

ATTACHMENT 1
Design Analysis Cover Sheet

Design Analysis (Major Revision)		Last Page No. ⁶ 79 / Att. 1-9	
Analysis No.: ¹	LM-0646	Revision: ²	1
Title: ³	Re-analysis Of Loss of Coolant Accident (LOCA) Using Alternative Source Terms		
ECECR No.: ⁴	04-00003	Revision: ⁵	0
Station(s): ⁷	Limerick	Component(s): ¹⁴	
Unit No.: ⁸	1 & 2		
Discipline: ⁹	MEDC		
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CONTROLLED DOCUMENT REFERENCES ¹³			
Document No.:	From/To	Document No.:	From/To
LGS UFSAR, Tech Specs, and Bases	From/To	Design Analysis LM-0312	From
Design Analysis LM-0310, LM-0551, LM-0641, LM-0642, LM-0645	From	DBD No. L-S-088	From
Design Analysis M-78-01 and M-76-01	From	DBD No. L-S-32	From
Procedure No. ST-4-LLR-001-1	From/To	DBD No. L-S-25A	From
Is this Design Analysis Safeguards Information? ¹⁸	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	If yes, see SY-AA-101-106	
Does this Design Analysis contain Unverified Assumptions? ¹⁷	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	If yes, AT/AR#: _____	
This Design Analysis SUPERCEDES: ¹⁸	LM-0645, Rev. 0	in its entirety.	
Description of Revision (list affected pages for partials): ¹⁹			
This revision incorporates responses to pertinent NRC Requests for Additional Information (RAIs) with respect to all Exelon Nuclear Station Alternative Source Term License Amendment Applications. Additional assumptions from Regulatory Guide 1.183 are included to directly indicate conformance with this Regulatory Guide.			
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	Print Name	Sign Name	Date
Method of Review: ²¹	Detailed Review <input checked="" type="checkbox"/>	Alternate Calculations (attached) <input type="checkbox"/>	Testing <input type="checkbox"/>
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Review Notes: ²³ HAA1212	Independent review <input checked="" type="checkbox"/>	Peer review <input type="checkbox"/>	
²³ 3 rd Party Review by M. Drucker and G. Patel (NUCORE)			
(For External Analyses Only)			
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Is a Supplemental Review Required? ²⁶	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	If yes, Complete Attachment 3	
Exelon Approver: ²⁷	E. Flick	<i>Elliott Flick</i>	9/21/05
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ATTACHMENTS:

- A. RADTRAD Analyses for Design Basis LOCA Dose Assessment Summary and Output
 - (1)Rad Mode Case - PC Leakage to Secondary Containment
 - (2)Rad Mode Case - MSIV Leakage (No Condenser Tube Credit)
 - (3)Rad Mode Case - MSIV Leakage (No Condenser Tube Credit) – Line A Resuspended Iodine
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 - (15)RADTRAD Nuclide Inventory "NIF" Input Files
 - (16)RADTRAD Release Fraction and Timing "RFT" Input File
- B. Main Steam Piping and Condenser Deposition Credit; Condenser Characterization for Alternate Drain Pathway; and Piping Takeoffs
- C. Reanalysis of External Source Gamma Shine to Control Room
- D. Deleted
- E. Evaluation of Containment Leak Rates vs. Time
- F. Assessment of Steam Line Temperatures for Piping Deposition Credit Analysis
- G. Evaluation of Post-LOCA Doses to Vital Areas
- H. Computer Disclosure Sheets
- I. Evaluation of High Wind Speed Conditions (unchanged from Revision 0)

FIGURES:

Figure 4.1: Radioactivity Transport Pathways

Figure 4.2: Post-LOCA MSIV Leakage Pathway Nodalization

Acronyms:

AST – Alternative Source Term (NUREG-1465)
 CEDE – Committed Effective Dose Equivalent
 CFR – Code of Federal Regulations
 CR – Control Room
 CREFAS – Control Room Emergency Fresh Air System
 CST – Condensate Storage Tank
 DBA – Design Basis Accident
 DCF – Dose Conversion Factor
 DG – Draft Guide
 EAB – Exclusion Area Boundary
 ECCS – Emergency Core Cooling System
 EDE – Effective Dose Equivalent
 EFPD – Effective Full Power Days
 ERFDS – Emergency Response Facility Data System
 ESF – Engineered Safety Features
 FGR – Federal Guidance Report
 FWIV – Feedwater Isolation Valve
 GDC – General Design Criteria
 GE – General Electric
 HPCI – High Pressure Coolant Injection
 HVAC – Heating, Ventilation and Air Conditioning
 IPF – Iodine Protection Factor
 L_a – Design Basis Containment Leak Rate against which LLRT leakages are evaluated
 LGS - Limerick Generating Station
 LLRT – Local Leak Rate Test
 LOCA – Loss of Coolant Accident
 LPZ – Low Population Zone
 MCREV – Main Control Room Emergency Ventilation
 MS – Main Steam
 MSL – Main Steam Line
 MSIV – Main Steam Isolation Valve
 NIF – Nuclide Information File
 NPS – Nominal Pipe Size
 NRC – Nuclear Regulatory Commission
 P_a – Design Basis Containment Pressure at which LLRT measurements are made
 PBAPS – Peach Bottom Atomic Power Station
 PC – Primary Containment (typically drywell + containment air space)
 PCIG – Primary Containment Instrument Gas
 RCIC – Reactor Core Isolation Cooling
 RERS – Reactor Enclosure Recirculation System
 RFT – Release Fraction and Timing File
 RG – Regulatory Guide
 RPV – Reactor Pressure Vessel
 RSLB – Recirculation Suction Line Break
 SC – Secondary Containment
 SR – Surveillance Requirement
 SER – Safety Evaluation Report
 SGTS – Standby Gas Treatment System
 SLCS – Standby Liquid Control System
 SRP – Standard Review Plan
 SSE – Safe Shutdown Earthquake
 TB – Turbine Building
 TID – Technical Information Document
 TEDE – Total Effective Dose Equivalent
 TS – Technical Specification
 UFSAR – Updated Final Safety Analysis Report
 λ_0 – Atmospheric Relative Concentration

1. Purpose/Objective

The objective of this calculation is to analyze the Limerick Generating Station design basis LOCA using the methodology established in Regulatory Guide 1.183, Rev. 0, "Alternative Radiological Source Terms for Evaluating Design Basis Accidents At Nuclear Power Reactors" [Ref. (4)], and in accordance with 10CFR50.67(b)(2) [Ref. (8)].

Key baseline parameters, associated changes in design basis accident analysis parameters, and associated objectives are:

❖ Primary Containment Leakage:

- The containment leak rate (L_a) used for this accident analyses is the current 0.5% per day for the first 24 hours. For dose assessment purposes, this leak rate is reduced to 0.25% per day after 24 hours, based on expected reductions in containment pressure by that point in time as justified in this calculation.
- To recognize the 2-minute delay before the start of gap release [Ref. (36)] in this accident analysis. This provides one element in evaluations of the potential for relaxation of Primary and Secondary Containment isolation valve closure time limits.
- To recognize that LGS does not routinely purge containment and that, therefore, LOCA during containment purging is not considered credible.

❖ Secondary Containment Release Pathway:

- To analyze the current Reactor Enclosure drawdown time of 15.5 minutes as from the start of gap release, with recognition that gap release does not commence for a minimum of 2 minutes from event initiation [Ref. (36)].

❖ Main Steam Isolation Valve Leakage Release Pathway:

- The current MSIV leak limits of 100 scfh per steam line and a total of 200 scfh for all 4 lines [Ref. (23)] will be unchanged. For TID-14844 purposes, MSIV leakage was evaluated in 1994 using NEDC-31858P [Ref. (29)] methodology. LGS Radiological effects are reanalyzed in this calculation using Alternative Source Terms, and the methodology described herein.
- This accident analysis will continue to credit the MSIV Leakage Alternate Drain Pathways that use existing main steam drain lines to the high pressure shell of the main condenser. This system has previously been shown to be seismically rugged as discussed in UFSAR Section 6.7.

❖ Control Room Emergency Fresh Air System (CREFAS) Parameters:

- To increase the Radiation mode assumed unfiltered inleakage to 275 cfm from the historical assumption of 50 cfm. This is in addition to the normal maximum filtered intake rate of 525 cfm.
- These conditions will be shown to bound the historical chlorine isolation mode assumption of an isolated control room with a 525 cfm unfiltered Inleakage. This will eliminate any dose-based time limit on transfer from Chlorine Mode (e.g. for test) to Radiation mode in the event of a radiological accident.
- To credit 99% removal efficiency for aerosols based on HEPA performance.

❖ Control Room Design for Gamma Shine from External Sources:

- To re-assess the dominant sources, including the core spray pipe run located immediately outside of one Control Room wall, containing ECCS fluid, reflecting AST assumptions and all pertinent isotopes.
- To identify a conservative post-LOCA dose rate for the Control Room.
- To evaluate other external sources that were previously treated as negligible.

2. Acceptance Criteria

The following NRC regulatory requirement and guidance documents are applicable to this LGS Alternative Source Term LOCA Calculation:

- 10CFR50.67 [Ref. (8)]
- Standard Review Plan section 15.0.1 [Ref. (6)]
- Regulatory Guide 1.183 [Ref. (4)]

Dose Acceptance Criteria are:

Regulatory Dose Limits

Dose Type	Control Room (rem)	EAB and LPZ (rem)
TEDE Dose	5	25

The basis for conformance with the Regulatory Positions in Section C. of the body of Regulatory Guide 1.183 and each of its Appendix A "Assumptions for Evaluating the Radiological Consequences of a LWR Loss-of-Coolant Accident" is provided by this analysis, as shown in the Conformance Matrix Tables 2.1 and 2.2.

Table 2.1: Conformance with Regulatory Guide (RG) 1.183 Main Sections

RG Section	RG Position	LGS Analysis	Comments
3.1	<p>The inventory of fission products in the reactor core and available for release to the containment should be based on the maximum full power operation of the core with, as a minimum, current licensed values for fuel enrichment, fuel burnup, and an assumed core power equal to the current licensed rated thermal power times the ECCS evaluation uncertainty. The period of irradiation should be of sufficient duration to allow the activity of dose-significant radionuclides to reach equilibrium or to reach maximum values. The core inventory should be determined using an appropriate isotope generation and depletion computer code such as ORIGEN 2 or ORIGEN-ARP. Core inventory factors (Ci/MWt) provided in TID 14844 and used in some analysis computer codes were derived for low burnup, low enrichment fuel and should not be used with higher burnup and higher enrichment fuels.</p>	Conforms	<p>ORIGEN 2.1 based methodology was used to determine core inventory. These source terms were evaluated at end-of-cycle and at beginning of cycle (100 effective full power days (EFPD), to achieve equilibrium) conditions and worst case inventory used for the selected isotopes. This has been shown to be a conservative approach. The resulting values were converted to units of Ci/MWt. Accident analyses are based on a power level of 3527 MWt to account for two percent uncertainty ($3458 \times 1.02 = 3527$). Fission product inventory is based on a 2 year fuel cycle with a nominal 711 EFPD per cycle.</p>
3.1	<p>For the DBA LOCA, all fuel assemblies in the core are assumed to be affected and the core average inventory should be used. For DBA events that do not involve the entire core, the fission product inventory of each of the damaged fuel rods is determined by dividing the total core inventory by the number of fuel rods in the core. To account for differences in power level across the core, radial peaking factors from the facility's core operating limits report (COLR) or technical specifications should be applied in determining the inventory of the damaged rods.</p>	Conforms	<p>This calculation addresses LOCA, and all fuel assemblies in the core are assumed to be affected and the core average inventory is used.</p>

Table 2.1: Conformance with Regulatory Guide (RG) 1.183 Main Sections

RG Section	RG Position	LGS Analysis	Comments																																				
3.1	<p>No adjustment to the fission product inventory should be made for events postulated to occur during power operations at less than full rated power or those postulated to occur at the beginning of core life. For events postulated to occur while the facility is shutdown, e.g., a fuel handling accident, radioactive decay from the time of shutdown may be modeled.</p>	Conforms	<p>This calculation addresses LOCA. Fission product inventories reflect full power operation.</p>																																				
3.2	<p>The core inventory release fractions, by radionuclide groups, for the gap release and early in-vessel damage phases for DBA LOCAs are listed in Table 1 for BWRs and Table 2 for PWRs. These fractions are applied to the equilibrium core inventory described in Regulatory Position 3.1.</p> <p style="text-align: center;">Table 1 BWR Core Inventory Fraction Released Into Containment</p> <table border="1" style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th style="text-align: left;"><i>Group</i></th> <th style="text-align: center;"><i>Gap Release Phase</i></th> <th style="text-align: center;"><i>Early In-Vessel Phase</i></th> <th style="text-align: center;"><i>Total</i></th> </tr> </thead> <tbody> <tr> <td>Noble Gases</td> <td style="text-align: center;">0.05</td> <td style="text-align: center;">0.95</td> <td style="text-align: center;">1.0</td> </tr> <tr> <td>Halogens</td> <td style="text-align: center;">0.05</td> <td style="text-align: center;">0.25</td> <td style="text-align: center;">0.3</td> </tr> <tr> <td>Alkali Metals</td> <td style="text-align: center;">0.05</td> <td style="text-align: center;">0.20</td> <td style="text-align: center;">0.25</td> </tr> <tr> <td>Tellurium Metals</td> <td style="text-align: center;">0.00</td> <td style="text-align: center;">0.05</td> <td style="text-align: center;">0.05</td> </tr> <tr> <td>Ba, Sr</td> <td style="text-align: center;">0.00</td> <td style="text-align: center;">0.02</td> <td style="text-align: center;">0.02</td> </tr> <tr> <td>Noble Metals</td> <td style="text-align: center;">0.00</td> <td style="text-align: center;">0.0025</td> <td style="text-align: center;">0.0025</td> </tr> <tr> <td>Cerium Group</td> <td style="text-align: center;">0.00</td> <td style="text-align: center;">0.0005</td> <td style="text-align: center;">0.0005</td> </tr> <tr> <td>Lanthanides</td> <td style="text-align: center;">0.00</td> <td style="text-align: center;">0.0002</td> <td style="text-align: center;">0.0002</td> </tr> </tbody> </table>	<i>Group</i>	<i>Gap Release Phase</i>	<i>Early In-Vessel Phase</i>	<i>Total</i>	Noble Gases	0.05	0.95	1.0	Halogens	0.05	0.25	0.3	Alkali Metals	0.05	0.20	0.25	Tellurium Metals	0.00	0.05	0.05	Ba, Sr	0.00	0.02	0.02	Noble Metals	0.00	0.0025	0.0025	Cerium Group	0.00	0.0005	0.0005	Lanthanides	0.00	0.0002	0.0002	Conforms	<p>The fractions from Table 1 are used.</p>
<i>Group</i>	<i>Gap Release Phase</i>	<i>Early In-Vessel Phase</i>	<i>Total</i>																																				
Noble Gases	0.05	0.95	1.0																																				
Halogens	0.05	0.25	0.3																																				
Alkali Metals	0.05	0.20	0.25																																				
Tellurium Metals	0.00	0.05	0.05																																				
Ba, Sr	0.00	0.02	0.02																																				
Noble Metals	0.00	0.0025	0.0025																																				
Cerium Group	0.00	0.0005	0.0005																																				
Lanthanides	0.00	0.0002	0.0002																																				

Table 2.1: Conformance with Regulatory Guide (RG) 1.183 Main Sections

RG Section	RG Position	LGS Analysis	Comments																			
3.2	<p>For non-LOCA events, the fractions of the core inventory assumed to be in the gap for the various radionuclides are given in Table 3. The release fractions from Table 3 are used in conjunction with the fission product inventory calculated with the maximum core radial peaking factor.</p> <p style="text-align: center;">Table 3 Non-LOCA Fraction of Fission Product Inventory in Gap</p> <table border="1" style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th><u>Group</u></th> <th><u>Fraction</u></th> </tr> </thead> <tbody> <tr> <td>I-131</td> <td>0.08</td> </tr> <tr> <td>Kr-85</td> <td>0.10</td> </tr> <tr> <td>Other Noble Gases</td> <td>0.05</td> </tr> <tr> <td>Other Halogens</td> <td>0.05</td> </tr> <tr> <td>Alkali Metals</td> <td>0.12</td> </tr> </tbody> </table>	<u>Group</u>	<u>Fraction</u>	I-131	0.08	Kr-85	0.10	Other Noble Gases	0.05	Other Halogens	0.05	Alkali Metals	0.12	Conforms	Not Applicable to LOCA.							
<u>Group</u>	<u>Fraction</u>																					
I-131	0.08																					
Kr-85	0.10																					
Other Noble Gases	0.05																					
Other Halogens	0.05																					
Alkali Metals	0.12																					
3.3	<p>Table 4 tabulates the onset and duration of each sequential release phase for DBA LOCAs at PWRs and BWRs. The specified onset is the time following the initiation of the accident (i.e., time = 0). The early in-vessel phase immediately follows the gap release phase. The activity released from the core during each release phase should be modeled as increasing in a linear fashion over the duration of the phase. For non-LOCA DBAs, in which fuel damage is projected, the release from the fuel gap and the fuel pellet should be assumed to occur instantaneously with the onset of the projected damage.</p> <p style="text-align: center;">Table 4 LOCA Release Phases</p> <table border="1" style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th rowspan="2"><u>Phase</u></th> <th colspan="2"><u>PWRs</u></th> <th colspan="2"><u>BWRs</u></th> </tr> <tr> <th><u>Onset</u></th> <th><u>Duration</u></th> <th><u>Onset</u></th> <th><u>Duration</u></th> </tr> </thead> <tbody> <tr> <td>Gap Release</td> <td>30 sec</td> <td>0.5 hr</td> <td>2 min</td> <td>0.5 hr</td> </tr> <tr> <td>Early In-Vessel</td> <td>0.5 hr</td> <td>1.3 hr</td> <td>0.5 hr</td> <td>1.5 hr</td> </tr> </tbody> </table>	<u>Phase</u>	<u>PWRs</u>		<u>BWRs</u>		<u>Onset</u>	<u>Duration</u>	<u>Onset</u>	<u>Duration</u>	Gap Release	30 sec	0.5 hr	2 min	0.5 hr	Early In-Vessel	0.5 hr	1.3 hr	0.5 hr	1.5 hr	Conforms	<p>The BWR durations from Table 4 are used.</p> <p>LOCA releases are modeled in a linear fashion using RADTRAD.</p>
<u>Phase</u>	<u>PWRs</u>		<u>BWRs</u>																			
	<u>Onset</u>	<u>Duration</u>	<u>Onset</u>	<u>Duration</u>																		
Gap Release	30 sec	0.5 hr	2 min	0.5 hr																		
Early In-Vessel	0.5 hr	1.3 hr	0.5 hr	1.5 hr																		

Table 2.1: Conformance with Regulatory Guide (RG) 1.183 Main Sections

RG Section	RG Position	LGS Analysis	Comments																
3.3	<p>For facilities licensed with leak-before-break methodology, the onset of the gap release phase may be assumed to be 10 minutes. A licensee may propose an alternative time for the onset of the gap release phase, based on facility-specific calculations using suitable analysis codes or on an accepted topical report shown to be applicable for the specific facility. In the absence of approved alternatives, the gap release phase onsets in Table 4 should be used.</p>	Not Applicable	LGS does not use leak-before-break methodology for DBA analyses.																
3.4	<p>Table 5 lists the elements in each radionuclide group that should be considered in design basis analyses.</p> <p style="text-align: center;">Table 5 Radionuclide Groups</p> <table border="0" style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th style="text-align: left;"><u>Group</u></th> <th style="text-align: left;"><u>Elements</u></th> </tr> </thead> <tbody> <tr> <td>Noble Gases</td> <td>Xe, Kr</td> </tr> <tr> <td>Halogens</td> <td>I, Br</td> </tr> <tr> <td>Alkali Metals</td> <td>Cs, Rb</td> </tr> <tr> <td>Tellurium Group</td> <td>Te, Sb, Se, Ba, Sr</td> </tr> <tr> <td>Noble Metals</td> <td>Ru, Rh, Pd, Mo, Tc, Co</td> </tr> <tr> <td>Lanthanides</td> <td>La, Zr, Nd, Eu, Nb, Pm, Pr, Sm, Y, Cm, Am</td> </tr> <tr> <td>Cerium</td> <td>Ce, Pu, Np</td> </tr> </tbody> </table>	<u>Group</u>	<u>Elements</u>	Noble Gases	Xe, Kr	Halogens	I, Br	Alkali Metals	Cs, Rb	Tellurium Group	Te, Sb, Se, Ba, Sr	Noble Metals	Ru, Rh, Pd, Mo, Tc, Co	Lanthanides	La, Zr, Nd, Eu, Nb, Pm, Pr, Sm, Y, Cm, Am	Cerium	Ce, Pu, Np	Conforms	Except for direct shine dose assessment, the nuclides used are the 60 identified as being potentially important dose contributors to total effective dose equivalent (TEDE) in the RADTRAD code, which encompasses those listed in RG 1.183, Table 5.
<u>Group</u>	<u>Elements</u>																		
Noble Gases	Xe, Kr																		
Halogens	I, Br																		
Alkali Metals	Cs, Rb																		
Tellurium Group	Te, Sb, Se, Ba, Sr																		
Noble Metals	Ru, Rh, Pd, Mo, Tc, Co																		
Lanthanides	La, Zr, Nd, Eu, Nb, Pm, Pr, Sm, Y, Cm, Am																		
Cerium	Ce, Pu, Np																		
3.5	<p>Of the radioiodine released from the reactor coolant system (RCS) to the containment in a postulated accident, 95 percent of the iodine released should be assumed to be cesium iodide (CsI), 4.85 percent elemental iodine, and 0.15 percent organic iodide. This includes releases from the gap and the fuel pellets. With the exception of elemental and organic iodine and noble gases, fission products should be assumed to be in particulate form. The same chemical form is assumed in releases from fuel pins in FHAs and from releases from the fuel pins through the RCS in DBAs other than FHAs or LOCAs. However, the transport of these iodine species following release from the fuel may affect these assumed fractions. The accident-specific appendices to this regulatory guide provide additional details.</p>	Conforms	NRC guidance on chemical forms for fission products is applied for all accidents as specified here and in RG 1.183 appendices.																

Table 2.1: Conformance with Regulatory Guide (RG) 1.183 Main Sections

RG Section	RG Position	LGS Analysis	Comments
3.6	The amount of fuel damage caused by non-LOCA design basis events should be analyzed to determine, for the case resulting in the highest radioactivity release, the fraction of the fuel that reaches or exceeds the initiation temperature of fuel melt and the fraction of fuel elements for which the fuel clad is breached. Although the NRC staff has traditionally relied upon the departure from nucleate boiling ratio (DNBR) as a fuel damage criterion, licensees may propose other methods to the NRC staff, such as those based upon enthalpy deposition, for estimating fuel damage for the purpose of establishing radioactivity releases.	Not applicable to LOCA.	
4.1.1	The dose calculations should determine the TEDE. TEDE is the sum of the committed effective dose equivalent (CEDE) from inhalation and the deep dose equivalent (DDE) from external exposure. The calculation of these two components of the TEDE should consider all radionuclides, including progeny from the decay of parent radionuclides, that are significant with regard to dose consequences and the released radioactivity.	Conforms	TEDE is calculated, with significant progeny included.
4.1.2	The exposure-to-CEDE factors for inhalation of radioactive material should be derived from the data provided in ICRP Publication 30, "Limits for Intakes of Radionuclides by Workers" (Ref. 19). Table 2.1 of Federal Guidance Report 11, "Limiting Values of Radionuclide Intake and Air Concentration and Dose Conversion Factors for Inhalation, Submersion, and Ingestion" (Ref. 20), provides tables of conversion factors acceptable to the NRC staff. The factors in the column headed "effective" yield doses corresponding to the CEDE.	Conforms	Federal Guidance Report 11 dose conversion factors (DCFs) are used.
4.1.3	For the first 8 hours, the breathing rate of persons offsite should be assumed to be 3.5×10^{-4} cubic meters per second. From 8 to 24 hours following the accident, the breathing rate should be assumed to be 1.8×10^{-4} cubic meters per second. After that and until the end of the accident, the rate should be assumed to be 2.3×10^{-4} cubic meters per second.	Conforms	The specified values are used in the analyses.
4.1.4	The DDE should be calculated assuming submergence in semi-infinite cloud assumptions with appropriate credit for attenuation by body tissue. The DDE is nominally equivalent to the effective dose equivalent (EDE)	Conforms	Federal Guidance Report 12 conversion factors are used.

Table 2.1: Conformance with Regulatory Guide (RG) 1.183 Main Sections

RG Section	RG Position	LGS Analysis	Comments
	<p>from external exposure if the whole body is irradiated uniformly. Since this is a reasonable assumption for submergence exposure situations, EDE may be used in lieu of DDE in determining the contribution of external dose to the TEDE. Table III.1 of Federal Guidance Report 12, "External Exposure to Radionuclides in Air, Water, and Soil" (Ref. 21), provides external EDE conversion factors acceptable to the NRC staff. The factors in the column headed "effective" yield doses corresponding to the EDE.</p>		
4.1.5	<p>The TEDE should be determined for the most limiting person at the EAB. The maximum EAB TEDE for any two-hour period following the start of the radioactivity release should be determined and used in determining compliance with the dose criteria in 10 CFR 50.67. The maximum two-hour TEDE should be determined by calculating the postulated dose for a series of small time increments and performing a "sliding" sum over the increments for successive two-hour periods. The maximum TEDE obtained is submitted. The time increments should appropriately reflect the progression of the accident to capture the peak dose interval between the start of the event and the end of radioactivity release (see also Table 6).</p>	Conforms	<p>The maximum two hour EAB doses value are determined by RADTRAD for each release path. These results are added, even if the times do not coincide, for simplicity and conservatism. That is, worst case 2 hr results in each RADTRAD run are added to obtain the total EAB dose.</p>
4.1.6	<p>TEDE should be determined for the most limiting receptor at the outer boundary of the low population zone (LPZ) and should be used in determining compliance with the dose criteria in 10 CFR 50.67.</p>	Conforms	<p>Analyses are based on X/Qs determined at the LPZ distance in conformance with Regulatory Guide 1.145.</p>
4.1.7	<p>No correction should be made for depletion of the effluent plume by deposition on the ground.</p>	Conforms	<p>No such credit is taken.</p>
4.2.1	<p>The TEDE analysis should consider all sources of radiation that will cause exposure to control room personnel. The applicable sources will vary from facility to facility, but typically will include:</p> <ul style="list-style-type: none"> • Contamination of the control room atmosphere by the intake or infiltration of the radioactive material contained in the radioactive plume released from the facility, • Contamination of the control room atmosphere by the intake or 	Conforms	<p>The principal source of dose within the control room is due to airborne activity.</p> <p>The dose estimates from post LOCA sources external to the control room were based on</p>

Table 2.1: Conformance with Regulatory Guide (RG) 1.183 Main Sections

RG Section	RG Position	LGS Analysis	Comments
	<p>infiltration of airborne radioactive material from areas and structures adjacent to the control room envelope,</p> <ul style="list-style-type: none"> • Radiation shine from the external radioactive plume released from the facility, • Radiation shine from radioactive material in the reactor containment, • Radiation shine from radioactive material in systems and components inside or external to the control room envelope, e.g., radioactive material buildup in recirculation filters. 		<p>consideration of all shielding-significant isotopes and indicate that the contribution to CR dose is dominated by the ECCS piping in the Reactor Enclosure adjacent to the Unit 1 CR. See Attachment C.</p>
4.2.2	<p>The radioactive material releases and radiation levels used in the control room dose analysis should be determined using the same source term, transport, and release assumptions used for determining the EAB and the LPZ TEDE values, unless these assumptions would result in non-conservative results for the control room.</p>	Conforms	<p>The source term, transport, and release assumptions are the same for both the control room and offsite locations.</p>
4.2.3	<p>The models used to transport radioactive material into and through the control room, and the shielding models used to determine radiation dose rates from external sources, should be structured to provide suitably conservative estimates of the exposure to control room personnel.</p>	Conforms	<p>RADTRAD analyses are used to evaluate transport of material into and through the control room, and to determine the resulting personnel doses.</p> <p>Shielding models are as discussed in Attachment C.</p>
4.2.4	<p>Credit for engineered safety features that mitigate airborne radioactive material within the control room may be assumed. Such features may include control room isolation or pressurization, or intake or recirculation filtration. Refer to Section 6.5.1, "ESF Atmospheric Cleanup System," of the SRP (Ref. 3) and Regulatory Guide 1.52, "Design, Testing, and Maintenance Criteria for Post-accident Engineered-Safety-Feature Atmosphere Cleanup System Air Filtration and Adsorption Units of Light-Water-Cooled Nuclear Power Plants" (Ref. 25), for guidance.</p>	Conforms	<p>After the drawdown period, credit is taken for SGTS HEPA and charcoal adsorber filtration (99.0% each) and RERS HEPA (99.0%) and charcoal filtration (95%)</p> <p>CR intake and recirculation filtration by CREFAS are credited in the LOCA accident analysis with automatic</p>

Table 2.1: Conformance with Regulatory Guide (RG) 1.183 Main Sections

RG Section	RG Position	LGS Analysis	Comments
			initiation of the Radiation Isolation Mode on a high rad signal, and filter efficiencies of 99.0% for HEPA/aerosols and 95.0% for charcoal adsorbers (elemental and organic iodine).
4.2.5	Credit should generally not be taken for the use of personal protective equipment or prophylactic drugs. Deviations may be considered on a case-by-case basis.	Conforms	Such credits are not taken.
4.2.6	The dose receptor for these analyses is the hypothetical maximum exposed individual who is present in the control room for 100% of the time during the first 24 hours after the event, 60% of the time between 1 and 4 days, and 40% of the time from 4 days to 30 days. For the duration of the event, the breathing rate of this individual should be assumed to be 3.5×10^{-4} cubic meters per second.	Conforms	The identified occupancy factors and breathing rate are used in dose analyses.
4.2.7	Control room doses should be calculated using dose conversion factors identified in Regulatory Position 4.1 above for use in offsite dose analyses. The DDE from photons may be corrected for the difference between finite cloud geometry in the control room and the semi-infinite cloud assumption used in calculating the dose conversion factors. The following expression may be used to correct the semi-infinite cloud dose, DDE_{∞} , to a finite cloud dose, DDE_{finite} , where the control room is modeled as a hemisphere that has a volume, V, in cubic feet, equivalent to that of the control room (Ref. 22). $DDE_{finite} = \frac{DDE_{\infty} V^{0.338}}{1173}$	Conforms	The equation given is utilized for finite cloud correction when calculating external doses due to the airborne activity inside the control room. This formula is also built into RADTRAD for use in control room dose assessments.
4.3	The guidance provided in Regulatory Positions 4.1 and 4.2 should be used, as applicable, in re-assessing the radiological analyses identified in Regulatory Position 1.3.1, such as those in NUREG-0737 (Ref. 2). Design envelope source terms provided in NUREG-0737 should be updated for consistency with the AST. In general, radiation exposures	Conforms	For the Technical Support Center and other areas requiring plant personnel access, assessments contained in Attachment G

Table 2.1: Conformance with Regulatory Guide (RG) 1.183 Main Sections

RG Section	RG Position	LGS Analysis	Comments
	to plant personnel identified in Regulatory Position 1.3.1 should be expressed in terms of TEDE. Integrated radiation exposure of plant equipment should be determined using the guidance of Appendix I of this guide.		indicate that with no new operator actions required, radiation exposures would be lower than currently reported.
5.1.1	The evaluations required by 10 CFR 50.67 are re-analyses of the design basis safety analyses and evaluations required by 10 CFR 50.34; they are considered to be a significant input to the evaluations required by 10 CFR 50.92 or 10 CFR 50.59. These analyses should be prepared, reviewed, and maintained in accordance with quality assurance programs that comply with Appendix B, "Quality Assurance Criteria for Nuclear Power Plants and Fuel Reprocessing Plants," to 10 CFR Part 50.	Conforms	Analyses are performed under quality assurance programs meeting Appendix B to 10 CFR Part 50.
5.1.2	Credit may be taken for accident mitigation features that are classified as safety-related, are required to be operable by technical specifications, are powered by emergency power sources, and are either automatically actuated or, in limited cases, have actuation requirements explicitly addressed in emergency operating procedures. The single active component failure that results in the most limiting radiological consequences should be assumed. Assumptions regarding the occurrence and timing of a loss of offsite power should be selected with the objective of maximizing the postulated radiological consequences.	Conforms	<p>This analysis generally relies on the same safety related accident mitigation features historically credited for LOCA analyses.</p> <p>The analyses take credit for SLC System operation for post-LOCA pH control. The SLC System is safety-related, required to be operable by technical specifications, and powered by emergency power. The SLC System is manually initiated from the main control room, as directed by the emergency operating procedures. Ref. 20 addresses other criteria that have been established to assure the SLC system is reliable for this intended</p>

Table 2.1: Conformance with Regulatory Guide (RG) 1.183 Main Sections

RG Section	RG Position	LGS Analysis	Comments
			service.
5.1.3	The numeric values that are chosen as inputs to the analyses required by 10 CFR 50.67 should be selected with the objective of determining a conservative postulated dose. In some instances, a particular parameter may be conservative in one portion of an analysis but be nonconservative in another portion of the same analysis.	Conforms	Conservative assumptions are used. See input parameter discussions for further information
5.1.4	Licensees should ensure that analysis assumptions and methods are compatible with the AST and the TEDE criteria.	Conforms	As documented in this calculation, analysis assumptions and methods were made per this guidance.
5.3	<p>Atmospheric dispersion values (X/Q) for the EAB, the LPZ, and the control room that were approved by the staff during initial facility licensing or in subsequent licensing proceedings may be used in performing the radiological analyses identified by this guide.</p> <p>Methodologies that have been used for determining X/Q values are documented in Regulatory Guides 1.3 and 1.4, Regulatory Guide 1.145, "Atmospheric Dispersion Models for Potential Accident Consequence Assessments at Nuclear Power Plants," and the paper, "Nuclear Power Plant Control Room Ventilation System Design for Meeting General Criterion 19".</p> <p>The NRC computer code PAVAN implements Regulatory Guide 1.145 and its use is acceptable to the NRC staff. The methodology of the NRC computer code ARCON96 is generally acceptable to the NRC staff for use in determining control room X/Q values.</p>	Conforms	<p>New atmospheric dispersion values (X/Q) for the EAB, the LPZ, and the control room were developed, using meteorology data for the years 1996 through 2000. ARCON96 and PAVAN were used with these data to determine control room and EAB/LPZ atmospheric dispersion values, respectively.</p> <p>Worst-case X/Q's for all releases are used, with the North Stack, the closest stack to the control room intake, assumed. Review of pertinent drawings and site walkdowns have substantiated that there is no worse release pathway that could be expected to occur.</p>

Table 2.2: Conformance with RG 1.183 Appendix A (Loss-of-Coolant Accident)

RG Section	RG Position	LGS Analysis	Comments
1	Acceptable assumptions regarding core inventory and the release of radionuclides from the fuel are provided in Regulatory Position 3 of this guide.	Conforms	<p><i>Fission Product Inventory:</i> Core source terms are developed using ORIGEN-2.1 based methodology.</p> <p><i>Release Fractions:</i> Release fractions are per Table 1 of RG 1.183, and are implemented by RADTRAD.</p> <p><i>Timing of Release Phases:</i> Release Phases are per Table 4 of RG 1.183, and are implemented by RADTRAD.</p> <p><i>Radionuclide Composition:</i> Radionuclide grouping is per Table 5 of RG 1.183, as implemented in RADTRAD.</p> <p><i>Chemical Form:</i> Treatment of release chemical form is per RG 1.183, Section 3.5.</p>
2	If the sump or suppression pool pH is controlled at values of 7 or greater, the chemical form of radioiodine released to the containment should be assumed to be 95% cesium iodide (CsI), 4.85 percent elemental iodine, and 0.15 percent organic iodide. Iodine species, including those from iodine re-evolution, for sump or suppression pool pH values less than 7 will be evaluated on a case-by-case basis. Evaluations of pH should consider the effect of acids and bases created during the LOCA event, e.g., radiolysis products. With the exception of elemental and organic iodine and noble gases, fission products should be assumed to be in particulate form.	Conforms	<p>The stated distributions of iodine chemical forms are used.</p> <p>The post-LOCA suppression pool pH has been evaluated [Reference 20], including consideration of the effects of acids and bases created during the LOCA event, the effects of key fission product releases, and the impact of SLCS injection. Suppression pool pH remains above 7 for at least 30 days.</p>
3.1	The radioactivity released from the fuel should be assumed to mix instantaneously and homogeneously throughout the free air volume of the primary containment in PWRs or the drywell in BWRs as it is released. This distribution should be adjusted if there are internal compartments that have limited ventilation exchange. The suppression pool free air volume may be included provided there is a mechanism to ensure	Conforms	See Item 3.7 below.

Table 2.2: Conformance with RG 1.183 Appendix A (Loss-of-Coolant Accident)

RG Section	RG Position	LGS Analysis	Comments
	mixing between the drywell to the wetwell. The release into the containment or drywell should be assumed to terminate at the end of the early in-vessel phase.		
3.2	Reduction in airborne radioactivity in the containment by natural deposition within the containment may be credited. Acceptable models for removal of iodine and aerosols are described in Chapter 6.5.2, "Containment Spray as a Fission Product Cleanup System," of the Standard Review Plan (SRP), NUREG-0800 (Ref. A-1) and in NUREG/CR-6189, "A Simplified Model of Aerosol Removal by Natural Processes in Reactor Containments" (Ref. A-2). The latter model is incorporated into the analysis code RADTRAD (Ref. A-3).	Conforms	Credit is taken for natural deposition per the methodology of NUREG/CR-6189, as implemented in RADTRAD. No deterministically assumed initial plateout is credited.
3.3	<p>Reduction in airborne radioactivity in the containment by containment spray systems that have been designed and are maintained in accordance with Chapter 6.5.2 of the SRP (Ref. A-1) may be credited. Acceptable models for the removal of iodine and aerosols are described in Chapter 6.5.2 of the SRP and NUREG/CR-5966, "A Simplified Model of Aerosol Removal by Containment Sprays"¹ (Ref. A-4). This simplified model is incorporated into the analysis code RADTRAD (Refs. A-1 to A-3).</p> <p>The evaluation of the containment sprays should address areas within the primary containment that are not covered by the spray drops. The mixing rate attributed to natural convection between sprayed and unsprayed regions of the containment building, provided that adequate flow exists between these regions, is assumed to be two turnovers of the unsprayed regions per hour, unless other rates are justified. The containment building atmosphere may be considered a single, well-mixed volume if the spray covers at least 90% of the volume and if adequate mixing of unsprayed compartments can be shown.</p>	Not Applicable	While containment sprays are a design feature that is available at LGS, no credit is taken for airborne activity removal by them in the LOCA AST reanalysis.

Table 2.2: Conformance with RG 1.183 Appendix A (Loss-of-Coolant Accident)

RG Section	RG Position	LGS Analysis	Comments
	<p>The SRP sets forth a maximum decontamination factor (DF) for elemental iodine based on the maximum iodine activity in the primary containment atmosphere when the sprays actuate, divided by the activity of iodine remaining at some time after decontamination. The SRP also states that the particulate iodine removal rate should be reduced by a factor of 10 when a DF of 50 is reached. The reduction in the removal rate is not required if the removal rate is based on the calculated time-dependent airborne aerosol mass. There is no specified maximum DF for aerosol removal by sprays. The maximum activity to be used in determining the DF is defined as the iodine activity in the columns labeled "Total" in Tables 1 and 2 of this guide multiplied by 0.05 for elemental iodine and by 0.95 for particulate iodine (i.e., aerosol treated as particulate in SRP methodology).</p>		
3.4	<p>Reduction in airborne radioactivity in the containment by in-containment recirculation filter systems may be credited if these systems meet the guidance of Regulatory Guide 1.52 and Generic Letter 99-02 (Refs. A-5 and A-6). The filter media loading caused by the increased aerosol release associated with the revised source term should be addressed.</p>	Conforms	No in-containment recirculation filter systems exist at LGS.
3.5	<p>Reduction in airborne radioactivity in the containment by suppression pool scrubbing in BWRs should generally not be credited. However, the staff may consider such reduction on an individual case basis. The evaluation should consider the relative timing of the blowdown and the fission product release from the fuel, the force driving the release through the pool, and the potential for any bypass of the suppression pool (Ref. 7). Analyses should consider iodine re-evolution if the suppression pool liquid pH is not maintained greater than 7.</p>	Conforms	No credit is taken for suppression pool scrubbing in the LOCA AST reanalysis. As indicated for Item 2. above, analyses have been performed that determined that the suppression pool liquid pH is maintained greater than 7, and that, therefore, iodine re-evolution is not expected.
3.6	<p>Reduction in airborne radioactivity in the containment by retention in ice condensers, or other engineering safety features not addressed above, should be evaluated on an</p>	Not Applicable	LGS does not have ice condensers. No other removal mechanisms are credited

Table 2.2: Conformance with RG 1.183 Appendix A (Loss-of-Coolant Accident)

RG Section	RG Position	LGS Analysis	Comments
	individual case basis. See Section 6.5.4 of the SRP (Ref. A-1).		other than natural deposition.
3.7	<p>The primary containment (i.e., drywell for Mark I and II containment designs) should be assumed to leak at the peak pressure technical specification leak rate for the first 24 hours. For PWRs, the leak rate may be reduced after the first 24 hours to 50% of the technical specification leak rate. For BWRs, leakage may be reduced after the first 24 hours, if supported by plant configuration and analyses, to a value not less than 50% of the technical specification leak rate. Leakage from subatmospheric containments is assumed to terminate when the containment is brought to and maintained at a subatmospheric condition as defined by technical specifications.</p> <p>For BWRs with Mark III containments, the leakage from the drywell into the primary containment should be based on the steaming rate of the heated reactor core, with no credit for core debris relocation. This leakage should be assumed during the two-hour period between the initial blowdown and termination of the fuel radioactivity release (gap and early in-vessel release phases). After two hours, the radioactivity is assumed to be uniformly distributed throughout the drywell and the primary containment.</p>	Conforms.	<p>Credit is taken for the 50% leak rate reduction after 24 hours, based on containment pressure, as supported by the Attachment E Containment Response results for a Design Basis LOCA, indicating only a 50% Containment Leak Rate reduction at and after 1 day is conservative.</p> <p>LGS uses a Mark II containment, and leakage from the drywell into the suppression chamber is not credited for the first two hour period. Rapid mixing is considered thereafter due to ECCS restoration and associated steam production to provide the uniform distribution required, with flow from the suppression chamber air space to the drywell through vacuum breakers as steam condensation reduces drywell pressure relative to that in the suppression chamber.</p> <p>As noted, such mixing after two hours is contained within Regulatory Guide 1.183 for Mark III containments, and has been accepted by the NRC recently for the Clinton Power Station AST LOCA analysis of reference 35. The same mixing mechanisms apply for Mark I</p>

Table 2.2: Conformance with RG 1:183 Appendix A (Loss-of-Coolant Accident)

RG Section	RG Position	LGS Analysis	Comments
			<p>and Mark II containments, and have been recently accepted by the NRC for Mark I containments at Fermi 1 and Vermont Yankee Nuclear Power plants. At Fermi 1, NRC's Safety Evaluation Report of September 28, 2004 states with respect to main steam isolation valve leakage that</p> <p style="padding-left: 40px;">“The licensee’s revised analysis assumes that the released fission products are dispersed throughout the drywell free volume, that there is no mixing of the drywell and wetwell volumes for the first two hours, and that there is complete mixing after that. The NRC staff finds this assumption acceptable as the AST is effectively based on a terminated LOCA in which core cooling is restored at the end of the early in-vessel release period.”</p> <p>For Vermont Yankee, the NRC Safety Evaluation Report indicates:</p> <p style="padding-left: 40px;">“Energy conservatively assumes that the fission products released from the core are dispersed equally throughout the drywell. Following the initial blowdown of the RPV, the fuel heats up and fuel melt begins, and subsequently the steaming in the RPV carries fission products to the containment. When core cooling is restored, steam is rapidly generated in</p>

Table 2.2: Conformance with RG 1.183 Appendix A (Loss-of-Coolant Accident)

RG Section	RG Position	LGS Analysis	Comments
			the core. This steam and the ECCS flow carry fission products from the core to the primary containment via the severed recirculation line, resulting in well-mixed RPV dome and containment fission product concentrations. Once the rapid steaming stops, the containment contents can flow back into the RPV through the severed line and would be available for release via the MSIVs."
3.8	If the primary containment is routinely purged during power operations, releases via the purge system prior to containment isolation should be analyzed and the resulting doses summed with the postulated doses from other release paths. The purge release evaluation should assume that 100% of the radionuclide inventory in the reactor coolant system liquid is released to the containment at the initiation of the LOCA. This inventory should be based on the technical specification reactor coolant system equilibrium activity. Iodine spikes need not be considered. If the purge system is not isolated before the onset of the gap release phase, the release fractions associated with the gap release and early in-vessel phases should be considered as applicable.	Conforms	The LGS primary containment is not routinely purged during power operation. Purging is limited to inerting, de-inerting, and occasional short pressure control activities.
4.1	Leakage from the primary containment should be considered to be collected, processed by engineered safety feature (ESF) filters, if any, and released to the environment via the secondary containment exhaust system during periods in which the secondary containment has a negative pressure as defined in technical specifications. Credit for an elevated release should be assumed only if the point of physical release is more than two and one-half times the height of any adjacent structure.	Conforms	Secondary Containment filtered release (via the North Stack) credit is taken at 15.5 minutes after the start of gap release. Gap release begins at ~ 2 minutes after LOCA initiation. Therefore, 17.5 minutes is available for achieving a negative pressure of 1/4" W.G. For EAB and LPZ doses, ground level releases are assumed. For Control Room doses, releases are based on zero-velocity

Table 2.2: Conformance with RG 1.183 Appendix A (Loss-of-Coolant Accident)

RG Section	RG Position	LGS Analysis	Comments
			vent release assumptions, yielding ground level release equivalent dispersion factors.
4.2	Leakage from the primary containment is assumed to be released directly to the environment as a ground-level release during any period in which the secondary containment does not have a negative pressure as defined in technical specifications.	Conforms	For EAB and LPZ doses, ground level releases are assumed. For Control Room doses, releases are based on zero-velocity vent release assumptions.
4.3	The effect of high wind speeds on the ability of the secondary containment to maintain a negative pressure should be evaluated on an individual case basis. The wind speed to be assumed is the 1-hour average value that is exceeded only 5% of the total number of hours in the data set. Ambient temperatures used in these assessments should be the 1-hour average value that is exceeded only 5% or 95% of the total numbers of hours in the data set, whichever is conservative for the intended use (e.g., if high temperatures are limiting, use those exceeded only 5%).	Conforms	The wind speed exceeded only 5% of the time at LGS in the secondary containment vicinity is approximately 19.7 mph (175' elevation of meteorological tower 2). It has been determined that a wind speed of greater than 35 mph would be required before the secondary containment pressures would be positive relative to outside air pressures at the downwind side of the reactor enclosure. See Attachment I.
4.4	Credit for dilution in the secondary containment may be allowed when adequate means to cause mixing can be demonstrated. Otherwise, the leakage from the primary containment should be assumed to be transported directly to exhaust systems without mixing. Credit for mixing, if found to be appropriate, should generally be limited to 50%. This evaluation should consider the magnitude of the containment leakage in relation to contiguous building volume or exhaust rate, the location of exhaust plenums relative to projected release locations, the recirculation ventilation systems, and internal walls and floors that impede stream flow between the release and the exhaust.	Conforms	A 50% mixing credit is taken for dilution/mixing in secondary containment, attributed to the RERS flow network.
4.5	Primary containment leakage that bypasses the secondary containment should be evaluated at the bypass leak rate incorporated in the technical specifications. If the bypass	Conforms	No primary containment leakage except for MSIV leakage has been identified which bypasses the secondary containment. Only

Table 2.2: Conformance with RG 1.183 Appendix A (Loss-of-Coolant Accident)

RG Section	RG Position	LGS Analysis	Comments
	leakage is through water, e.g., via a filled piping run that is maintained full, credit for retention of iodine and aerosols may be considered on a case-by-case basis. Similarly, deposition of aerosol radioactivity in gas-filled lines may be considered on a case-by-case basis.		the MSIV pathway leak rates are incorporated into the Tech. Specs.
4.6	Reduction in the amount of radioactive material released from the secondary containment because of ESF filter systems may be taken into account provided that these systems meet the guidance of Regulatory Guide 1.52 (Ref. A-5) and Generic Letter 99-02 (Ref. A-6).	Conforms	SGTS and RERS HEPA and charcoal adsorber filters meet these criteria and are therefore credited.
5.1	With the exception of noble gases, all the fission products released from the fuel to the containment (as defined in Tables 1 and 2 of this guide) should be assumed to instantaneously and homogeneously mix in the primary containment sump water (in PWRs) or suppression pool (in BWRs) at the time of release from the core. In lieu of this deterministic approach, suitably conservative mechanistic models for the transport of airborne activity in containment to the sump water may be used. Note that many of the parameters that make spray and deposition models conservative with regard to containment airborne leakage are nonconservative with regard to the buildup of sump activity.	Conforms	With the exception of noble gases, all the fission products released from the fuel to the containment are assumed to instantaneously and homogeneously mix in the suppression pool at the time of release from the core.
5.2	The leakage should be taken as two times the sum of the simultaneous leakage from all components in the ESF recirculation systems above which the technical specifications, or licensee commitments to item III.D.1.1 of NUREG-0737 (Ref. A-8), would require declaring such systems inoperable. The leakage should be assumed to start at the earliest time the recirculation flow occurs in these systems and end at the latest time the releases from these systems are terminated. Consideration should also be given to design leakage through valves isolating ESF recirculation systems from tanks vented to atmosphere, e.g., emergency	Conforms	The design basis 5 gpm leak rate is more than 2 times the acceptance criteria for the sum of the simultaneous leakage from all components in the ESF recirculation systems as addressed in the Program committed to in the T.S.6.8.4.a "Primary Coolant Sources Outside Containment". Since certain ECCS systems take suction immediately from the suppression pool, this leak path is assumed to start at time 0.

Table 2.2: Conformance with RG 1.183 Appendix A (Loss-of-Coolant Accident)

RG Section	RG Position	LGS Analysis	Comments
	core cooling system (ECCS) pump miniflow return to the refueling water storage tank.		Leakage to atmospheric tanks is credible only for lines connecting from ECCS pump discharges to such a tank, because of relative elevations. The sole leakage paths to a tank vented to atmosphere meeting this condition are the High Pressure Coolant Injection / Reactor Core Isolation Cooling test lines that discharge to the Condensate Storage tank (CST). These lines are isolated by two normally closed valves. Since the CST contents are demineralized water, ECCS leakage would quickly turn the water basic. Therefore, minimal elemental iodine is expected, and as a result, negligible iodine volatilization.
5.3	With the exception of iodine, all radioactive materials in the recirculating liquid should be assumed to be retained in the liquid phase.	Conforms	With the exception of iodine, all radioactive materials in ECCS liquids are assumed to be retained in the liquid phase.
5.4	<p>If the temperature of the leakage exceeds 212°F, the fraction of total iodine in the liquid that becomes airborne should be assumed equal to the fraction of the leakage that flashes to vapor. This flash fraction, FF, should be determined using a constant enthalpy, h, process, based on the maximum time-dependent temperature of the sump water circulating outside the containment:</p> $FF = \frac{h_{f1} - h_{f2}}{h_{fg}}$ <p>Where: h_{f1} is the enthalpy of liquid at system design temperature and pressure; h_{f2} is the enthalpy of liquid at saturation conditions (14.7 psia, 212°F); and h_{fg} is the heat of</p>	Not Applicable	The temperature of the leakage does not exceed 212°F.

Table 2.2: Conformance with RG 1.183 Appendix A (Loss-of-Coolant Accident)

RG Section	RG Position	LGS Analysis	Comments
	vaporization at 212°F.		
5.5	If the temperature of the leakage is less than 212°F or the calculated flash fraction is less than 10%, the amount of iodine that becomes airborne should be assumed to be 10% of the total iodine activity in the leaked fluid, unless a smaller amount can be justified based on the actual sump pH history and area ventilation rates.	Conforms	ESF leakage into Secondary Containment is assumed to flash such that 10% of the total iodine activity in the leaked fluid is assumed airborne.
5.6	The radioiodine that is postulated to be available for release to the environment is assumed to be 97% elemental and 3% organic. Reduction in release activity by dilution or holdup within buildings, or by ESF ventilation filtration systems, may be credited where applicable. Filter systems used in these applications should be evaluated against the guidance of Regulatory Guide 1.52 (Ref. A-5) and Generic Letter 99-02 (Ref. A-6).	Conforms	The credited SGTS, RERS and Control Room intake charcoal and HEPA filters meet the requirements of RG 1.52 and Generic Letter 99-02. These are credited at 95% efficiency for elemental and organic iodines, except for the SGTS which is credited at 99%. Aerosol removal efficiencies are assumed to be 99% based on the HEPA/charcoal combination. The above filter efficiencies are the historical design and Technical Specification basis, and are unchanged as a result of AST.
6.1	For the purpose of this analysis, the activity available for release via MSIV leakage should be assumed to be that activity determined to be in the drywell for evaluating containment leakage (see Regulatory Position 3). No credit should be assumed for activity reduction by the steam separators or by iodine partitioning in the reactor vessel.	Conforms	MSIV leakage will be considered an unfiltered radioactivity release pathway, with piping deposition credit, and the radiological consequences of such a release are analyzed. The radioactivity release from the fuel is assumed to instantaneously and homogeneously mix throughout the drywell air space. Mixing of this activity into the containment air space is as discussed under Item 3.7 above.
6.2	All the MSIVs should be assumed to leak at the maximum leak rate above which the technical specifications would require declaring the MSIVs inoperable. The leakage should	Conforms	MSIV leakage assumed in this accident analysis is 200 scfh for all steam lines and 100 scfh for any one line when tested at greater than or equal to 22 psig. A reduction in

Table 2.2: Conformance with RG 1.183 Appendix A (Loss-of-Coolant Accident)

RG Section	RG Position	LGS Analysis	Comments
	<p>be assumed to continue for the duration of the accident. Postulated leakage may be reduced after the first 24 hours, if supported by site-specific analyses, to a value not less than 50% of the maximum leak rate.</p>		<p>leakage to 55.1% is assumed at 24 hours, based on expected containment pressures at that time as indicated in Attachment E. After 24 hours no further reduction in leak rate is credited.</p>
6.3	<p>Reduction of the amount of released radioactivity by deposition and plateout on steam system piping upstream of the outboard MSIVs may be credited, but the amount of reduction in concentration allowed will be evaluated on an individual case basis. Generally, the model should be based on the assumption of well-mixed volumes, but other models such as slug flow may be used if justified.</p>	Conforms	<p>Modeling of deposition and plateout for MSIV piping is based on the assumption of 2 well mixed volumes for any one pipe line providing a leak path, with one node from the reactor pressure vessel to the inboard MSIV (except for the assumed broken line, where deposition in this node is not credited), and the other node from the inboard MSIV to the Turbine Stop Valve that provides the seismically designed boundary of the MSIV alternate drain pathway. For aerosol settling, only horizontal piping runs are credited, and only the horizontal projected surface area is considered available. In addition, no credit is taken for aerosol settling after 24 hours.</p> <p>The formulation for determining elemental iodine activity removal from a well-mixed node is based on that developed in AEB-98-03, using a 20 group probability distribution of settling velocities (based on AEB-98-03 probability descriptions) with settling efficiencies determined for each group and a net weighted average efficiency. This process is significantly more conservative than use of a median settling velocity. Resuspension of deposited elemental iodine and immediate release as organic iodine is also modeled.</p> <p>Other phenomena, such as effects of</p>

Table 2.2: Conformance with RG 1.183 Appendix A (Loss-of-Coolant Accident)

RG Section	RG Position	LGS Analysis	Comments
			<p>depletion over time of more easily settled particle sizes are considered to be adequately addressed by the above conservatisms.</p> <p>For elemental iodine deposition, both horizontal and vertical piping is credited on all interior surfaces, as this deposition is not gravity dependent.</p> <p>The general negligibility of decay heat from fission product deposition on resulting temperatures for main steam lines was demonstrated for the Clinton Power Station LOCA analysis of reference 35, as recently accepted by the NRC. The general applicability of the Cline model for the temperature/time relationship was also demonstrated in that calculation, which is considered typical and therefore applicable as well to LGS.</p>
6.4	<p>In the absence of collection and treatment of releases by ESFs such as the MSIV leakage control system, or as described in paragraph 6.5 below, the MSIV leakage should be assumed to be released to the environment as an unprocessed, ground-level release. Holdup and dilution in the turbine building should not be assumed.</p>	Conforms	<p>No ESFs are assumed to be available to collect or treat MSIV leakage. Releases are assumed to be from the worst case North Vent Stack, without credit for holdup or dilution in the condenser or turbine building. This exhaust stack is <u>not</u> an elevated release, and is treated as a ground level release for dose assessment.</p>
6.5	<p>A reduction in MSIV releases that is due to holdup and deposition in main steam piping downstream of the MSIVs and in the main condenser, including the treatment of air ejector effluent by offgas systems, may be credited if the components and piping systems used in the release path are capable of performing their safety function during and</p>	Conforms	<p>Main steam piping between the outboard MSIVs and the turbine stop valves is credited as piping systems capable of performing their safety function during and following an SSE. This includes the condenser, which is seismically rugged and meets the</p>

Table 2.2: Conformance with RG 1.183 Appendix A (Loss-of-Coolant Accident)

RG Section	RG Position	LGS Analysis	Comments
	<p>following a safe shutdown earthquake (SSE). The amount of reduction allowed will be evaluated on an individual case basis. References A-9 and A-10 provide guidance on acceptable models.</p>		<p>requirements of 10CFR Part 100 Appendix A, as discussed in LGS UFSAR Section 6.7.</p> <p>For elemental iodine, RG 1.183's Reference A-9 is considered only in part since it is the basis for slug flow models. Reference A-9 provides elemental iodine deposition velocities, resuspension rates and fixation rates. The deposition velocities are used in the well-mixed model formulation in AEB-98-03 that is analogous for aerosols or elemental iodine. This modeling is described in detail in this calculation.</p> <p>Resuspension of deposited elemental iodine is conservatively treated as immediately released organic iodine.</p>
7.0	<p>The radiological consequences from post-LOCA primary containment purging as a combustible gas or pressure control measure should be analyzed. If the installed containment purging capabilities are maintained for purposes of severe accident management and are not credited in any design basis analysis, radiological consequences need not be evaluated. If the primary containment purging is required within 30 days of the LOCA, the results of this analysis should be combined with consequences postulated for other fission product release paths to determine the total calculated radiological consequences from the LOCA. Reduction in the amount of radioactive material released via ESF filter systems may be taken into account provided that these systems meet the guidance in Regulatory Guide 1.52 (Ref. A-5) and Generic Letter 99-02 (Ref. A-6).</p>	Conforms	<p>Containment purging as a combustible gas or pressure control measure is not required nor credited in any design basis analysis for 30 days following a design basis LOCA at LGS.</p> <p>Also see the RG Section 3.8 discussion in this Table.</p>

3. Design Inputs and Assumptions

The design inputs used for this calculation were extracted from extensive review of LGS Licensing documents, UFSAR sections, existing calculations, Design Basis Documents, and regulatory guidance documents, including the Tables 2.1 and 2.2 in the previous section. These design inputs are listed in a tabular format with a description of the design input, units, values, comments and reference source documents. Table 3.1 provides general plant parameters applicable to this, and other, accident scenarios. Table 3.2 provides LOCA specific input used in this calculation. For specific details about the values used, the reference source document listed should be reviewed.

Generally, credit is taken only for those active accident mitigation features that are classified as safety-related, are required to be operable by technical specifications, are powered by emergency power sources, and are automatically actuated.

The numeric values that are chosen as inputs to analyses required by 10 CFR 50.67 are compatible to AST and TEDE dose criteria and selected with the objective of maximizing the postulated dose. The use of a 10% lower flow rate for the Control Room and a minimum Control Room recirculation flow rate, and use of worst-case ground release χ/Q_s s, demonstrate the inherent conservatism in the plant design and post-accident response analysis.

Table 3.1: General AST Design Inputs and Assumptions

TABLE 3.1: General AST Analysis Design Inputs for LGS	AST Value	Referenced Source Document	Assumption/Comment
Core Power Level	3527 MWth	Facility Operating Licenses NPF-39 [Ref. (1)] and NPF-85 [Ref. (2)], for Rated Thermal Power. Regulatory Guide 1.49 [Ref. (5)] for 102% multiplier. UFSAR [Ref. (3)] Table 15.0-2A identifies the resulting analysis power.	This value corresponds to the DBA power level, including margin, above the Rated Thermal Power Level of 3458 MWth, to account for instrument uncertainty.
Core Source Terms	Reg. Guide 1.183 based list of 60 Core Isotopes, with activities specific to burnup in LGS core	LGS Design Analysis No. LM-0645, Rev. 0, Attachment A [Ref.(18)]	The ORIGEN 2.1 based source terms developed for AST application in the Referenced Source Document are applied to Limerick AST accident analysis, on a Curie per MWt basis, as justified in the referenced source document.
Dose Conversion Factors	FGR 11 and 12 for Inhalation CEDE and cloud submersion EDE. Values are built into RADTRAD file FGR11&12.INP for a total of 60 isotopes.	Federal Guidance Reports 11 and 12 [Ref.(30),(31)]. See Attachment A for RADTRAD output.	
EAB - $^{-2}/\alpha$'s			
Distance From North Vent Stack	731 meters	Limerick UFSAR, Table 2.3.4-4; LGS Accident X/Q Values [Ref.(3)]	
Dispersion Factors: 0 – 2 hr (or worst two hours)	3.18E-04 (sec/m ³)	LGS Calc. LM-0641, Rev.0. [Ref.(19)]	

TABLE 3.1: General AST Analysis Design Inputs for LGS	AST Value	Referenced Source Document	Assumption/Comment
<p>LPZ - λ/Q's</p> <p>Distance From North Vent Stack</p> <p>Dispersion Factors:</p> <ul style="list-style-type: none"> 0 – 8 hrs 8 – 24 hrs 1 – 4 days 4 – 30 days 	<p>2043 meters</p> <p>5.79E-05 (sec/m³)</p> <p>4.10E-05 (sec/m³)</p> <p>1.95E-05 (sec/m³)</p> <p>6.68E-06 (sec/m³)</p>	<p>Limerick UFSAR, Table 2.3.4-4; LGS Accident X/Q Values [Ref.(3)]</p> <p>LGS Calc. LM-0641, Rev.0. [Ref.(19)]</p>	
<p>CR - λ/Q's</p> <p>From North Vent Stack</p> <p>Dispersion Factors:</p> <ul style="list-style-type: none"> 0 – 2 hrs 2 – 8 hrs 8 – 24 hrs 1 – 4 days 4 – 30 days 	<p>6.88E-03 (sec/m³)</p> <p>5.17E-03 (sec/m³)</p> <p>2.04E-03 (sec/m³)</p> <p>1.29E-03 (sec/m³)</p> <p>9.63E-04 (sec/m³)</p>	<p>LGS Calc. LM-0641, Rev.0. [Ref.(19)]</p>	<p>The North Vent Stack is relatively close to the control room intake such that its X/Qs are expected to bound all other potential release paths. This path clearly bounds any Reactor Enclosure openings due to significant differences in distances, and elevations. These X/Q are also clearly bounding for MSIV leakages, whose most likely release path is through the south stack, or possibly Turbine Building openings at, again, greater distances from the control room intake.</p>

TABLE 3.1: General AST Analysis Design Inputs for LGS	AST Value	Referenced Source Document	Assumption/Comment
Control Room			
Volume	126,000 ft ³	Calc. M-78-01, Rev. 6. [Ref.(16)].	
Radiological Isolation Mode			
Unfiltered Inleakage Rate	275 cfm	DBD L-S-08B, [Ref.(12)], For Intake Rate and total CREFAS Flow	Unfiltered inleakage assumption will be maximized for Design Basis Accident impact. This provides margin above tracer gas results of less than 100 cfm (Ref. [(42)]). 10% Minimum Tech Spec CREFAS flow value used for conservatism, since it minimizes filtered recirc. Analytically, unfiltered inleakage assumed to be into the Control Room Envelope from the control structure intake location.
Filtered Intake Rate	525 cfm, maximum	commitments	
Total CREFAS Flow	3,000 – 10% cfm		
Filtered Recirc. Rate	2175 cfm minimum		
Filter Efficiency	95% for all Elemental and Organic Iodines, 99% for Aerosols based on HEPA	Efficiencies per RG 1.52, Rev. 2 with conservative value for HEPA.	Current values for charcoal absorber and conservative for HEPA credit for aerosol removal.
Initiation Time	0 minutes		Automatic actuation on high rad signal; detectors located sufficiently upstream of dampers such that closure is assured before detected activity enters CR.

TABLE 3.1: General AST Analysis Design Inputs for LGS	AST Value	Referenced Source Document	Assumption/Comment
<p>Chlorine Isolation Mode Unfiltered Inleakage Rate Filtered Intake Rate Filtered Recirc. Rate</p> <p>Filter Efficiency</p>	<p>Run Indefinitely</p> <p>275 cfm 0 cfm 3,000 – 10% cfm</p> <p>95% for all elemental and organic iodines. 99% for aerosols, based on HEPA</p>		<p>Previously, Mode assumed to last for 8 hours; Now assumed indefinite to maximize Design Basis Accident impacts. This also provides a lower bound for Rad Mode filtered intake conditions</p> <p>Current values for charcoal absorber and conservative for HEPA credit for aerosol removal.</p>

Table 3.2: Design Inputs and Assumptions Specific for AST Based LOCA

TABLE 3.2: LOCA AST Analysis Design Inputs for LGS	AST Value	Referenced Source Document	Assumption/Comment
Primary Containment Volume Containment (Drywell + Supp.Pool Airspace): <u>Calculated Volume</u>	(0.95x243,580 ft ³ + 147,670 ft ³) 379,071 ft ³	ST-4-LLR-001-1, "The LLRT Program and Accountability Test", Rev. 8. [Ref.(39), with a 5% reduction in drywell volume as an allowance for occupied space additions, and with a minimum Supp. Pool Airspace volume from DBD L-S-25A [Ref. (14)].	For Primary Containment Leakage purposes (except for MSIVs) the leak rate is effectively independent of containment volume. For MSIV leakage purposes only the drywell volume is credited for the first two hours. The drywell-wetwell volumes are thereafter treated as well mixed as a result of rapid steaming that would follow ECCS restoration that force drywell activity through downcomers into the suppression pool airspace. No credit is taken for suppression pool scrubbing.
Minimum Suppression Pool Water Volume	118,655 ft ³	DBD L-S-25A [Ref. (14)]	
Reactor Coolant Volume (for Dilution of ECCS Water)	13,108 ft ³ @ 552.6 °F = 9,663 ft ³ @ 95.0 °F	UFSAR Table 6.2-4A [Ref. (3)], and Ref. (37) Steam Table.	
Secondary Containment Volume	1,800,000 ft ³ (below refueling floor)	Calc. M-76-01, Rev. 7 [Ref.(15)]	Secondary Containment mixing is by the RERS. Only 1/2 of this volume is assumed available for mixing.

TABLE 3.2: LOCA AST Analysis Design Inputs for LGS	AST Value	Referenced Source Document	Assumption/Comment
Releases to Containment	No Core Activity Release for first two minutes. Release Fractions and Timing per NUREG-1465 as shown in RADTRAD File BWR_DEF.rft [Attachment A]	NRC Regulatory Guide 1.183 [Ref.(4)]	RADTRAD runs use a starting point of time 0, which is artificially the start of gap release. Credit for the ~2 minute delay can be credited as additional margin available for credited time dependent system responses. For instance, in the RADTRAD analyses, a drawdown time of 15.5 minutes is used. Actual available time would be 17.5 minutes. Containment isolation is assumed to be instantaneous in the RADTRAD analyses. The 2-minute delay can be used in evaluating the acceptability of actual isolation valve closure times.
Containment Activity Removal Mechanisms	Natural Deposition of Aerosols		Credit for Natural Deposition of Aerosols in Containment is achieved through the use of the Power's Model, as implemented in the RADTRAD code. No credit is taken for elemental or organic iodine natural deposition in containment.
SGTS Flow Rate Filter Efficiency HEPA Charcoal Drawdown Timing	3,000 cfm pre-drawdown 2,500 cfm post-drawdown 99.0% 99.0% 15.5 minutes	DBD L-S-32 [Ref. (13)], LM-0551, Rev. 0 [Ref.(17)], and Tech Spec Surveillance Requirement 4.6.5.1.1 maximum SGTS flow Efficiencies per RG 1.52, Rev. 2 for four inch or greater charcoal adsorber, with conservative value for HEPA. DBD L-S-32 [Ref. (13)]	Attachment I provides an evaluation that confirms that the SGTS system maintains secondary containment negative pressure under high wind speed conditions in accordance with RG 1.183, Appendix A, Section 4.3 guidance. Current values for charcoal absorber and conservative for HEPA credit for aerosol removal.

TABLE 3.2: LOCA AST Analysis Design Inputs for LGS	AST Value	Referenced Source Document	Assumption/Comment
RERS Flow Rate Filter Efficiency HEPA Charcoal Drawdown Timing	60,000 –10% cfm 99% 95% 15.5 minutes	DBD L-S-32 [Ref. (13)], reduced to minimum of Tech Spec range. Efficiencies per RG 1.52, Rev. 2, with conservative value for HEPA. DBD L-S-32 [Ref. (13)]	Current values for charcoal absorber and conservative for HEPA credit for aerosol removal.
Primary Containment Leak Rate Test Pressure	0.5% per day, 0-1day. 0.25% per day, 1-30 days. 44 psig	Current design basis <i>New Design Assumption</i>	See Attachment E for the Containment Response results for a Design Basis LOCA, indicating only a 50% Containment Leak Rate reduction at and after 1 day is conservative.
MSIV – Piping, Leakage, and Flow Parameters	Attachment B establishes: <ul style="list-style-type: none"> • Pipe parameters such as volume aerosol settling area, and elemental iodine deposition areas • Containment leak rates as a function of leak acceptance criteria; • inboard and 	See Attachment B.	MSL A, B, C, and D piping volumes and inside surface areas were derived from system isometric drawings as detailed in Attachment B. Lines A and B were found to be the worst-case lines, with inboard line B determined to be the worst case postulated break location. These lines will have a leak acceptance criterion of 100 scfh per line, with 200 total for all lines. Though a Recirculation-Suction Line Break (RSLB) is historically assumed to

TABLE 3.2: LOCA AST Analysis Design Inputs for LGS	AST Value	Referenced Source Document	Assumption/Comment
<p>Leak Rates Total Single Line</p> <p>Test Pressure</p>	<p>outboard flow rates</p> <p>200 scfh 100 scfh</p> <p>Reduced to 55.1% of these values after 24 hours</p> <p>22 psig</p>	<p>Ref. (23)</p> <p><i>New Design Assumption</i></p> <p>Ref. (23)</p>	<p>be the most credible non-mechanistic source of a LOCA, a Main Steam Line Break (MSLB) of the worst-case inboard line is conservatively assumed, in order to artificially limit deposition credit.</p> <p>Outboard MSIV failure is assumed as the Single Active Failure since this maximizes the volume of piping in which the fluid is depressurized, minimizing deposition.</p> <p>Only horizontal piping is credited, and only the horizontal projected area of the pipe is used as the settling area for aerosols. For elemental iodine, all piping and surfaces are credited. Two nodes, one for inboard, one for penetration and outboard pipe, are used to model each assessed steam line. Only seismically qualified piping is credited. This piping is from the reactor vessel through the Turbine Condenser.</p> <p>Currently design basis, using Alternative Drain Pathway.</p> <p>See Attachment E, indicating a 55.1% MSIV Leak Rate reduction at 1 day compared to the design basis leak rate.</p>
<p>MSIV Leakage Mitigating Factors</p>	<p>Deposition of aerosols and elemental iodines credited in seismically qualified steam line</p>	<p>Well-Mixed Modeling, Aerosol settling velocity from Ref. (11).</p>	<p>Deposition based on AEB-98-03 [Ref. (11)] well-mixed model and a probabilistic distribution of settling velocities. Only horizontal piping is credited, and only the</p>

TABLE 3.2: LOCA AST Analysis Design Inputs for LGS	AST Value	Referenced Source Document	Assumption/Comment
	<p>pipings from the reactor vessel to the turbine stop valve.</p> <p>Release is through the HP condenser shell with well-mixed assumption and associated delay. Analysis of free volumes and surface areas for conservative evaluation of deposition is documented in Attachment B.</p>	<p>Elemental Iodine and Organic Iodine deposition velocities based on Ref. (10). Organic iodine deposition not credited.</p> <p>UFSAR Section 6.7 describes the seismically rugged MSIV Leakage Alternate Drain Pathway, with a manual actuation start time of 20 minutes.</p>	<p>projected horizontal area as the settling area. For elemental iodine, deposition velocities from Ref. (32) are used and all piping and surfaces credited.</p> <p>Modeling is consistent with Ref. (29), and as used for the NRC-approved Ref. (35) analysis. Consistent with the latter, resuspension of deposited elemental iodine is conservatively treated as immediately released organic iodine.</p> <p>Start time for Alternate Drain Pathway at 20 minutes evaluated and found to be of no significance.</p>

TABLE 3.2: LOCA AST Analysis Design Inputs for LGS	AST Value	Referenced Source Document	Assumption/Comment
ECCS Leakage into Secondary Containment			
Leak Rate	5 gpm	LM-0551, Rev. 0 [Ref.(17)], UFSAR Section 15.6	Quantitative leak rate, with procedural acceptance criterion at 2.5 gpm, for ECCS systems, for Technical Specification 6.8.4.a Program for the Control of Primary Coolant Sources Outside Containment.
Fraction Flashed	10%	NRC Regulatory Guide 1.183 [Ref.(4)]	
Filtered by SGTS	Yes		Systems outside containment are contained within the Reactor Enclosure

4. Methodology and Acceptance Criteria

This calculation addresses the DBA-LOCA based on guidance in SRP 15.0.1 [Ref. (6)] and RG 1.183 [Ref. (4)], and demonstrates compliance with dose criteria in 10CFR50.67 [Ref. (8)].

For airborne releases this calculation uses the computer program RADTRAD, Version 3.03 [Ref. (10)] for radioactivity transport and onsite and offsite dose assessment.

This calculation evaluates doses for the standard RG 1.183 30-day post-LOCA period, with onsite $^2/q$'s determined using ARCON96, and offsite $^2/q$'s determined using PAVAN. Dispersion factors are derived in a separate analysis [Ref. (19)].

The methodology for use and treatment of individual parameters are described in the sections below.

4.1. Core Source Term

The AST values used in this analysis were derived using guidance outlined in Reg. Guide 1.183. Core activity is based on the Origen2.1 analysis as performed originally for Peach Bottom and then endorsed for Limerick use in Attachment A of LM-0645 [Ref. (18)] to develop a conservative equilibrium end-of-cycle condition for the Limerick 24 month fuel cycle. The calculated source terms, as utilized in this analysis, are reported in units of Ci/MWth, so then the DBA power level of 3527 MWth (which accounts for instrument uncertainty) can be applied in calculation of doses. The bounding isotopic inventory at either end of cycle or 100 EFPD near beginning of cycle conditions are used for each isotope. Results from these analyses were incorporated into the RADTRAD "nif" files contained in Attachment A of this analysis.

4.2. Radioactivity Release Fraction and Timing

Core release fractions used in this analysis are in conformance with RG 1.183 [Ref. (4)], Table 1, below:

Group	RG 1.183, Table 1 BWR Core Inventory Fraction Released Into Containment		
	Gap Release	Early In-vessel	Total
Noble Gases	0.05	0.95	1.0
Halogens	0.05	0.25	0.3
Alkali Metals	0.05	0.20	0.25
Tellurium Metals	0.00	0.05	0.05
Ba, Sr	0.00	0.02	0.02
Noble Metals	0.00	0.0025	0.0025
Cerium Group	0.00	0.0005	0.0005
Lanthanides	0.00	0.0002	0.0002

with timing in conformance with RG 1.183, Table 4, specifically,

	Start Time	Duration
Gap Release	2 min.	0.5 hrs
Early In-Vessel Release	0.5 hrs	1.5 hrs

These parameters are implemented by RADTRAD in file BWR_DBA.RFT as follows:

```

Release Fraction and Timing Name:
BWR, NUREG-1465, Tables 3.11 & 3.13, June 1992
Duration (h): Design Basis Accident
0.5000E+00 0.1500E+01 0.0000E+00 0.0000E+00
Noble Gases:
0.5000E-01 0.9500E+00 0.0000E+00 0.0000E+00
Iodine:
0.5000E-01 0.2500E+00 0.0000E+00 0.0000E+00
Cesium:
0.5000E-01 0.2000E+00 0.0000E+00 0.0000E+00
Tellurium:
0.0000E+00 0.0500E+00 0.0000E+00 0.0000E+00
Strontium:
0.0000E+00 0.2000E-01 0.0000E+00 0.0000E+00
Barium:
0.0000E+00 0.2000E-01 0.0000E+00 0.0000E+00
Ruthenium:
0.0000E+00 0.2500E-02 0.0000E+00 0.0000E+00
Cerium:
0.0000E+00 0.5000E-03 0.0000E+00 0.0000E+00
Lanthanum:
0.0000E+00 0.2000E-03 0.0000E+00 0.0000E+00
Non-Radioactive Aerosols (kg):
0.0000E+00 0.0000E+00 0.0000E+00 0.0000E+00
End of Release File

```

RADTRAD runs are made with the gap activity release starting at time 0 for simplicity, but with recognition of no gap release during the first two minutes, where this is important. For instance, containment isolation is initiated by low water level and high drywell pressure, which occur very early in a LOCA. Therefore, these activities are credited before RADTRAD gap release, or analytically at time 0.

4.3. Distribution of Activity Released from Containment

As radioactivity is initially released from the reactor vessel it is conservatively distributed to the drywell, and except for non-noble gases, simultaneously to the suppression pool. The specifics of these mechanisms are discussed below and compared with regulatory guidance.

4.3.1. Drywell and Suppression Pool Airspace Mixing

RG 1.183, Appendix A guidance on this issue is:

"The radioactivity released from the fuel should be assumed to mix instantaneously and homogeneously throughout the free air volume of the primary containment in PWRs or the drywell in BWRs as it is released. This distribution should be adjusted if there are internal compartments that have limited ventilation exchange. The suppression pool free air volume may be included provided there is a mechanism to ensure mixing between the drywell to the wetwell."

For LGS, the radioactivity release from the reactor is assumed to mix instantaneously and homogeneously throughout the drywell. No mixing between the drywell and the wetwell is assumed for the first two hours. This is based on an assumption that the initial blowdown occurs before fuel damage commences, and that AST source terms are

based on a non-mechanistic loss of ECCS flow to the reactor for two hours. After ECCS flow restoration the rapid steaming of ECCS liquids are assumed to quickly displace significant fractions of the airborne activity in the drywell through downcomers into the suppression chamber, providing the mixing mechanism. Conservatively, no credit is taken for suppression pool scrubbing during this flow. Therefore, after two hours, complete mixing of activity in the drywell volume to the suppression chamber airspace is assumed. The RADTRAD Containment compartment volume parameter and MSIV leakage flow rates implement this treatment.

4.3.2. Releases to Suppression Pool

RG 1.183, Appendix A guidance on this issue is:

"With the exception of noble gases, all the fission products released from the fuel to the containment should be assumed to instantaneously and homogeneously mix in the suppression pool at the time of release from the core. In lieu of this deterministic approach, suitably conservative mechanistic models for the transport of airborne activity in containment to the sump water may be used. Note that many of the parameters that make spray and deposition models conservative with regard to containment airborne leakage are nonconservative with regard to the buildup of sump activity."

For LGS, with the exception of noble gases, all fission products released from the fuel to the containment are assumed to instantaneously and homogeneously mix in the suppression pool at the time of release. RADTRAD models for ECCS leakage treat the suppression pool water as the compartment to which core activity is released.

4.4. Airborne Activity Removal Mechanisms in Containment

Radioactivity in containment can be removed by natural deposition, containment spray, suppression pool scrubbing, decay, and leakage. As discussed below only natural deposition, decay, and leakage are credited.

4.4.1. Natural Deposition (Credited)

RG 1.183, Appendix A guidance on this issue is:

"Reduction in airborne radioactivity in the containment by natural deposition within the containment may be credited. Acceptable models for removal of iodine and aerosols are described in NUREG/CR-6189, "A Simplified Model of Aerosol Removal by Natural Processes in Reactor Containments". The latter model is incorporated into the analysis code RADTRAD. The prior practice of deterministically assuming that a 50% plateout of iodine is released from the fuel is no longer acceptable to the NRC staff as it is inconsistent with the characteristics of the revised source terms."

For LGS, the RADTRAD computer program, including the Powers Natural Deposition algorithm based on NUREG/CR-6189, is used for modeling aerosol deposition in primary containment. No natural deposition is assumed for elemental or organic iodine. The lower bound (10%) level of deposition credit is used.

4.4.2. Suppression Pool Scrubbing (Not Credited)

RG 1.183, Appendix A guidance on this issue includes:

Reduction in airborne radioactivity in the containment by suppression pool scrubbing in BWRs should generally not be credited. However, the staff may

consider such reduction on an individual case basis. The evaluation should consider the relative timing of the blowdown and the fission product release from the fuel, the force driving the release through the pool, and the potential for any bypass of the suppression pool. Analyses should consider iodine re-evolution if the suppression pool liquid pH is not maintained greater than 7.

For LGS, suppression pool scrubbing has not been analyzed and is not credited. Since it is not credited, suppression pool bypass is not a radiological release issue. Analyses in reference (20) demonstrate that suppression pool pH is maintained greater than 7 so iodine re-evolution is not of concern.

4.4.3. Decay Credited

Decay of radioactivity is credited in all compartments, prior to release. This is implemented in RADTRAD using the half-lives in the "nif" files. RADTRAD's decay plus daughter option is used. In reality, daughter products such as xenon from iodines or iodines from tellurium are unlikely to readily escape from the matrix in which the parent iodine or tellurium is contained. Nevertheless, the RADTRAD feature to include daughter effects is selected for conservatism.

4.4.4. Depletion from Leakage Credited

For analyses of doses due to release from containment, the dose is the result of leakage. It is reasonable to credit the small amount of depletion from the containment inventory associated with this leakage. This is done inherently by RADTRAD.

4.4.5. Containment Spray (Not Credited)

Neither Drywell nor Wetwell Spray is credited as a removal mechanism.

4.5. **Containment Leakage Release Pathways**

Release paths considered in this accident dose assessment are shown on the Figure 4.1 below and the associated Table 4.1. The detailed bases for analysis of the paths follows thereafter.

Figure 4.1: Radioactivity Transport Pathways

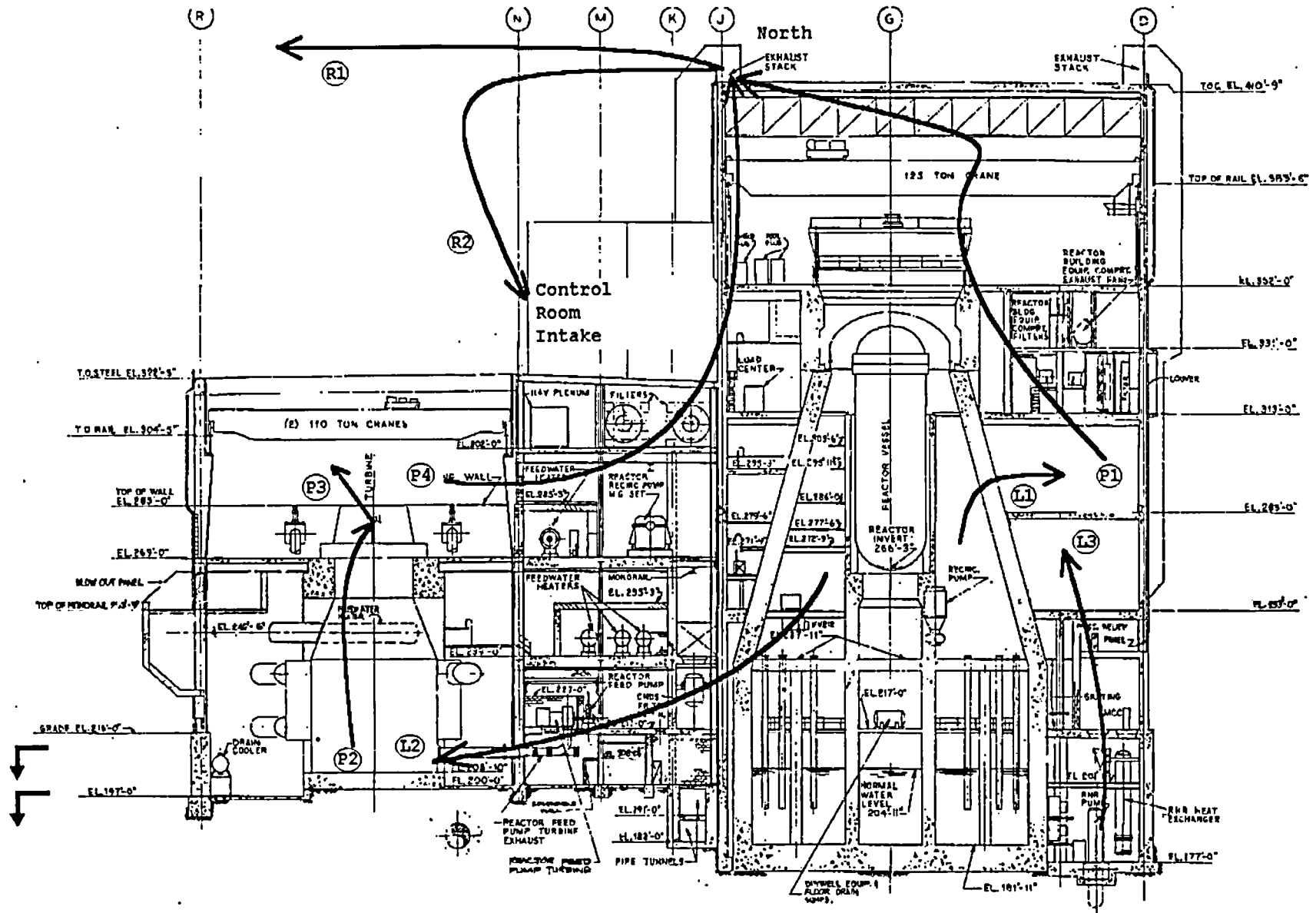


Table 4.1: Leak, Transport, and Release Path Layouts

Leakage Rates and Secondary Containment Mixing Parameters		
Path	Description	Parameters & Values
L ₁	Primary Containment Leakage to Secondary Containment	Leak Rate: L _a = 0.50 %/day, 0 - 15.5 min after start of gap release. Release is unfiltered through the North Stack during drawdown period.
P ₁	Release from Secondary Containment to Environment through SGTS Filter	L _a = 0.50 %/day, 15.5 min - 24hr Release is SGTS filtered through North Stack. 0.5 x L _a = 0.25 %/day, 1 - 30days Release is SGTS filtered through North Stack.
L ₂	MSIV Leakage to Condenser Environment	Leak Rate: Based on LLRT acceptance criterion of 200 scfh for all main steam (MS) lines, 100 scfh maximum for any one MS line when measured at greater than or equal to 22 psig. Two Steam lines are each treated as two node well-mixed volumes each with 100 scfh flow, after various adjustments discussed below. Leak Rate reduced to 55.1% after 24 hours. Release is from Turbine Building, unfiltered through North Stack.
P ₂	Leakage Well Mixed in HP Turbine/Condenser Shell. No credit for transport to other shells through available opening. No credit for substantial plateout potential on Condenser Tubing.	
P ₃	Leak from Turbine Shaft Seals to Turbine Building Atmosphere	Analytically, flow is direct from the condenser to the North Stack.
P ₄	Flow from Turbine Building to North Stack. No credit for mixing or holdup or deposition in Turbine Building. No filtration is provided for this flow.	
L ₃	ECCS Leakage (Supp. Pool Water Source) to Secondary Containment	Leak Rate: 5 gpm, 0 - 15.5 min {2x administrative limit} Release is unfiltered through North Stack during drawdown period.
P ₁	Release from Secondary Containment to Environment through SGTS Filter	5 gpm, 15.5 min - 30days {2x administrative limit} Release is SGTS filtered through North Stack.
P ₁	Release of Secondary Containment Atmosphere to the Environment	Secondary Containment mixing credit in 50% of Reactor Enclosure Volume. RERS provides the mixing mechanism, Volume (for analysis) = 900,000 cubic feet Outflow (for analysis) = 3000 cfm during drawdown period and 2500 cfm thereafter. For first 15.5 minutes, flow is directed through the North Stack without RERS or SGTS filter credit.

Leakage Rates and Secondary Containment Mixing Parameters		
Path	Description	Parameters & Values
R ₁	Control Room Intake from the Releases to the Environment	525 cfm Maximum filtered intake, plus 275 cfm of unfiltered inleakage. Total CREFAS flow is 2700 cfm, with recirculation being the balance after intake is subtracted. CREFAS filters credited at 99% for aerosols (based on HEPA) and 95% for charcoal absorbers (for elemental and organic iodine.)
	Control Room Exhaust to Environment	800 cfm, to balance with intake and inleakage
R ₂	Release to Environment for Offsite Dose Assessment Purposes	R ₁ and R ₂ include Primary Containment to Secondary Containment, ECCS Leakage, and MSIV Leakage related releases

4.5.1. Primary Containment Leakage Pathways

Design basis Primary Containment leakage is assumed to be controlled to an L_a rate of 0.5% per day. For RADTRAD radioactivity transport analysis this leak rate will be used for the first 24 hours, and then reduced by 50% thereafter. Attachment E provides justification for the reduction, based on containment pressure reductions.

The entire leakage is treated as being to the secondary containment. Because of the RERS recirculation fans after 3 minutes, credit is taken for mixing in Secondary Containment.

The exhaust from Secondary Containment is filtered through the RERS and SGTS filter trains, following a 15.5-minute drawdown period. After drawdown, RERS and SGTS HEPA and charcoal filters are available to reduce the release activity. The North Stack release point is treated as a zero velocity vent release (ground-ground level equivalent) for Control Room X/Q determination, and as a ground level release for offsite dose assessment. Therefore, no elevated release is credited.

Based on the design and operation of the Containment Atmospheric Control System, and the Primary Containment Instrument Gas (PCIG) System, LGS does not routinely purge primary containment during power operations. Therefore, per Ref. (4), Paragraph 3.8, releases from containment purging prior to isolation during a DBA-LOCA are not considered. Generally, high volume purging is only used for Inerting and De-Inerting for outages. Low volume purge lines are available for pressure or oxygen concentration control, and the PCIG System draws gas from the drywell for instrument gas to minimize pressure buildup.

4.5.2. Secondary Containment Bypass Pathways

Secondary containment bypass leakage potential has historically been evaluated as discussed in UFSAR subsection 6.2.3.2.3, and UFSAR Table 6.2-15. The conclusions continue to apply with application of AST, with the

exception of Containment Penetrations 7A-D Primary Steam, and Containment Penetration 8 Primary Steam Line Drain. Because of the use of the MSIV Leakage Alternate Drain Pathway, which is seismically rugged and meets the requirements of 10CFR Part 100 Appendix A, as discussed in LGS UFSAR Section 6.7, MSIV leakage bypasses secondary containment and is released through the Turbine Condenser System, as discussed below.

4.5.3. MSIV Leakage Alternate Drain Path Crediting Piping and Condenser Deposition Credit

As noted in Section 4.5.2, MSIV leakage is the only Secondary Containment bypass pathway analyzed for radiological dose consequences. The MSIV leakage flows and pathways considered are schematically indicated in Figure 4.2.

4.5.3.1. Consideration of Alternate Drain Path Release

The radioactivity associated with all MSIV leakage is assumed to be released directly from the Primary Containment and into the Main Steam Lines per RG 1.183, Appendix A, Section 6.1. MSIV leakage has separate limits and a separately analyzed dose assessment, therefore it is not included in the L_a fraction limit, and is instead separately controlled.

MSIV leakage assumed in this accident analysis is 200 scfh total for all steam lines and 100 scfh for any one line.

The leak rate and inboard piping flow rate associated with a 100 scfh leak rate Leak Rate Acceptance Criterion is:

$$\text{Leak Rate Acceptance Criterion (scfh)} * [14.7 / (P_{MSIVtest} + 14.7)] * (276+460) / (68+460)$$

Where:

$P_{MSIVtest}$ = 22 psig MSIV Leak Test Pressure
 276 °F is the peak drywell temperature at 2 minutes, per Attachment E.

Associated outboard piping flow rates are:

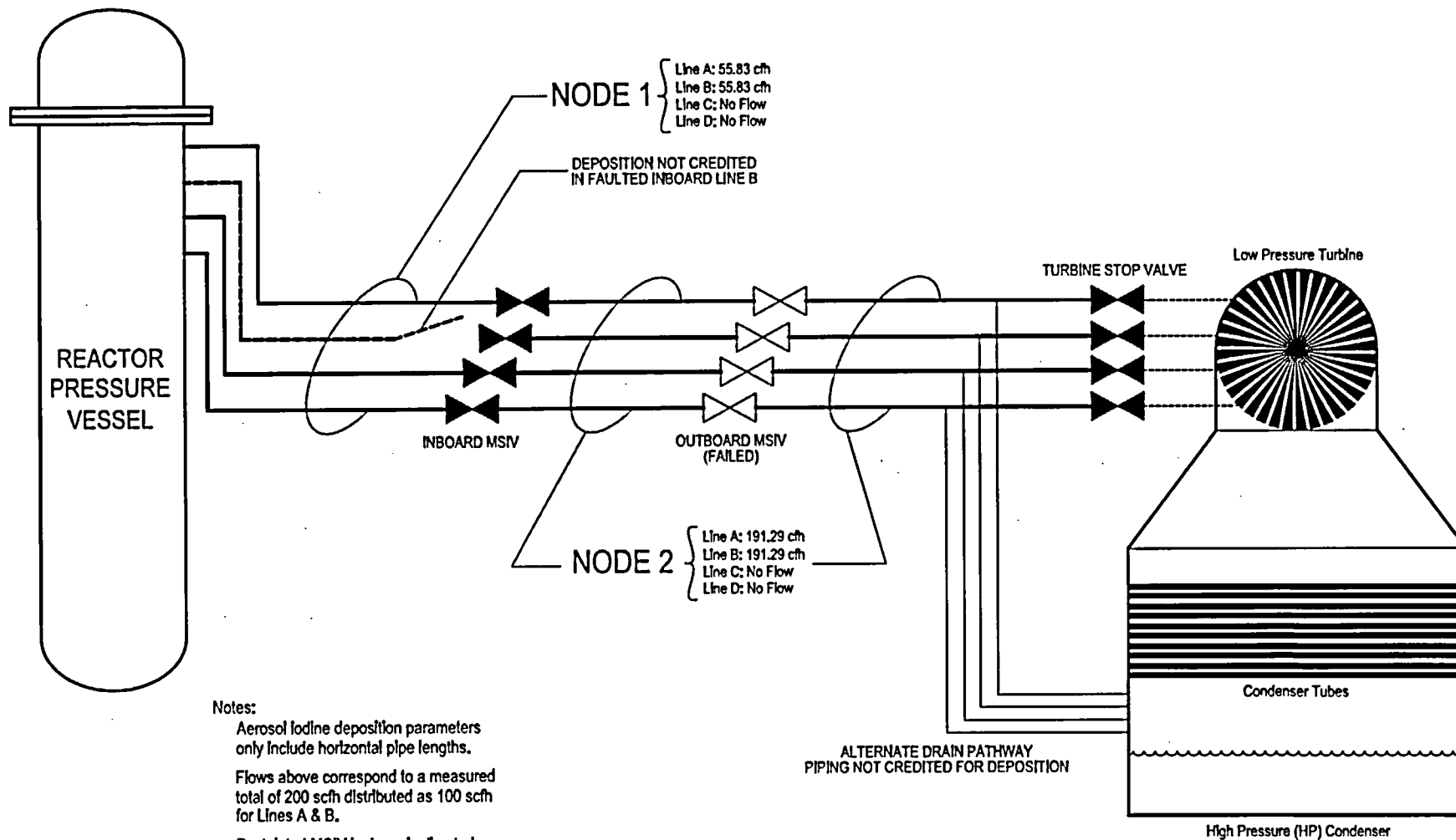
$$\text{Leak Rate Acceptance Criterion (scfh)} * (550+460) / (68+460)$$

Where:

550 °F is the normal steam line operating temperature. Credit is taken for temperature reductions to 410 °F at 24 hours, and to 200 °F at 96 hours (as shown in Attachment F) in determining later flow rates

Flow rates out of the condenser are similarly calculated with the assumption of a condenser air space temperature of 120 °F for the accident duration.

Figure 4.2: Post-LOCA MSIV Leakage Pathway Nodalization



Notes:

Aerosol iodine deposition parameters only include horizontal pipe lengths.

Flows above correspond to a measured total of 200 scfm distributed as 100 scfm for Lines A & B.

Postulated MSIV leakage is directed to the airspace below the tubes in HP Condenser of the Low Pressure Turbine.

Determination of inboard steam line, outboard steam line and condenser effective filter efficiencies are shown in Attachment B, using Reference (11) formulations and settling velocities, and deposition velocities based per Ref. (10).

4.5.3.2. Modeling of Deposition Credit in Pipes and Condenser

LGS has previously been analyzed and licensed to no longer credit a MSIV Leakage Control System, and to credit seismically analyzed portions of Turbine Condenser System. This historical evaluation is based on methodology described in NEDC-31858P, Rev. 2, "BWROG Report for Increasing MSIV Leakage Rate Limits and Elimination of Leakage Control Systems" [Ref. (29)], as cited in the LGS UFSAR Section 6.7. That analysis was based on a design basis recirculation line break and TID-14844 based source terms. In this calculation the analysis of MSIV leakage is updated to reflect AST parameters related to release timing and chemical makeup and more recent approaches regarding fission product settling and deposition.

4.5.3.2.1. Aerosol Settling

Modeling of aerosol settling is based on methodology used by NRC in the Perry AST SER in AEB-98-03 [Ref. (11)], with some additional conservatism. For aerosol settling, only horizontal piping runs are credited, and only the horizontal projected area of horizontal piping is considered as the settling area. NRC's AEB-98-03, indicates:

"The staff believes that, at this time, a well-mixed model is more appropriate than a plug flow model for settling in the main steam line. However complete mixing may not occur along the entire length of the pipe and, in some pipe segments, plug flow may exist. Given the conservatism associated with using a well-mixed model for the entire length of the pipe and a number of additional conservatisms inherent in the piping depositions analysis, use of a 10th percentile settling velocity with a well-mixed model is not appropriate. Additional conservatisms include additional deposition by thermophoresis, diffusiophoresis, and flow irregularities; addition deposition as a result of hygroscopicity and possible plugging of the leaking MSIV by aerosols. Given the conservatism of the well-mixed assumption, we believe it is acceptable then to utilize median values (as compared to more conservative values) for deposition parameters."

LGS is somewhat different than Perry in that piping downstream from the outboard MSIV to and including the condenser is credited. The NRC staff has questioned whether crediting the same settling velocities throughout the piping system was adequately conservative. In response, LGS:

1. Uses a 20 group probability distribution of settling velocities (based on AEB-98-03 probability descriptions) with settling efficiencies determined for each group and a net weighted average efficiency used. This process is significantly more conservative than use of a median settling velocity (Page B-1

of Attachment B shows the median settling velocity results and Page B-7 shows the 20 group probability distribution net weighted average efficiency used).

2. No credit is taken for aerosol settling after 24 hours.

Other phenomena, such as effects of depletion over time of more easily settled particle sizes are addressed by the use of a settling velocity distribution, as described above, and time-dependant activity transport model. Additionally, the above conservatisms and the significant residual conservatism mentioned in the original AEB-98-03 conclusions quoted above conservatively account for any uncertainty in the AEB-98-03 model.

Attachment B shows the probability distribution derived by a 10,000 history run.

The same methodology applied to the main steam piping was applied to the condenser when crediting aerosol settling. An effective filter efficiency is derived for each credited line out through the condenser. This efficiency is applied to the RADTRAD model as discussed in Section 6.

4.5.3.2.2. Elemental Iodine Removal

For elemental iodine, RG 1.183's Reference A-9 is considered only in part since it is the basis for plug flow models. Reference A-9 provides elemental iodine deposition velocities. The deposition velocities are used in the well-mixed model formulation in AEB-98-03 that is analogous for aerosol settling velocities and elemental iodine deposition velocities. Because elemental iodine deposition is not gravity dependent, deposition is credited in both horizontal and vertical piping, on all surface areas.

Attachment B shows the derivation of piping volumes, surface areas for settling and deposition, and piping effective filter efficiencies for each piping node.

For conservatism, no credit is taken for deposition in the drain lines that provide the previously licensed Alternate Drain Path to the condenser. All MS drain lines are routed to a single penetration in the HP condenser at a point below the condenser tubing. Credit is taken for deposition in the condenser, but only the deposition area of the horizontal surface of the wetwell of the HP Condenser. The condenser tubing provides a surface area that is 130 times that of the credited bottom surface area. It should also be noted that the HP, IP, and LP condensers are interconnected by substantial openings, but flow to the IP and LP condensers for further holdup is not credited.

By the time that activity has reached the condenser the aerosols are essentially depleted. Therefore, vertical wall surfaces are

credited for elemental iodine removal. No credit is taken for any organic iodine removal in piping or the condenser.

Flow rates out of the condenser are assumed to be at 120°F and atmospheric pressure. This leak rate is reduced to 55.1% after 24 hours, consistent with the change in Containment conditions shown in Attachment E.

Resuspension of deposited elemental iodine is conservatively treated as organic iodine and immediately released. Separate RADTRAD models are used to address deposition and resuspension, as follows:

1. The effect of deposition of elemental iodines, settling of aerosols, and transmission of the balance of each along with organic iodine and noble gas transmission are addressed in single RADTRAD runs for each path.
2. The resuspension runs are made with only elemental iodine entering the piping path. This is done by using a special RFT file to eliminate noble gases, and using 100% efficiency filtration for aerosols and organic iodines upon entry into the pipe. The pipe walls are treated as separate compartments. Elemental iodine is transmitted to the surface using a deposition rate. Resuspended iodines are sent to the environment directly using the resuspension rate. The latter simulates conversion to organic with no further deposition.

4.5.4. ECCS Fluid Leakage

For this AST evaluation an ECCS liquid leak rate of 5 gpm is used. Per reference (4), Appendix A, Section 5.2, this value must be at least 2 times any administrative limits used as part of the Ref. (25) Program for control of "Primary Coolant Sources Outside Containment".

4.6. *Control of pH to Prevent Iodine Re-evolution*

Reference (20) evaluated suppression pool pH over the 30 day duration of the DBA LOCA and demonstrated that pH will remain above 7. Therefore, no iodine conversion to elemental with re-evolution is expected or considered in this calculation. This control of pH also significantly limits the potential for airborne release from (always subcooled) ECCS leakage inside and outside of Secondary Containment. As noted in reference (20) completion of the SLCS injection of its sodium pentaborate solution is required for pH control within 13 hours of the start of the LOCA. Injection would typically be expected sooner for an event that results in fuel damage comparable to that necessary for core radioactivity releases assumed in the DBA LOCA, both as an alternative water source, and for added subcriticality margin.

4.7. Direct Gamma Shine Dose to Control Room Assessment

LGS post-LOCA direct shine dose from sources outside of the control room is dominated by a Unit 1 core spray pipe with a 14" NPS, located 18 inches from the 36 inch thick shield wall between the control room and the Reactor Enclosure.

The dose from the pipe has been re-evaluated based on AST based ECCS fluid radionuclide concentrations integrated over the accident duration with standard control room occupancy credit for the 1 to 4 day and 4 to 30 day periods. However, because of the relatively thick shield wall involved, an investigation was performed to determine what additional isotopes merit consideration. This involved an Origen 2 core source term analysis, with time integration to determine relative importances. As a result a total of 110 isotopes were evaluated in determining doses from shielded ECCS piping, as described in Attachment C. The resulting integrated dose from this pipe is 1.60 rem at 1 foot from the interior surface of the control room perpendicular to that surface. As a conservatism, this integrated dose at 1 foot is used for the entire control room.

Other external sources are also evaluated in Attachment C. The only other major dose contribution was for an RHR pipe located 50 to 60 feet from the control room occupied space. The calculated dose inside of the control room from this contributor was determined to be 0.18 rem. Reactor Enclosure airborne activity is considered negligible due to the 3-foot thick shield wall between these zones. The RERS filters are separated from the control room by the drywell and spent fuel pool and do not contribute to control room doses. SGTS filters are separated from the Control Room by approximately 60 feet of distance and a minimum of 4.5 feet of concrete, and contribute no significant dose. Similarly, CREFAS filters are separated from the control room by approximately 30 feet and approximately 3.5 feet of concrete, and have significantly less activity than SGTS filters. Therefore, doses from SGTS and CREFAS filters are considered negligible. The control room has no external walls, so external plume contributions are also negligible.

4.8. Control Room Dose Model

The Limerick Control Room is designed with one filtered air intake.

4.8.1. Control Room Filtered Intake Flow and Filter Efficiencies

The Control Room HVAC ventilated volume is 126,000 ft³. The bounding total flow through the CREFAS filters is 3000 cfm – 10% = 2700 cfm. In the Radiation Mode, 525 cfm of the CREFAS flow is filtered outside air, so 2175 cfm is recirculated air from the control room. In the Chlorine Mode the entire 2700 cfm is recirculation flow. The assumed intake filter efficiencies are a 99% HEPA filtration of aerosols, and a 95% charcoal efficiency for elemental and organic iodines.

4.8.2. Control Room Unfiltered Inleakage

This analysis assumes, and therefore provides margin for, up to 275 cfm of unfiltered intake into the control room from the control room intake vicinity. The control room intake plenum also provides the intake path for the auxiliary equipment room, which supplies the CR filter room. The traditional 10 cfm for ingress/egress has been previously evaluated as discussed in UFSAR

Sections 1.13, 6.4, and 15.10 and has been effectively eliminated by use of the main control room door seals for ingress/egress.

4.8.3. Control Room Exfiltration

In the Radiation Mode the Control Room exfiltration is 800 cfm. In the Chlorine isolation mode the exfiltration is 275 cfm.

4.9. Dispersion Factors

Figure 4.1 shows the Release Points and CR Intake Location.

Dispersion Factors are determined separately in reference (19). Onsite dispersion factors were determined using the computer program ARCON96 and associated guidance from Regulatory Guide 1.194. Offsite χ/Q 's were determined using the computer program PAVAN and associated guidance in RG 1.145.

4.9.1. EAB and LPZ

The Table 3.1 χ/Q values for the EAB and LPZ χ/Q 's are based on 731 meters and 2043 meters distances, respectively, from the Plant's North Stack.

The 0-2 hour EAB χ/Q is applied for 8 hours (or 24 hours, for the MSIV Leakage runs) to assure capturing of the 2-hour period of maximum dose effect.

4.9.2. CR

The control room intake is centered on the Control Structure north face at 124 feet above grade. Inleakage is assumed to be taken into the control room at the normal control room intake.

4.10. Equipment Qualification

Qualification of safety related equipment from the radiation environment resulting from a design basis LOCA will continue to be based on the original TID-14844 based accident treatment. This practice is recognized as acceptable because of the minimal public health and safety benefit and substantial cost of re-evaluation of radiation environment characterization with AST based assumptions of core releases and timing. NRC positions in support of this are in Reference (40). The changes in plant parameters in this calculation do not impact conclusions reached in Reference (40) or in the general underlying parameters.

4.11. Vital Area Accessibility

This evaluation is for establishing whether vital areas remain accessible. The following general conditions can be expected for sources impacting LGS vital areas:

1. Doses from ECCS piping source are bounded by TID-14844 based analyses, as discussed in Reference (40).

2. Doses from airborne clouds in the Reactor Enclosure are principally from noble gases and are expected to be bounded by or comparable to TID-14844 based analyses. Typically, airborne activity contributions are small.

The impact of doses from intake of airborne activity taken into vital area structures are evaluated using the Security Center as a sample. This location has X/Q's that bound the TSC, and no air filtration. Doses are calculated inside and outside of the Security Center. The doses determined in Attachment G are less than those historically determined in Reference (21), and are less than the 10CFR50.67 control room dose limits.

Based on this evaluation, the existing analyses included in UFSAR Section 1.13 can be considered conservative. Given compliance with GDC-19 limit of 5 rem, based on TID-14844 source terms, compliance can be expected with 10CFR 50.67 control room dose limits with AST.

5. References

- (1) NPF-39, Limerick Generating Station, Unit 1, Facility Operating License, Section 2.C.(1), through Amendment 147.
- (2) NPF-85, Limerick Generating Station, Unit 2, Facility Operating License, Section 2.C.(1), through Amendment 108.
- (3) Limerick Atomic Power Station Units 1 & 2 UFSAR, Revision 11.
- (4) Regulatory Guide 1.183, Rev. 0, "Alternative Radiological Source Terms for Evaluating Design Basis Accidents At Nuclear Power Reactors".
- (5) Regulatory Guide 1.49, Rev. 1, "Power Levels of Nuclear Power Plants ". Rev. 1.
- (6) Standard Review Plan Section 15.0.1, Rev. 0, July 2000.
- (7) Limerick Atomic Power Station Units 1 & 2 Technical Specifications.
- (8) 10CFR50.67(b)(2).
- (9) 10CFR50, GDC-19.
- (10) NUREG/CR-6604, "RADTRAD: A Simplified Model for RADionuclide Transport and Removal And Dose Estimation", 4/1998. Supplement 1, 6/1999. Supplement 2, 10/2002.
- (11) AEB-98-03, "Assessment of Radiological Consequences for the Perry Pilot Plant Application using the Revised (NUREG-1465) Source Term", December 9, 1998.
- (12) Design Basis Document DBD L-S-08B, Rev. 10, "Control Room HVAC".
- (13) Design Basis Document DBD L-S-32, Rev. 9, "Standby Gas Treatment System and Reactor Enclosure Recirculation System".
- (14) Design Basis Document DBD L-S-25A, Rev. 5, "Primary Containment Pressure Suppression System".
- (15) LGS Design Analysis M-76-01, Rev. 7, "Reactor Building Volume".
- (16) LGS Design Analysis M-78-01, Rev. 6, "Control Room Area - Room Volume".
- (17) LGS Design Analysis LM-0551, Rev. 0, "Determine DBA-LOCA Doses to EAB, LPZ, and CR with a 2500 cfm RX. Encl. Inleakage rate and a 15.5 minute drawdown duration".
- (18) LGS Design Analysis LM-0645, Rev. 1, "Re-analysis of Fuel Handling Accident (FHA) Using Alternative Source Terms".
- (19) LGS Design Analysis LM-0641, Rev. 0, "Calculation of Alternate Source Term Onsite and Offsite χ/Q Values".
- (20) LGS Design Analysis LM-0642, Rev. 1, "Suppression Pool pH Calculation for Alternative Source Term".
- (21) LGS Design Analysis 1042, Rev. 3, "Airborne Doses in Vital Areas and North Stack Concentrations Post-LOCA".
- (22) Regulatory Guide 1.3, Rev. 2, "Assumptions Used for Evaluating the Potential Radiological Consequences of a Loss of Coolant Accident for Boiling Water Reactors" June 1974.
- (23) LGS Units 1 & 2 Technical Specification LCO 3.6.1.2.c, Through Amendment 177 for Unit 1 and Amendment 139 for Unit 2.
- (24) LGS Units 2 & 3 Technical Specification SR 4.6.5.3.g.2, Through Amendment 177 for Unit 1 and Amendment 139 for Unit 2.
- (25) LGS Units 2 & 3 Technical Specification 6.8.4.a, Through Amendment 177 for Unit 1 and Amendment 139 for Unit 2.
- (26) LGS Units 2 & 3 Technical Specification SR 4.6.5.4.b.2, Through Amendment 177 for Unit 1 and Amendment 139 for Unit 2.
- (27) LGS Units 2 & 3 Technical Specification 6.8.4.g, Through Amendment 177 for Unit 1 and Amendment 139 for Unit 2.

- (28) LGS Units 2 & 3 Technical Specification Bases.
- (29) NEDC-31858P, "BWROG Report for Increasing MSIV Leakage Rate Limits and Elimination of Leakage Control Systems", September 1993.
- (30) Federal Guidance Report No. 11, "Limiting Values of Radionuclide Intake and Air Concentration and Dose Conversion Factors for Inhalation, Submersion, and Ingestion", 1988.
- (31) Federal Guidance Report No. 12, "External Exposure to Radionuclides in Air, Water, and Soil", 1993.
- (32) Cline, J.E. "MSIV Leakage - Iodine Transport Analysis", SAIC, August 20, 1990.
- (33) Cline, J.E. "MSIV Leakage - Iodine Transport Analysis", Prepared for USNRC under Contract NRC-03-87-029, Task Order 74, March 26, 1991.
- (34) Aerosol Measurement: Principles, Techniques, and Applications, 2nd Edition, K. Willeke and P. A. Baron, Eds., Van Nostrand Reinhold, New York, 2001.
- (35) Clinton Power Station Design Analysis C-020, Rev. 3, "Re-analysis of Loss of Coolant Accident (LOCA) Using Alternative Source Terms".
- (36) General Electric Nuclear Energy, NEDE-32963A, "Prediction of the Onset of Fission Gas Release from Fuel in Generic BWR," March 2000.
- (37) Steam/ Its Generation and Use, Babcock & Wilcox, 38th Edition.
- (38) TID-20583, "Leakage Characteristics of Steel Containment Vessels and the Analysis of Leakage Rate Determinations", May 1964, US Atomic Energy Commission.
- (39) LGS Procedure No. ST-4-LLR-001-1, Rev. 9, The LLRT Program and Accountability Test.
- (40) Memorandum to A. Thadani from J. Rosenthal, "Initial Screening of Candidate Generic Issue 187, 'The Potential Impact of Postulated Cesium Concentration on Equipment Qualification in the Containment Sump,'" April 30, 2001.
- (41) NUREG-0800, Standard Review Plan, Section 6.5.5, "Pressure Suppression Pool as a Fission Product Cleanup System".
- (42) Lagus Applied Technology, Inc./NCS Corporation Report "Control Room Envelope Inleakage Testing at Limerick Generating Station – 2004", November 15,2004.

6. Calculations

6.1. Control Room, EAB, and LPZ Dose Calculations from Airborne Releases

The RADTRAD v. 3.03 computer code was used for this DBA LOCA calculation to determine CR, EAB, and LPZ doses. RADTRAD is a simplified model of RADionuclide Transport and Removal And Dose Estimation developed for the NRC and endorsed by the NRC as an acceptable methodology for reanalysis of the radiological consequences of design basis accidents.

The RADTRAD code uses a combination of tables and/or numerical models of source term reduction phenomena to determine the time-dependent dose at user-specified locations for a given accident scenario. The code system also provides the inventory, decay chain, and dose conversion factor tables needed for the dose calculation. The RADTRAD code can be used to assess occupational radiation exposures, typically in the control room; to estimate site boundary doses; and to estimate dose attenuation due to modification of a facility or accident sequence. The technical basis for the RADTRAD code is documented in Section 2 of NUREG/CR-6604 [Ref. (10)].

As discussed in Attachment H, RADTRAD 3.03 has been pre-qualified under the Washington Group International procedures for performing these types of analyses.

The methodologies significant to this analysis are:

- Transport and removal (Ref. (10), Section 2.1)
- Removal by Natural Deposition (Ref. (10), Section 2.2.2)
- Dose consequence analysis (Ref. (10), Section 2.3)
- Mathematical Solutions including decay (Ref. (10), Section 2.4).

The RADTRAD plug flow models for deposition in piping have not been used for main steam line deposition analysis. Instead, well-mixed modeling formulations described in AEB-98-03 [Ref. (11)] are used. The reasons that the well-mixed models are used are:

- Fluids in the inboard piping from the reactor vessel to the inboard MSIV may be thermally mixed. The potentially cooler gases from the reactor vessel entering the bottom of the elevated segments of the steam lines could drop through the vertical segments, be heated by the steam line pipe walls, and return to the vessel at the top of the steam lines.
- Fluids in the outboard piping from the inboard MSIV to the Turbine Stop Valve may be partially mixed by uneven heat transfer at pipe support locations relative to the simple conductive heat transfer through in between piping segments.
- The alternate drain pathway to the condenser comes from both ends of the outboard piping segments.
- The AEB-98-03 aerosol settling velocity for well-mixed modeling represents a Monte-Carlo calculated distribution, which is determined based on analyses of particle characteristics in containment. This distribution accounts a spectrum of possible particles, and their potential for removal as they are transported. The RADTRAD models for aerosol settling use an artificially selected particle size and specific gravity that is at approximately a 2 percentile value of the identified AEB-98-03 particle settling velocity spectrum, and is, therefore, excessively conservative. In the model in this calculation, a

20-Group probabilistic settling velocity distribution is used, based on the AEB-98-03 model.

Leakage pathways include Primary Containment releases, ECCS leakage to secondary containment, and for MSIV leakage that is treated as separate from the analysis of L_a .

6.1.1. PC Leakage [Analyzed as 100% of L_a]

The following details the specific values supplied as input to RADTRAD 3.03 for the modeling of the Primary Containment leakage directly to Secondary Containment (SC) for an SGTS filtered, North Stack elevated release.

❖ Compartments

- 1. Containment - Containment releases are through this volume
 - Compartment type – Other – since it is not the environment or control room.
 - Volume – 379,071 ft³ – Primary Containment and Wetwell Airspace (minimums).
 - Source Term Fraction - 1.0
 - Compartment features - Natural Deposition only. Powers BWR – Design Basis Accident 10% (lower bound) deposition used. No elemental iodine removal coefficient.
- 2. Reactor Enclosure
 - Compartment Type - Other
 - Volume – 900,000 ft³ – 50% of actual 1,800,000 cu. ft. volume, for conservatism.
 - Source Term Fraction - 0.0
 - Compartment Features – Recirculation Filter, No filter credit during first 1 minute, then filtration for aerosols, elemental and organic iodines at 99, 95, and 95% efficiency, respectively, thereafter.
- 3. Environment
 - Compartment type – Environment
- 4. Control Room
 - Compartment type – Control Room
 - Volume – 126,000 ft³
 - Source term fraction – 0.0
 - Compartment features – Recirculating Filter, for Radiation mode flow is 2175 cfm; for Chlorine mode flow is 2700 cfm. Filter efficiencies are 99% for aerosol (HEPA) and 95% for elemental and organic iodines (charcoal).
- 5. SGTS Node
 - Compartment type – Control Room
 - Volume – 1ft³
 - Source term fraction – 0.0
 - Compartment features – None - Compartment used to model condition of SGTS filter train in series with RERS filter train.

❖ Active Transfer Pathways

- 1. Containment to Reactor Enclosure
 - From Compartment 1 – Containment
 - To Compartment 2 – Reactor Enclosure
 - Transfer mechanism – "Air Leakage" selected
 - Air Leakage Panel – Leak rate – 0-24 hours, 0.50%/day; 24-720 hours, 0.25%/day - These rates correspond to the L_a analyzed in this calc, which leaks from the PC to the SC. Design basis credits a 50% reduction after 24 hours, as detailed in this analysis.
- 2. Reactor Enclosure Exhaust to SGTS Node
 - From Compartment 2 – Reactor Enclosure
 - To Compartment 5 – SGTS Node
 - Transfer mechanism – "Filter" selected

- Filter Efficiency Panel - Flow rate - 0-1 minute, 9.00E6 cfm – 10 air changes per minute to simulate last minute of RERS startup (first two minutes are before gap release phase). Flow rate 1 minute to 15.5 minutes, 3000 cfm for drawdown period. Flow rate for 15.5 minutes until 720 hours, 2500 cfm. Filter Efficiency is 99% for aerosol (HEPA), and 95% for elemental and organic iodines (charcoal), after the first 1 minute, and then for accident duration - This is an intermediary pathway to effectively model SGTS filtration in series.
 - 3. Control Room Unfiltered Inleakage
 - From Compartment 3 – Environment
 - To Compartment 4 – Control Room
 - Transfer mechanism – “Filter” selected
 - Filter Efficiency Panel – Flow rate - 0-720 hours, 275 cfm – models the assumed bounding unfiltered inleakage. 0% efficiency of filter panel
 - 4. Control Room Filtered Intake
 - From Compartment 3 – Environment
 - To Compartment 4 – Control Room
 - Transfer mechanism – “Filter” selected
 - Filter Efficiency Panel – Radiation Mode Flow rate - 0 -720 hours, 525 cfm – models the design CR filtered intake flow rate. Filter efficiencies are 99% for aerosol (HEPA) and 95% for elemental and organic iodines (charcoal). Chlorine Mode has no filtered intake.
 - 5. Control Room Exhaust (Equilibrium)
 - From Compartment 4 – Control Room
 - To Compartment 3 – Environment
 - Transfer mechanism – “Filter” selected
 - Filter Efficiency Panel – Rad Mode Flow rate – 0-720 hours, 800 cfm – This equals the total flow that was taken into the CR volume, which includes inleakage (275 + 525 cfm). Chlorine Mode Flow Rate – 0-720 hours, 275 cfm – which balances the inleakage.
 - Filter Efficiency Panel – Filter efficiency is entered as 100.0% for all chemical forms of iodine, for all time periods. This is the exit from the control room to the environment; the filtration prevents a double counting of the iodine release, although RADTRAD 3.03 documentation indicates that this effect has been eliminated.
 - 6. SGTS Node to Environment
 - From Compartment 5 – SGTS Node
 - To Compartment 3 – Environment
 - Transfer mechanism – “Filter” selected
 - Filter Efficiency Panel - Flow rate - 0-1 minute, 9.00E6 cfm – 10 air changes per minute to simulate last minute of RERS startup (first two minutes are before gap release phase). Flow rate 1 minute to 15.5 minutes, 3000 cfm for drawdown period. Flow rate for 15.5 minutes until 720 hours, 2500 cfm. Filter Efficiency 0% during 0 to 15.5 minute drawdown period, then 99% for aerosol (HEPA), and elemental and organic iodines (charcoal), thereafter.
- ❖ Dose Locations (PC Leakage)
- Control Room
 - In Compartment 4 – Control Room
 - Breathing Rate – RADTRAD Default – RG 1.183.
 - Occupancy – RADTRAD Default – RG. 1.183
 - \dot{V}_O – See Table 3.1.
 - Exclusion Area Boundary
 - In Compartment 3 – Environment
 - Breathing Rate - RADTRAD Default – RG 1.183.
 - \dot{V}_O – See Table 3.1, 0-2 hr accident \dot{V}_O applied to maximum dose effective release period by extending the 2-hour value from 0 to 8 hours.
 - Low Population Zone
 - In Compartment 3 – Environment
 - Breathing Rate – RADTRAD Default – RG 1.183.
 - \dot{V}_O – See Table 3.1.

- ❖ Source Terms and Dose Conversion Factor
 - Nuclide Inventory – 3527 MWth, LGS Specific NIF for 60 MACCS isotopes; See Attachment A.
 - Release Fractions and Timing – RADTRAD standard BWR-DBA values, no delay.
 - Dose Conversion Factors – RADTRAD Library of FGR 11&12 values for 60 MACCS isotopes
 - Decay & Daughter Products – Enabled - Decay / Daughter Products considered.
 - Iodine Chemical Fractions – NUREG-1465 based Iodine Chemical Form fractions.

6.1.2. MSIV Leakage (Not Including Resuspended Iodine)

The following details the specific values supplied as input to RADTRAD 3.03 for the modeling of runs simulating the Primary Containment leakage, bypassing Secondary Containment, through the MSIV alternate drain pathways to the HP Condenser Shell. The total MSIV leak rate is analyzed at 200 scfh split into two steam lines.

- ❖ Compartments
 - 1. Containment - Containment releases are through this volume
 - Compartment type – Other – since it is not the environment or control room.
 - Volume – 379,071 ft³ – Primary Containment and Wetwell Airspace (minimum).
 - Source Term Fraction - 1.0
 - Compartment features - Natural Deposition only. Powers BWR – Design Basis Accident 10% (lower bound) deposition used. No elemental iodine removal coefficient.
 - 2. (Node 1) Inboard MSL A Volume
 - Compartment Type - Other
 - Volume - 258 ft³ - Minimum Steam Line Piping Volume from RPV to Inboard MSIV.
 - Source Term Fraction - 0.0
 - Compartment Features - None.
 - 3. (Node 1) Inboard MSL B Volume
 - Compartment Type - Other
 - Volume - 306 ft³, but treated as negligible (10E-8 ft³) - Minimum Steam Line Piping Volume from RPV to Inboard MSIV.
 - Source Term Fraction - 0.0
 - Compartment Features - None.
 - 4. (Node 2) Outboard MSL A Volume
 - Compartment Type - Other
 - Volume - 1,182 ft³ - Steam Line Piping Volume from Inboard MSIV to Turbine Stop Valve.
 - Source Term Fraction - 0.0
 - Compartment Features - None.
 - 5. (Node 2) Outboard MSL B Volume
 - Compartment Type - Other
 - Volume - 1,051 ft³ - Steam Line Piping Volume from Inboard MSIV to Turbine Stop Valve.
 - Source Term Fraction - 0.0
 - Compartment Features - None.
 - 6. HP Condenser
 - Compartment Type - Other
 - Volume - 54,750 ft³ - HP Condenser Shell free air volume.
 - Source Term Fraction - 0.0
 - Compartment Features - None. No credit taken for deposition on condenser walls or on substantial surface of condenser tubing.
 - 7. Environment
 - Compartment type – Environment
 - 8. Control Room

- Compartment type – Control Room
 - Volume – 126,000 ft³
 - Source term fraction – 0.0
 - Compartment features – Recirculating Filter, for Rad mode flow is 2175 cfm; for Chlorine mode flow is 2700 cfm. Filter efficiencies are 99% for aerosol (HEPA) and 95% for elemental and organic iodines (charcoal), from 0 - 720 hours.
- 9. Hold – Compartment holding PC leakage, so that impacts of releases are not double counted.

❖ Active Transfer Pathways

- 1. Containment to (Node 1) Inboard Piping MSL A Volume
- From Compartment 1 – Containment
 - To Compartment 2 – Inboard MSL A Piping
 - Transfer mechanism – "Filter" selected
 - Filter Efficiency Panel – Flow rate – 0-2 hours, 1.5244cfm; 2-24hours, 0.9306cfm; 24-720hours, 0.5127cfm, 55.1% of first day value based on a conservatively assumed containment pressure at 24 hours. Flow rates derived according to methodology described in Attachment E and Section 4.5.3 above.
 - Filter Efficiency Panel – All filtration associated with this pathway of Line A through the condenser is applied in this here, for detailed determination of these values, see Attachment B. The methodology used to determine these values is discussed in Section 4.5.3.2.
- 2. Containment to (Node 1) Inboard Piping MSL B Volume
- From Compartment 1 – Containment
 - To Compartment 3 – Inboard MSL B Piping
 - Transfer mechanism – "Filter" selected
 - Filter Efficiency Panel – Flow rate - 0-2 hours, 1.5244cfm; 2-24hours, 0.9306cfm; 24-720hours, 0.5127cfm, 55.1% of first day value based on a conservatively assumed containment pressure at 24 hours. Flow rates derived according to methodology described in Attachment E and Section 4.5.3 above. However, as the Inboard MSL B Piping is treated as broken, the effective flow rate is zero.
 - Filter Efficiency Panel – All filtration associated with this pathway of Line B through the condenser is applied here; for detailed determination of these values, see Attachment B. The methodology used to determine these values is discussed in Section 4.5.3.2. However, as the Inboard MSL B Piping is treated as broken, all deposition efficiencies are zero.
- 3. Containment to HOLD (PC Leakage)
- From Compartment 1 – Containment
 - To Compartment 9 – HOLD
 - Transfer mechanism – "Air Leakage" selected
 - Air Leakage Rate Panel - Leakage rate - 0-24hrs, 0.5% per day; 24-720hrs, .25% per day – Flow from PC leakage other than through MSIVs is sent to HOLD compartment to prevent dose contribution in this run, as it is not a contributor to this MSIV release model.
- 4. (Node 1) Inboard Piping MSL A Volume to (Node 2) Outboard Piping MSL A Volume
- From Compartment 2 – Inboard MSL A Piping
 - To Compartment 4 – Outboard MSL A Piping
 - Transfer mechanism – "Filter" selected
 - Filter Efficiency Panel – Flow rate - 0-24hrs, 0.9306cfm; 24-96hrs, 0.5127cfm; 96-720hrs, 0.5127cfm - Flow rates derived according to methodology described in Attachment E and Section 4.5.3 above. For detailed determination of values, see Attachment B.
 - Filter Efficiency Panel – All filtration associated with this line is applied in Pathway 1.
- 5. (Node 1) Inboard Piping MSL B Volume to (Node 2) Outboard Piping MSL B Volume
- From Compartment 3 – Inboard MSL B Piping
 - To Compartment 5 – Outboard MSL B Piping
 - Transfer mechanism – "Filter" selected
 - Filter Efficiency Panel – Flow rate - 0-24hrs, 0.9306cfm; 24-96hrs, 0.5127cfm; 96-720hrs, 0.5127cfm - Flow rates derived according to methodology described in Attachment E and Section 4.5.3 above. For detailed determination of values, see Attachment B.
 - Filter Efficiency Panel – All filtration associated with this line is applied in Pathway 1.
- 6. (Node 2) Outboard Piping MSL A Volume to Condenser
- From Compartment 4 – Outboard MSL A Piping
 - To Compartment 6 – Condenser

- Transfer mechanism – “Filter” selected
- Filter Efficiency Panel – Flow rate - 0-24hrs, 3.1881cfm; 24-96hrs, 1.5132cfm; 96-720hrs, 1.1479cfm - Flow rates derived according to methodology described in Attachment E and Section 4.5.3 above. For detailed determination of values, see Attachment B.
- Filter Efficiency Panel – All filtration associated with this line is applied in Pathway 1.
- 7. (Node 2) Outboard Piping MSL B Volume to Condenser
 - From Compartment 5 – Outboard MSL B Piping
 - To Compartment 6 – Condenser
 - Transfer mechanism – “Filter” selected
 - Filter Efficiency Panel – Flow rate - 0-24hrs, 3.1881cfm; 24-96hrs, 1.5132cfm; 96-720hrs, 1.1479cfm - Flow rates derived according to methodology described in Attachment E and Section 4.5.3 above. For detailed determination of values, see Attachment B.
 - Filter Efficiency Panel – All filtration associated with this line is applied in Pathway 1.
- 8. Condenser Leak to Environment
 - From Compartment 6 – Condenser
 - To Compartment 7 – Environment
 - Transfer mechanism – “Filter” selected
 - Filter Efficiency Panel – Flow rate - 0-24hrs, 3.6616cfm; 24-96hrs, 2.0176cfm; 96-720hrs, 2.0176cfm - Flow rates derived according to methodology described in Attachment E and Section 4.5.3 above. For detailed determination of values, see Attachment B.
 - Filter Efficiency Panel – Three different cases have been run: No Condenser Tube Credit, 10% of Condenser Tube Credit, and 100% of Condenser Tube Credit. See Attachment B for the determination of all pipe equivalent filter efficiencies. The methodology used to determine these values is discussed in Section 4.5.3.2.
- 9. Filtered Intake to Control Room
 - From Compartment 3 – Environment
 - To Compartment 4 – Control Room
 - Transfer mechanism – “Filter” selected
 - Filter Efficiency Panel – Flow rate – 0 - 720 hours, 525 cfm – models the normal CR filtered intake flow rate. Filter efficiencies are 99% for aerosol (HEPA) and 95% for elemental and organic iodines (charcoal). Chlorine Mode has no filtered intake. This corresponds to the current presence of the HEPA filter and the performance of charcoal with the CR in Radiation Mode.
- 10. Unfiltered Inleakage to Control Room
 - From Compartment 3 – Environment
 - To Compartment 4 – Control Room
 - Transfer mechanism – “Filter” selected
 - Filter Efficiency Panel – Flow rate - 0-720 hours, 275 cfm – models the normal Radiation Mode and Chlorine Mode CR unfiltered inleakage flow rate.
 - Filter Efficiency Panel – Filter efficiency is entered as 0.0% for all chemical forms of iodine, for the accident duration, because this is an unfiltered path.
- 11. Control Room Exhaust (Equilibrium)
 - From Compartment 4 – Control Room
 - To Compartment 3 – Environment
 - Transfer mechanism – “Filter” selected
 - Filter Efficiency Panel – Radiation Mode Flow rate – 0 - 720 hours, 800 cfm – This equals the total flow that was taken into the CR volume, which includes inleakage (275 + 525 cfm). Chlorine Mode Flow Rate – 0-720 hours, 275 cfm – which balances the inleakage.
 - Filter Efficiency Panel – Filter efficiency is entered as 100.0% for all chemical forms of iodine, for all time periods. This is the exit from the control room to the environment; the filtration prevents a double counting of the iodine release, although RADTRAD 3.03 documentation indicates that this effect has been eliminated.
- ❖ Dose Locations (MSIV Leakage)
 - Exclusion Area Boundary
 - In Compartment 2 – Environment
 - Breathing Rate - RADTRAD Default – RG 1.183.
 - $\frac{1}{Q}$ – See Table 3.1, 0-2 hr accident $\frac{1}{Q}$ applied to maximum dose effective release period.
 - Low Population Zone

- In Compartment 2 – Environment
- Breathing Rate – RADTRAD Default – RG 1.183.
- λ/Q – See Table 3.1.
- Control Room
 - In Compartment 3 – Control Room
 - Breathing Rate – RADTRAD Default – RG 1.183.
 - Occupancy – RADTRAD Default – RG. 1.183
 - λ/Q – See Table 3.1.
- ❖ Source Terms and Dose Conversion Factor
 - Nuclide Inventory – 3527 MWth, LGS Specific NIF for 60 MACCS isotopes; See Attachment A.
 - Release Fractions and Timing – RADTRAD standard BWR-DBA values, no delay.
 - Dose Conversion Factors – RADTRAD Library of FGR 11&12 values for 60 MACCS isotopes
 - Decay & Daughter Products – Enabled - Decay / Daughter Products considered.
 - Iodine Chemical Fractions – NUREG-1465 based Iodine Chemical Form fractions.

6.1.3. MSIV Leakage (Resuspended Iodine Only)

The following details the specific values supplied as input to RADTRAD 3.03 for the modeling of runs simulating the Primary Containment leakage, bypassing Secondary Containment, through the MSIV alternate drain pathways to the HP Condenser Shell. The simulation detailed in this Section only accounts for iodine resuspension effects, as runs simulating all other activity transport through the MSIVs are detailed in Section 6.1.2. The total MSIV leak rate is analyzed at 200 scfh, limited at 100 scfh per steam line, and divided between the two worst-case lines. Modeling of lines A and B was done separately, due to Compartment limitations in the RADTRAD code; this Section outlines both of these runs.

Leakage of Resuspended Iodine from Main Steam Line A

- ❖ Compartments
 - 1. Containment - Containment releases are through this volume
 - Compartment type – Other – since it is not the environment or control room.
 - Volume – 379,071 ft³ – Primary Containment and Wetwell Airspace (minimum).
 - Source Term Fraction - 1.0
 - Compartment features - Natural Deposition only. Powers BWR – Design Basis Accident 10% (lower bound) deposition used. No elemental iodine removal coefficient.
 - 2. MSL A Inboard - Airborne
 - Compartment Type - Other
 - Volume - 258 ft³ - Minimum Steam Line Piping Volume from RPV to Inboard MSIV.
 - Source Term Fraction - 0.0
 - Compartment Features - None.
 - 3. Environment
 - Compartment type – Environment
 - 4. Control Room
 - Compartment type – Control Room
 - Volume – 126,000 ft³
 - Source term fraction – 0.0
 - Compartment features – Recirculating Filter, for Rad mode flow is 2175 cfm; for Chlorine mode flow is 2700 cfm. Filter efficiencies are 99% for aerosol (HEPA) and 95% for elemental and organic iodines (charcoal), from 0 - 720 hours.
 - 5. MSL A Outboard - Airborne
 - Compartment Type - Other

- Volume - 1,182 ft³ - Steam Line Piping Volume from Inboard MSIV to Turbine Stop Valve.
 - Source Term Fraction - 0.0
 - Compartment Features - None.
- 6. MSL A Inboard - Surface
- Compartment Type - Other
 - Volume - 1 ft³ - A nominal volume to model the inboard pipe surface on which deposition, resuspension, and surface fixation take place.
 - Source Term Fraction - 0.0
 - Compartment Features - None. No credit taken for deposition on condenser walls or on substantial surface of condenser tubing
- 7. MSL A Outboard - Surface
- Compartment Type - Other
 - Volume - 1 ft³ - A nominal volume to model the outboard pipe surface on which deposition, resuspension, and surface fixation take place.
 - Source Term Fraction - 0.0
 - Compartment Features - None. No credit taken for deposition on condenser walls or on substantial surface of condenser tubing
- 8. Hold (By Surface Fixation)
- Compartment type - Other
 - Volume - 1 ft³ - Models the removal of iodine from dose contribution availability by fixation to the surface of the condenser and inboard and outboard piping nodes. Activity sent to this compartment is prevented from contributing to dose.
 - Source term fraction - 0.0
 - Compartment features - None.
- 9. Condenser - Airborne
- Compartment Type - Other
 - Volume - 54,750 ft³ - HP Condenser Shell free air volume.
 - Source Term Fraction - 0.0
 - Compartment Features - None. No credit taken for deposition on condenser walls or on substantial surface of condenser tubing.
- 9. Condenser - Surface
- Compartment Type - Other
 - Volume - 1 ft³ - A nominal volume to model the Condenser surface on which deposition, resuspension, and surface fixation take place.
 - Source Term Fraction - 0.0
 - Compartment Features - None. No credit taken for deposition on condenser walls or on substantial surface of condenser tubing.
- ❖ Active Transfer Pathways
- 1. Filtered Environment to Control Room (Intake)
- From Compartment 3 - Environment
 - To Compartment 4 - Control Room
 - Transfer mechanism - "Filter" selected
 - Filter Efficiency Panel - Flow rate - 0 - 720 hours, 525 cfm - models the normal CR filtered intake flow rate. Filter efficiencies are 99% for aerosol (HEPA) and 95% for elemental and organic iodines (charcoal). Chlorine Mode has no filtered intake. This corresponds to the current presence of the HEPA filter and the performance of charcoal with the CR in Radiation Mode.
- 2. Unfiltered Environment to Control Room (Inleakage)
- From Compartment 3 - Environment
 - To Compartment 4 - Control Room
 - Transfer mechanism - "Filter" selected
 - Filter Efficiency Panel - Flow rate - 0-720 hours, 275 cfm - models the normal Radiation Mode and Chlorine Mode CR unfiltered inleakage flow rate.
 - Filter Efficiency Panel - Filter efficiency is entered as 0.0% for all chemical forms of iodine, for the accident duration, because this is an unfiltered path.

- 3. Control Room to Environment (Exhaust)
 - From Compartment 4 – Control Room
 - To Compartment 3 – Environment
 - Transfer mechanism – “Filter” selected
 - Filter Efficiency Panel – Radiation Mode Flow rate – 0 - 720 hours, 800 cfm – This equals the total flow that was taken into the CR volume, which includes inleakage (275 + 525 cfm). Chlorine Mode Flow Rate – 0-720 hours, 275 cfm – which balances the inleakage.
 - Filter Efficiency Panel – Filter efficiency is entered as 100.0% for all chemical forms of iodine, for all time periods. This is the exit from the control room to the environment; the filtration prevents a double counting of the iodine release, although RADTRAD 3.03 documentation indicates that this effect has been eliminated.

- 4. (Aerosol Transport 1) MSL A Inboard - Airborne to MSL A Outboard - Airborne
 - From Compartment 2 – MSL A Inboard - Airborne
 - To Compartment 5 – MSL A Inboard - Airborne
 - Transfer mechanism – “Filter” selected
 - Filter Efficiency Panel – Flow rate - 0-24hrs, 0.9306cfm; 24-96hrs, 0.5127cfm; 96-720hrs, 0.5127cfm - Flow rates derived according to methodology described in Attachment E and Section 4.5.3 above. For detailed determination of values, see Attachment B.
 - Filter Efficiency Panel – This pathway is intended to transfer only elemental iodine forms for purposes of modeling deposition related phenomena. Therefore, both aerosol and organic chemical forms are 100% filtered in this pathway, while there is 0% filtration of elemental.

- 5. (Deposition 1) MSL A Inboard - Airborne to MSL A Inboard - Surface
 - From Compartment 2 – MSL A Inboard - Airborne
 - To Compartment 6 – MSL A Inboard - Surface
 - Transfer mechanism – “Air Leakage” selected
 - Air Leakage Panel – Leak rate – Percent per day leakage rates corresponding to calculated rates of deposition, which are associated with the inboard piping node characteristics, are entered here. For the detailed determination of these values, see Attachment B.

- 6. (Resuspension 1) MSL A Inboard - Surface to Environment
 - From Compartment 6 – MSL A Inboard - Surface
 - To Compartment 3 – Environment
 - Transfer mechanism – “Air Leakage” selected
 - Air Leakage Panel – Leak rate – Percent per day leakage rates corresponding to calculated rates of resuspension, which are associated with the inboard piping node characteristics, are entered here. For the detailed determination of these values, see Attachment B. No credit is taken for deposition of resuspended iodine, as all activity from this pathway goes directly to the environment.

- 7. (Surface Fixation 1) MSL A Inboard - Surface to Hold (By Surface Fixation)
 - From Compartment 6 – MSL A Inboard - Surface
 - To Compartment 8 – Hold (By Surface Fixation)
 - Transfer mechanism – “Air Leakage” selected
 - Air Leakage Panel – Leak rate – Percent per day leakage rates corresponding to calculated rates of surface fixation, which are associated with the inboard piping node characteristics, are entered here. For the detailed determination of these values, see Attachment B. The Hold compartment models “fixation”, by not allowing transport of activity sent there.

- 8. (Deposition 2) MSL A Outboard - Airborne to MSL A Outboard - Surface
 - From Compartment 5 – MSL A Outboard - Airborne
 - To Compartment 7 – MSL A Outboard - Surface
 - Transfer mechanism – “Air Leakage” selected
 - Air Leakage Panel – Leak rate – Percent per day leakage rates corresponding to calculated rates of deposition, which are associated with the outboard piping node characteristics, are entered here. For the detailed determination of these values, see Attachment B.

- 9. (Resuspension 2) MSL A Outboard - Surface to Environment
 - From Compartment 7 – MSL A Outboard - Surface
 - To Compartment 3 – Environment
 - Transfer mechanism – “Air Leakage” selected
 - Air Leakage Panel – Leak rate – Percent per day leakage rates corresponding to calculated rates of resuspension, which are associated with the outboard piping node characteristics, are entered here. For the detailed determination of these values, see Attachment B. No credit is taken for

deposition of resuspended iodine, as all activity from this pathway goes directly to the environment.

- 10. (Surface Fixation 2) MSL A Outboard - Surface to Hold (By Surface Fixation)
 - From Compartment 7 – MSL A Inboard - Surface
 - To Compartment 8 – Hold (By Surface Fixation)
 - Transfer mechanism – "Air Leakage" selected
 - Air Leakage Panel – Leak rate – Percent per day leakage rates corresponding to calculated rates of surface fixation, which are associated with the outboard piping node characteristics, are entered here. For the detailed determination of these values, see Attachment B. The Hold compartment models "fixation", by not allowing transport of activity sent there.
- 11. (Aerosol Transport 2) MSL A Outboard - Airborne to Condenser - Airborne
 - From Compartment 5 – MSL A Outboard - Airborne
 - To Compartment 9 – Condenser - Airborne
 - Transfer mechanism – "Filter" selected
 - Filter Efficiency Panel – Flow rate - 0-24hrs, 3.1881cfm; 24-96hrs, 1.5132cfm; 96-720hrs, 1.1479cfm - Flow rates derived according to methodology described in Attachment E and Section 4.5.3 above. For detailed determination of values, see Attachment B.
 - Filter Efficiency Panel – This pathway is intended to transfer only elemental iodine forms for purposes of modeling deposition related phenomena. Therefore, both aerosol and organic chemical forms are 100% filtered in this pathway, while there is 0% filtration of elemental.
- 12. (Deposition 3) Condenser - Airborne to Condenser - Surface
 - From Compartment 9 – Condenser - Airborne
 - To Compartment 10 – Condenser - Surface
 - Transfer mechanism – "Air Leakage" selected
 - Air Leakage Panel – Leak rate – Percent per day leakage rates corresponding to calculated rates of deposition, which are associated with the Condenser characteristics, are entered here. For the detailed determination of these values, see Attachment B.
- 13. (Resuspension 3) MSL A Outboard - Surface to Environment
 - From Compartment 10 – Condenser - Surface
 - To Compartment 3 – Environment
 - Transfer mechanism – "Air Leakage" selected
 - Air Leakage Panel – Leak rate – Percent per day leakage rates corresponding to calculated rates of resuspension, which are associated with the Condenser characteristics, are entered here. For the detailed determination of these values, see Attachment B. No credit is taken for deposition of resuspended iodine, as all activity from this pathway goes directly to the environment.
- 14. (Surface Fixation 3) MSL A Outboard - Surface to Hold (By Surface Fixation)
 - From Compartment 10 – Condenser - Surface
 - To Compartment 8 – Hold (By Surface Fixation)
 - Transfer mechanism – "Air Leakage" selected
 - Air Leakage Panel – Leak rate – Percent per day leakage rates corresponding to calculated rates of surface fixation, which are associated with the Condenser characteristics, are entered here. For the detailed determination of these values, see Attachment B. The Hold compartment models "fixation", by not allowing transport of activity sent there.
- 15. Containment to MSL A Inboard - Airborne
 - From Compartment 1 – Containment
 - To Compartment 2 – MSL A Inboard - Airborne
 - Transfer mechanism – "Filter" selected
 - Filter Efficiency Panel – Flow rate – 0-2 hours, 1.5244cfm; 2-24hours, 0.9306cfm; 24-720hours, 0.5127cfm, 55.1% of first day value based on a conservatively assumed containment pressure at 24 hours. Flow rates derived according to methodology described in Attachment E and Section 4.5.3 above. For detailed determination of values, see Attachment B.
 - Filter Efficiency Panel – This pathway is intended to transfer only elemental iodine forms for purposes of modeling deposition related phenomena. Therefore, both aerosol and organic chemical forms are 100% filtered in this pathway, while there is 0% filtration of elemental.

❖ Dose Locations (MSIV Leakage)

- Exclusion Area Boundary
 - In Compartment 2 – Environment
 - Breathing Rate - RADTRAD Default – RG 1.183.

- λ/Q – See Table 3.1, 0-2 hr accident λ/Q applied to maximum dose effective release period.
- Low Population Zone
 - In Compartment 2 – Environment
 - Breathing Rate – RADTRAD Default – RG 1.183.
 - λ/Q – See Table 3.1.
- Control Room
 - In Compartment 3 – Control Room
 - Breathing Rate – RADTRAD Default – RG 1.183.
 - Occupancy – RADTRAD Default – RG. 1.183
 - λ/Q – See Table 3.1.
- ❖ Source Terms and Dose Conversion Factor
 - Nuclide Inventory – 3527 MWth, LGS Specific NIF for 60 MACCS isotopes; See Attachment A.
 - Release Fractions and Timing – RADTRAD “BWR-I” values, no delay. This RFT file is used because it only allows the transport of iodine activity. This simulation only accounts for dose effects of resuspended iodine.
 - Dose Conversion Factors – RADTRAD Library of FGR 11&12 values for 60 MACCS isotopes
 - Decay & Daughter Products – Enabled - Decay / Daughter Products considered.
 - Iodine Chemical Fractions – NUREG-1465 based Iodine Chemical Form fractions.

Leakage of Resuspended Iodine from Main Steam Line B

- ❖ Compartments
 - 1. Containment - Containment releases are through this volume
 - Compartment type – Other – since it is not the environment or control room.
 - Volume – 379,071 ft³ – Primary Containment and Wetwell Airspace (minimum).
 - Source Term Fraction - 1.0
 - Compartment features - Natural Deposition only. Powers BWR – Design Basis Accident 10% (lower bound) deposition used. No elemental iodine removal coefficient.
 - 2. MSL B Inboard - Airborne
 - Compartment Type - Other
 - Volume – 1.000E-5 ft³ – This nominal volume is essentially zero and is used to model the conservatively assumed faulted inboard segment of MSL B, thereby making it unavailable for deposition.
 - Source Term Fraction - 0.0
 - Compartment Features - None.
 - 3. Environment
 - Compartment type – Environment
 - 4. Control Room
 - Compartment type – Control Room
 - Volume – 126,000 ft³
 - Source term fraction – 0.0
 - Compartment features – Recirculating Filter, for Rad mode flow is 2175 cfm; for Chlorine mode flow is 2700 cfm. Filter efficiencies are 99% for aerosol (HEPA) and 95% for elemental and organic iodines (charcoal), from 0 - 720 hours.
 - 5. MSL B Outboard - Airborne
 - Compartment Type - Other
 - Volume - 1,051 ft³ - Steam Line Piping Volume from Inboard MSIV to Turbine Stop Valve.
 - Source Term Fraction - 0.0
 - Compartment Features - None.
 - 6. MSL B Inboard - Surface
 - Compartment Type - Other

- Volume - 1 ft³ – A nominal volume to model the inboard pipe surface on which deposition, resuspension, and surface fixation take place.
 - Source Term Fraction - 0.0
 - Compartment Features - None. No credit taken for deposition on condenser walls or on substantial surface of condenser tubing
- 7. MSL B Outboard - Surface
- Compartment Type - Other
 - Volume - 1 ft³ – A nominal volume to model the outboard pipe surface on which deposition, resuspension, and surface fixation take place.
 - Source Term Fraction - 0.0
 - Compartment Features - None. No credit taken for deposition on condenser walls or on substantial surface of condenser tubing
- 8. Hold (By Surface Fixation)
- Compartment type – Other
 - Volume – 1 ft³ – Models the removal of iodine from dose contribution availability by fixation to the surface of the condenser and inboard and outboard piping nodes. Activity sent to this compartment is prevented from contributing to dose.
 - Source term fraction – 0.0
 - Compartment features – None.
- 9. Condenser – Airborne
- Compartment Type - Other
 - Volume - 54,750 ft³ - HP Condenser Shell free air volume.
 - Source Term Fraction - 0.0
 - Compartment Features - None. No credit taken for deposition on condenser walls or on substantial surface of condenser tubing.
- 9. Condenser – Surface
- Compartment Type - Other
 - Volume - 1 ft³ - A nominal volume to model the Condenser surface on which deposition, resuspension, and surface fixation take place.
 - Source Term Fraction - 0.0
 - Compartment Features - None. No credit taken for deposition on condenser walls or on substantial surface of condenser tubing.
- ❖ Active Transfer Pathways
- 1. Filtered Environment to Control Room (Intake)
- From Compartment 3 – Environment
 - To Compartment 4 – Control Room
 - Transfer mechanism – “Filter” selected
 - Filter Efficiency Panel – Flow rate – 0 - 720 hours, 525 cfm – models the normal CR filtered intake flow rate. Filter efficiencies are 99% for aerosol (HEPA) and 95% for elemental and organic iodines (charcoal). Chlorine Mode has no filtered intake. This corresponds to the current presence of the HEPA filter and the performance of charcoal with the CR in Radiation Mode.
- 2. Unfiltered Environment to Control Room (Inleakage)
- From Compartment 3 – Environment
 - To Compartment 4 – Control Room
 - Transfer mechanism – “Filter” selected
 - Filter Efficiency Panel – Flow rate - 0-720 hours, 275 cfm – models the normal Radiation Mode and Chlorine Mode CR unfiltered inleakage flow rate.
 - Filter Efficiency Panel – Filter efficiency is entered as 0.0% for all chemical forms of iodine, for the accident duration, because this is an unfiltered path.
- 3. Control Room to Environment (Exhaust)
- From Compartment 4 – Control Room
 - To Compartment 3 – Environment
 - Transfer mechanism – “Filter” selected

- Filter Efficiency Panel – Radiation Mode Flow rate – 0 - 720 hours, 800 cfm – This equals the total flow that was taken into the CR volume, which includes inleakage (275 + 525 cfm). Chlorine Mode Flow Rate – 0-720 hours, 275 cfm – which balances the inleakage.
 - Filter Efficiency Panel – Filter efficiency is entered as 100.0% for all chemical forms of iodine, for all time periods. This is the exit from the control room to the environment; the filtration prevents a double counting of the iodine release, although RADTRAD 3.03 documentation indicates that this effect has been eliminated.
- 4. (Aerosol Transport 1) MSL B Inboard - Airborne to MSL B Outboard - Airborne
- From Compartment 2 – MSL B Inboard - Airborne
 - To Compartment 5 – MSL B Inboard - Airborne
 - Transfer mechanism – “Filter” selected
 - Filter Efficiency Panel – Flow rate - 0-24hrs, 0.9306cfm; 24-96hrs, 0.5127cfm; 96-720hrs, 0.5127cfm - Flow rates derived according to methodology described in Attachment E and Section 4.5.3 above. For detailed determination of values, see Attachment B.
 - Filter Efficiency Panel – This pathway is intended to transfer only elemental iodine forms for purposes of modeling deposition related phenomena. Therefore, both aerosol and organic chemical forms are 100% filtered in this pathway, while there is 0% filtration of elemental.
- 5. (Deposition 1) MSL B Inboard - Airborne to MSL B Inboard - Surface
- From Compartment 2 – MSL B Inboard - Airborne
 - To Compartment 6 – MSL B Inboard - Surface
 - Transfer mechanism – “Air Leakage” selected
 - Air Leakage Panel – Leak rate – Percent per day leakage rates corresponding to calculated rates of deposition, which are associated with the inboard piping node characteristics, are entered here. For the detailed determination of these values, see Attachment B.
- 6. (Resuspension 1) MSL B Inboard - Surface to Environment
- From Compartment 6 – MSL B Inboard - Surface
 - To Compartment 3 – Environment
 - Transfer mechanism – “Air Leakage” selected
 - Air Leakage Panel – Leak rate – Percent per day leakage rates corresponding to calculated rates of resuspension, which are associated with the inboard piping node characteristics, are entered here. For the detailed determination of these values, see Attachment B. No credit is taken for deposition of resuspended iodine, as all activity from this pathway goes directly to the environment.
- 7. (Surface Fixation 1) MSL B Inboard - Surface to Hold (By Surface Fixation)
- From Compartment 6 – MSL B Inboard - Surface
 - To Compartment 8 – Hold (By Surface Fixation)
 - Transfer mechanism – “Air Leakage” selected
 - Air Leakage Panel – Leak rate – Percent per day leakage rates corresponding to calculated rates of surface fixation, which are associated with the inboard piping node characteristics, are entered here. For the detailed determination of these values, see Attachment B. The Hold compartment models “fixation”, by not allowing transport of activity sent there.
- 8. (Deposition 2) MSL B Outboard - Airborne to MSL B Outboard - Surface
- From Compartment 5 – MSL B Outboard - Airborne
 - To Compartment 7 – MSL B Outboard - Surface
 - Transfer mechanism – “Air Leakage” selected
 - Air Leakage Panel – Leak rate – Percent per day leakage rates corresponding to calculated rates of deposition, which are associated with the outboard piping node characteristics, are entered here. For the detailed determination of these values, see Attachment B.
- 9. (Resuspension 2) MSL B Outboard - Surface to Environment
- From Compartment 7 – MSL B Outboard - Surface
 - To Compartment 3 – Environment
 - Transfer mechanism – “Air Leakage” selected
 - Air Leakage Panel – Leak rate – Percent per day leakage rates corresponding to calculated rates of resuspension, which are associated with the outboard piping node characteristics, are entered here. For the detailed determination of these values, see Attachment B. No credit is taken for deposition of resuspended iodine, as all activity from this pathway goes directly to the environment.
- 10. (Surface Fixation 2) MSL B Outboard - Surface to Hold (By Surface Fixation)
- From Compartment 7 – MSL B Inboard - Surface
 - To Compartment 8 – Hold (By Surface Fixation)
 - Transfer mechanism – “Air Leakage” selected

- Air Leakage Panel – Leak rate – Percent per day leakage rates corresponding to calculated rates of surface fixation, which are associated with the outboard piping node characteristics, are entered here. For the detailed determination of these values, see Attachment B. The Hold compartment models “fixation”, by not allowing transport of activity sent there.
- 11. (Aerosol Transport 2) MSL B Outboard - Airborne to Condenser - Airborne
 - From Compartment 5 – MSL B Outboard - Airborne
 - To Compartment 9 – Condenser - Airborne
 - Transfer mechanism – “Filter” selected
 - Filter Efficiency Panel – Flow rate - 0-24hrs, 3.1881cfm; 24-96hrs, 1.5132cfm; 96-720hrs, 1.1479cfm - Flow rates derived according to methodology described in Attachment E and Section 4.5.3 above. For detailed determination of values, see Attachment B.
 - Filter Efficiency Panel – This pathway is intended to transfer only elemental iodine forms for purposes of modeling deposition related phenomena. Therefore, both aerosol and organic chemical forms are 100% filtered in this pathway, while there is 0% filtration of elemental.
- 12. (Deposition 3) Condenser - Airborne to Condenser - Surface
 - From Compartment 9 – Condenser - Airborne
 - To Compartment 10 – Condenser - Surface
 - Transfer mechanism – “Air Leakage” selected
 - Air Leakage Panel – Leak rate – Percent per day leakage rates corresponding to calculated rates of deposition, which are associated with the Condenser characteristics, are entered here. For the detailed determination of these values, see Attachment B.
- 13. (Resuspension 3) MSL B Outboard - Surface to Environment
 - From Compartment 10 – Condenser - Surface
 - To Compartment 3 – Environment
 - Transfer mechanism – “Air Leakage” selected
 - Air Leakage Panel – Leak rate – Percent per day leakage rates corresponding to calculated rates of resuspension, which are associated with the Condenser characteristics, are entered here. For the detailed determination of these values, see Attachment B. No credit is taken for deposition of resuspended iodine, as all activity from this pathway goes directly to the environment.
- 14. (Surface Fixation 3) MSL B Outboard - Surface to Hold (By Surface Fixation)
 - From Compartment 10 – Condenser - Surface
 - To Compartment 8 – Hold (By Surface Fixation)
 - Transfer mechanism – “Air Leakage” selected
 - Air Leakage Panel – Leak rate – Percent per day leakage rates corresponding to calculated rates of surface fixation, which are associated with the Condenser characteristics, are entered here. For the detailed determination of these values, see Attachment B. The Hold compartment models “fixation”, by not allowing transport of activity sent there.
- 15. Containment to MSL B Inboard - Airborne
 - From Compartment 1 – Containment
 - To Compartment 2 – MSL B Inboard - Airborne
 - Transfer mechanism – “Filter” selected
 - Filter Efficiency Panel – Flow rate – 0-2 hours, 1.5244cfm; 2-24hours, 0.9306cfm; 24-720hours, 0.5127cfm, 55.1% of first day value based on a conservatively assumed containment pressure at 24 hours. Flow rates derived according to methodology described in Attachment E and Section 4.5.3 above. For detailed determination of values, see Attachment B.
 - Filter Efficiency Panel – This pathway is intended to transfer only elemental iodine forms for purposes of modeling deposition related phenomena. Therefore, both aerosol and organic chemical forms are 100% filtered in this pathway, while there is 0% filtration of elemental.
- ❖ Dose Locations (MSIV Leakage)
 - Exclusion Area Boundary
 - In Compartment 2 – Environment
 - Breathing Rate - RADTRAD Default – RG 1.183.
 - $\frac{1}{Q}$ – See Table 3.1, 0-2 hr accident $\frac{1}{Q}$ applied to maximum dose effective release period.
 - Low Population Zone
 - In Compartment 2 – Environment
 - Breathing Rate – RADTRAD Default – RG 1.183.
 - $\frac{1}{Q}$ – See Table 3.1.

- Control Room
 - In Compartment 3 – Control Room
 - Breathing Rate – RADTRAD Default – RG 1.183.
 - Occupancy – RADTRAD Default – RG. 1.183
 - λ/a – See Table 3.1.
- ❖ Source Terms and Dose Conversion Factor
 - Nuclide Inventory – 3527 MWth, LGS Specific NIF for 60 MACCS isotopes; See Attachment A.
 - Release Fractions and Timing – RADTRAD "BWR-I" values, no delay. This RFT file is used because it only allows the transport of iodine activity. This simulation only accounts for dose effects of resuspended iodine.
 - Dose Conversion Factors – RADTRAD Library of FGR 11&12 values for 60 MACCS isotopes
 - Decay & Daughter Products – Enabled - Decay / Daughter Products considered.
 - Iodine Chemical Fractions – NUREG-1465 based Iodine Chemical Form fractions.

6.1.4. ECCS Leakage

The following details the specific values supplied as input to RADTRAD 3.03 for the modeling of runs simulating the ECCS Fluid leakage pathway. Non-noble gas isotopes released from the core are assumed to instantly appear in the ECCS fluid, which includes the minimum suppression pool water.

- ❖ Compartments
 - 1. ECCS Fluid – Releases from the core are to this compartment
 - Compartment type – Other – since it is not the environment or control room.
 - Volume – 118,655 cu. ft (suppression pool minimum) + 9,663 cu. ft. (reactor coolant) = rounded to 959,900 gallons – Includes Minimum Suppression Pool Water plus Reactor Coolant Volume at suppression pool temperature.
 - Source Term Fraction - 1.0
 - Compartment features - None.
 - 2. Reactor Enclosure
 - Compartment Type - Other
 - Volume – 900,000 ft³ – 50% of actual 1,800,000 cu. Ft. volume, for conservatism.
 - Source Term Fraction - 0.0
 - Compartment Features – Recirculation Filter, No filter credit during first 1 minute, Filtration for aerosols, elemental and organic iodines at 99, 95, and 95% efficiency, respectively, thereafter.
 - 3. Environment
 - Compartment type – Environment
 - 4. Control Room
 - Compartment type – Control Room
 - Volume – 126,000 ft³
 - Source term fraction – 0.0
 - Compartment features – Recirculating Filter, for RAD mode flow is 2175 cfm; for Chlorine mode flow is 2700 cfm. Filter efficiencies are 99% for aerosol (HEPA) and 95% for elemental and organic iodines (charcoal).
 - 5. SGTS Node
 - Compartment type – Control Room
 - Volume – 1ft³
 - Source term fraction – 0.0
 - Compartment features – None - Compartment used to model condition of SGTS filter train in series with RERS filter train.
- ❖ Active Transfer Pathways

- 1. ECCS Fluid to Reactor Enclosure
 - From Compartment 1 – ECCS Fluid
 - To Compartment 2 – Reactor Enclosure
 - Transfer mechanism – “Filter” selected
 - Filter Efficiency Panel - Flow rate - 5 gpm - Because the gallon volume value was entered as the ECCS Fluid Volume, entering a gallon value here is correct.
 - Filter Efficiency Panel - 90% for Iodines - The “filter” is used to simulate a conservatively assumed 10% flashing fraction.
 - 2. Control Room Filtered Intake
 - From Compartment 3 – Environment
 - To Compartment 4 – Control Room
 - Transfer mechanism – “Filter” selected
 - Filter Efficiency Panel – Flow rate - 0 - 720 hours, 525 cfm – models the normal CR filtered intake flow rate. Filter efficiencies are 99% for aerosol (HEPA) and 95% for elemental and organic iodines (charcoal). Chlorine Mode has no filtered intake. This corresponds to the current presence of the HEPA filter and the performance of charcoal with the CR in Radiation Mode.
 - 3. Control Room Exhaust (Equilibrium)
 - From Compartment 4 – Control Room
 - To Compartment 3 – Environment
 - Transfer mechanism – “Filter” selected
 - Filter Efficiency Panel – Radiation Mode Flow rate – 0 - 720 hours, 800 cfm – This equals the total flow that was taken into the CR volume, which includes inleakage (275 + 525 cfm). Chlorine Mode Flow Rate – 0-720 hours, 275 cfm – which balances the inleakage.
 - Filter Efficiency Panel – Filter efficiency is entered as 100.0% for all chemical forms of iodine, for all time periods. This is the exit from the control room to the environment; the filtration prevents a double counting of the iodine release, although RADTRAD 3.03 documentation indicates that this effect has been eliminated.
 - 4. Control Room Unfiltered Inleakage
 - From Compartment 3 – Environment
 - To Compartment 4 – Control Room
 - Transfer mechanism – “Filter” selected
 - Filter Efficiency Panel – Flow rate - 0-720 hours, 275 cfm – models the normal Radiation Mode and Chlorine Mode CR unfiltered inleakage flow rate.
 - Filter Efficiency Panel – Filter efficiency is entered as 0.0% for all chemical forms of iodine, for the accident duration, because this is an unfiltered path.
 - 5. Reactor Enclosure Exhaust to SGTS Node
 - From Compartment 2 – Reactor Enclosure
 - To Compartment 5 – SGTS Node
 - Transfer mechanism – “Filter” selected
 - Filter Efficiency Panel - Flow rate - 0-1 minute, 9.00E6 cfm – 10 air changes per minute to simulate last minute of RERS startup (first two minutes are before gap release phase). Flow rate 1 minute to 15.5 minutes, 3000 cfm for drawdown period. Flow rate for 15.5 minutes until 720 hours, 2500 cfm. Filter Efficiency is 99% for aerosol (HEPA), and 95% for elemental and organic iodines (charcoal), after the first 1 minute, and then for the accident duration - This is an intermediary pathway to effectively model SGTS filtration in series.
 - 6. SGTS Node to Environment
 - From Compartment 5 – SGTS Node
 - To Compartment 3 – Environment
 - Transfer mechanism – “Filter” selected
 - Filter Efficiency Panel - Flow rate - 0-1 minute, 9.00E6 cfm – 10 air changes per minute to simulate last minute of RERS startup (first two minutes are before gap release phase). Flow rate 1 minute to 15.5 minutes, 3000 cfm for drawdown period. Flow rate for 15.5 minutes until 720 hours, 2500 cfm. Filter Efficiency 0% during 0 to 15.5 minute drawdown period, then 99% for aerosol (HEPA), and elemental and organic iodines (charcoal), thereafter.
- ❖ Dose Locations (ECCS Leakage)
- Exclusion Area Boundary
 - In Compartment 2 – Environment
 - Breathing Rate - RADTRAD Default – RG 1.183.
 - τ_{D} – See Table 3.1, 0-2 hr accident τ_{D} applied to maximum dose effective release period.
 - Low Population Zone

- In Compartment 2 – Environment
 - Breathing Rate – RADTRAD Default – RG 1.183.
 - λ/Q – See Table 3.1.
- Control Room
- In Compartment 3 – Control Room
 - Breathing Rate – RADTRAD Default – RG 1.183.
 - Occupancy – RADTRAD Default – RG. 1.183
 - λ/Q – See Table 3.1.
- ❖ Source Terms and Dose Conversion Factor
- Nuclide Inventory – 3527 MWth, LGS Specific NIF for 60 MACCS isotopes; Iodines only for ECCS leakage. See Attachment A.
 - Release Fractions and Timing – RADTRAD standard BWR-DBA values, no delay.
 - Dose Conversion Factors – RADTRAD Library of FGR 11&12 values for 60 MACCS isotopes
 - Decay/No Daughter Products – Enabled - Decay considered; Daughter Products from ECCS leakage considered separately and found to make a negligible dose contribution.
 - Iodine Chemical Fractions – NUREG-1465 based Iodine Chemical Form fractions, however, since produced by flashing, treated as 97% elemental and 3% organic.

6.2. Other Dose Calculations

6.2.1. Shine Doses to Control Room from External Sources

LGS post-LOCA direct shine dose from sources outside of the control room is dominated by a Unit 1 core spray pipe with a 14" NPS, located 18 inches from the 36 inch thick shield wall between the control room and the Reactor Enclosure.

The dose from the pipe has been re-evaluated based on AST based ECCS fluid radionuclide concentrations integrated over the accident duration with standard control room occupancy credit for the 1 to 4 day and 4 to 30 day periods. However, because of the relatively thick shield wall involved, an investigation was performed to determine what additional isotopes merit consideration. This involved an Origen 2 core source term analysis, with time integration to determine relative importances. As a result a total of 110 isotopes were evaluated in determining doses from shielded ECCS piping, as described in Attachment C. The resulting integrated dose from this pipe is 1.60 rem at 1 foot from the interior surface of the control room perpendicular to that surface. As a conservatism, this integrated dose at 1 foot is used for the entire control room.

Other external sources are also evaluated in Attachment C. The only other major dose contribution was for an RHR pipe located 50 to 60 feet from the control room occupied space. The calculated dose inside of the control room from this contributor was determined to be 0.18 rem. Reactor Enclosure airborne activity is considered negligible due to the 3-foot thick shield wall between these zones. The RERS filters are separated from the control room by the drywell and spent fuel pool and do not contribute to control room doses. SGTS filters are separated from the control room by approximately 60 feet of distance and a minimum of 4.5 feet of concrete, and contribute no significant dose. Similarly, CREFAS filters are separated from the control room by approximately 30 feet and approximately 3.5 feet of concrete, and have significantly less activity than SGTS filters. Therefore, doses from SGTS and CREFAS filters are considered negligible. The control room has no external walls, so external plume contributions are also negligible.

6.2.2. Vital Area Considerations

Based on discussion in Section 4.11 and Attachment G, the existing analyses included in UFSAR Section 1.13 can be considered conservative. Given compliance with GDC-19 limit of 5 rem, based on TID-14844 source terms, compliance can be expected with 10CFR 50.67 control room dose limits with AST.

7. Summary and Conclusions

7.1. DBA LOCA Dose Results for EAB, LPZ, and for CR as a Function of Unfiltered Inleakage

The following Table summarizes calculated doses and related acceptance criteria for the EAB, LPZ and CR. All results are within regulatory limits.

LOCATION			DOSE CONTRIBUTOR
EAB (rem TEDE)	LPZ (rem TEDE)	Control Room (rem TEDE)	
0.866 <small>(worst 2-hour period starts at 3.9 hours)</small>	1.118	2.487	Filtered Primary Containment (PC) Leakage (unfiltered for 15.5 minutes, SGTS filtered thereafter) [100% of L _A], Control Room in Rad Mode
0.021 <small>(worst 2-hour period starts at 10.4 hours)</small>	0.145	0.611	MSIV Leakage with piping deposition credit, no condenser tube deposition credit, and resuspended iodine. [200 scfh total all MS lines, 100 scfh max/line]
0.000 <small>(worst 2-hour period starts at 2.3 hours)</small>	0.001	0.006	ECCS Leakage in Secondary Containment (SC) [5 gpm]
		1.78	Gamma Shine to Control Room General Area
0.888	1.26	4.88	Total Calculated Value
25	25	5	Regulatory Limits

The above control room doses are for the bounding Radiation Mode with 525 cfm of filtered fresh air intake for pressurization, and 275 cfm of unfiltered Inleakage. As shown on Page A-1 of Attachment A, the calculated total control room dose for the unpressurized Chlorine Mode with 275 cfm of unfiltered inleakage is lower.

Attachment A also shows the calculational margin associated with crediting deposition on condenser tubing in the alternative drain pathway to the environment.

As shown in Attachment G for the Security Center accessibility analysis, AST based doses (1.36 rem TEDE) are bounded by TID-14844 release based estimated TEDE dose (3.08 rem). Therefore, vital areas remain accessible.

7.2. Principal AST Supported Plant Operation and Parameter Changes

The following plant changes are supported by this calculation:

- A 2-minute delay before the start of gap release [Ref. (36)] is a basis for this accident analysis. This provides one element in evaluations of the potential for relaxation of Primary and Secondary Containment isolation valve closure time limits.

- Based on the limited amount of time spent in high volume containment purging (principally for inerting and de-inerting), and the presence of the PCIG system which minimizes the need for low volume purging to control containment pressure, LGS is assumed to not use routine purging for purposes of compliance with RG 1.183 guidance.
- An allowance of 15.5 minutes for secondary containment drawdown is used in these analyses, not including the expected 2 minutes before the start of gap releases. Therefore, a safety limit of up to 17.5 minutes for SC drawdown is justified by this calculation.
- Control room inleakage assumptions have been selected to provide additional margin. The dose analyses are performed with an assumed 275 cfm of unfiltered Inleakage for the accident duration.
- The design basis for external radioactivity source external to the control room is now based on an extended set of isotopes, with AST assumptions of releases and timing.

8. Owner's Acceptance Review Checklist for External Design Analysis

DESIGN ANALYSIS NO. LM-0646 REV: 1

		Yes	No	N/A
1.	Do assumptions have sufficient rationale?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2.	Are assumptions compatible with the way the plant is operated and with the licensing basis? <i>(For AST)</i>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3.	Do the design inputs have sufficient rationale?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4.	Are design inputs correct and reasonable?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5.	Are design inputs compatible with the way the plant is operated and with the licensing basis? <i>(For AST)</i>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6.	Are Engineering Judgments clearly documented and justified?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7.	Are Engineering Judgments compatible with the way the plant is operated and with the licensing basis? <i>(For AST)</i>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8.	Do the results and conclusions satisfy the purpose and objective of the Design Analysis?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9.	Are the results and conclusions compatible with the way the plant is operated and with the licensing basis? <i>(For AST)</i>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
10.	Does the Design Analysis include the applicable design basis documentation?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
11.	Have any limitations on the use of the results been identified and transmitted to the appropriate organizations?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
12.	Are there any unverified assumptions?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
13.	Do all unverified assumptions have a tracking and closure mechanism in place?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
14.	Have all affected design analyses been documented on the Affected Documents List (ADL) for the associated Configuration Change?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
15.	Do the sources of inputs and analysis methodology used meet current technical requirements and regulatory commitments? (If the input sources or analysis methodology are based on an out-of-date methodology or code, additional reconciliation may be required if the site has since committed to a more recent code)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
16.	Have vendor supporting technical documents and references (including GE DRFs) been reviewed when necessary?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

EXELON REVIEWER:

T. J. McSiz & Associates
 Print / Sign

DATE:

9/24/05

Calculation No. LM-0646, Rev. 1
 "Re-analysis of Loss of Coolant Accident (LOCA) Using Alternative Source Term Methodology"
 Attachment A
 RADTRAD Runs for AST LOCA Dose Analysis

This attachment contains run outputs for all dose contributing cases that were modeled for this LGS LOCA analysis. The two tables below show a tabulation of doses from the various dose contributing activity leakage pathways that are associated with the analyzed DBA-LOCA. In the first table, dose consequences with the Control Room in Radiation Mode, the bounding Control Room mode of operation, are listed. These include the scoping runs that analyze possible, but unused, credit for Condenser Tubing. The second shows the Chlorine Mode dose consequences of only the DBA cases. The RADTRAD runs are listed in the order they appear in this attachment; the nuclide information files (NIF) and release fraction and timing (RFT) appear after the runs of this attachment, and are named "Limerick AST Source Terms.nif", "Limerick AST ECCS Source Terms.nif", "BWR_DBA.RFT", and "BWR_I.RFT", respectively.

Radiation Mode Runs

Activity Leakage Pathway	Dose Location			RADTRAD Run Output Filename
	Control Room (rem TEDE)	EAB (rem TEDE)	LPZ (rem TEDE)	
Primary Containment Leakage	2.4866E+00	8.6596E-01	1.1176E+00	LGS LOCA PC Leak - New Design Basis - 275cfm CR Unfilt Inleak - Rad Mode.o0
MSIV Leakage (No Condenser Tube Credit)	5.5113E-01	2.1203E-02	1.3742E-01	LGS LOCA MSIV Leak (24-hr Settling Distribution) - New Design Basis - 275cfm CR Unfilt Inleak - Rad Mode.o0; LGS LOCA MSIV Leak (24-hr Settling Distribution) - New Design Basis - Line A Resuspension Only - 275cfm CR Unfilt Inleak - Rad Mode.o0; LGS LOCA MSIV Leak (24-hr Settling Distribution) - New Design Basis - Line B Resuspension Only - 275cfm CR Unfilt Inleak - Rad Mode.o0
Line A Resuspended Iodine	3.0619E-02	1.3034E-04	3.6349E-03	
Line B Resuspended Iodine	2.9499E-02	1.1875E-04	3.4830E-03	
MSIV Leakage (10% Condenser Tube Credit)	5.3292E-01	2.0731E-02	1.3505E-01	LGS LOCA MSIV Leak (24-hr Settling Distribution) - 10 th of HP Condenser Tubes - 275cfm CR Unfilt Inleak - Rad Mode.o0; LGS LOCA MSIV Leak (24-hr Settling Distribution) - 10 th of HP Condenser Tubes - Line A Resuspension Only - 275cfm CR Unfilt Inleak - Rad Mode.o0; LGS LOCA MSIV Leak (24-hr Settling Distribution) - 10 th of HP Condenser Tubes - Line B Resuspension Only - 275cfm CR Unfilt Inleak - Rad Mode.o0
Line A Resuspended Iodine	3.0667E-02	1.3377E-04	3.6404E-03	
Line B Resuspended Iodine	2.9615E-02	1.2506E-04	3.4967E-03	
MSIV Leakage (100% Condenser Tube Credit)	5.3073E-01	2.0676E-02	1.3477E-01	LGS LOCA MSIV Leak (24-hr Settling Distribution) - All of HP Condenser Tubes - 275cfm CR Unfilt Inleak - Rad Mode.o0; LGS LOCA MSIV Leak (24-hr Settling Distribution) - All of HP Condenser Tubes - Line A Resuspension Only - 275cfm CR Unfilt Inleak - Rad Mode.o0; LGS LOCA MSIV Leak (24-hr Settling Distribution) - All of HP Condenser Tubes - Line B Resuspension Only - 275cfm CR Unfilt Inleak - Rad Mode.o0
Line A Resuspended Iodine	3.0679E-02	1.3459E-04	3.6419E-03	
Line B Resuspended Iodine	2.9645E-02	1.2652E-04	3.5003E-03	
ECCS Leakage	5.6708E-03	3.3440E-04	6.7265E-04	LGS LOCA ECCS Leak - New Design Basis - 275cfm CR Unfilt Inleak - Rad Mode.o0

Chlorine Mode Runs

Activity Leakage Pathway	Dose Location			RADTRAD Run Output Filename
	Control Room (rem TEDE)	EAB (rem TEDE)	LPZ (rem TEDE)	
Primary Containment Leakage	1.8344E+00	8.6596E-01	1.1176E+00	LGS LOCA PC Leak - New Design Basis - 275cfm CR Unfilt Inleak - Chlorine Mode.o0
MSIV Leakage (No Condenser Tube Credit)	5.0609E-01	2.1203E-02	1.3742E-01	LGS LOCA MSIV Leak (24-hr Settling Distribution) - New Design Basis - 275cfm CR Unfilt Inleak - Chlorine Mode.o0
ECCS Leakage	5.2239E-03	3.3440E-04	6.7265E-04	LGS LOCA ECCS Leak - New Design Basis - 275cfm CR Unfilt Inleak - Chlorine Mode.o0

RADTRAD Version 3.03 (Spring 2001) run on 9/19/2005 at 16:06:19
#####

File information
#####

Plant file = C:\Documents and Settings\Aleem Boatright\My Documents\My Work\Exelon\AST\Limerick\LGS LOCA\RADTRAD\LGS LOCA PC Leak - New Design Basis - 275cfm CR Unfilt Inleak - Rad Mode.psf
Inventory file = c:\program files\radtrad3-03\defaults\limerick ast source terms.nif
Release file = c:\program files\radtrad3-03\defaults\bwr_dba.rft
Dose Conversion file = c:\program files\radtrad3-03\defaults\fgr11&12.inp

```
#####      #####      #####      # # #      #####      # #      #####  
# # #      # # #      # # #      # # #      # # #      # # #      # # #  
# # #      # # #      # # #      # # #      # # #      # # #      # # #  
#####      #####      #####      # # #      #####      # # #      # # #  
# # #      # # #      # # #      # # #      # # #      # # #      # # #  
# # #      # # #      # # #      # # #      # # #      # # #      # # #  
# # #      # # #      # # #      # # #      # # #      # # #      # # #  
# # #      # # #      # # #      # # #      # # #      # # #      # # #
```

Radtrad 3.03 4/15/2001
LGS PC Leak; 99% Aerosol, 95% E & O RERS Filter; 50% Leak Reduct at 24 hrs; 99% Filtration for SGTS; 99% Aerosol, 95% E&O Filtration for Control Room - No CREFAS Delay - Control Room in Rad Mode - 3000cfm -10% (2175cfm CR Recirc)

Nuclide Inventory File:
c:\program files\radtrad3-03\defaults\limerick ast source terms.nif

Plant Power Level:
3.5270E+03

Compartments:
5

Compartment 1:
Primary Containment
3
3.7907E+05
0
0
0
1
0

Compartment 2:
Reactor Enclosure
3
9.0000E+05
0
0
1
0
0

Compartment 3:
Environment

2
0.0000E+00
0
0
0
0
0

Compartment 4:

Control Room

1
1.2600E+05
0
0
1
0
0

Compartment 5:

SGTS Node

3
1.0000E+00
0
0
0
0
0

Pathways:

6

Pathway 1:

Primary Containment to Reactor Enclosure

1
2
4

Pathway 2:

Reactor Enclosure to SGTS Node

2
5
2

Pathway 3:

Environment to Control Room - Unfiltered Inleakage

3
4
2

Pathway 4:

Environment to Control Room - Filtered Intake

3
4
2

Pathway 5:

Control Room to Environment

4
3
2

Pathway 6:

SGTS Node to Environment

5
3
2

End of Plant Model File

Scenario Description Name:

Plant Model Filename:

Source Term:

1
 1 1.0000E+00
 c:\program files\radtrad3-03\defaults\fgr11&12.inp
 c:\program files\radtrad3-03\defaults\bwr_dba.rft
 0.0000E+00
 1
 9.5000E-01 4.8500E-02 1.5000E-03 1.0000E+00

Overlying Pool:

0
 0.0000E+00
 0
 0
 0
 0

Compartments:

5

Compartment 1:

0
 1
 0
 0
 0
 0
 0
 3
 3
 1.0000E+01
 1
 1
 0.0000E+00 0.0000E+00

Compartment 2:

0
 1
 0
 0
 0
 0
 1
 5.1000E+04
 4
 0.0000E+00 0.0000E+00 0.0000E+00 0.0000E+00
 1.6700E-02 9.9000E+01 9.5000E+01 9.5000E+01
 2.5830E-01 9.9000E+01 9.5000E+01 9.5000E+01
 7.2000E+02 0.0000E+00 0.0000E+00 0.0000E+00

Compartment 3:

0
 1
 0
 0
 0
 0
 0
 0
 0

Compartment 4:

0
 1
 0
 0
 0
 0
 1
 2.1750E+03
 3
 0.0000E+00 9.9000E+01 9.5000E+01 9.5000E+01
 5.0000E-01 9.9000E+01 9.5000E+01 9.5000E+01
 7.2000E+02 0.0000E+00 0.0000E+00 0.0000E+00

Compartment 5:

0
 1
 0
 0
 0
 0
 0
 0
 0

Pathways:

6

Pathway 1:

0
 0
 0
 0
 0
 0
 0
 0
 0
 0
 0
 1
 3
 0.0000E+00 5.0000E-01
 2.4000E+01 2.5000E-01
 7.2000E+02 0.0000E+00

Pathway 2:

0
 0
 0
 0
 0
 1
 4
 0.0000E+00 9.0000E+06 0.0000E+00 0.0000E+00 0.0000E+00
 1.6700E-02 3.0000E+03 9.9000E+01 9.5000E+01 9.5000E+01
 2.5830E-01 2.5000E+03 9.9000E+01 9.5000E+01 9.5000E+01
 7.2000E+02 0.0000E+00 0.0000E+00 0.0000E+00 0.0000E+00
 0
 0
 0
 0
 0

0
 Pathway 3:
 0
 0
 0
 0
 0
 1
 2
 0.0000E+00 2.7500E+02 0.0000E+00 0.0000E+00 0.0000E+00
 7.2000E+02 0.0000E+00 0.0000E+00 0.0000E+00 0.0000E+00

0
 0
 0
 0
 0

Pathway 4:
 0
 0
 0
 0
 0
 1
 3
 0.0000E+00 5.2500E+02 9.9000E+01 9.5000E+01 9.5000E+01
 5.0000E-01 5.2500E+02 9.9000E+01 9.5000E+01 9.5000E+01
 7.2000E+02 0.0000E+00 0.0000E+00 0.0000E+00 0.0000E+00

0
 0
 0
 0
 0
 0

Pathway 5:
 0
 0
 0
 0
 0
 1
 3
 0.0000E+00 8.0000E+02 1.0000E+02 1.0000E+02 1.0000E+02
 5.0000E-01 8.0000E+02 1.0000E+02 1.0000E+02 1.0000E+02
 7.2000E+02 0.0000E+00 0.0000E+00 0.0000E+00 0.0000E+00

0
 0
 0
 0
 0
 0

Pathway 6:
 0
 0
 0
 0
 0
 1
 4
 0.0000E+00 9.0000E+06 0.0000E+00 0.0000E+00 0.0000E+00

LGS LOCA PC Leak - New Design Basis - 275cfm CR Unfilt Inleak - Rad Mode.o0

1.6700E-02	3.0000E+03	0.0000E+00	0.0000E+00	0.0000E+00
2.5830E-01	2.5000E+03	9.9000E+01	9.9000E+01	9.9000E+01
7.2000E+02	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00
0				
0				
0				
0				
0				

Dose Locations:

3

Location 1:

Control Room

4

0

1

2

0.0000E+00 3.5000E-04

7.2000E+02 0.0000E+00

1

4

0.0000E+00 1.0000E+00

2.4000E+01 6.0000E-01

9.6000E+01 4.0000E-01

7.2000E+02 0.0000E+00

Location 2:

EAB

3

1

2

0.0000E+00 3.1800E-04

8.0000E+00 0.0000E+00

1

2

0.0000E+00 3.5000E-04

8.0000E+00 0.0000E+00

0

Location 3:

LPZ

3

1

5

0.0000E+00 5.7900E-05

8.0000E+00 4.1000E-05

2.4000E+01 1.9500E-05

9.6000E+01 6.6800E-06

7.2000E+02 0.0000E+00

1

4

0.0000E+00 3.5000E-04

8.0000E+00 1.8000E-04

2.4000E+01 2.3000E-04

7.2000E+02 0.0000E+00

0

Effective Volume Location:

1

6

0.0000E+00 6.8800E-03

2.0000E+00 5.1700E-03

8.0000E+00 2.0400E-03

2.4000E+01 1.2900E-03
9.6000E+01 9.6300E-04
7.2000E+02 0.0000E+00

Simulation Parameters:

3
0.0000E+00 1.6670E-03
1.6700E-02 2.5000E-02
2.5830E-01 0.0000E+00

Output Filename:

C:\Documents and Settings\Aleem Boatright\My Documents\My
Work\Exelon\AST\Limerick\LGS LOCA\RADTRAD\LGS LOCA PC Leak - New Design Basis -
275cfm CR Unfilt Inleak - Rad Mode.o0

1
1
1
0
1

End of Scenario File

RADTRAD Version 3.03 (Spring 2001) run on 9/19/2005 at 16:06:19
#####

Plant Description
#####

Number of Nuclides = 60

Inventory Power = 1.0000E+00 MWth
Plant Power Level = 3.5270E+03 MWth

Number of compartments = 5

Compartment information

Compartment number 1 (Source term fraction = 1.0000E+00
)

Name: Primary Containment
Compartment volume = 3.7907E+05 (Cubic feet)
Compartment type is Normal
Removal devices within compartment:
Deposition

Pathways into and out of compartment 1
Exit Pathway Number 1: Primary Containment to Reactor Enclosure

Compartment number 2
Name: Reactor Enclosure
Compartment volume = 9.0000E+05 (Cubic feet)
Compartment type is Normal
Removal devices within compartment:
Filter(s)

Pathways into and out of compartment 2
Inlet Pathway Number 1: Primary Containment to Reactor Enclosure
Exit Pathway Number 2: Reactor Enclosure to SGTS Node

Compartment number 3
Name: Environment
Compartment type is Environment
Pathways into and out of compartment 3
Inlet Pathway Number 5: Control Room to Environment
Inlet Pathway Number 6: SGTS Node to Environment
Exit Pathway Number 3: Environment to Control Room - Unfiltered Inleakage
Exit Pathway Number 4: Environment to Control Room - Filtered Intake

Compartment number 4
Name: Control Room
Compartment volume = 1.2600E+05 (Cubic feet)
Compartment type is Control Room
Removal devices within compartment:
Filter(s)
Pathways into and out of compartment 4
Inlet Pathway Number 3: Environment to Control Room - Unfiltered Inleakage
Inlet Pathway Number 4: Environment to Control Room - Filtered Intake
Exit Pathway Number 5: Control Room to Environment

Compartment number 5
Name: SGTS Node

Compartment volume = 1.0000E+00 (Cubic feet)

Compartment type is Normal

Pathways into and out of compartment 5

Inlet Pathway Number 2: Reactor Enclosure to SGTS Node

Exit Pathway Number 6: SGTS Node to Environment

Total number of pathways = 6

 RADTRAD Version 3.03 (Spring 2001) run on 9/19/2005 at 16:06:19
 #####

 Scenario Description
 #####

Radioactive Decay is enabled
 Calculation of Daughters is enabled

Release Fractions and Timings

	GAP	EARLY IN-VESSEL	LATE RELEASE	RELEASE MASS
	0.500000 hr	1.5000 hrs	0.0000 hrs	(gm)
NOBLES	5.0000E-02	9.5000E-01	0.0000E+00	4.625E+03
IODINE	5.0000E-02	2.5000E-01	0.0000E+00	3.033E+02
CESIUM	5.0000E-02	2.0000E-01	0.0000E+00	5.099E+04
TELLURIUM	0.0000E+00	5.0000E-02	0.0000E+00	4.012E+01
STRONTIUM	0.0000E+00	2.0000E-02	0.0000E+00	1.712E+03
BARIUM	0.0000E+00	2.0000E-02	0.0000E+00	4.739E+01
RUTHENIUM	0.0000E+00	2.5000E-03	0.0000E+00	5.988E+01
CERIUM	0.0000E+00	5.0000E-04	0.0000E+00	5.914E+02
LANTHANUM	0.0000E+00	2.0000E-04	0.0000E+00	8.731E+00

Inventory Power = 3527. MWt

Nuclide Name	Group	Specific Inventory (Ci/MWt)	half life (s)	Whole Body DCF (Sv-m3/Bq-s)	Inhaled Thyroid (Sv/Bq)	Inhaled Effective (Sv/Bq)
Co-58	7	1.529E+02	6.117E+06	4.760E-14	8.720E-10	2.940E-09
Co-60	7	1.830E+02	1.663E+08	1.260E-13	1.620E-08	5.910E-08
Kr-85	1	3.946E+02	3.383E+08	1.190E-16	0.000E+00	0.000E+00
Kr-85m	1	8.313E+03	1.613E+04	7.480E-15	0.000E+00	0.000E+00
Kr-87	1	1.633E+04	4.578E+03	4.120E-14	0.000E+00	0.000E+00
Kr-88	1	2.303E+04	1.022E+04	1.020E-13	0.000E+00	0.000E+00
Rb-86	3	6.518E+01	1.612E+06	4.810E-15	1.330E-09	1.790E-09
Sr-89	5	2.798E+04	4.363E+06	7.730E-17	7.960E-12	1.120E-08
Sr-90	5	3.178E+03	9.190E+08	7.530E-18	2.690E-10	3.510E-07
Sr-91	5	3.801E+04	3.420E+04	4.924E-14	9.930E-12	4.547E-10
Sr-92	5	4.017E+04	9.756E+03	6.790E-14	3.920E-12	2.180E-10
Y-90	9	3.272E+03	2.304E+05	1.900E-16	5.170E-13	2.280E-09
Y-91	9	3.448E+04	5.055E+06	2.600E-16	8.500E-12	1.320E-08
Y-92	9	4.029E+04	1.274E+04	1.300E-14	1.050E-12	2.110E-10
Y-93	9	4.526E+04	3.636E+04	4.800E-15	9.260E-13	5.820E-10
Zr-95	9	4.489E+04	5.528E+06	3.600E-14	1.440E-09	6.390E-09
Zr-97	9	4.657E+04	6.084E+04	4.432E-14	2.315E-11	1.171E-09
Nb-95	9	4.512E+04	3.037E+06	3.740E-14	3.580E-10	1.570E-09
Mo-99	7	5.078E+04	2.376E+05	7.280E-15	1.520E-11	1.070E-09
Tc-99m	7	4.447E+04	2.167E+04	5.890E-15	5.010E-11	8.800E-12
Ru-103	7	4.202E+04	3.394E+06	2.251E-14	2.570E-10	2.421E-09
Ru-105	7	2.908E+04	1.598E+04	3.810E-14	4.150E-12	1.230E-10
Ru-106	7	1.730E+04	3.181E+07	1.040E-14	1.720E-09	1.290E-07
Rh-105	7	2.752E+04	1.273E+05	3.720E-15	2.880E-12	2.580E-10
Sb-127	4	2.896E+03	3.326E+05	3.330E-14	6.150E-11	1.630E-09
Sb-129	4	8.638E+03	1.555E+04	7.140E-14	9.720E-12	1.740E-10
Te-127	4	2.873E+03	3.366E+04	2.420E-16	1.840E-12	8.600E-11
Te-127m	4	3.855E+02	9.418E+06	1.470E-16	9.660E-11	5.810E-09
Te-129	4	8.501E+03	4.176E+03	2.750E-15	5.090E-13	2.090E-11
Te-129m	4	1.267E+03	2.903E+06	3.337E-15	1.563E-10	6.484E-09

Te-131m	4	3.869E+03	1.080E+05	7.463E-14	3.669E-08	1.758E-09
Te-132	4	3.821E+04	2.815E+05	1.030E-14	6.280E-08	2.550E-09
I-131	2	2.687E+04	6.947E+05	1.820E-14	2.920E-07	8.890E-09
I-132	2	3.881E+04	8.280E+03	1.120E-13	1.740E-09	1.030E-10
I-133	2	5.556E+04	7.488E+04	2.940E-14	4.860E-08	1.580E-09
I-134	2	6.165E+04	3.156E+03	1.300E-13	2.880E-10	3.550E-11
I-135	2	5.192E+04	2.380E+04	8.294E-14	8.460E-09	3.320E-10
Xe-133	1	5.491E+04	4.532E+05	1.560E-15	0.000E+00	0.000E+00
Xe-135	1	2.228E+04	3.272E+04	1.190E-14	0.000E+00	0.000E+00
Cs-134	3	7.280E+03	6.507E+07	7.570E-14	1.110E-08	1.250E-08
Cs-136	3	2.027E+03	1.132E+06	1.060E-13	1.730E-09	1.980E-09
Cs-137	3	4.538E+03	9.467E+08	2.725E-14	7.930E-09	8.630E-09
Ba-139	6	5.084E+04	4.962E+03	2.170E-15	2.400E-12	4.640E-11
Ba-140	6	4.896E+04	1.101E+06	8.580E-15	2.560E-10	1.010E-09
La-140	9	5.019E+04	1.450E+05	1.170E-13	6.870E-11	1.310E-09
La-141	9	4.640E+04	1.415E+04	2.390E-15	9.400E-12	1.570E-10
La-142	9	4.532E+04	5.550E+03	1.440E-13	8.740E-12	6.840E-11
Ce-141	8	4.492E+04	2.808E+06	3.430E-15	2.550E-11	2.420E-09
Ce-143	8	4.427E+04	1.188E+05	1.290E-14	6.230E-12	9.160E-10
Ce-144	8	3.596E+04	2.456E+07	2.773E-15	2.920E-10	1.010E-07
Pr-143	9	4.293E+04	1.172E+06	2.100E-17	1.680E-18	2.190E-09
Nd-147	9	1.838E+04	9.487E+05	6.190E-15	1.820E-11	1.850E-09
Np-239	8	5.397E+05	2.035E+05	7.690E-15	7.620E-12	6.780E-10
Pu-238	8	1.796E+02	2.769E+09	4.880E-18	3.860E-10	7.790E-05
Pu-239	8	1.200E+01	7.594E+11	4.240E-18	3.750E-10	8.330E-05
Pu-240	8	1.288E+01	2.063E+11	4.750E-18	3.760E-10	8.330E-05
Pu-241	8	6.182E+03	4.544E+08	7.250E-20	9.150E-12	1.340E-06
Am-241	9	9.528E+00	1.364E+10	8.180E-16	1.600E-09	1.200E-04
Cm-242	9	2.388E+03	1.407E+07	5.690E-18	9.410E-10	4.670E-06
Cm-244	9	2.602E+02	5.715E+08	4.910E-18	1.010E-09	6.700E-05

Nuclide	Daughter	Fraction	Daughter	Fraction	Daughter	Fraction
Kr-85m	Kr-85	0.21	none	0.00	none	0.00
Kr-87	Rb-87	1.00	none	0.00	none	0.00
Kr-88	Rb-88	1.00	none	0.00	none	0.00
Sr-90	Y-90	1.00	none	0.00	none	0.00
Sr-91	Y-91m	0.58	Y-91	0.42	none	0.00
Sr-92	Y-92	1.00	none	0.00	none	0.00
Y-93	Zr-93	1.00	none	0.00	none	0.00
Zr-95	Nb-95m	0.01	Nb-95	0.99	none	0.00
Zr-97	Nb-97m	0.95	Nb-97	0.05	none	0.00
Mo-99	Tc-99m	0.88	Tc-99	0.12	none	0.00
Tc-99m	Tc-99	1.00	none	0.00	none	0.00
Ru-103	Rh-103m	1.00	none	0.00	none	0.00
Ru-105	Rh-105	1.00	none	0.00	none	0.00
Ru-106	Rh-106	1.00	none	0.00	none	0.00
Sb-127	Te-127m	0.18	Te-127	0.82	none	0.00
Sb-129	Te-129m	0.22	Te-129	0.77	none	0.00
Te-127m	Te-127	0.98	none	0.00	none	0.00
Te-129	I-129	1.00	none	0.00	none	0.00
Te-129m	Te-129	0.65	I-129	0.35	none	0.00
Te-131m	Te-131	0.22	I-131	0.78	none	0.00
Te-132	I-132	1.00	none	0.00	none	0.00
I-131	Xe-131m	0.01	none	0.00	none	0.00
I-133	Xe-133m	0.03	Xe-133	0.97	none	0.00
I-135	Xe-135m	0.15	Xe-135	0.85	none	0.00
Xe-135	Cs-135	1.00	none	0.00	none	0.00
Cs-137	Ba-137m	0.95	none	0.00	none	0.00
Ba-140	La-140	1.00	none	0.00	none	0.00
La-141	Ce-141	1.00	none	0.00	none	0.00

Ce-143	Pr-143	1.00	none	0.00	none	0.00
Ce-144	Pr-144m	0.02	Pr-144	0.98	none	0.00
Nd-147	Pm-147	1.00	none	0.00	none	0.00
Np-239	Pu-239	1.00	none	0.00	none	0.00
Pu-238	U-234	1.00	none	0.00	none	0.00
Pu-239	U-235	1.00	none	0.00	none	0.00
Pu-240	U-236	1.00	none	0.00	none	0.00
Pu-241	U-237	0.00	Am-241	1.00	none	0.00
Am-241	Np-237	1.00	none	0.00	none	0.00
Cm-242	Pu-238	1.00	none	0.00	none	0.00
Cm-244	Pu-240	1.00	none	0.00	none	0.00

Iodine fractions

Aerosol	=	9.5000E-01
Elemental	=	4.8500E-02
Organic	=	1.5000E-03

COMPARTMENT DATA

Compartment number 1: Primary Containment
 Natural Deposition (Powers' model): Aerosol data
 Reactor type: 3
 Percentile = 10 (%)

Natural Deposition: Elemental Removal Data
 Time (hr) Removal Coef. (hr⁻¹)
 0.0000E+00 0.0000E+00

Compartment number 2: Reactor Enclosure

Compartment Filter Data

Time (hr)	Flow Rate (cfm)	Filter Efficiencies (%)		
		Aerosol	Elemental	Organic
0.0000E+00	5.1000E+04	0.0000E+00	0.0000E+00	0.0000E+00
1.6700E-02	5.1000E+04	9.9000E+01	9.5000E+01	9.5000E+01
2.5830E-01	5.1000E+04	9.9000E+01	9.5000E+01	9.5000E+01
7.2000E+02	5.1000E+04	0.0000E+00	0.0000E+00	0.0000E+00

Compartment number 3: Environment

Compartment number 4: Control Room

Compartment Filter Data

Time (hr)	Flow Rate (cfm)	Filter Efficiencies (%)		
		Aerosol	Elemental	Organic
0.0000E+00	2.1750E+03	9.9000E+01	9.5000E+01	9.5000E+01
5.0000E-01	2.1750E+03	9.9000E+01	9.5000E+01	9.5000E+01
7.2000E+02	2.1750E+03	0.0000E+00	0.0000E+00	0.0000E+00

Compartment number 5: SGTS Node

PATHWAY DATA

Pathway number 1: Primary Containment to Reactor Enclosure

Convection Data

Time (hr)	Flow Rate (% / day)
0.0000E+00	5.0000E-01

2.4000E+01 2.5000E-01
 7.2000E+02 0.0000E+00

Pathway number 2: Reactor Enclosure to SGTS Node

Pathway Filter: Removal Data

Time (hr)	Flow Rate (cfm)	Filter Efficiencies (%)		
		Aerosol	Elemental	Organic
0.0000E+00	9.0000E+06	0.0000E+00	0.0000E+00	0.0000E+00
1.6700E-02	3.0000E+03	9.9000E+01	9.5000E+01	9.5000E+01
2.5830E-01	2.5000E+03	9.9000E+01	9.5000E+01	9.5000E+01
7.2000E+02	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00

Pathway number 3: Environment to Control Room - Unfiltered Inleakage

Pathway Filter: Removal Data

Time (hr)	Flow Rate (cfm)	Filter Efficiencies (%)		
		Aerosol	Elemental	Organic
0.0000E+00	2.7500E+02	0.0000E+00	0.0000E+00	0.0000E+00
7.2000E+02	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00

Pathway number 4: Environment to Control Room - Filtered Intake

Pathway Filter: Removal Data

Time (hr)	Flow Rate (cfm)	Filter Efficiencies (%)		
		Aerosol	Elemental	Organic
0.0000E+00	5.2500E+02	9.9000E+01	9.5000E+01	9.5000E+01
5.0000E-01	5.2500E+02	9.9000E+01	9.5000E+01	9.5000E+01
7.2000E+02	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00

Pathway number 5: Control Room to Environment

Pathway Filter: Removal Data

Time (hr)	Flow Rate (cfm)	Filter Efficiencies (%)		
		Aerosol	Elemental	Organic
0.0000E+00	8.0000E+02	1.0000E+02	1.0000E+02	1.0000E+02
5.0000E-01	8.0000E+02	1.0000E+02	1.0000E+02	1.0000E+02
7.2000E+02	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00

Pathway number 6: SGTS Node to Environment

Pathway Filter: Removal Data

Time (hr)	Flow Rate (cfm)	Filter Efficiencies (%)		
		Aerosol	Elemental	Organic
0.0000E+00	9.0000E+06	0.0000E+00	0.0000E+00	0.0000E+00
1.6700E-02	3.0000E+03	0.0000E+00	0.0000E+00	0.0000E+00
2.5830E-01	2.5000E+03	9.9000E+01	9.9000E+01	9.9000E+01
7.2000E+02	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00

LOCATION DATA

Location Control Room is in compartment 4

Location X/Q Data

Time (hr) X/Q (s * m^-3)
 0.0000E+00 6.8800E-03

2.0000E+00	5.1700E-03
8.0000E+00	2.0400E-03
2.4000E+01	1.2900E-03
9.6000E+01	9.6300E-04
7.2000E+02	0.0000E+00

Location Breathing Rate Data

Time (hr)	Breathing Rate (m ³ * sec ⁻¹)
0.0000E+00	3.5000E-04
7.2000E+02	0.0000E+00

Location Occupancy Factor Data

Time (hr)	Occupancy Factor
0.0000E+00	1.0000E+00
2.4000E+01	6.0000E-01
9.6000E+01	4.0000E-01
7.2000E+02	0.0000E+00

Location EAB is in compartment 3

Location X/Q Data

Time (hr)	X/Q (s * m ⁻³)
0.0000E+00	3.1800E-04
8.0000E+00	0.0000E+00

Location Breathing Rate Data

Time (hr)	Breathing Rate (m ³ * sec ⁻¹)
0.0000E+00	3.5000E-04
8.0000E+00	0.0000E+00

Location LPZ is in compartment 3

Location X/Q Data

Time (hr)	X/Q (s * m ⁻³)
0.0000E+00	5.7900E-05
8.0000E+00	4.1000E-05
2.4000E+01	1.9500E-05
9.6000E+01	6.6800E-06
7.2000E+02	0.0000E+00

Location Breathing Rate Data

Time (hr)	Breathing Rate (m ³ * sec ⁻¹)
0.0000E+00	3.5000E-04
8.0000E+00	1.8000E-04
2.4000E+01	2.3000E-04
7.2000E+02	0.0000E+00

USER SPECIFIED TIME STEP DATA - SUPPLEMENTAL TIME STEPS

Time	Time step
0.0000E+00	1.6670E-03
1.6700E-02	2.5000E-02
2.5830E-01	0.0000E+00

 RADTRAD Version 3.03 (Spring 2001) run on 9/19/2005 at 16:06:19
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 Dose Output
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Detailed model information at time (H) = 0.0167

Natural deposition - Powers' Model, Compartment 1
 Deposition Lambda (1 / Hours)
 Noble Elemental Organic Aerosol
 0.0000E+00 0.0000E+00 0.0000E+00 7.0466E-01
 Deposition Net DF
 Noble Elemental Organic Aerosol
 1.0000E+00 1.0000E+00 1.0000E+00 1.0059E+00

Control Room Doses:

Time (h) =	0.0167	Whole Body	Thyroid	TEDE
Delta dose (rem)		1.9418E-07	5.7322E-04	2.4979E-05
Accumulated dose (rem)		1.9418E-07	5.7322E-04	2.4979E-05

EAB Doses:

Time (h) =	0.0167	Whole Body	Thyroid	TEDE
Delta dose (rem)		2.2703E-04	3.8597E-02	1.8975E-03
Accumulated dose (rem)		2.2703E-04	3.8597E-02	1.8975E-03

LPZ Doses:

Time (h) =	0.0167	Whole Body	Thyroid	TEDE
Delta dose (rem)		4.1336E-05	7.0276E-03	3.4549E-04
Accumulated dose (rem)		4.1336E-05	7.0276E-03	3.4549E-04

Detailed model information at time (H) = 0.2583

Natural deposition - Powers' Model, Compartment 1
 Deposition Lambda (1 / Hours)
 Noble Elemental Organic Aerosol
 0.0000E+00 0.0000E+00 0.0000E+00 7.0466E-01
 Deposition Net DF
 Noble Elemental Organic Aerosol
 1.0000E+00 1.0000E+00 1.0000E+00 1.0938E+00

Control Room Doses:

Time (h) =	0.2583	Whole Body	Thyroid	TEDE
Delta dose (rem)		1.1541E-05	2.3044E-02	1.0071E-03
Accumulated dose (rem)		1.1735E-05	2.3617E-02	1.0321E-03

EAB Doses:

Time (h) =	0.2583	Whole Body	Thyroid	TEDE
Delta dose (rem)		1.6718E-04	1.7930E-03	2.4113E-04
Accumulated dose (rem)		3.9421E-04	4.0390E-02	2.1386E-03

LPZ Doses:

Time (h) =	0.2583	Whole Body	Thyroid	TEDE
Delta dose (rem)		3.0440E-05	3.2647E-04	4.3904E-05
Accumulated dose (rem)		7.1776E-05	7.3541E-03	3.8939E-04

Detailed model information at time (H) = 0.5000

Natural deposition - Powers' Model, Compartment 1
 Deposition Lambda (1 / Hours)

Noble	Elemental	Organic	Aerosol
0.0000E+00	0.0000E+00	0.0000E+00	7.0466E-01

Deposition Net DF

Noble	Elemental	Organic	Aerosol
1.0000E+00	1.0000E+00	1.0000E+00	1.1865E+00

Control Room Doses:

Time (h) =	0.5000	Whole Body	Thyroid	TEDE
Delta dose (rem)		4.6843E-05	1.7151E-02	7.8617E-04
Accumulated dose (rem)		5.8578E-05	4.0768E-02	1.8183E-03

EAB Doses:

Time (h) =	0.5000	Whole Body	Thyroid	TEDE
Delta dose (rem)		7.8813E-04	7.3368E-05	7.9114E-04
Accumulated dose (rem)		1.1823E-03	4.0464E-02	2.9298E-03

LPZ Doses:

Time (h) =	0.5000	Whole Body	Thyroid	TEDE
Delta dose (rem)		1.4350E-04	1.3359E-05	1.4405E-04
Accumulated dose (rem)		2.1527E-04	7.3674E-03	5.3344E-04

Detailed model information at time (H) = 2.0000

Natural deposition - Powers' Model, Compartment 1
 Deposition Lambda (1 / Hours)

Noble	Elemental	Organic	Aerosol
0.0000E+00	0.0000E+00	0.0000E+00	3.0681E-01

Deposition Net DF

Noble	Elemental	Organic	Aerosol
1.0000E+00	1.0000E+00	1.0000E+00	1.3635E+00

Control Room Doses:

Time (h) =	2.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)		1.8314E-02	4.0142E-02	2.0065E-02

Accumulated dose (rem) 1.8373E-02 8.0910E-02 2.1884E-02

EAB Doses:

Time (h) =	2.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)		1.3466E-01	3.2247E-03	1.3483E-01
Accumulated dose (rem)		1.3584E-01	4.3688E-02	1.3776E-01

LPZ Doses:

Time (h) =	2.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)		2.4519E-02	5.8714E-04	2.4549E-02
Accumulated dose (rem)		2.4734E-02	7.9546E-03	2.5082E-02

Detailed model information at time (H) = 8.0000

Natural deposition - Powers' Model, Compartment 1
 Deposition Lambda (1 / Hours)
 Noble Elemental Organic Aerosol
 0.0000E+00 0.0000E+00 0.0000E+00 6.2057E-01
 Deposition Net DF
 Noble Elemental Organic Aerosol
 1.0000E+00 1.0000E+00 1.0000E+00 1.8279E+02

Control Room Doses:

Time (h) =	8.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)		8.7998E-01	2.5080E-02	8.8109E-01
Accumulated dose (rem)		8.9836E-01	1.0599E-01	9.0297E-01

EAB Doses:

Time (h) =	8.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)		2.3643E+00	1.1007E-02	2.3648E+00
Accumulated dose (rem)		2.5002E+00	5.4695E-02	2.5025E+00

LPZ Doses:

Time (h) =	8.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)		4.3048E-01	2.0040E-03	4.3057E-01
Accumulated dose (rem)		4.5522E-01	9.9586E-03	4.5565E-01

Detailed model information at time (H) = 24.0000

Natural deposition - Powers' Model, Compartment 1
 Deposition Lambda (1 / Hours)
 Noble Elemental Organic Aerosol
 0.0000E+00 0.0000E+00 0.0000E+00 4.8360E-01
 Deposition Net DF
 Noble Elemental Organic Aerosol
 1.0000E+00 1.0000E+00 1.0000E+00 6.0637E+05

Control Room Doses:

Time (h) =	24.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)		1.0629E+00	1.1867E-02	1.0633E+00
Accumulated dose (rem)		1.9613E+00	1.1786E-01	1.9663E+00

EAB Doses:

Time (h) =	24.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00
Accumulated dose (rem)	2.5002E+00	5.4695E-02	2.5025E+00	

LPZ Doses:

Time (h) =	24.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)	4.2516E-01	1.0798E-03	4.2520E-01	
Accumulated dose (rem)	8.8038E-01	1.1038E-02	8.8085E-01	

Detailed model information at time (H) = 96.0000

Natural deposition - Powers' Model, Compartment 1

Deposition Lambda (1 / Hours)

Noble	Elemental	Organic	Aerosol
0.0000E+00	0.0000E+00	0.0000E+00	1.0000E-01

Deposition Net DF

Noble	Elemental	Organic	Aerosol
1.0000E+00	1.0000E+00	1.0000E+00	8.2005E+08

Control Room Doses:

Time (h) =	96.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)	3.1125E-01	7.1882E-03	3.1147E-01	
Accumulated dose (rem)	2.2725E+00	1.2505E-01	2.2777E+00	

EAB Doses:

Time (h) =	96.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00
Accumulated dose (rem)	2.5002E+00	5.4695E-02	2.5025E+00	

LPZ Doses:

Time (h) =	96.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)	1.5696E-01	1.0996E-03	1.5700E-01	
Accumulated dose (rem)	1.0373E+00	1.2138E-02	1.0378E+00	

Detailed model information at time (H) = 720.0000

Natural deposition - Powers' Model, Compartment 1

Deposition Lambda (1 / Hours)

Noble	Elemental	Organic	Aerosol
0.0000E+00	0.0000E+00	0.0000E+00	1.0000E-01

Deposition Net DF

Noble	Elemental	Organic	Aerosol
1.0000E+00	1.0000E+00	1.0000E+00	1.1106E+36

Control Room Doses:

Time (h) =	720.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)	2.0860E-01	9.5354E-03	2.0890E-01	
Accumulated dose (rem)	2.4811E+00	1.3458E-01	2.4866E+00	

EAB Doses:

Time (h) =	720.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00
Accumulated dose (rem)	2.5002E+00	5.4695E-02	2.5025E+00	

LPZ Doses:

Time (h) = 720.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)	7.9700E-02	1.0326E-03	7.9732E-02
Accumulated dose (rem)	1.1170E+00	1.3171E-02	1.1176E+00

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 I-131 Summary
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Time (hr)	Primary Containment I-131 (Curies)	Reactor Enclosure I-131 (Curies)	Environment I-131 (Curies)
0.000	5.2640E+03	2.7344E-04	3.1208E-05
0.017	1.5738E+05	4.9216E-02	2.2507E-01
0.258	2.2465E+06	4.6525E+01	2.3557E-01
0.500	4.0239E+06	1.3107E+02	2.3600E-01
0.900	9.2485E+06	3.5670E+02	2.3793E-01
1.200	1.2852E+07	5.6278E+02	2.4078E-01
1.500	1.6204E+07	7.6752E+02	2.4495E-01
1.800	1.9322E+07	9.6252E+02	2.5039E-01
2.000	2.1277E+07	1.0859E+03	2.5471E-01
2.300	1.6059E+07	1.0745E+03	2.6179E-01
2.600	1.2210E+07	9.0201E+02	2.6842E-01
2.900	9.3722E+06	7.1788E+02	2.7416E-01
3.200	7.2788E+06	5.6237E+02	2.7906E-01
3.500	5.7347E+06	4.4084E+02	2.8328E-01
3.800	4.5957E+06	3.4884E+02	2.8696E-01
4.100	3.7554E+06	2.8015E+02	2.9024E-01
4.400	3.1353E+06	2.2919E+02	2.9322E-01
4.700	2.6777E+06	1.9149E+02	2.9598E-01
5.000	2.3398E+06	1.6363E+02	2.9858E-01
5.300	2.1770E+06	1.4515E+02	3.0106E-01
5.600	2.0416E+06	1.3311E+02	3.0346E-01
5.900	1.9292E+06	1.2426E+02	3.0581E-01
6.200	1.8356E+06	1.1730E+02	3.0812E-01
6.500	1.7578E+06	1.1165E+02	3.1039E-01
6.800	1.6930E+06	1.0700E+02	3.1264E-01
7.100	1.6390E+06	1.0314E+02	3.1486E-01
7.400	1.5939E+06	9.9926E+01	3.1707E-01
7.700	1.5563E+06	9.7249E+01	3.1926E-01
8.000	1.5249E+06	9.5014E+01	3.2143E-01
8.300	1.4985E+06	9.3144E+01	3.2359E-01
8.600	1.4789E+06	9.1638E+01	3.2574E-01
8.900	1.4620E+06	9.0422E+01	3.2789E-01
9.200	1.4474E+06	8.9401E+01	3.3002E-01
9.500	1.4348E+06	8.8528E+01	3.3215E-01
9.800	1.4238E+06	8.7775E+01	3.3427E-01
10.100	1.4143E+06	8.7122E+01	3.3639E-01
10.400	1.4059E+06	8.6552E+01	3.3850E-01
24.000	1.2984E+06	7.9643E+01	4.3108E-01
96.000	9.9499E+05	3.0515E+01	6.4144E-01
720.000	9.9109E+04	3.0395E+00	1.2598E+00

Time (hr)	Control Room I-131 (Curies)	SGTS Node I-131 (Curies)
0.000	2.8499E-08	3.0382E-10
0.017	2.0410E-04	5.4684E-08
0.258	1.5412E-04	6.2785E-07

0.500	1.1003E-04	1.7906E-06
0.900	6.4105E-05	4.9163E-06
1.200	4.4228E-05	7.7953E-06
1.500	3.2188E-05	1.0692E-05
1.800	2.5271E-05	1.3491E-05
2.000	2.2587E-05	1.5285E-05
2.300	1.8863E-05	1.5556E-05
2.600	1.6160E-05	1.3780E-05
2.900	1.3898E-05	1.1782E-05
3.200	1.1950E-05	1.0068E-05
3.500	1.0294E-05	8.7204E-06
3.800	8.9164E-06	7.6962E-06
4.100	7.7930E-06	6.9296E-06
4.400	6.8922E-06	6.3594E-06
4.700	6.1796E-06	5.9363E-06
5.000	5.6220E-06	5.6225E-06
5.300	5.1916E-06	5.4128E-06
5.600	4.8677E-06	5.2748E-06
5.900	4.6260E-06	5.1722E-06
6.200	4.4448E-06	5.0905E-06
6.500	4.3075E-06	5.0235E-06
6.800	4.2021E-06	4.9675E-06
7.100	4.1201E-06	4.9203E-06
7.400	4.0554E-06	4.8803E-06
7.700	4.0037E-06	4.8463E-06
8.000	3.9618E-06	4.8172E-06
8.300	3.1398E-06	4.7921E-06
8.600	2.5927E-06	4.7711E-06
8.900	2.2281E-06	4.7533E-06
9.200	1.9848E-06	4.7377E-06
9.500	1.8220E-06	4.7237E-06
9.800	1.7128E-06	4.7111E-06
10.100	1.6392E-06	4.6996E-06
10.400	1.5892E-06	4.6890E-06
24.000	1.4105E-06	4.4245E-06
96.000	3.4173E-07	1.6953E-06
720.000	2.5410E-08	1.6886E-07

 Cumulative Dose Summary
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Time (hr)	Control Room		EAB		LPZ	
	Thyroid (rem)	TEDE (rem)	Thyroid (rem)	TEDE (rem)	Thyroid (rem)	TEDE (rem)
0.000	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00
0.017	5.7322E-04	2.4979E-05	3.8597E-02	1.8975E-03	7.0276E-03	3.4549E-04
0.258	2.3617E-02	1.0321E-03	4.0390E-02	2.1386E-03	7.3541E-03	3.8939E-04
0.500	4.0768E-02	1.8183E-03	4.0464E-02	2.9298E-03	7.3674E-03	5.3344E-04
0.900	5.9097E-02	3.0486E-03	4.0795E-02	9.2106E-03	7.4277E-03	1.6770E-03
1.200	6.7714E-02	4.7748E-03	4.1287E-02	2.4285E-02	7.5174E-03	4.4217E-03
1.500	7.3785E-02	8.3699E-03	4.2006E-02	5.2868E-02	7.6482E-03	9.6260E-03
1.800	7.8353E-02	1.5070E-02	4.2945E-02	9.7783E-02	7.8192E-03	1.7804E-02
2.000	8.0910E-02	2.1884E-02	4.3688E-02	1.3776E-01	7.9546E-03	2.5082E-02
2.300	8.4226E-02	3.5545E-02	4.4905E-02	2.1286E-01	8.1760E-03	3.8756E-02
2.600	8.7036E-02	5.3259E-02	4.6037E-02	3.0322E-01	8.3823E-03	5.5208E-02
2.900	8.9446E-02	7.5397E-02	4.7013E-02	4.0559E-01	8.5600E-03	7.3847E-02
3.200	9.1514E-02	1.0205E-01	4.7840E-02	5.1725E-01	8.7106E-03	9.4179E-02
3.500	9.3287E-02	1.3313E-01	4.8546E-02	6.3596E-01	8.8391E-03	1.1579E-01
3.800	9.4811E-02	1.6839E-01	4.9159E-02	7.5982E-01	8.9507E-03	1.3835E-01

4.100	9.6130E-02	2.0751E-01	4.9702E-02	8.8727E-01	9.0494E-03	1.6155E-01
4.400	9.7283E-02	2.5014E-01	5.0191E-02	1.0170E+00	9.1386E-03	1.8517E-01
4.700	9.8304E-02	2.9588E-01	5.0642E-02	1.1479E+00	9.2207E-03	2.0901E-01
5.000	9.9221E-02	3.4433E-01	5.1063E-02	1.2792E+00	9.2974E-03	2.3291E-01
5.300	1.0006E-01	3.9510E-01	5.1464E-02	1.4100E+00	9.3703E-03	2.5673E-01
5.600	1.0083E-01	4.4781E-01	5.1850E-02	1.5399E+00	9.4406E-03	2.8038E-01
5.900	1.0156E-01	5.0213E-01	5.2226E-02	1.6683E+00	9.5091E-03	3.0375E-01
6.200	1.0225E-01	5.5771E-01	5.2594E-02	1.7948E+00	9.5761E-03	3.2679E-01
6.500	1.0291E-01	6.1426E-01	5.2956E-02	1.9192E+00	9.6420E-03	3.4943E-01
6.800	1.0355E-01	6.7151E-01	5.3312E-02	2.0412E+00	9.7069E-03	3.7165E-01
7.100	1.0418E-01	7.2921E-01	5.3664E-02	2.1606E+00	9.7708E-03	3.9339E-01
7.400	1.0479E-01	7.8714E-01	5.4011E-02	2.2774E+00	9.8341E-03	4.1465E-01
7.700	1.0540E-01	8.4512E-01	5.4354E-02	2.3914E+00	9.8966E-03	4.3541E-01
8.000	1.0599E-01	9.0297E-01	5.4695E-02	2.5025E+00	9.9586E-03	4.5565E-01
8.300	1.0652E-01	9.5794E-01	5.4695E-02	2.5025E+00	9.9810E-03	4.6962E-01
8.600	1.0694E-01	1.0079E+00	5.4695E-02	2.5025E+00	1.0003E-02	4.8322E-01
8.900	1.0729E-01	1.0535E+00	5.4695E-02	2.5025E+00	1.0025E-02	4.9646E-01
9.200	1.0760E-01	1.0955E+00	5.4695E-02	2.5025E+00	1.0047E-02	5.0934E-01
9.500	1.0788E-01	1.1342E+00	5.4695E-02	2.5025E+00	1.0069E-02	5.2186E-01
9.800	1.0814E-01	1.1702E+00	5.4695E-02	2.5025E+00	1.0091E-02	5.3404E-01
10.100	1.0839E-01	1.2037E+00	5.4695E-02	2.5025E+00	1.0112E-02	5.4588E-01
10.400	1.0862E-01	1.2352E+00	5.4695E-02	2.5025E+00	1.0134E-02	5.5739E-01
24.000	1.1786E-01	1.9663E+00	5.4695E-02	2.5025E+00	1.1038E-02	8.8085E-01
96.000	1.2505E-01	2.2777E+00	5.4695E-02	2.5025E+00	1.2138E-02	1.0378E+00
720.000	1.3458E-01	2.4866E+00	5.4695E-02	2.5025E+00	1.3171E-02	1.1176E+00

#####

Worst Two-Hour Doses

#####

EAB

Time (hr)	Whole Body (rem)	Thyroid (rem)	TEDE (rem)
3.9	8.6585E-01	2.8861E-03	8.6596E-01

 RADTRAD Version 3.03 (Spring 2001) run on 9/19/2005 at 16:06:22
 #####

 File information
 #####

Plant file = C:\Documents and Settings\Aleem Boatright\My Documents\My Work\Exelon\AST\Limerick\LGS LOCA\RADTRAD\LGS LOCA MSIV Leak (24-hr Settling Distribution) - New Design Basis - 275cfm CR Unfilt Inleak - Rad Mode.psf
 Inventory file = c:\program files\radtrad3-03\defaults\limerick ast source terms.nif
 Release file = c:\program files\radtrad3-03\defaults\bwr_dba.rft
 Dose Conversion file = c:\program files\radtrad3-03\defaults\fgr11&12.inp

```
#####      #####      #####      # #      # #####      # #      #####
# #      # #      # #      # #      # #      # #      # #      # #
# #      # #      # #      # #      # #      # #      # #      # #
#####      #####      #####      # #      # #      #####      # #      # #
# #      # #      # #      # #      # #      # #      # #      # #
# #      # #      # #      # #      # #      # #      # #      # #
# #      # #      # #      # #      # #      # #      # #      # #
```

Radtrad 3.03 4/15/2001
 LGS LOCA 200scfh MSIV Leak - Leak to Condenser - MSL Pipe Deposition Credit (24-Hr 20-Group Aerosol Settling with Projected Area Assumption; 2-Hr Mixing Delay) - 95% CREFAS Charcoal Eff. No Delay - Rad Mode 275cfm Control Room Inleakage - 3000cfm - 10% (217

Nuclide Inventory File:
 c:\program files\radtrad3-03\defaults\limerick ast source terms.nif

Plant Power Level:

3.5270E+03

Compartments:

9

Compartment 1:

Containment

3

3.7907E+05

0

0

0

1

0

Compartment 2:

(Node 1) Inboard MSL A Volume

3

2.5800E+02

0

0

0

0

0

Compartment 3:

(Node 1) Inboard MSL B Volume

3
1.0000E-08
0
0
0
0
0

Compartment 4:

(Node 2) Outboard MSL A Volume

3
1.1820E+03
0
0
0
0
0

Compartment 5:

(Node 2) Outboard MSL B Volume

3
1.0510E+03
0
0
0
0
0

Compartment 6:

Condenser

3
5.4750E+04
0
0
0
0
0

Compartment 7:

Environment

2
0.0000E+00
0
0
0
0
0

Compartment 8:

Control Room

1
1.2600E+05
0
0
1
0
0

Compartment 9:

Hold

3
1.0000E+00
0
0
0

0
0

Pathways:

11

Pathway 1:

Containment to (Node 1) Inboard MSL A Volume

1

2

2

Pathway 2:

Containment to (Node 1) Inboard MSL B Volume

1

3

2

Pathway 3:

Containment to Hold (PC Leakage)

1

9

4

Pathway 4:

(Node 1) Inboard MSL A Volume to (Node 2) Outboard MSL A Volume

2

4

2

Pathway 5:

(Node 1) Inboard MSL B Volume to (Node 2) Outboard MSL B Volume

3

5

2

Pathway 6:

(Node 2) Outboard MSL A Volume to Condenser

4

6

2

Pathway 7:

(Node 2) Outboard MSL B Volume to Condenser

5

6

2

Pathway 8:

Condenser Leak to Environment

6

7

2

Pathway 9:

Filtered Intake to Control Room

7

8

2

Pathway 10:

Unfiltered Inleakage to Control Room

7

8

2

Pathway 11:

Control Room Exhaust

8

7

2

End of Plant Model File

Scenario Description Name:

Plant Model Filename:

Source Term:

1
1 1.0000E+00

c:\program files\radtrad3-03\defaults\fgr11&12.inp

c:\program files\radtrad3-03\defaults\bwr_dba.rft

0.0000E+00

1
9.5000E-01 4.8500E-02 1.5000E-03 1.0000E+00

Overlying Pool:

0
0.0000E+00

0
0
0
0

Compartments:

9

Compartment 1:

0
1
0
0
0
0
0
3
3
1.0000E+01

1
1
0.0000E+00 0.0000E+00

Compartment 2:

0
1
0
0
0
0
0
0
0
0

Compartment 3:

0
1
0
0
0
0
0
0
0
0

Compartment 4:

0
1
0
0

0
0
0
0
0

Compartment 5:

0
1
0
0
0
0
0
0
0

Compartment 6:

0
1
0
0
0
0
0
0
0

Compartment 7:

0
1
0
0
0
0
0
0
0

Compartment 8:

0
1
0
0
0
0
1

2.1750E+03

3

0.0000E+00	9.9000E+01	9.5000E+01	9.5000E+01
5.0000E-01	9.9000E+01	9.5000E+01	9.5000E+01
7.2000E+02	0.0000E+00	0.0000E+00	0.0000E+00

0
0

Compartment 9:

0
1
0
0
0
0
0
0
0

Pathways:

11

Pathway 1:

0

0

0

0

0

1

5

0.0000E+00 1.5240E+00 9.9980E+01 9.9690E+01 0.0000E+00

2.0000E+00 9.3060E-01 9.9980E+01 9.9690E+01 0.0000E+00

2.4000E+01 5.1270E-01 0.0000E+00 9.9970E+01 0.0000E+00

9.6000E+01 5.1270E-01 0.0000E+00 9.9990E+01 0.0000E+00

7.2000E+02 0.0000E+00 0.0000E+00 0.0000E+00 0.0000E+00

0

0

0

0

0

0

Pathway 2:

0

0

0

0

0

1

5

0.0000E+00 1.5240E+00 9.9910E+01 9.9480E+01 0.0000E+00

2.0000E+00 9.3060E-01 9.9910E+01 9.9480E+01 0.0000E+00

2.4000E+01 5.1270E-01 0.0000E+00 9.9890E+01 0.0000E+00

9.6000E+01 5.1270E-01 0.0000E+00 9.9980E+01 0.0000E+00

7.2000E+02 0.0000E+00 0.0000E+00 0.0000E+00 0.0000E+00

0

0

0

0

0

0

Pathway 3:

0

0

0

0

0

0

0

0

0

0

1

3

0.0000E+00 5.0000E-01

2.4000E+01 2.5000E-01

7.2000E+02 0.0000E+00

0

Pathway 4:

0

0

0
 0
 0
 1
 4
 0.0000E+00 9.3060E-01 0.0000E+00 0.0000E+00 0.0000E+00
 2.4000E+01 5.1270E-01 0.0000E+00 0.0000E+00 0.0000E+00
 9.6000E+01 5.1270E-01 0.0000E+00 0.0000E+00 0.0000E+00
 7.2000E+02 0.0000E+00 0.0000E+00 0.0000E+00 0.0000E+00

0
 0
 0
 0
 0

Pathway 5:

0
 0
 0
 0
 0
 1
 4
 0.0000E+00 9.3060E-01 0.0000E+00 0.0000E+00 0.0000E+00
 2.4000E+01 5.1270E-01 0.0000E+00 0.0000E+00 0.0000E+00
 9.6000E+01 5.1270E-01 0.0000E+00 0.0000E+00 0.0000E+00
 7.2000E+02 0.0000E+00 0.0000E+00 0.0000E+00 0.0000E+00

0
 0
 0
 0
 0

Pathway 6:

0
 0
 0
 0
 0
 1
 4
 0.0000E+00 3.1880E+00 0.0000E+00 0.0000E+00 0.0000E+00
 2.4000E+01 1.5130E+00 0.0000E+00 0.0000E+00 0.0000E+00
 9.6000E+01 1.1480E+00 0.0000E+00 0.0000E+00 0.0000E+00
 7.2000E+02 0.0000E+00 0.0000E+00 0.0000E+00 0.0000E+00

0
 0
 0
 0
 0

Pathway 7:

0
 0
 0
 0
 0
 1
 4
 0.0000E+00 3.1880E+00 0.0000E+00 0.0000E+00 0.0000E+00

2.4000E+01	1.5130E+00	0.0000E+00	0.0000E+00	0.0000E+00
9.6000E+01	1.1480E+00	0.0000E+00	0.0000E+00	0.0000E+00
7.2000E+02	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00
0				
0				
0				
0				
0				

Pathway 8:

0				
0				
0				
0				
0				
1				
4				
0.0000E+00	3.6620E+00	0.0000E+00	0.0000E+00	0.0000E+00
2.4000E+01	2.0180E+00	0.0000E+00	0.0000E+00	0.0000E+00
9.6000E+01	2.0180E+00	0.0000E+00	0.0000E+00	0.0000E+00
7.2000E+02	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00
0				
0				
0				
0				
0				

Pathway 9:

0				
0				
0				
0				
0				
1				
3				
0.0000E+00	5.2500E+02	9.9000E+01	9.5000E+01	9.5000E+01
5.0000E-01	5.2500E+02	9.9000E+01	9.5000E+01	9.5000E+01
7.2000E+02	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00
0				
0				
0				
0				
0				

Pathway 10:

0				
0				
0				
0				
0				
1				
2				
0.0000E+00	2.7500E+02	0.0000E+00	0.0000E+00	0.0000E+00
7.2000E+02	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00
0				
0				
0				
0				
0				

Pathway 11:

0
 0
 0
 0
 0
 1
 3
 0.0000E+00 8.0000E+02 1.0000E+02 1.0000E+02 1.0000E+02
 5.0000E-01 8.0000E+02 1.0000E+02 1.0000E+02 1.0000E+02
 7.2000E+02 0.0000E+00 0.0000E+00 0.0000E+00 0.0000E+00
 0
 0
 0
 0
 0
 0

Dose Locations:

3

Location 1:

Exclusion Area Boundary (EAB)

7
 1
 2
 0.0000E+00 3.1800E-04
 2.4000E+01 0.0000E+00
 1
 4
 0.0000E+00 3.5000E-04
 8.0000E+00 1.8000E-04
 2.4000E+01 2.3000E-04
 7.2000E+02 0.0000E+00
 0

Location 2:

Low Population Zone (LPZ)

7
 1
 10
 0.0000E+00 5.7900E-05
 8.0000E+00 4.1000E-05
 2.4000E+01 1.9500E-05
 4.8000E+01 1.9500E-05
 7.2000E+01 1.9500E-05
 9.6000E+01 6.6800E-06
 1.2000E+02 6.6800E-06
 1.6800E+02 6.6800E-06
 3.3600E+02 6.6800E-06
 7.2000E+02 0.0000E+00
 1
 4
 0.0000E+00 3.5000E-04
 8.0000E+00 1.8000E-04
 2.4000E+01 2.3000E-04
 7.2000E+02 0.0000E+00
 0

Location 3:

Control Room (CR)

8
 0
 1

2
0.0000E+00 3.5000E-04
7.2000E+02 0.0000E+00

1
4
0.0000E+00 1.0000E+00
2.4000E+01 6.0000E-01
9.6000E+01 4.0000E-01
7.2000E+02 0.0000E+00

Effective Volume Location:

1
6
0.0000E+00 6.8800E-03
2.0000E+00 5.1700E-03
8.0000E+00 2.0400E-03
2.4000E+01 1.2900E-03
9.6000E+01 9.6300E-04
7.2000E+02 0.0000E+00

Simulation Parameters:

1
0.0000E+00 0.0000E+00

Output Filename:

C:\Documents and Settings\Aleem Boatright\My Documents\My
Work\Exelon\AST\Limerick\LGS LOCA\RADTRAD\LGS LOCA MSIV Leak (24-hr Settling
Distribution) - New Design Basis - 275cfm CR Unfilt Inleak - Rad Mode.o0

1
1
1
0
0

End of Scenario File

RADTRAD Version 3.03 (Spring 2001) run on 9/19/2005 at 16:06:22
#####

Plant Description
#####

Number of Nuclides = 60

Inventory Power = 1.0000E+00 MWth
Plant Power Level = 3.5270E+03 MWth

Number of compartments = 9

Compartment information

Compartment number 1 (Source term fraction = 1.0000E+00
)

Name: Containment

Compartment volume = 3.7907E+05 (Cubic feet)

Compartment type is Normal

Removal devices within compartment:

Deposition

Pathways into and out of compartment 1

Exit Pathway Number 1: Containment to (Node 1) Inboard MSL A Volume

Exit Pathway Number 2: Containment to (Node 1) Inboard MSL B Volume

Exit Pathway Number 3: Containment to Hold (PC Leakage)

Compartment number 2

Name: (Node 1) Inboard MSL A Volume

Compartment volume = 2.5800E+02 (Cubic feet)

Compartment type is Normal

Pathways into and out of compartment 2

Inlet Pathway Number 1: Containment to (Node 1) Inboard MSL A Volume

Exit Pathway Number 4: (Node 1) Inboard MSL A Volume to (Node 2) Outboard

Compartment number 3

Name: (Node 1) Inboard MSL B Volume

Compartment volume = 1.0000E-08 (Cubic feet)

Compartment type is Normal

Pathways into and out of compartment 3

Inlet Pathway Number 2: Containment to (Node 1) Inboard MSL B Volume

Exit Pathway Number 5: (Node 1) Inboard MSL B Volume to (Node 2) Outboard

Compartment number 4

Name: (Node 2) Outboard MSL A Volume

Compartment volume = 1.1820E+03 (Cubic feet)

Compartment type is Normal

Pathways into and out of compartment 4

Inlet Pathway Number 4: (Node 1) Inboard MSL A Volume to (Node 2) Outboard

Exit Pathway Number 6: (Node 2) Outboard MSL A Volume to Condenser

Compartment number 5

Name: (Node 2) Outboard MSL B Volume

Compartment volume = 1.0510E+03 (Cubic feet)

Compartment type is Normal

Pathways into and out of compartment 5

Inlet Pathway Number 5: (Node 1) Inboard MSL B Volume to (Node 2) Outboard

Exit Pathway Number 7: (Node 2) Outboard MSL B Volume to Condenser

Compartment number 6

Name: Condenser

Compartment volume = 5.4750E+04 (Cubic feet)

Compartment type is Normal

Pathways into and out of compartment 6

Inlet Pathway Number 6: (Node 2) Outboard MSL A Volume to Condenser

Inlet Pathway Number 7: (Node 2) Outboard MSL B Volume to Condenser

Exit Pathway Number 8: Condenser Leak to Environment

Compartment number 7

Name: Environment

Compartment type is Environment

Pathways into and out of compartment 7

Inlet Pathway Number 8: Condenser Leak to Environment

Inlet Pathway Number 11: Control Room Exhaust

Exit Pathway Number 9: Filtered Intake to Control Room

Exit Pathway Number 10: Unfiltered Inleakage to Control Room

Compartment number 8

Name: Control Room

Compartment volume = 1.2600E+05 (Cubic feet)

Compartment type is Control Room

Removal devices within compartment:

Filter(s)

Pathways into and out of compartment 8

Inlet Pathway Number 9: Filtered Intake to Control Room

Inlet Pathway Number 10: Unfiltered Inleakage to Control Room

Exit Pathway Number 11: Control Room Exhaust

Compartment number 9

Name: Hold

Compartment volume = 1.0000E+00 (Cubic feet)

Compartment type is Normal

Pathways into and out of compartment 9

Inlet Pathway Number 3: Containment to Hold (PC Leakage)

Total number of pathways = 11

 RADTRAD Version 3.03 (Spring 2001) run on 9/19/2005 at 16:06:22
 #####

 Scenario Description
 #####

Radioactive Decay is enabled
 Calculation of Daughters is enabled

Release Fractions and Timings

	GAP	EARLY IN-VESSEL	LATE RELEASE	RELEASE MASS
	0.500000 hr	1.5000 hrs	0.0000 hrs	(gm)
NOBLES	5.0000E-02	9.5000E-01	0.0000E+00	4.625E+03
IODINE	5.0000E-02	2.5000E-01	0.0000E+00	3.033E+02
CESIUM	5.0000E-02	2.0000E-01	0.0000E+00	5.099E+04
TELLURIUM	0.0000E+00	5.0000E-02	0.0000E+00	4.012E+01
STRONTIUM	0.0000E+00	2.0000E-02	0.0000E+00	1.712E+03
BARIUM	0.0000E+00	2.0000E-02	0.0000E+00	4.739E+01
RUTHENIUM	0.0000E+00	2.5000E-03	0.0000E+00	5.988E+01
CERIUM	0.0000E+00	5.0000E-04	0.0000E+00	5.914E+02
LANTHANUM	0.0000E+00	2.0000E-04	0.0000E+00	8.731E+00

Inventory Power = 3527. MWt

Nuclide Name	Group	Specific Inventory (Ci/MWt)	half life (s)	Whole Body DCF (Sv-m3/Bq-s)	Inhaled Thyroid (Sv/Bq)	Inhaled Effective (Sv/Bq)
Co-58	7	1.529E+02	6.117E+06	4.760E-14	8.720E-10	2.940E-09
Co-60	7	1.830E+02	1.663E+08	1.260E-13	1.620E-08	5.910E-08
Kr-85	1	3.946E+02	3.383E+08	1.190E-16	0.000E+00	0.000E+00
Kr-85m	1	8.313E+03	1.613E+04	7.480E-15	0.000E+00	0.000E+00
Kr-87	1	1.633E+04	4.578E+03	4.120E-14	0.000E+00	0.000E+00
Kr-88	1	2.303E+04	1.022E+04	1.020E-13	0.000E+00	0.000E+00
Rb-86	3	6.518E+01	1.612E+06	4.810E-15	1.330E-09	1.790E-09
Sr-89	5	2.798E+04	4.363E+06	7.730E-17	7.960E-12	1.120E-08
Sr-90	5	3.178E+03	9.190E+08	7.530E-18	2.690E-10	3.510E-07
Sr-91	5	3.801E+04	3.420E+04	4.924E-14	9.930E-12	4.547E-10
Sr-92	5	4.017E+04	9.756E+03	6.790E-14	3.920E-12	2.180E-10
Y-90	9	3.272E+03	2.304E+05	1.900E-16	5.170E-13	2.280E-09
Y-91	9	3.448E+04	5.055E+06	2.600E-16	8.500E-12	1.320E-08
Y-92	9	4.029E+04	1.274E+04	1.300E-14	1.050E-12	2.110E-10
Y-93	9	4.526E+04	3.636E+04	4.800E-15	9.260E-13	5.820E-10
Zr-95	9	4.489E+04	5.528E+06	3.600E-14	1.440E-09	6.390E-09
Zr-97	9	4.657E+04	6.084E+04	4.432E-14	2.315E-11	1.171E-09
Nb-95	9	4.512E+04	3.037E+06	3.740E-14	3.580E-10	1.570E-09
Mo-99	7	5.078E+04	2.376E+05	7.280E-15	1.520E-11	1.070E-09
Tc-99m	7	4.447E+04	2.167E+04	5.890E-15	5.010E-11	8.800E-12
Ru-103	7	4.202E+04	3.394E+06	2.251E-14	2.570E-10	2.421E-09
Ru-105	7	2.908E+04	1.598E+04	3.810E-14	4.150E-12	1.230E-10
Ru-106	7	1.730E+04	3.181E+07	1.040E-14	1.720E-09	1.290E-07
Rh-105	7	2.752E+04	1.273E+05	3.720E-15	2.880E-12	2.580E-10
Sb-127	4	2.896E+03	3.326E+05	3.330E-14	6.150E-11	1.630E-09
Sb-129	4	8.638E+03	1.555E+04	7.140E-14	9.720E-12	1.740E-10
Te-127	4	2.873E+03	3.366E+04	2.420E-16	1.840E-12	8.600E-11
Te-127m	4	3.855E+02	9.418E+06	1.470E-16	9.660E-11	5.810E-09
Te-129	4	8.501E+03	4.176E+03	2.750E-15	5.090E-13	2.090E-11
Te-129m	4	1.267E+03	2.903E+06	3.337E-15	1.563E-10	6.484E-09

LGS LOCA MSIV Leak (24-hr Settling Distribution) - New Design Basis - 275cfm CR Unfilt Inleak - Rad Mode.o0

Te-131m	4	3.869E+03	1.080E+05	7.463E-14	3.669E-08	1.758E-09
Te-132	4	3.821E+04	2.815E+05	1.030E-14	6.280E-08	2.550E-09
I-131	2	2.687E+04	6.947E+05	1.820E-14	2.920E-07	8.890E-09
I-132	2	3.881E+04	8.280E+03	1.120E-13	1.740E-09	1.030E-10
I-133	2	5.556E+04	7.488E+04	2.940E-14	4.860E-08	1.580E-09
I-134	2	6.165E+04	3.156E+03	1.300E-13	2.880E-10	3.550E-11
I-135	2	5.192E+04	2.380E+04	8.294E-14	8.460E-09	3.320E-10
Xe-133	1	5.491E+04	4.532E+05	1.560E-15	0.000E+00	0.000E+00
Xe-135	1	2.228E+04	3.272E+04	1.190E-14	0.000E+00	0.000E+00
Cs-134	3	7.280E+03	6.507E+07	7.570E-14	1.110E-08	1.250E-08
Cs-136	3	2.027E+03	1.132E+06	1.060E-13	1.730E-09	1.980E-09
Cs-137	3	4.538E+03	9.467E+08	2.725E-14	7.930E-09	8.630E-09
Ba-139	6	5.084E+04	4.962E+03	2.170E-15	2.400E-12	4.640E-11
Ba-140	6	4.896E+04	1.101E+06	8.580E-15	2.560E-10	1.010E-09
La-140	9	5.019E+04	1.450E+05	1.170E-13	6.870E-11	1.310E-09
La-141	9	4.640E+04	1.415E+04	2.390E-15	9.400E-12	1.570E-10
La-142	9	4.532E+04	5.550E+03	1.440E-13	8.740E-12	6.840E-11
Ce-141	8	4.492E+04	2.808E+06	3.430E-15	2.550E-11	2.420E-09
Ce-143	8	4.427E+04	1.188E+05	1.290E-14	6.230E-12	9.160E-10
Ce-144	8	3.596E+04	2.456E+07	2.773E-15	2.920E-10	1.010E-07
Pr-143	9	4.293E+04	1.172E+06	2.100E-17	1.680E-18	2.190E-09
Nd-147	9	1.838E+04	9.487E+05	6.190E-15	1.820E-11	1.850E-09
Np-239	8	5.397E+05	2.035E+05	7.690E-15	7.620E-12	6.780E-10
Pu-238	8	1.796E+02	2.769E+09	4.880E-18	3.860E-10	7.790E-05
Pu-239	8	1.200E+01	7.594E+11	4.240E-18	3.750E-10	8.330E-05
Pu-240	8	1.288E+01	2.063E+11	4.750E-18	3.760E-10	8.330E-05
Pu-241	8	6.182E+03	4.544E+08	7.250E-20	9.150E-12	1.340E-06
Am-241	9	9.528E+00	1.364E+10	8.180E-16	1.600E-09	1.200E-04
Cm-242	9	2.388E+03	1.407E+07	5.690E-18	9.410E-10	4.670E-06
Cm-244	9	2.602E+02	5.715E+08	4.910E-18	1.010E-09	6.700E-05

Nuclide	Daughter	Fraction	Daughter	Fraction	Daughter	Fraction
Kr-85m	Kr-85	0.21	none	0.00	none	0.00
Kr-87	Rb-87	1.00	none	0.00	none	0.00
Kr-88	Rb-88	1.00	none	0.00	none	0.00
Sr-90	Y-90	1.00	none	0.00	none	0.00
Sr-91	Y-91m	0.58	Y-91	0.42	none	0.00
Sr-92	Y-92	1.00	none	0.00	none	0.00
Y-93	Zr-93	1.00	none	0.00	none	0.00
Zr-95	Nb-95m	0.01	Nb-95	0.99	none	0.00
Zr-97	Nb-97m	0.95	Nb-97	0.05	none	0.00
Mo-99	Tc-99m	0.88	Tc-99	0.12	none	0.00
Tc-99m	Tc-99	1.00	none	0.00	none	0.00
Ru-103	Rh-103m	1.00	none	0.00	none	0.00
Ru-105	Rh-105	1.00	none	0.00	none	0.00
Ru-106	Rh-106	1.00	none	0.00	none	0.00
Sb-127	Te-127m	0.18	Te-127	0.82	none	0.00
Sb-129	Te-129m	0.22	Te-129	0.77	none	0.00
Te-127m	Te-127	0.98	none	0.00	none	0.00
Te-129	I-129	1.00	none	0.00	none	0.00
Te-129m	Te-129	0.65	I-129	0.35	none	0.00
Te-131m	Te-131	0.22	I-131	0.78	none	0.00
Te-132	I-132	1.00	none	0.00	none	0.00
I-131	Xe-131m	0.01	none	0.00	none	0.00
I-133	Xe-133m	0.03	Xe-133	0.97	none	0.00
I-135	Xe-135m	0.15	Xe-135	0.85	none	0.00
Xe-135	Cs-135	1.00	none	0.00	none	0.00
Cs-137	Ba-137m	0.95	none	0.00	none	0.00
Ba-140	La-140	1.00	none	0.00	none	0.00
La-141	Ce-141	1.00	none	0.00	none	0.00

Ce-143	Pr-143	1.00	none	0.00	none	0.00
Ce-144	Pr-144m	0.02	Pr-144	0.98	none	0.00
Nd-147	Pm-147	1.00	none	0.00	none	0.00
Np-239	Pu-239	1.00	none	0.00	none	0.00
Pu-238	U-234	1.00	none	0.00	none	0.00
Pu-239	U-235	1.00	none	0.00	none	0.00
Pu-240	U-236	1.00	none	0.00	none	0.00
Pu-241	U-237	0.00	Am-241	1.00	none	0.00
Am-241	Np-237	1.00	none	0.00	none	0.00
Cm-242	Pu-238	1.00	none	0.00	none	0.00
Cm-244	Pu-240	1.00	none	0.00	none	0.00

Iodine fractions

Aerosol	=	9.5000E-01
Elemental	=	4.8500E-02
Organic	=	1.5000E-03

COMPARTMENT DATA

Compartment number 1: Containment
 Natural Deposition (Powers' model): Aerosol data
 Reactor type: 3
 Percentile = 10 (%)

Natural Deposition: Elemental Removal Data

Time (hr)	Removal Coef. (hr ⁻¹)
0.0000E+00	0.0000E+00

- Compartment number 2: (Node 1) Inboard MSL A Volume
- Compartment number 3: (Node 1) Inboard MSL B Volume
- Compartment number 4: (Node 2) Outboard MSL A Volume
- Compartment number 5: (Node 2) Outboard MSL B Volume
- Compartment number 6: Condenser
- Compartment number 7: Environment
- Compartment number 8: Control Room

Compartment Filter Data

Time (hr)	Flow Rate (cfm)	Filter Efficiencies (%)		
		Aerosol	Elemental	Organic
0.0000E+00	2.1750E+03	9.9000E+01	9.5000E+01	9.5000E+01
5.0000E-01	2.1750E+03	9.9000E+01	9.5000E+01	9.5000E+01
7.2000E+02	2.1750E+03	0.0000E+00	0.0000E+00	0.0000E+00

Compartment number 9: Hold

PATHWAY DATA

Pathway number 1: Containment to (Node 1) Inboard MSL A Volume

Pathway Filter: Removal Data

Time (hr)	Flow Rate (cfm)	Filter Efficiencies (%)		
		Aerosol	Elemental	Organic

0.0000E+00	1.5240E+00	9.9980E+01	9.9690E+01	0.0000E+00
2.0000E+00	9.3060E-01	9.9980E+01	9.9690E+01	0.0000E+00
2.4000E+01	5.1270E-01	0.0000E+00	9.9970E+01	0.0000E+00
9.6000E+01	5.1270E-01	0.0000E+00	9.9990E+01	0.0000E+00
7.2000E+02	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00

Pathway number 2: Containment to (Node 1) Inboard MSL B Volume

Pathway Filter: Removal Data

Time (hr)	Flow Rate (cfm)	Filter Efficiencies (%)		
		Aerosol	Elemental	Organic
0.0000E+00	1.5240E+00	9.9910E+01	9.9480E+01	0.0000E+00
2.0000E+00	9.3060E-01	9.9910E+01	9.9480E+01	0.0000E+00
2.4000E+01	5.1270E-01	0.0000E+00	9.9890E+01	0.0000E+00
9.6000E+01	5.1270E-01	0.0000E+00	9.9980E+01	0.0000E+00
7.2000E+02	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00

Pathway number 3: Containment to Hold (PC Leakage)

Convection Data

Time (hr)	Flow Rate (% / day)
0.0000E+00	5.0000E-01
2.4000E+01	2.5000E-01
7.2000E+02	0.0000E+00

Pathway number 4: (Node 1) Inboard MSL A Volume to (Node 2) Outboard

Pathway Filter: Removal Data

Time (hr)	Flow Rate (cfm)	Filter Efficiencies (%)		
		Aerosol	Elemental	Organic
0.0000E+00	9.3060E-01	0.0000E+00	0.0000E+00	0.0000E+00
2.4000E+01	5.1270E-01	0.0000E+00	0.0000E+00	0.0000E+00
9.6000E+01	5.1270E-01	0.0000E+00	0.0000E+00	0.0000E+00
7.2000E+02	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00

Pathway number 5: (Node 1) Inboard MSL B Volume to (Node 2) Outboard

Pathway Filter: Removal Data

Time (hr)	Flow Rate (cfm)	Filter Efficiencies (%)		
		Aerosol	Elemental	Organic
0.0000E+00	9.3060E-01	0.0000E+00	0.0000E+00	0.0000E+00
2.4000E+01	5.1270E-01	0.0000E+00	0.0000E+00	0.0000E+00
9.6000E+01	5.1270E-01	0.0000E+00	0.0000E+00	0.0000E+00
7.2000E+02	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00

Pathway number 6: (Node 2) Outboard MSL A Volume to Condenser

Pathway Filter: Removal Data

Time (hr)	Flow Rate (cfm)	Filter Efficiencies (%)		
		Aerosol	Elemental	Organic
0.0000E+00	3.1880E+00	0.0000E+00	0.0000E+00	0.0000E+00
2.4000E+01	1.5130E+00	0.0000E+00	0.0000E+00	0.0000E+00
9.6000E+01	1.1480E+00	0.0000E+00	0.0000E+00	0.0000E+00
7.2000E+02	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00

Pathway number 7: (Node 2) Outboard MSL B Volume to Condenser

Pathway Filter: Removal Data

Time (hr)	Flow Rate (cfm)	Filter Efficiencies (%)		
		Aerosol	Elemental	Organic
0.0000E+00	3.1880E+00	0.0000E+00	0.0000E+00	0.0000E+00
2.4000E+01	1.5130E+00	0.0000E+00	0.0000E+00	0.0000E+00
9.6000E+01	1.1480E+00	0.0000E+00	0.0000E+00	0.0000E+00
7.2000E+02	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00

Pathway number 8: Condenser Leak to Environment

Pathway Filter: Removal Data

Time (hr)	Flow Rate (cfm)	Filter Efficiencies (%)		
		Aerosol	Elemental	Organic
0.0000E+00	3.6620E+00	0.0000E+00	0.0000E+00	0.0000E+00
2.4000E+01	2.0180E+00	0.0000E+00	0.0000E+00	0.0000E+00
9.6000E+01	2.0180E+00	0.0000E+00	0.0000E+00	0.0000E+00
7.2000E+02	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00

Pathway number 9: Filtered Intake to Control Room

Pathway Filter: Removal Data

Time (hr)	Flow Rate (cfm)	Filter Efficiencies (%)		
		Aerosol	Elemental	Organic
0.0000E+00	5.2500E+02	9.9000E+01	9.5000E+01	9.5000E+01
5.0000E-01	5.2500E+02	9.9000E+01	9.5000E+01	9.5000E+01
7.2000E+02	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00

Pathway number 10: Unfiltered Inleakage to Control Room

Pathway Filter: Removal Data

Time (hr)	Flow Rate (cfm)	Filter Efficiencies (%)		
		Aerosol	Elemental	Organic
0.0000E+00	2.7500E+02	0.0000E+00	0.0000E+00	0.0000E+00
7.2000E+02	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00

Pathway number 11: Control Room Exhaust

Pathway Filter: Removal Data

Time (hr)	Flow Rate (cfm)	Filter Efficiencies (%)		
		Aerosol	Elemental	Organic
0.0000E+00	8.0000E+02	1.0000E+02	1.0000E+02	1.0000E+02
5.0000E-01	8.0000E+02	1.0000E+02	1.0000E+02	1.0000E+02
7.2000E+02	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00

LOCATION DATA

Location Exclusion Area Boundary (EAB) is in compartment 7

Location X/Q Data

Time (hr)	X/Q (s * m ⁻³)
0.0000E+00	3.1800E-04
2.4000E+01	0.0000E+00

Location Breathing Rate Data

Time (hr)	Breathing Rate (m ³ * sec ⁻¹)
0.0000E+00	3.1800E-04
2.4000E+01	0.0000E+00

0.0000E+00	3.5000E-04
8.0000E+00	1.8000E-04
2.4000E+01	2.3000E-04
7.2000E+02	0.0000E+00

Location Low Population Zone (LPZ) is in compartment 7

Location X/Q Data

Time (hr)	X/Q (s * m ⁻³)
0.0000E+00	5.7900E-05
8.0000E+00	4.1000E-05
2.4000E+01	1.9500E-05
4.8000E+01	1.9500E-05
7.2000E+01	1.9500E-05
9.6000E+01	6.6800E-06
1.2000E+02	6.6800E-06
1.6800E+02	6.6800E-06
3.3600E+02	6.6800E-06
7.2000E+02	0.0000E+00

Location Breathing Rate Data

Time (hr)	Breathing Rate (m ³ * sec ⁻¹)
0.0000E+00	3.5000E-04
8.0000E+00	1.8000E-04
2.4000E+01	2.3000E-04
7.2000E+02	0.0000E+00

Location Control Room (CR) is in compartment 8

Location X/Q Data

Time (hr)	X/Q (s * m ⁻³)
0.0000E+00	6.8800E-03
2.0000E+00	5.1700E-03
8.0000E+00	2.0400E-03
2.4000E+01	1.2900E-03
9.6000E+01	9.6300E-04
7.2000E+02	0.0000E+00

Location Breathing Rate Data

Time (hr)	Breathing Rate (m ³ * sec ⁻¹)
0.0000E+00	3.5000E-04
7.2000E+02	0.0000E+00

Location Occupancy Factor Data

Time (hr)	Occupancy Factor
0.0000E+00	1.0000E+00
2.4000E+01	6.0000E-01
9.6000E+01	4.0000E-01
7.2000E+02	0.0000E+00

USER SPECIFIED TIME STEP DATA - SUPPLEMENTAL TIME STEPS

Time	Time step
0.0000E+00	0.0000E+00

 RADTRAD Version 3.03 (Spring 2001) run on 9/19/2005 at 16:06:22
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 Dose Output
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Exclusion Area Boundary (EAB) Doses:

Time (h) =	0.5000	Whole Body	Thyroid	TEDE
Delta dose (rem)		6.0364E-07	1.8676E-06	6.6979E-07
Accumulated dose (rem)		6.0364E-07	1.8676E-06	6.6979E-07

Low Population Zone (LPZ) Doses:

Time (h) =	0.5000	Whole Body	Thyroid	TEDE
Delta dose (rem)		1.0991E-07	3.4004E-07	1.2195E-07
Accumulated dose (rem)		1.0991E-07	3.4004E-07	1.2195E-07

Control Room (CR) Doses:

Time (h) =	0.5000	Whole Body	Thyroid	TEDE
Delta dose (rem)		2.2883E-08	5.4110E-07	4.1954E-08
Accumulated dose (rem)		2.2883E-08	5.4110E-07	4.1954E-08

Exclusion Area Boundary (EAB) Doses:

Time (h) =	2.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)		2.9759E-04	5.4263E-04	3.1800E-04
Accumulated dose (rem)		2.9819E-04	5.4450E-04	3.1867E-04

Low Population Zone (LPZ) Doses:

Time (h) =	2.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)		5.4184E-05	9.8800E-05	5.7899E-05
Accumulated dose (rem)		5.4293E-05	9.9140E-05	5.8021E-05

Control Room (CR) Doses:

Time (h) =	2.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)		3.3295E-05	4.3550E-04	4.9381E-05
Accumulated dose (rem)		3.3318E-05	4.3604E-04	4.9423E-05

Exclusion Area Boundary (EAB) Doses:

Time (h) =	8.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)		2.4266E-02	6.4402E-02	2.6596E-02
Accumulated dose (rem)		2.4565E-02	6.4946E-02	2.6915E-02

Low Population Zone (LPZ) Doses:

Time (h) =	8.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)		4.4183E-03	1.1726E-02	4.8425E-03
Accumulated dose (rem)		4.4726E-03	1.1825E-02	4.9005E-03

Control Room (CR) Doses:

Time (h) =	8.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)		7.3988E-03	8.3806E-02	1.0418E-02
Accumulated dose (rem)		7.4321E-03	8.4242E-02	1.0468E-02

Exclusion Area Boundary (EAB) Doses:

Time (h) =	24.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)		1.4433E-01	5.7042E-01	1.6302E-01
Accumulated dose (rem)		1.6889E-01	6.3536E-01	1.8994E-01

Low Population Zone (LPZ) Doses:

Time (h) =	24.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)		1.8608E-02	7.3545E-02	2.1019E-02
Accumulated dose (rem)		2.3081E-02	8.5370E-02	2.5919E-02

Control Room (CR) Doses:

Time (h) =	24.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)		3.3799E-02	7.0835E-01	5.6986E-02
Accumulated dose (rem)		4.1231E-02	7.9259E-01	6.7453E-02

Exclusion Area Boundary (EAB) Doses:

Time (h) =	48.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)		0.0000E+00	0.0000E+00	0.0000E+00
Accumulated dose (rem)		1.6889E-01	6.3536E-01	1.8994E-01

Low Population Zone (LPZ) Doses:

Time (h) =	48.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)		7.7231E-03	7.5043E-02	1.0103E-02
Accumulated dose (rem)		3.0804E-02	1.6041E-01	3.6022E-02

Control Room (CR) Doses:

Time (h) =	48.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)		1.5151E-02	4.9201E-01	3.0722E-02
Accumulated dose (rem)		5.6383E-02	1.2846E+00	9.8175E-02

Exclusion Area Boundary (EAB) Doses:

Time (h) =	72.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)		0.0000E+00	0.0000E+00	0.0000E+00
Accumulated dose (rem)		1.6889E-01	6.3536E-01	1.8994E-01

Low Population Zone (LPZ) Doses:

Time (h) = 72.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)	8.3008E-03	9.7295E-02	1.1349E-02
Accumulated dose (rem)	3.9105E-02	2.5771E-01	4.7371E-02

Control Room (CR) Doses:

Time (h) = 72.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)	1.4224E-02	6.1046E-01	3.3310E-02
Accumulated dose (rem)	7.0607E-02	1.8951E+00	1.3149E-01

Exclusion Area Boundary (EAB) Doses:

Time (h) = 96.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)	0.0000E+00	0.0000E+00	0.0000E+00
Accumulated dose (rem)	1.6889E-01	6.3536E-01	1.8994E-01

Low Population Zone (LPZ) Doses:

Time (h) = 96.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)	9.3414E-03	1.1404E-01	1.2891E-02
Accumulated dose (rem)	4.8446E-02	3.7175E-01	6.0262E-02

Control Room (CR) Doses:

Time (h) = 96.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)	1.6211E-02	7.1792E-01	3.8518E-02
Accumulated dose (rem)	8.6818E-02	2.6130E+00	1.7000E-01

Exclusion Area Boundary (EAB) Doses:

Time (h) = 120.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)	0.0000E+00	0.0000E+00	0.0000E+00
Accumulated dose (rem)	1.6889E-01	6.3536E-01	1.8994E-01

Low Population Zone (LPZ) Doses:

Time (h) = 120.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)	3.3946E-03	4.2506E-02	4.7130E-03
Accumulated dose (rem)	5.1841E-02	4.1426E-01	6.4975E-02

Control Room (CR) Doses:

Time (h) = 120.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)	8.9589E-03	3.9433E-01	2.1170E-02
Accumulated dose (rem)	9.5777E-02	3.0073E+00	1.9117E-01

Exclusion Area Boundary (EAB) Doses:

Time (h) = 168.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)	0.0000E+00	0.0000E+00	0.0000E+00
Accumulated dose (rem)	1.6889E-01	6.3536E-01	1.8994E-01

Low Population Zone (LPZ) Doses:

Time (h) = 168.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)	6.9973E-03	9.1603E-02	9.8294E-03
Accumulated dose (rem)	5.8838E-02	5.0586E-01	7.4805E-02

Control Room (CR) Doses:

Time (h) = 168.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)	1.7876E-02	8.4088E-01	4.3838E-02
Accumulated dose (rem)	1.1365E-01	3.8482E+00	2.3501E-01

Exclusion Area Boundary (EAB) Doses:

Time (h) = 336.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)	0.0000E+00	0.0000E+00	0.0000E+00
Accumulated dose (rem)	1.6889E-01	6.3536E-01	1.8994E-01

Low Population Zone (LPZ) Doses:

Time (h) = 336.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)	2.0884E-02	3.2365E-01	3.0853E-02
Accumulated dose (rem)	7.9721E-02	8.2951E-01	1.0566E-01

Control Room (CR) Doses:

Time (h) = 336.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)	5.3708E-02	2.9774E+00	1.4532E-01
Accumulated dose (rem)	1.6736E-01	6.8256E+00	3.8033E-01

Exclusion Area Boundary (EAB) Doses:

Time (h) = 720.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)	0.0000E+00	0.0000E+00	0.0000E+00
Accumulated dose (rem)	1.6889E-01	6.3536E-01	1.8994E-01

Low Population Zone (LPZ) Doses:

Time (h) = 720.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)	1.8351E-02	4.3578E-01	3.1761E-02
Accumulated dose (rem)	9.8073E-02	1.2653E+00	1.3742E-01

Control Room (CR) Doses:

Time (h) = 720.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)	4.7352E-02	4.0155E+00	1.7080E-01
Accumulated dose (rem)	2.1471E-01	1.0841E+01	5.5113E-01

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 I-131 Summary
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Time (hr)	Containment I-131 (Curies)	(Node 1) Inboard MSL I-131 (Curies)	(Node 1) Inboard MSL I-131 (Curies)
0.000	5.2640E+03	6.4922E-07	5.9299E-13
0.401	3.3308E+06	3.2537E-01	4.0944E-10
0.500	4.0234E+06	5.0079E-01	5.0526E-10
0.800	7.9873E+06	1.3710E+00	1.0074E-09
1.100	1.1677E+07	2.7806E+00	1.4981E-09
1.400	1.5110E+07	4.6902E+00	1.9780E-09
1.700	1.8302E+07	7.0631E+00	2.4477E-09
2.000	2.1269E+07	9.8652E+00	2.9079E-09
2.300	1.6051E+07	1.1371E+01	1.6502E-09
2.600	1.2203E+07	1.2740E+01	1.5573E-09
2.900	9.3660E+06	1.3991E+01	1.4884E-09
3.200	7.2733E+06	1.5139E+01	1.4372E-09

3.500	5.7299E+06	1.6195E+01	1.3990E-09
3.800	4.5914E+06	1.7171E+01	1.3705E-09
4.100	3.7515E+06	1.8073E+01	1.3490E-09
4.400	3.1318E+06	1.8909E+01	1.3327E-09
4.700	2.6745E+06	1.9685E+01	1.3203E-09
5.000	2.3368E+06	2.0405E+01	1.3108E-09
5.300	2.1739E+06	2.1075E+01	1.3054E-09
5.600	2.0386E+06	2.1699E+01	1.3007E-09
5.900	1.9261E+06	2.2279E+01	1.2965E-09
6.200	1.8326E+06	2.2819E+01	1.2927E-09
6.500	1.7547E+06	2.3321E+01	1.2893E-09
6.800	1.6899E+06	2.3788E+01	1.2863E-09
7.100	1.6358E+06	2.4223E+01	1.2835E-09
7.400	1.5907E+06	2.4627E+01	1.2809E-09
7.700	1.5530E+06	2.5002E+01	1.2784E-09
8.000	1.5215E+06	2.5351E+01	1.2762E-09
8.300	1.4951E+06	2.5675E+01	1.2740E-09
8.600	1.4754E+06	2.5975E+01	1.2720E-09
8.900	1.4584E+06	2.6254E+01	1.2701E-09
9.200	1.4437E+06	2.6513E+01	1.2683E-09
9.500	1.4310E+06	2.6753E+01	1.2664E-09
9.800	1.4199E+06	2.6974E+01	1.2647E-09
10.100	1.4103E+06	2.7180E+01	1.2629E-09
10.400	1.4018E+06	2.7369E+01	1.2612E-09
24.000	1.2895E+06	2.8867E+01	1.1920E-09
48.000	1.1754E+06	2.4409E+01	9.6338E-10
72.000	1.0714E+06	2.2145E+01	8.7811E-10
96.000	9.7667E+05	2.0181E+01	8.0044E-10
120.000	8.9030E+05	1.8285E+01	7.0915E-10
168.000	7.3978E+05	1.5188E+01	5.8926E-10
336.000	3.8690E+05	7.9432E+00	3.0818E-10
720.000	8.7935E+04	1.8053E+00	7.0043E-11

Time (hr)	(Node 2) Outboard MSL		Condenser
	I-131 (Curies)	I-131 (Curies)	I-131 (Curies)
0.000	2.6019E-11	9.1972E-07	3.0999E-11
0.401	9.3507E-03	4.5376E-01	1.1337E-02
0.500	1.7909E-02	6.9590E-01	2.1811E-02
0.800	7.3594E-02	1.8960E+00	9.0936E-02
1.100	1.9914E-01	3.8398E+00	2.5018E-01
1.400	4.2407E-01	6.4688E+00	5.4241E-01
1.700	7.7404E-01	9.7289E+00	1.0086E+00
2.000	1.2712E+00	1.3570E+01	1.6881E+00
2.300	1.8834E+00	1.5620E+01	2.5580E+00
2.600	2.5569E+00	1.7382E+01	3.5607E+00
2.900	3.2806E+00	1.8919E+01	4.6848E+00
3.200	4.0451E+00	2.0276E+01	5.9211E+00
3.500	4.8424E+00	2.1486E+01	7.2625E+00
3.800	5.6653E+00	2.2578E+01	8.7027E+00
4.100	6.5078E+00	2.3569E+01	1.0237E+01
4.400	7.3645E+00	2.4477E+01	1.1860E+01
4.700	8.2308E+00	2.5312E+01	1.3569E+01
5.000	9.1024E+00	2.6085E+01	1.5361E+01
5.300	9.9759E+00	2.6803E+01	1.7231E+01
5.600	1.0848E+01	2.7475E+01	1.9177E+01
5.900	1.1716E+01	2.8102E+01	2.1196E+01
6.200	1.2577E+01	2.8690E+01	2.3286E+01
6.500	1.3430E+01	2.9240E+01	2.5443E+01
6.800	1.4272E+01	2.9754E+01	2.7666E+01
7.100	1.5102E+01	3.0236E+01	2.9951E+01

7.400	1.5918E+01	3.0688E+01	3.2296E+01
7.700	1.6719E+01	3.1111E+01	3.4700E+01
8.000	1.7505E+01	3.1507E+01	3.7158E+01
8.300	1.8274E+01	3.1878E+01	3.9670E+01
8.600	1.9025E+01	3.2226E+01	4.2232E+01
8.900	1.9758E+01	3.2552E+01	4.4843E+01
9.200	2.0473E+01	3.2857E+01	4.7500E+01
9.500	2.1169E+01	3.3143E+01	5.0201E+01
9.800	2.1846E+01	3.3410E+01	5.2945E+01
10.100	2.2503E+01	3.3659E+01	5.5729E+01
10.400	2.3141E+01	3.3893E+01	5.8551E+01
24.000	3.6320E+01	3.6282E+01	2.0411E+02
48.000	3.7672E+01	3.4251E+01	3.1175E+02
72.000	3.4498E+01	3.1352E+01	3.9669E+02
96.000	3.1442E+01	2.8593E+01	4.5964E+02
120.000	3.5400E+01	3.1886E+01	4.9043E+02
168.000	3.1107E+01	2.7716E+01	5.3523E+02
336.000	1.6327E+01	1.4524E+01	4.7457E+02
720.000	3.7108E+00	3.3011E+00	1.6811E+02

Time (hr)	Environment I-131 (Curies)	Control Room I-131 (Curies)	Hold I-131 (Curies)
0.000	1.7278E-17	1.6512E-20	3.0465E-04
0.401	4.5875E-06	3.9437E-09	1.4535E+02
0.500	1.1016E-05	9.2350E-09	2.2112E+02
0.800	7.2043E-05	5.6209E-08	5.9764E+02
1.100	2.6613E-04	1.9465E-07	1.2127E+03
1.400	7.2773E-04	5.0063E-07	2.0494E+03
1.700	1.6418E-03	1.0641E-06	3.0920E+03
2.000	3.2416E-03	1.9827E-06	4.3258E+03
2.300	5.7832E-03	2.8335E-06	5.4786E+03
2.600	9.4531E-03	4.0668E-06	6.3492E+03
2.900	1.4404E-02	5.6441E-06	7.0116E+03
3.200	2.0777E-02	7.5329E-06	7.5206E+03
3.500	2.8701E-02	9.7065E-06	7.9163E+03
3.800	3.8300E-02	1.2142E-05	8.2285E+03
4.100	4.9690E-02	1.4822E-05	8.4790E+03
4.400	6.2981E-02	1.7730E-05	8.6840E+03
4.700	7.8278E-02	2.0854E-05	8.8554E+03
5.000	9.5682E-02	2.4181E-05	9.0020E+03
5.300	1.1529E-01	2.7703E-05	9.1332E+03
5.600	1.3719E-01	3.1410E-05	9.2549E+03
5.900	1.6149E-01	3.5294E-05	9.3688E+03
6.200	1.8825E-01	3.9350E-05	9.4762E+03
6.500	2.1757E-01	4.3568E-05	9.5781E+03
6.800	2.4953E-01	4.7945E-05	9.6755E+03
7.100	2.8420E-01	5.2473E-05	9.7690E+03
7.400	3.2166E-01	5.7146E-05	9.8594E+03
7.700	3.6198E-01	6.1959E-05	9.9470E+03
8.000	4.0522E-01	6.6906E-05	1.0032E+04
8.300	4.5146E-01	5.5227E-05	1.0116E+04
8.600	5.0074E-01	4.8219E-05	1.0198E+04
8.900	5.5315E-01	4.4317E-05	1.0279E+04
9.200	6.0872E-01	4.2487E-05	1.0358E+04
9.500	6.6752E-01	4.2042E-05	1.0437E+04
9.800	7.2959E-01	4.2526E-05	1.0515E+04
10.100	7.9500E-01	4.3638E-05	1.0592E+04
10.400	8.6377E-01	4.5177E-05	1.0669E+04
24.000	7.9410E+00	1.6621E-04	1.3846E+04
48.000	2.1687E+01	9.1333E-05	1.5656E+04

72.000	4.0559E+01	1.1674E-04	1.7053E+04
96.000	6.3332E+01	1.3561E-04	1.8096E+04
120.000	8.8475E+01	1.0821E-04	1.8835E+04
168.000	1.4316E+02	1.1827E-04	1.9576E+04
336.000	3.3731E+02	1.0511E-04	1.7631E+04
720.000	5.9887E+02	3.7281E-05	8.1416E+03

 Cumulative Dose Summary
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Time (hr)	Exclusion Area Bounda		Low Population Zone (Control Room (CR)	
	Thyroid (rem)	TEDE (rem)	Thyroid (rem)	TEDE (rem)	Thyroid (rem)	TEDE (rem)
0.000	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00
0.401	7.7862E-07	2.8319E-07	1.4177E-07	5.1562E-08	1.9096E-07	1.4840E-08
0.500	1.8676E-06	6.6979E-07	3.4004E-07	1.2195E-07	5.4110E-07	4.1954E-08
0.800	1.2180E-05	4.5184E-06	2.2177E-06	8.2268E-07	5.0891E-06	4.0094E-07
1.100	4.4922E-05	1.9738E-05	8.1791E-06	3.5939E-06	2.3701E-05	2.0428E-06
1.400	1.2267E-04	6.2201E-05	2.2335E-05	1.1325E-05	7.6832E-05	7.3961E-06
1.700	2.7629E-04	1.5343E-04	5.0306E-05	2.7935E-05	1.9815E-04	2.0935E-05
2.000	5.4450E-04	3.1867E-04	9.9140E-05	5.8021E-05	4.3604E-04	4.9423E-05
2.300	9.6941E-04	5.8241E-04	1.7651E-04	1.0604E-04	8.1386E-04	9.7272E-05
2.600	1.5811E-03	9.5685E-04	2.8787E-04	1.7422E-04	1.3562E-03	1.6858E-04
2.900	2.4035E-03	1.4484E-03	4.3762E-04	2.6372E-04	2.1192E-03	2.7076E-04
3.200	3.4585E-03	2.0610E-03	6.2971E-04	3.7526E-04	3.1529E-03	4.1042E-04
3.500	4.7659E-03	2.7965E-03	8.6775E-04	5.0918E-04	4.5024E-03	5.9337E-04
3.800	6.3441E-03	3.6551E-03	1.1551E-03	6.6550E-04	6.2080E-03	8.2460E-04
4.100	8.2103E-03	4.6357E-03	1.4949E-03	8.4404E-04	8.3068E-03	1.1084E-03
4.400	1.0380E-02	5.7362E-03	1.8900E-03	1.0444E-03	1.0833E-02	1.4482E-03
4.700	1.2870E-02	6.9537E-03	2.3433E-03	1.2661E-03	1.3818E-02	1.8469E-03
5.000	1.5693E-02	8.2847E-03	2.8573E-03	1.5084E-03	1.7291E-02	2.3068E-03
5.300	1.8863E-02	9.7254E-03	3.4344E-03	1.7708E-03	2.1280E-02	2.8297E-03
5.600	2.2393E-02	1.1272E-02	4.0771E-03	2.0523E-03	2.5810E-02	3.4168E-03
5.900	2.6295E-02	1.2919E-02	4.7876E-03	2.3522E-03	3.0907E-02	4.0690E-03
6.200	3.0581E-02	1.4663E-02	5.5681E-03	2.6698E-03	3.6593E-02	4.7868E-03
6.500	3.5262E-02	1.6499E-02	6.4204E-03	3.0041E-03	4.2890E-02	5.5704E-03
6.800	4.0349E-02	1.8424E-02	7.3466E-03	3.3545E-03	4.9820E-02	6.4198E-03
7.100	4.5852E-02	2.0431E-02	8.3485E-03	3.7201E-03	5.7401E-02	7.3348E-03
7.400	5.1780E-02	2.2518E-02	9.4278E-03	4.1001E-03	6.5654E-02	8.3149E-03
7.700	5.8142E-02	2.4681E-02	1.0586E-02	4.4938E-03	7.4595E-02	9.3594E-03
8.000	6.4946E-02	2.6915E-02	1.1825E-02	4.9005E-03	8.4242E-02	1.0468E-02
8.300	6.8678E-02	2.9093E-02	1.2306E-02	5.1813E-03	9.3300E-02	1.1545E-02
8.600	7.2645E-02	3.1328E-02	1.2818E-02	5.4695E-03	1.0096E-01	1.2520E-02
8.900	7.6851E-02	3.3617E-02	1.3360E-02	5.7646E-03	1.0781E-01	1.3425E-02
9.200	8.1300E-02	3.5956E-02	1.3934E-02	6.0662E-03	1.1422E-01	1.4281E-02
9.500	8.5996E-02	3.8342E-02	1.4539E-02	6.3739E-03	1.2045E-01	1.5102E-02
9.800	9.0940E-02	4.0774E-02	1.5177E-02	6.6873E-03	1.2668E-01	1.5902E-02
10.100	9.6136E-02	4.3247E-02	1.5846E-02	7.0063E-03	1.3301E-01	1.6688E-02
10.400	1.0159E-01	4.5761E-02	1.6549E-02	7.3303E-03	1.3952E-01	1.7467E-02
24.000	6.3536E-01	1.8994E-01	8.5370E-02	2.5919E-02	7.9259E-01	6.7453E-02
48.000	6.3536E-01	1.8994E-01	1.6041E-01	3.6022E-02	1.2846E+00	9.8175E-02
72.000	6.3536E-01	1.8994E-01	2.5771E-01	4.7371E-02	1.8951E+00	1.3149E-01
96.000	6.3536E-01	1.8994E-01	3.7175E-01	6.0262E-02	2.6130E+00	1.7000E-01
120.000	6.3536E-01	1.8994E-01	4.1426E-01	6.4975E-02	3.0073E+00	1.9117E-01
168.000	6.3536E-01	1.8994E-01	5.0586E-01	7.4805E-02	3.8482E+00	2.3501E-01
336.000	6.3536E-01	1.8994E-01	8.2951E-01	1.0566E-01	6.8256E+00	3.8033E-01
720.000	6.3536E-01	1.8994E-01	1.2653E+00	1.3742E-01	1.0841E+01	5.5113E-01

#####

Worst Two-Hour Doses

#####

Exclusion Area Boundary (EAB)

Time (hr)	Whole Body (rem)	Thyroid (rem)	TEDE (rem)
10.4	1.8639E-02	7.8497E-02	2.1203E-02

 RADTRAD Version 3.03 (Spring 2001) run on 9/19/2005 at 16:43:29
 #####

 File information
 #####

Plant file = c:\RESUP-A.psf
 Inventory file = c:\program files\radtrad3-03\defaults\limerick ast source terms.nif
 Release file = c:\program files\radtrad3-03\defaults\bwr_i.rft
 Dose Conversion file = c:\program files\radtrad3-03\defaults\fgrr11&12.inp

```
#####  #####  #####  #  #  #  #####  #  #  #####
#  #  #  #  #  #  #  #  #  #  #  #  #
#  #  #  #  #  #  #  #  #  #  #  #  #
#####  #####  #####  #  #  #  #####  #  #  #
#  #  #  #  #  #  #  #  #  #  #  #
#  #  #  #  #  #  #  #  #  #  #  #
#  #####  #  #  #  #  #  #####  #
```

Radtrad 3.03 4/15/2001
 LGS LOCA 200scfh Line A MSIV Leak - Resuspension Only - Leak to Condenser - MSL
 Pipe Deposition Credit (24-Hr 20-Group Aerosol Settling with Projected Area
 Assumption; 2-Hr Mixing Delay) - 95% CREFAS Charcoal Eff. No Delay - Rad Mode
 275cfm Control Room In

Nuclide Inventory File:
 c:\program files\radtrad3-03\defaults\limerick ast source terms.nif

Plant Power Level:
 3.5270E+03

Compartments:
 10

Compartment 1:
 Containment

3
 3.7907E+05
 0
 0
 0
 1
 0

Compartment 2:
 MSL A Inboard - Airborne

3
 2.5800E+02
 0
 0
 0
 0
 0

Compartment 3:
 Environment

2

0.0000E+00

0
0
0
0
0

Compartment 4:

Control Room

1

1.2600E+05

0
0
1
0
0

Compartment 5:

MSL A Outboard - Airborne

3

1.1820E+03

0
0
0
0
0

Compartment 6:

MSL A Inboard - Surface

3

1.0000E+00

0
0
0
0
0

Compartment 7:

MSL A Outboard - Surface

3

1.0000E+00

0
0
0
0
0

Compartment 8:

Hold (By Surface Fixation)

3

1.0000E+00

0
0
0
0
0

Compartment 9:

Condenser - Airborne

3

5.4746E+04

0
0
0
0
0

Compartment 10:

Condenser - Surface

3

1.0000E+00

0

0

0

0

0

Pathways:

15

Pathway 1:

Filtered Environment to Control Room (Intake)

3

4

2

Pathway 2:

Unfiltered Environment to Control Room (Inleakage)

3

4

2

Pathway 3:

Control Room to Environment (Exhaust)

4

3

2

Pathway 4:

(Aerosol Transport 1) MSL A Inboard - Airborne to MSL A Outboard - Airborne

2

5

2

Pathway 5:

(Deposition 1) MSL A Inboard - Airborne to MSL A Inboard - Surface

2

6

4

Pathway 6:

(Resuspension 1) MSL A Inboard - Surface to Environment

6

3

4

Pathway 7:

(Surface Fixation 1) MSL A Inboard - Surface to Hold (By Surface Fixation)

6

8

4

Pathway 8:

(Deposition 2) MSL A Outboard - Airborne to MSL A Outboard - Surface

5

7

4

Pathway 9:

(Resuspension 2) MSL A Outboard - Surface to Environment

7

3

4

Pathway 10:

(Surface Fixation 2) MSL A Outboard - Surface to Hold (By Surface Fixation)

7

8

4

Pathway 11:

(Aerosol Transport 2) MSL A Outboard - Airborne to Condenser - Airborne

5

9

2

Pathway 12:

(Deposition 3) Condenser - Airborne to Condenser - Surface

9

10

4

Pathway 13:

(Resuspension 3) Condenser - Surface to Environment

10

3

4

Pathway 14:

(Surface Fixation 3) Condenser - Surface to Hold (By Surface Fixation)

10

8

4

Pathway 15:

Containment to MSL A Inboard - Airborne

1

2

2

End of Plant Model File

Scenario Description Name:

Plant Model Filename:

Source Term:

1

1 1.0000E+00

c:\program files\radtrad3-03\defaults\fgr11&12.inp

c:\program files\radtrad3-03\defaults\bwr_i.rft

0.0000E+00

1

9.5000E-01 4.8500E-02 1.5000E-03 1.0000E+00

Overlying Pool:

0

0.0000E+00

0

0

0

0

Compartments:

10

Compartment 1:

0

1

0

0

0

0

0

3

3

1.0000E+01

1

1
 0.0000E+00 0.0000E+00

Compartment 2:

0
 1
 0
 0
 0
 0
 0
 0
 0

Compartment 3:

0
 1
 0
 0
 0
 0
 0
 0
 0

Compartment 4:

0
 1
 0
 0
 0
 0
 1
 2.1750E+03

3				
0.0000E+00	9.9000E+01	9.5000E+01	9.5000E+01	
3.3330E-01	9.9000E+01	9.5000E+01	9.5000E+01	
7.2000E+02	0.0000E+00	0.0000E+00	0.0000E+00	

0
 0

Compartment 5:

0
 1
 0
 0
 0
 0
 0
 0
 0
 0

Compartment 6:

0
 1
 0
 0
 0
 0
 0
 0
 0
 0

Compartment 7:

0
 1

0
0
0
0
0
0
0

Compartment 8:

0
1
0
0
0
0
0
0
0

Compartment 9:

0
1
0
0
0
0
0
0
0

Compartment 10:

0
1
0
0
0
0
0
0
0

Pathways:

15

Pathway 1:

0
0
0
0
0
1
3

0.0000E+00	5.2500E+02	9.9000E+01	9.5000E+01	9.5000E+01
5.0000E-01	5.2500E+02	9.9000E+01	9.5000E+01	9.5000E+01
7.2000E+02	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00

0
0
0
0
0

Pathway 2:

0
0
0

0
 0
 1
 2
 0.0000E+00 2.7500E+02 0.0000E+00 0.0000E+00 0.0000E+00
 7.2000E+02 0.0000E+00 0.0000E+00 0.0000E+00 0.0000E+00

0
 0
 0
 0
 0
 0

Pathway 3:

0
 0
 0
 0
 0
 1
 3
 0.0000E+00 8.0000E+02 1.0000E+02 1.0000E+02 1.0000E+02
 5.0000E-01 8.0000E+02 1.0000E+02 1.0000E+02 1.0000E+02
 7.2000E+02 0.0000E+00 0.0000E+00 0.0000E+00 0.0000E+00

0
 0
 0
 0
 0
 0

Pathway 4:

0
 0
 0
 0
 0
 1
 5
 0.0000E+00 9.3060E-01 1.0000E+02 0.0000E+00 1.0000E+02
 2.0000E+00 9.3060E-01 1.0000E+02 0.0000E+00 1.0000E+02
 2.4000E+01 5.1270E-01 1.0000E+02 0.0000E+00 1.0000E+02
 9.6000E+01 5.1270E-01 1.0000E+02 0.0000E+00 1.0000E+02
 7.2000E+02 0.0000E+00 0.0000E+00 0.0000E+00 0.0000E+00

0
 0
 0
 0
 0
 0

Pathway 5:

0
 0
 0
 0
 0
 0
 0
 0
 0
 0
 1

4
 0.0000E+00 3.1420E+02
 2.4000E+01 7.0350E+02
 9.6000E+01 4.4780E+03
 7.2000E+02 0.0000E+00

0

Pathway 6:

0

0

0

0

0

0

0

0

0

0

1

4

0.0000E+00 3.5580E-02
 2.4000E+01 2.9950E-02
 9.6000E+01 2.0170E-02
 7.2000E+02 0.0000E+00

0

Pathway 7:

0

0

0

0

0

0

0

0

0

0

1

4

0.0000E+00 1.5960E-02
 2.4000E+01 1.1360E-02
 9.6000E+01 5.2000E-03
 7.2000E+02 0.0000E+00

0

Pathway 8:

0

0

0

0

0

0

0

0

0

0

1

4

0.0000E+00 3.1417E+02
 2.4000E+01 7.0352E+02
 9.6000E+01 4.4779E+03
 7.2000E+02 0.0000E+00

0

Pathway 9:

0
 0
 0
 0
 0
 0
 0
 0
 0
 0
 1
 4
 0.0000E+00 3.5580E-02
 2.4000E+01 2.9950E-02
 9.6000E+01 2.0170E-02
 7.2000E+02 0.0000E+00
 0

Pathway 10:

0
 0
 0
 0
 0
 0
 0
 0
 0
 0
 1
 4
 0.0000E+00 1.5960E-02
 2.4000E+01 1.1360E-02
 9.6000E+01 5.2000E-03
 7.2000E+02 0.0000E+00
 0

Pathway 11:

0
 0
 0
 0
 0
 1
 4
 0.0000E+00 3.1880E+00 1.0000E+02 0.0000E+00 1.0000E+02
 2.4000E+01 1.5130E+00 1.0000E+02 0.0000E+00 1.0000E+02
 9.6000E+01 1.1480E+00 1.0000E+02 0.0000E+00 1.0000E+02
 7.2000E+02 0.0000E+00 0.0000E+00 0.0000E+00 0.0000E+00
 0
 0
 0
 0
 0
 0

Pathway 12:

0
 0
 0
 0
 0

0
0
0
0
0
1
4

0.0000E+00	1.0690E+03
2.4000E+01	1.0690E+03
9.6000E+01	1.0690E+03
7.2000E+02	0.0000E+00

Pathway 13:

0
0
0
0
0
0
0
0
0
0
0
1
4

0.0000E+00	1.6090E-02
2.4000E+01	1.6090E-02
9.6000E+01	1.6090E-02
7.2000E+02	0.0000E+00

Pathway 14:

0
0
0
0
0
0
0
0
0
0
0
1
4

0.0000E+00	3.3300E-03
2.4000E+01	3.3300E-03
9.6000E+01	3.3300E-03
7.2000E+02	0.0000E+00

Pathway 15:

0
0
0
0
0
1
5

0.0000E+00	1.5244E+00	1.0000E+02	0.0000E+00	1.0000E+02
2.0000E+00	9.3060E-01	1.0000E+02	0.0000E+00	1.0000E+02
2.4000E+01	5.1270E-01	1.0000E+02	0.0000E+00	1.0000E+02
9.6000E+01	5.1270E-01	1.0000E+02	0.0000E+00	1.0000E+02

7.2000E+02 0.0000E+00 0.0000E+00 0.0000E+00 0.0000E+00
 0
 0
 0
 0
 0
 0

Dose Locations:

3

Location 1:

Control Room (CR)

4

0

1

2

0.0000E+00 3.5000E-04

7.2000E+02 0.0000E+00

1

4

0.0000E+00 1.0000E+00

2.4000E+01 6.0000E-01

9.6000E+01 4.0000E-01

7.2000E+02 0.0000E+00

Location 2:

Exclusion Area Boundary (EAB)

3

1

2

0.0000E+00 3.1800E-04

2.4000E+01 0.0000E+00

1

4

0.0000E+00 3.5000E-04

8.0000E+00 1.8000E-04

2.4000E+01 2.3000E-04

7.2000E+02 0.0000E+00

0

Location 3:

Low Population Zone (LPZ)

3

1

10

0.0000E+00 5.7900E-05

8.0000E+00 4.1000E-05

2.4000E+01 1.9500E-05

4.8000E+01 1.9500E-05

7.2000E+01 1.9500E-05

9.6000E+01 6.6800E-06

1.2000E+02 6.6800E-06

1.6800E+02 6.6800E-06

3.3600E+02 6.6800E-06

7.2000E+02 0.0000E+00

1

4

0.0000E+00 3.5000E-04

8.0000E+00 1.8000E-04

2.4000E+01 2.3000E-04

7.2000E+02 0.0000E+00

0

Effective Volume Location:

1

6

0.0000E+00 6.8800E-03

2.0000E+00 5.1700E-03

8.0000E+00 2.0400E-03

2.4000E+01 1.2900E-03

9.6000E+01 9.6300E-04

7.2000E+02 0.0000E+00

Simulation Parameters:

1

0.0000E+00 0.0000E+00

Output Filename:

C:\RESUP-A.o0

1

1

1

0

0

End of Scenario File

RADTRAD Version 3.03 (Spring 2001) run on 9/19/2005 at 16:43:29
#####

Plant Description
#####

Number of Nuclides = 60

Inventory Power = 1.0000E+00 MWth
Plant Power Level = 3.5270E+03 MWth

Number of compartments = 10

Compartment information

Compartment number 1 (Source term fraction = 1.0000E+00
)

Name: Containment
Compartment volume = 3.7907E+05 (Cubic feet)
Compartment type is Normal
Removal devices within compartment:

Deposition

Pathways into and out of compartment 1

Exit Pathway Number 15: Containment to MSL A Inboard - Airborne

Compartment number 2

Name: MSL A Inboard - Airborne
Compartment volume = 2.5800E+02 (Cubic feet)
Compartment type is Normal

Pathways into and out of compartment 2

Inlet Pathway Number 15: Containment to MSL A Inboard - Airborne
Exit Pathway Number 4: (Aerosol Transport 1) MSL A Inboard - Airborne to
Exit Pathway Number 5: (Deposition 1) MSL A Inboard - Airborne to MSL A I

Compartment number 3

Name: Environment
Compartment type is Environment

Pathways into and out of compartment 3

Inlet Pathway Number 3: Control Room to Environment (Exhaust)
Inlet Pathway Number 6: (Resuspension 1) MSL A Inboard - Surface to Enviro
Inlet Pathway Number 9: (Resuspension 2) MSL A Outboard - Surface to Envi
Inlet Pathway Number 13: (Resuspension 3) Condenser - Surface to Environme
Exit Pathway Number 1: Filtered Environment to Control Room (Intake)
Exit Pathway Number 2: Unfiltered Environment to Control Room (Inleakage)

Compartment number 4

Name: Control Room
Compartment volume = 1.2600E+05 (Cubic feet)
Compartment type is Control Room
Removal devices within compartment:

Filter(s)

Pathways into and out of compartment 4

Inlet Pathway Number 1: Filtered Environment to Control Room (Intake)
Inlet Pathway Number 2: Unfiltered Environment to Control Room (Inleakage)
Exit Pathway Number 3: Control Room to Environment (Exhaust)

Compartment number 5

Name: MSL A Outboard - Airborne
Compartment volume = 1.1820E+03 (Cubic feet)
Compartment type is Normal
Pathways into and out of compartment 5
Inlet Pathway Number 4: (Aerosol Transport 1) MSL A Inboard - Airborne to
Exit Pathway Number 8: (Deposition 2) MSL A Outboard - Airborne to MSL A
Exit Pathway Number 11: (Aerosol Transport 2) MSL A Outboard - Airborne to

Compartment number 6
Name: MSL A Inboard - Surface
Compartment volume = 1.0000E+00 (Cubic feet)
Compartment type is Normal
Pathways into and out of compartment 6
Inlet Pathway Number 5: (Deposition 1) MSL A Inboard - Airborne to MSL A I
Exit Pathway Number 6: (Resuspension 1) MSL A Inboard - Surface to Enviro
Exit Pathway Number 7: (Surface Fixation 1) MSL A Inboard - Surface to Ho

Compartment number 7
Name: MSL A Outboard - Surface
Compartment volume = 1.0000E+00 (Cubic feet)
Compartment type is Normal
Pathways into and out of compartment 7
Inlet Pathway Number 8: (Deposition 2) MSL A Outboard - Airborne to MSL A
Exit Pathway Number 9: (Resuspension 2) MSL A Outboard - Surface to Envi
Exit Pathway Number 10: (Surface Fixation 2) MSL A Outboard - Surface to H

Compartment number 8
Name: Hold (By Surface Fixation)
Compartment volume = 1.0000E+00 (Cubic feet)
Compartment type is Normal
Pathways into and out of compartment 8
Inlet Pathway Number 7: (Surface Fixation 1) MSL A Inboard - Surface to Ho
Inlet Pathway Number 10: (Surface Fixation 2) MSL A Outboard - Surface to H
Inlet Pathway Number 14: (Surface Fixation 3) Condenser - Surface to Hold

Compartment number 9
Name: Condenser - Airborne
Compartment volume = 5.4746E+04 (Cubic feet)
Compartment type is Normal
Pathways into and out of compartment 9
Inlet Pathway Number 11: (Aerosol Transport 2) MSL A Outboard - Airborne to
Exit Pathway Number 12: (Deposition 3) Condenser - Airborne to Condenser -

Compartment number 10
Name: Condenser - Surface
Compartment volume = 1.0000E+00 (Cubic feet)
Compartment type is Normal
Pathways into and out of compartment 10
Inlet Pathway Number 12: (Deposition 3) Condenser - Airborne to Condenser -
Exit Pathway Number 13: (Resuspension 3) Condenser - Surface to Environme
Exit Pathway Number 14: (Surface Fixation 3) Condenser - Surface to Hold

Total number of pathways = 15

 RADTRAD Version 3.03 (Spring 2001) run on 9/19/2005 at 16:43:29
 #####

 Scenario Description
 #####

Radioactive Decay is enabled
 Calculation of Daughters is enabled

Release Fractions and Timings

	GAP	EARLY IN-VESSEL	LATE RELEASE	RELEASE MASS
	0.500000 hr	1.5000 hrs	0.0000 hrs	(gm)
NOBLES	0.0000E+00	0.0000E+00	0.0000E+00	0.000E+00
IODINE	5.0000E-02	2.5000E-01	0.0000E+00	3.033E+02
CESIUM	0.0000E+00	0.0000E+00	0.0000E+00	0.000E+00
TELLURIUM	0.0000E+00	0.0000E+00	0.0000E+00	0.000E+00
STRONTIUM	0.0000E+00	0.0000E+00	0.0000E+00	0.000E+00
BARIUM	0.0000E+00	0.0000E+00	0.0000E+00	0.000E+00
RUTHENIUM	0.0000E+00	0.0000E+00	0.0000E+00	0.000E+00
CERIUM	0.0000E+00	0.0000E+00	0.0000E+00	0.000E+00
LANTHANUM	0.0000E+00	0.0000E+00	0.0000E+00	0.000E+00

Inventory Power = 3527. Mwt

Nuclide Name	Group	Specific Inventory (Ci/Mwt)	half life (s)	Whole Body DCF (Sv-m3/Bq-s)	Inhaled Thyroid (Sv/Bq)	Inhaled Effective (Sv/Bq)
I-131	2	2.687E+04	6.947E+05	1.820E-14	2.920E-07	8.890E-09
I-132	2	3.881E+04	8.280E+03	1.120E-13	1.740E-09	1.030E-10
I-133	2	5.556E+04	7.488E+04	2.940E-14	4.860E-08	1.580E-09
I-134	2	6.165E+04	3.156E+03	1.300E-13	2.880E-10	3.550E-11
I-135	2	5.192E+04	2.380E+04	8.294E-14	8.460E-09	3.320E-10

Nuclide	Daughter	Fraction	Daughter	Fraction	Daughter	Fraction
Kr-85m	Kr-85	0.21	none	0.00	none	0.00
Kr-87	Rb-87	1.00	none	0.00	none	0.00
Kr-88	Rb-88	1.00	none	0.00	none	0.00
Sr-90	Y-90	1.00	none	0.00	none	0.00
Sr-91	Y-91m	0.58	Y-91	0.42	none	0.00
Sr-92	Y-92	1.00	none	0.00	none	0.00
Y-93	Zr-93	1.00	none	0.00	none	0.00
Zr-95	Nb-95m	0.01	Nb-95	0.99	none	0.00
Zr-97	Nb-97m	0.95	Nb-97	0.05	none	0.00
Mo-99	Tc-99m	0.88	Tc-99	0.12	none	0.00
Tc-99m	Tc-99	1.00	none	0.00	none	0.00
Ru-103	Rh-103m	1.00	none	0.00	none	0.00
Ru-105	Rh-105	1.00	none	0.00	none	0.00
Ru-106	Rh-106	1.00	none	0.00	none	0.00
Sb-127	Te-127m	0.18	Te-127	0.82	none	0.00
Sb-129	Te-129m	0.22	Te-129	0.77	none	0.00
Te-127m	Te-127	0.98	none	0.00	none	0.00
Te-129	I-129	1.00	none	0.00	none	0.00
Te-129m	Te-129	0.65	I-129	0.35	none	0.00
Te-131m	Te-131	0.22	I-131	0.78	none	0.00
Te-132	I-132	1.00	none	0.00	none	0.00
I-131	Xe-131m	0.01	none	0.00	none	0.00
I-133	Xe-133m	0.03	Xe-133	0.97	none	0.00

I-135	Xe-135m	0.15	Xe-135	0.85	none	0.00
Xe-135	Cs-135	1.00	none	0.00	none	0.00
Cs-137	Ba-137m	0.95	none	0.00	none	0.00
Ba-140	La-140	1.00	none	0.00	none	0.00
La-141	Ce-141	1.00	none	0.00	none	0.00
Ce-143	Pr-143	1.00	none	0.00	none	0.00
Ce-144	Pr-144m	0.02	Pr-144	0.98	none	0.00
Nd-147	Pm-147	1.00	none	0.00	none	0.00
Np-239	Pu-239	1.00	none	0.00	none	0.00
Pu-238	U-234	1.00	none	0.00	none	0.00
Pu-239	U-235	1.00	none	0.00	none	0.00
Pu-240	U-236	1.00	none	0.00	none	0.00
Pu-241	U-237	0.00	Am-241	1.00	none	0.00
Am-241	Np-237	1.00	none	0.00	none	0.00
Cm-242	Pu-238	1.00	none	0.00	none	0.00
Cm-244	Pu-240	1.00	none	0.00	none	0.00

Iodine fractions

Aerosol = 9.5000E-01
 Elemental = 4.8500E-02
 Organic = 1.5000E-03

COMPARTMENT DATA

Compartment number 1: Containment
 Natural Deposition (Powers' model): Aerosol data
 Reactor type: 3
 Percentile = 10 (%)

Natural Deposition: Elemental Removal Data
 Time (hr) Removal Coef. (hr⁻¹)
 0.0000E+00 0.0000E+00

Compartment number 2: MSL A Inboard - Airborne
 Compartment number 3: Environment
 Compartment number 4: Control Room

Compartment Filter Data

Time (hr)	Flow Rate (cfm)	Filter Efficiencies (%)		
		Aerosol	Elemental	Organic
0.0000E+00	2.1750E+03	9.9000E+01	9.5000E+01	9.5000E+01
3.3330E-01	2.1750E+03	9.9000E+01	9.5000E+01	9.5000E+01
7.2000E+02	2.1750E+03	0.0000E+00	0.0000E+00	0.0000E+00

Compartment number 5: MSL A Outboard - Airborne
 Compartment number 6: MSL A Inboard - Surface
 Compartment number 7: MSL A Outboard - Surface
 Compartment number 8: Hold (By Surface Fixation)
 Compartment number 9: Condenser - Airborne
 Compartment number 10: Condenser - Surface

PATHWAY DATA

Pathway number 1: Filtered Environment to Control Room (Intake)

Pathway Filter: Removal Data

Time (hr)	Flow Rate (cfm)	Filter Efficiencies (%)		
		Aerosol	Elemental	Organic
0.0000E+00	5.2500E+02	9.9000E+01	9.5000E+01	9.5000E+01
5.0000E-01	5.2500E+02	9.9000E+01	9.5000E+01	9.5000E+01
7.2000E+02	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00

Pathway number 2: Unfiltered Environment to Control Room (Inleakage)

Pathway Filter: Removal Data

Time (hr)	Flow Rate (cfm)	Filter Efficiencies (%)		
		Aerosol	Elemental	Organic
0.0000E+00	2.7500E+02	0.0000E+00	0.0000E+00	0.0000E+00
7.2000E+02	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00

Pathway number 3: Control Room to Environment (Exhaust)

Pathway Filter: Removal Data

Time (hr)	Flow Rate (cfm)	Filter Efficiencies (%)		
		Aerosol	Elemental	Organic
0.0000E+00	8.0000E+02	1.0000E+02	1.0000E+02	1.0000E+02
5.0000E-01	8.0000E+02	1.0000E+02	1.0000E+02	1.0000E+02
7.2000E+02	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00

Pathway number 4: (Aerosol Transport 1) MSL A Inboard - Airborne to

Pathway Filter: Removal Data

Time (hr)	Flow Rate (cfm)	Filter Efficiencies (%)		
		Aerosol	Elemental	Organic
0.0000E+00	9.3060E-01	1.0000E+02	0.0000E+00	1.0000E+02
2.0000E+00	9.3060E-01	1.0000E+02	0.0000E+00	1.0000E+02
2.4000E+01	5.1270E-01	1.0000E+02	0.0000E+00	1.0000E+02
9.6000E+01	5.1270E-01	1.0000E+02	0.0000E+00	1.0000E+02
7.2000E+02	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00

Pathway number 5: (Deposition 1) MSL A Inboard - Airborne to MSL A I

Convection Data

Time (hr)	Flow Rate (% / day)
0.0000E+00	3.1420E+02
2.4000E+01	7.0350E+02
9.6000E+01	4.4780E+03
7.2000E+02	0.0000E+00

Pathway number 6: (Resuspension 1) MSL A Inboard - Surface to Enviro

Convection Data

Time (hr)	Flow Rate (% / day)
0.0000E+00	3.5580E-02
2.4000E+01	2.9950E-02
9.6000E+01	2.0170E-02
7.2000E+02	0.0000E+00

Pathway number 7: (Surface Fixation 1) MSL A Inboard - Surface to Ho

Convection Data

Time (hr)	Flow Rate (% / day)
0.0000E+00	1.5960E-02
2.4000E+01	1.1360E-02
9.6000E+01	5.2000E-03
7.2000E+02	0.0000E+00

Pathway number 8: (Deposition 2) MSL A Outboard - Airborne to MSL A

Convection Data

Time (hr)	Flow Rate (% / day)
0.0000E+00	3.1417E+02
2.4000E+01	7.0352E+02
9.6000E+01	4.4779E+03
7.2000E+02	0.0000E+00

Pathway number 9: (Resuspension 2) MSL A Outboard - Surface to Envi

Convection Data

Time (hr)	Flow Rate (% / day)
0.0000E+00	3.5580E-02
2.4000E+01	2.9950E-02
9.6000E+01	2.0170E-02
7.2000E+02	0.0000E+00

Pathway number 10: (Surface Fixation 2) MSL A Outboard - Surface to H

Convection Data

Time (hr)	Flow Rate (% / day)
0.0000E+00	1.5960E-02
2.4000E+01	1.1360E-02
9.6000E+01	5.2000E-03
7.2000E+02	0.0000E+00

Pathway number 11: (Aerosol Transport 2) MSL A Outboard - Airborne to

Pathway Filter: Removal Data

Time (hr)	Flow Rate (cfm)	Filter Efficiencies (%)		
		Aerosol	Elemental	Organic
0.0000E+00	3.1880E+00	1.0000E+02	0.0000E+00	1.0000E+02
2.4000E+01	1.5130E+00	1.0000E+02	0.0000E+00	1.0000E+02
9.6000E+01	1.1480E+00	1.0000E+02	0.0000E+00	1.0000E+02
7.2000E+02	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00

Pathway number 12: (Deposition 3) Condenser - Airborne to Condenser -

Convection Data

Time (hr)	Flow Rate (% / day)
0.0000E+00	1.0690E+03
2.4000E+01	1.0690E+03
9.6000E+01	1.0690E+03
7.2000E+02	0.0000E+00

Pathway number 13: (Resuspension 3) Condenser - Surface to Environme

Convection Data

Time (hr)	Flow Rate (% / day)
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0.0000E+00	1.6090E-02
2.4000E+01	1.6090E-02
9.6000E+01	1.6090E-02
7.2000E+02	0.0000E+00

Pathway number 14: (Surface Fixation 3) Condenser - Surface to Hold

Convection Data

Time (hr)	Flow Rate (% / day)
0.0000E+00	3.3300E-03
2.4000E+01	3.3300E-03
9.6000E+01	3.3300E-03
7.2000E+02	0.0000E+00

Pathway number 15: Containment to MSL A Inboard - Airborne

Pathway Filter: Removal Data

Time (hr)	Flow Rate (cfm)	Filter Efficiencies (%)		
		Aerosol	Elemental	Organic
0.0000E+00	1.5244E+00	1.0000E+02	0.0000E+00	1.0000E+02
2.0000E+00	9.3060E-01	1.0000E+02	0.0000E+00	1.0000E+02
2.4000E+01	5.1270E-01	1.0000E+02	0.0000E+00	1.0000E+02
9.6000E+01	5.1270E-01	1.0000E+02	0.0000E+00	1.0000E+02
7.2000E+02	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00

LOCATION DATA

Location Control Room (CR) is in compartment 4

Location X/Q Data

Time (hr)	X/Q (s * m ⁻³)
0.0000E+00	6.8800E-03
2.0000E+00	5.1700E-03
8.0000E+00	2.0400E-03
2.4000E+01	1.2900E-03
9.6000E+01	9.6300E-04
7.2000E+02	0.0000E+00

Location Breathing Rate Data

Time (hr)	Breathing Rate (m ³ * sec ⁻¹)
0.0000E+00	3.5000E-04
7.2000E+02	0.0000E+00

Location Occupancy Factor Data

Time (hr)	Occupancy Factor
0.0000E+00	1.0000E+00
2.4000E+01	6.0000E-01
9.6000E+01	4.0000E-01
7.2000E+02	0.0000E+00

Location Exclusion Area Boundary (EAB) is in compartment 3

Location X/Q Data

Time (hr)	X/Q (s * m ⁻³)
0.0000E+00	3.1800E-04
2.4000E+01	0.0000E+00

Location Breathing Rate Data

Time (hr)	Breathing Rate (m ³ * sec ⁻¹)
0.0000E+00	3.5000E-04
8.0000E+00	1.8000E-04

2.4000E+01	2.3000E-04
7.2000E+02	0.0000E+00

Location Low Population Zone (LPZ) is in compartment 3

Location X/Q Data

Time (hr)	X/Q (s * m ⁻³)
0.0000E+00	5.7900E-05
8.0000E+00	4.1000E-05
2.4000E+01	1.9500E-05
4.8000E+01	1.9500E-05
7.2000E+01	1.9500E-05
9.6000E+01	6.6800E-06
1.2000E+02	6.6800E-06
1.6800E+02	6.6800E-06
3.3600E+02	6.6800E-06
7.2000E+02	0.0000E+00

Location Breathing Rate Data

Time (hr)	Breathing Rate (m ³ * sec ⁻¹)
0.0000E+00	3.5000E-04
8.0000E+00	1.8000E-04
2.4000E+01	2.3000E-04
7.2000E+02	0.0000E+00

USER SPECIFIED TIME STEP DATA - SUPPLEMENTAL TIME STEPS

Time	Time step
0.0000E+00	0.0000E+00

 RADTRAD Version 3.03 (Spring 2001) run on 9/19/2005 at 16:43:29
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 Dose Output
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Control Room (CR) Doses:

Time (h) =	0.3333	Whole Body	Thyroid	TEDE
Delta dose (rem)		7.9848E-13	3.9617E-09	1.2591E-10
Accumulated dose (rem)		7.9848E-13	3.9617E-09	1.2591E-10

Exclusion Area Boundary (EAB) Doses:

Time (h) =	0.3333	Whole Body	Thyroid	TEDE
Delta dose (rem)		8.2706E-11	1.8546E-08	6.6841E-10
Accumulated dose (rem)		8.2706E-11	1.8546E-08	6.6841E-10

Low Population Zone (LPZ) Doses:

Time (h) =	0.3333	Whole Body	Thyroid	TEDE
Delta dose (rem)		1.5059E-11	3.3767E-09	1.2170E-10
Accumulated dose (rem)		1.5059E-11	3.3767E-09	1.2170E-10

Control Room (CR) Doses:

Time (h) =	0.5000	Whole Body	Thyroid	TEDE
Delta dose (rem)		4.4345E-12	2.3256E-08	7.3822E-10
Accumulated dose (rem)		5.2329E-12	2.7218E-08	8.6413E-10

Exclusion Area Boundary (EAB) Doses:

Time (h) =	0.5000	Whole Body	Thyroid	TEDE
Delta dose (rem)		3.1420E-10	7.4767E-08	2.6734E-09
Accumulated dose (rem)		3.9691E-10	9.3313E-08	3.3418E-09

Low Population Zone (LPZ) Doses:

Time (h) =	0.5000	Whole Body	Thyroid	TEDE
Delta dose (rem)		5.7208E-11	1.3613E-08	4.8676E-10
Accumulated dose (rem)		7.2267E-11	1.6990E-08	6.0846E-10

Control Room (CR) Doses:

Time (h) =	2.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)		3.1703E-09	2.2439E-05	7.0794E-07
Accumulated dose (rem)		3.1755E-09	2.2467E-05	7.0880E-07

Exclusion Area Boundary (EAB) Doses:

Time (h) =	2.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)		8.3049E-08	2.7307E-05	9.4089E-07
Accumulated dose (rem)		8.3446E-08	2.7400E-05	9.4423E-07

Low Population Zone (LPZ) Doses:

Time (h) =	2.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)		1.5121E-08	4.9719E-06	1.7131E-07
Accumulated dose (rem)		1.5194E-08	4.9889E-06	1.7192E-07

Control Room (CR) Doses:

Time (h) =	8.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)		4.4790E-07	4.4422E-03	1.3879E-04
Accumulated dose (rem)		4.5107E-07	4.4647E-03	1.3950E-04

Exclusion Area Boundary (EAB) Doses:

Time (h) =	8.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)		5.5404E-06	3.3672E-03	1.1042E-04
Accumulated dose (rem)		5.6238E-06	3.3946E-03	1.1136E-04

Low Population Zone (LPZ) Doses:

Time (h) =	8.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)		1.0088E-06	6.1308E-04	2.0105E-05
Accumulated dose (rem)		1.0240E-06	6.1806E-04	2.0277E-05

Control Room (CR) Doses:

Time (h) =	24.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)		2.8477E-06	3.6676E-02	1.1353E-03
Accumulated dose (rem)		3.2987E-06	4.1141E-02	1.2748E-03

Exclusion Area Boundary (EAB) Doses:

Time (h) =	24.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)		4.7459E-05	2.9274E-02	9.5130E-04
Accumulated dose (rem)		5.3083E-05	3.2669E-02	1.0627E-03

Low Population Zone (LPZ) Doses:

Time (h) =	24.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)		6.1189E-06	3.7743E-03	1.2265E-04
Accumulated dose (rem)		7.1429E-06	4.3924E-03	1.4293E-04

Control Room (CR) Doses:

Time (h) =	48.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)		1.8333E-06	4.5288E-02	1.3912E-03
Accumulated dose (rem)		5.1321E-06	8.6429E-02	2.6660E-03

Exclusion Area Boundary (EAB) Doses:

Time (h) = 48.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)	0.0000E+00	0.0000E+00	0.0000E+00
Accumulated dose (rem)	5.3083E-05	3.2669E-02	1.0627E-03

Low Population Zone (LPZ) Doses:

Time (h) = 48.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)	4.7955E-06	7.1474E-03	2.2406E-04
Accumulated dose (rem)	1.1938E-05	1.1540E-02	3.6699E-04

Control Room (CR) Doses:

Time (h) = 72.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)	1.1882E-06	5.9890E-02	1.8315E-03
Accumulated dose (rem)	6.3202E-06	1.4632E-01	4.4975E-03

Exclusion Area Boundary (EAB) Doses:

Time (h) = 72.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)	0.0000E+00	0.0000E+00	0.0000E+00
Accumulated dose (rem)	5.3083E-05	3.2669E-02	1.0627E-03

Low Population Zone (LPZ) Doses:

Time (h) = 72.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)	4.1688E-06	9.5324E-03	2.9550E-04
Accumulated dose (rem)	1.6107E-05	2.1072E-02	6.6248E-04

Control Room (CR) Doses:

Time (h) = 96.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)	1.0270E-06	7.1576E-02	2.1843E-03
Accumulated dose (rem)	7.3472E-06	2.1789E-01	6.6819E-03

Exclusion Area Boundary (EAB) Doses:

Time (h) = 96.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)	0.0000E+00	0.0000E+00	0.0000E+00
Accumulated dose (rem)	5.3083E-05	3.2669E-02	1.0627E-03

Low Population Zone (LPZ) Doses:

Time (h) = 96.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)	4.0209E-06	1.1362E-02	3.5061E-04
Accumulated dose (rem)	2.0128E-05	3.2434E-02	1.0131E-03

Control Room (CR) Doses:

Time (h) = 120.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)	3.8274E-07	2.9710E-02	9.0579E-04
Accumulated dose (rem)	7.7300E-06	2.4761E-01	7.5877E-03

Exclusion Area Boundary (EAB) Doses:

Time (h) = 120.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)	0.0000E+00	0.0000E+00	0.0000E+00
Accumulated dose (rem)	5.3083E-05	3.2669E-02	1.0627E-03

Low Population Zone (LPZ) Doses:

Time (h) = 120.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)	9.9950E-07	3.1498E-03	9.6987E-05
Accumulated dose (rem)	2.1128E-05	3.5584E-02	1.1101E-03

Control Room (CR) Doses:

Time (h) = 168.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)	7.6320E-07	6.4909E-02	1.9776E-03
Accumulated dose (rem)	8.4932E-06	3.1251E-01	9.5653E-03

Exclusion Area Boundary (EAB) Doses:

Time (h) = 168.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)	0.0000E+00	0.0000E+00	0.0000E+00
Accumulated dose (rem)	5.3083E-05	3.2669E-02	1.0627E-03

Low Population Zone (LPZ) Doses:

Time (h) = 168.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)	2.0870E-06	7.0704E-03	2.1742E-04
Accumulated dose (rem)	2.3215E-05	4.2655E-02	1.3275E-03

Control Room (CR) Doses:

Time (h) = 336.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)	2.7537E-06	2.5335E-01	7.7163E-03
Accumulated dose (rem)	1.1247E-05	5.6587E-01	1.7282E-02

Exclusion Area Boundary (EAB) Doses:

Time (h) = 336.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)	0.0000E+00	0.0000E+00	0.0000E+00
Accumulated dose (rem)	5.3083E-05	3.2669E-02	1.0627E-03

Low Population Zone (LPZ) Doses:

Time (h) = 336.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)	7.7702E-06	2.7547E-02	8.4648E-04
Accumulated dose (rem)	3.0985E-05	7.0202E-02	2.1740E-03

Control Room (CR) Doses:

Time (h) = 720.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)	4.2930E-06	4.3794E-01	1.3337E-02
Accumulated dose (rem)	1.5540E-05	1.0038E+00	3.0619E-02

Exclusion Area Boundary (EAB) Doses:

Time (h) = 720.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)	0.0000E+00	0.0000E+00	0.0000E+00
Accumulated dose (rem)	5.3083E-05	3.2669E-02	1.0627E-03

Low Population Zone (LPZ) Doses:

Time (h) = 720.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)	1.3185E-05	4.7552E-02	1.4609E-03
Accumulated dose (rem)	4.4170E-05	1.1775E-01	3.6349E-03

 I-131 Summary
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Time (hr)	Containment I-131 (Curies)	MSL A Inboard - Airbo I-131 (Curies)	Environment I-131 (Curies)
0.000	5.2640E+03	1.7114E-05	8.5433E-19
0.333	2.8290E+06	5.9220E+00	1.0961E-07
0.500	4.0239E+06	1.3070E+01	5.5249E-07
0.800	7.9884E+06	3.5530E+01	3.6382E-06
1.100	1.1679E+07	7.1455E+01	1.3487E-05
1.400	1.5113E+07	1.1946E+02	3.6935E-05
1.700	1.8307E+07	1.7832E+02	8.3380E-05
2.000	2.1276E+07	2.4689E+02	1.6468E-04
2.300	1.6058E+07	2.7960E+02	2.9380E-04
2.600	1.2209E+07	3.0897E+02	4.8021E-04
2.900	9.3713E+06	3.3535E+02	7.3204E-04
3.200	7.2781E+06	3.5902E+02	1.0571E-03
3.500	5.7342E+06	3.8027E+02	1.4627E-03
3.800	4.5953E+06	3.9933E+02	1.9562E-03
4.100	3.7551E+06	4.1642E+02	2.5443E-03
4.400	3.1351E+06	4.3174E+02	3.2335E-03
4.700	2.6775E+06	4.4546E+02	4.0300E-03
5.000	2.3396E+06	4.5775E+02	4.9398E-03
5.300	2.1768E+06	4.6874E+02	5.9684E-03
5.600	2.0415E+06	4.7858E+02	7.1211E-03
5.900	1.9291E+06	4.8737E+02	8.4031E-03
6.200	1.8355E+06	4.9521E+02	9.8190E-03
6.500	1.7577E+06	5.0221E+02	1.1373E-02
6.800	1.6930E+06	5.0845E+02	1.3070E-02
7.100	1.6390E+06	5.1400E+02	1.4914E-02
7.400	1.5940E+06	5.1893E+02	1.6909E-02
7.700	1.5564E+06	5.2331E+02	1.9057E-02
8.000	1.5249E+06	5.2718E+02	2.1362E-02
8.300	1.4986E+06	5.3061E+02	2.3828E-02
8.600	1.4790E+06	5.3363E+02	2.6458E-02
8.900	1.4622E+06	5.3629E+02	2.9253E-02
9.200	1.4476E+06	5.3861E+02	3.2217E-02
9.500	1.4350E+06	5.4065E+02	3.5351E-02
9.800	1.4240E+06	5.4241E+02	3.8659E-02
10.100	1.4145E+06	5.4394E+02	4.2141E-02
10.400	1.4061E+06	5.4525E+02	4.5801E-02
24.000	1.2997E+06	5.3471E+02	4.0907E-01
48.000	1.1900E+06	2.2722E+02	1.7210E+00
72.000	1.0896E+06	2.0804E+02	3.5717E+00
96.000	9.9764E+05	1.9048E+02	5.8421E+00
120.000	9.1346E+05	3.6224E+01	7.7062E+00
168.000	7.6580E+05	3.0368E+01	1.1929E+01
336.000	4.1314E+05	1.6384E+01	2.8457E+01
720.000	1.0081E+05	3.9977E+00	5.7001E+01

Time (hr)	Control Room I-131 (Curies)	MSL A Outboard - Airb I-131 (Curies)	MSL A Inboard - Surfa I-131 (Curies)
0.000	8.3555E-22	6.8585E-10	4.1491E-10
0.333	9.8130E-11	1.4029E-01	8.6958E-02
0.500	4.7405E-10	4.6105E-01	2.8927E-01
0.800	2.9055E-09	1.8683E+00	1.1965E+00
1.100	1.0096E-08	4.9831E+00	3.2534E+00
1.400	2.6001E-08	1.0452E+01	6.9597E+00
1.700	5.5295E-08	1.8787E+01	1.2763E+01

2.000	1.0305E-07	3.0380E+01	2.1065E+01
2.300	1.4730E-07	4.4183E+01	3.1387E+01
2.600	2.1137E-07	5.8737E+01	4.2916E+01
2.900	2.9346E-07	7.3781E+01	5.5524E+01
3.200	3.9221E-07	8.9098E+01	6.9101E+01
3.500	5.0648E-07	1.0450E+02	8.3544E+01
3.800	6.3536E-07	1.1985E+02	9.8761E+01
4.100	7.7803E-07	1.3501E+02	1.1467E+02
4.400	9.3377E-07	1.4989E+02	1.3120E+02
4.700	1.1019E-06	1.6440E+02	1.4828E+02
5.000	1.2818E-06	1.7848E+02	1.6585E+02
5.300	1.4729E-06	1.9209E+02	1.8386E+02
5.600	1.6746E-06	2.0519E+02	2.0225E+02
5.900	1.8864E-06	2.1775E+02	2.2100E+02
6.200	2.1078E-06	2.2976E+02	2.4005E+02
6.500	2.3382E-06	2.4120E+02	2.5936E+02
6.800	2.5772E-06	2.5208E+02	2.7892E+02
7.100	2.8242E-06	2.6241E+02	2.9869E+02
7.400	3.0789E-06	2.7218E+02	3.1864E+02
7.700	3.3407E-06	2.8140E+02	3.3875E+02
8.000	3.6093E-06	2.9010E+02	3.5901E+02
8.300	2.9820E-06	2.9829E+02	3.7938E+02
8.600	2.6048E-06	3.0597E+02	3.9986E+02
8.900	2.3942E-06	3.1318E+02	4.2042E+02
9.200	2.2945E-06	3.1994E+02	4.4107E+02
9.500	2.2691E-06	3.2625E+02	4.6177E+02
9.800	2.2934E-06	3.3214E+02	4.8253E+02
10.100	2.3512E-06	3.3763E+02	5.0333E+02
10.400	2.4316E-06	3.4275E+02	5.2416E+02
24.000	8.3922E-06	3.9367E+02	1.4459E+03
48.000	8.9185E-06	7.3353E+01	3.1124E+03
72.000	1.1539E-05	6.7066E+01	4.3188E+03
96.000	1.3657E-05	6.1407E+01	5.3015E+03
120.000	8.1710E-06	2.2449E+00	6.6159E+03
168.000	9.3163E-06	1.8820E+00	8.2897E+03
336.000	9.7184E-06	1.0153E+00	9.6918E+03
720.000	5.0399E-06	2.4775E-01	5.3333E+03

Time (hr)	MSL A Outboard - Surf Hold (By Surface Fixa Condenser - Airborne		
	I-131 (Curies)	I-131 (Curies)	I-131 (Curies)
0.000	1.2470E-14	3.8322E-19	1.5415E-14
0.333	1.5466E-03	4.9156E-08	1.8561E-03
0.500	7.6649E-03	2.4771E-07	9.0645E-03
0.800	4.9005E-02	1.6304E-06	5.6477E-02
1.100	1.7669E-01	6.0402E-06	1.9875E-01
1.400	4.7083E-01	1.6530E-05	5.1707E-01
1.700	1.0341E+00	3.7285E-05	1.1085E+00
2.000	1.9867E+00	7.3572E-05	2.0784E+00
2.300	3.4450E+00	1.3113E-04	3.5134E+00
2.600	5.4591E+00	2.1408E-04	5.4131E+00
2.900	8.0527E+00	3.2593E-04	7.7467E+00
3.200	1.1240E+01	4.6997E-04	1.0477E+01
3.500	1.5027E+01	6.4934E-04	1.3561E+01
3.800	1.9414E+01	8.6700E-04	1.6955E+01
4.100	2.4396E+01	1.1258E-03	2.0615E+01
4.400	2.9962E+01	1.4282E-03	2.4496E+01
4.700	3.6098E+01	1.7770E-03	2.8555E+01
5.000	4.2790E+01	2.1742E-03	3.2753E+01
5.300	5.0018E+01	2.6222E-03	3.7050E+01
5.600	5.7762E+01	3.1230E-03	4.1412E+01

5.900	6.6001E+01	3.6785E-03	4.5806E+01
6.200	7.4714E+01	4.2906E-03	5.0205E+01
6.500	8.3877E+01	4.9608E-03	5.4581E+01
6.800	9.3469E+01	5.6908E-03	5.8913E+01
7.100	1.0347E+02	6.4820E-03	6.3180E+01
7.400	1.1385E+02	7.3358E-03	6.7365E+01
7.700	1.2459E+02	8.2533E-03	7.1454E+01
8.000	1.3567E+02	9.2358E-03	7.5435E+01
8.300	1.4707E+02	1.0284E-02	7.9297E+01
8.600	1.5878E+02	1.1400E-02	8.3032E+01
8.900	1.7076E+02	1.2583E-02	8.6635E+01
9.200	1.8300E+02	1.3835E-02	9.0100E+01
9.500	1.9548E+02	1.5157E-02	9.3425E+01
9.800	2.0819E+02	1.6549E-02	9.6608E+01
10.100	2.2111E+02	1.8011E-02	9.9648E+01
10.400	2.3423E+02	1.9545E-02	1.0255E+02
24.000	8.9289E+02	1.6649E-01	1.4203E+02
48.000	1.6226E+03	6.0120E-01	1.2709E+01
72.000	1.9602E+03	1.1940E+00	1.1566E+01
96.000	2.2299E+03	1.8900E+00	1.0590E+01
120.000	2.2063E+03	2.1861E+00	2.9402E-01
168.000	2.0247E+03	2.8274E+00	2.4627E-01
336.000	1.4255E+03	4.7247E+00	1.3286E-01
720.000	5.3732E+02	4.8777E+00	3.2419E-02

Time (hr)	Condenser - Surface I-131 (Curies)
0.000	7.6291E-19
0.333	5.5778E-05
0.500	4.1108E-04
0.800	4.1044E-03
1.100	1.9679E-02
1.400	6.4985E-02
1.700	1.6986E-01
2.000	3.7768E-01
2.300	7.4539E-01
2.600	1.3357E+00
2.900	2.2084E+00
3.200	3.4187E+00
3.500	5.0165E+00
3.800	7.0457E+00
4.100	9.5443E+00
4.400	1.2544E+01
4.700	1.6071E+01
5.000	2.0147E+01
5.300	2.4785E+01
5.600	2.9997E+01
5.900	3.5789E+01
6.200	4.2162E+01
6.500	4.9114E+01
6.800	5.6640E+01
7.100	6.4733E+01
7.400	7.3381E+01
7.700	8.2573E+01
8.000	9.2294E+01
8.300	1.0253E+02
8.600	1.1326E+02
8.900	1.2447E+02
9.200	1.3614E+02
9.500	1.4825E+02

9.800	1.6078E+02
10.100	1.7371E+02
10.400	1.8703E+02
24.000	9.6194E+02
48.000	1.2105E+03
72.000	1.2341E+03
96.000	1.2453E+03
120.000	1.1567E+03
168.000	9.7836E+02
336.000	5.4435E+02
720.000	1.4223E+02

 Cumulative Dose Summary
 #####

Time (hr)	Control Room (CR)		Exclusion Area Bounda		Low Population Zone (
	Thyroid (rem)	TEDE (rem)	Thyroid (rem)	TEDE (rem)	Thyroid (rem)	TEDE (rem)
0.000	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00
0.333	3.9617E-09	1.2591E-10	1.8546E-08	6.6841E-10	3.3767E-09	1.2170E-10
0.500	2.7218E-08	8.6413E-10	9.3313E-08	3.3418E-09	1.6990E-08	6.0846E-10
0.800	2.6098E-07	8.2729E-09	6.1263E-07	2.1726E-08	1.1154E-07	3.9558E-09
1.100	1.2207E-06	3.8641E-08	2.2641E-06	7.9593E-08	4.1223E-07	1.4492E-08
1.400	3.9613E-06	1.2524E-07	6.1816E-06	2.1567E-07	1.1255E-06	3.9268E-08
1.700	1.0215E-05	3.2258E-07	1.3914E-05	4.8224E-07	2.5333E-06	8.7805E-08
2.000	2.2467E-05	7.0880E-07	2.7400E-05	9.4423E-07	4.9889E-06	1.7192E-07
2.300	4.1917E-05	1.3213E-06	4.8748E-05	1.6714E-06	8.8757E-06	3.0433E-07
2.600	6.9816E-05	2.1992E-06	7.9462E-05	2.7125E-06	1.4468E-05	4.9387E-07
2.900	1.0906E-04	3.4330E-06	1.2082E-04	4.1077E-06	2.1997E-05	7.4791E-07
3.200	1.6228E-04	5.1046E-06	1.7401E-04	5.8952E-06	3.1683E-05	1.0734E-06
3.500	2.3187E-04	7.2892E-06	2.4019E-04	8.1109E-06	4.3733E-05	1.4768E-06
3.800	3.2006E-04	1.0056E-05	3.2044E-04	1.0789E-05	5.8345E-05	1.9643E-06
4.100	4.2894E-04	1.3469E-05	4.1578E-04	1.3960E-05	7.5703E-05	2.5418E-06
4.400	5.6043E-04	1.7589E-05	5.2716E-04	1.7655E-05	9.5983E-05	3.2145E-06
4.700	7.1637E-04	2.2473E-05	6.5550E-04	2.1902E-05	1.1935E-04	3.9878E-06
5.000	8.9846E-04	2.8172E-05	8.0165E-04	2.6726E-05	1.4596E-04	4.8662E-06
5.300	1.1083E-03	3.4736E-05	9.6640E-04	3.2153E-05	1.7596E-04	5.8542E-06
5.600	1.3474E-03	4.2213E-05	1.1505E-03	3.8205E-05	2.0948E-04	6.9561E-06
5.900	1.6171E-03	5.0644E-05	1.3547E-03	4.4903E-05	2.4665E-04	8.1757E-06
6.200	1.9189E-03	6.0072E-05	1.5795E-03	5.2267E-05	2.8760E-04	9.5165E-06
6.500	2.2539E-03	7.0533E-05	1.8257E-03	6.0315E-05	3.3242E-04	1.0982E-05
6.800	2.6232E-03	8.2062E-05	2.0938E-03	6.9065E-05	3.8123E-04	1.2575E-05
7.100	3.0280E-03	9.4694E-05	2.3842E-03	7.8531E-05	4.3411E-04	1.4299E-05
7.400	3.4692E-03	1.0846E-04	2.6975E-03	8.8728E-05	4.9116E-04	1.6155E-05
7.700	3.9479E-03	1.2338E-04	3.0342E-03	9.9668E-05	5.5245E-04	1.8147E-05
8.000	4.4647E-03	1.3950E-04	3.3946E-03	1.1136E-04	6.1806E-04	2.0277E-05
8.300	4.9504E-03	1.5463E-04	3.5923E-03	1.1803E-04	6.4356E-04	2.1136E-05
8.600	5.3616E-03	1.6745E-04	3.8026E-03	1.2510E-04	6.7067E-04	2.2047E-05
8.900	5.7292E-03	1.7890E-04	4.0256E-03	1.3258E-04	6.9942E-04	2.3012E-05
9.200	6.0735E-03	1.8962E-04	4.2615E-03	1.4048E-04	7.2984E-04	2.4031E-05
9.500	6.4082E-03	2.0004E-04	4.5104E-03	1.4881E-04	7.6193E-04	2.5104E-05
9.800	6.7421E-03	2.1044E-04	4.7724E-03	1.5755E-04	7.9571E-04	2.6232E-05
10.100	7.0815E-03	2.2100E-04	5.0476E-03	1.6672E-04	8.3119E-04	2.7414E-05
10.400	7.4302E-03	2.3185E-04	5.3361E-03	1.7633E-04	8.6839E-04	2.8652E-05
24.000	4.1141E-02	1.2748E-03	3.2669E-02	1.0627E-03	4.3924E-03	1.4293E-04
48.000	8.6429E-02	2.6660E-03	3.2669E-02	1.0627E-03	1.1540E-02	3.6699E-04
72.000	1.4632E-01	4.4975E-03	3.2669E-02	1.0627E-03	2.1072E-02	6.6248E-04
96.000	2.1789E-01	6.6819E-03	3.2669E-02	1.0627E-03	3.2434E-02	1.0131E-03
120.000	2.4761E-01	7.5877E-03	3.2669E-02	1.0627E-03	3.5584E-02	1.1101E-03

168.000 3.1251E-01 9.5653E-03 3.2669E-02 1.0627E-03 4.2655E-02 1.3275E-03
336.000 5.6587E-01 1.7282E-02 3.2669E-02 1.0627E-03 7.0202E-02 2.1740E-03
720.000 1.0038E+00 3.0619E-02 3.2669E-02 1.0627E-03 1.1775E-01 3.6349E-03

Worst Two-Hour Doses
#####

Exclusion Area Boundary (EAB)

Time (hr)	Whole Body (rem)	Thyroid (rem)	TEDE (rem)
10.4	6.2869E-06	4.0195E-03	1.3034E-04

RADTRAD Version 3.03 (Spring 2001) run on 9/19/2005 at 16:43:44
#####

File information
#####

Plant file = c:\RESUP-B.psf
Inventory file = c:\program files\radtrad3-03\defaults\limerick ast source terms.nif
Release file = c:\program files\radtrad3-03\defaults\bwr_i.rft
Dose Conversion file = c:\program files\radtrad3-03\defaults\fgr11&12.inp

```
#####      #####      #####      # #      # #####      #      #      #####  
#      #      #      #      # ##      #      #      #      #      #  
#      #      #      #      # # #      #      #      #      #      #  
#####      #####      #####      # # #      #      #####      #      #      #  
#      #      #      #      # #      #      #      #      #      #  
#      #      #      #      # #      #      #      #      #      #  
#      #####      #      #      #      #      #      #      #
```

Radtrad 3.03 4/15/2001
LGS LOCA 200scfh Line B MSIV Leak - Resuspension Only - Leak to Condenser - MSL
Pipe Deposition Credit (24-Hr 20-Group Aerosol Settling with Projected Area
Assumption; 2-Hr Mixing Delay) - 95% CREFAS Charcoal Eff. No Delay - Rad Mode
275cfm Control Room In

Nuclide Inventory File:
c:\program files\radtrad3-03\defaults\limerick ast source terms.nif

Plant Power Level:
3.5270E+03

Compartment:
10

Compartment 1:
Containment

3
3.7907E+05
0
0
0
1
0

Compartment 2:
MSL B Inboard - Airborne

3
1.0000E-05
0
0
0
0
0

Compartment 3:
Environment

2

0.0000E+00

0
0
0
0
0

Compartment 4:

Control Room

1

1.2600E+05

0
0
1
0
0

Compartment 5:

MSL B Outboard - Airborne

3

1.0510E+03

0
0
0
0
0

Compartment 6:

MSL B Inboard - Surface

3

1.0000E+00

0
0
0
0
0

Compartment 7:

MSL B Outboard - Surface

3

1.0000E+00

0
0
0
0
0

Compartment 8:

Hold (By Surface Fixation)

3

1.0000E+00

0
0
0
0
0

Compartment 9:

Condenser - Airborne

3

5.4746E+04

0
0
0
0
0

Compartment 10:

Condenser - Surface

3

1.0000E+00

0

0

0

0

0

Pathways:

15

Pathway 1:

Filtered Environment to Control Room (Intake)

3

4

2

Pathway 2:

Unfiltered Environment to Control Room (Inleakage)

3

4

2

Pathway 3:

Control Room to Environment (Exhaust)

4

3

2

Pathway 4:

(Aerosol Transport 1) MSL B Inboard - Airborne to MSL B Outboard - Airborne

2

5

2

Pathway 5:

(Deposition 1) MSL B Inboard - Airborne to MSL B Inboard - Surface

2

6

4

Pathway 6:

(Resuspension 1) MSL B Inboard - Surface to Environment

6

3

4

Pathway 7:

(Surface Fixation 1) MSL B Inboard - Surface to Hold (By Surface Fixation)

6

8

4

Pathway 8:

(Deposition 2) MSL B Outboard - Airborne to MSL B Outboard - Surface

5

7

4

Pathway 9:

(Resuspension 2) MSL B Outboard - Surface to Environment

7

3

4

Pathway 10:

(Surface Fixation 2) MSL B Outboard - Surface to Hold (By Surface Fixation)

7

8

4

Pathway 11:

(Aerosol Transport 2) MSL B Outboard - Airborne to Condenser - Airborne

5

9

2

Pathway 12:

(Deposition 3) Condenser - Airborne to Condenser - Surface

9

10

4

Pathway 13:

(Resuspension 3) Condenser - Surface to Environment

10

3

4

Pathway 14:

(Surface Fixation 3) Condenser - Surface to Hold (By Surface Fixation)

10

8

4

Pathway 15:

Containment to MSL B Inboard - Airborne

1

2

2

End of Plant Model File

Scenario Description Name:

Plant Model Filename:

Source Term:

1

1 1.0000E+00

c:\program files\radtrad3-03\defaults\fgr11&12.inp

c:\program files\radtrad3-03\defaults\bwr_i.rft

0.0000E+00

1

9.5000E-01 4.8500E-02 1.5000E-03 1.0000E+00

Overlying Pool:

0

0.0000E+00

0

0

0

0

Compartments:

10

Compartment 1:

0

1

0

0

0

0

0

3

3

1.0000E+01

1

1
 0.0000E+00 0.0000E+00

Compartment 2:

0
 1
 0
 0
 0
 0
 0
 0
 0

Compartment 3:

0
 1
 0
 0
 0
 0
 0
 0
 0

Compartment 4:

0
 1
 0
 0
 0
 0
 1

2.1750E+03

3

0.0000E+00	9.9000E+01	9.5000E+01	9.5000E+01
3.3330E-01	9.9000E+01	9.5000E+01	9.5000E+01
7.2000E+02	0.0000E+00	0.0000E+00	0.0000E+00

0
 0

Compartment 5:

0
 1
 0
 0
 0
 0
 0
 0
 0

Compartment 6:

0
 1
 0
 0
 0
 0
 0
 0
 0

Compartment 7:

0
 1

0
0
0
0
0
0
0
0

Compartment 8:

0
1
0
0
0
0
0
0
0

Compartment 9:

0
1
0
0
0
0
0
0
0

Compartment 10:

0
1
0
0
0
0
0
0
0

Pathways:

15

Pathway 1:

0
0
0
0
0
1
3
0
0
0
0
0
0
0
0

0.0000E+00	5.2500E+02	9.9000E+01	9.5000E+01	9.5000E+01
5.0000E-01	5.2500E+02	9.9000E+01	9.5000E+01	9.5000E+01
7.2000E+02	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00

Pathway 2:

0
0
0

0
 0
 1
 2
 0.0000E+00 2.7500E+02 0.0000E+00 0.0000E+00 0.0000E+00
 7.2000E+02 0.0000E+00 0.0000E+00 0.0000E+00 0.0000E+00

0
 0
 0
 0
 0
 0

Pathway 3:

0
 0
 0
 0
 0
 1
 3
 0.0000E+00 8.0000E+02 1.0000E+02 1.0000E+02 1.0000E+02
 5.0000E-01 8.0000E+02 1.0000E+02 1.0000E+02 1.0000E+02
 7.2000E+02 0.0000E+00 0.0000E+00 0.0000E+00 0.0000E+00

0
 0
 0
 0
 0
 0
 0

Pathway 4:

0
 0
 0
 0
 0
 1
 5
 0.0000E+00 9.3060E-01 1.0000E+02 0.0000E+00 1.0000E+02
 2.0000E+00 9.3060E-01 1.0000E+02 0.0000E+00 1.0000E+02
 2.4000E+01 5.1270E-01 1.0000E+02 0.0000E+00 1.0000E+02
 9.6000E+01 5.1270E-01 1.0000E+02 0.0000E+00 1.0000E+02
 7.2000E+02 0.0000E+00 0.0000E+00 0.0000E+00 0.0000E+00

0
 0
 0
 0
 0
 0
 0

Pathway 5:

0
 0
 0
 0
 0
 0
 0
 0
 0
 0
 1

4
 0.0000E+00 3.1420E+02
 2.4000E+01 7.0350E+02
 9.6000E+01 4.4780E+03
 7.2000E+02 0.0000E+00

0
 Pathway 6:

0
 0
 0
 0
 0
 0
 0
 0
 0
 0
 1
 4
 0.0000E+00 3.5580E-02
 2.4000E+01 2.9950E-02
 9.6000E+01 2.0170E-02
 7.2000E+02 0.0000E+00

0
 Pathway 7:

0
 0
 0
 0
 0
 0
 0
 0
 0
 0
 0
 1
 4
 0.0000E+00 1.5960E-02
 2.4000E+01 1.1360E-02
 9.6000E+01 5.2000E-03
 7.2000E+02 0.0000E+00

0
 Pathway 8:

0
 0
 0
 0
 0
 0
 0
 0
 0
 0
 0
 1
 4
 0.0000E+00 3.1417E+02
 2.4000E+01 7.0352E+02
 9.6000E+01 4.4779E+03
 7.2000E+02 0.0000E+00

Pathway 9:

0
 0
 0
 0
 0
 0
 0
 0
 0
 0
 0
 1
 4
 0.0000E+00 3.5580E-02
 2.4000E+01 2.9950E-02
 9.6000E+01 2.0170E-02
 7.2000E+02 0.0000E+00
 0

Pathway 10:

0
 0
 0
 0
 0
 0
 0
 0
 0
 0
 0
 1
 4
 0.0000E+00 1.5960E-02
 2.4000E+01 1.1360E-02
 9.6000E+01 5.2000E-03
 7.2000E+02 0.0000E+00
 0

Pathway 11:

0
 0
 0
 0
 0
 1
 4
 0.0000E+00 3.1880E+00 1.0000E+02 0.0000E+00 1.0000E+02
 2.4000E+01 1.5130E+00 1.0000E+02 0.0000E+00 1.0000E+02
 9.6000E+01 1.1480E+00 1.0000E+02 0.0000E+00 1.0000E+02
 7.2000E+02 0.0000E+00 0.0000E+00 0.0000E+00 0.0000E+00
 0
 0
 0
 0
 0
 0
 0

Pathway 12:

0
 0
 0
 0
 0

0
 0
 0
 0
 1
 4
 0.0000E+00 1.0690E+03
 2.4000E+01 1.0690E+03
 9.6000E+01 1.0690E+03
 7.2000E+02 0.0000E+00

Pathway 13:

0
 0
 0
 0
 0
 0
 0
 0
 0
 0
 1
 4
 0.0000E+00 1.6090E-02
 2.4000E+01 1.6090E-02
 9.6000E+01 1.6090E-02
 7.2000E+02 0.0000E+00

Pathway 14:

0
 0
 0
 0
 0
 0
 0
 0
 0
 0
 1
 4
 0.0000E+00 3.3300E-03
 2.4000E+01 3.3300E-03
 9.6000E+01 3.3300E-03
 7.2000E+02 0.0000E+00

Pathway 15:

0
 0
 0
 0
 0
 1
 5
 0.0000E+00 1.5240E+00 1.0000E+02 0.0000E+00 1.0000E+02
 2.0000E+00 9.3060E-01 1.0000E+02 0.0000E+00 1.0000E+02
 2.4000E+01 5.1270E-01 1.0000E+02 0.0000E+00 1.0000E+02
 9.6000E+01 5.1270E-01 1.0000E+02 0.0000E+00 1.0000E+02

7.2000E+02 0.0000E+00 0.0000E+00 0.0000E+00 0.0000E+00
 0
 0
 0
 0
 0
 0

Dose Locations:

3

Location 1:

Control Room (CR)

4

0

1

2

0.0000E+00 3.5000E-04

7.2000E+02 0.0000E+00

1

4

0.0000E+00 1.0000E+00

2.4000E+01 6.0000E-01

9.6000E+01 4.0000E-01

7.2000E+02 0.0000E+00

Location 2:

Exclusion Area Boundary (EAB)

3

1

2

0.0000E+00 3.1800E-04

2.4000E+01 0.0000E+00

1

4

0.0000E+00 3.5000E-04

8.0000E+00 1.8000E-04

2.4000E+01 2.3000E-04

7.2000E+02 0.0000E+00

0

Location 3:

Low Population Zone (LPZ)

3

1

10

0.0000E+00 5.7900E-05

8.0000E+00 4.1000E-05

2.4000E+01 1.9500E-05

4.8000E+01 1.9500E-05

7.2000E+01 1.9500E-05

9.6000E+01 6.6800E-06

1.2000E+02 6.6800E-06

1.6800E+02 6.6800E-06

3.3600E+02 6.6800E-06

7.2000E+02 0.0000E+00

1

4

0.0000E+00 3.5000E-04

8.0000E+00 1.8000E-04

2.4000E+01 2.3000E-04

7.2000E+02 0.0000E+00

0

Effective Volume Location:

1
6
0.0000E+00 6.8800E-03
2.0000E+00 5.1700E-03
8.0000E+00 2.0400E-03
2.4000E+01 1.2900E-03
9.6000E+01 9.6300E-04
7.2000E+02 0.0000E+00

Simulation Parameters:

1
0.0000E+00 0.0000E+00

Output Filename:

C:\RESUP-B.o0

1
1
1
0
0

End of Scenario File

RADTRAD Version 3.03 (Spring 2001) run on 9/19/2005 at 16:43:44
#####

Plant Description
#####

Number of Nuclides = 60

Inventory Power = 1.0000E+00 MWth
Plant Power Level = 3.5270E+03 MWth

Number of compartments = 10

Compartment information

Compartment number 1 (Source term fraction = 1.0000E+00
)

Name: Containment
Compartment volume = 3.7907E+05 (Cubic feet)
Compartment type is Normal
Removal devices within compartment:
Deposition

Pathways into and out of compartment 1
Exit Pathway Number 15: Containment to MSL B Inboard - Airborne

Compartment number 2
Name: MSL B Inboard - Airborne
Compartment volume = 1.0000E-05 (Cubic feet)
Compartment type is Normal
Pathways into and out of compartment 2

Inlet Pathway Number 15: Containment to MSL B Inboard - Airborne
Exit Pathway Number 4: (Aerosol Transport 1) MSL B Inboard - Airborne to
Exit Pathway Number 5: (Deposition 1) MSL B Inboard - Airborne to MSL B I

Compartment number 3
Name: Environment
Compartment type is Environment

Pathways into and out of compartment 3
Inlet Pathway Number 3: Control Room to Environment (Exhaust)
Inlet Pathway Number 6: (Resuspension 1) MSL B Inboard - Surface to Enviro
Inlet Pathway Number 9: (Resuspension 2) MSL B Outboard - Surface to Envi
Inlet Pathway Number 13: (Resuspension 3) Condenser - Surface to Environme
Exit Pathway Number 1: Filtered Environment to Control Room (Intake)
Exit Pathway Number 2: Unfiltered Environment to Control Room (Inleakage)

Compartment number 4
Name: Control Room
Compartment volume = 1.2600E+05 (Cubic feet)
Compartment type is Control Room
Removal devices within compartment:
Filter(s)

Pathways into and out of compartment 4
Inlet Pathway Number 1: Filtered Environment to Control Room (Intake)
Inlet Pathway Number 2: Unfiltered Environment to Control Room (Inleakage)
Exit Pathway Number 3: Control Room to Environment (Exhaust)

Compartment number 5

Name: MSL B Outboard - Airborne
Compartment volume = 1.0510E+03 (Cubic feet)
Compartment type is Normal
Pathways into and out of compartment 5
Inlet Pathway Number 4: (Aerosol Transport 1) MSL B Inboard - Airborne to
Exit Pathway Number 8: (Deposition 2) MSL B Outboard - Airborne to MSL B
Exit Pathway Number 11: (Aerosol Transport 2) MSL B Outboard - Airborne to

Compartment number 6
Name: MSL B Inboard - Surface
Compartment volume = 1.0000E+00 (Cubic feet)
Compartment type is Normal
Pathways into and out of compartment 6
Inlet Pathway Number 5: (Deposition 1) MSL B Inboard - Airborne to MSL B I
Exit Pathway Number 6: (Resuspension 1) MSL B Inboard - Surface to Enviro
Exit Pathway Number 7: (Surface Fixation 1) MSL B Inboard - Surface to Ho

Compartment number 7
Name: MSL B Outboard - Surface
Compartment volume = 1.0000E+00 (Cubic feet)
Compartment type is Normal
Pathways into and out of compartment 7
Inlet Pathway Number 8: (Deposition 2) MSL B Outboard - Airborne to MSL B
Exit Pathway Number 9: (Resuspension 2) MSL B Outboard - Surface to Envi
Exit Pathway Number 10: (Surface Fixation 2) MSL B Outboard - Surface to H

Compartment number 8
Name: Hold (By Surface Fixation)
Compartment volume = 1.0000E+00 (Cubic feet)
Compartment type is Normal
Pathways into and out of compartment 8
Inlet Pathway Number 7: (Surface Fixation 1) MSL B Inboard - Surface to Ho
Inlet Pathway Number 10: (Surface Fixation 2) MSL B Outboard - Surface to H
Inlet Pathway Number 14: (Surface Fixation 3) Condenser - Surface to Hold

Compartment number 9
Name: Condenser - Airborne
Compartment volume = 5.4746E+04 (Cubic feet)
Compartment type is Normal
Pathways into and out of compartment 9
Inlet Pathway Number 11: (Aerosol Transport 2) MSL B Outboard - Airborne to
Exit Pathway Number 12: (Deposition 3) Condenser - Airborne to Condenser -

Compartment number 10
Name: Condenser - Surface
Compartment volume = 1.0000E+00 (Cubic feet)
Compartment type is Normal
Pathways into and out of compartment 10
Inlet Pathway Number 12: (Deposition 3) Condenser - Airborne to Condenser -
Exit Pathway Number 13: (Resuspension 3) Condenser - Surface to Environme
Exit Pathway Number 14: (Surface Fixation 3) Condenser - Surface to Hold

Total number of pathways = 15

 RADTRAD Version 3.03 (Spring 2001) run on 9/19/2005 at 16:43:44
 #####

 Scenario Description
 #####

Radioactive Decay is enabled
 Calculation of Daughters is enabled

Release Fractions and Timings

	GAP	EARLY IN-VESSEL	LATE RELEASE	RELEASE MASS
	0.500000 hr	1.5000 hrs	0.0000 hrs	(gm)
NOBLES	0.0000E+00	0.0000E+00	0.0000E+00	0.000E+00
IODINE	5.0000E-02	2.5000E-01	0.0000E+00	3.033E+02
CESIUM	0.0000E+00	0.0000E+00	0.0000E+00	0.000E+00
TELLURIUM	0.0000E+00	0.0000E+00	0.0000E+00	0.000E+00
STRONTIUM	0.0000E+00	0.0000E+00	0.0000E+00	0.000E+00
BARIUM	0.0000E+00	0.0000E+00	0.0000E+00	0.000E+00
RUTHENIUM	0.0000E+00	0.0000E+00	0.0000E+00	0.000E+00
CERIUM	0.0000E+00	0.0000E+00	0.0000E+00	0.000E+00
LANTHANUM	0.0000E+00	0.0000E+00	0.0000E+00	0.000E+00

Inventory Power = 3527. MWt

Nuclide Name	Group	Specific Inventory (Ci/MWt)	half life (s)	Whole Body DCF (Sv-m3/Bq-s)	Inhaled Thyroid (Sv/Bq)	Inhaled Effective (Sv/Bq)
I-131	2	2.687E+04	6.947E+05	1.820E-14	2.920E-07	8.890E-09
I-132	2	3.881E+04	8.280E+03	1.120E-13	1.740E-09	1.030E-10
I-133	2	5.556E+04	7.488E+04	2.940E-14	4.860E-08	1.580E-09
I-134	2	6.165E+04	3.156E+03	1.300E-13	2.880E-10	3.550E-11
I-135	2	5.192E+04	2.380E+04	8.294E-14	8.460E-09	3.320E-10

Nuclide	Daughter	Fraction	Daughter	Fraction	Daughter	Fraction
Kr-85m	Kr-85	0.21	none	0.00	none	0.00
Kr-87	Rb-87	1.00	none	0.00	none	0.00
Kr-88	Rb-88	1.00	none	0.00	none	0.00
Sr-90	Y-90	1.00	none	0.00	none	0.00
Sr-91	Y-91m	0.58	Y-91	0.42	none	0.00
Sr-92	Y-92	1.00	none	0.00	none	0.00
Y-93	Zr-93	1.00	none	0.00	none	0.00
Zr-95	Nb-95m	0.01	Nb-95	0.99	none	0.00
Zr-97	Nb-97m	0.95	Nb-97	0.05	none	0.00
Mo-99	Tc-99m	0.88	Tc-99	0.12	none	0.00
Tc-99m	Tc-99	1.00	none	0.00	none	0.00
Ru-103	Rh-103m	1.00	none	0.00	none	0.00
Ru-105	Rh-105	1.00	none	0.00	none	0.00
Ru-106	Rh-106	1.00	none	0.00	none	0.00
Sb-127	Te-127m	0.18	Te-127	0.82	none	0.00
Sb-129	Te-129m	0.22	Te-129	0.77	none	0.00
Te-127m	Te-127	0.98	none	0.00	none	0.00
Te-129	I-129	1.00	none	0.00	none	0.00
Te-129m	Te-129	0.65	I-129	0.35	none	0.00
Te-131m	Te-131	0.22	I-131	0.78	none	0.00
Te-132	I-132	1.00	none	0.00	none	0.00
I-131	Xe-131m	0.01	none	0.00	none	0.00
I-133	Xe-133m	0.03	Xe-133	0.97	none	0.00

I-135	Xe-135m	0.15	Xe-135	0.85	none	0.00
Xe-135	Cs-135	1.00	none	0.00	none	0.00
Cs-137	Ba-137m	0.95	none	0.00	none	0.00
Ba-140	La-140	1.00	none	0.00	none	0.00
La-141	Ce-141	1.00	none	0.00	none	0.00
Ce-143	Pr-143	1.00	none	0.00	none	0.00
Ce-144	Pr-144m	0.02	Pr-144	0.98	none	0.00
Nd-147	Pm-147	1.00	none	0.00	none	0.00
Np-239	Pu-239	1.00	none	0.00	none	0.00
Pu-238	U-234	1.00	none	0.00	none	0.00
Pu-239	U-235	1.00	none	0.00	none	0.00
Pu-240	U-236	1.00	none	0.00	none	0.00
Pu-241	U-237	0.00	Am-241	1.00	none	0.00
Am-241	Np-237	1.00	none	0.00	none	0.00
Cm-242	Pu-238	1.00	none	0.00	none	0.00
Cm-244	Pu-240	1.00	none	0.00	none	0.00

Iodine fractions

Aerosol	=	9.5000E-01
Elemental	=	4.8500E-02
Organic	=	1.5000E-03

COMPARTMENT DATA

Compartment number 1: Containment
 Natural Deposition (Powers' model): Aerosol data
 Reactor type: 3
 Percentile = 10 (%)

Natural Deposition: Elemental Removal Data
 Time (hr) Removal Coef. (hr⁻¹)
 0.0000E+00 0.0000E+00

Compartment number 2: MSL B Inboard - Airborne
 Compartment number 3: Environment
 Compartment number 4: Control Room

Compartment Filter Data

Time (hr)	Flow Rate (cfm)	Filter Efficiencies (%)		
		Aerosol	Elemental	Organic
0.0000E+00	2.1750E+03	9.9000E+01	9.5000E+01	9.5000E+01
3.3330E-01	2.1750E+03	9.9000E+01	9.5000E+01	9.5000E+01
7.2000E+02	2.1750E+03	0.0000E+00	0.0000E+00	0.0000E+00

Compartment number 5: MSL B Outboard - Airborne
 Compartment number 6: MSL B Inboard - Surface
 Compartment number 7: MSL B Outboard - Surface
 Compartment number 8: Hold (By Surface Fixation)
 Compartment number 9: Condenser - Airborne
 Compartment number 10: Condenser - Surface

PATHWAY DATA

Pathway number 1: Filtered Environment to Control Room (Intake)

Pathway Filter: Removal Data

Time (hr)	Flow Rate (cfm)	Filter Efficiencies (%)		
		Aerosol	Elemental	Organic
0.0000E+00	5.2500E+02	9.9000E+01	9.5000E+01	9.5000E+01
5.0000E-01	5.2500E+02	9.9000E+01	9.5000E+01	9.5000E+01
7.2000E+02	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00

Pathway number 2: Unfiltered Environment to Control Room (Inleakage)

Pathway Filter: Removal Data

Time (hr)	Flow Rate (cfm)	Filter Efficiencies (%)		
		Aerosol	Elemental	Organic
0.0000E+00	2.7500E+02	0.0000E+00	0.0000E+00	0.0000E+00
7.2000E+02	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00

Pathway number 3: Control Room to Environment (Exhaust)

Pathway Filter: Removal Data

Time (hr)	Flow Rate (cfm)	Filter Efficiencies (%)		
		Aerosol	Elemental	Organic
0.0000E+00	8.0000E+02	1.0000E+02	1.0000E+02	1.0000E+02
5.0000E-01	8.0000E+02	1.0000E+02	1.0000E+02	1.0000E+02
7.2000E+02	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00

Pathway number 4: (Aerosol Transport 1) MSL B Inboard - Airborne to

Pathway Filter: Removal Data

Time (hr)	Flow Rate (cfm)	Filter Efficiencies (%)		
		Aerosol	Elemental	Organic
0.0000E+00	9.3060E-01	1.0000E+02	0.0000E+00	1.0000E+02
2.0000E+00	9.3060E-01	1.0000E+02	0.0000E+00	1.0000E+02
2.4000E+01	5.1270E-01	1.0000E+02	0.0000E+00	1.0000E+02
9.6000E+01	5.1270E-01	1.0000E+02	0.0000E+00	1.0000E+02
7.2000E+02	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00

Pathway number 5: (Deposition 1) MSL B Inboard - Airborne to MSL B I

Convection Data

Time (hr)	Flow Rate (% / day)
0.0000E+00	3.1420E+02
2.4000E+01	7.0350E+02
9.6000E+01	4.4780E+03
7.2000E+02	0.0000E+00

Pathway number 6: (Resuspension 1) MSL B Inboard - Surface to Enviro

Convection Data

Time (hr)	Flow Rate (% / day)
0.0000E+00	3.5580E-02
2.4000E+01	2.9950E-02
9.6000E+01	2.0170E-02
7.2000E+02	0.0000E+00

Pathway number 7: (Surface Fixation 1) MSL B Inboard - Surface to Ho

Convection Data

Time (hr)	Flow Rate (% / day)
0.0000E+00	1.5960E-02
2.4000E+01	1.1360E-02
9.6000E+01	5.2000E-03
7.2000E+02	0.0000E+00

Pathway number 8: (Deposition 2) MSL B Outboard - Airborne to MSL B

Convection Data

Time (hr)	Flow Rate (% / day)
0.0000E+00	3.1417E+02
2.4000E+01	7.0352E+02
9.6000E+01	4.4779E+03
7.2000E+02	0.0000E+00

Pathway number 9: (Resuspension 2) MSL B Outboard - Surface to Envi

Convection Data

Time (hr)	Flow Rate (% / day)
0.0000E+00	3.5580E-02
2.4000E+01	2.9950E-02
9.6000E+01	2.0170E-02
7.2000E+02	0.0000E+00

Pathway number 10: (Surface Fixation 2) MSL B Outboard - Surface to H

Convection Data

Time (hr)	Flow Rate (% / day)
0.0000E+00	1.5960E-02
2.4000E+01	1.1360E-02
9.6000E+01	5.2000E-03
7.2000E+02	0.0000E+00

Pathway number 11: (Aerosol Transport 2) MSL B Outboard - Airborne to

Pathway Filter: Removal Data

Time (hr)	Flow Rate (cfm)	Filter Efficiencies (%)		
		Aerosol	Elemental	Organic
0.0000E+00	3.1880E+00	1.0000E+02	0.0000E+00	1.0000E+02
2.4000E+01	1.5130E+00	1.0000E+02	0.0000E+00	1.0000E+02
9.6000E+01	1.1480E+00	1.0000E+02	0.0000E+00	1.0000E+02
7.2000E+02	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00

Pathway number 12: (Deposition 3) Condenser - Airborne to Condenser -

Convection Data

Time (hr)	Flow Rate (% / day)
0.0000E+00	1.0690E+03
2.4000E+01	1.0690E+03
9.6000E+01	1.0690E+03
7.2000E+02	0.0000E+00

Pathway number 13: (Resuspension 3) Condenser - Surface to Environme

Convection Data

Time (hr)	Flow Rate (% / day)
-----------	---------------------

0.0000E+00	1.6090E-02
2.4000E+01	1.6090E-02
9.6000E+01	1.6090E-02
7.2000E+02	0.0000E+00

Pathway number 14: (Surface Fixation 3) Condenser - Surface to Hold

Convection Data

Time (hr)	Flow Rate (% / day)
0.0000E+00	3.3300E-03
2.4000E+01	3.3300E-03
9.6000E+01	3.3300E-03
7.2000E+02	0.0000E+00

Pathway number 15: Containment to MSL B Inboard - Airborne

Pathway Filter: Removal Data

Time (hr)	Flow Rate (cfm)	Filter Efficiencies (%)		
		Aerosol	Elemental	Organic
0.0000E+00	1.5240E+00	1.0000E+02	0.0000E+00	1.0000E+02
2.0000E+00	9.3060E-01	1.0000E+02	0.0000E+00	1.0000E+02
2.4000E+01	5.1270E-01	1.0000E+02	0.0000E+00	1.0000E+02
9.6000E+01	5.1270E-01	1.0000E+02	0.0000E+00	1.0000E+02
7.2000E+02	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00

LOCATION DATA

Location Control Room (CR) is in compartment 4

Location X/Q Data

Time (hr)	X/Q (s * m^-3)
0.0000E+00	6.8800E-03
2.0000E+00	5.1700E-03
8.0000E+00	2.0400E-03
2.4000E+01	1.2900E-03
9.6000E+01	9.6300E-04
7.2000E+02	0.0000E+00

Location Breathing Rate Data

Time (hr)	Breathing Rate (m^3 * sec^-1)
0.0000E+00	3.5000E-04
7.2000E+02	0.0000E+00

Location Occupancy Factor Data

Time (hr)	Occupancy Factor
0.0000E+00	1.0000E+00
2.4000E+01	6.0000E-01
9.6000E+01	4.0000E-01
7.2000E+02	0.0000E+00

Location Exclusion Area Boundary (EAB) is in compartment 3

Location X/Q Data

Time (hr)	X/Q (s * m^-3)
0.0000E+00	3.1800E-04
2.4000E+01	0.0000E+00

Location Breathing Rate Data

Time (hr)	Breathing Rate (m^3 * sec^-1)
0.0000E+00	3.5000E-04
8.0000E+00	1.8000E-04

2.4000E+01	2.3000E-04
7.2000E+02	0.0000E+00

Location Low Population Zone (LPZ) is in compartment 3

Location X/Q Data

Time (hr)	X/Q (s * m ⁻³)
0.0000E+00	5.7900E-05
8.0000E+00	4.1000E-05
2.4000E+01	1.9500E-05
4.8000E+01	1.9500E-05
7.2000E+01	1.9500E-05
9.6000E+01	6.6800E-06
1.2000E+02	6.6800E-06
1.6800E+02	6.6800E-06
3.3600E+02	6.6800E-06
7.2000E+02	0.0000E+00

Location Breathing Rate Data

Time (hr)	Breathing Rate (m ³ * sec ⁻¹)
0.0000E+00	3.5000E-04
8.0000E+00	1.8000E-04
2.4000E+01	2.3000E-04
7.2000E+02	0.0000E+00

USER SPECIFIED TIME STEP DATA - SUPPLEMENTAL TIME STEPS

Time	Time step
0.0000E+00	0.0000E+00

 RADTRAD Version 3.03 (Spring 2001) run on 9/19/2005 at 16:43:44
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 Dose Output
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Control Room (CR) Doses:

Time (h) =	0.3333	Whole Body	Thyroid	TEDE
Delta dose (rem)		8.0243E-13	3.9814E-09	1.2654E-10
Accumulated dose (rem)		8.0243E-13	3.9814E-09	1.2654E-10

Exclusion Area Boundary (EAB) Doses:

Time (h) =	0.3333	Whole Body	Thyroid	TEDE
Delta dose (rem)		8.3174E-11	1.8651E-08	6.7221E-10
Accumulated dose (rem)		8.3174E-11	1.8651E-08	6.7221E-10

Low Population Zone (LPZ) Doses:

Time (h) =	0.3333	Whole Body	Thyroid	TEDE
Delta dose (rem)		1.5144E-11	3.3959E-09	1.2239E-10
Accumulated dose (rem)		1.5144E-11	3.3959E-09	1.2239E-10

Control Room (CR) Doses:

Time (h) =	0.5000	Whole Body	Thyroid	TEDE
Delta dose (rem)		4.4683E-12	2.3434E-08	7.4388E-10
Accumulated dose (rem)		5.2708E-12	2.7416E-08	8.7041E-10

Exclusion Area Boundary (EAB) Doses:

Time (h) =	0.5000	Whole Body	Thyroid	TEDE
Delta dose (rem)		3.1703E-10	7.5443E-08	2.6975E-09
Accumulated dose (rem)		4.0020E-10	9.4094E-08	3.3697E-09

Low Population Zone (LPZ) Doses:

Time (h) =	0.5000	Whole Body	Thyroid	TEDE
Delta dose (rem)		5.7723E-11	1.3736E-08	4.9116E-10
Accumulated dose (rem)		7.2867E-11	1.7132E-08	6.1355E-10

Control Room (CR) Doses:

Time (h) =	2.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)		3.2378E-09	2.2926E-05	7.2329E-07
Accumulated dose (rem)		3.2430E-09	2.2954E-05	7.2416E-07

Exclusion Area Boundary (EAB) Doses:

Time (h) =	2.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)		8.4963E-08	2.7947E-05	9.6291E-07
Accumulated dose (rem)		8.5363E-08	2.8041E-05	9.6628E-07

Low Population Zone (LPZ) Doses:

Time (h) =	2.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)		1.5470E-08	5.0885E-06	1.7532E-07
Accumulated dose (rem)		1.5542E-08	5.1056E-06	1.7594E-07

Control Room (CR) Doses:

Time (h) =	8.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)		4.5472E-07	4.4949E-03	1.4044E-04
Accumulated dose (rem)		4.5796E-07	4.5179E-03	1.4116E-04

Exclusion Area Boundary (EAB) Doses:

Time (h) =	8.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)		5.5984E-06	3.3933E-03	1.1130E-04
Accumulated dose (rem)		5.6838E-06	3.4214E-03	1.1226E-04

Low Population Zone (LPZ) Doses:

Time (h) =	8.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)		1.0193E-06	6.1784E-04	2.0264E-05
Accumulated dose (rem)		1.0349E-06	6.2295E-04	2.0440E-05

Control Room (CR) Doses:

Time (h) =	24.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)		2.6546E-06	3.3728E-02	1.0441E-03
Accumulated dose (rem)		3.1126E-06	3.8245E-02	1.1853E-03

Exclusion Area Boundary (EAB) Doses:

Time (h) =	24.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)		4.3702E-05	2.6786E-02	8.7076E-04
Accumulated dose (rem)		4.9385E-05	3.0207E-02	9.8302E-04

Low Population Zone (LPZ) Doses:

Time (h) =	24.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)		5.6345E-06	3.4535E-03	1.1227E-04
Accumulated dose (rem)		6.6693E-06	4.0764E-03	1.3271E-04

Control Room (CR) Doses:

Time (h) =	48.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)		1.6282E-06	4.0121E-02	1.2325E-03
Accumulated dose (rem)		4.7407E-06	7.8367E-02	2.4178E-03

Exclusion Area Boundary (EAB) Doses:

Time (h) =	Whole Body	Thyroid	TEDE
48.0000	0.0000E+00	0.0000E+00	0.0000E+00
Delta dose (rem)	4.9385E-05	3.0207E-02	9.8302E-04
Accumulated dose (rem)			

Low Population Zone (LPZ) Doses:

Time (h) =	Whole Body	Thyroid	TEDE
48.0000	4.2512E-06	6.3320E-03	1.9850E-04
Delta dose (rem)	1.0921E-05	1.0408E-02	3.3121E-04
Accumulated dose (rem)			

Control Room (CR) Doses:

Time (h) =	Whole Body	Thyroid	TEDE
72.0000	1.0611E-06	5.3515E-02	1.6366E-03
Delta dose (rem)	5.8019E-06	1.3188E-01	4.0544E-03
Accumulated dose (rem)			

Exclusion Area Boundary (EAB) Doses:

Time (h) =	Whole Body	Thyroid	TEDE
72.0000	0.0000E+00	0.0000E+00	0.0000E+00
Delta dose (rem)	4.9385E-05	3.0207E-02	9.8302E-04
Accumulated dose (rem)			

Low Population Zone (LPZ) Doses:

Time (h) =	Whole Body	Thyroid	TEDE
72.0000	3.7254E-06	8.5203E-03	2.6412E-04
Delta dose (rem)	1.4646E-05	1.8929E-02	5.9533E-04
Accumulated dose (rem)			

Control Room (CR) Doses:

Time (h) =	Whole Body	Thyroid	TEDE
96.0000	9.2460E-07	6.4445E-02	1.9667E-03
Delta dose (rem)	6.7265E-06	1.9633E-01	6.0211E-03
Accumulated dose (rem)			

Exclusion Area Boundary (EAB) Doses:

Time (h) =	Whole Body	Thyroid	TEDE
96.0000	0.0000E+00	0.0000E+00	0.0000E+00
Delta dose (rem)	4.9385E-05	3.0207E-02	9.8302E-04
Accumulated dose (rem)			

Low Population Zone (LPZ) Doses:

Time (h) =	Whole Body	Thyroid	TEDE
96.0000	3.6208E-06	1.0232E-02	3.1573E-04
Delta dose (rem)	1.8267E-05	2.9161E-02	9.1106E-04
Accumulated dose (rem)			

Control Room (CR) Doses:

Time (h) =	Whole Body	Thyroid	TEDE
120.0000	3.6576E-07	2.8460E-02	8.6767E-04
Delta dose (rem)	7.0922E-06	2.2479E-01	6.8888E-03
Accumulated dose (rem)			

Exclusion Area Boundary (EAB) Doses:

Time (h) =	Whole Body	Thyroid	TEDE
120.0000	0.0000E+00	0.0000E+00	0.0000E+00
Delta dose (rem)	4.9385E-05	3.0207E-02	9.8302E-04
Accumulated dose (rem)			

Low Population Zone (LPZ) Doses:

Time (h) = 120.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)	9.6102E-07	3.0286E-03	9.3257E-05
Accumulated dose (rem)	1.9228E-05	3.2189E-02	1.0043E-03

Control Room (CR) Doses:

Time (h) = 168.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)	7.3925E-07	6.2876E-02	1.9157E-03
Accumulated dose (rem)	7.8315E-06	2.8766E-01	8.8044E-03

Exclusion Area Boundary (EAB) Doses:

Time (h) = 168.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)	0.0000E+00	0.0000E+00	0.0000E+00
Accumulated dose (rem)	4.9385E-05	3.0207E-02	9.8302E-04

Low Population Zone (LPZ) Doses:

Time (h) = 168.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)	2.0219E-06	6.8497E-03	2.1064E-04
Accumulated dose (rem)	2.1250E-05	3.9039E-02	1.2150E-03

Control Room (CR) Doses:

Time (h) = 336.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)	2.6938E-06	2.4785E-01	7.5489E-03
Accumulated dose (rem)	1.0525E-05	5.3552E-01	1.6353E-02

Exclusion Area Boundary (EAB) Doses:

Time (h) = 336.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)	0.0000E+00	0.0000E+00	0.0000E+00
Accumulated dose (rem)	4.9385E-05	3.0207E-02	9.8302E-04

Low Population Zone (LPZ) Doses:

Time (h) = 336.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)	7.6018E-06	2.6951E-02	8.2814E-04
Accumulated dose (rem)	2.8851E-05	6.5990E-02	2.0431E-03

Control Room (CR) Doses:

Time (h) = 720.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)	4.2311E-06	4.3164E-01	1.3146E-02
Accumulated dose (rem)	1.4756E-05	9.6715E-01	2.9499E-02

Exclusion Area Boundary (EAB) Doses:

Time (h) = 720.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)	0.0000E+00	0.0000E+00	0.0000E+00
Accumulated dose (rem)	4.9385E-05	3.0207E-02	9.8302E-04

Low Population Zone (LPZ) Doses:

Time (h) = 720.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)	1.2995E-05	4.6869E-02	1.4399E-03
Accumulated dose (rem)	4.1847E-05	1.1286E-01	3.4830E-03

 I-131 Summary
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Time (hr)	Containment I-131 (Curies)	MSL B Inboard - Airbo I-131 (Curies)	Environment I-131 (Curies)
0.000	5.2640E+03	1.1028E-08	8.5404E-19
0.333	2.8290E+06	6.6104E-06	1.1023E-07
0.500	4.0239E+06	9.9107E-06	5.5711E-07
0.800	7.9884E+06	1.9800E-05	3.6839E-06
1.100	1.1679E+07	2.9668E-05	1.3702E-05
1.400	1.5113E+07	3.9513E-05	3.7631E-05
1.700	1.8307E+07	4.9337E-05	8.5158E-05
2.000	2.1276E+07	5.9137E-05	1.6853E-04
2.300	1.6058E+07	3.6069E-05	3.0120E-04
2.600	1.2209E+07	3.6028E-05	4.9309E-04
2.900	9.3713E+06	3.5988E-05	7.5262E-04
3.200	7.2781E+06	3.5948E-05	1.0878E-03
3.500	5.7342E+06	3.5907E-05	1.5060E-03
3.800	4.5953E+06	3.5867E-05	2.0142E-03
4.100	3.7551E+06	3.5827E-05	2.6191E-03
4.400	3.1351E+06	3.5787E-05	3.3268E-03
4.700	2.6775E+06	3.5746E-05	4.1428E-03
5.000	2.3396E+06	3.5706E-05	5.0725E-03
5.300	2.1768E+06	3.5666E-05	6.1207E-03
5.600	2.0415E+06	3.5626E-05	7.2920E-03
5.900	1.9291E+06	3.5586E-05	8.5905E-03
6.200	1.8355E+06	3.5547E-05	1.0020E-02
6.500	1.7577E+06	3.5507E-05	1.1584E-02
6.800	1.6930E+06	3.5467E-05	1.3286E-02
7.100	1.6390E+06	3.5427E-05	1.5129E-02
7.400	1.5940E+06	3.5387E-05	1.7115E-02
7.700	1.5564E+06	3.5348E-05	1.9247E-02
8.000	1.5249E+06	3.5308E-05	2.1527E-02
8.300	1.4986E+06	3.5268E-05	2.3958E-02
8.600	1.4790E+06	3.5229E-05	2.6540E-02
8.900	1.4622E+06	3.5189E-05	2.9277E-02
9.200	1.4476E+06	3.5150E-05	3.2168E-02
9.500	1.4350E+06	3.5111E-05	3.5216E-02
9.800	1.4240E+06	3.5071E-05	3.8422E-02
10.100	1.4145E+06	3.5032E-05	4.1787E-02
10.400	1.4061E+06	3.4993E-05	4.5311E-02
24.000	1.2997E+06	3.3257E-05	3.7606E-01
48.000	1.1900E+06	3.0451E-05	1.5383E+00
72.000	1.0896E+06	2.7881E-05	3.1925E+00
96.000	9.9764E+05	2.5529E-05	5.2371E+00
120.000	9.1346E+05	2.3374E-05	7.0295E+00
168.000	7.6580E+05	1.9596E-05	1.1120E+01
336.000	4.1314E+05	1.0572E-05	2.7290E+01
720.000	1.0081E+05	2.5796E-06	5.5425E+01

Time (hr)	Control Room I-131 (Curies)	MSL B Outboard - Airb I-131 (Curies)	MSL B Inboard - Surfa I-131 (Curies)
0.000	8.3526E-22	1.7098E-05	4.0092E-13
0.333	9.8696E-11	5.9427E+00	1.4422E-07
0.500	4.7811E-10	1.3140E+01	3.2437E-07
0.800	2.9431E-09	3.5817E+01	9.0725E-07
1.100	1.0263E-08	7.2225E+01	1.8773E-06
1.400	2.6510E-08	1.2109E+02	3.2331E-06
1.700	5.6522E-08	1.8124E+02	4.9735E-06

2.000	1.0556E-07	2.5162E+02	7.0972E-06
2.300	1.5114E-07	2.8649E+02	8.5061E-06
2.600	2.1726E-07	3.1815E+02	9.9120E-06
2.900	3.0207E-07	3.4687E+02	1.1315E-05
3.200	4.0406E-07	3.7293E+02	1.2714E-05
3.500	5.2195E-07	3.9656E+02	1.4111E-05
3.800	6.5460E-07	4.1799E+02	1.5504E-05
4.100	8.0097E-07	4.3741E+02	1.6895E-05
4.400	9.6012E-07	4.5501E+02	1.8282E-05
4.700	1.1311E-06	4.7095E+02	1.9666E-05
5.000	1.3132E-06	4.8538E+02	2.1047E-05
5.300	1.5056E-06	4.9844E+02	2.2425E-05
5.600	1.7075E-06	5.1026E+02	2.3800E-05
5.900	1.9181E-06	5.2094E+02	2.5172E-05
6.200	2.1370E-06	5.3059E+02	2.6541E-05
6.500	2.3633E-06	5.3930E+02	2.7907E-05
6.800	2.5966E-06	5.4715E+02	2.9269E-05
7.100	2.8363E-06	5.5424E+02	3.0629E-05
7.400	3.0819E-06	5.6062E+02	3.1986E-05
7.700	3.3327E-06	5.6635E+02	3.3339E-05
8.000	3.5885E-06	5.7151E+02	3.4690E-05
8.300	2.9597E-06	5.7613E+02	3.6038E-05
8.600	2.5788E-06	5.8027E+02	3.7382E-05
8.900	2.3628E-06	5.8397E+02	3.8724E-05
9.200	2.2564E-06	5.8728E+02	4.0062E-05
9.500	2.2231E-06	5.9022E+02	4.1398E-05
9.800	2.2386E-06	5.9283E+02	4.2731E-05
10.100	2.2866E-06	5.9515E+02	4.4060E-05
10.400	2.3566E-06	5.9719E+02	4.5387E-05
24.000	7.4722E-06	5.9337E+02	1.0247E-04
48.000	7.9213E-06	2.4691E+02	3.0836E-04
72.000	1.0356E-05	2.2605E+02	4.7907E-04
96.000	1.2328E-05	2.0697E+02	6.1905E-04
120.000	7.8800E-06	3.7232E+01	1.6154E-03
168.000	9.0557E-06	3.1213E+01	3.1168E-03
336.000	9.5463E-06	1.6840E+01	5.0352E-03
720.000	4.9801E-06	4.1090E+00	3.1359E-03

Time (hr)	MSL B Outboard - Surf Hold (By Surface Fixa Condenser - Airborne		
	I-131 (Curies)	I-131 (Curies)	I-131 (Curies)
0.000	4.1436E-10	3.8309E-19	5.7605E-10
0.333	8.7173E-02	4.8963E-08	1.1681E-01
0.500	2.9038E-01	2.4629E-07	3.8205E-01
0.800	1.2038E+00	1.6157E-06	1.5360E+00
1.100	3.2802E+00	5.9670E-06	4.0672E+00
1.400	7.0318E+00	1.6278E-05	8.4695E+00
1.700	1.2922E+01	3.6598E-05	1.5112E+01
2.000	2.1371E+01	7.1977E-05	2.4262E+01
2.300	3.1920E+01	1.2784E-04	3.4983E+01
2.600	4.3761E+01	2.0794E-04	4.6048E+01
2.900	5.6774E+01	3.1530E-04	5.7259E+01
3.200	7.0847E+01	4.5273E-04	6.8453E+01
3.500	8.5879E+01	6.2285E-04	7.9503E+01
3.800	1.0178E+02	8.2803E-04	9.0309E+01
4.100	1.1846E+02	1.0705E-03	1.0080E+02
4.400	1.3585E+02	1.3522E-03	1.1090E+02
4.700	1.5388E+02	1.6751E-03	1.2059E+02
5.000	1.7249E+02	2.0409E-03	1.2983E+02
5.300	1.9161E+02	2.4510E-03	1.3861E+02
5.600	2.1121E+02	2.9070E-03	1.4692E+02

5.900	2.3122E+02	3.4100E-03	1.5475E+02
6.200	2.5161E+02	3.9614E-03	1.6212E+02
6.500	2.7233E+02	4.5620E-03	1.6902E+02
6.800	2.9336E+02	5.2130E-03	1.7548E+02
7.100	3.1466E+02	5.9150E-03	1.8150E+02
7.400	3.3620E+02	6.6691E-03	1.8711E+02
7.700	3.5796E+02	7.4757E-03	1.9232E+02
8.000	3.7990E+02	8.3356E-03	1.9715E+02
8.300	4.0201E+02	9.2493E-03	2.0162E+02
8.600	4.2427E+02	1.0217E-02	2.0575E+02
8.900	4.4666E+02	1.1240E-02	2.0956E+02
9.200	4.6917E+02	1.2318E-02	2.1307E+02
9.500	4.9177E+02	1.3451E-02	2.1629E+02
9.800	5.1445E+02	1.4640E-02	2.1926E+02
10.100	5.3721E+02	1.5885E-02	2.2197E+02
10.400	5.6003E+02	1.7187E-02	2.2445E+02
24.000	1.5803E+03	1.3490E-01	2.4219E+02
48.000	3.4167E+03	4.8569E-01	4.7922E+01
72.000	4.7247E+03	9.7764E-01	4.3843E+01
96.000	5.7898E+03	1.5648E+00	4.0143E+01
120.000	7.1262E+03	1.8564E+00	5.4801E+00
168.000	8.7947E+03	2.4947E+00	4.5935E+00
336.000	1.0111E+04	4.4222E+00	2.4782E+00
720.000	5.5191E+03	4.7109E+00	6.0469E-01

Condenser - Surface
I-131 (Curies)

Time (hr)	I-131 (Curies)
0.000	3.5626E-14
0.333	4.3900E-03
0.500	2.1674E-02
0.800	1.3767E-01
1.100	4.9335E-01
1.400	1.3069E+00
1.700	2.8537E+00
2.000	5.4510E+00
2.300	9.3963E+00
2.600	1.4795E+01
2.900	2.1677E+01
3.200	3.0049E+01
3.500	3.9899E+01
3.800	5.1198E+01
4.100	6.3908E+01
4.400	7.7981E+01
4.700	9.3360E+01
5.000	1.0999E+02
5.300	1.2780E+02
5.600	1.4673E+02
5.900	1.6673E+02
6.200	1.8771E+02
6.500	2.0962E+02
6.800	2.3241E+02
7.100	2.5600E+02
7.400	2.8034E+02
7.700	3.0538E+02
8.000	3.3106E+02
8.300	3.5734E+02
8.600	3.8416E+02
8.900	4.1148E+02
9.200	4.3926E+02
9.500	4.6746E+02

9.800	4.9604E+02
10.100	5.2497E+02
10.400	5.5422E+02
24.000	1.9553E+03
48.000	2.5475E+03
72.000	2.8057E+03
96.000	3.0030E+03
120.000	2.8495E+03
168.000	2.4957E+03
336.000	1.5496E+03
720.000	4.9377E+02

 Cumulative Dose Summary
 #####

Time (hr)	Control Room (CR)		Exclusion Area Bounda		Low Population Zone (
	Thyroid (rem)	TEDE (rem)	Thyroid (rem)	TEDE (rem)	Thyroid (rem)	TEDE (rem)
0.000	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00
0.333	3.9814E-09	1.2654E-10	1.8651E-08	6.7221E-10	3.3959E-09	1.2239E-10
0.500	2.7416E-08	8.7041E-10	9.4094E-08	3.3697E-09	1.7132E-08	6.1355E-10
0.800	2.6388E-07	8.3647E-09	6.2033E-07	2.1999E-08	1.1295E-07	4.0055E-09
1.100	1.2382E-06	3.9194E-08	2.3002E-06	8.0861E-08	4.1881E-07	1.4723E-08
1.400	4.0290E-06	1.2738E-07	6.2981E-06	2.1973E-07	1.1467E-06	4.0007E-08
1.700	1.0414E-05	3.2888E-07	1.4210E-05	4.9250E-07	2.5873E-06	8.9673E-08
2.000	2.2954E-05	7.2416E-07	2.8041E-05	9.6628E-07	5.1056E-06	1.7594E-07
2.300	4.2895E-05	1.3522E-06	4.9975E-05	1.7134E-06	9.0992E-06	3.1198E-07
2.600	7.1549E-05	2.2537E-06	8.1591E-05	2.7850E-06	1.4856E-05	5.0708E-07
2.900	1.1192E-04	3.5229E-06	1.2421E-04	4.2230E-06	2.2616E-05	7.6890E-07
3.200	1.6672E-04	5.2445E-06	1.7906E-04	6.0661E-06	3.2603E-05	1.1045E-06
3.500	2.3843E-04	7.4955E-06	2.4729E-04	8.3503E-06	4.5025E-05	1.5204E-06
3.800	3.2931E-04	1.0347E-05	3.2995E-04	1.1108E-05	6.0075E-05	2.0226E-06
4.100	4.4144E-04	1.3862E-05	4.2801E-04	1.4371E-05	7.7930E-05	2.6165E-06
4.400	5.7673E-04	1.8101E-05	5.4237E-04	1.8164E-05	9.8752E-05	3.3073E-06
4.700	7.3694E-04	2.3118E-05	6.7385E-04	2.2515E-05	1.2269E-04	4.0994E-06
5.000	9.2367E-04	2.8963E-05	8.2320E-04	2.7445E-05	1.4988E-04	4.9971E-06
5.300	1.1384E-03	3.5680E-05	9.9110E-04	3.2976E-05	1.8046E-04	6.0041E-06
5.600	1.3825E-03	4.3313E-05	1.1782E-03	3.9125E-05	2.1452E-04	7.1237E-06
5.900	1.6572E-03	5.1898E-05	1.3850E-03	4.5910E-05	2.5217E-04	8.3591E-06
6.200	1.9635E-03	6.1469E-05	1.6120E-03	5.3345E-05	2.9351E-04	9.7129E-06
6.500	2.3026E-03	7.2059E-05	1.8597E-03	6.1445E-05	3.3861E-04	1.1188E-05
6.800	2.6753E-03	8.3694E-05	2.1285E-03	7.0219E-05	3.8756E-04	1.2785E-05
7.100	3.0825E-03	9.6401E-05	2.4188E-03	7.9680E-05	4.4041E-04	1.4508E-05
7.400	3.5249E-03	1.1020E-04	2.7309E-03	8.9836E-05	4.9722E-04	1.6357E-05
7.700	4.0032E-03	1.2512E-04	3.0650E-03	1.0069E-04	5.5806E-04	1.8334E-05
8.000	4.5179E-03	1.4116E-04	3.4214E-03	1.1226E-04	6.2295E-04	2.0440E-05
8.300	5.0004E-03	1.5620E-04	3.6162E-03	1.1883E-04	6.4807E-04	2.1287E-05
8.600	5.4081E-03	1.6890E-04	3.8228E-03	1.2577E-04	6.7470E-04	2.2182E-05
8.900	5.7714E-03	1.8022E-04	4.0411E-03	1.3310E-04	7.0285E-04	2.3127E-05
9.200	6.1107E-03	1.9079E-04	4.2712E-03	1.4081E-04	7.3252E-04	2.4121E-05
9.500	6.4391E-03	2.0102E-04	4.5133E-03	1.4891E-04	7.6373E-04	2.5165E-05
9.800	6.7657E-03	2.1119E-04	4.7672E-03	1.5738E-04	7.9647E-04	2.6258E-05
10.100	7.0963E-03	2.2148E-04	5.0331E-03	1.6625E-04	8.3075E-04	2.7401E-05
10.400	7.4349E-03	2.3201E-04	5.3110E-03	1.7550E-04	8.6658E-04	2.8593E-05
24.000	3.8245E-02	1.1853E-03	3.0207E-02	9.8302E-04	4.0764E-03	1.3271E-04
48.000	7.8367E-02	2.4178E-03	3.0207E-02	9.8302E-04	1.0408E-02	3.3121E-04
72.000	1.3188E-01	4.0544E-03	3.0207E-02	9.8302E-04	1.8929E-02	5.9533E-04
96.000	1.9633E-01	6.0211E-03	3.0207E-02	9.8302E-04	2.9161E-02	9.1106E-04
120.000	2.2479E-01	6.8888E-03	3.0207E-02	9.8302E-04	3.2189E-02	1.0043E-03

168.000 2.8766E-01 8.8044E-03 3.0207E-02 9.8302E-04 3.9039E-02 1.2150E-03
336.000 5.3552E-01 1.6353E-02 3.0207E-02 9.8302E-04 6.5990E-02 2.0431E-03
720.000 9.6715E-01 2.9499E-02 3.0207E-02 9.8302E-04 1.1286E-01 3.4830E-03

Worst Two-Hour Doses
#####

Exclusion Area Boundary (EAB)

Time (hr)	Whole Body (rem)	Thyroid (rem)	TEDE (rem)
10.4	5.7517E-06	3.6612E-03	1.1875E-04

```
#####
RADTRAD Version 3.03 (Spring 2001) run on 9/19/2005 at 16:24:59
#####
```

```
#####
File information
#####
```

```
Plant file           = C:\Documents and Settings\Aleem Boatright\My Documents\My
Work\Exelon\AST\Limerick\LGS LOCA\RADTRAD\LGS LOCA MSIV Leak (24-hr Settling
Distribution) - 10th of HP Condenser Tubes - 275cfm CR Unfilt Inleak - Rad Mode.psf
Inventory file       = c:\program files\radtrad3-03\defaults\limerick ast source
terms.nif
Release file         = c:\program files\radtrad3-03\defaults\bwr_dba.rft
Dose Conversion file = c:\program files\radtrad3-03\defaults\fgr11&12.inp
```

```
#####      #####      #####      # #      # #####      # #      #####
# # #      # # #      # # #      # # #      # # #      # # #
# # #      # # #      # # #      # # #      # # #      # # #
#####      #####      #####      # # #      # # #      # # #
# # #      # # #      # # #      # # #      # # #      # # #
# # #      # # #      # # #      # # #      # # #      # # #
# # #      # # #      # # #      # # #      # # #      # # #
```

```
Radtrad 3.03 4/15/2001
LGS LOCA 200scfh MSIV Leak - Leak to Condenser - MSL Pipe Deposition Credit (24-Hr
20-Group Aerosol Settling with Projected Area Assumption; 2-Hr Mixing Delay) - 95%
CREFAS Charcoal Eff. No Delay - Rad Mode 275cfm Control Room Inleakage - 3000cfm -
10% (217
```

```
Nuclide Inventory File:
c:\program files\radtrad3-03\defaults\limerick ast source terms.nif
```

```
Plant Power Level:
3.5270E+03
```

```
Compartments:
9
```

```
Compartment 1:
```

```
Containment
3
3.7907E+05
0
0
0
1
0
```

```
Compartment 2:
```

```
(Node 1) Inboard MSL A Volume
3
2.5800E+02
0
0
0
0
0
```

```
Compartment 3:
```

(Node 1) Inboard MSL B Volume

3
1.0000E-08
0
0
0
0
0

Compartment 4:

(Node 2) Outboard MSL A Volume

3
1.1820E+03
0
0
0
0
0

Compartment 5:

(Node 2) Outboard MSL B Volume

3
1.0510E+03
0
0
0
0
0

Compartment 6:

Condenser

3
5.4750E+04
0
0
0
0
0

Compartment 7:

Environment

2
0.0000E+00
0
0
0
0
0

Compartment 8:

Control Room

1
1.2600E+05
0
0
1
0
0

Compartment 9:

Hold

3
1.0000E+00
0
0
0

0

0

Pathways:

11

Pathway 1:

Containment to (Node 1) Inboard MSL A Volume

1

2

2

Pathway 2:

Containment to (Node 1) Inboard MSL B Volume

1

3

2

Pathway 3:

Containment to Hold (PC Leakage)

1

9

4

Pathway 4:

(Node 1) Inboard MSL A Volume to (Node 2) Outboard MSL A Volume

2

4

2

Pathway 5:

(Node 1) Inboard MSL B Volume to (Node 2) Outboard MSL B Volume

3

5

2

Pathway 6:

(Node 2) Outboard MSL A Volume to Condenser

4

6

2

Pathway 7:

(Node 2) Outboard MSL B Volume to Condenser

5

6

2

Pathway 8:

Condenser Leak to Environment

6

7

2

Pathway 9:

Filtered Intake to Control Room

7

8

2

Pathway 10:

Unfiltered Inleakage to Control Room

7

8

2

Pathway 11:

Control Room Exhaust

8

7

2

End of Plant Model File

Scenario Description Name:

Plant Model Filename:

Source Term:

1
1 1.0000E+00
c:\program files\radtrad3-03\defaults\fgr11&12.inp
c:\program files\radtrad3-03\defaults\bwr_dba.rft
0.0000E+00
1
9.5000E-01 4.8500E-02 1.5000E-03 1.0000E+00

Overlying Pool:

0
0.0000E+00
0
0
0
0

Compartments:

9

Compartment 1:

0
1
0
0
0
0
0
3
3
1.0000E+01
1
1
0.0000E+00 0.0000E+00

Compartment 2:

0
1
0
0
0
0
0
0
0
0

Compartment 3:

0
1
0
0
0
0
0
0
0
0

Compartment 4:

0
1
0
0

0
0
0
0
0

Compartment 5:

0
1
0
0
0
0
0
0
0

Compartment 6:

0
1
0
0
0
0
0
0
0

Compartment 7:

0
1
0
0
0
0
0
0
0

Compartment 8:

0
1
0
0
0
0
1
2.1750E+03
3

0.0000E+00	9.9000E+01	9.5000E+01	9.5000E+01
5.0000E-01	9.9000E+01	9.5000E+01	9.5000E+01
7.2000E+02	0.0000E+00	0.0000E+00	0.0000E+00

0
0

Compartment 9:

0
1
0
0
0
0
0
0
0

Pathways:

11

Pathway 1:

0

0

0

0

0

1

5

0.0000E+00	1.5240E+00	9.9990E+01	9.9940E+01	0.0000E+00
2.0000E+00	9.3060E-01	9.9990E+01	9.9940E+01	0.0000E+00
2.4000E+01	5.1270E-01	0.0000E+00	9.9990E+01	0.0000E+00
9.6000E+01	5.1270E-01	0.0000E+00	9.9990E+01	0.0000E+00
7.2000E+02	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00

0

0

0

0

0

0

Pathway 2:

0

0

0

0

0

1

5

0.0000E+00	1.5240E+00	9.9990E+01	9.9890E+01	0.0000E+00
2.0000E+00	9.3060E-01	9.9990E+01	9.9890E+01	0.0000E+00
2.4000E+01	5.1270E-01	0.0000E+00	9.9980E+01	0.0000E+00
9.6000E+01	5.1270E-01	0.0000E+00	9.9990E+01	0.0000E+00
7.2000E+02	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00

0

0

0

0

0

0

Pathway 3:

0

0

0

0

0

0

0

0

0

0

1

3

0.0000E+00	5.0000E-01
2.4000E+01	2.5000E-01
7.2000E+02	0.0000E+00

0

Pathway 4:

0

0

0
 0
 0
 1
 4
 0.0000E+00 9.3060E-01 0.0000E+00 0.0000E+00 0.0000E+00
 2.4000E+01 5.1270E-01 0.0000E+00 0.0000E+00 0.0000E+00
 9.6000E+01 5.1270E-01 0.0000E+00 0.0000E+00 0.0000E+00
 7.2000E+02 0.0000E+00 0.0000E+00 0.0000E+00 0.0000E+00

0
 0
 0
 0
 0

Pathway 5:

0
 0
 0
 0
 1
 4
 0.0000E+00 9.3060E-01 0.0000E+00 0.0000E+00 0.0000E+00
 2.4000E+01 5.1270E-01 0.0000E+00 0.0000E+00 0.0000E+00
 9.6000E+01 5.1270E-01 0.0000E+00 0.0000E+00 0.0000E+00
 7.2000E+02 0.0000E+00 0.0000E+00 0.0000E+00 0.0000E+00

0
 0
 0
 0
 0
 0

Pathway 6:

0
 0
 0
 0
 1
 4
 0.0000E+00 3.1880E+00 0.0000E+00 0.0000E+00 0.0000E+00
 2.4000E+01 1.5130E+00 0.0000E+00 0.0000E+00 0.0000E+00
 9.6000E+01 1.1480E+00 0.0000E+00 0.0000E+00 0.0000E+00
 7.2000E+02 0.0000E+00 0.0000E+00 0.0000E+00 0.0000E+00

0
 0
 0
 0
 0
 0

Pathway 7:

0
 0
 0
 0
 1
 4
 0.0000E+00 3.1880E+00 0.0000E+00 0.0000E+00 0.0000E+00

2.4000E+01	1.5130E+00	0.0000E+00	0.0000E+00	0.0000E+00
9.6000E+01	1.1480E+00	0.0000E+00	0.0000E+00	0.0000E+00
7.2000E+02	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00

0
0
0
0
0
0

Pathway 8:

0
0
0
0
0
1
4

0.0000E+00	3.6620E+00	0.0000E+00	0.0000E+00	0.0000E+00
2.4000E+01	2.0180E+00	0.0000E+00	0.0000E+00	0.0000E+00
9.6000E+01	2.0180E+00	0.0000E+00	0.0000E+00	0.0000E+00
7.2000E+02	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00

0
0
0
0
0
0

Pathway 9:

0
0
0
0
0
1
3

0.0000E+00	5.2500E+02	9.9000E+01	9.5000E+01	9.5000E+01
5.0000E-01	5.2500E+02	9.9000E+01	9.5000E+01	9.5000E+01
7.2000E+02	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00

0
0
0
0
0
0

Pathway 10:

0
0
0
0
0
1
2

0.0000E+00	2.7500E+02	0.0000E+00	0.0000E+00	0.0000E+00
7.2000E+02	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00

0
0
0
0
0
0

Pathway 11:

0
 0
 0
 0
 0
 1
 3
 0.0000E+00 8.0000E+02 1.0000E+02 1.0000E+02 1.0000E+02
 5.0000E-01 8.0000E+02 1.0000E+02 1.0000E+02 1.0000E+02
 7.2000E+02 0.0000E+00 0.0000E+00 0.0000E+00 0.0000E+00
 0
 0
 0
 0
 0
 0

Dose Locations:

3

Location 1:

Exclusion Area Boundary (EAB)

7
 1
 2
 0.0000E+00 3.1800E-04
 2.4000E+01 0.0000E+00
 1
 4
 0.0000E+00 3.5000E-04
 8.0000E+00 1.8000E-04
 2.4000E+01 2.3000E-04
 7.2000E+02 0.0000E+00
 0

Location 2:

Low Population Zone (LPZ)

7
 1
 10
 0.0000E+00 5.7900E-05
 8.0000E+00 4.1000E-05
 2.4000E+01 1.9500E-05
 4.8000E+01 1.9500E-05
 7.2000E+01 1.9500E-05
 9.6000E+01 6.6800E-06
 1.2000E+02 6.6800E-06
 1.6800E+02 6.6800E-06
 3.3600E+02 6.6800E-06
 7.2000E+02 0.0000E+00
 1
 4
 0.0000E+00 3.5000E-04
 8.0000E+00 1.8000E-04
 2.4000E+01 2.3000E-04
 7.2000E+02 0.0000E+00
 0

Location 3:

Control Room (CR)

8
 0
 1

2
0.0000E+00 3.5000E-04
7.2000E+02 0.0000E+00
1
4
0.0000E+00 1.0000E+00
2.4000E+01 6.0000E-01
9.6000E+01 4.0000E-01
7.2000E+02 0.0000E+00

Effective Volume Location:

1
6
0.0000E+00 6.8800E-03
2.0000E+00 5.1700E-03
8.0000E+00 2.0400E-03
2.4000E+01 1.2900E-03
9.6000E+01 9.6300E-04
7.2000E+02 0.0000E+00

Simulation Parameters:

1
0.0000E+00 0.0000E+00

Output Filename:

C:\Documents and Settings\Aleem Boatright\My Documents\My
Work\Exelon\AST\Limerick\LGS LOCA\RADTRAD\LGS LOCA MSIV Leak (24-hr Settling
Distribution) - 10th of HP Condenser Tubes - 275cfm CR Unfilt Inleak - Rad Mode.o0

1
1
1
0
0

End of Scenario File

RADTRAD Version 3.03 (Spring 2001) run on 9/19/2005 at 16:24:59
#####

Plant Description
#####

Number of Nuclides = 60

Inventory Power = 1.0000E+00 MWth
Plant Power Level = 3.5270E+03 MWth

Number of compartments = 9

Compartment information

Compartment number 1 (Source term fraction = 1.0000E+00
)

Name: Containment

Compartment volume = 3.7907E+05 (Cubic feet)

Compartment type is Normal

Removal devices within compartment:

Deposition

Pathways into and out of compartment 1

Exit Pathway Number 1: Containment to (Node 1) Inboard MSL A Volume

Exit Pathway Number 2: Containment to (Node 1) Inboard MSL B Volume

Exit Pathway Number 3: Containment to Hold (PC Leakage)

Compartment number 2

Name: (Node 1) Inboard MSL A Volume

Compartment volume = 2.5800E+02 (Cubic feet)

Compartment type is Normal

Pathways into and out of compartment 2

Inlet Pathway Number 1: Containment to (Node 1) Inboard MSL A Volume

Exit Pathway Number 4: (Node 1) Inboard MSL A Volume to (Node 2) Outboard

Compartment number 3

Name: (Node 1) Inboard MSL B Volume

Compartment volume = 1.0000E-08 (Cubic feet)

Compartment type is Normal

Pathways into and out of compartment 3

Inlet Pathway Number 2: Containment to (Node 1) Inboard MSL B Volume

Exit Pathway Number 5: (Node 1) Inboard MSL B Volume to (Node 2) Outboard

Compartment number 4

Name: (Node 2) Outboard MSL A Volume

Compartment volume = 1.1820E+03 (Cubic feet)

Compartment type is Normal

Pathways into and out of compartment 4

Inlet Pathway Number 4: (Node 1) Inboard MSL A Volume to (Node 2) Outboard

Exit Pathway Number 6: (Node 2) Outboard MSL A Volume to Condenser

Compartment number 5

Name: (Node 2) Outboard MSL B Volume

Compartment volume = 1.0510E+03 (Cubic feet)

Compartment type is Normal

Pathways into and out of compartment 5

Inlet Pathway Number 5: (Node 1) Inboard MSL B Volume to (Node 2) Outboard

Exit Pathway Number 7: (Node 2) Outboard MSL B Volume to Condenser

Compartment number 6

Name: Condenser

Compartment volume = 5.4750E+04 (Cubic feet)

Compartment type is Normal

Pathways into and out of compartment 6

Inlet Pathway Number 6: (Node 2) Outboard MSL A Volume to Condenser

Inlet Pathway Number 7: (Node 2) Outboard MSL B Volume to Condenser

Exit Pathway Number 8: Condenser Leak to Environment

Compartment number 7

Name: Environment

Compartment type is Environment

Pathways into and out of compartment 7

Inlet Pathway Number 8: Condenser Leak to Environment

Inlet Pathway Number 11: Control Room Exhaust

Exit Pathway Number 9: Filtered Intake to Control Room

Exit Pathway Number 10: Unfiltered Inleakage to Control Room

Compartment number 8

Name: Control Room

Compartment volume = 1.2600E+05 (Cubic feet)

Compartment type is Control Room

Removal devices within compartment:

Filter(s)

Pathways into and out of compartment 8

Inlet Pathway Number 9: Filtered Intake to Control Room

Inlet Pathway Number 10: Unfiltered Inleakage to Control Room

Exit Pathway Number 11: Control Room Exhaust

Compartment number 9

Name: Hold

Compartment volume = 1.0000E+00 (Cubic feet)

Compartment type is Normal

Pathways into and out of compartment 9

Inlet Pathway Number 3: Containment to Hold (PC Leakage)

Total number of pathways = 11

 RADTRAD Version 3.03 (Spring 2001) run on 9/19/2005 at 16:24:59
 #####

 Scenario Description
 #####

Radioactive Decay is enabled
 Calculation of Daughters is enabled

Release Fractions and Timings

	GAP	EARLY IN-VESSEL	LATE RELEASE	RELEASE MASS
	0.500000 hr	1.5000 hrs	0.0000 hrs	(gm)
NOBLES	5.0000E-02	9.5000E-01	0.0000E+00	4.625E+03
IODINE	5.0000E-02	2.5000E-01	0.0000E+00	3.033E+02
CESIUM	5.0000E-02	2.0000E-01	0.0000E+00	5.099E+04
TELLURIUM	0.0000E+00	5.0000E-02	0.0000E+00	4.012E+01
STRONTIUM	0.0000E+00	2.0000E-02	0.0000E+00	1.712E+03
BARIUM	0.0000E+00	2.0000E-02	0.0000E+00	4.739E+01
RUTHENIUM	0.0000E+00	2.5000E-03	0.0000E+00	5.988E+01
CERIUM	0.0000E+00	5.0000E-04	0.0000E+00	5.914E+02
LANTHANUM	0.0000E+00	2.0000E-04	0.0000E+00	8.731E+00

Inventory Power = 3527. Mwt

Nuclide Name	Group	Specific Inventory (Ci/Mwt)	half life (s)	Whole Body DCF (Sv-m3/Bq-s)	Inhaled Thyroid (Sv/Bq)	Inhaled Effective (Sv/Bq)
Co-58	7	1.529E+02	6.117E+06	4.760E-14	8.720E-10	2.940E-09
Co-60	7	1.830E+02	1.663E+08	1.260E-13	1.620E-08	5.910E-08
Kr-85	1	3.946E+02	3.383E+08	1.190E-16	0.000E+00	0.000E+00
Kr-85m	1	8.313E+03	1.613E+04	7.480E-15	0.000E+00	0.000E+00
Kr-87	1	1.633E+04	4.578E+03	4.120E-14	0.000E+00	0.000E+00
Kr-88	1	2.303E+04	1.022E+04	1.020E-13	0.000E+00	0.000E+00
Rb-86	3	6.518E+01	1.612E+06	4.810E-15	1.330E-09	1.790E-09
Sr-89	5	2.798E+04	4.363E+06	7.730E-17	7.960E-12	1.120E-08
Sr-90	5	3.178E+03	9.190E+08	7.530E-18	2.690E-10	3.510E-07
Sr-91	5	3.801E+04	3.420E+04	4.924E-14	9.930E-12	4.547E-10
Sr-92	5	4.017E+04	9.756E+03	6.790E-14	3.920E-12	2.180E-10
Y-90	9	3.272E+03	2.304E+05	1.900E-16	5.170E-13	2.280E-09
Y-91	9	3.448E+04	5.055E+06	2.600E-16	8.500E-12	1.320E-08
Y-92	9	4.029E+04	1.274E+04	1.300E-14	1.050E-12	2.110E-10
Y-93	9	4.526E+04	3.636E+04	4.800E-15	9.260E-13	5.820E-10
Zr-95	9	4.489E+04	5.528E+06	3.600E-14	1.440E-09	6.390E-09
Zr-97	9	4.657E+04	6.084E+04	4.432E-14	2.315E-11	1.171E-09
Nb-95	9	4.512E+04	3.037E+06	3.740E-14	3.580E-10	1.570E-09
Mo-99	7	5.078E+04	2.376E+05	7.280E-15	1.520E-11	1.070E-09
Tc-99m	7	4.447E+04	2.167E+04	5.890E-15	5.010E-11	8.800E-12
Ru-103	7	4.202E+04	3.394E+06	2.251E-14	2.570E-10	2.421E-09
Ru-105	7	2.908E+04	1.598E+04	3.810E-14	4.150E-12	1.230E-10
Ru-106	7	1.730E+04	3.181E+07	1.040E-14	1.720E-09	1.290E-07
Rh-105	7	2.752E+04	1.273E+05	3.720E-15	2.880E-12	2.580E-10
Sb-127	4	2.896E+03	3.326E+05	3.330E-14	6.150E-11	1.630E-09
Sb-129	4	8.638E+03	1.555E+04	7.140E-14	9.720E-12	1.740E-10
Te-127	4	2.873E+03	3.366E+04	2.420E-16	1.840E-12	8.600E-11
Te-127m	4	3.855E+02	9.418E+06	1.470E-16	9.660E-11	5.810E-09
Te-129	4	8.501E+03	4.176E+03	2.750E-15	5.090E-13	2.090E-11
Te-129m	4	1.267E+03	2.903E+06	3.337E-15	1.563E-10	6.484E-09

Te-131m	4	3.869E+03	1.080E+05	7.463E-14	3.669E-08	1.758E-09
Te-132	4	3.821E+04	2.815E+05	1.030E-14	6.280E-08	2.550E-09
I-131	2	2.687E+04	6.947E+05	1.820E-14	2.920E-07	8.890E-09
I-132	2	3.881E+04	8.280E+03	1.120E-13	1.740E-09	1.030E-10
I-133	2	5.556E+04	7.488E+04	2.940E-14	4.860E-08	1.580E-09
I-134	2	6.165E+04	3.156E+03	1.300E-13	2.880E-10	3.550E-11
I-135	2	5.192E+04	2.380E+04	8.294E-14	8.460E-09	3.320E-10
Xe-133	1	5.491E+04	4.532E+05	1.560E-15	0.000E+00	0.000E+00
Xe-135	1	2.228E+04	3.272E+04	1.190E-14	0.000E+00	0.000E+00
Cs-134	3	7.280E+03	6.507E+07	7.570E-14	1.110E-08	1.250E-08
Cs-136	3	2.027E+03	1.132E+06	1.060E-13	1.730E-09	1.980E-09
Cs-137	3	4.538E+03	9.467E+08	2.725E-14	7.930E-09	8.630E-09
Ba-139	6	5.084E+04	4.962E+03	2.170E-15	2.400E-12	4.640E-11
Ba-140	6	4.896E+04	1.101E+06	8.580E-15	2.560E-10	1.010E-09
La-140	9	5.019E+04	1.450E+05	1.170E-13	6.870E-11	1.310E-09
La-141	9	4.640E+04	1.415E+04	2.390E-15	9.400E-12	1.570E-10
La-142	9	4.532E+04	5.550E+03	1.440E-13	8.740E-12	6.840E-11
Ce-141	8	4.492E+04	2.808E+06	3.430E-15	2.550E-11	2.420E-09
Ce-143	8	4.427E+04	1.188E+05	1.290E-14	6.230E-12	9.160E-10
Ce-144	8	3.596E+04	2.456E+07	2.773E-15	2.920E-10	1.010E-07
Pr-143	9	4.293E+04	1.172E+06	2.100E-17	1.680E-18	2.190E-09
Nd-147	9	1.838E+04	9.487E+05	6.190E-15	1.820E-11	1.850E-09
Np-239	8	5.397E+05	2.035E+05	7.690E-15	7.620E-12	6.780E-10
Pu-238	8	1.796E+02	2.769E+09	4.880E-18	3.860E-10	7.790E-05
Pu-239	8	1.200E+01	7.594E+11	4.240E-18	3.750E-10	8.330E-05
Pu-240	8	1.288E+01	2.063E+11	4.750E-18	3.760E-10	8.330E-05
Pu-241	8	6.182E+03	4.544E+08	7.250E-20	9.150E-12	1.340E-06
Am-241	9	9.528E+00	1.364E+10	8.180E-16	1.600E-09	1.200E-04
Cm-242	9	2.388E+03	1.407E+07	5.690E-18	9.410E-10	4.670E-06
Cm-244	9	2.602E+02	5.715E+08	4.910E-18	1.010E-09	6.700E-05

Nuclide	Daughter	Fraction	Daughter	Fraction	Daughter	Fraction
Kr-85m	Kr-85	0.21	none	0.00	none	0.00
Kr-87	Rb-87	1.00	none	0.00	none	0.00
Kr-88	Rb-88	1.00	none	0.00	none	0.00
Sr-90	Y-90	1.00	none	0.00	none	0.00
Sr-91	Y-91m	0.58	Y-91	0.42	none	0.00
Sr-92	Y-92	1.00	none	0.00	none	0.00
Y-93	Zr-93	1.00	none	0.00	none	0.00
Zr-95	Nb-95m	0.01	Nb-95	0.99	none	0.00
Zr-97	Nb-97m	0.95	Nb-97	0.05	none	0.00
Mo-99	Tc-99m	0.88	Tc-99	0.12	none	0.00
Tc-99m	Tc-99	1.00	none	0.00	none	0.00
Ru-103	Rh-103m	1.00	none	0.00	none	0.00
Ru-105	Rh-105	1.00	none	0.00	none	0.00
Ru-106	Rh-106	1.00	none	0.00	none	0.00
Sb-127	Te-127m	0.18	Te-127	0.82	none	0.00
Sb-129	Te-129m	0.22	Te-129	0.77	none	0.00
Te-127m	Te-127	0.98	none	0.00	none	0.00
Te-129	I-129	1.00	none	0.00	none	0.00
Te-129m	Te-129	0.65	I-129	0.35	none	0.00
Te-131m	Te-131	0.22	I-131	0.78	none	0.00
Te-132	I-132	1.00	none	0.00	none	0.00
I-131	Xe-131m	0.01	none	0.00	none	0.00
I-133	Xe-133m	0.03	Xe-133	0.97	none	0.00
I-135	Xe-135m	0.15	Xe-135	0.85	none	0.00
Xe-135	Cs-135	1.00	none	0.00	none	0.00
Cs-137	Ba-137m	0.95	none	0.00	none	0.00
Ba-140	La-140	1.00	none	0.00	none	0.00
La-141	Ce-141	1.00	none	0.00	none	0.00

Ce-143	Pr-143	1.00	none	0.00	none	0.00
Ce-144	Pr-144m	0.02	Pr-144	0.98	none	0.00
Nd-147	Pm-147	1.00	none	0.00	none	0.00
Np-239	Pu-239	1.00	none	0.00	none	0.00
Pu-238	U-234	1.00	none	0.00	none	0.00
Pu-239	U-235	1.00	none	0.00	none	0.00
Pu-240	U-236	1.00	none	0.00	none	0.00
Pu-241	U-237	0.00	Am-241	1.00	none	0.00
Am-241	Np-237	1.00	none	0.00	none	0.00
Cm-242	Pu-238	1.00	none	0.00	none	0.00
Cm-244	Pu-240	1.00	none	0.00	none	0.00

Iodine fractions

Aerosol	=	9.5000E-01
Elemental	=	4.8500E-02
Organic	=	1.5000E-03

COMPARTMENT DATA

Compartment number 1: Containment
 Natural Deposition (Powers' model): Aerosol data
 Reactor type: 3
 Percentile = 10 (%)

Natural Deposition: Elemental Removal Data

Time (hr)	Removal Coef. (hr ⁻¹)
0.0000E+00	0.0000E+00

- Compartment number 2: (Node 1) Inboard MSL A Volume
- Compartment number 3: (Node 1) Inboard MSL B Volume
- Compartment number 4: (Node 2) Outboard MSL A Volume
- Compartment number 5: (Node 2) Outboard MSL B Volume
- Compartment number 6: Condenser
- Compartment number 7: Environment
- Compartment number 8: Control Room

Compartment Filter Data

Time (hr)	Flow Rate (cfm)	Filter Efficiencies (%)		
		Aerosol	Elemental	Organic
0.0000E+00	2.1750E+03	9.9000E+01	9.5000E+01	9.5000E+01
5.0000E-01	2.1750E+03	9.9000E+01	9.5000E+01	9.5000E+01
7.2000E+02	2.1750E+03	0.0000E+00	0.0000E+00	0.0000E+00

Compartment number 9: Hold

PATHWAY DATA

Pathway number 1: Containment to (Node 1) Inboard MSL A Volume

Pathway Filter: Removal Data

Time (hr)	Flow Rate (cfm)	Filter Efficiencies (%)		
		Aerosol	Elemental	Organic

0.0000E+00	1.5240E+00	9.9990E+01	9.9940E+01	0.0000E+00
2.0000E+00	9.3060E-01	9.9990E+01	9.9940E+01	0.0000E+00
2.4000E+01	5.1270E-01	0.0000E+00	9.9990E+01	0.0000E+00
9.6000E+01	5.1270E-01	0.0000E+00	9.9990E+01	0.0000E+00
7.2000E+02	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00

Pathway number 2: Containment to (Node 1) Inboard MSL B Volume

Pathway Filter: Removal Data

Time (hr)	Flow Rate (cfm)	Filter Efficiencies (%)		
		Aerosol	Elemental	Organic
0.0000E+00	1.5240E+00	9.9990E+01	9.9890E+01	0.0000E+00
2.0000E+00	9.3060E-01	9.9990E+01	9.9890E+01	0.0000E+00
2.4000E+01	5.1270E-01	0.0000E+00	9.9980E+01	0.0000E+00
9.6000E+01	5.1270E-01	0.0000E+00	9.9990E+01	0.0000E+00
7.2000E+02	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00

Pathway number 3: Containment to Hold (PC Leakage)

Convection Data

Time (hr)	Flow Rate (% / day)
0.0000E+00	5.0000E-01
2.4000E+01	2.5000E-01
7.2000E+02	0.0000E+00

Pathway number 4: (Node 1) Inboard MSL A Volume to (Node 2) Outboard

Pathway Filter: Removal Data

Time (hr)	Flow Rate (cfm)	Filter Efficiencies (%)		
		Aerosol	Elemental	Organic
0.0000E+00	9.3060E-01	0.0000E+00	0.0000E+00	0.0000E+00
2.4000E+01	5.1270E-01	0.0000E+00	0.0000E+00	0.0000E+00
9.6000E+01	5.1270E-01	0.0000E+00	0.0000E+00	0.0000E+00
7.2000E+02	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00

Pathway number 5: (Node 1) Inboard MSL B Volume to (Node 2) Outboard

Pathway Filter: Removal Data

Time (hr)	Flow Rate (cfm)	Filter Efficiencies (%)		
		Aerosol	Elemental	Organic
0.0000E+00	9.3060E-01	0.0000E+00	0.0000E+00	0.0000E+00
2.4000E+01	5.1270E-01	0.0000E+00	0.0000E+00	0.0000E+00
9.6000E+01	5.1270E-01	0.0000E+00	0.0000E+00	0.0000E+00
7.2000E+02	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00

Pathway number 6: (Node 2) Outboard MSL A Volume to Condenser

Pathway Filter: Removal Data

Time (hr)	Flow Rate (cfm)	Filter Efficiencies (%)		
		Aerosol	Elemental	Organic
0.0000E+00	3.1880E+00	0.0000E+00	0.0000E+00	0.0000E+00
2.4000E+01	1.5130E+00	0.0000E+00	0.0000E+00	0.0000E+00
9.6000E+01	1.1480E+00	0.0000E+00	0.0000E+00	0.0000E+00
7.2000E+02	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00

Pathway number 7: (Node 2) Outboard MSL B Volume to Condenser

Pathway Filter: Removal Data

Time (hr)	Flow Rate (cfm)	Filter Efficiencies (%)		
		Aerosol	Elemental	Organic
0.0000E+00	3.1880E+00	0.0000E+00	0.0000E+00	0.0000E+00
2.4000E+01	1.5130E+00	0.0000E+00	0.0000E+00	0.0000E+00
9.6000E+01	1.1480E+00	0.0000E+00	0.0000E+00	0.0000E+00
7.2000E+02	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00

Pathway number 8: Condenser Leak to Environment

Pathway Filter: Removal Data

Time (hr)	Flow Rate (cfm)	Filter Efficiencies (%)		
		Aerosol	Elemental	Organic
0.0000E+00	3.6620E+00	0.0000E+00	0.0000E+00	0.0000E+00
2.4000E+01	2.0180E+00	0.0000E+00	0.0000E+00	0.0000E+00
9.6000E+01	2.0180E+00	0.0000E+00	0.0000E+00	0.0000E+00
7.2000E+02	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00

Pathway number 9: Filtered Intake to Control Room

Pathway Filter: Removal Data

Time (hr)	Flow Rate (cfm)	Filter Efficiencies (%)		
		Aerosol	Elemental	Organic
0.0000E+00	5.2500E+02	9.9000E+01	9.5000E+01	9.5000E+01
5.0000E-01	5.2500E+02	9.9000E+01	9.5000E+01	9.5000E+01
7.2000E+02	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00

Pathway number 10: Unfiltered Inleakage to Control Room

Pathway Filter: Removal Data

Time (hr)	Flow Rate (cfm)	Filter Efficiencies (%)		
		Aerosol	Elemental	Organic
0.0000E+00	2.7500E+02	0.0000E+00	0.0000E+00	0.0000E+00
7.2000E+02	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00

Pathway number 11: Control Room Exhaust

Pathway Filter: Removal Data

Time (hr)	Flow Rate (cfm)	Filter Efficiencies (%)		
		Aerosol	Elemental	Organic
0.0000E+00	8.0000E+02	1.0000E+02	1.0000E+02	1.0000E+02
5.0000E-01	8.0000E+02	1.0000E+02	1.0000E+02	1.0000E+02
7.2000E+02	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00

LOCATION DATA

Location Exclusion Area Boundary (EAB) is in compartment 7

Location X/Q Data

Time (hr)	X/Q (s * m^-3)
0.0000E+00	3.1800E-04
2.4000E+01	0.0000E+00

Location Breathing Rate Data

Time (hr)	Breathing Rate (m^3 * sec^-1)
0.0000E+00	0.0000E+00
2.4000E+01	0.0000E+00

0.0000E+00	3.5000E-04
8.0000E+00	1.8000E-04
2.4000E+01	2.3000E-04
7.2000E+02	0.0000E+00

Location Low Population Zone (LPZ) is in compartment 7

Location X/Q Data

Time (hr)	X/Q (s * m ⁻³)
0.0000E+00	5.7900E-05
8.0000E+00	4.1000E-05
2.4000E+01	1.9500E-05
4.8000E+01	1.9500E-05
7.2000E+01	1.9500E-05
9.6000E+01	6.6800E-06
1.2000E+02	6.6800E-06
1.6800E+02	6.6800E-06
3.3600E+02	6.6800E-06
7.2000E+02	0.0000E+00

Location Breathing Rate Data

Time (hr)	Breathing Rate (m ³ * sec ⁻¹)
0.0000E+00	3.5000E-04
8.0000E+00	1.8000E-04
2.4000E+01	2.3000E-04
7.2000E+02	0.0000E+00

Location Control Room (CR) is in compartment 8

Location X/Q Data

Time (hr)	X/Q (s * m ⁻³)
0.0000E+00	6.8800E-03
2.0000E+00	5.1700E-03
8.0000E+00	2.0400E-03
2.4000E+01	1.2900E-03
9.6000E+01	9.6300E-04
7.2000E+02	0.0000E+00

Location Breathing Rate Data

Time (hr)	Breathing Rate (m ³ * sec ⁻¹)
0.0000E+00	3.5000E-04
7.2000E+02	0.0000E+00

Location Occupancy Factor Data

Time (hr)	Occupancy Factor
0.0000E+00	1.0000E+00
2.4000E+01	6.0000E-01
9.6000E+01	4.0000E-01
7.2000E+02	0.0000E+00

USER SPECIFIED TIME STEP DATA - SUPPLEMENTAL TIME STEPS

Time	Time step
0.0000E+00	0.0000E+00

 RADTRAD Version 3.03 (Spring 2001) run on 9/19/2005 at 16:24:59
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 Dose Output
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Exclusion Area Boundary (EAB) Doses:

Time (h) =	0.5000	Whole Body	Thyroid	TEDE
Delta dose (rem)		6.0073E-07	1.2050E-06	6.3957E-07
Accumulated dose (rem)		6.0073E-07	1.2050E-06	6.3957E-07

Low Population Zone (LPZ) Doses:

Time (h) =	0.5000	Whole Body	Thyroid	TEDE
Delta dose (rem)		1.0938E-07	2.1940E-07	1.1645E-07
Accumulated dose (rem)		1.0938E-07	2.1940E-07	1.1645E-07

Control Room (CR) Doses:

Time (h) =	0.5000	Whole Body	Thyroid	TEDE
Delta dose (rem)		2.2847E-08	3.5484E-07	3.4269E-08
Accumulated dose (rem)		2.2847E-08	3.5484E-07	3.4269E-08

Exclusion Area Boundary (EAB) Doses:

Time (h) =	2.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)		2.9702E-04	3.6231E-04	3.0879E-04
Accumulated dose (rem)		2.9762E-04	3.6351E-04	3.0943E-04

Low Population Zone (LPZ) Doses:

Time (h) =	2.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)		5.4080E-05	6.5967E-05	5.6224E-05
Accumulated dose (rem)		5.4189E-05	6.6187E-05	5.6340E-05

Control Room (CR) Doses:

Time (h) =	2.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)		3.3275E-05	2.9525E-04	4.2828E-05
Accumulated dose (rem)		3.3298E-05	2.9560E-04	4.2862E-05

Exclusion Area Boundary (EAB) Doses:

Time (h) =	8.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)		2.4239E-02	4.9014E-02	2.5810E-02
Accumulated dose (rem)		2.4536E-02	4.9377E-02	2.6119E-02

Low Population Zone (LPZ) Doses:

Time (h) =	8.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)		4.4133E-03	8.9242E-03	4.6993E-03
Accumulated dose (rem)		4.4675E-03	8.9903E-03	4.7557E-03

Control Room (CR) Doses:

Time (h) =	8.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)		7.3971E-03	6.3995E-02	9.4456E-03
Accumulated dose (rem)		7.4304E-03	6.4291E-02	9.4884E-03

Exclusion Area Boundary (EAB) Doses:

Time (h) =	24.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)		1.4418E-01	4.8943E-01	1.5947E-01
Accumulated dose (rem)		1.6872E-01	5.3881E-01	1.8559E-01

Low Population Zone (LPZ) Doses:

Time (h) =	24.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)		1.8589E-02	6.3103E-02	2.0561E-02
Accumulated dose (rem)		2.3057E-02	7.2093E-02	2.5317E-02

Control Room (CR) Doses:

Time (h) =	24.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)		3.3794E-02	6.0816E-01	5.2789E-02
Accumulated dose (rem)		4.1225E-02	6.7245E-01	6.2278E-02

Exclusion Area Boundary (EAB) Doses:

Time (h) =	48.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)		0.0000E+00	0.0000E+00	0.0000E+00
Accumulated dose (rem)		1.6872E-01	5.3881E-01	1.8559E-01

Low Population Zone (LPZ) Doses:

Time (h) =	48.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)		7.7165E-03	6.6840E-02	9.7812E-03
Accumulated dose (rem)		3.0773E-02	1.3893E-01	3.5098E-02

Control Room (CR) Doses:

Time (h) =	48.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)		1.5150E-02	4.3844E-01	2.8689E-02
Accumulated dose (rem)		5.6374E-02	1.1109E+00	9.0966E-02

Exclusion Area Boundary (EAB) Doses:

Time (h) =	72.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)		0.0000E+00	0.0000E+00	0.0000E+00
Accumulated dose (rem)		1.6872E-01	5.3881E-01	1.8559E-01

Low Population Zone (LPZ) Doses:

Time (h) = 72.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)	8.2960E-03	8.9201E-02	1.1036E-02
Accumulated dose (rem)	3.9069E-02	2.2813E-01	4.6134E-02

Control Room (CR) Doses:

Time (h) = 72.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)	1.4223E-02	5.6005E-01	3.1420E-02
Accumulated dose (rem)	7.0598E-02	1.6709E+00	1.2239E-01

Exclusion Area Boundary (EAB) Doses:

Time (h) = 96.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)	0.0000E+00	0.0000E+00	0.0000E+00
Accumulated dose (rem)	1.6872E-01	5.3881E-01	1.8559E-01

Low Population Zone (LPZ) Doses:

Time (h) = 96.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)	9.3376E-03	1.0653E-01	1.2601E-02
Accumulated dose (rem)	4.8407E-02	3.3467E-01	5.8735E-02

Control Room (CR) Doses:

Time (h) = 96.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)	1.6210E-02	6.7103E-01	3.6757E-02
Accumulated dose (rem)	8.6808E-02	2.3420E+00	1.5914E-01

Exclusion Area Boundary (EAB) Doses:

Time (h) = 120.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)	0.0000E+00	0.0000E+00	0.0000E+00
Accumulated dose (rem)	1.6872E-01	5.3881E-01	1.8559E-01

Low Population Zone (LPZ) Doses:

Time (h) = 120.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)	3.3936E-03	4.0164E-02	4.6219E-03
Accumulated dose (rem)	5.1801E-02	3.7483E-01	6.3357E-02

Control Room (CR) Doses:

Time (h) = 120.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)	8.9585E-03	3.7276E-01	2.0355E-02
Accumulated dose (rem)	9.5766E-02	2.7147E+00	1.7950E-01

Exclusion Area Boundary (EAB) Doses:

Time (h) = 168.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)	0.0000E+00	0.0000E+00	0.0000E+00
Accumulated dose (rem)	1.6872E-01	5.3881E-01	1.8559E-01

Low Population Zone (LPZ) Doses:

Time (h) = 168.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)	6.9955E-03	8.7720E-02	9.6752E-03
Accumulated dose (rem)	5.8796E-02	4.6255E-01	7.3032E-02

Control Room (CR) Doses:

Time (h) = 168.0000 Whole Body Thyroid TEDE
 Delta dose (rem) 1.7875E-02 8.0552E-01 4.2475E-02
 Accumulated dose (rem) 1.1364E-01 3.5202E+00 2.2197E-01

Exclusion Area Boundary (EAB) Doses:

Time (h) = 336.0000 Whole Body Thyroid TEDE
 Delta dose (rem) 0.0000E+00 0.0000E+00 0.0000E+00
 Accumulated dose (rem) 1.6872E-01 5.3881E-01 1.8559E-01

Low Population Zone (LPZ) Doses:

Time (h) = 336.0000 Whole Body Thyroid TEDE
 Delta dose (rem) 2.0880E-02 3.1590E-01 3.0520E-02
 Accumulated dose (rem) 7.9676E-02 7.7845E-01 1.0355E-01

Control Room (CR) Doses:

Time (h) = 336.0000 Whole Body Thyroid TEDE
 Delta dose (rem) 5.3707E-02 2.9068E+00 1.4239E-01
 Accumulated dose (rem) 1.6735E-01 6.4270E+00 3.6437E-01

Exclusion Area Boundary (EAB) Doses:

Time (h) = 720.0000 Whole Body Thyroid TEDE
 Delta dose (rem) 0.0000E+00 0.0000E+00 0.0000E+00
 Accumulated dose (rem) 1.6872E-01 5.3881E-01 1.8559E-01

Low Population Zone (LPZ) Doses:

Time (h) = 720.0000 Whole Body Thyroid TEDE
 Delta dose (rem) 1.8348E-02 4.3116E-01 3.1502E-02
 Accumulated dose (rem) 9.8024E-02 1.2096E+00 1.3505E-01

Control Room (CR) Doses:

Time (h) = 720.0000 Whole Body Thyroid TEDE
 Delta dose (rem) 4.7351E-02 3.9733E+00 1.6855E-01
 Accumulated dose (rem) 2.1470E-01 1.0400E+01 5.3292E-01

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 I-131 Summary
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Time (hr)	Containment	(Node 1) Inboard MSL	(Node 1) Inboard MSL
	I-131 (Curies)	I-131 (Curies)	I-131 (Curies)
0.000	5.2640E+03	5.7294E-07	3.7493E-13
0.401	3.3308E+06	2.8828E-01	2.6828E-10
0.500	4.0234E+06	4.4412E-01	3.3374E-10
0.800	7.9873E+06	1.2176E+00	6.6653E-10
1.100	1.1677E+07	2.4716E+00	9.9740E-10
1.400	1.5110E+07	4.1722E+00	1.3264E-09
1.700	1.8302E+07	6.2882E+00	1.6537E-09
2.000	2.1269E+07	8.7901E+00	1.9792E-09
2.300	1.6051E+07	1.0145E+01	1.1934E-09
2.600	1.2203E+07	1.1393E+01	1.1818E-09
2.900	9.3660E+06	1.2544E+01	1.1729E-09
3.200	7.2733E+06	1.3609E+01	1.1660E-09

3.500	5.7299E+06	1.4596E+01	1.1606E-09
3.800	4.5914E+06	1.5513E+01	1.1562E-09
4.100	3.7515E+06	1.6364E+01	1.1526E-09
4.400	3.1318E+06	1.7156E+01	1.1496E-09
4.700	2.6745E+06	1.7892E+01	1.1470E-09
5.000	2.3368E+06	1.8578E+01	1.1447E-09
5.300	2.1739E+06	1.9216E+01	1.1429E-09
5.600	2.0386E+06	1.9811E+01	1.1411E-09
5.900	1.9261E+06	2.0365E+01	1.1394E-09
6.200	1.8326E+06	2.0881E+01	1.1378E-09
6.500	1.7547E+06	2.1362E+01	1.1362E-09
6.800	1.6899E+06	2.1809E+01	1.1347E-09
7.100	1.6358E+06	2.2226E+01	1.1331E-09
7.400	1.5907E+06	2.2613E+01	1.1316E-09
7.700	1.5530E+06	2.2973E+01	1.1301E-09
8.000	1.5215E+06	2.3308E+01	1.1287E-09
8.300	1.4951E+06	2.3619E+01	1.1272E-09
8.600	1.4754E+06	2.3908E+01	1.1258E-09
8.900	1.4584E+06	2.4176E+01	1.1244E-09
9.200	1.4437E+06	2.4425E+01	1.1230E-09
9.500	1.4310E+06	2.4656E+01	1.1216E-09
9.800	1.4199E+06	2.4870E+01	1.1202E-09
10.100	1.4103E+06	2.5067E+01	1.1188E-09
10.400	1.4018E+06	2.5250E+01	1.1174E-09
24.000	1.2895E+06	2.6741E+01	1.0568E-09
48.000	1.1754E+06	2.4150E+01	9.3632E-10
72.000	1.0714E+06	2.1998E+01	8.5343E-10
96.000	9.7667E+05	2.0052E+01	7.7795E-10
120.000	8.9030E+05	1.8278E+01	7.0687E-10
168.000	7.3978E+05	1.5188E+01	5.8737E-10
336.000	3.8690E+05	7.9432E+00	3.0719E-10
720.000	8.7935E+04	1.8053E+00	6.9818E-11

Time (hr)	(Node 2) Outboard MSL	(Node 2) Outboard MSL	Condenser
	I-131 (Curies)	I-131 (Curies)	I-131 (Curies)
0.000	2.2962E-11	5.8149E-07	1.9599E-11
0.401	8.2770E-03	2.9394E-01	7.3375E-03
0.500	1.5864E-02	4.5335E-01	1.4193E-02
0.800	6.5298E-02	1.2465E+00	5.9963E-02
1.100	1.7686E-01	2.5372E+00	1.6639E-01
1.400	3.7688E-01	4.2956E+00	3.6331E-01
1.700	6.8836E-01	6.4934E+00	6.8011E-01
2.000	1.1313E+00	9.1040E+00	1.1456E+00
2.300	1.6772E+00	1.0567E+01	1.7478E+00
2.600	2.2789E+00	1.1929E+01	2.4534E+00
2.900	2.9275E+00	1.3201E+01	3.2596E+00
3.200	3.6148E+00	1.4391E+01	4.1634E+00
3.500	4.3337E+00	1.5507E+01	5.1622E+00
3.800	5.0780E+00	1.6555E+01	6.2531E+00
4.100	5.8423E+00	1.7539E+01	7.4335E+00
4.400	6.6215E+00	1.8464E+01	8.7008E+00
4.700	7.4114E+00	1.9335E+01	1.0052E+01
5.000	8.2080E+00	2.0155E+01	1.1485E+01
5.300	9.0080E+00	2.0927E+01	1.2997E+01
5.600	9.8083E+00	2.1654E+01	1.4585E+01
5.900	1.0606E+01	2.2339E+01	1.6246E+01
6.200	1.1399E+01	2.2985E+01	1.7979E+01
6.500	1.2186E+01	2.3593E+01	1.9780E+01
6.800	1.2963E+01	2.4165E+01	2.1647E+01
7.100	1.3730E+01	2.4704E+01	2.3578E+01

7.400	1.4486E+01	2.5211E+01	2.5570E+01
7.700	1.5229E+01	2.5688E+01	2.7620E+01
8.000	1.5957E+01	2.6137E+01	2.9727E+01
8.300	1.6671E+01	2.6559E+01	3.1887E+01
8.600	1.7369E+01	2.6956E+01	3.4100E+01
8.900	1.8052E+01	2.7330E+01	3.6361E+01
9.200	1.8717E+01	2.7680E+01	3.8670E+01
9.500	1.9365E+01	2.8010E+01	4.1024E+01
9.800	1.9996E+01	2.8319E+01	4.3421E+01
10.100	2.0610E+01	2.8609E+01	4.5859E+01
10.400	2.1206E+01	2.8882E+01	4.8337E+01
24.000	3.3603E+01	3.2071E+01	1.7915E+02
48.000	3.6564E+01	3.2921E+01	2.8221E+02
72.000	3.4124E+01	3.0428E+01	3.6782E+02
96.000	3.1217E+01	2.7785E+01	4.3238E+02
120.000	3.5305E+01	3.1647E+01	4.6584E+02
168.000	3.1102E+01	2.7622E+01	5.1618E+02
336.000	1.6327E+01	1.4478E+01	4.6695E+02
720.000	3.7108E+00	3.2905E+00	1.6710E+02

Time (hr)	Environment I-131 (Curies)	Control Room I-131 (Curies)	Hold I-131 (Curies)
0.000	1.0924E-17	1.0641E-20	3.0465E-04
0.401	2.9556E-06	2.5904E-09	1.4535E+02
0.500	7.1285E-06	6.0937E-09	2.2112E+02
0.800	4.7187E-05	3.7554E-08	5.9764E+02
1.100	1.7583E-04	1.3123E-07	1.2127E+03
1.400	4.8408E-04	3.3988E-07	2.0494E+03
1.700	1.0986E-03	7.2702E-07	3.0920E+03
2.000	2.1811E-03	1.3627E-06	4.3258E+03
2.300	3.9121E-03	1.9583E-06	5.4786E+03
2.600	6.4304E-03	2.8288E-06	6.3492E+03
2.900	9.8589E-03	3.9554E-06	7.0116E+03
3.200	1.4317E-02	5.3236E-06	7.5206E+03
3.500	1.9920E-02	6.9218E-06	7.9163E+03
3.800	2.6782E-02	8.7402E-06	8.2285E+03
4.100	3.5010E-02	1.0771E-05	8.4790E+03
4.400	4.4712E-02	1.3005E-05	8.6840E+03
4.700	5.5991E-02	1.5438E-05	8.8554E+03
5.000	6.8945E-02	1.8061E-05	9.0020E+03
5.300	8.3672E-02	2.0869E-05	9.1332E+03
5.600	1.0027E-01	2.3857E-05	9.2549E+03
5.900	1.1881E-01	2.7017E-05	9.3688E+03
6.200	1.3941E-01	3.0344E-05	9.4762E+03
6.500	1.6213E-01	3.3833E-05	9.5781E+03
6.800	1.8705E-01	3.7478E-05	9.6755E+03
7.100	2.1427E-01	4.1274E-05	9.7690E+03
7.400	2.4384E-01	4.5214E-05	9.8594E+03
7.700	2.7585E-01	4.9294E-05	9.9470E+03
8.000	3.1036E-01	5.3509E-05	1.0032E+04
8.300	3.4744E-01	4.4309E-05	1.0116E+04
8.600	3.8715E-01	3.8834E-05	1.0198E+04
8.900	4.2955E-01	3.5845E-05	1.0279E+04
9.200	4.7470E-01	3.4518E-05	1.0358E+04
9.500	5.2266E-01	3.4305E-05	1.0437E+04
9.800	5.7348E-01	3.4845E-05	1.0515E+04
10.100	6.2721E-01	3.5895E-05	1.0592E+04
10.400	6.8390E-01	3.7296E-05	1.0669E+04
24.000	6.7946E+00	1.4609E-04	1.3846E+04
48.000	1.9054E+01	8.2735E-05	1.5656E+04

72.000	3.6370E+01	1.0831E-04	1.7053E+04
96.000	5.7655E+01	1.2763E-04	1.8096E+04
120.000	8.1422E+01	1.0282E-04	1.8835E+04
168.000	1.3380E+02	1.1409E-04	1.9576E+04
336.000	3.2333E+02	1.0344E-04	1.7631E+04
720.000	5.8214E+02	3.7059E-05	8.1416E+03

 Cumulative Dose Summary
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Time (hr)	Exclusion Area Bounda		Low Population Zone (Control Room (CR)	
	Thyroid (rem)	TEDE (rem)	Thyroid (rem)	TEDE (rem)	Thyroid (rem)	TEDE (rem)
0.000	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00
0.401	5.0015E-07	2.7045E-07	9.1064E-08	4.9242E-08	1.2477E-07	1.2107E-08
0.500	1.2050E-06	6.3957E-07	2.1940E-07	1.1645E-07	3.5484E-07	3.4269E-08
0.800	7.9514E-06	4.3251E-06	1.4478E-06	7.8749E-07	3.3727E-06	3.2986E-07
1.100	2.9545E-05	1.9014E-05	5.3795E-06	3.4620E-06	1.5830E-05	1.7083E-06
1.400	8.1118E-05	6.0178E-05	1.4770E-05	1.0957E-05	5.1610E-05	6.2859E-06
1.700	1.8359E-04	1.4879E-04	3.3428E-05	2.7091E-05	1.3374E-04	1.8006E-05
2.000	3.6351E-04	3.0943E-04	6.6187E-05	5.6340E-05	2.9560E-04	4.2862E-05
2.300	6.5025E-04	5.6588E-04	1.1839E-04	1.0303E-04	5.5395E-04	8.4891E-05
2.600	1.0660E-03	9.2991E-04	1.9410E-04	1.6931E-04	9.2683E-04	1.4783E-04
2.900	1.6302E-03	1.4077E-03	2.9682E-04	2.5631E-04	1.4550E-03	2.3828E-04
3.200	2.3614E-03	2.0031E-03	4.2995E-04	3.6471E-04	2.1763E-03	3.6224E-04
3.500	3.2774E-03	2.7178E-03	5.9674E-04	4.9484E-04	3.1261E-03	5.2505E-04
3.800	4.3955E-03	3.5519E-03	8.0031E-04	6.4672E-04	4.3379E-03	7.3137E-04
4.100	5.7321E-03	4.5045E-03	1.0437E-03	8.2017E-04	5.8433E-03	9.8520E-04
4.400	7.3031E-03	5.5735E-03	1.3297E-03	1.0148E-03	7.6728E-03	1.2899E-03
4.700	9.1237E-03	6.7560E-03	1.6612E-03	1.2301E-03	9.8552E-03	1.6483E-03
5.000	1.1209E-02	8.0486E-03	2.0408E-03	1.4654E-03	1.2418E-02	2.0627E-03
5.300	1.3572E-02	9.4475E-03	2.4710E-03	1.7201E-03	1.5388E-02	2.5347E-03
5.600	1.6226E-02	1.0949E-02	2.9544E-03	1.9935E-03	1.8791E-02	3.0657E-03
5.900	1.9185E-02	1.2548E-02	3.4931E-03	2.2846E-03	2.2651E-02	3.6567E-03
6.200	2.2461E-02	1.4240E-02	4.0895E-03	2.5928E-03	2.6990E-02	4.3081E-03
6.500	2.6064E-02	1.6022E-02	4.7457E-03	2.9172E-03	3.1832E-02	5.0204E-03
6.800	3.0008E-02	1.7888E-02	5.4636E-03	3.2570E-03	3.7198E-02	5.7935E-03
7.100	3.4301E-02	1.9835E-02	6.2453E-03	3.6115E-03	4.3108E-02	6.6273E-03
7.400	3.8954E-02	2.1859E-02	7.0925E-03	3.9800E-03	4.9581E-02	7.5214E-03
7.700	4.3976E-02	2.3955E-02	8.0070E-03	4.3616E-03	5.6636E-02	8.4753E-03
8.000	4.9377E-02	2.6119E-02	8.9903E-03	4.7557E-03	6.4291E-02	9.4884E-03
8.300	5.2354E-02	2.8259E-02	9.3741E-03	5.0316E-03	7.1507E-02	1.0478E-02
8.600	5.5534E-02	3.0455E-02	9.7841E-03	5.3147E-03	7.7635E-02	1.1381E-02
8.900	5.8921E-02	3.2703E-02	1.0221E-02	5.6045E-03	8.3132E-02	1.2222E-02
9.200	6.2519E-02	3.5000E-02	1.0685E-02	5.9007E-03	8.8306E-02	1.3019E-02
9.500	6.6331E-02	3.7343E-02	1.1176E-02	6.2028E-03	9.3357E-02	1.3785E-02
9.800	7.0361E-02	3.9730E-02	1.1696E-02	6.5105E-03	9.8425E-02	1.4531E-02
10.100	7.4612E-02	4.2157E-02	1.2244E-02	6.8235E-03	1.0360E-01	1.5264E-02
10.400	7.9086E-02	4.4623E-02	1.2821E-02	7.1414E-03	1.0894E-01	1.5989E-02
24.000	5.3881E-01	1.8559E-01	7.2093E-02	2.5317E-02	6.7245E-01	6.2278E-02
48.000	5.3881E-01	1.8559E-01	1.3893E-01	3.5098E-02	1.1109E+00	9.0966E-02
72.000	5.3881E-01	1.8559E-01	2.2813E-01	4.6134E-02	1.6709E+00	1.2239E-01
96.000	5.3881E-01	1.8559E-01	3.3467E-01	5.8735E-02	2.3420E+00	1.5914E-01
120.000	5.3881E-01	1.8559E-01	3.7483E-01	6.3357E-02	2.7147E+00	1.7950E-01
168.000	5.3881E-01	1.8559E-01	4.6255E-01	7.3032E-02	3.5202E+00	2.2197E-01
336.000	5.3881E-01	1.8559E-01	7.7845E-01	1.0355E-01	6.4270E+00	3.6437E-01
720.000	5.3881E-01	1.8559E-01	1.2096E+00	1.3505E-01	1.0400E+01	5.3292E-01

#####

Worst Two-Hour Doses

#####

Exclusion Area Boundary (EAB)

Time (hr)	Whole Body (rem)	Thyroid (rem)	TEDE (rem)
10.4	1.8620E-02	6.7606E-02	2.0731E-02

RADTRAD Version 3.03 (Spring 2001) run on 9/19/2005 at 16:47:56
#####

File information
#####

Plant file = c:\RESUP2-A.psf
Inventory file = c:\program files\radtrad3-03\defaults\limerick ast source terms.nif
Release file = c:\program files\radtrad3-03\defaults\bwr_i.rft
Dose Conversion file = c:\program files\radtrad3-03\defaults\fgr11&12.inp

```
#####      #####      #####      # # #      #####      # # #####
# # #      # # #      # # #      # # #      # # #      # # #
# # #      # # #      # # #      # # #      # # #      # # #
#####      #####      #####      # # #      #####      # # #
# # #      # # #      # # #      # # #      # # #      # # #
# # #      # # #      # # #      # # #      # # #      # # #
# # #      # # #      # # #      # # #      # # #      # # #
# # #      # # #      # # #      # # #      # # #      # # #
```

Radtrad 3.03 4/15/2001
LGS LOCA 200scfh Line A MSIV Leak - Resuspension Only - Leak to Condenser - MSL
Pipe Deposition Credit (24-Hr 20-Group Aerosol Settling with Projected Area
Assumption; 2-Hr Mixing Delay) - 95% CREFAS Charcoal Eff. No Delay - Rad Mode
275cfm Control Room In

Nuclide Inventory File:
c:\program files\radtrad3-03\defaults\limerick ast source terms.nif

Plant Power Level:
3.5270E+03

Compartment:
10

Compartment 1:
Containment

3
3.7907E+05
0
0
0
1
0

Compartment 2:
MSL A Inboard - Airborne

3
2.5800E+02
0
0
0
0
0

Compartment 3:
Environment

2

0.0000E+00

0
0
0
0
0

Compartment 4:

Control Room

1

1.2600E+05

0
0
1
0
0

Compartment 5:

MSL A Outboard - Airborne

3

1.1820E+03

0
0
0
0
0

Compartment 6:

MSL A Inboard - Surface

3

1.0000E+00

0
0
0
0
0

Compartment 7:

MSL A Outboard - Surface

3

1.0000E+00

0
0
0
0
0

Compartment 8:

Hold (By Surface Fixation)

3

1.0000E+00

0
0
0
0
0

Compartment 9:

Condenser - Airborne

3

5.4746E+04

0
0
0
0
0

Compartment 10:

Condenser - Surface

3

1.0000E+00

0

0

0

0

0

Pathways:

15

Pathway 1:

Filtered Environment to Control Room (Intake)

3

4

2

Pathway 2:

Unfiltered Environment to Control Room (Inleakage)

3

4

2

Pathway 3:

Control Room to Environment (Exhaust)

4

3

2

Pathway 4:

(Aerosol Transport 1) MSL A Inboard - Airborne to MSL A Outboard - Airborne

2

5

2

Pathway 5:

(Deposition 1) MSL A Inboard - Airborne to MSL A Inboard - Surface

2

6

4

Pathway 6:

(Resuspension 1) MSL A Inboard - Surface to Environment

6

3

4

Pathway 7:

(Surface Fixation 1) MSL A Inboard - Surface to Hold (By Surface Fixation)

6

8

4

Pathway 8:

(Deposition 2) MSL A Outboard - Airborne to MSL A Outboard - Surface

5

7

4

Pathway 9:

(Resuspension 2) MSL A Outboard - Surface to Environment

7

3

4

Pathway 10:

(Surface Fixation 2) MSL A Outboard - Surface to Hold (By Surface Fixation)

7

8

4

Pathway 11:

(Aerosol Transport 2) MSL A Outboard - Airborne to Condenser - Airborne

5

9

2

Pathway 12:

(Deposition 3) Condenser - Airborne to Condenser - Surface

9

10

4

Pathway 13:

(Resuspension 3) Condenser - Surface to Environment

10

3

4

Pathway 14:

(Surface Fixation 3) Condenser - Surface to Hold (By Surface Fixation)

10

8

4

Pathway 15:

Containment to MSL A Inboard - Airborne

1

2

2

End of Plant Model File

Scenario Description Name:

Plant Model Filename:

Source Term:

1

1 1.0000E+00

c:\program files\radtrad3-03\defaults\fgr11&12.inp

c:\program files\radtrad3-03\defaults\bwr_i.rft

0.0000E+00

1

9.5000E-01 4.8500E-02 1.5000E-03 1.0000E+00

Overlying Pool:

0

0.0000E+00

0

0

0

0

Compartments:

10

Compartment 1:

0

1

0

0

0

0

0

3

3

1.0000E+01

1

1
 0.0000E+00 0.0000E+00

Compartment 2:

0
 1
 0
 0
 0
 0
 0
 0
 0

Compartment 3:

0
 1
 0
 0
 0
 0
 0
 0
 0

Compartment 4:

0
 1
 0
 0
 0
 0
 1

2.1750E+03

3

0.0000E+00	9.9000E+01	9.5000E+01	9.5000E+01
3.3330E-01	9.9000E+01	9.5000E+01	9.5000E+01
7.2000E+02	0.0000E+00	0.0000E+00	0.0000E+00

0
 0

Compartment 5:

0
 1
 0
 0
 0
 0
 0
 0
 0

Compartment 6:

0
 1
 0
 0
 0
 0
 0
 0
 0

Compartment 7:

0
 1

0
0
0
0
0
0
0
0

Compartment 8:

0
1
0
0
0
0
0
0
0

Compartment 9:

0
1
0
0
0
0
0
0
0

Compartment 10:

0
1
0
0
0
0
0
0
0

Pathways:

15

Pathway 1:

0
0
0
0
0
1
3
0
0
0
0
0
0
0

0.0000E+00	5.2500E+02	9.9000E+01	9.5000E+01	9.5000E+01
5.0000E-01	5.2500E+02	9.9000E+01	9.5000E+01	9.5000E+01
7.2000E+02	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00

Pathway 2:

0
0
0

0
 0
 1
 2
 0.0000E+00 2.7500E+02 0.0000E+00 0.0000E+00 0.0000E+00
 7.2000E+02 0.0000E+00 0.0000E+00 0.0000E+00 0.0000E+00

0
 0
 0
 0
 0
 0

Pathway 3:

0
 0
 0
 0
 0
 1
 3
 0.0000E+00 8.0000E+02 1.0000E+02 1.0000E+02 1.0000E+02
 5.0000E-01 8.0000E+02 1.0000E+02 1.0000E+02 1.0000E+02
 7.2000E+02 0.0000E+00 0.0000E+00 0.0000E+00 0.0000E+00

0
 0
 0
 0
 0
 0

Pathway 4:

0
 0
 0
 0
 0
 1
 5
 0.0000E+00 9.3060E-01 1.0000E+02 0.0000E+00 1.0000E+02
 2.0000E+00 9.3060E-01 1.0000E+02 0.0000E+00 1.0000E+02
 2.4000E+01 5.1270E-01 1.0000E+02 0.0000E+00 1.0000E+02
 9.6000E+01 5.1270E-01 1.0000E+02 0.0000E+00 1.0000E+02
 7.2000E+02 0.0000E+00 0.0000E+00 0.0000E+00 0.0000E+00

0
 0
 0
 0
 0
 0

Pathway 5:

0
 0
 0
 0
 0
 0
 0
 0
 0
 0
 1

4
 0.0000E+00 3.1420E+02
 2.4000E+01 7.0350E+02
 9.6000E+01 4.4780E+03
 7.2000E+02 0.0000E+00

0
 Pathway 6:

0
 0
 0
 0
 0
 0
 0
 0
 0
 0
 1
 4
 0.0000E+00 3.5580E-02
 2.4000E+01 2.9950E-02
 9.6000E+01 2.0170E-02
 7.2000E+02 0.0000E+00
 0

Pathway 7:

0
 0
 0
 0
 0
 0
 0
 0
 0
 0
 0
 1
 4
 0.0000E+00 1.5960E-02
 2.4000E+01 1.1360E-02
 9.6000E+01 5.2000E-03
 7.2000E+02 0.0000E+00
 0

Pathway 8:

0
 0
 0
 0
 0
 0
 0
 0
 0
 0
 0
 1
 4
 0.0000E+00 3.1417E+02
 2.4000E+01 7.0352E+02
 9.6000E+01 4.4779E+03
 7.2000E+02 0.0000E+00
 0

Pathway 9:

0
 0
 0
 0
 0
 0
 0
 0
 0
 0
 1
 4
 0.0000E+00 3.5580E-02
 2.4000E+01 2.9950E-02
 9.6000E+01 2.0170E-02
 7.2000E+02 0.0000E+00
 0

Pathway 10:

0
 0
 0
 0
 0
 0
 0
 0
 0
 0
 1
 4
 0.0000E+00 1.5960E-02
 2.4000E+01 1.1360E-02
 9.6000E+01 5.2000E-03
 7.2000E+02 0.0000E+00
 0

Pathway 11:

0
 0
 0
 0
 0
 1
 4
 0.0000E+00 3.1880E+00 1.0000E+02 0.0000E+00 1.0000E+02
 2.4000E+01 1.5130E+00 1.0000E+02 0.0000E+00 1.0000E+02
 9.6000E+01 1.1480E+00 1.0000E+02 0.0000E+00 1.0000E+02
 7.2000E+02 0.0000E+00 0.0000E+00 0.0000E+00 0.0000E+00
 0
 0
 0
 0
 0
 0
 0

Pathway 12:

0
 0
 0
 0
 0

0
 0
 0
 0
 0
 1
 4
 0.0000E+00 5.2212E+03
 2.4000E+01 5.2212E+03
 9.6000E+01 5.2212E+03
 7.2000E+02 0.0000E+00

Pathway 13:

0
 0
 0
 0
 0
 0
 0
 0
 0
 0
 1
 4
 0.0000E+00 1.6090E-02
 2.4000E+01 1.6090E-02
 9.6000E+01 1.6090E-02
 7.2000E+02 0.0000E+00

Pathway 14:

0
 0
 0
 0
 0
 0
 0
 0
 0
 0
 1
 4
 0.0000E+00 3.3300E-03
 2.4000E+01 3.3300E-03
 9.6000E+01 3.3300E-03
 7.2000E+02 0.0000E+00

Pathway 15:

0
 0
 0
 0
 0
 1
 5
 0.0000E+00 1.5244E+00 1.0000E+02 0.0000E+00 1.0000E+02
 2.0000E+00 9.3060E-01 1.0000E+02 0.0000E+00 1.0000E+02
 2.4000E+01 5.1270E-01 1.0000E+02 0.0000E+00 1.0000E+02
 9.6000E+01 5.1270E-01 1.0000E+02 0.0000E+00 1.0000E+02

7.2000E+02 0.0000E+00 0.0000E+00 0.0000E+00 0.0000E+00
 0
 0
 0
 0
 0
 0

Dose Locations:

3

Location 1:

Control Room (CR)

4
 0
 1
 2
 0.0000E+00 3.5000E-04
 7.2000E+02 0.0000E+00
 1
 4
 0.0000E+00 1.0000E+00
 2.4000E+01 6.0000E-01
 9.6000E+01 4.0000E-01
 7.2000E+02 0.0000E+00

Location 2:

Exclusion Area Boundary (EAB)

3
 1
 2
 0.0000E+00 3.1800E-04
 2.4000E+01 0.0000E+00
 1
 4
 0.0000E+00 3.5000E-04
 8.0000E+00 1.8000E-04
 2.4000E+01 2.3000E-04
 7.2000E+02 0.0000E+00
 0

Location 3:

Low Population Zone (LPZ)

3
 1
 10
 0.0000E+00 5.7900E-05
 8.0000E+00 4.1000E-05
 2.4000E+01 1.9500E-05
 4.8000E+01 1.9500E-05
 7.2000E+01 1.9500E-05
 9.6000E+01 6.6800E-06
 1.2000E+02 6.6800E-06
 1.6800E+02 6.6800E-06
 3.3600E+02 6.6800E-06
 7.2000E+02 0.0000E+00
 1
 4
 0.0000E+00 3.5000E-04
 8.0000E+00 1.8000E-04
 2.4000E+01 2.3000E-04
 7.2000E+02 0.0000E+00
 0

Effective Volume Location:

1
6
0.0000E+00 6.8800E-03
2.0000E+00 5.1700E-03
8.0000E+00 2.0400E-03
2.4000E+01 1.2900E-03
9.6000E+01 9.6300E-04
7.2000E+02 0.0000E+00

Simulation Parameters:

1
0.0000E+00 0.0000E+00

Output Filename:

C:\RESUP2-A.o0

1
1
1
0
0

End of Scenario File

RADTRAD Version 3.03 (Spring 2001) run on 9/19/2005 at 16:47:56
#####

Plant Description
#####

Number of Nuclides = 60

Inventory Power = 1.0000E+00 MWth
Plant Power Level = 3.5270E+03 MWth

Number of compartments = 10

Compartment information

Compartment number 1 (Source term fraction = 1.0000E+00
)

Name: Containment
Compartment volume = 3.7907E+05 (Cubic feet)
Compartment type is Normal
Removal devices within compartment:
Deposition

Pathways into and out of compartment 1
Exit Pathway Number 15: Containment to MSL A Inboard - Airborne

Compartment number 2
Name: MSL A Inboard - Airborne
Compartment volume = 2.5800E+02 (Cubic feet)
Compartment type is Normal
Pathways into and out of compartment 2

Inlet Pathway Number 15: Containment to MSL A Inboard - Airborne
Exit Pathway Number 4: (Aerosol Transport 1) MSL A Inboard - Airborne to
Exit Pathway Number 5: (Deposition 1) MSL A Inboard - Airborne to MSL A I

Compartment number 3
Name: Environment
Compartment type is Environment

Pathways into and out of compartment 3
Inlet Pathway Number 3: Control Room to Environment (Exhaust)
Inlet Pathway Number 6: (Resuspension 1) MSL A Inboard - Surface to Enviro
Inlet Pathway Number 9: (Resuspension 2) MSL A Outboard - Surface to Envi
Inlet Pathway Number 13: (Resuspension 3) Condenser - Surface to Environme
Exit Pathway Number 1: Filtered Environment to Control Room (Intake)
Exit Pathway Number 2: Unfiltered Environment to Control Room (Inleakage)

Compartment number 4
Name: Control Room
Compartment volume = 1.2600E+05 (Cubic feet)
Compartment type is Control Room
Removal devices within compartment:

Filter(s)
Pathways into and out of compartment 4
Inlet Pathway Number 1: Filtered Environment to Control Room (Intake)
Inlet Pathway Number 2: Unfiltered Environment to Control Room (Inleakage)
Exit Pathway Number 3: Control Room to Environment (Exhaust)

Compartment number 5

Name: MSL A Outboard - Airborne
Compartment volume = 1.1820E+03 (Cubic feet)
Compartment type is Normal
Pathways into and out of compartment 5
Inlet Pathway Number 4: (Aerosol Transport 1) MSL A Inboard - Airborne to
Exit Pathway Number 8: (Deposition 2) MSL A Outboard - Airborne to MSL A
Exit Pathway Number 11: (Aerosol Transport 2) MSL A Outboard - Airborne to

Compartment number 6
Name: MSL A Inboard - Surface
Compartment volume = 1.0000E+00 (Cubic feet)
Compartment type is Normal
Pathways into and out of compartment 6
Inlet Pathway Number 5: (Deposition 1) MSL A Inboard - Airborne to MSL A I
Exit Pathway Number 6: (Resuspension 1) MSL A Inboard - Surface to Enviro
Exit Pathway Number 7: (Surface Fixation 1) MSL A Inboard - Surface to Ho

Compartment number 7
Name: MSL A Outboard - Surface
Compartment volume = 1.0000E+00 (Cubic feet)
Compartment type is Normal
Pathways into and out of compartment 7
Inlet Pathway Number 8: (Deposition 2) MSL A Outboard - Airborne to MSL A
Exit Pathway Number 9: (Resuspension 2) MSL A Outboard - Surface to Envi
Exit Pathway Number 10: (Surface Fixation 2) MSL A Outboard - Surface to H

Compartment number 8
Name: Hold (By Surface Fixation)
Compartment volume = 1.0000E+00 (Cubic feet)
Compartment type is Normal
Pathways into and out of compartment 8
Inlet Pathway Number 7: (Surface Fixation 1) MSL A Inboard - Surface to Ho
Inlet Pathway Number 10: (Surface Fixation 2) MSL A Outboard - Surface to H
Inlet Pathway Number 14: (Surface Fixation 3) Condenser - Surface to Hold

Compartment number 9
Name: Condenser - Airborne
Compartment volume = 5.4746E+04 (Cubic feet)
Compartment type is Normal
Pathways into and out of compartment 9
Inlet Pathway Number 11: (Aerosol Transport 2) MSL A Outboard - Airborne to
Exit Pathway Number 12: (Deposition 3) Condenser - Airborne to Condenser -

Compartment number 10
Name: Condenser - Surface
Compartment volume = 1.0000E+00 (Cubic feet)
Compartment type is Normal
Pathways into and out of compartment 10
Inlet Pathway Number 12: (Deposition 3) Condenser - Airborne to Condenser -
Exit Pathway Number 13: (Resuspension 3) Condenser - Surface to Environme
Exit Pathway Number 14: (Surface Fixation 3) Condenser - Surface to Hold

Total number of pathways = 15

 RADTRAD Version 3.03 (Spring 2001) run on 9/19/2005 at 16:47:56
 #####

 Scenario Description
 #####

Radioactive Decay is enabled
 Calculation of Daughters is enabled

Release Fractions and Timings

	GAP	EARLY IN-VESEL	LATE RELEASE	RELEASE MASS
	0.500000 hr	1.5000 hrs	0.0000 hrs	(gm)
NOBLES	0.0000E+00	0.0000E+00	0.0000E+00	0.000E+00
IODINE	5.0000E-02	2.5000E-01	0.0000E+00	3.033E+02
CESIUM	0.0000E+00	0.0000E+00	0.0000E+00	0.000E+00
TELLURIUM	0.0000E+00	0.0000E+00	0.0000E+00	0.000E+00
STRONTIUM	0.0000E+00	0.0000E+00	0.0000E+00	0.000E+00
BARIUM	0.0000E+00	0.0000E+00	0.0000E+00	0.000E+00
RUTHENIUM	0.0000E+00	0.0000E+00	0.0000E+00	0.000E+00
CERIUM	0.0000E+00	0.0000E+00	0.0000E+00	0.000E+00
LANTHANUM	0.0000E+00	0.0000E+00	0.0000E+00	0.000E+00

Inventory Power = 3527. MWt

Nuclide Name	Group	Specific Inventory (Ci/MWt)	half life (s)	Whole Body DCF (Sv-m3/Bq-s)	Inhaled Thyroid (Sv/Bq)	Inhaled Effective (Sv/Bq)
I-131	2	2.687E+04	6.947E+05	1.820E-14	2.920E-07	8.890E-09
I-132	2	3.881E+04	8.280E+03	1.120E-13	1.740E-09	1.030E-10
I-133	2	5.556E+04	7.488E+04	2.940E-14	4.860E-08	1.580E-09
I-134	2	6.165E+04	3.156E+03	1.300E-13	2.880E-10	3.550E-11
I-135	2	5.192E+04	2.380E+04	8.294E-14	8.460E-09	3.320E-10

Nuclide	Daughter	Fraction	Daughter	Fraction	Daughter	Fraction
Kr-85m	Kr-85	0.21	none	0.00	none	0.00
Kr-87	Rb-87	1.00	none	0.00	none	0.00
Kr-88	Rb-88	1.00	none	0.00	none	0.00
Sr-90	Y-90	1.00	none	0.00	none	0.00
Sr-91	Y-91m	0.58	Y-91	0.42	none	0.00
Sr-92	Y-92	1.00	none	0.00	none	0.00
Y-93	Zr-93	1.00	none	0.00	none	0.00
Zr-95	Nb-95m	0.01	Nb-95	0.99	none	0.00
Zr-97	Nb-97m	0.95	Nb-97	0.05	none	0.00
Mo-99	Tc-99m	0.88	Tc-99	0.12	none	0.00
Tc-99m	Tc-99	1.00	none	0.00	none	0.00
Ru-103	Rh-103m	1.00	none	0.00	none	0.00
Ru-105	Rh-105	1.00	none	0.00	none	0.00
Ru-106	Rh-106	1.00	none	0.00	none	0.00
Sb-127	Te-127m	0.18	Te-127	0.82	none	0.00
Sb-129	Te-129m	0.22	Te-129	0.77	none	0.00
Te-127m	Te-127	0.98	none	0.00	none	0.00
Te-129	I-129	1.00	none	0.00	none	0.00
Te-129m	Te-129	0.65	I-129	0.35	none	0.00
Te-131m	Te-131	0.22	I-131	0.78	none	0.00
Te-132	I-132	1.00	none	0.00	none	0.00
I-131	Xe-131m	0.01	none	0.00	none	0.00
I-133	Xe-133m	0.03	Xe-133	0.97	none	0.00

I-135	Xe-135m	0.15	Xe-135	0.85	none	0.00
Xe-135	Cs-135	1.00	none	0.00	none	0.00
Cs-137	Ba-137m	0.95	none	0.00	none	0.00
Ba-140	La-140	1.00	none	0.00	none	0.00
La-141	Ce-141	1.00	none	0.00	none	0.00
Ce-143	Pr-143	1.00	none	0.00	none	0.00
Ce-144	Pr-144m	0.02	Pr-144	0.98	none	0.00
Nd-147	Pm-147	1.00	none	0.00	none	0.00
Np-239	Pu-239	1.00	none	0.00	none	0.00
Pu-238	U-234	1.00	none	0.00	none	0.00
Pu-239	U-235	1.00	none	0.00	none	0.00
Pu-240	U-236	1.00	none	0.00	none	0.00
Pu-241	U-237	0.00	Am-241	1.00	none	0.00
Am-241	Np-237	1.00	none	0.00	none	0.00
Cm-242	Pu-238	1.00	none	0.00	none	0.00
Cm-244	Pu-240	1.00	none	0.00	none	0.00

Iodine fractions

Aerosol	=	9.5000E-01
Elemental	=	4.8500E-02
Organic	=	1.5000E-03

COMPARTMENT DATA

Compartment number 1: Containment
 Natural Deposition (Powers' model): Aerosol data
 Reactor type: 3
 Percentile = 10 (%)

Natural Deposition: Elemental Removal Data
 Time (hr) Removal Coef. (hr⁻¹)
 0.0000E+00 0.0000E+00

Compartment number 2: MSL A Inboard - Airborne
 Compartment number 3: Environment
 Compartment number 4: Control Room

Compartment Filter Data

Time (hr)	Flow Rate (cfm)	Filter Efficiencies (%)		
		Aerosol	Elemental	Organic
0.0000E+00	2.1750E+03	9.9000E+01	9.5000E+01	9.5000E+01
3.3330E-01	2.1750E+03	9.9000E+01	9.5000E+01	9.5000E+01
7.2000E+02	2.1750E+03	0.0000E+00	0.0000E+00	0.0000E+00

Compartment number 5: MSL A Outboard - Airborne
 Compartment number 6: MSL A Inboard - Surface
 Compartment number 7: MSL A Outboard - Surface
 Compartment number 8: Hold (By Surface Fixation)
 Compartment number 9: Condenser - Airborne
 Compartment number 10: Condenser - Surface

PATHWAY DATA

Pathway number 1: Filtered Environment to Control Room (Intake)

Pathway Filter: Removal Data

Time (hr)	Flow Rate (cfm)	Filter Efficiencies (%)		
		Aerosol	Elemental	Organic
0.0000E+00	5.2500E+02	9.9000E+01	9.5000E+01	9.5000E+01
5.0000E-01	5.2500E+02	9.9000E+01	9.5000E+01	9.5000E+01
7.2000E+02	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00

Pathway number 2: Unfiltered Environment to Control Room (Inleakage)

Pathway Filter: Removal Data

Time (hr)	Flow Rate (cfm)	Filter Efficiencies (%)		
		Aerosol	Elemental	Organic
0.0000E+00	2.7500E+02	0.0000E+00	0.0000E+00	0.0000E+00
7.2000E+02	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00

Pathway number 3: Control Room to Environment (Exhaust)

Pathway Filter: Removal Data

Time (hr)	Flow Rate (cfm)	Filter Efficiencies (%)		
		Aerosol	Elemental	Organic
0.0000E+00	8.0000E+02	1.0000E+02	1.0000E+02	1.0000E+02
5.0000E-01	8.0000E+02	1.0000E+02	1.0000E+02	1.0000E+02
7.2000E+02	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00

Pathway number 4: (Aerosol Transport 1) MSL A Inboard - Airborne to

Pathway Filter: Removal Data

Time (hr)	Flow Rate (cfm)	Filter Efficiencies (%)		
		Aerosol	Elemental	Organic
0.0000E+00	9.3060E-01	1.0000E+02	0.0000E+00	1.0000E+02
2.0000E+00	9.3060E-01	1.0000E+02	0.0000E+00	1.0000E+02
2.4000E+01	5.1270E-01	1.0000E+02	0.0000E+00	1.0000E+02
9.6000E+01	5.1270E-01	1.0000E+02	0.0000E+00	1.0000E+02
7.2000E+02	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00

Pathway number 5: (Deposition 1) MSL A Inboard - Airborne to MSL A I

Convection Data

Time (hr)	Flow Rate (% / day)
0.0000E+00	3.1420E+02
2.4000E+01	7.0350E+02
9.6000E+01	4.4780E+03
7.2000E+02	0.0000E+00

Pathway number 6: (Resuspension 1) MSL A Inboard - Surface to Enviro

Convection Data

Time (hr)	Flow Rate (% / day)
0.0000E+00	3.5580E-02
2.4000E+01	2.9950E-02
9.6000E+01	2.0170E-02
7.2000E+02	0.0000E+00

Pathway number 7: (Surface Fixation 1) MSL A Inboard - Surface to Ho

Convection Data

Time (hr)	Flow Rate (% / day)
0.0000E+00	1.5960E-02
2.4000E+01	1.1360E-02
9.6000E+01	5.2000E-03
7.2000E+02	0.0000E+00

Pathway number 8: (Deposition 2) MSL A Outboard - Airborne to MSL A

Convection Data

Time (hr)	Flow Rate (% / day)
0.0000E+00	3.1417E+02
2.4000E+01	7.0352E+02
9.6000E+01	4.4779E+03
7.2000E+02	0.0000E+00

Pathway number 9: (Resuspension 2) MSL A Outboard - Surface to Envi

Convection Data

Time (hr)	Flow Rate (% / day)
0.0000E+00	3.5580E-02
2.4000E+01	2.9950E-02
9.6000E+01	2.0170E-02
7.2000E+02	0.0000E+00

Pathway number 10: (Surface Fixation 2) MSL A Outboard - Surface to H

Convection Data

Time (hr)	Flow Rate (% / day)
0.0000E+00	1.5960E-02
2.4000E+01	1.1360E-02
9.6000E+01	5.2000E-03
7.2000E+02	0.0000E+00

Pathway number 11: (Aerosol Transport 2) MSL A Outboard - Airborne to

Pathway Filter: Removal Data

Time (hr)	Flow Rate (cfm)	Filter Efficiencies (%)		
		Aerosol	Elemental	Organic
0.0000E+00	3.1880E+00	1.0000E+02	0.0000E+00	1.0000E+02
2.4000E+01	1.5130E+00	1.0000E+02	0.0000E+00	1.0000E+02
9.6000E+01	1.1480E+00	1.0000E+02	0.0000E+00	1.0000E+02
7.2000E+02	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00

Pathway number 12: (Deposition 3) Condenser - Airborne to Condenser -

Convection Data

Time (hr)	Flow Rate (% / day)
0.0000E+00	5.2212E+03
2.4000E+01	5.2212E+03
9.6000E+01	5.2212E+03
7.2000E+02	0.0000E+00

Pathway number 13: (Resuspension 3) Condenser - Surface to Environme

Convection Data

Time (hr)	Flow Rate (% / day)
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0.0000E+00	1.6090E-02
2.4000E+01	1.6090E-02
9.6000E+01	1.6090E-02
7.2000E+02	0.0000E+00

Pathway number 14: (Surface Fixation 3) Condenser - Surface to Hold

Convection Data

Time (hr)	Flow Rate (% / day)
0.0000E+00	3.3300E-03
2.4000E+01	3.3300E-03
9.6000E+01	3.3300E-03
7.2000E+02	0.0000E+00

Pathway number 15: Containment to MSL A Inboard - Airborne

Pathway Filter: Removal Data

Time (hr)	Flow Rate (cfm)	Filter Efficiencies (%)		
		Aerosol	Elemental	Organic
0.0000E+00	1.5244E+00	1.0000E+02	0.0000E+00	1.0000E+02
2.0000E+00	9.3060E-01	1.0000E+02	0.0000E+00	1.0000E+02
2.4000E+01	5.1270E-01	1.0000E+02	0.0000E+00	1.0000E+02
9.6000E+01	5.1270E-01	1.0000E+02	0.0000E+00	1.0000E+02
7.2000E+02	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00

LOCATION DATA

Location Control Room (CR) is in compartment 4

Location X/Q Data

Time (hr)	X/Q (s * m ⁻³)
0.0000E+00	6.8800E-03
2.0000E+00	5.1700E-03
8.0000E+00	2.0400E-03
2.4000E+01	1.2900E-03
9.6000E+01	9.6300E-04
7.2000E+02	0.0000E+00

Location Breathing Rate Data

Time (hr)	Breathing Rate (m ³ * sec ⁻¹)
0.0000E+00	3.5000E-04
7.2000E+02	0.0000E+00

Location Occupancy Factor Data

Time (hr)	Occupancy Factor
0.0000E+00	1.0000E+00
2.4000E+01	6.0000E-01
9.6000E+01	4.0000E-01
7.2000E+02	0.0000E+00

Location Exclusion Area Boundary (EAB) is in compartment 3

Location X/Q Data

Time (hr)	X/Q (s * m ⁻³)
0.0000E+00	3.1800E-04
2.4000E+01	0.0000E+00

Location Breathing Rate Data

Time (hr)	Breathing Rate (m ³ * sec ⁻¹)
0.0000E+00	3.5000E-04
8.0000E+00	1.8000E-04

2.4000E+01	2.3000E-04
7.2000E+02	0.0000E+00

Location Low Population Zone (LPZ) is in compartment 3

Location X/Q Data

Time (hr)	X/Q (s * m ⁻³)
0.0000E+00	5.7900E-05
8.0000E+00	4.1000E-05
2.4000E+01	1.9500E-05
4.8000E+01	1.9500E-05
7.2000E+01	1.9500E-05
9.6000E+01	6.6800E-06
1.2000E+02	6.6800E-06
1.6800E+02	6.6800E-06
3.3600E+02	6.6800E-06
7.2000E+02	0.0000E+00

Location Breathing Rate Data

Time (hr)	Breathing Rate (m ³ * sec ⁻¹)
0.0000E+00	3.5000E-04
8.0000E+00	1.8000E-04
2.4000E+01	2.3000E-04
7.2000E+02	0.0000E+00

USER SPECIFIED TIME STEP DATA - SUPPLEMENTAL TIME STEPS

Time	Time step
0.0000E+00	0.0000E+00

 RADTRAD Version 3.03 (Spring 2001) run on 9/19/2005 at 16:47:56
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 Dose Output
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Control Room (CR) Doses:

Time (h) =	0.3333	Whole Body	Thyroid	TEDE
Delta dose (rem)		7.9890E-13	3.9638E-09	1.2598E-10
Accumulated dose (rem)		7.9890E-13	3.9638E-09	1.2598E-10

Exclusion Area Boundary (EAB) Doses:

Time (h) =	0.3333	Whole Body	Thyroid	TEDE
Delta dose (rem)		8.2761E-11	1.8558E-08	6.6885E-10
Accumulated dose (rem)		8.2761E-11	1.8558E-08	6.6885E-10

Low Population Zone (LPZ) Doses:

Time (h) =	0.3333	Whole Body	Thyroid	TEDE
Delta dose (rem)		1.5069E-11	3.3790E-09	1.2178E-10
Accumulated dose (rem)		1.5069E-11	3.3790E-09	1.2178E-10

Control Room (CR) Doses:

Time (h) =	0.5000	Whole Body	Thyroid	TEDE
Delta dose (rem)		4.4397E-12	2.3284E-08	7.3910E-10
Accumulated dose (rem)		5.2386E-12	2.7248E-08	8.6508E-10

Exclusion Area Boundary (EAB) Doses:

Time (h) =	0.5000	Whole Body	Thyroid	TEDE
Delta dose (rem)		3.1470E-10	7.4886E-08	2.6776E-09
Accumulated dose (rem)		3.9746E-10	9.3444E-08	3.3465E-09

Low Population Zone (LPZ) Doses:

Time (h) =	0.5000	Whole Body	Thyroid	TEDE
Delta dose (rem)		5.7299E-11	1.3635E-08	4.8753E-10
Accumulated dose (rem)		7.2367E-11	1.7014E-08	6.0931E-10

Control Room (CR) Doses:

Time (h) =	2.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)		3.2016E-09	2.2669E-05	7.1519E-07
Accumulated dose (rem)		3.2068E-09	2.2697E-05	7.1606E-07

Exclusion Area Boundary (EAB) Doses:

Time (h) =	2.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)		8.4023E-08	2.7639E-05	9.5228E-07
Accumulated dose (rem)		8.4420E-08	2.7732E-05	9.5562E-07

Low Population Zone (LPZ) Doses:

Time (h) =	2.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)		1.5298E-08	5.0323E-06	1.7339E-07
Accumulated dose (rem)		1.5371E-08	5.0493E-06	1.7400E-07

Control Room (CR) Doses:

Time (h) =	8.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)		4.6649E-07	4.6344E-03	1.4479E-04
Accumulated dose (rem)		4.6969E-07	4.6571E-03	1.4550E-04

Exclusion Area Boundary (EAB) Doses:

Time (h) =	8.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)		5.7796E-06	3.5161E-03	1.1530E-04
Accumulated dose (rem)		5.8640E-06	3.5439E-03	1.1625E-04

Low Population Zone (LPZ) Doses:

Time (h) =	8.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)		1.0523E-06	6.4020E-04	2.0993E-05
Accumulated dose (rem)		1.0677E-06	6.4525E-04	2.1167E-05

Control Room (CR) Doses:

Time (h) =	24.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)		2.9385E-06	3.7727E-02	1.1679E-03
Accumulated dose (rem)		3.4082E-06	4.2384E-02	1.3134E-03

Exclusion Area Boundary (EAB) Doses:

Time (h) =	24.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)		4.8843E-05	3.0075E-02	9.7743E-04
Accumulated dose (rem)		5.4707E-05	3.3619E-02	1.0937E-03

Low Population Zone (LPZ) Doses:

Time (h) =	24.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)		6.2973E-06	3.8776E-03	1.2602E-04
Accumulated dose (rem)		7.3650E-06	4.5229E-03	1.4719E-04

Control Room (CR) Doses:

Time (h) =	48.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)		1.8457E-06	4.5477E-02	1.3970E-03
Accumulated dose (rem)		5.2539E-06	8.7861E-02	2.7104E-03

Exclusion Area Boundary (EAB) Doses:

Time (h) = 48.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)	0.0000E+00	0.0000E+00	0.0000E+00
Accumulated dose (rem)	5.4707E-05	3.3619E-02	1.0937E-03

Low Population Zone (LPZ) Doses:

Time (h) = 48.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)	4.8154E-06	7.1723E-03	2.2484E-04
Accumulated dose (rem)	1.2180E-05	1.1695E-02	3.7203E-04

Control Room (CR) Doses:

Time (h) = 72.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)	1.1892E-06	5.9941E-02	1.8331E-03
Accumulated dose (rem)	6.4431E-06	1.4780E-01	4.5435E-03

Exclusion Area Boundary (EAB) Doses:

Time (h) = 72.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)	0.0000E+00	0.0000E+00	0.0000E+00
Accumulated dose (rem)	5.4707E-05	3.3619E-02	1.0937E-03

Low Population Zone (LPZ) Doses:

Time (h) = 72.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)	4.1723E-06	9.5404E-03	2.9574E-04
Accumulated dose (rem)	1.6353E-05	2.1236E-02	6.6777E-04

Control Room (CR) Doses:

Time (h) = 96.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)	1.0276E-06	7.1621E-02	2.1857E-03
Accumulated dose (rem)	7.4707E-06	2.1942E-01	6.7292E-03

Exclusion Area Boundary (EAB) Doses:

Time (h) = 96.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)	0.0000E+00	0.0000E+00	0.0000E+00
Accumulated dose (rem)	5.4707E-05	3.3619E-02	1.0937E-03

Low Population Zone (LPZ) Doses:

Time (h) = 96.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)	4.0234E-06	1.1369E-02	3.5083E-04
Accumulated dose (rem)	2.0376E-05	3.2605E-02	1.0186E-03

Control Room (CR) Doses:

Time (h) = 120.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)	3.8281E-07	2.9714E-02	9.0591E-04
Accumulated dose (rem)	7.8535E-06	2.4914E-01	7.6351E-03

Exclusion Area Boundary (EAB) Doses:

Time (h) = 120.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)	0.0000E+00	0.0000E+00	0.0000E+00
Accumulated dose (rem)	5.4707E-05	3.3619E-02	1.0937E-03

Low Population Zone (LPZ) Doses:

Time (h) = 120.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)	9.9961E-07	3.1501E-03	9.6997E-05
Accumulated dose (rem)	2.1376E-05	3.5755E-02	1.1156E-03

Control Room (CR) Doses:

Time (h) = 168.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)	7.6322E-07	6.4910E-02	1.9777E-03
Accumulated dose (rem)	8.6167E-06	3.1405E-01	9.6128E-03

Exclusion Area Boundary (EAB) Doses:

Time (h) = 168.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)	0.0000E+00	0.0000E+00	0.0000E+00
Accumulated dose (rem)	5.4707E-05	3.3619E-02	1.0937E-03

Low Population Zone (LPZ) Doses:

Time (h) = 168.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)	2.0871E-06	7.0705E-03	2.1743E-04
Accumulated dose (rem)	2.3463E-05	4.2825E-02	1.3330E-03

Control Room (CR) Doses:

Time (h) = 336.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)	2.7537E-06	2.5335E-01	7.7164E-03
Accumulated dose (rem)	1.1370E-05	5.6740E-01	1.7329E-02

Exclusion Area Boundary (EAB) Doses:

Time (h) = 336.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)	0.0000E+00	0.0000E+00	0.0000E+00
Accumulated dose (rem)	5.4707E-05	3.3619E-02	1.0937E-03

Low Population Zone (LPZ) Doses:

Time (h) = 336.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)	7.7703E-06	2.7548E-02	8.4649E-04
Accumulated dose (rem)	3.1233E-05	7.0373E-02	2.1795E-03

Control Room (CR) Doses:

Time (h) = 720.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)	4.2930E-06	4.3794E-01	1.3337E-02
Accumulated dose (rem)	1.5664E-05	1.0053E+00	3.0667E-02

Exclusion Area Boundary (EAB) Doses:

Time (h) = 720.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)	0.0000E+00	0.0000E+00	0.0000E+00
Accumulated dose (rem)	5.4707E-05	3.3619E-02	1.0937E-03

Low Population Zone (LPZ) Doses:

Time (h) = 720.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)	1.3185E-05	4.7553E-02	1.4609E-03
Accumulated dose (rem)	4.4418E-05	1.1793E-01	3.6404E-03

 I-131 Summary
 #####

Time (hr)	Containment I-131 (Curies)	MSL A Inboard - Airbo I-131 (Curies)	Environment I-131 (Curies)
0.000	5.2640E+03	1.7114E-05	8.5433E-19
0.333	2.8290E+06	5.9220E+00	1.0968E-07
0.500	4.0239E+06	1.3070E+01	5.5326E-07
0.800	7.9884E+06	3.5530E+01	3.6497E-06
1.100	1.1679E+07	7.1455E+01	1.3557E-05
1.400	1.5113E+07	1.1946E+02	3.7208E-05
1.700	1.8307E+07	1.7832E+02	8.4191E-05
2.000	2.1276E+07	2.4689E+02	1.6667E-04
2.300	1.6058E+07	2.7960E+02	2.9808E-04
2.600	1.2209E+07	3.0897E+02	4.8848E-04
2.900	9.3713E+06	3.3535E+02	7.4664E-04
3.200	7.2781E+06	3.5902E+02	1.0810E-03
3.500	5.7342E+06	3.8027E+02	1.4997E-03
3.800	4.5953E+06	3.9933E+02	2.0105E-03
4.100	3.7551E+06	4.1642E+02	2.6208E-03
4.400	3.1351E+06	4.3174E+02	3.3375E-03
4.700	2.6775E+06	4.4546E+02	4.1672E-03
5.000	2.3396E+06	4.5775E+02	5.1163E-03
5.300	2.1768E+06	4.6874E+02	6.1907E-03
5.600	2.0415E+06	4.7858E+02	7.3958E-03
5.900	1.9291E+06	4.8737E+02	8.7369E-03
6.200	1.8355E+06	4.9521E+02	1.0219E-02
6.500	1.7577E+06	5.0221E+02	1.1846E-02
6.800	1.6930E+06	5.0845E+02	1.3623E-02
7.100	1.6390E+06	5.1400E+02	1.5554E-02
7.400	1.5940E+06	5.1893E+02	1.7642E-02
7.700	1.5564E+06	5.2331E+02	1.9891E-02
8.000	1.5249E+06	5.2718E+02	2.2304E-02
8.300	1.4986E+06	5.3061E+02	2.4883E-02
8.600	1.4790E+06	5.3363E+02	2.7633E-02
8.900	1.4622E+06	5.3629E+02	3.0554E-02
9.200	1.4476E+06	5.3861E+02	3.3650E-02
9.500	1.4350E+06	5.4065E+02	3.6922E-02
9.800	1.4240E+06	5.4241E+02	4.0373E-02
10.100	1.4145E+06	5.4394E+02	4.4005E-02
10.400	1.4061E+06	5.4525E+02	4.7818E-02
24.000	1.2997E+06	5.3471E+02	4.2055E-01
48.000	1.1900E+06	2.2722E+02	1.7370E+00
72.000	1.0896E+06	2.0804E+02	3.5892E+00
96.000	9.9764E+05	1.9048E+02	5.8610E+00
120.000	9.1346E+05	3.6224E+01	7.7253E+00
168.000	7.6580E+05	3.0368E+01	1.1948E+01
336.000	4.1314E+05	1.6384E+01	2.8476E+01
720.000	1.0081E+05	3.9977E+00	5.7021E+01

Time (hr)	Control Room I-131 (Curies)	MSL A Outboard - Airb I-131 (Curies)	MSL A Inboard - Surfa I-131 (Curies)
0.000	8.3555E-22	6.8585E-10	4.1491E-10
0.333	9.8197E-11	1.4029E-01	8.6958E-02
0.500	4.7475E-10	4.6105E-01	2.8927E-01
0.800	2.9152E-09	1.8683E+00	1.1965E+00
1.100	1.0152E-08	4.9831E+00	3.2534E+00
1.400	2.6207E-08	1.0452E+01	6.9597E+00
1.700	5.5876E-08	1.8787E+01	1.2763E+01

2.000	1.0441E-07	3.0380E+01	2.1065E+01
2.300	1.4961E-07	4.4183E+01	3.1387E+01
2.600	2.1534E-07	5.8737E+01	4.2916E+01
2.900	2.9997E-07	7.3781E+01	5.5524E+01
3.200	4.0224E-07	8.9098E+01	6.9101E+01
3.500	5.2108E-07	1.0450E+02	8.3544E+01
3.800	6.5558E-07	1.1985E+02	9.8761E+01
4.100	8.0491E-07	1.3501E+02	1.1467E+02
4.400	9.6829E-07	1.4989E+02	1.3120E+02
4.700	1.1450E-06	1.6440E+02	1.4828E+02
5.000	1.3342E-06	1.7848E+02	1.6585E+02
5.300	1.5354E-06	1.9209E+02	1.8386E+02
5.600	1.7478E-06	2.0519E+02	2.0225E+02
5.900	1.9708E-06	2.1775E+02	2.2100E+02
6.200	2.2037E-06	2.2976E+02	2.4005E+02
6.500	2.4460E-06	2.4120E+02	2.5936E+02
6.800	2.6970E-06	2.5208E+02	2.7892E+02
7.100	2.9562E-06	2.6241E+02	2.9869E+02
7.400	3.2231E-06	2.7218E+02	3.1864E+02
7.700	3.4972E-06	2.8140E+02	3.3875E+02
8.000	3.7778E-06	2.9010E+02	3.5901E+02
8.300	3.1209E-06	2.9829E+02	3.7938E+02
8.600	2.7256E-06	3.0597E+02	3.9986E+02
8.900	2.5043E-06	3.1318E+02	4.2042E+02
9.200	2.3991E-06	3.1994E+02	4.4107E+02
9.500	2.3713E-06	3.2625E+02	4.6177E+02
9.800	2.3954E-06	3.3214E+02	4.8253E+02
10.100	2.4542E-06	3.3763E+02	5.0333E+02
10.400	2.5366E-06	3.4275E+02	5.2416E+02
24.000	8.5523E-06	3.9367E+02	1.4459E+03
48.000	8.9276E-06	7.3353E+01	3.1124E+03
72.000	1.1547E-05	6.7066E+01	4.3188E+03
96.000	1.3665E-05	6.1407E+01	5.3015E+03
120.000	8.1711E-06	2.2449E+00	6.6159E+03
168.000	9.3164E-06	1.8820E+00	8.2897E+03
336.000	9.7185E-06	1.0153E+00	9.6918E+03
720.000	5.0399E-06	2.4775E-01	5.3333E+03

Time (hr)	MSL A Outboard - Surf Hold (By Surface Fixa Condenser - Airborne		
	I-131 (Curies)	I-131 (Curies)	I-131 (Curies)
0.000	1.2470E-14	3.8322E-19	1.5412E-14
0.333	1.5466E-03	4.9171E-08	1.6634E-03
0.500	7.6649E-03	2.4787E-07	7.7206E-03
0.800	4.9005E-02	1.6328E-06	4.4270E-02
1.100	1.7669E-01	6.0547E-06	1.4503E-01
1.400	4.7083E-01	1.6586E-05	3.5324E-01
1.700	1.0341E+00	3.7453E-05	7.1172E-01
2.000	1.9867E+00	7.3985E-05	1.2585E+00
2.300	3.4450E+00	1.3201E-04	2.0072E+00
2.600	5.4591E+00	2.1579E-04	2.9042E+00
2.900	8.0527E+00	3.2894E-04	3.8998E+00
3.200	1.1240E+01	4.7492E-04	4.9597E+00
3.500	1.5027E+01	6.5698E-04	6.0591E+00
3.800	1.9414E+01	8.7822E-04	7.1792E+00
4.100	2.4396E+01	1.1416E-03	8.3054E+00
4.400	2.9962E+01	1.4497E-03	9.4261E+00
4.700	3.6098E+01	1.8053E-03	1.0532E+01
5.000	4.2790E+01	2.2106E-03	1.1616E+01
5.300	5.0018E+01	2.6681E-03	1.2673E+01
5.600	5.7762E+01	3.1797E-03	1.3697E+01

5.900	6.6001E+01	3.7474E-03	1.4686E+01
6.200	7.4714E+01	4.3730E-03	1.5637E+01
6.500	8.3877E+01	5.0582E-03	1.6549E+01
6.800	9.3469E+01	5.8047E-03	1.7420E+01
7.100	1.0347E+02	6.6137E-03	1.8250E+01
7.400	1.1385E+02	7.4867E-03	1.9038E+01
7.700	1.2459E+02	8.4249E-03	1.9786E+01
8.000	1.3567E+02	9.4294E-03	2.0493E+01
8.300	1.4707E+02	1.0501E-02	2.1160E+01
8.600	1.5878E+02	1.1641E-02	2.1789E+01
8.900	1.7076E+02	1.2851E-02	2.2381E+01
9.200	1.8300E+02	1.4130E-02	2.2937E+01
9.500	1.9548E+02	1.5480E-02	2.3457E+01
9.800	2.0819E+02	1.6901E-02	2.3945E+01
10.100	2.2111E+02	1.8394E-02	2.4401E+01
10.400	2.3423E+02	1.9959E-02	2.4826E+01
24.000	8.9289E+02	1.6880E-01	2.9265E+01
48.000	1.6226E+03	6.0419E-01	2.5904E+00
72.000	1.9602E+03	1.1971E+00	2.3677E+00
96.000	2.2299E+03	1.8931E+00	2.1679E+00
120.000	2.2063E+03	2.1889E+00	6.0134E-02
168.000	2.0247E+03	2.8298E+00	5.0414E-02
336.000	1.4255E+03	4.7260E+00	2.7198E-02
720.000	5.3732E+02	4.8780E+00	6.6365E-03

Condenser - Surface
I-131 (Curies)

Time (hr)	I-131 (Curies)
0.000	3.7256E-18
0.333	2.4854E-04
0.500	1.7550E-03
0.800	1.6311E-02
1.100	7.3401E-02
1.400	2.2881E-01
1.700	5.6666E-01
2.000	1.1975E+00
2.300	2.2516E+00
2.600	3.8446E+00
2.900	6.0553E+00
3.200	8.9356E+00
3.500	1.2518E+01
3.800	1.6822E+01
4.100	2.1854E+01
4.400	2.7614E+01
4.700	3.4095E+01
5.000	4.1283E+01
5.300	4.9162E+01
5.600	5.7711E+01
5.900	6.6908E+01
6.200	7.6728E+01
6.500	8.7145E+01
6.800	9.8133E+01
7.100	1.0966E+02
7.400	1.2171E+02
7.700	1.3424E+02
8.000	1.4723E+02
8.300	1.6066E+02
8.600	1.7450E+02
8.900	1.8872E+02
9.200	2.0330E+02
9.500	2.1821E+02

9.800	2.3344E+02
10.100	2.4896E+02
10.400	2.6474E+02
24.000	1.0747E+03
48.000	1.2206E+03
72.000	1.2433E+03
96.000	1.2537E+03
120.000	1.1569E+03
168.000	9.7855E+02
336.000	5.4444E+02
720.000	1.4225E+02

 Cumulative Dose Summary
 #####

Time (hr)	Control Room (CR)		Exclusion Area Bounda		Low Population Zone (
	Thyroid (rem)	TEDE (rem)	Thyroid (rem)	TEDE (rem)	Thyroid (rem)	TEDE (rem)
0.000	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00
0.333	3.9638E-09	1.2598E-10	1.8558E-08	6.6885E-10	3.3790E-09	1.2178E-10
0.500	2.7248E-08	8.6508E-10	9.3444E-08	3.3465E-09	1.7014E-08	6.0931E-10
0.800	2.6164E-07	8.2937E-09	6.1457E-07	2.1795E-08	1.1190E-07	3.9683E-09
1.100	1.2259E-06	3.8803E-08	2.2758E-06	8.0004E-08	4.1437E-07	1.4567E-08
1.400	3.9854E-06	1.2600E-07	6.2273E-06	2.1726E-07	1.1338E-06	3.9558E-08
1.700	1.0297E-05	3.2519E-07	1.4049E-05	4.8691E-07	2.5580E-06	8.8655E-08
2.000	2.2697E-05	7.1606E-07	2.7732E-05	9.5562E-07	5.0493E-06	1.7400E-07
2.300	4.2428E-05	1.3374E-06	4.9458E-05	1.6957E-06	9.0050E-06	3.0874E-07
2.600	7.0811E-05	2.2305E-06	8.0828E-05	2.7589E-06	1.4717E-05	5.0233E-07
2.900	1.1086E-04	3.4897E-06	1.2322E-04	4.1892E-06	2.2436E-05	7.6275E-07
3.200	1.6535E-04	5.2014E-06	1.7795E-04	6.0281E-06	3.2400E-05	1.0976E-06
3.500	2.3684E-04	7.4456E-06	2.4626E-04	8.3150E-06	4.4838E-05	1.5140E-06
3.800	3.2772E-04	1.0296E-05	3.2932E-04	1.1087E-05	5.9962E-05	2.0186E-06
4.100	4.4022E-04	1.3823E-05	4.2825E-04	1.4377E-05	7.7974E-05	2.6178E-06
4.400	5.7643E-04	1.8091E-05	5.4408E-04	1.8220E-05	9.9064E-05	3.3174E-06
4.700	7.3830E-04	2.3160E-05	6.7778E-04	2.2643E-05	1.2341E-04	4.1228E-06
5.000	9.2768E-04	2.9088E-05	8.3025E-04	2.7676E-05	1.5117E-04	5.0392E-06
5.300	1.1463E-03	3.5926E-05	1.0023E-03	3.3344E-05	1.8250E-04	6.0712E-06
5.600	1.3957E-03	4.3724E-05	1.1948E-03	3.9671E-05	2.1754E-04	7.2231E-06
5.900	1.6774E-03	5.2529E-05	1.4084E-03	4.6678E-05	2.5643E-04	8.4989E-06
6.200	1.9927E-03	6.2381E-05	1.6437E-03	5.4386E-05	2.9928E-04	9.9023E-06
6.500	2.3430E-03	7.3321E-05	1.9015E-03	6.2812E-05	3.4621E-04	1.1436E-05
6.800	2.7295E-03	8.5385E-05	2.1822E-03	7.1973E-05	3.9732E-04	1.3105E-05
7.100	3.1532E-03	9.8606E-05	2.4863E-03	8.1885E-05	4.5269E-04	1.4909E-05
7.400	3.6150E-03	1.1301E-04	2.8143E-03	9.2562E-05	5.1242E-04	1.6853E-05
7.700	4.1161E-03	1.2864E-04	3.1667E-03	1.0401E-04	5.7659E-04	1.8938E-05
8.000	4.6571E-03	1.4550E-04	3.5439E-03	1.1625E-04	6.4525E-04	2.1167E-05
8.300	5.1654E-03	1.6135E-04	3.7507E-03	1.2322E-04	6.7192E-04	2.2066E-05
8.600	5.5958E-03	1.7476E-04	3.9706E-03	1.3062E-04	7.0027E-04	2.3019E-05
8.900	5.9804E-03	1.8674E-04	4.2037E-03	1.3844E-04	7.3032E-04	2.4027E-05
9.200	6.3404E-03	1.9795E-04	4.4501E-03	1.4669E-04	7.6209E-04	2.5092E-05
9.500	6.6902E-03	2.0885E-04	4.7099E-03	1.5538E-04	7.9559E-04	2.6212E-05
9.800	7.0391E-03	2.1971E-04	4.9833E-03	1.6451E-04	8.3084E-04	2.7388E-05
10.100	7.3934E-03	2.3074E-04	5.2703E-03	1.7407E-04	8.6784E-04	2.8622E-05
10.400	7.7573E-03	2.4206E-04	5.5709E-03	1.8408E-04	9.0660E-04	2.9912E-05
24.000	4.2384E-02	1.3134E-03	3.3619E-02	1.0937E-03	4.5229E-03	1.4719E-04
48.000	8.7861E-02	2.7104E-03	3.3619E-02	1.0937E-03	1.1695E-02	3.7203E-04
72.000	1.4780E-01	4.5435E-03	3.3619E-02	1.0937E-03	2.1236E-02	6.6777E-04
96.000	2.1942E-01	6.7292E-03	3.3619E-02	1.0937E-03	3.2605E-02	1.0186E-03
120.000	2.4914E-01	7.6351E-03	3.3619E-02	1.0937E-03	3.5755E-02	1.1156E-03

168.000 3.1405E-01 9.6128E-03 3.3619E-02 1.0937E-03 4.2825E-02 1.3330E-03
336.000 5.6740E-01 1.7329E-02 3.3619E-02 1.0937E-03 7.0373E-02 2.1795E-03
720.000 1.0053E+00 3.0667E-02 3.3619E-02 1.0937E-03 1.1793E-01 3.6404E-03

Worst Two-Hour Doses
#####

Exclusion Area Boundary (EAB)

Time (hr)	Whole Body (rem)	Thyroid (rem)	TEDE (rem)
10.4	6.4598E-06	4.1247E-03	1.3377E-04

```
#####  
RADTRAD Version 3.03 (Spring 2001) run on 9/19/2005 at 16:48:12  
#####
```

```
#####  
File information  
#####
```

```
Plant file           = c:\RESUP2-B.psf  
Inventory file       = c:\program files\radtrad3-03\defaults\limerick ast source  
terms.nif  
Release file         = c:\program files\radtrad3-03\defaults\bwr_i.rft  
Dose Conversion file = c:\program files\radtrad3-03\defaults\fgr11&12.inp
```

```
#####      #####      #####      # #      # #####      # #      #####  
# #      # #      # #      # #      # #      # #      # #      # #  
# #      # #      # #      # #      # #      # #      # #      # #  
#####      #####      #####      # #      # #      #####      # #      # #  
# #      # #      # #      # #      # #      # #      # #      # #  
# #      # #      # #      # #      # #      # #      # #      # #  
# #      # #      # #      # #      # #      # #      # #      # #  
# #      # #      # #      # #      # #      # #      # #      # #
```

```
Radtrad 3.03 4/15/2001  
LGS LOCA 200scfh Line B MSIV Leak - Resuspension Only - Leak to Condenser - MSL  
Pipe Deposition Credit (24-Hr 20-Group Aerosol Settling with Projected Area  
Assumption; 2-Hr Mixing Delay) - 95% CREFAS Charcoal Eff. No Delay - Rad Mode  
275cfm Control Room In  
Nuclide Inventory File:  
c:\program files\radtrad3-03\defaults\limerick ast source terms.nif  
Plant Power Level:  
3.5270E+03  
Compartments:  
10  
Compartment 1:  
Containment  
3  
3.7907E+05  
0  
0  
0  
1  
0  
Compartment 2:  
MSL B Inboard - Airborne  
3  
1.0000E-05  
0  
0  
0  
0  
0  
0  
Compartment 3:  
Environment  
2
```

0.0000E+00

0
0
0
0
0

Compartment 4:

Control Room

1
1.2600E+05

0
0
1
0
0

Compartment 5:

MSL B Outboard - Airborne

3
1.0510E+03

0
0
0
0
0

Compartment 6:

MSL B Inboard - Surface

3
1.0000E+00

0
0
0
0
0

Compartment 7:

MSL B Outboard - Surface

3
1.0000E+00

0
0
0
0
0

Compartment 8:

Hold (By Surface Fixation)

3
1.0000E+00

0
0
0
0
0

Compartment 9:

Condenser - Airborne

3
5.4746E+04

0
0
0
0
0

Compartment 10:

Condenser - Surface

3

1.0000E+00

0

0

0

0

0

Pathways:

15

Pathway 1:

Filtered Environment to Control Room (Intake)

3

4

2

Pathway 2:

Unfiltered Environment to Control Room (Inleakage)

3

4

2

Pathway 3:

Control Room to Environment (Exhaust)

4

3

2

Pathway 4:

(Aerosol Transport 1) MSL B Inboard - Airborne to MSL B Outboard - Airborne

2

5

2

Pathway 5:

(Deposition 1) MSL B Inboard - Airborne to MSL B Inboard - Surface

2

6

4

Pathway 6:

(Resuspension 1) MSL B Inboard - Surface to Environment

6

3

4

Pathway 7:

(Surface Fixation 1) MSL B Inboard - Surface to Hold (By Surface Fixation)

6

8

4

Pathway 8:

(Deposition 2) MSL B Outboard - Airborne to MSL B Outboard - Surface

5

7

4

Pathway 9:

(Resuspension 2) MSL B Outboard - Surface to Environment

7

3

4

Pathway 10:

(Surface Fixation 2) MSL B Outboard - Surface to Hold (By Surface Fixation)

7

8

4
Pathway 11:
(Aerosol Transport 2) MSL B Outboard - Airborne to Condenser - Airborne

5
9
2

Pathway 12:
(Deposition 3) Condenser - Airborne to Condenser - Surface

9
10
4

Pathway 13:
(Resuspension 3) Condenser - Surface to Environment

10
3
4

Pathway 14:
(Surface Fixation 3) Condenser - Surface to Hold (By Surface Fixation)

10
8
4

Pathway 15:
Containment to MSL B Inboard - Airborne

1
2
2

End of Plant Model File
Scenario Description Name:

Plant Model Filename:

Source Term:

1
1 1.0000E+00
c:\program files\radtrad3-03\defaults\fgr11&12.inp
c:\program files\radtrad3-03\defaults\bwr_i.rft
0.0000E+00
1
9.5000E-01 4.8500E-02 1.5000E-03 1.0000E+00

Overlying Pool:

0
0.0000E+00
0
0
0
0

Compartments:

10
Compartment 1:

0
1
0
0
0
0
0
3
3
1.0000E+01
1

1
 0.0000E+00 0.0000E+00

Compartment 2:

0
 1
 0
 0
 0
 0
 0
 0
 0

Compartment 3:

0
 1
 0
 0
 0
 0
 0
 0
 0

Compartment 4:

0
 1
 0
 0
 0
 0
 1

2.1750E+03

3

0.0000E+00	9.9000E+01	9.5000E+01	9.5000E+01
3.3330E-01	9.9000E+01	9.5000E+01	9.5000E+01
7.2000E+02	0.0000E+00	0.0000E+00	0.0000E+00

0
 0

Compartment 5:

0
 1
 0
 0
 0
 0
 0
 0
 0

Compartment 6:

0
 1
 0
 0
 0
 0
 0
 0
 0

Compartment 7:

0
 1

0
0
0
0
0
0
0
0

Compartment 8:

0
1
0
0
0
0
0
0
0

Compartment 9:

0
1
0
0
0
0
0
0
0

Compartment 10:

0
1
0
0
0
0
0
0
0

Pathways:

15

Pathway 1:

0
0
0
0
0
1
3
0
0
0
0
0
0
0

0.0000E+00	5.2500E+02	9.9000E+01	9.5000E+01	9.5000E+01
5.0000E-01	5.2500E+02	9.9000E+01	9.5000E+01	9.5000E+01
7.2000E+02	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00

Pathway 2:

0
0
0

0
 0
 1
 2
 0.0000E+00 2.7500E+02 0.0000E+00 0.0000E+00 0.0000E+00
 7.2000E+02 0.0000E+00 0.0000E+00 0.0000E+00 0.0000E+00

0
 0
 0
 0
 0
 0

Pathway 3:

0
 0
 0
 0
 0
 1
 3
 0.0000E+00 8.0000E+02 1.0000E+02 1.0000E+02 1.0000E+02
 5.0000E-01 8.0000E+02 1.0000E+02 1.0000E+02 1.0000E+02
 7.2000E+02 0.0000E+00 0.0000E+00 0.0000E+00 0.0000E+00

0
 0
 0
 0
 0
 0

Pathway 4:

0
 0
 0
 0
 0
 1
 5
 0.0000E+00 9.3060E-01 1.0000E+02 0.0000E+00 1.0000E+02
 2.0000E+00 9.3060E-01 1.0000E+02 0.0000E+00 1.0000E+02
 2.4000E+01 5.1270E-01 1.0000E+02 0.0000E+00 1.0000E+02
 9.6000E+01 5.1270E-01 1.0000E+02 0.0000E+00 1.0000E+02
 7.2000E+02 0.0000E+00 0.0000E+00 0.0000E+00 0.0000E+00

0
 0
 0
 0
 0
 0

Pathway 5:

0
 0
 0
 0
 0
 0
 0
 0
 0
 0
 1

4
 0.0000E+00 3.1420E+02
 2.4000E+01 7.0350E+02
 9.6000E+01 4.4780E+03
 7.2000E+02 0.0000E+00

0
 Pathway 6:

0
 0
 0
 0
 0
 0
 0
 0
 0
 0
 1
 4
 0.0000E+00 3.5580E-02
 2.4000E+01 2.9950E-02
 9.6000E+01 2.0170E-02
 7.2000E+02 0.0000E+00

0
 Pathway 7:

0
 0
 0
 0
 0
 0
 0
 0
 0
 0
 0
 1
 4
 0.0000E+00 1.5960E-02
 2.4000E+01 1.1360E-02
 9.6000E+01 5.2000E-03
 7.2000E+02 0.0000E+00

0
 Pathway 8:

0
 0
 0
 0
 0
 0
 0
 0
 0
 0
 1
 4
 0.0000E+00 3.1417E+02
 2.4000E+01 7.0352E+02
 9.6000E+01 4.4779E+03
 7.2000E+02 0.0000E+00

Pathway 9:

0
 0
 0
 0
 0
 0
 0
 0
 0
 0
 0
 1
 4
 0.0000E+00 3.5580E-02
 2.4000E+01 2.9950E-02
 9.6000E+01 2.0170E-02
 7.2000E+02 0.0000E+00
 0

Pathway 10:

0
 0
 0
 0
 0
 0
 0
 0
 0
 0
 0
 1
 4
 0.0000E+00 1.5960E-02
 2.4000E+01 1.1360E-02
 9.6000E+01 5.2000E-03
 7.2000E+02 0.0000E+00
 0

Pathway 11:

0
 0
 0
 0
 0
 1
 4
 0.0000E+00 3.1880E+00 1.0000E+02 0.0000E+00 1.0000E+02
 2.4000E+01 1.5130E+00 1.0000E+02 0.0000E+00 1.0000E+02
 9.6000E+01 1.1480E+00 1.0000E+02 0.0000E+00 1.0000E+02
 7.2000E+02 0.0000E+00 0.0000E+00 0.0000E+00 0.0000E+00
 0
 0
 0
 0
 0
 0
 0

Pathway 12:

0
 0
 0
 0
 0

0
 0
 0
 0
 0
 1
 4
 0.0000E+00 5.2212E+03
 2.4000E+01 5.2212E+03
 9.6000E+01 5.2212E+03
 7.2000E+02 0.0000E+00

Pathway 13:

0
 0
 0
 0
 0
 0
 0
 0
 0
 0
 1
 4
 0.0000E+00 1.6090E-02
 2.4000E+01 1.6090E-02
 9.6000E+01 1.6090E-02
 7.2000E+02 0.0000E+00

Pathway 14:

0
 0
 0
 0
 0
 0
 0
 0
 0
 0
 1
 4
 0.0000E+00 3.3300E-03
 2.4000E+01 3.3300E-03
 9.6000E+01 3.3300E-03
 7.2000E+02 0.0000E+00

Pathway 15:

0
 0
 0
 0
 0
 1
 5
 0.0000E+00 1.5240E+00 1.0000E+02 0.0000E+00 1.0000E+02
 2.0000E+00 9.3060E-01 1.0000E+02 0.0000E+00 1.0000E+02
 2.4000E+01 5.1270E-01 1.0000E+02 0.0000E+00 1.0000E+02
 9.6000E+01 5.1270E-01 1.0000E+02 0.0000E+00 1.0000E+02

7.2000E+02 0.0000E+00 0.0000E+00 0.0000E+00 0.0000E+00
 0
 0
 0
 0
 0
 0

Dose Locations:

3

Location 1:

Control Room (CR)

4

0

1

2

0.0000E+00 3.5000E-04

7.2000E+02 0.0000E+00

1

4

0.0000E+00 1.0000E+00

2.4000E+01 6.0000E-01

9.6000E+01 4.0000E-01

7.2000E+02 0.0000E+00

Location 2:

Exclusion Area Boundary (EAB)

3

1

2

0.0000E+00 3.1800E-04

2.4000E+01 0.0000E+00

1

4

0.0000E+00 3.5000E-04

8.0000E+00 1.8000E-04

2.4000E+01 2.3000E-04

7.2000E+02 0.0000E+00

0

Location 3:

Low Population Zone (LPZ)

3

1

10

0.0000E+00 5.7900E-05

8.0000E+00 4.1000E-05

2.4000E+01 1.9500E-05

4.8000E+01 1.9500E-05

7.2000E+01 1.9500E-05

9.6000E+01 6.6800E-06

1.2000E+02 6.6800E-06

1.6800E+02 6.6800E-06

3.3600E+02 6.6800E-06

7.2000E+02 0.0000E+00

1

4

0.0000E+00 3.5000E-04

8.0000E+00 1.8000E-04

2.4000E+01 2.3000E-04

7.2000E+02 0.0000E+00

0

Effective Volume Location:

1
6
0.0000E+00 6.8800E-03
2.0000E+00 5.1700E-03
8.0000E+00 2.0400E-03
2.4000E+01 1.2900E-03
9.6000E+01 9.6300E-04
7.2000E+02 0.0000E+00

Simulation Parameters:

1
0.0000E+00 0.0000E+00

Output Filename:

C:\RESUP2-B.o0

1
1
1
0
0

End of Scenario File

RADTRAD Version 3.03 (Spring 2001) run on 9/19/2005 at 16:48:12
#####

Plant Description
#####

Number of Nuclides = 60

Inventory Power = 1.0000E+00 MWth
Plant Power Level = 3.5270E+03 MWth

Number of compartments = 10

Compartment information

Compartment number 1 (Source term fraction = 1.0000E+00
)

Name: Containment
Compartment volume = 3.7907E+05 (Cubic feet)
Compartment type is Normal
Removal devices within compartment:
Deposition

Pathways into and out of compartment 1
Exit Pathway Number 15: Containment to MSL B Inboard - Airborne

Compartment number 2
Name: MSL B Inboard - Airborne
Compartment volume = 1.0000E-05 (Cubic feet)
Compartment type is Normal

Pathways into and out of compartment 2
Inlet Pathway Number 15: Containment to MSL B Inboard - Airborne
Exit Pathway Number 4: (Aerosol Transport 1) MSL B Inboard - Airborne to
Exit Pathway Number 5: (Deposition 1) MSL B Inboard - Airborne to MSL B I

Compartment number 3
Name: Environment
Compartment type is Environment

Pathways into and out of compartment 3
Inlet Pathway Number 3: Control Room to Environment (Exhaust)
Inlet Pathway Number 6: (Resuspension 1) MSL B Inboard - Surface to Enviro
Inlet Pathway Number 9: (Resuspension 2) MSL B Outboard - Surface to Envi
Inlet Pathway Number 13: (Resuspension 3) Condenser - Surface to Environme
Exit Pathway Number 1: Filtered Environment to Control Room (Intake)
Exit Pathway Number 2: Unfiltered Environment to Control Room (Inleakage)

Compartment number 4
Name: Control Room
Compartment volume = 1.2600E+05 (Cubic feet)
Compartment type is Control Room
Removal devices within compartment:

Filter(s)
Pathways into and out of compartment 4
Inlet Pathway Number 1: Filtered Environment to Control Room (Intake)
Inlet Pathway Number 2: Unfiltered Environment to Control Room (Inleakage)
Exit Pathway Number 3: Control Room to Environment (Exhaust)

Compartment number 5

Name: MSL B Outboard - Airborne
Compartment volume = 1.0510E+03 (Cubic feet)
Compartment type is Normal
Pathways into and out of compartment 5
Inlet Pathway Number 4: (Aerosol Transport 1) MSL B Inboard - Airborne to
Exit Pathway Number 8: (Deposition 2) MSL B Outboard - Airborne to MSL B
Exit Pathway Number 11: (Aerosol Transport 2) MSL B Outboard - Airborne to

Compartment number 6
Name: MSL B Inboard - Surface
Compartment volume = 1.0000E+00 (Cubic feet)
Compartment type is Normal
Pathways into and out of compartment 6
Inlet Pathway Number 5: (Deposition 1) MSL B Inboard - Airborne to MSL B I
Exit Pathway Number 6: (Resuspension 1) MSL B Inboard - Surface to Enviro
Exit Pathway Number 7: (Surface Fixation 1) MSL B Inboard - Surface to Ho

Compartment number 7
Name: MSL B Outboard - Surface
Compartment volume = 1.0000E+00 (Cubic feet)
Compartment type is Normal
Pathways into and out of compartment 7
Inlet Pathway Number 8: (Deposition 2) MSL B Outboard - Airborne to MSL B
Exit Pathway Number 9: (Resuspension 2) MSL B Outboard - Surface to Envi
Exit Pathway Number 10: (Surface Fixation 2) MSL B Outboard - Surface to H

Compartment number 8
Name: Hold (By Surface Fixation)
Compartment volume = 1.0000E+00 (Cubic feet)
Compartment type is Normal
Pathways into and out of compartment 8
Inlet Pathway Number 7: (Surface Fixation 1) MSL B Inboard - Surface to Ho
Inlet Pathway Number 10: (Surface Fixation 2) MSL B Outboard - Surface to H
Inlet Pathway Number 14: (Surface Fixation 3) Condenser - Surface to Hold

Compartment number 9
Name: Condenser - Airborne
Compartment volume = 5.4746E+04 (Cubic feet)
Compartment type is Normal
Pathways into and out of compartment 9
Inlet Pathway Number 11: (Aerosol Transport 2) MSL B Outboard - Airborne to
Exit Pathway Number 12: (Deposition 3) Condenser - Airborne to Condenser -

Compartment number 10
Name: Condenser - Surface
Compartment volume = 1.0000E+00 (Cubic feet)
Compartment type is Normal
Pathways into and out of compartment 10
Inlet Pathway Number 12: (Deposition 3) Condenser - Airborne to Condenser -
Exit Pathway Number 13: (Resuspension 3) Condenser - Surface to Environme
Exit Pathway Number 14: (Surface Fixation 3) Condenser - Surface to Hold

Total number of pathways = 15

 RADTRAD Version 3.03 (Spring 2001) run on 9/19/2005 at 16:48:12
 #####

 Scenario Description
 #####

Radioactive Decay is enabled
 Calculation of Daughters is enabled

Release Fractions and Timings

	GAP	EARLY IN-VESSEL	LATE RELEASE	RELEASE MASS
	0.500000 hr	1.5000 hrs	0.0000 hrs	(gm)
NOBLES	0.0000E+00	0.0000E+00	0.0000E+00	0.000E+00
IODINE	5.0000E-02	2.5000E-01	0.0000E+00	3.033E+02
CESIUM	0.0000E+00	0.0000E+00	0.0000E+00	0.000E+00
TELLURIUM	0.0000E+00	0.0000E+00	0.0000E+00	0.000E+00
STRONTIUM	0.0000E+00	0.0000E+00	0.0000E+00	0.000E+00
BARIUM	0.0000E+00	0.0000E+00	0.0000E+00	0.000E+00
RUTHENIUM	0.0000E+00	0.0000E+00	0.0000E+00	0.000E+00
CERIUM	0.0000E+00	0.0000E+00	0.0000E+00	0.000E+00
LANTHANUM	0.0000E+00	0.0000E+00	0.0000E+00	0.000E+00

Inventory Power = 3527. MWt

Nuclide Name	Group	Specific Inventory (Ci/MWt)	half life (s)	Whole Body DCF (Sv-m3/Bq-s)	Inhaled Thyroid (Sv/Bq)	Inhaled Effective (Sv/Bq)
I-131	2	2.687E+04	6.947E+05	1.820E-14	2.920E-07	8.890E-09
I-132	2	3.881E+04	8.280E+03	1.120E-13	1.740E-09	1.030E-10
I-133	2	5.556E+04	7.488E+04	2.940E-14	4.860E-08	1.580E-09
I-134	2	6.165E+04	3.156E+03	1.300E-13	2.880E-10	3.550E-11
I-135	2	5.192E+04	2.380E+04	8.294E-14	8.460E-09	3.320E-10

Nuclide	Daughter	Fraction	Daughter	Fraction	Daughter	Fraction
Kr-85m	Kr-85	0.21	none	0.00	none	0.00
Kr-87	Rb-87	1.00	none	0.00	none	0.00
Kr-88	Rb-88	1.00	none	0.00	none	0.00
Sr-90	Y-90	1.00	none	0.00	none	0.00
Sr-91	Y-91m	0.58	Y-91	0.42	none	0.00
Sr-92	Y-92	1.00	none	0.00	none	0.00
Y-93	Zr-93	1.00	none	0.00	none	0.00
Zr-95	Nb-95m	0.01	Nb-95	0.99	none	0.00
Zr-97	Nb-97m	0.95	Nb-97	0.05	none	0.00
Mo-99	Tc-99m	0.88	Tc-99	0.12	none	0.00
Tc-99m	Tc-99	1.00	none	0.00	none	0.00
Ru-103	Rh-103m	1.00	none	0.00	none	0.00
Ru-105	Rh-105	1.00	none	0.00	none	0.00
Ru-106	Rh-106	1.00	none	0.00	none	0.00
Sb-127	Te-127m	0.18	Te-127	0.82	none	0.00
Sb-129	Te-129m	0.22	Te-129	0.77	none	0.00
Te-127m	Te-127	0.98	none	0.00	none	0.00
Te-129	I-129	1.00	none	0.00	none	0.00
Te-129m	Te-129	0.65	I-129	0.35	none	0.00
Te-131m	Te-131	0.22	I-131	0.78	none	0.00
Te-132	I-132	1.00	none	0.00	none	0.00
I-131	Xe-131m	0.01	none	0.00	none	0.00
I-133	Xe-133m	0.03	Xe-133	0.97	none	0.00

I-135	Xe-135m	0.15	Xe-135	0.85	none	0.00
Xe-135	Cs-135	1.00	none	0.00	none	0.00
Cs-137	Ba-137m	0.95	none	0.00	none	0.00
Ba-140	La-140	1.00	none	0.00	none	0.00
La-141	Ce-141	1.00	none	0.00	none	0.00
Ce-143	Pr-143	1.00	none	0.00	none	0.00
Ce-144	Pr-144m	0.02	Pr-144	0.98	none	0.00
Nd-147	Pm-147	1.00	none	0.00	none	0.00
Np-239	Pu-239	1.00	none	0.00	none	0.00
Pu-238	U-234	1.00	none	0.00	none	0.00
Pu-239	U-235	1.00	none	0.00	none	0.00
Pu-240	U-236	1.00	none	0.00	none	0.00
Pu-241	U-237	0.00	Am-241	1.00	none	0.00
Am-241	Np-237	1.00	none	0.00	none	0.00
Cm-242	Pu-238	1.00	none	0.00	none	0.00
Cm-244	Pu-240	1.00	none	0.00	none	0.00

Iodine fractions

Aerosol = 9.5000E-01
 Elemental = 4.8500E-02
 Organic = 1.5000E-03

COMPARTMENT DATA

Compartment number 1: Containment
 Natural Deposition (Powers' model): Aerosol data
 Reactor type: 3
 Percentile = 10 (%)

Natural Deposition: Elemental Removal Data
 Time (hr) Removal Coef. (hr⁻¹)
 0.0000E+00 0.0000E+00

Compartment number 2: MSL B Inboard - Airborne

Compartment number 3: Environment

Compartment number 4: Control Room

Compartment Filter Data

Time (hr)	Flow Rate (cfm)	Filter Efficiencies (%)		
		Aerosol	Elemental	Organic
0.0000E+00	2.1750E+03	9.9000E+01	9.5000E+01	9.5000E+01
3.3330E-01	2.1750E+03	9.9000E+01	9.5000E+01	9.5000E+01
7.2000E+02	2.1750E+03	0.0000E+00	0.0000E+00	0.0000E+00

Compartment number 5: MSL B Outboard - Airborne

Compartment number 6: MSL B Inboard - Surface

Compartment number 7: MSL B Outboard - Surface

Compartment number 8: Hold (By Surface Fixation)

Compartment number 9: Condenser - Airborne

Compartment number 10: Condenser - Surface

PATHWAY DATA

Pathway number 1: Filtered Environment to Control Room (Intake)

Pathway Filter: Removal Data

Time (hr)	Flow Rate (cfm)	Filter Efficiencies (%)		
		Aerosol	Elemental	Organic
0.0000E+00	5.2500E+02	9.9000E+01	9.5000E+01	9.5000E+01
5.0000E-01	5.2500E+02	9.9000E+01	9.5000E+01	9.5000E+01
7.2000E+02	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00

Pathway number 2: Unfiltered Environment to Control Room (Inleakage)

Pathway Filter: Removal Data

Time (hr)	Flow Rate (cfm)	Filter Efficiencies (%)		
		Aerosol	Elemental	Organic
0.0000E+00	2.7500E+02	0.0000E+00	0.0000E+00	0.0000E+00
7.2000E+02	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00

Pathway number 3: Control Room to Environment (Exhaust)

Pathway Filter: Removal Data

Time (hr)	Flow Rate (cfm)	Filter Efficiencies (%)		
		Aerosol	Elemental	Organic
0.0000E+00	8.0000E+02	1.0000E+02	1.0000E+02	1.0000E+02
5.0000E-01	8.0000E+02	1.0000E+02	1.0000E+02	1.0000E+02
7.2000E+02	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00

Pathway number 4: (Aerosol Transport 1) MSL B Inboard - Airborne to

Pathway Filter: Removal Data

Time (hr)	Flow Rate (cfm)	Filter Efficiencies (%)		
		Aerosol	Elemental	Organic
0.0000E+00	9.3060E-01	1.0000E+02	0.0000E+00	1.0000E+02
2.0000E+00	9.3060E-01	1.0000E+02	0.0000E+00	1.0000E+02
2.4000E+01	5.1270E-01	1.0000E+02	0.0000E+00	1.0000E+02
9.6000E+01	5.1270E-01	1.0000E+02	0.0000E+00	1.0000E+02
7.2000E+02	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00

Pathway number 5: (Deposition 1) MSL B Inboard - Airborne to MSL B I

Convection Data

Time (hr)	Flow Rate (% / day)
0.0000E+00	3.1420E+02
2.4000E+01	7.0350E+02
9.6000E+01	4.4780E+03
7.2000E+02	0.0000E+00

Pathway number 6: (Resuspension 1) MSL B Inboard - Surface to Enviro

Convection Data

Time (hr)	Flow Rate (% / day)
0.0000E+00	3.5580E-02
2.4000E+01	2.9950E-02
9.6000E+01	2.0170E-02
7.2000E+02	0.0000E+00

Pathway number 7: (Surface Fixation 1) MSL B Inboard - Surface to Ho

Convection Data

Time (hr)	Flow Rate (% / day)
0.0000E+00	1.5960E-02
2.4000E+01	1.1360E-02
9.6000E+01	5.2000E-03
7.2000E+02	0.0000E+00

Pathway number 8: (Deposition 2) MSL B Outboard - Airborne to MSL B

Convection Data

Time (hr)	Flow Rate (% / day)
0.0000E+00	3.1417E+02
2.4000E+01	7.0352E+02
9.6000E+01	4.4779E+03
7.2000E+02	0.0000E+00

Pathway number 9: (Resuspension 2) MSL B Outboard - Surface to Envi

Convection Data

Time (hr)	Flow Rate (% / day)
0.0000E+00	3.5580E-02
2.4000E+01	2.9950E-02
9.6000E+01	2.0170E-02
7.2000E+02	0.0000E+00

Pathway number 10: (Surface Fixation 2) MSL B Outboard - Surface to H

Convection Data

Time (hr)	Flow Rate (% / day)
0.0000E+00	1.5960E-02
2.4000E+01	1.1360E-02
9.6000E+01	5.2000E-03
7.2000E+02	0.0000E+00

Pathway number 11: (Aerosol Transport 2) MSL B Outboard - Airborne to

Pathway Filter: Removal Data

Time (hr)	Flow Rate (cfm)	Filter Efficiencies (%)		
		Aerosol	Elemental	Organic
0.0000E+00	3.1880E+00	1.0000E+02	0.0000E+00	1.0000E+02
2.4000E+01	1.5130E+00	1.0000E+02	0.0000E+00	1.0000E+02
9.6000E+01	1.1480E+00	1.0000E+02	0.0000E+00	1.0000E+02
7.2000E+02	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00

Pathway number 12: (Deposition 3) Condenser - Airborne to Condenser -

Convection Data

Time (hr)	Flow Rate (% / day)
0.0000E+00	5.2212E+03
2.4000E+01	5.2212E+03
9.6000E+01	5.2212E+03
7.2000E+02	0.0000E+00

Pathway number 13: (Resuspension 3) Condenser - Surface to Environme

Convection Data

Time (hr)	Flow Rate (% / day)
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0.0000E+00	1.6090E-02
2.4000E+01	1.6090E-02
9.6000E+01	1.6090E-02
7.2000E+02	0.0000E+00

Pathway number 14: (Surface Fixation 3) Condenser - Surface to Hold

Convection Data

Time (hr)	Flow Rate (% / day)
0.0000E+00	3.3300E-03
2.4000E+01	3.3300E-03
9.6000E+01	3.3300E-03
7.2000E+02	0.0000E+00

Pathway number 15: Containment to MSL B Inboard - Airborne

Pathway Filter: Removal Data

Time (hr)	Flow Rate (cfm)	Filter Efficiencies (%)		
		Aerosol	Elemental	Organic
0.0000E+00	1.5240E+00	1.0000E+02	0.0000E+00	1.0000E+02
2.0000E+00	9.3060E-01	1.0000E+02	0.0000E+00	1.0000E+02
2.4000E+01	5.1270E-01	1.0000E+02	0.0000E+00	1.0000E+02
9.6000E+01	5.1270E-01	1.0000E+02	0.0000E+00	1.0000E+02
7.2000E+02	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00

LOCATION DATA

Location Control Room (CR) is in compartment 4

Location X/Q Data

Time (hr)	X/Q (s * m^-3)
0.0000E+00	6.8800E-03
2.0000E+00	5.1700E-03
8.0000E+00	2.0400E-03
2.4000E+01	1.2900E-03
9.6000E+01	9.6300E-04
7.2000E+02	0.0000E+00

Location Breathing Rate Data

Time (hr)	Breathing Rate (m^3 * sec^-1)
0.0000E+00	3.5000E-04
7.2000E+02	0.0000E+00

Location Occupancy Factor Data

Time (hr)	Occupancy Factor
0.0000E+00	1.0000E+00
2.4000E+01	6.0000E-01
9.6000E+01	4.0000E-01
7.2000E+02	0.0000E+00

Location Exclusion Area Boundary (EAB) is in compartment 3

Location X/Q Data

Time (hr)	X/Q (s * m^-3)
0.0000E+00	3.1800E-04
2.4000E+01	0.0000E+00

Location Breathing Rate Data

Time (hr)	Breathing Rate (m^3 * sec^-1)
0.0000E+00	3.5000E-04
8.0000E+00	1.8000E-04

2.4000E+01 2.3000E-04
 7.2000E+02 0.0000E+00
 Location Low Population Zone (LPZ) is in compartment 3

Location X/Q Data

Time (hr)	X/Q (s * m ⁻³)
0.0000E+00	5.7900E-05
8.0000E+00	4.1000E-05
2.4000E+01	1.9500E-05
4.8000E+01	1.9500E-05
7.2000E+01	1.9500E-05
9.6000E+01	6.6800E-06
1.2000E+02	6.6800E-06
1.6800E+02	6.6800E-06
3.3600E+02	6.6800E-06
7.2000E+02	0.0000E+00

Location Breathing Rate Data

Time (hr)	Breathing Rate (m ³ * sec ⁻¹)
0.0000E+00	3.5000E-04
8.0000E+00	1.8000E-04
2.4000E+01	2.3000E-04
7.2000E+02	0.0000E+00

USER SPECIFIED TIME STEP DATA - SUPPLEMENTAL TIME STEPS

Time	Time step
0.0000E+00	0.0000E+00

 RADTRAD Version 3.03 (Spring 2001) run on 9/19/2005 at 16:48:12
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 Dose Output
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Control Room (CR) Doses:

Time (h) =	0.3333	Whole Body	Thyroid	TEDE
Delta dose (rem)		8.4642E-13	4.2006E-09	1.3350E-10
Accumulated dose (rem)		8.4642E-13	4.2006E-09	1.3350E-10

Exclusion Area Boundary (EAB) Doses:

Time (h) =	0.3333	Whole Body	Thyroid	TEDE
Delta dose (rem)		8.8306E-11	1.9808E-08	7.1388E-10
Accumulated dose (rem)		8.8306E-11	1.9808E-08	7.1388E-10

Low Population Zone (LPZ) Doses:

Time (h) =	0.3333	Whole Body	Thyroid	TEDE
Delta dose (rem)		1.6078E-11	3.6066E-09	1.2998E-10
Accumulated dose (rem)		1.6078E-11	3.6066E-09	1.2998E-10

Control Room (CR) Doses:

Time (h) =	0.5000	Whole Body	Thyroid	TEDE
Delta dose (rem)		4.8249E-12	2.5311E-08	8.0347E-10
Accumulated dose (rem)		5.6714E-12	2.9512E-08	9.3697E-10

Exclusion Area Boundary (EAB) Doses:

Time (h) =	0.5000	Whole Body	Thyroid	TEDE
Delta dose (rem)		3.4623E-10	8.2415E-08	2.9467E-09
Accumulated dose (rem)		4.3454E-10	1.0222E-07	3.6606E-09

Low Population Zone (LPZ) Doses:

Time (h) =	0.5000	Whole Body	Thyroid	TEDE
Delta dose (rem)		6.3040E-11	1.5006E-08	5.3653E-10
Accumulated dose (rem)		7.9118E-11	1.8612E-08	6.6651E-10

Control Room (CR) Doses:

Time (h) =	2.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)		3.8138E-09	2.7060E-05	8.5369E-07
Accumulated dose (rem)		3.8195E-09	2.7090E-05	8.5463E-07

Exclusion Area Boundary (EAB) Doses:

Time (h) =	2.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)		1.0091E-07	3.3257E-05	1.1457E-06
Accumulated dose (rem)		1.0135E-07	3.3360E-05	1.1493E-06

Low Population Zone (LPZ) Doses:

Time (h) =	2.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)		1.8374E-08	6.0554E-06	2.0860E-07
Accumulated dose (rem)		1.8453E-08	6.0740E-06	2.0926E-07

Control Room (CR) Doses:

Time (h) =	8.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)		5.3604E-07	5.2662E-03	1.6454E-04
Accumulated dose (rem)		5.3986E-07	5.2932E-03	1.6540E-04

Exclusion Area Boundary (EAB) Doses:

Time (h) =	8.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)		6.5482E-06	3.9499E-03	1.2959E-04
Accumulated dose (rem)		6.6496E-06	3.9832E-03	1.3074E-04

Low Population Zone (LPZ) Doses:

Time (h) =	8.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)		1.1923E-06	7.1917E-04	2.3595E-05
Accumulated dose (rem)		1.2107E-06	7.2525E-04	2.3804E-05

Control Room (CR) Doses:

Time (h) =	24.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)		2.8525E-06	3.5804E-02	1.1085E-03
Accumulated dose (rem)		3.3923E-06	4.1098E-02	1.2739E-03

Exclusion Area Boundary (EAB) Doses:

Time (h) =	24.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)		4.6422E-05	2.8312E-02	9.2066E-04
Accumulated dose (rem)		5.3072E-05	3.2296E-02	1.0514E-03

Low Population Zone (LPZ) Doses:

Time (h) =	24.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)		5.9852E-06	3.6503E-03	1.1870E-04
Accumulated dose (rem)		7.1960E-06	4.3756E-03	1.4250E-04

Control Room (CR) Doses:

Time (h) =	48.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)		1.6520E-06	4.0520E-02	1.2448E-03
Accumulated dose (rem)		5.0443E-06	8.1618E-02	2.5187E-03

Exclusion Area Boundary (EAB) Doses:

Time (h) =	48.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)		0.0000E+00	0.0000E+00	0.0000E+00
Accumulated dose (rem)		5.3072E-05	3.2296E-02	1.0514E-03

Low Population Zone (LPZ) Doses:

Time (h) =	48.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)		4.2931E-06	6.3871E-03	2.0024E-04
Accumulated dose (rem)		1.1489E-05	1.0763E-02	3.4274E-04

Control Room (CR) Doses:

Time (h) =	72.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)		1.0651E-06	5.3706E-02	1.6424E-03
Accumulated dose (rem)		6.1094E-06	1.3532E-01	4.1611E-03

Exclusion Area Boundary (EAB) Doses:

Time (h) =	72.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)		0.0000E+00	0.0000E+00	0.0000E+00
Accumulated dose (rem)		5.3072E-05	3.2296E-02	1.0514E-03

Low Population Zone (LPZ) Doses:

Time (h) =	72.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)		3.7387E-06	8.5505E-03	2.6505E-04
Accumulated dose (rem)		1.5228E-05	1.9313E-02	6.0779E-04

Control Room (CR) Doses:

Time (h) =	96.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)		9.2708E-07	6.4615E-02	1.9719E-03
Accumulated dose (rem)		7.0365E-06	1.9994E-01	6.1330E-03

Exclusion Area Boundary (EAB) Doses:

Time (h) =	96.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)		0.0000E+00	0.0000E+00	0.0000E+00
Accumulated dose (rem)		5.3072E-05	3.2296E-02	1.0514E-03

Low Population Zone (LPZ) Doses:

Time (h) =	96.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)		3.6303E-06	1.0259E-02	3.1656E-04
Accumulated dose (rem)		1.8858E-05	2.9572E-02	9.2435E-04

Control Room (CR) Doses:

Time (h) =	120.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)		3.6608E-07	2.8483E-02	8.6837E-04
Accumulated dose (rem)		7.4026E-06	2.2842E-01	7.0014E-03

Exclusion Area Boundary (EAB) Doses:

Time (h) =	120.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)		0.0000E+00	0.0000E+00	0.0000E+00
Accumulated dose (rem)		5.3072E-05	3.2296E-02	1.0514E-03

Low Population Zone (LPZ) Doses:

Time (h) = 120.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)	9.6172E-07	3.0308E-03	9.3324E-05
Accumulated dose (rem)	1.9820E-05	3.2603E-02	1.0177E-03

Control Room (CR) Doses:

Time (h) = 168.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)	7.3948E-07	6.2895E-02	1.9163E-03
Accumulated dose (rem)	8.1420E-06	2.9132E-01	8.9177E-03

Exclusion Area Boundary (EAB) Doses:

Time (h) = 168.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)	0.0000E+00	0.0000E+00	0.0000E+00
Accumulated dose (rem)	5.3072E-05	3.2296E-02	1.0514E-03

Low Population Zone (LPZ) Doses:

Time (h) = 168.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)	2.0225E-06	6.8519E-03	2.1070E-04
Accumulated dose (rem)	2.1842E-05	3.9455E-02	1.2284E-03

Control Room (CR) Doses:

Time (h) = 336.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)	2.6943E-06	2.4790E-01	7.5503E-03
Accumulated dose (rem)	1.0836E-05	5.3922E-01	1.6468E-02

Exclusion Area Boundary (EAB) Doses:

Time (h) = 336.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)	0.0000E+00	0.0000E+00	0.0000E+00
Accumulated dose (rem)	5.3072E-05	3.2296E-02	1.0514E-03

Low Population Zone (LPZ) Doses:

Time (h) = 336.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)	7.6032E-06	2.6956E-02	8.2830E-04
Accumulated dose (rem)	2.9446E-05	6.6410E-02	2.0567E-03

Control Room (CR) Doses:

Time (h) = 720.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)	4.2315E-06	4.3168E-01	1.3147E-02
Accumulated dose (rem)	1.5068E-05	9.7089E-01	2.9615E-02

Exclusion Area Boundary (EAB) Doses:

Time (h) = 720.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)	0.0000E+00	0.0000E+00	0.0000E+00
Accumulated dose (rem)	5.3072E-05	3.2296E-02	1.0514E-03

Low Population Zone (LPZ) Doses:

Time (h) = 720.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)	1.2996E-05	4.6873E-02	1.4401E-03
Accumulated dose (rem)	4.2442E-05	1.1328E-01	3.4967E-03

 I-131 Summary
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Time (hr)	Containment	MSL B Inboard - Airbo	Environment
	I-131 (Curies)	I-131 (Curies)	I-131 (Curies)
0.000	5.2640E+03	1.1028E-08	8.5414E-19
0.333	2.8290E+06	6.6104E-06	1.1707E-07
0.500	4.0239E+06	9.9107E-06	6.0525E-07
0.800	7.9884E+06	1.9800E-05	4.1288E-06
1.100	1.1679E+07	2.9668E-05	1.5693E-05
1.400	1.5113E+07	3.9513E-05	4.3806E-05
1.700	1.8307E+07	4.9337E-05	1.0037E-04
2.000	2.1276E+07	5.9137E-05	2.0051E-04
2.300	1.6058E+07	3.6069E-05	3.6101E-04
2.600	1.2209E+07	3.6028E-05	5.9465E-04
2.900	9.3713E+06	3.5988E-05	9.1165E-04
3.200	7.2781E+06	3.5948E-05	1.3210E-03
3.500	5.7342E+06	3.5907E-05	1.8307E-03
3.800	4.5953E+06	3.5867E-05	2.4479E-03
4.100	3.7551E+06	3.5827E-05	3.1791E-03
4.400	3.1351E+06	3.5787E-05	4.0300E-03
4.700	2.6775E+06	3.5746E-05	5.0059E-03
5.000	2.3396E+06	3.5706E-05	6.1115E-03
5.300	2.1768E+06	3.5666E-05	7.3511E-03
5.600	2.0415E+06	3.5626E-05	8.7284E-03
5.900	1.9291E+06	3.5586E-05	1.0247E-02
6.200	1.8355E+06	3.5547E-05	1.1910E-02
6.500	1.7577E+06	3.5507E-05	1.3720E-02
6.800	1.6930E+06	3.5467E-05	1.5679E-02
7.100	1.6390E+06	3.5427E-05	1.7791E-02
7.400	1.5940E+06	3.5387E-05	2.0056E-02
7.700	1.5564E+06	3.5348E-05	2.2476E-02
8.000	1.5249E+06	3.5308E-05	2.5054E-02
8.300	1.4986E+06	3.5268E-05	2.7791E-02
8.600	1.4790E+06	3.5229E-05	3.0687E-02
8.900	1.4622E+06	3.5189E-05	3.3744E-02
9.200	1.4476E+06	3.5150E-05	3.6964E-02
9.500	1.4350E+06	3.5111E-05	4.0345E-02
9.800	1.4240E+06	3.5071E-05	4.3891E-02
10.100	1.4145E+06	3.5032E-05	4.7600E-02
10.400	1.4061E+06	3.4993E-05	5.1474E-02
24.000	1.2997E+06	3.3257E-05	3.9961E-01
48.000	1.1900E+06	3.0451E-05	1.5718E+00
72.000	1.0896E+06	2.7881E-05	3.2319E+00
96.000	9.9764E+05	2.5529E-05	5.2818E+00
120.000	9.1346E+05	2.3374E-05	7.0755E+00
168.000	7.6580E+05	1.9596E-05	1.1167E+01
336.000	4.1314E+05	1.0572E-05	2.7341E+01
720.000	1.0081E+05	2.5796E-06	5.5478E+01

Time (hr)	Control Room	MSL B Outboard - Airb	MSL B Inboard - Surfa
	I-131 (Curies)	I-131 (Curies)	I-131 (Curies)
0.000	8.3536E-22	1.7098E-05	4.0092E-13
0.333	1.0490E-10	5.9427E+00	1.4422E-07
0.500	5.2016E-10	1.3140E+01	3.2437E-07
0.800	3.3069E-09	3.5817E+01	9.0725E-07
1.100	1.1793E-08	7.2225E+01	1.8773E-06
1.400	3.0981E-08	1.2109E+02	3.2331E-06
1.700	6.6908E-08	1.8124E+02	4.9735E-06

2.000	1.2616E-07	2.5162E+02	7.0972E-06
2.300	1.8185E-07	2.8649E+02	8.5061E-06
2.600	2.6311E-07	3.1815E+02	9.9120E-06
2.900	3.6747E-07	3.4687E+02	1.1315E-05
3.200	4.9255E-07	3.7293E+02	1.2714E-05
3.500	6.3618E-07	3.9656E+02	1.4111E-05
3.800	7.9641E-07	4.1799E+02	1.5504E-05
4.100	9.7152E-07	4.3741E+02	1.6895E-05
4.400	1.1600E-06	4.5501E+02	1.8282E-05
4.700	1.3605E-06	4.7095E+02	1.9666E-05
5.000	1.5717E-06	4.8538E+02	2.1047E-05
5.300	1.7927E-06	4.9844E+02	2.2425E-05
5.600	2.0224E-06	5.1026E+02	2.3800E-05
5.900	2.2600E-06	5.2094E+02	2.5172E-05
6.200	2.5047E-06	5.3059E+02	2.6541E-05
6.500	2.7557E-06	5.3930E+02	2.7907E-05
6.800	3.0124E-06	5.4715E+02	2.9269E-05
7.100	3.2743E-06	5.5424E+02	3.0629E-05
7.400	3.5408E-06	5.6062E+02	3.1986E-05
7.700	3.8114E-06	5.6635E+02	3.3339E-05
8.000	4.0857E-06	5.7151E+02	3.4690E-05
8.300	3.3623E-06	5.7613E+02	3.6038E-05
8.600	2.9206E-06	5.8027E+02	3.7382E-05
8.900	2.6659E-06	5.8397E+02	3.8724E-05
9.200	2.5355E-06	5.8728E+02	4.0062E-05
9.500	2.4877E-06	5.9022E+02	4.1398E-05
9.800	2.4948E-06	5.9283E+02	4.2731E-05
10.100	2.5387E-06	5.9515E+02	4.4060E-05
10.400	2.6069E-06	5.9719E+02	4.5387E-05
24.000	7.7464E-06	5.9337E+02	1.0247E-04
48.000	7.9556E-06	2.4691E+02	3.0836E-04
72.000	1.0387E-05	2.2605E+02	4.7907E-04
96.000	1.2357E-05	2.0697E+02	6.1905E-04
120.000	7.8829E-06	3.7232E+01	1.6154E-03
168.000	9.0581E-06	3.1213E+01	3.1168E-03
336.000	9.5476E-06	1.6840E+01	5.0352E-03
720.000	4.9804E-06	4.1090E+00	3.1359E-03

Time (hr)	MSL B Outboard - Surf Hold (By Surface Fixa Condenser - Airborne		
	I-131 (Curies)	I-131 (Curies)	I-131 (Curies)
0.000	4.1436E-10	3.8311E-19	5.7592E-10
0.333	8.7173E-02	5.0378E-08	1.0198E-01
0.500	2.9038E-01	2.5625E-07	3.1348E-01
0.800	1.2038E+00	1.7078E-06	1.1456E+00
1.100	3.2802E+00	6.3788E-06	2.7967E+00
1.400	7.0318E+00	1.7555E-05	5.3953E+00
1.700	1.2922E+01	3.9743E-05	8.9596E+00
2.000	2.1371E+01	7.8588E-05	1.3455E+01
2.300	3.1920E+01	1.4021E-04	1.7869E+01
2.600	4.3761E+01	2.2892E-04	2.1490E+01
2.900	5.6774E+01	3.4815E-04	2.4576E+01
3.200	7.0847E+01	5.0091E-04	2.7272E+01
3.500	8.5879E+01	6.8990E-04	2.9664E+01
3.800	1.0178E+02	9.1755E-04	3.1806E+01
4.100	1.1846E+02	1.1860E-03	3.3733E+01
4.400	1.3585E+02	1.4973E-03	3.5473E+01
4.700	1.5388E+02	1.8531E-03	3.7046E+01
5.000	1.7249E+02	2.2551E-03	3.8469E+01
5.300	1.9161E+02	2.7046E-03	3.9757E+01
5.600	2.1121E+02	3.2029E-03	4.0922E+01

5.900	2.3122E+02	3.7511E-03	4.1976E+01
6.200	2.5161E+02	4.3504E-03	4.2929E+01
6.500	2.7233E+02	5.0014E-03	4.3790E+01
6.800	2.9336E+02	5.7052E-03	4.4568E+01
7.100	3.1466E+02	6.4623E-03	4.5270E+01
7.400	3.3620E+02	7.2735E-03	4.5904E+01
7.700	3.5796E+02	8.1392E-03	4.6474E+01
8.000	3.7990E+02	9.0600E-03	4.6988E+01
8.300	4.0201E+02	1.0036E-02	4.7449E+01
8.600	4.2427E+02	1.1068E-02	4.7864E+01
8.900	4.4666E+02	1.2157E-02	4.8236E+01
9.200	4.6917E+02	1.3301E-02	4.8569E+01
9.500	4.9177E+02	1.4503E-02	4.8866E+01
9.800	5.1445E+02	1.5761E-02	4.9131E+01
10.100	5.3721E+02	1.7076E-02	4.9367E+01
10.400	5.6003E+02	1.8448E-02	4.9576E+01
24.000	1.5803E+03	1.3962E-01	4.9639E+01
48.000	3.4167E+03	4.9198E-01	9.8040E+00
72.000	4.7247E+03	9.8457E-01	8.9752E+00
96.000	5.7898E+03	1.5723E+00	8.2178E+00
120.000	7.1262E+03	1.8635E+00	1.1217E+00
168.000	8.7947E+03	2.5009E+00	9.4035E-01
336.000	1.0111E+04	4.4260E+00	5.0731E-01
720.000	5.5191E+03	4.7121E+00	1.2379E-01

Time (hr)	Condenser - Surface I-131 (Curies)
0.000	1.7397E-13
0.333	1.9222E-02
0.500	9.0242E-02
0.800	5.2807E-01
1.100	1.7638E+00
1.400	4.3811E+00
1.700	9.0066E+00
2.000	1.6258E+01
2.300	2.6510E+01
2.600	3.9353E+01
2.900	5.4359E+01
3.200	7.1229E+01
3.500	8.9737E+01
3.800	1.0970E+02
4.100	1.3097E+02
4.400	1.5341E+02
4.700	1.7690E+02
5.000	2.0135E+02
5.300	2.2665E+02
5.600	2.5273E+02
5.900	2.7950E+02
6.200	3.0689E+02
6.500	3.3485E+02
6.800	3.6331E+02
7.100	3.9223E+02
7.400	4.2154E+02
7.700	4.5122E+02
8.000	4.8122E+02
8.300	5.1150E+02
8.600	5.4204E+02
8.900	5.7280E+02
9.200	6.0375E+02
9.500	6.3488E+02

9.800	6.6616E+02
10.100	6.9757E+02
10.400	7.2909E+02
24.000	2.1478E+03
48.000	2.5855E+03
72.000	2.8406E+03
96.000	3.0349E+03
120.000	2.8538E+03
168.000	2.4993E+03
336.000	1.5516E+03
720.000	4.9424E+02

 Cumulative Dose Summary
 #####

Time (hr)	Control Room (CR)		Exclusion Area Bounda		Low Population Zone (
	Thyroid (rem)	TEDE (rem)	Thyroid (rem)	TEDE (rem)	Thyroid (rem)	TEDE (rem)
0.000	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00
0.333	4.2006E-09	1.3350E-10	1.9808E-08	7.1388E-10	3.6066E-09	1.2998E-10
0.500	2.9512E-08	9.3697E-10	1.0222E-07	3.6606E-09	1.8612E-08	6.6651E-10
0.800	2.9261E-07	9.2754E-09	6.9522E-07	2.4652E-08	1.2658E-07	4.4885E-09
1.100	1.4033E-06	4.4420E-08	2.6343E-06	9.2592E-08	4.7965E-07	1.6859E-08
1.400	4.6436E-06	1.4680E-07	7.3310E-06	2.5572E-07	1.3348E-06	4.6559E-08
1.700	1.2163E-05	3.8409E-07	1.6747E-05	5.8032E-07	3.0493E-06	1.0566E-07
2.000	2.7090E-05	8.5463E-07	3.3360E-05	1.1493E-06	6.0740E-06	2.0926E-07
2.300	5.1007E-05	1.6078E-06	5.9895E-05	2.0531E-06	1.0905E-05	3.7383E-07
2.600	8.5607E-05	2.6965E-06	9.8390E-05	3.3578E-06	1.7914E-05	6.1137E-07
2.900	1.3462E-04	4.2374E-06	1.5045E-04	5.1141E-06	2.7393E-05	9.3115E-07
3.200	2.0137E-04	6.3344E-06	2.1745E-04	7.3655E-06	3.9592E-05	1.3411E-06
3.500	2.8879E-04	9.0785E-06	3.0060E-04	1.0149E-05	5.4732E-05	1.8480E-06
3.800	3.9947E-04	1.2550E-05	4.0098E-04	1.3499E-05	7.3008E-05	2.4578E-06
4.100	5.3569E-04	1.6821E-05	5.1951E-04	1.7442E-05	9.4590E-05	3.1758E-06
4.400	6.9946E-04	2.1953E-05	6.5703E-04	2.2004E-05	1.1963E-04	4.0065E-06
4.700	8.9258E-04	2.8000E-05	8.1427E-04	2.7208E-05	1.4826E-04	4.9539E-06
5.000	1.1166E-03	3.5012E-05	9.9188E-04	3.3071E-05	1.8060E-04	6.0215E-06
5.300	1.3729E-03	4.3031E-05	1.1904E-03	3.9612E-05	2.1675E-04	7.2123E-06
5.600	1.6628E-03	5.2095E-05	1.4104E-03	4.6843E-05	2.5680E-04	8.5290E-06
5.900	1.9872E-03	6.2236E-05	1.6522E-03	5.4778E-05	3.0083E-04	9.9738E-06
6.200	2.3472E-03	7.3484E-05	1.9163E-03	6.3428E-05	3.4892E-04	1.1549E-05
6.500	2.7436E-03	8.5863E-05	2.2030E-03	7.2801E-05	4.0111E-04	1.3255E-05
6.800	3.1771E-03	9.9395E-05	2.5125E-03	8.2904E-05	4.5746E-04	1.5095E-05
7.100	3.6483E-03	1.1410E-04	2.8451E-03	9.3745E-05	5.1802E-04	1.7069E-05
7.400	4.1577E-03	1.2999E-04	3.2010E-03	1.0533E-04	5.8282E-04	1.9178E-05
7.700	4.7059E-03	1.4709E-04	3.5803E-03	1.1766E-04	6.5188E-04	2.1423E-05
8.000	5.2932E-03	1.6540E-04	3.9832E-03	1.3074E-04	7.2525E-04	2.3804E-05
8.300	5.8421E-03	1.8250E-04	4.2026E-03	1.3813E-04	7.5354E-04	2.4757E-05
8.600	6.3046E-03	1.9692E-04	4.4343E-03	1.4592E-04	7.8340E-04	2.5762E-05
8.900	6.7153E-03	2.0971E-04	4.6782E-03	1.5411E-04	8.1485E-04	2.6817E-05
9.200	7.0973E-03	2.2161E-04	4.9344E-03	1.6269E-04	8.4789E-04	2.7924E-05
9.500	7.4656E-03	2.3308E-04	5.2029E-03	1.7167E-04	8.8251E-04	2.9082E-05
9.800	7.8303E-03	2.4444E-04	5.4838E-03	1.8105E-04	9.1871E-04	3.0291E-05
10.100	8.1980E-03	2.5588E-04	5.7769E-03	1.9082E-04	9.5651E-04	3.1551E-05
10.400	8.5732E-03	2.6756E-04	6.0824E-03	2.0099E-04	9.9589E-04	3.2862E-05
24.000	4.1098E-02	1.2739E-03	3.2296E-02	1.0514E-03	4.3756E-03	1.4250E-04
48.000	8.1618E-02	2.5187E-03	3.2296E-02	1.0514E-03	1.0763E-02	3.4274E-04
72.000	1.3532E-01	4.1611E-03	3.2296E-02	1.0514E-03	1.9313E-02	6.0779E-04
96.000	1.9994E-01	6.1330E-03	3.2296E-02	1.0514E-03	2.9572E-02	9.2435E-04
120.000	2.2842E-01	7.0014E-03	3.2296E-02	1.0514E-03	3.2603E-02	1.0177E-03

168.000	2.9132E-01	8.9177E-03	3.2296E-02	1.0514E-03	3.9455E-02	1.2284E-03
336.000	5.3922E-01	1.6468E-02	3.2296E-02	1.0514E-03	6.6410E-02	2.0567E-03
720.000	9.7089E-01	2.9615E-02	3.2296E-02	1.0514E-03	1.1328E-01	3.4967E-03

Worst Two-Hour Doses
#####

Exclusion Area Boundary (EAB)

Time (hr)	Whole Body (rem)	Thyroid (rem)	TEDE (rem)
10.4	6.0756E-06	3.8549E-03	1.2506E-04

RADTRAD Version 3.03 (Spring 2001) run on 9/19/2005 at 16:25:01
#####

File information
#####

Plant file = C:\Documents and Settings\Aleem Boatright\My Documents\My Work\Exelon\AST\Limerick\LGS LOCA\RADTRAD\LGS LOCA MSIV Leak (24-hr Settling Distribution) - All of HP Condenser Tubes - 275cfm CR Unfilt Inleak - Rad Mode.psf
Inventory file = c:\program files\radtrad3-03\defaults\limerick ast source terms.nif
Release file = c:\program files\radtrad3-03\defaults\bwr_dba.rft
Dose Conversion file = c:\program files\radtrad3-03\defaults\fgr11&12.inp

```
#####  #####  #####  #  #  #  #####  #  #  #####
#  #  #  #  #  #  #  #  #  #  #  #  #
#  #  #  #  #  #  #  #  #  #  #  #  #
#####  #####  #####  #  #  #  #  #####  #  #  #
#  #  #  #  #  #  #  #  #  #  #  #  #
#  #  #  #  #  #  #  #  #  #  #  #  #
#  #  #  #  #  #  #  #  #  #  #  #  #
```

Radtrad 3.03 4/15/2001
LGS LOCA 200scfh MSIV Leak - Leak to Condenser - MSL Pipe Deposition Credit (24-Hr 20-Group Aerosol Settling with Projected Area Assumption; 2-Hr Mixing Delay) - 95% CREFAS Charcoal Eff. No Delay - Rad Mode 275cfm Control Room Inleakage - 3000cfm - 10% (217

Nuclide Inventory File:
c:\program files\radtrad3-03\defaults\limerick ast source terms.nif

Plant Power Level:
3.5270E+03

Compartments:
9

Compartment 1:
Containment

3
3.7907E+05
0
0
0
1
0

Compartment 2:
(Node 1) Inboard MSL A Volume

3
2.5800E+02
0
0
0
0
0

Compartment 3:

(Node 1) Inboard MSL B Volume

3
1.0000E-08
0
0
0
0
0

Compartment 4:

(Node 2) Outboard MSL A Volume

3
1.1820E+03
0
0
0
0
0

Compartment 5:

(Node 2) Outboard MSL B Volume

3
1.0510E+03
0
0
0
0
0

Compartment 6:

Condenser

3
5.4750E+04
0
0
0
0
0

Compartment 7:

Environment

2
0.0000E+00
0
0
0
0
0

Compartment 8:

Control Room

1
1.2600E+05
0
0
1
0
0

Compartment 9:

Hold

3
1.0000E+00
0
0
0

0

0

Pathways:

11

Pathway 1:

Containment to (Node 1) Inboard MSL A Volume

1

2

2

Pathway 2:

Containment to (Node 1) Inboard MSL B Volume

1

3

2

Pathway 3:

Containment to Hold (PC Leakage)

1

9

4

Pathway 4:

(Node 1) Inboard MSL A Volume to (Node 2) Outboard MSL A Volume

2

4

2

Pathway 5:

(Node 1) Inboard MSL B Volume to (Node 2) Outboard MSL B Volume

3

5

2

Pathway 6:

(Node 2) Outboard MSL A Volume to Condenser

4

6

2

Pathway 7:

(Node 2) Outboard MSL B Volume to Condenser

5

6

2

Pathway 8:

Condenser Leak to Environment

6

7

2

Pathway 9:

Filtered Intake to Control Room

7

8

2

Pathway 10:

Unfiltered Inleakage to Control Room

7

8

2

Pathway 11:

Control Room Exhaust

8

7

2

End of Plant Model File

Scenario Description Name:

Plant Model Filename:

Source Term:

1
1 1.0000E+00

c:\program files\radtrad3-03\defaults\fgr11&12.inp

c:\program files\radtrad3-03\defaults\bwr_dba.rft
0.0000E+00

1
9.5000E-01 4.8500E-02 1.5000E-03 1.0000E+00

Overlying Pool:

0
0.0000E+00

0
0
0
0

Compartments:

9

Compartment 1:

0
1
0
0
0
0
0
3
3
1.0000E+01
1
1
0.0000E+00 0.0000E+00

Compartment 2:

0
1
0
0
0
0
0
0
0
0

Compartment 3:

0
1
0
0
0
0
0
0
0
0

Compartment 4:

0
1
0
0

0
0
0
0
0

Compartment 5:

0
1
0
0
0
0
0
0
0

Compartment 6:

0
1
0
0
0
0
0
0
0

Compartment 7:

0
1
0
0
0
0
0
0
0

Compartment 8:

0
1
0
0
0
0
1
2.1750E+03
3

0.0000E+00	9.9000E+01	9.5000E+01	9.5000E+01
5.0000E-01	9.9000E+01	9.5000E+01	9.5000E+01
7.2000E+02	0.0000E+00	0.0000E+00	0.0000E+00

0
0

Compartment 9:

0
1
0
0
0
0
0
0
0

Pathways:

11

Pathway 1:

0

0

0

0

0

1

5

0.0000E+00	1.5240E+00	9.9990E+01	9.9990E+01	0.0000E+00
2.0000E+00	9.3060E-01	9.9990E+01	9.9990E+01	0.0000E+00
2.4000E+01	5.1270E-01	0.0000E+00	9.9990E+01	0.0000E+00
9.6000E+01	5.1270E-01	0.0000E+00	9.9990E+01	0.0000E+00
7.2000E+02	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00

0

0

0

0

0

0

Pathway 2:

0

0

0

0

0

1

5

0.0000E+00	1.5240E+00	9.9990E+01	9.9990E+01	0.0000E+00
2.0000E+00	9.3060E-01	9.9990E+01	9.9990E+01	0.0000E+00
2.4000E+01	5.1270E-01	0.0000E+00	9.9990E+01	0.0000E+00
9.6000E+01	5.1270E-01	0.0000E+00	9.9990E+01	0.0000E+00
7.2000E+02	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00

0

0

0

0

0

0

Pathway 3:

0

0

0

0

0

0

0

0

0

0

1

3

0.0000E+00	5.0000E-01
2.4000E+01	2.5000E-01
7.2000E+02	0.0000E+00

0

Pathway 4:

0

0

0
 0
 0
 1
 4
 0.0000E+00 9.3060E-01 0.0000E+00 0.0000E+00 0.0000E+00
 2.4000E+01 5.1270E-01 0.0000E+00 0.0000E+00 0.0000E+00
 9.6000E+01 5.1270E-01 0.0000E+00 0.0000E+00 0.0000E+00
 7.2000E+02 0.0000E+00 0.0000E+00 0.0000E+00 0.0000E+00

0
 0
 0
 0
 0
 0

Pathway 5:

0
 0
 0
 0
 0
 1
 4
 0.0000E+00 9.3060E-01 0.0000E+00 0.0000E+00 0.0000E+00
 2.4000E+01 5.1270E-01 0.0000E+00 0.0000E+00 0.0000E+00
 9.6000E+01 5.1270E-01 0.0000E+00 0.0000E+00 0.0000E+00
 7.2000E+02 0.0000E+00 0.0000E+00 0.0000E+00 0.0000E+00

0
 0
 0
 0
 0
 0

Pathway 6:

0
 0
 0
 0
 0
 1
 4
 0.0000E+00 3.1880E+00 0.0000E+00 0.0000E+00 0.0000E+00
 2.4000E+01 1.5130E+00 0.0000E+00 0.0000E+00 0.0000E+00
 9.6000E+01 1.1480E+00 0.0000E+00 0.0000E+00 0.0000E+00
 7.2000E+02 0.0000E+00 0.0000E+00 0.0000E+00 0.0000E+00

0
 0
 0
 0
 0
 0

Pathway 7:

0
 0
 0
 0
 0
 1
 4
 0.0000E+00 3.1880E+00 0.0000E+00 0.0000E+00 0.0000E+00

2.4000E+01	1.5130E+00	0.0000E+00	0.0000E+00	0.0000E+00
9.6000E+01	1.1480E+00	0.0000E+00	0.0000E+00	0.0000E+00
7.2000E+02	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00

0
0
0
0
0
0

Pathway 8:

0
0
0
0
0
1
4

0.0000E+00	3.6620E+00	0.0000E+00	0.0000E+00	0.0000E+00
2.4000E+01	2.0180E+00	0.0000E+00	0.0000E+00	0.0000E+00
9.6000E+01	2.0180E+00	0.0000E+00	0.0000E+00	0.0000E+00
7.2000E+02	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00

0
0
0
0
0
0

Pathway 9:

0
0
0
0
0
1
3

0.0000E+00	5.2500E+02	9.9000E+01	9.5000E+01	9.5000E+01
5.0000E-01	5.2500E+02	9.9000E+01	9.5000E+01	9.5000E+01
7.2000E+02	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00

0
0
0
0
0
0

Pathway 10:

0
0
0
0
0
0
1
2

0.0000E+00	2.7500E+02	0.0000E+00	0.0000E+00	0.0000E+00
7.2000E+02	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00

0
0
0
0
0
0

Pathway 11:

0
 0
 0
 0
 0
 1
 3
 0.0000E+00 8.0000E+02 1.0000E+02 1.0000E+02 1.0000E+02
 5.0000E-01 8.0000E+02 1.0000E+02 1.0000E+02 1.0000E+02
 7.2000E+02 0.0000E+00 0.0000E+00 0.0000E+00 0.0000E+00
 0
 0
 0
 0
 0
 0

Dose Locations:

3

Location 1:

Exclusion Area Boundary (EAB)

7
 1
 2
 0.0000E+00 3.1800E-04
 2.4000E+01 0.0000E+00
 1
 4
 0.0000E+00 3.5000E-04
 8.0000E+00 1.8000E-04
 2.4000E+01 2.3000E-04
 7.2000E+02 0.0000E+00
 0

Location 2:

Low Population Zone (LPZ)

7
 1
 10
 0.0000E+00 5.7900E-05
 8.0000E+00 4.1000E-05
 2.4000E+01 1.9500E-05
 4.8000E+01 1.9500E-05
 7.2000E+01 1.9500E-05
 9.6000E+01 6.6800E-06
 1.2000E+02 6.6800E-06
 1.6800E+02 6.6800E-06
 3.3600E+02 6.6800E-06
 7.2000E+02 0.0000E+00
 1
 4
 0.0000E+00 3.5000E-04
 8.0000E+00 1.8000E-04
 2.4000E+01 2.3000E-04
 7.2000E+02 0.0000E+00
 0

Location 3:

Control Room (CR)

8
 0
 1

2
0.0000E+00 3.5000E-04
7.2000E+02 0.0000E+00

1
4
0.0000E+00 1.0000E+00
2.4000E+01 6.0000E-01
9.6000E+01 4.0000E-01
7.2000E+02 0.0000E+00

Effective Volume Location:

1
6
0.0000E+00 6.8800E-03
2.0000E+00 5.1700E-03
8.0000E+00 2.0400E-03
2.4000E+01 1.2900E-03
9.6000E+01 9.6300E-04
7.2000E+02 0.0000E+00

Simulation Parameters:

1
0.0000E+00 0.0000E+00

Output Filename:

C:\Documents and Settings\Aleem Boatright\My Documents\My
Work\Exelon\AST\Limerick\LGS LOCA\RADTRAD\LGS LOCA MSIV Leak (24-hr Settling
Distribution) - All of HP Condenser Tubes - 275cfm CR Unfilt Inleak - Rad Mode.o0

1
1
1
0
0

End of Scenario File

RADTRAD Version 3.03 (Spring 2001) run on 9/19/2005 at 16:25:01
#####

Plant Description
#####

Number of Nuclides = 60

Inventory Power = 1.0000E+00 MWth
Plant Power Level = 3.5270E+03 MWth

Number of compartments = 9

Compartment information

Compartment number 1 (Source term fraction = 1.0000E+00
)

Name: Containment
Compartment volume = 3.7907E+05 (Cubic feet)
Compartment type is Normal
Removal devices within compartment:
Deposition

Pathways into and out of compartment 1

- Exit Pathway Number 1: Containment to (Node 1) Inboard MSL A Volume
- Exit Pathway Number 2: Containment to (Node 1) Inboard MSL B Volume
- Exit Pathway Number 3: Containment to Hold (PC Leakage)

Compartment number 2

Name: (Node 1) Inboard MSL A Volume
Compartment volume = 2.5800E+02 (Cubic feet)
Compartment type is Normal
Pathways into and out of compartment 2

- Inlet Pathway Number 1: Containment to (Node 1) Inboard MSL A Volume
- Exit Pathway Number 4: (Node 1) Inboard MSL A Volume to (Node 2) Outboard

Compartment number 3

Name: (Node 1) Inboard MSL B Volume
Compartment volume = 1.0000E-08 (Cubic feet)
Compartment type is Normal
Pathways into and out of compartment 3

- Inlet Pathway Number 2: Containment to (Node 1) Inboard MSL B Volume
- Exit Pathway Number 5: (Node 1) Inboard MSL B Volume to (Node 2) Outboard

Compartment number 4

Name: (Node 2) Outboard MSL A Volume
Compartment volume = 1.1820E+03 (Cubic feet)
Compartment type is Normal
Pathways into and out of compartment 4

- Inlet Pathway Number 4: (Node 1) Inboard MSL A Volume to (Node 2) Outboard
- Exit Pathway Number 6: (Node 2) Outboard MSL A Volume to Condenser

Compartment number 5

Name: (Node 2) Outboard MSL B Volume
Compartment volume = 1.0510E+03 (Cubic feet)
Compartment type is Normal
Pathways into and out of compartment 5

- Inlet Pathway Number 5: (Node 1) Inboard MSL B Volume to (Node 2) Outboard

Exit Pathway Number 7! (Node 2) Outboard MSL B Volume to Condenser

Compartment number 6

Name: Condenser

Compartment volume = 5.4750E+04 (Cubic feet)

Compartment type is Normal

Pathways into and out of compartment 6

Inlet Pathway Number 6: (Node 2) Outboard MSL A Volume to Condenser

Inlet Pathway Number 7: (Node 2) Outboard MSL B Volume to Condenser

Exit Pathway Number 8: Condenser Leak to Environment

Compartment number 7

Name: Environment

Compartment type is Environment

Pathways into and out of compartment 7

Inlet Pathway Number 8: Condenser Leak to Environment

Inlet Pathway Number 11: Control Room Exhaust

Exit Pathway Number 9: Filtered Intake to Control Room

Exit Pathway Number 10: Unfiltered Inleakage to Control Room

Compartment number 8

Name: Control Room

Compartment volume = 1.2600E+05 (Cubic feet)

Compartment type is Control Room

Removal devices within compartment:

Filter(s)

Pathways into and out of compartment 8

Inlet Pathway Number 9: Filtered Intake to Control Room

Inlet Pathway Number 10: Unfiltered Inleakage to Control Room

Exit Pathway Number 11: Control Room Exhaust

Compartment number 9

Name: Hold

Compartment volume = 1.0000E+00 (Cubic feet)

Compartment type is Normal

Pathways into and out of compartment 9

Inlet Pathway Number 3: Containment to Hold (PC Leakage)

Total number of pathways = 11

 RADTRAD Version 3.03 (Spring 2001) run on 9/19/2005 at 16:25:01
 #####

 Scenario Description
 #####

Radioactive Decay is enabled
 Calculation of Daughters is enabled

Release Fractions and Timings

	GAP	EARLY IN-VESSEL	LATE RELEASE	RELEASE MASS
	0.500000 hr	1.5000 hrs	0.0000 hrs	(gm)
NOBLES	5.0000E-02	9.5000E-01	0.0000E+00	4.625E+03
IODINE	5.0000E-02	2.5000E-01	0.0000E+00	3.033E+02
CESIUM	5.0000E-02	2.0000E-01	0.0000E+00	5.099E+04
TELLURIUM	0.0000E+00	5.0000E-02	0.0000E+00	4.012E+01
STRONTIUM	0.0000E+00	2.0000E-02	0.0000E+00	1.712E+03
BARIUM	0.0000E+00	2.0000E-02	0.0000E+00	4.739E+01
RUTHENIUM	0.0000E+00	2.5000E-03	0.0000E+00	5.988E+01
CERIUM	0.0000E+00	5.0000E-04	0.0000E+00	5.914E+02
LANTHANUM	0.0000E+00	2.0000E-04	0.0000E+00	8.731E+00

Inventory Power = 3527. MWt

Nuclide Name	Group	Specific Inventory (Ci/MWt)	half life (s)	Whole Body DCF (Sv-m3/Bq-s)	Inhaled Thyroid (Sv/Bq)	Inhaled Effective (Sv/Bq)
Co-58	7	1.529E+02	6.117E+06	4.760E-14	8.720E-10	2.940E-09
Co-60	7	1.830E+02	1.663E+08	1.260E-13	1.620E-08	5.910E-08
Kr-85	1	3.946E+02	3.383E+08	1.190E-16	0.000E+00	0.000E+00
Kr-85m	1	8.313E+03	1.613E+04	7.480E-15	0.000E+00	0.000E+00
Kr-87	1	1.633E+04	4.578E+03	4.120E-14	0.000E+00	0.000E+00
Kr-88	1	2.303E+04	1.022E+04	1.020E-13	0.000E+00	0.000E+00
Rb-86	3	6.518E+01	1.612E+06	4.810E-15	1.330E-09	1.790E-09
Sr-89	5	2.798E+04	4.363E+06	7.730E-17	7.960E-12	1.120E-08
Sr-90	5	3.178E+03	9.190E+08	7.530E-18	2.690E-10	3.510E-07
Sr-91	5	3.801E+04	3.420E+04	4.924E-14	9.930E-12	4.547E-10
Sr-92	5	4.017E+04	9.756E+03	6.790E-14	3.920E-12	2.180E-10
Y-90	9	3.272E+03	2.304E+05	1.900E-16	5.170E-13	2.280E-09
Y-91	9	3.448E+04	5.055E+06	2.600E-16	8.500E-12	1.320E-08
Y-92	9	4.029E+04	1.274E+04	1.300E-14	1.050E-12	2.110E-10
Y-93	9	4.526E+04	3.636E+04	4.800E-15	9.260E-13	5.820E-10
Zr-95	9	4.489E+04	5.528E+06	3.600E-14	1.440E-09	6.390E-09
Zr-97	9	4.657E+04	6.084E+04	4.432E-14	2.315E-11	1.171E-09
Nb-95	9	4.512E+04	3.037E+06	3.740E-14	3.580E-10	1.570E-09
Mo-99	7	5.078E+04	2.376E+05	7.280E-15	1.520E-11	1.070E-09
Tc-99m	7	4.447E+04	2.167E+04	5.890E-15	5.010E-11	8.800E-12
Ru-103	7	4.202E+04	3.394E+06	2.251E-14	2.570E-10	2.421E-09
Ru-105	7	2.908E+04	1.598E+04	3.810E-14	4.150E-12	1.230E-10
Ru-106	7	1.730E+04	3.181E+07	1.040E-14	1.720E-09	1.290E-07
Rh-105	7	2.752E+04	1.273E+05	3.720E-15	2.880E-12	2.580E-10
Sb-127	4	2.896E+03	3.326E+05	3.330E-14	6.150E-11	1.630E-09
Sb-129	4	8.638E+03	1.555E+04	7.140E-14	9.720E-12	1.740E-10
Te-127	4	2.873E+03	3.366E+04	2.420E-16	1.840E-12	8.600E-11
Te-127m	4	3.855E+02	9.418E+06	1.470E-16	9.660E-11	5.810E-09
Te-129	4	8.501E+03	4.176E+03	2.750E-15	5.090E-13	2.090E-11
Te-129m	4	1.267E+03	2.903E+06	3.337E-15	1.563E-10	6.484E-09

LGS LOCA MSIV Leak (24-hr Settling Distribution) - All of HP Condenser Tubes - 275cfm CR Unfilt Inleak - Rad Mode.o0

Te-131m	4	3.869E+03	1.080E+05	7.463E-14	3.669E-08	1.758E-09
Te-132	4	3.821E+04	2.815E+05	1.030E-14	6.280E-08	2.550E-09
I-131	2	2.687E+04	6.947E+05	1.820E-14	2.920E-07	8.890E-09
I-132	2	3.881E+04	8.280E+03	1.120E-13	1.740E-09	1.030E-10
I-133	2	5.556E+04	7.488E+04	2.940E-14	4.860E-08	1.580E-09
I-134	2	6.165E+04	3.156E+03	1.300E-13	2.880E-10	3.550E-11
I-135	2	5.192E+04	2.380E+04	8.294E-14	8.460E-09	3.320E-10
Xe-133	1	5.491E+04	4.532E+05	1.560E-15	0.000E+00	0.000E+00
Xe-135	1	2.228E+04	3.272E+04	1.190E-14	0.000E+00	0.000E+00
Cs-134	3	7.280E+03	6.507E+07	7.570E-14	1.110E-08	1.250E-08
Cs-136	3	2.027E+03	1.132E+06	1.060E-13	1.730E-09	1.980E-09
Cs-137	3	4.538E+03	9.467E+08	2.725E-14	7.930E-09	8.630E-09
Ba-139	6	5.084E+04	4.962E+03	2.170E-15	2.400E-12	4.640E-11
Ba-140	6	4.896E+04	1.101E+06	8.580E-15	2.560E-10	1.010E-09
La-140	9	5.019E+04	1.450E+05	1.170E-13	6.870E-11	1.310E-09
La-141	9	4.640E+04	1.415E+04	2.390E-15	9.400E-12	1.570E-10
La-142	9	4.532E+04	5.550E+03	1.440E-13	8.740E-12	6.840E-11
Ce-141	8	4.492E+04	2.808E+06	3.430E-15	2.550E-11	2.420E-09
Ce-143	8	4.427E+04	1.188E+05	1.290E-14	6.230E-12	9.160E-10
Ce-144	8	3.596E+04	2.456E+07	2.773E-15	2.920E-10	1.010E-07
Pr-143	9	4.293E+04	1.172E+06	2.100E-17	1.680E-18	2.190E-09
Nd-147	9	1.838E+04	9.487E+05	6.190E-15	1.820E-11	1.850E-09
Np-239	8	5.397E+05	2.035E+05	7.690E-15	7.620E-12	6.780E-10
Pu-238	8	1.796E+02	2.769E+09	4.880E-18	3.860E-10	7.790E-05
Pu-239	8	1.200E+01	7.594E+11	4.240E-18	3.750E-10	8.330E-05
Pu-240	8	1.288E+01	2.063E+11	4.750E-18	3.760E-10	8.330E-05
Pu-241	8	6.182E+03	4.544E+08	7.250E-20	9.150E-12	1.340E-06
Am-241	9	9.528E+00	1.364E+10	8.180E-16	1.600E-09	1.200E-04
Cm-242	9	2.388E+03	1.407E+07	5.690E-18	9.410E-10	4.670E-06
Cm-244	9	2.602E+02	5.715E+08	4.910E-18	1.010E-09	6.700E-05

Nuclide	Daughter	Fraction	Daughter	Fraction	Daughter	Fraction
Kr-85m	Kr-85	0.21	none	0.00	none	0.00
Kr-87	Rb-87	1.00	none	0.00	none	0.00
Kr-88	Rb-88	1.00	none	0.00	none	0.00
Sr-90	Y-90	1.00	none	0.00	none	0.00
Sr-91	Y-91m	0.58	Y-91	0.42	none	0.00
Sr-92	Y-92	1.00	none	0.00	none	0.00
Y-93	Zr-93	1.00	none	0.00	none	0.00
Zr-95	Nb-95m	0.01	Nb-95	0.99	none	0.00
Zr-97	Nb-97m	0.95	Nb-97	0.05	none	0.00
Mo-99	Tc-99m	0.88	Tc-99	0.12	none	0.00
Tc-99m	Tc-99	1.00	none	0.00	none	0.00
Ru-103	Rh-103m	1.00	none	0.00	none	0.00
Ru-105	Rh-105	1.00	none	0.00	none	0.00
Ru-106	Rh-106	1.00	none	0.00	none	0.00
Sb-127	Te-127m	0.18	Te-127	0.82	none	0.00
Sb-129	Te-129m	0.22	Te-129	0.77	none	0.00
Te-127m	Te-127	0.98	none	0.00	none	0.00
Te-129	I-129	1.00	none	0.00	none	0.00
Te-129m	Te-129	0.65	I-129	0.35	none	0.00
Te-131m	Te-131	0.22	I-131	0.78	none	0.00
Te-132	I-132	1.00	none	0.00	none	0.00
I-131	Xe-131m	0.01	none	0.00	none	0.00
I-133	Xe-133m	0.03	Xe-133	0.97	none	0.00
I-135	Xe-135m	0.15	Xe-135	0.85	none	0.00
Xe-135	Cs-135	1.00	none	0.00	none	0.00
Cs-137	Ba-137m	0.95	none	0.00	none	0.00
Ba-140	La-140	1.00	none	0.00	none	0.00
La-141	Ce-141	1.00	none	0.00	none	0.00

Ce-143	Pr-143	1.00	none	0.00	none	0.00
Ce-144	Pr-144m	0.02	Pr-144	0.98	none	0.00
Nd-147	Pm-147	1.00	none	0.00	none	0.00
Np-239	Pu-239	1.00	none	0.00	none	0.00
Pu-238	U-234	1.00	none	0.00	none	0.00
Pu-239	U-235	1.00	none	0.00	none	0.00
Pu-240	U-236	1.00	none	0.00	none	0.00
Pu-241	U-237	0.00	Am-241	1.00	none	0.00
Am-241	Np-237	1.00	none	0.00	none	0.00
Cm-242	Pu-238	1.00	none	0.00	none	0.00
Cm-244	Pu-240	1.00	none	0.00	none	0.00

Iodine fractions

Aerosol	=	9.5000E-01
Elemental	=	4.8500E-02
Organic	=	1.5000E-03

COMPARTMENT DATA

Compartment number 1: Containment
 Natural Deposition (Powers' model): Aerosol data
 Reactor type: 3
 Percentile = 10 (%)

Natural Deposition: Elemental Removal Data

Time (hr)	Removal Coef. (hr ⁻¹)
0.0000E+00	0.0000E+00

- Compartment number 2: (Node 1) Inboard MSL A Volume
- Compartment number 3: (Node 1) Inboard MSL B Volume
- Compartment number 4: (Node 2) Outboard MSL A Volume
- Compartment number 5: (Node 2) Outboard MSL B Volume
- Compartment number 6: Condenser
- Compartment number 7: Environment
- Compartment number 8: Control Room

Compartment Filter Data

Time (hr)	Flow Rate (cfm)	Filter Efficiencies (%)		
		Aerosol	Elemental	Organic
0.0000E+00	2.1750E+03	9.9000E+01	9.5000E+01	9.5000E+01
5.0000E-01	2.1750E+03	9.9000E+01	9.5000E+01	9.5000E+01
7.2000E+02	2.1750E+03	0.0000E+00	0.0000E+00	0.0000E+00

Compartment number 9: Hold

PATHWAY DATA

Pathway number 1: Containment to (Node 1) Inboard MSL A Volume

Pathway Filter: Removal Data

Time (hr)	Flow Rate (cfm)	Filter Efficiencies (%)		
		Aerosol	Elemental	Organic

0.0000E+00	1.5240E+00	9.9990E+01	9.9990E+01	0.0000E+00
2.0000E+00	9.3060E-01	9.9990E+01	9.9990E+01	0.0000E+00
2.4000E+01	5.1270E-01	0.0000E+00	9.9990E+01	0.0000E+00
9.6000E+01	5.1270E-01	0.0000E+00	9.9990E+01	0.0000E+00
7.2000E+02	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00

Pathway number 2: Containment to (Node 1) Inboard MSL B Volume

Pathway Filter: Removal Data

Time (hr)	Flow Rate (cfm)	Filter Efficiencies (%)		
		Aerosol	Elemental	Organic
0.0000E+00	1.5240E+00	9.9990E+01	9.9990E+01	0.0000E+00
2.0000E+00	9.3060E-01	9.9990E+01	9.9990E+01	0.0000E+00
2.4000E+01	5.1270E-01	0.0000E+00	9.9990E+01	0.0000E+00
9.6000E+01	5.1270E-01	0.0000E+00	9.9990E+01	0.0000E+00
7.2000E+02	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00

Pathway number 3: Containment to Hold (PC Leakage)

Convection Data

Time (hr)	Flow Rate (% / day)
0.0000E+00	5.0000E-01
2.4000E+01	2.5000E-01
7.2000E+02	0.0000E+00

Pathway number 4: (Node 1) Inboard MSL A Volume to (Node 2) Outboard

Pathway Filter: Removal Data

Time (hr)	Flow Rate (cfm)	Filter Efficiencies (%)		
		Aerosol	Elemental	Organic
0.0000E+00	9.3060E-01	0.0000E+00	0.0000E+00	0.0000E+00
2.4000E+01	5.1270E-01	0.0000E+00	0.0000E+00	0.0000E+00
9.6000E+01	5.1270E-01	0.0000E+00	0.0000E+00	0.0000E+00
7.2000E+02	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00

Pathway number 5: (Node 1) Inboard MSL B Volume to (Node 2) Outboard

Pathway Filter: Removal Data

Time (hr)	Flow Rate (cfm)	Filter Efficiencies (%)		
		Aerosol	Elemental	Organic
0.0000E+00	9.3060E-01	0.0000E+00	0.0000E+00	0.0000E+00
2.4000E+01	5.1270E-01	0.0000E+00	0.0000E+00	0.0000E+00
9.6000E+01	5.1270E-01	0.0000E+00	0.0000E+00	0.0000E+00
7.2000E+02	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00

Pathway number 6: (Node 2) Outboard MSL A Volume to Condenser

Pathway Filter: Removal Data

Time (hr)	Flow Rate (cfm)	Filter Efficiencies (%)		
		Aerosol	Elemental	Organic
0.0000E+00	3.1880E+00	0.0000E+00	0.0000E+00	0.0000E+00
2.4000E+01	1.5130E+00	0.0000E+00	0.0000E+00	0.0000E+00
9.6000E+01	1.1480E+00	0.0000E+00	0.0000E+00	0.0000E+00
7.2000E+02	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00

Pathway number 7: (Node 2) Outboard MSL B Volume to Condenser

Pathway Filter: Removal Data

Time (hr)	Flow Rate (cfm)	Filter Efficiencies (%)		
		Aerosol	Elemental	Organic
0.0000E+00	3.1880E+00	0.0000E+00	0.0000E+00	0.0000E+00
2.4000E+01	1.5130E+00	0.0000E+00	0.0000E+00	0.0000E+00
9.6000E+01	1.1480E+00	0.0000E+00	0.0000E+00	0.0000E+00
7.2000E+02	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00

Pathway number 8: Condenser Leak to Environment

Pathway Filter: Removal Data

Time (hr)	Flow Rate (cfm)	Filter Efficiencies (%)		
		Aerosol	Elemental	Organic
0.0000E+00	3.6620E+00	0.0000E+00	0.0000E+00	0.0000E+00
2.4000E+01	2.0180E+00	0.0000E+00	0.0000E+00	0.0000E+00
9.6000E+01	2.0180E+00	0.0000E+00	0.0000E+00	0.0000E+00
7.2000E+02	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00

Pathway number 9: Filtered Intake to Control Room

Pathway Filter: Removal Data

Time (hr)	Flow Rate (cfm)	Filter Efficiencies (%)		
		Aerosol	Elemental	Organic
0.0000E+00	5.2500E+02	9.9000E+01	9.5000E+01	9.5000E+01
5.0000E-01	5.2500E+02	9.9000E+01	9.5000E+01	9.5000E+01
7.2000E+02	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00

Pathway number 10: Unfiltered Inleakage to Control Room

Pathway Filter: Removal Data

Time (hr)	Flow Rate (cfm)	Filter Efficiencies (%)		
		Aerosol	Elemental	Organic
0.0000E+00	2.7500E+02	0.0000E+00	0.0000E+00	0.0000E+00
7.2000E+02	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00

Pathway number 11: Control Room Exhaust

Pathway Filter: Removal Data

Time (hr)	Flow Rate (cfm)	Filter Efficiencies (%)		
		Aerosol	Elemental	Organic
0.0000E+00	8.0000E+02	1.0000E+02	1.0000E+02	1.0000E+02
5.0000E-01	8.0000E+02	1.0000E+02	1.0000E+02	1.0000E+02
7.2000E+02	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00

LOCATION DATA

Location Exclusion Area Boundary (EAB) is in compartment 7

Location X/Q Data

Time (hr)	X/Q (s * m ⁻³)
0.0000E+00	3.1800E-04
2.4000E+01	0.0000E+00

Location Breathing Rate Data

Time (hr)	Breathing Rate (m ³ * sec ⁻¹)
0.0000E+00	3.1800E-04
2.4000E+01	0.0000E+00

0.0000E+00	3.5000E-04
8.0000E+00	1.8000E-04
2.4000E+01	2.3000E-04
7.2000E+02	0.0000E+00

Location Low Population Zone (LPZ) is in compartment 7

Location X/Q Data

Time (hr)	X/Q (s * m ⁻³)
0.0000E+00	5.7900E-05
8.0000E+00	4.1000E-05
2.4000E+01	1.9500E-05
4.8000E+01	1.9500E-05
7.2000E+01	1.9500E-05
9.6000E+01	6.6800E-06
1.2000E+02	6.6800E-06
1.6800E+02	6.6800E-06
3.3600E+02	6.6800E-06
7.2000E+02	0.0000E+00

Location Breathing Rate Data

Time (hr)	Breathing Rate (m ³ * sec ⁻¹)
0.0000E+00	3.5000E-04
8.0000E+00	1.8000E-04
2.4000E+01	2.3000E-04
7.2000E+02	0.0000E+00

Location Control Room (CR) is in compartment 8

Location X/Q Data

Time (hr)	X/Q (s * m ⁻³)
0.0000E+00	6.8800E-03
2.0000E+00	5.1700E-03
8.0000E+00	2.0400E-03
2.4000E+01	1.2900E-03
9.6000E+01	9.6300E-04
7.2000E+02	0.0000E+00

Location Breathing Rate Data

Time (hr)	Breathing Rate (m ³ * sec ⁻¹)
0.0000E+00	3.5000E-04
7.2000E+02	0.0000E+00

Location Occupancy Factor Data

Time (hr)	Occupancy Factor
0.0000E+00	1.0000E+00
2.4000E+01	6.0000E-01
9.6000E+01	4.0000E-01
7.2000E+02	0.0000E+00

USER SPECIFIED TIME STEP DATA - SUPPLEMENTAL TIME STEPS

Time	Time step
0.0000E+00	0.0000E+00

 RADTRAD Version 3.03 (Spring 2001) run on 9/19/2005 at 16:25:01
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 Dose Output
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Exclusion Area Boundary (EAB) Doses:

Time (h) =	0.5000	Whole Body	Thyroid	TEDE
Delta dose (rem)		6.0058E-07	1.1697E-06	6.3831E-07
Accumulated dose (rem)		6.0058E-07	1.1697E-06	6.3831E-07

Low Population Zone (LPZ) Doses:

Time (h) =	0.5000	Whole Body	Thyroid	TEDE
Delta dose (rem)		1.0935E-07	2.1298E-07	1.1622E-07
Accumulated dose (rem)		1.0935E-07	2.1298E-07	1.1622E-07

Control Room (CR) Doses:

Time (h) =	0.5000	Whole Body	Thyroid	TEDE
Delta dose (rem)		2.2845E-08	3.4442E-07	3.3938E-08
Accumulated dose (rem)		2.2845E-08	3.4442E-07	3.3938E-08

Exclusion Area Boundary (EAB) Doses:

Time (h) =	2.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)		2.9699E-04	3.5190E-04	3.0844E-04
Accumulated dose (rem)		2.9759E-04	3.5307E-04	3.0907E-04

Low Population Zone (LPZ) Doses:

Time (h) =	2.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)		5.4074E-05	6.4073E-05	5.6159E-05
Accumulated dose (rem)		5.4184E-05	6.4286E-05	5.6275E-05

Control Room (CR) Doses:

Time (h) =	2.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)		3.3274E-05	2.8671E-04	4.2559E-05
Accumulated dose (rem)		3.3297E-05	2.8706E-04	4.2593E-05

Exclusion Area Boundary (EAB) Doses:

Time (h) =	8.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)	2.4237E-02		4.7693E-02	2.5767E-02
Accumulated dose (rem)	2.4534E-02		4.8046E-02	2.6076E-02

Low Population Zone (LPZ) Doses:

Time (h) =	8.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)	4.4129E-03		8.6837E-03	4.6915E-03
Accumulated dose (rem)	4.4671E-03		8.7480E-03	4.7478E-03

Control Room (CR) Doses:

Time (h) =	8.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)	7.3970E-03		6.2258E-02	9.3913E-03
Accumulated dose (rem)	7.4303E-03		6.2545E-02	9.4339E-03

Exclusion Area Boundary (EAB) Doses:

Time (h) =	24.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)	1.4416E-01		4.7716E-01	1.5908E-01
Accumulated dose (rem)	1.6870E-01		5.2520E-01	1.8515E-01

Low Population Zone (LPZ) Doses:

Time (h) =	24.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)	1.8587E-02		6.1520E-02	2.0510E-02
Accumulated dose (rem)	2.3054E-02		7.0268E-02	2.5258E-02

Control Room (CR) Doses:

Time (h) =	24.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)	3.3794E-02		5.9284E-01	5.2316E-02
Accumulated dose (rem)	4.1224E-02		6.5538E-01	6.1750E-02

Exclusion Area Boundary (EAB) Doses:

Time (h) =	48.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)	0.0000E+00		0.0000E+00	0.0000E+00
Accumulated dose (rem)	1.6870E-01		5.2520E-01	1.8515E-01

Low Population Zone (LPZ) Doses:

Time (h) =	48.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)	7.7156E-03		6.5367E-02	9.7351E-03
Accumulated dose (rem)	3.0770E-02		1.3563E-01	3.4993E-02

Control Room (CR) Doses:

Time (h) =	48.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)	1.5149E-02		4.2864E-01	2.8388E-02
Accumulated dose (rem)	5.6373E-02		1.0840E+00	9.0137E-02

Exclusion Area Boundary (EAB) Doses:

Time (h) =	72.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)	0.0000E+00		0.0000E+00	0.0000E+00
Accumulated dose (rem)	1.6870E-01		5.2520E-01	1.8515E-01

Low Population Zone (LPZ) Doses:

Time (h) =	72.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)		8.2954E-03	8.7758E-02	1.0992E-02
Accumulated dose (rem)		3.9065E-02	2.2339E-01	4.5984E-02

Control Room (CR) Doses:

Time (h) =	72.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)		1.4223E-02	5.5089E-01	3.1140E-02
Accumulated dose (rem)		7.0597E-02	1.6349E+00	1.2128E-01

Exclusion Area Boundary (EAB) Doses:

Time (h) =	96.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)		0.0000E+00	0.0000E+00	0.0000E+00
Accumulated dose (rem)		1.6870E-01	5.2520E-01	1.8515E-01

Low Population Zone (LPZ) Doses:

Time (h) =	96.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)		9.3372E-03	1.0524E-01	1.2561E-02
Accumulated dose (rem)		4.8402E-02	3.2863E-01	5.8545E-02

Control Room (CR) Doses:

Time (h) =	96.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)		1.6210E-02	6.6280E-01	3.6506E-02
Accumulated dose (rem)		8.6807E-02	2.2977E+00	1.5778E-01

Exclusion Area Boundary (EAB) Doses:

Time (h) =	120.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)		0.0000E+00	0.0000E+00	0.0000E+00
Accumulated dose (rem)		1.6870E-01	5.2520E-01	1.8515E-01

Low Population Zone (LPZ) Doses:

Time (h) =	120.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)		3.3934E-03	3.9770E-02	4.6098E-03
Accumulated dose (rem)		5.1796E-02	3.6840E-01	6.3155E-02

Control Room (CR) Doses:

Time (h) =	120.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)		8.9585E-03	3.6908E-01	2.0243E-02
Accumulated dose (rem)		9.5765E-02	2.6668E+00	1.7803E-01

Exclusion Area Boundary (EAB) Doses:

Time (h) =	168.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)		0.0000E+00	0.0000E+00	0.0000E+00
Accumulated dose (rem)		1.6870E-01	5.2520E-01	1.8515E-01

Low Population Zone (LPZ) Doses:

Time (h) =	168.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)		6.9953E-03	8.7079E-02	9.6555E-03
Accumulated dose (rem)		5.8791E-02	4.5548E-01	7.2810E-02

Control Room (CR) Doses:

Time (h) = 168.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)	1.7875E-02	7.9960E-01	4.2295E-02
Accumulated dose (rem)	1.1364E-01	3.4664E+00	2.2032E-01

Exclusion Area Boundary (EAB) Doses:

Time (h) = 336.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)	0.0000E+00	0.0000E+00	0.0000E+00
Accumulated dose (rem)	1.6870E-01	5.2520E-01	1.8515E-01

Low Population Zone (LPZ) Doses:

Time (h) = 336.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)	2.0880E-02	3.1466E-01	3.0482E-02
Accumulated dose (rem)	7.9671E-02	7.7014E-01	1.0329E-01

Control Room (CR) Doses:

Time (h) = 336.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)	5.3707E-02	2.8953E+00	1.4204E-01
Accumulated dose (rem)	1.6735E-01	6.3617E+00	3.6237E-01

Exclusion Area Boundary (EAB) Doses:

Time (h) = 720.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)	0.0000E+00	0.0000E+00	0.0000E+00
Accumulated dose (rem)	1.6870E-01	5.2520E-01	1.8515E-01

Low Population Zone (LPZ) Doses:

Time (h) = 720.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)	1.8348E-02	4.3049E-01	3.1482E-02
Accumulated dose (rem)	9.8019E-02	1.2006E+00	1.3477E-01

Control Room (CR) Doses:

Time (h) = 720.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)	4.7351E-02	3.9672E+00	1.6836E-01
Accumulated dose (rem)	2.1470E-01	1.0329E+01	5.3073E-01

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 I-131 Summary
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Time (hr)	Containment	(Node 1) Inboard MSL	(Node 1) Inboard MSL
	I-131 (Curies)	I-131 (Curies)	I-131 (Curies)
0.000	5.2640E+03	5.6438E-07	3.6390E-13
0.401	3.3308E+06	2.8396E-01	2.6033E-10
0.500	4.0234E+06	4.3745E-01	3.2383E-10
0.800	7.9873E+06	1.1993E+00	6.4673E-10
1.100	1.1677E+07	2.4343E+00	9.6773E-10
1.400	1.5110E+07	4.1093E+00	1.2869E-09
1.700	1.8302E+07	6.1932E+00	1.6044E-09
2.000	2.1269E+07	8.6572E+00	1.9201E-09
2.300	1.6051E+07	9.9918E+00	1.1573E-09
2.600	1.2203E+07	1.1220E+01	1.1458E-09
2.900	9.3660E+06	1.2353E+01	1.1370E-09
3.200	7.2733E+06	1.3401E+01	1.1301E-09

3.500	5.7299E+06	1.4373E+01	1.1247E-09
3.800	4.5914E+06	1.5274E+01	1.1203E-09
4.100	3.7515E+06	1.6111E+01	1.1168E-09
4.400	3.1318E+06	1.6890E+01	1.1138E-09
4.700	2.6745E+06	1.7615E+01	1.1113E-09
5.000	2.3368E+06	1.8289E+01	1.1090E-09
5.300	2.1739E+06	1.8917E+01	1.1072E-09
5.600	2.0386E+06	1.9502E+01	1.1055E-09
5.900	1.9261E+06	2.0047E+01	1.1039E-09
6.200	1.8326E+06	2.0555E+01	1.1023E-09
6.500	1.7547E+06	2.1028E+01	1.1008E-09
6.800	1.6899E+06	2.1468E+01	1.0992E-09
7.100	1.6358E+06	2.1877E+01	1.0978E-09
7.400	1.5907E+06	2.2258E+01	1.0963E-09
7.700	1.5530E+06	2.2612E+01	1.0949E-09
8.000	1.5215E+06	2.2942E+01	1.0935E-09
8.300	1.4951E+06	2.3248E+01	1.0920E-09
8.600	1.4754E+06	2.3532E+01	1.0907E-09
8.900	1.4584E+06	2.3796E+01	1.0893E-09
9.200	1.4437E+06	2.4040E+01	1.0879E-09
9.500	1.4310E+06	2.4267E+01	1.0865E-09
9.800	1.4199E+06	2.4477E+01	1.0852E-09
10.100	1.4103E+06	2.4672E+01	1.0838E-09
10.400	1.4018E+06	2.4852E+01	1.0825E-09
24.000	1.2895E+06	2.6317E+01	1.0238E-09
48.000	1.1754E+06	2.4128E+01	9.3331E-10
72.000	1.0714E+06	2.1997E+01	8.5069E-10
96.000	9.7667E+05	2.0051E+01	7.7545E-10
120.000	8.9030E+05	1.8278E+01	7.0687E-10
168.000	7.3978E+05	1.5188E+01	5.8737E-10
336.000	3.8690E+05	7.9432E+00	3.0719E-10
720.000	8.7935E+04	1.8053E+00	6.9818E-11

Time (hr)	(Node 2) Outboard MSL	(Node 2) Outboard MSL	Condenser
	I-131 (Curies)	I-131 (Curies)	I-131 (Curies)
0.000	2.2619E-11	5.6438E-07	1.9022E-11
0.401	8.1529E-03	2.8525E-01	7.1228E-03
0.500	1.5626E-02	4.3993E-01	1.3779E-02
0.800	6.4316E-02	1.2095E+00	5.8217E-02
1.100	1.7420E-01	2.4619E+00	1.6157E-01
1.400	3.7120E-01	4.1680E+00	3.5283E-01
1.700	6.7798E-01	6.3002E+00	6.6058E-01
2.000	1.1142E+00	8.8328E+00	1.1129E+00
2.300	1.6518E+00	1.0252E+01	1.6981E+00
2.600	2.2445E+00	1.1572E+01	2.3840E+00
2.900	2.8831E+00	1.2805E+01	3.1679E+00
3.200	3.5599E+00	1.3958E+01	4.0469E+00
3.500	4.2678E+00	1.5039E+01	5.0184E+00
3.800	5.0007E+00	1.6053E+01	6.0798E+00
4.100	5.7531E+00	1.7006E+01	7.2283E+00
4.400	6.5203E+00	1.7902E+01	8.4616E+00
4.700	7.2978E+00	1.8745E+01	9.7769E+00
5.000	8.0821E+00	1.9539E+01	1.1172E+01
5.300	8.8695E+00	2.0286E+01	1.2643E+01
5.600	9.6572E+00	2.0990E+01	1.4190E+01
5.900	1.0443E+01	2.1653E+01	1.5808E+01
6.200	1.1223E+01	2.2278E+01	1.7495E+01
6.500	1.1997E+01	2.2866E+01	1.9250E+01
6.800	1.2762E+01	2.3420E+01	2.1068E+01
7.100	1.3518E+01	2.3942E+01	2.2949E+01

7.400	1.4261E+01	2.4432E+01	2.4890E+01
7.700	1.4992E+01	2.4894E+01	2.6888E+01
8.000	1.5709E+01	2.5329E+01	2.8940E+01
8.300	1.6412E+01	2.5738E+01	3.1046E+01
8.600	1.7099E+01	2.6122E+01	3.3202E+01
8.900	1.7770E+01	2.6483E+01	3.5407E+01
9.200	1.8425E+01	2.6823E+01	3.7657E+01
9.500	1.9063E+01	2.7141E+01	3.9952E+01
9.800	1.9684E+01	2.7441E+01	4.2289E+01
10.100	2.0288E+01	2.7722E+01	4.4666E+01
10.400	2.0874E+01	2.7985E+01	4.7082E+01
24.000	3.3071E+01	3.1070E+01	1.7474E+02
48.000	3.6376E+01	3.2711E+01	2.7683E+02
72.000	3.4091E+01	3.0318E+01	3.6270E+02
96.000	3.1212E+01	2.7694E+01	4.2772E+02
120.000	3.5303E+01	3.1630E+01	4.6172E+02
168.000	3.1102E+01	2.7621E+01	5.1305E+02
336.000	1.6327E+01	1.4478E+01	4.6576E+02
720.000	3.7108E+00	3.2905E+00	1.6698E+02

Time (hr)	Environment I-131 (Curies)	Control Room I-131 (Curies)	Hold I-131 (Curies)
0.000	1.0603E-17	1.0327E-20	3.0465E-04
0.401	2.8690E-06	2.5142E-09	1.4535E+02
0.500	6.9199E-06	5.9146E-09	2.2112E+02
0.800	4.5810E-05	3.6455E-08	5.9764E+02
1.100	1.7072E-04	1.2740E-07	1.2127E+03
1.400	4.7006E-04	3.3001E-07	2.0494E+03
1.700	1.0669E-03	7.0598E-07	3.0920E+03
2.000	2.1184E-03	1.3235E-06	4.3258E+03
2.300	3.8000E-03	1.9020E-06	5.4786E+03
2.600	6.2469E-03	2.7479E-06	6.3492E+03
2.900	9.5787E-03	3.8430E-06	7.0116E+03
3.200	1.3912E-02	5.1730E-06	7.5206E+03
3.500	1.9359E-02	6.7269E-06	7.9163E+03
3.800	2.6029E-02	8.4953E-06	8.2285E+03
4.100	3.4030E-02	1.0470E-05	8.4790E+03
4.400	4.3465E-02	1.2644E-05	8.6840E+03
4.700	5.4434E-02	1.5010E-05	8.8554E+03
5.000	6.7035E-02	1.7563E-05	9.0020E+03
5.300	8.1361E-02	2.0296E-05	9.1332E+03
5.600	9.7503E-02	2.3204E-05	9.2549E+03
5.900	1.1555E-01	2.6280E-05	9.3688E+03
6.200	1.3559E-01	2.9520E-05	9.4762E+03
6.500	1.5770E-01	3.2917E-05	9.5781E+03
6.800	1.8196E-01	3.6467E-05	9.6755E+03
7.100	2.0844E-01	4.0164E-05	9.7690E+03
7.400	2.3723E-01	4.4002E-05	9.8594E+03
7.700	2.6839E-01	4.7976E-05	9.9470E+03
8.000	3.0198E-01	5.2082E-05	1.0032E+04
8.300	3.3808E-01	4.3129E-05	1.0116E+04
8.600	3.7674E-01	3.7802E-05	1.0198E+04
8.900	4.1803E-01	3.4895E-05	1.0279E+04
9.200	4.6200E-01	3.3605E-05	1.0358E+04
9.500	5.0871E-01	3.3401E-05	1.0437E+04
9.800	5.5820E-01	3.3929E-05	1.0515E+04
10.100	6.1053E-01	3.4954E-05	1.0592E+04
10.400	6.6575E-01	3.6321E-05	1.0669E+04
24.000	6.6236E+00	1.4249E-04	1.3846E+04
48.000	1.8613E+01	8.1140E-05	1.5656E+04

72.000	3.5649E+01	1.0679E-04	1.7053E+04
96.000	5.6675E+01	1.2624E-04	1.8096E+04
120.000	8.0209E+01	1.0191E-04	1.8835E+04
168.000	1.3221E+02	1.1340E-04	1.9576E+04
336.000	3.2099E+02	1.0318E-04	1.7631E+04
720.000	5.7940E+02	3.7031E-05	8.1416E+03

 Cumulative Dose Summary
 #####

Time (hr)	Exclusion Area Bounda		Low Population Zone (Control Room (CR)	
	Thyroid (rem)	TEDE (rem)	Thyroid (rem)	TEDE (rem)	Thyroid (rem)	TEDE (rem)
0.000	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00
0.401	4.8550E-07	2.6992E-07	8.8398E-08	4.9146E-08	1.2110E-07	1.1990E-08
0.500	1.1697E-06	6.3831E-07	2.1298E-07	1.1622E-07	3.4442E-07	3.3938E-08
0.800	7.7196E-06	4.3169E-06	1.4055E-06	7.8599E-07	3.2738E-06	3.2673E-07
1.100	2.8687E-05	1.8984E-05	5.2232E-06	3.4565E-06	1.5368E-05	1.6937E-06
1.400	7.8770E-05	6.0096E-05	1.4342E-05	1.0942E-05	5.0107E-05	6.2384E-06
1.700	1.7830E-04	1.4861E-04	3.2464E-05	2.7058E-05	1.2985E-04	1.7884E-05
2.000	3.5307E-04	3.0907E-04	6.4286E-05	5.6275E-05	2.8706E-04	4.2593E-05
2.300	6.3165E-04	5.6525E-04	1.1501E-04	1.0292E-04	5.3798E-04	8.4388E-05
2.600	1.0357E-03	9.2888E-04	1.8857E-04	1.6913E-04	9.0020E-04	1.4699E-04
2.900	1.5840E-03	1.4062E-03	2.8840E-04	2.5603E-04	1.4134E-03	2.3697E-04
3.200	2.2947E-03	2.0008E-03	4.1781E-04	3.6430E-04	2.1143E-03	3.6029E-04
3.500	3.1852E-03	2.7147E-03	5.7994E-04	4.9427E-04	3.0373E-03	5.2226E-04
3.800	4.2722E-03	3.5478E-03	7.7787E-04	6.4597E-04	4.2151E-03	7.2751E-04
4.100	5.5719E-03	4.4992E-03	1.0145E-03	8.1919E-04	5.6785E-03	9.8003E-04
4.400	7.0997E-03	5.5667E-03	1.2927E-03	1.0136E-03	7.4571E-03	1.2832E-03
4.700	8.8705E-03	6.7475E-03	1.6151E-03	1.2286E-03	9.5791E-03	1.6397E-03
5.000	1.0898E-02	8.0383E-03	1.9843E-03	1.4636E-03	1.2071E-02	2.0518E-03
5.300	1.3197E-02	9.4350E-03	2.4029E-03	1.7179E-03	1.4960E-02	2.5213E-03
5.600	1.5780E-02	1.0934E-02	2.8731E-03	1.9908E-03	1.8270E-02	3.0494E-03
5.900	1.8659E-02	1.2530E-02	3.3973E-03	2.2814E-03	2.2024E-02	3.6371E-03
6.200	2.1846E-02	1.4220E-02	3.9777E-03	2.5891E-03	2.6246E-02	4.2848E-03
6.500	2.5353E-02	1.5998E-02	4.6162E-03	2.9129E-03	3.0957E-02	4.9930E-03
6.800	2.9191E-02	1.7861E-02	5.3150E-03	3.2521E-03	3.6178E-02	5.7616E-03
7.100	3.3370E-02	1.9805E-02	6.0758E-03	3.6060E-03	4.1929E-02	6.5905E-03
7.400	3.7899E-02	2.1824E-02	6.9004E-03	3.9737E-03	4.8228E-02	7.4791E-03
7.700	4.2788E-02	2.3916E-02	7.7906E-03	4.3545E-03	5.5095E-02	8.4272E-03
8.000	4.8046E-02	2.6076E-02	8.7480E-03	4.7478E-03	6.2545E-02	9.4339E-03
8.300	5.0944E-02	2.8213E-02	9.1217E-03	5.0233E-03	6.9569E-02	1.0417E-02
8.600	5.4041E-02	3.0406E-02	9.5209E-03	5.3061E-03	7.5534E-02	1.1315E-02
8.900	5.7339E-02	3.2651E-02	9.9461E-03	5.5955E-03	8.0886E-02	1.2152E-02
9.200	6.0843E-02	3.4945E-02	1.0398E-02	5.8913E-03	8.5922E-02	1.2944E-02
9.500	6.4555E-02	3.7285E-02	1.0877E-02	6.1929E-03	9.0841E-02	1.3707E-02
9.800	6.8480E-02	3.9668E-02	1.1383E-02	6.5002E-03	9.5775E-02	1.4448E-02
10.100	7.2620E-02	4.2092E-02	1.1916E-02	6.8127E-03	1.0081E-01	1.5177E-02
10.400	7.6979E-02	4.4554E-02	1.2478E-02	7.1302E-03	1.0601E-01	1.5898E-02
24.000	5.2520E-01	1.8515E-01	7.0268E-02	2.5258E-02	6.5538E-01	6.1750E-02
48.000	5.2520E-01	1.8515E-01	1.3563E-01	3.4993E-02	1.0840E+00	9.0137E-02
72.000	5.2520E-01	1.8515E-01	2.2339E-01	4.5984E-02	1.6349E+00	1.2128E-01
96.000	5.2520E-01	1.8515E-01	3.2863E-01	5.8545E-02	2.2977E+00	1.5778E-01
120.000	5.2520E-01	1.8515E-01	3.6840E-01	6.3155E-02	2.6668E+00	1.7803E-01
168.000	5.2520E-01	1.8515E-01	4.5548E-01	7.2810E-02	3.4664E+00	2.2032E-01
336.000	5.2520E-01	1.8515E-01	7.7014E-01	1.0329E-01	6.3617E+00	3.6237E-01
720.000	5.2520E-01	1.8515E-01	1.2006E+00	1.3477E-01	1.0329E+01	5.3073E-01

#####

Worst Two-Hour Doses

#####

Exclusion Area Boundary (EAB)

Time (hr)	Whole Body (rem)	Thyroid (rem)	TEDE (rem)
10.4	1.8618E-02	6.5915E-02	2.0676E-02

RADTRAD Version 3.03 (Spring 2001) run on 9/19/2005 at 16:48:35
#####

File information
#####

Plant file = c:\RESUP3-A.psf
Inventory file = c:\program files\radtrad3-03\defaults\limerick ast source terms.nif
Release file = c:\program files\radtrad3-03\defaults\bwr_i.rft
Dose Conversion file = c:\program files\radtrad3-03\defaults\fgrl1&12.inp

```
#####      #####      #####      # #      # #####      #      #      #####
#      #      #      #      # ##      #      #      #      #
#      #      #      #      # #      #      #      #      #
#####      #####      #####      # #      # #####      #      #      #
#      #      #      #      # #      #      #      #      #
#      #      #      #      # #      ##      #      #      #
#      #####      #      #      #      #      #      #      #
```

Radtrad 3.03 4/15/2001
LGS LOCA 200scfh Line A MSIV Leak - Resuspension Only - Leak to Condenser - MSL
Pipe Deposition Credit (24-Hr 20-Group Aerosol Settling with Projected Area
Assumption; 2-Hr Mixing Delay) - 95% CREFAS Charcoal Eff. No Delay - Rad Mode
275cfm Control Room In

Nuclide Inventory File:
c:\program files\radtrad3-03\defaults\limerick ast source terms.nif

Plant Power Level:
3.5270E+03

Compartments:
10

Compartment 1:
Containment

3
3.7907E+05
0
0
0
1
0

Compartment 2:
MSL A Inboard - Airborne

3
2.5800E+02
0
0
0
0
0

Compartment 3:
Environment

2

0.0000E+00

0
0
0
0
0

Compartment 4:

Control Room

1

1.2600E+05

0
0
1
0
0

Compartment 5:

MSL A Outboard - Airborne

3

1.1820E+03

0
0
0
0
0

Compartment 6:

MSL A Inboard - Surface

3

1.0000E+00

0
0
0
0
0

Compartment 7:

MSL A Outboard - Surface

3

1.0000E+00

0
0
0
0
0

Compartment 8:

Hold (By Surface Fixation)

3

1.0000E+00

0
0
0
0
0

Compartment 9:

Condenser - Airborne

3

5.4746E+04

0
0
0
0
0

Compartment 10:

Condenser - Surface

3

1.0000E+00

0

0

0

0

0

Pathways:

15

Pathway 1:

Filtered Environment to Control Room (Intake)

3

4

2

Pathway 2:

Unfiltered Environment to Control Room (Inleakage)

3

4

2

Pathway 3:

Control Room to Environment (Exhaust)

4

3

2

Pathway 4:

(Aerosol Transport 1) MSL A Inboard - Airborne to MSL A Outboard - Airborne

2

5

2

Pathway 5:

(Deposition 1) MSL A Inboard - Airborne to MSL A Inboard - Surface

2

6

4

Pathway 6:

(Resuspension 1) MSL A Inboard - Surface to Environment

6

3

4

Pathway 7:

(Surface Fixation 1) MSL A Inboard - Surface to Hold (By Surface Fixation)

6

8

4

Pathway 8:

(Deposition 2) MSL A Outboard - Airborne to MSL A Outboard - Surface

5

7

4

Pathway 9:

(Resuspension 2) MSL A Outboard - Surface to Environment

7

3

4

Pathway 10:

(Surface Fixation 2) MSL A Outboard - Surface to Hold (By Surface Fixation)

7

8

4

Pathway 11:

(Aerosol Transport 2) MSL A Outboard - Airborne to Condenser - Airborne

5

9

2

Pathway 12:

(Deposition 3) Condenser - Airborne to Condenser - Surface

9

10

4

Pathway 13:

(Resuspension 3) Condenser - Surface to Environment

10

3

4

Pathway 14:

(Surface Fixation 3) Condenser - Surface to Hold (By Surface Fixation)

10

8

4

Pathway 15:

Containment to MSL A Inboard - Airborne

1

2

2

End of Plant Model File

Scenario Description Name:

Plant Model Filename:

Source Term:

1

1 1.0000E+00

c:\program files\radtrad3-03\defaults\fgr11&12.inp

c:\program files\radtrad3-03\defaults\bwr_i.rft

0.0000E+00

1

9.5000E-01 4.8500E-02 1.5000E-03 1.0000E+00

Overlying Pool:

0

0.0000E+00

0

0

0

0

Compartments:

10

Compartment 1:

0

1

0

0

0

0

0

3

3

1.0000E+01

1

1
 0.0000E+00 0.0000E+00

Compartment 2:

0
 1
 0
 0
 0
 0
 0
 0
 0

Compartment 3:

0
 1
 0
 0
 0
 0
 0
 0
 0

Compartment 4:

0
 1
 0
 0
 0
 0
 1

2.1750E+03

3

0.0000E+00	9.9000E+01	9.5000E+01	9.5000E+01
3.3330E-01	9.9000E+01	9.5000E+01	9.5000E+01
7.2000E+02	0.0000E+00	0.0000E+00	0.0000E+00

0
 0

Compartment 5:

0
 1
 0
 0
 0
 0
 0
 0
 0

Compartment 6:

0
 1
 0
 0
 0
 0
 0
 0
 0

Compartment 7:

0
 1

0
0
0
0
0
0
0
0

Compartment 8:

0
1
0
0
0
0
0
0
0

Compartment 9:

0
1
0
0
0
0
0
0
0

Compartment 10:

0
1
0
0
0
0
0
0
0

Pathways:

15

Pathway 1:

0
0
0
0
0
1
3
0
0
0
0
0
0
0
0

0.0000E+00	5.2500E+02	9.9000E+01	9.5000E+01	9.5000E+01
5.0000E-01	5.2500E+02	9.9000E+01	9.5000E+01	9.5000E+01
7.2000E+02	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00

Pathway 2:

0
0
0

0
 0
 1
 2
 0.0000E+00 2.7500E+02 0.0000E+00 0.0000E+00 0.0000E+00
 7.2000E+02 0.0000E+00 0.0000E+00 0.0000E+00 0.0000E+00

0
 0
 0
 0
 0
 0

Pathway 3:

0
 0
 0
 0
 0
 1
 3
 0.0000E+00 8.0000E+02 1.0000E+02 1.0000E+02 1.0000E+02
 5.0000E-01 8.0000E+02 1.0000E+02 1.0000E+02 1.0000E+02
 7.2000E+02 0.0000E+00 0.0000E+00 0.0000E+00 0.0000E+00

0
 0
 0
 0
 0
 0

Pathway 4:

0
 0
 0
 0
 0
 1
 5
 0.0000E+00 9.3060E-01 1.0000E+02 0.0000E+00 1.0000E+02
 2.0000E+00 9.3060E-01 1.0000E+02 0.0000E+00 1.0000E+02
 2.4000E+01 5.1270E-01 1.0000E+02 0.0000E+00 1.0000E+02
 9.6000E+01 5.1270E-01 1.0000E+02 0.0000E+00 1.0000E+02
 7.2000E+02 0.0000E+00 0.0000E+00 0.0000E+00 0.0000E+00

0
 0
 0
 0
 0
 0

Pathway 5:

0
 0
 0
 0
 0
 0
 0
 0
 0
 0
 1

4
 0.0000E+00 3.1420E+02
 2.4000E+01 7.0350E+02
 9.6000E+01 4.4780E+03
 7.2000E+02 0.0000E+00

0
 Pathway 6:

0
 0
 0
 0
 0
 0
 0
 0
 0
 0
 1
 4
 0.0000E+00 3.5580E-02
 2.4000E+01 2.9950E-02
 9.6000E+01 2.0170E-02
 7.2000E+02 0.0000E+00

0
 Pathway 7:

0
 0
 0
 0
 0
 0
 0
 0
 0
 0
 0
 1
 4
 0.0000E+00 1.5960E-02
 2.4000E+01 1.1360E-02
 9.6000E+01 5.2000E-03
 7.2000E+02 0.0000E+00

0
 Pathway 8:

0
 0
 0
 0
 0
 0
 0
 0
 0
 0
 0
 1
 4
 0.0000E+00 3.1417E+02
 2.4000E+01 7.0352E+02
 9.6000E+01 4.4779E+03
 7.2000E+02 0.0000E+00
 0

Pathway 9:

0
 0
 0
 0
 0
 0
 0
 0
 0
 0
 1
 4
 0.0000E+00 3.5580E-02
 2.4000E+01 2.9950E-02
 9.6000E+01 2.0170E-02
 7.2000E+02 0.0000E+00
 0

Pathway 10:

0
 0
 0
 0
 0
 0
 0
 0
 0
 0
 1
 4
 0.0000E+00 1.5960E-02
 2.4000E+01 1.1360E-02
 9.6000E+01 5.2000E-03
 7.2000E+02 0.0000E+00
 0

Pathway 11:

0
 0
 0
 0
 0
 1
 4
 0.0000E+00 3.1880E+00 1.0000E+02 0.0000E+00 1.0000E+02
 2.4000E+01 1.5130E+00 1.0000E+02 0.0000E+00 1.0000E+02
 9.6000E+01 1.1480E+00 1.0000E+02 0.0000E+00 1.0000E+02
 7.2000E+02 0.0000E+00 0.0000E+00 0.0000E+00 0.0000E+00
 0
 0
 0
 0
 0
 0

Pathway 12:

0
 0
 0
 0
 0

0
 0
 0
 0
 0
 1
 4
 0.0000E+00 4.2591E+04
 2.4000E+01 4.2591E+04
 9.6000E+01 4.2591E+04
 7.2000E+02 0.0000E+00

Pathway 13:

0
 0
 0
 0
 0
 0
 0
 0
 0
 0
 1
 4
 0.0000E+00 1.6090E-02
 2.4000E+01 1.6090E-02
 9.6000E+01 1.6090E-02
 7.2000E+02 0.0000E+00

Pathway 14:

0
 0
 0
 0
 0
 0
 0
 0
 0
 0
 1
 4
 0.0000E+00 3.3300E-03
 2.4000E+01 3.3300E-03
 9.6000E+01 3.3300E-03
 7.2000E+02 0.0000E+00

Pathway 15:

0
 0
 0
 0
 0
 0
 1
 5
 0.0000E+00 1.5244E+00 1.0000E+02 0.0000E+00 1.0000E+02
 2.0000E+00 9.3060E-01 1.0000E+02 0.0000E+00 1.0000E+02
 2.4000E+01 5.1270E-01 1.0000E+02 0.0000E+00 1.0000E+02
 9.6000E+01 5.1270E-01 1.0000E+02 0.0000E+00 1.0000E+02

7.2000E+02 0.0000E+00 0.0000E+00 0.0000E+00 0.0000E+00
 0
 0
 0
 0
 0
 0

Dose Locations:

3

Location 1:

Control Room (CR)

4

0

1

2

0.0000E+00 3.5000E-04

7.2000E+02 0.0000E+00

1

4

0.0000E+00 1.0000E+00

2.4000E+01 6.0000E-01

9.6000E+01 4.0000E-01

7.2000E+02 0.0000E+00

Location 2:

Exclusion Area Boundary (EAB)

3

1

2

0.0000E+00 3.1800E-04

2.4000E+01 0.0000E+00

1

4

0.0000E+00 3.5000E-04

8.0000E+00 1.8000E-04

2.4000E+01 2.3000E-04

7.2000E+02 0.0000E+00

0

Location 3:

Low Population Zone (LPZ)

3

1

10

0.0000E+00 5.7900E-05

8.0000E+00 4.1000E-05

2.4000E+01 1.9500E-05

4.8000E+01 1.9500E-05

7.2000E+01 1.9500E-05

9.6000E+01 6.6800E-06

1.2000E+02 6.6800E-06

1.6800E+02 6.6800E-06

3.3600E+02 6.6800E-06

7.2000E+02 0.0000E+00

1

4

0.0000E+00 3.5000E-04

8.0000E+00 1.8000E-04

2.4000E+01 2.3000E-04

7.2000E+02 0.0000E+00

0

Effective Volume Location:

1
6
0.0000E+00 6.8800E-03
2.0000E+00 5.1700E-03
8.0000E+00 2.0400E-03
2.4000E+01 1.2900E-03
9.6000E+01 9.6300E-04
7.2000E+02 0.0000E+00

Simulation Parameters:

1
0.0000E+00 0.0000E+00

Output Filename:

C:\RESUP3-A.o0

1
1
1
0
0

End of Scenario File

RADTRAD Version 3.03 (Spring 2001) run on 9/19/2005 at 16:48:35
#####

Plant Description
#####

Number of Nuclides = 60

Inventory Power = 1.0000E+00 MWth
Plant Power Level = 3.5270E+03 MWth

Number of compartments = 10

Compartment information

Compartment number 1 (Source term fraction = 1.0000E+00
)

Name: Containment
Compartment volume = 3.7907E+05 (Cubic feet)
Compartment type is Normal
Removal devices within compartment:

Deposition

Pathways into and out of compartment 1

Exit Pathway Number 15: Containment to MSL A Inboard - Airborne

Compartment number 2

Name: MSL A Inboard - Airborne
Compartment volume = 2.5800E+02 (Cubic feet)
Compartment type is Normal

Pathways into and out of compartment 2

Inlet Pathway Number 15: Containment to MSL A Inboard - Airborne

Exit Pathway Number 4: (Aerosol Transport 1) MSL A Inboard - Airborne to

Exit Pathway Number 5: (Deposition 1) MSL A Inboard - Airborne to MSL A I

Compartment number 3

Name: Environment
Compartment type is Environment

Pathways into and out of compartment 3

Inlet Pathway Number 3: Control Room to Environment (Exhaust)

Inlet Pathway Number 6: (Resuspension 1) MSL A Inboard - Surface to Enviro

Inlet Pathway Number 9: (Resuspension 2) MSL A Outboard - Surface to Envi

Inlet Pathway Number 13: (Resuspension 3) Condenser - Surface to Environme

Exit Pathway Number 1: Filtered Environment to Control Room (Intake)

Exit Pathway Number 2: Unfiltered Environment to Control Room (Inleakage)

Compartment number 4

Name: Control Room
Compartment volume = 1.2600E+05 (Cubic feet)
Compartment type is Control Room
Removal devices within compartment:

Filter(s)

Pathways into and out of compartment 4

Inlet Pathway Number 1: Filtered Environment to Control Room (Intake)

Inlet Pathway Number 2: Unfiltered Environment to Control Room (Inleakage)

Exit Pathway Number 3: Control Room to Environment (Exhaust)

Compartment number 5

Name: MSL A Outboard - Airborne
Compartment volume = 1.1820E+03 (Cubic feet)
Compartment type is Normal
Pathways into and out of compartment 5
Inlet Pathway Number 4: (Aerosol Transport 1) MSL A Inboard - Airborne to
Exit Pathway Number 8: (Deposition 2) MSL A Outboard - Airborne to MSL A
Exit Pathway Number 11: (Aerosol Transport 2) MSL A Outboard - Airborne to

Compartment number 6
Name: MSL A Inboard - Surface
Compartment volume = 1.0000E+00 (Cubic feet)
Compartment type is Normal
Pathways into and out of compartment 6
Inlet Pathway Number 5: (Deposition 1) MSL A Inboard - Airborne to MSL A I
Exit Pathway Number 6: (Resuspension 1) MSL A Inboard - Surface to Enviro
Exit Pathway Number 7: (Surface Fixation 1) MSL A Inboard - Surface to Ho

Compartment number 7
Name: MSL A Outboard - Surface
Compartment volume = 1.0000E+00 (Cubic feet)
Compartment type is Normal
Pathways into and out of compartment 7
Inlet Pathway Number 8: (Deposition 2) MSL A Outboard - Airborne to MSL A
Exit Pathway Number 9: (Resuspension 2) MSL A Outboard - Surface to Envi
Exit Pathway Number 10: (Surface Fixation 2) MSL A Outboard - Surface to H

Compartment number 8
Name: Hold (By Surface Fixation)
Compartment volume = 1.0000E+00 (Cubic feet)
Compartment type is Normal
Pathways into and out of compartment 8
Inlet Pathway Number 7: (Surface Fixation 1) MSL A Inboard - Surface to Ho
Inlet Pathway Number 10: (Surface Fixation 2) MSL A Outboard - Surface to H
Inlet Pathway Number 14: (Surface Fixation 3) Condenser - Surface to Hold

Compartment number 9
Name: Condenser - Airborne
Compartment volume = 5.4746E+04 (Cubic feet)
Compartment type is Normal
Pathways into and out of compartment 9
Inlet Pathway Number 11: (Aerosol Transport 2) MSL A Outboard - Airborne to
Exit Pathway Number 12: (Deposition 3) Condenser - Airborne to Condenser -

Compartment number 10
Name: Condenser - Surface
Compartment volume = 1.0000E+00 (Cubic feet)
Compartment type is Normal
Pathways into and out of compartment 10
Inlet Pathway Number 12: (Deposition 3) Condenser - Airborne to Condenser -
Exit Pathway Number 13: (Resuspension 3) Condenser - Surface to Environme
Exit Pathway Number 14: (Surface Fixation 3) Condenser - Surface to Hold

Total number of pathways = 15

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 Scenario Description
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Radioactive Decay is enabled
 Calculation of Daughters is enabled

Release Fractions and Timings

	GAP	EARLY IN-VESSEL	LATE RELEASE	RELEASE MASS
	0.500000 hr	1.5000 hrs	0.0000 hrs	(gm)
NOBLES	0.0000E+00	0.0000E+00	0.0000E+00	0.000E+00
IODINE	5.0000E-02	2.5000E-01	0.0000E+00	3.033E+02
CESIUM	0.0000E+00	0.0000E+00	0.0000E+00	0.000E+00
TELLURIUM	0.0000E+00	0.0000E+00	0.0000E+00	0.000E+00
STRONTIUM	0.0000E+00	0.0000E+00	0.0000E+00	0.000E+00
BARIUM	0.0000E+00	0.0000E+00	0.0000E+00	0.000E+00
RUTHENIUM	0.0000E+00	0.0000E+00	0.0000E+00	0.000E+00
CERIUM	0.0000E+00	0.0000E+00	0.0000E+00	0.000E+00
LANTHANUM	0.0000E+00	0.0000E+00	0.0000E+00	0.000E+00

Inventory Power = 3527. Mwt

Nuclide Name	Group	Specific Inventory (Ci/Mwt)	half life (s)	Whole Body DCF (Sv-m3/Bq-s)	Inhaled Thyroid (Sv/Bq)	Inhaled Effective (Sv/Bq)
I-131	2	2.687E+04	6.947E+05	1.820E-14	2.920E-07	8.890E-09
I-132	2	3.881E+04	8.280E+03	1.120E-13	1.740E-09	1.030E-10
I-133	2	5.556E+04	7.488E+04	2.940E-14	4.860E-08	1.580E-09
I-134	2	6.165E+04	3.156E+03	1.300E-13	2.880E-10	3.550E-11
I-135	2	5.192E+04	2.380E+04	8.294E-14	8.460E-09	3.320E-10

Nuclide	Daughter	Fraction	Daughter	Fraction	Daughter	Fraction
Kr-85m	Kr-85	0.21	none	0.00	none	0.00
Kr-87	Rb-87	1.00	none	0.00	none	0.00
Kr-88	Rb-88	1.00	none	0.00	none	0.00
Sr-90	Y-90	1.00	none	0.00	none	0.00
Sr-91	Y-91m	0.58	Y-91	0.42	none	0.00
Sr-92	Y-92	1.00	none	0.00	none	0.00
Y-93	Zr-93	1.00	none	0.00	none	0.00
Zr-95	Nb-95m	0.01	Nb-95	0.99	none	0.00
Zr-97	Nb-97m	0.95	Nb-97	0.05	none	0.00
Mo-99	Tc-99m	0.88	Tc-99	0.12	none	0.00
Tc-99m	Tc-99	1.00	none	0.00	none	0.00
Ru-103	Rh-103m	1.00	none	0.00	none	0.00
Ru-105	Rh-105	1.00	none	0.00	none	0.00
Ru-106	Rh-106	1.00	none	0.00	none	0.00
Sb-127	Te-127m	0.18	Te-127	0.82	none	0.00
Sb-129	Te-129m	0.22	Te-129	0.77	none	0.00
Te-127m	Te-127	0.98	none	0.00	none	0.00
Te-129	I-129	1.00	none	0.00	none	0.00
Te-129m	Te-129	0.65	I-129	0.35	none	0.00
Te-131m	Te-131	0.22	I-131	0.78	none	0.00
Te-132	I-132	1.00	none	0.00	none	0.00
I-131	Xe-131m	0.01	none	0.00	none	0.00
I-133	Xe-133m	0.03	Xe-133	0.97	none	0.00

I-135	Xe-135m	0.15	Xe-135	0.85	none	0.00
Xe-135	Cs-135	1.00	none	0.00	none	0.00
Cs-137	Ba-137m	0.95	none	0.00	none	0.00
Ba-140	La-140	1.00	none	0.00	none	0.00
La-141	Ce-141	1.00	none	0.00	none	0.00
Ce-143	Pr-143	1.00	none	0.00	none	0.00
Ce-144	Pr-144m	0.02	Pr-144	0.98	none	0.00
Nd-147	Pm-147	1.00	none	0.00	none	0.00
Np-239	Pu-239	1.00	none	0.00	none	0.00
Pu-238	U-234	1.00	none	0.00	none	0.00
Pu-239	U-235	1.00	none	0.00	none	0.00
Pu-240	U-236	1.00	none	0.00	none	0.00
Pu-241	U-237	0.00	Am-241	1.00	none	0.00
Am-241	Np-237	1.00	none	0.00	none	0.00
Cm-242	Pu-238	1.00	none	0.00	none	0.00
Cm-244	Pu-240	1.00	none	0.00	none	0.00

Iodine fractions

Aerosol	=	9.5000E-01
Elemental	=	4.8500E-02
Organic	=	1.5000E-03

COMPARTMENT DATA

Compartment number 1: Containment
 Natural Deposition (Powers' model): Aerosol data
 Reactor type: 3
 Percentile = 10 (%)

Natural Deposition: Elemental Removal Data
 Time (hr) Removal Coef. (hr⁻¹)
 0.0000E+00 0.0000E+00

Compartment number 2: MSL A Inboard - Airborne
 Compartment number 3: Environment
 Compartment number 4: Control Room

Compartment Filter Data

Time (hr)	Flow Rate (cfm)	Filter Efficiencies (%)		
		Aerosol	Elemental	Organic
0.0000E+00	2.1750E+03	9.9000E+01	9.5000E+01	9.5000E+01
3.3330E-01	2.1750E+03	9.9000E+01	9.5000E+01	9.5000E+01
7.2000E+02	2.1750E+03	0.0000E+00	0.0000E+00	0.0000E+00

Compartment number 5: MSL A Outboard - Airborne
 Compartment number 6: MSL A Inboard - Surface
 Compartment number 7: MSL A Outboard - Surface
 Compartment number 8: Hold (By Surface Fixation)
 Compartment number 9: Condenser - Airborne
 Compartment number 10: Condenser - Surface

PATHWAY DATA

Pathway number 1: Filtered Environment to Control Room (Intake)

Pathway Filter: Removal Data

Time (hr)	Flow Rate (cfm)	Filter Efficiencies (%)		
		Aerosol	Elemental	Organic
0.0000E+00	5.2500E+02	9.9000E+01	9.5000E+01	9.5000E+01
5.0000E-01	5.2500E+02	9.9000E+01	9.5000E+01	9.5000E+01
7.2000E+02	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00

Pathway number 2: Unfiltered Environment to Control Room (Inleakage)

Pathway Filter: Removal Data

Time (hr)	Flow Rate (cfm)	Filter Efficiencies (%)		
		Aerosol	Elemental	Organic
0.0000E+00	2.7500E+02	0.0000E+00	0.0000E+00	0.0000E+00
7.2000E+02	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00

Pathway number 3: Control Room to Environment (Exhaust)

Pathway Filter: Removal Data

Time (hr)	Flow Rate (cfm)	Filter Efficiencies (%)		
		Aerosol	Elemental	Organic
0.0000E+00	8.0000E+02	1.0000E+02	1.0000E+02	1.0000E+02
5.0000E-01	8.0000E+02	1.0000E+02	1.0000E+02	1.0000E+02
7.2000E+02	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00

Pathway number 4: (Aerosol Transport 1) MSL A Inboard - Airborne to

Pathway Filter: Removal Data

Time (hr)	Flow Rate (cfm)	Filter Efficiencies (%)		
		Aerosol	Elemental	Organic
0.0000E+00	9.3060E-01	1.0000E+02	0.0000E+00	1.0000E+02
2.0000E+00	9.3060E-01	1.0000E+02	0.0000E+00	1.0000E+02
2.4000E+01	5.1270E-01	1.0000E+02	0.0000E+00	1.0000E+02
9.6000E+01	5.1270E-01	1.0000E+02	0.0000E+00	1.0000E+02
7.2000E+02	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00

Pathway number 5: (Deposition 1) MSL A Inboard - Airborne to MSL A I

Convection Data

Time (hr)	Flow Rate (% / day)
0.0000E+00	3.1420E+02
2.4000E+01	7.0350E+02
9.6000E+01	4.4780E+03
7.2000E+02	0.0000E+00

Pathway number 6: (Resuspension 1) MSL A Inboard - Surface to Enviro

Convection Data

Time (hr)	Flow Rate (% / day)
0.0000E+00	3.5580E-02
2.4000E+01	2.9950E-02
9.6000E+01	2.0170E-02
7.2000E+02	0.0000E+00

Pathway number 7: (Surface Fixation 1) MSL A Inboard - Surface to Ho

Convection Data

Time (hr)	Flow Rate (% / day)
0.0000E+00	1.5960E-02
2.4000E+01	1.1360E-02
9.6000E+01	5.2000E-03
7.2000E+02	0.0000E+00

Pathway number 8: (Deposition 2) MSL A Outboard - Airborne to MSL A

Convection Data

Time (hr)	Flow Rate (% / day)
0.0000E+00	3.1417E+02
2.4000E+01	7.0352E+02
9.6000E+01	4.4779E+03
7.2000E+02	0.0000E+00

Pathway number 9: (Resuspension 2) MSL A Outboard - Surface to Envi

Convection Data

Time (hr)	Flow Rate (% / day)
0.0000E+00	3.5580E-02
2.4000E+01	2.9950E-02
9.6000E+01	2.0170E-02
7.2000E+02	0.0000E+00

Pathway number 10: (Surface Fixation 2) MSL A Outboard - Surface to H

Convection Data

Time (hr)	Flow Rate (% / day)
0.0000E+00	1.5960E-02
2.4000E+01	1.1360E-02
9.6000E+01	5.2000E-03
7.2000E+02	0.0000E+00

Pathway number 11: (Aerosol Transport 2) MSL A Outboard - Airborne to

Pathway Filter: Removal Data

Time (hr)	Flow Rate (cfm)	Filter Efficiencies (%)		
		Aerosol	Elemental	Organic
0.0000E+00	3.1880E+00	1.0000E+02	0.0000E+00	1.0000E+02
2.4000E+01	1.5130E+00	1.0000E+02	0.0000E+00	1.0000E+02
9.6000E+01	1.1480E+00	1.0000E+02	0.0000E+00	1.0000E+02
7.2000E+02	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00

Pathway number 12: (Deposition 3) Condenser - Airborne to Condenser -

Convection Data

Time (hr)	Flow Rate (% / day)
0.0000E+00	4.2591E+04
2.4000E+01	4.2591E+04
9.6000E+01	4.2591E+04
7.2000E+02	0.0000E+00

Pathway number 13: (Resuspension 3) Condenser - Surface to Environme

Convection Data

Time (hr)	Flow Rate (% / day)
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0.0000E+00	1.6090E-02
2.4000E+01	1.6090E-02
9.6000E+01	1.6090E-02
7.2000E+02	0.0000E+00

Pathway number 14: (Surface Fixation 3) Condenser - Surface to Hold

Convection Data

Time (hr)	Flow Rate (% / day)
0.0000E+00	3.3300E-03
2.4000E+01	3.3300E-03
9.6000E+01	3.3300E-03
7.2000E+02	0.0000E+00

Pathway number 15: Containment to MSL A Inboard - Airborne

Pathway Filter: Removal Data

Time (hr)	Flow Rate (cfm)	Filter Efficiencies (%)		
		Aerosol	Elemental	Organic
0.0000E+00	1.5244E+00	1.0000E+02	0.0000E+00	1.0000E+02
2.0000E+00	9.3060E-01	1.0000E+02	0.0000E+00	1.0000E+02
2.4000E+01	5.1270E-01	1.0000E+02	0.0000E+00	1.0000E+02
9.6000E+01	5.1270E-01	1.0000E+02	0.0000E+00	1.0000E+02
7.2000E+02	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00

LOCATION DATA

Location Control Room (CR) is in compartment 4

Location X/Q Data

Time (hr)	X/Q (s * m^-3)
0.0000E+00	6.8800E-03
2.0000E+00	5.1700E-03
8.0000E+00	2.0400E-03
2.4000E+01	1.2900E-03
9.6000E+01	9.6300E-04
7.2000E+02	0.0000E+00

Location Breathing Rate Data

Time (hr)	Breathing Rate (m^3 * sec^-1)
0.0000E+00	3.5000E-04
7.2000E+02	0.0000E+00

Location Occupancy Factor Data

Time (hr)	Occupancy Factor
0.0000E+00	1.0000E+00
2.4000E+01	6.0000E-01
9.6000E+01	4.0000E-01
7.2000E+02	0.0000E+00

Location Exclusion Area Boundary (EAB) is in compartment 3

Location X/Q Data

Time (hr)	X/Q (s * m^-3)
0.0000E+00	3.1800E-04
2.4000E+01	0.0000E+00

Location Breathing Rate Data

Time (hr)	Breathing Rate (m^3 * sec^-1)
0.0000E+00	3.5000E-04
8.0000E+00	1.8000E-04

2.4000E+01	2.3000E-04
7.2000E+02	0.0000E+00

Location Low Population Zone (LPZ) is in compartment 3

Location X/Q Data

Time (hr)	X/Q (s * m ⁻³)
0.0000E+00	5.7900E-05
8.0000E+00	4.1000E-05
2.4000E+01	1.9500E-05
4.8000E+01	1.9500E-05
7.2000E+01	1.9500E-05
9.6000E+01	6.6800E-06
1.2000E+02	6.6800E-06
1.6800E+02	6.6800E-06
3.3600E+02	6.6800E-06
7.2000E+02	0.0000E+00

Location Breathing Rate Data

Time (hr)	Breathing Rate (m ³ * sec ⁻¹)
0.0000E+00	3.5000E-04
8.0000E+00	1.8000E-04
2.4000E+01	2.3000E-04
7.2000E+02	0.0000E+00

USER SPECIFIED TIME STEP DATA - SUPPLEMENTAL TIME STEPS

Time	Time step
0.0000E+00	0.0000E+00

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 Dose Output
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Control Room (CR) Doses:

Time (h) =	0.3333	Whole Body	Thyroid	TEDE
Delta dose (rem)		8.0102E-13	3.9744E-09	1.2631E-10
Accumulated dose (rem)		8.0102E-13	3.9744E-09	1.2631E-10

Exclusion Area Boundary (EAB) Doses:

Time (h) =	0.3333	Whole Body	Thyroid	TEDE
Delta dose (rem)		8.3025E-11	1.8618E-08	6.7100E-10
Accumulated dose (rem)		8.3025E-11	1.8618E-08	6.7100E-10

Low Population Zone (LPZ) Doses:

Time (h) =	0.3333	Whole Body	Thyroid	TEDE
Delta dose (rem)		1.5117E-11	3.3898E-09	1.2217E-10
Accumulated dose (rem)		1.5117E-11	3.3898E-09	1.2217E-10

Control Room (CR) Doses:

Time (h) =	0.5000	Whole Body	Thyroid	TEDE
Delta dose (rem)		4.4610E-12	2.3396E-08	7.4267E-10
Accumulated dose (rem)		5.2620E-12	2.7370E-08	8.6898E-10

Exclusion Area Boundary (EAB) Doses:

Time (h) =	0.5000	Whole Body	Thyroid	TEDE
Delta dose (rem)		3.1656E-10	7.5332E-08	2.6936E-09
Accumulated dose (rem)		3.9959E-10	9.3950E-08	3.3646E-09

Low Population Zone (LPZ) Doses:

Time (h) =	0.5000	Whole Body	Thyroid	TEDE
Delta dose (rem)		5.7638E-11	1.3716E-08	4.9044E-10
Accumulated dose (rem)		7.2755E-11	1.7106E-08	6.1261E-10

Control Room (CR) Doses:

Time (h) =	2.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)		3.2517E-09	2.3031E-05	7.2660E-07
Accumulated dose (rem)		3.2570E-09	2.3059E-05	7.2747E-07

Exclusion Area Boundary (EAB) Doses:

Time (h) =	2.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)		8.5444E-08	2.8114E-05	9.6863E-07
Accumulated dose (rem)		8.5843E-08	2.8208E-05	9.7200E-07

Low Population Zone (LPZ) Doses:

Time (h) =	2.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)		1.5557E-08	5.1189E-06	1.7636E-07
Accumulated dose (rem)		1.5630E-08	5.1360E-06	1.7698E-07

Control Room (CR) Doses:

Time (h) =	8.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)		4.7534E-07	4.7196E-03	1.4745E-04
Accumulated dose (rem)		4.7859E-07	4.7427E-03	1.4818E-04

Exclusion Area Boundary (EAB) Doses:

Time (h) =	8.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)		5.8847E-06	3.5784E-03	1.1734E-04
Accumulated dose (rem)		5.9705E-06	3.6066E-03	1.1832E-04

Low Population Zone (LPZ) Doses:

Time (h) =	8.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)		1.0715E-06	6.5154E-04	2.1366E-05
Accumulated dose (rem)		1.0871E-06	6.5668E-04	2.1543E-05

Control Room (CR) Doses:

Time (h) =	24.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)		2.9632E-06	3.7993E-02	1.1761E-03
Accumulated dose (rem)		3.4418E-06	4.2736E-02	1.3243E-03

Exclusion Area Boundary (EAB) Doses:

Time (h) =	24.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)		4.9192E-05	3.0273E-02	9.8388E-04
Accumulated dose (rem)		5.5162E-05	3.3879E-02	1.1022E-03

Low Population Zone (LPZ) Doses:

Time (h) =	24.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)		6.3424E-06	3.9031E-03	1.2685E-04
Accumulated dose (rem)		7.4294E-06	4.5598E-03	1.4840E-04

Control Room (CR) Doses:

Time (h) =	48.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)		1.8479E-06	4.5508E-02	1.3980E-03
Accumulated dose (rem)		5.2897E-06	8.8244E-02	2.7223E-03

Exclusion Area Boundary (EAB) Doses:

Time (h) = 48.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)	0.0000E+00	0.0000E+00	0.0000E+00
Accumulated dose (rem)	5.5162E-05	3.3879E-02	1.1022E-03

Low Population Zone (LPZ) Doses:

Time (h) = 48.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)	4.8184E-06	7.1761E-03	2.2496E-04
Accumulated dose (rem)	1.2248E-05	1.1736E-02	3.7336E-04

Control Room (CR) Doses:

Time (h) = 72.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)	1.1894E-06	5.9952E-02	1.8334E-03
Accumulated dose (rem)	6.4792E-06	1.4820E-01	4.5557E-03

Exclusion Area Boundary (EAB) Doses:

Time (h) = 72.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)	0.0000E+00	0.0000E+00	0.0000E+00
Accumulated dose (rem)	5.5162E-05	3.3879E-02	1.1022E-03

Low Population Zone (LPZ) Doses:

Time (h) = 72.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)	4.1731E-06	9.5422E-03	2.9580E-04
Accumulated dose (rem)	1.6421E-05	2.1278E-02	6.6916E-04

Control Room (CR) Doses:

Time (h) = 96.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)	1.0278E-06	7.1631E-02	2.1860E-03
Accumulated dose (rem)	7.5069E-06	2.1983E-01	6.7417E-03

Exclusion Area Boundary (EAB) Doses:

Time (h) = 96.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)	0.0000E+00	0.0000E+00	0.0000E+00
Accumulated dose (rem)	5.5162E-05	3.3879E-02	1.1022E-03

Low Population Zone (LPZ) Doses:

Time (h) = 96.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)	4.0240E-06	1.1371E-02	3.5088E-04
Accumulated dose (rem)	2.0445E-05	3.2649E-02	1.0200E-03

Control Room (CR) Doses:

Time (h) = 120.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)	3.8281E-07	2.9715E-02	9.0593E-04
Accumulated dose (rem)	7.8898E-06	2.4954E-01	7.6477E-03

Exclusion Area Boundary (EAB) Doses:

Time (h) = 120.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)	0.0000E+00	0.0000E+00	0.0000E+00
Accumulated dose (rem)	5.5162E-05	3.3879E-02	1.1022E-03

Low Population Zone (LPZ) Doses:

Time (h) = 120.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)	9.9962E-07	3.1502E-03	9.6998E-05
Accumulated dose (rem)	2.1444E-05	3.5799E-02	1.1170E-03

Control Room (CR) Doses:

Time (h) = 168.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)	7.6322E-07	6.4910E-02	1.9777E-03
Accumulated dose (rem)	8.6530E-06	3.1445E-01	9.6253E-03

Exclusion Area Boundary (EAB) Doses:

Time (h) = 168.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)	0.0000E+00	0.0000E+00	0.0000E+00
Accumulated dose (rem)	5.5162E-05	3.3879E-02	1.1022E-03

Low Population Zone (LPZ) Doses:

Time (h) = 168.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)	2.0871E-06	7.0705E-03	2.1743E-04
Accumulated dose (rem)	2.3532E-05	4.2870E-02	1.3345E-03

Control Room (CR) Doses:

Time (h) = 336.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)	2.7537E-06	2.5335E-01	7.7164E-03
Accumulated dose (rem)	1.1407E-05	5.6781E-01	1.7342E-02

Exclusion Area Boundary (EAB) Doses:

Time (h) = 336.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)	0.0000E+00	0.0000E+00	0.0000E+00
Accumulated dose (rem)	5.5162E-05	3.3879E-02	1.1022E-03

Low Population Zone (LPZ) Doses:

Time (h) = 336.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)	7.7703E-06	2.7548E-02	8.4649E-04
Accumulated dose (rem)	3.1302E-05	7.0417E-02	2.1809E-03

Control Room (CR) Doses:

Time (h) = 720.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)	4.2930E-06	4.3794E-01	1.3337E-02
Accumulated dose (rem)	1.5700E-05	1.0057E+00	3.0679E-02

Exclusion Area Boundary (EAB) Doses:

Time (h) = 720.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)	0.0000E+00	0.0000E+00	0.0000E+00
Accumulated dose (rem)	5.5162E-05	3.3879E-02	1.1022E-03

Low Population Zone (LPZ) Doses:

Time (h) = 720.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)	1.3185E-05	4.7553E-02	1.4609E-03
Accumulated dose (rem)	4.4487E-05	1.1797E-01	3.6419E-03

 I-131 Summary
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Time (hr)	Containment	MSL A Inboard - Airbo		Environment
	I-131 (Curies)	I-131 (Curies)		I-131 (Curies)
0.000	5.2640E+03	1.7114E-05		8.5433E-19
0.333	2.8290E+06	5.9220E+00		1.1004E-07
0.500	4.0239E+06	1.3070E+01		5.5626E-07
0.800	7.9884E+06	3.5530E+01		3.6823E-06
1.100	1.1679E+07	7.1455E+01		1.3715E-05
1.400	1.5113E+07	1.1946E+02		3.7726E-05
1.700	1.8307E+07	1.7832E+02		8.5514E-05
2.000	2.1276E+07	2.4689E+02		1.6953E-04
2.300	1.6058E+07	2.7960E+02		3.0356E-04
2.600	1.2209E+07	3.0897E+02		4.9798E-04
2.900	9.3713E+06	3.3535E+02		7.6181E-04
3.200	7.2781E+06	3.5902E+02		1.1036E-03
3.500	5.7342E+06	3.8027E+02		1.5317E-03
3.800	4.5953E+06	3.9933E+02		2.0538E-03
4.100	3.7551E+06	4.1642E+02		2.6773E-03
4.400	3.1351E+06	4.3174E+02		3.4093E-03
4.700	2.6775E+06	4.4546E+02		4.2563E-03
5.000	2.3396E+06	4.5775E+02		5.2246E-03
5.300	2.1768E+06	4.6874E+02		6.3200E-03
5.600	2.0415E+06	4.7858E+02		7.5480E-03
5.900	1.9291E+06	4.8737E+02		8.9139E-03
6.200	1.8355E+06	4.9521E+02		1.0422E-02
6.500	1.7577E+06	5.0221E+02		1.2078E-02
6.800	1.6930E+06	5.0845E+02		1.3884E-02
7.100	1.6390E+06	5.1400E+02		1.5846E-02
7.400	1.5940E+06	5.1893E+02		1.7967E-02
7.700	1.5564E+06	5.2331E+02		2.0250E-02
8.000	1.5249E+06	5.2718E+02		2.2698E-02
8.300	1.4986E+06	5.3061E+02		2.5314E-02
8.600	1.4790E+06	5.3363E+02		2.8101E-02
8.900	1.4622E+06	5.3629E+02		3.1061E-02
9.200	1.4476E+06	5.3861E+02		3.4197E-02
9.500	1.4350E+06	5.4065E+02		3.7510E-02
9.800	1.4240E+06	5.4241E+02		4.1003E-02
10.100	1.4145E+06	5.4394E+02		4.4677E-02
10.400	1.4061E+06	5.4525E+02		4.8533E-02
24.000	1.2997E+06	5.3471E+02		4.2354E-01
48.000	1.1900E+06	2.2722E+02		1.7406E+00
72.000	1.0896E+06	2.0804E+02		3.5932E+00
96.000	9.9764E+05	1.9048E+02		5.8654E+00
120.000	9.1346E+05	3.6224E+01		7.7297E+00
168.000	7.6580E+05	3.0368E+01		1.1952E+01
336.000	4.1314E+05	1.6384E+01		2.8481E+01
720.000	1.0081E+05	3.9977E+00		5.7025E+01

Time (hr)	Control Room	MSL A Outboard - Airb		MSL A Inboard - Surfa
	I-131 (Curies)	I-131 (Curies)		I-131 (Curies)
0.000	8.3555E-22	6.8585E-10		4.1491E-10
0.333	9.8519E-11	1.4029E-01		8.6958E-02
0.500	4.7738E-10	4.6105E-01		2.8927E-01
0.800	2.9421E-09	1.8683E+00		1.1965E+00
1.100	1.0275E-08	4.9831E+00		3.2534E+00
1.400	2.6586E-08	1.0452E+01		6.9597E+00
1.700	5.6790E-08	1.8787E+01		1.2763E+01

2.000	1.0627E-07	3.0380E+01	2.1065E+01
2.300	1.5245E-07	4.4183E+01	3.1387E+01
2.600	2.1968E-07	5.8737E+01	4.2916E+01
2.900	3.0631E-07	7.3781E+01	5.5524E+01
3.200	4.1097E-07	8.9098E+01	6.9101E+01
3.500	5.3255E-07	1.0450E+02	8.3544E+01
3.800	6.7005E-07	1.1985E+02	9.8761E+01
4.100	8.2256E-07	1.3501E+02	1.1467E+02
4.400	9.8924E-07	1.4989E+02	1.3120E+02
4.700	1.1693E-06	1.6440E+02	1.4828E+02
5.000	1.3620E-06	1.7848E+02	1.6585E+02
5.300	1.5665E-06	1.9209E+02	1.8386E+02
5.600	1.7823E-06	2.0519E+02	2.0225E+02
5.900	2.0086E-06	2.1775E+02	2.2100E+02
6.200	2.2448E-06	2.2976E+02	2.4005E+02
6.500	2.4902E-06	2.4120E+02	2.5936E+02
6.800	2.7443E-06	2.5208E+02	2.7892E+02
7.100	3.0064E-06	2.6241E+02	2.9869E+02
7.400	3.2761E-06	2.7218E+02	3.1864E+02
7.700	3.5528E-06	2.8140E+02	3.3875E+02
8.000	3.8361E-06	2.9010E+02	3.5901E+02
8.300	3.1682E-06	2.9829E+02	3.7938E+02
8.600	2.7659E-06	3.0597E+02	3.9986E+02
8.900	2.5403E-06	3.1318E+02	4.2042E+02
9.200	2.4324E-06	3.1994E+02	4.4107E+02
9.500	2.4031E-06	3.2625E+02	4.6177E+02
9.800	2.4264E-06	3.3214E+02	4.8253E+02
10.100	2.4849E-06	3.3763E+02	5.0333E+02
10.400	2.5673E-06	3.4275E+02	5.2416E+02
24.000	8.5888E-06	3.9367E+02	1.4459E+03
48.000	8.9297E-06	7.3353E+01	3.1124E+03
72.000	1.1549E-05	6.7066E+01	4.3188E+03
96.000	1.3667E-05	6.1407E+01	5.3015E+03
120.000	8.1712E-06	2.2449E+00	6.6159E+03
168.000	9.3164E-06	1.8820E+00	8.2897E+03
336.000	9.7185E-06	1.0153E+00	9.6918E+03
720.000	5.0400E-06	2.4775E-01	5.3333E+03

Time (hr)	MSL A Outboard - Surf Hold (By Surface Fixa Condenser - Airborne		
	I-131 (Curies)	I-131 (Curies)	I-131 (Curies)
0.000	1.2470E-14	3.8322E-19	1.5385E-14
0.333	1.5466E-03	4.9244E-08	8.1728E-04
0.500	7.6649E-03	2.4849E-07	3.0866E-03
0.800	4.9005E-02	1.6395E-06	1.3876E-02
1.100	1.7669E-01	6.0874E-06	3.8971E-02
1.400	4.7083E-01	1.6693E-05	8.4502E-02
1.700	1.0341E+00	3.7727E-05	1.5535E-01
2.000	1.9867E+00	7.4577E-05	2.5529E-01
2.300	3.4450E+00	1.3315E-04	3.7873E-01
2.600	5.4591E+00	2.1776E-04	5.1028E-01
2.900	8.0527E+00	3.3208E-04	6.4672E-01
3.200	1.1240E+01	4.7959E-04	7.8600E-01
3.500	1.5027E+01	6.6358E-04	9.2640E-01
3.800	1.9414E+01	8.8716E-04	1.0665E+00
4.100	2.4396E+01	1.1532E-03	1.2051E+00
4.400	2.9962E+01	1.4645E-03	1.3413E+00
4.700	3.6098E+01	1.8236E-03	1.4742E+00
5.000	4.2790E+01	2.2330E-03	1.6034E+00
5.300	5.0018E+01	2.6947E-03	1.7283E+00
5.600	5.7762E+01	3.2110E-03	1.8486E+00

5.900	6.6001E+01	3.7838E-03	1.9640E+00
6.200	7.4714E+01	4.4149E-03	2.0744E+00
6.500	8.3877E+01	5.1059E-03	2.1798E+00
6.800	9.3469E+01	5.8584E-03	2.2799E+00
7.100	1.0347E+02	6.6739E-03	2.3750E+00
7.400	1.1385E+02	7.5536E-03	2.4650E+00
7.700	1.2459E+02	8.4987E-03	2.5501E+00
8.000	1.3567E+02	9.5104E-03	2.6303E+00
8.300	1.4707E+02	1.0590E-02	2.7058E+00
8.600	1.5878E+02	1.1738E-02	2.7767E+00
8.900	1.7076E+02	1.2955E-02	2.8432E+00
9.200	1.8300E+02	1.4242E-02	2.9056E+00
9.500	1.9548E+02	1.5600E-02	2.9639E+00
9.800	2.0819E+02	1.7030E-02	3.0183E+00
10.100	2.2111E+02	1.8531E-02	3.0691E+00
10.400	2.3423E+02	2.0106E-02	3.1163E+00
24.000	8.9289E+02	1.6940E-01	3.5896E+00
48.000	1.6226E+03	6.0487E-01	3.1747E-01
72.000	1.9602E+03	1.1978E+00	2.9025E-01
96.000	2.2299E+03	1.8938E+00	2.6576E-01
120.000	2.2063E+03	2.1896E+00	7.3716E-03
168.000	2.0247E+03	2.8304E+00	6.1800E-03
336.000	1.4255E+03	4.7263E+00	3.3341E-03
720.000	5.3732E+02	4.8781E+00	8.1354E-04

Condenser - Surface
I-131 (Curies)

Time (hr)	
0.000	3.0347E-17
0.333	1.0946E-03
0.500	6.3889E-03
0.800	4.6705E-02
1.100	1.7946E-01
1.400	4.9755E-01
1.700	1.1230E+00
2.000	2.2008E+00
2.300	3.8801E+00
2.600	6.2385E+00
2.900	9.3083E+00
3.200	1.3109E+01
3.500	1.7651E+01
3.800	2.2934E+01
4.100	2.8954E+01
4.400	3.5699E+01
4.700	4.3152E+01
5.000	5.1296E+01
5.300	6.0106E+01
5.600	6.9560E+01
5.900	7.9630E+01
6.200	9.0291E+01
6.500	1.0151E+02
6.800	1.1327E+02
7.100	1.2554E+02
7.400	1.3828E+02
7.700	1.5148E+02
8.000	1.6510E+02
8.300	1.7912E+02
8.600	1.9351E+02
8.900	2.0826E+02
9.200	2.2333E+02
9.500	2.3871E+02

9.800	2.5436E+02
10.100	2.7029E+02
10.400	2.8645E+02
24.000	1.1004E+03
48.000	1.2229E+03
72.000	1.2454E+03
96.000	1.2556E+03
120.000	1.1569E+03
168.000	9.7859E+02
336.000	5.4447E+02
720.000	1.4226E+02

 Cumulative Dose Summary
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Time (hr)	Control Room (CR)		Exclusion Area Bounda		Low Population Zone (
	Thyroid (rem)	TEDE (rem)	Thyroid (rem)	TEDE (rem)	Thyroid (rem)	TEDE (rem)
0.000	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00
0.333	3.9744E-09	1.2631E-10	1.8618E-08	6.7100E-10	3.3898E-09	1.2217E-10
0.500	2.7370E-08	8.6898E-10	9.3950E-08	3.3646E-09	1.7106E-08	6.1261E-10
0.800	2.6366E-07	8.3576E-09	6.2006E-07	2.1989E-08	1.1290E-07	4.0037E-09
1.100	1.2385E-06	3.9205E-08	2.3024E-06	8.0938E-08	4.1921E-07	1.4737E-08
1.400	4.0354E-06	1.2758E-07	6.3139E-06	2.2027E-07	1.1496E-06	4.0106E-08
1.700	1.0446E-05	3.2987E-07	1.4270E-05	4.9455E-07	2.5981E-06	9.0045E-08
2.000	2.3059E-05	7.2747E-07	2.8208E-05	9.7200E-07	5.1360E-06	1.7698E-07
2.300	4.3154E-05	1.3603E-06	5.0366E-05	1.7268E-06	9.1705E-06	3.1441E-07
2.600	7.2094E-05	2.2709E-06	8.2400E-05	2.8125E-06	1.5003E-05	5.1208E-07
2.900	1.1298E-04	3.5562E-06	1.2572E-04	4.2741E-06	2.2891E-05	7.7822E-07
3.200	1.6864E-04	5.3046E-06	1.8167E-04	6.1541E-06	3.3078E-05	1.1205E-06
3.500	2.4169E-04	7.5979E-06	2.5151E-04	8.4920E-06	4.5793E-05	1.5462E-06
3.800	3.3457E-04	1.0512E-05	3.3641E-04	1.1325E-05	6.1252E-05	2.0620E-06
4.100	4.4955E-04	1.4116E-05	4.3749E-04	1.4687E-05	7.9657E-05	2.6742E-06
4.400	5.8872E-04	1.8477E-05	5.5579E-04	1.8612E-05	1.0120E-04	3.3887E-06
4.700	7.5407E-04	2.3655E-05	6.9226E-04	2.3127E-05	1.2604E-04	4.2109E-06
5.000	9.4742E-04	2.9707E-05	8.4781E-04	2.8262E-05	1.5437E-04	5.1458E-06
5.300	1.1705E-03	3.6685E-05	1.0233E-03	3.4041E-05	1.8631E-04	6.1981E-06
5.600	1.4249E-03	4.4640E-05	1.2194E-03	4.0488E-05	2.2202E-04	7.3719E-06
5.900	1.7121E-03	5.3616E-05	1.4369E-03	4.7624E-05	2.6163E-04	8.6712E-06
6.200	2.0334E-03	6.3654E-05	1.6765E-03	5.5469E-05	3.0524E-04	1.0100E-05
6.500	2.3901E-03	7.4795E-05	1.9387E-03	6.4041E-05	3.5298E-04	1.1660E-05
6.800	2.7835E-03	8.7074E-05	2.2240E-03	7.3356E-05	4.0494E-04	1.3356E-05
7.100	3.2144E-03	1.0052E-04	2.5331E-03	8.3428E-05	4.6121E-04	1.5190E-05
7.400	3.6840E-03	1.1517E-04	2.8663E-03	9.4271E-05	5.2188E-04	1.7164E-05
7.700	4.1932E-03	1.3105E-04	3.2240E-03	1.0590E-04	5.8701E-04	1.9281E-05
8.000	4.7427E-03	1.4818E-04	3.6066E-03	1.1832E-04	6.5668E-04	2.1543E-05
8.300	5.2588E-03	1.6426E-04	3.8164E-03	1.2538E-04	6.8372E-04	2.2454E-05
8.600	5.6956E-03	1.7788E-04	4.0393E-03	1.3288E-04	7.1246E-04	2.3420E-05
8.900	6.0858E-03	1.9003E-04	4.2755E-03	1.4080E-04	7.4291E-04	2.4442E-05
9.200	6.4510E-03	2.0141E-04	4.5251E-03	1.4917E-04	7.7509E-04	2.5520E-05
9.500	6.8055E-03	2.1245E-04	4.7881E-03	1.5796E-04	8.0901E-04	2.6654E-05
9.800	7.1590E-03	2.2345E-04	5.0648E-03	1.6720E-04	8.4468E-04	2.7845E-05
10.100	7.5178E-03	2.3462E-04	5.3551E-03	1.7688E-04	8.8211E-04	2.9093E-05
10.400	7.8862E-03	2.4608E-04	5.6592E-03	1.8699E-04	9.2132E-04	3.0397E-05
24.000	4.2736E-02	1.3243E-03	3.3879E-02	1.1022E-03	4.5598E-03	1.4840E-04
48.000	8.8244E-02	2.7223E-03	3.3879E-02	1.1022E-03	1.1736E-02	3.7336E-04
72.000	1.4820E-01	4.5557E-03	3.3879E-02	1.1022E-03	2.1278E-02	6.6916E-04
96.000	2.1983E-01	6.7417E-03	3.3879E-02	1.1022E-03	3.2649E-02	1.0200E-03
120.000	2.4954E-01	7.6477E-03	3.3879E-02	1.1022E-03	3.5799E-02	1.1170E-03

168.000 3.1445E-01 9.6253E-03 3.3879E-02 1.1022E-03 4.2870E-02 1.3345E-03
336.000 5.6781E-01 1.7342E-02 3.3879E-02 1.1022E-03 7.0417E-02 2.1809E-03
720.000 1.0057E+00 3.0679E-02 3.3879E-02 1.1022E-03 1.1797E-01 3.6419E-03

Worst Two-Hour Doses
#####

Exclusion Area Boundary (EAB)

Time (hr)	Whole Body (rem)	Thyroid (rem)	TEDE (rem)
10.4	6.5019E-06	4.1500E-03	1.3459E-04

RADTRAD Version 3.03 (Spring 2001) run on 9/19/2005 at 16:48:49
#####

File information
#####

Plant file = c:\RESUP3-B.psf
Inventory file = c:\program files\radtrad3-03\defaults\limerick ast source terms.nif
Release file = c:\program files\radtrad3-03\defaults\bwr_i.rft
Dose Conversion file = c:\program files\radtrad3-03\defaults\fgr11&12.inp

```
#####      #####      #####      # # #      #####      # # #####  
# # #      # # #      # # #      # # #      # # #      # # #  
# # #      # # #      # # #      # # #      # # #      # # #  
#####      #####      #####      # # #      # # #      # # #  
# # #      # # #      # # #      # # #      # # #      # # #  
# # #      # # #      # # #      # # #      # # #      # # #  
# # #      # # #      # # #      # # #      # # #      # # #  
# # #      # # #      # # #      # # #      # # #      # # #
```

Radtrad 3.03 4/15/2001
LGS LOCA 200scfh Line B MSIV Leak - Resuspension Only - Leak to Condenser - MSL
Pipe Deposition Credit (24-Hr 20-Group Aerosol Settling with Projected Area
Assumption; 2-Hr Mixing Delay) - 95% CREFAS Charcoal Eff. No Delay - Rad Mode
275cfm Control Room In

Nuclide Inventory File:
c:\program files\radtrad3-03\defaults\limerick ast source terms.nif

Plant Power Level:
3.5270E+03

Compartments:
10

Compartment 1:
Containment

3
3.7907E+05
0
0
0
1
0

Compartment 2:
MSL B Inboard - Airborne

3
1.0000E-05
0
0
0
0
0

Compartment 3:
Environment

2

0.0000E+00

0
0
0
0
0

Compartment 4:

Control Room

1

1.2600E+05

0
0
1
0
0

Compartment 5:

MSL B Outboard - Airborne

3

1.0510E+03

0
0
0
0
0

Compartment 6:

MSL B Inboard - Surface

3

1.0000E+00

0
0
0
0
0

Compartment 7:

MSL B Outboard - Surface

3

1.0000E+00

0
0
0
0
0

Compartment 8:

Hold (By Surface Fixation)

3

1.0000E+00

0
0
0
0
0

Compartment 9:

Condenser - Airborne

3

5.4746E+04

0
0
0
0
0

Compartment 10:

Condenser - Surface

3

1.0000E+00

0

0

0

0

0

Pathways:

15

Pathway 1:

Filtered Environment to Control Room (Intake)

3

4

2

Pathway 2:

Unfiltered Environment to Control Room (Inleakage)

3

4

2

Pathway 3:

Control Room to Environment (Exhaust)

4

3

2

Pathway 4:

(Aerosol Transport 1) MSL B Inboard - Airborne to MSL B Outboard - Airborne

2

5

2

Pathway 5:

(Deposition 1) MSL B Inboard - Airborne to MSL B Inboard - Surface

2

6

4

Pathway 6:

(Resuspension 1) MSL B Inboard - Surface to Environment

6

3

4

Pathway 7:

(Surface Fixation 1) MSL B Inboard - Surface to Hold (By Surface Fixation)

6

8

4

Pathway 8:

(Deposition 2) MSL B Outboard - Airborne to MSL B Outboard - Surface

5

7

4

Pathway 9:

(Resuspension 2) MSL B Outboard - Surface to Environment

7

3

4

Pathway 10:

(Surface Fixation 2) MSL B Outboard - Surface to Hold (By Surface Fixation)

7

8

4

Pathway 11:

(Aerosol Transport 2) MSL B Outboard - Airborne to Condenser - Airborne

5

9

2

Pathway 12:

(Deposition 3) Condenser - Airborne to Condenser - Surface

9

10

4

Pathway 13:

(Resuspension 3) Condenser - Surface to Environment

10

3

4

Pathway 14:

(Surface Fixation 3) Condenser - Surface to Hold (By Surface Fixation)

10

8

4

Pathway 15:

Containment to MSL B Inboard - Airborne

1

2

2

End of Plant Model File

Scenario Description Name:

Plant Model Filename:

Source Term:

1

1 1.0000E+00

c:\program files\radtrad3-03\defaults\fgr11&12.inp

c:\program files\radtrad3-03\defaults\bwr_i.rft

0.0000E+00

1

9.5000E-01 4.8500E-02 1.5000E-03 1.0000E+00

Overlying Pool:

0

0.0000E+00

0

0

0

0

Compartments:

10

Compartment 1:

0

1

0

0

0

0

0

3

3

1.0000E+01

1

1
 0.0000E+00 0.0000E+00

Compartment 2:

0
 1
 0
 0
 0
 0
 0
 0
 0

Compartment 3:

0
 1
 0
 0
 0
 0
 0
 0
 0

Compartment 4:

0
 1
 0
 0
 0
 0
 1

2.1750E+03

3

0.0000E+00	9.9000E+01	9.5000E+01	9.5000E+01
3.3330E-01	9.9000E+01	9.5000E+01	9.5000E+01
7.2000E+02	0.0000E+00	0.0000E+00	0.0000E+00

0
 0

Compartment 5:

0
 1
 0
 0
 0
 0
 0
 0
 0

Compartment 6:

0
 1
 0
 0
 0
 0
 0
 0
 0

Compartment 7:

0
 1

0
0
0
0
0
0
0
0

Compartment 8:

0
1
0
0
0
0
0
0
0

Compartment 9:

0
1
0
0
0
0
0
0
0

Compartment 10:

0
1
0
0
0
0
0
0
0

Pathways:

15

Pathway 1:

0
0
0
0
0
1
3
0.0000E+00
5.0000E-01
7.2000E+02
0
0
0
0
0
0

5.2500E+02	9.9000E+01	9.5000E+01	9.5000E+01
5.2500E+02	9.9000E+01	9.5000E+01	9.5000E+01
0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00

Pathway 2:

0
0
0

0
 0
 1
 2
 0.0000E+00 2.7500E+02 0.0000E+00 0.0000E+00 0.0000E+00
 7.2000E+02 0.0000E+00 0.0000E+00 0.0000E+00 0.0000E+00

0
 0
 0
 0
 0
 0

Pathway 3:

0
 0
 0
 0
 0
 1
 3
 0.0000E+00 8.0000E+02 1.0000E+02 1.0000E+02 1.0000E+02
 5.0000E-01 8.0000E+02 1.0000E+02 1.0000E+02 1.0000E+02
 7.2000E+02 0.0000E+00 0.0000E+00 0.0000E+00 0.0000E+00

0
 0
 0
 0
 0
 0

Pathway 4:

0
 0
 0
 0
 0
 1
 5
 0.0000E+00 9.3060E-01 1.0000E+02 0.0000E+00 1.0000E+02
 2.0000E+00 9.3060E-01 1.0000E+02 0.0000E+00 1.0000E+02
 2.4000E+01 5.1270E-01 1.0000E+02 0.0000E+00 1.0000E+02
 9.6000E+01 5.1270E-01 1.0000E+02 0.0000E+00 1.0000E+02
 7.2000E+02 0.0000E+00 0.0000E+00 0.0000E+00 0.0000E+00

0
 0
 0
 0
 0
 0

Pathway 5:

0
 0
 0
 0
 0
 0
 0
 0
 0
 0
 1

4
 0.0000E+00 3.1420E+02
 2.4000E+01 7.0350E+02
 9.6000E+01 4.4780E+03
 7.2000E+02 0.0000E+00

0
 Pathway 6:

0
 0
 0
 0
 0
 0
 0
 0
 0
 0
 1
 4
 0.0000E+00 3.5580E-02
 2.4000E+01 2.9950E-02
 9.6000E+01 2.0170E-02
 7.2000E+02 0.0000E+00

0
 Pathway 7:

0
 0
 0
 0
 0
 0
 0
 0
 0
 0
 0
 1
 4
 0.0000E+00 1.5960E-02
 2.4000E+01 1.1360E-02
 9.6000E+01 5.2000E-03
 7.2000E+02 0.0000E+00

0
 Pathway 8:

0
 0
 0
 0
 0
 0
 0
 0
 0
 0
 0
 1
 4
 0.0000E+00 3.1417E+02
 2.4000E+01 7.0352E+02
 9.6000E+01 4.4779E+03
 7.2000E+02 0.0000E+00

Pathway 9:

0
 0
 0
 0
 0
 0
 0
 0
 0
 0
 1
 4
 0.0000E+00 3.5580E-02
 2.4000E+01 2.9950E-02
 9.6000E+01 2.0170E-02
 7.2000E+02 0.0000E+00
 0

Pathway 10:

0
 0
 0
 0
 0
 0
 0
 0
 0
 0
 1
 4
 0.0000E+00 1.5960E-02
 2.4000E+01 1.1360E-02
 9.6000E+01 5.2000E-03
 7.2000E+02 0.0000E+00
 0

Pathway 11:

0
 0
 0
 0
 0
 1
 4
 0.0000E+00 3.1880E+00 1.0000E+02 0.0000E+00 1.0000E+02
 2.4000E+01 1.5130E+00 1.0000E+02 0.0000E+00 1.0000E+02
 9.6000E+01 1.1480E+00 1.0000E+02 0.0000E+00 1.0000E+02
 7.2000E+02 0.0000E+00 0.0000E+00 0.0000E+00 0.0000E+00
 0
 0
 0
 0
 0
 0
 0

Pathway 12:

0
 0
 0
 0
 0

0
 0
 0
 0
 0
 1
 4
 0.0000E+00 4.2591E+04
 2.4000E+01 4.2591E+04
 9.6000E+01 4.2591E+04
 7.2000E+02 0.0000E+00

Pathway 13:

0
 0
 0
 0
 0
 0
 0
 0
 0
 0
 0
 1
 4
 0.0000E+00 1.6090E-02
 2.4000E+01 1.6090E-02
 9.6000E+01 1.6090E-02
 7.2000E+02 0.0000E+00

Pathway 14:

0
 0
 0
 0
 0
 0
 0
 0
 0
 0
 0
 1
 4
 0.0000E+00 3.3300E-03
 2.4000E+01 3.3300E-03
 9.6000E+01 3.3300E-03
 7.2000E+02 0.0000E+00

Pathway 15:

0
 0
 0
 0
 0
 1
 5
 0.0000E+00 1.5240E+00 1.0000E+02 0.0000E+00 1.0000E+02
 2.0000E+00 9.3060E-01 1.0000E+02 0.0000E+00 1.0000E+02
 2.4000E+01 5.1270E-01 1.0000E+02 0.0000E+00 1.0000E+02
 9.6000E+01 5.1270E-01 1.0000E+02 0.0000E+00 1.0000E+02

7.2000E+02 0.0000E+00 0.0000E+00 0.0000E+00 0.0000E+00
 0
 0
 0
 0
 0
 0

Dose Locations:

3

Location 1:

Control Room (CR)

4
 0
 1
 2
 0.0000E+00 3.5000E-04
 7.2000E+02 0.0000E+00
 1
 4
 0.0000E+00 1.0000E+00
 2.4000E+01 6.0000E-01
 9.6000E+01 4.0000E-01
 7.2000E+02 0.0000E+00

Location 2:

Exclusion Area Boundary (EAB)

3
 1
 2
 0.0000E+00 3.1800E-04
 2.4000E+01 0.0000E+00
 1
 4
 0.0000E+00 3.5000E-04
 8.0000E+00 1.8000E-04
 2.4000E+01 2.3000E-04
 7.2000E+02 0.0000E+00
 0

Location 3:

Low Population Zone (LPZ)

3
 1
 10
 0.0000E+00 5.7900E-05
 8.0000E+00 4.1000E-05
 2.4000E+01 1.9500E-05
 4.8000E+01 1.9500E-05
 7.2000E+01 1.9500E-05
 9.6000E+01 6.6800E-06
 1.2000E+02 6.6800E-06
 1.6800E+02 6.6800E-06
 3.3600E+02 6.6800E-06
 7.2000E+02 0.0000E+00
 1
 4
 0.0000E+00 3.5000E-04
 8.0000E+00 1.8000E-04
 2.4000E+01 2.3000E-04
 7.2000E+02 0.0000E+00
 0

Effective Volume Location:

1
6
0.0000E+00 6.8800E-03
2.0000E+00 5.1700E-03
8.0000E+00 2.0400E-03
2.4000E+01 1.2900E-03
9.6000E+01 9.6300E-04
7.2000E+02 0.0000E+00

Simulation Parameters:

1
0.0000E+00 0.0000E+00

Output Filename:

C:\RESUP3-B.o0

1
1
1
0
0

End of Scenario File

RADTRAD Version 3.03 (Spring 2001) run on 9/19/2005 at 16:48:49
#####

Plant Description
#####

Number of Nuclides = 60

Inventory Power = 1.0000E+00 MWth
Plant Power Level = 3.5270E+03 MWth

Number of compartments = 10

Compartment information

Compartment number 1 (Source term fraction = 1.0000E+00
)

Name: Containment
Compartment volume = 3.7907E+05 (Cubic feet)
Compartment type is Normal
Removal devices within compartment:
Deposition

Pathways into and out of compartment 1
Exit Pathway Number 15: Containment to MSL B Inboard - Airborne

Compartment number 2
Name: MSL B Inboard - Airborne
Compartment volume = 1.0000E-05 (Cubic feet)
Compartment type is Normal

Pathways into and out of compartment 2
Inlet Pathway Number 15: Containment to MSL B Inboard - Airborne
Exit Pathway Number 4: (Aerosol Transport 1) MSL B Inboard - Airborne to
Exit Pathway Number 5: (Deposition 1) MSL B Inboard - Airborne to MSL B I

Compartment number 3
Name: Environment
Compartment type is Environment

Pathways into and out of compartment 3
Inlet Pathway Number 3: Control Room to Environment (Exhaust)
Inlet Pathway Number 6: (Resuspension 1) MSL B Inboard - Surface to Enviro
Inlet Pathway Number 9: (Resuspension 2) MSL B Outboard - Surface to Envi
Inlet Pathway Number 13: (Resuspension 3) Condenser - Surface to Environme
Exit Pathway Number 1: Filtered Environment to Control Room (Intake)
Exit Pathway Number 2: Unfiltered Environment to Control Room (Inleakage)

Compartment number 4
Name: Control Room
Compartment volume = 1.2600E+05 (Cubic feet)
Compartment type is Control Room
Removal devices within compartment:

Filter(s)
Pathways into and out of compartment 4
Inlet Pathway Number 1: Filtered Environment to Control Room (Intake)
Inlet Pathway Number 2: Unfiltered Environment to Control Room (Inleakage)
Exit Pathway Number 3: Control Room to Environment (Exhaust)

Compartment number 5

Name: MSL B Outboard - Airborne
Compartment volume = 1.0510E+03 (Cubic feet)
Compartment type is Normal
Pathways into and out of compartment 5
Inlet Pathway Number 4: (Aerosol Transport 1) MSL B Inboard - Airborne to
Exit Pathway Number 8: (Deposition 2) MSL B Outboard - Airborne to MSL B
Exit Pathway Number 11: (Aerosol Transport 2) MSL B Outboard - Airborne to

Compartment number 6
Name: MSL B Inboard - Surface
Compartment volume = 1.0000E+00 (Cubic feet)
Compartment type is Normal
Pathways into and out of compartment 6
Inlet Pathway Number 5: (Deposition 1) MSL B Inboard - Airborne to MSL B I
Exit Pathway Number 6: (Resuspension 1) MSL B Inboard - Surface to Enviro
Exit Pathway Number 7: (Surface Fixation 1) MSL B Inboard - Surface to Ho

Compartment number 7
Name: MSL B Outboard - Surface
Compartment volume = 1.0000E+00 (Cubic feet)
Compartment type is Normal
Pathways into and out of compartment 7
Inlet Pathway Number 8: (Deposition 2) MSL B Outboard - Airborne to MSL B
Exit Pathway Number 9: (Resuspension 2) MSL B Outboard - Surface to Envi
Exit Pathway Number 10: (Surface Fixation 2) MSL B Outboard - Surface to H

Compartment number 8
Name: Hold (By Surface Fixation)
Compartment volume = 1.0000E+00 (Cubic feet)
Compartment type is Normal
Pathways into and out of compartment 8
Inlet Pathway Number 7: (Surface Fixation 1) MSL B Inboard - Surface to Ho
Inlet Pathway Number 10: (Surface Fixation 2) MSL B Outboard - Surface to H
Inlet Pathway Number 14: (Surface Fixation 3) Condenser - Surface to Hold

Compartment number 9
Name: Condenser - Airborne
Compartment volume = 5.4746E+04 (Cubic feet)
Compartment type is Normal
Pathways into and out of compartment 9
Inlet Pathway Number 11: (Aerosol Transport 2) MSL B Outboard - Airborne to
Exit Pathway Number 12: (Deposition 3) Condenser - Airborne to Condenser -

Compartment number 10
Name: Condenser - Surface
Compartment volume = 1.0000E+00 (Cubic feet)
Compartment type is Normal
Pathways into and out of compartment 10
Inlet Pathway Number 12: (Deposition 3) Condenser - Airborne to Condenser -
Exit Pathway Number 13: (Resuspension 3) Condenser - Surface to Environme
Exit Pathway Number 14: (Surface Fixation 3) Condenser - Surface to Hold

Total number of pathways = 15

```
#####
RADTRAD Version 3.03 (Spring 2001) run on 9/19/2005 at 16:48:49
#####

#####
Scenario Description
#####
```

Radioactive Decay is enabled
 Calculation of Daughters is enabled

Release Fractions and Timings

	GAP	EARLY IN-VESSEL	LATE RELEASE	RELEASE MASS
	0.500000 hr	1.5000 hrs	0.0000 hrs	(gm)
NOBLES	0.0000E+00	0.0000E+00	0.0000E+00	0.000E+00
IODINE	5.0000E-02	2.5000E-01	0.0000E+00	3.033E+02
CESIUM	0.0000E+00	0.0000E+00	0.0000E+00	0.000E+00
TELLURIUM	0.0000E+00	0.0000E+00	0.0000E+00	0.000E+00
STRONTIUM	0.0000E+00	0.0000E+00	0.0000E+00	0.000E+00
BARIUM	0.0000E+00	0.0000E+00	0.0000E+00	0.000E+00
RUTHENIUM	0.0000E+00	0.0000E+00	0.0000E+00	0.000E+00
CERIUM	0.0000E+00	0.0000E+00	0.0000E+00	0.000E+00
LANTHANUM	0.0000E+00	0.0000E+00	0.0000E+00	0.000E+00

Inventory Power = 3527. Mwt

Nuclide Name	Group	Specific Inventory (Ci/Mwt)	half life (s)	Whole Body DCF (Sv-m3/Bq-s)	Inhaled Thyroid (Sv/Bq)	Inhaled Effective (Sv/Bq)
I-131	2	2.687E+04	6.947E+05	1.820E-14	2.920E-07	8.890E-09
I-132	2	3.881E+04	8.280E+03	1.120E-13	1.740E-09	1.030E-10
I-133	2	5.556E+04	7.488E+04	2.940E-14	4.860E-08	1.580E-09
I-134	2	6.165E+04	3.156E+03	1.300E-13	2.880E-10	3.550E-11
I-135	2	5.192E+04	2.380E+04	8.294E-14	8.460E-09	3.320E-10

Nuclide	Daughter	Fraction	Daughter	Fraction	Daughter	Fraction
Kr-85m	Kr-85	0.21	none	0.00	none	0.00
Kr-87	Rb-87	1.00	none	0.00	none	0.00
Kr-88	Rb-88	1.00	none	0.00	none	0.00
Sr-90	Y-90	1.00	none	0.00	none	0.00
Sr-91	Y-91m	0.58	Y-91	0.42	none	0.00
Sr-92	Y-92	1.00	none	0.00	none	0.00
Y-93	Zr-93	1.00	none	0.00	none	0.00
Zr-95	Nb-95m	0.01	Nb-95	0.99	none	0.00
Zr-97	Nb-97m	0.95	Nb-97	0.05	none	0.00
Mo-99	Tc-99m	0.88	Tc-99	0.12	none	0.00
Tc-99m	Tc-99	1.00	none	0.00	none	0.00
Ru-103	Rh-103m	1.00	none	0.00	none	0.00
Ru-105	Rh-105	1.00	none	0.00	none	0.00
Ru-106	Rh-106	1.00	none	0.00	none	0.00
Sb-127	Te-127m	0.18	Te-127	0.82	none	0.00
Sb-129	Te-129m	0.22	Te-129	0.77	none	0.00
Te-127m	Te-127	0.98	none	0.00	none	0.00
Te-129	I-129	1.00	none	0.00	none	0.00
Te-129m	Te-129	0.65	I-129	0.35	none	0.00
Te-131m	Te-131	0.22	I-131	0.78	none	0.00
Te-132	I-132	1.00	none	0.00	none	0.00
I-131	Xe-131m	0.01	none	0.00	none	0.00
I-133	Xe-133m	0.03	Xe-133	0.97	none	0.00

I-135	Xe-135m	0.15	Xe-135	0.85	none	0.00
Xe-135	Cs-135	1.00	none	0.00	none	0.00
Cs-137	Ba-137m	0.95	none	0.00	none	0.00
Ba-140	La-140	1.00	none	0.00	none	0.00
La-141	Ce-141	1.00	none	0.00	none	0.00
Ce-143	Pr-143	1.00	none	0.00	none	0.00
Ce-144	Pr-144m	0.02	Pr-144	0.98	none	0.00
Nd-147	Pm-147	1.00	none	0.00	none	0.00
Np-239	Pu-239	1.00	none	0.00	none	0.00
Pu-238	U-234	1.00	none	0.00	none	0.00
Pu-239	U-235	1.00	none	0.00	none	0.00
Pu-240	U-236	1.00	none	0.00	none	0.00
Pu-241	U-237	0.00	Am-241	1.00	none	0.00
Am-241	Np-237	1.00	none	0.00	none	0.00
Cm-242	Pu-238	1.00	none	0.00	none	0.00
Cm-244	Pu-240	1.00	none	0.00	none	0.00

Iodine fractions

Aerosol	=	9.5000E-01
Elemental	=	4.8500E-02
Organic	=	1.5000E-03

COMPARTMENT DATA

Compartment number 1: Containment
 Natural Deposition (Powers' model): Aerosol data
 Reactor type: 3
 Percentile = 10 (%)

Natural Deposition: Elemental Removal Data
 Time (hr) Removal Coef. (hr⁻¹)
 0.0000E+00 0.0000E+00

Compartment number 2: MSL B Inboard - Airborne

Compartment number 3: Environment

Compartment number 4: Control Room

Compartment Filter Data

Time (hr)	Flow Rate (cfm)	Filter Efficiencies (%)		
		Aerosol	Elemental	Organic
0.0000E+00	2.1750E+03	9.9000E+01	9.5000E+01	9.5000E+01
3.3330E-01	2.1750E+03	9.9000E+01	9.5000E+01	9.5000E+01
7.2000E+02	2.1750E+03	0.0000E+00	0.0000E+00	0.0000E+00

Compartment number 5: MSL B Outboard - Airborne

Compartment number 6: MSL B Inboard - Surface

Compartment number 7: MSL B Outboard - Surface

Compartment number 8: Hold (By Surface Fixation)

Compartment number 9: Condenser - Airborne

Compartment number 10: Condenser - Surface

PATHWAY DATA

Pathway number 1: Filtered Environment to Control Room (Intake)

Pathway Filter: Removal Data

Time (hr)	Flow Rate (cfm)	Filter Efficiencies (%)		
		Aerosol	Elemental	Organic
0.0000E+00	5.2500E+02	9.9000E+01	9.5000E+01	9.5000E+01
5.0000E-01	5.2500E+02	9.9000E+01	9.5000E+01	9.5000E+01
7.2000E+02	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00

Pathway number 2: Unfiltered Environment to Control Room (Inleakage)

Pathway Filter: Removal Data

Time (hr)	Flow Rate (cfm)	Filter Efficiencies (%)		
		Aerosol	Elemental	Organic
0.0000E+00	2.7500E+02	0.0000E+00	0.0000E+00	0.0000E+00
7.2000E+02	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00

Pathway number 3: Control Room to Environment (Exhaust)

Pathway Filter: Removal Data

Time (hr)	Flow Rate (cfm)	Filter Efficiencies (%)		
		Aerosol	Elemental	Organic
0.0000E+00	8.0000E+02	1.0000E+02	1.0000E+02	1.0000E+02
5.0000E-01	8.0000E+02	1.0000E+02	1.0000E+02	1.0000E+02
7.2000E+02	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00

Pathway number 4: (Aerosol Transport 1) MSL B Inboard - Airborne to

Pathway Filter: Removal Data

Time (hr)	Flow Rate (cfm)	Filter Efficiencies (%)		
		Aerosol	Elemental	Organic
0.0000E+00	9.3060E-01	1.0000E+02	0.0000E+00	1.0000E+02
2.0000E+00	9.3060E-01	1.0000E+02	0.0000E+00	1.0000E+02
2.4000E+01	5.1270E-01	1.0000E+02	0.0000E+00	1.0000E+02
9.6000E+01	5.1270E-01	1.0000E+02	0.0000E+00	1.0000E+02
7.2000E+02	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00

Pathway number 5: (Deposition 1) MSL B Inboard - Airborne to MSL B I

Convection Data

Time (hr)	Flow Rate (% / day)
0.0000E+00	3.1420E+02
2.4000E+01	7.0350E+02
9.6000E+01	4.4780E+03
7.2000E+02	0.0000E+00

Pathway number 6: (Resuspension 1) MSL B Inboard - Surface to Enviro

Convection Data

Time (hr)	Flow Rate (% / day)
0.0000E+00	3.5580E-02
2.4000E+01	2.9950E-02
9.6000E+01	2.0170E-02
7.2000E+02	0.0000E+00

Pathway number 7: (Surface Fixation 1) MSL B Inboard - Surface to Ho

Convection Data

Time (hr)	Flow Rate (% / day)
0.0000E+00	1.5960E-02
2.4000E+01	1.1360E-02
9.6000E+01	5.2000E-03
7.2000E+02	0.0000E+00

Pathway number 8: (Deposition 2) MSL B Outboard - Airborne to MSL B

Convection Data

Time (hr)	Flow Rate (% / day)
0.0000E+00	3.1417E+02
2.4000E+01	7.0352E+02
9.6000E+01	4.4779E+03
7.2000E+02	0.0000E+00

Pathway number 9: (Resuspension 2) MSL B Outboard - Surface to Envi

Convection Data

Time (hr)	Flow Rate (% / day)
0.0000E+00	3.5580E-02
2.4000E+01	2.9950E-02
9.6000E+01	2.0170E-02
7.2000E+02	0.0000E+00

Pathway number 10: (Surface Fixation 2) MSL B Outboard - Surface to H

Convection Data

Time (hr)	Flow Rate (% / day)
0.0000E+00	1.5960E-02
2.4000E+01	1.1360E-02
9.6000E+01	5.2000E-03
7.2000E+02	0.0000E+00

Pathway number 11: (Aerosol Transport 2) MSL B Outboard - Airborne to

Pathway Filter: Removal Data

Time (hr)	Flow Rate (cfm)	Filter Efficiencies (%)		
		Aerosol	Elemental	Organic
0.0000E+00	3.1880E+00	1.0000E+02	0.0000E+00	1.0000E+02
2.4000E+01	1.5130E+00	1.0000E+02	0.0000E+00	1.0000E+02
9.6000E+01	1.1480E+00	1.0000E+02	0.0000E+00	1.0000E+02
7.2000E+02	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00

Pathway number 12: (Deposition 3) Condenser - Airborne to Condenser -

Convection Data

Time (hr)	Flow Rate (% / day)
0.0000E+00	4.2591E+04
2.4000E+01	4.2591E+04
9.6000E+01	4.2591E+04
7.2000E+02	0.0000E+00

Pathway number 13: (Resuspension 3) Condenser - Surface to Environme

Convection Data

Time (hr)	Flow Rate (% / day)
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0.0000E+00	1.6090E-02
2.4000E+01	1.6090E-02
9.6000E+01	1.6090E-02
7.2000E+02	0.0000E+00

Pathway number 14: (Surface Fixation 3) Condenser - Surface to Hold

Convection Data

Time (hr)	Flow Rate (% / day)
0.0000E+00	3.3300E-03
2.4000E+01	3.3300E-03
9.6000E+01	3.3300E-03
7.2000E+02	0.0000E+00

Pathway number 15: Containment to MSL B Inboard - Airborne

Pathway Filter: Removal Data

Time (hr)	Flow Rate (cfm)	Filter Efficiencies (%)		
		Aerosol	Elemental	Organic
0.0000E+00	1.5240E+00	1.0000E+02	0.0000E+00	1.0000E+02
2.0000E+00	9.3060E-01	1.0000E+02	0.0000E+00	1.0000E+02
2.4000E+01	5.1270E-01	1.0000E+02	0.0000E+00	1.0000E+02
9.6000E+01	5.1270E-01	1.0000E+02	0.0000E+00	1.0000E+02
7.2000E+02	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00

LOCATION DATA

Location Control Room (CR) is in compartment 4

Location X/Q Data

Time (hr)	X/Q (s * m ⁻³)
0.0000E+00	6.8800E-03
2.0000E+00	5.1700E-03
8.0000E+00	2.0400E-03
2.4000E+01	1.2900E-03
9.6000E+01	9.6300E-04
7.2000E+02	0.0000E+00

Location Breathing Rate Data

Time (hr)	Breathing Rate (m ³ * sec ⁻¹)
0.0000E+00	3.5000E-04
7.2000E+02	0.0000E+00

Location Occupancy Factor Data

Time (hr)	Occupancy Factor
0.0000E+00	1.0000E+00
2.4000E+01	6.0000E-01
9.6000E+01	4.0000E-01
7.2000E+02	0.0000E+00

Location Exclusion Area Boundary (EAB) is in compartment 3

Location X/Q Data

Time (hr)	X/Q (s * m ⁻³)
0.0000E+00	3.1800E-04
2.4000E+01	0.0000E+00

Location Breathing Rate Data

Time (hr)	Breathing Rate (m ³ * sec ⁻¹)
0.0000E+00	3.5000E-04
8.0000E+00	1.8000E-04

2.4000E+01	2.3000E-04
7.2000E+02	0.0000E+00

Location Low Population Zone (LPZ) is in compartment 3

Location X/Q Data

Time (hr)	X/Q (s * m^-3)
0.0000E+00	5.7900E-05
8.0000E+00	4.1000E-05
2.4000E+01	1.9500E-05
4.8000E+01	1.9500E-05
7.2000E+01	1.9500E-05
9.6000E+01	6.6800E-06
1.2000E+02	6.6800E-06
1.6800E+02	6.6800E-06
3.3600E+02	6.6800E-06
7.2000E+02	0.0000E+00

Location Breathing Rate Data

Time (hr)	Breathing Rate (m^3 * sec^-1)
0.0000E+00	3.5000E-04
8.0000E+00	1.8000E-04
2.4000E+01	2.3000E-04
7.2000E+02	0.0000E+00

USER SPECIFIED TIME STEP DATA - SUPPLEMENTAL TIME STEPS

Time	Time step
0.0000E+00	0.0000E+00

 RADTRAD Version 3.03 (Spring 2001) run on 9/19/2005 at 16:48:49
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 Dose Output
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Control Room (CR) Doses:

Time (h) =	0.3333	Whole Body	Thyroid	TEDE
Delta dose (rem)		1.0530E-12	5.2279E-09	1.6615E-10
Accumulated dose (rem)		1.0530E-12	5.2279E-09	1.6615E-10

Exclusion Area Boundary (EAB) Doses:

Time (h) =	0.3333	Whole Body	Thyroid	TEDE
Delta dose (rem)		1.1094E-10	2.4896E-08	8.9718E-10
Accumulated dose (rem)		1.1094E-10	2.4896E-08	8.9718E-10

Low Population Zone (LPZ) Doses:

Time (h) =	0.3333	Whole Body	Thyroid	TEDE
Delta dose (rem)		2.0199E-11	4.5329E-09	1.6335E-10
Accumulated dose (rem)		2.0199E-11	4.5329E-09	1.6335E-10

Control Room (CR) Doses:

Time (h) =	0.5000	Whole Body	Thyroid	TEDE
Delta dose (rem)		6.1366E-12	3.2198E-08	1.0221E-09
Accumulated dose (rem)		7.1896E-12	3.7426E-08	1.1882E-09

Exclusion Area Boundary (EAB) Doses:

Time (h) =	0.5000	Whole Body	Thyroid	TEDE
Delta dose (rem)		4.4296E-10	1.0545E-07	3.7703E-09
Accumulated dose (rem)		5.5389E-10	1.3035E-07	4.6675E-09

Low Population Zone (LPZ) Doses:

Time (h) =	0.5000	Whole Body	Thyroid	TEDE
Delta dose (rem)		8.0652E-11	1.9200E-08	6.8648E-10
Accumulated dose (rem)		1.0085E-10	2.3733E-08	8.4984E-10

Control Room (CR) Doses:

Time (h) =	2.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)		4.6337E-09	3.2802E-05	1.0349E-06
Accumulated dose (rem)		4.6409E-09	3.2839E-05	1.0360E-06

Exclusion Area Boundary (EAB) Doses:

Time (h) =	2.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)		1.2126E-07	3.9863E-05	1.3736E-06
Accumulated dose (rem)		1.2182E-07	3.9993E-05	1.3782E-06

Low Population Zone (LPZ) Doses:

Time (h) =	2.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)		2.2079E-08	7.2581E-06	2.5009E-07
Accumulated dose (rem)		2.2180E-08	7.2818E-06	2.5094E-07

Control Room (CR) Doses:

Time (h) =	8.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)		5.7052E-07	5.5643E-03	1.7387E-04
Accumulated dose (rem)		5.7516E-07	5.5971E-03	1.7491E-04

Exclusion Area Boundary (EAB) Doses:

Time (h) =	8.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)		6.9148E-06	4.1510E-03	1.3623E-04
Accumulated dose (rem)		7.0366E-06	4.1910E-03	1.3760E-04

Low Population Zone (LPZ) Doses:

Time (h) =	8.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)		1.2590E-06	7.5579E-04	2.4803E-05
Accumulated dose (rem)		1.2812E-06	7.6307E-04	2.5054E-05

Control Room (CR) Doses:

Time (h) =	24.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)		2.9035E-06	3.6303E-02	1.1240E-03
Accumulated dose (rem)		3.4787E-06	4.1900E-02	1.2989E-03

Exclusion Area Boundary (EAB) Doses:

Time (h) =	24.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)		4.7071E-05	2.8671E-02	9.3240E-04
Accumulated dose (rem)		5.4107E-05	3.2862E-02	1.0700E-03

Low Population Zone (LPZ) Doses:

Time (h) =	24.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)		6.0689E-06	3.6966E-03	1.2021E-04
Accumulated dose (rem)		7.3500E-06	4.4597E-03	1.4527E-04

Control Room (CR) Doses:

Time (h) =	48.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)		1.6565E-06	4.0593E-02	1.2470E-03
Accumulated dose (rem)		5.1352E-06	8.2493E-02	2.5459E-03

Exclusion Area Boundary (EAB) Doses:

Time (h) = 48.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)	0.0000E+00	0.0000E+00	0.0000E+00
Accumulated dose (rem)	5.4107E-05	3.2862E-02	1.0700E-03

Low Population Zone (LPZ) Doses:

Time (h) = 48.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)	4.3002E-06	6.3968E-03	2.0054E-04
Accumulated dose (rem)	1.1650E-05	1.0856E-02	3.4581E-04

Control Room (CR) Doses:

Time (h) = 72.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)	1.0660E-06	5.3750E-02	1.6437E-03
Accumulated dose (rem)	6.2012E-06	1.3624E-01	4.1896E-03

Exclusion Area Boundary (EAB) Doses:

Time (h) = 72.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)	0.0000E+00	0.0000E+00	0.0000E+00
Accumulated dose (rem)	5.4107E-05	3.2862E-02	1.0700E-03

Low Population Zone (LPZ) Doses:

Time (h) = 72.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)	3.7417E-06	8.5573E-03	2.6527E-04
Accumulated dose (rem)	1.5392E-05	1.9414E-02	6.1107E-04

Control Room (CR) Doses:

Time (h) = 96.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)	9.2764E-07	6.4653E-02	1.9731E-03
Accumulated dose (rem)	7.1288E-06	2.0090E-01	6.1627E-03

Exclusion Area Boundary (EAB) Doses:

Time (h) = 96.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)	0.0000E+00	0.0000E+00	0.0000E+00
Accumulated dose (rem)	5.4107E-05	3.2862E-02	1.0700E-03

Low Population Zone (LPZ) Doses:

Time (h) = 96.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)	3.6324E-06	1.0265E-02	3.1675E-04
Accumulated dose (rem)	1.9024E-05	2.9678E-02	9.2782E-04

Control Room (CR) Doses:

Time (h) = 120.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)	3.6614E-07	2.8487E-02	8.6849E-04
Accumulated dose (rem)	7.4949E-06	2.2938E-01	7.0312E-03

Exclusion Area Boundary (EAB) Doses:

Time (h) = 120.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)	0.0000E+00	0.0000E+00	0.0000E+00
Accumulated dose (rem)	5.4107E-05	3.2862E-02	1.0700E-03

Low Population Zone (LPZ) Doses:

Time (h) = 120.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)	9.6183E-07	3.0312E-03	9.3334E-05
Accumulated dose (rem)	1.9986E-05	3.2710E-02	1.0212E-03

Control Room (CR) Doses:

Time (h) = 168.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)	7.3953E-07	6.2900E-02	1.9164E-03
Accumulated dose (rem)	8.2345E-06	2.9228E-01	8.9476E-03

Exclusion Area Boundary (EAB) Doses:

Time (h) = 168.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)	0.0000E+00	0.0000E+00	0.0000E+00
Accumulated dose (rem)	5.4107E-05	3.2862E-02	1.0700E-03

Low Population Zone (LPZ) Doses:

Time (h) = 168.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)	2.0226E-06	6.8523E-03	2.1072E-04
Accumulated dose (rem)	2.2009E-05	3.9562E-02	1.2319E-03

Control Room (CR) Doses:

Time (h) = 336.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)	2.6944E-06	2.4791E-01	7.5506E-03
Accumulated dose (rem)	1.0929E-05	5.4019E-01	1.6498E-02

Exclusion Area Boundary (EAB) Doses:

Time (h) = 336.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)	0.0000E+00	0.0000E+00	0.0000E+00
Accumulated dose (rem)	5.4107E-05	3.2862E-02	1.0700E-03

Low Population Zone (LPZ) Doses:

Time (h) = 336.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)	7.6036E-06	2.6957E-02	8.2833E-04
Accumulated dose (rem)	2.9612E-05	6.6519E-02	2.0602E-03

Control Room (CR) Doses:

Time (h) = 720.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)	4.2316E-06	4.3169E-01	1.3147E-02
Accumulated dose (rem)	1.5160E-05	9.7188E-01	2.9645E-02

Exclusion Area Boundary (EAB) Doses:

Time (h) = 720.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)	0.0000E+00	0.0000E+00	0.0000E+00
Accumulated dose (rem)	5.4107E-05	3.2862E-02	1.0700E-03

Low Population Zone (LPZ) Doses:

Time (h) = 720.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)	1.2997E-05	4.6874E-02	1.4401E-03
Accumulated dose (rem)	4.2609E-05	1.1339E-01	3.5003E-03

 I-131 Summary
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Time (hr)	Containment	MSL B Inboard - Airbo	Environment
	I-131 (Curies)	I-131 (Curies)	I-131 (Curies)
0.000	5.2640E+03	1.1028E-08	8.5506E-19
0.333	2.8290E+06	6.6104E-06	1.4714E-07
0.500	4.0239E+06	9.9107E-06	7.7178E-07
0.800	7.9884E+06	1.9800E-05	5.2433E-06
1.100	1.1679E+07	2.9668E-05	1.9659E-05
1.400	1.5113E+07	3.9513E-05	5.4053E-05
1.700	1.8307E+07	4.9337E-05	1.2202E-04
2.000	2.1276E+07	5.9137E-05	2.4036E-04
2.300	1.6058E+07	3.6069E-05	4.2713E-04
2.600	1.2209E+07	3.6028E-05	6.9434E-04
2.900	9.3713E+06	3.5988E-05	1.0510E-03
3.200	7.2781E+06	3.5948E-05	1.5052E-03
3.500	5.7342E+06	3.5907E-05	2.0644E-03
3.800	4.5953E+06	3.5867E-05	2.7351E-03
4.100	3.7551E+06	3.5827E-05	3.5235E-03
4.400	3.1351E+06	3.5787E-05	4.4349E-03
4.700	2.6775E+06	3.5746E-05	5.4742E-03
5.000	2.3396E+06	3.5706E-05	6.6460E-03
5.300	2.1768E+06	3.5666E-05	7.9541E-03
5.600	2.0415E+06	3.5626E-05	9.4022E-03
5.900	1.9291E+06	3.5586E-05	1.0994E-02
6.200	1.8355E+06	3.5547E-05	1.2731E-02
6.500	1.7577E+06	3.5507E-05	1.4617E-02
6.800	1.6930E+06	3.5467E-05	1.6654E-02
7.100	1.6390E+06	3.5427E-05	1.8845E-02
7.400	1.5940E+06	3.5387E-05	2.1190E-02
7.700	1.5564E+06	3.5348E-05	2.3692E-02
8.000	1.5249E+06	3.5308E-05	2.6352E-02
8.300	1.4986E+06	3.5268E-05	2.9172E-02
8.600	1.4790E+06	3.5229E-05	3.2152E-02
8.900	1.4622E+06	3.5189E-05	3.5294E-02
9.200	1.4476E+06	3.5150E-05	3.8598E-02
9.500	1.4350E+06	3.5111E-05	4.2066E-02
9.800	1.4240E+06	3.5071E-05	4.5698E-02
10.100	1.4145E+06	3.5032E-05	4.9494E-02
10.400	1.4061E+06	3.4993E-05	5.3455E-02
24.000	1.2997E+06	3.3257E-05	4.0561E-01
48.000	1.1900E+06	3.0451E-05	1.5795E+00
72.000	1.0896E+06	2.7881E-05	3.2409E+00
96.000	9.9764E+05	2.5529E-05	5.2921E+00
120.000	9.1346E+05	2.3374E-05	7.0860E+00
168.000	7.6580E+05	1.9596E-05	1.1178E+01
336.000	4.1314E+05	1.0572E-05	2.7352E+01
720.000	1.0081E+05	2.5796E-06	5.5490E+01

Time (hr)	Control Room	MSL B Outboard - Airb	MSL B Inboard - Surfa
	I-131 (Curies)	I-131 (Curies)	I-131 (Curies)
0.000	8.3626E-22	1.7098E-05	4.0092E-13
0.333	1.3199E-10	5.9427E+00	1.4422E-07
0.500	6.6382E-10	1.3140E+01	3.2437E-07
0.800	4.1972E-09	3.5817E+01	9.0725E-07
1.100	1.4743E-08	7.2225E+01	1.8773E-06
1.400	3.8095E-08	1.2109E+02	3.2331E-06
1.700	8.0937E-08	1.8124E+02	4.9735E-06

2.000	1.5028E-07	2.5162E+02	7.0972E-06
2.300	2.1385E-07	2.8649E+02	8.5061E-06
2.600	3.0471E-07	3.1815E+02	9.9120E-06
2.900	4.1908E-07	3.4687E+02	1.1315E-05
3.200	5.5393E-07	3.7293E+02	1.2714E-05
3.500	7.0680E-07	3.9656E+02	1.4111E-05
3.800	8.7560E-07	4.1799E+02	1.5504E-05
4.100	1.0586E-06	4.3741E+02	1.6895E-05
4.400	1.2543E-06	4.5501E+02	1.8282E-05
4.700	1.4613E-06	4.7095E+02	1.9666E-05
5.000	1.6786E-06	4.8538E+02	2.1047E-05
5.300	1.9050E-06	4.9844E+02	2.2425E-05
5.600	2.1396E-06	5.1026E+02	2.3800E-05
5.900	2.3816E-06	5.2094E+02	2.5172E-05
6.200	2.6303E-06	5.3059E+02	2.6541E-05
6.500	2.8850E-06	5.3930E+02	2.7907E-05
6.800	3.1451E-06	5.4715E+02	2.9269E-05
7.100	3.4100E-06	5.5424E+02	3.0629E-05
7.400	3.6792E-06	5.6062E+02	3.1986E-05
7.700	3.9522E-06	5.6635E+02	3.3339E-05
8.000	4.2287E-06	5.7151E+02	3.4690E-05
8.300	3.4770E-06	5.7613E+02	3.6038E-05
8.600	3.0166E-06	5.8027E+02	3.7382E-05
8.900	2.7497E-06	5.8397E+02	3.8724E-05
9.200	2.6114E-06	5.8728E+02	4.0062E-05
9.500	2.5584E-06	5.9022E+02	4.1398E-05
9.800	2.5623E-06	5.9283E+02	4.2731E-05
10.100	2.6041E-06	5.9515E+02	4.4060E-05
10.400	2.6710E-06	5.9719E+02	4.5387E-05
24.000	7.8084E-06	5.9337E+02	1.0247E-04
48.000	7.9634E-06	2.4691E+02	3.0836E-04
72.000	1.0395E-05	2.2605E+02	4.7907E-04
96.000	1.2363E-05	2.0697E+02	6.1905E-04
120.000	7.8835E-06	3.7232E+01	1.6154E-03
168.000	9.0587E-06	3.1213E+01	3.1168E-03
336.000	9.5479E-06	1.6840E+01	5.0352E-03
720.000	4.9805E-06	4.1090E+00	3.1359E-03

Time (hr)	MSL B Outboard - Surf Hold (By Surface Fixa Condenser - Airborne		
	I-131 (Curies)	I-131 (Curies)	I-131 (Curies)
0.000	4.1436E-10	3.8330E-19	5.7467E-10
0.333	8.7173E-02	5.6601E-08	4.3987E-02
0.500	2.9038E-01	2.9071E-07	1.0829E-01
0.800	1.2038E+00	1.9383E-06	3.1497E-01
1.100	3.2802E+00	7.1990E-06	6.6266E-01
1.400	7.0318E+00	1.9674E-05	1.1404E+00
1.700	1.2922E+01	4.4218E-05	1.7361E+00
2.000	2.1371E+01	8.6825E-05	2.4386E+00
2.300	3.1920E+01	1.5387E-04	2.8721E+00
2.600	4.3761E+01	2.4952E-04	3.2030E+00
2.900	5.6774E+01	3.7692E-04	3.5030E+00
3.200	7.0847E+01	5.3893E-04	3.7752E+00
3.500	8.5879E+01	7.3811E-04	4.0220E+00
3.800	1.0178E+02	9.7678E-04	4.2458E+00
4.100	1.1846E+02	1.2570E-03	4.4487E+00
4.400	1.3585E+02	1.5807E-03	4.6326E+00
4.700	1.5388E+02	1.9496E-03	4.7991E+00
5.000	1.7249E+02	2.3651E-03	4.9499E+00
5.300	1.9161E+02	2.8287E-03	5.0864E+00
5.600	2.1121E+02	3.3415E-03	5.2099E+00

5.900	2.3122E+02	3.9047E-03	5.3215E+00
6.200	2.5161E+02	4.5192E-03	5.4224E+00
6.500	2.7233E+02	5.1858E-03	5.5134E+00
6.800	2.9336E+02	5.9055E-03	5.5956E+00
7.100	3.1466E+02	6.6787E-03	5.6697E+00
7.400	3.3620E+02	7.5063E-03	5.7364E+00
7.700	3.5796E+02	8.3885E-03	5.7964E+00
8.000	3.7990E+02	9.3261E-03	5.8503E+00
8.300	4.0201E+02	1.0319E-02	5.8987E+00
8.600	4.2427E+02	1.1368E-02	5.9421E+00
8.900	4.4666E+02	1.2474E-02	5.9809E+00
9.200	4.6917E+02	1.3636E-02	6.0155E+00
9.500	4.9177E+02	1.4855E-02	6.0464E+00
9.800	5.1445E+02	1.6130E-02	6.0738E+00
10.100	5.3721E+02	1.7463E-02	6.0981E+00
10.400	5.6003E+02	1.8853E-02	6.1195E+00
24.000	1.5803E+03	1.4082E-01	6.0854E+00
48.000	3.4167E+03	4.9342E-01	1.2018E+00
72.000	4.7247E+03	9.8616E-01	1.1002E+00
96.000	5.7898E+03	1.5740E+00	1.0074E+00
120.000	7.1262E+03	1.8651E+00	1.3750E-01
168.000	8.7947E+03	2.5023E+00	1.1527E-01
336.000	1.0111E+04	4.4269E+00	6.2189E-02
720.000	5.5191E+03	4.7124E+00	1.5175E-02

Time (hr)	Condenser - Surface I-131 (Curies)
0.000	1.4167E-12
0.333	7.7210E-02
0.500	2.9543E-01
0.800	1.3587E+00
1.100	3.8979E+00
1.400	8.6360E+00
1.700	1.6230E+01
2.000	2.7275E+01
2.300	4.1507E+01
2.600	5.7640E+01
2.900	7.5432E+01
3.200	9.4726E+01
3.500	1.1538E+02
3.800	1.3726E+02
4.100	1.6025E+02
4.400	1.8425E+02
4.700	2.0915E+02
5.000	2.3487E+02
5.300	2.6132E+02
5.600	2.8844E+02
5.900	3.1615E+02
6.200	3.4440E+02
6.500	3.7313E+02
6.800	4.0228E+02
7.100	4.3182E+02
7.400	4.6171E+02
7.700	4.9189E+02
8.000	5.2235E+02
8.300	5.5305E+02
8.600	5.8396E+02
8.900	6.1505E+02
9.200	6.4630E+02
9.500	6.7770E+02

9.800	7.0921E+02
10.100	7.4083E+02
10.400	7.7254E+02
24.000	2.1913E+03
48.000	2.5941E+03
72.000	2.8484E+03
96.000	3.0421E+03
120.000	2.8548E+03
168.000	2.5001E+03
336.000	1.5520E+03
720.000	4.9435E+02

 Cumulative Dose Summary
 #####

Time (hr)	Control Room (CR)		Exclusion Area Bounda		Low Population Zone (
	Thyroid (rem)	TEDE (rem)	Thyroid (rem)	TEDE (rem)	Thyroid (rem)	TEDE (rem)
0.000	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00
0.333	5.2279E-09	1.6615E-10	2.4896E-08	8.9718E-10	4.5329E-09	1.6335E-10
0.500	3.7426E-08	1.1882E-09	1.3035E-07	4.6675E-09	2.3733E-08	8.4984E-10
0.800	3.7243E-07	1.1805E-08	8.8289E-07	3.1307E-08	1.6075E-07	5.7002E-09
1.100	1.7692E-06	5.6001E-08	3.3001E-06	1.1600E-07	6.0086E-07	2.1121E-08
1.400	5.7805E-06	1.8275E-07	9.0464E-06	3.1560E-07	1.6471E-06	5.7463E-08
1.700	1.4939E-05	4.7179E-07	2.0361E-05	7.0568E-07	3.7072E-06	1.2849E-07
2.000	3.2839E-05	1.0360E-06	3.9993E-05	1.3782E-06	7.2818E-06	2.5094E-07
2.300	6.1140E-05	1.9273E-06	7.0872E-05	2.4302E-06	1.2904E-05	4.4247E-07
2.600	1.0150E-04	3.1973E-06	1.1490E-04	3.9225E-06	2.0920E-05	7.1419E-07
2.900	1.5780E-04	4.9673E-06	1.7347E-04	5.8988E-06	3.1584E-05	1.0740E-06
3.200	2.3336E-04	7.3409E-06	2.4781E-04	8.3972E-06	4.5120E-05	1.5289E-06
3.500	3.3103E-04	1.0407E-05	3.3903E-04	1.1452E-05	6.1730E-05	2.0851E-06
3.800	4.5331E-04	1.4243E-05	4.4811E-04	1.5092E-05	8.1590E-05	2.7479E-06
4.100	6.0236E-04	1.8916E-05	5.7592E-04	1.9344E-05	1.0486E-04	3.5221E-06
4.400	7.8009E-04	2.4485E-05	7.2322E-04	2.4231E-05	1.3168E-04	4.4119E-06
4.700	9.8818E-04	3.1002E-05	8.9068E-04	2.9774E-05	1.6217E-04	5.4210E-06
5.000	1.2281E-03	3.8511E-05	1.0789E-03	3.5988E-05	1.9644E-04	6.5526E-06
5.300	1.5011E-03	4.7053E-05	1.2884E-03	4.2891E-05	2.3460E-04	7.8094E-06
5.600	1.8084E-03	5.6662E-05	1.5197E-03	5.0495E-05	2.7671E-04	9.1939E-06
5.900	2.1510E-03	6.7370E-05	1.7732E-03	5.8811E-05	3.2285E-04	1.0708E-05
6.200	2.5297E-03	7.9202E-05	2.0491E-03	6.7849E-05	3.7309E-04	1.2354E-05
6.500	2.9453E-03	9.2181E-05	2.3478E-03	7.7617E-05	4.2748E-04	1.4132E-05
6.800	3.3984E-03	1.0633E-04	2.6696E-03	8.8121E-05	4.8607E-04	1.6045E-05
7.100	3.8898E-03	1.2166E-04	3.0146E-03	9.9368E-05	5.4889E-04	1.8093E-05
7.400	4.4197E-03	1.3819E-04	3.3831E-03	1.1136E-04	6.1598E-04	2.0276E-05
7.700	4.9887E-03	1.5594E-04	3.7752E-03	1.2411E-04	6.8737E-04	2.2597E-05
8.000	5.5971E-03	1.7491E-04	4.1910E-03	1.3760E-04	7.6307E-04	2.5054E-05
8.300	6.1650E-03	1.9260E-04	4.4171E-03	1.4522E-04	7.9222E-04	2.6037E-05
8.600	6.6430E-03	2.0750E-04	4.6554E-03	1.5324E-04	8.2295E-04	2.7070E-05
8.900	7.0669E-03	2.2071E-04	4.9061E-03	1.6165E-04	8.5527E-04	2.8155E-05
9.200	7.4606E-03	2.3298E-04	5.1691E-03	1.7047E-04	8.8918E-04	2.9291E-05
9.500	7.8397E-03	2.4478E-04	5.4444E-03	1.7968E-04	9.2468E-04	3.0479E-05
9.800	8.2145E-03	2.5645E-04	5.7321E-03	1.8928E-04	9.6177E-04	3.1717E-05
10.100	8.5920E-03	2.6820E-04	6.0321E-03	1.9928E-04	1.0005E-03	3.3007E-05
10.400	8.9766E-03	2.8017E-04	6.3444E-03	2.0968E-04	1.0407E-03	3.4347E-05
24.000	4.1900E-02	1.2989E-03	3.2862E-02	1.0700E-03	4.4597E-03	1.4527E-04
48.000	8.2493E-02	2.5459E-03	3.2862E-02	1.0700E-03	1.0856E-02	3.4581E-04
72.000	1.3624E-01	4.1896E-03	3.2862E-02	1.0700E-03	1.9414E-02	6.1107E-04
96.000	2.0090E-01	6.1627E-03	3.2862E-02	1.0700E-03	2.9678E-02	9.2782E-04
120.000	2.2938E-01	7.0312E-03	3.2862E-02	1.0700E-03	3.2710E-02	1.0212E-03

168.000 2.9228E-01 8.9476E-03 3.2862E-02 1.0700E-03 3.9562E-02 1.2319E-03
336.000 5.4019E-01 1.6498E-02 3.2862E-02 1.0700E-03 6.6519E-02 2.0602E-03
720.000 9.7188E-01 2.9645E-02 3.2862E-02 1.0700E-03 1.1339E-01 3.5003E-03

Worst Two-Hour Doses
#####

Exclusion Area Boundary (EAB)

Time (hr)	Whole Body (rem)	Thyroid (rem)	TEDE (rem)
10.4	6.1509E-06	3.8997E-03	1.2652E-04

RADTRAD Version 3.03 (Spring 2001) run on 9/19/2005 at 16:06:25
#####

File information
#####

Plant file = C:\Documents and Settings\Aleem Boatright\My Documents\My Work\Exelon\AST\Limerick\LGS LOCA\RADTRAD\LGS LOCA ECCS Leak - New Design Basis - 275cfm CR Unfilt Inleak - Rad Mode.psf
Inventory file = c:\program files\radtrad3-03\defaults\limerick ast eccs source terms.nif
Release file = c:\program files\radtrad3-03\defaults\bwr_dba.rft
Dose Conversion file = c:\program files\radtrad3-03\defaults\fgr11&12.inp

```
#####      #####      #####      # #      # #####      # #      #####  
# #      # #      # #      # #      # #      # #      # #      # #  
# #      # #      # #      # #      # #      # #      # #      # #  
#####      #####      #####      # #      # #      #####      # #      # #  
# #      # #      # #      # #      # #      # #      # #      # #  
# #      # #      # #      # #      # #      # #      # #      # #  
# #      # #      # #      # #      # #      # #      # #      # #  
# #      # #      # #      # #      # #      # #      # #      # #
```

Radtrad 3.03 4/15/2001
ECCS Leak, 15.5 minute SC Drawdown - 10% Flashing Fraction - 99% Aerosol, 95% E&O
RERS Filters - 99% SGTS Filters - 99% Aerosol, 95% E&O CREFAS Filters - 275cfm
Unfiltered Inleakage - No CREFAS Delay - Control Room in Rad Mode - 3000cfm -10%
(2175cfm CR Re

Nuclide Inventory File:
c:\program files\radtrad3-03\defaults\limerick ast eccs source terms.nif
Plant Power Level:
3.5270E+03

Compartments:
5

Compartment 1:
ECCS Fluid

3
9.5989E+05
0
0
0
0
0

Compartment 2:
Reactor Enclosure

3
9.0000E+05
0
0
1
0
0

Compartment 3:

Environment

2
 0.0000E+00
 0
 0
 0
 0
 0

Compartment 4:

Control Room

1
 1.2600E+05
 0
 0
 1
 0
 0

Compartment 5:

SGTS Node

3
 1.0000E+00
 0
 0
 0
 0
 0

Pathways:

6

Pathway 1:

ECCS Fluid to Reactor Enclosure

1
 2
 2

Pathway 2:

Filtered Environment to Control Room

3
 4
 2

Pathway 3:

Control Room to Environment

4
 3
 2

Pathway 4:

Unfiltered Environment to Control Room

3
 4
 2

Pathway 5:

Reactor Enclosure to SGTS Node

2
 5
 2

Pathway 6:

SGTS Node to Environment

5
 3
 2

End of Plant Model File

Scenario Description Name:

Plant Model Filename:

Source Term:

1
1 1.0000E+00

c:\program files\radtrad3-03\defaults\fgr11&12.inp

c:\program files\radtrad3-03\defaults\bwr_dba.rft

0.0000E+00

0

0.0000E+00 9.7000E-01 3.0000E-02 1.0000E+00

Overlying Pool:

0

0.0000E+00

0

0

0

0

Compartments:

5

Compartment 1:

0

1

0

0

0

0

0

0

0

Compartment 2:

0

1

0

0

0

0

1

5.1000E+04

4

0.0000E+00 0.0000E+00 0.0000E+00 0.0000E+00

1.6700E-02 9.9000E+01 9.5000E+01 9.5000E+01

2.5830E-01 9.9000E+01 9.5000E+01 9.5000E+01

7.2000E+02 0.0000E+00 0.0000E+00 0.0000E+00

0

0

Compartment 3:

0

1

0

0

0

0

0

0

0

Compartment 4:

0

1

0

0
 0
 0
 1
 2.1750E+03
 3
 0.0000E+00 9.9000E+01 9.5000E+01 9.5000E+01
 5.0000E-01 9.9000E+01 9.5000E+01 9.5000E+01
 7.2000E+02 0.0000E+00 0.0000E+00 0.0000E+00

Compartment 5:

0
 1
 0
 0
 0
 0
 0
 0
 0

Pathways:

6

Pathway 1:

0
 0
 0
 0
 0
 1
 3
 0.0000E+00 5.0000E+00 9.0000E+01 9.0000E+01 9.0000E+01
 2.4000E+01 5.0000E+00 9.0000E+01 9.0000E+01 9.0000E+01
 7.2000E+02 0.0000E+00 0.0000E+00 0.0000E+00 0.0000E+00

0
 0
 0
 0
 0
 0

Pathway 2:

0
 0
 0
 0
 0
 1
 3
 0.0000E+00 5.2500E+02 9.9000E+01 9.5000E+01 9.5000E+01
 5.0000E-01 5.2500E+02 9.9000E+01 9.5000E+01 9.5000E+01
 7.2000E+02 0.0000E+00 0.0000E+00 0.0000E+00 0.0000E+00

0
 0
 0
 0
 0
 0

Pathway 3:

0
 0

0
 0
 0
 1
 3
 0.0000E+00 8.0000E+02 1.0000E+02 1.0000E+02 1.0000E+02
 5.0000E-01 8.0000E+02 1.0000E+02 1.0000E+02 1.0000E+02
 7.2000E+02 0.0000E+00 0.0000E+00 0.0000E+00 0.0000E+00

0
 0
 0
 0
 0
 0

Pathway 4:

0
 0
 0
 0
 0
 1
 2
 0.0000E+00 2.7500E+02 0.0000E+00 0.0000E+00 0.0000E+00
 7.2000E+02 0.0000E+00 0.0000E+00 0.0000E+00 0.0000E+00

0
 0
 0
 0
 0
 0

Pathway 5:

0
 0
 0
 0
 0
 1
 4
 0.0000E+00 9.0000E+06 0.0000E+00 0.0000E+00 0.0000E+00
 1.6700E-02 3.0000E+03 9.9000E+01 9.5000E+01 9.5000E+01
 2.5830E-01 2.5000E+03 9.9000E+01 9.5000E+01 9.5000E+01
 7.2000E+02 0.0000E+00 0.0000E+00 0.0000E+00 0.0000E+00

0
 0
 0
 0
 0
 0

Pathway 6:

0
 0
 0
 0
 0
 1
 4
 0.0000E+00 9.0000E+06 0.0000E+00 0.0000E+00 0.0000E+00
 1.6700E-02 3.0000E+03 0.0000E+00 0.0000E+00 0.0000E+00
 2.5830E-01 2.5000E+03 9.9000E+01 9.9000E+01 9.9000E+01
 7.2000E+02 0.0000E+00 0.0000E+00 0.0000E+00 0.0000E+00

0
0
0
0
0
0

Dose Locations:

3

Location 1:

EAB

3

1

2

0.0000E+00 3.1800E-04

8.0000E+00 0.0000E+00

1

2

0.0000E+00 3.5000E-04

8.0000E+00 0.0000E+00

0

Location 2:

LPZ

3

1

5

0.0000E+00 5.7900E-05

8.0000E+00 4.1000E-05

2.4000E+01 1.9500E-05

9.6000E+01 6.6800E-06

7.2000E+02 2.6200E-06

1

4

0.0000E+00 3.5000E-04

8.0000E+00 1.8000E-04

2.4000E+01 2.3000E-04

7.2000E+02 0.0000E+00

0

Location 3:

Control Room

4

0

1

2

0.0000E+00 3.5000E-04

7.2000E+02 0.0000E+00

1

4

0.0000E+00 1.0000E+00

2.4000E+01 6.0000E-01

9.6000E+01 4.0000E-01

7.2000E+02 0.0000E+00

Effective Volume Location:

1

6

0.0000E+00 6.8800E-03

2.0000E+00 5.1700E-03

8.0000E+00 2.0400E-03

2.4000E+01 1.2900E-03

9.6000E+01 9.6300E-04

7.2000E+02 0.0000E+00

Simulation Parameters:

4

0.0000E+00 1.6670E-03

1.6700E-02 2.5000E-02

2.5830E-01 1.0000E-01

1.2000E+01 0.0000E+00

Output Filename:

C:\Documents and Settings\Aleem Boatright\My Documents\My
Work\Exelon\AST\Limerick\LGS LOCA\RADTRAD\LGS LOCA ECCS Leak - New Design Basis -
275cfm CR Unfilt Inleak - Rad Mode.o0

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0

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End of Scenario File

RADTRAD Version 3.03 (Spring 2001) run on 9/19/2005 at 16:06:25
#####

Plant Description
#####

Number of Nuclides = 60

Inventory Power = 1.0000E+00 MWth
Plant Power Level = 3.5270E+03 MWth

Number of compartments = 5

Compartment information

Compartment number 1 (Source term fraction = 1.0000E+00
)

Name: ECCS Fluid

Compartment volume = 9.5989E+05 (Cubic feet)

Compartment type is Normal

Pathways into and out of compartment 1

Exit Pathway Number 1: ECCS Fluid to Reactor Enclosure

Compartment number 2

Name: Reactor Enclosure

Compartment volume = 9.0000E+05 (Cubic feet)

Compartment type is Normal

Removal devices within compartment:

Filter(s)

Pathways into and out of compartment 2

Inlet Pathway Number 1: ECCS Fluid to Reactor Enclosure

Exit Pathway Number 5: Reactor Enclosure to SGTS Node

Compartment number 3

Name: Environment

Compartment type is Environment

Pathways into and out of compartment 3

Inlet Pathway Number 3: Control Room to Environment

Inlet Pathway Number 6: SGTS Node to Environment

Exit Pathway Number 2: Filtered Environment to Control Room

Exit Pathway Number 4: Unfiltered Environment to Control Room

Compartment number 4

Name: Control Room

Compartment volume = 1.2600E+05 (Cubic feet)

Compartment type is Control Room

Removal devices within compartment:

Filter(s)

Pathways into and out of compartment 4

Inlet Pathway Number 2: Filtered Environment to Control Room

Inlet Pathway Number 4: Unfiltered Environment to Control Room

Exit Pathway Number 3: Control Room to Environment

Compartment number 5

Name: SGTS Node

Compartment volume = 1.0000E+00 (Cubic feet)

Compartment type is Normal

Pathways into and out of compartment 5

Inlet Pathway Number 5: Reactor Enclosure to SGTS Node

Exit Pathway Number 6: SGTS Node to Environment

Total number of pathways = 6

 RADTRAD Version 3.03 (Spring 2001) run on 9/19/2005 at 16:06:25
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 Dose Output
 #####

Detailed model information at time (H) = 0.0167

EAB Doses:

Time (h) =	0.0167	Whole Body	Thyroid	TEDE
Delta dose (rem)		2.7748E-05	5.7475E-03	2.0948E-04
Accumulated dose (rem)		2.7748E-05	5.7475E-03	2.0948E-04

LPZ Doses:

Time (h) =	0.0167	Whole Body	Thyroid	TEDE
Delta dose (rem)		5.0522E-06	1.0465E-03	3.8142E-05
Accumulated dose (rem)		5.0522E-06	1.0465E-03	3.8142E-05

Control Room Doses:

Time (h) =	0.0167	Whole Body	Thyroid	TEDE
Delta dose (rem)		1.9900E-08	9.1354E-05	2.9085E-06
Accumulated dose (rem)		1.9900E-08	9.1354E-05	2.9085E-06

Detailed model information at time (H) = 0.2583

EAB Doses:

Time (h) =	0.2583	Whole Body	Thyroid	TEDE
Delta dose (rem)		5.2290E-06	1.1596E-03	4.1857E-05
Accumulated dose (rem)		3.2977E-05	6.9071E-03	2.5134E-04

LPZ Doses:

Time (h) =	0.2583	Whole Body	Thyroid	TEDE
Delta dose (rem)		9.5207E-07	2.1113E-04	7.6212E-06
Accumulated dose (rem)		6.0043E-06	1.2576E-03	4.5763E-05

Control Room Doses:

Time (h) =	0.2583	Whole Body	Thyroid	TEDE
Delta dose (rem)		8.0481E-07	3.8642E-03	1.2291E-04

Accumulated dose (rem) 8.2471E-07 3.9556E-03 1.2582E-04

Detailed model information at time (H) = 0.5000

EAB Doses:

Time (h) =	0.5000	Whole Body	Thyroid	TEDE
Delta dose (rem)		2.0995E-07	4.9754E-05	1.7800E-06
Accumulated dose (rem)		3.3187E-05	6.9569E-03	2.5312E-04

LPZ Doses:

Time (h) =	0.5000	Whole Body	Thyroid	TEDE
Delta dose (rem)		3.8227E-08	9.0590E-06	3.2410E-07
Accumulated dose (rem)		6.0425E-06	1.2667E-03	4.6087E-05

Control Room Doses:

Time (h) =	0.5000	Whole Body	Thyroid	TEDE
Delta dose (rem)		6.3414E-07	3.3028E-03	1.0487E-04
Accumulated dose (rem)		1.4588E-06	7.2584E-03	2.3069E-04

Detailed model information at time (H) = 2.0000

EAB Doses:

Time (h) =	2.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)		7.0790E-06	2.3620E-03	8.1280E-05
Accumulated dose (rem)		4.0266E-05	9.3188E-03	3.3440E-04

LPZ Doses:

Time (h) =	2.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)		1.2889E-06	4.3005E-04	1.4799E-05
Accumulated dose (rem)		7.3314E-06	1.6967E-03	6.0886E-05

Control Room Doses:

Time (h) =	2.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)		1.4629E-06	9.7699E-03	3.0876E-04
Accumulated dose (rem)		2.9217E-06	1.7028E-02	5.3945E-04

Detailed model information at time (H) = 8.0000

EAB Doses:

Time (h) =	8.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)		3.3619E-05	2.0424E-02	6.7059E-04
Accumulated dose (rem)		7.3885E-05	2.9743E-02	1.0050E-03

LPZ Doses:

Time (h) =	8.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)		6.1212E-06	3.7187E-03	1.2210E-04
Accumulated dose (rem)		1.3453E-05	5.4154E-03	1.8298E-04

Control Room Doses:

Time (h) =	8.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)		2.5482E-06	3.4415E-02	1.0758E-03

Accumulated dose (rem) 5.4699E-06 5.1443E-02 1.6153E-03

Detailed model information at time (H) = 24.0000

EAB Doses:

Time (h) = 24.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)	0.0000E+00	0.0000E+00	0.0000E+00
Accumulated dose (rem)	7.3885E-05	2.9743E-02	1.0050E-03

LPZ Doses:

Time (h) = 24.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)	4.9945E-06	3.2473E-03	1.0540E-04
Accumulated dose (rem)	1.8447E-05	8.6628E-03	2.8838E-04

Control Room Doses:

Time (h) = 24.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)	1.3025E-06	3.5512E-02	1.0996E-03
Accumulated dose (rem)	6.7724E-06	8.6956E-02	2.7149E-03

Detailed model information at time (H) = 96.0000

EAB Doses:

Time (h) = 96.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)	0.0000E+00	0.0000E+00	0.0000E+00
Accumulated dose (rem)	7.3885E-05	2.9743E-02	1.0050E-03

LPZ Doses:

Time (h) = 96.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)	3.1193E-06	6.5580E-03	2.0380E-04
Accumulated dose (rem)	2.1566E-05	1.5221E-02	4.9218E-04

Control Room Doses:

Time (h) = 96.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)	6.0728E-07	4.2483E-02	1.3008E-03
Accumulated dose (rem)	7.3797E-06	1.2944E-01	4.0156E-03

Detailed model information at time (H) = 720.0000

EAB Doses:

Time (h) = 720.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)	0.0000E+00	0.0000E+00	0.0000E+00
Accumulated dose (rem)	7.3885E-05	2.9743E-02	1.0050E-03

LPZ Doses:

Time (h) = 720.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)	1.6286E-06	5.8732E-03	1.8047E-04
Accumulated dose (rem)	2.3195E-05	2.1094E-02	6.7265E-04

Control Room Doses:

Time (h) = 720.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)	4.4721E-07	5.4340E-02	1.6552E-03

Accumulated dose (rem) 7.8269E-06 1.8378E-01 5.6708E-03

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 I-131 Summary
 #####

Time (hr)	ECCS Fluid	Reactor Enclosure	Environment
	I-131 (Curies)	I-131 (Curies)	I-131 (Curies)
0.000	5.2650E+03	4.1026E-05	4.6822E-06
0.017	1.5826E+05	7.4208E-03	3.3880E-02
0.258	2.4456E+06	7.4879E+00	4.0731E-02
0.500	4.7297E+06	2.2569E+01	4.1025E-02
0.800	9.4488E+06	5.2127E+01	4.1930E-02
1.100	1.4157E+07	9.0484E+01	4.3702E-02
1.400	1.8855E+07	1.3195E+02	4.6478E-02
1.700	2.3543E+07	1.7448E+02	5.0307E-02
2.000	2.8220E+07	2.1733E+02	5.5203E-02
2.300	2.8186E+07	2.4410E+02	6.1027E-02
2.600	2.8153E+07	2.5357E+02	6.7267E-02
2.900	2.8121E+07	2.5678E+02	7.3652E-02
3.200	2.8088E+07	2.5775E+02	8.0085E-02
3.500	2.8055E+07	2.5790E+02	8.6531E-02
3.800	2.8022E+07	2.5777E+02	9.2976E-02
4.100	2.7989E+07	2.5752E+02	9.9416E-02
4.400	2.7956E+07	2.5724E+02	1.0585E-01
4.700	2.7924E+07	2.5695E+02	1.1228E-01
5.000	2.7891E+07	2.5665E+02	1.1869E-01
5.300	2.7858E+07	2.5635E+02	1.2511E-01
5.600	2.7826E+07	2.5605E+02	1.3151E-01
5.900	2.7793E+07	2.5575E+02	1.3791E-01
6.200	2.7761E+07	2.5545E+02	1.4430E-01
6.500	2.7728E+07	2.5516E+02	1.5068E-01
6.800	2.7696E+07	2.5486E+02	1.5705E-01
7.100	2.7663E+07	2.5456E+02	1.6342E-01
7.400	2.7631E+07	2.5426E+02	1.6978E-01
7.700	2.7598E+07	2.5396E+02	1.7613E-01
8.000	2.7566E+07	2.5367E+02	1.8247E-01
8.300	2.7534E+07	2.5337E+02	1.8881E-01
8.600	2.7502E+07	2.5307E+02	1.9514E-01
8.900	2.7469E+07	2.5278E+02	2.0146E-01
9.200	2.7437E+07	2.5248E+02	2.0778E-01
9.500	2.7405E+07	2.5218E+02	2.1408E-01
9.800	2.7373E+07	2.5189E+02	2.2038E-01
10.100	2.7341E+07	2.5159E+02	2.2667E-01
10.400	2.7309E+07	2.5130E+02	2.3296E-01
24.000	2.5897E+07	2.3830E+02	5.0899E-01
96.000	1.9550E+07	1.7990E+02	1.7465E+00
720.000	1.7099E+06	1.5735E+01	5.2249E+00

Time (hr)	Control Room	SGTS Node
	I-131 (Curies)	I-131 (Curies)
0.000	4.5790E-09	4.5584E-11
0.017	3.2909E-05	8.2454E-09
0.258	2.9776E-05	4.1598E-07
0.500	2.1643E-05	1.2538E-06
0.800	1.5102E-05	2.8959E-06
1.100	1.1465E-05	5.0268E-06
1.400	9.8608E-06	7.3306E-06

1.700	9.6417E-06	9.6932E-06
2.000	1.0353E-05	1.2074E-05
2.300	1.0392E-05	1.3561E-05
2.600	1.0660E-05	1.4087E-05
2.900	1.0923E-05	1.4266E-05
3.200	1.1124E-05	1.4319E-05
3.500	1.1265E-05	1.4328E-05
3.800	1.1358E-05	1.4320E-05
4.100	1.1417E-05	1.4307E-05
4.400	1.1452E-05	1.4291E-05
4.700	1.1470E-05	1.4275E-05
5.000	1.1478E-05	1.4259E-05
5.300	1.1479E-05	1.4242E-05
5.600	1.1475E-05	1.4225E-05
5.900	1.1468E-05	1.4209E-05
6.200	1.1459E-05	1.4192E-05
6.500	1.1448E-05	1.4175E-05
6.800	1.1437E-05	1.4159E-05
7.100	1.1424E-05	1.4142E-05
7.400	1.1412E-05	1.4126E-05
7.700	1.1399E-05	1.4109E-05
8.000	1.1386E-05	1.4093E-05
8.300	9.0598E-06	1.4076E-05
8.600	7.5151E-06	1.4060E-05
8.900	6.4887E-06	1.4043E-05
9.200	5.8062E-06	1.4027E-05
9.500	5.3517E-06	1.4010E-05
9.800	5.0485E-06	1.3994E-05
10.100	4.8456E-06	1.3977E-05
10.400	4.7093E-06	1.3961E-05
24.000	4.2209E-06	1.3239E-05
96.000	2.0150E-06	9.9945E-06
720.000	1.3156E-07	8.7414E-07

 Cumulative Dose Summary
 #####

Time (hr)	EAB		LPZ		Control Room	
	Thyroid (rem)	TEDE (rem)	Thyroid (rem)	TEDE (rem)	Thyroid (rem)	TEDE (rem)
0.000	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00
0.017	5.7475E-03	2.0948E-04	1.0465E-03	3.8142E-05	9.1354E-05	2.9085E-06
0.258	6.9071E-03	2.5134E-04	1.2576E-03	4.5763E-05	3.9556E-03	1.2582E-04
0.500	6.9569E-03	2.5312E-04	1.2667E-03	4.6087E-05	7.2584E-03	2.3069E-04
0.800	7.1091E-03	2.5850E-04	1.2944E-03	4.7067E-05	1.0162E-02	3.2270E-04
1.100	7.4062E-03	2.6888E-04	1.3485E-03	4.8956E-05	1.2253E-02	3.8885E-04
1.400	7.8699E-03	2.8492E-04	1.4329E-03	5.1876E-05	1.3928E-02	4.4176E-04
1.700	8.5070E-03	3.0676E-04	1.5489E-03	5.5854E-05	1.5459E-02	4.9004E-04
2.000	9.3188E-03	3.3440E-04	1.6967E-03	6.0886E-05	1.7028E-02	5.3945E-04
2.300	1.0281E-02	3.6695E-04	1.8719E-03	6.6813E-05	1.8654E-02	5.9060E-04
2.600	1.1309E-02	4.0152E-04	2.0590E-03	7.3108E-05	2.0303E-02	6.4242E-04
2.900	1.2357E-02	4.3661E-04	2.2498E-03	7.9497E-05	2.1989E-02	6.9536E-04
3.200	1.3409E-02	4.7170E-04	2.4414E-03	8.5885E-05	2.3706E-02	7.4922E-04
3.500	1.4460E-02	5.0661E-04	2.6328E-03	9.2241E-05	2.5444E-02	8.0370E-04
3.800	1.5507E-02	5.4129E-04	2.8235E-03	9.8555E-05	2.7194E-02	8.5853E-04
4.100	1.6551E-02	5.7573E-04	3.0135E-03	1.0483E-04	2.8950E-02	9.1351E-04
4.400	1.7590E-02	6.0993E-04	3.2027E-03	1.1105E-04	3.0708E-02	9.6852E-04
4.700	1.8625E-02	6.4391E-04	3.3912E-03	1.1724E-04	3.2465E-02	1.0235E-03
5.000	1.9656E-02	6.7768E-04	3.5788E-03	1.2339E-04	3.4219E-02	1.0783E-03

5.300	2.0682E-02	7.1124E-04	3.7658E-03	1.2950E-04	3.5968E-02	1.1329E-03
5.600	2.1705E-02	7.4460E-04	3.9519E-03	1.3557E-04	3.7712E-02	1.1874E-03
5.900	2.2723E-02	7.7776E-04	4.1373E-03	1.4161E-04	3.9450E-02	1.2416E-03
6.200	2.3738E-02	8.1074E-04	4.3220E-03	1.4762E-04	4.1182E-02	1.2956E-03
6.500	2.4748E-02	8.4354E-04	4.5060E-03	1.5359E-04	4.2908E-02	1.3494E-03
6.800	2.5755E-02	8.7616E-04	4.6893E-03	1.5953E-04	4.4628E-02	1.4030E-03
7.100	2.6757E-02	9.0861E-04	4.8718E-03	1.6544E-04	4.6341E-02	1.4564E-03
7.400	2.7756E-02	9.4090E-04	5.0537E-03	1.7132E-04	4.8048E-02	1.5096E-03
7.700	2.8751E-02	9.7303E-04	5.2349E-03	1.7716E-04	4.9749E-02	1.5625E-03
8.000	2.9743E-02	1.0050E-03	5.4154E-03	1.8298E-04	5.1443E-02	1.6153E-03
8.300	2.9743E-02	1.0050E-03	5.4809E-03	1.8517E-04	5.2950E-02	1.6621E-03
8.600	2.9743E-02	1.0050E-03	5.5462E-03	1.8733E-04	5.4169E-02	1.7001E-03
8.900	2.9743E-02	1.0050E-03	5.6112E-03	1.8949E-04	5.5198E-02	1.7321E-03
9.200	2.9743E-02	1.0050E-03	5.6760E-03	1.9164E-04	5.6101E-02	1.7601E-03
9.500	2.9743E-02	1.0050E-03	5.7406E-03	1.9377E-04	5.6918E-02	1.7855E-03
9.800	2.9743E-02	1.0050E-03	5.8049E-03	1.9589E-04	5.7679E-02	1.8092E-03
10.100	2.9743E-02	1.0050E-03	5.8690E-03	1.9801E-04	5.8402E-02	1.8316E-03
10.400	2.9743E-02	1.0050E-03	5.9329E-03	2.0011E-04	5.9098E-02	1.8532E-03
24.000	2.9743E-02	1.0050E-03	8.6628E-03	2.8838E-04	8.6956E-02	2.7149E-03
96.000	2.9743E-02	1.0050E-03	1.5221E-02	4.9218E-04	1.2944E-01	4.0156E-03
720.000	2.9743E-02	1.0050E-03	2.1094E-02	6.7265E-04	1.8378E-01	5.6708E-03

 Worst Two-Hour Doses
 #####

EAB

Time (hr)	Whole Body (rem)	Thyroid (rem)	TEDE (rem)
0.0	4.0266E-05	9.3188E-03	3.3440E-04

 RADTRAD Version 3.03 (Spring 2001) run on 9/19/2005 at 16:34:19
 #####

 File information
 #####

Plant file = C:\Documents and Settings\Aleem Boatright\My Documents\My Work\Exelon\AST\Limerick\LGS LOCA\RADTRAD\LGS LOCA PC Leak - New Design Basis - 275cfm CR Unfilt Inleak - Chlorine Mode.psf
 Inventory file = c:\program files\radtrad3-03\defaults\limerick ast source terms.nif
 Release file = c:\program files\radtrad3-03\defaults\bwr_dba.rft
 Dose Conversion file = c:\program files\radtrad3-03\defaults\fgr11&12.inp

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Radtrad 3.03 4/15/2001
 LGS PC Leak; 99% Aerosol, 95% E & O RERS Filter; 50% Leak Reduct at 24 hrs; 99% Filtration for SGTS; 99% Aerosol, 95% E&O Filtration for Control Room - No CREFAS Delay - Control Room in Chlorine Mode - 3000cfm -10% (2700cfm CR Recirc)
 Nuclide Inventory File:
 c:\program files\radtrad3-03\defaults\limerick ast source terms.nif
 Plant Power Level:
 3.5270E+03
 Compartments:
 5
 Compartment 1:
 Primary Containment
 3
 3.7907E+05
 0
 0
 0
 1
 0
 Compartment 2:
 Reactor Enclosure
 3
 9.0000E+05
 0
 0
 1
 0
 0
 Compartment 3:
 Environment

2
0.0000E+00
0
0
0
0
0

Compartment 4:
Control Room

1
1.2600E+05
0
0
1
0
0

Compartment 5:
SGTS Node

3
1.0000E+00
0
0
0
0
0

Pathways:
6

Pathway 1:
Primary Containment to Reactor Enclosure

1
2
4

Pathway 2:
Reactor Enclosure to SGTS Node

2
5
2

Pathway 3:
Environment to Control Room - Unfiltered Inleakage

3
4
2

Pathway 4:
Environment to Control Room - Filtered Intake

3
4
2

Pathway 5:
Control Room to Environment

4
3
2

Pathway 6:
SGTS Node to Environment

5
3
2

End of Plant Model File
Scenario Description Name:

Plant Model Filename:

Source Term:

1
 1 1.0000E+00
 c:\program files\radtrad3-03\defaults\fgr11&12.inp
 c:\program files\radtrad3-03\defaults\bwr_dba.rft
 0.0000E+00
 1
 9.5000E-01 4.8500E-02 1.5000E-03 1.0000E+00

Overlying Pool:

0
 0.0000E+00
 0
 0
 0
 0

Compartments:

5

Compartment 1:

0
 1
 0
 0
 0
 0
 0
 3
 3
 1.0000E+01
 1
 1
 0.0000E+00 0.0000E+00

Compartment 2:

0
 1
 0
 0
 0
 0
 1
 5.1000E+04
 4
 0.0000E+00 0.0000E+00 0.0000E+00 0.0000E+00
 1.6700E-02 9.9000E+01 9.5000E+01 9.5000E+01
 2.5830E-01 9.9000E+01 9.5000E+01 9.5000E+01
 7.2000E+02 0.0000E+00 0.0000E+00 0.0000E+00

Compartment 3:

0
 1
 0
 0
 0
 0
 0
 0
 0

Compartment 4:

0
 1
 0
 0
 0
 0
 1
 2.7000E+03
 3
 0.0000E+00 9.9000E+01 9.5000E+01 9.5000E+01
 5.0000E-01 9.9000E+01 9.5000E+01 9.5000E+01
 7.2000E+02 0.0000E+00 0.0000E+00 0.0000E+00

Compartment 5:

0
 1
 0
 0
 0
 0
 0
 0
 0
 0

Pathways:

6

Pathway 1:

0
 0
 0
 0
 0
 0
 0
 0
 0
 0
 0
 1
 3
 0.0000E+00 5.0000E-01
 2.4000E+01 2.5000E-01
 7.2000E+02 0.0000E+00

Pathway 2:

0
 0
 0
 0
 0
 0
 1
 4
 0.0000E+00 9.0000E+06 0.0000E+00 0.0000E+00 0.0000E+00
 1.6700E-02 3.0000E+03 9.9000E+01 9.5000E+01 9.5000E+01
 2.5830E-01 2.5000E+03 9.9000E+01 9.5000E+01 9.5000E+01
 7.2000E+02 0.0000E+00 0.0000E+00 0.0000E+00 0.0000E+00
 0
 0
 0
 0
 0

0
 Pathway 3:
 0
 0
 0
 0
 1
 2
 0.0000E+00 2.7500E+02 0.0000E+00 0.0000E+00 0.0000E+00
 7.2000E+02 0.0000E+00 0.0000E+00 0.0000E+00 0.0000E+00

0
 0
 0
 0
 0

Pathway 4:
 0
 0
 0
 0
 1
 3
 0.0000E+00 0.0000E+00 9.9000E+01 9.5000E+01 9.5000E+01
 5.0000E-01 0.0000E+00 9.9000E+01 9.5000E+01 9.5000E+01
 7.2000E+02 0.0000E+00 0.0000E+00 0.0000E+00 0.0000E+00

0
 0
 0
 0
 0

Pathway 5:
 0
 0
 0
 0
 1
 3
 0.0000E+00 2.7500E+02 1.0000E+02 1.0000E+02 1.0000E+02
 5.0000E-01 2.7500E+02 1.0000E+02 1.0000E+02 1.0000E+02
 7.2000E+02 0.0000E+00 0.0000E+00 0.0000E+00 0.0000E+00

0
 0
 0
 0
 0

Pathway 6:
 0
 0
 0
 0
 1
 4
 0.0000E+00 9.0000E+06 0.0000E+00 0.0000E+00 0.0000E+00

LGS LOCA PC Leak - New Design Basis - 275cfm CR Unfilt Inleak - Chlorine Mode.o0

1.6700E-02	3.0000E+03	0.0000E+00	0.0000E+00	0.0000E+00
2.5830E-01	2.5000E+03	9.9000E+01	9.9000E+01	9.9000E+01
7.2000E+02	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00

0
0
0
0
0
0

Dose Locations:

3

Location 1:

Control Room

4

0

1

2

0.0000E+00 3.5000E-04

7.2000E+02 0.0000E+00

1

4

0.0000E+00 1.0000E+00

2.4000E+01 6.0000E-01

9.6000E+01 4.0000E-01

7.2000E+02 0.0000E+00

Location 2:

EAB

3

1

2

0.0000E+00 3.1800E-04

8.0000E+00 0.0000E+00

1

2

0.0000E+00 3.5000E-04

8.0000E+00 0.0000E+00

0

Location 3:

LPZ

3

1

5

0.0000E+00 5.7900E-05

8.0000E+00 4.1000E-05

2.4000E+01 1.9500E-05

9.6000E+01 6.6800E-06

7.2000E+02 0.0000E+00

1

4

0.0000E+00 3.5000E-04

8.0000E+00 1.8000E-04

2.4000E+01 2.3000E-04

7.2000E+02 0.0000E+00

0

Effective Volume Location:

1

6

0.0000E+00 6.8800E-03

2.0000E+00 5.1700E-03

8.0000E+00 2.0400E-03

2.4000E+01 1.2900E-03
9.6000E+01 9.6300E-04
7.2000E+02 0.0000E+00

Simulation Parameters:

3
0.0000E+00 1.6670E-03
1.6700E-02 2.5000E-02
2.5830E-01 0.0000E+00

Output Filename:

C:\Documents and Settings\Aleem Boatright\My Documents\My
Work\Exelon\AST\Limerick\LGS LOCA\RADTRAD\LGS LOCA PC Leak - New Design Basis -
275cfm CR Unfilt Inleak - Chlorine Mode.o0

1
1
1
0
1

End of Scenario File

RADTRAD Version 3.03 (Spring 2001) run on 9/19/2005 at 16:34:19
#####

Plant Description
#####

Number of Nuclides = 60

Inventory Power = 1.0000E+00 MWth
Plant Power Level = 3.5270E+03 MWth

Number of compartments = 5

Compartment information

Compartment number 1 (Source term fraction = 1.0000E+00
)

Name: Primary Containment
Compartment volume = 3.7907E+05 (Cubic feet)
Compartment type is Normal
Removal devices within compartment:
Deposition

Pathways into and out of compartment 1
Exit Pathway Number 1: Primary Containment to Reactor Enclosure

Compartment number 2
Name: Reactor Enclosure
Compartment volume = 9.0000E+05 (Cubic feet)
Compartment type is Normal
Removal devices within compartment:

Filter(s)
Pathways into and out of compartment 2
Inlet Pathway Number 1: Primary Containment to Reactor Enclosure
Exit Pathway Number 2: Reactor Enclosure to SGTS Node

Compartment number 3
Name: Environment
Compartment type is Environment
Pathways into and out of compartment 3
Inlet Pathway Number 5: Control Room to Environment
Inlet Pathway Number 6: SGTS Node to Environment
Exit Pathway Number 3: Environment to Control Room - Unfiltered Inleakage
Exit Pathway Number 4: Environment to Control Room - Filtered Intake

Compartment number 4
Name: Control Room
Compartment volume = 1.2600E+05 (Cubic feet)
Compartment type is Control Room
Removal devices within compartment:
Filter(s)
Pathways into and out of compartment 4
Inlet Pathway Number 3: Environment to Control Room - Unfiltered Inleakage
Inlet Pathway Number 4: Environment to Control Room - Filtered Intake
Exit Pathway Number 5: Control Room to Environment

Compartment number 5
Name: SGTS Node

Compartment volume = 1.0000E+00 (Cubic feet)

Compartment type is Normal

Pathways into and out of compartment 5

Inlet Pathway Number 2: Reactor Enclosure to SGTS Node

Exit Pathway Number 6: SGTS Node to Environment

Total number of pathways = 6

 RADTRAD Version 3.03 (Spring 2001) run on 9/19/2005 at 16:34:19
 #####

 Scenario Description
 #####

Radioactive Decay is enabled
 Calculation of Daughters is enabled

Release Fractions and Timings

	GAP	EARLY IN-VESSEL	LATE RELEASE	RELEASE MASS
	0.500000 hr	1.5000 hrs	0.0000 hrs	(gm)
NOBLES	5.0000E-02	9.5000E-01	0.0000E+00	4.625E+03
IODINE	5.0000E-02	2.5000E-01	0.0000E+00	3.033E+02
CESIUM	5.0000E-02	2.0000E-01	0.0000E+00	5.099E+04
TELLURIUM	0.0000E+00	5.0000E-02	0.0000E+00	4.012E+01
STRONTIUM	0.0000E+00	2.0000E-02	0.0000E+00	1.712E+03
BARIUM	0.0000E+00	2.0000E-02	0.0000E+00	4.739E+01
RUTHENIUM	0.0000E+00	2.5000E-03	0.0000E+00	5.988E+01
CERIUM	0.0000E+00	5.0000E-04	0.0000E+00	5.914E+02
LANTHANUM	0.0000E+00	2.0000E-04	0.0000E+00	8.731E+00

Inventory Power = 3527. MWt

Nuclide Name	Group	Specific Inventory (Ci/MWt)	half life (s)	Whole Body DCF (Sv-m3/Bq-s)	Inhaled Thyroid (Sv/Bq)	Inhaled Effective (Sv/Bq)
Co-58	7	1.529E+02	6.117E+06	4.760E-14	8.720E-10	2.940E-09
Co-60	7	1.830E+02	1.663E+08	1.260E-13	1.620E-08	5.910E-08
Kr-85	1	3.946E+02	3.383E+08	1.190E-16	0.000E+00	0.000E+00
Kr-85m	1	8.313E+03	1.613E+04	7.480E-15	0.000E+00	0.000E+00
Kr-87	1	1.633E+04	4.578E+03	4.120E-14	0.000E+00	0.000E+00
Kr-88	1	2.303E+04	1.022E+04	1.020E-13	0.000E+00	0.000E+00
Rb-86	3	6.518E+01	1.612E+06	4.810E-15	1.330E-09	1.790E-09
Sr-89	5	2.798E+04	4.363E+06	7.730E-17	7.960E-12	1.120E-08
Sr-90	5	3.178E+03	9.190E+08	7.530E-18	2.690E-10	3.510E-07
Sr-91	5	3.801E+04	3.420E+04	4.924E-14	9.930E-12	4.547E-10
Sr-92	5	4.017E+04	9.756E+03	6.790E-14	3.920E-12	2.180E-10
Y-90	9	3.272E+03	2.304E+05	1.900E-16	5.170E-13	2.280E-09
Y-91	9	3.448E+04	5.055E+06	2.600E-16	8.500E-12	1.320E-08
Y-92	9	4.029E+04	1.274E+04	1.300E-14	1.050E-12	2.110E-10
Y-93	9	4.526E+04	3.636E+04	4.800E-15	9.260E-13	5.820E-10
Zr-95	9	4.489E+04	5.528E+06	3.600E-14	1.440E-09	6.390E-09
Zr-97	9	4.657E+04	6.084E+04	4.432E-14	2.315E-11	1.171E-09
Nb-95	9	4.512E+04	3.037E+06	3.740E-14	3.580E-10	1.570E-09
Mo-99	7	5.078E+04	2.376E+05	7.280E-15	1.520E-11	1.070E-09
Tc-99m	7	4.447E+04	2.167E+04	5.890E-15	5.010E-11	8.800E-12
Ru-103	7	4.202E+04	3.394E+06	2.251E-14	2.570E-10	2.421E-09
Ru-105	7	2.908E+04	1.598E+04	3.810E-14	4.150E-12	1.230E-10
Ru-106	7	1.730E+04	3.181E+07	1.040E-14	1.720E-09	1.290E-07
Rh-105	7	2.752E+04	1.273E+05	3.720E-15	2.880E-12	2.580E-10
Sb-127	4	2.896E+03	3.326E+05	3.330E-14	6.150E-11	1.630E-09
Sb-129	4	8.638E+03	1.555E+04	7.140E-14	9.720E-12	1.740E-10
Te-127	4	2.873E+03	3.366E+04	2.420E-16	1.840E-12	8.600E-11
Te-127m	4	3.855E+02	9.418E+06	1.470E-16	9.660E-11	5.810E-09
Te-129	4	8.501E+03	4.176E+03	2.750E-15	5.090E-13	2.090E-11
Te-129m	4	1.267E+03	2.903E+06	3.337E-15	1.563E-10	6.484E-09

LGS LOCA PC Leak - New Design Basis - 275cfm CR Unfilt Inleak - Chlorine Mode.o0

Te-131m	4	3.869E+03	1.080E+05	7.463E-14	3.669E-08	1.758E-09
Te-132	4	3.821E+04	2.815E+05	1.030E-14	6.280E-08	2.550E-09
I-131	2	2.687E+04	6.947E+05	1.820E-14	2.920E-07	8.890E-09
I-132	2	3.881E+04	8.280E+03	1.120E-13	1.740E-09	1.030E-10
I-133	2	5.556E+04	7.488E+04	2.940E-14	4.860E-08	1.580E-09
I-134	2	6.165E+04	3.156E+03	1.300E-13	2.880E-10	3.550E-11
I-135	2	5.192E+04	2.380E+04	8.294E-14	8.460E-09	3.320E-10
Xe-133	1	5.491E+04	4.532E+05	1.560E-15	0.000E+00	0.000E+00
Xe-135	1	2.228E+04	3.272E+04	1.190E-14	0.000E+00	0.000E+00
Cs-134	3	7.280E+03	6.507E+07	7.570E-14	1.110E-08	1.250E-08
Cs-136	3	2.027E+03	1.132E+06	1.060E-13	1.730E-09	1.980E-09
Cs-137	3	4.538E+03	9.467E+08	2.725E-14	7.930E-09	8.630E-09
Ba-139	6	5.084E+04	4.962E+03	2.170E-15	2.400E-12	4.640E-11
Ba-140	6	4.896E+04	1.101E+06	8.580E-15	2.560E-10	1.010E-09
La-140	9	5.019E+04	1.450E+05	1.170E-13	6.870E-11	1.310E-09
La-141	9	4.640E+04	1.415E+04	2.390E-15	9.400E-12	1.570E-10
La-142	9	4.532E+04	5.550E+03	1.440E-13	8.740E-12	6.840E-11
Ce-141	8	4.492E+04	2.808E+06	3.430E-15	2.550E-11	2.420E-09
Ce-143	8	4.427E+04	1.188E+05	1.290E-14	6.230E-12	9.160E-10
Ce-144	8	3.596E+04	2.456E+07	2.773E-15	2.920E-10	1.010E-07
Pr-143	9	4.293E+04	1.172E+06	2.100E-17	1.680E-18	2.190E-09
Nd-147	9	1.838E+04	9.487E+05	6.190E-15	1.820E-11	1.850E-09
Np-239	8	5.397E+05	2.035E+05	7.690E-15	7.620E-12	6.780E-10
Pu-238	8	1.796E+02	2.769E+09	4.880E-18	3.860E-10	7.790E-05
Pu-239	8	1.200E+01	7.594E+11	4.240E-18	3.750E-10	8.330E-05
Pu-240	8	1.288E+01	2.063E+11	4.750E-18	3.760E-10	8.330E-05
Pu-241	8	6.182E+03	4.544E+08	7.250E-20	9.150E-12	1.340E-06
Am-241	9	9.528E+00	1.364E+10	8.180E-16	1.600E-09	1.200E-04
Cm-242	9	2.388E+03	1.407E+07	5.690E-18	9.410E-10	4.670E-06
Cm-244	9	2.602E+02	5.715E+08	4.910E-18	1.010E-09	6.700E-05

Nuclide	Daughter	Fraction	Daughter	Fraction	Daughter	Fraction
Kr-85m	Kr-85	0.21	none	0.00	none	0.00
Kr-87	Rb-87	1.00	none	0.00	none	0.00
Kr-88	Rb-88	1.00	none	0.00	none	0.00
Sr-90	Y-90	1.00	none	0.00	none	0.00
Sr-91	Y-91m	0.58	Y-91	0.42	none	0.00
Sr-92	Y-92	1.00	none	0.00	none	0.00
Y-93	Zr-93	1.00	none	0.00	none	0.00
Zr-95	Nb-95m	0.01	Nb-95	0.99	none	0.00
Zr-97	Nb-97m	0.95	Nb-97	0.05	none	0.00
Mo-99	Tc-99m	0.88	Tc-99	0.12	none	0.00
Tc-99m	Tc-99	1.00	none	0.00	none	0.00
Ru-103	Rh-103m	1.00	none	0.00	none	0.00
Ru-105	Rh-105	1.00	none	0.00	none	0.00
Ru-106	Rh-106	1.00	none	0.00	none	0.00
Sb-127	Te-127m	0.18	Te-127	0.82	none	0.00
Sb-129	Te-129m	0.22	Te-129	0.77	none	0.00
Te-127m	Te-127	0.98	none	0.00	none	0.00
Te-129	I-129	1.00	none	0.00	none	0.00
Te-129m	Te-129	0.65	I-129	0.35	none	0.00
Te-131m	Te-131	0.22	I-131	0.78	none	0.00
Te-132	I-132	1.00	none	0.00	none	0.00
I-131	Xe-131m	0.01	none	0.00	none	0.00
I-133	Xe-133m	0.03	Xe-133	0.97	none	0.00
I-135	Xe-135m	0.15	Xe-135	0.85	none	0.00
Xe-135	Cs-135	1.00	none	0.00	none	0.00
Cs-137	Ba-137m	0.95	none	0.00	none	0.00
Ba-140	La-140	1.00	none	0.00	none	0.00
La-141	Ce-141	1.00	none	0.00	none	0.00

Ce-143	Pr-143	1.00	none	0.00	none	0.00
Ce-144	Pr-144m	0.02	Pr-144	0.98	none	0.00
Nd-147	Pm-147	1.00	none	0.00	none	0.00
Np-239	Pu-239	1.00	none	0.00	none	0.00
Pu-238	U-234	1.00	none	0.00	none	0.00
Pu-239	U-235	1.00	none	0.00	none	0.00
Pu-240	U-236	1.00	none	0.00	none	0.00
Pu-241	U-237	0.00	Am-241	1.00	none	0.00
Am-241	Np-237	1.00	none	0.00	none	0.00
Cm-242	Pu-238	1.00	none	0.00	none	0.00
Cm-244	Pu-240	1.00	none	0.00	none	0.00

Iodine fractions

Aerosol	=	9.5000E-01
Elemental	=	4.8500E-02
Organic	=	1.5000E-03

COMPARTMENT DATA

Compartment number 1: Primary Containment
 Natural Deposition (Powers' model): Aerosol data
 Reactor type: 3
 Percentile = 10 (%)

Natural Deposition: Elemental Removal Data

Time (hr)	Removal Coef. (hr ⁻¹)
0.0000E+00	0.0000E+00

Compartment number 2: Reactor Enclosure

Compartment Filter Data

Time (hr)	Flow Rate (cfm)	Filter Efficiencies (%)		
		Aerosol	Elemental	Organic
0.0000E+00	5.1000E+04	0.0000E+00	0.0000E+00	0.0000E+00
1.6700E-02	5.1000E+04	9.9000E+01	9.5000E+01	9.5000E+01
2.5830E-01	5.1000E+04	9.9000E+01	9.5000E+01	9.5000E+01
7.2000E+02	5.1000E+04	0.0000E+00	0.0000E+00	0.0000E+00

Compartment number 3: Environment

Compartment number 4: Control Room

Compartment Filter Data

Time (hr)	Flow Rate (cfm)	Filter Efficiencies (%)		
		Aerosol	Elemental	Organic
0.0000E+00	2.7000E+03	9.9000E+01	9.5000E+01	9.5000E+01
5.0000E-01	2.7000E+03	9.9000E+01	9.5000E+01	9.5000E+01
7.2000E+02	2.7000E+03	0.0000E+00	0.0000E+00	0.0000E+00

Compartment number 5: SGTS Node

PATHWAY DATA

Pathway number 1: Primary Containment to Reactor Enclosure

Convection Data

Time (hr)	Flow Rate (% / day)
0.0000E+00	5.0000E-01

2.4000E+01 2.5000E-01
 7.2000E+02 0.0000E+00

Pathway number 2: Reactor Enclosure to SGTS Node

Pathway Filter: Removal Data

Time (hr)	Flow Rate (cfm)	Filter Efficiencies (%)		
		Aerosol	Elemental	Organic
0.0000E+00	9.0000E+06	0.0000E+00	0.0000E+00	0.0000E+00
1.6700E-02	3.0000E+03	9.9000E+01	9.5000E+01	9.5000E+01
2.5830E-01	2.5000E+03	9.9000E+01	9.5000E+01	9.5000E+01
7.2000E+02	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00

Pathway number 3: Environment to Control Room - Unfiltered Inleakage

Pathway Filter: Removal Data

Time (hr)	Flow Rate (cfm)	Filter Efficiencies (%)		
		Aerosol	Elemental	Organic
0.0000E+00	2.7500E+02	0.0000E+00	0.0000E+00	0.0000E+00
7.2000E+02	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00

Pathway number 4: Environment to Control Room - Filtered Intake

Pathway Filter: Removal Data

Time (hr)	Flow Rate (cfm)	Filter Efficiencies (%)		
		Aerosol	Elemental	Organic
0.0000E+00	0.0000E+00	9.9000E+01	9.5000E+01	9.5000E+01
5.0000E-01	0.0000E+00	9.9000E+01	9.5000E+01	9.5000E+01
7.2000E+02	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00

Pathway number 5: Control Room to Environment

Pathway Filter: Removal Data

Time (hr)	Flow Rate (cfm)	Filter Efficiencies (%)		
		Aerosol	Elemental	Organic
0.0000E+00	2.7500E+02	1.0000E+02	1.0000E+02	1.0000E+02
5.0000E-01	2.7500E+02	1.0000E+02	1.0000E+02	1.0000E+02
7.2000E+02	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00

Pathway number 6: SGTS Node to Environment

Pathway Filter: Removal Data

Time (hr)	Flow Rate (cfm)	Filter Efficiencies (%)		
		Aerosol	Elemental	Organic
0.0000E+00	9.0000E+06	0.0000E+00	0.0000E+00	0.0000E+00
1.6700E-02	3.0000E+03	0.0000E+00	0.0000E+00	0.0000E+00
2.5830E-01	2.5000E+03	9.9000E+01	9.9000E+01	9.9000E+01
7.2000E+02	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00

LOCATION DATA

Location Control Room is in compartment 4

Location X/Q Data

Time (hr)	X/Q (s * m ⁻³)
0.0000E+00	6.8800E-03

2.0000E+00	5.1700E-03
8.0000E+00	2.0400E-03
2.4000E+01	1.2900E-03
9.6000E+01	9.6300E-04
7.2000E+02	0.0000E+00

Location Breathing Rate Data

Time (hr)	Breathing Rate (m ³ * sec ⁻¹)
0.0000E+00	3.5000E-04
7.2000E+02	0.0000E+00

Location Occupancy Factor Data

Time (hr)	Occupancy Factor
0.0000E+00	1.0000E+00
2.4000E+01	6.0000E-01
9.6000E+01	4.0000E-01
7.2000E+02	0.0000E+00

Location EAB is in compartment 3

Location X/Q Data

Time (hr)	X/Q (s * m ⁻³)
0.0000E+00	3.1800E-04
8.0000E+00	0.0000E+00

Location Breathing Rate Data

Time (hr)	Breathing Rate (m ³ * sec ⁻¹)
0.0000E+00	3.5000E-04
8.0000E+00	0.0000E+00

Location LPZ is in compartment 3

Location X/Q Data

Time (hr)	X/Q (s * m ⁻³)
0.0000E+00	5.7900E-05
8.0000E+00	4.1000E-05
2.4000E+01	1.9500E-05
9.6000E+01	6.6800E-06
7.2000E+02	0.0000E+00

Location Breathing Rate Data

Time (hr)	Breathing Rate (m ³ * sec ⁻¹)
0.0000E+00	3.5000E-04
8.0000E+00	1.8000E-04
2.4000E+01	2.3000E-04
7.2000E+02	0.0000E+00

USER SPECIFIED TIME STEP DATA - SUPPLEMENTAL TIME STEPS

Time	Time step
0.0000E+00	1.6670E-03
1.6700E-02	2.5000E-02
2.5830E-01	0.0000E+00

 RADTRAD Version 3.03 (Spring 2001) run on 9/19/2005 at 16:34:19
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 Dose Output
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Detailed model information at time (H) = 0.0167

Natural deposition - Powers' Model, Compartment 1
 Deposition Lambda (1 / Hours)
 Noble Elemental Organic Aerosol
 0.0000E+00 0.0000E+00 0.0000E+00 7.0466E-01
 Deposition Net DF
 Noble Elemental Organic Aerosol
 1.0000E+00 1.0000E+00 1.0000E+00 1.0059E+00

Control Room Doses:

Time (h) =	0.0167	Whole Body	Thyroid	TEDE
Delta dose (rem)		1.4883E-07	5.6040E-04	2.4403E-05
Accumulated dose (rem)		1.4883E-07	5.6040E-04	2.4403E-05

EAB Doses:

Time (h) =	0.0167	Whole Body	Thyroid	TEDE
Delta dose (rem)		2.2703E-04	3.8597E-02	1.8975E-03
Accumulated dose (rem)		2.2703E-04	3.8597E-02	1.8975E-03

LPZ Doses:

Time (h) =	0.0167	Whole Body	Thyroid	TEDE
Delta dose (rem)		4.1336E-05	7.0276E-03	3.4549E-04
Accumulated dose (rem)		4.1336E-05	7.0276E-03	3.4549E-04

Detailed model information at time (H) = 0.2583

Natural deposition - Powers' Model, Compartment 1
 Deposition Lambda (1 / Hours)
 Noble Elemental Organic Aerosol
 0.0000E+00 0.0000E+00 0.0000E+00 7.0466E-01
 Deposition Net DF
 Noble Elemental Organic Aerosol
 1.0000E+00 1.0000E+00 1.0000E+00 1.0938E+00

Control Room Doses:

Time (h) =	0.2583	Whole Body	Thyroid	TEDE
Delta dose (rem)		7.1801E-06	2.2532E-02	9.8167E-04
Accumulated dose (rem)		7.3289E-06	2.3092E-02	1.0061E-03

EAB Doses:

Time (h) =	0.2583	Whole Body	Thyroid	TEDE
Delta dose (rem)		1.6718E-04	1.7930E-03	2.4113E-04
Accumulated dose (rem)		3.9421E-04	4.0390E-02	2.1386E-03

LPZ Doses:

Time (h) =	0.2583	Whole Body	Thyroid	TEDE
Delta dose (rem)		3.0440E-05	3.2647E-04	4.3904E-05
Accumulated dose (rem)		7.1776E-05	7.3541E-03	3.8939E-04

Detailed model information at time (H) = 0.5000

Natural deposition - Powers' Model, Compartment 1

Deposition Lambda (1 / Hours)

Noble	Elemental	Organic	Aerosol
0.0000E+00	0.0000E+00	0.0000E+00	7.0466E-01

Deposition Net DF

Noble	Elemental	Organic	Aerosol
1.0000E+00	1.0000E+00	1.0000E+00	1.1865E+00

Control Room Doses:

Time (h) =	0.5000	Whole Body	Thyroid	TEDE
Delta dose (rem)		1.8748E-05	1.6772E-02	7.4258E-04
Accumulated dose (rem)		2.6077E-05	3.9865E-02	1.7487E-03

EAB Doses:

Time (h) =	0.5000	Whole Body	Thyroid	TEDE
Delta dose (rem)		7.8813E-04	7.3368E-05	7.9114E-04
Accumulated dose (rem)		1.1823E-03	4.0464E-02	2.9298E-03

LPZ Doses:

Time (h) =	0.5000	Whole Body	Thyroid	TEDE
Delta dose (rem)		1.4350E-04	1.3359E-05	1.4405E-04
Accumulated dose (rem)		2.1527E-04	7.3674E-03	5.3344E-04

Detailed model information at time (H) = 2.0000

Natural deposition - Powers' Model, Compartment 1

Deposition Lambda (1 / Hours)

Noble	Elemental	Organic	Aerosol
0.0000E+00	0.0000E+00	0.0000E+00	3.0681E-01

Deposition Net DF

Noble	Elemental	Organic	Aerosol
1.0000E+00	1.0000E+00	1.0000E+00	1.3635E+00

Control Room Doses:

Time (h) =	2.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)		6.8196E-03	3.9281E-02	8.5354E-03

Accumulated dose (rem) 6.8457E-03 7.9146E-02 1.0284E-02

EAB Doses:

Time (h) =	2.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)	1.3466E-01		3.2247E-03	1.3483E-01
Accumulated dose (rem)	1.3584E-01		4.3688E-02	1.3776E-01

LPZ Doses:

Time (h) =	2.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)	2.4519E-02		5.8714E-04	2.4549E-02
Accumulated dose (rem)	2.4734E-02		7.9546E-03	2.5082E-02

Detailed model information at time (H) = 8.0000

Natural deposition - Powers' Model, Compartment 1
 Deposition Lambda (1 / Hours)

Noble	Elemental	Organic	Aerosol
0.0000E+00	0.0000E+00	0.0000E+00	6.2057E-01

Deposition Net DF

Noble	Elemental	Organic	Aerosol
1.0000E+00	1.0000E+00	1.0000E+00	1.8279E+02

Control Room Doses:

Time (h) =	8.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)	4.2030E-01		2.3969E-02	4.2137E-01
Accumulated dose (rem)	4.2715E-01		1.0312E-01	4.3165E-01

EAB Doses:

Time (h) =	8.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)	2.3643E+00		1.1007E-02	2.3648E+00
Accumulated dose (rem)	2.5002E+00		5.4695E-02	2.5025E+00

LPZ Doses:

Time (h) =	8.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)	4.3048E-01		2.0040E-03	4.3057E-01
Accumulated dose (rem)	4.5522E-01		9.9586E-03	4.5565E-01

Detailed model information at time (H) = 24.0000

Natural deposition - Powers' Model, Compartment 1
 Deposition Lambda (1 / Hours)

Noble	Elemental	Organic	Aerosol
0.0000E+00	0.0000E+00	0.0000E+00	4.8360E-01

Deposition Net DF

Noble	Elemental	Organic	Aerosol
1.0000E+00	1.0000E+00	1.0000E+00	6.0637E+05

Control Room Doses:

Time (h) =	24.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)	8.4149E-01		1.0946E-02	8.4183E-01
Accumulated dose (rem)	1.2686E+00		1.1406E-01	1.2735E+00

EAB Doses:

Time (h) =	24.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)		0.0000E+00	0.0000E+00	0.0000E+00
Accumulated dose (rem)		2.5002E+00	5.4695E-02	2.5025E+00

LPZ Doses:

Time (h) =	24.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)		4.2516E-01	1.0798E-03	4.2520E-01
Accumulated dose (rem)		8.8038E-01	1.1038E-02	8.8085E-01

Detailed model information at time (H) = 96.0000

Natural deposition - Powers' Model, Compartment 1
Deposition Lambda (1 / Hours)

Noble	Elemental	Organic	Aerosol
0.0000E+00	0.0000E+00	0.0000E+00	1.0000E-01

Deposition Net DF

Noble	Elemental	Organic	Aerosol
1.0000E+00	1.0000E+00	1.0000E+00	8.2005E+08

Control Room Doses:

Time (h) =	96.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)		3.4982E-01	6.6240E-03	3.5002E-01
Accumulated dose (rem)		1.6185E+00	1.2069E-01	1.6235E+00

EAB Doses:

Time (h) =	96.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)		0.0000E+00	0.0000E+00	0.0000E+00
Accumulated dose (rem)		2.5002E+00	5.4695E-02	2.5025E+00

LPZ Doses:

Time (h) =	96.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)		1.5696E-01	1.0996E-03	1.5700E-01
Accumulated dose (rem)		1.0373E+00	1.2138E-02	1.0378E+00

Detailed model information at time (H) = 720.0000

Natural deposition - Powers' Model, Compartment 1
Deposition Lambda (1 / Hours)

Noble	Elemental	Organic	Aerosol
0.0000E+00	0.0000E+00	0.0000E+00	1.0000E-01

Deposition Net DF

Noble	Elemental	Organic	Aerosol
1.0000E+00	1.0000E+00	1.0000E+00	1.1106E+36

Control Room Doses:

Time (h) =	720.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)		2.1064E-01	8.7851E-03	2.1091E-01
Accumulated dose (rem)		1.8291E+00	1.2947E-01	1.8344E+00

EAB Doses:

Time (h) =	720.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)		0.0000E+00	0.0000E+00	0.0000E+00
Accumulated dose (rem)		2.5002E+00	5.4695E-02	2.5025E+00

LPZ Doses:

Time (h) = 720.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)	7.9700E-02	1.0326E-03	7.9732E-02
Accumulated dose (rem)	1.1170E+00	1.3171E-02	1.1176E+00

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 I-131 Summary
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Time (hr)	Primary Containment I-131 (Curies)	Reactor Enclosure I-131 (Curies)	Environment I-131 (Curies)
0.000	5.2640E+03	2.7344E-04	3.1208E-05
0.017	1.5738E+05	4.9216E-02	2.2507E-01
0.258	2.2465E+06	4.6525E+01	2.3557E-01
0.500	4.0239E+06	1.3107E+02	2.3600E-01
0.900	9.2485E+06	3.5670E+02	2.3793E-01
1.200	1.2852E+07	5.6278E+02	2.4078E-01
1.500	1.6204E+07	7.6752E+02	2.4495E-01
1.800	1.9322E+07	9.6252E+02	2.5039E-01
2.000	2.1277E+07	1.0859E+03	2.5471E-01
2.300	1.6059E+07	1.0745E+03	2.6179E-01
2.600	1.2210E+07	9.0201E+02	2.6842E-01
2.900	9.3722E+06	7.1788E+02	2.7416E-01
3.200	7.2788E+06	5.6237E+02	2.7906E-01
3.500	5.7347E+06	4.4084E+02	2.8328E-01
3.800	4.5957E+06	3.4884E+02	2.8696E-01
4.100	3.7554E+06	2.8015E+02	2.9024E-01
4.400	3.1353E+06	2.2919E+02	2.9322E-01
4.700	2.6777E+06	1.9149E+02	2.9598E-01
5.000	2.3398E+06	1.6363E+02	2.9858E-01
5.300	2.1770E+06	1.4515E+02	3.0106E-01
5.600	2.0416E+06	1.3311E+02	3.0346E-01
5.900	1.9292E+06	1.2426E+02	3.0581E-01
6.200	1.8356E+06	1.1730E+02	3.0812E-01
6.500	1.7578E+06	1.1165E+02	3.1039E-01
6.800	1.6930E+06	1.0700E+02	3.1264E-01
7.100	1.6390E+06	1.0314E+02	3.1486E-01
7.400	1.5939E+06	9.9926E+01	3.1707E-01
7.700	1.5563E+06	9.7249E+01	3.1926E-01
8.000	1.5249E+06	9.5014E+01	3.2143E-01
8.300	1.4985E+06	9.3144E+01	3.2359E-01
8.600	1.4789E+06	9.1638E+01	3.2574E-01
8.900	1.4620E+06	9.0422E+01	3.2789E-01
9.200	1.4474E+06	8.9401E+01	3.3002E-01
9.500	1.4348E+06	8.8528E+01	3.3215E-01
9.800	1.4238E+06	8.7775E+01	3.3427E-01
10.100	1.4143E+06	8.7122E+01	3.3639E-01
10.400	1.4059E+06	8.6552E+01	3.3850E-01
24.000	1.2984E+06	7.9643E+01	4.3108E-01
96.000	9.9499E+05	3.0515E+01	6.4144E-01
720.000	9.9109E+04	3.0395E+00	1.2598E+00

Time (hr)	Control Room I-131 (Curies)	SGTS Node I-131 (Curies)
0.000	2.7861E-08	3.0382E-10
0.017	1.9953E-04	5.4684E-08
0.258	1.5066E-04	6.2785E-07

0.500	1.0763E-04	1.7906E-06
0.900	6.2762E-05	4.9163E-06
1.200	4.3305E-05	7.7953E-06
1.500	3.1494E-05	1.0692E-05
1.800	2.4683E-05	1.3491E-05
2.000	2.2026E-05	1.5285E-05
2.300	1.8358E-05	1.5556E-05
2.600	1.5688E-05	1.3780E-05
2.900	1.3454E-05	1.1782E-05
3.200	1.1532E-05	1.0068E-05
3.500	9.8986E-06	8.7204E-06
3.800	8.5402E-06	7.6962E-06
4.100	7.4329E-06	6.9296E-06
4.400	6.5454E-06	6.3594E-06
4.700	5.8434E-06	5.9363E-06
5.000	5.2941E-06	5.6225E-06
5.300	4.8703E-06	5.4128E-06
5.600	4.5514E-06	5.2748E-06
5.900	4.3133E-06	5.1722E-06
6.200	4.1349E-06	5.0905E-06
6.500	3.9998E-06	5.0235E-06
6.800	3.8962E-06	4.9675E-06
7.100	3.8156E-06	4.9203E-06
7.400	3.7521E-06	4.8803E-06
7.700	3.7014E-06	4.8463E-06
8.000	3.6604E-06	4.8172E-06
8.300	2.9055E-06	4.7921E-06
8.600	2.4012E-06	4.7711E-06
8.900	2.0638E-06	4.7533E-06
9.200	1.8378E-06	4.7377E-06
9.500	1.6861E-06	4.7237E-06
9.800	1.5839E-06	4.7111E-06
10.100	1.5148E-06	4.6996E-06
10.400	1.4677E-06	4.6890E-06
24.000	1.2995E-06	4.4245E-06
96.000	3.1483E-07	1.6953E-06
720.000	2.3410E-08	1.6886E-07

 Cumulative Dose Summary
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Time (hr)	Control Room		EAB		LPZ	
	Thyroid (rem)	TEDE (rem)	Thyroid (rem)	TEDE (rem)	Thyroid (rem)	TEDE (rem)
0.000	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00
0.017	5.6040E-04	2.4403E-05	3.8597E-02	1.8975E-03	7.0276E-03	3.4549E-04
0.258	2.3092E-02	1.0061E-03	4.0390E-02	2.1386E-03	7.3541E-03	3.8939E-04
0.500	3.9865E-02	1.7487E-03	4.0464E-02	2.9298E-03	7.3674E-03	5.3344E-04
0.900	5.7802E-02	2.6827E-03	4.0795E-02	9.2106E-03	7.4277E-03	1.6770E-03
1.200	6.6240E-02	3.5393E-03	4.1287E-02	2.4285E-02	7.5174E-03	4.4217E-03
1.500	7.2183E-02	5.0222E-03	4.2006E-02	5.2868E-02	7.6482E-03	9.6260E-03
1.800	7.6650E-02	7.6425E-03	4.2945E-02	9.7783E-02	7.8192E-03	1.7804E-02
2.000	7.9146E-02	1.0284E-02	4.3688E-02	1.3776E-01	7.9546E-03	2.5082E-02
2.300	8.2377E-02	1.5631E-02	4.4905E-02	2.1286E-01	8.1760E-03	3.8756E-02
2.600	8.5109E-02	2.2678E-02	4.6037E-02	3.0322E-01	8.3823E-03	5.5208E-02
2.900	8.7447E-02	3.1628E-02	4.7013E-02	4.0559E-01	8.5600E-03	7.3847E-02
3.200	8.9447E-02	4.2585E-02	4.7840E-02	5.1725E-01	8.7106E-03	9.4179E-02
3.500	9.1155E-02	5.5579E-02	4.8546E-02	6.3596E-01	8.8391E-03	1.1579E-01
3.800	9.2619E-02	7.0588E-02	4.9159E-02	7.5982E-01	8.9507E-03	1.3835E-01

4.100	9.3881E-02	8.7546E-02	4.9702E-02	8.8727E-01	9.0494E-03	1.6155E-01
4.400	9.4980E-02	1.0636E-01	5.0191E-02	1.0170E+00	9.1386E-03	1.8517E-01
4.700	9.5948E-02	1.2693E-01	5.0642E-02	1.1479E+00	9.2207E-03	2.0901E-01
5.000	9.6814E-02	1.4911E-01	5.1063E-02	1.2792E+00	9.2974E-03	2.3291E-01
5.300	9.7599E-02	1.7278E-01	5.1464E-02	1.4100E+00	9.3703E-03	2.5673E-01
5.600	9.8324E-02	1.9781E-01	5.1850E-02	1.5399E+00	9.4406E-03	2.8038E-01
5.900	9.9002E-02	2.2406E-01	5.2226E-02	1.6683E+00	9.5091E-03	3.0375E-01
6.200	9.9646E-02	2.5140E-01	5.2594E-02	1.7948E+00	9.5761E-03	3.2679E-01
6.500	1.0026E-01	2.7970E-01	5.2956E-02	1.9192E+00	9.6420E-03	3.4943E-01
6.800	1.0086E-01	3.0884E-01	5.3312E-02	2.0412E+00	9.7069E-03	3.7165E-01
7.100	1.0144E-01	3.3871E-01	5.3664E-02	2.1606E+00	9.7708E-03	3.9339E-01
7.400	1.0201E-01	3.6920E-01	5.4011E-02	2.2774E+00	9.8341E-03	4.1465E-01
7.700	1.0257E-01	4.0021E-01	5.4354E-02	2.3914E+00	9.8966E-03	4.3541E-01
8.000	1.0312E-01	4.3165E-01	5.4695E-02	2.5025E+00	9.9586E-03	4.5565E-01
8.300	1.0360E-01	4.6251E-01	5.4695E-02	2.5025E+00	9.9810E-03	4.6962E-01
8.600	1.0399E-01	4.9192E-01	5.4695E-02	2.5025E+00	1.0003E-02	4.8322E-01
8.900	1.0432E-01	5.2001E-01	5.4695E-02	2.5025E+00	1.0025E-02	4.9646E-01
9.200	1.0461E-01	5.4688E-01	5.4695E-02	2.5025E+00	1.0047E-02	5.0934E-01
9.500	1.0487E-01	5.7262E-01	5.4695E-02	2.5025E+00	1.0069E-02	5.2186E-01
9.800	1.0511E-01	5.9733E-01	5.4695E-02	2.5025E+00	1.0091E-02	5.3404E-01
10.100	1.0533E-01	6.2108E-01	5.4695E-02	2.5025E+00	1.0112E-02	5.4588E-01
10.400	1.0555E-01	6.4393E-01	5.4695E-02	2.5025E+00	1.0134E-02	5.5739E-01
24.000	1.1406E-01	1.2735E+00	5.4695E-02	2.5025E+00	1.1038E-02	8.8085E-01
96.000	1.2069E-01	1.6235E+00	5.4695E-02	2.5025E+00	1.2138E-02	1.0378E+00
720.000	1.2947E-01	1.8344E+00	5.4695E-02	2.5025E+00	1.3171E-02	1.1176E+00

 Worst Two-Hour Doses
 #####

EAB

Time (hr)	Whole Body (rem)	Thyroid (rem)	TEDE (rem)
3.9	8.6585E-01	2.8861E-03	8.6596E-01

RADTRAD Version 3.03 (Spring 2001) run on 9/19/2005 at 16:34:21
#####

File information
#####

Plant file = C:\Documents and Settings\Aleem Boatright\My Documents\My Work\Exelon\AST\Limerick\LGS LOCA\RADTRAD\LGS LOCA MSIV Leak (24-hr Settling Distribution) - New Design Basis - 275cfm CR Unfilt Inleak - Chlorine Mode.psf
Inventory file = c:\program files\radtrad3-03\defaults\limerick ast source terms.nif
Release file = c:\program files\radtrad3-03\defaults\bwr_dba.rft
Dose Conversion file = c:\program files\radtrad3-03\defaults\fgr11&12.inp

```
#####      #####      #####      # #      # #####      # #      #####  
# #      # #      # #      # #      # #      # #      # #      # #  
# #      # #      # #      # #      # #      # #      # #      # #  
#####      #####      #####      # #      # #      #####      # #      # #  
# #      # #      # #      # #      # #      # #      # #      # #  
# #      # #      # #      # #      # #      # #      # #      # #  
# #      # #      # #      # #      # #      # #      # #      # #  
# #      # #      # #      # #      # #      # #      # #      # #
```

Radtrad 3.03 4/15/2001
LGS LOCA 200scfh MSIV Leak - Leak to Condenser - MSL Pipe Deposition Credit (24-Hr 20-Group Aerosol Settling with Projected Area Assumption; 2-Hr Mixing Delay) - 95% CREFAS Charcoal Eff. No Delay - Chlorine Mode 275cfm Control Room Inleakage - 3000cfm -10%

Nuclide Inventory File:
c:\program files\radtrad3-03\defaults\limerick ast source terms.nif

Plant Power Level:
3.5270E+03

Compartments:
9

Compartment 1:
Containment

3
3.7907E+05
0
0
0
1
0

Compartment 2:
(Node 1) Inboard MSL A Volume

3
2.5800E+02
0
0
0
0
0

Compartment 3:

(Node 1) Inboard MSL B Volume

3
1.0000E-08
0
0
0
0
0

Compartment 4:

(Node 2) Outboard MSL A Volume

3
1.1820E+03
0
0
0
0
0

Compartment 5:

(Node 2) Outboard MSL B Volume

3
1.0510E+03
0
0
0
0
0

Compartment 6:

Condenser

3
5.4750E+04
0
0
0
0
0

Compartment 7:

Environment

2
0.0000E+00
0
0
0
0
0

Compartment 8:

Control Room

1
1.2600E+05
0
0
1
0
0

Compartment 9:

Hold

3
1.0000E+00
0
0
0

0
0
Pathways:
11
Pathway 1:
Containment to (Node 1) Inboard MSL A Volume
1
2
2
Pathway 2:
Containment to (Node 1) Inboard MSL B Volume
1
3
2
Pathway 3:
Containment to Hold (PC Leakage)
1
9
4
Pathway 4:
(Node 1) Inboard MSL A Volume to (Node 2) Outboard MSL A Volume
2
4
2
Pathway 5:
(Node 1) Inboard MSL B Volume to (Node 2) Outboard MSL B Volume
3
5
2
Pathway 6:
(Node 2) Outboard MSL A Volume to Condenser
4
6
2
Pathway 7:
(Node 2) Outboard MSL B Volume to Condenser
5
6
2
Pathway 8:
Condenser Leak to Environment
6
7
2
Pathway 9:
Filtered Intake to Control Room
7
8
2
Pathway 10:
Unfiltered Inleakage to Control Room
7
8
2
Pathway 11:
Control Room Exhaust
8
7
2
End of Plant Model File

Scenario Description Name:

Plant Model Filename:

Source Term:

1
1 1.0000E+00
c:\program files\radtrad3-03\defaults\fgr11&12.inp
c:\program files\radtrad3-03\defaults\bwr_dba.rft
0.0000E+00
1
9.5000E-01 4.8500E-02 1.5000E-03 1.0000E+00

Overlying Pool:

0
0.0000E+00
0
0
0
0

Compartments:

9

Compartment 1:

0
1
0
0
0
0
0
3
3
1.0000E+01
1
1
0.0000E+00 0.0000E+00

Compartment 2:

0
1
0
0
0
0
0
0
0
0

Compartment 3:

0
1
0
0
0
0
0
0
0
0

Compartment 4:

0
1
0
0

0
0
0
0
0

Compartment 5:

0
1
0
0
0
0
0
0
0

Compartment 6:

0
1
0
0
0
0
0
0
0

Compartment 7:

0
1
0
0
0
0
0
0
0

Compartment 8:

0
1
0
0
0
0
1

2.7000E+03

3

0.0000E+00	9.9000E+01	9.5000E+01	9.5000E+01
5.0000E-01	9.9000E+01	9.5000E+01	9.5000E+01
7.2000E+02	0.0000E+00	0.0000E+00	0.0000E+00

0
0

Compartment 9:

0
1
0
0
0
0
0
0
0

Pathways:

11

Pathway 1:

0

0

0

0

0

1

5

0.0000E+00 1.5240E+00 9.9980E+01 9.9690E+01 0.0000E+00

2.0000E+00 9.3060E-01 9.9980E+01 9.9690E+01 0.0000E+00

2.4000E+01 5.1270E-01 0.0000E+00 9.9970E+01 0.0000E+00

9.6000E+01 5.1270E-01 0.0000E+00 9.9990E+01 0.0000E+00

7.2000E+02 0.0000E+00 0.0000E+00 0.0000E+00 0.0000E+00

0

0

0

0

0

0

Pathway 2:

0

0

0

0

0

1

5

0.0000E+00 1.5240E+00 9.9910E+01 9.9480E+01 0.0000E+00

2.0000E+00 9.3060E-01 9.9910E+01 9.9480E+01 0.0000E+00

2.4000E+01 5.1270E-01 0.0000E+00 9.9890E+01 0.0000E+00

9.6000E+01 5.1270E-01 0.0000E+00 9.9980E+01 0.0000E+00

7.2000E+02 0.0000E+00 0.0000E+00 0.0000E+00 0.0000E+00

0

0

0

0

0

0

Pathway 3:

0

0

0

0

0

0

0

0

0

0

1

3

0.0000E+00 5.0000E-01

2.4000E+01 2.5000E-01

7.2000E+02 0.0000E+00

0

Pathway 4:

0

0

0
0
0
1
4
0.0000E+00
2.4000E+01
9.6000E+01
7.2000E+02
0
0
0
0
0
0

0.0000E+00	9.3060E-01	0.0000E+00	0.0000E+00	0.0000E+00
2.4000E+01	5.1270E-01	0.0000E+00	0.0000E+00	0.0000E+00
9.6000E+01	5.1270E-01	0.0000E+00	0.0000E+00	0.0000E+00
7.2000E+02	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00

Pathway 5:

0
0
0
0
0
1
4
0.0000E+00
2.4000E+01
9.6000E+01
7.2000E+02
0
0
0
0
0
0

0.0000E+00	9.3060E-01	0.0000E+00	0.0000E+00	0.0000E+00
2.4000E+01	5.1270E-01	0.0000E+00	0.0000E+00	0.0000E+00
9.6000E+01	5.1270E-01	0.0000E+00	0.0000E+00	0.0000E+00
7.2000E+02	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00

Pathway 6:

0
0
0
0
0
1
4
0.0000E+00
2.4000E+01
9.6000E+01
7.2000E+02
0
0
0
0
0
0

0.0000E+00	3.1880E+00	0.0000E+00	0.0000E+00	0.0000E+00
2.4000E+01	1.5130E+00	0.0000E+00	0.0000E+00	0.0000E+00
9.6000E+01	1.1480E+00	0.0000E+00	0.0000E+00	0.0000E+00
7.2000E+02	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00

Pathway 7:

0
0
0
0
0
1
4

0.0000E+00	3.1880E+00	0.0000E+00	0.0000E+00	0.0000E+00
------------	------------	------------	------------	------------

2.4000E+01	1.5130E+00	0.0000E+00	0.0000E+00	0.0000E+00
9.6000E+01	1.1480E+00	0.0000E+00	0.0000E+00	0.0000E+00
7.2000E+02	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00
0				
0				
0				
0				
0				
0				

Pathway 8:

0				
0				
0				
0				
0				
1				
4				
0.0000E+00	3.6620E+00	0.0000E+00	0.0000E+00	0.0000E+00
2.4000E+01	2.0180E+00	0.0000E+00	0.0000E+00	0.0000E+00
9.6000E+01	2.0180E+00	0.0000E+00	0.0000E+00	0.0000E+00
7.2000E+02	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00
0				
0				
0				
0				
0				

Pathway 9:

0				
0				
0				
0				
0				
1				
3				
0.0000E+00	0.0000E+00	9.9000E+01	9.5000E+01	9.5000E+01
5.0000E-01	0.0000E+00	9.9000E+01	9.5000E+01	9.5000E+01
7.2000E+02	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00
0				
0				
0				
0				
0				
0				

Pathway 10:

0				
0				
0				
0				
0				
1				
2				
0.0000E+00	2.7500E+02	0.0000E+00	0.0000E+00	0.0000E+00
7.2000E+02	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00
0				
0				
0				
0				
0				

Pathway 11:

0
 0
 0
 0
 0
 1
 3
 0.0000E+00 2.7500E+02 1.0000E+02 1.0000E+02 1.0000E+02
 5.0000E-01 2.7500E+02 1.0000E+02 1.0000E+02 1.0000E+02
 7.2000E+02 0.0000E+00 0.0000E+00 0.0000E+00 0.0000E+00
 0
 0
 0
 0
 0
 0

Dose Locations:

3

Location 1:

Exclusion Area Boundary (EAB)

7
 1
 2
 0.0000E+00 3.1800E-04
 2.4000E+01 0.0000E+00
 1
 4
 0.0000E+00 3.5000E-04
 8.0000E+00 1.8000E-04
 2.4000E+01 2.3000E-04
 7.2000E+02 0.0000E+00
 0

Location 2:

Low Population Zone (LPZ)

7
 1
 10
 0.0000E+00 5.7900E-05
 8.0000E+00 4.1000E-05
 2.4000E+01 1.9500E-05
 4.8000E+01 1.9500E-05
 7.2000E+01 1.9500E-05
 9.6000E+01 6.6800E-06
 1.2000E+02 6.6800E-06
 1.6800E+02 6.6800E-06
 3.3600E+02 6.6800E-06
 7.2000E+02 0.0000E+00
 1
 4
 0.0000E+00 3.5000E-04
 8.0000E+00 1.8000E-04
 2.4000E+01 2.3000E-04
 7.2000E+02 0.0000E+00
 0

Location 3:

Control Room (CR)

8
 0
 1

2
0.0000E+00 3.5000E-04
7.2000E+02 0.0000E+00
1
4
0.0000E+00 1.0000E+00
2.4000E+01 6.0000E-01
9.6000E+01 4.0000E-01
7.2000E+02 0.0000E+00

Effective Volume Location:

1
6
0.0000E+00 6.8800E-03
2.0000E+00 5.1700E-03
8.0000E+00 2.0400E-03
2.4000E+01 1.2900E-03
9.6000E+01 9.6300E-04
7.2000E+02 0.0000E+00

Simulation Parameters:

1
0.0000E+00 0.0000E+00

Output Filename:

C:\Documents and Settings\Aleem Boatright\My Documents\My
Work\Exelon\AST\Limerick\LGS LOCA\RADTRAD\LGS LOCA MSIV Leak (24-hr Settling
Distribution) - New Design Basis - 275cfm CR Unfilt Inleak - Chlorine Mode.o0

1
1
1
0
0

End of Scenario File

RADTRAD Version 3.03 (Spring 2001) run on 9/19/2005 at 16:34:21
#####

Plant Description
#####

Number of Nuclides = 60

Inventory Power = 1.0000E+00 MWth
Plant Power Level = 3.5270E+03 MWth

Number of compartments = 9

Compartment information

Compartment number 1 (Source term fraction = 1.0000E+00
)

Name: Containment
Compartment volume = 3.7907E+05 (Cubic feet)
Compartment type is Normal
Removal devices within compartment:
Deposition

Pathways into and out of compartment 1

Exit Pathway Number 1: Containment to (Node 1) Inboard MSL A Volume
Exit Pathway Number 2: Containment to (Node 1) Inboard MSL B Volume
Exit Pathway Number 3: Containment to Hold (PC Leakage)

Compartment number 2

Name: (Node 1) Inboard MSL A Volume
Compartment volume = 2.5800E+02 (Cubic feet)
Compartment type is Normal
Pathways into and out of compartment 2

Inlet Pathway Number 1: Containment to (Node 1) Inboard MSL A Volume
Exit Pathway Number 4: (Node 1) Inboard MSL A Volume to (Node 2) Outboard

Compartment number 3

Name: (Node 1) Inboard MSL B Volume
Compartment volume = 1.0000E-08 (Cubic feet)
Compartment type is Normal
Pathways into and out of compartment 3

Inlet Pathway Number 2: Containment to (Node 1) Inboard MSL B Volume
Exit Pathway Number 5: (Node 1) Inboard MSL B Volume to (Node 2) Outboard

Compartment number 4

Name: (Node 2) Outboard MSL A Volume
Compartment volume = 1.1820E+03 (Cubic feet)
Compartment type is Normal
Pathways into and out of compartment 4

Inlet Pathway Number 4: (Node 1) Inboard MSL A Volume to (Node 2) Outboard
Exit Pathway Number 6: (Node 2) Outboard MSL A Volume to Condenser

Compartment number 5

Name: (Node 2) Outboard MSL B Volume
Compartment volume = 1.0510E+03 (Cubic feet)
Compartment type is Normal
Pathways into and out of compartment 5

Inlet Pathway Number 5: (Node 1) Inboard MSL B Volume to (Node 2) Outboard

Exit Pathway Number 7: (Node 2) Outboard MSL B Volume to Condenser

Compartment number 6

Name: Condenser

Compartment volume = 5.4750E+04 (Cubic feet)

Compartment type is Normal

Pathways into and out of compartment 6

Inlet Pathway Number 6: (Node 2) Outboard MSL A Volume to Condenser

Inlet Pathway Number 7: (Node 2) Outboard MSL B Volume to Condenser

Exit Pathway Number 8: Condenser Leak to Environment

Compartment number 7

Name: Environment

Compartment type is Environment

Pathways into and out of compartment 7

Inlet Pathway Number 8: Condenser Leak to Environment

Inlet Pathway Number 11: Control Room Exhaust

Exit Pathway Number 9: Filtered Intake to Control Room

Exit Pathway Number 10: Unfiltered Inleakage to Control Room

Compartment number 8

Name: Control Room

Compartment volume = 1.2600E+05 (Cubic feet)

Compartment type is Control Room

Removal devices within compartment:

Filter(s)

Pathways into and out of compartment 8

Inlet Pathway Number 9: Filtered Intake to Control Room

Inlet Pathway Number 10: Unfiltered Inleakage to Control Room

Exit Pathway Number 11: Control Room Exhaust

Compartment number 9

Name: Hold

Compartment volume = 1.0000E+00 (Cubic feet)

Compartment type is Normal

Pathways into and out of compartment 9

Inlet Pathway Number 3: Containment to Hold (PC Leakage)

Total number of pathways = 11

 RADTRAD Version 3.03 (Spring 2001) run on 9/19/2005 at 16:34:21
 #####

 Scenario Description
 #####

Radioactive Decay is enabled
 Calculation of Daughters is enabled

Release Fractions and Timings

	GAP	EARLY IN-VESSEL	LATE RELEASE	RELEASE MASS
	0.500000 hr	1.5000 hrs	0.0000 hrs	(gm)
NOBLES	5.0000E-02	9.5000E-01	0.0000E+00	4.625E+03
IODINE	5.0000E-02	2.5000E-01	0.0000E+00	3.033E+02
CESIUM	5.0000E-02	2.0000E-01	0.0000E+00	5.099E+04
TELLURIUM	0.0000E+00	5.0000E-02	0.0000E+00	4.012E+01
STRONTIUM	0.0000E+00	2.0000E-02	0.0000E+00	1.712E+03
BARIUM	0.0000E+00	2.0000E-02	0.0000E+00	4.739E+01
RUTHENIUM	0.0000E+00	2.5000E-03	0.0000E+00	5.988E+01
CERIUM	0.0000E+00	5.0000E-04	0.0000E+00	5.914E+02
LANTHANUM	0.0000E+00	2.0000E-04	0.0000E+00	8.731E+00

Inventory Power = 3527. Mwt

Nuclide Name	Group	Specific Inventory (Ci/Mwt)	half life (s)	Whole Body DCF (Sv-m3/Bq-s)	Inhaled Thyroid (Sv/Bq)	Inhaled Effective (Sv/Bq)
Co-58	7	1.529E+02	6.117E+06	4.760E-14	8.720E-10	2.940E-09
Co-60	7	1.830E+02	1.663E+08	1.260E-13	1.620E-08	5.910E-08
Kr-85	1	3.946E+02	3.383E+08	1.190E-16	0.000E+00	0.000E+00
Kr-85m	1	8.313E+03	1.613E+04	7.480E-15	0.000E+00	0.000E+00
Kr-87	1	1.633E+04	4.578E+03	4.120E-14	0.000E+00	0.000E+00
Kr-88	1	2.303E+04	1.022E+04	1.020E-13	0.000E+00	0.000E+00
Rb-86	3	6.518E+01	1.612E+06	4.810E-15	1.330E-09	1.790E-09
Sr-89	5	2.798E+04	4.363E+06	7.730E-17	7.960E-12	1.120E-08
Sr-90	5	3.178E+03	9.190E+08	7.530E-18	2.690E-10	3.510E-07
Sr-91	5	3.801E+04	3.420E+04	4.924E-14	9.930E-12	4.547E-10
Sr-92	5	4.017E+04	9.756E+03	6.790E-14	3.920E-12	2.180E-10
Y-90	9	3.272E+03	2.304E+05	1.900E-16	5.170E-13	2.280E-09
Y-91	9	3.448E+04	5.055E+06	2.600E-16	8.500E-12	1.320E-08
Y-92	9	4.029E+04	1.274E+04	1.300E-14	1.050E-12	2.110E-10
Y-93	9	4.526E+04	3.636E+04	4.800E-15	9.260E-13	5.820E-10
Zr-95	9	4.489E+04	5.528E+06	3.600E-14	1.440E-09	6.390E-09
Zr-97	9	4.657E+04	6.084E+04	4.432E-14	2.315E-11	1.171E-09
Nb-95	9	4.512E+04	3.037E+06	3.740E-14	3.580E-10	1.570E-09
Mo-99	7	5.078E+04	2.376E+05	7.280E-15	1.520E-11	1.070E-09
Tc-99m	7	4.447E+04	2.167E+04	5.890E-15	5.010E-11	8.800E-12
Ru-103	7	4.202E+04	3.394E+06	2.251E-14	2.570E-10	2.421E-09
Ru-105	7	2.908E+04	1.598E+04	3.810E-14	4.150E-12	1.230E-10
Ru-106	7	1.730E+04	3.181E+07	1.040E-14	1.720E-09	1.290E-07
Rh-105	7	2.752E+04	1.273E+05	3.720E-15	2.880E-12	2.580E-10
Sb-127	4	2.896E+03	3.326E+05	3.330E-14	6.150E-11	1.630E-09
Sb-129	4	8.638E+03	1.555E+04	7.140E-14	9.720E-12	1.740E-10
Te-127	4	2.873E+03	3.366E+04	2.420E-16	1.840E-12	8.600E-11
Te-127m	4	3.855E+02	9.418E+06	1.470E-16	9.660E-11	5.810E-09
Te-129	4	8.501E+03	4.176E+03	2.750E-15	5.090E-13	2.090E-11
Te-129m	4	1.267E+03	2.903E+06	3.337E-15	1.563E-10	6.484E-09

LGS LOCA MSIV Leak (24-hr Settling Distribution) - New Design Basis - 275cfm CR Unfilt Inleak - Chlorine Mode.o0

Te-131m	4	3.869E+03	1.080E+05	7.463E-14	3.669E-08	1.758E-09
Te-132	4	3.821E+04	2.815E+05	1.030E-14	6.280E-08	2.550E-09
I-131	2	2.687E+04	6.947E+05	1.820E-14	2.920E-07	8.890E-09
I-132	2	3.881E+04	8.280E+03	1.120E-13	1.740E-09	1.030E-10
I-133	2	5.556E+04	7.488E+04	2.940E-14	4.860E-08	1.580E-09
I-134	2	6.165E+04	3.156E+03	1.300E-13	2.880E-10	3.550E-11
I-135	2	5.192E+04	2.380E+04	8.294E-14	8.460E-09	3.320E-10
Xe-133	1	5.491E+04	4.532E+05	1.560E-15	0.000E+00	0.000E+00
Xe-135	1	2.228E+04	3.272E+04	1.190E-14	0.000E+00	0.000E+00
Cs-134	3	7.280E+03	6.507E+07	7.570E-14	1.110E-08	1.250E-08
Cs-136	3	2.027E+03	1.132E+06	1.060E-13	1.730E-09	1.980E-09
Cs-137	3	4.538E+03	9.467E+08	2.725E-14	7.930E-09	8.630E-09
Ba-139	6	5.084E+04	4.962E+03	2.170E-15	2.400E-12	4.640E-11
Ba-140	6	4.896E+04	1.101E+06	8.580E-15	2.560E-10	1.010E-09
La-140	9	5.019E+04	1.450E+05	1.170E-13	6.870E-11	1.310E-09
La-141	9	4.640E+04	1.415E+04	2.390E-15	9.400E-12	1.570E-10
La-142	9	4.532E+04	5.550E+03	1.440E-13	8.740E-12	6.840E-11
Ce-141	8	4.492E+04	2.808E+06	3.430E-15	2.550E-11	2.420E-09
Ce-143	8	4.427E+04	1.188E+05	1.290E-14	6.230E-12	9.160E-10
Ce-144	8	3.596E+04	2.456E+07	2.773E-15	2.920E-10	1.010E-07
Pr-143	9	4.293E+04	1.172E+06	2.100E-17	1.680E-18	2.190E-09
Nd-147	9	1.838E+04	9.487E+05	6.190E-15	1.820E-11	1.850E-09
Np-239	8	5.397E+05	2.035E+05	7.690E-15	7.620E-12	6.780E-10
Pu-238	8	1.796E+02	2.769E+09	4.880E-18	3.860E-10	7.790E-05
Pu-239	8	1.200E+01	7.594E+11	4.240E-18	3.750E-10	8.330E-05
Pu-240	8	1.288E+01	2.063E+11	4.750E-18	3.760E-10	8.330E-05
Pu-241	8	6.182E+03	4.544E+08	7.250E-20	9.150E-12	1.340E-06
Am-241	9	9.528E+00	1.364E+10	8.180E-16	1.600E-09	1.200E-04
Cm-242	9	2.388E+03	1.407E+07	5.690E-18	9.410E-10	4.670E-06
Cm-244	9	2.602E+02	5.715E+08	4.910E-18	1.010E-09	6.700E-05

Nuclide	Daughter	Fraction	Daughter	Fraction	Daughter	Fraction
Kr-85m	Kr-85	0.21	none	0.00	none	0.00
Kr-87	Rb-87	1.00	none	0.00	none	0.00
Kr-88	Rb-88	1.00	none	0.00	none	0.00
Sr-90	Y-90	1.00	none	0.00	none	0.00
Sr-91	Y-91m	0.58	Y-91	0.42	none	0.00
Sr-92	Y-92	1.00	none	0.00	none	0.00
Y-93	Zr-93	1.00	none	0.00	none	0.00
Zr-95	Nb-95m	0.01	Nb-95	0.99	none	0.00
Zr-97	Nb-97m	0.95	Nb-97	0.05	none	0.00
Mo-99	Tc-99m	0.88	Tc-99	0.12	none	0.00
Tc-99m	Tc-99	1.00	none	0.00	none	0.00
Ru-103	Rh-103m	1.00	none	0.00	none	0.00
Ru-105	Rh-105	1.00	none	0.00	none	0.00
Ru-106	Rh-106	1.00	none	0.00	none	0.00
Sb-127	Te-127m	0.18	Te-127	0.82	none	0.00
Sb-129	Te-129m	0.22	Te-129	0.77	none	0.00
Te-127m	Te-127	0.98	none	0.00	none	0.00
Te-129	I-129	1.00	none	0.00	none	0.00
Te-129m	Te-129	0.65	I-129	0.35	none	0.00
Te-131m	Te-131	0.22	I-131	0.78	none	0.00
Te-132	I-132	1.00	none	0.00	none	0.00
I-131	Xe-131m	0.01	none	0.00	none	0.00
I-133	Xe-133m	0.03	Xe-133	0.97	none	0.00
I-135	Xe-135m	0.15	Xe-135	0.85	none	0.00
Xe-135	Cs-135	1.00	none	0.00	none	0.00
Cs-137	Ba-137m	0.95	none	0.00	none	0.00
Ba-140	La-140	1.00	none	0.00	none	0.00
La-141	Ce-141	1.00	none	0.00	none	0.00

Ce-143	Pr-143	1.00	none	0.00	none	0.00
Ce-144	Pr-144m	0.02	Pr-144	0.98	none	0.00
Nd-147	Pm-147	1.00	none	0.00	none	0.00
Np-239	Pu-239	1.00	none	0.00	none	0.00
Pu-238	U-234	1.00	none	0.00	none	0.00
Pu-239	U-235	1.00	none	0.00	none	0.00
Pu-240	U-236	1.00	none	0.00	none	0.00
Pu-241	U-237	0.00	Am-241	1.00	none	0.00
Am-241	Np-237	1.00	none	0.00	none	0.00
Cm-242	Pu-238	1.00	none	0.00	none	0.00
Cm-244	Pu-240	1.00	none	0.00	none	0.00

Iodine fractions

Aerosol	=	9.5000E-01
Elemental	=	4.8500E-02
Organic	=	1.5000E-03

COMPARTMENT DATA

Compartment number 1: Containment
 Natural Deposition (Powers' model): Aerosol data
 Reactor type: 3
 Percentile = 10 (%)

Natural Deposition: Elemental Removal Data
 Time (hr) Removal Coef. (hr⁻¹)
 0.0000E+00 0.0000E+00

- Compartment number 2: (Node 1) Inboard MSL A Volume
- Compartment number 3: (Node 1) Inboard MSL B Volume
- Compartment number 4: (Node 2) Outboard MSL A Volume
- Compartment number 5: (Node 2) Outboard MSL B Volume
- Compartment number 6: Condenser
- Compartment number 7: Environment
- Compartment number 8: Control Room

Compartment Filter Data

Time (hr)	Flow Rate (cfm)	Filter Efficiencies (%)		
		Aerosol	Elemental	Organic
0.0000E+00	2.7000E+03	9.9000E+01	9.5000E+01	9.5000E+01
5.0000E-01	2.7000E+03	9.9000E+01	9.5000E+01	9.5000E+01
7.2000E+02	2.7000E+03	0.0000E+00	0.0000E+00	0.0000E+00

Compartment number 9: Hold

PATHWAY DATA

Pathway number 1: Containment to (Node 1) Inboard MSL A Volume

Pathway Filter: Removal Data

Time (hr)	Flow Rate (cfm)	Filter Efficiencies (%)		
		Aerosol	Elemental	Organic

0.0000E+00	1.5240E+00	9.9980E+01	9.9690E+01	0.0000E+00
2.0000E+00	9.3060E-01	9.9980E+01	9.9690E+01	0.0000E+00
2.4000E+01	5.1270E-01	0.0000E+00	9.9970E+01	0.0000E+00
9.6000E+01	5.1270E-01	0.0000E+00	9.9990E+01	0.0000E+00
7.2000E+02	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00

Pathway number 2: Containment to (Node 1) Inboard MSL B Volume

Pathway Filter: Removal Data

Time (hr)	Flow Rate (cfm)	Filter Efficiencies (%)		
		Aerosol	Elemental	Organic
0.0000E+00	1.5240E+00	9.9910E+01	9.9480E+01	0.0000E+00
2.0000E+00	9.3060E-01	9.9910E+01	9.9480E+01	0.0000E+00
2.4000E+01	5.1270E-01	0.0000E+00	9.9890E+01	0.0000E+00
9.6000E+01	5.1270E-01	0.0000E+00	9.9980E+01	0.0000E+00
7.2000E+02	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00

Pathway number 3: Containment to Hold (PC Leakage)

Convection Data

Time (hr)	Flow Rate (% / day)
0.0000E+00	5.0000E-01
2.4000E+01	2.5000E-01
7.2000E+02	0.0000E+00

Pathway number 4: (Node 1) Inboard MSL A Volume to (Node 2) Outboard

Pathway Filter: Removal Data

Time (hr)	Flow Rate (cfm)	Filter Efficiencies (%)		
		Aerosol	Elemental	Organic
0.0000E+00	9.3060E-01	0.0000E+00	0.0000E+00	0.0000E+00
2.4000E+01	5.1270E-01	0.0000E+00	0.0000E+00	0.0000E+00
9.6000E+01	5.1270E-01	0.0000E+00	0.0000E+00	0.0000E+00
7.2000E+02	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00

Pathway number 5: (Node 1) Inboard MSL B Volume to (Node 2) Outboard

Pathway Filter: Removal Data

Time (hr)	Flow Rate (cfm)	Filter Efficiencies (%)		
		Aerosol	Elemental	Organic
0.0000E+00	9.3060E-01	0.0000E+00	0.0000E+00	0.0000E+00
2.4000E+01	5.1270E-01	0.0000E+00	0.0000E+00	0.0000E+00
9.6000E+01	5.1270E-01	0.0000E+00	0.0000E+00	0.0000E+00
7.2000E+02	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00

Pathway number 6: (Node 2) Outboard MSL A Volume to Condenser

Pathway Filter: Removal Data

Time (hr)	Flow Rate (cfm)	Filter Efficiencies (%)		
		Aerosol	Elemental	Organic
0.0000E+00	3.1880E+00	0.0000E+00	0.0000E+00	0.0000E+00
2.4000E+01	1.5130E+00	0.0000E+00	0.0000E+00	0.0000E+00
9.6000E+01	1.1480E+00	0.0000E+00	0.0000E+00	0.0000E+00
7.2000E+02	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00

Pathway number 7: (Node 2) Outboard MSL B Volume to Condenser

Pathway Filter: Removal Data

Time (hr)	Flow Rate (cfm)	Filter Efficiencies (%)		
		Aerosol	Elemental	Organic
0.0000E+00	3.1880E+00	0.0000E+00	0.0000E+00	0.0000E+00
2.4000E+01	1.5130E+00	0.0000E+00	0.0000E+00	0.0000E+00
9.6000E+01	1.1480E+00	0.0000E+00	0.0000E+00	0.0000E+00
7.2000E+02	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00

Pathway number 8: Condenser Leak to Environment

Pathway Filter: Removal Data

Time (hr)	Flow Rate (cfm)	Filter Efficiencies (%)		
		Aerosol	Elemental	Organic
0.0000E+00	3.6620E+00	0.0000E+00	0.0000E+00	0.0000E+00
2.4000E+01	2.0180E+00	0.0000E+00	0.0000E+00	0.0000E+00
9.6000E+01	2.0180E+00	0.0000E+00	0.0000E+00	0.0000E+00
7.2000E+02	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00

Pathway number 9: Filtered Intake to Control Room

Pathway Filter: Removal Data

Time (hr)	Flow Rate (cfm)	Filter Efficiencies (%)		
		Aerosol	Elemental	Organic
0.0000E+00	0.0000E+00	9.9000E+01	9.5000E+01	9.5000E+01
5.0000E-01	0.0000E+00	9.9000E+01	9.5000E+01	9.5000E+01
7.2000E+02	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00

Pathway number 10: Unfiltered Inleakage to Control Room

Pathway Filter: Removal Data

Time (hr)	Flow Rate (cfm)	Filter Efficiencies (%)		
		Aerosol	Elemental	Organic
0.0000E+00	2.7500E+02	0.0000E+00	0.0000E+00	0.0000E+00
7.2000E+02	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00

Pathway number 11: Control Room Exhaust

Pathway Filter: Removal Data

Time (hr)	Flow Rate (cfm)	Filter Efficiencies (%)		
		Aerosol	Elemental	Organic
0.0000E+00	2.7500E+02	1.0000E+02	1.0000E+02	1.0000E+02
5.0000E-01	2.7500E+02	1.0000E+02	1.0000E+02	1.0000E+02
7.2000E+02	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00

LOCATION DATA

Location Exclusion Area Boundary (EAB) is in compartment 7

Location X/Q Data

Time (hr)	X/Q (s * m^-3)
0.0000E+00	3.1800E-04
2.4000E+01	0.0000E+00

Location Breathing Rate Data

Time (hr)	Breathing Rate (m^3 * sec^-1)
0.0000E+00	3.1800E-04
2.4000E+01	0.0000E+00

0.0000E+00	3.5000E-04
8.0000E+00	1.8000E-04
2.4000E+01	2.3000E-04
7.2000E+02	0.0000E+00

Location Low Population Zone (LPZ) is in compartment 7

Location X/Q Data

Time (hr)	X/Q (s * m ⁻³)
0.0000E+00	5.7900E-05
8.0000E+00	4.1000E-05
2.4000E+01	1.9500E-05
4.8000E+01	1.9500E-05
7.2000E+01	1.9500E-05
9.6000E+01	6.6800E-06
1.2000E+02	6.6800E-06
1.6800E+02	6.6800E-06
3.3600E+02	6.6800E-06
7.2000E+02	0.0000E+00

Location Breathing Rate Data

Time (hr)	Breathing Rate (m ³ * sec ⁻¹)
0.0000E+00	3.5000E-04
8.0000E+00	1.8000E-04
2.4000E+01	2.3000E-04
7.2000E+02	0.0000E+00

Location Control Room (CR) is in compartment 8

Location X/Q Data

Time (hr)	X/Q (s * m ⁻³)
0.0000E+00	6.8800E-03
2.0000E+00	5.1700E-03
8.0000E+00	2.0400E-03
2.4000E+01	1.2900E-03
9.6000E+01	9.6300E-04
7.2000E+02	0.0000E+00

Location Breathing Rate Data

Time (hr)	Breathing Rate (m ³ * sec ⁻¹)
0.0000E+00	3.5000E-04
7.2000E+02	0.0000E+00

Location Occupancy Factor Data

Time (hr)	Occupancy Factor
0.0000E+00	1.0000E+00
2.4000E+01	6.0000E-01
9.6000E+01	4.0000E-01
7.2000E+02	0.0000E+00

USER SPECIFIED TIME STEP DATA - SUPPLEMENTAL TIME STEPS

Time	Time step
0.0000E+00	0.0000E+00

 RADTRAD Version 3.03 (Spring 2001) run on 9/19/2005 at 16:34:21
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 Dose Output
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Exclusion Area Boundary (EAB) Doses:

Time (h) =	0.5000	Whole Body	Thyroid	TEDE
Delta dose (rem)		6.0364E-07	1.8676E-06	6.6979E-07
Accumulated dose (rem)		6.0364E-07	1.8676E-06	6.6979E-07

Low Population Zone (LPZ) Doses:

Time (h) =	0.5000	Whole Body	Thyroid	TEDE
Delta dose (rem)		1.0991E-07	3.4004E-07	1.2195E-07
Accumulated dose (rem)		1.0991E-07	3.4004E-07	1.2195E-07

Control Room (CR) Doses:

Time (h) =	0.5000	Whole Body	Thyroid	TEDE
Delta dose (rem)		8.0946E-09	5.0538E-07	2.6001E-08
Accumulated dose (rem)		8.0946E-09	5.0538E-07	2.6001E-08

Exclusion Area Boundary (EAB) Doses:

Time (h) =	2.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)		2.9759E-04	5.4263E-04	3.1800E-04
Accumulated dose (rem)		2.9819E-04	5.4450E-04	3.1867E-04

Low Population Zone (LPZ) Doses:

Time (h) =	2.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)		5.4184E-05	9.8800E-05	5.7899E-05
Accumulated dose (rem)		5.4293E-05	9.9140E-05	5.8021E-05

Control Room (CR) Doses:

Time (h) =	2.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)		1.2277E-05	4.0662E-04	2.7412E-05
Accumulated dose (rem)		1.2285E-05	4.0712E-04	2.7438E-05

Exclusion Area Boundary (EAB) Doses:

Time (h) =	8.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)		2.4266E-02	6.4402E-02	2.6596E-02
Accumulated dose (rem)		2.4565E-02	6.4946E-02	2.6915E-02

Low Population Zone (LPZ) Doses:

Time (h) =	8.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)		4.4183E-03	1.1726E-02	4.8425E-03
Accumulated dose (rem)		4.4726E-03	1.1825E-02	4.9005E-03

Control Room (CR) Doses:

Time (h) =	8.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)		3.3541E-03	7.7948E-02	6.1842E-03
Accumulated dose (rem)		3.3664E-03	7.8355E-02	6.2116E-03

Exclusion Area Boundary (EAB) Doses:

Time (h) =	24.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)		1.4433E-01	5.7042E-01	1.6302E-01
Accumulated dose (rem)		1.6889E-01	6.3536E-01	1.8994E-01

Low Population Zone (LPZ) Doses:

Time (h) =	24.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)		1.8608E-02	7.3545E-02	2.1019E-02
Accumulated dose (rem)		2.3081E-02	8.5370E-02	2.5919E-02

Control Room (CR) Doses:

Time (h) =	24.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)		2.2324E-02	6.5481E-01	4.3835E-02
Accumulated dose (rem)		2.5690E-02	7.3316E-01	5.0047E-02

Exclusion Area Boundary (EAB) Doses:

Time (h) =	48.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)		0.0000E+00	0.0000E+00	0.0000E+00
Accumulated dose (rem)		1.6889E-01	6.3536E-01	1.8994E-01

Low Population Zone (LPZ) Doses:

Time (h) =	48.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)		7.7231E-03	7.5043E-02	1.0103E-02
Accumulated dose (rem)		3.0804E-02	1.6041E-01	3.6022E-02

Control Room (CR) Doses:

Time (h) =	48.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)		1.4975E-02	4.5414E-01	2.9376E-02
Accumulated dose (rem)		4.0666E-02	1.1873E+00	7.9422E-02

Exclusion Area Boundary (EAB) Doses:

Time (h) =	72.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)		0.0000E+00	0.0000E+00	0.0000E+00
Accumulated dose (rem)		1.6889E-01	6.3536E-01	1.8994E-01

Low Population Zone (LPZ) Doses:

Time (h) =	Whole Body	Thyroid	TEDE
72.0000	8.3008E-03	9.7295E-02	1.1349E-02
Delta dose (rem)			
Accumulated dose (rem)	3.9105E-02	2.5771E-01	4.7371E-02

Control Room (CR) Doses:

Time (h) =	Whole Body	Thyroid	TEDE
72.0000	1.3209E-02	5.6298E-01	3.0836E-02
Delta dose (rem)			
Accumulated dose (rem)	5.3875E-02	1.7503E+00	1.1026E-01

Exclusion Area Boundary (EAB) Doses:

Time (h) =	Whole Body	Thyroid	TEDE
96.0000	0.0000E+00	0.0000E+00	0.0000E+00
Delta dose (rem)			
Accumulated dose (rem)	1.6889E-01	6.3536E-01	1.8994E-01

Low Population Zone (LPZ) Doses:

Time (h) =	Whole Body	Thyroid	TEDE
96.0000	9.3414E-03	1.1404E-01	1.2891E-02
Delta dose (rem)			
Accumulated dose (rem)	4.8446E-02	3.7175E-01	6.0262E-02

Control Room (CR) Doses:

Time (h) =	Whole Body	Thyroid	TEDE
96.0000	1.5315E-02	6.6190E-01	3.5906E-02
Delta dose (rem)			
Accumulated dose (rem)	6.9190E-02	2.4122E+00	1.4616E-01

Exclusion Area Boundary (EAB) Doses:

Time (h) =	Whole Body	Thyroid	TEDE
120.0000	0.0000E+00	0.0000E+00	0.0000E+00
Delta dose (rem)			
Accumulated dose (rem)	1.6889E-01	6.3536E-01	1.8994E-01

Low Population Zone (LPZ) Doses:

Time (h) =	Whole Body	Thyroid	TEDE
120.0000	3.3946E-03	4.2506E-02	4.7130E-03
Delta dose (rem)			
Accumulated dose (rem)	5.1841E-02	4.1426E-01	6.4975E-02

Control Room (CR) Doses:

Time (h) =	Whole Body	Thyroid	TEDE
120.0000	9.1225E-03	3.6353E-01	2.0392E-02
Delta dose (rem)			
Accumulated dose (rem)	7.8312E-02	2.7757E+00	1.6656E-01

Exclusion Area Boundary (EAB) Doses:

Time (h) =	Whole Body	Thyroid	TEDE
168.0000	0.0000E+00	0.0000E+00	0.0000E+00
Delta dose (rem)			
Accumulated dose (rem)	1.6889E-01	6.3536E-01	1.8994E-01

Low Population Zone (LPZ) Doses:

Time (h) =	Whole Body	Thyroid	TEDE
168.0000	6.9973E-03	9.1603E-02	9.8294E-03
Delta dose (rem)			
Accumulated dose (rem)	5.8838E-02	5.0586E-01	7.4805E-02

Control Room (CR) Doses:

Time (h) = 168.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)	1.7377E-02	7.7503E-01	4.1327E-02
Accumulated dose (rem)	9.5689E-02	3.5507E+00	2.0788E-01

Exclusion Area Boundary (EAB) Doses:

Time (h) = 336.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)	0.0000E+00	0.0000E+00	0.0000E+00
Accumulated dose (rem)	1.6889E-01	6.3536E-01	1.8994E-01

Low Population Zone (LPZ) Doses:

Time (h) = 336.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)	2.0884E-02	3.2365E-01	3.0853E-02
Accumulated dose (rem)	7.9721E-02	8.2951E-01	1.0566E-01

Control Room (CR) Doses:

Time (h) = 336.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)	5.2835E-02	2.7437E+00	1.3732E-01
Accumulated dose (rem)	1.4852E-01	6.2945E+00	3.4520E-01

Exclusion Area Boundary (EAB) Doses:

Time (h) = 720.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)	0.0000E+00	0.0000E+00	0.0000E+00
Accumulated dose (rem)	1.6889E-01	6.3536E-01	1.8994E-01

Low Population Zone (LPZ) Doses:

Time (h) = 720.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)	1.8351E-02	4.3578E-01	3.1761E-02
Accumulated dose (rem)	9.8073E-02	1.2653E+00	1.3742E-01

Control Room (CR) Doses:

Time (h) = 720.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)	4.7074E-02	3.6999E+00	1.6089E-01
Accumulated dose (rem)	1.9560E-01	9.9943E+00	5.0609E-01

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 I-131 Summary
 #####

Time (hr)	Containment	(Node 1) Inboard MSL	(Node 1) Inboard MSL
	I-131 (Curies)	I-131 (Curies)	I-131 (Curies)
0.000	5.2640E+03	6.4922E-07	5.9299E-13
0.401	3.3308E+06	3.2537E-01	4.0944E-10
0.500	4.0234E+06	5.0079E-01	5.0526E-10
0.800	7.9873E+06	1.3710E+00	1.0074E-09
1.100	1.1677E+07	2.7806E+00	1.4981E-09
1.400	1.5110E+07	4.6902E+00	1.9780E-09
1.700	1.8302E+07	7.0631E+00	2.4477E-09
2.000	2.1269E+07	9.8652E+00	2.9079E-09
2.300	1.6051E+07	1.1371E+01	1.6502E-09
2.600	1.2203E+07	1.2740E+01	1.5573E-09
2.900	9.3660E+06	1.3991E+01	1.4884E-09
3.200	7.2733E+06	1.5139E+01	1.4372E-09

3.500	5.7299E+06	1.6195E+01	1.3990E-09
3.800	4.5914E+06	1.7171E+01	1.3705E-09
4.100	3.7515E+06	1.8073E+01	1.3490E-09
4.400	3.1318E+06	1.8909E+01	1.3327E-09
4.700	2.6745E+06	1.9685E+01	1.3203E-09
5.000	2.3368E+06	2.0405E+01	1.3108E-09
5.300	2.1739E+06	2.1075E+01	1.3054E-09
5.600	2.0386E+06	2.1699E+01	1.3007E-09
5.900	1.9261E+06	2.2279E+01	1.2965E-09
6.200	1.8326E+06	2.2819E+01	1.2927E-09
6.500	1.7547E+06	2.3321E+01	1.2893E-09
6.800	1.6899E+06	2.3788E+01	1.2863E-09
7.100	1.6358E+06	2.4223E+01	1.2835E-09
7.400	1.5907E+06	2.4627E+01	1.2809E-09
7.700	1.5530E+06	2.5002E+01	1.2784E-09
8.000	1.5215E+06	2.5351E+01	1.2762E-09
8.300	1.4951E+06	2.5675E+01	1.2740E-09
8.600	1.4754E+06	2.5975E+01	1.2720E-09
8.900	1.4584E+06	2.6254E+01	1.2701E-09
9.200	1.4437E+06	2.6513E+01	1.2683E-09
9.500	1.4310E+06	2.6753E+01	1.2664E-09
9.800	1.4199E+06	2.6974E+01	1.2647E-09
10.100	1.4103E+06	2.7180E+01	1.2629E-09
10.400	1.4018E+06	2.7369E+01	1.2612E-09
24.000	1.2895E+06	2.8867E+01	1.1920E-09
48.000	1.1754E+06	2.4409E+01	9.6338E-10
72.000	1.0714E+06	2.2145E+01	8.7811E-10
96.000	9.7667E+05	2.0181E+01	8.0044E-10
120.000	8.9030E+05	1.8285E+01	7.0915E-10
168.000	7.3978E+05	1.5188E+01	5.8926E-10
336.000	3.8690E+05	7.9432E+00	3.0818E-10
720.000	8.7935E+04	1.8053E+00	7.0043E-11

Time (hr)	(Node 2) Outboard MSL	(Node 2) Outboard MSL	Condenser
	I-131 (Curies)	I-131 (Curies)	I-131 (Curies)
0.000	2.6019E-11	9.1972E-07	3.0999E-11
0.401	9.3507E-03	4.5376E-01	1.1337E-02
0.500	1.7909E-02	6.9590E-01	2.1811E-02
0.800	7.3594E-02	1.8960E+00	9.0936E-02
1.100	1.9914E-01	3.8398E+00	2.5018E-01
1.400	4.2407E-01	6.4688E+00	5.4241E-01
1.700	7.7404E-01	9.7289E+00	1.0086E+00
2.000	1.2712E+00	1.3570E+01	1.6881E+00
2.300	1.8834E+00	1.5620E+01	2.5580E+00
2.600	2.5569E+00	1.7382E+01	3.5607E+00
2.900	3.2806E+00	1.8919E+01	4.6848E+00
3.200	4.0451E+00	2.0276E+01	5.9211E+00
3.500	4.8424E+00	2.1486E+01	7.2625E+00
3.800	5.6653E+00	2.2578E+01	8.7027E+00
4.100	6.5078E+00	2.3569E+01	1.0237E+01
4.400	7.3645E+00	2.4477E+01	1.1860E+01
4.700	8.2308E+00	2.5312E+01	1.3569E+01
5.000	9.1024E+00	2.6085E+01	1.5361E+01
5.300	9.9759E+00	2.6803E+01	1.7231E+01
5.600	1.0848E+01	2.7475E+01	1.9177E+01
5.900	1.1716E+01	2.8102E+01	2.1196E+01
6.200	1.2577E+01	2.8690E+01	2.3286E+01
6.500	1.3430E+01	2.9240E+01	2.5443E+01
6.800	1.4272E+01	2.9754E+01	2.7666E+01
7.100	1.5102E+01	3.0236E+01	2.9951E+01

7.400	1.5918E+01	3.0688E+01	3.2296E+01
7.700	1.6719E+01	3.1111E+01	3.4700E+01
8.000	1.7505E+01	3.1507E+01	3.7158E+01
8.300	1.8274E+01	3.1878E+01	3.9670E+01
8.600	1.9025E+01	3.2226E+01	4.2232E+01
8.900	1.9758E+01	3.2552E+01	4.4843E+01
9.200	2.0473E+01	3.2857E+01	4.7500E+01
9.500	2.1169E+01	3.3143E+01	5.0201E+01
9.800	2.1846E+01	3.3410E+01	5.2945E+01
10.100	2.2503E+01	3.3659E+01	5.5729E+01
10.400	2.3141E+01	3.3893E+01	5.8551E+01
24.000	3.6320E+01	3.6282E+01	2.0411E+02
48.000	3.7672E+01	3.4251E+01	3.1175E+02
72.000	3.4498E+01	3.1352E+01	3.9669E+02
96.000	3.1442E+01	2.8593E+01	4.5964E+02
120.000	3.5400E+01	3.1886E+01	4.9043E+02
168.000	3.1107E+01	2.7716E+01	5.3523E+02
336.000	1.6327E+01	1.4524E+01	4.7457E+02
720.000	3.7108E+00	3.3011E+00	1.6811E+02

Time (hr)	Environment	Control Room	Hold
	I-131 (Curies)	I-131 (Curies)	I-131 (Curies)
0.000	1.7278E-17	1.5426E-20	3.0465E-04
0.401	4.5875E-06	3.6828E-09	1.4535E+02
0.500	1.1016E-05	8.6232E-09	2.2112E+02
0.800	7.2043E-05	5.2471E-08	5.9764E+02
1.100	2.6613E-04	1.8168E-07	1.2127E+03
1.400	7.2773E-04	4.6724E-07	2.0494E+03
1.700	1.6418E-03	9.9314E-07	3.0920E+03
2.000	3.2416E-03	1.8504E-06	4.3258E+03
2.300	5.7832E-03	2.6451E-06	5.4786E+03
2.600	9.4531E-03	3.7962E-06	6.3492E+03
2.900	1.4404E-02	5.2674E-06	7.0116E+03
3.200	2.0777E-02	7.0284E-06	7.5206E+03
3.500	2.8701E-02	9.0535E-06	7.9163E+03
3.800	3.8300E-02	1.1322E-05	8.2285E+03
4.100	4.9690E-02	1.3815E-05	8.4790E+03
4.400	6.2981E-02	1.6520E-05	8.6840E+03
4.700	7.8278E-02	1.9422E-05	8.8554E+03
5.000	9.5682E-02	2.2512E-05	9.0020E+03
5.300	1.1529E-01	2.5781E-05	9.1332E+03
5.600	1.3719E-01	2.9219E-05	9.2549E+03
5.900	1.6149E-01	3.2821E-05	9.3688E+03
6.200	1.8825E-01	3.6579E-05	9.4762E+03
6.500	2.1757E-01	4.0487E-05	9.5781E+03
6.800	2.4953E-01	4.4539E-05	9.6755E+03
7.100	2.8420E-01	4.8729E-05	9.7690E+03
7.400	3.2166E-01	5.3053E-05	9.8594E+03
7.700	3.6198E-01	5.7505E-05	9.9470E+03
8.000	4.0522E-01	6.2079E-05	1.0032E+04
8.300	4.5146E-01	5.1317E-05	1.0116E+04
8.600	5.0074E-01	4.4834E-05	1.0198E+04
8.900	5.5315E-01	4.1205E-05	1.0279E+04
9.200	6.0872E-01	3.9486E-05	1.0358E+04
9.500	6.6752E-01	3.9048E-05	1.0437E+04
9.800	7.2959E-01	3.9471E-05	1.0515E+04
10.100	7.9500E-01	4.0478E-05	1.0592E+04
10.400	8.6377E-01	4.1883E-05	1.0669E+04
24.000	7.9410E+00	1.5340E-04	1.3846E+04
48.000	2.1687E+01	8.4241E-05	1.5656E+04

72.000	4.0559E+01	1.0764E-04	1.7053E+04
96.000	6.3332E+01	1.2501E-04	1.8096E+04
120.000	8.8475E+01	9.9739E-05	1.8835E+04
168.000	1.4316E+02	1.0900E-04	1.9576E+04
336.000	3.3731E+02	9.6855E-05	1.7631E+04
720.000	5.9887E+02	3.4349E-05	8.1416E+03

 Cumulative Dose Summary
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Time (hr)	Exclusion Area Bounda		Low Population Zone (Control Room (CR)	
	Thyroid (rem)	TEDE (rem)	Thyroid (rem)	TEDE (rem)	Thyroid (rem)	TEDE (rem)
0.000	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00
0.401	7.7862E-07	2.8319E-07	1.4177E-07	5.1562E-08	1.7837E-07	9.1835E-09
0.500	1.8676E-06	6.6979E-07	3.4004E-07	1.2195E-07	5.0538E-07	2.6001E-08
0.800	1.2180E-05	4.5184E-06	2.2177E-06	8.2268E-07	4.7520E-06	2.4745E-07
1.100	4.4922E-05	1.9738E-05	8.1791E-06	3.5939E-06	2.2129E-05	1.2230E-06
1.400	1.2267E-04	6.2201E-05	2.2335E-05	1.1325E-05	7.1734E-05	4.2794E-06
1.700	2.7629E-04	1.5343E-04	5.0306E-05	2.7935E-05	1.8500E-04	1.1812E-05
2.000	5.4450E-04	3.1867E-04	9.9140E-05	5.8021E-05	4.0712E-04	2.7438E-05
2.300	9.6941E-04	5.8241E-04	1.7651E-04	1.0604E-04	7.5998E-04	5.3506E-05
2.600	1.5811E-03	9.5685E-04	2.8787E-04	1.7422E-04	1.2665E-03	9.2308E-05
2.900	2.4035E-03	1.4484E-03	4.3762E-04	2.6372E-04	1.9790E-03	1.4805E-04
3.200	3.4585E-03	2.0610E-03	6.2971E-04	3.7526E-04	2.9442E-03	2.2457E-04
3.500	4.7659E-03	2.7965E-03	8.6775E-04	5.0918E-04	4.2037E-03	3.2537E-04
3.800	6.3441E-03	3.6551E-03	1.1551E-03	6.6550E-04	5.7952E-03	4.5358E-04
4.100	8.2103E-03	4.6357E-03	1.4949E-03	8.4404E-04	7.7529E-03	6.1199E-04
4.400	1.0380E-02	5.7362E-03	1.8900E-03	1.0444E-03	1.0108E-02	8.0308E-04
4.700	1.2870E-02	6.9537E-03	2.3433E-03	1.2661E-03	1.2890E-02	1.0290E-03
5.000	1.5693E-02	8.2847E-03	2.8573E-03	1.5084E-03	1.6126E-02	1.2918E-03
5.300	1.8863E-02	9.7254E-03	3.4344E-03	1.7708E-03	1.9840E-02	1.5929E-03
5.600	2.2393E-02	1.1272E-02	4.0771E-03	2.0523E-03	2.4058E-02	1.9340E-03
5.900	2.6295E-02	1.2919E-02	4.7876E-03	2.3522E-03	2.8800E-02	2.3162E-03
6.200	3.0581E-02	1.4663E-02	5.5681E-03	2.6698E-03	3.4089E-02	2.7405E-03
6.500	3.5262E-02	1.6499E-02	6.4204E-03	3.0041E-03	3.9945E-02	3.2079E-03
6.800	4.0349E-02	1.8424E-02	7.3466E-03	3.3545E-03	4.6386E-02	3.7190E-03
7.100	4.5852E-02	2.0431E-02	8.3485E-03	3.7201E-03	5.3431E-02	4.2746E-03
7.400	5.1780E-02	2.2518E-02	9.4278E-03	4.1001E-03	6.1096E-02	4.8749E-03
7.700	5.8142E-02	2.4681E-02	1.0586E-02	4.4938E-03	6.9400E-02	5.5205E-03
8.000	6.4946E-02	2.6915E-02	1.1825E-02	4.9005E-03	7.8355E-02	6.2116E-03
8.300	6.8678E-02	2.9093E-02	1.2306E-02	5.1813E-03	8.6769E-02	6.8888E-03
8.600	7.2645E-02	3.1328E-02	1.2818E-02	5.4695E-03	9.3894E-02	7.5101E-03
8.900	7.6851E-02	3.3617E-02	1.3360E-02	5.7646E-03	1.0026E-01	8.0958E-03
9.200	8.1300E-02	3.5956E-02	1.3934E-02	6.0662E-03	1.0622E-01	8.6600E-03
9.500	8.5996E-02	3.8342E-02	1.4539E-02	6.3739E-03	1.1202E-01	9.2123E-03
9.800	9.0940E-02	4.0774E-02	1.5177E-02	6.6873E-03	1.1780E-01	9.7594E-03
10.100	9.6136E-02	4.3247E-02	1.5846E-02	7.0063E-03	1.2367E-01	1.0306E-02
10.400	1.0159E-01	4.5761E-02	1.6549E-02	7.3303E-03	1.2971E-01	1.0855E-02
24.000	6.3536E-01	1.8994E-01	8.5370E-02	2.5919E-02	7.3316E-01	5.0047E-02
48.000	6.3536E-01	1.8994E-01	1.6041E-01	3.6022E-02	1.1873E+00	7.9422E-02
72.000	6.3536E-01	1.8994E-01	2.5771E-01	4.7371E-02	1.7503E+00	1.1026E-01
96.000	6.3536E-01	1.8994E-01	3.7175E-01	6.0262E-02	2.4122E+00	1.4616E-01
120.000	6.3536E-01	1.8994E-01	4.1426E-01	6.4975E-02	2.7757E+00	1.6656E-01
168.000	6.3536E-01	1.8994E-01	5.0586E-01	7.4805E-02	3.5507E+00	2.0788E-01
336.000	6.3536E-01	1.8994E-01	8.2951E-01	1.0566E-01	6.2945E+00	3.4520E-01
720.000	6.3536E-01	1.8994E-01	1.2653E+00	1.3742E-01	9.9943E+00	5.0609E-01

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Worst Two-Hour Doses

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Exclusion Area Boundary (EAB)

Time (hr)	Whole Body (rem)	Thyroid (rem)	TEDE (rem)
10.4	1.8639E-02	7.8497E-02	2.1203E-02

 RADTRAD Version 3.03 (Spring 2001) run on 9/19/2005 at 16:34:24
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 File information
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Plant file = C:\Documents and Settings\Aleem Boatright\My Documents\My Work\Exelon\AST\Limerick\LGS LOCA\RADTRAD\LGS LOCA ECCS Leak - New Design Basis - 275cfm CR Unfilt Inleak - Chlorine Mode.psf
 Inventory file = c:\program files\radtrad3-03\defaults\limerick ast eccs source terms.nif
 Release file = c:\program files\radtrad3-03\defaults\bwr_dba.rft
 Dose Conversion file = c:\program files\radtrad3-03\defaults\fgr11&12.inp

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#####      #####      #####      # #      # #####      # #      #####
# #      # #      # #      # #      # #      # #      # #      # #
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#####      #####      #####      # #      # #      #####      # #      #
# #      # #      # #      # #      # #      # #      # #      # #
# #      # #      # #      # #      # #      # #      # #      # #
# #      #####      # #      # #      # #      # #      #####      #
```

Radtrad 3.03 4/15/2001
 ECCS Leak, 15.5 minute SC Drawdown - 10% Flashing Fraction - 99% Aerosol, 95% E&O
 RERS Filters - 99% SGTS Filters - 99% Aerosol, 95% E&O CREFAS Filters - 275cfm
 Unfiltered Inleakage - No CREFAS Delay - Control Room in Chlorine Mode - 3000cfm -
 10% (2700cfm)

Nuclide Inventory File:
 c:\program files\radtrad3-03\defaults\limerick ast eccs source terms.nif

Plant Power Level:
 3.5270E+03

Compartments:
 5

Compartment 1:
 ECCS Fluid

3
 9.5989E+05
 0
 0
 0
 0
 0

Compartment 2:
 Reactor Enclosure

3
 9.0000E+05
 0
 0
 1
 0
 0

Compartment 3:

Environment

2

0.0000E+00

0

0

0

0

0

Compartment 4:

Control Room

1

1.2600E+05

0

0

1

0

0

Compartment 5:

SGTS Node

3

1.0000E+00

0

0

0

0

0

Pathways:

6

Pathway 1:

ECCS Fluid to Reactor Enclosure

1

2

2

Pathway 2:

Filtered Environment to Control Room

3

4

2

Pathway 3:

Control Room to Environment

4

3

2

Pathway 4:

Unfiltered Environment to Control Room

3

4

2

Pathway 5:

Reactor Enclosure to SGTS Node

2

5

2

Pathway 6:

SGTS Node to Environment

5

3

2

End of Plant Model File

Scenario Description Name:

Plant Model Filename:

Source Term:

1
 1 1.0000E+00
 c:\program files\radtrad3-03\defaults\fgr11&12.inp
 c:\program files\radtrad3-03\defaults\bwr_dba.rft
 0.0000E+00
 0
 0.0000E+00 9.7000E-01 3.0000E-02 1.0000E+00

Overlying Pool:

0
 0.0000E+00
 0
 0
 0
 0

Compartments:

5

Compartment 1:

0
 1
 0
 0
 0
 0
 0
 0
 0

Compartment 2:

0
 1
 0
 0
 0
 0
 1
 5.1000E+04
 4
 0.0000E+00 0.0000E+00 0.0000E+00 0.0000E+00
 1.6700E-02 9.9000E+01 9.5000E+01 9.5000E+01
 2.5830E-01 9.9000E+01 9.5000E+01 9.5000E+01
 7.2000E+02 0.0000E+00 0.0000E+00 0.0000E+00

Compartment 3:

0
 1
 0
 0
 0
 0
 0
 0
 0

Compartment 4:

0
 1
 0

0
 0
 0
 1
 2.7000E+03
 3
 0.0000E+00 9.9000E+01 9.5000E+01 9.5000E+01
 5.0000E-01 9.9000E+01 9.5000E+01 9.5000E+01
 7.2000E+02 0.0000E+00 0.0000E+00 0.0000E+00

Compartment 5:

0
 1
 0
 0
 0
 0
 0
 0
 0

Pathways:

6

Pathway 1:

0
 0
 0
 0
 0
 1
 3
 0.0000E+00 5.0000E+00 9.0000E+01 9.0000E+01 9.0000E+01
 2.4000E+01 5.0000E+00 9.0000E+01 9.0000E+01 9.0000E+01
 7.2000E+02 0.0000E+00 0.0000E+00 0.0000E+00 0.0000E+00

0
 0
 0
 0
 0
 0

Pathway 2:

0
 0
 0
 0
 0
 1
 3
 0.0000E+00 0.0000E+00 9.9000E+01 9.5000E+01 9.5000E+01
 5.0000E-01 0.0000E+00 9.9000E+01 9.5000E+01 9.5000E+01
 7.2000E+02 0.0000E+00 0.0000E+00 0.0000E+00 0.0000E+00

0
 0
 0
 0
 0
 0

Pathway 3:

0
 0

0
0
0
1
3
0
0
0
0
0
0
0
0

0.0000E+00	2.7500E+02	1.0000E+02	1.0000E+02	1.0000E+02
5.0000E-01	2.7500E+02	1.0000E+02	1.0000E+02	1.0000E+02
7.2000E+02	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00

Pathway 4:

0
0
0
0
0
1
2
0
0
0
0
0
0

0.0000E+00	2.7500E+02	0.0000E+00	0.0000E+00	0.0000E+00
7.2000E+02	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00

Pathway 5:

0
0
0
0
0
1
4
0
0
0
0
0
0

0.0000E+00	9.0000E+06	0.0000E+00	0.0000E+00	0.0000E+00
1.6700E-02	3.0000E+03	9.9000E+01	9.5000E+01	9.5000E+01
2.5830E-01	2.5000E+03	9.9000E+01	9.5000E+01	9.5000E+01
7.2000E+02	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00

Pathway 6:

0
0
0
0
0
1
4
0
0
0
0
0

0.0000E+00	9.0000E+06	0.0000E+00	0.0000E+00	0.0000E+00
1.6700E-02	3.0000E+03	0.0000E+00	0.0000E+00	0.0000E+00
2.5830E-01	2.5000E+03	9.9000E+01	9.9000E+01	9.9000E+01
7.2000E+02	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00

0
0
0
0
0
0

Dose Locations:

3

Location 1:

EAB

3

1

2

0.0000E+00 3.1800E-04

8.0000E+00 0.0000E+00

1

2

0.0000E+00 3.5000E-04

8.0000E+00 0.0000E+00

0

Location 2:

LPZ

3

1

5

0.0000E+00 5.7900E-05

8.0000E+00 4.1000E-05

2.4000E+01 1.9500E-05

9.6000E+01 6.6800E-06

7.2000E+02 2.6200E-06

1

4

0.0000E+00 3.5000E-04

8.0000E+00 1.8000E-04

2.4000E+01 2.3000E-04

7.2000E+02 0.0000E+00

0

Location 3:

Control Room

4

0

1

2

0.0000E+00 3.5000E-04

7.2000E+02 0.0000E+00

1

4

0.0000E+00 1.0000E+00

2.4000E+01 6.0000E-01

9.6000E+01 4.0000E-01

7.2000E+02 0.0000E+00

Effective Volume Location:

1

6

0.0000E+00 6.8800E-03

2.0000E+00 5.1700E-03

8.0000E+00 2.0400E-03

2.4000E+01 1.2900E-03

9.6000E+01 9.6300E-04

7.2000E+02 0.0000E+00

Simulation Parameters:

4
0.0000E+00 1.6670E-03
1.6700E-02 2.5000E-02
2.5830E-01 1.0000E-01
1.2000E+01 0.0000E+00

Output Filename:

C:\Documents and Settings\Aleem Boatright\My Documents\My
Work\Exelon\AST\Limerick\LGS LOCA\RADTRAD\LGS LOCA ECCS Leak - New Design Basis -
275cfm CR Unfilt Inleak - Chlorine Mode.o0

1
2
1
0
1

End of Scenario File

RADTRAD Version 3.03 (Spring 2001) run on 9/19/2005 at 16:34:24
#####

Plant Description
#####

Number of Nuclides = 60

Inventory Power = 1.0000E+00 MWth
Plant Power Level = 3.5270E+03 MWth

Number of compartments = 5

Compartment information

Compartment number 1 (Source term fraction = 1.0000E+00
)

Name: ECCS Fluid

Compartment volume = 9.5989E+05 (Cubic feet)

Compartment type is Normal

Pathways into and out of compartment 1

Exit Pathway Number 1: ECCS Fluid to Reactor Enclosure

Compartment number 2

Name: Reactor Enclosure

Compartment volume = 9.0000E+05 (Cubic feet)

Compartment type is Normal

Removal devices within compartment:

Filter(s)

Pathways into and out of compartment 2

Inlet Pathway Number 1: ECCS Fluid to Reactor Enclosure

Exit Pathway Number 5: Reactor Enclosure to SGTS Node

Compartment number 3

Name: Environment

Compartment type is Environment

Pathways into and out of compartment 3

Inlet Pathway Number 3: Control Room to Environment

Inlet Pathway Number 6: SGTS Node to Environment

Exit Pathway Number 2: Filtered Environment to Control Room

Exit Pathway Number 4: Unfiltered Environment to Control Room

Compartment number 4

Name: Control Room

Compartment volume = 1.2600E+05 (Cubic feet)

Compartment type is Control Room

Removal devices within compartment:

Filter(s)

Pathways into and out of compartment 4

Inlet Pathway Number 2: Filtered Environment to Control Room

Inlet Pathway Number 4: Unfiltered Environment to Control Room

Exit Pathway Number 3: Control Room to Environment

Compartment number 5

Name: SGTS Node

Compartment volume = 1.0000E+00 (Cubic feet)

Compartment type is Normal

Pathways into and out of compartment 5

Inlet Pathway Number 5: Reactor Enclosure to SGTS Node

Exit Pathway Number 6: SGTS Node to Environment

Total number of pathways = 6

 RADTRAD Version 3.03 (Spring 2001) run on 9/19/2005 at 16:34:24
 #####

```

#####  #  #  #####  #####  #  #  #####
#  #  #  #  #  #  #  #  #  #  #
#  #  #  #  #  #  #  #  #  #  #
#  #  #  #  #  #####  #  #  #
#  #  #  #  #  #  #  #  #  #  #
#  #  #  #  #  #  #  #  #  #  #
#####  #####  #  #  #####  #
  
```


 Dose Output
 #####

Detailed model information at time (H) = 0.0167

EAB Doses:

Time (h) =	0.0167	Whole Body	Thyroid	TEDE
Delta dose (rem)		2.7748E-05	5.7475E-03	2.0948E-04
Accumulated dose (rem)		2.7748E-05	5.7475E-03	2.0948E-04

LPZ Doses:

Time (h) =	0.0167	Whole Body	Thyroid	TEDE
Delta dose (rem)		5.0522E-06	1.0465E-03	3.8142E-05
Accumulated dose (rem)		5.0522E-06	1.0465E-03	3.8142E-05

Control Room Doses:

Time (h) =	0.0167	Whole Body	Thyroid	TEDE
Delta dose (rem)		1.8167E-08	8.3398E-05	2.6552E-06
Accumulated dose (rem)		1.8167E-08	8.3398E-05	2.6552E-06

Detailed model information at time (H) = 0.2583

EAB Doses:

Time (h) =	0.2583	Whole Body	Thyroid	TEDE
Delta dose (rem)		5.2290E-06	1.1596E-03	4.1857E-05
Accumulated dose (rem)		3.2977E-05	6.9071E-03	2.5134E-04

LPZ Doses:

Time (h) =	0.2583	Whole Body	Thyroid	TEDE
Delta dose (rem)		9.5207E-07	2.1113E-04	7.6212E-06
Accumulated dose (rem)		6.0043E-06	1.2576E-03	4.5763E-05

Control Room Doses:

Time (h) =	0.2583	Whole Body	Thyroid	TEDE
Delta dose (rem)		7.3572E-07	3.5326E-03	1.1236E-04

Accumulated dose (rem) 7.5389E-07 3.6160E-03 1.1501E-04

Detailed model information at time (H) = 0.5000

EAB Doses:

Time (h) =	0.5000	Whole Body	Thyroid	TEDE
Delta dose (rem)		2.0995E-07	4.9754E-05	1.7800E-06
Accumulated dose (rem)		3.3187E-05	6.9569E-03	2.5312E-04

LPZ Doses:

Time (h) =	0.5000	Whole Body	Thyroid	TEDE
Delta dose (rem)		3.8227E-08	9.0590E-06	3.2410E-07
Accumulated dose (rem)		6.0425E-06	1.2667E-03	4.6087E-05

Control Room Doses:

Time (h) =	0.5000	Whole Body	Thyroid	TEDE
Delta dose (rem)		5.8119E-07	3.0271E-03	9.6119E-05
Accumulated dose (rem)		1.3351E-06	6.6431E-03	2.1113E-04

Detailed model information at time (H) = 2.0000

EAB Doses:

Time (h) =	2.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)		7.0790E-06	2.3620E-03	8.1280E-05
Accumulated dose (rem)		4.0266E-05	9.3188E-03	3.3440E-04

LPZ Doses:

Time (h) =	2.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)		1.2889E-06	4.3005E-04	1.4799E-05
Accumulated dose (rem)		7.3314E-06	1.6967E-03	6.0886E-05

Control Room Doses:

Time (h) =	2.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)		1.3484E-06	9.0069E-03	2.8465E-04
Accumulated dose (rem)		2.6835E-06	1.5650E-02	4.9578E-04

Detailed model information at time (H) = 8.0000

EAB Doses:

Time (h) =	8.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)		3.3619E-05	2.0424E-02	6.7059E-04
Accumulated dose (rem)		7.3885E-05	2.9743E-02	1.0050E-03

LPZ Doses:

Time (h) =	8.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)		6.1212E-06	3.7187E-03	1.2210E-04
Accumulated dose (rem)		1.3453E-05	5.4154E-03	1.8298E-04

Control Room Doses:

Time (h) =	8.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)		2.3476E-06	3.1705E-02	9.9111E-04

Accumulated dose (rem) 5.0310E-06 4.7355E-02 1.4869E-03

Detailed model information at time (H) = 24.0000

EAB Doses:

Time (h) = 24.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)	0.0000E+00	0.0000E+00	0.0000E+00
Accumulated dose (rem)	7.3885E-05	2.9743E-02	1.0050E-03

LPZ Doses:

Time (h) = 24.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)	4.9945E-06	3.2473E-03	1.0540E-04
Accumulated dose (rem)	1.8447E-05	8.6628E-03	2.8838E-04

Control Room Doses:

Time (h) = 24.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)	1.2010E-06	3.2739E-02	1.0137E-03
Accumulated dose (rem)	6.2320E-06	8.0094E-02	2.5006E-03

Detailed model information at time (H) = 96.0000

EAB Doses:

Time (h) = 96.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)	0.0000E+00	0.0000E+00	0.0000E+00
Accumulated dose (rem)	7.3885E-05	2.9743E-02	1.0050E-03

LPZ Doses:

Time (h) = 96.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)	3.1193E-06	6.5580E-03	2.0380E-04
Accumulated dose (rem)	2.1566E-05	1.5221E-02	4.9218E-04

Control Room Doses:

Time (h) = 96.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)	5.5950E-07	3.9140E-02	1.1984E-03
Accumulated dose (rem)	6.7915E-06	1.1923E-01	3.6990E-03

Detailed model information at time (H) = 720.0000

EAB Doses:

Time (h) = 720.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)	0.0000E+00	0.0000E+00	0.0000E+00
Accumulated dose (rem)	7.3885E-05	2.9743E-02	1.0050E-03

LPZ Doses:

Time (h) = 720.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)	1.6286E-06	5.8732E-03	1.8047E-04
Accumulated dose (rem)	2.3195E-05	2.1094E-02	6.7265E-04

Control Room Doses:

Time (h) = 720.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)	4.1202E-07	5.0064E-02	1.5249E-03

Accumulated dose (rem) 7.2035E-06 1.6930E-01 5.2239E-03

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 I-131 Summary
 #####

Time (hr)	ECCS Fluid	Reactor Enclosure	Environment
	I-131 (Curies)	I-131 (Curies)	I-131 (Curies)
0.000	5.2650E+03	4.1026E-05	4.6822E-06
0.017	1.5826E+05	7.4208E-03	3.3880E-02
0.258	2.4456E+06	7.4879E+00	4.0731E-02
0.500	4.7297E+06	2.2569E+01	4.1025E-02
0.800	9.4488E+06	5.2127E+01	4.1930E-02
1.100	1.4157E+07	9.0484E+01	4.3702E-02
1.400	1.8855E+07	1.3195E+02	4.6478E-02
1.700	2.3543E+07	1.7448E+02	5.0307E-02
2.000	2.8220E+07	2.1733E+02	5.5203E-02
2.300	2.8186E+07	2.4410E+02	6.1027E-02
2.600	2.8153E+07	2.5357E+02	6.7267E-02
2.900	2.8121E+07	2.5678E+02	7.3652E-02
3.200	2.8088E+07	2.5775E+02	8.0085E-02
3.500	2.8055E+07	2.5790E+02	8.6531E-02
3.800	2.8022E+07	2.5777E+02	9.2976E-02
4.100	2.7989E+07	2.5752E+02	9.9416E-02
4.400	2.7956E+07	2.5724E+02	1.0585E-01
4.700	2.7924E+07	2.5695E+02	1.1228E-01
5.000	2.7891E+07	2.5665E+02	1.1869E-01
5.300	2.7858E+07	2.5635E+02	1.2511E-01
5.600	2.7826E+07	2.5605E+02	1.3151E-01
5.900	2.7793E+07	2.5575E+02	1.3791E-01
6.200	2.7761E+07	2.5545E+02	1.4430E-01
6.500	2.7728E+07	2.5516E+02	1.5068E-01
6.800	2.7696E+07	2.5486E+02	1.5705E-01
7.100	2.7663E+07	2.5456E+02	1.6342E-01
7.400	2.7631E+07	2.5426E+02	1.6978E-01
7.700	2.7598E+07	2.5396E+02	1.7613E-01
8.000	2.7566E+07	2.5367E+02	1.8247E-01
8.300	2.7534E+07	2.5337E+02	1.8881E-01
8.600	2.7502E+07	2.5307E+02	1.9514E-01
8.900	2.7469E+07	2.5278E+02	2.0146E-01
9.200	2.7437E+07	2.5248E+02	2.0778E-01
9.500	2.7405E+07	2.5218E+02	2.1408E-01
9.800	2.7373E+07	2.5189E+02	2.2038E-01
10.100	2.7341E+07	2.5159E+02	2.2667E-01
10.400	2.7309E+07	2.5130E+02	2.3296E-01
24.000	2.5897E+07	2.3830E+02	5.0899E-01
96.000	1.9550E+07	1.7990E+02	1.7465E+00
720.000	1.7099E+06	1.5735E+01	5.2249E+00

Time (hr)	Control Room	SGTS Node
	I-131 (Curies)	I-131 (Curies)
0.000	4.1800E-09	4.5584E-11
0.017	3.0043E-05	8.2454E-09
0.258	2.7253E-05	4.1598E-07
0.500	1.9868E-05	1.2538E-06
0.800	1.3910E-05	2.8959E-06
1.100	1.0585E-05	5.0268E-06
1.400	9.1102E-06	7.3306E-06

1.700	8.9010E-06	9.6932E-06
2.000	9.5454E-06	1.2074E-05
2.300	9.5783E-06	1.3561E-05
2.600	9.8220E-06	1.4087E-05
2.900	1.0062E-05	1.4266E-05
3.200	1.0246E-05	1.4319E-05
3.500	1.0376E-05	1.4328E-05
3.800	1.0462E-05	1.4320E-05
4.100	1.0516E-05	1.4307E-05
4.400	1.0549E-05	1.4291E-05
4.700	1.0566E-05	1.4275E-05
5.000	1.0574E-05	1.4259E-05
5.300	1.0575E-05	1.4242E-05
5.600	1.0571E-05	1.4225E-05
5.900	1.0565E-05	1.4209E-05
6.200	1.0557E-05	1.4192E-05
6.500	1.0547E-05	1.4175E-05
6.800	1.0536E-05	1.4159E-05
7.100	1.0525E-05	1.4142E-05
7.400	1.0514E-05	1.4126E-05
7.700	1.0502E-05	1.4109E-05
8.000	1.0490E-05	1.4093E-05
8.300	8.3626E-06	1.4076E-05
8.600	6.9447E-06	1.4060E-05
8.900	5.9990E-06	1.4043E-05
9.200	5.3678E-06	1.4027E-05
9.500	4.9460E-06	1.4010E-05
9.800	4.6635E-06	1.3994E-05
10.100	4.4738E-06	1.3977E-05
10.400	4.3460E-06	1.3961E-05
24.000	3.8887E-06	1.3239E-05
96.000	1.8564E-06	9.9945E-06
720.000	1.2121E-07	8.7414E-07

 Cumulative Dose Summary
 #####

Time (hr)	EAB		LPZ		Control Room	
	Thyroid (rem)	TEDE (rem)	Thyroid (rem)	TEDE (rem)	Thyroid (rem)	TEDE (rem)
0.000	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00
0.017	5.7475E-03	2.0948E-04	1.0465E-03	3.8142E-05	8.3398E-05	2.6552E-06
0.258	6.9071E-03	2.5134E-04	1.2576E-03	4.5763E-05	3.6160E-03	1.1501E-04
0.500	6.9569E-03	2.5312E-04	1.2667E-03	4.6087E-05	6.6431E-03	2.1113E-04
0.800	7.1091E-03	2.5850E-04	1.2944E-03	4.7067E-05	9.3124E-03	2.9573E-04
1.100	7.4062E-03	2.6888E-04	1.3485E-03	4.8956E-05	1.1241E-02	3.5673E-04
1.400	7.8699E-03	2.8492E-04	1.4329E-03	5.1876E-05	1.2788E-02	4.0560E-04
1.700	8.5070E-03	3.0676E-04	1.5489E-03	5.5854E-05	1.4203E-02	4.5020E-04
2.000	9.3188E-03	3.3440E-04	1.6967E-03	6.0886E-05	1.5650E-02	4.9578E-04
2.300	1.0281E-02	3.6695E-04	1.8719E-03	6.6813E-05	1.7149E-02	5.4293E-04
2.600	1.1309E-02	4.0152E-04	2.0590E-03	7.3108E-05	1.8668E-02	5.9069E-04
2.900	1.2357E-02	4.3661E-04	2.2498E-03	7.9497E-05	2.0222E-02	6.3946E-04
3.200	1.3409E-02	4.7170E-04	2.4414E-03	8.5885E-05	2.1803E-02	6.8907E-04
3.500	1.4460E-02	5.0661E-04	2.6328E-03	9.2241E-05	2.3404E-02	7.3925E-04
3.800	1.5507E-02	5.4129E-04	2.8235E-03	9.8555E-05	2.5016E-02	7.8975E-04
4.100	1.6551E-02	5.7573E-04	3.0135E-03	1.0483E-04	2.6633E-02	8.4040E-04
4.400	1.7590E-02	6.0993E-04	3.2027E-03	1.1105E-04	2.8253E-02	8.9107E-04
4.700	1.8625E-02	6.4391E-04	3.3912E-03	1.1724E-04	2.9871E-02	9.4167E-04
5.000	1.9656E-02	6.7768E-04	3.5788E-03	1.2339E-04	3.1487E-02	9.9216E-04

5.300	2.0682E-02	7.1124E-04	3.7658E-03	1.2950E-04	3.3098E-02	1.0425E-03
5.600	2.1705E-02	7.4460E-04	3.9519E-03	1.3557E-04	3.4705E-02	1.0927E-03
5.900	2.2723E-02	7.7776E-04	4.1373E-03	1.4161E-04	3.6306E-02	1.1426E-03
6.200	2.3738E-02	8.1074E-04	4.3220E-03	1.4762E-04	3.7902E-02	1.1924E-03
6.500	2.4748E-02	8.4354E-04	4.5060E-03	1.5359E-04	3.9492E-02	1.2420E-03
6.800	2.5755E-02	8.7616E-04	4.6893E-03	1.5953E-04	4.1076E-02	1.2914E-03
7.100	2.6757E-02	9.0861E-04	4.8718E-03	1.6544E-04	4.2655E-02	1.3405E-03
7.400	2.7756E-02	9.4090E-04	5.0537E-03	1.7132E-04	4.4227E-02	1.3895E-03
7.700	2.8751E-02	9.7303E-04	5.2349E-03	1.7716E-04	4.5794E-02	1.4383E-03
8.000	2.9743E-02	1.0050E-03	5.4154E-03	1.8298E-04	4.7355E-02	1.4869E-03
8.300	2.9743E-02	1.0050E-03	5.4809E-03	1.8517E-04	4.8744E-02	1.5301E-03
8.600	2.9743E-02	1.0050E-03	5.5462E-03	1.8733E-04	4.9871E-02	1.5651E-03
8.900	2.9743E-02	1.0050E-03	5.6112E-03	1.8949E-04	5.0822E-02	1.5947E-03
9.200	2.9743E-02	1.0050E-03	5.6760E-03	1.9164E-04	5.1656E-02	1.6207E-03
9.500	2.9743E-02	1.0050E-03	5.7406E-03	1.9377E-04	5.2412E-02	1.6441E-03
9.800	2.9743E-02	1.0050E-03	5.8049E-03	1.9589E-04	5.3115E-02	1.6660E-03
10.100	2.9743E-02	1.0050E-03	5.8690E-03	1.9801E-04	5.3782E-02	1.6867E-03
10.400	2.9743E-02	1.0050E-03	5.9329E-03	2.0011E-04	5.4425E-02	1.7067E-03
24.000	2.9743E-02	1.0050E-03	8.6628E-03	2.8838E-04	8.0094E-02	2.5006E-03
96.000	2.9743E-02	1.0050E-03	1.5221E-02	4.9218E-04	1.1923E-01	3.6990E-03
720.000	2.9743E-02	1.0050E-03	2.1094E-02	6.7265E-04	1.6930E-01	5.2239E-03

 Worst Two-Hour Doses
 #####

EAB

Time (hr)	Whole Body (rem)	Thyroid (rem)	TEDE (rem)
0.0	4.0266E-05	9.3188E-03	3.3440E-04

Limerick AST Source Terms.nif

Nuclide Inventory Name: Source Terms per this calculation

Limerick (LGS) AST - in Ci/MW

Power Level:

0.1000E+01

Nuclides:

60

Nuclide 001:

Co-58

7

0.6117120000E+07

0.5800E+02

0.1529E+03

none 0.0000E+00

none 0.0000E+00

none 0.0000E+00

Nuclide 002:

Co-60

7

0.1663401096E+09

0.6000E+02

0.1830E+03

none 0.0000E+00

none 0.0000E+00

none 0.0000E+00

Nuclide 003:

Kr-85

1

0.3382974720E+09

0.8500E+02

0.3946E+03

none 0.0000E+00

none 0.0000E+00

none 0.0000E+00

Nuclide 004:

Kr-85m

1

0.1612800000E+05

0.8500E+02

0.8313E+04

Kr-85 0.2100E+00

none 0.0000E+00

none 0.0000E+00

Nuclide 005:

Kr-87

1

0.4578000000E+04

0.8700E+02

0.1633E+05

Rb-87 0.1000E+01

none 0.0000E+00

none 0.0000E+00

Nuclide 006:

Kr-88

1

0.1022400000E+05

0.8800E+02

0.2303E+05

Rb-88 0.1000E+01

none 0.0000E+00

none 0.0000E+00

Limerick AST Source Terms.nif

Nuclide 007:

Rb-86
 3
 0.1612224000E+07
 0.8600E+02
 0.6518E+02
 none 0.0000E+00
 none 0.0000E+00
 none 0.0000E+00

Nuclide 008:

Sr-89
 5
 0.4363200000E+07
 0.8900E+02
 0.2798E+05
 none 0.0000E+00
 none 0.0000E+00
 none 0.0000E+00

Nuclide 009:

Sr-90
 5
 0.9189573120E+09
 0.9000E+02
 0.3178E+04
 Y-90 0.1000E+01
 none 0.0000E+00
 none 0.0000E+00

Nuclide 010:

Sr-91
 5
 0.3420000000E+05
 0.9100E+02
 0.3801E+05
 Y-91m 0.5800E+00
 Y-91 0.4200E+00
 none 0.0000E+00

Nuclide 011:

Sr-92
 5
 0.9756000000E+04
 0.9200E+02
 0.4017E+05
 Y-92 0.1000E+01
 none 0.0000E+00
 none 0.0000E+00

Nuclide 012:

Y-90
 9
 0.2304000000E+06
 0.9000E+02
 0.3272E+04
 none 0.0000E+00
 none 0.0000E+00
 none 0.0000E+00

Nuclide 013:

Y-91
 9
 0.5055264000E+07
 0.9100E+02
 0.3448E+05

Limerick AST Source Terms.nif

none 0.0000E+00
 none 0.0000E+00
 none 0.0000E+00

Nuclide 014:

Y-92
 9
 0.1274400000E+05
 0.9200E+02
 0.4029E+05

none 0.0000E+00
 none 0.0000E+00
 none 0.0000E+00

Nuclide 015:

Y-93
 9
 0.3636000000E+05
 0.9300E+02
 0.4526E+05

Zr-93 0.1000E+01
 none 0.0000E+00
 none 0.0000E+00

Nuclide 016:

Zr-95
 9
 0.5527872000E+07
 0.9500E+02
 0.4489E+05

Nb-95m 0.7000E-02
 Nb-95 0.9900E+00
 none 0.0000E+00

Nuclide 017:

Zr-97
 9
 0.6084000000E+05
 0.9700E+02
 0.4657E+05

Nb-97m 0.9500E+00
 Nb-97 0.5300E-01
 none 0.0000E+00

Nuclide 018:

Nb-95
 9
 0.3036960000E+07
 0.9500E+02
 0.4512E+05

none 0.0000E+00
 none 0.0000E+00
 none 0.0000E+00

Nuclide 019:

Mo-99
 7
 0.2376000000E+06
 0.9900E+02
 0.5078+05

Tc-99m 0.8800E+00
 Tc-99 0.1200E+00
 none 0.0000E+00

Nuclide 020:

Tc-99m
 7

0.2167200000E+05
 0.9900E+02
 0.4447E+05
 Tc-99 0.1000E+01
 none 0.0000E+00
 none 0.0000E+00
 Nuclide 021:
 Ru-103
 7
 0.3393792000E+07
 0.1030E+03
 0.4202E+05
 Rh-103m 0.1000E+01
 none 0.0000E+00
 none 0.0000E+00
 Nuclide 022:
 Ru-105
 7
 0.1598400000E+05
 0.1050E+03
 0.2908E+05
 Rh-105 0.1000E+01
 none 0.0000E+00
 none 0.0000E+00
 Nuclide 023:
 Ru-106
 7
 0.3181248000E+08
 0.1060E+03
 0.1730E+05
 Rh-106 0.1000E+01
 none 0.0000E+00
 none 0.0000E+00
 Nuclide 024:
 Rh-105
 7
 0.1272960000E+06
 0.1050E+03
 0.2752E+05
 none 0.0000E+00
 none 0.0000E+00
 none 0.0000E+00
 Nuclide 025:
 Sb-127
 4
 0.3326400000E+06
 0.1270E+03
 0.2896E+04
 Te-127m 0.1800E+00
 Te-127 0.8200E+00
 none 0.0000E+00
 Nuclide 026:
 Sb-129
 4
 0.1555200000E+05
 0.1290E+03
 0.8638E+04
 Te-129m 0.2200E+00
 Te-129 0.7700E+00
 none 0.0000E+00

Limerick AST Source Terms.nif

Nuclide 027:

Te-127

4

0.3366000000E+05

0.1270E+03

0.2873E+04

none 0.0000E+00

none 0.0000E+00

none 0.0000E+00

Nuclide 028:

Te-127m

4

0.9417600000E+07

0.1270E+03

0.3855E+03

Te-127 0.9800E+00

none 0.0000E+00

none 0.0000E+00

Nuclide 029:

Te-129

4

0.4176000000E+04

0.1290E+03

0.8501E+04

I-129 0.1000E+01

none 0.0000E+00

none 0.0000E+00

Nuclide 030:

Te-129m

4

0.2903040000E+07

0.1290E+03

0.1267E+04

Te-129 0.6500E+00

I-129 0.3500E+00

none 0.0000E+00

Nuclide 031:

Te-131m

4

0.1080000000E+06

0.1310E+03

0.3869E+04

Te-131 0.2200E+00

I-131 0.7800E+00

none 0.0000E+00

Nuclide 032:

Te-132

4

0.2815200000E+06

0.1320E+03

0.3821E+05

I-132 0.1000E+01

none 0.0000E+00

none 0.0000E+00

Nuclide 033:

I-131

2

0.6946560000E+06

0.1310E+03

0.2687E+05

Limerick AST Source Terms.nif

Xe-131m 0.1100E-01
 none 0.0000E+00
 none 0.0000E+00

Nuclide 034:

I-132
 2
 0.8280000000E+04
 0.1320E+03
 0.3881E+05
 none 0.0000E+00
 none 0.0000E+00
 none 0.0000E+00

Nuclide 035:

I-133
 2
 0.7488000000E+05
 0.1330E+03
 0.5556E+05
 Xe-133m 0.2900E-01
 Xe-133 0.9700E+00
 none 0.0000E+00

Nuclide 036:

I-134
 2
 0.3156000000E+04
 0.1340E+03
 0.6165E+05
 none 0.0000E+00
 none 0.0000E+00
 none 0.0000E+00

Nuclide 037:

I-135
 2
 0.2379600000E+05
 0.1350E+03
 0.5192E+05
 Xe-135m 0.1500E+00
 Xe-135 0.8500E+00
 none 0.0000E+00

Nuclide 038:

Xe-133
 1
 0.4531680000E+06
 0.1330E+03
 0.5491E+05
 none 0.0000E+00
 none 0.0000E+00
 none 0.0000E+00

Nuclide 039:

Xe-135
 1
 0.3272400000E+05
 0.1350E+03
 0.2228E+05
 Cs-135 0.1000E+01
 none 0.0000E+00
 none 0.0000E+00

Nuclide 040:

Cs-134

3

Limerick AST Source Terms.nif

0.6507177120E+08
0.1340E+03
0.7280E+04
none 0.0000E+00
none 0.0000E+00
none 0.0000E+00

Nuclide 041:

Cs-136
3
0.1131840000E+07
0.1360E+03
0.2027E+04
none 0.0000E+00
none 0.0000E+00
none 0.0000E+00

Nuclide 042:

Cs-137
3
0.9467280000E+09
0.1370E+03
0.4538E+04
Ba-137m 0.9500E+00
none 0.0000E+00
none 0.0000E+00

Nuclide 043:

Ba-139
6
0.4962000000E+04
0.1390E+03
0.5084E+05
none 0.0000E+00
none 0.0000E+00
none 0.0000E+00

Nuclide 044:

Ba-140
6
0.1100736000E+07
0.1400E+03
0.4896E+05
La-140 0.1000E+01
none 0.0000E+00
none 0.0000E+00

Nuclide 045:

La-140
9
0.1449792000E+06
0.1400E+03
0.5019E+05
none 0.0000E+00
none 0.0000E+00
none 0.0000E+00

Nuclide 046:

La-141
9
0.1414800000E+05
0.1410E+03
0.4640E+05
Ce-141 0.1000E+01
none 0.0000E+00
none 0.0000E+00

Limerick AST Source Terms.nif

Nuclide 047:

La-142

9

0.5550000000E+04

0.1420E+03

0.4532E+05

none 0.0000E+00

none 0.0000E+00

none 0.0000E+00

Nuclide 048:

Ce-141

8

0.2808086400E+07

0.1410E+03

0.4492E+05

none 0.0000E+00

none 0.0000E+00

none 0.0000E+00

Nuclide 049:

Ce-143

8

0.1188000000E+06

0.1430E+03

0.4427E+05

Pr-143 0.1000E+01

none 0.0000E+00

none 0.0000E+00

Nuclide 050:

Ce-144

8

0.2456352000E+08

0.1440E+03

0.3596E+05

Pr-144m 0.1800E-01

Pr-144 0.9800E+00

none 0.0000E+00

Nuclide 051:

Pr-143

9

0.1171584000E+07

0.1430E+03

0.4293E+05

none 0.0000E+00

none 0.0000E+00

none 0.0000E+00

Nuclide 052:

Nd-147

9

0.9486720000E+06

0.1470E+03

0.1838E+05

Pm-147 0.1000E+01

none 0.0000E+00

none 0.0000E+00

Nuclide 053:

Np-239

8

0.2034720000E+06

0.2390E+03

0.5397E+06

Limerick AST Source Terms.nif

Pu-239 0.1000E+01
 none 0.0000E+00
 none 0.0000E+00

Nuclide 054:

Pu-238
 8
 0.2768863824E+10
 0.2380E+03
 0.1796E+03

U-234 0.1000E+01
 none 0.0000E+00
 none 0.0000E+00

Nuclide 055:

Pu-239
 8
 0.7594336440E+12
 0.2390E+03
 0.1200E+02

U-235 0.1000E+01
 none 0.0000E+00
 none 0.0000E+00

Nuclide 056:

Pu-240
 8
 0.2062920312E+12
 0.2400E+03
 0.1288E+02

U-236 0.1000E+01
 none 0.0000E+00
 none 0.0000E+00

Nuclide 057:

Pu-241
 8
 0.4544294400E+09
 0.2410E+03
 0.6182E+04

U-237 0.2400E-04
 Am-241 0.1000E+01
 none 0.0000E+00

Nuclide 058:

Am-241
 9
 0.1363919472E+11
 0.2410E+03
 0.9528E+01

Np-237 0.1000E+01
 none 0.0000E+00
 none 0.0000E+00

Nuclide 059:

Cm-242
 9
 0.1406592000E+08
 0.2420E+03
 0.2388E+04

Pu-238 0.1000E+01
 none 0.0000E+00
 none 0.0000E+00

Nuclide 060:

Cm-244
 9

Limerick AST Source Terms.nif

0.5715081360E+09

0.2440E+03

0.2602E+03

Pu-240 0.1000E+01

none 0.0000E+00

none 0.0000E+00

End of Nuclear Inventory File

Limerick AST ECCS Source Terms.nif

Nuclide Inventory Name: Source Terms per this calculation
Limerick Generating Station (LGS) ECCS Source Terms AST - in Ci/MW
Power Level:
0.1000E+01
Nuclides:
60
Nuclide 001:
Co-58
7
0.6117120000E+07
0.5800E+02
0.0000E+00
none 0.0000E+00
none 0.0000E+00
none 0.0000E+00
Nuclide 002:
Co-60
7
0.1663401096E+09
0.6000E+02
0.0000E+00
none 0.0000E+00
none 0.0000E+00
none 0.0000E+00
Nuclide 003:
Kr-85
1
0.3382974720E+09
0.8500E+02
0.0000E+00
none 0.0000E+00
none 0.0000E+00
none 0.0000E+00
Nuclide 004:
Kr-85m
1
0.1612800000E+05
0.8500E+02
0.0000E+00
Kr-85 0.2100E+00
none 0.0000E+00
none 0.0000E+00
Nuclide 005:
Kr-87
1
0.4578000000E+04
0.8700E+02
0.0000E+00
Rb-87 0.1000E+01
none 0.0000E+00
none 0.0000E+00
Nuclide 006:
Kr-88
1
0.1022400000E+05
0.8800E+02
0.0000E+00
Rb-88 0.1000E+01
none 0.0000E+00
none 0.0000E+00

Limerick AST ECCS Source Terms.nif

Nuclide 007:

Rb-86

3

0.1612224000E+07

0.8600E+02

0.0000E+00

none 0.0000E+00

none 0.0000E+00

none 0.0000E+00

Nuclide 008:

Sr-89

5

0.4363200000E+07

0.8900E+02

0.0000E+00

none 0.0000E+00

none 0.0000E+00

none 0.0000E+00

Nuclide 009:

Sr-90

5

0.9189573120E+09

0.9000E+02

0.0000E+00

Y-90 0.1000E+01

none 0.0000E+00

none 0.0000E+00

Nuclide 010:

Sr-91

5

0.3420000000E+05

0.9100E+02

0.0000E+00

Y-91m 0.5800E+00

Y-91 0.4200E+00

none 0.0000E+00

Nuclide 011:

Sr-92

5

0.9756000000E+04

0.9200E+02

0.0000E+00

Y-92 0.1000E+01

none 0.0000E+00

none 0.0000E+00

Nuclide 012:

Y-90

9

0.2304000000E+06

0.9000E+02

0.0000E+00

none 0.0000E+00

none 0.0000E+00

none 0.0000E+00

Nuclide 013:

Y-91

9

0.5055264000E+07

0.9100E+02

0.0000E+00

Limerick AST ECCS Source Terms.nif

none 0.0000E+00
 none 0.0000E+00
 none 0.0000E+00

Nuclide 014:

Y-92
 9
 0.1274400000E+05
 0.9200E+02
 0.0000E+00
 none 0.0000E+00
 none 0.0000E+00
 none 0.0000E+00

Nuclide 015:

Y-93
 9
 0.3636000000E+05
 0.9300E+02
 0.0000E+00
 Zr-93 0.1000E+01
 none 0.0000E+00
 none 0.0000E+00

Nuclide 016:

Zr-95
 9
 0.5527872000E+07
 0.9500E+02
 0.0000E+00
 Nb-95m 0.7000E-02
 Nb-95 0.9900E+00
 none 0.0000E+00

Nuclide 017:

Zr-97
 9
 0.6084000000E+05
 0.9700E+02
 0.0000E+00
 Nb-97m 0.9500E+00
 Nb-97 0.5300E-01
 none 0.0000E+00

Nuclide 018:

Nb-95
 9
 0.3036960000E+07
 0.9500E+02
 0.0000E+00
 none 0.0000E+00
 none 0.0000E+00
 none 0.0000E+00

Nuclide 019:

Mo-99
 7
 0.2376000000E+06
 0.9900E+02
 0.0000E+00
 Tc-99m 0.8800E+00
 Tc-99 0.1200E+00
 none 0.0000E+00

Nuclide 020:

Tc-99m
 7

Limerick AST ECCS Source Terms.nif

0.2167200000E+05
 0.9900E+02
 0.0000E+00
 Tc-99 0.1000E+01
 none 0.0000E+00
 none 0.0000E+00
 Nuclide 021:
 Ru-103
 7
 0.3393792000E+07
 0.1030E+03
 0.0000E+00
 Rh-103m 0.1000E+01
 none 0.0000E+00
 none 0.0000E+00
 Nuclide 022:
 Ru-105
 7
 0.1598400000E+05
 0.1050E+03
 0.0000E+00
 Rh-105 0.1000E+01
 none 0.0000E+00
 none 0.0000E+00
 Nuclide 023:
 Ru-106
 7
 0.3181248000E+08
 0.1060E+03
 0.0000E+00
 Rh-106 0.1000E+01
 none 0.0000E+00
 none 0.0000E+00
 Nuclide 024:
 Rh-105
 7
 0.1272960000E+06
 0.1050E+03
 0.0000E+00
 none 0.0000E+00
 none 0.0000E+00
 none 0.0000E+00
 Nuclide 025:
 Sb-127
 4
 0.3326400000E+06
 0.1270E+03
 0.0000E+00
 Te-127m 0.1800E+00
 Te-127 0.8200E+00
 none 0.0000E+00
 Nuclide 026:
 Sb-129
 4
 0.1555200000E+05
 0.1290E+03
 0.0000E+00
 Te-129m 0.2200E+00
 Te-129 0.7700E+00
 none 0.0000E+00

Limerick AST ECCS Source Terms.nif

Nuclide 027:

Te-127

4

0.3366000000E+05

0.1270E+03

0.0000E+00

none 0.0000E+00

none 0.0000E+00

none 0.0000E+00

Nuclide 028:

Te-127m

4

0.9417600000E+07

0.1270E+03

0.0000E+00

Te-127 0.9800E+00

none 0.0000E+00

none 0.0000E+00

Nuclide 029:

Te-129

4

0.4176000000E+04

0.1290E+03

0.0000E+00

I-129 0.1000E+01

none 0.0000E+00

none 0.0000E+00

Nuclide 030:

Te-129m

4

0.2903040000E+07

0.1290E+03

0.0000E+00

Te-129 0.6500E+00

I-129 0.3500E+00

none 0.0000E+00

Nuclide 031:

Te-131m

4

0.1080000000E+06

0.1310E+03

0.0000E+00

Te-131 0.2200E+00

I-131 0.7800E+00

none 0.0000E+00

Nuclide 032:

Te-132

4

0.2815200000E+06

0.1320E+03

0.0000E+00

I-132 0.1000E+01

none 0.0000E+00

none 0.0000E+00

Nuclide 033:

I-131

2

0.6946560000E+06

0.1310E+03

0.2687E+05

Limerick AST ECCS Source Terms.nif

Xe-131m 0.1100E-01
 none 0.0000E+00
 none 0.0000E+00

Nuclide 034:

I-132

2

0.8280000000E+04
 0.1320E+03
 0.3881E+05
 none 0.0000E+00
 none 0.0000E+00
 none 0.0000E+00

Nuclide 035:

I-133

2

0.7488000000E+05
 0.1330E+03
 0.5556E+05
 Xe-133m 0.2900E-01
 Xe-133 0.9700E+00
 none 0.0000E+00

Nuclide 036:

I-134

2

0.3156000000E+04
 0.1340E+03
 0.6165E+05
 none 0.0000E+00
 none 0.0000E+00
 none 0.0000E+00

Nuclide 037:

I-135

2

0.2379600000E+05
 0.1350E+03
 0.5192E+05
 Xe-135m 0.1500E+00
 Xe-135 0.8500E+00
 none 0.0000E+00

Nuclide 038:

Xe-133

1

0.4531680000E+06
 0.1330E+03
 0.0000E+00
 none 0.0000E+00
 none 0.0000E+00
 none 0.0000E+00

Nuclide 039:

Xe-135

1

0.3272400000E+05
 0.1350E+03
 0.0000E+00
 Cs-135 0.1000E+01
 none 0.0000E+00
 none 0.0000E+00

Nuclide 040:

Cs-134

3

Limerick AST ECCS Source Terms.nif

0.6507177120E+08
0.1340E+03
0.0000E+00
none 0.0000E+00
none 0.0000E+00
none 0.0000E+00
Nuclide 041:
Cs-136
3
0.1131840000E+07
0.1360E+03
0.0000E+00
none 0.0000E+00
none 0.0000E+00
none 0.0000E+00
Nuclide 042:
Cs-137
3
0.9467280000E+09
0.1370E+03
0.0000E+00
Ba-137m 0.9500E+00
none 0.0000E+00
none 0.0000E+00
Nuclide 043:
Ba-139
6
0.4962000000E+04
0.1390E+03
0.0000E+00
none 0.0000E+00
none 0.0000E+00
none 0.0000E+00
Nuclide 044:
Ba-140
6
0.1100736000E+07
0.1400E+03
0.0000E+00
La-140 0.1000E+01
none 0.0000E+00
none 0.0000E+00
Nuclide 045:
La-140
9
0.1449792000E+06
0.1400E+03
0.0000E+00
none 0.0000E+00
none 0.0000E+00
none 0.0000E+00
Nuclide 046:
La-141
9
0.1414800000E+05
0.1410E+03
0.0000E+00
Ce-141 0.1000E+01
none 0.0000E+00
none 0.0000E+00

Limerick AST ECCS Source Terms.nif

Nuclide 047:

La-142

9

0.5550000000E+04

0.1420E+03

0.0000E+00

none 0.0000E+00

none 0.0000E+00

none 0.0000E+00

Nuclide 048:

Ce-141

8

0.2808086400E+07

0.1410E+03

0.0000E+00

none 0.0000E+00

none 0.0000E+00

none 0.0000E+00

Nuclide 049:

Ce-143

8

0.1188000000E+06

0.1430E+03

0.0000E+00

Pr-143 0.1000E+01

none 0.0000E+00

none 0.0000E+00

Nuclide 050:

Ce-144

8

0.2456352000E+08

0.1440E+03

0.0000E+00

Pr-144m 0.1800E-01

Pr-144 0.9800E+00

none 0.0000E+00

Nuclide 051:

Pr-143

9

0.1171584000E+07

0.1430E+03

0.0000E+00

none 0.0000E+00

none 0.0000E+00

none 0.0000E+00

Nuclide 052:

Nd-147

9

0.9486720000E+06

0.1470E+03

0.0000E+00

Pm-147 0.1000E+01

none 0.0000E+00

none 0.0000E+00

Nuclide 053:

Np-239

8

0.2034720000E+06

0.2390E+03

0.0000E+00

Limerick AST ECCS Source Terms.nif

Pu-239 0.1000E+01
 none 0.0000E+00
 none 0.0000E+00

Nuclide 054:

Pu-238
 8
 0.2768863824E+10
 0.2380E+03
 0.0000E+00

U-234 0.1000E+01
 none 0.0000E+00
 none 0.0000E+00

Nuclide 055:

Pu-239
 8
 0.7594336440E+12
 0.2390E+03
 0.0000E+00

U-235 0.1000E+01
 none 0.0000E+00
 none 0.0000E+00

Nuclide 056:

Pu-240
 8
 0.2062920312E+12
 0.2400E+03
 0.0000E+00

U-236 0.1000E+01
 none 0.0000E+00
 none 0.0000E+00

Nuclide 057:

Pu-241
 8
 0.4544294400E+09
 0.2410E+03
 0.0000E+00

U-237 0.2400E-04
 Am-241 0.1000E+01
 none 0.0000E+00

Nuclide 058:

Am-241
 9
 0.1363919472E+11
 0.2410E+03
 0.0000E+00

Np-237 0.1000E+01
 none 0.0000E+00
 none 0.0000E+00

Nuclide 059:

Cm-242
 9
 0.1406592000E+08
 0.2420E+03
 0.0000E+00

Pu-238 0.1000E+01
 none 0.0000E+00
 none 0.0000E+00

Nuclide 060:

Cm-244
 9

Limerick AST ECCS Source Terms.nif

0.5715081360E+09

0.2440E+03

0.0000E+00

Pu-240 0.1000E+01

none 0.0000E+00

none 0.0000E+00

End of Nuclear Inventory File

BWR_DBA.RFT

Release Fraction and Timing Name:

BWR, RG 1.183, Table 1 Section 3.2

Duration (h): Design Basis Accident

0.5000E+00 0.1500E+01 0.0000E+00 0.0000E+00

Noble Gases:

0.5000E-01 0.9500E+00 0.0000E+00 0.0000E+00

Iodine:

0.5000E-01 0.2500E+00 0.0000E+00 0.0000E+00

Cesium:

0.5000E-01 0.2000E+00 0.0000E+00 0.0000E+00

Tellurium:

0.0000E+00 0.0500E+00 0.0000E+00 0.0000E+00

Strontium:

0.0000E+00 0.2000E-01 0.0000E+00 0.0000E+00

Barium:

0.0000E+00 0.2000E-01 0.0000E+00 0.0000E+00

Ruthenium:

0.0000E+00 0.2500E-02 0.0000E+00 0.0000E+00

Cerium:

0.0000E+00 0.5000E-03 0.0000E+00 0.0000E+00

Lanthanum:

0.0000E+00 0.2000E-03 0.0000E+00 0.0000E+00

Non-Radioactive Aerosols (kg):

0.0000E+00 0.0000E+00 0.0000E+00 0.0000E+00

End of Release File

BWR_IRFT

Release Fraction and Timing Name: Iodine only

NUREG 1465 BWR

Duration (h):

0.5000E+00 1.5000E+00 0.0000E+00 0.0000E+00

Noble Gases:

0.0000E+00 0.0000E+00 0.0000E+00 0.0000E+00

Iodine:

0.0500E+00 0.2500E+00 0.0000E+00 0.0000E+00

Cesium:

0.0000E+00 0.0000E+00 0.0000E+00 0.0000E+00

Tellurium:

0.0000E+00 0.0000E+00 0.0000E+00 0.0000E+00

Strontium:

0.0000E+00 0.0000E+00 0.0000E+00 0.0000E+00

Barium:

0.0000E+00 0.0000E+00 0.0000E+00 0.0000E+00

Ruthenium:

0.0000E+00 0.0000E+00 0.0000E+00 0.0000E+00

Cerium:

0.0000E+00 0.0000E+00 0.0000E+00 0.0000E+00

Lanthanum:

0.0000E+00 0.0000E+00 0.0000E+00 0.0000E+00

Non-Radioactive Aerosols (kg):

0.0000E+00 0.0000E+00 0.0000E+00 0.0000E+00

End of Release File

A	B	C	D
1			
2		Unbroken	Broken
3		Inboard A	Inboard B
4	Pipe Surface Area (ft²)	=MS Piping Summary/A65	=MS Piping Summary/B65
5	Total Pipe Volume (ft³)	=MS Piping Summary/A66	=MS Piping Summary/B66
6	Pipe Surface Area (ft²)	=MS Piping Summary/A55	=MS Piping Summary/B55
7	Pipe Surface Area (ft²)	=MS Piping Summary/A55A/12)*(MS Piping Summary/A53/12)	=MS Piping Summary/B55A/12)*(MS Piping Summary/B53/12)
8	Total Pipe Volume (ft³)	=MS Piping Summary/A56	=MS Piping Summary/B56
9	Settling Velocity (m/s)	0.00117	0.00117
10	Settling Velocity (ft/s)	=C39/3048	=D59/3048
11	Locality 0-24hrs (m/sec)	=EXP((2809*SB578)-12.5)/100	=EXP((2809*SB578)-12.5)/100
12	Locality 24-48hrs (m/sec)	=EXP((2809*SB580)-12.5)/100	=EXP((2809*SB580)-12.5)/100
13	Locality 96-720hrs (m/sec)	=EXP((2809*SB582)-12.5)/100	=EXP((2809*SB582)-12.5)/100
14	Locality 0-24hrs (ft/sec)	=C110/3048	=D110/3048
15	Locality 24-48hrs (ft/sec)	=C120/3048	=D120/3048
16	Locality 96-720hrs (ft/sec)	=C130/3048	=D130/3048
17	Locality 0-24hrs (m/sec)	=EXP((2809*SB578)-19.3)/100	=EXP((2809*SB578)-19.3)/100
18	Locality 24-48hrs (m/sec)	=EXP((2809*SB580)-19.3)/100	=EXP((2809*SB580)-19.3)/100
19	Locality 96-720hrs (m/sec)	=EXP((2809*SB582)-19.3)/100	=EXP((2809*SB582)-19.3)/100
20	Locality 0-24hrs (ft/sec)	=C170/3048	=D170/3048
21	Locality 24-48hrs (ft/sec)	=C180/3048	=D180/3048
22	Locality 96-720hrs (ft/sec)	=C190/3048	=D190/3048
23	Adjusted Flow Rate (cmh)	100	0
24	Flow Rate 0-24 hrs (cmh)	=(C323*(SB592*SB591)*(SB586*SB587*SB589))*((SB583+460)/(SB586+460)))^60	=(D323*(SB592*SB591)*(SB586*SB587*SB589))*((SB583+460)/(SB586+460)))^60
25	Flow Rate 24-48 hrs (cmh)	=(C323*(SB589*SB587*SB589))*((SB583+460)/(SB586+460)))^60	=(D323*(SB589*SB587*SB589))*((SB583+460)/(SB586+460)))^60
26	Flow Rate 24-720 hrs (cmh)	=C325*SB590	=D325*SB590
27	Flow Rate 0-24 hrs (cmh)	=(C323*(SB589*SB587*SB589))*((SB583+460)/(SB586+460)))^60	=(D323*(SB589*SB587*SB589))*((SB583+460)/(SB586+460)))^60
28	Flow Rate 24-48 hrs (cmh)	=C327*SB590	=D327*SB590
29	Flow Rate 96-720 hrs (cmh)	=C327*SB590	=D327*SB590
30	Flow Rate 0-24 hrs (cfh)	=C327*60	=D327*60
31	Flow Rate 24-48 hrs (cfh)	=C329*60	=D329*60
32	Flow Rate 96-720 hrs (cfh)	=C329*60	=D329*60
33			
34	Log Rate Constant (h⁻¹)	=(C310*C37)/C38)*3600	=(D310*D37/D38)*3600
35	Constant 0-24hr (h⁻¹)	=(C14*C34)/C35)*3600	=(D14*D34/D35)*3600
36	Constant 24-48hr (h⁻¹)	=(C15*C34)/C35)*3600	=(D15*D34/D35)*3600
37	Constant 96-720hr (h⁻¹)	=(C16*C34)/C35)*3600	=(D16*D34/D35)*3600
38	In Rate 0-24hr (%/day)	=C35*24	=D35*24
39	In Rate 24-48hr (%/day)	=C36*24	=D36*24
40	In Rate 96-720hr (%/day)	=C37*24	=D37*24
41	Constant 0-24hr (hr⁻¹)	=(2.32*2*10^-5)*EXP(-400/BS578)	=(2.32*2*10^-5)*EXP(-400/BS578)
42	Constant 24-48hr (hr⁻¹)	=(2.32*2*10^-5)*EXP(-400/BS580)	=(2.32*2*10^-5)*EXP(-400/BS580)
43	Constant 96-720hr (hr⁻¹)	=(2.32*2*10^-5)*EXP(-400/BS582)	=(2.32*2*10^-5)*EXP(-400/BS582)
44	In Rate 0-24hr (%/day)	=C41*24	=D41*24
45	In Rate 24-48hr (%/day)	=C42*24	=D42*24
46	In Rate 96-720hr (%/day)	=C43*24	=D43*24
47	Constant 0-24hr (hr⁻¹)	=(1.3-0.75)*10^-4)*EXP(-1185/BS578)	=(1.3-0.75)*10^-4)*EXP(-1185/BS578)
48	Constant 24-48hr (hr⁻¹)	=(1.3-0.75)*10^-4)*EXP(-1185/BS580)	=(1.3-0.75)*10^-4)*EXP(-1185/BS580)
49	Constant 96-720hr (hr⁻¹)	=(1.3-0.75)*10^-4)*EXP(-1185/BS582)	=(1.3-0.75)*10^-4)*EXP(-1185/BS582)
50	In Rate 0-24hr (%/day)	=C47*24	=D47*24
51	In Rate 24-48hr (%/day)	=C48*24	=D48*24
52	In Rate 96-720hr (%/day)	=C49*24	=D49*24
53	Constant 0-24hr (h⁻¹)	=(C20*C34)/C35)*3600	=(D20*D34/D35)*3600
54	Constant 24-48hr (h⁻¹)	=(C21*C34)/C35)*3600	=(D21*D34/D35)*3600
55	Constant 96-720hr (h⁻¹)	=(C22*C34)/C35)*3600	=(D22*D34/D35)*3600
56			
57	Efficiency 0-24 hrs	=F(C323-0.1,1/(1+(C334*C35)/C30)))	=F(D323-0.1,1/(1+(D334*D35)/D30)))
58	Efficiency 24-48 hrs	=F(C323-0.1,1/(1+(C334*C35)/C31)))	=F(D323-0.1,1/(1+(D334*D35)/D31)))
59	Efficiency 96-720 hrs	=F(C323-0.1,1/(1+(C334*C35)/C32)))	=F(D323-0.1,1/(1+(D334*D35)/D32)))
60	Efficiency 0-24 hrs	=F(C323-0.1,1/(1+(C334*C35)/C30)))	=F(D323-0.1,1/(1+(D334*D35)/D30)))
61	Efficiency 24-48 hrs	=F(C323-0.1,1/(1+(C334*C35)/C31)))	=F(D323-0.1,1/(1+(D334*D35)/D31)))
62	Efficiency 96-720 hrs	=F(C323-0.1,1/(1+(C334*C35)/C32)))	=F(D323-0.1,1/(1+(D334*D35)/D32)))
63	Efficiency 0-24 hrs	=F(C323-0.1,1/(1+(C334*C35)/C30)))	=F(D323-0.1,1/(1+(D334*D35)/D30)))
64	Efficiency 24-48 hrs	=F(C323-0.1,1/(1+(C334*C35)/C31)))	=F(D323-0.1,1/(1+(D334*D35)/D31)))
65	Efficiency 96-720 hrs	=F(C323-0.1,1/(1+(C334*C35)/C32)))	=F(D323-0.1,1/(1+(D334*D35)/D32)))
66	Aerosol DF (0-24 hrs)	=F(C323-0.1,1/(1+(C334*C35)/C30)))	=F(D323-0.1,1/(1+(D334*D35)/D30)))
67	Aerosol DF (24-48 hrs)	=F(C323-0.1,1/(1+(C334*C35)/C31)))	=F(D323-0.1,1/(1+(D334*D35)/D31)))
68	Aerosol DF (96-720 hrs)	=F(C323-0.1,1/(1+(C334*C35)/C32)))	=F(D323-0.1,1/(1+(D334*D35)/D32)))
69	Elemental DF (0-24 hrs)	=F(C323-0.1,1/(1+(C334*C35)/C30)))	=F(D323-0.1,1/(1+(D334*D35)/D30)))
70	Elemental DF (24-48 hrs)	=F(C323-0.1,1/(1+(C334*C35)/C31)))	=F(D323-0.1,1/(1+(D334*D35)/D31)))
71	Elemental DF (96-720 hrs)	=F(C323-0.1,1/(1+(C334*C35)/C32)))	=F(D323-0.1,1/(1+(D334*D35)/D32)))
72	Organic DF (0-24 hrs)	=F(C323-0.1,1/(1+(C334*C35)/C30)))	=F(D323-0.1,1/(1+(D334*D35)/D30)))
73	Organic DF (24-48 hrs)	=F(C323-0.1,1/(1+(C334*C35)/C31)))	=F(D323-0.1,1/(1+(D334*D35)/D31)))
74	Organic DF (96-720 hrs)	=F(C323-0.1,1/(1+(C334*C35)/C32)))	=F(D323-0.1,1/(1+(D334*D35)/D32)))
75			
76			
77	Temperature, 0-24hr (F)	550	
78	Temperature, 0-24hr (K)	=(B77-32)*(5/9)+273.15	
79	Temperature, 24-48hr (F)	410	
80	Temperature, 24-48hr (K)	=(B79-32)*(5/9)+273.15	
81	Temperature, 96-720hr (F)	200	
82	Temperature, 96-720hr (K)	=(B81-32)*(5/9)+273.15	
83	Peak Temperature (F)	278	
84	Temperature, constant (F)	120	
85	Temperature, constant (K)	=(B84-32)*(5/9)+273.15	
86	Pressure, constant (F)	68	
87	Pressure, constant (psig)	22	
88	Pressure, constant (psig)	44	
89	Pressure, constant (psia)	14.7	
90	Retention Factor at 24 hours	0.551	
91	Drywell Volume (ft³)	=0.95*243580	
92	Retention Volume (ft³)	=147670*SB931	

	E	F	G
1			Deterr
2			
3	Inboard C	Inboard D	
4	=MS Piping Summary1C65	=MS Piping Summary1D65	
5	=MS Piping Summary1C66	=MS Piping Summary1D66	
6	=MS Piping Summary1C55	=MS Piping Summary1D55	
7	=MS Piping Summary1C54/12/12/MS Piping Summary1A52/12	=MS Piping Summary1D54/12/12/MS Piping Summary1A52/12	
8	=MS Piping Summary1C56	=MS Piping Summary1D56	
9	0 00117	0 00117	
10	=E\$90.3048	=F\$90.3048	
11	=EXP((2809*38378)-12.5)/100	=EXP((2809*38378)-12.5)/100	
12	=EXP((2809*38380)-12.5)/100	=EXP((2809*38380)-12.5)/100	
13	=EXP((2809*38382)-12.5)/100	=EXP((2809*38382)-12.5)/100	
14	=E110.3048	=F110.3048	
15	=E120.3048	=F120.3048	
16	=E130.3048	=F130.3048	
17	=EXP((2809*38378)-19.3)/100	=EXP((2809*38378)-19.3)/100	
18	=EXP((2809*38380)-19.3)/100	=EXP((2809*38380)-19.3)/100	
19	=EXP((2809*38382)-19.3)/100	=EXP((2809*38382)-19.3)/100	
20	=E170.3048	=F170.3048	
21	=E180.3048	=F180.3048	
22	=E190.3048	=F190.3048	
23	0	0	
24	=(\$E23*(\$B\$92*\$B\$91)*(\$B\$89*(\$B\$87+\$B\$86)))/(\$B\$83+460)/(\$B\$86+460))/60	=(\$F23*(\$B\$92*\$B\$91)*(\$B\$89*(\$B\$87+\$B\$86)))/(\$B\$83+460)/(\$B\$86+460))/60	
25	=(\$E23*(\$B\$88*(\$B\$87+\$B\$89)))/(\$B\$83+460)/(\$B\$86+460))/60	=(\$F23*(\$B\$88*(\$B\$87+\$B\$89)))/(\$B\$83+460)/(\$B\$86+460))/60	
26	=E\$25*\$B\$90	=F\$25*\$B\$90	
27	=(\$E23*(\$B\$88*(\$B\$87+\$B\$89)))/(\$B\$83+460)/(\$B\$86+460))/60	=(\$F23*(\$B\$88*(\$B\$87+\$B\$89)))/(\$B\$83+460)/(\$B\$86+460))/60	
28	=E\$27*\$B\$90	=F\$27*\$B\$90	
29	=E\$27*\$B\$90	=F\$27*\$B\$90	
30	=E\$27*60	=F\$27*60	
31	=E\$29*60	=F\$29*60	
32	=E\$29*60	=F\$29*60	
33			
34	=(E\$10*E\$7*E\$8)^3600	=(F\$10*F\$7*F\$8)^3600	
35	=(E\$14*E\$4*E\$5)^3600	=(F\$14*F\$4*F\$5)^3600	
36	=(E\$15*E\$4*E\$5)^3600	=(F\$15*F\$4*F\$5)^3600	
37	=(E\$18*E\$4*E\$5)^3600	=(F\$18*F\$4*F\$5)^3600	
38	=E35*24	=F35*24	
39	=E36*24	=F36*24	
40	=E37*24	=F37*24	
41	=(2.32+2)^10^-5*EXP(-600/\$B\$78)	=(2.32+2)^10^-5*EXP(-600/\$B\$78)	
42	=(2.32+2)^10^-5*EXP(-600/\$B\$80)	=(2.32+2)^10^-5*EXP(-600/\$B\$80)	
43	=(2.32+2)^10^-5*EXP(-600/\$B\$82)	=(2.32+2)^10^-5*EXP(-600/\$B\$82)	
44	=E41*24	=F41*24	
45	=E42*24	=F42*24	
46	=E43*24	=F43*24	
47	=(1.3-0.75)^10^-4*EXP(-1185/\$B\$78)	=(1.3-0.75)^10^-4*EXP(-1185/\$B\$78)	
48	=(1.3-0.75)^10^-4*EXP(-1185/\$B\$80)	=(1.3-0.75)^10^-4*EXP(-1185/\$B\$80)	
49	=(1.3-0.75)^10^-4*EXP(-1185/\$B\$82)	=(1.3-0.75)^10^-4*EXP(-1185/\$B\$82)	
50	=E47*24	=F47*24	
51	=E48*24	=F48*24	
52	=E49*24	=F49*24	
53	=(E20*E\$4*E\$5)^3600	=(F20*F\$4*F\$5)^3600	
54	=(E21*E\$4*E\$5)^3600	=(F21*F\$4*F\$5)^3600	
55	=(E22*E\$4*E\$5)^3600	=(F22*F\$4*F\$5)^3600	
56			
57	=IF(E\$23=0,1-(1/(1+(E\$34*E\$8)/E30))))	=IF(F\$23=0,1-(1/(1+(F\$34*F\$8)/F30))))	
58	=IF(E\$23=0,1-(1/(1+(E\$34*E\$8)/E31))))	=IF(F\$23=0,1-(1/(1+(F\$34*F\$8)/F31))))	
59	=IF(E\$23=0,1-(1/(1+(E\$34*E\$8)/E32))))	=IF(F\$23=0,1-(1/(1+(F\$34*F\$8)/F32))))	
60	=IF(E\$23=0,1-(1/(1+(E\$35*E\$5)/E30))))	=IF(F\$23=0,1-(1/(1+(F\$35*F\$5)/F30))))	
61	=IF(E\$23=0,1-(1/(1+(E\$36*E\$5)/E31))))	=IF(F\$23=0,1-(1/(1+(F\$36*F\$5)/F31))))	
62	=IF(E\$23=0,1-(1/(1+(E\$37*E\$5)/E32))))	=IF(F\$23=0,1-(1/(1+(F\$37*F\$5)/F32))))	
63	=IF(E\$23=0,1-(1/(1+(E\$37*E\$5)/E30))))	=IF(F\$23=0,1-(1/(1+(F\$37*F\$5)/F30))))	
64	=IF(E\$23=0,1-(1/(1+(E\$54*E\$5)/E31))))	=IF(F\$23=0,1-(1/(1+(F\$54*F\$5)/F31))))	
65	=IF(E\$23=0,1-(1/(1+(E\$55*E\$5)/E32))))	=IF(F\$23=0,1-(1/(1+(F\$55*F\$5)/F32))))	
66	=IF(E\$23=0,1-(1/(1+(E\$34*E\$8)/E30))))	=IF(F\$23=0,1-(1/(1+(F\$34*F\$8)/F30))))	
67	=IF(E\$23=0,1-(1/(1+(E\$34*E\$8)/E31))))	=IF(F\$23=0,1-(1/(1+(F\$34*F\$8)/F31))))	
68	=IF(E\$23=0,1-(1/(1+(E\$34*E\$8)/E32))))	=IF(F\$23=0,1-(1/(1+(F\$34*F\$8)/F32))))	
69	=IF(E\$23=0,1-(1/(1+(E\$35*E\$5)/E30))))	=IF(F\$23=0,1-(1/(1+(F\$35*F\$5)/F30))))	
70	=IF(E\$23=0,1-(1/(1+(E\$36*E\$5)/E31))))	=IF(F\$23=0,1-(1/(1+(F\$36*F\$5)/F31))))	
71	=IF(E\$23=0,1-(1/(1+(E\$37*E\$5)/E32))))	=IF(F\$23=0,1-(1/(1+(F\$37*F\$5)/F32))))	
72	=IF(E\$23=0,1-(1/(1+(E\$37*E\$5)/E30))))	=IF(F\$23=0,1-(1/(1+(F\$37*F\$5)/F30))))	
73	=IF(E\$23=0,1-(1/(1+(E\$54*E\$5)/E31))))	=IF(F\$23=0,1-(1/(1+(F\$54*F\$5)/F31))))	
74	=IF(E\$23=0,1-(1/(1+(E\$55*E\$5)/E32))))	=IF(F\$23=0,1-(1/(1+(F\$55*F\$5)/F32))))	
75			
76			
77	References		
78		¹ Piping Take-offs and Condenser Characterization (Pages B-9 and B-14)	
79		² USNRC Document AEB-88-03, 12/9/1998, Page A-3, Median Value	
80		³ USNRC Document AEB-88-03, 12/9/1998, Page A-2, Formula 2	
81		⁴ USNRC Document AEB-88-03, 12/9/1998, Page A-2, Formula 4	
82		⁵ Cline, J.E. "MSIV Leakage Code Transport Analysis", 3/26/1991	
83		⁶ NUREG/CR-6804, RADTRAD Manual, 4/1998, Supplement 1, 8/1999	
84		⁷ Cline, J.E. 8/1990, as shown in Design Analysis LM-0646, Rev. 0, Attachment F, (this Calc.)	
85		⁸ Typical conservative value for H.P. Condenser Volume	
86		⁹ LGS Technical Specification LCO 3.8.1.2.c	
87		¹⁰ LGS Technical Specification SR 4.8.1.c.2	
88			
89			
90			
91			
92			

H			I			J			
1	ation of MSL Decontamination Factors Due to Iodine Deposition								
2	Outboard A		Outboard B			Outboard C			
3	=MS Ppang Summary1A68		=MS Ppang Summary1B68			=MS Ppang Summary1C68			
4	=MS Ppang Summary1A69		=MS Ppang Summary1B69			=MS Ppang Summary1C69			
5	=MS Ppang Summary1A58		=MS Ppang Summary1B58			=MS Ppang Summary1C58			
6	=MS Ppang Summary1A59		=MS Ppang Summary1B59			=MS Ppang Summary1C59			
7	=MS Ppang Summary1A57/12*(MS Ppang Summary1A52/12)		=MS Ppang Summary1B57/12*(MS Ppang Summary1B52/12)			=MS Ppang Summary1C57/12*(MS Ppang Summary1C52/12)			
8	=MS Ppang Summary1A59		=MS Ppang Summary1B59			=MS Ppang Summary1C59			
9	0.00117		0.00117			0.00117			
10	=S90.3048		=S90.3048			=S90.3048			
11	=EXP((2809/38378)-12.5y100)		=EXP((2809/38378)-12.5y100)			=EXP((2809/38378)-12.5y100)			
12	=EXP((2809/38380)-12.5y100)		=EXP((2809/38380)-12.5y100)			=EXP((2809/38380)-12.5y100)			
13	=EXP((2809/38382)-12.5y100)		=EXP((2809/38382)-12.5y100)			=EXP((2809/38382)-12.5y100)			
14	=I170.3048		=I170.3048			=I170.3048			
15	=I120.3048		=I120.3048			=I120.3048			
16	=I130.3048		=I130.3048			=I130.3048			
17	=EXP((2809/38378)-19.3y100)		=EXP((2809/38378)-19.3y100)			=EXP((2809/38378)-19.3y100)			
18	=EXP((2809/38380)-19.3y100)		=EXP((2809/38380)-19.3y100)			=EXP((2809/38380)-19.3y100)			
19	=EXP((2809/38382)-19.3y100)		=EXP((2809/38382)-19.3y100)			=EXP((2809/38382)-19.3y100)			
20	=I170.3048		=I170.3048			=I170.3048			
21	=I180.3048		=I180.3048			=I180.3048			
22	=I190.3048		=I190.3048			=I190.3048			
23	100		100			0			
24	N/A		N/A			N/A			
25	N/A		N/A			N/A			
26	N/A		N/A			N/A			
27	=(S23*((S877+460)/(S856+460)))60		=(S23*((S877+460)/(S856+460)))60			=(S23*((S877+460)/(S856+460)))60			
28	=(S23*((S879+460)/(S856+460)))60*S8590		=(S23*((S879+460)/(S856+460)))60*S8590			=(S23*((S879+460)/(S856+460)))60*S8590			
29	=(S23*((S881+460)/(S856+460)))60*S8590		=(S23*((S881+460)/(S856+460)))60*S8590			=(S23*((S881+460)/(S856+460)))60*S8590			
30	=S27*60		=S27*60			=S27*60			
31	=S28*60		=S28*60			=S28*60			
32	=S29*60		=S29*60			=S29*60			
33									
34	=((S10*S7)/S8)*3600		=((S10*S7)/S8)*3600			=((S10*S7)/S8)*3600			
35	=((H14*H4)/H5)*3600		=((H14*H4)/H5)*3600			=((H14*H4)/H5)*3600			
36	=((H15*H4)/H5)*3600		=((H15*H4)/H5)*3600			=((H15*H4)/H5)*3600			
37	=((H16*H4)/H5)*3600		=((H16*H4)/H5)*3600			=((H16*H4)/H5)*3600			
38	=I35*24		=I35*24			=I35*24			
39	=I36*24		=I36*24			=I36*24			
40	=I37*24		=I37*24			=I37*24			
41	=((2.32*2)*10^-5)*EXP(-600/38378)		=((2.32*2)*10^-5)*EXP(-600/38378)			=((2.32*2)*10^-5)*EXP(-600/38378)			
42	=((2.32*2)*10^-5)*EXP(-600/38380)		=((2.32*2)*10^-5)*EXP(-600/38380)			=((2.32*2)*10^-5)*EXP(-600/38380)			
43	=((2.32*2)*10^-5)*EXP(-600/38382)		=((2.32*2)*10^-5)*EXP(-600/38382)			=((2.32*2)*10^-5)*EXP(-600/38382)			
44	=J41*24		=J41*24			=J41*24			
45	=J42*24		=J42*24			=J42*24			
46	=J43*24		=J43*24			=J43*24			
47	=((1.3-0.75)*10^-4)*EXP(-1185/38378)		=((1.3-0.75)*10^-4)*EXP(-1185/38378)			=((1.3-0.75)*10^-4)*EXP(-1185/38378)			
48	=((1.3-0.75)*10^-4)*EXP(-1185/38380)		=((1.3-0.75)*10^-4)*EXP(-1185/38380)			=((1.3-0.75)*10^-4)*EXP(-1185/38380)			
49	=((1.3-0.75)*10^-4)*EXP(-1185/38382)		=((1.3-0.75)*10^-4)*EXP(-1185/38382)			=((1.3-0.75)*10^-4)*EXP(-1185/38382)			
50	=J47*24		=J47*24			=J47*24			
51	=J48*24		=J48*24			=J48*24			
52	=J49*24		=J49*24			=J49*24			
53	=((I20*H4)/H5)*3600		=((I20*H4)/H5)*3600			=((I20*H4)/H5)*3600			
54	=((I21*H4)/H5)*3600		=((I21*H4)/H5)*3600			=((I21*H4)/H5)*3600			
55	=((I22*H4)/H5)*3600		=((I22*H4)/H5)*3600			=((I22*H4)/H5)*3600			
56									
57	=F(S23=0,0,1-(1/(1+(S34*S8)/S30))))		=F(S23=0,0,1-(1/(1+(S34*S8)/S30))))			=F(S23=0,0,1-(1/(1+(S34*S8)/S30))))			
58	=F(S23=0,0,1-(1/(1+(S34*S8)/S31))))		=F(S23=0,0,1-(1/(1+(S34*S8)/S31))))			=F(S23=0,0,1-(1/(1+(S34*S8)/S31))))			
59	=F(S23=0,0,1-(1/(1+(S34*S8)/S32))))		=F(S23=0,0,1-(1/(1+(S34*S8)/S32))))			=F(S23=0,0,1-(1/(1+(S34*S8)/S32))))			
60	=F(S23=0,0,1-(1/(1+(S35*S5)/S30))))		=F(S23=0,0,1-(1/(1+(S35*S5)/S30))))			=F(S23=0,0,1-(1/(1+(S35*S5)/S30))))			
61	=F(S23=0,0,1-(1/(1+(S36*S5)/S31))))		=F(S23=0,0,1-(1/(1+(S36*S5)/S31))))			=F(S23=0,0,1-(1/(1+(S36*S5)/S31))))			
62	=F(S23=0,0,1-(1/(1+(S37*S5)/S32))))		=F(S23=0,0,1-(1/(1+(S37*S5)/S32))))			=F(S23=0,0,1-(1/(1+(S37*S5)/S32))))			
63	=F(S23=0,0,1-(1/(1+(S37*S5)/S30))))		=F(S23=0,0,1-(1/(1+(S37*S5)/S30))))			=F(S23=0,0,1-(1/(1+(S37*S5)/S30))))			
64	=F(S23=0,0,1-(1/(1+(S34*S5)/S31))))		=F(S23=0,0,1-(1/(1+(S34*S5)/S31))))			=F(S23=0,0,1-(1/(1+(S34*S5)/S31))))			
65	=F(S23=0,0,1-(1/(1+(S35*S5)/S32))))		=F(S23=0,0,1-(1/(1+(S35*S5)/S32))))			=F(S23=0,0,1-(1/(1+(S35*S5)/S32))))			
66	=F(S23=0,1,(1+(S34*S8)/S30))))		=F(S23=0,1,(1+(S34*S8)/S30))))			=F(S23=0,1,(1+(S34*S8)/S30))))			
67	=F(S23=0,1,(1+(S34*S8)/S31))))		=F(S23=0,1,(1+(S34*S8)/S31))))			=F(S23=0,1,(1+(S34*S8)/S31))))			
68	=F(S23=0,1,(1+(S34*S8)/S32))))		=F(S23=0,1,(1+(S34*S8)/S32))))			=F(S23=0,1,(1+(S34*S8)/S32))))			
69	=F(S23=0,1,(1+(S35*S5)/S30))))		=F(S23=0,1,(1+(S35*S5)/S30))))			=F(S23=0,1,(1+(S35*S5)/S30))))			
70	=F(S23=0,1,(1+(S36*S5)/S31))))		=F(S23=0,1,(1+(S36*S5)/S31))))			=F(S23=0,1,(1+(S36*S5)/S31))))			
71	=F(S23=0,1,(1+(S37*S5)/S32))))		=F(S23=0,1,(1+(S37*S5)/S32))))			=F(S23=0,1,(1+(S37*S5)/S32))))			
72	=F(S23=0,1,(1+(S37*S5)/S30))))		=F(S23=0,1,(1+(S37*S5)/S30))))			=F(S23=0,1,(1+(S37*S5)/S30))))			
73	=F(S23=0,1,(1+(S34*S5)/S31))))		=F(S23=0,1,(1+(S34*S5)/S31))))			=F(S23=0,1,(1+(S34*S5)/S31))))			
74	=F(S23=0,1,(1+(S35*S5)/S32))))		=F(S23=0,1,(1+(S35*S5)/S32))))			=F(S23=0,1,(1+(S35*S5)/S32))))			
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	K	L	M	N	O	P
1						
2			Condenser	Condenser	Condenser	
3	Outboard D		No Tube Credit	16% Tubes	100% Tubes	
4	*MS Piping Summary1D68		=9022.59	=9022.59*(0.1350478)	=9022.59+350478	
5	*MS Piping Summary1D69		54745.5	54745.5	54745.5	
6	*MS Piping Summary1D58		N/A	N/A	N/A	
7	*MS Piping Summary1D57/12>(*MS Piping Summary1SA32/12)		=Condenser Dimensions1C38	=M7*(0.1350478)^2	=M7*Condenser Dimensions1E47/2	
8	*MS Piping Summary1D59		54745.5	54745.5	54745.5	
9	0.00117		0.00117	0.00117	0.00117	
10	=K390.3048		=M390.3048	=N390.3048	=O390.3048	
11	=EXP(2809/38378)-12.5Y100		=EXP(2809/38385)-12.5Y100	=EXP(2809/38385)-12.5Y100	=EXP(2809/38385)-12.5Y100	
12	=EXP(2809/38380)-12.5Y100		=EXP(2809/38385)-12.5Y100	=EXP(2809/38385)-12.5Y100	=EXP(2809/38385)-12.5Y100	
13	=EXP(2809/38382)-12.5Y100		=EXP(2809/38385)-12.5Y100	=EXP(2809/38385)-12.5Y100	=EXP(2809/38385)-12.5Y100	
14	=K110.3048		=M110.3048	=N110.3048	=O110.3048	
15	=K120.3048		=M120.3048	=N120.3048	=O120.3048	
16	=K130.3048		=M130.3048	=N130.3048	=O130.3048	
17	=EXP(2809/38378)-19.3Y100		=EXP(2809/38385)-19.3Y100	=EXP(2809/38385)-19.3Y100	=EXP(2809/38385)-19.3Y100	
18	=EXP(2809/38380)-19.3Y100		=EXP(2809/38385)-19.3Y100	=EXP(2809/38385)-19.3Y100	=EXP(2809/38385)-19.3Y100	
19	=EXP(2809/38382)-19.3Y100		=EXP(2809/38385)-19.3Y100	=EXP(2809/38385)-19.3Y100	=EXP(2809/38385)-19.3Y100	
20	=K170.3048		=M170.3048	=N170.3048	=O170.3048	
21	=K180.3048		=M180.3048	=N180.3048	=O180.3048	
22	=K190.3048		=M190.3048	=N190.3048	=O190.3048	
23	0		200	=323*323+323+323	=323*323+323+323	
24	N/A		N/A	N/A	N/A	
25	N/A		N/A	N/A	N/A	
26	N/A		N/A	N/A	N/A	
27	=(K323*(38377+460)/(38386+460))/60		=(M23*(38384+460)/(38386+460))/60	=(N23*(38384+460)/(38386+460))/60	=(O23*(38384+460)/(38386+460))/60	
28	=(K323*(38379+460)/(38386+460))/60		=M27*38390	=N27*38390	=O27*38390	
29	=(K323*(38381+460)/(38386+460))/60		=M27*38390	=N27*38390	=O27*38390	
30	=K327*60		=M27*60	=N27*60	=O27*60	
31	=K328*60		=M28*60	=N28*60	=O28*60	
32	=K329*60		=M29*60	=N29*60	=O29*60	
33						
34	=(K310*K37)*K38)*3600		=(M310*M37)*M38)*3600	=(N310*N37)*N38)*3600	=(O310*O37)*O38)*3600	
35	=(K14*K34)*K35)*3600		=(M14*M34)*M35)*3600	=(N14*N34)*N35)*3600	=(O14*O34)*O35)*3600	
36	=(K15*K34)*K35)*3600		=(M15*M34)*M35)*3600	=(N15*N34)*N35)*3600	=(O15*O34)*O35)*3600	
37	=(K16*K34)*K35)*3600		=(M16*M34)*M35)*3600	=(N16*N34)*N35)*3600	=(O16*O34)*O35)*3600	
38	=K35*24		=M35*24	=N35*24	=O35*24	
39	=K36*24		=M36*24	=N36*24	=O36*24	
40	=K37*24		=M37*24	=N37*24	=O37*24	
41	=(2.32*2^10^-5)*EXP(-600/38385)		=(2.32*2^10^-5)*EXP(-600/38385)	=(2.32*2^10^-5)*EXP(-600/38385)	=(2.32*2^10^-5)*EXP(-600/38385)	
42	=(2.32*2^10^-5)*EXP(-600/38380)		=(2.32*2^10^-5)*EXP(-600/38385)	=(2.32*2^10^-5)*EXP(-600/38385)	=(2.32*2^10^-5)*EXP(-600/38385)	
43	=(2.32*2^10^-5)*EXP(-600/38382)		=(2.32*2^10^-5)*EXP(-600/38385)	=(2.32*2^10^-5)*EXP(-600/38385)	=(2.32*2^10^-5)*EXP(-600/38385)	
44	=K41*24		=M41*24	=N41*24	=O41*24	
45	=K42*24		=M42*24	=N42*24	=O42*24	
46	=K43*24		=M43*24	=N43*24	=O43*24	
47	=(1.3-0.75)*10^-4)*EXP(-1185/38385)		=(1.3-0.75)*10^-4)*EXP(-1185/38385)	=(1.3-0.75)*10^-4)*EXP(-1185/38385)	=(1.3-0.75)*10^-4)*EXP(-1185/38385)	
48	=(1.3-0.75)*10^-4)*EXP(-1185/38380)		=(1.3-0.75)*10^-4)*EXP(-1185/38385)	=(1.3-0.75)*10^-4)*EXP(-1185/38385)	=(1.3-0.75)*10^-4)*EXP(-1185/38385)	
49	=(1.3-0.75)*10^-4)*EXP(-1185/38382)		=(1.3-0.75)*10^-4)*EXP(-1185/38385)	=(1.3-0.75)*10^-4)*EXP(-1185/38385)	=(1.3-0.75)*10^-4)*EXP(-1185/38385)	
50	=K47*24		=M47*24	=N47*24	=O47*24	
51	=K48*24		=M48*24	=N48*24	=O48*24	
52	=K49*24		=M49*24	=N49*24	=O49*24	
53	=(K20*K34)*K35)*3600		=(M20*M34)*M35)*3600	=(N20*N34)*N35)*3600	=(O20*O34)*O35)*3600	
54	=(K21*K34)*K35)*3600		=(M21*M34)*M35)*3600	=(N21*N34)*N35)*3600	=(O21*O34)*O35)*3600	
55	=(K22*K34)*K35)*3600		=(M22*M34)*M35)*3600	=(N22*N34)*N35)*3600	=(O22*O34)*O35)*3600	
56						
57	=IF(K323=0,0,1-(1/(1+(K34*K38)/K30))))		=IF(M323=0,0,1-(1/(1+(M34*M38)/M30))))	=IF(N323=0,0,1-(1/(1+(N34*N38)/N30))))	=IF(O323=0,0,1-(1/(1+(O34*O38)/O30))))	
58	=IF(K323=0,0,1-(1/(1+(K34*K38)/K31))))		=IF(M323=0,0,1-(1/(1+(M34*M38)/M31))))	=IF(N323=0,0,1-(1/(1+(N34*N38)/N31))))	=IF(O323=0,0,1-(1/(1+(O34*O38)/O31))))	
59	=IF(K323=0,0,1-(1/(1+(K34*K38)/K32))))		=IF(M323=0,0,1-(1/(1+(M34*M38)/M32))))	=IF(N323=0,0,1-(1/(1+(N34*N38)/N32))))	=IF(O323=0,0,1-(1/(1+(O34*O38)/O32))))	
60	=IF(K323=0,0,1-(1/(1+(K35*K35)/K30))))		=IF(M323=0,0,1-(1/(1+(M35*M35)/M30))))	=IF(N323=0,0,1-(1/(1+(N35*N35)/N30))))	=IF(O323=0,0,1-(1/(1+(O35*O35)/O30))))	
61	=IF(K323=0,0,1-(1/(1+(K36*K35)/K31))))		=IF(M323=0,0,1-(1/(1+(M36*M35)/M31))))	=IF(N323=0,0,1-(1/(1+(N36*N35)/N31))))	=IF(O323=0,0,1-(1/(1+(O36*O35)/O31))))	
62	=IF(K323=0,0,1-(1/(1+(K37*K35)/K32))))		=IF(M323=0,0,1-(1/(1+(M37*M35)/M32))))	=IF(N323=0,0,1-(1/(1+(N37*N35)/N32))))	=IF(O323=0,0,1-(1/(1+(O37*O35)/O32))))	
63	=IF(K323=0,0,1-(1/(1+(K37*K35)/K30))))		=IF(M323=0,0,1-(1/(1+(M37*M35)/M30))))	=IF(N323=0,0,1-(1/(1+(N37*N35)/N30))))	=IF(O323=0,0,1-(1/(1+(O37*O35)/O30))))	
64	=IF(K323=0,0,1-(1/(1+(K34*K35)/K31))))		=IF(M323=0,0,1-(1/(1+(M34*M35)/M31))))	=IF(N323=0,0,1-(1/(1+(N34*N35)/N31))))	=IF(O323=0,0,1-(1/(1+(O34*O35)/O31))))	
65	=IF(K323=0,0,1-(1/(1+(K34*K35)/K32))))		=IF(M323=0,0,1-(1/(1+(M34*M35)/M32))))	=IF(N323=0,0,1-(1/(1+(N34*N35)/N32))))	=IF(O323=0,0,1-(1/(1+(O34*O35)/O32))))	
66	=IF(K323=0,1,(1+(K34*K38)/K30))))		=IF(M323=0,1,(1+(M34*M38)/M30))))	=IF(N323=0,1,(1+(N34*N38)/N30))))	=IF(O323=0,1,(1+(O34*O38)/O30))))	
67	=IF(K323=0,1,(1+(K34*K38)/K31))))		=IF(M323=0,1,(1+(M34*M38)/M31))))	=IF(N323=0,1,(1+(N34*N38)/N31))))	=IF(O323=0,1,(1+(O34*O38)/O31))))	
68	=IF(K323=0,1,(1+(K34*K38)/K32))))		=IF(M323=0,1,(1+(M34*M38)/M32))))	=IF(N323=0,1,(1+(N34*N38)/N32))))	=IF(O323=0,1,(1+(O34*O38)/O32))))	
69	=IF(K323=0,1,(1+(K35*K35)/K30))))		=IF(M323=0,1,(1+(M35*M35)/M30))))	=IF(N323=0,1,(1+(N35*N35)/N30))))	=IF(O323=0,1,(1+(O35*O35)/O30))))	
70	=IF(K323=0,1,(1+(K36*K35)/K31))))		=IF(M323=0,1,(1+(M36*M35)/M31))))	=IF(N323=0,1,(1+(N36*N35)/N31))))	=IF(O323=0,1,(1+(O36*O35)/O31))))	
71	=IF(K323=0,1,(1+(K37*K35)/K32))))		=IF(M323=0,1,(1+(M37*M35)/M32))))	=IF(N323=0,1,(1+(N37*N35)/N32))))	=IF(O323=0,1,(1+(O37*O35)/O32))))	
72	=IF(K323=0,1,(1+(K37*K35)/K30))))		=IF(M323=0,1,(1+(M37*M35)/M30))))	=IF(N323=0,1,(1+(N37*N35)/N30))))	=IF(O323=0,1,(1+(O37*O35)/O30))))	
73	=IF(K323=0,1,(1+(K34*K35)/K31))))		=IF(M323=0,1,(1+(M34*M35)/M31))))	=IF(N323=0,1,(1+(N34*N35)/N31))))	=IF(O323=0,1,(1+(O34*O35)/O31))))	
74	=IF(K323=0,1,(1+(K34*K35)/K32))))		=IF(M323=0,1,(1+(M34*M35)/M32))))	=IF(N323=0,1,(1+(N34*N35)/N32))))	=IF(O323=0,1,(1+(O34*O35)/O32))))	
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56	MSIV Leakage Pathway Combined Elemental Removal Efficiency	
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59		
60	$=1-(1-C60)*(1+H60)*(1-SM60)$	$=1-(1-D60)*(1-B0)*(1-SM60)$
61	$=1-(1-C61)*(1+H61)*(1-SM61)$	$=1-(1-D61)*(1-B1)*(1-SM61)$
62	$=1-(1-C62)*(1+H62)*(1-SM62)$	$=1-(1-D62)*(1-B2)*(1-SM62)$
63	$=1-(1-C63)*(1+H63)*(1-SM63)$	$=1-(1-D63)*(1-B3)*(1-SM63)$
64	$=1-(1-C64)*(1+H64)*(1-SM64)$	$=1-(1-D64)*(1-B4)*(1-SM64)$
65	$=1-(1-C65)*(1+H65)*(1-SM65)$	$=1-(1-D65)*(1-B5)*(1-SM65)$
66		
67	Combined DF	
68	Line A	Line B
69	$=1/(1-D60)$	$=1/(1-R60)$
70	$=1/(1-D61)$	$=1/(1-R61)$
71	$=1/(1-D62)$	$=1/(1-R62)$
72	$=1/(1-D63)$	$=1/(1-R63)$
73	$=1/(1-D64)$	$=1/(1-R64)$
74	$=1/(1-D65)$	$=1/(1-R65)$
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Calculation No. LM-0646, Rev. 1
"Re-analysis of Loss of Coolant Accident (LOCA) Using Alternative Source Term Methodology"
Attachment C
Reanalysis of External Source Gamma Shine to Control Room

1. Purpose

The purpose of this attachment is to reassess gamma shine from sources external to the the control room, in some cases using alternative source terms to assess contained radioactivity. Also, in cases of negligible contributors, this determination may be performed by evaluations of either AST source terms or older TID-14844 based analyses.

2. Historical Analysis Consideration

The dominant radiation source outside of the control room is a Unit 1 vertical run of 14 inch NPS core spray piping that is located 18 inches from the Unit 1 Reactor Enclosure / Control Room wall. This wall is 36 inch thick concrete. The historically determined dose contribution in the control room from this pipe, and other lesser piping contributors, is 4.2 rem whole body. The following changes in analyses reduce this dose contribution.

- The core spray fluid is ECCS water. AST source terms are more favorable because of the reduction in assumed fractions of core iodine released to the suppression pool from 50% to 30%. This is offset only partially by increases in certain other non-halogen, non-noble gas isotopes.
- Doses are evaluated with credit for Control Room occupancy per RG. 1.183 of 1.0 for the first day, 0.6 for the next 3 days, and 0.4 for the following 26 days.
- Dose assessment is performed using the point-kernel method as implemented in MicroShield 5.05.

This same approach is applied to certain RHR piping that can cause control room operator exposure.

3. Dose Evaluations

Dose evaluations are either quantitative, or qualitative where negligible contributions are expected.

3.1. Core Spray Piping and RHR Piping in the Vicinity of Control Room Walls

3.1.1. Piping Contribution to CR Doses

ECCS piping between Elevation 253' and Elevation 283' of the reactor enclosure was evaluated for its potential to cause significant control room operator doses, when they contain design basis accident activity. The floor elevation of the control room is 269'. In each case, the piping size and wall thickness, distances, and available shielding were reviewed. The worst case piping is a portion of the Unit 1 core spray pipe GBB-112 pipe described above. The other Unit 1 core spray pipe on this elevation is well away and would make an insignificant dose contribution. Unit 1 core spray piping bounds Unit 2 conditions.

The RHR piping between Elevations 253' and Elevation 283' that would expose the same position in the control room are portions of GBB-118 (18" NPS), GBB-119 (18" NPS) and a small portion of GBB-105 (16" NPS). These pipes are modeled in 4 segments, as follows:

- A 34 foot horizontal segment of GBB-118 at Elevation 273'6" is modeled. A similar segment of GBB-119 is directly behind this segment and is effectively shielded by the front piping, and is not considered.
- An 8 foot segment of GBB-118 from Elevation 273'6" to Elevation 281'6" is modeled. Again a segment of GBB-119 is directly behind this pipe and is considered shielded.
- A 28'6" segment of GBB-118 and GBB-105 from Elevation 253'0" to Elevation 281'6" is modeled.
- A 20'6" segment of GBB-119 from Elevation 253'0" to Elevation 273'6" is modeled because it can be "seen" from the point in the control room nearest the CS pipe.

3.1.2. Source Terms

The steps required to perform this analysis are:

1. Run RADTRAD with RG 1.183, Table 1 non-noble gas release fractions and timing, with activity released directly to the suppression pool.
2. Have RADTRAD calculate the compartment activity as a function of time. Select a number of time steps and spacing such that source integration can be performed linearly by multiplying the step duration times the average activity over the step based on the activity at the start and end. A total of 53 time steps are used, and linear integration is conservative.
3. Develop and run a program to extract results from the RADTRAD output, output a tabulation of the RADTRAD calculated activities for verification, and then to perform the integration.
4. Use a spreadsheet to take the integrated sources through 1 day, 4 days, and 30 days, and apply occupancy factors and unit conversions to create a MicroShield suitable time integrated source file. *{For example, if a source in uCi/cc is input into MicroShield then doses rates are calculated (e.g. mR/hr). The integrated source input is in uCi - hr /cc. The result is a dose (e.g. in mR).}*
5. Evaluate the need for inclusion of isotopes other than the basic 60 included in standard AST "*.nif" files. This is done by:
 - a. Using the End of Cycle (EOC) ORIGEN-2 core source term originally used for the AST source term development. Decay steps are added to obtain activity as a function of time, with the impacts of decay and daughter ingrowth.
 - b. Time integration of all 800+ fission products, with occupancy credit.
 - c. Apply the time dependent elemental release fractions runs to the core activity to obtain integrated sources in ECCS fluid.
 - d. Sorting the data to identify the important isotopes by source term.
 - e. Selection of additional isotopes for evaluation. Conservatively, a total of 110 isotopes were selected for a set of MicroShield runs.
 - f. Note that some adjustment was necessary for isotopes whose parents were in a group with higher release fractions than the daughters. The adjusted values are shown.
6. Run MicroShield using the above source file to determine Control Room operator doses, with design basis Control Room occupancy at 1 foot from the wall at a position on a line perpendicular from the pipe centerline. Additional runs are made for RHR piping located at ~55 to 60 feet from the 1 ft inside the control room dose point perpendicular to the center of the CS piping in a position where they could also contribute to doses at that location.

3.1.3. Results of Dose Assessment for ECCS Piping to Control Room

Pipe Segments	Integrated 30 day CR Operator Dose (rem EDE) Resulting for ECCS Pipe Gamma Shine
CS Pipe Segment (20 ft)	1.597
GBB-118 Horizontal 34 ft Segment	0.106
GBB-118 Vertical 8 ft Segment	0.041
GBB-118+GBB105 Vertical 28.5 ft Segment	0.020
GBB-119 Vertical 20.5 ft Segment	0.016
Total	1.78

3.2. RERS, SGTS, and CREFAS Filter Shine

1. RERS Filters: As shown on drawing M-0105, Sheet 1, these filters are located in the Reactor Enclosure at Elevation 331. It is shielded from the Control Room by the Drywell and Spent Fuel Pools, several floors, and the Reactor Enclosure wall. In this position, these filters do not contribute any significant dose to control room operators.
2. SGTS Filters: These filters are located approximately 60 feet above the control room and have a total of 4.5 feet of concrete between the filters and control room personnel. Furthermore, flows to the SGTS Filters have been pre-filtered by the RERS filters, which minimizes filter loading compared to a typical BWR. Therefore, the SGTS filters do not contribute any significant dose to control room operators.
3. CREFAS Filters: These filters are located approximately 30 feet above the control room and have a total of 3.5 feet of concrete shielding between the filters and control room personnel. CREFAS filters will have significantly less activity than SGTS filters and dose contributions will be negligible.

3.3. Reactor Enclosure Cloud Shine

The 3 feet of shielding provided by the reactor enclosure / control provides ample protection for Control Room Operators from Reactor Enclosure airborne activity. As a simple test, the LGS Specification for Environmental Service Conditions, Table 4 integrated gamma doses are taken and adjusted for control room occupancy resulting in a calculated unshielded integrated dose of $3.42E4$ rads (treated as rem for this analysis). Two MicroShield runs were made with a 300 foot thick slab source with and without the 3 foot thick concrete shield. An extremely conservative gamma energy of 0.8 MEV was used. The resulting shielding effectiveness is $2.17E-7$, and the calculated control room dose commitment is 0.0074 rem, or negligible. In fact, doses would be expected to be lower because of the relatively confined area between Elevation 253 and 283, and between the drywell and the reactor enclosure wall

3.4. External Cloud Shine

The LGS control room has no exterior walls or overlying structures that are less than 2 feet of concrete. Therefore, the allowance RADTRAD cloud dose model that applies a Geometry Factor to the effects of an infinite cloud as addressed in Federal Guidance Report 12 is considered sufficient.

4. Attachment C Contents

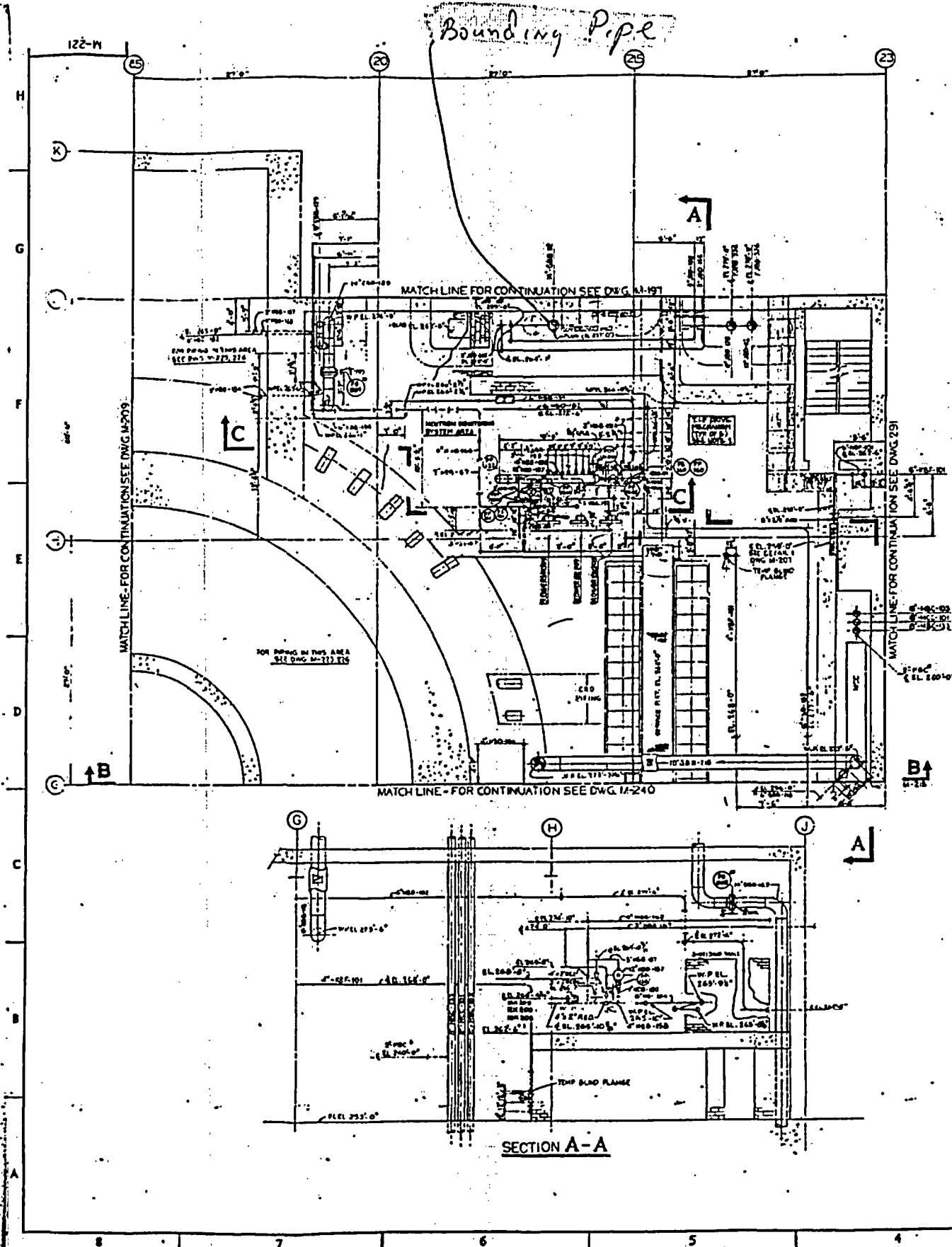
1. This Summary
2. Figures showing source pipes with respect to control room walls.
3. RADTRAD Run with associated Nuclide Inventory File to determine activity in ECCS fluid
4. Source Code Listing for Computer Program to extract data from RADTRAD Run and perform integration

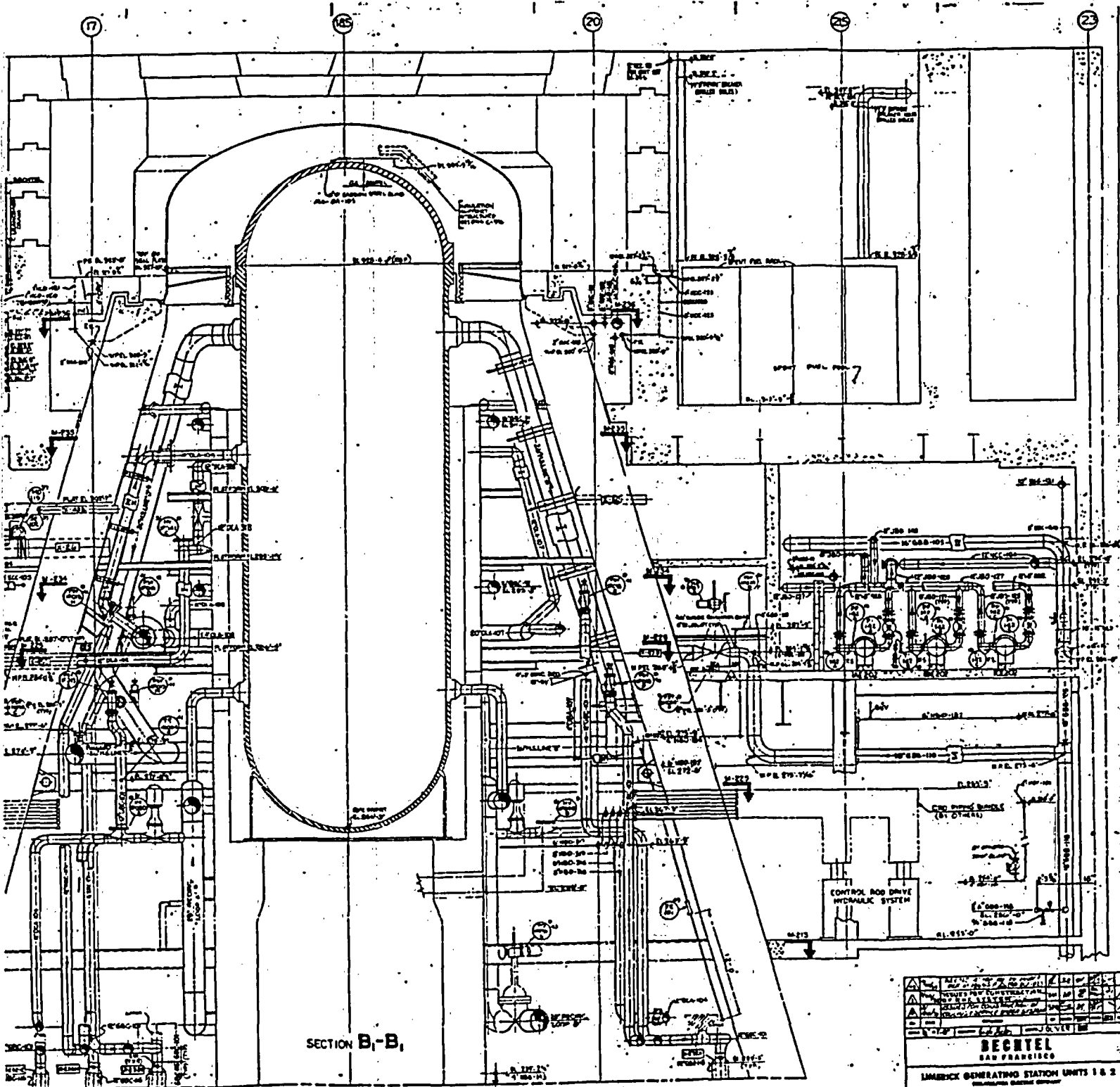
5. Output from above showing extracted data and integrated results (Raw Data).
6. Spreadsheet that takes integrated data and incorporates occupancy credit for 1-4 and 4-30 day periods (Occupancy Adjusted Data), with Formula Version.
7. Source Term Development for ECCS Piping Gamma Shine – Introduction and Evaluation Spreadsheet of Additional Isotopes for Thickly Shielded Sources
8. MicroShield Runs Calculating doses as a function of distance from the CS Line through the CR wall.
9. MicroShield Runs for RHR Pipe.
10. Reactor Enclosure Airborne Activity Test using EQ dose bases, including MicroShield Shielding Effectiveness Test

5. Attachment C References

Drawings Used in Take-offs, and for Determination of Piping Potentially Impacting the Control Room at the bounding location:

1. LGS Drawing M-0215, Rev. 52, Piping and Mechanical Reactor Bldg. Unit No 1, Section B-B Area 11, 12, & 16
2. LGS Drawing M-0221, Rev. 32, Piping and Mechanical Reactor Bldg. Unit No 1, Plan at Elevation 253'0" Area 12
3. LGS Drawing GBB-118-3, Rev. 15, Isometric – Reactor Bld'g Residual Heat Removal – Unit 1
4. LGS Drawing GBB-119-6, Rev. 16, Isometric – Reactor Encl Residual Heat Removal – Unit 1
5. LGS Drawing C-132, Rev. 26, Reactor Building Unit 1 Floor Plan Elevation 253'0" Area 12
6. LGS Drawing M-0214, Rev. 75, Piping and Mechanical Reactor Bldg. Unit No 1, Section A-A Area 15 & 16
7. LGS Drawing M-0216, Rev. 83, Piping and Mechanical Reactor Bldg. Unit No 1, Section C-C Areas 11 & 15
8. LGS Drawing M-0209, Rev. 21, Piping and Mechanical Reactor Bldg. Unit No 1, Plan at Elevation 253'0" Area 11
9. LGS Drawing M-0230, Rev. 24, Piping and Mechanical Reactor Bldg. Unit No 1, Plan at Elevation 253'0" Area 15
10. LGS Drawing M-0240, Rev. 29, Piping and Mechanical Reactor Bldg. Unit No 1, Plan at Elevation 253'0" Area 16
11. LGS Drawing GBB-112-3, Rev. 30, Isometric – Reactor Bldg. Core Spray Cooling – Unit 1
12. LGS Drawing GBB-113-3, Rev. 22, Isometric – Reactor Bldg. Core Spray Cooling – Unit 1





SECTION B-B

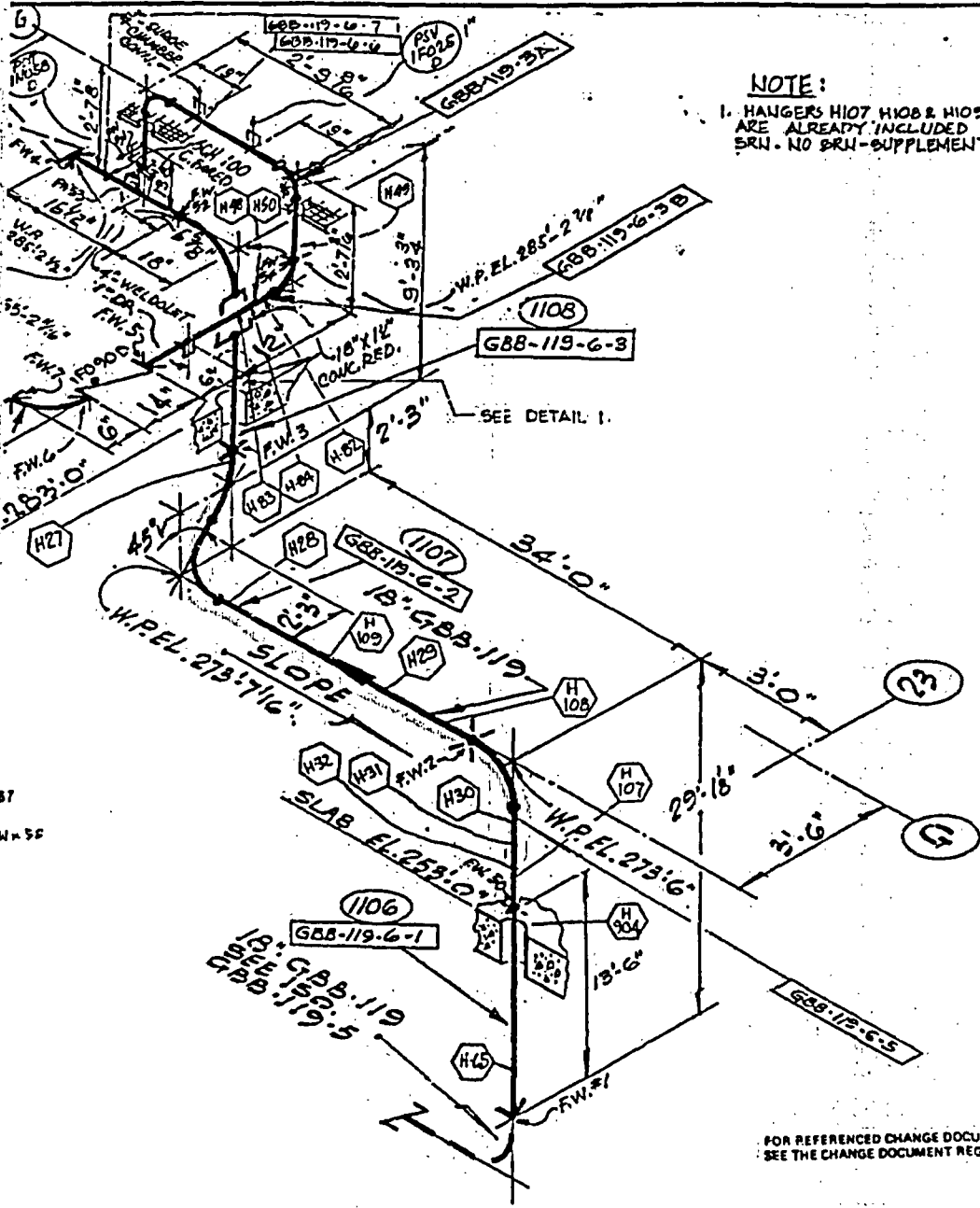
MATCH LINE FOR CONTINUATION
SEE DWG. M-247

REVISIONS	NO.	DATE	BY	CHKD.	DESCRIPTION
BECHTEL SAN FRANCISCO					
LIMBERG GENERATING STATION UNITS 1 & 2 LIMBERG GENERATING STATION					
PIPING AND MECHANICAL REACTOR BLDG. UNIT NO. 1 SECTION B-B AREA 11, 12 & 16					
	8031	M-215			

NOT LISTED
AS SUPPLEMENTED
TO DRAWING

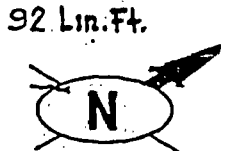
BECHTEL
SAN FRANCISCO

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NOTE:
 1. HANGERS H107, H108 & H109 ARE ALREADY INCLUDED IN SRN. NO BRN-SUPPLEMENT REQ'D

CCN REV. 0
 CALC. NO. PI-10-66



REV. 14 NOTE:
 ADDED HGR H904 H-65
 REVISED VALVE NRS 1F090D (W. 1F090A) 1F089D (WAS 1F089A)
 REVISED LOCATIONS OF HGR'S H85, H-64
REV. 15 NOTE:
 ADDED DETAIL 1, INCORP FSK SHT. 2 REV. 4

REV. 16 NOTE:
 ADDED HANGER H107, H108, & H109, SEE NOTE 1.

REV. 10 NOTE:
 INCORP FSK. REV. 0, (ADDED SPOOL 43B)

REV. 11 NOTE:
 REVISED DIMS TO AGREE WITH INSTALLED RATION. 3'-8 3/4" WAS 3'-10 3/4", 16 1/2" WAS 13 1/4" FIELD TO ADD EXTRA 3" LENGTH TO 16 1/2" C FOR FIELD CUT TO FIT REF. FME 3135 DDC. 052572, ADDED DIM. 14 3/16"

REV. 12 NOTE:
 REV W.P. ELEVATIONS PER FCR M-6247 F. Δ ADDED 4RESS ISO NOTI

REV. 13 NOTE:
 ADDED HGRS H-82, 83, 187 INC FSK SHT 1
 REV 2 4 SHT 2 REV 2.

REFERENCE DWGS.
 M-51 P.I.D.
 M-239 PIPING PLAN AREA
 M-240 " " " "
 M-241 " " " "
 SK-M-1524 1/8 STRESS ISO " REV.

NO.	DATE	REVISIONS	BY	CHKD	APP'D
1		SEE REV 13 NOTE	JL	WP	
2		SEE REV 15 NOTE	JMC	JP	
3		SEE REV 14 NOTE	JMC	JP	
4		SEE REV 16 NOTE	JMC	JP	
5		SEE REV. 10 NOTE	JL	JP	
6		SEE REV. 2 NOTE	WS	JP	
7		ADDED SPOOL SUPPORT	JL	JP	
8		ISSUED FOR FABRICATION	JL	JP	

FOR REFERENCED CHANGE DOCUMENTS SEE THE CHANGE DOCUMENT REGISTER.

PIPING AT SITE

Fabricated By:
 SOUTHWEST FABRICATING
 AND WELDING COMPANY.

BECHTEL
 SAN FRANCISCO

LIMERICK GENERATING STATION
 UNITS 1 & 2
 PHILADELPHIA ELECTRIC COMPANY

ISOMETRIC-REACTOR ENC
RESIDUAL HEAT REMOVAL-LI

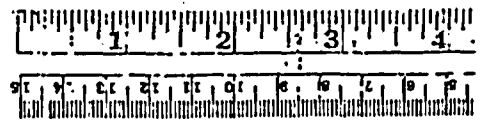
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SPOOL SH. 1106-1109F



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Signed: *[Signature]* Date: *[Date]* Camera Type: *[Type]*
 Lenses Operator: *[Name]*



CCN REV. 0
CALC.
NO. P-10-66

145 L.F.



REV. 14 NOTE:
ADDED HUB, HGG; H70, H78 & H79 PER HANGER MAPS

REV. 15 NOTE:
INCOMP FSK SH? REV. 0, SH. I REV. 2.
RELOCATED HGR. H-703.
DELETED HGR. H31, H32, H70.
10079 VALVE BY
10079 REF. FOR V15, I51F

REVB NOTE:
REVISED D. 109, 110, 111 & 112 TO ADDEE W/IN CALLED PERMITATION PER PHE 3118 DOC CS2572. 3'-3 3/4" DIA 3'-10 3/8" HGT. 16 3/16" DIA 13 1/4" ELEV. 255'-17 3/8" DIA 3'-5 3/8" FIELD TO ADD EXTRA 3" LENGTH TO 20'-11 3/16" FOR FIELD CUT TO FIT, ADDED DIM 2'-2 3/8"

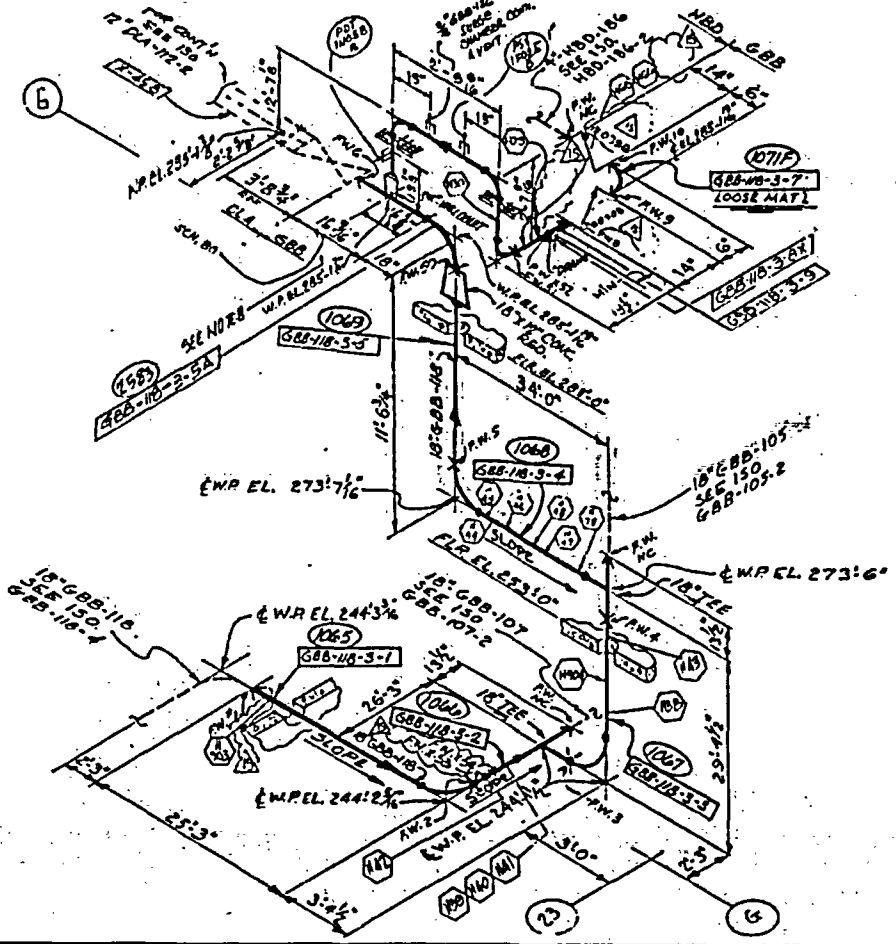
REV. 10 NOTE:
DELETED SPOOL GBB-118-3-6 PER I 10 REQUEST

REV. 12 NOTE:
ADDED HGRS H50 TO H52 (MCCRP FSK SH I REV. 1)

REFERENCE DWGS:

M-51 SH 1072	PER ID
M-220	PIPING PLAN-AREA 12
M-221	" " " " " " " "
M-222	" " " " " " " "
M-223	" " " " " " " "
SK-M-1523A10	STRESS 150
FCR-M15-131F	" " " " " " " "

NO.	DESCRIPTION	DATE	BY	CHKD.	APP.	REV.
1	SEE REV. 15 NOTE					
2	ADD HGRS H47, H48, H49, H50, H51, H52					
3	SEE REV. 12 NOTE					
4	RELOCATED HGR. H-703					
5	DELETED HGR. H31, H32, H70					
6	ADDED HGRS H50 TO H52					
7	ADDED HGRS H50 TO H52					
8	ADDED HGRS H50 TO H52					
9	ADDED HGRS H50 TO H52					
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17	ADDED HGRS H50 TO H52					
18	ADDED HGRS H50 TO H52					
19	ADDED HGRS H50 TO H52					
20	ADDED HGRS H50 TO H52					



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 $2' \frac{13}{16}$
 $+ 1' \frac{1}{16}$

 $3'$
 $281' \frac{6}{16}$
 253

 $8' 6"$
 $\times 2$
 $17' 0"$

CCN REV. 1
CALC.
NO. P-13-51

CCN REV. 0
CALC.
NO. P-10-62

FOR REFERENCED CHANGE DOCUMENTS SEE THE CHANGE DOCUMENT REGISTER.

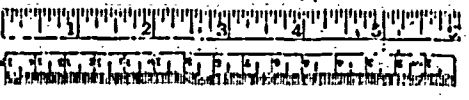
Manufactured by:
SOUTHWEST FABRICATING
& WELDING COMPANY

BECHTEL SAN FRANCISCO	
LIMERICK GENERATING STATION UNITS 1 & 2 PHILADELPHIA ELECTRIC COMPANY	
ISOMETRIC - REACTOR BLD'G RESIDUAL HEAT REMOVAL UNIT I	
8031	G-BB-118-3 15

SPOOL SH 1065-1071F & 2583

16X

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#####
RADTRAD Version 3.03 (Spring 2001) run on 3/13/2003 at 15:24:18
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File information
#####
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```
Plant file           = D:\PBAPS\Pbaps LOCA\RADTRAD\lgscs.psf
Inventory file       = d:\pbaps\pbaps loca\radtrad\lgs core spray pipe source evaluation.nif
Release file         = c:\program files\radtrad3.03\defaults\bwr_dba.rft
Dose Conversion file = c:\program files\radtrad3.03\defaults\fgr11&12.inp
```

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#####  #####  #####  | | | #####  | | | #####
# | | | | | | | | | | | | | | | | | | | | | | |
# | | | | | | | | | | | | | | | | | | | | | | |
#####  #####  #####  | | | #####  | | | #####
# | | | | | | | | | | | | | | | | | | | | | | |
# | | | | | | | | | | | | | | | | | | | | | | |
# | | | | | | | | | | | | | | | | | | | | | | |
# | | | | | | | | | | | | | | | | | | | | | | |
```

```
Radtrad 3.03 4/15/2001
LGS Core Spray Pipe Source Evaluation
Nuclide Inventory File:
d:\pbaps\pbaps loca\radtrad\lgs core spray pipe source evaluation.nif
Plant Power Level:
3.5280E+03
Compartments:
4
Compartment 1:
ECCS Fluid (Torus)
3
1.3870E+05
0
0
0
0
0
Compartment 2:
Reactor Building
3
1.0000E+00
0
0
0
0
0
Compartment 3:
Environment
2
0.0000E+00
0
0
0
0
0
Compartment 4:
Control Room
1
1.7600E+05
0
0
0
0
0
Pathways:
5
Pathway 1:
ECCS Fluid to Reactor Building
```

```

1
2
2
Pathway 2:
Filtered Environment to Control Room
3
4
2
Pathway 3:
Control Room to Environment
4
3
2
Pathway 4:
Unfiltered Environment to Control Room
3
4
2
Pathway 5:
Reactor Building to Environment
2
3
2
End of Plant Model File
Scenario Description Name:

Plant Model Filename:

Source Term:
1
1 1.0000E+00
c:\program files\radtrad3.03\defaults\fgr11&12.inp
c:\program files\radtrad3.03\defaults\bwr_dba.rft
0.0000E+00
1
9.5000E-01 4.8500E-02 1.5000E-03 1.0000E+00
Overlying Pool:
0
0.0000E+00
0
0
0
0
0
Compartments:
4
Compartment 1:
1
1
0
0
0
0
0
0
0
0
Compartment 2:
0
1
0
0
0
0
0
0
0
0
Compartment 3:
0
1
0
0
0
0
0
0
0
0

```

Compartment 4:

0
1
0
0
0
0
0
0
0

Pathways:

5

Pathway 1:

0
0
0
0
0
1
3

0.0000E+00	1.0000E-05	0.0000E+00	0.0000E+00	0.0000E+00
2.4000E+01	1.0000E-05	0.0000E+00	0.0000E+00	0.0000E+00
7.2000E+02	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00

0
0
0
0
0

Pathway 2:

0
0
0
0
0
1
3

0.0000E+00	3.0000E+03	9.9000E+01	9.0000E+01	9.0000E+01
5.0000E-01	3.0000E+03	9.9000E+01	9.0000E+01	9.0000E+01
7.2000E+02	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00

0
0
0
0
0

Pathway 3:

0
0
0
0
0
1
2

0.0000E+00	4.6000E+03	1.0000E+02	1.0000E+02	1.0000E+02
7.2000E+02	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00

0
0
0
0
0

Pathway 4:

0
0
0
0
0
1
2

0.0000E+00	1.6000E+03	0.0000E+00	0.0000E+00	0.0000E+00
7.2000E+02	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00

0
0
0

0
0
0
Pathway 5:
0
0
0
0
0
1
3
0.0000E+00 1.0000E+05 0.0000E+00 0.0000E+00 0.0000E+00
2.5000E-01 1.0000E+05 0.0000E+00 0.0000E+00 0.0000E+00
7.2000E+02 0.0000E+00 0.0000E+00 0.0000E+00 0.0000E+00

0
0
0
0
Dose Locations:
3

Location 1:
EAB
3
1
4
0.0000E+00 4.2500E-04
2.5000E-01 5.3000E-05
7.5000E-01 8.8900E-06
6.0000E+00 0.0000E+00
1
4
0.0000E+00 3.4700E-04
8.0000E+00 1.7500E-04
2.4000E+01 2.3200E-04
7.2000E+02 0.0000E+00

Location 2:
LPZ
3
1
8
0.0000E+00 4.8100E-05
2.5000E-01 1.7500E-05
7.5000E-01 8.8700E-06
2.0000E+00 3.9400E-06
8.0000E+00 2.6200E-06
2.4000E+01 1.0900E-06
9.6000E+01 3.0600E-07
7.2000E+02 0.0000E+00
1
4
0.0000E+00 3.4700E-04
8.0000E+00 1.7500E-04
2.4000E+01 2.3200E-04
7.2000E+02 0.0000E+00

Location 3:
Control Room
4
0
1
2
0.0000E+00 3.4700E-04
7.2000E+02 0.0000E+00
1
4
0.0000E+00 1.0000E+00
2.4000E+01 6.0000E-01
9.6000E+01 4.0000E-01
7.2000E+02 0.0000E+00

Effective Volume Location:
1
7

0.0000E+00	1.1800E-03
2.5000E-01	2.7200E-06
2.0000E+00	1.0000E-09
8.0000E+00	1.0000E-09
2.4000E+01	1.4600E-08
9.6000E+01	4.2100E-09
7.2000E+02	0.0000E+00

Simulation Parameters:

6

0.0000E+00	2.5000E-01
2.0000E+00	5.0000E-01
8.0000E+00	2.0000E+00
2.4000E+01	6.0000E+00
9.6000E+01	4.8000E+01
7.2000E+02	0.0000E+00

Output Filename:

D:\PBAPS\Pbaps LOCA\RADTRAD\lgscs.o1

1

2

1

1

1

End of Scenario File

RADTRAD Version 3.03 (Spring 2001) run on 3/13/2003 at 15:24:18
#####

Plant Description
#####

Number of Nuclides = 60

Inventory Power = 1.0000E+00 MWth
Plant Power Level = 3.5280E+03 MWth

Number of compartments = 4

Compartment information

Compartment number 1 (Source term fraction = 1.0000E+00
)

Name: ECCS Fluid (Torus)

Compartment volume = 1.3870E+05 (Cubic feet)

Compartment type is Normal

Pathways into and out of compartment 1

Exit Pathway Number 1: ECCS Fluid to Reactor Building

Compartment number 2

Name: Reactor Building

Compartment volume = 1.0000E+00 (Cubic feet)

Compartment type is Normal

Pathways into and out of compartment 2

Inlet Pathway Number 1: ECCS Fluid to Reactor Building

Exit Pathway Number 5: Reactor Building to Environment

Compartment number 3

Name: Environment

Compartment type is Environment

Pathways into and out of compartment 3

Inlet Pathway Number 3: Control Room to Environment

Inlet Pathway Number 5: Reactor Building to Environment

Exit Pathway Number 2: Filtered Environment to Control Room

Exit Pathway Number 4: Unfiltered Environment to Control Room

Compartment number 4

Name: Control Room

Compartment volume = 1.7600E+05 (Cubic feet)

Compartment type is Control Room

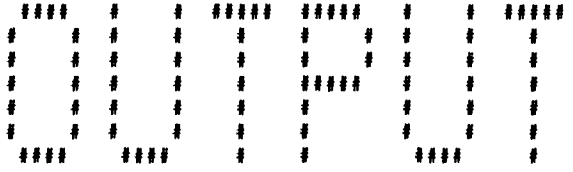
Pathways into and out of compartment 4

Inlet Pathway Number 2: Filtered Environment to Control Room

Inlet Pathway Number 4: Unfiltered Environment to Control Room

Exit Pathway Number 3: Control Room to Environment

Total number of pathways = 5



 Dose, Detailed model and Detailed Inventory Output
 #####

Detailed model information at time (H) = 0.2500

EAB Doses:

Time (h) =	0.2500	Whole Body	Thyroid	TEDE
Delta dose (rem)		1.4105E-06	2.9065E-04	1.3991E-05
Accumulated dose (rem)		1.4105E-06	2.9065E-04	1.3991E-05

LPZ Doses:

Time (h) =	0.2500	Whole Body	Thyroid	TEDE
Delta dose (rem)		1.5963E-07	3.2895E-05	1.5835E-06
Accumulated dose (rem)		1.5963E-07	3.2895E-05	1.5835E-06

Control Room Doses:

Time (h) =	0.2500	Whole Body	Thyroid	TEDE
Delta dose (rem)		8.8670E-09	3.6407E-05	1.5812E-06
Accumulated dose (rem)		8.8670E-09	3.6407E-05	1.5812E-06

ECCS Fluid (Torus) Compartment Nuclide Inventory:

Time (h) =	0.2500	Ci	kg	Atoms	Decay
Rb-86		5.7467E+03	7.0626E-05	4.9456E+20	1.2998E+17
I-131		2.3679E+06	1.9100E-02	8.7802E+22	5.3568E+19
I-132		3.2530E+06	3.1515E-04	1.4378E+21	7.5099E+19
I-133		4.8597E+06	4.2900E-03	1.9425E+22	1.1027E+20
I-134		4.4623E+06	1.6727E-04	7.5174E+20	1.0949E+20
I-135		4.4609E+06	1.2702E-03	5.6663E+21	1.0196E+20
Xe-133		6.5135E+03	3.4797E-05	1.5756E+20	6.2608E+16
Xe-135		7.2791E+04	2.8504E-05	1.2715E+20	7.0284E+17
Cs-134		6.4209E+05	4.9627E-01	2.2303E+24	1.4521E+19
Cs-136		1.7868E+05	2.4380E-03	1.0796E+22	4.0418E+18
Cs-137		4.0025E+05	4.6016E+00	2.0227E+25	9.0516E+18

ECCS Fluid (Torus) Transport Group Inventory:

Time (h) =	0.2500	Atmosphere	Sump	
Noble gases (atoms)		2.8471E+20	0.0000E+00	
Elemental I (atoms)		5.5815E+21	0.0000E+00	
Organic I (atoms)		1.7262E+20	0.0000E+00	
Aerosols (kg)		5.1242E+00	0.0000E+00	
Dose Effective (Ci/cc) I-131 (Thyroid)				8.4780E-04
Dose Effective (Ci/cc) I-131 (ICRP2 Thyroid)				1.0774E-03
Total I (Ci)				1.9404E+07

ECCS Fluid to Reactor Building Transport Group Inventory:

Time (h) =	0.2500	Pathway	
		Filtered	Transported
Noble gases (atoms)		0.0000E+00	7.4277E+10
Elemental I (atoms)		0.0000E+00	3.0266E+12
Organic I (atoms)		0.0000E+00	9.3607E+10
Aerosols (kg)		0.0000E+00	2.7709E-09

Detailed model information at time (H) = 0.5000

EAB Doses:

Time (h) =	0.5000	Whole Body	Thyroid	TEDE
Delta dose (rem)		4.8776E-07	1.0834E-04	5.1780E-06
Accumulated dose (rem)		1.8982E-06	3.9899E-04	1.9169E-05

LPZ Doses:

Time (h) =	0.5000	Whole Body	Thyroid	TEDE
Delta dose (rem)		1.6105E-07	3.5773E-05	1.7097E-06
Accumulated dose (rem)		3.2069E-07	6.8667E-05	3.2932E-06

Control Room Doses:

Time (h) =	0.5000	Whole Body	Thyroid	TEDE
Delta dose (rem)		1.8793E-08	8.2560E-05	3.5849E-06
Accumulated dose (rem)		2.7660E-08	1.1897E-04	5.1661E-06

ECCS Fluid (Torus) Compartment Nuclide Inventory:

Time (h) =	0.5000	Ci	kg	Atoms	Decay
Rb-86		1.1489E+04	1.4120E-04	9.8873E+20	4.5140E+17
I-131		4.7318E+06	3.8167E-02	1.7546E+23	1.8598E+20
I-132		6.2688E+06	6.0732E-04	2.7707E+21	2.5462E+20
I-133		9.6388E+06	8.5088E-03	3.8527E+22	3.8093E+20
I-134		7.3239E+06	2.7454E-04	1.2338E+21	3.3430E+20
I-135		8.6909E+06	2.4747E-03	1.1039E+22	3.4803E+20
Xe-133		2.5928E+04	1.3852E-04	6.2719E+20	5.5773E+17
Xe-135		2.8465E+05	1.1146E-04	4.9723E+20	6.1784E+18
Cs-134		1.2842E+06	9.9253E-01	4.4606E+24	5.0442E+19
Cs-136		3.5717E+05	4.8733E-03	2.1579E+22	1.4035E+19
Cs-137		8.0050E+05	9.2031E+00	4.0454E+25	3.1443E+19

ECCS Fluid (Torus) Transport Group Inventory:

Time (h) =	0.5000	Atmosphere	Sump
Noble gases (atoms)		1.1244E+21	0.0000E+00
Elemental I (atoms)		1.1108E+22	0.0000E+00
Organic I (atoms)		3.4354E+20	0.0000E+00
Aerosols (kg)		1.0248E+01	0.0000E+00
Dose Effective (Ci/cc)	I-131 (Thyroid)		1.6887E-03
Dose Effective (Ci/cc)	I-131 (ICRP2 Thyroid)		2.1342E-03
Total I (Ci)			3.6654E+07

ECCS Fluid to Reactor Building Transport Group Inventory:

	Pathway	
Time (h) =	0.5000	Filtered Transported
Noble gases (atoms)		0.0000E+00 7.0505E+11
Elemental I (atoms)		0.0000E+00 1.2065E+13
Organic I (atoms)		0.0000E+00 3.7314E+11
Aerosols (kg)		0.0000E+00 1.1083E-08

Detailed model information at time (H) = 0.7500

EAB Doses:

Time (h) =	0.7500	Whole Body	Thyroid	TEDE
Delta dose (rem)		8.6089E-07	2.0646E-04	1.0896E-05
Accumulated dose (rem)		2.7591E-06	6.0544E-04	3.0065E-05

LPZ Doses:

Time (h) =	0.7500	Whole Body	Thyroid	TEDE
Delta dose (rem)		2.8426E-07	6.8169E-05	3.5978E-06
Accumulated dose (rem)		6.0494E-07	1.3684E-04	6.8910E-06

Control Room Doses:

Time (h) =	0.7500	Whole Body	Thyroid	TEDE
Delta dose (rem)		1.1785E-08	5.6478E-05	2.4543E-06
Accumulated dose (rem)		3.9445E-08	1.7545E-04	7.6204E-06

ECCS Fluid (Torus) Compartment Nuclide Inventory:

Time (h) =	Ci	kg	Atoms	Decay
0.7500				
Co-58	2.2469E+02	7.0663E-06	7.3369E+19	5.0882E+15
Co-60	2.6901E+02	2.3798E-04	2.3886E+21	6.0914E+15
Rb-86	1.9141E+04	2.3524E-04	1.6472E+21	1.0073E+18
Sr-89	3.2890E+05	1.1321E-02	7.6604E+22	7.4481E+18
Sr-90	3.7373E+04	2.7398E-01	1.8333E+24	8.4628E+17
Sr-91	4.2319E+05	1.1674E-04	7.7258E+20	9.6541E+18
Sr-92	3.8994E+05	3.1023E-05	2.0307E+20	9.0634E+18
Y-90	4.5278E+02	8.3222E-07	5.5686E+18	9.2409E+15
Y-91	4.0689E+03	1.6592E-04	1.0980E+21	9.1918E+16
Y-92	1.7719E+04	1.8415E-06	1.2054E+19	2.0934E+17
Y-93	5.0555E+03	1.5153E-06	9.8122E+18	1.1528E+17
Zr-95	5.2773E+03	2.4565E-04	1.5572E+21	1.1950E+17
Zr-97	5.3107E+03	2.7781E-06	1.7247E+19	1.2076E+17
Nb-95	5.3061E+03	1.3569E-04	8.6018E+20	1.2015E+17
Mo-99	7.4061E+04	1.5442E-04	9.3932E+20	1.6788E+18
Tc-99m	6.5404E+04	1.2438E-05	7.5662E+19	1.4737E+18
Ru-103	6.1735E+04	1.9129E-03	1.1184E+22	1.3980E+18
Ru-105	3.8024E+04	5.6567E-06	3.2443E+19	8.7482E+17
Ru-106	2.5430E+04	7.6009E-03	4.3183E+22	5.7583E+17
Rh-105	4.0453E+04	4.7927E-05	2.7488E+20	9.1537E+17
Sb-127	8.4665E+04	3.1703E-04	1.5033E+21	1.9186E+18
Sb-129	2.2516E+05	4.0041E-05	1.8692E+20	5.1826E+18
Te-127	8.4278E+04	3.1935E-05	1.5143E+20	1.9032E+18
Te-127m	1.1334E+04	1.2016E-03	5.6979E+21	2.5665E+17
Te-129	2.3668E+05	1.1301E-05	5.2759E+19	5.2885E+18
Te-129m	3.7260E+04	1.2368E-03	5.7739E+21	8.4364E+17
Te-131m	1.1179E+05	1.4020E-04	6.4450E+20	2.5374E+18
Te-132	1.1159E+06	3.6758E-03	1.6770E+22	2.5292E+19
I-131	8.6677E+06	6.9915E-02	3.2140E+23	4.3273E+20
I-132	1.1288E+07	1.0935E-03	4.9890E+21	5.8137E+20
I-133	1.7525E+07	1.5470E-02	7.0047E+22	8.8156E+20
I-134	1.1019E+07	4.1305E-04	1.8563E+21	6.7866E+20
I-135	1.5521E+07	4.4196E-03	1.9715E+22	7.9514E+20
Xe-133	1.4095E+05	7.5302E-04	3.4096E+21	3.6452E+18
Xe-135	1.5203E+06	5.9531E-04	2.6556E+21	3.9725E+19
Cs-134	2.1403E+06	1.6542E+00	7.4342E+24	1.1259E+20
Cs-136	5.9495E+05	8.1177E-03	3.5945E+22	3.1316E+19
Cs-137	1.3342E+06	1.5338E+01	6.7424E+25	7.0184E+19
Ba-139	4.1003E+05	2.5067E-05	1.0860E+20	9.7765E+18
Ba-140	5.7479E+05	7.8514E-03	3.3773E+22	1.3019E+19
La-140	7.5642E+03	1.3609E-05	5.8539E+19	1.4656E+17
La-141	4.7805E+03	8.4531E-07	3.6103E+18	1.1021E+17
La-142	3.8041E+03	2.6574E-07	1.1270E+18	9.0203E+16
Ce-141	1.3205E+04	4.6344E-04	1.9794E+21	2.9902E+17
Ce-143	1.2812E+04	1.9293E-05	8.1247E+19	2.9073E+17
Ce-144	1.0571E+04	3.3145E-03	1.3861E+22	2.3938E+17
Pr-143	5.0515E+03	7.5017E-05	3.1592E+20	1.1433E+17
Nd-147	2.1572E+03	2.6666E-05	1.0924E+20	4.8861E+16
Np-239	1.5722E+05	6.7769E-04	1.7076E+21	3.5645E+18
Pu-238	5.2803E+01	3.0843E-03	7.8043E+21	1.1957E+15
Pu-239	3.5284E+00	5.6766E-02	1.4304E+23	7.9895E+13
Pu-240	3.7867E+00	1.6618E-02	4.1699E+22	8.5747E+13
Pu-241	1.8175E+03	1.7643E-02	4.4088E+22	4.1156E+16
Am-241	1.1206E+00	3.2651E-04	8.1588E+20	2.5375E+13
Cm-242	2.8079E+02	8.4721E-05	2.1083E+20	6.3584E+15
Cm-244	3.0599E+01	3.7823E-04	9.3349E+20	6.9289E+14

ECCS Fluid (Torus) Transport Group Inventory:

Time (h) =	Atmosphere	Sump
0.7500		
Noble gases (atoms)	6.0652E+21	0.0000E+00
Elemental I (atoms)	2.0274E+22	0.0000E+00
Organic I (atoms)	6.2702E+20	0.0000E+00
Aerosols (kg)	1.7498E+01	0.0000E+00
Dose Effective (Ci/cc) I-131 (Thyroid)		3.0839E-03
Dose Effective (Ci/cc) I-131 (ICRP2 Thyroid)		3.8798E-03
Total I (Ci)		6.4020E+07

ECCS Fluid to Reactor Building Transport Group Inventory:

Time (h) =	Pathway
0.7500	Filtered Transported
0.7500	
Noble gases (atoms)	0.0000E+00 4.2579E+12

Elemental I (atoms)	0.0000E+00	2.9057E+13
Organic I (atoms)	0.0000E+00	8.9868E+11
Aerosols (kg)	0.0000E+00	2.6087E-08

Detailed model information at time (H) = 1.0000

EAB Doses:

Time (h) = 1.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)	2.1609E-07	5.5411E-05	3.1672E-06
Accumulated dose (rem)	2.9752E-06	6.6085E-04	3.3232E-05

LPZ Doses:

Time (h) = 1.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)	2.1560E-07	5.5287E-05	3.1601E-06
Accumulated dose (rem)	8.2054E-07	1.9212E-04	1.0051E-05

Control Room Doses:

Time (h) = 1.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)	7.6328E-09	3.9620E-05	1.7348E-06
Accumulated dose (rem)	4.7078E-08	2.1507E-04	9.3553E-06

ECCS Fluid (Torus) Compartment Nuclide Inventory:

Time (h) = 1.0000	Ci	kg	Atoms	Decay
Co-58	4.4934E+02	1.4131E-05	1.4672E+20	1.7658E+16
Co-60	5.3801E+02	4.7595E-04	4.7771E+21	2.1141E+16
Rb-86	2.6787E+04	3.2921E-04	2.3053E+21	1.8179E+18
Sr-89	6.5771E+05	2.2639E-02	1.5319E+23	2.5847E+19
Sr-90	7.4746E+04	5.4797E-01	3.6666E+24	2.9371E+18
Sr-91	8.3109E+05	2.2927E-04	1.5172E+21	3.3098E+19
Sr-92	7.3157E+05	5.8203E-05	3.8098E+20	3.0144E+19
Y-90	1.0054E+03	1.8480E-06	1.2365E+19	3.4616E+16
Y-91	8.1585E+03	3.3267E-04	2.2016E+21	3.1955E+17
Y-92	5.1944E+04	5.3982E-06	3.5336E+19	1.1844E+18
Y-93	9.9391E+03	2.9791E-06	1.9291E+19	3.9551E+17
Zr-95	1.0553E+04	4.9124E-04	3.1140E+21	4.1472E+17
Zr-97	1.0513E+04	5.4994E-06	3.4143E+19	4.1623E+17
Nb-95	1.0612E+04	2.7139E-04	1.7203E+21	4.1698E+17
Mo-99	1.4773E+05	3.0803E-04	1.8737E+21	5.8162E+18
Tc-99m	1.3081E+05	2.4877E-05	1.5133E+20	5.1142E+18
Ru-103	1.2345E+05	3.8250E-03	2.2364E+22	4.8514E+18
Ru-105	7.3138E+04	1.0880E-05	6.2403E+19	2.9580E+18
Ru-106	5.0858E+04	1.5202E-02	8.6364E+22	1.9984E+18
Rh-105	8.0876E+04	9.5818E-05	5.4955E+20	3.1763E+18
Sb-127	1.6901E+05	6.3288E-04	3.0010E+21	6.6503E+18
Sb-129	4.3262E+05	7.6932E-05	3.5915E+20	1.7511E+19
Te-127	1.6843E+05	6.3820E-05	3.0262E+20	6.6014E+18
Te-127m	2.2669E+04	2.4033E-03	1.1396E+22	8.9075E+17
Te-129	4.6299E+05	2.2108E-05	1.0321E+20	1.8087E+19
Te-129m	7.4524E+04	2.4738E-03	1.1549E+22	2.9281E+18
Te-131m	2.2230E+05	2.7878E-04	1.2816E+21	8.7722E+18
Te-132	2.2269E+06	7.3352E-03	3.3465E+22	8.7647E+19
I-131	1.2597E+07	1.0161E-01	4.6711E+23	8.1042E+20
I-132	1.6021E+07	1.5521E-03	7.0811E+21	1.0699E+21
I-133	2.5279E+07	2.2315E-02	1.0104E+23	1.6422E+21
I-134	1.3153E+07	4.9305E-04	2.2158E+21	1.1126E+21
I-135	2.1992E+07	6.2622E-03	2.7934E+22	1.4626E+21
Xe-133	3.0653E+05	1.6376E-03	7.4150E+21	1.1586E+19
Xe-135	3.2480E+06	1.2718E-03	5.6735E+21	1.2454E+20
Cs-134	2.9963E+06	2.3159E+00	1.0408E+25	2.0325E+20
Cs-136	8.3248E+05	1.1359E-02	5.0296E+22	5.6509E+19
Cs-137	1.8678E+06	2.1474E+01	9.4393E+25	1.2670E+20
Ba-139	7.2317E+05	4.4212E-05	1.9155E+20	3.1228E+19
Ba-140	1.1489E+06	1.5694E-02	6.7508E+22	4.5165E+19
La-140	1.7563E+04	3.1599E-05	1.3592E+20	5.7077E+17
La-141	9.1487E+03	1.6177E-06	6.9092E+18	3.7141E+17
La-142	6.7993E+03	4.7498E-07	2.0143E+18	2.9063E+17
Ce-141	2.6408E+04	9.2681E-04	3.9584E+21	1.0377E+18
Ce-143	2.5490E+04	3.8383E-05	1.6164E+20	1.0055E+18
Ce-144	2.1142E+04	6.6287E-03	2.7722E+22	8.3078E+17
Pr-143	1.0107E+04	1.5010E-04	6.3209E+20	3.9691E+17
Nd-147	4.3116E+03	5.3297E-05	2.1834E+20	1.6950E+17

Np-239	3.1348E+05	1.3512E-03	3.4047E+21	1.2345E+19
Pu-238	1.0561E+02	6.1687E-03	1.5609E+22	4.1497E+15
Pu-239	7.0570E+00	1.1354E-01	2.8608E+23	2.7729E+14
Pu-240	7.5734E+00	3.3236E-02	8.3397E+22	2.9759E+14
Pu-241	3.6350E+03	3.5287E-02	8.8175E+22	1.4283E+17
Am-241	2.2414E+00	6.5305E-04	1.6318E+21	8.8068E+13
Cm-242	5.6156E+02	1.6944E-04	4.2164E+20	2.2067E+16
Cm-244	6.1199E+01	7.5645E-04	1.8670E+21	2.4047E+15

ECCS Fluid (Torus) Transport Group Inventory:

Time (h) =	1.0000	Atmosphere	Sump	
Noble gases (atoms)		1.3089E+22	0.0000E+00	
Elemental I (atoms)		2.9361E+22	0.0000E+00	
Organic I (atoms)		9.0807E+20	0.0000E+00	
Aerosols (kg)		2.4747E+01	0.0000E+00	
Dose Effective (Ci/cc)	I-131 (Thyroid)			4.4685E-03
Dose Effective (Ci/cc)	I-131 (ICRP2 Thyroid)			5.5978E-03
Total I (Ci)				8.9042E+07

ECCS Fluid to Reactor Building Transport Group Inventory:

	Pathway	
Time (h) =	Filtered	Transported
Noble gases (atoms)	0.0000E+00	1.4211E+13
Elemental I (atoms)	0.0000E+00	5.5927E+13
Organic I (atoms)	0.0000E+00	1.7297E+12
Aerosols (kg)	0.0000E+00	4.8930E-08

Detailed model information at time (H) = 1.2500

EAB Doses:

Time (h) =	1.2500	Whole Body	Thyroid	TEDE
Delta dose (rem)		2.7912E-07	7.6038E-05	4.4920E-06
Accumulated dose (rem)		3.2543E-06	7.3689E-04	3.7724E-05

LPZ Doses:

Time (h) =	1.2500	Whole Body	Thyroid	TEDE
Delta dose (rem)		2.7849E-07	7.5867E-05	4.4819E-06
Accumulated dose (rem)		1.0990E-06	2.6799E-04	1.4533E-05

Control Room Doses:

Time (h) =	1.2500	Whole Body	Thyroid	TEDE
Delta dose (rem)		5.2043E-09	2.9011E-05	1.2958E-06
Accumulated dose (rem)		5.2282E-08	2.4408E-04	1.0651E-05

ECCS Fluid (Torus) Compartment Nuclide Inventory:

Time (h) =	Ci	kg	Atoms	Decay
Co-58	6.7395E+02	2.1195E-05	2.2006E+20	3.7707E+16
Co-60	8.0701E+02	7.1393E-04	7.1656E+21	4.5148E+16
Rb-86	3.4427E+04	4.2310E-04	2.9628E+21	2.8830E+18
Sr-89	9.8643E+05	3.3954E-02	2.2975E+23	5.5193E+19
Sr-90	1.1212E+05	8.2195E-01	5.4999E+24	6.2724E+18
Sr-91	1.2241E+06	3.3768E-04	2.2347E+21	6.9831E+19
Sr-92	1.0294E+06	8.1896E-05	5.3608E+20	6.1718E+19
Y-90	1.6576E+03	3.0467E-06	2.0387E+19	7.9445E+16
Y-91	1.2268E+04	5.0025E-04	3.3105E+21	6.8356E+17
Y-92	9.9670E+04	1.0358E-05	6.7803E+19	3.4374E+18
Y-93	1.4655E+04	4.3926E-06	2.8444E+19	8.3505E+17
Zr-95	1.5828E+04	7.3678E-04	4.6705E+21	8.8560E+17
Zr-97	1.5609E+04	8.1650E-06	5.0691E+19	8.8283E+17
Nb-95	1.5918E+04	4.0708E-04	2.5805E+21	8.9049E+17
Mo-99	2.2102E+05	4.6083E-04	2.8032E+21	1.2399E+19
Tc-99m	1.9620E+05	3.7313E-05	2.2697E+20	1.0921E+19
Ru-103	1.8514E+05	5.7365E-03	3.3540E+22	1.0359E+19
Ru-105	1.0551E+05	1.5696E-05	9.0021E+19	6.1557E+18
Ru-106	7.6286E+04	2.2802E-02	1.2954E+23	4.2678E+18
Rh-105	1.2125E+05	1.4365E-04	8.2388E+20	6.7813E+18
Sb-127	2.5304E+05	9.4754E-04	4.4931E+21	1.4185E+19
Sb-129	6.2342E+05	1.1086E-04	5.1754E+20	3.6415E+19
Te-127	2.5244E+05	9.5654E-05	4.5358E+20	1.4090E+19
Te-127m	3.4005E+04	3.6051E-03	1.7095E+22	1.9023E+18

Te-129	6.7824E+05	3.2386E-05	1.5119E+20	3.8049E+19
Te-129m	1.1179E+05	3.7109E-03	1.7324E+22	6.2534E+18
Te-131m	3.3153E+05	4.1576E-04	1.9113E+21	1.8662E+19
Te-132	3.3330E+06	1.0978E-02	5.0086E+22	1.8690E+20
I-131	1.6520E+07	1.3325E-01	6.1257E+23	1.3188E+21
I-132	2.0489E+07	1.9850E-03	9.0558E+21	1.7111E+21
I-133	3.2903E+07	2.9046E-02	1.3152E+23	2.6585E+21
I-134	1.4167E+07	5.3106E-04	2.3866E+21	1.5929E+21
I-135	2.8117E+07	8.0064E-03	3.5715E+22	2.3386E+21
Xe-133	5.2204E+05	2.7889E-03	1.2628E+22	2.6051E+19
Xe-135	5.4340E+06	2.1279E-03	9.4921E+21	2.7637E+20
Cs-134	3.8524E+06	2.9775E+00	1.3381E+25	3.2241E+20
Cs-136	1.0697E+06	1.4596E-02	6.4631E+22	8.9607E+19
Cs-137	2.4015E+06	2.7609E+01	1.2136E+26	2.0098E+20
Ba-139	9.5660E+05	5.8483E-05	2.5338E+20	6.1461E+19
Ba-140	1.7224E+06	2.3528E-02	1.0120E+23	9.6417E+19
La-140	2.9985E+04	5.3946E-05	2.3205E+20	1.3535E+18
La-141	1.3131E+04	2.3219E-06	9.9168E+18	7.7035E+17
La-142	9.1147E+03	6.3672E-07	2.7003E+18	5.7683E+17
Ce-141	3.9609E+04	1.3901E-03	5.9371E+21	2.2161E+18
Ce-143	3.8034E+04	5.7273E-05	2.4119E+20	2.1397E+18
Ce-144	3.1713E+04	9.9429E-03	4.1581E+22	1.7742E+18
Pr-143	1.5167E+04	2.2523E-04	9.4852E+20	8.4788E+17
Nd-147	6.4632E+03	7.9892E-05	3.2729E+20	3.6183E+17
Np-239	4.6877E+05	2.0207E-03	5.0915E+21	2.6311E+19
Pu-238	1.5841E+02	9.2530E-03	2.3413E+22	8.8620E+15
Pu-239	1.0586E+01	1.7031E-01	4.2914E+23	5.9219E+14
Pu-240	1.1360E+01	4.9854E-02	1.2510E+23	6.3553E+14
Pu-241	5.4525E+03	5.2930E-02	1.3226E+23	3.0503E+17
Am-241	3.3622E+00	9.7962E-04	2.4479E+21	1.8808E+14
Cm-242	8.4230E+02	2.5414E-04	6.3243E+20	4.7124E+16
Cm-244	9.1798E+01	1.1347E-03	2.8005E+21	5.1356E+15

ECCS Fluid (Torus) Transport Group Inventory:

Time (h) =	1.2500	Atmosphere	Sump	
Noble gases (atoms)	2.2120E+22	0.0000E+00		
Elemental I (atoms)	3.8375E+22	0.0000E+00		
Organic I (atoms)	1.1869E+21	0.0000E+00		
Aerosols (kg)	3.1996E+01	0.0000E+00		
Dose Effective (Ci/cc) I-131 (Thyroid)				5.8426E-03
Dose Effective (Ci/cc) I-131 (ICRP2 Thyroid)				7.2906E-03
Total I (Ci)				1.1220E+08

ECCS Fluid to Reactor Building Transport Group Inventory:

	Pathway	
Time (h) =	Filtered	Transported
Noble gases (atoms)	0.0000E+00	3.2783E+13
Elemental I (atoms)	0.0000E+00	9.2592E+13
Organic I (atoms)	0.0000E+00	2.8637E+12
Aerosols (kg)	0.0000E+00	7.9613E-08

Detailed model information at time (H) = 1.5000

EAB Doses:

Time (h) =	1.5000	Whole Body	Thyroid	TEDE
Delta dose (rem)		3.3545E-07	9.6514E-05	5.8042E-06
Accumulated dose (rem)		3.5898E-06	8.3341E-04	4.3529E-05

LPZ Doses:

Time (h) =	1.5000	Whole Body	Thyroid	TEDE
Delta dose (rem)		3.3470E-07	9.6297E-05	5.7911E-06
Accumulated dose (rem)		1.4337E-06	3.6429E-04	2.0324E-05

Control Room Doses:

Time (h) =	1.5000	Whole Body	Thyroid	TEDE
Delta dose (rem)		3.8146E-09	2.2601E-05	1.0450E-06
Accumulated dose (rem)		5.6096E-08	2.6668E-04	1.1696E-05

ECCS Fluid (Torus) Compartment Nuclide Inventory:

Time (h) =	1.5000	Ci	kg	Atoms	Decay
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Co-58	8.9850E+02	2.8257E-05	2.9339E+20	6.5235E+16
Co-60	1.0760E+03	9.5190E-04	9.5541E+21	7.8113E+16
Rb-86	4.2061E+04	5.1692E-04	3.6197E+21	4.2024E+18
Sr-89	1.3151E+06	4.5265E-02	3.0628E+23	9.5484E+19
Sr-90	1.4949E+05	1.0959E+00	7.3332E+24	1.0852E+19
Sr-91	1.6026E+06	4.4211E-04	2.9257E+21	1.1936E+20
Sr-92	1.2875E+06	1.0243E-04	6.7049E+20	1.0241E+20
Y-90	2.4091E+03	4.4280E-06	2.9629E+19	1.4704E+17
Y-91	1.6397E+04	6.6860E-04	4.4246E+21	1.1846E+18
Y-92	1.5825E+05	1.6446E-05	1.0765E+20	7.3850E+18
Y-93	1.9208E+04	5.7571E-06	3.7280E+19	1.4284E+18
Zr-95	2.1102E+04	9.8227E-04	6.2267E+21	1.5321E+18
Zr-97	2.0599E+04	1.0776E-05	6.6899E+19	1.5171E+18
Nb-95	2.1224E+04	5.4277E-04	3.4407E+21	1.5407E+18
Mo-99	2.9392E+05	6.1282E-04	3.7278E+21	2.1415E+19
Tc-99m	2.6156E+05	4.9744E-05	3.0259E+20	1.8894E+19
Ru-103	2.4681E+05	7.6472E-03	4.4711E+22	1.7921E+19
Ru-105	1.3529E+05	2.0127E-05	1.1543E+20	1.0380E+19
Ru-106	1.0171E+05	3.0402E-02	1.7272E+23	7.3839E+18
Rh-105	1.6155E+05	1.9139E-04	1.0977E+21	1.1729E+19
Sb-127	3.3676E+05	1.2610E-03	5.9796E+21	2.4511E+19
Sb-129	7.9854E+05	1.4200E-04	6.6292E+20	6.1359E+19
Te-127	3.3632E+05	1.2744E-04	6.0429E+20	2.4365E+19
Te-127m	4.5341E+04	4.8069E-03	2.2793E+22	3.2913E+18
Te-129	8.8201E+05	4.2116E-05	1.9661E+20	6.4807E+19
Te-129m	1.4906E+05	4.9481E-03	2.3099E+22	1.0820E+19
Te-131m	4.3950E+05	5.5116E-04	2.5337E+21	3.2164E+19
Te-132	4.4341E+06	1.4606E-02	6.6634E+22	3.2289E+20
I-131	2.0436E+07	1.6484E-01	7.5778E+23	1.9577E+21
I-132	2.4709E+07	2.3938E-03	1.0921E+22	2.4964E+21
I-133	4.0399E+07	3.5663E-02	1.6148E+23	3.9261E+21
I-134	1.4394E+07	5.3957E-04	2.4249E+21	2.0890E+21
I-135	3.3911E+07	9.6562E-03	4.3075E+22	3.4120E+21
Xe-133	7.8683E+05	4.2036E-03	1.9033E+22	4.8691E+19
Xe-135	8.0461E+06	3.1507E-03	1.4055E+22	5.0985E+20
Cs-134	4.7084E+06	3.6391E+00	1.6355E+25	4.7008E+20
Cs-136	1.3067E+06	1.7829E-02	7.8949E+22	1.3060E+20
Cs-137	2.9352E+06	3.3745E+01	1.4833E+26	2.9303E+20
Ba-139	1.1248E+06	6.8765E-05	2.9792E+20	9.8099E+19
Ba-140	2.2953E+06	3.1352E-02	1.3486E+23	1.6675E+20
La-140	4.4814E+04	8.0626E-05	3.4682E+20	2.5752E+18
La-141	1.6753E+04	2.9623E-06	1.2652E+19	1.2947E+18
La-142	1.0861E+04	7.5870E-07	3.2176E+18	9.2830E+17
Ce-141	5.2806E+04	1.8533E-03	7.9154E+21	3.8339E+18
Ce-143	5.0447E+04	7.5965E-05	3.1991E+20	3.6892E+18
Ce-144	4.2283E+04	1.3257E-02	5.5441E+22	3.0696E+18
Pr-143	2.0231E+04	3.0043E-04	1.2652E+21	1.4674E+18
Nd-147	8.6119E+03	1.0645E-04	4.3611E+20	6.2575E+17
Np-239	6.2312E+05	2.6860E-03	6.7679E+21	4.5429E+19
Pu-238	2.1121E+02	1.2337E-02	3.1217E+22	1.5333E+16
Pu-239	1.4115E+01	2.2709E-01	5.7220E+23	1.0246E+15
Pu-240	1.5147E+01	6.6473E-02	1.6679E+23	1.0996E+15
Pu-241	7.2700E+03	7.0574E-02	1.7635E+23	5.2776E+17
Am-241	4.4832E+00	1.3062E-03	3.2640E+21	3.2542E+14
Cm-242	1.1230E+03	3.3884E-04	8.4320E+20	8.1529E+16
Cm-244	1.2240E+02	1.5129E-03	3.7340E+21	8.8853E+15

ECCS Fluid (Torus) Transport Group Inventory:

Time (h) =	1.5000	Atmosphere	Sump	
Noble gases (atoms)		3.3088E+22	0.0000E+00	
Elemental I (atoms)		4.7321E+22	0.0000E+00	
Organic I (atoms)		1.4635E+21	0.0000E+00	
Aerosols (kg)		3.9244E+01	0.0000E+00	
Dose Effective (Ci/cc) I-131 (Thyroid)				7.2065E-03
Dose Effective (Ci/cc) I-131 (ICRP2 Thyroid)				8.9603E-03
Total I (Ci)				1.3385E+08

ECCS Fluid to Reactor Building Transport Group Inventory:

	Pathway	
Time (h) =	Filtered	Transported
Noble gases (atoms)	0.0000E+00	6.2113E+13
Elemental I (atoms)	0.0000E+00	1.3897E+14
Organic I (atoms)	0.0000E+00	4.2982E+12
Aerosols (kg)	0.0000E+00	1.1814E-07

Detailed model information at time (H) = 1.7500

EAB Doses:

Time (h) =	1.7500	Whole Body	Thyroid	TEDE
Delta dose (rem)		3.8660E-07	1.1684E-04	7.1056E-06
Accumulated dose (rem)		3.9764E-06	9.5025E-04	5.0634E-05

LPZ Doses:

Time (h) =	1.7500	Whole Body	Thyroid	TEDE
Delta dose (rem)		3.8573E-07	1.1658E-04	7.0897E-06
Accumulated dose (rem)		1.8195E-06	4.8087E-04	2.7414E-05

Control Room Doses:

Time (h) =	1.7500	Whole Body	Thyroid	TEDE
Delta dose (rem)		3.0537E-09	1.9009E-05	9.2068E-07
Accumulated dose (rem)		5.9150E-08	2.8569E-04	1.2617E-05

ECCS Fluid (Torus) Compartment Nuclide Inventory:

Time (h) =	1.7500	Ci	kg	Atoms	Decay
Co-58		1.1230E+03	3.5317E-05	3.6670E+20	1.0024E+17
Co-60		1.3450E+03	1.1899E-03	1.1943E+22	1.2004E+17
Rb-86		4.9689E+04	6.1067E-04	4.2762E+21	5.7758E+18
Sr-89		1.6436E+06	5.6573E-02	3.8280E+23	1.4672E+20
Sr-90		1.8687E+05	1.3699E+00	9.1664E+24	1.6677E+19
Sr-91		1.9671E+06	5.4264E-04	3.5911E+21	1.8122E+20
Sr-92		1.5097E+06	1.2011E-04	7.8620E+20	1.5095E+20
Y-90		3.2597E+03	5.9914E-06	4.0090E+19	2.4071E+17
Y-91		2.0544E+04	8.3770E-04	5.5436E+21	1.8234E+18
Y-92		2.2534E+05	2.3419E-05	1.5329E+20	1.3360E+19
Y-93		2.3601E+04	7.0740E-06	4.5807E+19	2.1702E+18
Zr-95		2.6374E+04	1.2277E-03	7.7825E+21	2.3542E+18
Zr-97		2.5487E+04	1.3332E-05	8.2771E+19	2.3154E+18
Nb-95		2.6530E+04	6.7846E-04	4.3008E+21	2.3676E+18
Mo-99		3.6644E+05	7.6402E-04	4.6475E+21	3.2851E+19
Tc-99m		3.2689E+05	6.2167E-05	3.7816E+20	2.9032E+19
Ru-103		3.0845E+05	9.5572E-03	5.5879E+22	2.7536E+19
Ru-105		1.6264E+05	2.4195E-05	1.3877E+20	1.5546E+19
Ru-106		1.2714E+05	3.8002E-02	2.1590E+23	1.1347E+19
Rh-105		2.0176E+05	2.3904E-04	1.3710E+21	1.8015E+19
Sb-127		4.2016E+05	1.5733E-03	7.4605E+21	3.7619E+19
Sb-129		9.5893E+05	1.7052E-04	7.9606E+20	9.1839E+19
Te-127		4.2006E+05	1.5917E-04	7.5474E+20	3.7422E+19
Te-127m		5.6678E+04	6.0087E-03	2.8492E+22	5.0579E+18
Te-129		1.0741E+06	5.1289E-05	2.3943E+20	9.7986E+19
Te-129m		1.8634E+05	6.1853E-03	2.8875E+22	1.6627E+19
Te-131m		5.4621E+05	6.8498E-04	3.1489E+21	4.9236E+19
Te-132		5.5304E+06	1.8217E-02	8.3108E+22	4.9545E+20
I-131		2.4346E+07	1.9638E-01	9.0275E+23	2.7269E+21
I-132		2.8700E+07	2.7804E-03	1.2685E+22	3.4178E+21
I-133		4.7769E+07	4.2168E-02	1.9094E+23	5.4409E+21
I-134		1.4084E+07	5.2795E-04	2.3727E+21	2.5797E+21
I-135		3.9386E+07	1.1215E-02	5.0029E+22	4.6719E+21
Xe-133		1.1003E+06	5.8783E-03	2.6616E+22	8.1137E+19
Xe-135		1.1054E+07	4.3284E-03	1.9308E+22	8.3858E+20
Cs-134		5.5645E+06	4.3008E+00	1.9328E+25	6.4625E+20
Cs-136		1.5435E+06	2.1060E-02	9.3252E+22	1.7948E+20
Cs-137		3.4688E+06	3.9880E+01	1.7530E+26	4.0286E+20
Ba-139		1.2399E+06	7.5801E-05	3.2841E+20	1.3921E+20
Ba-140		2.8674E+06	3.9168E-02	1.6848E+23	2.5615E+20
La-140		6.2040E+04	1.1162E-04	4.8012E+20	4.3159E+18
La-141		2.0038E+04	3.5431E-06	1.5133E+19	1.9328E+18
La-142		1.2133E+04	8.4755E-07	3.5944E+18	1.3279E+18
Ce-141		6.6002E+04	2.3164E-03	9.8933E+21	5.8912E+18
Ce-143		6.2728E+04	9.4459E-05	3.9779E+20	5.6493E+18
Ce-144		5.2852E+04	1.6571E-02	6.9299E+22	4.7169E+18
Pr-143		2.5298E+04	3.7569E-04	1.5821E+21	2.2555E+18
Nd-147		1.0758E+04	1.3298E-04	5.4477E+20	9.6116E+17
Np-239		7.7651E+05	3.3472E-03	8.4339E+21	6.9668E+19
Pu-238		2.6402E+02	1.5422E-02	3.9022E+22	2.3562E+16
Pu-239		1.7645E+01	2.8387E-01	7.1528E+23	1.5746E+15

Pu-240	1.8934E+01	8.3091E-02	2.0849E+23	1.6897E+15
Pu-241	9.0875E+03	8.8217E-02	2.2044E+23	8.1100E+17
Am-241	5.6043E+00	1.6329E-03	4.0802E+21	5.0010E+14
Cm-242	1.4037E+03	4.2353E-04	1.0540E+21	1.2528E+17
Cm-244	1.5300E+02	1.8911E-03	4.6675E+21	1.3654E+16

ECCS Fluid (Torus) Transport Group Inventory:

Time (h) =	1.7500	Atmosphere	Sump	
Noble gases (atoms)	4.5925E+22	0.0000E+00		
Elemental I (atoms)	5.6201E+22	0.0000E+00		
Organic I (atoms)	1.7382E+21	0.0000E+00		
Aerosols (kg)	4.6492E+01	0.0000E+00		
Dose Effective (Ci/cc) I-131 (Thyroid)				8.5606E-03
Dose Effective (Ci/cc) I-131 (ICRP2 Thyroid)				1.0609E-02
Total I (Ci)				1.5428E+08

ECCS Fluid to Reactor Building Transport Group Inventory:

		Pathway	
Time (h) =	1.7500	Filtered	Transported
Noble gases (atoms)	0.0000E+00	1.0426E+14	
Elemental I (atoms)	0.0000E+00	1.9500E+14	
Organic I (atoms)	0.0000E+00	6.0310E+12	
Aerosols (kg)	0.0000E+00	1.6450E-07	

Detailed model information at time (H) = 2.0000

EAB Doses:

Time (h) =	2.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)		4.3369E-07	1.3703E-04	8.3977E-06
Accumulated dose (rem)		4.4101E-06	1.0873E-03	5.9032E-05

LPZ Doses:

Time (h) =	2.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)		4.3272E-07	1.3672E-04	8.3788E-06
Accumulated dose (rem)		2.2522E-06	6.1759E-04	3.5793E-05

Control Room Doses:

Time (h) =	2.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)		2.6747E-09	1.7310E-05	8.8122E-07
Accumulated dose (rem)		6.1825E-08	3.0300E-04	1.3498E-05

ECCS Fluid (Torus) Compartment Nuclide Inventory:

Time (h) =	2.0000	Ci	kg	Atoms	Decay
Co-58		1.3475E+03	4.2376E-05	4.3999E+20	1.4272E+17
Co-60		1.6140E+03	1.4278E-03	1.4331E+22	1.7092E+17
Rb-86		5.7311E+04	7.0435E-04	4.9322E+21	7.6032E+18
Sr-89		1.9720E+06	6.7878E-02	4.5929E+23	2.0889E+20
Sr-90		2.2424E+05	1.6439E+00	1.1000E+25	2.3746E+19
Sr-91		2.3178E+06	6.3940E-04	4.2314E+21	2.5495E+20
Sr-92		1.6994E+06	1.3520E-04	8.8501E+20	2.0624E+20
Y-90		4.2090E+03	7.7363E-06	5.1766E+19	3.6373E+17
Y-91		2.4708E+04	1.0075E-03	6.6675E+21	2.6004E+18
Y-92		2.9890E+05	3.1064E-05	2.0334E+20	2.1621E+19
Y-93		2.7840E+04	8.3444E-06	5.4034E+19	3.0552E+18
Zr-95		3.1646E+04	1.4731E-03	9.3379E+21	3.3519E+18
Zr-97		3.0272E+04	1.5835E-05	9.8312E+19	3.2745E+18
Nb-95		3.1836E+04	8.1415E-04	5.1610E+21	3.3711E+18
Mo-99		4.3857E+05	9.1442E-04	5.5624E+21	4.6694E+19
Tc-99m		3.9216E+05	7.4579E-05	4.5366E+20	4.1334E+19
Ru-103		3.7007E+05	1.1467E-02	6.7042E+22	3.9203E+19
Ru-105		1.8770E+05	2.7923E-05	1.6015E+20	2.1578E+19
Ru-106		1.5256E+05	4.5601E-02	2.5907E+23	1.6156E+19
Rh-105		2.4186E+05	2.8655E-04	1.6435E+21	2.5638E+19
Sb-127		5.0325E+05	1.8845E-03	8.9358E+21	5.3498E+19
Sb-129		1.1055E+06	1.9658E-04	9.1772E+20	1.2738E+20
Te-127		5.0365E+05	1.9084E-04	9.0494E+20	5.3255E+19
Te-127m		6.8015E+04	7.2106E-03	3.4192E+22	7.2019E+18
Te-129		1.2545E+06	5.9903E-05	2.7965E+20	1.3720E+20
Te-129m		2.2361E+05	7.4226E-03	3.4651E+22	2.3676E+19
Te-131m		6.5167E+05	8.1724E-04	3.7569E+21	6.9838E+19

Te-132	6.6218E+06	2.1811E-02	9.9509E+22	7.0443E+20
I-131	2.8249E+07	2.2786E-01	1.0475E+24	3.6262E+21
I-132	3.2476E+07	3.1462E-03	1.4354E+22	4.4679E+21
I-133	5.5013E+07	4.8564E-02	2.1989E+23	7.1986E+21
I-134	1.3422E+07	5.0314E-04	2.2612E+21	3.0511E+21
I-135	4.4555E+07	1.2687E-02	5.6595E+22	6.1081E+21
Xe-133	1.4618E+06	7.8097E-03	3.5362E+22	1.2500E+20
Xe-135	1.4427E+07	5.6493E-03	2.5201E+22	1.2752E+21
Cs-134	6.4205E+06	4.9624E+00	2.2302E+25	8.5093E+20
Cs-136	1.7799E+06	2.4286E-02	1.0754E+23	2.3624E+20
Cs-137	4.0025E+06	4.6015E+01	2.0227E+26	5.3046E+20
Ba-139	1.3121E+06	8.0216E-05	3.4753E+20	1.8322E+20
Ba-140	3.4390E+06	4.6975E-02	2.0206E+23	3.6459E+20
La-140	8.1647E+04	1.4689E-04	6.3187E+20	6.6552E+18
La-141	2.3008E+04	4.0684E-06	1.7376E+19	2.6740E+18
La-142	1.3011E+04	9.0893E-07	3.8547E+18	1.7615E+18
Ce-141	7.9194E+04	2.7794E-03	1.1871E+22	8.3878E+18
Ce-143	7.4880E+04	1.1276E-04	4.7485E+20	8.0159E+18
Ce-144	6.3421E+04	1.9884E-02	8.3157E+22	6.7162E+18
Pr-143	3.0370E+04	4.5100E-04	1.8993E+21	3.2124E+18
Nd-147	1.2901E+04	1.5947E-04	6.5330E+20	1.3680E+18
Np-239	9.2896E+05	4.0043E-03	1.0090E+22	9.8997E+19
Pu-238	3.1682E+02	1.8506E-02	4.6826E+22	3.3549E+16
Pu-239	2.1174E+01	3.4066E-01	8.5837E+23	2.2420E+15
Pu-240	2.2720E+01	9.9709E-02	2.5019E+23	2.4059E+15
Pu-241	1.0905E+04	1.0586E-01	2.6452E+23	1.1548E+18
Am-241	6.7255E+00	1.9595E-03	4.8965E+21	7.1210E+14
Cm-242	1.6844E+03	5.0822E-04	1.2647E+21	1.7838E+17
Cm-244	1.8360E+02	2.2693E-03	5.6009E+21	1.9442E+16

ECCS Fluid (Torus) Transport Group Inventory:

Time (h) =	2.0000	Atmosphere	Sump	
Noble gases (atoms)	6.0562E+22	0.0000E+00		
Elemental I (atoms)	6.5018E+22	0.0000E+00		
Organic I (atoms)	2.0109E+21	0.0000E+00		
Aerosols (kg)	5.3740E+01	0.0000E+00		
Dose Effective (Ci/cc) I-131 (Thyroid)				9.9051E-03
Dose Effective (Ci/cc) I-131 (ICRP2 Thyroid)				1.2237E-02
Total I (Ci)				1.7372E+08

ECCS Fluid to Reactor Building Transport Group Inventory:

	Pathway	
	Filtered	Transported
Time (h) =	2.0000	
Noble gases (atoms)	0.0000E+00	1.6122E+14
Elemental I (atoms)	0.0000E+00	2.6060E+14
Organic I (atoms)	0.0000E+00	8.0599E+12
Aerosols (kg)	0.0000E+00	2.1870E-07

Detailed model information at time (H) = 2.5000

EAB Doses:

Time (h) =	2.5000	Whole Body	Thyroid	TEDE
Delta dose (rem)		8.6749E-07	2.9309E-04	1.7996E-05
Accumulated dose (rem)		5.2776E-06	1.3804E-03	7.7028E-05

LPZ Doses:

Time (h) =	2.5000	Whole Body	Thyroid	TEDE
Delta dose (rem)		3.8447E-07	1.2989E-04	7.9758E-06
Accumulated dose (rem)		2.6366E-06	7.4749E-04	4.3768E-05

Control Room Doses:

Time (h) =	2.5000	Whole Body	Thyroid	TEDE
Delta dose (rem)		3.4137E-09	2.3420E-05	1.2220E-06
Accumulated dose (rem)		6.5239E-08	3.2642E-04	1.4720E-05

ECCS Fluid (Torus) Compartment Nuclide Inventory:

Time (h) =	Ci	kg	Atoms	Decay
Co-58	1.3472E+03	4.2368E-05	4.3990E+20	2.3245E+17
Co-60	1.6140E+03	1.4278E-03	1.4331E+22	2.7841E+17
Rb-86	5.7267E+04	7.0380E-04	4.9284E+21	1.1419E+19

Sr-89	1.9714E+06	6.7859E-02	4.5916E+23	3.4020E+20
Sr-90	2.2424E+05	1.6439E+00	1.1000E+25	3.8680E+19
Sr-91	2.2348E+06	6.1650E-04	4.0798E+21	4.0653E+20
Sr-92	1.4954E+06	1.1897E-04	7.7876E+20	3.1248E+20
Y-90	5.3980E+03	9.9216E-06	6.6388E+19	6.7559E+17
Y-91	2.4938E+04	1.0169E-03	6.7295E+21	4.2521E+18
Y-92	4.2111E+05	4.3764E-05	2.8647E+20	4.4728E+19
Y-93	2.6901E+04	8.0629E-06	5.2211E+19	4.8779E+18
Zr-95	3.1639E+04	1.4727E-03	9.3358E+21	5.4593E+18
Zr-97	2.9657E+04	1.5514E-05	9.6316E+19	5.2701E+18
Nb-95	3.1836E+04	8.1415E-04	5.1609E+21	5.4913E+18
Mo-99	4.3627E+05	9.0963E-04	5.5333E+21	7.5827E+19
Tc-99m	3.9188E+05	7.4526E-05	4.5334E+20	6.7295E+19
Ru-103	3.6994E+05	1.1462E-02	6.7017E+22	6.3845E+19
Ru-105	1.7361E+05	2.5826E-05	1.4812E+20	3.3603E+19
Ru-106	1.5256E+05	4.5599E-02	2.5906E+23	2.6316E+19
Rh-105	2.4127E+05	2.8584E-04	1.6394E+21	4.1716E+19
Sb-127	5.0136E+05	1.8774E-03	8.9023E+21	8.6951E+19
Sb-129	1.0202E+06	1.8143E-04	8.4697E+20	1.9813E+20
Te-127	5.0280E+05	1.9052E-04	9.0341E+20	8.6652E+19
Te-127m	6.8017E+04	7.2109E-03	3.4193E+22	1.1732E+19
Te-129	1.1864E+06	5.6650E-05	2.6446E+20	2.1654E+20
Te-129m	2.2361E+05	7.4227E-03	3.4652E+22	3.8568E+19
Te-131m	6.4419E+05	8.0785E-04	3.7137E+21	1.1299E+20
Te-132	6.5925E+06	2.1715E-02	9.9069E+22	1.1445E+21
I-131	2.8199E+07	2.2746E-01	1.0456E+24	5.5059E+21
I-132	2.8871E+07	2.7970E-03	1.2761E+22	6.5011E+21
I-133	5.4104E+07	4.7761E-02	2.1626E+23	1.0832E+22
I-134	9.0392E+06	3.3884E-04	1.5228E+21	3.7894E+21
I-135	4.2280E+07	1.2039E-02	5.3705E+22	8.9990E+21
Xe-133	1.6033E+06	8.5657E-03	3.8785E+22	2.2611E+20
Xe-135	1.5272E+07	5.9805E-03	2.6678E+22	2.2553E+21
Cs-134	6.4203E+06	4.9623E+00	2.2301E+25	1.2785E+21
Cs-136	1.7780E+06	2.4259E-02	1.0742E+23	3.5472E+20
Cs-137	4.0025E+06	4.6015E+01	2.0227E+26	7.9702E+20
Ba-139	1.0204E+06	6.2382E-05	2.7027E+20	2.6048E+20
Ba-140	3.4351E+06	4.6922E-02	2.0184E+23	5.9350E+20
La-140	1.1042E+05	1.9867E-04	8.5457E+20	1.2856E+19
La-141	2.1066E+04	3.7250E-06	1.5909E+19	4.1407E+18
La-142	1.0392E+04	7.2594E-07	3.0787E+18	2.5375E+18
Ce-141	7.9169E+04	2.7785E-03	1.1867E+22	1.3661E+19
Ce-143	7.4097E+04	1.1158E-04	4.6989E+20	1.2977E+19
Ce-144	6.3417E+04	1.9883E-02	8.3152E+22	1.0940E+19
Pr-143	3.0416E+04	4.5169E-04	1.9022E+21	5.2360E+18
Nd-147	1.2884E+04	1.5926E-04	6.5244E+20	2.2266E+18
Np-239	9.2329E+05	3.9798E-03	1.0028E+22	1.6068E+20
Pu-238	3.1682E+02	1.8506E-02	4.6826E+22	5.4649E+16
Pu-239	2.1176E+01	3.4068E-01	8.5843E+23	3.6523E+15
Pu-240	2.2720E+01	9.9709E-02	2.5019E+23	3.9191E+15
Pu-241	1.0905E+04	1.0586E-01	2.6452E+23	1.8810E+18
Am-241	6.7265E+00	1.9598E-03	4.8973E+21	1.1600E+15
Cm-242	1.6842E+03	5.0817E-04	1.2646E+21	2.9056E+17
Cm-244	1.8360E+02	2.2693E-03	5.6009E+21	3.1669E+16

ECCS Fluid (Torus) Transport Group Inventory:

Time (h) =	2.5000	Atmosphere	Sump	
Noble gases (atoms)	6.5463E+22	0.0000E+00		
Elemental I (atoms)	6.4499E+22	0.0000E+00		
Organic I (atoms)	1.9948E+21	0.0000E+00		
Aerosols (kg)	5.3738E+01	0.0000E+00		
Dose Effective (Ci/cc) I-131 (Thyroid)				9.8305E-03
Dose Effective (Ci/cc) I-131 (ICRP2 Thyroid)				1.2062E-02
Total I (Ci)				1.6249E+08

ECCS Fluid to Reactor Building-Transport Group Inventory:

	Pathway	
Time (h) =	Filtered	Transported
Noble gases (atoms)	0.0000E+00	2.9650E+14
Elemental I (atoms)	0.0000E+00	4.0078E+14
Organic I (atoms)	0.0000E+00	1.2395E+13
Aerosols (kg)	0.0000E+00	3.3493E-07

Detailed model information at time (H) = 3.0000

EAB Doses:

Time (h) =	3.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)		7.8967E-07	2.9095E-04	1.7838E-05
Accumulated dose (rem)		6.0672E-06	1.6713E-03	9.4866E-05

LPZ Doses:

Time (h) =	3.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)		3.4998E-07	1.2895E-04	7.9057E-06
Accumulated dose (rem)		2.9866E-06	8.7643E-04	5.1674E-05

Control Room Doses:

Time (h) =	3.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)		1.4158E-09	1.0620E-05	5.5523E-07
Accumulated dose (rem)		6.6654E-08	3.3704E-04	1.5275E-05

ECCS Fluid (Torus) Compartment Nuclide Inventory:

Time (h) =	3.0000	Ci	kg	Atoms	Decay
Co-58		1.3469E+03	4.2359E-05	4.3981E+20	3.2217E+17
Co-60		1.6140E+03	1.4278E-03	1.4331E+22	3.8590E+17
Rb-86		5.7222E+04	7.0326E-04	4.9246E+21	1.5231E+19
Sr-89		1.9709E+06	6.7839E-02	4.5903E+23	4.7148E+20
Sr-90		2.2424E+05	1.6439E+00	1.1000E+25	5.3614E+19
Sr-91		2.1547E+06	5.9441E-04	3.9337E+21	5.5269E+20
Sr-92		1.3159E+06	1.0469E-04	6.8528E+20	4.0597E+20
Y-90		6.5805E+03	1.2095E-05	8.0932E+19	1.0664E+18
Y-91		2.5159E+04	1.0259E-03	6.7892E+21	5.9188E+18
Y-92		5.1391E+05	5.3408E-05	3.4960E+20	7.5091E+19
Y-93		2.5993E+04	7.7910E-06	5.0450E+19	6.6391E+18
Zr-95		3.1632E+04	1.4724E-03	9.3337E+21	7.5661E+18
Zr-97		2.9055E+04	1.5199E-05	9.4361E+19	7.2252E+18
Nb-95		3.1835E+04	8.1414E-04	5.1609E+21	7.6115E+18
Mo-99		4.3399E+05	9.0487E-04	5.5043E+21	1.0481E+20
Tc-99m		3.9150E+05	7.4454E-05	4.5290E+20	9.3234E+19
Ru-103		3.6980E+05	1.1458E-02	6.6993E+22	8.8479E+19
Ru-105		1.6057E+05	2.3887E-05	1.3700E+20	4.4726E+19
Ru-106		1.5255E+05	4.5598E-02	2.5905E+23	3.6477E+19
Rh-105		2.4054E+05	2.8499E-04	1.6345E+21	5.7750E+19
Sb-127		4.9949E+05	1.8704E-03	8.8690E+21	1.2028E+20
Sb-129		9.4159E+05	1.6744E-04	7.8167E+20	2.6342E+20
Te-127		5.0193E+05	1.9019E-04	9.0184E+20	1.1999E+20
Te-127m		6.8020E+04	7.2112E-03	3.4194E+22	1.6262E+19
Te-129		1.1191E+06	5.3438E-05	2.4947E+20	2.9150E+20
Te-129m		2.2361E+05	7.4226E-03	3.4651E+22	5.3460E+19
Te-131m		6.3679E+05	7.9857E-04	3.6711E+21	1.5565E+20
Te-132		6.5634E+06	2.1619E-02	9.8631E+22	1.5826E+21
I-131		2.8149E+07	2.2706E-01	1.0438E+24	7.3823E+21
I-132		2.5766E+07	2.4962E-03	1.1388E+22	8.3113E+21
I-133		5.3210E+07	4.6972E-02	2.1268E+23	1.4406E+22
I-134		6.0875E+06	2.2820E-04	1.0255E+21	4.2867E+21
I-135		4.0120E+07	1.1424E-02	5.0961E+22	1.1742E+22
Xe-133		1.7421E+06	9.3069E-03	4.2141E+22	3.3657E+20
Xe-135		1.6016E+07	6.2715E-03	2.7976E+22	3.2889E+21
Cs-134		6.4202E+06	4.9622E+00	2.2301E+25	1.7061E+21
Cs-136		1.7760E+06	2.4233E-02	1.0730E+23	4.7307E+20
Cs-137		4.0025E+06	4.6015E+01	2.0227E+26	1.0636E+21
Ba-139		7.9352E+05	4.8513E-05	2.1018E+20	3.2057E+20
Ba-140		3.4312E+06	4.6869E-02	2.0161E+23	8.2215E+20
La-140		1.3892E+05	2.4994E-04	1.0751E+21	2.0964E+19
La-141		1.9288E+04	3.4105E-06	1.4566E+19	5.4836E+18
La-142		8.2997E+03	5.7979E-07	2.4588E+18	3.1574E+18
Ce-141		7.9142E+04	2.7776E-03	1.1863E+22	1.8933E+19
Ce-143		7.3323E+04	1.1041E-04	4.6498E+20	1.7886E+19
Ce-144		6.3414E+04	1.9882E-02	8.3148E+22	1.5163E+19
Pr-143		3.0463E+04	4.5238E-04	1.9051E+21	7.2628E+18
Nd-147		1.2867E+04	1.5905E-04	6.5158E+20	3.0841E+18
Np-239		9.1764E+05	3.9555E-03	9.9668E+21	2.2198E+20
Pu-238		3.1682E+02	1.8506E-02	4.6826E+22	7.5750E+16
Pu-239		2.1177E+01	3.4071E-01	8.5849E+23	5.0626E+15
Pu-240		2.2720E+01	9.9709E-02	2.5019E+23	5.4323E+15
Pu-241		1.0905E+04	1.0586E-01	2.6452E+23	2.6073E+18
Am-241		6.7275E+00	1.9601E-03	4.8980E+21	1.6081E+15

Cm-242	1.6841E+03	5.0813E-04	1.2645E+21	4.0272E+17
Cm-244	1.8359E+02	2.2693E-03	5.6009E+21	4.3897E+16

ECCS Fluid (Torus) Transport Group Inventory:

Time (h) =	3.0000	Atmosphere	Sump	
Noble gases (atoms)	7.0117E+22	0.0000E+00		
Elemental I (atoms)	6.4013E+22	0.0000E+00		
Organic I (atoms)	1.9798E+21	0.0000E+00		
Aerosols (kg)	5.3735E+01	0.0000E+00		
Dose Effective (Ci/cc) I-131 (Thyroid)				9.7586E-03
Dose Effective (Ci/cc) I-131 (ICRP2 Thyroid)				1.1901E-02
Total I (Ci)				1.5333E+08

ECCS Fluid to Reactor Building Transport Group Inventory:

		Pathway	
Time (h) =	3.0000	Filtered	Transported
Noble gases (atoms)	0.0000E+00	4.4216E+14	
Elemental I (atoms)	0.0000E+00	5.3986E+14	
Organic I (atoms)	0.0000E+00	1.6697E+13	
Aerosols (kg)	0.0000E+00	4.5116E-07	

Detailed model information at time (H) = 3.5000

EAB Doses:

Time (h) =	3.5000	Whole Body	Thyroid	TEDE
Delta dose (rem)		7.2773E-07	2.8889E-04	1.7700E-05
Accumulated dose (rem)		6.7950E-06	1.9602E-03	1.1257E-04

LPZ Doses:

Time (h) =	3.5000	Whole Body	Thyroid	TEDE
Delta dose (rem)		3.2253E-07	1.2804E-04	7.8444E-06
Accumulated dose (rem)		3.3091E-06	1.0045E-03	5.9518E-05

Control Room Doses:

Time (h) =	3.5000	Whole Body	Thyroid	TEDE
Delta dose (rem)		5.9516E-10	4.8203E-06	2.5254E-07
Accumulated dose (rem)		6.7250E-08	3.4186E-04	1.5528E-05

ECCS Fluid (Torus) Compartment Nuclide Inventory:

Time (h) =	3.5000	Ci	kg	Atoms	Decay
Co-58		1.3467E+03	4.2350E-05	4.3972E+20	4.1186E+17
Co-60		1.6140E+03	1.4278E-03	1.4331E+22	4.9339E+17
Rb-86		5.7178E+04	7.0272E-04	4.9208E+21	1.9041E+19
Sr-89		1.9703E+06	6.7820E-02	4.5890E+23	6.0272E+20
Sr-90		2.2424E+05	1.6439E+00	1.1000E+25	6.8548E+19
Sr-91		2.0775E+06	5.7312E-04	3.7927E+21	6.9361E+20
Sr-92		1.1579E+06	9.2122E-05	6.0301E+20	4.8823E+20
Y-90		7.7566E+03	1.4257E-05	9.5396E+19	1.5358E+18
Y-91		2.5372E+04	1.0346E-03	6.8467E+21	7.6001E+18
Y-92		5.8219E+05	6.0504E-05	3.9605E+20	1.1090E+20
Y-93		2.5116E+04	7.5282E-06	4.8748E+19	8.3408E+18
Zr-95		3.1624E+04	1.4721E-03	9.3316E+21	9.6726E+18
Zr-97		2.8466E+04	1.4890E-05	9.2446E+19	9.1405E+18
Nb-95		3.1835E+04	8.1413E-04	5.1609E+21	9.7316E+18
Mo-99		4.3172E+05	9.0013E-04	5.4755E+21	1.3363E+20
Tc-99m		3.9103E+05	7.4365E-05	4.5236E+20	1.1915E+20
Ru-103		3.6966E+05	1.1454E-02	6.6968E+22	1.1310E+20
Ru-105		1.4851E+05	2.2094E-05	1.2671E+20	5.5013E+19
Ru-106		1.5254E+05	4.5596E-02	2.5904E+23	4.6636E+19
Rh-105		2.3971E+05	2.8399E-04	1.6288E+21	7.3732E+19
Sb-127		4.9762E+05	1.8634E-03	8.8358E+21	1.5348E+20
Sb-129		8.6900E+05	1.5453E-04	7.2141E+20	3.2368E+20
Te-127		5.0103E+05	1.8985E-04	9.0023E+20	1.5327E+20
Te-127m		6.8023E+04	7.2115E-03	3.4196E+22	2.0792E+19
Te-129		1.0538E+06	5.0317E-05	2.3490E+20	3.6214E+20
Te-129m		2.2360E+05	7.4223E-03	3.4649E+22	6.8351E+19
Te-131m		6.2947E+05	7.8940E-04	3.6289E+21	1.9781E+20
Te-132		6.5344E+06	2.1523E-02	9.8195E+22	2.0187E+21
I-131		2.8100E+07	2.2666E-01	1.0420E+24	9.2553E+21
I-132		2.3092E+07	2.2371E-03	1.0206E+22	9.9295E+21

I-133	5.2331E+07	4.6196E-02	2.0917E+23	1.7920E+22
I-134	4.0997E+06	1.5368E-04	6.9066E+20	4.6216E+21
I-135	3.8071E+07	1.0841E-02	4.8358E+22	1.4345E+22
Xe-133	1.8781E+06	1.0033E-02	4.5430E+22	4.5620E+20
Xe-135	1.6664E+07	6.5253E-03	2.9109E+22	4.3691E+21
Cs-134	6.4201E+06	4.9621E+00	2.2300E+25	2.1337E+21
Cs-136	1.7741E+06	2.4206E-02	1.0718E+23	5.9129E+20
Cs-137	4.0025E+06	4.6015E+01	2.0227E+26	1.3302E+21
Ba-139	6.1710E+05	3.7727E-05	1.6345E+20	3.6730E+20
Ba-140	3.4273E+06	4.6816E-02	2.0138E+23	1.0505E+21
La-140	1.6714E+05	3.0071E-04	1.2935E+21	3.0960E+19
La-141	1.7660E+04	3.1227E-06	1.3337E+19	6.7132E+18
La-142	6.6287E+03	4.6306E-07	1.9638E+18	3.6524E+18
Ce-141	7.9115E+04	2.7766E-03	1.1859E+22	2.4203E+19
Ce-143	7.2557E+04	1.0926E-04	4.6012E+20	2.2744E+19
Ce-144	6.3411E+04	1.9881E-02	8.3144E+22	1.9387E+19
Pr-143	3.0508E+04	4.5305E-04	1.9079E+21	9.2926E+18
Nd-147	1.2850E+04	1.5884E-04	6.5073E+20	3.9405E+18
Np-239	9.1203E+05	3.9313E-03	9.9058E+21	2.8291E+20
Pu-238	3.1682E+02	1.8506E-02	4.6827E+22	9.6850E+16
Pu-239	2.1179E+01	3.4073E-01	8.5855E+23	6.4731E+15
Pu-240	2.2720E+01	9.9709E-02	2.5019E+23	6.9455E+15
Pu-241	1.0905E+04	1.0586E-01	2.6452E+23	3.3336E+18
Am-241	6.7285E+00	1.9604E-03	4.8987E+21	2.0561E+15
Cm-242	1.6839E+03	5.0808E-04	1.2644E+21	5.1487E+17
Cm-244	1.8359E+02	2.2693E-03	5.6009E+21	5.6124E+16

ECCS Fluid (Torus) Transport Group Inventory:

Time (h) =	3.5000	Atmosphere	Sump	
Noble gases (atoms)	7.4539E+22	0.0000E+00		
Elemental I (atoms)	6.3553E+22	0.0000E+00		
Organic I (atoms)	1.9656E+21	0.0000E+00		
Aerosols (kg)	5.3733E+01	0.0000E+00		
Dose Effective (Ci/cc) I-131 (Thyroid)				9.6890E-03
Dose Effective (Ci/cc) I-131 (ICRP2 Thyroid)				1.1752E-02
Total I (Ci)				1.4569E+08

ECCS Fluid to Reactor Building Transport Group Inventory:

	Pathway	
Time (h) =	Filtered	Transported
3.5000		
Noble gases (atoms)	0.0000E+00	5.9768E+14
Elemental I (atoms)	0.0000E+00	6.7792E+14
Organic I (atoms)	0.0000E+00	2.0966E+13
Aerosols (kg)	0.0000E+00	5.6738E-07

Detailed model information at time (H) = 4.0000

EAB Doses:

Time (h) =	4.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)		6.7741E-07	2.8689E-04	1.7576E-05
Accumulated dose (rem)		7.4724E-06	2.2471E-03	1.3014E-04

LPZ Doses:

Time (h) =	4.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)		3.0022E-07	1.2715E-04	7.7897E-06
Accumulated dose (rem)		3.6094E-06	1.1316E-03	6.7308E-05

Control Room Doses:

Time (h) =	4.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)		2.5324E-10	2.1916E-06	1.1509E-07
Accumulated dose (rem)		6.7503E-08	3.4405E-04	1.5643E-05

ECCS Fluid (Torus) Compartment Nuclide Inventory:

Time (h) =	4.0000	Ci	kg	Atoms	Decay
Co-58		1.3464E+03	4.2342E-05	4.3963E+20	5.0154E+17
Co-60		1.6140E+03	1.4278E-03	1.4331E+22	6.0088E+17
Rb-86		5.7134E+04	7.0217E-04	4.9170E+21	2.2847E+19
Sr-89		1.9698E+06	6.7801E-02	4.5877E+23	7.3393E+20
Sr-90		2.2424E+05	1.6439E+00	1.1000E+25	8.3483E+19
Sr-91		2.0031E+06	5.5259E-04	3.6569E+21	8.2948E+20

Sr-92	1.0189E+06	8.1063E-05	5.3062E+20	5.6062E+20
Y-90	8.9264E+03	1.6407E-05	1.0978E+20	2.0833E+18
Y-91	2.5578E+04	1.0430E-03	6.9021E+21	9.2954E+18
Y-92	6.3016E+05	6.5489E-05	4.2868E+20	1.5066E+20
Y-93	2.4269E+04	7.2742E-06	4.7104E+19	9.9852E+18
Zr-95	3.1617E+04	1.4717E-03	9.3295E+21	1.1779E+19
Zr-97	2.7888E+04	1.4588E-05	9.0569E+19	1.1017E+19
Nb-95	3.1835E+04	8.1413E-04	5.1608E+21	1.1852E+19
Mo-99	4.2945E+05	8.9541E-04	5.4468E+21	1.6231E+20
Tc-99m	3.9047E+05	7.4259E-05	4.5171E+20	1.4503E+20
Ru-103	3.6953E+05	1.1450E-02	6.6944E+22	1.3772E+20
Ru-105	1.3736E+05	2.0435E-05	1.1720E+20	6.4528E+19
Ru-106	1.5254E+05	4.5594E-02	2.5903E+23	5.6795E+19
Rh-105	2.3876E+05	2.8288E-04	1.6224E+21	8.9657E+19
Sb-127	4.9575E+05	1.8564E-03	8.8027E+21	1.8656E+20
Sb-129	8.0201E+05	1.4262E-04	6.6580E+20	3.7930E+20
Te-127	5.0011E+05	1.8950E-04	8.9857E+20	1.8649E+20
Te-127m	6.8026E+04	7.2118E-03	3.4197E+22	2.5322E+19
Te-129	9.9102E+05	4.7322E-05	2.2091E+20	4.2863E+20
Te-129m	2.2358E+05	7.4217E-03	3.4647E+22	8.3242E+19
Te-131m	6.2224E+05	7.8033E-04	3.5872E+21	2.3949E+20
Te-132	6.5055E+06	2.1428E-02	9.7760E+22	2.4529E+21
I-131	2.8050E+07	2.2626E-01	1.0401E+24	1.1125E+22
I-132	2.0788E+07	2.0139E-03	9.1879E+21	1.1382E+22
I-133	5.1466E+07	4.5432E-02	2.0571E+23	2.1376E+22
I-134	2.7610E+06	1.0350E-04	4.6513E+20	4.8471E+21
I-135	3.6126E+07	1.0287E-02	4.5888E+22	1.6816E+22
Xe-133	2.0113E+06	1.0745E-02	4.8654E+22	5.8481E+20
Xe-135	1.7224E+07	6.7447E-03	3.0087E+22	5.4901E+21
Cs-134	6.4200E+06	4.9620E+00	2.2300E+25	2.5613E+21
Cs-136	1.7721E+06	2.4179E-02	1.0707E+23	7.0937E+20
Cs-137	4.0025E+06	4.6015E+01	2.0227E+26	1.5967E+21
Ba-139	4.7991E+05	2.9340E-05	1.2711E+20	4.0364E+20
Ba-140	3.4234E+06	4.6763E-02	2.0115E+23	1.2787E+21
La-140	1.9509E+05	3.5098E-04	1.5098E+21	4.2828E+19
La-141	1.6169E+04	2.8591E-06	1.2211E+19	7.8389E+18
La-142	5.2942E+03	3.6983E-07	1.5684E+18	4.0478E+18
Ce-141	7.9088E+04	2.7756E-03	1.1855E+22	2.9471E+19
Ce-143	7.1799E+04	1.0812E-04	4.5532E+20	2.7551E+19
Ce-144	6.3408E+04	1.9880E-02	8.3140E+22	2.3610E+19
Pr-143	3.0552E+04	4.5371E-04	1.9107E+21	1.1325E+19
Nd-147	1.2833E+04	1.5863E-04	6.4987E+20	4.7958E+18
Np-239	9.0646E+05	3.9073E-03	9.8453E+21	3.4346E+20
Pu-238	3.1682E+02	1.8506E-02	4.6827E+22	1.1795E+17
Pu-239	2.1180E+01	3.4076E-01	8.5861E+23	7.8836E+15
Pu-240	2.2720E+01	9.9709E-02	2.5019E+23	8.4586E+15
Pu-241	1.0905E+04	1.0586E-01	2.6452E+23	4.0598E+18
Am-241	6.7295E+00	1.9607E-03	4.8994E+21	2.5043E+15
Cm-242	1.6838E+03	5.0804E-04	1.2642E+21	6.2702E+17
Cm-244	1.8359E+02	2.2693E-03	5.6009E+21	6.8351E+16

ECCS Fluid (Torus) Transport Group Inventory:

Time (h) =	4.0000	Atmosphere	Sump	
Noble gases (atoms)	7.8741E+22	0.0000E+00		
Elemental I (atoms)	6.3116E+22	0.0000E+00		
Organic I (atoms)	1.9521E+21	0.0000E+00		
Aerosols (kg)	5.3730E+01	0.0000E+00		
Dose Effective (Ci/cc)	I-131 (Thyroid)		9.6216E-03	
Dose Effective (Ci/cc)	I-131 (ICRP2 Thyroid)		1.1612E-02	
Total I (Ci)			1.3919E+08	

ECCS Fluid to Reactor Building Transport Group Inventory:

	Pathway	
Time (h) =	Filtered	Transported
Noble gases (atoms)	0.0000E+00	7.6258E+14
Elemental I (atoms)	0.0000E+00	8.1500E+14
Organic I (atoms)	0.0000E+00	2.5206E+13
Aerosols (kg)	0.0000E+00	6.8360E-07

Detailed model information at time (H) = 4.5000

EAB Doses:

Time (h) =	4.5000	Whole Body	Thyroid	TEDE
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Delta dose (rem)	6.3570E-07	2.8496E-04	1.7464E-05
Accumulated dose (rem)	8.1081E-06	2.5321E-03	1.4761E-04

LPZ Doses:

Time (h) =	4.5000	Whole Body	Thyroid	TEDE
Delta dose (rem)		2.8174E-07	1.2629E-04	7.7401E-06
Accumulated dose (rem)		3.8911E-06	1.2579E-03	7.5048E-05

Control Room Doses:

Time (h) =	4.5000	Whole Body	Thyroid	TEDE
Delta dose (rem)		1.0905E-10	9.9998E-07	5.2659E-08
Accumulated dose (rem)		6.7612E-08	3.4505E-04	1.5696E-05

ECCS Fluid (Torus) Compartment Nuclide Inventory:

Time (h) =	Ci	kg	Atoms	Decay
Co-58	1.3461E+03	4.2333E-05	4.3954E+20	5.9120E+17
Co-60	1.6140E+03	1.4278E-03	1.4331E+22	7.0837E+17
Rb-86	5.7090E+04	7.0163E-04	4.9131E+21	2.6651E+19
Sr-89	1.9692E+06	6.7781E-02	4.5864E+23	8.6510E+20
Sr-90	2.2424E+05	1.6439E+00	1.1000E+25	9.8417E+19
Sr-91	1.9314E+06	5.3279E-04	3.5259E+21	9.6048E+20
Sr-92	8.9659E+05	7.1331E-05	4.6692E+20	6.2432E+20
Y-90	1.0090E+04	1.8545E-05	1.2409E+20	2.7085E+18
Y-91	2.5775E+04	1.0510E-03	6.9554E+21	1.1004E+19
Y-92	6.6138E+05	6.8733E-05	4.4992E+20	1.9313E+20
Y-93	2.3450E+04	7.0288E-06	4.5515E+19	1.1574E+19
Zr-95	3.1610E+04	1.4714E-03	9.3274E+21	1.3884E+19
Zr-97	2.7322E+04	1.4292E-05	8.8731E+19	1.2855E+19
Nb-95	3.1835E+04	8.1412E-04	5.1608E+21	1.3972E+19
Mo-99	4.2721E+05	8.9073E-04	5.4183E+21	1.9084E+20
Tc-99m	3.8983E+05	7.4138E-05	4.5098E+20	1.7087E+20
Ru-103	3.6939E+05	1.1446E-02	6.6919E+22	1.6232E+20
Ru-105	1.2705E+05	1.8900E-05	1.0840E+20	7.3328E+19
Ru-106	1.5253E+05	4.5592E-02	2.5902E+23	6.6954E+19
Rh-105	2.3772E+05	2.8165E-04	1.6153E+21	1.0552E+20
Sb-127	4.9390E+05	1.8494E-03	8.7698E+21	2.1952E+20
Sb-129	7.4018E+05	1.3163E-04	6.1447E+20	4.3063E+20
Te-127	4.9916E+05	1.8914E-04	8.9687E+20	2.1965E+20
Te-127m	6.8029E+04	7.2121E-03	3.4199E+22	2.9853E+19
Te-129	9.3132E+05	4.4471E-05	2.0760E+20	4.9114E+20
Te-129m	2.2356E+05	7.4209E-03	3.4643E+22	9.8131E+19
Te-131m	6.1510E+05	7.7137E-04	3.5460E+21	2.8070E+20
Te-132	6.4767E+06	2.1333E-02	9.7328E+22	2.8852E+21
I-131	2.8001E+07	2.2586E-01	1.0383E+24	1.2992E+22
I-132	1.8802E+07	1.8215E-03	8.3100E+21	1.2692E+22
I-133	5.0616E+07	4.4682E-02	2.0231E+23	2.4776E+22
I-134	1.8594E+06	6.9701E-05	3.1325E+20	4.9990E+21
I-135	3.4281E+07	9.7614E-03	4.3544E+22	1.9160E+22
Xe-133	2.1420E+06	1.1443E-02	5.1814E+22	7.2222E+20
Xe-135	1.7703E+07	6.9323E-03	3.0924E+22	6.6460E+21
Cs-134	6.4199E+06	4.9619E+00	2.2299E+25	2.9888E+21
Cs-136	1.7702E+06	2.4153E-02	1.0695E+23	8.2733E+20
Cs-137	4.0025E+06	4.6015E+01	2.0227E+26	1.8633E+21
Ba-139	3.7321E+05	2.2817E-05	9.8853E+19	4.3190E+20
Ba-140	3.4196E+06	4.6710E-02	2.0092E+23	1.5065E+21
La-140	2.2276E+05	4.0077E-04	1.7239E+21	5.6547E+19
La-141	1.4804E+04	2.6177E-06	1.1180E+19	8.8697E+18
La-142	4.2283E+03	2.9537E-07	1.2527E+18	4.3635E+18
Ce-141	7.9059E+04	2.7747E-03	1.1851E+22	3.4737E+19
Ce-143	7.1049E+04	1.0699E-04	4.5056E+20	3.2307E+19
Ce-144	6.3404E+04	1.9879E-02	8.3136E+22	2.7833E+19
Pr-143	3.0596E+04	4.5435E-04	1.9134E+21	1.3361E+19
Nd-147	1.2816E+04	1.5842E-04	6.4902E+20	5.6499E+18
Np-239	9.0091E+05	3.8834E-03	9.7851E+21	4.0365E+20
Pu-238	3.1682E+02	1.8506E-02	4.6827E+22	1.3905E+17
Pu-239	2.1182E+01	3.4078E-01	8.5867E+23	9.2942E+15
Pu-240	2.2720E+01	9.9709E-02	2.5019E+23	9.9718E+15
Pu-241	1.0905E+04	1.0586E-01	2.6452E+23	4.7861E+18
Am-241	6.7305E+00	1.9610E-03	4.9002E+21	2.9525E+15
Cm-242	1.6836E+03	5.0799E-04	1.2641E+21	7.3915E+17
Cm-244	1.8359E+02	2.2693E-03	5.6009E+21	8.0579E+16

ECCS Fluid (Torus) Transport Group Inventory:

Time (h) =	4.5000	Atmosphere	Sump	
Noble gases (atoms)	8.2738E+22	0.0000E+00		
Elemental I (atoms)	6.2699E+22	0.0000E+00		
Organic I (atoms)	1.9391E+21	0.0000E+00		
Aerosols (kg)	5.3728E+01	0.0000E+00		
Dose Effective (Ci/cc) I-131 (Thyroid)				9.5561E-03
Dose Effective (Ci/cc) I-131 (ICRP2 Thyroid)				1.1481E-02
Total I (Ci)				1.3356E+08

ECCS Fluid to Reactor Building Transport Group Inventory:

	Pathway	
Time (h) =	Filtered	Transported
Noble gases (atoms)	0.0000E+00	9.3638E+14
Elemental I (atoms)	0.0000E+00	9.5115E+14
Organic I (atoms)	0.0000E+00	2.9417E+13
Aerosols (kg)	0.0000E+00	7.9982E-07

Detailed model information at time (H) = 5.0000

EAB Doses:

Time (h) =	Whole Body	Thyroid	TEDE
Delta dose (rem)	6.0049E-07	2.8307E-04	1.7362E-05
Accumulated dose (rem)	8.7085E-06	2.8151E-03	1.6497E-04

LPZ Doses:

Time (h) =	Whole Body	Thyroid	TEDE
Delta dose (rem)	2.6613E-07	1.2546E-04	7.6946E-06
Accumulated dose (rem)	4.1572E-06	1.3834E-03	8.2743E-05

Control Room Doses:

Time (h) =	Whole Body	Thyroid	TEDE
Delta dose (rem)	4.7659E-11	4.5967E-07	2.4296E-08
Accumulated dose (rem)	6.7659E-08	3.4551E-04	1.5720E-05

ECCS Fluid (Torus) Compartment Nuclide Inventory:

Time (h) =	Ci	kg	Atoms	Decay
Co-58	1.3458E+03	4.2324E-05	4.3945E+20	6.8084E+17
Co-60	1.6139E+03	1.4278E-03	1.4330E+22	8.1586E+17
Rb-86	5.7046E+04	7.0109E-04	4.9093E+21	3.0452E+19
Sr-89	1.9686E+06	6.7762E-02	4.5851E+23	9.9623E+20
Sr-90	2.2424E+05	1.6439E+00	1.1000E+25	1.1335E+20
Sr-91	1.8622E+06	5.1370E-04	3.3996E+21	1.0868E+21
Sr-92	7.8896E+05	6.2768E-05	4.1087E+20	6.8037E+20
Y-90	1.1247E+04	2.0672E-05	1.3832E+20	3.4109E+18
Y-91	2.5965E+04	1.0588E-03	7.0067E+21	1.2726E+19
Y-92	6.7888E+05	7.0552E-05	4.6182E+20	2.3727E+20
Y-93	2.2659E+04	6.7917E-06	4.3979E+19	1.3109E+19
Zr-95	3.1603E+04	1.4711E-03	9.3253E+21	1.5989E+19
Zr-97	2.6767E+04	1.4002E-05	8.6930E+19	1.4657E+19
Nb-95	3.1835E+04	8.1412E-04	5.1608E+21	1.6092E+19
Mo-99	4.2497E+05	8.8606E-04	5.3899E+21	2.1922E+20
Tc-99m	3.8912E+05	7.4003E-05	4.5015E+20	1.9666E+20
Ru-103	3.6926E+05	1.1441E-02	6.6894E+22	1.8692E+20
Ru-105	1.1751E+05	1.7481E-05	1.0026E+20	8.1467E+19
Ru-106	1.5253E+05	4.5590E-02	2.5901E+23	7.7113E+19
Rh-105	2.3660E+05	2.8031E-04	1.6077E+21	1.2130E+20
Sb-127	4.9205E+05	1.8425E-03	8.7369E+21	2.5235E+20
Sb-129	6.8312E+05	1.2148E-04	5.6710E+20	4.7800E+20
Te-127	4.9820E+05	1.8878E-04	8.9514E+20	2.5275E+20
Te-127m	6.8032E+04	7.2124E-03	3.4200E+22	3.4383E+19
Te-129	8.7489E+05	4.1776E-05	1.9502E+20	5.4987E+20
Te-129m	2.2353E+05	7.4200E-03	3.4639E+22	1.1302E+20
Te-131m	6.0803E+05	7.6251E-04	3.5053E+21	3.2143E+20
Te-132	6.4480E+06	2.1239E-02	9.6898E+22	3.3156E+21
I-131	2.7951E+07	2.2546E-01	1.0364E+24	1.4855E+22
I-132	1.7089E+07	1.6556E-03	7.5532E+21	1.3880E+22
I-133	4.9779E+07	4.3943E-02	1.9897E+23	2.8119E+22
I-134	1.2522E+06	4.6941E-05	2.1096E+20	5.1013E+21
I-135	3.2529E+07	9.2627E-03	4.1320E+22	2.1384E+22

Xe-133	2.2700E+06	1.2127E-02	5.4911E+22	8.6826E+20
Xe-135	1.8107E+07	7.0903E-03	3.1629E+22	7.8316E+21
Cs-134	6.4197E+06	4.9618E+00	2.2299E+25	3.4164E+21
Cs-136	1.7682E+06	2.4126E-02	1.0683E+23	9.4516E+20
Cs-137	4.0025E+06	4.6015E+01	2.0227E+26	2.1298E+21
Ba-139	2.9024E+05	1.7744E-05	7.6876E+19	4.5388E+20
Ba-140	3.4157E+06	4.6657E-02	2.0070E+23	1.7342E+21
La-140	2.5016E+05	4.5007E-04	1.9360E+21	7.2101E+19
La-141	1.3555E+04	2.3968E-06	1.0237E+19	9.8134E+18
La-142	3.3770E+03	2.3591E-07	1.0005E+18	4.6157E+18
Ce-141	7.9031E+04	2.7736E-03	1.1846E+22	4.0002E+19
Ce-143	7.0307E+04	1.0587E-04	4.4585E+20	3.7015E+19
Ce-144	6.3401E+04	1.9878E-02	8.3131E+22	3.2055E+19
Pr-143	3.0638E+04	4.5499E-04	1.9161E+21	1.5400E+19
Nd-147	1.2799E+04	1.5822E-04	6.4816E+20	6.5029E+18
Np-239	8.9541E+05	3.8597E-03	9.7253E+21	4.6347E+20
Pu-238	3.1682E+02	1.8506E-02	4.6827E+22	1.6015E+17
Pu-239	2.1183E+01	3.4080E-01	8.5873E+23	1.0705E+16
Pu-240	2.2720E+01	9.9709E-02	2.5019E+23	1.1485E+16
Pu-241	1.0905E+04	1.0586E-01	2.6452E+23	5.5123E+18
Am-241	6.7315E+00	1.9613E-03	4.9009E+21	3.4008E+15
Cm-242	1.6835E+03	5.0795E-04	1.2640E+21	8.5128E+17
Cm-244	1.8359E+02	2.2693E-03	5.6009E+21	9.2806E+16

ECSS Fluid (Torus) Transport Group Inventory:

Time (h) =	5.0000	Atmosphere	Sump	
Noble gases (atoms)		8.6540E+22	0.0000E+00	
Elemental I (atoms)		6.2298E+22	0.0000E+00	
Organic I (atoms)		1.9268E+21	0.0000E+00	
Aerosols (kg)		5.3726E+01	0.0000E+00	
Dose Effective (Ci/cc)	I-131 (Thyroid)			9.4924E-03
Dose Effective (Ci/cc)	I-131 (ICRP2 Thyroid)			1.1356E-02
Total I (Ci)				1.2860E+08

ECSS Fluid to Reactor Building Transport Group Inventory:

	Pathway	
Time (h) =	Filtered	Transported
Noble gases (atoms)	0.0000E+00	1.1187E+15
Elemental I (atoms)	0.0000E+00	1.0864E+15
Organic I (atoms)	0.0000E+00	3.3600E+13
Aerosols (kg)	0.0000E+00	9.1603E-07

Detailed model information at time (H) = 5.5000

EAB Doses:

Time (h) =	5.5000	Whole Body	Thyroid	TEDE
Delta dose (rem)		5.7029E-07	2.8124E-04	1.7266E-05
Accumulated dose (rem)		9.2788E-06	3.0964E-03	1.8223E-04

LPZ Doses:

Time (h) =	5.5000	Whole Body	Thyroid	TEDE
Delta dose (rem)		2.5275E-07	1.2464E-04	7.6522E-06
Accumulated dose (rem)		4.4100E-06	1.5080E-03	9.0395E-05

Control Room Doses:

Time (h) =	5.5000	Whole Body	Thyroid	TEDE
Delta dose (rem)		2.1298E-11	2.1463E-07	1.1406E-08
Accumulated dose (rem)		6.7681E-08	3.4572E-04	1.5731E-05

ECSS Fluid (Torus) Compartment Nuclide Inventory:

Time (h) =	5.5000	Ci	kg	Atoms	Decay
Co-58		1.3456E+03	4.2316E-05	4.3936E+20	7.7047E+17
Co-60		1.6139E+03	1.4278E-03	1.4330E+22	9.2335E+17
Rb-86		5.7001E+04	7.0054E-04	4.9055E+21	3.4249E+19
Sr-89		1.9681E+06	6.7742E-02	4.5838E+23	1.1273E+21
Sr-90		2.2424E+05	1.6439E+00	1.1000E+25	1.2829E+20
Sr-91		1.7955E+06	4.9530E-04	3.2778E+21	1.2086E+21
Sr-92		6.9425E+05	5.5233E-05	3.6154E+20	7.2970E+20
Y-90		1.2398E+04	2.2788E-05	1.5248E+20	4.1903E+18
Y-91		2.6148E+04	1.0662E-03	7.0561E+21	1.4460E+19

Y-92	6.8524E+05	7.1214E-05	4.6615E+20	2.8227E+20
Y-93	2.1895E+04	6.5626E-06	4.2496E+19	1.4593E+19
Zr-95	3.1596E+04	1.4707E-03	9.3232E+21	1.8094E+19
Zr-97	2.6224E+04	1.3718E-05	8.5165E+19	1.6421E+19
Nb-95	3.1834E+04	8.1411E-04	5.1607E+21	1.8212E+19
Mo-99	4.2274E+05	8.8142E-04	5.3616E+21	2.4744E+20
Tc-99m	3.8834E+05	7.3854E-05	4.4925E+20	2.2241E+20
Ru-103	3.6912E+05	1.1437E-02	6.6870E+22	2.1151E+20
Ru-105	1.0868E+05	1.6168E-05	9.2731E+19	8.8996E+19
Ru-106	1.5252E+05	4.5589E-02	2.5900E+23	8.7271E+19
Rh-105	2.3539E+05	2.7889E-04	1.5995E+21	1.3701E+20
Sb-127	4.9021E+05	1.8356E-03	8.7042E+21	2.8506E+20
Sb-129	6.3046E+05	1.1211E-04	5.2338E+20	5.2171E+20
Te-127	4.9721E+05	1.8840E-04	8.9337E+20	2.8578E+20
Te-127m	6.8034E+04	7.2127E-03	3.4201E+22	3.8914E+19
Te-129	8.2181E+05	3.9242E-05	1.8319E+20	6.0504E+20
Te-129m	2.2349E+05	7.4188E-03	3.4634E+22	1.2790E+20
Te-131m	6.0105E+05	7.5375E-04	3.4650E+21	3.6169E+20
Te-132	6.4195E+06	2.1145E-02	9.6469E+22	3.7441E+21
I-131	2.7902E+07	2.2506E-01	1.0346E+24	1.6715E+22
I-132	1.5612E+07	1.5125E-03	6.9004E+21	1.4961E+22
I-133	4.8957E+07	4.3217E-02	1.9568E+23	3.1407E+22
I-134	8.4332E+05	3.1613E-05	1.4207E+20	5.1702E+21
I-135	3.0868E+07	8.7896E-03	3.9209E+22	2.3495E+22
Xe-133	2.3954E+06	1.2797E-02	5.7946E+22	1.0228E+21
Xe-135	1.8441E+07	7.2211E-03	3.2212E+22	9.0421E+21
Cs-134	6.4196E+06	4.9617E+00	2.2299E+25	3.8440E+21
Cs-136	1.7663E+06	2.4099E-02	1.0671E+23	1.0629E+21
Cs-137	4.0025E+06	4.6015E+01	2.0227E+26	2.3964E+21
Ba-139	2.2571E+05	1.3799E-05	5.9785E+19	4.7097E+20
Ba-140	3.4118E+06	4.6604E-02	2.0047E+23	1.9615E+21
La-140	2.7729E+05	4.9888E-04	2.1460E+21	8.9471E+19
La-141	1.2410E+04	2.1945E-06	9.3726E+18	1.0677E+19
La-142	2.6971E+03	1.8841E-07	7.9905E+17	4.8171E+18
Ce-141	7.9001E+04	2.7726E-03	1.1842E+22	4.5264E+19
Ce-143	6.9572E+04	1.0476E-04	4.4119E+20	4.1672E+19
Ce-144	6.3398E+04	1.9877E-02	8.3127E+22	3.6278E+19
Pr-143	3.0680E+04	4.5561E-04	1.9187E+21	1.7441E+19
Nd-147	1.2783E+04	1.5801E-04	6.4731E+20	7.3548E+18
Np-239	8.8993E+05	3.8361E-03	9.6658E+21	5.2292E+20
Pu-238	3.1682E+02	1.8506E-02	4.6827E+22	1.8125E+17
Pu-239	2.1185E+01	3.4083E-01	8.5879E+23	1.2116E+16
Pu-240	2.2720E+01	9.9709E-02	2.5019E+23	1.2998E+16
Pu-241	1.0905E+04	1.0586E-01	2.6452E+23	6.2386E+18
Am-241	6.7325E+00	1.9616E-03	4.9016E+21	3.8491E+15
Cm-242	1.6833E+03	5.0790E-04	1.2639E+21	9.6339E+17
Cm-244	1.8359E+02	2.2693E-03	5.6009E+21	1.0503E+17

ECCS Fluid (Torus) Transport Group Inventory:

Time (h) =	5.5000	Atmosphere	Sump	
Noble gases (atoms)	9.0158E+22	0.0000E+00		
Elemental I (atoms)	6.1913E+22	0.0000E+00		
Organic I (atoms)	1.9148E+21	0.0000E+00		
Aerosols (kg)	5.3724E+01	0.0000E+00		
Dose Effective (Ci/cc)	I-131 (Thyroid)		9.4304E-03	
Dose Effective (Ci/cc)	I-131 (ICRP2 Thyroid)		1.1237E-02	
Total I (Ci)			1.2418E+08	

ECCS Fluid to Reactor Building Transport Group Inventory:

	Pathway	
	Filtered	Transported
Time (h) =	5.5000	
Noble gases (atoms)	0.0000E+00	1.3090E+15
Elemental I (atoms)	0.0000E+00	1.2208E+15
Organic I (atoms)	0.0000E+00	3.7757E+13
Aerosols (kg)	0.0000E+00	1.0322E-06

Detailed model information at time (H) = 6.0000

EAB Doses:

Time (h) =	6.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)		5.4400E-07	2.7945E-04	1.7177E-05
Accumulated dose (rem)		9.8228E-06	3.3758E-03	1.9941E-04

LPZ Doses:

Time (h) =	6.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)		2.4110E-07	1.2385E-04	7.6125E-06
Accumulated dose (rem)		4.6511E-06	1.6319E-03	9.8007E-05

Control Room Doses:

Time (h) =	6.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)		9.8961E-12	1.0346E-07	5.5475E-09
Accumulated dose (rem)		6.7691E-08	3.4583E-04	1.5737E-05

ECCS Fluid (Torus) Compartment Nuclide Inventory:

Time (h) =	6.0000	Ci	kg	Atoms	Decay
Co-58		1.3453E+03	4.2307E-05	4.3927E+20	8.6007E+17
Co-60		1.6139E+03	1.4278E-03	1.4330E+22	1.0308E+18
Rb-86		5.6957E+04	7.0000E-04	4.9018E+21	3.8044E+19
Sr-89		1.9675E+06	6.7723E-02	4.5824E+23	1.2584E+21
Sr-90		2.2424E+05	1.6439E+00	1.1000E+25	1.4322E+20
Sr-91		1.7311E+06	4.7756E-04	3.1603E+21	1.3260E+21
Sr-92		6.1090E+05	4.8602E-05	3.1814E+20	7.7310E+20
Y-90		1.3543E+04	2.4892E-05	1.6656E+20	5.0460E+18
Y-91		2.6325E+04	1.0734E-03	7.1037E+21	1.6206E+19
Y-92		6.8265E+05	7.0944E-05	4.6439E+20	3.2743E+20
Y-93		2.1156E+04	6.3413E-06	4.1062E+19	1.6026E+19
Zr-95		3.1589E+04	1.4704E-03	9.3211E+21	2.0198E+19
Zr-97		2.5692E+04	1.3439E-05	8.3436E+19	1.8150E+19
Nb-95		3.1834E+04	8.1411E-04	5.1607E+21	2.0332E+19
Mo-99		4.2053E+05	8.7680E-04	5.3336E+21	2.7552E+20
Tc-99m		3.8749E+05	7.3692E-05	4.4827E+20	2.4810E+20
Ru-103		3.6898E+05	1.1433E-02	6.6845E+22	2.3609E+20
Ru-105		1.0052E+05	1.4954E-05	8.5768E+19	9.5959E+19
Ru-106		1.5251E+05	4.5587E-02	2.5899E+23	9.7428E+19
Rh-105		2.3412E+05	2.7737E-04	1.5908E+21	1.5264E+20
Sb-127		4.8837E+05	1.8287E-03	8.6716E+21	3.1764E+20
Sb-129		5.8185E+05	1.0347E-04	4.8303E+20	5.6206E+20
Te-127		4.9621E+05	1.8802E-04	8.9157E+20	3.1874E+20
Te-127m		6.8037E+04	7.2130E-03	3.4203E+22	4.3446E+19
Te-129		7.7208E+05	3.6867E-05	1.7211E+20	6.5687E+20
Te-129m		2.2346E+05	7.4175E-03	3.4628E+22	1.4279E+20
Te-131m		5.9414E+05	7.4510E-04	3.4252E+21	4.0149E+20
Te-132		6.3911E+06	2.1052E-02	9.6043E+22	4.1707E+21
I-131		2.7853E+07	2.2466E-01	1.0328E+24	1.8571E+22
I-132		1.4338E+07	1.3890E-03	6.3372E+21	1.5951E+22
I-133		4.8148E+07	4.2503E-02	1.9245E+23	3.4640E+22
I-134		5.6794E+05	2.1290E-05	9.5679E+19	5.2166E+21
I-135		2.9291E+07	8.3406E-03	3.7206E+22	2.5497E+22
Xe-133		2.5184E+06	1.3454E-02	6.0919E+22	1.1855E+21
Xe-135		1.8711E+07	7.3268E-03	3.2684E+22	1.0273E+22
Cs-134		6.4195E+06	4.9616E+00	2.2298E+25	4.2715E+21
Cs-136		1.7643E+06	2.4073E-02	1.0660E+23	1.1804E+21
Cs-137		4.0025E+06	4.6015E+01	2.0227E+26	2.6630E+21
Ba-139		1.7553E+05	1.0731E-05	4.6493E+19	4.8426E+20
Ba-140		3.4079E+06	4.6551E-02	2.0024E+23	2.1886E+21
La-140		3.0416E+05	5.4722E-04	2.3539E+21	1.0864E+20
La-141		1.1363E+04	2.0092E-06	8.5814E+18	1.1469E+19
La-142		2.1541E+03	1.5048E-07	6.3818E+17	4.9780E+18
Ce-141		7.8971E+04	2.7716E-03	1.1837E+22	5.0524E+19
Ce-143		6.8845E+04	1.0367E-04	4.3658E+20	4.6282E+19
Ce-144		6.3395E+04	1.9876E-02	8.3123E+22	4.0500E+19
Pr-143		3.0721E+04	4.5622E-04	1.9213E+21	1.9485E+19
Nd-147		1.2766E+04	1.5780E-04	6.4646E+20	8.2055E+18
Np-239		8.8449E+05	3.8126E-03	9.6067E+21	5.8200E+20
Pu-238		3.1682E+02	1.8506E-02	4.6827E+22	2.0235E+17
Pu-239		2.1186E+01	3.4085E-01	8.5885E+23	1.3527E+16
Pu-240		2.2720E+01	9.9709E-02	2.5019E+23	1.4511E+16
Pu-241		1.0905E+04	1.0586E-01	2.6452E+23	6.9649E+18
Am-241		6.7335E+00	1.9619E-03	4.9024E+21	4.2975E+15
Cm-242		1.6832E+03	5.0786E-04	1.2638E+21	1.0755E+18
Cm-244		1.8359E+02	2.2693E-03	5.6008E+21	1.1726E+17

ECCS Fluid (Torus) Transport Group Inventory:

Time (h) =	6.0000	Atmosphere	Sump
Noble gases (atoms)		9.3603E+22	0.0000E+00

Elemental I (atoms)	6.1541E+22	0.0000E+00	
Organic I (atoms)	1.9033E+21	0.0000E+00	
Aerosols (kg)	5.3722E+01	0.0000E+00	
Dose Effective (Ci/cc) I-131 (Thyroid)			9.3700E-03
Dose Effective (Ci/cc) I-131 (ICRP2 Thyroid)			1.1123E-02
Total I (Ci)			1.2020E+08

ECCS Fluid to Reactor Building Transport Group Inventory:

Time (h) = 6.0000	Pathway	
	Filtered	Transported
Noble gases (atoms)	0.0000E+00	1.5070E+15
Elemental I (atoms)	0.0000E+00	1.3544E+15
Organic I (atoms)	0.0000E+00	4.1889E+13
Aerosols (kg)	0.0000E+00	1.1484E-06

Detailed model information at time (H) = 6.5000

EAB Doses:

Time (h) = 6.5000	Whole Body	Thyroid	TEDE
Delta dose (rem)	0.0000E+00	0.0000E+00	0.0000E+00
Accumulated dose (rem)	9.8228E-06	3.3758E-03	1.9941E-04

LPZ Doses:

Time (h) = 6.5000	Whole Body	Thyroid	TEDE
Delta dose (rem)	2.3083E-07	1.2308E-04	7.5751E-06
Accumulated dose (rem)	4.8819E-06	1.7549E-03	1.0558E-04

Control Room Doses:

Time (h) = 6.5000	Whole Body	Thyroid	TEDE
Delta dose (rem)	4.9271E-12	5.3001E-08	2.8832E-09
Accumulated dose (rem)	6.7696E-08	3.4588E-04	1.5740E-05

ECCS Fluid (Torus) Compartment Nuclide Inventory:

Time (h) = 6.5000	Ci	kg	Atoms	Decay
Co-58	1.3450E+03	4.2299E-05	4.3919E+20	9.4966E+17
Co-60	1.6139E+03	1.4277E-03	1.4330E+22	1.1383E+18
Rb-86	5.6913E+04	6.9946E-04	4.8980E+21	4.1836E+19
Sr-89	1.9669E+06	6.7704E-02	4.5811E+23	1.3894E+21
Sr-90	2.2424E+05	1.6439E+00	1.1000E+25	1.5815E+20
Sr-91	1.6691E+06	4.6045E-04	3.0471E+21	1.4392E+21
Sr-92	5.3757E+05	4.2768E-05	2.7995E+20	8.1129E+20
Y-90	1.4681E+04	2.6984E-05	1.8056E+20	5.9778E+18
Y-91	2.6494E+04	1.0804E-03	7.1495E+21	1.7964E+19
Y-92	6.7294E+05	6.9935E-05	4.5778E+20	3.7223E+20
Y-93	2.0443E+04	6.1274E-06	3.9677E+19	1.7412E+19
Zr-95	3.1582E+04	1.4701E-03	9.3190E+21	2.2301E+19
Zr-97	2.5170E+04	1.3167E-05	8.1743E+19	1.9843E+19
Nb-95	3.1834E+04	8.1410E-04	5.1607E+21	2.2452E+19
Mo-99	4.1833E+05	8.7221E-04	5.3056E+21	3.0346E+20
Tc-99m	3.8658E+05	7.3519E-05	4.4721E+20	2.7374E+20
Ru-103	3.6885E+05	1.1429E-02	6.6821E+22	2.6066E+20
Ru-105	9.2975E+04	1.3831E-05	7.9328E+19	1.0240E+20
Ru-106	1.5251E+05	4.5585E-02	2.5898E+23	1.0759E+20
Rh-105	2.3278E+05	2.7579E-04	1.5817E+21	1.6818E+20
Sb-127	4.8654E+05	1.8219E-03	8.6392E+21	3.5011E+20
Sb-129	5.3700E+05	9.5494E-05	4.4580E+20	5.9930E+20
Te-127	4.9519E+05	1.8763E-04	8.8973E+20	3.5164E+20
Te-127m	6.8040E+04	7.2133E-03	3.4204E+22	4.7977E+19
Te-129	7.2565E+05	3.4650E-05	1.6176E+20	7.0557E+20
Te-129m	2.2341E+05	7.4161E-03	3.4621E+22	1.5767E+20
Te-131m	5.8732E+05	7.3654E-04	3.3859E+21	4.4083E+20
Te-132	6.3629E+06	2.0959E-02	9.5618E+22	4.5954E+21
I-131	2.7804E+07	2.2427E-01	1.0310E+24	2.0425E+22
I-132	1.3238E+07	1.2825E-03	5.8509E+21	1.6862E+22
I-133	4.7352E+07	4.1801E-02	1.8927E+23	3.7820E+22
I-134	3.8248E+05	1.4338E-05	6.4435E+19	5.2478E+21
I-135	2.7795E+07	7.9146E-03	3.5306E+22	2.7398E+22
Xe-133	2.6388E+06	1.4098E-02	6.3833E+22	1.3564E+21
Xe-135	1.8921E+07	7.4093E-03	3.3052E+22	1.1520E+22
Cs-134	6.4194E+06	4.9615E+00	2.2298E+25	4.6990E+21

Cs-136	1.7624E+06	2.4046E-02	1.0648E+23	1.2979E+21
Cs-137	4.0024E+06	4.6015E+01	2.0227E+26	2.9295E+21
Ba-139	1.3651E+05	8.3455E-06	3.6157E+19	4.9460E+20
Ba-140	3.4041E+06	4.6498E-02	2.0001E+23	2.4154E+21
La-140	3.3077E+05	5.9509E-04	2.5598E+21	1.2959E+20
La-141	1.0404E+04	1.8396E-06	7.8571E+18	1.2193E+19
La-142	1.7204E+03	1.2018E-07	5.0969E+17	5.1065E+18
Ce-141	7.8941E+04	2.7705E-03	1.1833E+22	5.5783E+19
Ce-143	6.8126E+04	1.0259E-04	4.3202E+20	5.0843E+19
Ce-144	6.3392E+04	1.9875E-02	8.3119E+22	4.4722E+19
Pr-143	3.0761E+04	4.5682E-04	1.9238E+21	2.1532E+19
Nd-147	1.2749E+04	1.5759E-04	6.4561E+20	9.0552E+18
Np-239	8.7909E+05	3.7893E-03	9.5480E+21	6.4073E+20
Pu-238	3.1683E+02	1.8506E-02	4.6827E+22	2.2345E+17
Pu-239	2.1188E+01	3.4087E-01	8.5891E+23	1.4938E+16
Pu-240	2.2720E+01	9.9709E-02	2.5019E+23	1.6025E+16
Pu-241	1.0905E+04	1.0586E-01	2.6452E+23	7.6911E+18
Am-241	6.7345E+00	1.9622E-03	4.9031E+21	4.7460E+15
Cm-242	1.6830E+03	5.0781E-04	1.2637E+21	1.1876E+18
Cm-244	1.8359E+02	2.2693E-03	5.6008E+21	1.2949E+17

ECCS Fluid (Torus) Transport Group Inventory:

Time (h) =	6.5000	Atmosphere	Sump	
Noble gases (atoms)	9.6885E+22	0.0000E+00		
Elemental I (atoms)	6.1181E+22	0.0000E+00		
Organic I (atoms)	1.8922E+21	0.0000E+00		
Aerosols (kg)	5.3720E+01	0.0000E+00		
Dose Effective (Ci/cc) I-131 (Thyroid)				9.3110E-03
Dose Effective (Ci/cc) I-131 (ICRP2 Thyroid)				1.1014E-02
Total I (Ci)				1.1657E+08

ECCS Fluid to Reactor Building Transport Group Inventory:

	Pathway	
Time (h) =	Filtered	Transported
6.5000		
Noble gases (atoms)	0.0000E+00	1.7123E+15
Elemental I (atoms)	0.0000E+00	1.4872E+15
Organic I (atoms)	0.0000E+00	4.5996E+13
Aerosols (kg)	0.0000E+00	1.2646E-06

Detailed model information at time (H) = 7.0000

EAB Doses:

Time (h) =	7.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)		0.0000E+00	0.0000E+00	0.0000E+00
Accumulated dose (rem)		9.8228E-06	3.3758E-03	1.9941E-04

LPZ Doses:

Time (h) =	7.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)		2.2169E-07	1.2232E-04	7.5395E-06
Accumulated dose (rem)		5.1036E-06	1.8773E-03	1.1312E-04

Control Room Doses:

Time (h) =	7.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)		2.7418E-12	3.0074E-08	1.6707E-09
Accumulated dose (rem)		6.7698E-08	3.4591E-04	1.5741E-05

ECCS Fluid (Torus) Compartment Nuclide Inventory:

Time (h) =	7.0000	Ci	kg	Atoms	Decay
Co-58		1.3447E+03	4.2290E-05	4.3910E+20	1.0392E+18
Co-60		1.6139E+03	1.4277E-03	1.4330E+22	1.2458E+18
Rb-86		5.6869E+04	6.9892E-04	4.8942E+21	4.5625E+19
Sr-89		1.9664E+06	6.7684E-02	4.5798E+23	1.5204E+21
Sr-90		2.2424E+05	1.6439E+00	1.1000E+25	1.7309E+20
Sr-91		1.6093E+06	4.4395E-04	2.9380E+21	1.5484E+21
Sr-92		4.7303E+05	3.7634E-05	2.4634E+20	8.4490E+20
Y-90		1.5814E+04	2.9066E-05	1.9449E+20	6.9853E+18
Y-91		2.6658E+04	1.0870E-03	7.1936E+21	1.9733E+19
Y-92		6.5765E+05	6.8346E-05	4.4738E+20	4.1624E+20
Y-93		1.9753E+04	5.9207E-06	3.8339E+19	1.8750E+19
Zr-95		3.1574E+04	1.4697E-03	9.3169E+21	2.4404E+19

Zr-97	2.4659E+04	1.2899E-05	8.0084E+19	2.1503E+19
Nb-95	3.1834E+04	8.1409E-04	5.1606E+21	2.4572E+19
Mo-99	4.1613E+05	8.6764E-04	5.2778E+21	3.3125E+20
Tc-99m	3.8561E+05	7.3335E-05	4.4609E+20	2.9931E+20
Ru-103	3.6871E+05	1.1425E-02	6.6796E+22	2.8522E+20
Ru-105	8.5994E+04	1.2793E-05	7.3372E+19	1.0836E+20
Ru-106	1.5250E+05	4.5583E-02	2.5897E+23	1.1774E+20
Rh-105	2.3138E+05	2.7413E-04	1.5722E+21	1.8363E+20
Sb-127	4.8472E+05	1.8151E-03	8.6068E+21	3.8245E+20
Sb-129	4.9560E+05	8.8132E-05	4.1143E+20	6.3367E+20
Te-127	4.9415E+05	1.8724E-04	8.8786E+20	3.8447E+20
Te-127m	6.8042E+04	7.2135E-03	3.4205E+22	5.2508E+19
Te-129	6.8238E+05	3.2584E-05	1.5211E+20	7.5134E+20
Te-129m	2.2337E+05	7.4145E-03	3.4613E+22	1.7254E+20
Te-131m	5.8057E+05	7.2808E-04	3.3470E+21	4.7972E+20
Te-132	6.3347E+06	2.0866E-02	9.5195E+22	5.0183E+21
I-131	2.7754E+07	2.2387E-01	1.0292E+24	2.2275E+22
I-132	1.2288E+07	1.1904E-03	5.4309E+21	1.7704E+22
I-133	4.6570E+07	4.1110E-02	1.8614E+23	4.0948E+22
I-134	2.5759E+05	9.6558E-06	4.3394E+19	5.2689E+21
I-135	2.6375E+07	7.5103E-03	3.3502E+22	2.9201E+22
Xe-133	2.7568E+06	1.4728E-02	6.6688E+22	1.5353E+21
Xe-135	1.9078E+07	7.4706E-03	3.3325E+22	1.2780E+22
Cs-134	6.4192E+06	4.9614E+00	2.2297E+25	5.1266E+21
Cs-136	1.7604E+06	2.4020E-02	1.0636E+23	1.4152E+21
Cs-137	4.0024E+06	4.6015E+01	2.0227E+26	3.1961E+21
Ba-139	1.0616E+05	6.4901E-06	2.8118E+19	5.0263E+20
Ba-140	3.4002E+06	4.6446E-02	1.9979E+23	2.6420E+21
La-140	3.5711E+05	6.4248E-04	2.7637E+21	1.5230E+20
La-141	9.5256E+03	1.6843E-06	7.1939E+18	1.2856E+19
La-142	1.3741E+03	9.5988E-08	4.0708E+17	5.2091E+18
Ce-141	7.8911E+04	2.7694E-03	1.1828E+22	6.1039E+19
Ce-143	6.7414E+04	1.0152E-04	4.2751E+20	5.5356E+19
Ce-144	6.3388E+04	1.9874E-02	8.3114E+22	4.8944E+19
Pr-143	3.0801E+04	4.5740E-04	1.9262E+21	2.3582E+19
Nd-147	1.2732E+04	1.5739E-04	6.4476E+20	9.9037E+18
Np-239	8.7371E+05	3.7661E-03	9.4896E+21	6.9910E+20
Pu-238	3.1683E+02	1.8507E-02	4.6827E+22	2.4455E+17
Pu-239	2.1189E+01	3.4090E-01	8.5897E+23	1.6349E+16
Pu-240	2.2720E+01	9.9709E-02	2.5019E+23	1.7538E+16
Pu-241	1.0905E+04	1.0586E-01	2.6452E+23	8.4174E+18
Am-241	6.7355E+00	1.9625E-03	4.9038E+21	5.1945E+15
Cm-242	1.6829E+03	5.0776E-04	1.2636E+21	1.2997E+18
Cm-244	1.8359E+02	2.2693E-03	5.6008E+21	1.4171E+17

ECCS Fluid (Torus) Transport Group Inventory:

Time (h) =	7.0000	Atmosphere	Sump	
Noble gases (atoms)	1.0001E+23	0.0000E+00		
Elemental I (atoms)	6.0832E+22	0.0000E+00		
Organic I (atoms)	1.8814E+21	0.0000E+00		
Aerosols (kg)	5.3718E+01	0.0000E+00		
Dose Effective (Ci/cc) I-131 (Thyroid)				9.2534E-03
Dose Effective (Ci/cc) I-131 (ICRP2 Thyroid)				1.0909E-02
Total I (Ci)				1.1324E+08

ECCS Fluid to Reactor Building Transport Group Inventory:

Time (h) =	7.0000	Pathway	
		Filtered	Transported
Noble gases (atoms)	0.0000E+00	1.9246E+15	
Elemental I (atoms)	0.0000E+00	1.6192E+15	
Organic I (atoms)	0.0000E+00	5.0080E+13	
Aerosols (kg)	0.0000E+00	1.3808E-06	

Detailed model information at time (H) = 7.5000

EAB Doses:

Time (h) =	7.5000	Whole Body	Thyroid	TEDE
Delta dose (rem)		0.0000E+00	0.0000E+00	0.0000E+00
Accumulated dose (rem)		9.8228E-06	3.3758E-03	1.9941E-04

LPZ Doses:

Time (h) =	7.5000	Whole Body	Thyroid	TEDE
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Delta dose (rem)	2.1348E-07	1.2158E-04	7.5056E-06
Accumulated dose (rem)	5.3171E-06	1.9988E-03	1.2063E-04

Control Room Doses:

Time (h) =	7.5000	Whole Body	Thyroid	TEDE
Delta dose (rem)		1.7676E-12	1.9636E-08	1.1183E-09
Accumulated dose (rem)		6.7700E-08	3.4593E-04	1.5742E-05

ECCS Fluid (Torus) Compartment Nuclide Inventory:

Time (h) =	Ci	kg	Atoms	Decay
Co-58	1.3445E+03	4.2281E-05	4.3901E+20	1.1288E+18
Co-60	1.6139E+03	1.4277E-03	1.4330E+22	1.3533E+18
Rb-86	5.6825E+04	6.9838E-04	4.8904E+21	4.9411E+19
Sr-89	1.9658E+06	6.7665E-02	4.5785E+23	1.6513E+21
Sr-90	2.2424E+05	1.6439E+00	1.1000E+25	1.8802E+20
Sr-91	1.5517E+06	4.2805E-04	2.8327E+21	1.6536E+21
Sr-92	4.1625E+05	3.3116E-05	2.1677E+20	8.7447E+20
Y-90	1.6940E+04	3.1136E-05	2.0834E+20	8.0679E+18
Y-91	2.6815E+04	1.0934E-03	7.2360E+21	2.1512E+19
Y-92	6.3810E+05	6.6314E-05	4.3408E+20	4.5912E+20
Y-93	1.9087E+04	5.7210E-06	3.7046E+19	2.0043E+19
Zr-95	3.1567E+04	1.4694E-03	9.3148E+21	2.6507E+19
Zr-97	2.4159E+04	1.2637E-05	7.8458E+19	2.3128E+19
Nb-95	3.1833E+04	8.1409E-04	5.1606E+21	2.6692E+19
Mo-99	4.1396E+05	8.6310E-04	5.2502E+21	3.5889E+20
Tc-99m	3.8459E+05	7.3140E-05	4.4491E+20	3.2482E+20
Ru-103	3.6858E+05	1.1420E-02	6.6772E+22	3.0977E+20
Ru-105	7.9536E+04	1.1832E-05	6.7862E+19	1.1387E+20
Ru-106	1.5250E+05	4.5581E-02	2.5896E+23	1.2790E+20
Rh-105	2.2993E+05	2.7242E-04	1.5624E+21	1.9899E+20
Sb-127	4.8291E+05	1.8083E-03	8.5746E+21	4.1467E+20
Sb-129	4.5739E+05	8.1338E-05	3.7971E+20	6.6539E+20
Te-127	4.9309E+05	1.8684E-04	8.8597E+20	4.1723E+20
Te-127m	6.8045E+04	7.2138E-03	3.4207E+22	5.7040E+19
Te-129	6.4215E+05	3.0663E-05	1.4314E+20	7.9440E+20
Te-129m	2.2331E+05	7.4129E-03	3.4606E+22	1.8742E+20
Te-131m	5.7390E+05	7.1971E-04	3.3086E+21	5.1816E+20
Te-132	6.3067E+06	2.0774E-02	9.4774E+22	5.4392E+21
I-131	2.7705E+07	2.2348E-01	1.0273E+24	2.4122E+22
I-132	1.1466E+07	1.1108E-03	5.0679E+21	1.8488E+22
I-133	4.5800E+07	4.0431E-02	1.8307E+23	4.4024E+22
I-134	1.7347E+05	6.5028E-06	2.9224E+19	5.2830E+21
I-135	2.5028E+07	7.1267E-03	3.1791E+22	3.0913E+22
Xe-133	2.8725E+06	1.5346E-02	6.9485E+22	1.7219E+21
Xe-135	1.9184E+07	7.5122E-03	3.3511E+22	1.4049E+22
Cs-134	6.4191E+06	4.9613E+00	2.2297E+25	5.5541E+21
Cs-136	1.7585E+06	2.3993E-02	1.0624E+23	1.5324E+21
Cs-137	4.0024E+06	4.6015E+01	2.0227E+26	3.4627E+21
Ba-139	8.2557E+04	5.0472E-06	2.1867E+19	5.0889E+20
Ba-140	3.3964E+06	4.6393E-02	1.9956E+23	2.8684E+21
La-140	3.8319E+05	6.8941E-04	2.9655E+21	1.7676E+20
La-141	8.7215E+03	1.5422E-06	6.5866E+18	1.3463E+19
La-142	1.0974E+03	7.6663E-08	3.2512E+17	5.2911E+18
Ce-141	7.8880E+04	2.7683E-03	1.1824E+22	6.6294E+19
Ce-143	6.6710E+04	1.0045E-04	4.2304E+20	5.9823E+19
Ce-144	6.3385E+04	1.9873E-02	8.3110E+22	5.3165E+19
Pr-143	3.0839E+04	4.5797E-04	1.9287E+21	2.5634E+19
Nd-147	1.2716E+04	1.5718E-04	6.4392E+20	1.0751E+19
Np-239	8.6837E+05	3.7431E-03	9.4316E+21	7.5711E+20
Pu-238	3.1683E+02	1.8507E-02	4.6827E+22	2.6565E+17
Pu-239	2.1190E+01	3.4092E-01	8.5902E+23	1.7760E+16
Pu-240	2.2720E+01	9.9709E-02	2.5019E+23	1.9051E+16
Pu-241	1.0905E+04	1.0586E-01	2.6452E+23	9.1436E+18
Am-241	6.7365E+00	1.9627E-03	4.9045E+21	5.6431E+15
Cm-242	1.6827E+03	5.0772E-04	1.2635E+21	1.4118E+18
Cm-244	1.8359E+02	2.2693E-03	5.6008E+21	1.5394E+17

ECCS Fluid (Torus) Transport Group Inventory:

Time (h) =	7.5000	Atmosphere	Sump
Noble gases (atoms)		1.0300E+23	0.0000E+00
Elemental I (atoms)		6.0494E+22	0.0000E+00
Organic I (atoms)		1.8709E+21	0.0000E+00
Aerosols (kg)		5.3717E+01	0.0000E+00

Dose Effective (Ci/cc) I-131 (Thyroid)	9.1971E-03
Dose Effective (Ci/cc) I-131 (ICRP2 Thyroid)	1.0807E-02
Total I (Ci)	1.1017E+08

ECCS Fluid to Reactor Building Transport Group Inventory:

Time (h) = 7.5000	Pathway	
	Filtered	Transported
Noble gases (atoms)	0.0000E+00	2.1436E+15
Elemental I (atoms)	0.0000E+00	1.7505E+15
Organic I (atoms)	0.0000E+00	5.4140E+13
Aerosols (kg)	0.0000E+00	1.4970E-06

Detailed model information at time (H) = 8.0000

EAB Doses:

Time (h) = 8.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)	0.0000E+00	0.0000E+00	0.0000E+00
Accumulated dose (rem)	9.8228E-06	3.3758E-03	1.9941E-04

LPZ Doses:

Time (h) = 8.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)	2.0604E-07	1.2086E-04	7.4731E-06
Accumulated dose (rem)	5.5231E-06	2.1197E-03	1.2810E-04

Control Room Doses:

Time (h) = 8.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)	1.3232E-12	1.4865E-08	8.6585E-10
Accumulated dose (rem)	6.7701E-08	3.4594E-04	1.5743E-05

ECCS Fluid (Torus) Compartment Nuclide Inventory:

Time (h) = 8.0000	Ci	kg	Atoms	Decay
Co-58	1.3442E+03	4.2273E-05	4.3892E+20	1.2183E+18
Co-60	1.6139E+03	1.4277E-03	1.4330E+22	1.4608E+18
Rb-86	5.6781E+04	6.9784E-04	4.8666E+21	5.3194E+19
Sr-89	1.9653E+06	6.7646E-02	4.5772E+23	1.7822E+21
Sr-90	2.2423E+05	1.6439E+00	1.1000E+25	2.0296E+20
Sr-91	1.4961E+06	4.1272E-04	2.7312E+21	1.7551E+21
Sr-92	3.6628E+05	2.9140E-05	1.9075E+20	9.0050E+20
Y-90	1.8060E+04	3.3195E-05	2.2211E+20	9.2253E+18
Y-91	2.6966E+04	1.0996E-03	7.2768E+21	2.3302E+19
Y-92	6.1535E+05	6.3950E-05	4.1860E+20	5.0061E+20
Y-93	1.8443E+04	5.5280E-06	3.5796E+19	2.1293E+19
Zr-95	3.1560E+04	1.4691E-03	9.3127E+21	2.8609E+19
Zr-97	2.3668E+04	1.2381E-05	7.6865E+19	2.4721E+19
Nb-95	3.1833E+04	8.1408E-04	5.1605E+21	2.8812E+19
Mo-99	4.1179E+05	8.5858E-04	5.2227E+21	3.8638E+20
Tc-99m	3.8352E+05	7.2936E-05	4.4367E+20	3.5025E+20
Ru-103	3.6844E+05	1.1416E-02	6.6747E+22	3.3431E+20
Ru-105	7.3564E+04	1.0944E-05	6.2767E+19	1.1896E+20
Ru-106	1.5249E+05	4.5580E-02	2.5895E+23	1.3805E+20
Rh-105	2.2844E+05	2.7064E-04	1.5522E+21	2.1425E+20
Sb-127	4.8110E+05	1.8015E-03	8.5425E+21	4.4678E+20
Sb-129	4.2213E+05	7.5067E-05	3.5044E+20	6.9466E+20
Te-127	4.9202E+05	1.8643E-04	8.8404E+20	4.4992E+20
Te-127m	6.8047E+04	7.2141E-03	3.4208E+22	6.1572E+19
Te-129	6.0479E+05	2.8879E-05	1.3482E+20	8.3494E+20
Te-129m	2.2326E+05	7.4110E-03	3.4597E+22	2.0229E+20
Te-131m	5.6731E+05	7.1145E-04	3.2706E+21	5.5617E+20
Te-132	6.2788E+06	2.0682E-02	9.4355E+22	5.8583E+21
I-131	2.7657E+07	2.2308E-01	1.0255E+24	2.5965E+22
I-132	1.0756E+07	1.0420E-03	4.7539E+21	1.9222E+22
I-133	4.5043E+07	3.9763E-02	1.8004E+23	4.7049E+22
I-134	1.1683E+05	4.3793E-06	1.9681E+19	5.2926E+21
I-135	2.3749E+07	6.7626E-03	3.0167E+22	3.2537E+22
Xe-133	2.9857E+06	1.5951E-02	7.2225E+22	1.9162E+21
Xe-135	1.9245E+07	7.5359E-03	3.3616E+22	1.5324E+22
Cs-134	6.4190E+06	4.9612E+00	2.2296E+25	5.9816E+21
Cs-136	1.7566E+06	2.3967E-02	1.0613E+23	1.6494E+21
Cs-137	4.0024E+06	4.6015E+01	2.0227E+26	3.7292E+21
Ba-139	6.4203E+04	3.9251E-06	1.7005E+19	5.1375E+20

Ba-140	3.3925E+06	4.6340E-02	1.9933E+23	3.0944E+21
La-140	4.0902E+05	7.3588E-04	3.1654E+21	2.0295E+20
La-141	7.9853E+03	1.4120E-06	6.0307E+18	1.4019E+19
La-142	8.7649E+02	6.1229E-08	2.5967E+17	5.3565E+18
Ce-141	7.8848E+04	2.7672E-03	1.1819E+22	7.1546E+19
Ce-143	6.6013E+04	9.9405E-05	4.1862E+20	6.4242E+19
Ce-144	6.3382E+04	1.9872E-02	8.3106E+22	5.7386E+19
Pr-143	3.0877E+04	4.5854E-04	1.9310E+21	2.7689E+19
Nd-147	1.2699E+04	1.5697E-04	6.4307E+20	1.1597E+19
Np-239	8.6306E+05	3.7202E-03	9.3740E+21	8.1477E+20
Pu-238	3.1683E+02	1.8507E-02	4.6827E+22	2.8675E+17
Pu-239	2.1192E+01	3.4094E-01	8.5908E+23	1.9171E+16
Pu-240	2.2720E+01	9.9709E-02	2.5019E+23	2.0564E+16
Pu-241	1.0905E+04	1.0586E-01	2.6452E+23	9.8698E+18
Am-241	6.7375E+00	1.9630E-03	4.9053E+21	6.0918E+15
Cm-242	1.6826E+03	5.0767E-04	1.2633E+21	1.5238E+18
Cm-244	1.8359E+02	2.2693E-03	5.6008E+21	1.6617E+17

ECCS Fluid (Torus) Transport Group Inventory:

Time (h) =	8.0000	Atmosphere	Sump	
Noble gases (atoms)		1.0584E+23	0.0000E+00	
Elemental I (atoms)		6.0164E+22	0.0000E+00	
Organic I (atoms)		1.8608E+21	0.0000E+00	
Aerosols (kg)		5.3715E+01	0.0000E+00	
Dose Effective (Ci/cc)		I-131 (Thyroid)		9.1420E-03
Dose Effective (Ci/cc)		I-131 (ICRP2 Thyroid)		1.0709E-02
Total I (Ci)				1.0732E+08

ECCS Fluid to Reactor Building Transport Group Inventory:

	Pathway	
Time (h) =	Filtered	Transported
Noble gases (atoms)	0.0000E+00	2.3688E+15
Elemental I (atoms)	0.0000E+00	1.8811E+15
Organic I (atoms)	0.0000E+00	5.8178E+13
Aerosols (kg)	0.0000E+00	1.6132E-06

Detailed model information at time (H) = 10.0000

EAB Doses:

Time (h) =	10.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)		0.0000E+00	0.0000E+00	0.0000E+00
Accumulated dose (rem)		9.8228E-06	3.3758E-03	1.9941E-04

LPZ Doses:

Time (h) =	10.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)		5.0653E-07	1.5981E-04	1.0175E-05
Accumulated dose (rem)		6.0297E-06	2.2795E-03	1.3828E-04

Control Room Doses:

Time (h) =	10.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)		3.9624E-12	4.6306E-08	2.7737E-09
Accumulated dose (rem)		6.7705E-08	3.4599E-04	1.5746E-05

ECCS Fluid (Torus) Compartment Nuclide Inventory:

Time (h) =	10.0000	Ci	kg	Atoms	Decay
Co-58		1.3431E+03	4.2238E-05	4.3856E+20	1.5763E+18
Co-60		1.6138E+03	1.4277E-03	1.4329E+22	1.8907E+18
Rb-86		5.6606E+04	6.9568E-04	4.8715E+21	6.8297E+19
Sr-89		1.9630E+06	6.7568E-02	4.5720E+23	2.3055E+21
Sr-90		2.2423E+05	1.6439E+00	1.0999E+25	2.6269E+20
Sr-91		1.2930E+06	3.5668E-04	2.3604E+21	2.1259E+21
Sr-92		2.1961E+05	1.7472E-05	1.1437E+20	9.7688E+20
Y-90		2.2480E+04	4.1320E-05	2.7648E+20	1.4595E+19
Y-91		2.7517E+04	1.1220E-03	7.4253E+21	3.0557E+19
Y-92		5.0823E+05	5.2817E-05	3.4573E+20	6.4987E+20
Y-93		1.6078E+04	4.8190E-06	3.1205E+19	2.5884E+19
Zr-95		3.1532E+04	1.4678E-03	9.3043E+21	3.7013E+19
Zr-97		2.1804E+04	1.1406E-05	7.0812E+19	3.0774E+19
Nb-95		3.1832E+04	8.1406E-04	5.1604E+21	3.7292E+19
Mo-99		4.0323E+05	8.4073E-04	5.1141E+21	4.9494E+20

Tc-99m	3.7879E+05	7.2037E-05	4.3820E+20	4.5126E+20
Ru-103	3.6790E+05	1.1399E-02	6.6649E+22	4.3239E+20
Ru-105	5.3835E+04	8.0088E-06	4.5933E+19	1.3579E+20
Ru-106	1.5247E+05	4.5573E-02	2.5891E+23	1.7868E+20
Rh-105	2.2208E+05	2.6312E-04	1.5091E+21	2.7425E+20
Sb-127	4.7393E+05	1.7747E-03	8.4153E+21	5.7398E+20
Sb-129	3.0625E+05	5.4461E-05	2.5424E+20	7.9086E+20
Te-127	4.8759E+05	1.8476E-04	8.7608E+20	5.7996E+20
Te-127m	6.8057E+04	7.2151E-03	3.4213E+22	7.9700E+19
Te-129	4.8080E+05	2.2958E-05	1.0718E+20	9.7529E+20
Te-129m	2.2301E+05	7.4028E-03	3.4559E+22	2.6173E+20
Te-131m	5.4169E+05	6.7932E-04	3.1229E+21	7.0386E+20
Te-132	6.1685E+06	2.0318E-02	9.2697E+22	7.5163E+21
I-131	2.7462E+07	2.2151E-01	1.0183E+24	3.3307E+22
I-132	8.7443E+06	8.4714E-04	3.8648E+21	2.1769E+22
I-133	4.2139E+07	3.7199E-02	1.6843E+23	5.8657E+22
I-134	2.4031E+04	9.0084E-07	4.0485E+18	5.3082E+21
I-135	1.9256E+07	5.4832E-03	2.4460E+22	3.8244E+22
Xe-133	3.4161E+06	1.8250E-02	8.2635E+22	2.7666E+21
Xe-135	1.9101E+07	7.4798E-03	3.3366E+22	2.0425E+22
Cs-134	6.4185E+06	4.9609E+00	2.2295E+25	7.6915E+21
Cs-136	1.7488E+06	2.3861E-02	1.0566E+23	2.1163E+21
Cs-137	4.0024E+06	4.6014E+01	2.0227E+26	4.7955E+21
Ba-139	2.3483E+04	1.4356E-06	6.2199E+18	5.2453E+20
Ba-140	3.3772E+06	4.6131E-02	1.9843E+23	3.9962E+21
La-140	5.0981E+05	9.1722E-04	3.9454E+21	3.2465E+20
La-141	5.6117E+03	9.9229E-07	4.2381E+18	1.5812E+19
La-142	3.5663E+02	2.4913E-08	1.0566E+17	5.5105E+18
Ce-141	7.8720E+04	2.7627E-03	1.1800E+22	9.2534E+19
Ce-143	6.3298E+04	9.5316E-05	4.0140E+20	8.1464E+19
Ce-144	6.3369E+04	1.9868E-02	8.3089E+22	7.4270E+19
Pr-143	3.1021E+04	4.6067E-04	1.9400E+21	3.5932E+19
Nd-147	1.2632E+04	1.5615E-04	6.3970E+20	1.4972E+19
Np-239	8.4215E+05	3.6301E-03	9.1468E+21	1.0419E+21
Pu-238	3.1683E+02	1.8507E-02	4.6828E+22	3.7116E+17
Pu-239	2.1197E+01	3.4103E-01	8.5931E+23	2.4818E+16
Pu-240	2.2720E+01	9.9709E-02	2.5019E+23	2.6617E+16
Pu-241	1.0904E+04	1.0586E-01	2.6451E+23	1.2775E+19
Am-241	6.7415E+00	1.9642E-03	4.9082E+21	7.8872E+15
Cm-242	1.6820E+03	5.0749E-04	1.2629E+21	1.9720E+18
Cm-244	1.8359E+02	2.2693E-03	5.6007E+21	2.1508E+17

ECSS Fluid (Torus) Transport Group Inventory:

Time (h) = 10.0000	Atmosphere	Sump	
Noble gases (atoms)	1.1600E+23	0.0000E+00	
Elemental I (atoms)	5.8930E+22	0.0000E+00	
Organic I (atoms)	1.8226E+21	0.0000E+00	
Aerosols (kg)	5.3708E+01	0.0000E+00	
Dose Effective (Ci/cc) I-131 (Thyroid)			8.9331E-03
Dose Effective (Ci/cc) I-131 (ICRP2 Thyroid)			1.0348E-02
Total I (Ci)			9.7625E+07

ECSS Fluid to Reactor Building Transport Group Inventory:

	Pathway	
Time (h) = 10.0000	Filtered	Transported
Noble gases (atoms)	0.0000E+00	3.3276E+15
Elemental I (atoms)	0.0000E+00	2.3964E+15
Organic I (atoms)	0.0000E+00	7.4117E+13
Aerosols (kg)	0.0000E+00	2.0779E-06

Detailed model information at time (H) = 12.0000

EAB Doses:

Time (h) = 12.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)	0.0000E+00	0.0000E+00	0.0000E+00
Accumulated dose (rem)	9.8228E-06	3.3758E-03	1.9941E-04

LPZ Doses:

Time (h) = 12.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)	4.5377E-07	1.5631E-04	1.0003E-05
Accumulated dose (rem)	6.4834E-06	2.4358E-03	1.4828E-04

Control Room Doses:

Time (h) = 12.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)	3.3609E-12	4.2380E-08	2.5816E-09
Accumulated dose (rem)	6.7709E-08	3.4603E-04	1.5749E-05

ECCS Fluid (Torus) Compartment Nuclide Inventory:

Time (h) = 12.0000	Ci	kg	Atoms	Decay
Co-58	1.3420E+03	4.2204E-05	4.3820E+20	1.9339E+18
Co-60	1.6138E+03	1.4276E-03	1.4329E+22	2.3206E+18
Rb-86	5.6431E+04	6.9353E-04	4.8564E+21	8.3354E+19
Sr-89	1.9608E+06	6.7491E-02	4.5667E+23	2.8281E+21
Sr-90	2.2423E+05	1.6438E+00	1.0999E+25	3.2243E+20
Sr-91	1.1174E+06	3.0825E-04	2.0399E+21	2.4464E+21
Sr-92	1.3167E+05	1.0475E-05	6.8570E+19	1.0227E+21
Y-90	2.6806E+04	4.9270E-05	3.2968E+20	2.1130E+19
Y-91	2.7988E+04	1.1413E-03	7.5525E+21	3.7949E+19
Y-92	3.9887E+05	4.1452E-05	2.7134E+20	7.7005E+20
Y-93	1.4016E+04	4.2009E-06	2.7203E+19	2.9886E+19
Zr-95	3.1503E+04	1.4664E-03	9.2959E+21	4.5409E+19
Zr-97	2.0087E+04	1.0508E-05	6.5235E+19	3.6351E+19
Nb-95	3.1831E+04	8.1403E-04	5.1602E+21	4.5772E+19
Mo-99	3.9485E+05	8.2326E-04	5.0078E+21	6.0124E+20
Tc-99m	3.7349E+05	7.1029E-05	4.3207E+20	5.5093E+20
Ru-103	3.6736E+05	1.1383E-02	6.6551E+22	5.3033E+20
Ru-105	3.9397E+04	5.8610E-06	3.3615E+19	1.4811E+20
Ru-106	1.5244E+05	4.5565E-02	2.5887E+23	2.1929E+20
Rh-105	2.1532E+05	2.5511E-04	1.4631E+21	3.3251E+20
Sb-127	4.6688E+05	1.7483E-03	8.2900E+21	6.9930E+20
Sb-129	2.2219E+05	3.9511E-05	1.8445E+20	8.6065E+20
Te-127	4.8296E+05	1.8300E-04	8.6777E+20	7.0879E+20
Te-127m	6.8065E+04	7.2160E-03	3.4217E+22	9.7832E+19
Te-129	3.9002E+05	1.8623E-05	8.6940E+19	1.0879E+21
Te-129m	2.2273E+05	7.3934E-03	3.4515E+22	3.2111E+20
Te-131m	5.1723E+05	6.4864E-04	2.9818E+21	8.4488E+20
Te-132	6.0601E+06	1.9961E-02	9.1068E+22	9.1451E+21
I-131	2.7268E+07	2.1995E-01	1.0111E+24	4.0597E+22
I-132	7.5931E+06	7.3561E-04	3.3560E+21	2.3906E+22
I-133	3.9422E+07	3.4800E-02	1.5757E+23	6.9517E+22
I-134	4.9433E+03	1.8531E-07	8.3279E+17	5.3114E+21
I-135	1.5613E+07	4.4458E-03	1.9832E+22	4.2872E+22
Xe-133	3.8118E+06	2.0364E-02	9.2208E+22	3.7272E+21
Xe-135	1.8490E+07	7.2406E-03	3.2299E+22	2.5426E+22
Cs-134	6.4180E+06	4.9605E+00	2.2293E+25	9.4014E+21
Cs-136	1.7411E+06	2.3756E-02	1.0519E+23	2.5812E+21
Cs-137	4.0024E+06	4.6014E+01	2.0227E+26	5.8617E+21
Ba-139	8.5891E+03	5.2510E-07	2.2750E+18	5.2848E+20
Ba-140	3.3619E+06	4.5922E-02	1.9754E+23	4.8938E+21
La-140	6.0668E+05	1.0915E-03	4.6950E+21	4.7268E+20
La-141	3.9437E+03	6.9733E-07	2.9783E+18	1.7072E+19
La-142	1.4511E+02	1.0137E-08	4.2990E+16	5.5732E+18
Ce-141	7.8589E+04	2.7581E-03	1.1780E+22	1.1349E+20
Ce-143	6.0694E+04	9.1395E-05	3.8489E+20	9.7977E+19
Ce-144	6.3356E+04	1.9864E-02	8.3072E+22	9.1149E+19
Pr-143	3.1152E+04	4.6262E-04	1.9482E+21	4.4212E+19
Nd-147	1.2566E+04	1.5533E-04	6.3634E+20	1.8328E+19
Np-239	8.2175E+05	3.5421E-03	8.9252E+21	1.2635E+21
Pu-238	3.1683E+02	1.8507E-02	4.6828E+22	4.5556E+17
Pu-239	2.1203E+01	3.4112E-01	8.5953E+23	3.0465E+16
Pu-240	2.2720E+01	9.9709E-02	2.5019E+23	3.2669E+16
Pu-241	1.0904E+04	1.0585E-01	2.6451E+23	1.5680E+19
Am-241	6.7454E+00	1.9654E-03	4.9111E+21	9.6836E+15
Cm-242	1.6814E+03	5.0731E-04	1.2624E+21	2.4200E+18
Cm-244	1.8359E+02	2.2692E-03	5.6007E+21	2.6399E+17

ECCS Fluid (Torus) Transport Group Inventory:

Time (h) = 12.0000	Atmosphere	Sump
Noble gases (atoms)	1.2451E+23	0.0000E+00
Elemental I (atoms)	5.7806E+22	0.0000E+00
Organic I (atoms)	1.7878E+21	0.0000E+00
Aerosols (kg)	5.3702E+01	0.0000E+00
Dose Effective (Ci/cc) I-131 (Thyroid)		8.7401E-03
Dose Effective (Ci/cc) I-131 (ICRP2 Thyroid)		1.0026E-02
Total I (Ci)		8.9901E+07

ECCS Fluid to Reactor Building Transport Group Inventory:

	Pathway	
Time (h) = 12.0000	Filtered	Transported
Noble gases (atoms)	0.0000E+00	4.3672E+15
Elemental I (atoms)	0.0000E+00	2.9016E+15
Organic I (atoms)	0.0000E+00	8.9740E+13
Aerosols (kg)	0.0000E+00	2.5425E-06

Detailed model information at time (H) = 14.0000

EAB Doses:

Time (h) = 14.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)	0.0000E+00	0.0000E+00	0.0000E+00
Accumulated dose (rem)	9.8228E-06	3.3758E-03	1.9941E-04

LPZ Doses:

Time (h) = 14.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)	4.1808E-07	1.5345E-04	9.8706E-06
Accumulated dose (rem)	6.9015E-06	2.5893E-03	1.5815E-04

Control Room Doses:

Time (h) = 14.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)	3.1013E-12	4.1482E-08	2.5484E-09
Accumulated dose (rem)	6.7712E-08	3.4607E-04	1.5751E-05

ECCS Fluid (Torus) Compartment Nuclide Inventory:

Time (h) = 14.0000	Ci	kg	Atoms	Decay
Co-58	1.3409E+03	4.2169E-05	4.3784E+20	2.2913E+18
Co-60	1.6137E+03	1.4276E-03	1.4329E+22	2.7505E+18
Rb-86	5.6256E+04	6.9139E-04	4.8414E+21	9.8364E+19
Sr-89	1.9585E+06	6.7414E-02	4.5615E+23	3.3502E+21
Sr-90	2.2423E+05	1.6438E+00	1.0999E+25	3.8216E+20
Sr-91	9.6568E+05	2.6640E-04	1.7629E+21	2.7234E+21
Sr-92	7.8945E+04	6.2807E-06	4.1112E+19	1.0501E+21
Y-90	3.1053E+04	5.7075E-05	3.8191E+20	2.8640E+19
Y-91	2.8391E+04	1.1577E-03	7.6614E+21	4.5443E+19
Y-92	3.0452E+05	3.1647E-05	2.0716E+20	8.6169E+20
Y-93	1.2218E+04	3.6622E-06	2.3714E+19	3.3375E+19
Zr-95	3.1475E+04	1.4651E-03	9.2875E+21	5.3798E+19
Zr-97	1.8505E+04	9.6800E-06	6.0097E+19	4.1489E+19
Nb-95	3.1830E+04	8.1400E-04	5.1600E+21	5.4249E+19
Mo-99	3.8664E+05	8.0615E-04	4.9038E+21	7.0533E+20
Tc-99m	3.6998E+05	7.0362E-05	4.2801E+20	6.4659E+20
Ru-103	3.6682E+05	1.1366E-02	6.6453E+22	6.2812E+20
Ru-105	2.8832E+04	4.2891E-06	2.4600E+19	1.5713E+20
Ru-106	1.5242E+05	4.5558E-02	2.5883E+23	2.5990E+20
Rh-105	2.0835E+05	2.4685E-04	1.4158E+21	3.8890E+20
Sb-127	4.5992E+05	1.7222E-03	8.1665E+21	8.2274E+20
Sb-129	1.6120E+05	2.8665E-05	1.3382E+20	9.1128E+20
Te-127	4.7940E+05	1.8165E-04	8.6136E+20	8.3420E+20
Te-127m	6.8074E+04	7.2169E-03	3.4221E+22	1.1596E+20
Te-129	3.6506E+05	1.7432E-05	8.1376E+19	1.1709E+21
Te-129m	2.2242E+05	7.3831E-03	3.4467E+22	3.8040E+20
Te-131m	4.9387E+05	6.1935E-04	2.8472E+21	9.7954E+20
Te-132	5.9536E+06	1.9611E-02	8.9468E+22	1.0745E+22
I-131	2.7076E+07	2.1840E-01	1.0040E+24	4.7835E+22
I-132	7.1602E+06	6.9367E-04	3.1647E+21	2.5698E+22
I-133	3.6880E+07	3.2557E-02	1.4741E+23	7.9677E+22
I-134	1.0169E+03	3.8118E-08	1.7131E+17	5.3121E+21
I-135	1.2659E+07	3.6047E-03	1.6080E+22	4.6624E+22
Xe-133	4.1759E+06	2.2309E-02	1.0101E+23	4.7754E+21
Xe-135	1.7604E+07	6.8934E-03	3.0750E+22	3.0164E+22
Cs-134	6.4175E+06	4.9601E+00	2.2291E+25	1.1111E+22
Cs-136	1.7335E+06	2.3652E-02	1.0473E+23	3.0440E+21
Cs-137	4.0024E+06	4.6014E+01	2.0226E+26	6.9279E+21
Ba-139	3.1415E+03	1.9206E-07	8.3210E+17	5.2992E+20
Ba-140	3.3467E+06	4.5714E-02	1.9664E+23	5.7874E+21
La-140	7.0025E+05	1.2598E-03	5.4192E+21	6.4212E+20
La-141	2.7714E+03	4.9006E-07	2.0930E+18	1.7957E+19

La-142	5.9043E+01	4.1246E-09	1.7492E+16	5.5987E+18
Ce-141	7.8455E+04	2.7534E-03	1.1760E+22	1.3441E+20
Ce-143	5.8197E+04	8.7635E-05	3.6905E+20	1.1381E+20
Ce-144	6.3343E+04	1.9860E-02	8.3055E+22	1.0803E+20
Pr-143	3.1273E+04	4.6441E-04	1.9558E+21	5.2517E+19
Nd-147	1.2500E+04	1.5451E-04	6.3300E+20	2.1667E+19
Np-239	8.0184E+05	3.4563E-03	8.7090E+21	1.4798E+21
Pu-238	3.1683E+02	1.8507E-02	4.6828E+22	5.3997E+17
Pu-239	2.1208E+01	3.4121E-01	8.5975E+23	3.6114E+16
Pu-240	2.2720E+01	9.9709E-02	2.5019E+23	3.8722E+16
Pu-241	1.0904E+04	1.0585E-01	2.6451E+23	1.8585E+19
Am-241	6.7494E+00	1.9665E-03	4.9140E+21	1.1481E+16
Cm-242	1.6808E+03	5.0713E-04	1.2620E+21	2.8678E+18
Cm-244	1.8359E+02	2.2692E-03	5.6006E+21	3.1289E+17

ECCS Fluid (Torus) Transport Group Inventory:

Time (h) = 14.0000	Atmosphere	Sump	
Noble gases (atoms)	1.3177E+23	0.0000E+00	
Elemental I (atoms)	5.6776E+22	0.0000E+00	
Organic I (atoms)	1.7560E+21	0.0000E+00	
Aerosols (kg)	5.3696E+01	0.0000E+00	
Dose Effective (Ci/cc) I-131 (Thyroid)			8.5609E-03
Dose Effective (Ci/cc) I-131 (ICRP2 Thyroid)			9.7377E-03
Total I (Ci)			8.3776E+07

ECCS Fluid to Reactor Building Transport Group Inventory:

	Pathway	
Time (h) = 14.0000	Filtered	Transported
Noble gases (atoms)	0.0000E+00	5.4671E+15
Elemental I (atoms)	0.0000E+00	3.3985E+15
Organic I (atoms)	0.0000E+00	1.0511E+14
Aerosols (kg)	0.0000E+00	3.0071E-06

Detailed model information at time (H) = 16.0000

EAB Doses:

Time (h) = 16.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)	0.0000E+00	0.0000E+00	0.0000E+00
Accumulated dose (rem)	9.8228E-06	3.3758E-03	1.9941E-04

LPZ Doses:

Time (h) = 16.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)	3.9135E-07	1.5069E-04	9.7515E-06
Accumulated dose (rem)	7.2928E-06	2.7400E-03	1.6790E-04

Control Room Doses:

Time (h) = 16.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)	2.9055E-12	4.0731E-08	2.5229E-09
Accumulated dose (rem)	6.7715E-08	3.4611E-04	1.5754E-05

ECCS Fluid (Torus) Compartment Nuclide Inventory:

Time (h) = 16.0000	Ci	kg	Atoms	Decay
Co-58	1.3398E+03	4.2135E-05	4.3749E+20	2.6483E+18
Co-60	1.6137E+03	1.4275E-03	1.4328E+22	3.1804E+18
Rb-86	5.6083E+04	6.8925E-04	4.8265E+21	1.1333E+20
Sr-89	1.9563E+06	6.7337E-02	4.5563E+23	3.8716E+21
Sr-90	2.2423E+05	1.6438E+00	1.0999E+25	4.4190E+20
Sr-91	8.3456E+05	2.3022E-04	1.5236E+21	2.9628E+21
Sr-92	4.7333E+04	3.7657E-06	2.4650E+19	1.0666E+21
Y-90	3.5218E+04	6.4732E-05	4.3314E+20	3.7145E+19
Y-91	2.8736E+04	1.1717E-03	7.7543E+21	5.3028E+19
Y-92	2.2762E+05	2.3656E-05	1.5484E+20	9.3047E+20
Y-93	1.0651E+04	3.1925E-06	2.0673E+19	3.6416E+19
Zr-95	3.1446E+04	1.4638E-03	9.2791E+21	6.2179E+19
Zr-97	1.7048E+04	8.9177E-06	5.5365E+19	4.6222E+19
Nb-95	3.1829E+04	8.1398E-04	5.1599E+21	6.2725E+19
Mo-99	3.7860E+05	7.8939E-04	4.8018E+21	8.0726E+20
Tc-99m	3.6718E+05	6.9829E-05	4.2477E+20	7.3953E+20
Ru-103	3.6628E+05	1.1349E-02	6.6356E+22	7.2577E+20
Ru-105	2.1099E+04	3.1389E-06	1.8002E+19	1.6372E+20

Ru-106	1.5239E+05	4.5551E-02	2.5879E+23	3.0050E+20
Rh-105	2.0130E+05	2.3849E-04	1.3679E+21	4.4340E+20
Sb-127	4.5308E+05	1.6966E-03	8.0449E+21	9.4435E+20
Sb-129	1.1695E+05	2.0796E-05	9.7084E+19	9.4801E+20
Te-127	4.7638E+05	1.8051E-04	8.5595E+20	9.5711E+20
Te-127m	6.8081E+04	7.2177E-03	3.4225E+22	1.3410E+20
Te-129	3.4035E+05	1.6252E-05	7.5869E+19	1.2432E+21
Te-129m	2.2209E+05	7.3722E-03	3.4416E+22	4.3960E+20
Te-131m	4.7157E+05	5.9138E-04	2.7186E+21	1.1081E+21
Te-132	5.8490E+06	1.9266E-02	8.7896E+22	1.2317E+22
I-131	2.6885E+07	2.1685E-01	9.9689E+23	5.5022E+22
I-132	7.0109E+06	6.7921E-04	3.0987E+21	2.7336E+22
I-133	3.4502E+07	3.0457E-02	1.3791E+23	8.9181E+22
I-134	2.0917E+02	7.8409E-09	3.5238E+16	5.3122E+21
I-135	1.0264E+07	2.9227E-03	1.3038E+22	4.9666E+22
Xe-133	4.5102E+06	2.4095E-02	1.0910E+23	5.9075E+21
Xe-135	1.6537E+07	6.4756E-03	2.8887E+22	3.4613E+22
Cs-134	6.4170E+06	4.9597E+00	2.2290E+25	1.2821E+22
Cs-136	1.7258E+06	2.3548E-02	1.0427E+23	3.5048E+21
Cs-137	4.0023E+06	4.6014E+01	2.0226E+26	7.9942E+21
Ba-139	1.1491E+03	7.0249E-08	3.0435E+17	5.3045E+20
Ba-140	3.3316E+06	4.5508E-02	1.9575E+23	6.6769E+21
La-140	7.9052E+05	1.4222E-03	6.1178E+21	8.3309E+20
La-141	1.9476E+03	3.4439E-07	1.4709E+18	1.8579E+19
La-142	2.4024E+01	1.6782E-09	7.1173E+15	5.6091E+18
Ce-141	7.8320E+04	2.7487E-03	1.1740E+22	1.5529E+20
Ce-143	5.5803E+04	8.4030E-05	3.5387E+20	1.2899E+20
Ce-144	6.3330E+04	1.9856E-02	8.3038E+22	1.2490E+20
Pr-143	3.1382E+04	4.6604E-04	1.9626E+21	6.0846E+19
Nd-147	1.2434E+04	1.5370E-04	6.2968E+20	2.4988E+19
Np-239	7.8241E+05	3.3726E-03	8.4980E+21	1.6908E+21
Pu-238	3.1684E+02	1.8507E-02	4.6829E+22	6.2437E+17
Pu-239	2.1213E+01	3.4129E-01	8.5996E+23	4.1765E+16
Pu-240	2.2720E+01	9.9709E-02	2.5019E+23	4.4775E+16
Pu-241	1.0904E+04	1.0585E-01	2.6450E+23	2.1489E+19
Am-241	6.7534E+00	1.9677E-03	4.9169E+21	1.3279E+16
Cm-242	1.6802E+03	5.0695E-04	1.2616E+21	3.3155E+18
Cm-244	1.8358E+02	2.2692E-03	5.6006E+21	3.6180E+17

ECCS Fluid (Torus) Transport Group Inventory:

Time (h) = 16.0000	Atmosphere	Sump	
Noble gases (atoms)	1.3799E+23	0.0000E+00	
Elemental I (atoms)	5.5821E+22	0.0000E+00	
Organic I (atoms)	1.7264E+21	0.0000E+00	
Aerosols (kg)	5.3690E+01	0.0000E+00	
Dose Effective (Ci/cc) I-131 (Thyroid)			8.3936E-03
Dose Effective (Ci/cc) I-131 (ICRP2 Thyroid)			9.4751E-03
Total I (Ci)			7.8662E+07

ECCS Fluid to Reactor Building Transport Group Inventory:

	Pathway	
Time (h) = 16.0000	Filtered	Transported
Noble gases (atoms)	0.0000E+00	6.6211E+15
Elemental I (atoms)	0.0000E+00	3.8877E+15
Organic I (atoms)	0.0000E+00	1.2024E+14
Aerosols (kg)	0.0000E+00	3.4717E-06

Detailed model information at time (H) = 18.0000

EAB Doses:

Time (h) = 18.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)	0.0000E+00	0.0000E+00	0.0000E+00
Accumulated dose (rem)	9.8228E-06	3.3758E-03	1.9941E-04

LPZ Doses:

Time (h) = 18.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)	3.6651E-07	1.4781E-04	9.6307E-06
Accumulated dose (rem)	7.6594E-06	2.8878E-03	1.7753E-04

Control Room Doses:

Time (h) = 18.0000	Whole Body	Thyroid	TEDE
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Delta dose (rem) 2.7222E-12 3.9952E-08 2.4968E-09
 Accumulated dose (rem) 6.7717E-08 3.4615E-04 1.5756E-05

ECCS Fluid (Torus) Compartment Nuclide Inventory:

Time (h) = 18.0000	Ci	kg	Atoms	Decay
Co-58	1.3387E+03	4.2101E-05	4.3713E+20	3.0051E+18
Co-60	1.6136E+03	1.4275E-03	1.4328E+22	3.6103E+18
Rb-86	5.5909E+04	6.8712E-04	4.8116E+21	1.2824E+20
Sr-89	1.9540E+06	6.7260E-02	4.5511E+23	4.3925E+21
Sr-90	2.2423E+05	1.6438E+00	1.0999E+25	5.0163E+20
Sr-91	7.2125E+05	1.9897E-04	1.3167E+21	3.1696E+21
Sr-92	2.8379E+04	2.2578E-06	1.4779E+19	1.0765E+21
Y-90	3.9294E+04	7.2224E-05	4.8327E+20	4.6748E+19
Y-91	2.9029E+04	1.1837E-03	7.8335E+21	6.0702E+19
Y-92	1.6692E+05	1.7347E-05	1.1355E+20	9.8163E+20
Y-93	9.2850E+03	2.7830E-06	1.8021E+19	3.9068E+19
Zr-95	3.1418E+04	1.4625E-03	9.2707E+21	7.0552E+19
Zr-97	1.5705E+04	8.2154E-06	5.1004E+19	5.0582E+19
Nb-95	3.1828E+04	8.1395E-04	5.1597E+21	7.1201E+19
Mo-99	3.7073E+05	7.7298E-04	4.7020E+21	9.0707E+20
Tc-99m	3.6342E+05	6.9115E-05	4.2043E+20	8.3170E+20
Ru-103	3.6574E+05	1.1332E-02	6.6258E+22	8.2328E+20
Ru-105	1.5441E+04	2.2971E-06	1.3174E+19	1.6855E+20
Ru-106	1.5237E+05	4.5544E-02	2.5875E+23	3.4109E+20
Rh-105	1.9427E+05	2.3016E-04	1.3200E+21	4.9604E+20
Sb-127	4.4633E+05	1.6713E-03	7.9251E+21	1.0642E+21
Sb-129	8.4844E+04	1.5088E-05	7.0434E+19	9.7466E+20
Te-127	4.7299E+05	1.7922E-04	8.4985E+20	1.0792E+21
Te-127m	6.8088E+04	7.2184E-03	3.4228E+22	1.5223E+20
Te-129	3.0630E+05	1.4626E-05	6.8279E+19	1.3098E+21
Te-129m	2.2174E+05	7.3607E-03	3.4362E+22	4.9872E+20
Te-131m	4.5028E+05	5.6468E-04	2.5958E+21	1.2309E+21
Te-132	5.7463E+06	1.8928E-02	8.6352E+22	1.3862E+22
I-131	2.6695E+07	2.1532E-01	9.8985E+23	6.2159E+22
I-132	6.8749E+06	6.6603E-04	3.0386E+21	2.8940E+22
I-133	3.2278E+07	2.8494E-02	1.2902E+23	9.8073E+22
I-134	4.3027E+01	1.6129E-09	7.2486E+15	5.3122E+21
I-135	8.3222E+06	2.3697E-03	1.0571E+22	5.2133E+22
Xe-133	4.8164E+06	2.5731E-02	1.1651E+23	7.1265E+21
Xe-135	1.5352E+07	6.0115E-03	2.6816E+22	3.8780E+22
Cs-134	6.4165E+06	4.9593E+00	2.2288E+25	1.4530E+22
Cs-136	1.7183E+06	2.3444E-02	1.0381E+23	3.9635E+21
Cs-137	4.0023E+06	4.6013E+01	2.0226E+26	9.0604E+21
Ba-139	4.2028E+02	2.5694E-08	1.1132E+17	5.3064E+20
Ba-140	3.3165E+06	4.5302E-02	1.9487E+23	7.5624E+21
La-140	8.7721E+05	1.5782E-03	6.7887E+21	1.0477E+21
La-141	1.3687E+03	2.4202E-07	1.0337E+18	1.9016E+19
La-142	9.7751E+00	6.8285E-10	2.8959E+15	5.6133E+18
Ce-141	7.8184E+04	2.7439E-03	1.1719E+22	1.7613E+20
Ce-143	5.3507E+04	8.0573E-05	3.3931E+20	1.4355E+20
Ce-144	6.3318E+04	1.9852E-02	8.3022E+22	1.4177E+20
Pr-143	3.1482E+04	4.6751E-04	1.9688E+21	6.9205E+19
Nd-147	1.2369E+04	1.5290E-04	6.2637E+20	2.8292E+19
Np-239	7.6345E+05	3.2909E-03	8.2921E+21	1.8967E+21
Pu-238	3.1684E+02	1.8507E-02	4.6829E+22	7.0878E+17
Pu-239	2.1219E+01	3.4137E-01	8.6016E+23	4.7416E+16
Pu-240	2.2720E+01	9.9709E-02	2.5019E+23	5.0828E+16
Pu-241	1.0904E+04	1.0585E-01	2.6450E+23	2.4394E+19
Am-241	6.7574E+00	1.9688E-03	4.9198E+21	1.5079E+16
Cm-242	1.6796E+03	5.0678E-04	1.2611E+21	3.7630E+18
Cm-244	1.8358E+02	2.2692E-03	5.6005E+21	4.1071E+17

ECCS Fluid (Torus) Transport Group Inventory:

Time (h) = 18.0000	Atmosphere	Sump	
Noble gases (atoms)	1.4332E+23	0.0000E+00	
Elemental I (atoms)	5.4925E+22	0.0000E+00	
Organic I (atoms)	1.6987E+21	0.0000E+00	
Aerosols (kg)	5.3685E+01	0.0000E+00	
Dose Effective (Ci/cc) I-131 (Thyroid)			8.2364E-03
Dose Effective (Ci/cc) I-131 (ICRP2 Thyroid)			9.2330E-03
Total I (Ci)			7.4170E+07

ECCS Fluid to Reactor Building Transport Group Inventory:

	Pathway	
	Filtered	Transported
Time (h) = 18.0000		
Noble gases (atoms)	0.0000E+00	7.8269E+15
Elemental I (atoms)	0.0000E+00	4.3686E+15
Organic I (atoms)	0.0000E+00	1.3511E+14
Aerosols (kg)	0.0000E+00	3.9362E-06

Detailed model information at time (H) = 20.0000

EAB Doses:

Time (h) = 20.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)	0.0000E+00	0.0000E+00	0.0000E+00
Accumulated dose (rem)	9.8228E-06	3.3758E-03	1.9941E-04

LPZ Doses:

Time (h) = 20.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)	3.4525E-07	1.4510E-04	9.5195E-06
Accumulated dose (rem)	8.0046E-06	3.0329E-03	1.8705E-04

Control Room Doses:

Time (h) = 20.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)	2.5625E-12	3.9219E-08	2.4723E-09
Accumulated dose (rem)	6.7720E-08	3.4619E-04	1.5759E-05

ECCS Fluid (Torus) Compartment Nuclide Inventory:

Time (h) = 20.0000	Ci	kg	Atoms	Decay
Co-58	1.3376E+03	4.2066E-05	4.3677E+20	3.3616E+18
Co-60	1.6136E+03	1.4275E-03	1.4327E+22	4.0401E+18
Rb-86	5.5736E+04	6.8500E-04	4.7967E+21	1.4312E+20
Sr-89	1.9518E+06	6.7183E-02	4.5459E+23	4.9127E+21
Sr-90	2.2423E+05	1.6438E+00	1.0999E+25	5.6137E+20
Sr-91	6.2332E+05	1.7195E-04	1.1379E+21	3.3484E+21
Sr-92	1.7015E+04	1.3537E-06	8.8610E+18	1.0824E+21
Y-90	4.3283E+04	7.9555E-05	5.3232E+20	5.7426E+19
Y-91	2.9279E+04	1.1939E-03	7.9009E+21	6.8451E+19
Y-92	1.2066E+05	1.2540E-05	8.2082E+19	1.0190E+21
Y-93	8.0942E+03	2.4261E-06	1.5710E+19	4.1379E+19
Zr-95	3.1390E+04	1.4611E-03	9.2624E+21	7.8918E+19
Zr-97	1.4468E+04	7.5684E-06	4.6987E+19	5.4599E+19
Nb-95	3.1827E+04	8.1392E-04	5.1595E+21	7.9676E+19
Mo-99	3.6303E+05	7.5692E-04	4.6043E+21	1.0048E+21
Tc-99m	3.5895E+05	6.8265E-05	4.1525E+20	9.2288E+20
Ru-103	3.6521E+05	1.1316E-02	6.6161E+22	9.2064E+20
Ru-105	1.1300E+04	1.6810E-06	9.6413E+18	1.7209E+20
Ru-106	1.5235E+05	4.5537E-02	2.5871E+23	3.8168E+20
Rh-105	1.8731E+05	2.2192E-04	1.2728E+21	5.4682E+20
Sb-127	4.3968E+05	1.6464E-03	7.8071E+21	1.1822E+21
Sb-129	6.1554E+04	1.0946E-05	5.1100E+19	9.9400E+20
Te-127	4.6928E+05	1.7782E-04	8.4318E+20	1.2004E+21
Te-127m	6.8094E+04	7.2190E-03	3.4231E+22	1.7037E+20
Te-129	2.7666E+05	1.3210E-05	6.1671E+19	1.3696E+21
Te-129m	2.2139E+05	7.3490E-03	3.4308E+22	5.5774E+20
Te-131m	4.2994E+05	5.3918E-04	2.4786E+21	1.3481E+21
Te-132	5.6453E+06	1.8595E-02	8.4834E+22	1.5379E+22
I-131	2.6506E+07	2.1380E-01	9.8286E+23	6.9245E+22
I-132	6.7471E+06	6.5365E-04	2.9821E+21	3.0514E+22
I-133	3.0197E+07	2.6657E-02	1.2070E+23	1.0639E+23
I-134	8.8507E+00	3.3178E-10	1.4910E+15	5.3123E+21
I-135	6.7476E+06	1.9214E-03	8.5710E+21	5.4133E+22
Xe-133	5.0963E+06	2.7226E-02	1.2328E+23	8.4251E+21
Xe-135	1.4116E+07	5.5276E-03	2.4658E+22	4.2639E+22
Cs-134	6.4160E+06	4.9590E+00	2.2286E+25	1.6239E+22
Cs-136	1.7107E+06	2.3341E-02	1.0336E+23	4.4203E+21
Cs-137	4.0023E+06	4.6013E+01	2.0226E+26	1.0127E+22
Ba-139	1.5372E+02	9.3979E-09	4.0716E+16	5.3071E+20
Ba-140	3.3015E+06	4.5097E-02	1.9399E+23	8.4440E+21
La-140	9.6046E+05	1.7280E-03	7.4330E+21	1.2849E+21
La-141	9.6187E+02	1.7008E-07	7.2642E+17	1.9324E+19
La-142	3.9774E+00	2.7784E-10	1.1783E+15	5.6150E+18
Ce-141	7.8047E+04	2.7391E-03	1.1699E+22	1.9694E+20
Ce-143	5.1306E+04	7.7258E-05	3.2536E+20	1.5751E+20

Ce-144	6.3305E+04	1.9848E-02	8.3005E+22	1.5863E+20
Pr-143	3.1571E+04	4.6883E-04	1.9744E+21	7.7588E+19
Nd-147	1.2304E+04	1.5210E-04	6.2309E+20	3.1578E+19
Np-239	7.4495E+05	3.2111E-03	8.0912E+21	2.0976E+21
Pu-238	3.1684E+02	1.8507E-02	4.6830E+22	7.9318E+17
Pu-239	2.1223E+01	3.4145E-01	8.6036E+23	5.3069E+16
Pu-240	2.2720E+01	9.9709E-02	2.5019E+23	5.6880E+16
Pu-241	1.0904E+04	1.0585E-01	2.6450E+23	2.7299E+19
Am-241	6.7614E+00	1.9700E-03	4.9227E+21	1.6879E+16
Cm-242	1.6790E+03	5.0660E-04	1.2607E+21	4.2104E+18
Cm-244	1.8358E+02	2.2692E-03	5.6005E+21	4.5961E+17

ECCS Fluid (Torus) Transport Group Inventory:

Time (h) = 20.0000	Atmosphere	Sump	
Noble gases (atoms)	1.4794E+23	0.0000E+00	
Elemental I (atoms)	5.4083E+22	0.0000E+00	
Organic I (atoms)	1.6727E+21	0.0000E+00	
Aerosols (kg)	5.3680E+01	0.0000E+00	
Dose Effective (Ci/cc) I-131 (Thyroid)			8.0884E-03
Dose Effective (Ci/cc) I-131 (ICRP2 Thyroid)			9.0088E-03
Total I (Ci)			7.0197E+07

ECCS Fluid to Reactor Building Transport Group Inventory:

	Pathway	
Time (h) = 20.0000	Filtered	Transported
Noble gases (atoms)	0.0000E+00	9.0773E+15
Elemental I (atoms)	0.0000E+00	4.8420E+15
Organic I (atoms)	0.0000E+00	1.4975E+14
Aerosols (kg)	0.0000E+00	4.4006E-06

Detailed model information at time (H) = 22.0000

EAB Doses:

Time (h) = 22.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)	0.0000E+00	0.0000E+00	0.0000E+00
Accumulated dose (rem)	9.8228E-06	3.3758E-03	1.9941E-04

LPZ Doses:

Time (h) = 22.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)	3.2694E-07	1.4254E-04	9.4167E-06
Accumulated dose (rem)	8.3315E-06	3.1754E-03	1.9647E-04

Control Room Doses:

Time (h) = 22.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)	2.4225E-12	3.8527E-08	2.4494E-09
Accumulated dose (rem)	6.7722E-08	3.4623E-04	1.5761E-05

ECCS Fluid (Torus) Compartment Nuclide Inventory:

Time (h) = 22.0000	Ci	kg	Atoms	Decay
Co-58	1.3365E+03	4.2032E-05	4.3642E+20	3.7178E+18
Co-60	1.6135E+03	1.4274E-03	1.4327E+22	4.4700E+18
Rb-86	5.5564E+04	6.8288E-04	4.7819E+21	1.5794E+20
Sr-89	1.9496E+06	6.7106E-02	4.5407E+23	5.4324E+21
Sr-90	2.2423E+05	1.6438E+00	1.0999E+25	6.2110E+20
Sr-91	5.3868E+05	1.4860E-04	9.8341E+20	3.5029E+21
Sr-92	1.0202E+04	8.1163E-07	5.3128E+18	1.0859E+21
Y-90	4.7186E+04	8.6730E-05	5.8033E+20	6.9154E+19
Y-91	2.9490E+04	1.2025E-03	7.9580E+21	7.6263E+19
Y-92	8.6256E+04	8.9642E-06	5.8678E+19	1.0460E+21
Y-93	7.0561E+03	2.1149E-06	1.3695E+19	4.3394E+19
Zr-95	3.1361E+04	1.4598E-03	9.2540E+21	8.7277E+19
Zr-97	1.3329E+04	6.9723E-06	4.3287E+19	5.8299E+19
Nb-95	3.1825E+04	8.1388E-04	5.1593E+21	8.8151E+19
Mo-99	3.5548E+05	7.4118E-04	4.5086E+21	1.1005E+21
Tc-99m	3.5394E+05	6.7311E-05	4.0945E+20	1.0129E+21
Ru-103	3.6467E+05	1.1299E-02	6.6063E+22	1.0179E+21
Ru-105	8.2694E+03	1.2302E-06	7.0556E+18	1.7467E+20
Ru-106	1.5232E+05	4.5530E-02	2.5867E+23	4.2226E+20
Rh-105	1.8049E+05	2.1383E-04	1.2264E+21	5.9579E+20
Sb-127	4.3314E+05	1.6219E-03	7.6908E+21	1.2984E+21

Sb-129	4.4657E+04	7.9413E-06	3.7072E+19	1.0080E+21
Te-127	4.6531E+05	1.7631E-04	8.3604E+20	1.3207E+21
Te-127m	6.8100E+04	7.2196E-03	3.4234E+22	1.8851E+20
Te-129	2.5359E+05	1.2109E-05	5.6529E+19	1.4239E+21
Te-129m	2.2103E+05	7.3371E-03	3.4252E+22	6.1667E+20
Te-131m	4.1053E+05	5.1483E-04	2.3667E+21	1.4600E+21
Te-132	5.5461E+06	1.8268E-02	8.3344E+22	1.6870E+22
I-131	2.6319E+07	2.1229E-01	9.7591E+23	7.6281E+22
I-132	6.6247E+06	6.4179E-04	2.9280E+21	3.2059E+22
I-133	2.8250E+07	2.4938E-02	1.1292E+23	1.1417E+23
I-134	1.8206E+00	6.8247E-11	3.0671E+14	5.3123E+21
I-135	5.4710E+06	1.5579E-03	6.9494E+21	5.5754E+22
Xe-133	5.3516E+06	2.8591E-02	1.2946E+23	9.7963E+21
Xe-135	1.2878E+07	5.0428E-03	2.2495E+22	4.6180E+22
Cs-134	6.4155E+06	4.9586E+00	2.2284E+25	1.7949E+22
Cs-136	1.7032E+06	2.3238E-02	1.0290E+23	4.8750E+21
Cs-137	4.0023E+06	4.6013E+01	2.0226E+26	1.1193E+22
Ba-139	5.6225E+01	3.4374E-09	1.4892E+16	5.3074E+20
Ba-140	3.2866E+06	4.4893E-02	1.9311E+23	9.3215E+21
La-140	1.0404E+06	1.8718E-03	8.0515E+21	1.5439E+21
La-141	6.7596E+02	1.1953E-07	5.1050E+17	1.9540E+19
La-142	1.6183E+00	1.1305E-10	4.7944E+14	5.6157E+18
Ce-141	7.7910E+04	2.7343E-03	1.1678E+22	2.1772E+20
Ce-143	4.9195E+04	7.4080E-05	3.1197E+20	1.7090E+20
Ce-144	6.3292E+04	1.9844E-02	8.2988E+22	1.7550E+20
Pr-143	3.1650E+04	4.7002E-04	1.9794E+21	8.5995E+19
Nd-147	1.2240E+04	1.5130E-04	6.1982E+20	3.4848E+19
Np-239	7.2690E+05	3.1333E-03	7.8951E+21	2.2936E+21
Pu-238	3.1684E+02	1.8508E-02	4.6830E+22	8.7759E+17
Pu-239	2.1228E+01	3.4153E-01	8.6056E+23	5.8723E+16
Pu-240	2.2720E+01	9.9709E-02	2.5019E+23	6.2933E+16
Pu-241	1.0904E+04	1.0585E-01	2.6450E+23	3.0204E+19
Am-241	6.7654E+00	1.9712E-03	4.9256E+21	1.8681E+16
Cm-242	1.6784E+03	5.0642E-04	1.2602E+21	4.6576E+18
Cm-244	1.8358E+02	2.2691E-03	5.6004E+21	5.0852E+17

ECSS Fluid (Torus) Transport Group Inventory:

Time (h) = 22.0000	Atmosphere	Sump	
Noble gases (atoms)	1.5195E+23	0.0000E+00	
Elemental I (atoms)	5.3287E+22	0.0000E+00	
Organic I (atoms)	1.6481E+21	0.0000E+00	
Aerosols (kg)	5.3675E+01	0.0000E+00	
Dose Effective (Ci/cc) I-131 (Thyroid)			7.9486E-03
Dose Effective (Ci/cc) I-131 (ICRP2 Thyroid)			8.8004E-03
Total I (Ci)			6.6664E+07

ECSS Fluid to Reactor Building Transport Group Inventory:

	Pathway	
Time (h) = 22.0000	Filtered	Transported
Noble gases (atoms)	0.0000E+00	1.0366E+16
Elemental I (atoms)	0.0000E+00	5.3082E+15
Organic I (atoms)	0.0000E+00	1.6417E+14
Aerosols (kg)	0.0000E+00	4.8651E-06

Detailed model information at time (H) = 24.0000

EAB Doses:

Time (h) = 24.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)	0.0000E+00	0.0000E+00	0.0000E+00
Accumulated dose (rem)	9.8228E-06	3.3758E-03	1.9941E-04

LPZ Doses:

Time (h) = 24.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)	3.1109E-07	1.4012E-04	9.3211E-06
Accumulated dose (rem)	8.6426E-06	3.3155E-03	2.0579E-04

Control Room Doses:

Time (h) = 24.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)	2.2992E-12	3.7872E-08	2.4277E-09
Accumulated dose (rem)	6.7725E-08	3.4627E-04	1.5764E-05

ECCS Fluid (Torus) Compartment Nuclide Inventory:

Time (h) = 24.0000	Ci	kg	Atoms	Decay
Co-58	1.3354E+03	4.1998E-05	4.3606E+20	4.0737E+18
Co-60	1.6135E+03	1.4274E-03	1.4326E+22	4.8998E+18
Rb-86	5.5392E+04	6.8077E-04	4.7671E+21	1.7272E+20
Sr-89	1.9474E+06	6.7030E-02	4.5355E+23	5.9515E+21
Sr-90	2.2423E+05	1.6438E+00	1.0999E+25	6.8083E+20
Sr-91	4.6554E+05	1.2843E-04	8.4989E+20	3.6365E+21
Sr-92	6.1166E+03	4.8663E-07	3.1854E+18	1.0881E+21
Y-90	5.1006E+04	9.3750E-05	6.2731E+20	8.1911E+19
Y-91	2.9669E+04	1.2098E-03	8.0062E+21	8.4130E+19
Y-92	6.1120E+04	6.3519E-06	4.1578E+19	1.0652E+21
Y-93	6.1511E+03	1.8437E-06	1.1939E+19	4.5150E+19
Zr-95	3.1333E+04	1.4585E-03	9.2456E+21	9.5628E+19
Zr-97	1.2279E+04	6.4232E-06	3.9878E+19	6.1708E+19
Nb-95	3.1824E+04	8.1385E-04	5.1591E+21	9.6626E+19
Mo-99	3.4809E+05	7.2578E-04	4.4149E+21	1.1942E+21
Tc-99m	3.4853E+05	6.6282E-05	4.0319E+20	1.1016E+21
Ru-103	3.6413E+05	1.1283E-02	6.5966E+22	1.1149E+21
Ru-105	6.0516E+03	9.0027E-07	5.1634E+18	1.7656E+20
Ru-106	1.5230E+05	4.5523E-02	2.5863E+23	4.6284E+20
Rh-105	1.7382E+05	2.0594E-04	1.1811E+21	6.4296E+20
Sb-127	4.2669E+05	1.5978E-03	7.5763E+21	1.4130E+21
Sb-129	3.2398E+04	5.7614E-06	2.6896E+19	1.0182E+21
Te-127	4.6112E+05	1.7473E-04	8.2852E+20	1.4399E+21
Te-127m	6.8105E+04	7.2201E-03	3.4237E+22	2.0665E+20
Te-129	2.3632E+05	1.1284E-05	5.2679E+19	1.4738E+21
Te-129m	2.2067E+05	7.3249E-03	3.4195E+22	6.7551E+20
Te-131m	3.9199E+05	4.9158E-04	2.2598E+21	1.5669E+21
Te-132	5.4486E+06	1.7947E-02	8.1879E+22	1.8334E+22
I-131	2.6132E+07	2.1079E-01	9.6901E+23	8.3268E+22
I-132	6.5062E+06	6.3031E-04	2.8756E+21	3.3576E+22
I-133	2.6428E+07	2.3330E-02	1.0564E+23	1.2145E+23
I-134	3.7450E-01	1.4039E-11	6.3091E+13	5.3123E+21
I-135	4.4359E+06	1.2631E-03	5.6346E+21	5.7069E+22
Xe-133	5.5842E+06	2.9833E-02	1.3508E+23	1.1234E+22
Xe-135	1.1671E+07	4.5703E-03	2.0387E+22	4.9405E+22
Cs-134	6.4151E+06	4.9582E+00	2.2283E+25	1.9658E+22
Cs-136	1.6957E+06	2.3136E-02	1.0245E+23	5.3277E+21
Cs-137	4.0023E+06	4.6013E+01	2.0226E+26	1.2259E+22
Ba-139	2.0565E+01	1.2573E-09	5.4471E+15	5.3075E+20
Ba-140	3.2717E+06	4.4690E-02	1.9223E+23	1.0195E+22
La-140	1.1171E+06	2.0098E-03	8.6451E+21	1.8238E+21
La-141	4.7503E+02	8.3997E-08	3.5875E+17	1.9691E+19
La-142	6.5848E-01	4.5999E-11	1.9508E+14	5.6160E+18
Ce-141	7.7773E+04	2.7295E-03	1.1658E+22	2.3845E+20
Ce-143	4.7171E+04	7.1032E-05	2.9914E+20	1.8373E+20
Ce-144	6.3279E+04	1.9840E-02	8.2971E+22	1.9236E+20
Pr-143	3.1721E+04	4.7106E-04	1.9838E+21	9.4423E+19
Nd-147	1.2176E+04	1.5050E-04	6.1657E+20	3.8100E+19
Np-239	7.0929E+05	3.0574E-03	7.7038E+21	2.4849E+21
Pu-238	3.1685E+02	1.8508E-02	4.6830E+22	9.6200E+17
Pu-239	2.1233E+01	3.4161E-01	8.6075E+23	6.4379E+16
Pu-240	2.2720E+01	9.9709E-02	2.5019E+23	6.8986E+16
Pu-241	1.0904E+04	1.0585E-01	2.6449E+23	3.3109E+19
Am-241	6.7694E+00	1.9723E-03	4.9285E+21	2.0483E+16
Cm-242	1.6778E+03	5.0624E-04	1.2598E+21	5.1047E+18
Cm-244	1.8358E+02	2.2691E-03	5.6004E+21	5.5742E+17

ECCS Fluid (Torus) Transport Group Inventory:

Time (h) = 24.0000	Atmosphere	Sump	
Noble gases (atoms)	1.5547E+23	0.0000E+00	
Elemental I (atoms)	5.2533E+22	0.0000E+00	
Organic I (atoms)	1.6247E+21	0.0000E+00	
Aerosols (kg)	5.3671E+01	0.0000E+00	
Dose Effective (Ci/cc) I-131 (Thyroid)			7.8162E-03
Dose Effective (Ci/cc) I-131 (ICRP2 Thyroid)			8.6060E-03
Total I (Ci)			6.3503E+07

ECCS Fluid to Reactor Building Transport Group Inventory:

Time (h) = 24.0000	Pathway	
	Filtered	Transported
Noble gases (atoms)	0.0000E+00	1.1689E+16

Elemental I (atoms)	0.0000E+00	5.7675E+15
Organic I (atoms)	0.0000E+00	1.7838E+14
Aerosols (kg)	0.0000E+00	5.3294E-06

Detailed model information at time (H) = 30.0000

EAB Doses:

Time (h) = 30.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)	0.0000E+00	0.0000E+00	0.0000E+00
Accumulated dose (rem)	9.8228E-06	3.3758E-03	1.9941E-04

LPZ Doses:

Time (h) = 30.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)	3.5655E-07	2.2447E-04	1.5023E-05
Accumulated dose (rem)	8.9992E-06	3.5400E-03	2.2081E-04

Control Room Doses:

Time (h) = 30.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)	4.8270E-11	8.4743E-07	5.5255E-08
Accumulated dose (rem)	6.7773E-08	3.4712E-04	1.5819E-05

ECCS Fluid (Torus) Compartment Nuclide Inventory:

Time (h) = 30.0000	Ci	kg	Atoms	Decay
Co-58	1.3322E+03	4.1895E-05	4.3500E+20	5.1397E+18
Co-60	1.6133E+03	1.4272E-03	1.4325E+22	6.1893E+18
Rb-86	5.4880E+04	6.7448E-04	4.7230E+21	2.1679E+20
Sr-89	1.9407E+06	6.6800E-02	4.5200E+23	7.5051E+21
Sr-90	2.2422E+05	1.6438E+00	1.0999E+25	8.6003E+20
Sr-91	3.0049E+05	8.2895E-05	5.4858E+20	3.9378E+21
Sr-92	1.3183E+03	1.0488E-07	6.8655E+17	1.0906E+21
Y-90	6.1981E+04	1.1392E-04	7.6228E+20	1.2614E+20
Y-91	3.0050E+04	1.2253E-03	8.1089E+21	1.0798E+20
Y-92	2.0940E+04	2.1761E-06	1.4245E+19	1.0950E+21
Y-93	4.0750E+03	1.2214E-06	7.9091E+18	4.9180E+19
Zr-95	3.1248E+04	1.4546E-03	9.2206E+21	1.2064E+20
Zr-97	9.6005E+03	5.0220E-06	3.1179E+19	7.0408E+19
Nb-95	3.1820E+04	8.1375E-04	5.1584E+21	1.2205E+20
Mo-99	3.2684E+05	6.8145E-04	4.1453E+21	1.4638E+21
Tc-99m	3.3090E+05	6.2930E-05	3.8280E+20	1.3593E+21
Ru-103	3.6253E+05	1.1233E-02	6.5676E+22	1.4053E+21
Ru-105	2.3718E+03	3.5284E-07	2.0237E+18	1.7970E+20
Ru-106	1.5223E+05	4.5501E-02	2.5850E+23	5.8453E+20
Rh-105	1.5497E+05	1.8360E-04	1.0530E+21	7.7419E+20
Sb-127	4.0791E+05	1.5274E-03	7.2429E+21	1.7464E+21
Sb-129	1.2372E+04	2.2000E-06	1.0270E+19	1.0348E+21
Te-127	4.4766E+05	1.6963E-04	8.0434E+20	1.7908E+21
Te-127m	6.8116E+04	7.2213E-03	3.4242E+22	2.6107E+20
Te-129	2.0728E+05	9.8976E-06	4.6205E+19	1.6074E+21
Te-129m	2.1955E+05	7.2880E-03	3.4023E+22	8.5142E+20
Te-131m	3.4125E+05	4.2795E-04	1.9673E+21	1.8594E+21
Te-132	5.1664E+06	1.7018E-02	7.7638E+22	2.2575E+22
I-131	2.5581E+07	2.0634E-01	9.4857E+23	1.0393E+23
I-132	6.1671E+06	5.9746E-04	2.7258E+21	3.7966E+22
I-133	2.1639E+07	1.9102E-02	8.6492E+22	1.4060E+23
I-134	3.2597E-03	1.2219E-13	5.4915E+11	5.3123E+21
I-135	2.3645E+06	6.7329E-04	3.0034E+21	5.9700E+22
Xe-133	6.1595E+06	3.2906E-02	1.4900E+23	1.5887E+22
Xe-135	8.4288E+06	3.3006E-03	1.4723E+22	5.7306E+22
Cs-134	6.4136E+06	4.9571E+00	2.2278E+25	2.4784E+22
Cs-136	1.6734E+06	2.2832E-02	1.0110E+23	6.6740E+21
Cs-137	4.0022E+06	4.6012E+01	2.0226E+26	1.5458E+22
Ba-139	1.0063E+00	6.1520E-11	2.6653E+14	5.3075E+20
Ba-140	3.2275E+06	4.4086E-02	1.8964E+23	1.2792E+22
La-140	1.3290E+06	2.3911E-03	1.0285E+22	2.7806E+21
La-141	1.6487E+02	2.9153E-08	1.2451E+17	1.9926E+19
La-142	4.4358E-02	3.0987E-12	1.3141E+13	5.6162E+18
Ce-141	7.7361E+04	2.7150E-03	1.1596E+22	3.0045E+20
Ce-143	4.1586E+04	6.2621E-05	2.6372E+20	2.1915E+20
Ce-144	6.3240E+04	1.9828E-02	8.2920E+22	2.4291E+20
Pr-143	3.1881E+04	4.7345E-04	1.9938E+21	1.1981E+20
Nd-147	1.1985E+04	1.4815E-04	6.0691E+20	4.7754E+19

Np-239	6.5897E+05	2.8405E-03	7.1573E+21	3.0314E+21
Pu-238	3.1685E+02	1.8508E-02	4.6831E+22	1.2152E+18
Pu-239	2.1247E+01	3.4182E-01	8.6130E+23	8.1353E+16
Pu-240	2.2720E+01	9.9709E-02	2.5019E+23	8.7144E+16
Pu-241	1.0903E+04	1.0584E-01	2.6448E+23	4.1823E+19
Am-241	6.7813E+00	1.9758E-03	4.9372E+21	2.5897E+16
Cm-242	1.6760E+03	5.0570E-04	1.2584E+21	6.4448E+18
Cm-244	1.8357E+02	2.2691E-03	5.6003E+21	7.0414E+17

ECCS Fluid (Torus) Transport Group Inventory:

Time (h) = 30.0000	Atmosphere	Sump	
Noble gases (atoms)	1.6372E+23	0.0000E+00	
Elemental I (atoms)	5.0478E+22	0.0000E+00	
Organic I (atoms)	1.5612E+21	0.0000E+00	
Aerosols (kg)	5.3658E+01	0.0000E+00	
Dose Effective (Ci/cc) I-131 (Thyroid)			7.4571E-03
Dose Effective (Ci/cc) I-131 (ICRP2 Thyroid)			8.0928E-03
Total I (Ci)			5.5752E+07

ECCS Fluid to Reactor Building Transport Group Inventory:

	Pathway	
Time (h) = 30.0000	Filtered	Transported
Noble gases (atoms)	0.0000E+00	1.5820E+16
Elemental I (atoms)	0.0000E+00	7.1082E+15
Organic I (atoms)	0.0000E+00	2.1984E+14
Aerosols (kg)	0.0000E+00	6.7223E-06

Detailed model information at time (H) = 36.0000

EAB Doses:

Time (h) = 36.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)	0.0000E+00	0.0000E+00	0.0000E+00
Accumulated dose (rem)	9.8228E-06	3.3758E-03	1.9941E-04

LPZ Doses:

Time (h) = 36.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)	3.2083E-07	2.1458E-04	1.4665E-05
Accumulated dose (rem)	9.3200E-06	3.7546E-03	2.3548E-04

Control Room Doses:

Time (h) = 36.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)	4.9024E-11	9.2115E-07	6.1367E-08
Accumulated dose (rem)	6.7822E-08	3.4804E-04	1.5880E-05

ECCS Fluid (Torus) Compartment Nuclide Inventory:

Time (h) = 36.0000	Ci	kg	Atoms	Decay
Co-58	1.3289E+03	4.1793E-05	4.3393E+20	6.2031E+18
Co-60	1.6132E+03	1.4271E-03	1.4324E+22	7.4786E+18
Rb-86	5.4373E+04	6.6824E-04	4.6794E+21	2.6044E+20
Sr-89	1.9340E+06	6.6571E-02	4.5045E+23	9.0535E+21
Sr-90	2.2422E+05	1.6437E+00	1.0999E+25	1.0392E+21
Sr-91	1.9396E+05	5.3506E-05	3.5409E+20	4.1323E+21
Sr-92	2.8414E+02	2.2606E-08	1.4797E+17	1.0911E+21
Y-90	7.2265E+04	1.3282E-04	8.8876E+20	1.7885E+20
Y-91	3.0263E+04	1.2340E-03	8.1665E+21	1.3207E+20
Y-92	6.9119E+03	7.1832E-07	4.7020E+18	1.1051E+21
Y-93	2.6996E+03	8.0915E-07	5.2396E+18	5.1849E+19
Zr-95	3.1164E+04	1.4506E-03	9.1957E+21	1.4558E+20
Zr-97	7.5062E+03	3.9265E-06	2.4377E+19	7.7209E+19
Nb-95	3.1816E+04	8.1363E-04	5.1577E+21	1.4747E+20
Mo-99	3.0688E+05	6.3984E-04	3.8921E+21	1.7170E+21
Tc-99m	3.1252E+05	5.9435E-05	3.6154E+20	1.6033E+21
Ru-103	3.6094E+05	1.1183E-02	6.5387E+22	1.6944E+21
Ru-105	9.2956E+02	1.3829E-07	7.9312E+17	1.8093E+20
Ru-106	1.5216E+05	4.5480E-02	2.5838E+23	7.0616E+20
Rh-105	1.3795E+05	1.6343E-04	9.3735E+20	8.9111E+20
Sb-127	3.8995E+05	1.4602E-03	6.9241E+21	2.0652E+21
Sb-129	4.7242E+03	8.4010E-07	3.9218E+18	1.0412E+21
Te-127	4.3344E+05	1.6424E-04	7.7878E+20	2.1311E+21
Te-127m	6.8122E+04	7.2219E-03	3.4245E+22	3.1550E+20

Te-129	1.9554E+05	9.3370E-06	4.3588E+19	1.7287E+21
Te-129m	2.1843E+05	7.2508E-03	3.3849E+22	1.0264E+21
Te-131m	2.9707E+05	3.7255E-04	1.7126E+21	2.1141E+21
Te-132	4.8988E+06	1.6136E-02	7.3617E+22	2.6596E+22
I-131	2.5041E+07	2.0199E-01	9.2854E+23	1.2416E+23
I-132	5.8474E+06	5.6649E-04	2.5844E+21	4.2129E+22
I-133	1.7717E+07	1.5640E-02	7.0818E+22	1.5627E+23
I-134	2.8372E-05	1.0636E-15	4.7798E+09	5.3123E+21
I-135	1.2603E+06	3.5888E-04	1.6009E+21	6.1103E+22
Xe-133	6.5789E+06	3.5147E-02	1.5914E+23	2.0944E+22
Xe-135	5.8899E+06	2.3064E-03	1.0288E+22	6.2933E+22
Cs-134	6.4121E+06	4.9559E+00	2.2273E+25	2.9909E+22
Cs-136	1.6514E+06	2.2532E-02	9.9773E+22	8.0026E+21
Cs-137	4.0021E+06	4.6011E+01	2.0225E+26	1.8656E+22
Ba-139	4.9239E-02	3.0103E-12	1.3042E+13	5.3075E+20
Ba-140	3.1839E+06	4.3490E-02	1.8708E+23	1.5354E+22
La-140	1.5158E+06	2.7272E-03	1.1731E+22	3.8969E+21
La-141	5.7220E+01	1.0118E-08	4.3214E+16	2.0007E+19
La-142	2.9881E-03	2.0874E-13	8.8524E+11	5.6162E+18
Ce-141	7.6950E+04	2.7006E-03	1.1534E+22	3.6211E+20
Ce-143	3.6662E+04	5.5206E-05	2.3249E+20	2.5038E+20
Ce-144	6.3202E+04	1.9816E-02	8.2870E+22	2.9344E+20
Pr-143	3.1973E+04	4.7481E-04	1.9996E+21	1.4529E+20
Nd-147	1.1797E+04	1.4583E-04	5.9741E+20	5.7257E+19
Np-239	6.1223E+05	2.6390E-03	6.6496E+21	3.5392E+21
Pu-238	3.1686E+02	1.8509E-02	4.6832E+22	1.4685E+18
Pu-239	2.1259E+01	3.4202E-01	8.6181E+23	9.8337E+16
Pu-240	2.2720E+01	9.9709E-02	2.5019E+23	1.0530E+17
Pu-241	1.0903E+04	1.0584E-01	2.6447E+23	5.0536E+19
Am-241	6.7933E+00	1.9793E-03	4.9459E+21	3.1321E+16
Cm-242	1.6742E+03	5.0516E-04	1.2571E+21	7.7836E+18
Cm-244	1.8357E+02	2.2690E-03	5.6001E+21	8.5085E+17

ECCS Fluid (Torus) Transport Group Inventory:

Time (h) = 36.0000	Atmosphere	Sump	
Noble gases (atoms)	1.6943E+23	0.0000E+00	
Elemental I (atoms)	4.8672E+22	0.0000E+00	
Organic I (atoms)	1.5053E+21	0.0000E+00	
Aerosols (kg)	5.3646E+01	0.0000E+00	
Dose Effective (Ci/cc) I-131 (Thyroid)			7.1448E-03
Dose Effective (Ci/cc) I-131 (ICRP2 Thyroid)			7.6620E-03
Total I (Ci)			4.9866E+07

ECCS Fluid to Reactor Building Transport Group Inventory:

	Pathway	
Time (h) = 36.0000	Filtered	Transported
Noble gases (atoms)	0.0000E+00	2.0135E+16
Elemental I (atoms)	0.0000E+00	8.3984E+15
Organic I (atoms)	0.0000E+00	2.5974E+14
Aerosols (kg)	0.0000E+00	8.1149E-06

Detailed model information at time (H) = 42.0000

EAB Doses:

Time (h) = 42.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)	0.0000E+00	0.0000E+00	0.0000E+00
Accumulated dose (rem)	9.8228E-06	3.3758E-03	1.9941E-04

LPZ Doses:

Time (h) = 42.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)	2.9538E-07	2.0588E-04	1.4357E-05
Accumulated dose (rem)	9.6154E-06	3.9605E-03	2.4983E-04

Control Room Doses:

Time (h) = 42.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)	4.4629E-11	8.8385E-07	6.0151E-08
Accumulated dose (rem)	6.7867E-08	3.4892E-04	1.5940E-05

ECCS Fluid (Torus) Compartment Nuclide Inventory:

Time (h) = 42.0000	Ci	kg	Atoms	Decay
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Co-58	1.3257E+03	4.1690E-05	4.3287E+20	7.2638E+18
Co-60	1.6130E+03	1.4270E-03	1.4323E+22	8.7678E+18
Rb-86	5.3871E+04	6.6207E-04	4.6361E+21	3.0370E+20
Sr-89	1.9274E+06	6.6343E-02	4.4891E+23	1.0596E+22
Sr-90	2.2421E+05	1.6437E+00	1.0999E+25	1.2184E+21
Sr-91	1.2519E+05	3.4537E-05	2.2855E+20	4.2578E+21
Sr-92	6.1242E+01	4.8723E-09	3.1893E+16	1.0912E+21
Y-90	8.1901E+04	1.5054E-04	1.0073E+21	2.3953E+20
Y-91	3.0369E+04	1.2383E-03	8.1950E+21	1.5629E+20
Y-92	2.2306E+03	2.3182E-07	1.5174E+18	1.1084E+21
Y-93	1.7884E+03	5.3604E-07	3.4711E+18	5.3618E+19
Zr-95	3.1080E+04	1.4467E-03	9.1708E+21	1.7045E+20
Zr-97	5.8687E+03	3.0699E-06	1.9059E+19	8.2527E+19
Nb-95	3.1811E+04	8.1351E-04	5.1569E+21	1.7288E+20
Mo-99	2.8814E+05	6.0076E-04	3.6544E+21	1.9547E+21
Tc-99m	2.9436E+05	5.5980E-05	3.4053E+20	1.8335E+21
Ru-103	3.5935E+05	1.1134E-02	6.5099E+22	1.9822E+21
Ru-105	3.6432E+02	5.4198E-08	3.1084E+17	1.8142E+20
Ru-106	1.5208E+05	4.5458E-02	2.5826E+23	8.2773E+20
Rh-105	1.2271E+05	1.4538E-04	8.3380E+20	9.9515E+20
Sb-127	3.7279E+05	1.3959E-03	6.6194E+21	2.3699E+21
Sb-129	1.8040E+03	3.2080E-07	1.4976E+18	1.0436E+21
Te-127	4.1897E+05	1.5875E-04	7.5278E+20	2.4604E+21
Te-127m	6.8122E+04	7.2220E-03	3.4246E+22	3.6994E+20
Te-129	1.9045E+05	9.0943E-06	4.2455E+19	1.8449E+21
Te-129m	2.1731E+05	7.2137E-03	3.3676E+22	1.2006E+21
Te-131m	2.5862E+05	3.2432E-04	1.4909E+21	2.3358E+21
Te-132	4.6451E+06	1.5301E-02	6.9804E+22	3.0409E+22
I-131	2.4512E+07	1.9772E-01	9.0891E+23	1.4396E+23
I-132	5.5445E+06	5.3714E-04	2.4506E+21	4.6076E+22
I-133	1.4507E+07	1.2806E-02	5.7984E+22	1.6911E+23
I-134	2.4695E-07	9.2572E-18	4.1603E+07	5.3123E+21
I-135	6.7180E+05	1.9129E-04	8.5333E+20	6.1850E+22
Xe-133	6.8725E+06	3.6716E-02	1.6625E+23	2.6292E+22
Xe-135	4.0236E+06	1.5756E-03	7.0285E+21	6.6828E+22
Cs-134	6.4106E+06	4.9548E+00	2.2267E+25	3.5033E+22
Cs-136	1.6297E+06	2.2236E-02	9.8462E+22	9.3137E+21
Cs-137	4.0021E+06	4.6010E+01	2.0225E+26	2.1855E+22
Ba-139	2.4094E-03	1.4730E-13	6.3817E+11	5.3075E+20
Ba-140	3.1409E+06	4.2903E-02	1.8455E+23	1.7881E+22
La-140	1.6800E+06	3.0226E-03	1.3002E+22	5.1536E+21
La-141	1.9859E+01	3.5116E-09	1.4998E+16	2.0035E+19
La-142	2.0129E-04	1.4061E-14	5.9633E+10	5.6162E+18
Ce-141	7.6541E+04	2.6863E-03	1.1473E+22	4.2344E+20
Ce-143	3.2321E+04	4.8670E-05	2.0496E+20	2.7790E+20
Ce-144	6.3163E+04	1.9804E-02	8.2819E+22	3.4394E+20
Pr-143	3.2005E+04	4.7528E-04	2.0015E+21	1.7083E+20
Nd-147	1.1612E+04	1.4354E-04	5.8806E+20	6.6611E+19
Np-239	5.6879E+05	2.4518E-03	6.1778E+21	4.0109E+21
Pu-238	3.1687E+02	1.8509E-02	4.6834E+22	1.7217E+18
Pu-239	2.1271E+01	3.4221E-01	8.6228E+23	1.1533E+17
Pu-240	2.2720E+01	9.9709E-02	2.5019E+23	1.2346E+17
Pu-241	1.0903E+04	1.0584E-01	2.6447E+23	5.9250E+19
Am-241	6.8052E+00	1.9828E-03	4.9546E+21	3.6754E+16
Cm-242	1.6725E+03	5.0462E-04	1.2557E+21	9.1210E+18
Cm-244	1.8356E+02	2.2689E-03	5.6000E+21	9.9755E+17

ECCS Fluid (Torus) Transport Group Inventory:

Time (h) = 42.0000	Atmosphere	Sump	
Noble gases (atoms)	1.7327E+23	0.0000E+00	
Elemental I (atoms)	4.7055E+22	0.0000E+00	
Organic I (atoms)	1.4553E+21	0.0000E+00	
Aerosols (kg)	5.3636E+01	0.0000E+00	
Dose Effective (Ci/cc) I-131 (Thyroid)			6.8691E-03
Dose Effective (Ci/cc) I-131 (ICRP2 Thyroid)			7.2935E-03
Total I (Ci)			4.5235E+07

ECCS Fluid to Reactor Building Transport Group Inventory:

	Pathway	
Time (h) = 42.0000	Filtered	Transported
Noble gases (atoms)	0.0000E+00	2.4578E+16
Elemental I (atoms)	0.0000E+00	9.6439E+15
Organic I (atoms)	0.0000E+00	2.9826E+14
Aerosols (kg)	0.0000E+00	9.5072E-06

Detailed model information at time (H) = 48.0000

EAB Doses:

Time (h) = 48.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)	0.0000E+00	0.0000E+00	0.0000E+00
Accumulated dose (rem)	9.8228E-06	3.3758E-03	1.9941E-04

LPZ Doses:

Time (h) = 48.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)	2.7642E-07	1.9815E-04	1.4088E-05
Accumulated dose (rem)	9.8918E-06	4.1586E-03	2.6392E-04

Control Room Doses:

Time (h) = 48.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)	4.1368E-11	8.5065E-07	5.9072E-08
Accumulated dose (rem)	6.7908E-08	3.4977E-04	1.5999E-05

ECCS Fluid (Torus) Compartment Nuclide Inventory:

Time (h) = 48.0000	Ci	kg	Atoms	Decay
Co-58	1.3224E+03	4.1588E-05	4.3181E+20	8.3220E+18
Co-60	1.6129E+03	1.4269E-03	1.4321E+22	1.0057E+19
Rb-86	5.3373E+04	6.5595E-04	4.5932E+21	3.4655E+20
Sr-89	1.9208E+06	6.6116E-02	4.4737E+23	1.2134E+22
Sr-90	2.2421E+05	1.6437E+00	1.0998E+25	1.3976E+21
Sr-91	8.0810E+04	2.2292E-05	1.4752E+20	4.3388E+21
Sr-92	1.3200E+01	1.0501E-09	6.8740E+15	1.0912E+21
Y-90	9.0932E+04	1.6713E-04	1.1183E+21	3.0766E+20
Y-91	3.0405E+04	1.2398E-03	8.2047E+21	1.8057E+20
Y-92	7.0962E+02	7.3747E-08	4.8274E+17	1.1095E+21
Y-93	1.1848E+03	3.5511E-07	2.2995E+18	5.4789E+19
Zr-95	3.0995E+04	1.4428E-03	9.1460E+21	1.9525E+20
Zr-97	4.5885E+03	2.4002E-06	1.4902E+19	8.6685E+19
Nb-95	3.1805E+04	8.1337E-04	5.1560E+21	1.9829E+20
Mo-99	2.7054E+05	5.6408E-04	3.4313E+21	2.1778E+21
Tc-99m	2.7684E+05	5.2649E-05	3.2026E+20	2.0501E+21
Ru-103	3.5776E+05	1.1085E-02	6.4812E+22	2.2688E+21
Ru-105	1.4279E+02	2.1241E-08	1.2183E+17	1.8161E+20
Ru-106	1.5201E+05	4.5437E-02	2.5814E+23	9.4925E+20
Rh-105	1.0912E+05	1.2928E-04	7.4146E+20	1.0877E+21
Sb-127	3.5638E+05	1.3345E-03	6.3280E+21	2.6612E+21
Sb-129	6.8886E+02	1.2250E-07	5.7187E+17	1.0445E+21
Te-127	4.0457E+05	1.5330E-04	7.2692E+20	2.7784E+21
Te-127m	6.8118E+04	7.2216E-03	3.4244E+22	4.2438E+20
Te-129	1.8792E+05	8.9731E-06	4.1889E+19	1.9587E+21
Te-129m	2.1620E+05	7.1766E-03	3.3503E+22	1.3738E+21
Te-131m	2.2514E+05	2.8234E-04	1.2979E+21	2.5288E+21
Te-132	4.4045E+06	1.4508E-02	6.6189E+22	3.4024E+22
I-131	2.3993E+07	1.9353E-01	8.8968E+23	1.6334E+23
I-132	5.2573E+06	5.0932E-04	2.3236E+21	4.9818E+22
I-133	1.1878E+07	1.0485E-02	4.7475E+22	1.7961E+23
I-134	2.1495E-09	8.0575E-20	3.6211E+05	5.3123E+21
I-135	3.5809E+05	1.0196E-04	4.5485E+20	6.2249E+22
Xe-133	7.0645E+06	3.7742E-02	1.7089E+23	3.1839E+22
Xe-135	2.7043E+06	1.0589E-03	4.7238E+21	6.9472E+22
Cs-134	6.4092E+06	4.9536E+00	2.2262E+25	4.0156E+22
Cs-136	1.6083E+06	2.1944E-02	9.7168E+22	1.0608E+22
Cs-137	4.0020E+06	4.6010E+01	2.0225E+26	2.5053E+22
Ba-139	1.1789E-04	7.2076E-15	3.1227E+10	5.3075E+20
Ba-140	3.0984E+06	4.2323E-02	1.8205E+23	2.0375E+22
La-140	1.8239E+06	3.2814E-03	1.4115E+22	6.5335E+21
La-141	6.8925E+00	1.2187E-09	5.2053E+15	2.0045E+19
La-142	1.3559E-05	9.4721E-16	4.0171E+09	5.6162E+18
Ce-141	7.6134E+04	2.6720E-03	1.1412E+22	4.8445E+20
Ce-143	2.8494E+04	4.2907E-05	1.8069E+20	3.0217E+20
Ce-144	6.3125E+04	1.9792E-02	8.2769E+22	3.9440E+20
Pr-143	3.1984E+04	4.7498E-04	2.0003E+21	1.9638E+20
Nd-147	1.1431E+04	1.4130E-04	5.7885E+20	7.5819E+19
Np-239	5.2844E+05	2.2779E-03	5.7396E+21	4.4492E+21
Pu-238	3.1688E+02	1.8509E-02	4.6835E+22	1.9749E+18
Pu-239	2.1281E+01	3.4239E-01	8.6272E+23	1.3233E+17

Pu-240	2.2720E+01	9.9709E-02	2.5019E+23	1.4162E+17
Pu-241	1.0902E+04	1.0583E-01	2.6446E+23	6.7963E+19
Am-241	6.8172E+00	1.9863E-03	4.9633E+21	4.2197E+16
Cm-242	1.6707E+03	5.0409E-04	1.2544E+21	1.0457E+19
Cm-244	1.8356E+02	2.2689E-03	5.5998E+21	1.1443E+18

ECCS Fluid (Torus) Transport Group Inventory:

Time (h) = 48.0000	Atmosphere	Sump	
Noble gases (atoms)	1.7561E+23	0.0000E+00	
Elemental I (atoms)	4.5587E+22	0.0000E+00	
Organic I (atoms)	1.4099E+21	0.0000E+00	
Aerosols (kg)	5.3625E+01	0.0000E+00	
Dose Effective (Ci/cc) I-131 (Thyroid)			6.6229E-03
Dose Effective (Ci/cc) I-131 (ICRP2 Thyroid)			6.9732E-03
Total I (Ci)			4.1486E+07

ECCS Fluid to Reactor Building Transport Group Inventory:

	Pathway	
Time (h) = 48.0000	Filtered	Transported
Noble gases (atoms)	0.0000E+00	2.9103E+16
Elemental I (atoms)	0.0000E+00	1.0849E+16
Organic I (atoms)	0.0000E+00	3.3554E+14
Aerosols (kg)	0.0000E+00	1.0899E-05

Detailed model information at time (H) = 54.0000

EAB Doses:

Time (h) = 54.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)	0.0000E+00	0.0000E+00	0.0000E+00
Accumulated dose (rem)	9.8228E-06	3.3758E-03	1.9941E-04

LPZ Doses:

Time (h) = 54.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)	2.6172E-07	1.9119E-04	1.3848E-05
Accumulated dose (rem)	1.0154E-05	4.3498E-03	2.7777E-04

Control Room Doses:

Time (h) = 54.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)	3.8875E-11	8.2079E-07	5.8103E-08
Accumulated dose (rem)	6.7947E-08	3.5059E-04	1.6058E-05

ECCS Fluid (Torus) Compartment Nuclide Inventory:

Time (h) = 54.0000	Ci	kg	Atoms	Decay
Co-58	1.3192E+03	4.1487E-05	4.3076E+20	9.3776E+18
Co-60	1.6128E+03	1.4267E-03	1.4320E+22	1.1346E+19
Rb-86	5.2879E+04	6.4988E-04	4.5508E+21	3.8901E+20
Sr-89	1.9142E+06	6.5889E-02	4.4584E+23	1.3667E+22
Sr-90	2.2421E+05	1.6437E+00	1.0998E+25	1.5768E+21
Sr-91	5.2160E+04	1.4389E-05	9.5223E+19	4.3911E+21
Sr-92	2.8450E+00	2.2634E-10	1.4816E+15	1.0912E+21
Y-90	9.9393E+04	1.8269E-04	1.2224E+21	3.8278E+20
Y-91	3.0396E+04	1.2395E-03	8.2024E+21	2.0486E+20
Y-92	2.2363E+02	2.3241E-08	1.5213E+17	1.1098E+21
Y-93	7.8488E+02	2.3525E-07	1.5234E+18	5.5565E+19
Zr-95	3.0912E+04	1.4389E-03	9.1213E+21	2.1999E+20
Zr-97	3.5875E+03	1.8766E-06	1.1651E+19	8.9935E+19
Nb-95	3.1800E+04	8.1323E-04	5.1551E+21	2.2370E+20
Mo-99	2.5402E+05	5.2963E-04	3.2217E+21	2.3874E+21
Tc-99m	2.6017E+05	4.9478E-05	3.0097E+20	2.2538E+21
Ru-103	3.5619E+05	1.1036E-02	6.4527E+22	2.5541E+21
Ru-105	5.5961E+01	8.3251E-09	4.7747E+16	1.8168E+20
Ru-106	1.5194E+05	4.5416E-02	2.5802E+23	1.0707E+21
Rh-105	9.7020E+04	1.1495E-04	6.5925E+20	1.1700E+21
Sb-127	3.4070E+05	1.2758E-03	6.0495E+21	2.9397E+21
Sb-129	2.6305E+02	4.6778E-08	2.1837E+17	1.0449E+21
Te-127	3.9045E+05	1.4795E-04	7.0155E+20	3.0855E+21
Te-127m	6.8110E+04	7.2207E-03	3.4239E+22	4.7881E+20
Te-129	1.8636E+05	8.8986E-06	4.1541E+19	2.0714E+21
Te-129m	2.1509E+05	7.1397E-03	3.3330E+22	1.5461E+21
Te-131m	1.9599E+05	2.4579E-04	1.1299E+21	2.6968E+21

Te-132	4.1764E+06	1.3757E-02	6.2761E+22	3.7453E+22
I-131	2.3485E+07	1.8943E-01	8.7084E+23	1.8231E+23
I-132	4.9850E+06	4.8294E-04	2.2033E+21	5.3366E+22
I-133	9.7250E+06	8.5849E-03	3.8872E+22	1.8822E+23
I-135	1.9087E+05	5.4350E-05	2.4245E+20	6.2461E+22
Xe-133	7.1751E+06	3.8332E-02	1.7356E+23	3.7511E+22
Xe-135	1.7955E+06	7.0311E-04	3.1365E+21	7.1239E+22
Ba-134	6.4077E+06	4.9525E+00	2.2257E+25	4.5277E+22
Cs-136	1.5872E+06	2.1656E-02	9.5891E+22	1.1884E+22
Cs-137	4.0019E+06	4.6009E+01	2.0224E+26	2.8251E+22
Ba-139	5.7688E-06	3.5268E-16	1.5280E+09	5.3075E+20
Ba-140	3.0566E+06	4.1752E-02	1.7960E+23	2.2834E+22
La-140	1.9495E+06	3.5073E-03	1.5087E+22	8.0213E+21
La-141	2.3921E+00	4.2299E-10	1.8066E+15	2.0048E+19
La-142	9.1340E-07	6.3807E-17	2.7060E+08	5.6162E+18
Ce-141	7.5729E+04	2.6578E-03	1.1351E+22	5.4513E+20
Ce-143	2.5120E+04	3.7826E-05	1.5930E+20	3.2357E+20
Ce-144	6.3086E+04	1.9779E-02	8.2718E+22	4.4483E+20
Pr-143	3.1918E+04	4.7400E-04	1.9961E+21	2.2189E+20
Nd-147	1.1252E+04	1.3908E-04	5.6978E+20	8.4883E+19
Np-239	4.9096E+05	2.1163E-03	5.3324E+21	4.8563E+21
Pu-238	3.1688E+02	1.8510E-02	4.6836E+22	2.2282E+18
Pu-239	2.1292E+01	3.4255E-01	8.6312E+23	1.4935E+17
Pu-240	2.2720E+01	9.9709E-02	2.5019E+23	1.5978E+17
Pu-241	1.0902E+04	1.0583E-01	2.6445E+23	7.6676E+19
Am-241	6.8292E+00	1.9898E-03	4.9720E+21	4.7649E+16
Cm-242	1.6689E+03	5.0355E-04	1.2531E+21	1.1791E+19
Cm-244	1.8355E+02	2.2688E-03	5.5997E+21	1.2910E+18

ECCS Fluid (Torus) Transport Group Inventory:

Time (h) = 54.0000	Atmosphere	Sump	
Noble gases (atoms)	1.7670E+23	0.0000E+00	
Elemental I (atoms)	4.4240E+22	0.0000E+00	
Organic I (atoms)	1.3682E+21	0.0000E+00	
Aerosols (kg)	5.3616E+01	0.0000E+00	
Dose Effective (Ci/cc) I-131 (Thyroid)			6.4007E-03
Dose Effective (Ci/cc) I-131 (ICRP2 Thyroid)			6.6913E-03
Total I (Ci)			3.8386E+07

ECCS Fluid to Reactor Building Transport Group Inventory:

	Pathway	
Time (h) = 54.0000	Filtered	Transported
Noble gases (atoms)	0.0000E+00	3.3676E+16
Elemental I (atoms)	0.0000E+00	1.2017E+16
Organic I (atoms)	0.0000E+00	3.7167E+14
Aerosols (kg)	0.0000E+00	1.2291E-05

Detailed model information at time (H) = 60.0000

EAB Doses:

Time (h) = 60.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)	0.0000E+00	0.0000E+00	0.0000E+00
Accumulated dose (rem)	9.8228E-06	3.3758E-03	1.9941E-04

LPZ Doses:

Time (h) = 60.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)	2.4990E-07	1.8488E-04	1.3631E-05
Accumulated dose (rem)	1.0403E-05	4.5347E-03	2.9140E-04

Control Room Doses:

Time (h) = 60.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)	3.6914E-11	7.9367E-07	5.7223E-08
Accumulated dose (rem)	6.7984E-08	3.5139E-04	1.6115E-05

ECCS Fluid (Torus) Compartment Nuclide Inventory:

Time (h) = 60.0000	Ci	kg	Atoms	Decay
Co-58	1.3160E+03	4.1385E-05	4.2970E+20	1.0431E+19
Co-60	1.6126E+03	1.4266E-03	1.4319E+22	1.2635E+19
Rb-86	5.2390E+04	6.4387E-04	4.5087E+21	4.3107E+20
Sr-89	1.9077E+06	6.5664E-02	4.4431E+23	1.5194E+22

Sr-90	2.2420E+05	1.6436E+00	1.0998E+25	1.7560E+21
Sr-91	3.3668E+04	9.2877E-06	6.1463E+19	4.4249E+21
Sr-92	6.1318E-01	4.8784E-11	3.1933E+14	1.0912E+21
Y-90	1.0732E+05	1.9726E-04	1.3199E+21	4.6444E+20
Y-91	3.0359E+04	1.2379E-03	8.1923E+21	2.2914E+20
Y-92	7.0032E+01	7.2781E-09	4.7641E+16	1.1099E+21
Y-93	5.1997E+02	1.5585E-07	1.0092E+18	5.6080E+19
Zr-95	3.0828E+04	1.4350E-03	9.0966E+21	2.4466E+20
Zr-97	2.8049E+03	1.4673E-06	9.1093E+18	9.2477E+19
Nb-95	3.1794E+04	8.1307E-04	5.1541E+21	2.4910E+20
Mo-99	2.3851E+05	4.9728E-04	3.0250E+21	2.5841E+21
Tc-99m	2.4439E+05	4.6478E-05	2.8273E+20	2.4452E+21
Ru-103	3.5462E+05	1.0988E-02	6.4243E+22	2.8381E+21
Ru-105	2.1933E+01	3.2628E-09	1.8713E+16	1.8171E+20
Ru-106	1.5187E+05	4.5394E-02	2.5790E+23	1.1921E+21
Rh-105	8.6258E+04	1.0220E-04	5.8613E+20	1.2431E+21
Sb-127	3.2570E+05	1.2196E-03	5.7833E+21	3.2060E+21
Sb-129	1.0045E+02	1.7862E-08	8.3388E+16	1.0450E+21
Te-127	3.7672E+05	1.4275E-04	6.7688E+20	3.3819E+21
Te-127m	6.8097E+04	7.2193E-03	3.4233E+22	5.3323E+20
Te-129	1.8517E+05	8.8420E-06	4.1277E+19	2.1832E+21
Te-129m	2.1398E+05	7.1030E-03	3.3159E+22	1.7176E+21
Te-131m	1.7062E+05	2.1397E-04	9.8364E+20	2.8431E+21
Te-132	3.9601E+06	1.3044E-02	5.9510E+22	4.0703E+22
I-131	2.2987E+07	1.8542E-01	8.5239E+23	2.0088E+23
I-132	4.7268E+06	4.5793E-04	2.0892E+21	5.6731E+22
I-133	7.9626E+06	7.0291E-03	3.1827E+22	1.9526E+23
I-135	1.0174E+05	2.8970E-05	1.2923E+20	6.2574E+22
Xe-133	7.2204E+06	3.8574E-02	1.7466E+23	4.3249E+22
Xe-135	1.1812E+06	4.6253E-04	2.0633E+21	7.2409E+22
Cs-134	6.4062E+06	4.9514E+00	2.2252E+25	5.0398E+22
Cs-136	1.5663E+06	2.1371E-02	9.4631E+22	1.3145E+22
Cs-137	4.0019E+06	4.6008E+01	2.0224E+26	3.1450E+22
Ba-139	2.8228E-07	1.7257E-17	7.4767E+07	5.3075E+20
Ba-140	3.0153E+06	4.1187E-02	1.7717E+23	2.5260E+22
La-140	2.0586E+06	3.7036E-03	1.5931E+22	9.6030E+21
La-141	8.3023E-01	1.4680E-10	6.2700E+14	2.0049E+19
La-142	6.1530E-08	4.2983E-18	1.8229E+07	5.6162E+18
Ce-141	7.5326E+04	2.6436E-03	1.1291E+22	6.0550E+20
Ce-143	2.2145E+04	3.3347E-05	1.4043E+20	3.4243E+20
Ce-144	6.3048E+04	1.9767E-02	8.2668E+22	4.9524E+20
Pr-143	3.1813E+04	4.7243E-04	1.9896E+21	2.4734E+20
Nd-147	1.1076E+04	1.3691E-04	5.6086E+20	9.3805E+19
Np-239	4.5613E+05	1.9661E-03	4.9541E+21	5.2346E+21
Pu-238	3.1689E+02	1.8510E-02	4.6837E+22	2.4814E+18
Pu-239	2.1301E+01	3.4270E-01	8.6350E+23	1.6637E+17
Pu-240	2.2720E+01	9.9709E-02	2.5019E+23	1.7793E+17
Pu-241	1.0901E+04	1.0583E-01	2.6444E+23	8.5388E+19
Am-241	6.8411E+00	1.9932E-03	4.9807E+21	5.3111E+16
Cm-242	1.6671E+03	5.0301E-04	1.2517E+21	1.3124E+19
Cm-244	1.8355E+02	2.2688E-03	5.5995E+21	1.4376E+18

ECCS Fluid (Torus) Transport Group Inventory:

Time (h) = 60.0000	Atmosphere	Sump	
Noble gases (atoms)	1.7672E+23	0.0000E+00	
Elemental I (atoms)	4.2992E+22	0.0000E+00	
Organic I (atoms)	1.3296E+21	0.0000E+00	
Aerosols (kg)	5.3607E+01	0.0000E+00	
Dose Effective (Ci/cc) I-131 (Thyroid)			6.1982E-03
Dose Effective (Ci/cc) I-131 (ICRP2 Thyroid)			6.4404E-03
Total I (Ci)			3.5779E+07

ECCS Fluid to Reactor Building Transport Group Inventory:

	Pathway	
Time (h) = 60.0000	Filtered	Transported
Noble gases (atoms)	0.0000E+00	3.8264E+16
Elemental I (atoms)	0.0000E+00	1.3152E+16
Organic I (atoms)	0.0000E+00	4.0676E+14
Aerosols (kg)	0.0000E+00	1.3683E-05

Detailed model information at time (H) = 66.0000

EAB Doses:

Time (h) = 66.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)	0.0000E+00	0.0000E+00	0.0000E+00
Accumulated dose (rem)	9.8228E-06	3.3758E-03	1.9941E-04

LPZ Doses:

Time (h) = 66.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)	2.4012E-07	1.7909E-04	1.3434E-05
Accumulated dose (rem)	1.0644E-05	4.7138E-03	3.0483E-04

Control Room Doses:

Time (h) = 66.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)	3.5327E-11	7.6883E-07	5.6417E-08
Accumulated dose (rem)	6.8019E-08	3.5216E-04	1.6171E-05

ECSS Fluid (Torus) Compartment Nuclide Inventory:

Time (h) = 66.0000	Ci	kg	Atoms	Decay
Co-58	1.3128E+03	4.1284E-05	4.2865E+20	1.1481E+19
Co-60	1.6125E+03	1.4265E-03	1.4317E+22	1.3923E+19
Rb-86	5.1906E+04	6.3792E-04	4.4670E+21	4.7275E+20
Sr-89	1.9011E+06	6.5439E-02	4.4279E+23	1.6716E+22
Sr-90	2.2420E+05	1.6436E+00	1.0998E+25	1.9352E+21
Sr-91	2.1732E+04	5.9949E-06	3.9673E+19	4.4467E+21
Sr-92	1.3216E-01	1.0514E-11	6.8826E+13	1.0912E+21
Y-90	1.1475E+05	2.1092E-04	1.4113E+21	5.5224E+20
Y-91	3.0303E+04	1.2357E-03	8.1772E+21	2.5337E+20
Y-92	2.1838E+01	2.2695E-09	1.4856E+16	1.1099E+21
Y-93	3.4447E+02	1.0325E-07	6.6857E+17	5.6420E+19
Zr-95	3.0745E+04	1.4311E-03	9.0720E+21	2.6927E+20
Zr-97	2.1930E+03	1.1472E-06	7.1221E+18	9.4464E+19
Nb-95	3.1787E+04	8.1291E-04	5.1531E+21	2.7450E+20
Mo-99	2.2394E+05	4.6692E-04	2.8402E+21	2.7689E+21
Tc-99m	2.2953E+05	4.3651E-05	2.6553E+20	2.6250E+21
Ru-103	3.5306E+05	1.0939E-02	6.3960E+22	3.1209E+21
Ru-105	8.5959E+00	1.2788E-09	7.3342E+15	1.8172E+20
Ru-106	1.5180E+05	4.5373E-02	2.5777E+23	1.3135E+21
Rh-105	7.6689E+04	9.0857E-05	5.2110E+20	1.3081E+21
Sb-127	3.1137E+05	1.1659E-03	5.5287E+21	3.4605E+21
Sb-129	3.8357E+01	6.8209E-09	3.1842E+16	1.0451E+21
Te-127	3.6344E+05	1.3771E-04	6.5302E+20	3.6678E+21
Te-127m	6.8080E+04	7.2175E-03	3.4224E+22	5.8764E+20
Te-129	1.8413E+05	8.7923E-06	4.1045E+19	2.2943E+21
Te-129m	2.1288E+05	7.0664E-03	3.2988E+22	1.8882E+21
Te-131m	1.4854E+05	1.8627E-04	8.5631E+20	2.9704E+21
Te-132	3.7550E+06	1.2369E-02	5.6428E+22	4.3785E+22
I-131	2.2500E+07	1.8149E-01	8.3431E+23	2.1906E+23
I-132	4.4820E+06	4.3421E-04	1.9810E+21	5.9922E+22
I-133	6.5196E+06	5.7552E-03	2.6059E+22	2.0103E+23
I-135	5.4230E+04	1.5442E-05	6.8884E+19	6.2635E+22
Xe-133	7.2137E+06	3.8539E-02	1.7450E+23	4.9004E+22
Xe-135	7.7142E+05	3.0207E-04	1.3475E+21	7.3176E+22
Cs-134	6.4047E+06	4.9502E+00	2.2247E+25	5.5517E+22
Cs-136	1.5457E+06	2.1090E-02	9.3388E+22	1.4388E+22
Cs-137	4.0018E+06	4.6008E+01	2.0224E+26	3.4648E+22
Ba-139	1.3812E-08	8.4443E-19	3.6585E+06	5.3075E+20
Ba-140	2.9745E+06	4.0631E-02	1.7478E+23	2.7654E+22
La-140	2.1530E+06	3.8734E-03	1.6662E+22	1.1266E+22
La-141	2.8814E-01	5.0951E-11	2.1761E+14	2.0050E+19
La-142	4.1449E-09	2.8955E-19	1.2279E+06	5.6162E+18
Ce-141	7.4926E+04	2.6296E-03	1.1231E+22	6.6554E+20
Ce-143	1.9523E+04	2.9399E-05	1.2381E+20	3.5906E+20
Ce-144	6.3010E+04	1.9755E-02	8.2618E+22	5.4561E+20
Pr-143	3.1674E+04	4.7036E-04	1.9808E+21	2.7270E+20
Nd-147	1.0902E+04	1.3476E-04	5.5208E+20	1.0259E+20
Np-239	4.2377E+05	1.8267E-03	4.6027E+21	5.5861E+21
Pu-238	3.1690E+02	1.8511E-02	4.6838E+22	2.7347E+18
Pu-239	2.1310E+01	3.4284E-01	8.6385E+23	1.8339E+17
Pu-240	2.2720E+01	9.9709E-02	2.5019E+23	1.9609E+17
Pu-241	1.0901E+04	1.0582E-01	2.6443E+23	9.4101E+19
Am-241	6.8531E+00	1.9967E-03	4.9894E+21	5.8582E+16
Cm-242	1.6654E+03	5.0248E-04	1.2504E+21	1.4456E+19
Cm-244	1.8354E+02	2.2687E-03	5.5994E+21	1.5843E+18

ECCS Fluid (Torus) Transport Group Inventory:
 Time (h) = 66.0000 Atmosphere Sump
 Noble gases (atoms) 1.7585E+23 0.0000E+00
 Elemental I (atoms) 4.1827E+22 0.0000E+00
 Organic I (atoms) 1.2936E+21 0.0000E+00
 Aerosols (kg) 5.3598E+01 0.0000E+00
 Dose Effective (Ci/cc) I-131 (Thyroid) 6.0122E-03
 Dose Effective (Ci/cc) I-131 (ICRP2 Thyroid) 6.2148E-03
 Total I (Ci) 3.3556E+07

ECCS Fluid to Reactor Building Transport Group Inventory:

	Pathway	
Time (h) = 66.0000	Filtered	Transported
Noble gases (atoms)	0.0000E+00	4.2844E+16
Elemental I (atoms)	0.0000E+00	1.4255E+16
Organic I (atoms)	0.0000E+00	4.4088E+14
Aerosols (kg)	0.0000E+00	1.5074E-05

Detailed model information at time (H) = 72.0000

EAB Doses:

Time (h) = 72.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)	0.0000E+00	0.0000E+00	0.0000E+00
Accumulated dose (rem)	9.8228E-06	3.3758E-03	1.9941E-04

LPZ Doses:

Time (h) = 72.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)	2.3181E-07	1.7375E-04	1.3252E-05
Accumulated dose (rem)	1.0875E-05	4.8875E-03	3.1809E-04

Control Room Doses:

Time (h) = 72.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)	3.4008E-11	7.4590E-07	5.5672E-08
Accumulated dose (rem)	6.8053E-08	3.5290E-04	1.6227E-05

ECCS Fluid (Torus) Compartment Nuclide Inventory:

Time (h) = 72.0000	Ci	kg	Atoms	Decay
Co-58	1.3095E+03	4.1183E-05	4.2761E+20	1.2529E+19
Co-60	1.6123E+03	1.4263E-03	1.4316E+22	1.5212E+19
Rb-86	5.1426E+04	6.3203E-04	4.4258E+21	5.1404E+20
Sr-89	1.8946E+06	6.5214E-02	4.4127E+23	1.8233E+22
Sr-90	2.2420E+05	1.6436E+00	1.0998E+25	2.1143E+21
Sr-91	1.4027E+04	3.8695E-06	2.5608E+19	4.4607E+21
Sr-92	2.8485E-02	2.2662E-12	1.4834E+13	1.0912E+21
Y-90	1.2172E+05	2.2371E-04	1.4969E+21	6.4579E+20
Y-91	3.0235E+04	1.2329E-03	8.1589E+21	2.7756E+20
Y-92	6.7896E+00	7.0561E-10	4.6188E+15	1.1100E+21
Y-93	2.2820E+02	6.8399E-08	4.4291E+17	5.6646E+19
Zr-95	3.0661E+04	1.4273E-03	9.0475E+21	2.9380E+20
Zr-97	1.7146E+03	8.9693E-07	5.5685E+18	9.6018E+19
Nb-95	3.1781E+04	8.1274E-04	5.1520E+21	2.9989E+20
Mo-99	2.1026E+05	4.3840E-04	2.6668E+21	2.9423E+21
Tc-99m	2.1554E+05	4.0991E-05	2.4934E+20	2.7938E+21
Ru-103	3.5151E+05	1.0891E-02	6.3679E+22	3.4025E+21
Ru-105	3.3690E+00	5.0118E-10	2.8745E+15	1.8172E+20
Ru-106	1.5173E+05	4.5351E-02	2.5765E+23	1.4347E+21
Rh-105	6.8180E+04	8.0776E-05	4.6328E+20	1.3660E+21
Sb-127	2.9767E+05	1.1146E-03	5.2854E+21	3.7039E+21
Sb-129	1.4647E+01	2.6046E-09	1.2159E+16	1.0451E+21
Te-127	3.5065E+05	1.3287E-04	6.3004E+20	3.9436E+21
Te-127m	6.8059E+04	7.2153E-03	3.4214E+22	6.4203E+20
Te-129	1.8315E+05	8.7455E-06	4.0827E+19	2.4049E+21
Te-129m	2.1178E+05	7.0301E-03	3.2819E+22	2.0579E+21
Te-131m	1.2931E+05	1.6216E-04	7.4546E+20	3.0813E+21
Te-132	3.5605E+06	1.1728E-02	5.3505E+22	4.6708E+22
I-131	2.2022E+07	1.7764E-01	8.1661E+23	2.3685E+23
I-132	4.2498E+06	4.1172E-04	1.8784E+21	6.2947E+22
I-133	5.3381E+06	4.7122E-03	2.1337E+22	2.0575E+23
I-135	2.8906E+04	8.2310E-06	3.6717E+19	6.2667E+22
Xe-133	7.1660E+06	3.8284E-02	1.7335E+23	5.4740E+22

Xe-135	5.0094E+05	1.9616E-04	8.7503E+20	7.3676E+22
Cs-134	6.4033E+06	4.9491E+00	2.2242E+25	6.0635E+22
Cs-136	1.5254E+06	2.0813E-02	9.2161E+22	1.5615E+22
Cs-137	4.0018E+06	4.6007E+01	2.0223E+26	3.7846E+22
Ba-139	6.7586E-10	4.1320E-20	1.7902E+05	5.3075E+20
Ba-140	2.9344E+06	4.0082E-02	1.7241E+23	3.0015E+22
La-140	2.2341E+06	4.0193E-03	1.7289E+22	1.3000E+22
La-141	1.0001E-01	1.7683E-11	7.5526E+13	2.0050E+19
La-142	2.7921E-10	1.9505E-20	8.2719E+04	5.6162E+18
Ce-141	7.4527E+04	2.6156E-03	1.1171E+22	7.2526E+20
Ce-143	1.7211E+04	2.5918E-05	1.0915E+20	3.7372E+20
Ce-144	6.2971E+04	1.9743E-02	8.2567E+22	5.9595E+20
Pr-143	3.1505E+04	4.6785E-04	1.9703E+21	2.9793E+20
Nd-147	1.0731E+04	1.3265E-04	5.4344E+20	1.1123E+20
Np-239	3.9371E+05	1.6971E-03	4.2762E+21	5.9126E+21
Pu-238	3.1691E+02	1.8511E-02	4.6839E+22	2.9880E+18
Pu-239	2.1318E+01	3.4297E-01	8.6418E+23	2.0043E+17
Pu-240	2.2720E+01	9.9709E-02	2.5019E+23	2.1425E+17
Pu-241	1.0901E+04	1.0582E-01	2.6442E+23	1.0281E+20
Am-241	6.8650E+00	2.0002E-03	4.9981E+21	6.4063E+16
Cm-242	1.6636E+03	5.0194E-04	1.2491E+21	1.5786E+19
Cm-244	1.8354E+02	2.2686E-03	5.5992E+21	1.7310E+18

ECCS Fluid (Torus) Transport Group Inventory:

Time (h) = 72.0000	Atmosphere	Sump	
Noble gases (atoms)	1.7422E+23	0.0000E+00	
Elemental I (atoms)	4.0733E+22	0.0000E+00	
Organic I (atoms)	1.2598E+21	0.0000E+00	
Aerosols (kg)	5.3590E+01	0.0000E+00	
Dose Effective (Ci/cc) I-131 (Thyroid)			5.8401E-03
Dose Effective (Ci/cc) I-131 (ICRP2 Thyroid)			6.0101E-03
Total I (Ci)			3.1639E+07

ECCS Fluid to Reactor Building Transport Group Inventory:

	Pathway	
Time (h) = 72.0000	Filtered	Transported
Noble gases (atoms)	0.0000E+00	4.7392E+16
Elemental I (atoms)	0.0000E+00	1.5329E+16
Organic I (atoms)	0.0000E+00	4.7409E+14
Aerosols (kg)	0.0000E+00	1.6465E-05

Detailed model information at time (H) = 78.0000

EAB Doses:

Time (h) = 78.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)	0.0000E+00	0.0000E+00	0.0000E+00
Accumulated dose (rem)	9.8228E-06	3.3758E-03	1.9941E-04

LPZ Doses:

Time (h) = 78.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)	2.2460E-07	1.6879E-04	1.3084E-05
Accumulated dose (rem)	1.1100E-05	5.0563E-03	3.3117E-04

Control Room Doses:

Time (h) = 78.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)	3.2886E-11	7.2460E-07	5.4980E-08
Accumulated dose (rem)	6.8086E-08	3.5363E-04	1.6282E-05

ECCS Fluid (Torus) Compartment Nuclide Inventory:

Time (h) = 78.0000	Ci	kg	Atoms	Decay
Co-58	1.3063E+03	4.1083E-05	4.2656E+20	1.3574E+19
Co-60	1.6122E+03	1.4262E-03	1.4315E+22	1.6501E+19
Rb-86	5.0951E+04	6.2618E-04	4.3848E+21	5.5495E+20
Sr-89	1.8881E+06	6.4991E-02	4.3976E+23	1.9744E+22
Sr-90	2.2419E+05	1.6436E+00	1.0997E+25	2.2935E+21
Sr-91	9.0540E+03	2.4977E-06	1.6529E+19	4.4698E+21
Sr-92	6.1394E-03	4.8844E-13	3.1972E+12	1.0912E+21
Y-90	1.2824E+05	2.3571E-04	1.5772E+21	7.4473E+20
Y-91	3.0160E+04	1.2298E-03	8.1386E+21	3.0170E+20
Y-92	2.1067E+00	2.1894E-10	1.4331E+15	1.1100E+21

Y-93	1.5118E+02	4.5313E-08	2.9342E+17	5.6795E+19
Zr-95	3.0579E+04	1.4234E-03	9.0230E+21	3.1828E+20
Zr-97	1.3406E+03	7.0126E-07	4.3537E+18	9.7233E+19
Nb-95	3.1773E+04	8.1255E-04	5.1508E+21	3.2528E+20
Mo-99	1.9742E+05	4.1163E-04	2.5039E+21	3.1052E+21
Tc-99m	2.0239E+05	3.8490E-05	2.3413E+20	2.9523E+21
Ru-103	3.4996E+05	1.0843E-02	6.3398E+22	3.6828E+21
Ru-105	1.3204E+00	1.9643E-10	1.1266E+15	1.8173E+20
Ru-106	1.5166E+05	4.5330E-02	2.5753E+23	1.5560E+21
Rh-105	6.0615E+04	7.1814E-05	4.1188E+20	1.4174E+21
Sb-127	2.8456E+05	1.0656E-03	5.0528E+21	3.9365E+21
Sb-129	5.5930E+00	9.9460E-10	4.6431E+15	1.0451E+21
Te-127	3.3836E+05	1.2821E-04	6.0795E+20	4.2097E+21
Te-127m	6.8034E+04	7.2126E-03	3.4201E+22	6.9641E+20
Te-129	1.8220E+05	8.6999E-06	4.0614E+19	2.5148E+21
Te-129m	2.1069E+05	6.9939E-03	3.2650E+22	2.2267E+21
Te-131m	1.1257E+05	1.4117E-04	6.4896E+20	3.1778E+21
Te-132	3.3761E+06	1.1120E-02	5.0734E+22	4.9479E+22
I-131	2.1555E+07	1.7387E-01	7.9927E+23	2.5426E+23
I-132	4.0297E+06	3.9040E-04	1.7811E+21	6.5815E+22
I-133	4.3707E+06	3.8583E-03	1.7470E+22	2.0962E+23
I-135	1.5408E+04	4.3874E-06	1.9571E+19	6.2684E+22
Xe-133	7.0860E+06	3.7856E-02	1.7141E+23	6.0426E+22
Xe-135	3.2381E+05	1.2680E-04	5.6563E+20	7.4000E+22
Cs-134	6.4018E+06	4.9479E+00	2.2237E+25	6.5752E+22
Cs-136	1.5054E+06	2.0539E-02	9.0950E+22	1.6826E+22
Cs-137	4.0017E+06	4.6006E+01	2.0223E+26	4.1044E+22
Ba-140	2.8947E+06	3.9541E-02	1.7008E+23	3.2344E+22
La-140	2.3033E+06	4.1438E-03	1.7825E+22	1.4793E+22
La-141	3.4708E-02	6.1373E-12	2.6212E+13	2.0050E+19
Ce-141	7.4131E+04	2.6017E-03	1.1112E+22	7.8466E+20
Ce-143	1.5173E+04	2.2849E-05	9.6222E+19	3.8664E+20
Ce-144	6.2933E+04	1.9731E-02	8.2517E+22	6.4626E+20
Pr-143	3.1310E+04	4.6496E-04	1.9581E+21	3.2302E+20
Nd-147	1.0563E+04	1.3058E-04	5.3493E+20	1.1974E+20
Np-239	3.6578E+05	1.5767E-03	3.9728E+21	6.2159E+21
Pu-238	3.1691E+02	1.8512E-02	4.6840E+22	3.2412E+18
Pu-239	2.1325E+01	3.4309E-01	8.6448E+23	2.1746E+17
Pu-240	2.2720E+01	9.9710E-02	2.5019E+23	2.3241E+17
Pu-241	1.0900E+04	1.0582E-01	2.6441E+23	1.1152E+20
Am-241	6.8770E+00	2.0037E-03	5.0068E+21	6.9554E+16
Cm-242	1.6618E+03	5.0141E-04	1.2478E+21	1.7115E+19
Cm-244	1.8353E+02	2.2686E-03	5.5991E+21	1.8777E+18

ECCS Fluid (Torus) Transport Group Inventory:

Time (h) = 78.0000	Atmosphere	Sump
Noble gases (atoms)	1.7197E+23	0.0000E+00
Elemental I (atoms)	3.9699E+22	0.0000E+00
Organic I (atoms)	1.2278E+21	0.0000E+00
Aerosols (kg)	5.3582E+01	0.0000E+00
Dose Effective (Ci/cc) I-131 (Thyroid)		5.6796E-03
Dose Effective (Ci/cc) I-131 (ICRP2 Thyroid)		5.8229E-03
Total I (Ci)		2.9971E+07

ECCS Fluid to Reactor Building Transport Group Inventory:

	Pathway	
Time (h) = 78.0000	Filtered	Transported
Noble gases (atoms)	0.0000E+00	5.1890E+16
Elemental I (atoms)	0.0000E+00	1.6375E+16
Organic I (atoms)	0.0000E+00	5.0644E+14
Aerosols (kg)	0.0000E+00	1.7856E-05

Detailed model information at time (H) = 84.0000

EAB Doses:

Time (h) = 84.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)	0.0000E+00	0.0000E+00	0.0000E+00
Accumulated dose (rem)	9.8228E-06	3.3758E-03	1.9941E-04

LPZ Doses:

Time (h) = 84.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)	2.1825E-07	1.6415E-04	1.2927E-05

Accumulated dose (rem) 1.1318E-05 5.2205E-03 3.4410E-04

Control Room Doses:

Time (h) = 84.0000 Whole Body Thyroid TEDE
Delta dose (rem) 3.1912E-11 7.0468E-07 5.4332E-08
Accumulated dose (rem) 6.8118E-08 3.5433E-04 1.6336E-05

ECCS Fluid (Torus) Compartment Nuclide Inventory:

Time (h) = 84.0000	Ci	kg	Atoms	Decay
Co-58	1.3032E+03	4.0982E-05	4.2552E+20	1.4617E+19
Co-60	1.6120E+03	1.4261E-03	1.4313E+22	1.7789E+19
Rb-86	5.0480E+04	6.2040E-04	4.3443E+21	5.9548E+20
Sr-89	1.8817E+06	6.4768E-02	4.3825E+23	2.1251E+22
Sr-90	2.2419E+05	1.6435E+00	1.0997E+25	2.4727E+21
Sr-91	5.8441E+03	1.6122E-06	1.0669E+19	4.4757E+21
Sr-92	1.3232E-03	1.0528E-13	6.8911E+11	1.0912E+21
Y-90	1.3435E+05	2.4694E-04	1.6524E+21	8.4872E+20
Y-91	3.0080E+04	1.2266E-03	8.1170E+21	3.2577E+20
Y-92	6.5278E-01	6.7840E-11	4.4407E+14	1.1100E+21
Y-93	1.0015E+02	3.0019E-08	1.9438E+17	5.6894E+19
Zr-95	3.0496E+04	1.4195E-03	8.9986E+21	3.4268E+20
Zr-97	1.0481E+03	5.4829E-07	3.4040E+18	9.8182E+19
Nb-95	3.1766E+04	8.1236E-04	5.1496E+21	3.5066E+20
Mo-99	1.8537E+05	3.8649E-04	2.3510E+21	3.2581E+21
Tc-99m	1.9004E+05	3.6141E-05	2.1984E+20	3.1012E+21
Ru-103	3.4842E+05	1.0796E-02	6.3119E+22	3.9618E+21
Ru-105	5.1749E-01	7.6984E-11	4.4153E+14	1.8173E+20
Ru-106	1.5158E+05	4.5309E-02	2.5741E+23	1.6772E+21
Rh-105	5.3889E+04	6.3845E-05	3.6618E+20	1.4631E+21
Sb-127	2.7204E+05	1.0187E-03	4.8304E+21	4.1589E+21
Sb-129	2.1358E+00	3.7980E-10	1.7730E+15	1.0451E+21
Te-127	3.2656E+05	1.2374E-04	5.8675E+20	4.4665E+21
Te-127m	6.8005E+04	7.2096E-03	3.4187E+22	7.5077E+20
Te-129	1.8125E+05	8.6550E-06	4.0404E+19	2.6242E+21
Te-129m	2.0961E+05	6.9579E-03	3.2482E+22	2.3946E+21
Te-131m	9.7997E+04	1.2289E-04	5.6495E+20	3.2618E+21
Te-132	3.2012E+06	1.0545E-02	4.8107E+22	5.2107E+22
I-131	2.1097E+07	1.7017E-01	7.8229E+23	2.7130E+23
I-132	3.8210E+06	3.7018E-04	1.6888E+21	6.8535E+22
I-133	3.5786E+06	3.1591E-03	1.4304E+22	2.1279E+23
I-135	8.2128E+03	2.3386E-06	1.0432E+19	6.2693E+22
Xe-133	6.9808E+06	3.7294E-02	1.6887E+23	6.6041E+22
Xe-135	2.0855E+05	8.1663E-05	3.6429E+20	7.4209E+22
Cs-134	6.4003E+06	4.9468E+00	2.2232E+25	7.0868E+22
Cs-136	1.4856E+06	2.0270E-02	8.9754E+22	1.8021E+22
Cs-137	4.0016E+06	4.6005E+01	2.0223E+26	4.4243E+22
Ba-140	2.8556E+06	3.9006E-02	1.6779E+23	3.4642E+22
La-140	2.3618E+06	4.2491E-03	1.8278E+22	1.6638E+22
La-141	1.2046E-02	2.1300E-12	9.0974E+12	2.0050E+19
Ce-141	7.3737E+04	2.5879E-03	1.1053E+22	8.4375E+20
Ce-143	1.3377E+04	2.0143E-05	8.4829E+19	3.9804E+20
Ce-144	6.2894E+04	1.9719E-02	8.2467E+22	6.9654E+20
Pr-143	3.1094E+04	4.6175E-04	1.9446E+21	3.4794E+20
Nd-147	1.0398E+04	1.2853E-04	5.2655E+20	1.2812E+20
Np-239	3.3983E+05	1.4648E-03	3.6910E+21	6.4978E+21
Pu-238	3.1692E+02	1.8512E-02	4.6841E+22	3.4945E+18
Pu-239	2.1332E+01	3.4320E-01	8.6476E+23	2.3451E+17
Pu-240	2.2720E+01	9.9710E-02	2.5019E+23	2.5057E+17
Pu-241	1.0900E+04	1.0581E-01	2.6441E+23	1.2024E+20
Am-241	6.8890E+00	2.0072E-03	5.0155E+21	7.5054E+16
Cm-242	1.6600E+03	5.0088E-04	1.2464E+21	1.8443E+19
Cm-244	1.8353E+02	2.2685E-03	5.5989E+21	2.0244E+18

ECCS Fluid (Torus) Transport Group Inventory:

Time (h) = 84.0000	Atmosphere	Sump
Noble gases (atoms)	1.6923E+23	0.0000E+00
Elemental I (atoms)	3.8717E+22	0.0000E+00
Organic I (atoms)	1.1974E+21	0.0000E+00
Aerosols (kg)	5.3574E+01	0.0000E+00
Dose Effective (Ci/cc) I-131 (Thyroid)		5.5291E-03
Dose Effective (Ci/cc) I-131 (ICRP2 Thyroid)		5.6504E-03
Total I (Ci)		2.8505E+07

ECCS Fluid to Reactor Building Transport Group Inventory:

Time (h) = 84.0000	Pathway	
	Filtered	Transported
Noble gases (atoms)	0.0000E+00	5.6325E+16
Elemental I (atoms)	0.0000E+00	1.7394E+16
Organic I (atoms)	0.0000E+00	5.3797E+14
Aerosols (kg)	0.0000E+00	1.9246E-05

Detailed model information at time (H) = 90.0000

EAB Doses:

Time (h) = 90.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)	0.0000E+00	0.0000E+00	0.0000E+00
Accumulated dose (rem)	9.8228E-06	3.3758E-03	1.9941E-04

LPZ Doses:

Time (h) = 90.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)	2.1256E-07	1.5978E-04	1.2779E-05
Accumulated dose (rem)	1.1531E-05	5.3802E-03	3.5688E-04

Control Room Doses:

Time (h) = 90.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)	3.1051E-11	6.8594E-07	5.3722E-08
Accumulated dose (rem)	6.8149E-08	3.5502E-04	1.6390E-05

ECCS Fluid (Torus) Compartment Nuclide Inventory:

Time (h) = 90.0000	Ci	kg	Atoms	Decay
Co-58	1.3000E+03	4.0882E-05	4.2448E+20	1.5657E+19
Co-60	1.6119E+03	1.4260E-03	1.4312E+22	1.9077E+19
Rb-86	5.0013E+04	6.1466E-04	4.3042E+21	6.3564E+20
Sr-89	1.8752E+06	6.4547E-02	4.3675E+23	2.2752E+22
Sr-90	2.2418E+05	1.6435E+00	1.0997E+25	2.6519E+21
Sr-91	3.7722E+03	1.0406E-06	6.8865E+18	4.4795E+21
Sr-92	2.8520E-04	2.2690E-14	1.4853E+11	1.0912E+21
Y-90	1.4008E+05	2.5747E-04	1.7228E+21	9.5743E+20
Y-91	2.9997E+04	1.2232E-03	8.0946E+21	3.4978E+20
Y-92	2.0207E-01	2.1000E-11	1.3746E+14	1.1100E+21
Y-93	6.6348E+01	1.9887E-08	1.2877E+17	5.6960E+19
Zr-95	3.0413E+04	1.4157E-03	8.9743E+21	3.6702E+20
Zr-97	8.1950E+02	4.2868E-07	2.6614E+18	9.8925E+19
Nb-95	3.1758E+04	8.1216E-04	5.1483E+21	3.7603E+20
Mo-99	1.7405E+05	3.6289E-04	2.2074E+21	3.4017E+21
Tc-99m	1.7844E+05	3.3935E-05	2.0642E+20	3.2409E+21
Ru-103	3.4689E+05	1.0748E-02	6.2842E+22	4.2397E+21
Ru-105	2.0282E-01	3.0172E-11	1.7305E+14	1.8173E+20
Ru-106	1.5151E+05	4.5287E-02	2.5729E+23	1.7983E+21
Rh-105	4.7909E+04	5.6761E-05	3.2554E+20	1.5037E+21
Sb-127	2.6007E+05	9.7384E-04	4.6178E+21	4.3715E+21
Sb-129	8.1556E-01	1.4503E-10	6.7704E+14	1.0451E+21
Te-127	3.1525E+05	1.1945E-04	5.6644E+20	4.7144E+21
Te-127m	6.7973E+04	7.2062E-03	3.4171E+22	8.0510E+20
Te-129	1.8032E+05	8.6103E-06	4.0196E+19	2.7330E+21
Te-129m	2.0853E+05	6.9221E-03	3.2315E+22	2.5617E+21
Te-131m	8.5311E+04	1.0699E-04	4.9182E+20	3.3349E+21
Te-132	3.0354E+06	9.9984E-03	4.5615E+22	5.4598E+22
I-131	2.0649E+07	1.6656E-01	7.6567E+23	2.8798E+23
I-132	3.6231E+06	3.5100E-04	1.6014E+21	7.1114E+22
I-133	2.9301E+06	2.5866E-03	1.1712E+22	2.1538E+23
I-135	4.3776E+03	1.2465E-06	5.5606E+18	6.2698E+22
Xe-133	6.8564E+06	3.6630E-02	1.6586E+23	7.1564E+22
Xe-135	1.3391E+05	5.2436E-05	2.3391E+20	7.4343E+22
Cs-134	6.3988E+06	4.9457E+00	2.2226E+25	7.5982E+22
Cs-136	1.4661E+06	2.0003E-02	8.8575E+22	1.9201E+22
Cs-137	4.0016E+06	4.6005E+01	2.0222E+26	4.7441E+22
Ba-140	2.8170E+06	3.8479E-02	1.6552E+23	3.6909E+22
La-140	2.4107E+06	4.3371E-03	1.8656E+22	1.8526E+22
La-141	4.1808E-03	7.3926E-13	3.1574E+12	2.0050E+19
Ce-141	7.3345E+04	2.5741E-03	1.0994E+22	9.0252E+20
Ce-143	1.1793E+04	1.7758E-05	7.4784E+19	4.0808E+20
Ce-144	6.2856E+04	1.9707E-02	8.2417E+22	7.4679E+20

Pr-143	3.0859E+04	4.5826E-04	1.9299E+21	3.7269E+20
Nd-147	1.0235E+04	1.2652E-04	5.1831E+20	1.3636E+20
Np-239	3.1572E+05	1.3609E-03	3.4291E+21	6.7596E+21
Pu-238	3.1693E+02	1.8512E-02	4.6842E+22	3.7478E+18
Pu-239	2.1338E+01	3.4330E-01	8.6503E+23	2.5156E+17
Pu-240	2.2720E+01	9.9710E-02	2.5019E+23	2.6873E+17
Pu-241	1.0900E+04	1.0581E-01	2.6440E+23	1.2895E+20
Am-241	6.9009E+00	2.0107E-03	5.0243E+21	8.0564E+16
Cm-242	1.6583E+03	5.0034E-04	1.2451E+21	1.9769E+19
Cm-244	1.8352E+02	2.2685E-03	5.5988E+21	2.1711E+18

ECCS Fluid (Torus) Transport Group Inventory:

Time (h) = 90.0000	Atmosphere	Sump		
Noble gases (atoms)	1.6609E+23	0.0000E+00		
Elemental I (atoms)	3.7781E+22	0.0000E+00		
Organic I (atoms)	1.1685E+21	0.0000E+00		
Aerosols (kg)	5.3566E+01	0.0000E+00		
Dose Effective (Ci/cc) I-131 (Thyroid)			5.3871E-03	
Dose Effective (Ci/cc) I-131 (ICRP2 Thyroid)			5.4902E-03	
Total I (Ci)			2.7206E+07	

ECCS Fluid to Reactor Building Transport Group Inventory:

	Pathway	
Time (h) = 90.0000	Filtered	Transported
Noble gases (atoms)	0.0000E+00	6.0684E+16
Elemental I (atoms)	0.0000E+00	1.8389E+16
Organic I (atoms)	0.0000E+00	5.6874E+14
Aerosols (kg)	0.0000E+00	2.0637E-05

Detailed model information at time (H) = 96.0000

EAB Doses:

Time (h) = 96.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)	0.0000E+00	0.0000E+00	0.0000E+00
Accumulated dose (rem)	9.8228E-06	3.3758E-03	1.9941E-04

LPZ Doses:

Time (h) = 96.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)	2.0741E-07	1.5566E-04	1.2640E-05
Accumulated dose (rem)	1.1738E-05	5.5359E-03	3.6952E-04

Control Room Doses:

Time (h) = 96.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)	3.0278E-11	6.6824E-07	5.3144E-08
Accumulated dose (rem)	6.8179E-08	3.5569E-04	1.6443E-05

ECCS Fluid (Torus) Compartment Nuclide Inventory:

Time (h) = 96.0000	Ci	kg	Atoms	Decay
Co-58	1.2968E+03	4.0782E-05	4.2344E+20	1.6695E+19
Co-60	1.6117E+03	1.4258E-03	1.4311E+22	2.0365E+19
Rb-86	4.9551E+04	6.0898E-04	4.2644E+21	6.7543E+20
Sr-89	1.8688E+06	6.4325E-02	4.3525E+23	2.4248E+22
Sr-90	2.2418E+05	1.6435E+00	1.0997E+25	2.8310E+21
Sr-91	2.4348E+03	6.7168E-07	4.4450E+18	4.4819E+21
Sr-92	6.1471E-05	4.8905E-15	3.2012E+10	1.0912E+21
Y-90	1.4545E+05	2.6734E-04	1.7888E+21	1.0706E+21
Y-91	2.9912E+04	1.2197E-03	8.0717E+21	3.7372E+20
Y-92	6.2510E-02	6.4964E-12	4.2524E+13	1.1100E+21
Y-93	4.3954E+01	1.3174E-08	8.5310E+16	5.7003E+19
Zr-95	3.0331E+04	1.4119E-03	8.9500E+21	3.9129E+20
Zr-97	6.4073E+02	3.3516E-07	2.0808E+18	9.9505E+19
Nb-95	3.1750E+04	8.1195E-04	5.1470E+21	4.0140E+20
Mo-99	1.6342E+05	3.4073E-04	2.0726E+21	3.5365E+21
Tc-99m	1.6754E+05	3.1863E-05	1.9382E+20	3.3722E+21
Ru-103	3.4536E+05	1.0701E-02	6.2565E+22	4.5163E+21
Ru-105	7.9489E-02	1.1825E-11	6.7822E+13	1.8173E+20
Ru-106	1.5144E+05	4.5266E-02	2.5717E+23	1.9193E+21
Rh-105	4.2593E+04	5.0462E-05	2.8942E+20	1.5398E+21
Sb-127	2.4862E+05	9.3098E-04	4.4146E+21	4.5747E+21
Sb-129	3.1143E-01	5.5381E-11	2.5853E+14	1.0451E+21

Te-127	3.0442E+05	1.1535E-04	5.4698E+20	4.9538E+21
Te-127m	6.7938E+04	7.2025E-03	3.4153E+22	8.5941E+20
Te-129	1.7939E+05	8.5660E-06	3.9989E+19	2.8413E+21
Te-129m	2.0746E+05	6.8865E-03	3.2149E+22	2.7279E+21
Te-131m	7.4268E+04	9.3137E-05	4.2816E+20	3.3986E+21
Te-132	2.8782E+06	9.4805E-03	4.3252E+22	5.6961E+22
I-131	2.0210E+07	1.6302E-01	7.4939E+23	3.0431E+23
I-132	3.4355E+06	3.3282E-04	1.5184E+21	7.3560E+22
I-133	2.3991E+06	2.1178E-03	9.5893E+21	2.1750E+23
I-135	2.3334E+03	6.6444E-07	2.9639E+18	6.2701E+22
Xe-133	6.7175E+06	3.5888E-02	1.6250E+23	7.6983E+22
Xe-135	8.5772E+04	3.3587E-05	1.4983E+20	7.4430E+22
Cs-134	6.3974E+06	4.9445E+00	2.2221E+25	8.1096E+22
Cs-136	1.4468E+06	1.9740E-02	8.7411E+22	2.0365E+22
Cs-137	4.0015E+06	4.6004E+01	2.0222E+26	5.0639E+22
Ba-140	2.7790E+06	3.7960E-02	1.6328E+23	3.9145E+22
La-140	2.4510E+06	4.4097E-03	1.8968E+22	2.0450E+22
La-141	1.4510E-03	2.5657E-13	1.0958E+12	2.0050E+19
Ce-141	7.2955E+04	2.5604E-03	1.0936E+22	9.6098E+20
Ce-143	1.0396E+04	1.5655E-05	6.5929E+19	4.1694E+20
Ce-144	6.2818E+04	1.9695E-02	8.2366E+22	7.9701E+20
Pr-143	3.0608E+04	4.5453E-04	1.9142E+21	3.9724E+20
Nd-147	1.0075E+04	1.2454E-04	5.1019E+20	1.4448E+20
Np-239	2.9332E+05	1.2644E-03	3.1859E+21	7.0029E+21
Pu-238	3.1693E+02	1.8513E-02	4.6843E+22	4.0011E+18
Pu-239	2.1344E+01	3.4340E-01	8.6527E+23	2.6862E+17
Pu-240	2.2721E+01	9.9710E-02	2.5019E+23	2.8688E+17
Pu-241	1.0899E+04	1.0581E-01	2.6439E+23	1.3766E+20
Am-241	6.9129E+00	2.0141E-03	5.0330E+21	8.6083E+16
Cm-242	1.6565E+03	4.9981E-04	1.2438E+21	2.1093E+19
Cm-244	1.8352E+02	2.2684E-03	5.5986E+21	2.3177E+18

ECCS Fluid (Torus) Transport Group Inventory:

Time (h) = 96.0000	Atmosphere	Sump	
Noble gases (atoms)	1.6265E+23	0.0000E+00	
Elemental I (atoms)	3.6884E+22	0.0000E+00	
Organic I (atoms)	1.1408E+21	0.0000E+00	
Aerosols (kg)	5.3559E+01	0.0000E+00	
Dose Effective (Ci/cc) I-131 (Thyroid)			5.2526E-03
Dose Effective (Ci/cc) I-131 (ICRP2 Thyroid)			5.3405E-03
Total I (Ci)			2.6047E+07

ECCS Fluid to Reactor Building Transport Group Inventory:

	Pathway	
	Filtered	Transported
Time (h) = 96.0000		
Noble gases (atoms)	0.0000E+00	6.4959E+16
Elemental I (atoms)	0.0000E+00	1.9360E+16
Organic I (atoms)	0.0000E+00	5.9876E+14
Aerosols (kg)	0.0000E+00	2.2027E-05

Detailed model information at time (H) = 144.0000

EAB Doses:

Time (h) = 144.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)	0.0000E+00	0.0000E+00	0.0000E+00
Accumulated dose (rem)	9.8228E-06	3.3758E-03	1.9941E-04

LPZ Doses:

Time (h) = 144.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)	4.2507E-07	3.1369E-04	2.7172E-05
Accumulated dose (rem)	1.2163E-05	5.8496E-03	3.9669E-04

Control Room Doses:

Time (h) = 144.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)	4.4231E-11	9.6186E-07	8.1461E-08
Accumulated dose (rem)	6.8224E-08	3.5665E-04	1.6524E-05

ECCS Fluid (Torus) Compartment Nuclide Inventory:

Time (h) = 144.0000	Ci	kg	Atoms	Decay
Co-58	1.2716E+03	3.9991E-05	4.1523E+20	2.4905E+19

Co-60	1.6106E+03	1.4248E-03	1.4301E+22	3.0666E+19
Rb-86	4.6003E+04	5.6538E-04	3.9590E+21	9.8075E+20
Sr-89	1.8182E+06	6.2584E-02	4.2347E+23	3.6034E+22
Sr-90	2.2415E+05	1.6433E+00	1.0995E+25	4.2643E+21
Sr-91	7.3363E+01	2.0238E-08	1.3393E+17	4.4862E+21
Sr-92	2.8627E-10	2.2775E-20	1.4908E+05	1.0912E+21
Y-90	1.7785E+05	3.2690E-04	2.1874E+21	2.1053E+21
Y-91	2.9218E+04	1.1914E-03	7.8844E+21	5.6274E+20
Y-92	5.1957E-06	5.3996E-16	3.5345E+09	1.1100E+21
Y-93	1.6306E+00	4.8876E-10	3.1649E+15	5.7086E+19
Zr-95	2.9681E+04	1.3816E-03	8.7581E+21	5.8313E+20
Zr-97	8.9470E+01	4.6802E-08	2.9056E+17	1.0130E+20
Nb-95	3.1671E+04	8.0994E-04	5.1343E+21	6.0408E+20
Mo-99	9.8712E+04	2.0581E-04	1.2520E+21	4.3571E+21
Tc-99m	1.0120E+05	1.9247E-05	1.1708E+20	4.1711E+21
Ru-103	3.3338E+05	1.0330E-02	6.0395E+22	6.6859E+21
Ru-105	4.4251E-05	6.5831E-15	3.7756E+10	1.8173E+20
Ru-106	1.5087E+05	4.5096E-02	2.5620E+23	2.8858E+21
Rh-105	1.6623E+04	1.9694E-05	1.1295E+20	1.7163E+21
Sb-127	1.7344E+05	6.4948E-04	3.0797E+21	5.9096E+21
Sb-129	1.4079E-04	2.5037E-14	1.1688E+11	1.0451E+21
Te-127	2.3298E+05	8.8281E-05	4.1861E+20	6.6012E+21
Te-127m	6.7554E+04	7.1618E-03	3.3960E+22	1.2926E+21
Te-129	1.7214E+05	8.2198E-06	3.8373E+19	3.6875E+21
Te-129m	1.9907E+05	6.6082E-03	3.0849E+22	4.0274E+21
Te-131m	2.4499E+04	3.0724E-05	1.4124E+20	3.6855E+21
Te-132	1.8808E+06	6.1952E-03	2.8264E+22	7.1949E+22
I-131	1.7014E+07	1.3724E-01	6.3091E+23	4.2302E+23
I-132	2.2450E+06	2.1749E-04	9.9224E+20	8.9074E+22
I-133	4.8457E+05	4.2776E-04	1.9369E+21	2.2515E+23
I-135	1.5205E+01	4.3297E-09	1.9314E+16	6.2704E+22
Xe-133	5.4186E+06	2.8948E-02	1.3108E+23	1.1583E+23
Xe-135	2.3123E+03	9.0546E-07	4.0391E+18	7.4578E+22
Cs-134	6.3856E+06	4.9354E+00	2.2180E+25	1.2196E+23
Cs-136	1.3015E+06	1.7758E-02	7.8633E+22	2.9142E+22
Cs-137	4.0010E+06	4.5998E+01	2.0219E+26	7.6221E+22
Ba-140	2.4925E+06	3.4046E-02	1.4645E+23	5.5980E+22
La-140	2.5552E+06	4.5970E-03	1.9774E+22	3.6480E+22
La-141	3.0547E-07	5.4014E-17	2.3070E+08	2.0050E+19
Ce-141	6.9908E+04	2.4535E-03	1.0479E+22	1.4176E+21
Ce-143	3.7933E+03	5.7122E-06	2.4056E+19	4.5881E+20
Ce-144	6.2512E+04	1.9599E-02	8.1966E+22	1.1977E+21
Pr-143	2.8265E+04	4.1974E-04	1.7677E+21	5.8563E+20
Nd-147	8.8799E+03	1.0977E-04	4.4968E+20	2.0499E+20
Np-239	1.6282E+05	7.0182E-04	1.7684E+21	8.4203E+21
Pu-238	3.1699E+02	1.8516E-02	4.6852E+22	6.0276E+18
Pu-239	2.1379E+01	3.4396E-01	8.6669E+23	4.0521E+17
Pu-240	2.2721E+01	9.9710E-02	2.5019E+23	4.3215E+17
Pu-241	1.0896E+04	1.0578E-01	2.6432E+23	2.0733E+20
Am-241	7.0085E+00	2.0420E-03	5.1026E+21	1.3058E+17
Cm-242	1.6425E+03	4.9557E-04	1.2332E+21	3.1639E+19
Cm-244	1.8348E+02	2.2679E-03	5.5975E+21	3.4910E+18

ECCS Fluid (Torus) Transport Group Inventory:

Time (h) = 144.0000	Atmosphere	Sump	
Noble gases (atoms)	1.3108E+23	0.0000E+00	
Elemental I (atoms)	3.0741E+22	0.0000E+00	
Organic I (atoms)	9.5075E+20	0.0000E+00	
Aerosols (kg)	5.3505E+01	0.0000E+00	
Dose Effective (Ci/cc) I-131 (Thyroid)			4.3560E-03
Dose Effective (Ci/cc) I-131 (ICRP2 Thyroid)			4.3857E-03
Total I (Ci)			1.9744E+07

ECCS Fluid to Reactor Building Transport Group Inventory:

	Pathway	
Time (h) = 144.0000	Filtered	Transported
Noble gases (atoms)	0.0000E+00	9.5567E+16
Elemental I (atoms)	0.0000E+00	2.6367E+16
Organic I (atoms)	0.0000E+00	8.1548E+14
Aerosols (kg)	0.0000E+00	3.3142E-05

Detailed model information at time (H) = 192.0000

EAB Doses:

Time (h) = 192.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)	0.0000E+00	0.0000E+00	0.0000E+00
Accumulated dose (rem)	9.8228E-06	3.3758E-03	1.9941E-04

LPZ Doses:

Time (h) = 192.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)	3.7147E-07	2.6128E-04	2.5390E-05
Accumulated dose (rem)	1.2535E-05	6.1109E-03	4.2208E-04

Control Room Doses:

Time (h) = 192.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)	3.7019E-11	7.6811E-07	7.3193E-08
Accumulated dose (rem)	6.8261E-08	3.5742E-04	1.6598E-05

ECCS Fluid (Torus) Compartment Nuclide Inventory:

Time (h) = 192.0000	Ci	kg	Atoms	Decay
Co-58	1.2470E+03	3.9216E-05	4.0718E+20	3.2957E+19
Co-60	1.6094E+03	1.4238E-03	1.4290E+22	4.0960E+19
Rb-86	4.2709E+04	5.2490E-04	3.6756E+21	1.2642E+21
Sr-89	1.7690E+06	6.0889E-02	4.1200E+23	4.7501E+22
Sr-90	2.2412E+05	1.6430E+00	1.0994E+25	5.6973E+21
Sr-91	2.2105E+00	6.0978E-10	4.0354E+15	4.4863E+21
Y-90	1.9711E+05	3.6229E-04	2.4242E+21	3.3015E+21
Y-91	2.8534E+04	1.1635E-03	7.6999E+21	7.4736E+20
Y-92	4.3049E-10	4.4738E-20	2.9285E+05	1.1100E+21
Y-93	6.0495E-02	1.8132E-11	1.1741E+14	5.7089E+19
Zr-95	2.9045E+04	1.3520E-03	8.5704E+21	7.7086E+20
Zr-97	1.2493E+01	6.5353E-09	4.0574E+16	1.0155E+20
Nb-95	3.1571E+04	8.0737E-04	5.1180E+21	8.0618E+20
Mo-99	5.9626E+04	1.2432E-04	7.5624E+20	4.8528E+21
Tc-99m	6.1131E+04	1.1626E-05	7.0719E+19	4.6537E+21
Ru-103	3.2182E+05	9.9716E-03	5.8301E+22	8.7802E+21
Ru-105	2.4635E-08	3.6648E-18	2.1019E+07	1.8173E+20
Ru-106	1.5031E+05	4.4927E-02	2.5524E+23	3.8486E+21
Rh-105	6.4873E+03	7.6859E-06	4.4081E+19	1.7852E+21
Sb-127	1.2100E+05	4.5309E-04	2.1485E+21	6.8408E+21
Sb-129	6.3650E-08	1.1319E-17	5.2840E+07	1.0451E+21
Te-127	1.8285E+05	6.9283E-05	3.2853E+20	7.8766E+21
Te-127m	6.7032E+04	7.1064E-03	3.3698E+22	1.7229E+21
Te-129	1.6518E+05	7.8875E-06	3.6822E+19	4.4996E+21
Te-129m	1.9103E+05	6.3411E-03	2.9602E+22	5.2743E+21
Te-131m	8.0817E+03	1.0135E-05	4.6591E+19	3.7801E+21
Te-132	1.2291E+06	4.0484E-03	1.8470E+22	8.1744E+22
I-131	1.4322E+07	1.1552E-01	5.3105E+23	5.2295E+23
I-132	1.4670E+06	1.4212E-04	6.4840E+20	9.9212E+22
I-133	9.7875E+04	8.6401E-05	3.9121E+20	2.2670E+23
I-135	9.9082E-02	2.8214E-11	1.2586E+14	6.2704E+22
Xe-133	4.2129E+06	2.2507E-02	1.0191E+23	1.4649E+23
Xe-135	6.0178E+01	2.3565E-08	1.0512E+17	7.4582E+22
Cs-134	6.3739E+06	4.9263E+00	2.2140E+25	1.6275E+23
Cs-136	1.1708E+06	1.5975E-02	7.0737E+22	3.7039E+22
Cs-137	4.0005E+06	4.5992E+01	2.0217E+26	1.0180E+23
Ba-140	2.2355E+06	3.0536E-02	1.3135E+23	7.1079E+22
La-140	2.4479E+06	4.4041E-03	1.8944E+22	5.2409E+22
La-141	6.4308E-11	1.1371E-20	4.8567E+04	2.0050E+19
Ce-141	6.6989E+04	2.3510E-03	1.0041E+22	1.8552E+21
Ce-143	1.3841E+03	2.0842E-06	8.7771E+18	4.7409E+20
Ce-144	6.2208E+04	1.9504E-02	8.1567E+22	1.5964E+21
Pr-143	2.5749E+04	3.8237E-04	1.6103E+21	7.5827E+20
Nd-147	7.8266E+03	9.6746E-05	3.9634E+20	2.5833E+20
Np-239	9.0374E+04	3.8956E-04	9.8158E+20	9.2072E+21
Pu-238	3.1705E+02	1.8520E-02	4.6860E+22	8.0545E+18
Pu-239	2.1399E+01	3.4427E-01	8.6747E+23	5.4196E+17
Pu-240	2.2721E+01	9.9710E-02	2.5020E+23	5.7742E+17
Pu-241	1.0894E+04	1.0575E-01	2.6425E+23	2.7699E+20
Am-241	7.1041E+00	2.0699E-03	5.1722E+21	1.7569E+17
Cm-242	1.6285E+03	4.9137E-04	1.2228E+21	4.2096E+19
Cm-244	1.8344E+02	2.2675E-03	5.5963E+21	4.6639E+18

ECCS Fluid (Torus) Transport Group Inventory:
Time (h) = 192.0000 Atmosphere Sump

Noble gases (atoms)	1.0191E+23	0.0000E+00	
Elemental I (atoms)	2.5806E+22	0.0000E+00	
Organic I (atoms)	7.9814E+20	0.0000E+00	
Aerosols (kg)	5.3458E+01	0.0000E+00	
Dose Effective (Ci/cc) I-131 (Thyroid)			3.6528E-03
Dose Effective (Ci/cc) I-131 (ICRP2 Thyroid)			3.6666E-03
Total I (Ci)			1.5886E+07

ECCS Fluid to Reactor Building Transport Group Inventory:

	Pathway	
Time (h) = 192.0000	Filtered	Transported
Noble gases (atoms)	0.0000E+00	1.1973E+17
Elemental I (atoms)	0.0000E+00	3.2232E+16
Organic I (atoms)	0.0000E+00	9.9687E+14
Aerosols (kg)	0.0000E+00	4.4247E-05

Detailed model information at time (H) = 240.0000

EAB Doses:

Time (h) = 240.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)	0.0000E+00	0.0000E+00	0.0000E+00
Accumulated dose (rem)	9.8228E-06	3.3758E-03	1.9941E-04

LPZ Doses:

Time (h) = 240.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)	3.3227E-07	2.1935E-04	2.3956E-05
Accumulated dose (rem)	1.2867E-05	6.3302E-03	4.4603E-04

Control Room Doses:

Time (h) = 240.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)	3.3062E-11	6.4485E-07	6.9092E-08
Accumulated dose (rem)	6.8294E-08	3.5806E-04	1.6667E-05

ECCS Fluid (Torus) Compartment Nuclide Inventory:

Time (h) = 240.0000	Ci	kg	Atoms	Decay
Co-58	1.2228E+03	3.8455E-05	3.9928E+20	4.0852E+19
Co-60	1.6083E+03	1.4228E-03	1.4280E+22	5.1246E+19
Rb-86	3.9651E+04	4.8731E-04	3.4124E+21	1.5274E+21
Sr-89	1.7211E+06	5.9240E-02	4.0085E+23	5.8657E+22
Sr-90	2.2409E+05	1.6428E+00	1.0993E+25	7.1302E+21
Sr-91	6.6602E-02	1.8373E-11	1.2159E+14	4.4863E+21
Y-90	2.0855E+05	3.8331E-04	2.5648E+21	4.5937E+21
Y-91	2.7866E+04	1.1363E-03	7.5196E+21	9.2765E+20
Y-93	2.2443E-03	6.7269E-13	4.3560E+12	5.7089E+19
Zr-95	2.8422E+04	1.3230E-03	8.3867E+21	9.5456E+20
Zr-97	1.7445E+00	9.1258E-10	5.6656E+15	1.0158E+20
Nb-95	3.1450E+04	8.0429E-04	5.0985E+21	1.0076E+21
Mo-99	3.6017E+04	7.5095E-05	4.5680E+20	5.1523E+21
Tc-99m	3.6926E+04	7.0225E-06	4.2718E+19	4.9452E+21
Ru-103	3.1066E+05	9.6258E-03	5.6279E+22	1.0802E+22
Ru-105	1.3714E-11	2.0402E-21	1.1701E+04	1.8173E+20
Ru-106	1.4974E+05	4.4758E-02	2.5428E+23	4.8078E+21
Rh-105	2.5318E+03	2.9995E-06	1.7203E+19	1.8121E+21
Sb-127	8.4411E+04	3.1609E-04	1.4988E+21	7.4904E+21
Sb-129	2.8775E-11	5.1171E-21	2.3888E+04	1.0451E+21
Te-127	1.4761E+05	5.5932E-05	2.6522E+20	8.8907E+21
Te-127m	6.6416E+04	7.0411E-03	3.3388E+22	2.1495E+21
Te-129	1.5851E+05	7.5687E-06	3.5333E+19	5.2788E+21
Te-129m	1.8331E+05	6.0848E-03	2.8406E+22	6.4708E+21
Te-131m	2.6660E+03	3.3433E-06	1.5369E+19	3.8114E+21
Te-132	8.0315E+05	2.6455E-03	1.2069E+22	8.8144E+22
I-131	1.2054E+07	9.7229E-02	4.4697E+23	6.0706E+23
I-132	9.5865E+05	9.2873E-05	4.2371E+20	1.0584E+23
I-133	1.9769E+04	1.7451E-05	7.9019E+19	2.2701E+23
I-135	6.4565E-04	1.8385E-13	8.2012E+11	6.2704E+22
Xe-133	3.2450E+06	1.7336E-02	7.8497E+22	1.7021E+23
Xe-135	1.5527E+00	6.0802E-10	2.7123E+15	7.4582E+22
Cs-134	6.3621E+06	4.9173E+00	2.2099E+25	2.0346E+23
Cs-136	1.0532E+06	1.4371E-02	6.3634E+22	4.4142E+22
Cs-137	4.0000E+06	4.5986E+01	2.0214E+26	1.2738E+23

Ba-140	2.0050E+06	2.7387E-02	1.1781E+23	8.4622E+22
La-140	2.2639E+06	4.0730E-03	1.7520E+22	6.7376E+22
Ce-141	6.4192E+04	2.2529E-03	9.6220E+21	2.2745E+21
Ce-143	5.0501E+02	7.6046E-07	3.2025E+18	4.7966E+20
Ce-144	6.1906E+04	1.9409E-02	8.1170E+22	1.9931E+21
Pr-143	2.3330E+04	3.4646E-04	1.4591E+21	9.1508E+20
Nd-147	6.8983E+03	8.5271E-05	3.4933E+20	3.0534E+20
Np-239	5.0164E+04	2.1623E-04	5.4484E+20	9.6439E+21
Pu-238	3.1711E+02	1.8523E-02	4.6869E+22	1.0082E+19
Pu-239	2.1410E+01	3.4445E-01	8.6791E+23	6.7882E+17
Pu-240	2.2721E+01	9.9711E-02	2.5020E+23	7.2268E+17
Pu-241	1.0891E+04	1.0572E-01	2.6418E+23	3.4663E+20
Am-241	7.1997E+00	2.0977E-03	5.2418E+21	2.2141E+17
Cm-242	1.6147E+03	4.8720E-04	1.2124E+21	5.2464E+19
Cm-244	1.8340E+02	2.2670E-03	5.5951E+21	5.8367E+18

ECCS Fluid (Torus) Transport Group Inventory:

Time (h) = 240.0000	Atmosphere	Sump	
Noble gases (atoms)	7.8497E+22	0.0000E+00	
Elemental I (atoms)	2.1702E+22	0.0000E+00	
Organic I (atoms)	6.7120E+20	0.0000E+00	
Aerosols (kg)	5.3416E+01	0.0000E+00	
Dose Effective (Ci/cc) I-131 (Thyroid)			3.0714E-03
Dose Effective (Ci/cc) I-131 (ICRP2 Thyroid)			3.0792E-03
Total I (Ci)			1.3032E+07

ECCS Fluid to Reactor Building Transport Group Inventory:

Time (h) = 240.0000	Pathway	
	Filtered	Transported
Noble gases (atoms)	0.0000E+00	1.3841E+17
Elemental I (atoms)	0.0000E+00	3.7161E+16
Organic I (atoms)	0.0000E+00	1.1493E+15
Aerosols (kg)	0.0000E+00	5.5343E-05

Detailed model information at time (H) = 288.0000

EAB Doses:

Time (h) = 288.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)	0.0000E+00	0.0000E+00	0.0000E+00
Accumulated dose (rem)	9.8228E-06	3.3758E-03	1.9941E-04

LPZ Doses:

Time (h) = 288.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)	3.0161E-07	1.8475E-04	2.2765E-05
Accumulated dose (rem)	1.3169E-05	6.5150E-03	4.6880E-04

Control Room Doses:

Time (h) = 288.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)	2.9969E-11	5.4312E-07	6.5678E-08
Accumulated dose (rem)	6.8324E-08	3.5860E-04	1.6732E-05

ECCS Fluid (Torus) Compartment Nuclide Inventory:

Time (h) = 288.0000	Ci	kg	Atoms	Decay
Co-58	1.1991E+03	3.7710E-05	3.9154E+20	4.8594E+19
Co-60	1.6071E+03	1.4217E-03	1.4270E+22	6.1525E+19
Rb-86	3.6812E+04	4.5242E-04	3.1681E+21	1.7717E+21
Sr-89	1.6745E+06	5.7636E-02	3.8999E+23	6.9511E+22
Sr-90	2.2406E+05	1.6426E+00	1.0991E+25	8.5628E+21
Sr-91	2.0068E-03	5.5359E-13	3.6635E+12	4.4863E+21
Y-90	2.1534E+05	3.9579E-04	2.6483E+21	5.9429E+21
Y-91	2.7214E+04	1.1097E-03	7.3435E+21	1.1037E+21
Y-93	8.3262E-05	2.4956E-14	1.6160E+11	5.7089E+19
Zr-95	2.7813E+04	1.2947E-03	8.2069E+21	1.1343E+21
Zr-97	2.4360E-01	1.2743E-10	7.9114E+14	1.0159E+20
Nb-95	3.1311E+04	8.0072E-04	5.0759E+21	1.2082E+21
Mo-99	2.1756E+04	4.5361E-05	2.7593E+20	5.3332E+21
Tc-99m	2.2305E+04	4.2419E-06	2.5803E+19	5.1213E+21
Ru-103	2.9989E+05	9.2920E-03	5.4328E+22	1.2754E+22
Ru-106	1.4918E+05	4.4589E-02	2.5332E+23	5.7633E+21
Rh-105	9.8807E+02	1.1706E-06	6.7139E+18	1.8225E+21

Sb-127	5.8887E+04	2.2051E-04	1.0456E+21	7.9436E+21
Te-127	1.2278E+05	4.6523E-05	2.2060E+20	9.7210E+21
Te-127m	6.5738E+04	6.9692E-03	3.3047E+22	2.5720E+21
Te-129	1.5210E+05	7.2628E-06	3.3905E+19	6.0265E+21
Te-129m	1.7590E+05	5.8388E-03	2.7258E+22	7.6189E+21
Te-131m	8.7945E+02	1.1029E-06	5.0700E+18	3.8217E+21
Te-132	5.2483E+05	1.7287E-03	7.8869E+21	9.2326E+22
I-131	1.0145E+07	8.1831E-02	3.7618E+23	6.7785E+23
I-132	6.2645E+05	6.0689E-05	2.7688E+20	1.1017E+23
I-133	3.9930E+03	3.5249E-06	1.5960E+19	2.2707E+23
I-135	4.2073E-06	1.1980E-15	5.3442E+09	6.2704E+22
Xe-133	2.4935E+06	1.3321E-02	6.0317E+22	1.8845E+23
Xe-135	3.9977E-02	1.5655E-11	6.9832E+13	7.4582E+22
Cs-134	6.3504E+06	4.9082E+00	2.2058E+25	2.4410E+23
Cs-136	9.4748E+05	1.2928E-02	5.7244E+22	5.0532E+22
Cs-137	3.9995E+06	4.5981E+01	2.0212E+26	1.5295E+23
Ba-140	1.7983E+06	2.4564E-02	1.0566E+23	9.6768E+22
La-140	2.0604E+06	3.7069E-03	1.5945E+22	8.1097E+22
Ce-141	6.1511E+04	2.1588E-03	9.2202E+21	2.6763E+21
Ce-143	1.8426E+02	2.7747E-07	1.1685E+18	4.8170E+20
Ce-144	6.1604E+04	1.9315E-02	8.0775E+22	2.3880E+21
Pr-143	2.1094E+04	3.1325E-04	1.3192E+21	1.0570E+21
Nd-147	6.0801E+03	7.5157E-05	3.0789E+20	3.4677E+20
Np-239	2.7845E+04	1.2002E-04	3.0243E+20	9.8863E+21
Pu-238	3.1716E+02	1.8526E-02	4.6877E+22	1.2109E+19
Pu-239	2.1416E+01	3.4454E-01	8.6815E+23	8.1572E+17
Pu-240	2.2721E+01	9.9711E-02	2.5020E+23	8.6795E+17
Pu-241	1.0888E+04	1.0569E-01	2.6411E+23	4.1625E+20
Am-241	7.2953E+00	2.1256E-03	5.3114E+21	2.6774E+17
Cm-242	1.6010E+03	4.8307E-04	1.2021E+21	6.2744E+19
Cm-244	1.8337E+02	2.2665E-03	5.5939E+21	7.0092E+18

ECCS Fluid (Torus) Transport Group Inventory:

Time (h) = 288.0000	Atmosphere	Sump	
Noble gases (atoms)	6.0317E+22	0.0000E+00	
Elemental I (atoms)	1.8259E+22	0.0000E+00	
Organic I (atoms)	5.6471E+20	0.0000E+00	
Aerosols (kg)	5.3378E+01	0.0000E+00	
Dose Effective (Ci/cc)	I-131 (Thyroid)		2.5842E-03
Dose Effective (Ci/cc)	I-131 (ICRP2 Thyroid)		2.5891E-03
Total I (Ci)			1.0775E+07

ECCS Fluid to Reactor Building Transport Group Inventory:

	Pathway	
	Filtered	Transported
Time (h) = 288.0000		
Noble gases (atoms)	0.0000E+00	1.5278E+17
Elemental I (atoms)	0.0000E+00	4.1307E+16
Organic I (atoms)	0.0000E+00	1.2775E+15
Aerosols (kg)	0.0000E+00	6.6431E-05

Detailed model information at time (H) = 336.0000

EAB Doses:

Time (h) = 336.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)	0.0000E+00	0.0000E+00	0.0000E+00
Accumulated dose (rem)	9.8228E-06	3.3758E-03	1.9941E-04

LPZ Doses:

Time (h) = 336.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)	2.7707E-07	1.5592E-04	2.1764E-05
Accumulated dose (rem)	1.3446E-05	6.6709E-03	4.9056E-04

Control Room Doses:

Time (h) = 336.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)	2.7495E-11	4.5837E-07	6.2809E-08
Accumulated dose (rem)	6.8351E-08	3.5906E-04	1.6795E-05

ECCS Fluid (Torus) Compartment Nuclide Inventory:

Time (h) = 336.0000	Ci	kg	Atoms	Decay
Co-58	1.1758E+03	3.6979E-05	3.8395E+20	5.6186E+19

Co-60	1.6059E+03	1.4207E-03	1.4259E+22	7.1797E+19
Rb-86	3.4177E+04	4.2003E-04	2.9412E+21	1.9986E+21
Sr-89	1.6291E+06	5.6075E-02	3.7943E+23	8.0071E+22
Sr-90	2.2403E+05	1.6424E+00	1.0990E+25	9.9953E+21
Sr-91	6.0464E-05	1.6680E-14	1.1038E+11	4.4863E+21
Y-90	2.1936E+05	4.0319E-04	2.6978E+21	7.3259E+21
Y-91	2.6576E+04	1.0837E-03	7.1716E+21	1.2757E+21
Y-93	3.0889E-06	9.2585E-16	5.9953E+09	5.7089E+19
Zr-95	2.7217E+04	1.2669E-03	8.0310E+21	1.3102E+21
Zr-97	3.4016E-02	1.7794E-11	1.1047E+14	1.0159E+20
Nb-95	3.1154E+04	7.9670E-04	5.0504E+21	1.4078E+21
Mo-99	1.3141E+04	2.7400E-05	1.6667E+20	5.4424E+21
Tc-99m	1.3473E+04	2.5623E-06	1.5586E+19	5.2276E+21
Ru-103	2.8949E+05	8.9698E-03	5.2444E+22	1.4637E+22
Ru-106	1.4862E+05	4.4422E-02	2.5237E+23	6.7153E+21
Rh-105	3.8561E+02	4.5685E-07	2.6202E+18	1.8266E+21
Sb-127	4.1081E+04	1.5383E-04	7.2945E+20	8.2598E+21
Te-127	1.0520E+05	3.9863E-05	1.8903E+20	1.0422E+22
Te-127m	6.5019E+04	6.8931E-03	3.2686E+22	2.9900E+21
Te-129	1.4595E+05	6.9692E-06	3.2535E+19	6.7440E+21
Te-129m	1.6879E+05	5.6028E-03	2.6156E+22	8.7206E+21
Te-131m	2.9011E+02	3.6382E-07	1.6725E+18	3.8251E+21
Te-132	3.4296E+05	1.1297E-03	5.1539E+21	9.5059E+22
I-131	8.5383E+06	6.8872E-02	3.1661E+23	7.3743E+23
I-132	4.0936E+05	3.9659E-05	1.8093E+20	1.1300E+23
I-133	8.0653E+02	7.1197E-07	3.2238E+18	2.2709E+23
I-135	2.7416E-08	7.8067E-18	3.4825E+07	6.2704E+22
Xe-133	1.9148E+06	1.0229E-02	4.6318E+22	2.0246E+23
Xe-135	1.0287E-03	4.0283E-13	1.7970E+12	7.4582E+22
Cs-134	6.3388E+06	4.8992E+00	2.2018E+25	2.8467E+23
Cs-136	8.5234E+05	1.1629E-02	5.1496E+22	5.6280E+22
Cs-137	3.9990E+06	4.5975E+01	2.0209E+26	1.7852E+23
Ba-140	1.6129E+06	2.2031E-02	9.4767E+22	1.0766E+23
La-140	1.8611E+06	3.3483E-03	1.4403E+22	9.3533E+22
Ce-141	5.8943E+04	2.0686E-03	8.8352E+21	3.0613E+21
Ce-143	6.7232E+01	1.0124E-07	4.2635E+17	4.8244E+20
Ce-144	6.1305E+04	1.9221E-02	8.0382E+22	2.7809E+21
Pr-143	1.9055E+04	2.8297E-04	1.1917E+21	1.1852E+21
Nd-147	5.3589E+03	6.6242E-05	2.7137E+20	3.8329E+20
Np-239	1.5456E+04	6.6622E-05	1.6787E+20	1.0021E+22
Pu-238	3.1722E+02	1.8529E-02	4.6885E+22	1.4137E+19
Pu-239	2.1419E+01	3.4460E-01	8.6829E+23	9.5265E+17
Pu-240	2.2721E+01	9.9712E-02	2.5020E+23	1.0132E+18
Pu-241	1.0885E+04	1.0567E-01	2.6404E+23	4.8586E+20
Am-241	7.3908E+00	2.1534E-03	5.3809E+21	3.1468E+17
Cm-242	1.5875E+03	4.7898E-04	1.1919E+21	7.2937E+19
Cm-244	1.8333E+02	2.2660E-03	5.5928E+21	8.1814E+18

ECCS Fluid (Torus) Transport Group Inventory:

Time (h) = 336.0000	Atmosphere	Sump	
Noble gases (atoms)	4.6318E+22	0.0000E+00	
Elemental I (atoms)	1.5364E+22	0.0000E+00	
Organic I (atoms)	4.7519E+20	0.0000E+00	
Aerosols (kg)	5.3343E+01	0.0000E+00	
Dose Effective (Ci/cc) I-131 (Thyroid)			2.1746E-03
Dose Effective (Ci/cc) I-131 (ICRP2 Thyroid)			2.1778E-03
Total I (Ci)			8.9485E+06

ECCS Fluid to Reactor Building Transport Group Inventory:

Time (h) = 336.0000	Pathway	
	Filtered	Transported
Noble gases (atoms)	0.0000E+00	1.6381E+17
Elemental I (atoms)	0.0000E+00	4.4795E+16
Organic I (atoms)	0.0000E+00	1.3854E+15
Aerosols (kg)	0.0000E+00	7.7511E-05

Detailed model information at time (H) = 384.0000

EAB Doses:

Time (h) = 384.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)	0.0000E+00	0.0000E+00	0.0000E+00
Accumulated dose (rem)	9.8228E-06	3.3758E-03	1.9941E-04

LPZ Doses:

Time (h) = 384.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)	2.5713E-07	1.3182E-04	2.0920E-05
Accumulated dose (rem)	1.3703E-05	6.8027E-03	5.1148E-04

Control Room Doses:

Time (h) = 384.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)	2.5488E-11	3.8751E-07	6.0386E-08
Accumulated dose (rem)	6.8377E-08	3.5945E-04	1.6856E-05

ECCS Fluid (Torus) Compartment Nuclide Inventory:

Time (h) = 384.0000	Ci	kg	Atoms	Decay
Co-58	1.1530E+03	3.6262E-05	3.7650E+20	6.3631E+19
Co-60	1.6048E+03	1.4197E-03	1.4249E+22	8.2061E+19
Rb-86	3.1730E+04	3.8995E-04	2.7307E+21	2.2091E+21
Sr-89	1.5850E+06	5.4557E-02	3.6916E+23	9.0345E+22
Sr-90	2.2401E+05	1.6422E+00	1.0988E+25	1.1428E+22
Sr-91	1.8218E-06	5.0257E-16	3.3259E+09	4.4863E+21
Y-90	2.2174E+05	4.0757E-04	2.7271E+21	8.7289E+21
Y-91	2.5954E+04	1.0583E-03	7.0037E+21	1.4436E+21
Y-93	1.1460E-07	3.4348E-17	2.2242E+08	5.7089E+19
Zr-95	2.6633E+04	1.2397E-03	7.8589E+21	1.4824E+21
Zr-97	4.7500E-03	2.4847E-12	1.5426E+13	1.0159E+20
Nb-95	3.0980E+04	7.9226E-04	5.0222E+21	1.6063E+21
Mo-99	7.9380E+03	1.6551E-05	1.0068E+20	5.5084E+21
Tc-99m	8.1384E+03	1.5477E-06	9.4149E+18	5.2919E+21
Ru-103	2.7945E+05	8.6587E-03	5.0625E+22	1.6456E+22
Ru-106	1.4806E+05	4.4255E-02	2.5142E+23	7.6637E+21
Rh-105	1.5049E+02	1.7830E-07	1.0226E+18	1.8282E+21
Sb-127	2.8659E+04	1.0732E-04	5.0888E+20	8.4804E+21
Te-127	9.2696E+04	3.5124E-05	1.6655E+20	1.1030E+22
Te-127m	6.4276E+04	6.8143E-03	3.2312E+22	3.4034E+21
Te-129	1.4005E+05	6.6875E-06	3.1220E+19	7.4325E+21
Te-129m	1.6197E+05	5.3764E-03	2.5099E+22	9.7778E+21
Te-131m	9.5700E+01	1.2001E-07	5.5171E+17	3.8262E+21
Te-132	2.2412E+05	7.3821E-04	3.3679E+21	9.6845E+22
I-131	7.1861E+06	5.7964E-02	2.6646E+23	7.8757E+23
I-132	2.6751E+05	2.5916E-05	1.1823E+20	1.1484E+23
I-133	1.6291E+02	1.4381E-07	6.5114E+17	2.2709E+23
I-135	1.7865E-10	5.0871E-20	2.2693E+05	6.2704E+22
Xe-133	1.4701E+06	7.8540E-03	3.5562E+22	2.1322E+23
Xe-135	2.6468E-05	1.0364E-14	4.6234E+10	7.4582E+22
Cs-134	6.3271E+06	4.8902E+00	2.1977E+25	3.2516E+23
Cs-136	7.6675E+05	1.0462E-02	4.6325E+22	6.1451E+22
Cs-137	3.9985E+06	4.5969E+01	2.0207E+26	2.0408E+23
Ba-140	1.4466E+06	1.9760E-02	8.4996E+22	1.1743E+23
La-140	1.6749E+06	3.0134E-03	1.2962E+22	1.0474E+23
Ce-141	5.6482E+04	1.9823E-03	8.4663E+21	3.4302E+21
Ce-143	2.4531E+01	3.6940E-08	1.5556E+17	4.8271E+20
Ce-144	6.1006E+04	1.9127E-02	7.9991E+22	3.1719E+21
Pr-143	1.7207E+04	2.5553E-04	1.0761E+21	1.3011E+21
Nd-147	4.7233E+03	5.8385E-05	2.3919E+20	4.1548E+20
Np-239	8.5790E+03	3.6980E-05	9.3179E+19	1.0096E+22
Pu-238	3.1727E+02	1.8533E-02	4.6893E+22	1.6166E+19
Pu-239	2.1421E+01	3.4463E-01	8.6836E+23	1.0896E+18
Pu-240	2.2721E+01	9.9712E-02	2.5020E+23	1.1585E+18
Pu-241	1.0882E+04	1.0564E-01	2.6397E+23	5.5544E+20
Am-241	7.4863E+00	2.1812E-03	5.4505E+21	3.6224E+17
Cm-242	1.5740E+03	4.7492E-04	1.1818E+21	8.3044E+19
Cm-244	1.8329E+02	2.2656E-03	5.5916E+21	9.3534E+18

ECCS Fluid (Torus) Transport Group Inventory:

Time (h) = 384.0000	Atmosphere	Sump	
Noble gases (atoms)	3.5562E+22	0.0000E+00	
Elemental I (atoms)	1.2929E+22	0.0000E+00	
Organic I (atoms)	3.9987E+20	0.0000E+00	
Aerosols (kg)	5.3310E+01	0.0000E+00	
Dose Effective (Ci/cc) I-131 (Thyroid)			1.8301E-03
Dose Effective (Ci/cc) I-131 (ICRP2 Thyroid)			1.8321E-03
Total I (Ci)			7.4537E+06

ECCS Fluid to Reactor Building Transport Group Inventory:

	Pathway	
	Filtered	Transported
Time (h) = 384.0000		
Noble gases (atoms)	0.0000E+00	1.7229E+17
Elemental I (atoms)	0.0000E+00	4.7731E+16
Organic I (atoms)	0.0000E+00	1.4762E+15
Aerosols (kg)	0.0000E+00	8.8583E-05

Detailed model information at time (H) = 432.0000

EAB Doses:

Time (h) = 432.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)	0.0000E+00	0.0000E+00	0.0000E+00
Accumulated dose (rem)	9.8228E-06	3.3758E-03	1.9941E-04

LPZ Doses:

Time (h) = 432.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)	2.4072E-07	1.1164E-04	2.0206E-05
Accumulated dose (rem)	1.3944E-05	6.9143E-03	5.3169E-04

Control Room Doses:

Time (h) = 432.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)	2.3839E-11	3.2817E-07	5.8334E-08
Accumulated dose (rem)	6.8400E-08	3.5978E-04	1.6914E-05

ECCS Fluid (Torus) Compartment Nuclide Inventory:

Time (h) = 432.0000	Ci	kg	Atoms	Decay
Co-58	1.1307E+03	3.5558E-05	3.6920E+20	7.0931E+19
Co-60	1.6036E+03	1.4187E-03	1.4239E+22	9.2317E+19
Rb-86	2.9458E+04	3.6203E-04	2.5351E+21	2.4047E+21
Sr-89	1.5421E+06	5.3080E-02	3.5916E+23	1.0034E+23
Sr-90	2.2398E+05	1.6420E+00	1.0987E+25	1.2860E+22
Sr-91	5.4892E-08	1.5143E-17	1.0021E+08	4.4863E+21
Y-90	2.2315E+05	4.1015E-04	2.7444E+21	1.0144E+22
Y-91	2.5346E+04	1.0335E-03	6.8397E+21	1.6076E+21
Y-93	4.2514E-09	1.2743E-18	8.2515E+06	5.7089E+19
Zr-95	2.6063E+04	1.2132E-03	7.6904E+21	1.6508E+21
Zr-97	6.6328E-04	3.4696E-13	2.1541E+12	1.0159E+20
Nb-95	3.0791E+04	7.8743E-04	4.9916E+21	1.8038E+21
Mo-99	4.7949E+03	9.9975E-06	6.0814E+19	5.5483E+21
Tc-99m	4.9160E+03	9.3491E-07	5.6870E+18	5.3307E+21
Ru-103	2.6976E+05	8.3584E-03	4.8870E+22	1.8212E+22
Ru-106	1.4750E+05	4.4089E-02	2.5048E+23	8.6086E+21
Rh-105	5.8732E+01	6.9583E-08	3.9908E+17	1.8289E+21
Sb-127	1.9993E+04	7.4866E-05	3.5500E+20	8.6343E+21
Te-127	8.3726E+04	3.1725E-05	1.5044E+20	1.1573E+22
Te-127m	6.3518E+04	6.7339E-03	3.1931E+22	3.8119E+21
Te-129	1.3439E+05	6.4172E-06	2.9958E+19	8.0931E+21
Te-129m	1.5542E+05	5.1591E-03	2.4084E+22	1.0792E+22
Te-131m	3.1569E+01	3.9590E-08	1.8200E+17	3.8265E+21
Te-132	1.4645E+05	4.8240E-04	2.2008E+21	9.8013E+22
I-131	6.0480E+06	4.8784E-02	2.2426E+23	8.2977E+23
I-132	1.7481E+05	1.6935E-05	7.7261E+19	1.1605E+23
I-133	3.2904E+01	2.9046E-08	1.3152E+17	2.2709E+23
Xe-133	1.1287E+06	6.0299E-03	2.7303E+22	2.2148E+23
Xe-135	6.8097E-07	2.6666E-16	1.1895E+09	7.4582E+22
Cs-134	6.3155E+06	4.8812E+00	2.1937E+25	3.6557E+23
Cs-136	6.8975E+05	9.4111E-03	4.1673E+22	6.6103E+22
Cs-137	3.9980E+06	4.5963E+01	2.0204E+26	2.2965E+23
Ba-140	1.2974E+06	1.7722E-02	7.6233E+22	1.2620E+23
La-140	1.5047E+06	2.7072E-03	1.1645E+22	1.1483E+23
Ce-141	5.4123E+04	1.8995E-03	8.1128E+21	3.7837E+21
Ce-143	8.9506E+00	1.3478E-08	5.6760E+16	4.8281E+20
Ce-144	6.0710E+04	1.9034E-02	7.9602E+22	3.5610E+21
Pr-143	1.5537E+04	2.3072E-04	9.7164E+20	1.4056E+21
Nd-147	4.1630E+03	5.1460E-05	2.1082E+20	4.4385E+20
Np-239	4.7619E+03	2.0526E-05	5.1721E+19	1.0137E+22
Pu-238	3.1732E+02	1.8536E-02	4.6901E+22	1.8194E+19
Pu-239	2.1422E+01	3.4464E-01	8.6840E+23	1.2266E+18
Pu-240	2.2721E+01	9.9712E-02	2.5020E+23	1.3038E+18
Pu-241	1.0879E+04	1.0561E-01	2.6390E+23	6.2501E+20

Am-241	7.5818E+00	2.2090E-03	5.5200E+21	4.1040E+17
Cm-242	1.5607E+03	4.7089E-04	1.1718E+21	9.3065E+19
Cm-244	1.8325E+02	2.2651E-03	5.5904E+21	1.0525E+19

ECCS Fluid (Torus) Transport Group Inventory:

Time (h) = 432.0000	Atmosphere	Sump	
Noble gases (atoms)	2.7303E+22	0.0000E+00	
Elemental I (atoms)	1.0880E+22	0.0000E+00	
Organic I (atoms)	3.3651E+20	0.0000E+00	
Aerosols (kg)	5.3280E+01	0.0000E+00	
Dose Effective (Ci/cc) I-131 (Thyroid)			1.5402E-03
Dose Effective (Ci/cc) I-131 (ICRP2 Thyroid)			1.5415E-03
Total I (Ci)			6.2228E+06

ECCS Fluid to Reactor Building Transport Group Inventory:

	Pathway	
Time (h) = 432.0000	Filtered	Transported
Noble gases (atoms)	0.0000E+00	1.7880E+17
Elemental I (atoms)	0.0000E+00	5.0201E+16
Organic I (atoms)	0.0000E+00	1.5526E+15
Aerosols (kg)	0.0000E+00	9.9650E-05

Detailed model information at time (H) = 480.0000

EAB Doses:

Time (h) = 480.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)	0.0000E+00	0.0000E+00	0.0000E+00
Accumulated dose (rem)	9.8228E-06	3.3758E-03	1.9941E-04

LPZ Doses:

Time (h) = 480.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)	2.2706E-07	9.4721E-05	1.9599E-05
Accumulated dose (rem)	1.4171E-05	7.0091E-03	5.5129E-04

Control Room Doses:

Time (h) = 480.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)	2.2467E-11	2.7841E-07	5.6590E-08
Accumulated dose (rem)	6.8423E-08	3.6006E-04	1.6971E-05

ECCS Fluid (Torus) Compartment Nuclide Inventory:

Time (h) = 480.0000	Ci	kg	Atoms	Decay
Co-58	1.1088E+03	3.4869E-05	3.6204E+20	7.8090E+19
Co-60	1.6025E+03	1.4176E-03	1.4229E+22	1.0257E+20
Rb-86	2.7349E+04	3.3611E-04	2.3536E+21	2.5862E+21
Sr-89	1.5003E+06	5.1642E-02	3.4944E+23	1.1007E+23
Sr-90	2.2395E+05	1.6418E+00	1.0985E+25	1.4292E+22
Sr-91	1.6539E-09	4.5626E-19	3.0194E+06	4.4863E+21
Y-90	2.2397E+05	4.1166E-04	2.7545E+21	1.1566E+22
Y-91	2.4753E+04	1.0093E-03	6.6795E+21	1.7677E+21
Y-93	1.5772E-10	4.7275E-20	3.0612E+05	5.7089E+19
Zr-95	2.5504E+04	1.1872E-03	7.5256E+21	1.8157E+21
Zr-97	9.2619E-05	4.8449E-14	3.0079E+11	1.0159E+20
Nb-95	3.0588E+04	7.8223E-04	4.9586E+21	1.9999E+21
Mo-99	2.8964E+03	6.0389E-06	3.6735E+19	5.5724E+21
Tc-99m	2.9695E+03	5.6473E-07	3.4352E+18	5.3541E+21
Ru-103	2.6041E+05	8.0686E-03	4.7175E+22	1.9906E+22
Ru-106	1.4695E+05	4.3923E-02	2.4954E+23	9.5499E+21
Rh-105	2.2921E+01	2.7156E-08	1.5575E+17	1.8291E+21
Sb-127	1.3948E+04	5.2229E-05	2.4766E+20	8.7416E+21
Te-127	7.7228E+04	2.9263E-05	1.3876E+20	1.2068E+22
Te-127m	6.2754E+04	6.6529E-03	3.1547E+22	4.2156E+21
Te-129	1.2896E+05	6.1579E-06	2.8747E+19	8.7271E+21
Te-129m	1.4914E+05	4.9505E-03	2.3111E+22	1.1766E+22
Te-131m	1.0414E+01	1.3060E-08	6.0037E+16	3.8267E+21
Te-132	9.5702E+04	3.1523E-04	1.4382E+21	9.8775E+22
I-131	5.0901E+06	4.1058E-02	1.8874E+23	8.6529E+23
I-132	1.1423E+05	1.1067E-05	5.0488E+19	1.1684E+23
I-133	6.6461E+00	5.8669E-09	2.6565E+16	2.2709E+23
Xe-133	8.6654E+05	4.6294E-03	2.0962E+22	2.2782E+23
Xe-135	1.7520E-08	6.8605E-18	3.0604E+07	7.4582E+22

Cs-134	6.3038E+06	4.8722E+00	2.1896E+25	4.0592E+23
Cs-136	6.2049E+05	8.4661E-03	3.7488E+22	7.0288E+22
Cs-137	3.9974E+06	4.5957E+01	2.0202E+26	2.5521E+23
Ba-140	1.1637E+06	1.5895E-02	6.8373E+22	1.3406E+23
La-140	1.3507E+06	2.4301E-03	1.0453E+22	1.2388E+23
Ce-141	5.1863E+04	1.8202E-03	7.7740E+21	4.1225E+21
Ce-143	3.2658E+00	4.9178E-09	2.0710E+16	4.8285E+20
Ce-144	6.0414E+04	1.8942E-02	7.9215E+22	3.9482E+21
Pr-143	1.4027E+04	2.0831E-04	8.7725E+20	1.5001E+21
Nd-147	3.6693E+03	4.5356E-05	1.8581E+20	4.6885E+20
Np-239	2.6432E+03	1.1394E-05	2.8709E+19	1.0160E+22
Pu-238	3.1738E+02	1.8539E-02	4.6909E+22	2.0223E+19
Pu-239	2.1422E+01	3.4465E-01	8.6842E+23	1.3635E+18
Pu-240	2.2721E+01	9.9713E-02	2.5020E+23	1.4490E+18
Pu-241	1.0876E+04	1.0558E-01	2.6383E+23	6.9456E+20
Am-241	7.6773E+00	2.2369E-03	5.5895E+21	4.5917E+17
Cm-242	1.5474E+03	4.6690E-04	1.1619E+21	1.0300E+20
Cm-244	1.8321E+02	2.2646E-03	5.5893E+21	1.1697E+19

ECCS Fluid (Torus) Transport Group Inventory:

Time (h) = 480.0000	Atmosphere	Sump	
Noble gases (atoms)	2.0962E+22	0.0000E+00	
Elemental I (atoms)	9.1565E+21	0.0000E+00	
Organic I (atoms)	2.8319E+20	0.0000E+00	
Aerosols (kg)	5.3252E+01	0.0000E+00	
Dose Effective (Ci/cc) I-131 (Thyroid)			1.2962E-03
Dose Effective (Ci/cc) I-131 (ICRP2 Thyroid)			1.2970E-03
Total I (Ci)			5.2043E+06

ECCS Fluid to Reactor Building Transport Group Inventory:

	Pathway	
Time (h) = 480.0000	Filtered	Transported
Noble gases (atoms)	0.0000E+00	1.8379E+17
Elemental I (atoms)	0.0000E+00	5.2280E+16
Organic I (atoms)	0.0000E+00	1.6169E+15
Aerosols (kg)	0.0000E+00	1.1071E-04

Detailed model information at time (H) = 528.0000

EAB Doses:

Time (h) = 528.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)	0.0000E+00	0.0000E+00	0.0000E+00
Accumulated dose (rem)	9.8228E-06	3.3758E-03	1.9941E-04

LPZ Doses:

Time (h) = 528.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)	2.1554E-07	8.0520E-05	1.9082E-05
Accumulated dose (rem)	1.4386E-05	7.0896E-03	5.7037E-04

Control Room Doses:

Time (h) = 528.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)	2.1313E-11	2.3666E-07	5.5103E-08
Accumulated dose (rem)	6.8444E-08	3.6029E-04	1.7026E-05

ECCS Fluid (Torus) Compartment Nuclide Inventory:

Time (h) = 528.0000	Ci	kg	Atoms	Decay
Co-58	1.0873E+03	3.4193E-05	3.5502E+20	8.5110E+19
Co-60	1.6013E+03	1.4166E-03	1.4218E+22	1.1281E+20
Rb-86	2.5390E+04	3.1205E-04	2.1851E+21	2.7547E+21
Sr-89	1.4597E+06	5.0244E-02	3.3997E+23	1.1953E+23
Sr-90	2.2392E+05	1.6415E+00	1.0984E+25	1.5723E+22
Sr-91	4.9834E-11	1.3747E-20	9.0976E+04	4.4863E+21
Y-90	2.2445E+05	4.1254E-04	2.7604E+21	1.2991E+22
Y-91	2.4173E+04	9.8570E-04	6.5231E+21	1.9241E+21
Y-93	5.8514E-12	1.7538E-21	1.1357E+04	5.7089E+19
Zr-95	2.4957E+04	1.1617E-03	7.3643E+21	1.9770E+21
Zr-97	1.2933E-05	6.7653E-15	4.2002E+10	1.0159E+20
Nb-95	3.0371E+04	7.7669E-04	4.9235E+21	2.1947E+21
Mo-99	1.7495E+03	3.6478E-06	2.2189E+19	5.5869E+21
Tc-99m	1.7937E+03	3.4112E-07	2.0750E+18	5.3683E+21

Ru-103	2.5138E+05	7.7888E-03	4.5539E+22	2.1542E+22
Ru-106	1.4640E+05	4.3758E-02	2.4860E+23	1.0488E+22
Rh-105	8.9453E+00	1.0598E-08	6.0784E+16	1.8292E+21
Sb-127	9.7303E+03	3.6436E-05	1.7277E+20	8.8165E+21
Te-127	7.2457E+04	2.7455E-05	1.3019E+20	1.2529E+22
Te-127m	6.1987E+04	6.5716E-03	3.1162E+22	4.6143E+21
Te-129	1.2375E+05	5.9090E-06	2.7585E+19	9.3354E+21
Te-129m	1.4311E+05	4.7504E-03	2.2177E+22	1.2700E+22
Te-131m	3.4353E+00	4.3081E-09	1.9805E+16	3.8267E+21
Te-132	6.2538E+04	2.0599E-04	9.3979E+20	9.9274E+22
I-131	4.2839E+06	3.4555E-02	1.5885E+23	8.9518E+23
I-132	7.4646E+04	7.2316E-06	3.2992E+19	1.1736E+23
I-133	1.3424E+00	1.1850E-09	5.3657E+15	2.2709E+23
Xe-133	6.6528E+05	3.5542E-03	1.6093E+22	2.3269E+23
Xe-135	4.5075E-10	1.7651E-19	7.8737E+05	7.4582E+22
Cs-134	6.2922E+06	4.8633E+00	2.1856E+25	4.4618E+23
Cs-136	5.5818E+05	7.6160E-03	3.3724E+22	7.4052E+22
Cs-137	3.9969E+06	4.5951E+01	2.0199E+26	2.8076E+23
Ba-140	1.0437E+06	1.4256E-02	6.1323E+22	1.4111E+23
La-140	1.2119E+06	2.1804E-03	9.3789E+21	1.3200E+23
Ce-141	4.9697E+04	1.7442E-03	7.4494E+21	4.4471E+21
Ce-143	1.1916E+00	1.7943E-09	7.5565E+15	4.8286E+20
Ce-144	6.0121E+04	1.8850E-02	7.8830E+22	4.3335E+21
Pr-143	1.2664E+04	1.8807E-04	7.9201E+20	1.5853E+21
Nd-147	3.2340E+03	3.9977E-05	1.6377E+20	4.9089E+20
Np-239	1.4672E+03	6.3242E-06	1.5935E+19	1.0173E+22
Pu-238	3.1743E+02	1.8542E-02	4.6917E+22	2.2253E+19
Pu-239	2.1423E+01	3.4466E-01	8.6844E+23	1.5005E+18
Pu-240	2.2721E+01	9.9713E-02	2.5020E+23	1.5943E+18
Pu-241	1.0873E+04	1.0555E-01	2.6376E+23	7.6409E+20
Am-241	7.7727E+00	2.2647E-03	5.6590E+21	5.0856E+17
Cm-242	1.5343E+03	4.6294E-04	1.1520E+21	1.1285E+20
Cm-244	1.8317E+02	2.2641E-03	5.5881E+21	1.2868E+19

ECCS Fluid (Torus) Transport Group Inventory:

Time (h) = 528.0000	Atmosphere	Sump	
Noble gases (atoms)	1.6093E+22	0.0000E+00	
Elemental I (atoms)	7.7059E+21	0.0000E+00	
Organic I (atoms)	2.3833E+20	0.0000E+00	
Aerosols (kg)	5.3226E+01	0.0000E+00	
Dose Effective (Ci/cc) I-131 (Thyroid)			1.0909E-03
Dose Effective (Ci/cc) I-131 (ICRP2 Thyroid)			1.0914E-03
Total I (Ci)			4.3586E+06

ECCS Fluid to Reactor Building Transport Group Inventory:

	Pathway	
	Filtered	Transported
Time (h) = 528.0000		
Noble gases (atoms)	0.0000E+00	1.8763E+17
Elemental I (atoms)	0.0000E+00	5.4029E+16
Organic I (atoms)	0.0000E+00	1.6710E+15
Aerosols (kg)	0.0000E+00	1.2177E-04

Detailed model information at time (H) = 576.0000

EAB Doses:

Time (h) = 576.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)	0.0000E+00	0.0000E+00	0.0000E+00
Accumulated dose (rem)	9.8228E-06	3.3758E-03	1.9941E-04

LPZ Doses:

Time (h) = 576.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)	2.0574E-07	6.8595E-05	1.8639E-05
Accumulated dose (rem)	1.4592E-05	7.1582E-03	5.8901E-04

Control Room Doses:

Time (h) = 576.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)	2.0332E-11	2.0159E-07	5.3832E-08
Accumulated dose (rem)	6.8465E-08	3.6049E-04	1.7079E-05

ECCS Fluid (Torus) Compartment Nuclide Inventory:

Time (h) = 576.0000	Ci	kg	Atoms	Decay
Co-58	1.0662E+03	3.3530E-05	3.4814E+20	9.1994E+19
Co-60	1.6002E+03	1.4156E-03	1.4208E+22	1.2304E+20
Rb-86	2.3572E+04	2.8970E-04	2.0286E+21	2.9111E+21
Sr-89	1.4202E+06	4.8884E-02	3.3077E+23	1.2873E+23
Sr-90	2.2389E+05	1.6413E+00	1.0983E+25	1.7155E+22
Y-90	2.2472E+05	4.1304E-04	2.7637E+21	1.4420E+22
Y-91	2.3607E+04	9.6262E-04	6.3704E+21	2.0769E+21
Zr-95	2.4422E+04	1.1368E-03	7.2064E+21	2.1348E+21
Zr-97	1.8060E-06	9.4470E-16	5.8651E+09	1.0159E+20
Nb-95	3.0142E+04	7.7083E-04	4.8864E+21	2.3881E+21
Mo-99	1.0568E+03	2.2034E-06	1.3403E+19	5.5957E+21
Tc-99m	1.0835E+03	2.0605E-07	1.2534E+18	5.3769E+21
Ru-103	2.4266E+05	7.5187E-03	4.3960E+22	2.3121E+22
Ru-106	1.4585E+05	4.3593E-02	2.4767E+23	1.1422E+22
Rh-105	3.4911E+00	4.1361E-09	2.3722E+16	1.8292E+21
Sb-127	6.7881E+03	2.5418E-05	1.2053E+20	8.8687E+21
Te-127	6.8893E+04	2.6105E-05	1.2379E+20	1.2964E+22
Te-127m	6.1223E+04	6.4906E-03	3.0777E+22	5.0082E+21
Te-129	1.1875E+05	5.6701E-06	2.6470E+19	9.9192E+21
Te-129m	1.3732E+05	4.5584E-03	2.1280E+22	1.3596E+22
Te-131m	1.1332E+00	1.4212E-09	6.5331E+15	3.8267E+21
Te-132	4.0867E+04	1.3461E-04	6.1412E+20	9.9599E+22
I-131	3.6055E+06	2.9082E-02	1.3369E+23	9.2034E+23
I-132	4.8779E+04	4.7256E-06	2.1559E+19	1.1769E+23
I-133	2.7114E-01	2.3935E-10	1.0838E+15	2.2709E+23
Xe-133	5.1076E+05	2.7287E-03	1.2355E+22	2.3643E+23
Xe-135	1.1597E-11	4.5411E-21	2.0257E+04	7.4582E+22
Cs-134	6.2807E+06	4.8543E+00	2.1816E+25	4.8638E+23
Cs-136	5.0213E+05	6.8512E-03	3.0337E+22	7.7438E+22
Cs-137	3.9964E+06	4.5946E+01	2.0196E+26	3.0632E+23
Ba-140	9.3607E+05	1.2786E-02	5.5001E+22	1.4743E+23
La-140	1.0872E+06	1.9560E-03	8.4136E+21	1.3929E+23
Ce-141	4.7622E+04	1.6713E-03	7.1383E+21	4.7582E+21
Ce-143	4.3478E-01	6.5470E-10	2.7571E+15	4.8286E+20
Ce-144	5.9828E+04	1.8758E-02	7.8446E+22	4.7170E+21
Pr-143	1.1434E+04	1.6979E-04	7.1504E+20	1.6623E+21
Nd-147	2.8505E+03	3.5235E-05	1.4435E+20	5.1032E+20
Np-235	8.1438E+02	3.5104E-06	8.8452E+18	1.0180E+22
Pu-238	3.1748E+02	1.8545E-02	4.6924E+22	2.4282E+19
Pu-239	2.1423E+01	3.4466E-01	8.6844E+23	1.6375E+18
Pu-240	2.2721E+01	9.9714E-02	2.5020E+23	1.7396E+18
Pu-241	1.0871E+04	1.0553E-01	2.6369E+23	8.3360E+20
Am-241	7.8681E+00	2.2925E-03	5.7284E+21	5.5855E+17
Cm-242	1.5213E+03	4.5901E-04	1.1422E+21	1.2262E+20
Cm-244	1.8314E+02	2.2637E-03	5.5869E+21	1.4039E+19

ECCS Fluid (Torus) Transport Group Inventory:

Time (h) = 576.0000	Atmosphere	Sump
Noble gases (atoms)	1.2355E+22	0.0000E+00
Elemental I (atoms)	6.4851E+21	0.0000E+00
Organic I (atoms)	2.0057E+20	0.0000E+00
Aerosols (kg)	5.3201E+01	0.0000E+00
Dose Effective (Ci/cc) I-131 (Thyroid)		9.1807E-04
Dose Effective (Ci/cc) I-131 (ICRP2 Thyroid)		9.1844E-04
Total I (Ci)		3.6542E+06

ECCS Fluid to Reactor Building Transport Group Inventory:

Time (h) = 576.0000	Pathway	
	Filtered	Transported
Noble gases (atoms)	0.0000E+00	1.9057E+17
Elemental I (atoms)	0.0000E+00	5.5502E+16
Organic I (atoms)	0.0000E+00	1.7165E+15
Aerosols (kg)	0.0000E+00	1.3281E-04

Detailed model information at time (H) = 624.0000

EAB Doses:

Time (h) = 624.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)	0.0000E+00	0.0000E+00	0.0000E+00
Accumulated dose (rem)	9.8228E-06	3.3758E-03	1.9941E-04

LPZ Doses:

Time (h) = 624.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)	1.9734E-07	5.8574E-05	1.8260E-05
Accumulated dose (rem)	1.4789E-05	7.2168E-03	6.0727E-04

Control Room Doses:

Time (h) = 624.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)	1.9492E-11	1.7212E-07	5.2742E-08
Accumulated dose (rem)	6.8484E-08	3.6067E-04	1.7132E-05

ECCS Fluid (Torus) Compartment Nuclide Inventory:

Time (h) = 624.0000	Ci	kg	Atoms	Decay
Co-58	1.0455E+03	3.2880E-05	3.4139E+20	9.8744E+19
Co-60	1.5990E+03	1.4146E-03	1.4198E+22	1.3327E+20
Rb-86	2.1885E+04	2.6896E-04	1.8834E+21	3.0564E+21
Sr-89	1.3817E+06	4.7560E-02	3.2181E+23	1.3769E+23
Sr-90	2.2386E+05	1.6411E+00	1.0981E+25	1.8586E+22
Y-90	2.2487E+05	4.1331E-04	2.7656E+21	1.5849E+22
Y-91	2.3054E+04	9.4008E-04	6.2212E+21	2.2260E+21
Zr-95	2.3899E+04	1.1125E-03	7.0520E+21	2.2893E+21
Zr-97	2.5218E-07	1.3192E-16	8.1898E+08	1.0159E+20
Nb-95	2.9902E+04	7.6469E-04	4.8474E+21	2.5800E+21
Mo-99	6.3835E+02	1.3310E-06	8.0962E+18	5.6010E+21
Tc-99m	6.5446E+02	1.2446E-07	7.5711E+17	5.3820E+21
Ru-103	2.3424E+05	7.2580E-03	4.2435E+22	2.4646E+22
Ru-106	1.4530E+05	4.3430E-02	2.4673E+23	1.2353E+22
Rh-105	1.3624E+00	1.6142E-09	9.2579E+15	1.8292E+21
Sb-127	4.7355E+03	1.7733E-05	8.4085E+19	8.9052E+21
Te-127	6.6176E+04	2.5075E-05	1.1890E+20	1.3380E+22
Te-127m	6.0462E+04	6.4099E-03	3.0395E+22	5.3972E+21
Te-129	1.1395E+05	5.4409E-06	2.5400E+19	1.0479E+22
Te-129m	1.3177E+05	4.3742E-03	2.0420E+22	1.4456E+22
Te-131m	3.7383E-01	4.6881E-10	2.1551E+15	3.8267E+21
Te-132	2.6705E+04	8.7964E-05	4.0131E+20	9.9812E+22
I-131	3.0344E+06	2.4476E-02	1.1252E+23	9.4152E+23
I-132	3.1875E+04	3.0880E-06	1.4088E+19	1.1792E+23
I-133	5.4766E-02	4.8345E-11	2.1890E+14	2.2709E+23
Xe-133	3.9213E+05	2.0949E-03	9.4856E+21	2.3930E+23
Cs-134	6.2691E+06	4.8454E+00	2.1776E+25	5.2649E+23
Cs-136	4.5171E+05	6.1632E-03	2.7291E+22	8.0485E+22
Cs-137	3.9959E+06	4.5940E+01	2.0194E+26	3.3187E+23
Ba-140	8.3956E+05	1.1468E-02	4.9330E+22	1.5310E+23
La-140	9.7517E+05	1.7545E-03	7.5468E+21	1.4583E+23
Ce-141	4.5634E+04	1.6015E-03	6.8402E+21	5.0563E+21
Ce-143	1.5864E-01	2.3888E-10	1.0060E+15	4.8286E+20
Ce-144	5.9537E+04	1.8667E-02	7.8065E+22	5.0986E+21
Pr-143	1.0322E+04	1.5329E-04	6.4555E+20	1.7318E+21
Nd-147	2.5124E+03	3.1056E-05	1.2723E+20	5.2744E+20
Np-239	4.5204E+02	1.9485E-06	4.9097E+18	1.0184E+22
Pu-238	3.1754E+02	1.8548E-02	4.6932E+22	2.6312E+19
Pu-239	2.1423E+01	3.4466E-01	8.6845E+23	1.7744E+18
Pu-240	2.2721E+01	9.9714E-02	2.5020E+23	1.8848E+18
Pu-241	1.0868E+04	1.0550E-01	2.6362E+23	9.0309E+20
Am-241	7.9635E+00	2.3202E-03	5.7979E+21	6.0915E+17
Cm-242	1.5084E+03	4.5512E-04	1.1326E+21	1.3231E+20
Cm-244	1.8310E+02	2.2632E-03	5.5857E+21	1.5210E+19

ECCS Fluid (Torus) Transport Group Inventory:

Time (h) = 624.0000	Atmosphere	Sump	
Noble gases (atoms)	9.4856E+21	0.0000E+00	
Elemental I (atoms)	5.4578E+21	0.0000E+00	
Organic I (atoms)	1.6880E+20	0.0000E+00	
Aerosols (kg)	5.3177E+01	0.0000E+00	
Dose Effective (Ci/cc) I-131 (Thyroid)			7.7265E-04
Dose Effective (Ci/cc) I-131 (ICRP2 Thyroid)			7.7289E-04
Total I (Ci)			3.0663E+06

ECCS Fluid to Reactor Building Transport Group Inventory:

	Pathway	
Time (h) = 624.0000	Filtered	Transported
Noble gases (atoms)	0.0000E+00	1.9283E+17
Elemental I (atoms)	0.0000E+00	5.6741E+16

Organic I (atoms)	0.0000E+00	1.7549E+15
Aerosols (kg)	0.0000E+00	1.4386E-04

Detailed model information at time (H) = 672.0000

EAB Doses:

Time (h) = 672.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)	0.0000E+00	0.0000E+00	0.0000E+00
Accumulated dose (rem)	9.8228E-06	3.3758E-03	1.9941E-04

LPZ Doses:

Time (h) = 672.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)	1.9007E-07	5.0151E-05	1.7934E-05
Accumulated dose (rem)	1.4979E-05	7.2669E-03	6.2520E-04

Control Room Doses:

Time (h) = 672.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)	1.8767E-11	1.4735E-07	5.1805E-08
Accumulated dose (rem)	6.8503E-08	3.6081E-04	1.7184E-05

ECCS Fluid (Torus) Compartment Nuclide Inventory:

Time (h) = 672.0000	Ci	kg	Atoms	Decay
Co-58	1.0252E+03	3.2242E-05	3.3477E+20	1.0536E+20
Co-60	1.5979E+03	1.4136E-03	1.4188E+22	1.4349E+20
Rb-86	2.0318E+04	2.4970E-04	1.7485E+21	3.1912E+21
Sr-89	1.3443E+06	4.6272E-02	3.1310E+23	1.4641E+23
Sr-90	2.2383E+05	1.6409E+00	1.0980E+25	2.0017E+22
Y-90	2.2494E+05	4.1345E-04	2.7665E+21	1.7279E+22
Y-91	2.2515E+04	9.1807E-04	6.0755E+21	2.3717E+21
Zr-95	2.3387E+04	1.0886E-03	6.9008E+21	2.4405E+21
Zr-97	3.5214E-08	1.8420E-17	1.1436E+08	1.0159E+20
Nb-95	2.9651E+04	7.5827E-04	4.8067E+21	2.7703E+21
Mo-99	3.8559E+02	8.0396E-07	4.8905E+18	5.6042E+21
Tc-99m	3.9532E+02	7.5182E-08	4.5733E+17	5.3851E+21
Ru-103	2.2612E+05	7.0063E-03	4.0964E+22	2.6117E+22
Ru-106	1.4475E+05	4.3266E-02	2.4581E+23	1.3280E+22
Rh-105	5.3172E-01	6.2996E-10	3.6130E+15	1.8293E+21
Sb-127	3.3036E+03	1.2371E-05	5.8659E+19	8.9306E+21
Te-127	6.4051E+04	2.4270E-05	1.1508E+20	1.3781E+22
Te-127m	5.9707E+04	6.3299E-03	3.0015E+22	5.7814E+21
Te-129	1.0934E+05	5.2210E-06	2.4373E+19	1.1017E+22
Te-129m	1.2645E+05	4.1974E-03	1.9595E+22	1.5282E+22
Te-131m	1.2332E-01	1.5465E-10	7.1093E+14	3.8267E+21
Te-132	1.7451E+04	5.7481E-05	2.6224E+20	9.9951E+22
I-131	2.5538E+06	2.0600E-02	9.4698E+22	9.5934E+23
I-132	2.0830E+04	2.0179E-06	9.2063E+18	1.1806E+23
I-133	1.1062E-02	9.7649E-12	4.4215E+13	2.2709E+23
Xe-133	3.0105E+05	1.6083E-03	7.2824E+21	2.4150E+23
Cs-134	6.2576E+06	4.8365E+00	2.1736E+25	5.6654E+23
Cs-136	4.0635E+05	5.5443E-03	2.4550E+22	8.3225E+22
Cs-137	3.9954E+06	4.5934E+01	2.0191E+26	3.5741E+23
Ba-140	7.5300E+05	1.0286E-02	4.4244E+22	1.5819E+23
La-140	8.7467E+05	1.5736E-03	6.7690E+21	1.5169E+23
Ce-141	4.3728E+04	1.5347E-03	6.5546E+21	5.3419E+21
Ce-143	5.7882E-02	8.7161E-11	3.6706E+14	4.8287E+20
Ce-144	5.9247E+04	1.8576E-02	7.7685E+22	5.4783E+21
Pr-143	9.3193E+03	1.3839E-04	5.8282E+20	1.7945E+21
Nd-147	2.2144E+03	2.7372E-05	1.1214E+20	5.4253E+20
Np-239	2.5091E+02	1.0816E-06	2.7252E+18	1.0186E+22
Pu-238	3.1759E+02	1.8551E-02	4.6940E+22	2.8343E+19
Pu-239	2.1423E+01	3.4466E-01	8.6845E+23	1.9114E+18
Pu-240	2.2722E+01	9.9714E-02	2.5021E+23	2.0301E+18
Pu-241	1.0865E+04	1.0547E-01	2.6355E+23	9.7256E+20
Am-241	8.0588E+00	2.3480E-03	5.8673E+21	6.6037E+17
Cm-242	1.4956E+03	4.5126E-04	1.1230E+21	1.4191E+20
Cm-244	1.8306E+02	2.2627E-03	5.5846E+21	1.6380E+19

ECCS Fluid (Torus) Transport Group Inventory:

Time (h) = 672.0000	Atmosphere	Sump
Noble gases (atoms)	7.2824E+21	0.0000E+00
Elemental I (atoms)	4.5933E+21	0.0000E+00

Organic I (atoms)	1.4206E+20	0.0000E+00	
Aerosols (kg)	5.3154E+01	0.0000E+00	
Dose Effective (Ci/cc) I-131 (Thyroid)			6.5027E-04
Dose Effective (Ci/cc) I-131 (ICRP2 Thyroid)			6.5043E-04
Total I (Ci)			2.5747E+06

ECCS Fluid to Reactor Building Transport Group Inventory:

	Pathway	
	Filtered	Transported
Time (h) = 672.0000		
Noble gases (atoms)	0.0000E+00	1.9457E+17
Elemental I (atoms)	0.0000E+00	5.7784E+16
Organic I (atoms)	0.0000E+00	1.7871E+15
Aerosols (kg)	0.0000E+00	1.5490E-04

Detailed model information at time (H) = 720.0000

EAB Doses:

Time (h) = 720.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)	0.0000E+00	0.0000E+00	0.0000E+00
Accumulated dose (rem)	9.8228E-06	3.3758E-03	1.9941E-04

LPZ Doses:

Time (h) = 720.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)	1.8375E-07	4.3068E-05	1.7652E-05
Accumulated dose (rem)	1.5163E-05	7.3100E-03	6.4286E-04

Control Room Doses:

Time (h) = 720.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)	1.8137E-11	1.2652E-07	5.0996E-08
Accumulated dose (rem)	6.8521E-08	3.6094E-04	1.7235E-05

ECCS Fluid (Torus) Compartment Nuclide Inventory:

Time (h) = 720.0000	Ci	kg	Atoms	Decay
Co-58	1.0054E+03	3.1617E-05	3.2828E+20	1.1185E+20
Co-60	1.5967E+03	1.4125E-03	1.4178E+22	1.5370E+20
Rb-86	1.8863E+04	2.3182E-04	1.6234E+21	3.3164E+21
Sr-89	1.3079E+06	4.5019E-02	3.0462E+23	1.5488E+23
Sr-90	2.2380E+05	1.6407E+00	1.0978E+25	2.1448E+22
Y-90	2.2498E+05	4.1352E-04	2.7669E+21	1.8710E+22
Y-91	2.1987E+04	8.9657E-04	5.9333E+21	2.5139E+21
Zr-95	2.2885E+04	1.0653E-03	6.7529E+21	2.5884E+21
Zr-97	4.9172E-09	2.5722E-18	1.5969E+07	1.0159E+20
Nb-95	2.9390E+04	7.5160E-04	4.7645E+21	2.9590E+21
Mo-99	2.3291E+02	4.8563E-07	2.9541E+18	5.6061E+21
Tc-99m	2.3879E+02	4.5413E-08	2.7625E+17	5.3870E+21
Ru-103	2.1828E+05	6.7633E-03	3.9543E+22	2.7538E+22
Ru-106	1.4421E+05	4.3104E-02	2.4488E+23	1.4204E+22
Rh-105	2.0751E-01	2.4585E-10	1.4101E+15	1.8293E+21
Sb-127	2.3047E+03	8.6300E-06	4.0922E+19	8.9483E+21
Te-127	6.2343E+04	2.3623E-05	1.1201E+20	1.4170E+22
Te-127m	5.8959E+04	6.2505E-03	2.9639E+22	6.1607E+21
Te-129	1.0492E+05	5.0100E-06	2.3388E+19	1.1533E+22
Te-129m	1.2134E+05	4.0277E-03	1.8803E+22	1.6074E+22
Te-131m	4.0680E-02	5.1015E-11	2.3452E+14	3.8267E+21
Te-132	1.1404E+04	3.7562E-05	1.7137E+20	1.0004E+23
I-131	2.1494E+06	1.7337E-02	7.9700E+22	9.7434E+23
I-132	1.3611E+04	1.3187E-06	6.0160E+18	1.1815E+23
I-133	2.2343E-03	1.9724E-12	8.9307E+12	2.2709E+23
Xe-133	2.3113E+05	1.2348E-03	5.5910E+21	2.4319E+23
Cs-134	6.2461E+06	4.8276E+00	2.1696E+25	6.0651E+23
Cs-136	3.6554E+05	4.9876E-03	2.2085E+22	8.5691E+22
Cs-137	3.9949E+06	4.5928E+01	2.0189E+26	3.8296E+23
Ba-140	6.7536E+05	9.2252E-03	3.9682E+22	1.6275E+23
La-140	7.8451E+05	1.4114E-03	6.0713E+21	1.5695E+23
Ce-141	4.1902E+04	1.4706E-03	6.2809E+21	5.6156E+21
Ce-143	2.1119E-02	3.1802E-11	1.3393E+14	4.8287E+20
Ce-144	5.8959E+04	1.8485E-02	7.7307E+22	5.8562E+21
Pr-143	8.4136E+03	1.2495E-04	5.2618E+20	1.8512E+21
Nd-147	1.9517E+03	2.4125E-05	9.8835E+19	5.5583E+20
Np-239	1.3927E+02	6.0035E-07	1.5127E+18	1.0187E+22

Pu-238	3.1764E+02	1.8554E-02	4.6947E+22	3.0373E+19
Pu-239	2.1423E+01	3.4466E-01	8.6845E+23	2.0484E+18
Pu-240	2.2722E+01	9.9715E-02	2.5021E+23	2.1754E+18
Pu-241	1.0862E+04	1.0544E-01	2.6348E+23	1.0420E+21
Am-241	8.1542E+00	2.3758E-03	5.9367E+21	7.1219E+17
Cm-242	1.4829E+03	4.4743E-04	1.1134E+21	1.5143E+20
Cm-244	1.8302E+02	2.2622E-03	5.5834E+21	1.7551E+19

ECCS Fluid (Torus) Transport Group Inventory:

Time (h) = 720.0000	Atmosphere	Sump	
Noble gases (atoms)	5.5910E+21	0.0000E+00	
Elemental I (atoms)	3.8657E+21	0.0000E+00	
Organic I (atoms)	1.1956E+20	0.0000E+00	
Aerosols (kg)	5.3132E+01	0.0000E+00	
Dose Effective (Ci/cc) I-131 (Thyroid)			5.4728E-04
Dose Effective (Ci/cc) I-131 (ICRP2 Thyroid)			5.4738E-04
Total I (Ci)			2.1630E+06

ECCS Fluid to Reactor Building Transport Group Inventory:

	Pathway	
Time (h) = 720.0000	Filtered	Transported
Noble gases (atoms)	0.0000E+00	1.9590E+17
Elemental I (atoms)	0.0000E+00	5.8661E+16
Organic I (atoms)	0.0000E+00	1.8143E+15
Aerosols (kg)	0.0000E+00	1.6593E-04

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I-131 Summary
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Time (hr)	ECCS Fluid (Torus) I-131 (Curies)	Reactor Building I-131 (Curies)	Environment I-131 (Curies)
0.000	5.2665E+03	3.7959E-12	6.3246E-09
0.250	2.3679E+06	1.7072E-09	1.2806E-03
0.500	4.7318E+06	3.4115E-09	5.1194E-03
0.750	8.6677E+06	6.2493E-09	1.2364E-02
1.000	1.2597E+07	9.0823E-09	2.3862E-02
1.250	1.6520E+07	1.1911E-08	3.9605E-02
1.500	2.0436E+07	1.4734E-08	5.9586E-02
1.750	2.4346E+07	1.7553E-08	8.3798E-02
2.000	2.8249E+07	2.0367E-08	1.1223E-01
2.300	2.8219E+07	2.0345E-08	1.4887E-01
2.600	2.8189E+07	2.0324E-08	1.8546E-01
2.900	2.8159E+07	2.0302E-08	2.2202E-01
3.200	2.8129E+07	2.0281E-08	2.5854E-01
3.500	2.8100E+07	2.0259E-08	2.9502E-01
3.800	2.8070E+07	2.0238E-08	3.3146E-01
4.100	2.8040E+07	2.0216E-08	3.6786E-01
4.400	2.8011E+07	2.0195E-08	4.0423E-01
4.700	2.7981E+07	2.0174E-08	4.4055E-01
5.000	2.7951E+07	2.0152E-08	4.7684E-01
5.300	2.7922E+07	2.0131E-08	5.1309E-01
5.600	2.7892E+07	2.0110E-08	5.4930E-01
5.900	2.7863E+07	2.0088E-08	5.8547E-01
6.000	2.7853E+07	2.0081E-08	5.9752E-01
6.300	2.7823E+07	2.0060E-08	6.3364E-01
6.600	2.7794E+07	2.0039E-08	6.6972E-01
6.900	2.7764E+07	2.0018E-08	7.0576E-01
7.200	2.7735E+07	1.9996E-08	7.4177E-01
7.500	2.7705E+07	1.9975E-08	7.7774E-01
7.800	2.7676E+07	1.9954E-08	8.1367E-01
8.000	2.7657E+07	1.9940E-08	8.3760E-01
8.300	2.7627E+07	1.9919E-08	8.7347E-01
8.600	2.7598E+07	1.9898E-08	9.0930E-01
8.900	2.7569E+07	1.9876E-08	9.4509E-01
9.200	2.7539E+07	1.9855E-08	9.8084E-01
9.500	2.7510E+07	1.9834E-08	1.0166E+00
9.800	2.7481E+07	1.9813E-08	1.0522E+00
10.100	2.7452E+07	1.9792E-08	1.0879E+00
10.400	2.7423E+07	1.9771E-08	1.1235E+00
24.000	2.6132E+07	1.8841E-08	2.6962E+00
96.000	2.0210E+07	1.4571E-08	9.8623E+00

720.000 2.1494E+06 1.5497E-09 3.1583E+01

Control Room	
Time (hr)	I-131 (Curies)
0.000	5.7870E-12
0.250	1.0326E-06
0.500	7.0395E-07
0.750	4.8810E-07
1.000	3.4980E-07
1.250	2.6385E-07
1.500	2.1322E-07
1.750	1.8643E-07
2.000	1.7571E-07
2.300	1.0967E-07
2.600	6.8466E-08
2.900	4.2749E-08
3.200	2.6700E-08
3.500	1.6685E-08
3.800	1.0435E-08
4.100	6.5343E-09
4.400	4.1002E-09
4.700	2.5812E-09
5.000	1.6333E-09
5.300	1.0417E-09
5.600	6.7245E-10
5.900	4.4202E-10
6.000	3.8638E-10
6.300	2.6346E-10
6.600	1.8673E-10
6.900	1.3882E-10
7.200	1.0890E-10
7.500	9.0208E-11
7.800	7.8518E-11
8.000	7.3270E-11
8.300	6.7908E-11
8.600	6.4539E-11
8.900	6.2413E-11
9.200	6.1062E-11
9.500	6.0196E-11
9.800	5.9632E-11
10.100	5.9257E-11
10.400	5.8999E-11
24.000	5.5914E-11
96.000	6.3133E-10
720.000	1.9361E-11

 Cumulative Dose Summary
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Time (hr)	EAB		LPZ		Control Room	
	Thyroid (rem)	TEDE (rem)	Thyroid (rem)	TEDE (rem)	Thyroid (rem)	TEDE (rem)
0.000	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00
0.250	2.9065E-04	1.3991E-05	3.2895E-05	1.5835E-06	3.6407E-05	1.5812E-06
0.500	3.9899E-04	1.9169E-05	6.8667E-05	3.2932E-06	1.1897E-04	5.1661E-06
0.750	6.0544E-04	3.0065E-05	1.3684E-04	6.8910E-06	1.7545E-04	7.6204E-06
1.000	6.6085E-04	3.3232E-05	1.9212E-04	1.0051E-05	2.1507E-04	9.3553E-06
1.250	7.3689E-04	3.7724E-05	2.6799E-04	1.4533E-05	2.4408E-04	1.0651E-05
1.500	8.3341E-04	4.3529E-05	3.6429E-04	2.0324E-05	2.6668E-04	1.1696E-05
1.750	9.5025E-04	5.0634E-05	4.8087E-04	2.7414E-05	2.8569E-04	1.2617E-05
2.000	1.0873E-03	5.9032E-05	6.1759E-04	3.5793E-05	3.0300E-04	1.3498E-05
2.300	1.2634E-03	6.9850E-05	6.9564E-04	4.0587E-05	3.1919E-04	1.4343E-05
2.600	1.4387E-03	8.0608E-05	7.7335E-04	4.5355E-05	3.2926E-04	1.4869E-05
2.900	1.6133E-03	9.1310E-05	8.5072E-04	5.0098E-05	3.3553E-04	1.5196E-05
3.200	1.7871E-03	1.0196E-04	9.2776E-04	5.4819E-05	3.3943E-04	1.5400E-05
3.500	1.9602E-03	1.1257E-04	1.0045E-03	5.9518E-05	3.4186E-04	1.5528E-05
3.800	2.1326E-03	1.2313E-04	1.0809E-03	6.4198E-05	3.4337E-04	1.5607E-05
4.100	2.3043E-03	1.3364E-04	1.1569E-03	6.8860E-05	3.4431E-04	1.5657E-05
4.400	2.4752E-03	1.4412E-04	1.2327E-03	7.3504E-05	3.4491E-04	1.5688E-05
4.700	2.6455E-03	1.5456E-04	1.3082E-03	7.8131E-05	3.4527E-04	1.5708E-05
5.000	2.8151E-03	1.6497E-04	1.3834E-03	8.2743E-05	3.4551E-04	1.5720E-05
5.300	2.9841E-03	1.7534E-04	1.4582E-03	8.7339E-05	3.4565E-04	1.5728E-05
5.600	3.1524E-03	1.8568E-04	1.5328E-03	9.1921E-05	3.4575E-04	1.5733E-05
5.900	3.3201E-03	1.9598E-04	1.6072E-03	9.6488E-05	3.4581E-04	1.5736E-05

6.000	3.3758E-03	1.9941E-04	1.6319E-03	9.8007E-05	3.4583E-04	1.5737E-05
6.300	3.3758E-03	1.9941E-04	1.7058E-03	1.0256E-04	3.4586E-04	1.5739E-05
6.600	3.3758E-03	1.9941E-04	1.7795E-03	1.0709E-04	3.4589E-04	1.5740E-05
6.900	3.3758E-03	1.9941E-04	1.8529E-03	1.1162E-04	3.4590E-04	1.5741E-05
7.200	3.3758E-03	1.9941E-04	1.9260E-03	1.1613E-04	3.4592E-04	1.5742E-05
7.500	3.3758E-03	1.9941E-04	1.9988E-03	1.2063E-04	3.4593E-04	1.5742E-05
7.800	3.3758E-03	1.9941E-04	2.0714E-03	1.2512E-04	3.4594E-04	1.5743E-05
8.000	3.3758E-03	1.9941E-04	2.1197E-03	1.2810E-04	3.4594E-04	1.5743E-05
8.300	3.3758E-03	1.9941E-04	2.1439E-03	1.2964E-04	3.4595E-04	1.5744E-05
8.600	3.3758E-03	1.9941E-04	2.1680E-03	1.3117E-04	3.4596E-04	1.5744E-05
8.900	3.3758E-03	1.9941E-04	2.1921E-03	1.3270E-04	3.4597E-04	1.5745E-05
9.200	3.3758E-03	1.9941E-04	2.2160E-03	1.3423E-04	3.4597E-04	1.5745E-05
9.500	3.3758E-03	1.9941E-04	2.2399E-03	1.3575E-04	3.4598E-04	1.5745E-05
9.800	3.3758E-03	1.9941E-04	2.2637E-03	1.3727E-04	3.4599E-04	1.5746E-05
10.100	3.3758E-03	1.9941E-04	2.2874E-03	1.3878E-04	3.4599E-04	1.5746E-05
10.400	3.3758E-03	1.9941E-04	2.3110E-03	1.4029E-04	3.4600E-04	1.5747E-05
24.000	3.3758E-03	1.9941E-04	3.3155E-03	2.0579E-04	3.4627E-04	1.5764E-05
96.000	3.3758E-03	1.9941E-04	5.5359E-03	3.6952E-04	3.5569E-04	1.6443E-05
720.000	3.3758E-03	1.9941E-04	7.3100E-03	6.4286E-04	3.6094E-04	1.7235E-05

Worst Two-Hour Doses
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EAB

Time (hr)	Whole Body (rem)	Thyroid (rem)	TEDE (rem)
2.0	3.0606E-06	1.1597E-03	7.1105E-05

Nuclide Inventory Name: Source Terms per this calculation

Limerick (LGS)- in Ci/MW

Power Level:

0.1000E+01

Nuclides:

60

Nuclide 001:

Co-58

7

0.6117120000E+07

0.5800E+02

0.1529E+03

none 0.0000E+00

none 0.0000E+00

none 0.0000E+00

Nuclide 002:

Co-60

7

0.1663401096E+09

0.6000E+02

0.1830E+03

none 0.0000E+00

none 0.0000E+00

none 0.0000E+00

Nuclide 003:

Kr-85

1

0.3382974720E+09

0.8500E+02

0.0000E+00

none 0.0000E+00

none 0.0000E+00

none 0.0000E+00

Nuclide 004:

Kr-85m

1

0.1612800000E+05

0.8500E+02

0.0000E+00

Kr-85 0.2100E+00

none 0.0000E+00

none 0.0000E+00

Nuclide 005:

Kr-87

1

0.4578000000E+04

0.8700E+02

0.0000E+00

Rb-87 0.1000E+01

none 0.0000E+00

none 0.0000E+00

Nuclide 006:

Kr-88

1

0.1022400000E+05

0.8800E+02

0.0000E+00

Rb-88 0.1000E+01

none 0.0000E+00

none 0.0000E+00

Nuclide 007:

Rb-86

3

0.1612224000E+07

0.8600E+02

0.6518E+02

none 0.0000E+00

none 0.0000E+00

none 0.0000E+00

Nuclide 008:

Sr-89

5

0.4363200000E+07

0.8900E+02

0.2798E+05

none 0.0000E+00
 none 0.0000E+00
 none 0.0000E+00
 Nuclide 009:
 Sr-90
 5
 0.9189573120E+09
 0.9000E+02
 0.3178E+04
 Y-90 0.1000E+01
 none 0.0000E+00
 none 0.0000E+00
 Nuclide 010:
 Sr-91
 5
 0.3420000000E+05
 0.9100E+02
 0.3801E+05
 Y-91m 0.5800E+00
 Y-91 0.4200E+00
 none 0.0000E+00
 Nuclide 011:
 Sr-92
 5
 0.9756000000E+04
 0.9200E+02
 0.4017E+05
 Y-92 0.1000E+01
 none 0.0000E+00
 none 0.0000E+00
 Nuclide 012:
 Y-90
 9
 0.2304000000E+06
 0.9000E+02
 0.3272E+04
 none 0.0000E+00
 none 0.0000E+00
 none 0.0000E+00
 Nuclide 013:
 Y-91
 9
 0.5055264000E+07
 0.9100E+02
 0.3448E+05
 none 0.0000E+00
 none 0.0000E+00
 none 0.0000E+00
 Nuclide 014:
 Y-92
 9
 0.1274400000E+05
 0.9200E+02
 0.4029E+05
 none 0.0000E+00
 none 0.0000E+00
 none 0.0000E+00
 Nuclide 015:
 Y-93
 9
 0.3636000000E+05
 0.9300E+02
 0.4526E+05
 Zr-93 0.1000E+01
 none 0.0000E+00
 none 0.0000E+00
 Nuclide 016:
 Zr-95
 9
 0.5527872000E+07
 0.9500E+02
 0.4489E+05
 Nb-95m 0.7000E-02
 Nb-95 0.9900E+00
 none 0.0000E+00

Nuclide 017:
 Zr-97
 9
 0.6084000000E+05
 0.9700E+02
 0.4657E+05
 Nb-97m 0.9500E+00
 Nb-97 0.5300E-01
 none 0.0000E+00
 Nuclide 018:
 Nb-95
 9
 0.3036960000E+07
 0.9500E+02
 0.4512E+05
 none 0.0000E+00
 none 0.0000E+00
 none 0.0000E+00
 Nuclide 019:
 Mo-99
 7
 0.2376000000E+06
 0.9900E+02
 0.5078E+05
 Tc-99m 0.8800E+00
 Tc-99 0.1200E+00
 none 0.0000E+00
 Nuclide 020:
 Tc-99m
 7
 0.2167200000E+05
 0.9900E+02
 0.4447E+05
 Tc-99 0.1000E+01
 none 0.0000E+00
 none 0.0000E+00
 Nuclide 021:
 Ru-103
 7
 0.3393792000E+07
 0.1030E+03
 0.4202E+05
 Rh-103m 0.1000E+01
 none 0.0000E+00
 none 0.0000E+00
 Nuclide 022:
 Ru-105
 7
 0.1598400000E+05
 0.1050E+03
 0.2908E+05
 Rh-105 0.1000E+01
 none 0.0000E+00
 none 0.0000E+00
 Nuclide 023:
 Ru-106
 7
 0.3181248000E+08
 0.1060E+03
 0.1730E+05
 Rh-106 0.1000E+01
 none 0.0000E+00
 none 0.0000E+00
 Nuclide 024:
 Rh-105
 7
 0.1272960000E+06
 0.1050E+03
 0.2752E+05
 none 0.0000E+00
 none 0.0000E+00
 none 0.0000E+00
 Nuclide 025:
 Sb-127
 4

0.3326400000E+06
 0.1270E+03
 0.2896E+04
 Te-127m 0.1800E+00
 Te-127 0.8200E+00
 none 0.0000E+00
 Nuclide 026:
 Sb-129
 4
 0.1555200000E+05
 0.1290E+03
 0.8638E+04
 Te-129m 0.2200E+00
 Te-129 0.7700E+00
 none 0.0000E+00
 Nuclide 027:
 Te-127
 4
 0.3366000000E+05
 0.1270E+03
 0.2873E+04
 none 0.0000E+00
 none 0.0000E+00
 none 0.0000E+00
 Nuclide 028:
 Te-127m
 4
 0.9417600000E+07
 0.1270E+03
 0.3855E+03
 Te-127 0.9800E+00
 none 0.0000E+00
 none 0.0000E+00
 Nuclide 029:
 Te-129
 4
 0.4176000000E+04
 0.1290E+03
 0.8501E+04
 I-129 0.1000E+01
 none 0.0000E+00
 none 0.0000E+00
 Nuclide 030:
 Te-129m
 4
 0.2903040000E+07
 0.1290E+03
 0.1267E+04
 Te-129 0.6500E+00
 I-129 0.3500E+00
 none 0.0000E+00
 Nuclide 031:
 Te-131m
 4
 0.1080000000E+06
 0.1310E+03
 0.3869E+04
 Te-131 0.2200E+00
 I-131 0.7800E+00
 none 0.0000E+00
 Nuclide 032:
 Te-132
 4
 0.2815200000E+06
 0.1320E+03
 0.3821E+05
 I-132 0.1000E+01
 none 0.0000E+00
 none 0.0000E+00
 Nuclide 033:
 I-131
 2
 0.6946560000E+06
 0.1310E+03
 0.2687E+05

Xe-131m 0.1100E-01
 none 0.0000E+00
 none 0.0000E+00
 Nuclide 034:
 I-132
 2
 0.8280000000E+04
 0.1320E+03
 0.3881E+05
 none 0.0000E+00
 none 0.0000E+00
 none 0.0000E+00
 Nuclide 035:
 I-133
 2
 0.7488000000E+05
 0.1330E+03
 0.5556E+05
 Xe-133m 0.2900E-01
 Xe-133 0.9700E+00
 none 0.0000E+00
 Nuclide 036:
 I-134
 2
 0.3156000000E+04
 0.1340E+03
 0.6165E+05
 none 0.0000E+00
 none 0.0000E+00
 none 0.0000E+00
 Nuclide 037:
 I-135
 2
 0.2379600000E+05
 0.1350E+03
 0.5192E+05
 Xe-135m 0.1500E+00
 Xe-135 0.8500E+00
 none 0.0000E+00
 Nuclide 038:
 Xe-133
 1
 0.4531680000E+06
 0.1330E+03
 0.0000E+00
 none 0.0000E+00
 none 0.0000E+00
 none 0.0000E+00
 Nuclide 039:
 Xe-135
 1
 0.3272400000E+05
 0.1350E+03
 0.0000E+00
 Cs-135 0.1000E+01
 none 0.0000E+00
 none 0.0000E+00
 Nuclide 040:
 Cs-134
 3
 0.6507177120E+08
 0.1340E+03
 0.7280E+04
 none 0.0000E+00
 none 0.0000E+00
 none 0.0000E+00
 Nuclide 041:
 Cs-136
 3
 0.1131840000E+07
 0.1360E+03
 0.2027E+04
 none 0.0000E+00
 none 0.0000E+00
 none 0.0000E+00

Nuclide 042:
 Cs-137
 3
 0.9467280000E+09
 0.1370E+03
 0.4538E+04
 Ba-137m 0.9500E+00
 none 0.0000E+00
 none 0.0000E+00
 Nuclide 043:
 Ba-139
 6
 0.4962000000E+04
 0.1390E+03
 0.5084E+05
 none 0.0000E+00
 none 0.0000E+00
 none 0.0000E+00
 Nuclide 044:
 Ba-140
 6
 0.1100736000E+07
 0.1400E+03
 0.4896E+05
 La-140 0.1000E+01
 none 0.0000E+00
 none 0.0000E+00
 Nuclide 045:
 La-140
 9
 0.1449792000E+06
 0.1400E+03
 0.5019E+05
 none 0.0000E+00
 none 0.0000E+00
 none 0.0000E+00
 Nuclide 046:
 La-141
 9
 0.1414800000E+05
 0.1410E+03
 0.4640E+05
 Ce-141 0.1000E+01
 none 0.0000E+00
 none 0.0000E+00
 Nuclide 047:
 La-142
 9
 0.5550000000E+04
 0.1420E+03
 0.4532E+05
 none 0.0000E+00
 none 0.0000E+00
 none 0.0000E+00
 Nuclide 048:
 Ce-141
 8
 0.2808086400E+07
 0.1410E+03
 0.4492E+05
 none 0.0000E+00
 none 0.0000E+00
 none 0.0000E+00
 Nuclide 049:
 Ce-143
 8
 0.1188000000E+06
 0.1430E+03
 0.4427E+05
 Pr-143 0.1000E+01
 none 0.0000E+00
 none 0.0000E+00
 Nuclide 050:
 Ce-144
 8

0.2456352000E+08
 0.1440E+03
 0.3596E+05
 Pr-144m 0.1800E-01
 Pr-144 0.9800E+00
 none 0.0000E+00
 Nuclide 051:
 Pr-143
 9
 0.1171584000E+07
 0.1430E+03
 0.4293E+05
 none 0.0000E+00
 none 0.0000E+00
 none 0.0000E+00
 Nuclide 052:
 Nd-147
 9
 0.9486720000E+06
 0.1470E+03
 0.1838E+05
 Pm-147 0.1000E+01
 none 0.0000E+00
 none 0.0000E+00
 Nuclide 053:
 Np-239
 8
 0.2034720000E+06
 0.2390E+03
 0.5397E+06
 Pu-239 0.1000E+01
 none 0.0000E+00
 none 0.0000E+00
 Nuclide 054:
 Pu-238
 8
 0.2768863824E+10
 0.2380E+03
 0.1796E+03
 U-234 0.1000E+01
 none 0.0000E+00
 none 0.0000E+00
 Nuclide 055:
 Pu-239
 8
 0.7594336440E+12
 0.2390E+03
 0.1200E+02
 U-235 0.1000E+01
 none 0.0000E+00
 none 0.0000E+00
 Nuclide 056:
 Pu-240
 8
 0.2062920312E+12
 0.2400E+03
 0.1288E+02
 U-236 0.1000E+01
 none 0.0000E+00
 none 0.0000E+00
 Nuclide 057:
 Pu-241
 8
 0.4544294400E+09
 0.2410E+03
 0.6182E+04
 U-237 0.2400E-04
 Am-241 0.1000E+01
 none 0.0000E+00
 Nuclide 058:
 Am-241
 9
 0.1363919472E+11
 0.2410E+03
 0.9528E+01

Np-237 0.1000E+01
none 0.0000E+00
none 0.0000E+00

Nuclide 059:

Cm-242

9

0.1406592000E+08

0.2420E+03

0.2388E+04

Pu-238 0.1000E+01

none 0.0000E+00

none 0.0000E+00

Nuclide 060:

Cm-244

9

0.5715081360E+09

0.2440E+03

0.2602E+03

Pu-240 0.1000E+01

none 0.0000E+00

none 0.0000E+00

End of Nuclear Inventory File

```

type
  isonametype = string[7];
  isotope = array[1..60] of isonametype;
  isodata = array[1..60,0..80] of real;
  hour = array[0..80] of string[8];

const
  isotopes:isotope =
    ('Co-58 ', 'Co-60 ', 'Kr-85 ', 'Kr-85m ', 'Kr-87 ',
     'Kr-88 ', 'Rb-86 ', 'Sr-89 ', 'Sr-90 ', 'Sr-91 ',
     'Sr-92 ', 'Y-90 ', 'Y-91 ', 'Y-92 ', 'Y-93 ',
     'Zr-95 ', 'Zr-97 ', 'Nb-95 ', 'Mo-99 ', 'Tc-99m ',
     'Ru-103 ', 'Ru-105 ', 'Ru-106 ', 'Rh-105 ', 'Sb-127 ',
     'Sb-129 ', 'Te-127 ', 'Te-127m ', 'Te-129 ', 'Te-129m ',
     'Te-131m ', 'Te-132 ', 'I-131 ', 'I-132 ', 'I-133 ',
     'I-134 ', 'I-135 ', 'Xe-133 ', 'Xe-135 ', 'Cs-134 ',
     'Cs-136 ', 'Cs-137 ', 'Ba-139 ', 'Ba-140 ', 'La-140 ',
     'La-141 ', 'La-142 ', 'Ce-141 ', 'Ce-143 ', 'Ce-144 ',
     'Pr-143 ', 'Nd-147 ', 'Np-239 ', 'Pu-238 ', 'Pu-239 ',
     'Pu-240 ', 'Pu-241 ', 'Am-241 ', 'Cm-242 ', 'Cm-244 ');

var
  line :string[132];           {OUTPUT LINE READ IN}
  i,j,k,m,n :integer;        {COUNTERS}
  alldata :isodata;         {COMPARTMENT CURIE DATA}
  allintdata :isodata;      {COMPARTMENT CURIE-HR DATA}
  currentisotope :isonametype; {CURRENT ISOTOPE}
  firstspace :char;         {BLANK CHARACTER}
  hours :hour;              {TIME DATA AS A STRING}
  hourvalue :array[1..80] of real; {TIME DATA AS A VALUE}
  wholepart :integer;       {WHOLE PART OF TIME DATA}
  fractionpart :integer;    {FRACTION PART OF TIME DATA}
  code :integer;           {USED BY VAL PROCEDURE}
  inputfile :text;
  outputfile :text;

begin

assign(inputfile,'lgscs.ol');
reset(inputfile);
assign(outputfile,'lgscs.out');
rewrite(outputfile);

{FILL DATA ARRAYS WITH ZEROS}
for i := 1 to 60 do
  for j := 0 to 80 do
    begin
      alldata[i,j] := 0.0;
      allintdata[i,j] := 0.0;
    end;
  for j := 0 to 80 do
    hours[j] := ' no data';
  for j := 0 to 80 do
    hourvalue[j] := 0.0;

j := 0;

repeat
  readln(inputfile,line);

{CHECK IF START OF COMPARTMENT ISOTOPIIC DATA}
if copy(line,28,40)='Ci kg Atoms Decay'
then
  begin
    J:=J+1; {INCREMENT TO TIME PERIOD COUNT}
    hours[j] := copy(line,13,8); {GETS TIME ASSOCIATED WITH DATA}
    val(copy(hours[j],1,3),wholepart,code);
    val(copy(hours[j],5,4),fractionpart,code);
    hourvalue[j] := wholepart+fractionpart/10000;
    for k := 1 to 60 do {READ AND CHECK 60 LINES}
      begin
        read(inputfile,firstspace); {READ BLANK SPACE}
        read(inputfile,currentisotope); {READ ISOTOPE NAME?}
        for i := 1 to 60 do {SEE IF IN ISOTOPE LIST}
          begin

```

```

        if currentisotope = isotopes[i]
        then
            begin
                read(inputfile,alldata[i,j]);      {IF SO, GET CURIE DATA}
                readln(inputfile);                {FINISH THAT LINE}
            end;
        end;                                     {END i}
    end;                                         {END k}
end;                                           {DATA SET}
until eof(inputfile);
close(inputfile);

{OUTPUT COMPARTMENT CURIE DATA FOR VERIFICATION OF PROPER READIN}
writeln(outputfile,'OUTPUT CURIE DATA FOR VERIFICATION OF PROPER READIN');
writeln(outputfile);
for j := 0 to 7 do
begin
    write(outputfile,'time (hrs)');             {CURIE TIME COLUMN HEADING}
    for m:= (10*j+1) to (10*j+10) do           { " " " " " " }
        write(outputfile,hours[m],' ');        { " " " " " " }
        writeln(outputfile);                   { " " " " " " }

    for k := 1 to 60 do                         {INCREMENT OVER 60 ISOTOPES}
        begin                                  {TO REGURGITATE CURIE DATA }
            write(outputfile,isotopes[k],' ');
            for i := (10*j+1) to (10*j+10) do
                begin
                    write(outputfile,alldata[k,i]:11,' ');
                end;
            writeln(outputfile);
        end;
    end;
    writeln(outputfile);
end;

{DETERMINE COMPARTMENT TIME INTEGRATED (CURIE-HOUR) DATA}
for i := 1 to 60 do
for j := 1 to 80 do
    if hourvalue[j] > 0.0
    then allintdata[i,j] := (hourvalue[j] - hourvalue[j-1]) *
        (alldata[i,j]+alldata[i,j-1])/2 +
        allintdata[i,j-1]
    else allintdata[i,j] := 0.0;

{OUTPUT COMPARTMENT CURIE HOUR DATA FOR MICROSHIELD INPUT}
writeln(outputfile);
writeln(outputfile,'*****');
writeln(outputfile,' INTEGRATED SOURCE IN CURIE-HOURS');
writeln;
for j := 0 to 7 do
begin
    write(outputfile,' ');                     {CURIE TIME COLUMN HEADING}
    for m:= (10*j+1) to (10*j+10) do           { " " " " " " }
        write(outputfile,hours[m],' ');        { " " " " " " }
        writeln(outputfile);                   { " " " " " " }

    for k := 1 to 60 do                         {INCREMENT OVER 60 ISOTOPES}
        begin                                  {INTEGRATED CURIE-HOUR DATA}
            write(outputfile,isotopes[k],' ');
            for i := (10*j+1) to (10*j+10) do
                begin
                    write(outputfile,allintdata[k,i]:11,' ');
                end;
            writeln(outputfile);
        end;
    end;
    writeln(outputfile);
end;

close(outputfile);

end.
```

OUTPUT CURIE DATA FOR VERIFICATION OF PROPER READIN

time (hrs)	0.2500	0.5000	0.7500	1.0000	1.2500	1.5000	1.7500	2.0000	2.5000	3.0000
Co-58	0.0000E+00	0.0000E+00	2.2469E+02	4.4934E+02	6.7395E+02	8.9850E+02	1.1230E+03	1.3475E+03	1.3472E+03	1.3469E+03
Co-60	0.0000E+00	0.0000E+00	2.6901E+02	5.3801E+02	8.0701E+02	1.0760E+03	1.3450E+03	1.6140E+03	1.6140E+03	1.6140E+03
Kr-85	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00
Kr-85m	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00
Kr-87	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00
Kr-88	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00
Rb-86	5.7467E+03	1.1489E+04	1.9141E+04	2.6787E+04	3.4427E+04	4.2061E+04	4.9689E+04	5.7311E+04	5.7267E+04	5.7222E+04
Sr-89	0.0000E+00	0.0000E+00	3.2890E+05	6.5771E+05	9.8643E+05	1.3151E+06	1.6436E+06	1.9720E+06	1.9714E+06	1.9709E+06
Sr-90	0.0000E+00	0.0000E+00	3.7373E+04	7.4746E+04	1.1212E+05	1.4949E+05	1.8687E+05	2.2424E+05	2.2424E+05	2.2424E+05
Sr-91	0.0000E+00	0.0000E+00	4.2319E+05	8.3109E+05	1.2241E+06	1.6026E+06	1.9671E+06	2.3178E+06	2.2348E+06	2.1547E+06
Sr-92	0.0000E+00	0.0000E+00	3.8994E+05	7.3157E+05	1.0294E+06	1.2875E+06	1.5097E+06	1.6994E+06	1.4954E+06	1.3159E+06
Y-90	0.0000E+00	0.0000E+00	4.5278E+02	1.0054E+03	1.6576E+03	2.4091E+03	3.2597E+03	4.2090E+03	5.3980E+03	6.5805E+03
Y-91	0.0000E+00	0.0000E+00	4.0689E+03	8.1585E+03	1.2268E+04	1.6397E+04	2.0544E+04	2.4708E+04	2.4938E+04	2.5159E+04
Y-92	0.0000E+00	0.0000E+00	1.7719E+04	5.1944E+04	9.9670E+04	1.5825E+05	2.2534E+05	2.9890E+05	4.2111E+05	5.1391E+05
Y-93	0.0000E+00	0.0000E+00	5.0555E+03	9.9391E+03	1.4655E+04	1.9208E+04	2.3601E+04	2.7840E+04	2.6901E+04	2.5993E+04
Zr-95	0.0000E+00	0.0000E+00	5.2773E+03	1.0553E+04	1.5828E+04	2.1102E+04	2.6374E+04	3.1646E+04	3.1639E+04	3.1632E+04
Zr-97	0.0000E+00	0.0000E+00	5.3107E+03	1.0513E+04	1.5609E+04	2.0599E+04	2.5487E+04	3.0272E+04	2.9657E+04	2.9055E+04
Nb-95	0.0000E+00	0.0000E+00	5.3061E+03	1.0612E+04	1.5918E+04	2.1224E+04	2.6530E+04	3.1836E+04	3.1836E+04	3.1835E+04
Mo-99	0.0000E+00	0.0000E+00	7.4061E+04	1.4773E+05	2.2102E+05	2.9392E+05	3.6644E+05	4.3857E+05	4.3627E+05	4.3399E+05
Tc-99m	0.0000E+00	0.0000E+00	6.5404E+04	1.3081E+05	1.9620E+05	2.6156E+05	3.2689E+05	3.9216E+05	3.9188E+05	3.9150E+05
Ru-103	0.0000E+00	0.0000E+00	6.1735E+04	1.2345E+05	1.8514E+05	2.4681E+05	3.0845E+05	3.7007E+05	3.6994E+05	3.6980E+05
Ru-105	0.0000E+00	0.0000E+00	3.8021E+04	7.3138E+04	1.0551E+05	1.3529E+05	1.6264E+05	1.8770E+05	1.7361E+05	1.6057E+05
Ru-106	0.0000E+00	0.0000E+00	2.5430E+04	5.0858E+04	7.6286E+04	1.0171E+05	1.2714E+05	1.5256E+05	1.5256E+05	1.5255E+05
Rh-105	0.0000E+00	0.0000E+00	4.0453E+04	8.0876E+04	1.2125E+05	1.6155E+05	2.0176E+05	2.4186E+05	2.4127E+05	2.4054E+05
Sb-127	0.0000E+00	0.0000E+00	8.4665E+04	1.6901E+05	2.5304E+05	3.3676E+05	4.2016E+05	5.0325E+05	5.0136E+05	4.9949E+05
Sb-129	0.0000E+00	0.0000E+00	2.2516E+05	4.3262E+05	6.2342E+05	7.9854E+05	9.5893E+05	1.1055E+06	1.0202E+06	9.4159E+05
Te-127	0.0000E+00	0.0000E+00	8.4278E+04	1.6843E+05	2.5244E+05	3.3632E+05	4.2006E+05	5.0365E+05	5.0280E+05	5.0193E+05
Te-127m	0.0000E+00	0.0000E+00	1.1334E+04	2.2669E+04	3.4005E+04	4.5341E+04	5.6678E+04	6.8015E+04	6.8017E+04	6.8020E+04
Te-129	0.0000E+00	0.0000E+00	2.3668E+05	4.6299E+05	6.7824E+05	8.8201E+05	1.0741E+06	1.2545E+06	1.1864E+06	1.1191E+06
Te-129m	0.0000E+00	0.0000E+00	3.7260E+04	7.4524E+04	1.1179E+05	1.4906E+05	1.8634E+05	2.2361E+05	2.2361E+05	2.2361E+05
Te-131m	0.0000E+00	0.0000E+00	1.1179E+05	2.2230E+05	3.3153E+05	4.3950E+05	5.4621E+05	6.5167E+05	6.4419E+05	6.3679E+05
Te-132	0.0000E+00	0.0000E+00	1.1159E+06	2.2269E+06	3.3330E+06	4.4341E+06	5.5304E+06	6.6218E+06	6.5925E+06	6.5634E+06
I-131	2.3679E+06	4.7318E+06	8.6677E+06	1.2597E+07	1.6520E+07	2.0436E+07	2.4346E+07	2.8249E+07	2.8199E+07	2.8149E+07
I-132	3.2530E+06	6.2688E+06	1.1288E+07	1.6021E+07	2.0489E+07	2.4709E+07	2.8700E+07	3.2476E+07	2.8871E+07	2.5766E+07
I-133	4.8597E+06	9.6388E+06	1.7525E+07	2.5279E+07	3.2903E+07	4.0399E+07	4.7769E+07	5.5013E+07	5.4104E+07	5.3210E+07
I-134	4.4623E+06	7.3239E+06	1.1019E+07	1.3153E+07	1.4167E+07	1.4394E+07	1.4084E+07	1.3422E+07	9.0392E+06	6.0875E+06
I-135	4.4609E+06	8.6909E+06	1.5521E+07	2.1992E+07	2.8117E+07	3.3911E+07	3.9386E+07	4.4555E+07	4.2280E+07	4.0120E+07
Xe-133	6.5135E+03	2.5928E+04	1.4095E+05	3.0653E+05	5.2204E+05	7.8683E+05	1.1003E+06	1.4618E+06	1.6033E+06	1.7421E+06
Xe-135	7.2791E+04	2.8465E+05	1.5203E+06	3.2480E+06	5.4340E+06	8.0461E+06	1.1054E+07	1.4427E+07	1.5272E+07	1.6016E+07
Cs-134	6.4209E+05	1.2842E+06	2.1403E+06	2.9963E+06	3.8524E+06	4.7084E+06	5.5645E+06	6.4205E+06	6.4203E+06	6.4202E+06
Cs-136	1.7868E+05	3.5717E+05	5.9495E+05	8.3248E+05	1.0697E+06	1.3067E+06	1.5435E+06	1.7799E+06	1.7780E+06	1.7760E+06
Cs-137	4.0025E+05	8.0050E+05	1.3342E+06	1.8678E+06	2.4015E+06	2.9352E+06	3.4688E+06	4.0025E+06	4.0025E+06	4.0025E+06
Ba-139	0.0000E+00	0.0000E+00	4.1003E+05	7.2317E+05	9.5660E+05	1.1248E+06	1.2399E+06	1.3121E+06	1.0204E+06	7.9352E+05
Ba-140	0.0000E+00	0.0000E+00	5.7479E+05	1.1489E+06	1.7224E+06	2.2953E+06	2.8674E+06	3.4390E+06	3.4351E+06	3.4312E+06
La-140	0.0000E+00	0.0000E+00	7.5642E+03	1.7563E+04	2.9985E+04	4.4814E+04	6.2040E+04	8.1647E+04	1.1042E+05	1.3892E+05
La-141	0.0000E+00	0.0000E+00	4.7805E+03	9.1487E+03	1.3131E+04	1.6753E+04	2.0038E+04	2.3008E+04	2.1066E+04	1.9288E+04
La-142	0.0000E+00	0.0000E+00	3.8041E+03	6.7993E+03	9.1147E+03	1.0861E+04	1.2133E+04	1.3011E+04	1.0392E+04	8.2997E+03
Ce-141	0.0000E+00	0.0000E+00	1.3205E+04	2.6408E+04	3.9609E+04	5.2806E+04	6.6002E+04	7.9194E+04	7.9169E+04	7.9142E+04

Ce-143	0.0000E+00	0.0000E+00	1.2812E+04	2.5490E+04	3.8034E+04	5.0447E+04	6.2728E+04	7.4880E+04	7.4097E+04	7.3323E+04
Ce-144	0.0000E+00	0.0000E+00	1.0571E+04	2.1142E+04	3.1713E+04	4.2283E+04	5.2852E+04	6.3421E+04	6.3417E+04	6.3414E+04
Pr-143	0.0000E+00	0.0000E+00	5.0515E+03	1.0107E+04	1.5167E+04	2.0231E+04	2.5298E+04	3.0370E+04	3.0416E+04	3.0463E+04
Nd-147	0.0000E+00	0.0000E+00	2.1572E+03	4.3111E+03	6.4632E+03	8.6119E+03	1.0758E+04	1.2901E+04	1.2884E+04	1.2867E+04
Np-239	0.0000E+00	0.0000E+00	1.5722E+05	3.1348E+05	4.6877E+05	6.2312E+05	7.7651E+05	9.2896E+05	9.2329E+05	9.1764E+05
Pu-238	0.0000E+00	0.0000E+00	5.2803E+01	1.0561E+02	1.5841E+02	2.1121E+02	2.6402E+02	3.1682E+02	3.1682E+02	3.1682E+02
Pu-239	0.0000E+00	0.0000E+00	3.5284E+00	7.0570E+00	1.0586E+01	1.4115E+01	1.7645E+01	2.1174E+01	2.1176E+01	2.1177E+01
Pu-240	0.0000E+00	0.0000E+00	3.7867E+00	7.5734E+00	1.1360E+01	1.5147E+01	1.8934E+01	2.2720E+01	2.2720E+01	2.2720E+01
Pu-241	0.0000E+00	0.0000E+00	1.8175E+03	3.6350E+03	5.4525E+03	7.2700E+03	9.0875E+03	1.0905E+04	1.0905E+04	1.0905E+04
Am-241	0.0000E+00	0.0000E+00	1.1206E+00	2.2414E+00	3.3622E+00	4.4832E+00	5.6043E+00	6.7255E+00	6.7265E+00	6.7275E+00
Cm-242	0.0000E+00	0.0000E+00	2.8079E+02	5.6156E+02	8.4230E+02	1.1230E+03	1.4037E+03	1.6844E+03	1.6842E+03	1.6841E+03
Cm-244	0.0000E+00	0.0000E+00	3.0599E+01	6.1199E+01	9.1798E+01	1.2240E+02	1.5300E+02	1.8360E+02	1.8360E+02	1.8359E+02

time (hrs)	3.5000	4.0000	4.5000	5.0000	5.5000	6.0000	6.5000	7.0000	7.5000	8.0000
Co-58	1.3467E+03	1.3464E+03	1.3461E+03	1.3458E+03	1.3456E+03	1.3453E+03	1.3450E+03	1.3447E+03	1.3445E+03	1.3442E+03
Co-60	1.6140E+03	1.6140E+03	1.6140E+03	1.6139E+03	1.6139E+03	1.6139E+03	1.6139E+03	1.6139E+03	1.6139E+03	1.6139E+03
Kr-85	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00
Kr-85m	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00
Kr-87	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00
Kr-88	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00
Rb-86	5.7178E+04	5.7134E+04	5.7090E+04	5.7046E+04	5.7001E+04	5.6957E+04	5.6913E+04	5.6869E+04	5.6825E+04	5.6781E+04
Sr-89	1.9703E+06	1.9698E+06	1.9692E+06	1.9686E+06	1.9681E+06	1.9675E+06	1.9669E+06	1.9664E+06	1.9658E+06	1.9653E+06
Sr-90	2.2424E+05	2.2424E+05	2.2424E+05	2.2424E+05	2.2424E+05	2.2424E+05	2.2424E+05	2.2424E+05	2.2424E+05	2.2423E+05
Sr-91	2.0775E+06	2.0031E+06	1.9314E+06	1.8622E+06	1.7955E+06	1.7311E+06	1.6691E+06	1.6093E+06	1.5517E+06	1.4961E+06
Sr-92	1.1579E+06	1.0189E+06	8.9659E+05	7.8896E+05	6.9425E+05	6.1090E+05	5.3757E+05	4.7303E+05	4.1625E+05	3.6628E+05
Y-90	7.7566E+03	8.9264E+03	1.0090E+04	1.1247E+04	1.2398E+04	1.3543E+04	1.4681E+04	1.5814E+04	1.6940E+04	1.8060E+04
Y-91	2.5372E+04	2.5578E+04	2.5775E+04	2.5965E+04	2.6148E+04	2.6325E+04	2.6494E+04	2.6658E+04	2.6815E+04	2.6966E+04
Y-92	5.8219E+05	6.3016E+05	6.6138E+05	6.7888E+05	6.8524E+05	6.8265E+05	6.7294E+05	6.5765E+05	6.3810E+05	6.1535E+05
Y-93	2.5116E+04	2.4269E+04	2.3450E+04	2.2659E+04	2.1895E+04	2.1156E+04	2.0443E+04	1.9753E+04	1.9087E+04	1.8443E+04
Zr-95	3.1624E+04	3.1617E+04	3.1610E+04	3.1603E+04	3.1596E+04	3.1589E+04	3.1582E+04	3.1574E+04	3.1567E+04	3.1560E+04
Zr-97	2.8466E+04	2.7888E+04	2.7322E+04	2.6767E+04	2.6224E+04	2.5692E+04	2.5170E+04	2.4659E+04	2.4159E+04	2.3668E+04
Nb-95	3.1835E+04	3.1835E+04	3.1835E+04	3.1835E+04	3.1834E+04	3.1834E+04	3.1834E+04	3.1834E+04	3.1833E+04	3.1833E+04
Mo-99	4.3172E+05	4.2945E+05	4.2721E+05	4.2497E+05	4.2274E+05	4.2053E+05	4.1833E+05	4.1613E+05	4.1396E+05	4.1179E+05
Tc-99m	3.9103E+05	3.9047E+05	3.8983E+05	3.8912E+05	3.8834E+05	3.8749E+05	3.8658E+05	3.8561E+05	3.8459E+05	3.8352E+05
Ru-103	3.6966E+05	3.6953E+05	3.6939E+05	3.6926E+05	3.6912E+05	3.6898E+05	3.6885E+05	3.6871E+05	3.6858E+05	3.6844E+05
Ru-105	1.4851E+05	1.3736E+05	1.2705E+05	1.1751E+05	1.0868E+05	1.0052E+05	9.2975E+04	8.5994E+04	7.9536E+04	7.3564E+04
Ru-106	1.5254E+05	1.5254E+05	1.5253E+05	1.5253E+05	1.5252E+05	1.5251E+05	1.5251E+05	1.5250E+05	1.5250E+05	1.5249E+05
Rh-105	2.3971E+05	2.3876E+05	2.3772E+05	2.3660E+05	2.3539E+05	2.3412E+05	2.3278E+05	2.3138E+05	2.2993E+05	2.2844E+05
Sb-127	4.9762E+05	4.9575E+05	4.9390E+05	4.9205E+05	4.9021E+05	4.8837E+05	4.8654E+05	4.8472E+05	4.8291E+05	4.8110E+05
Sb-129	8.6900E+05	8.0201E+05	7.4018E+05	6.8312E+05	6.3046E+05	5.8185E+05	5.3700E+05	4.9560E+05	4.5739E+05	4.2213E+05
Te-127	5.0103E+05	5.0011E+05	4.9916E+05	4.9820E+05	4.9721E+05	4.9621E+05	4.9519E+05	4.9415E+05	4.9309E+05	4.9202E+05
Te-127m	6.8023E+04	6.8026E+04	6.8029E+04	6.8032E+04	6.8034E+04	6.8037E+04	6.8040E+04	6.8042E+04	6.8045E+04	6.8047E+04
Te-129	1.0538E+06	9.9102E+05	9.3132E+05	8.7489E+05	8.2181E+05	7.7208E+05	7.2565E+05	6.8238E+05	6.4215E+05	6.0479E+05
Te-129m	2.2360E+05	2.2358E+05	2.2356E+05	2.2353E+05	2.2349E+05	2.2346E+05	2.2341E+05	2.2337E+05	2.2331E+05	2.2326E+05
Te-131m	6.2947E+05	6.2224E+05	6.1510E+05	6.0803E+05	6.0105E+05	5.9414E+05	5.8732E+05	5.8057E+05	5.7390E+05	5.6731E+05
Te-132	6.5344E+06	6.5055E+06	6.4767E+06	6.4480E+06	6.4195E+06	6.3911E+06	6.3629E+06	6.3347E+06	6.3067E+06	6.2788E+06
I-131	2.8100E+07	2.8050E+07	2.8001E+07	2.7951E+07	2.7902E+07	2.7853E+07	2.7804E+07	2.7754E+07	2.7705E+07	2.7657E+07
I-132	2.3092E+07	2.0788E+07	1.8802E+07	1.7089E+07	1.5612E+07	1.4338E+07	1.3238E+07	1.2288E+07	1.1466E+07	1.0756E+07
I-133	5.2331E+07	5.1466E+07	5.0616E+07	4.9779E+07	4.8957E+07	4.8148E+07	4.7352E+07	4.6570E+07	4.5800E+07	4.5043E+07
I-134	4.0997E+06	2.7610E+06	1.8594E+06	1.2522E+06	8.4332E+05	4.8148E+05	3.8248E+05	2.5759E+05	1.7347E+05	1.1683E+05
I-135	3.8071E+07	3.6126E+07	3.4281E+07	3.2529E+07	3.0868E+07	2.9291E+07	2.7795E+07	2.6375E+07	2.5028E+07	2.3749E+07

Te-127	4.8759E+05	4.8296E+05	4.7940E+05	4.7638E+05	4.7299E+05	4.6928E+05	4.6531E+05	4.6112E+05	4.4766E+05	4.3344E+05
Te-127m	6.8057E+04	6.8065E+04	6.8074E+04	6.8081E+04	6.8088E+04	6.8094E+04	6.8100E+04	6.8105E+04	6.8116E+04	6.8122E+04
Te-129	4.8080E+05	3.9002E+05	3.6506E+05	3.4035E+05	3.0630E+05	2.7666E+05	2.5359E+05	2.3632E+05	2.0728E+05	1.9554E+05
Te-129m	2.2301E+05	2.2273E+05	2.2242E+05	2.2209E+05	2.2174E+05	2.2139E+05	2.2103E+05	2.2067E+05	2.1955E+05	2.1843E+05
Te-131m	5.4169E+05	5.1723E+05	4.9387E+05	4.7157E+05	4.5028E+05	4.2994E+05	4.1053E+05	3.9199E+05	3.4125E+05	2.9707E+05
Te-132	6.1685E+06	6.0601E+06	5.9536E+06	5.8490E+06	5.7463E+06	5.6453E+06	5.5461E+06	5.4486E+06	5.1664E+06	4.8988E+06
I-131	2.7462E+07	2.7268E+07	2.7076E+07	2.6885E+07	2.6695E+07	2.6506E+07	2.6319E+07	2.6132E+07	2.5581E+07	2.5041E+07
I-132	8.7443E+06	7.5931E+06	7.1602E+06	7.0109E+06	6.8749E+06	6.7471E+06	6.6247E+06	6.5062E+06	6.1671E+06	5.8474E+06
I-133	4.2139E+07	3.9422E+07	3.6880E+07	3.4502E+07	3.2278E+07	3.0197E+07	2.8250E+07	2.6428E+07	2.1639E+07	1.7717E+07
I-134	2.4031E+04	4.9433E+03	1.0169E+03	2.0917E+02	4.3027E+01	8.8507E+00	1.8206E+00	3.7450E-01	3.2597E-03	2.8372E-05
I-135	1.9256E+07	1.5613E+07	1.2659E+07	1.0264E+07	8.3222E+06	6.7476E+06	5.4710E+06	4.4359E+06	2.3645E+06	1.2603E+06
Xe-133	3.4161E+06	3.8118E+06	4.1759E+06	4.5102E+06	4.8164E+06	5.0963E+06	5.3516E+06	5.5842E+06	6.1595E+06	6.5789E+06
Xe-135	1.9101E+07	1.8490E+07	1.7604E+07	1.6537E+07	1.5352E+07	1.4116E+07	1.2878E+07	1.1671E+07	8.4288E+06	5.8899E+06
Cs-134	6.4185E+06	6.4180E+06	6.4175E+06	6.4170E+06	6.4165E+06	6.4160E+06	6.4155E+06	6.4151E+06	6.4136E+06	6.4121E+06
Cs-136	1.7488E+06	1.7411E+06	1.7335E+06	1.7258E+06	1.7183E+06	1.7107E+06	1.7032E+06	1.6957E+06	1.6734E+06	1.6514E+06
Cs-137	4.0024E+06	4.0024E+06	4.0024E+06	4.0023E+06	4.0023E+06	4.0023E+06	4.0023E+06	4.0023E+06	4.0022E+06	4.0021E+06
Ba-139	2.3483E+04	8.5891E+03	3.1415E+03	1.1491E+03	4.2028E+02	1.5372E+02	5.6225E+01	2.0565E+01	1.0063E+00	4.9239E-02
Ba-140	3.3772E+06	3.3619E+06	3.3467E+06	3.3316E+06	3.3165E+06	3.3015E+06	3.2866E+06	3.2717E+06	3.2275E+06	3.1839E+06
La-140	5.0981E+05	6.0668E+05	7.0025E+05	7.9052E+05	8.7721E+05	9.6046E+05	1.0404E+06	1.1171E+06	1.3290E+06	1.5158E+06
La-141	5.6117E+03	3.9437E+03	2.7714E+03	1.9476E+03	1.3687E+03	9.6187E+02	6.7596E+02	4.7503E+02	1.6487E+02	5.7220E+01
La-142	3.5663E+02	1.4511E+02	5.9043E+01	2.4024E+01	9.7751E+00	3.9774E+00	1.6183E+00	6.5848E-01	4.4358E-02	2.9881E-03
Ce-141	7.8720E+04	7.8589E+04	7.8455E+04	7.8320E+04	7.8184E+04	7.8047E+04	7.7910E+04	7.7773E+04	7.7361E+04	7.6950E+04
Ce-143	6.3298E+04	6.0694E+04	5.8197E+04	5.5803E+04	5.3507E+04	5.1306E+04	4.9195E+04	4.7171E+04	4.1586E+04	3.6662E+04
Ce-144	6.3369E+04	6.3356E+04	6.3343E+04	6.3330E+04	6.3318E+04	6.3305E+04	6.3292E+04	6.3279E+04	6.3240E+04	6.3202E+04
Pr-143	3.1021E+04	3.1152E+04	3.1273E+04	3.1382E+04	3.1482E+04	3.1571E+04	3.1650E+04	3.1721E+04	3.1881E+04	3.1973E+04
Nd-147	1.2632E+04	1.2566E+04	1.2500E+04	1.2434E+04	1.2369E+04	1.2304E+04	1.2240E+04	1.2176E+04	1.1985E+04	1.1797E+04
Np-239	8.4215E+05	8.2175E+05	8.0184E+05	7.8241E+05	7.6345E+05	7.4495E+05	7.2690E+05	7.0929E+05	6.5897E+05	6.1223E+05
Pu-238	3.1683E+02	3.1683E+02	3.1683E+02	3.1684E+02	3.1684E+02	3.1684E+02	3.1684E+02	3.1685E+02	3.1685E+02	3.1686E+02
Pu-239	2.1197E+01	2.1203E+01	2.1208E+01	2.1213E+01	2.1219E+01	2.1223E+01	2.1228E+01	2.1233E+01	2.1247E+01	2.1259E+01
Pu-240	2.2720E+01	2.2720E+01	2.2720E+01	2.2720E+01	2.2720E+01	2.2720E+01	2.2720E+01	2.2720E+01	2.2720E+01	2.2720E+01
Pu-241	1.0904E+04	1.0904E+04	1.0904E+04	1.0904E+04	1.0904E+04	1.0904E+04	1.0904E+04	1.0904E+04	1.0903E+04	1.0903E+04
Am-241	6.7415E+00	6.7454E+00	6.7494E+00	6.7534E+00	6.7574E+00	6.7614E+00	6.7654E+00	6.7694E+00	6.7813E+00	6.7933E+00
Cm-242	1.6820E+03	1.6814E+03	1.6808E+03	1.6802E+03	1.6796E+03	1.6790E+03	1.6784E+03	1.6778E+03	1.6760E+03	1.6742E+03
Cm-244	1.8359E+02	1.8359E+02	1.8359E+02	1.8358E+02	1.8358E+02	1.8358E+02	1.8358E+02	1.8358E+02	1.8357E+02	1.8357E+02
time (hrs)	42.0000	48.0000	54.0000	60.0000	66.0000	72.0000	78.0000	84.0000	90.0000	96.0000
Co-58	1.3257E+03	1.3224E+03	1.3192E+03	1.3160E+03	1.3128E+03	1.3095E+03	1.3063E+03	1.3032E+03	1.3000E+03	1.2968E+03
Co-60	1.6130E+03	1.6129E+03	1.6128E+03	1.6126E+03	1.6125E+03	1.6123E+03	1.6122E+03	1.6120E+03	1.6119E+03	1.6117E+03
Kr-85	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00
Kr-85m	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00
Kr-87	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00
Kr-88	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00
Rb-86	5.3871E+04	5.3373E+04	5.2879E+04	5.2390E+04	5.1906E+04	5.1426E+04	5.0951E+04	5.0480E+04	5.0013E+04	4.9551E+04
Sr-89	1.9274E+06	1.9208E+06	1.9142E+06	1.9077E+06	1.9011E+06	1.8946E+06	1.8881E+06	1.8817E+06	1.8752E+06	1.8688E+06
Sr-90	2.2421E+05	2.2421E+05	2.2421E+05	2.2420E+05	2.2420E+05	2.2420E+05	2.2419E+05	2.2419E+05	2.2418E+05	2.2418E+05
Sr-91	1.2519E+05	8.0810E+04	5.2160E+04	3.3668E+04	2.1732E+04	1.4027E+04	9.0540E+03	5.8441E+03	3.7722E+03	2.4348E+03
Sr-92	6.1242E+01	1.3200E+01	2.8450E+00	6.1318E-01	1.3216E-01	2.8485E-02	6.1394E-03	1.3232E-03	2.8520E-04	6.1471E-05
Y-90	8.1901E+04	9.0932E+04	9.9393E+04	1.0732E+05	1.1475E+05	1.2172E+05	1.2824E+05	1.3435E+05	1.4008E+05	1.4545E+05
Y-91	3.0369E+04	3.0405E+04	3.0396E+04	3.0359E+04	3.0303E+04	3.0235E+04	3.0160E+04	3.0080E+04	2.9997E+04	2.9912E+04
Y-92	2.2306E+03	7.0962E+02	2.2363E+02	7.0032E+01	2.1838E+01	6.7896E+00	2.1067E+00	6.5278E-01	2.0207E-01	6.2510E-02
Y-93	1.7884E+03	1.1848E+03	7.8488E+02	5.1997E+02	3.4447E+02	2.2820E+02	1.5118E+02	1.0015E+02	6.6348E+01	4.3954E+01

La-140	9.7517E+05	8.7467E+05	7.8451E+05	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00
La-141	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00
La-142	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00
Ce-141	4.5634E+04	4.3728E+04	4.1902E+04	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00
Ce-143	1.5864E-01	5.7882E-02	2.1119E-02	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00
Ce-144	5.9537E+04	5.9247E+04	5.8959E+04	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00
Pr-143	1.0322E+04	9.3193E+03	8.4136E+03	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00
Nd-147	2.5124E+03	2.2144E+03	1.9517E+03	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00
Np-239	4.5204E+02	2.5091E+02	1.3927E+02	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00
Pu-238	3.1754E+02	3.1759E+02	3.1764E+02	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00
Pu-239	2.1423E+01	2.1423E+01	2.1423E+01	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00
Pu-240	2.2721E+01	2.2722E+01	2.2722E+01	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00
Pu-241	1.0868E+04	1.0865E+04	1.0862E+04	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00
Am-241	7.9635E+00	8.0588E+00	8.1542E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00
Cm-242	1.5084E+03	1.4956E+03	1.4829E+03	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00
Cm-244	1.8310E+02	1.8306E+02	1.8302E+02	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00

	INTEGRATED SOURCE IN CURIE-HOURS										
	0.2500	0.5000	0.7500	1.0000	1.2500	1.5000	1.7500	2.0000	2.5000	3.0000	
Co-58	0.0000E+00	0.0000E+00	2.8086E+01	1.1234E+02	2.5275E+02	4.4931E+02	7.0200E+02	1.0108E+03	1.6845E+03	2.3580E+03	
Co-60	0.0000E+00	0.0000E+00	3.3626E+01	1.3450E+02	3.0263E+02	5.3801E+02	8.4063E+02	1.2105E+03	2.0175E+03	2.8245E+03	
Kr-85	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	
Kr-85m	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	
Kr-87	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	
Kr-88	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	
Rb-86	7.1834E+02	2.8728E+03	6.7016E+03	1.2443E+04	2.0094E+04	2.9655E+04	4.1124E+04	5.4499E+04	8.3144E+04	1.1177E+05	
Sr-89	0.0000E+00	0.0000E+00	4.1113E+04	1.6444E+05	3.6996E+05	6.5765E+05	1.0275E+06	1.4794E+06	2.4653E+06	3.4509E+06	
Sr-90	0.0000E+00	0.0000E+00	4.6716E+03	1.8687E+04	4.2045E+04	7.4746E+04	1.1679E+05	1.6818E+05	2.8030E+05	3.9242E+05	
Sr-91	0.0000E+00	0.0000E+00	5.2899E+04	2.0968E+05	4.6658E+05	8.1992E+05	1.2661E+06	1.8017E+06	2.9399E+06	4.0373E+06	
Sr-92	0.0000E+00	0.0000E+00	4.8743E+04	1.8893E+05	4.0905E+05	6.9866E+05	1.0483E+06	1.4495E+06	2.2482E+06	2.9510E+06	
Y-90	0.0000E+00	0.0000E+00	5.6597E+01	2.3887E+02	5.7175E+02	1.0801E+03	1.7887E+03	2.7223E+03	5.1240E+03	8.1186E+03	
Y-91	0.0000E+00	0.0000E+00	5.0861E+02	2.0370E+03	4.5903E+03	8.1735E+03	1.2791E+04	1.8448E+04	3.0859E+04	4.3383E+04	
Y-92	0.0000E+00	0.0000E+00	2.2149E+03	1.0923E+04	2.9875E+04	6.2115E+04	1.1006E+05	1.7559E+05	3.5560E+05	5.8935E+05	
Y-93	0.0000E+00	0.0000E+00	6.3194E+02	2.5063E+03	5.5805E+03	9.8134E+03	1.5165E+04	2.1595E+04	3.5280E+04	4.8503E+04	
Zr-95	0.0000E+00	0.0000E+00	6.5966E+02	2.6384E+03	5.9361E+03	1.0552E+04	1.6487E+04	2.3739E+04	3.9561E+04	5.5378E+04	
Zr-97	0.0000E+00	0.0000E+00	6.6384E+02	2.6418E+03	5.9071E+03	1.0433E+04	1.6194E+04	2.3164E+04	3.8146E+04	5.2824E+04	
Nb-95	0.0000E+00	0.0000E+00	6.6326E+02	2.6530E+03	5.9693E+03	1.0612E+04	1.6581E+04	2.3877E+04	3.9795E+04	5.5713E+04	
Mo-99	0.0000E+00	0.0000E+00	9.2576E+03	3.6982E+04	8.3075E+04	1.4744E+05	2.2999E+05	3.3061E+05	5.4932E+05	7.6689E+05	
Tc-99m	0.0000E+00	0.0000E+00	8.1755E+03	3.2702E+04	7.3579E+04	1.3080E+05	2.0435E+05	2.9424E+05	4.9025E+05	6.8609E+05	
Ru-103	0.0000E+00	0.0000E+00	7.7169E+03	3.0865E+04	6.9439E+04	1.2343E+05	1.9284E+05	2.7765E+05	4.6266E+05	6.4759E+05	
Ru-105	0.0000E+00	0.0000E+00	4.7530E+03	1.8648E+04	4.0979E+04	7.1079E+04	1.0832E+05	1.5211E+05	2.4244E+05	3.2599E+05	
Ru-106	0.0000E+00	0.0000E+00	3.1787E+03	1.2715E+04	2.8608E+04	5.0857E+04	7.9464E+04	1.1443E+05	1.9071E+05	2.6698E+05	
Rh-105	0.0000E+00	0.0000E+00	5.0566E+03	2.0223E+04	4.5488E+04	8.0839E+04	1.2625E+05	1.8170E+05	3.0249E+05	4.2294E+05	
Sb-127	0.0000E+00	0.0000E+00	1.0583E+04	4.2292E+04	9.5049E+04	1.6877E+05	2.6339E+05	3.7882E+05	6.2997E+05	8.8018E+05	
Sb-129	0.0000E+00	0.0000E+00	2.8145E+04	1.1037E+05	2.4237E+05	4.2012E+05	6.3980E+05	8.9785E+05	1.4293E+06	1.9197E+06	
Te-127	0.0000E+00	0.0000E+00	1.0535E+04	4.2123E+04	9.4732E+04	1.6833E+05	2.6287E+05	3.7834E+05	6.2995E+05	8.8113E+05	
Te-127m	0.0000E+00	0.0000E+00	1.4168E+03	5.6671E+03	1.2751E+04	2.2670E+04	3.5422E+04	5.1009E+04	8.5017E+04	1.1903E+05	
Te-129	0.0000E+00	0.0000E+00	2.9585E+04	1.1704E+05	2.5970E+05	4.5473E+05	6.9924E+05	9.9032E+05	1.6005E+06	2.1769E+06	

Te-129m	0.0000E+00	0.0000E+00	4.6575E+03	1.8630E+04	4.1920E+04	7.4526E+04	1.1645E+05	1.6769E+05	2.7950E+05	3.9130E+05
Te-131m	0.0000E+00	0.0000E+00	1.3974E+04	5.5735E+04	1.2496E+05	2.2134E+05	3.4456E+05	4.9429E+05	8.1826E+05	1.1385E+06
Te-132	0.0000E+00	0.0000E+00	1.3949E+05	5.5734E+05	1.2523E+06	2.2232E+06	3.4688E+06	4.9878E+06	8.2914E+06	1.1580E+07
I-131	2.9599E+05	1.1835E+06	2.8584E+06	5.5165E+06	9.1561E+06	1.3776E+07	1.9373E+07	2.5948E+07	4.0060E+07	5.4147E+07
I-132	4.0663E+05	1.5968E+06	3.7915E+06	7.2051E+06	1.1769E+07	1.7419E+07	2.4095E+07	3.1742E+07	4.7078E+07	6.0738E+07
I-133	6.0746E+05	2.4198E+06	5.8152E+06	1.1166E+07	1.8438E+07	2.7601E+07	3.8622E+07	5.1470E+07	7.8749E+07	1.0558E+08
I-134	5.5779E+05	2.0311E+06	4.3239E+06	7.3454E+06	1.0760E+07	1.4331E+07	1.7890E+07	2.1329E+07	2.6944E+07	3.0726E+07
I-135	5.5761E+05	2.2016E+06	5.2281E+06	9.9172E+06	1.6181E+07	2.3934E+07	3.3096E+07	4.3589E+07	6.5298E+07	8.5898E+07
Xe-133	8.1419E+02	4.8694E+03	2.5729E+04	8.1664E+04	1.8524E+05	3.4884E+05	5.8474E+05	9.0500E+05	1.6713E+06	2.5076E+06
Xe-135	9.0989E+03	5.3779E+04	2.7940E+05	8.7544E+05	1.9607E+06	3.6457E+06	6.0332E+06	9.2183E+06	1.6643E+07	2.4465E+07
Cs-134	8.0261E+04	3.2105E+05	7.4911E+05	1.3912E+06	2.2473E+06	3.3174E+06	4.6015E+06	6.0996E+06	9.3098E+06	1.2520E+07
Cs-136	2.2335E+04	8.9316E+04	2.0833E+05	3.8676E+05	6.2453E+05	9.2158E+05	1.2779E+06	1.6933E+06	2.5828E+06	3.4713E+06
Cs-137	5.0031E+04	2.0013E+05	4.6696E+05	8.6721E+05	1.4009E+06	2.0680E+06	2.8685E+06	3.8024E+06	5.8036E+06	7.8049E+06
Ba-139	0.0000E+00	0.0000E+00	5.1254E+04	1.9290E+05	4.0287E+05	6.6305E+05	9.5864E+05	1.2776E+06	1.8608E+06	2.3142E+06
Ba-140	0.0000E+00	0.0000E+00	7.1849E+04	2.8731E+05	6.4622E+05	1.1484E+06	1.7938E+06	2.5821E+06	4.3006E+06	6.0172E+06
La-140	0.0000E+00	0.0000E+00	9.4552E+02	4.0864E+03	1.0030E+04	1.9380E+04	3.2737E+04	5.0697E+04	9.8714E+04	1.6105E+05
La-141	0.0000E+00	0.0000E+00	5.9756E+02	2.3387E+03	5.1237E+03	8.8592E+03	1.3458E+04	1.8839E+04	2.9857E+04	3.5946E+04
La-142	0.0000E+00	0.0000E+00	4.7551E+02	1.8009E+03	3.7902E+03	6.2872E+03	9.1614E+03	1.2304E+04	1.8155E+04	2.2828E+04
Ce-141	0.0000E+00	0.0000E+00	1.6506E+03	6.6023E+03	1.4854E+04	2.6406E+04	4.1257E+04	5.9407E+04	9.8998E+04	1.3858E+05
Ce-143	0.0000E+00	0.0000E+00	1.6015E+03	6.3893E+03	1.4330E+04	2.5390E+04	3.9537E+04	5.6738E+04	9.3982E+04	1.3084E+05
Ce-144	0.0000E+00	0.0000E+00	1.3214E+03	5.2855E+03	1.1892E+04	2.1142E+04	3.3034E+04	4.7568E+04	7.9277E+04	1.1099E+05
Pr-143	0.0000E+00	0.0000E+00	6.3144E+02	2.5262E+03	5.6855E+03	1.0110E+04	1.5801E+04	2.2760E+04	3.7956E+04	5.3176E+04
Nd-147	0.0000E+00	0.0000E+00	2.6965E+02	1.0783E+03	2.4251E+03	4.3095E+03	6.7307E+03	9.6881E+03	1.6134E+04	2.2572E+04
Np-239	0.0000E+00	0.0000E+00	1.9652E+04	7.8490E+04	1.7627E+05	3.1276E+05	4.8771E+05	7.0090E+05	1.1640E+06	1.6242E+06
Pu-238	0.0000E+00	0.0000E+00	6.6004E+00	2.6402E+01	5.9405E+01	1.0561E+02	1.6501E+02	2.3762E+02	3.9603E+02	5.5444E+02
Pu-239	0.0000E+00	0.0000E+00	4.4105E-01	1.7642E+00	3.9696E+00	7.0572E+00	1.1027E+01	1.5880E+01	2.6467E+01	3.7055E+01
Pu-240	0.0000E+00	0.0000E+00	4.7334E-01	1.8934E+00	4.2600E+00	7.5734E+00	1.1834E+01	1.7040E+01	2.8400E+01	3.9760E+01
Pu-241	0.0000E+00	0.0000E+00	2.2719E+02	9.0875E+02	2.0447E+03	3.6350E+03	5.6797E+03	8.1788E+03	1.3631E+04	1.9084E+04
Am-241	0.0000E+00	0.0000E+00	1.4008E-01	5.6033E-01	1.2608E+00	2.2415E+00	3.5024E+00	5.0436E+00	8.4066E+00	1.1770E+01
Cm-242	0.0000E+00	0.0000E+00	3.5099E+01	1.4039E+02	3.1587E+02	5.6154E+02	8.7738E+02	1.2634E+03	2.1055E+03	2.9476E+03
Cm-244	0.0000E+00	0.0000E+00	3.8249E+00	1.5300E+01	3.4424E+01	6.1199E+01	9.5624E+01	1.3770E+02	2.2950E+02	3.2130E+02
	3.5000	4.0000	4.5000	5.0000	5.5000	6.0000	6.5000	7.0000	7.5000	8.0000
Co-58	3.0314E+03	3.7047E+03	4.3778E+03	5.0508E+03	5.7236E+03	6.3964E+03	7.0689E+03	7.7414E+03	8.4137E+03	9.0858E+03
Co-60	3.6315E+03	4.4385E+03	5.2455E+03	6.0525E+03	6.8594E+03	7.6664E+03	8.4733E+03	9.2803E+03	1.0087E+04	1.0894E+04
Kr-85	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00
Kr-85m	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00
Kr-87	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00
Kr-88	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00
Rb-86	1.4037E+05	1.6894E+05	1.9750E+05	2.2603E+05	2.5455E+05	2.8304E+05	3.1150E+05	3.3995E+05	3.6837E+05	3.9677E+05
Sr-89	4.4362E+06	5.4212E+06	6.4059E+06	7.3904E+06	8.3746E+06	9.3585E+06	1.0342E+07	1.1325E+07	1.2308E+07	1.3291E+07
Sr-90	5.0454E+05	6.1666E+05	7.2878E+05	8.4090E+05	9.5302E+05	1.0651E+06	1.1773E+06	1.2894E+06	1.4015E+06	1.5136E+06
Sr-91	5.0953E+06	6.1155E+06	7.0991E+06	8.0475E+06	8.9619E+06	9.8436E+06	1.0694E+07	1.1513E+07	1.2303E+07	1.3065E+07
Sr-92	3.5694E+06	4.1136E+06	4.5925E+06	5.0139E+06	5.3847E+06	5.7110E+06	5.9981E+06	6.2507E+06	6.4731E+06	6.6687E+06
Y-90	1.1703E+04	1.5874E+04	2.0628E+04	2.5962E+04	3.1873E+04	3.8359E+04	4.5415E+04	5.3038E+04	6.1227E+04	6.9977E+04
Y-91	5.6016E+04	6.8754E+04	8.1592E+04	9.4527E+04	1.0756E+05	1.2067E+05	1.3388E+05	1.4717E+05	1.6053E+05	1.7398E+05
Y-92	8.6338E+05	1.1665E+06	1.4893E+06	1.8244E+06	2.1654E+06	2.5074E+06	2.8463E+06	3.1790E+06	3.5029E+06	3.8163E+06
Y-93	6.1281E+04	7.3627E+04	8.5557E+04	9.7084E+04	1.0822E+05	1.1899E+05	1.2938E+05	1.3943E+05	1.4914E+05	1.5853E+05
Zr-95	7.1192E+04	8.7003E+04	1.0281E+05	1.1861E+05	1.3441E+05	1.5021E+05	1.6600E+05	1.8179E+05	1.9758E+05	2.1336E+05
Zr-97	6.7204E+04	8.1293E+04	9.5095E+04	1.0862E+05	1.2187E+05	1.3484E+05	1.4756E+05	1.6002E+05	1.7222E+05	1.8418E+05
Nb-95	7.1630E+04	8.7548E+04	1.0347E+05	1.1938E+05	1.3530E+05	1.5122E+05	1.6713E+05	1.8305E+05	1.9897E+05	2.1488E+05

I-135	4.7062E+08	4.7062E+08	4.7062E+08	4.7062E+08	4.7062E+08	4.7062E+08	4.7062E+08	4.7062E+08	4.7062E+08	4.7062E+08
Xe-133	8.7177E+08	1.1029E+09	1.2819E+09	1.4196E+09	1.5254E+09	1.6067E+09	1.6690E+09	1.7169E+09	1.7537E+09	1.7819E+09
Xe-135	5.6752E+08	5.6758E+08	5.6758E+08	5.6758E+08	5.6758E+08	5.6758E+08	5.6758E+08	5.6758E+08	5.6758E+08	5.6758E+08
Cs-134	9.1533E+08	1.2216E+09	1.5272E+09	1.8323E+09	2.1369E+09	2.4408E+09	2.7443E+09	3.0471E+09	3.3494E+09	3.6512E+09
Cs-136	2.1877E+08	2.7811E+08	3.3148E+08	3.7950E+08	4.2269E+08	4.6155E+08	4.9651E+08	5.2795E+08	5.5624E+08	5.8169E+08
Cs-137	5.7205E+08	7.6409E+08	9.5610E+08	1.1481E+09	1.3401E+09	1.5320E+09	1.7239E+09	1.9158E+09	2.1077E+09	2.2995E+09
Ba-139	3.9104E+06	3.9104E+06	3.9104E+06	3.9104E+06	3.9104E+06	3.9104E+06	3.9104E+06	3.9104E+06	3.9104E+06	3.9104E+06
Ba-140	4.2025E+08	5.3372E+08	6.3549E+08	7.2677E+08	8.0864E+08	8.8207E+08	9.4792E+08	1.0070E+09	1.0600E+09	1.1075E+09
La-140	2.7581E+08	3.9588E+08	5.0897E+08	6.1275E+08	7.0687E+08	7.9173E+08	8.6804E+08	9.3657E+08	9.9807E+08	1.0533E+09
La-141	1.5003E+05	1.5003E+05	1.5003E+05	1.5003E+05	1.5003E+05	1.5003E+05	1.5003E+05	1.5003E+05	1.5003E+05	1.5003E+05
La-142	4.1488E+04	4.1488E+04	4.1488E+04	4.1488E+04	4.1488E+04	4.1488E+04	4.1488E+04	4.1488E+04	4.1488E+04	4.1488E+04
Ce-141	1.0640E+07	1.3925E+07	1.7074E+07	2.0091E+07	2.2981E+07	2.5752E+07	2.8406E+07	3.0950E+07	3.3387E+07	3.5723E+07
Ce-143	3.4697E+06	3.5940E+06	3.6393E+06	3.6559E+06	3.6619E+06	3.6641E+06	3.6649E+06	3.6652E+06	3.6653E+06	3.6653E+06
Ce-144	8.9886E+06	1.1982E+07	1.4961E+07	1.7925E+07	2.0875E+07	2.3810E+07	2.6731E+07	2.9638E+07	3.2531E+07	3.5410E+07
Pr-143	4.3963E+06	5.6926E+06	6.8705E+06	7.9367E+06	8.9002E+06	9.7705E+06	1.0556E+07	1.1266E+07	1.1907E+07	1.2485E+07
Nd-147	1.5390E+06	1.9400E+06	2.2934E+06	2.6048E+06	2.8794E+06	3.1214E+06	3.3346E+06	3.5226E+06	3.6883E+06	3.8343E+06
Np-239	6.3495E+07	6.9572E+07	7.2945E+07	7.4817E+07	7.5856E+07	7.6433E+07	7.6753E+07	7.7029E+07	7.7084E+07	7.7084E+07
Pu-238	4.5238E+04	6.0455E+04	7.5675E+04	9.0897E+04	1.0612E+05	1.2135E+05	1.3658E+05	1.5181E+05	1.6705E+05	1.8229E+05
Pu-239	3.0411E+03	4.0678E+03	5.0952E+03	6.1230E+03	7.1511E+03	8.1792E+03	9.2075E+03	1.0236E+04	1.1264E+04	1.2292E+04
Pu-240	3.2433E+03	4.3339E+03	5.4245E+03	6.5152E+03	7.6058E+03	8.6964E+03	9.7870E+03	1.0878E+04	1.1968E+04	1.3059E+04
Pu-241	1.5561E+06	2.0790E+06	2.6019E+06	3.1246E+06	3.6471E+06	4.1695E+06	4.6918E+06	5.2139E+06	5.7359E+06	6.2577E+06
Am-241	9.8016E+02	1.3189E+03	1.6622E+03	2.0100E+03	2.3625E+03	2.7196E+03	3.0812E+03	3.4474E+03	3.8182E+03	4.1936E+03
Cm-242	2.3746E+05	3.1596E+05	3.9380E+05	4.7097E+05	5.4750E+05	6.2337E+05	6.9861E+05	7.7320E+05	8.4716E+05	9.2050E+05
Cm-244	2.6200E+04	3.5006E+04	4.3810E+04	5.2613E+04	6.1414E+04	7.0212E+04	7.9009E+04	8.7804E+04	9.6598E+04	1.0539E+05
Co-58	624.0000	672.0000	720.0000	no data	no data	no data	no data	no data	no data	no data
Co-60	7.4128E+05	7.9098E+05	8.3971E+05	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00
Kr-85	1.0005E+06	1.0772E+06	1.1539E+06	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00
Kr-85m	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00
Kr-87	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00
Kr-88	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00
Rb-86	2.2952E+07	2.3964E+07	2.4905E+07	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00
Sr-89	1.0337E+09	1.0991E+09	1.1628E+09	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00
Sr-90	1.3953E+08	1.5027E+08	1.6101E+08	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00
Sr-91	3.3725E+07	3.3725E+07	3.3725E+07	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00
Sr-92	8.1358E+06	8.1358E+06	8.1358E+06	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00
Y-90	1.1956E+08	1.3036E+08	1.4116E+08	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00
Y-91	1.6713E+07	1.7806E+07	1.8874E+07	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00
Y-92	8.4889E+06	8.4889E+06	8.4889E+06	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00
Y-93	4.2930E+05	4.2930E+05	4.2930E+05	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00
Zr-95	1.7186E+07	1.8321E+07	1.9431E+07	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00
Zr-97	7.6758E+05	7.6758E+05	7.6758E+05	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00
Nb-95	1.9374E+07	2.0803E+07	2.2220E+07	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00
Mo-99	4.2363E+07	4.2387E+07	4.2402E+07	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00
Tc-99m	4.2674E+07	4.2700E+07	4.2715E+07	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00
Ru-103	1.8503E+08	1.9608E+08	2.0674E+08	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00
Ru-105	1.3611E+06	1.3611E+06	1.3611E+06	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00
Ru-106	9.2731E+07	9.9693E+07	1.0663E+08	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00
Rh-105	1.3891E+07	1.3891E+07	1.3891E+07	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00
Sb-127	6.7187E+07	6.7380E+07	6.7515E+07	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00

Sb-129	7.8261E+06	7.8261E+06	7.8261E+06	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00
Te-127	1.0412E+08	1.0725E+08	1.1028E+08	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00
Te-127m	4.0516E+07	4.3400E+07	4.6248E+07	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00
Te-129	1.0180E+08	1.0716E+08	1.1230E+08	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00
Te-129m	1.0853E+08	1.1473E+08	1.2068E+08	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00
Te-131m	2.9045E+07	2.9045E+07	2.9046E+07	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00
Te-132	7.5395E+08	7.5501E+08	7.5570E+08	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00
I-131	7.0791E+09	7.2132E+09	7.3261E+09	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00
I-132	9.9799E+08	9.9926E+08	1.0001E+09	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00
I-133	1.7197E+09	1.7197E+09	1.7197E+09	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00
I-134	3.8552E+07	3.8552E+07	3.8552E+07	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00
I-135	4.7062E+08	4.7062E+08	4.7062E+08	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00
Xe-133	1.8036E+09	1.8202E+09	1.8330E+09	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00
Xe-135	5.6758E+08	5.6758E+08	5.6758E+08	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00
Cs-134	3.9524E+09	4.2530E+09	4.5531E+09	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00
Cs-136	6.0458E+08	6.2518E+08	6.4370E+08	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00
Cs-137	2.4913E+09	2.6831E+09	2.8749E+09	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00
Ba-139	3.9104E+06	3.9104E+06	3.9104E+06	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00
Ba-140	1.1501E+09	1.1883E+09	1.2226E+09	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00
La-140	1.1027E+09	1.1471E+09	1.1870E+09	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00
La-141	1.5003E+05	1.5003E+05	1.5003E+05	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00
La-142	4.1488E+04	4.1488E+04	4.1488E+04	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00
Ce-141	3.7961E+07	4.0106E+07	4.2161E+07	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00
Ce-143	3.6654E+06	3.6654E+06	3.6654E+06	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00
Ce-144	3.8275E+07	4.1126E+07	4.3962E+07	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00
Pr-143	1.3007E+07	1.3478E+07	1.3904E+07	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00
Nd-147	3.9630E+06	4.0765E+06	4.1765E+06	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00
Np-239	7.7115E+07	7.7131E+07	7.7141E+07	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00
Pu-238	1.9753E+05	2.1277E+05	2.2802E+05	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00
Pu-239	1.3321E+04	1.4349E+04	1.5377E+04	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00
Pu-240	1.4149E+04	1.5240E+04	1.6331E+04	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00
Pu-241	6.7795E+06	7.3011E+06	7.8225E+06	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00
Am-241	4.5735E+03	4.9581E+03	5.3472E+03	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00
Cm-242	9.9321E+05	1.0653E+06	1.1368E+06	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00
Cm-244	1.1418E+05	1.2297E+05	1.3175E+05	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00

Ba-139	3.91E+06	3.91E+06	3.91E+06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Ba-140	1.15E+09	1.19E+09	1.22E+09	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
La-140	1.10E+09	1.15E+09	1.19E+09	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
La-141	1.50E+05	1.50E+05	1.50E+05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
La-142	4.15E+04	4.15E+04	4.15E+04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Ce-141	3.80E+07	4.01E+07	4.22E+07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Ce-143	3.67E+06	3.67E+06	3.67E+06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Ce-144	3.83E+07	4.11E+07	4.40E+07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Pr-143	1.30E+07	1.35E+07	1.39E+07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Nd-147	3.96E+06	4.08E+06	4.18E+06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Np-239	7.71E+07	7.71E+07	7.71E+07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Pu-238	1.98E+05	2.13E+05	2.28E+05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Pu-239	1.33E+04	1.43E+04	1.54E+04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Pu-240	1.41E+04	1.52E+04	1.63E+04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Pu-241	6.78E+06	7.30E+06	7.82E+06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Am-241	4.57E+03	4.96E+03	5.35E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Cm-242	9.93E+05	1.07E+06	1.14E+06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Cm-244	1.14E+05	1.23E+05	1.32E+05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

	I	J	K
1	Diluting Water Volume (cubic feet)		
2			
3			
4	8	24	96
5	=1000000*C5/(\$H\$1*30.48^3)	=1000000*D5/(\$H\$1*30.48^3)	=1000000*(D5+0.6*(E5-D5))/(\$H\$1*30.48^3)
6	=1000000*C6/(\$H\$1*30.48^3)	=1000000*D6/(\$H\$1*30.48^3)	=1000000*(D6+0.6*(E6-D6))/(\$H\$1*30.48^3)
7	=1000000*C7/(\$H\$1*30.48^3)	=1000000*D7/(\$H\$1*30.48^3)	=1000000*(D7+0.6*(E7-D7))/(\$H\$1*30.48^3)
8	=1000000*C8/(\$H\$1*30.48^3)	=1000000*D8/(\$H\$1*30.48^3)	=1000000*(D8+0.6*(E8-D8))/(\$H\$1*30.48^3)
9	=1000000*C9/(\$H\$1*30.48^3)	=1000000*D9/(\$H\$1*30.48^3)	=1000000*(D9+0.6*(E9-D9))/(\$H\$1*30.48^3)
10	=1000000*C10/(\$H\$1*30.48^3)	=1000000*D10/(\$H\$1*30.48^3)	=1000000*(D10+0.6*(E10-D10))/(\$H\$1*30.48^3)
11	=1000000*C11/(\$H\$1*30.48^3)	=1000000*D11/(\$H\$1*30.48^3)	=1000000*(D11+0.6*(E11-D11))/(\$H\$1*30.48^3)
12	=1000000*C12/(\$H\$1*30.48^3)	=1000000*D12/(\$H\$1*30.48^3)	=1000000*(D12+0.6*(E12-D12))/(\$H\$1*30.48^3)
13	=1000000*C13/(\$H\$1*30.48^3)	=1000000*D13/(\$H\$1*30.48^3)	=1000000*(D13+0.6*(E13-D13))/(\$H\$1*30.48^3)
14	=1000000*C14/(\$H\$1*30.48^3)	=1000000*D14/(\$H\$1*30.48^3)	=1000000*(D14+0.6*(E14-D14))/(\$H\$1*30.48^3)
15	=1000000*C15/(\$H\$1*30.48^3)	=1000000*D15/(\$H\$1*30.48^3)	=1000000*(D15+0.6*(E15-D15))/(\$H\$1*30.48^3)
16	=1000000*C16/(\$H\$1*30.48^3)	=1000000*D16/(\$H\$1*30.48^3)	=1000000*(D16+0.6*(E16-D16))/(\$H\$1*30.48^3)
17	=1000000*C17/(\$H\$1*30.48^3)	=1000000*D17/(\$H\$1*30.48^3)	=1000000*(D17+0.6*(E17-D17))/(\$H\$1*30.48^3)
18	=1000000*C18/(\$H\$1*30.48^3)	=1000000*D18/(\$H\$1*30.48^3)	=1000000*(D18+0.6*(E18-D18))/(\$H\$1*30.48^3)
19	=1000000*C19/(\$H\$1*30.48^3)	=1000000*D19/(\$H\$1*30.48^3)	=1000000*(D19+0.6*(E19-D19))/(\$H\$1*30.48^3)
20	=1000000*C20/(\$H\$1*30.48^3)	=1000000*D20/(\$H\$1*30.48^3)	=1000000*(D20+0.6*(E20-D20))/(\$H\$1*30.48^3)
21	=1000000*C21/(\$H\$1*30.48^3)	=1000000*D21/(\$H\$1*30.48^3)	=1000000*(D21+0.6*(E21-D21))/(\$H\$1*30.48^3)
22	=1000000*C22/(\$H\$1*30.48^3)	=1000000*D22/(\$H\$1*30.48^3)	=1000000*(D22+0.6*(E22-D22))/(\$H\$1*30.48^3)
23	=1000000*C23/(\$H\$1*30.48^3)	=1000000*D23/(\$H\$1*30.48^3)	=1000000*(D23+0.6*(E23-D23))/(\$H\$1*30.48^3)
24	=1000000*C24/(\$H\$1*30.48^3)	=1000000*D24/(\$H\$1*30.48^3)	=1000000*(D24+0.6*(E24-D24))/(\$H\$1*30.48^3)
25	=1000000*C25/(\$H\$1*30.48^3)	=1000000*D25/(\$H\$1*30.48^3)	=1000000*(D25+0.6*(E25-D25))/(\$H\$1*30.48^3)
26	=1000000*C26/(\$H\$1*30.48^3)	=1000000*D26/(\$H\$1*30.48^3)	=1000000*(D26+0.6*(E26-D26))/(\$H\$1*30.48^3)
27	=1000000*C27/(\$H\$1*30.48^3)	=1000000*D27/(\$H\$1*30.48^3)	=1000000*(D27+0.6*(E27-D27))/(\$H\$1*30.48^3)
28	=1000000*C28/(\$H\$1*30.48^3)	=1000000*D28/(\$H\$1*30.48^3)	=1000000*(D28+0.6*(E28-D28))/(\$H\$1*30.48^3)
29	=1000000*C29/(\$H\$1*30.48^3)	=1000000*D29/(\$H\$1*30.48^3)	=1000000*(D29+0.6*(E29-D29))/(\$H\$1*30.48^3)
30	=1000000*C30/(\$H\$1*30.48^3)	=1000000*D30/(\$H\$1*30.48^3)	=1000000*(D30+0.6*(E30-D30))/(\$H\$1*30.48^3)
31	=1000000*C31/(\$H\$1*30.48^3)	=1000000*D31/(\$H\$1*30.48^3)	=1000000*(D31+0.6*(E31-D31))/(\$H\$1*30.48^3)
32	=1000000*C32/(\$H\$1*30.48^3)	=1000000*D32/(\$H\$1*30.48^3)	=1000000*(D32+0.6*(E32-D32))/(\$H\$1*30.48^3)
33	=1000000*C33/(\$H\$1*30.48^3)	=1000000*D33/(\$H\$1*30.48^3)	=1000000*(D33+0.6*(E33-D33))/(\$H\$1*30.48^3)
34	=1000000*C34/(\$H\$1*30.48^3)	=1000000*D34/(\$H\$1*30.48^3)	=1000000*(D34+0.6*(E34-D34))/(\$H\$1*30.48^3)
35	=1000000*C35/(\$H\$1*30.48^3)	=1000000*D35/(\$H\$1*30.48^3)	=1000000*(D35+0.6*(E35-D35))/(\$H\$1*30.48^3)
36	=1000000*C36/(\$H\$1*30.48^3)	=1000000*D36/(\$H\$1*30.48^3)	=1000000*(D36+0.6*(E36-D36))/(\$H\$1*30.48^3)
37	=1000000*C37/(\$H\$1*30.48^3)	=1000000*D37/(\$H\$1*30.48^3)	=1000000*(D37+0.6*(E37-D37))/(\$H\$1*30.48^3)
38	=1000000*C38/(\$H\$1*30.48^3)	=1000000*D38/(\$H\$1*30.48^3)	=1000000*(D38+0.6*(E38-D38))/(\$H\$1*30.48^3)
39	=1000000*C39/(\$H\$1*30.48^3)	=1000000*D39/(\$H\$1*30.48^3)	=1000000*(D39+0.6*(E39-D39))/(\$H\$1*30.48^3)
40	=1000000*C40/(\$H\$1*30.48^3)	=1000000*D40/(\$H\$1*30.48^3)	=1000000*(D40+0.6*(E40-D40))/(\$H\$1*30.48^3)
41	=1000000*C41/(\$H\$1*30.48^3)	=1000000*D41/(\$H\$1*30.48^3)	=1000000*(D41+0.6*(E41-D41))/(\$H\$1*30.48^3)
42	=1000000*C42/(\$H\$1*30.48^3)	=1000000*D42/(\$H\$1*30.48^3)	=1000000*(D42+0.6*(E42-D42))/(\$H\$1*30.48^3)
43	=1000000*C43/(\$H\$1*30.48^3)	=1000000*D43/(\$H\$1*30.48^3)	=1000000*(D43+0.6*(E43-D43))/(\$H\$1*30.48^3)
44	=1000000*C44/(\$H\$1*30.48^3)	=1000000*D44/(\$H\$1*30.48^3)	=1000000*(D44+0.6*(E44-D44))/(\$H\$1*30.48^3)
45	=1000000*C45/(\$H\$1*30.48^3)	=1000000*D45/(\$H\$1*30.48^3)	=1000000*(D45+0.6*(E45-D45))/(\$H\$1*30.48^3)
46	=1000000*C46/(\$H\$1*30.48^3)	=1000000*D46/(\$H\$1*30.48^3)	=1000000*(D46+0.6*(E46-D46))/(\$H\$1*30.48^3)
47	=1000000*C47/(\$H\$1*30.48^3)	=1000000*D47/(\$H\$1*30.48^3)	=1000000*(D47+0.6*(E47-D47))/(\$H\$1*30.48^3)
48	=1000000*C48/(\$H\$1*30.48^3)	=1000000*D48/(\$H\$1*30.48^3)	=1000000*(D48+0.6*(E48-D48))/(\$H\$1*30.48^3)
49	=1000000*C49/(\$H\$1*30.48^3)	=1000000*D49/(\$H\$1*30.48^3)	=1000000*(D49+0.6*(E49-D49))/(\$H\$1*30.48^3)
50	=1000000*C50/(\$H\$1*30.48^3)	=1000000*D50/(\$H\$1*30.48^3)	=1000000*(D50+0.6*(E50-D50))/(\$H\$1*30.48^3)
51	=1000000*C51/(\$H\$1*30.48^3)	=1000000*D51/(\$H\$1*30.48^3)	=1000000*(D51+0.6*(E51-D51))/(\$H\$1*30.48^3)
52	=1000000*C52/(\$H\$1*30.48^3)	=1000000*D52/(\$H\$1*30.48^3)	=1000000*(D52+0.6*(E52-D52))/(\$H\$1*30.48^3)
53	=1000000*C53/(\$H\$1*30.48^3)	=1000000*D53/(\$H\$1*30.48^3)	=1000000*(D53+0.6*(E53-D53))/(\$H\$1*30.48^3)
54	=1000000*C54/(\$H\$1*30.48^3)	=1000000*D54/(\$H\$1*30.48^3)	=1000000*(D54+0.6*(E54-D54))/(\$H\$1*30.48^3)
55	=1000000*C55/(\$H\$1*30.48^3)	=1000000*D55/(\$H\$1*30.48^3)	=1000000*(D55+0.6*(E55-D55))/(\$H\$1*30.48^3)
56	=1000000*C56/(\$H\$1*30.48^3)	=1000000*D56/(\$H\$1*30.48^3)	=1000000*(D56+0.6*(E56-D56))/(\$H\$1*30.48^3)
57	=1000000*C57/(\$H\$1*30.48^3)	=1000000*D57/(\$H\$1*30.48^3)	=1000000*(D57+0.6*(E57-D57))/(\$H\$1*30.48^3)
58	=1000000*C58/(\$H\$1*30.48^3)	=1000000*D58/(\$H\$1*30.48^3)	=1000000*(D58+0.6*(E58-D58))/(\$H\$1*30.48^3)
59	=1000000*C59/(\$H\$1*30.48^3)	=1000000*D59/(\$H\$1*30.48^3)	=1000000*(D59+0.6*(E59-D59))/(\$H\$1*30.48^3)
60	=1000000*C60/(\$H\$1*30.48^3)	=1000000*D60/(\$H\$1*30.48^3)	=1000000*(D60+0.6*(E60-D60))/(\$H\$1*30.48^3)
61	=1000000*C61/(\$H\$1*30.48^3)	=1000000*D61/(\$H\$1*30.48^3)	=1000000*(D61+0.6*(E61-D61))/(\$H\$1*30.48^3)
62	=1000000*C62/(\$H\$1*30.48^3)	=1000000*D62/(\$H\$1*30.48^3)	=1000000*(D62+0.6*(E62-D62))/(\$H\$1*30.48^3)
63	=1000000*C63/(\$H\$1*30.48^3)	=1000000*D63/(\$H\$1*30.48^3)	=1000000*(D63+0.6*(E63-D63))/(\$H\$1*30.48^3)
64	=1000000*C64/(\$H\$1*30.48^3)	=1000000*D64/(\$H\$1*30.48^3)	=1000000*(D64+0.6*(E64-D64))/(\$H\$1*30.48^3)

	L
1	
2	
3	
4	720
5	=1000000*(D5+0.6*(E5-D5)+0.4*(F5-E5))/(SH\$1*30.48^3)
6	=1000000*(D6+0.6*(E6-D6)+0.4*(F6-E6))/(SH\$1*30.48^3)
7	=1000000*(D7+0.6*(E7-D7)+0.4*(F7-E7))/(SH\$1*30.48^3)
8	=1000000*(D8+0.6*(E8-D8)+0.4*(F8-E8))/(SH\$1*30.48^3)
9	=1000000*(D9+0.6*(E9-D9)+0.4*(F9-E9))/(SH\$1*30.48^3)
10	=1000000*(D10+0.6*(E10-D10)+0.4*(F10-E10))/(SH\$1*30.48^3)
11	=1000000*(D11+0.6*(E11-D11)+0.4*(F11-E11))/(SH\$1*30.48^3)
12	=1000000*(D12+0.6*(E12-D12)+0.4*(F12-E12))/(SH\$1*30.48^3)
13	=1000000*(D13+0.6*(E13-D13)+0.4*(F13-E13))/(SH\$1*30.48^3)
14	=1000000*(D14+0.6*(E14-D14)+0.4*(F14-E14))/(SH\$1*30.48^3)
15	=1000000*(D15+0.6*(E15-D15)+0.4*(F15-E15))/(SH\$1*30.48^3)
16	=1000000*(D16+0.6*(E16-D16)+0.4*(F16-E16))/(SH\$1*30.48^3)
17	=1000000*(D17+0.6*(E17-D17)+0.4*(F17-E17))/(SH\$1*30.48^3)
18	=1000000*(D18+0.6*(E18-D18)+0.4*(F18-E18))/(SH\$1*30.48^3)
19	=1000000*(D19+0.6*(E19-D19)+0.4*(F19-E19))/(SH\$1*30.48^3)
20	=1000000*(D20+0.6*(E20-D20)+0.4*(F20-E20))/(SH\$1*30.48^3)
21	=1000000*(D21+0.6*(E21-D21)+0.4*(F21-E21))/(SH\$1*30.48^3)
22	=1000000*(D22+0.6*(E22-D22)+0.4*(F22-E22))/(SH\$1*30.48^3)
23	=1000000*(D23+0.6*(E23-D23)+0.4*(F23-E23))/(SH\$1*30.48^3)
24	=1000000*(D24+0.6*(E24-D24)+0.4*(F24-E24))/(SH\$1*30.48^3)
25	=1000000*(D25+0.6*(E25-D25)+0.4*(F25-E25))/(SH\$1*30.48^3)
26	=1000000*(D26+0.6*(E26-D26)+0.4*(F26-E26))/(SH\$1*30.48^3)
27	=1000000*(D27+0.6*(E27-D27)+0.4*(F27-E27))/(SH\$1*30.48^3)
28	=1000000*(D28+0.6*(E28-D28)+0.4*(F28-E28))/(SH\$1*30.48^3)
29	=1000000*(D29+0.6*(E29-D29)+0.4*(F29-E29))/(SH\$1*30.48^3)
30	=1000000*(D30+0.6*(E30-D30)+0.4*(F30-E30))/(SH\$1*30.48^3)
31	=1000000*(D31+0.6*(E31-D31)+0.4*(F31-E31))/(SH\$1*30.48^3)
32	=1000000*(D32+0.6*(E32-D32)+0.4*(F32-E32))/(SH\$1*30.48^3)
33	=1000000*(D33+0.6*(E33-D33)+0.4*(F33-E33))/(SH\$1*30.48^3)
34	=1000000*(D34+0.6*(E34-D34)+0.4*(F34-E34))/(SH\$1*30.48^3)
35	=1000000*(D35+0.6*(E35-D35)+0.4*(F35-E35))/(SH\$1*30.48^3)
36	=1000000*(D36+0.6*(E36-D36)+0.4*(F36-E36))/(SH\$1*30.48^3)
37	=1000000*(D37+0.6*(E37-D37)+0.4*(F37-E37))/(SH\$1*30.48^3)
38	=1000000*(D38+0.6*(E38-D38)+0.4*(F38-E38))/(SH\$1*30.48^3)
39	=1000000*(D39+0.6*(E39-D39)+0.4*(F39-E39))/(SH\$1*30.48^3)
40	=1000000*(D40+0.6*(E40-D40)+0.4*(F40-E40))/(SH\$1*30.48^3)
41	=1000000*(D41+0.6*(E41-D41)+0.4*(F41-E41))/(SH\$1*30.48^3)
42	=1000000*(D42+0.6*(E42-D42)+0.4*(F42-E42))/(SH\$1*30.48^3)
43	=1000000*(D43+0.6*(E43-D43)+0.4*(F43-E43))/(SH\$1*30.48^3)
44	=1000000*(D44+0.6*(E44-D44)+0.4*(F44-E44))/(SH\$1*30.48^3)
45	=1000000*(D45+0.6*(E45-D45)+0.4*(F45-E45))/(SH\$1*30.48^3)
46	=1000000*(D46+0.6*(E46-D46)+0.4*(F46-E46))/(SH\$1*30.48^3)
47	=1000000*(D47+0.6*(E47-D47)+0.4*(F47-E47))/(SH\$1*30.48^3)
48	=1000000*(D48+0.6*(E48-D48)+0.4*(F48-E48))/(SH\$1*30.48^3)
49	=1000000*(D49+0.6*(E49-D49)+0.4*(F49-E49))/(SH\$1*30.48^3)
50	=1000000*(D50+0.6*(E50-D50)+0.4*(F50-E50))/(SH\$1*30.48^3)
51	=1000000*(D51+0.6*(E51-D51)+0.4*(F51-E51))/(SH\$1*30.48^3)
52	=1000000*(D52+0.6*(E52-D52)+0.4*(F52-E52))/(SH\$1*30.48^3)
53	=1000000*(D53+0.6*(E53-D53)+0.4*(F53-E53))/(SH\$1*30.48^3)
54	=1000000*(D54+0.6*(E54-D54)+0.4*(F54-E54))/(SH\$1*30.48^3)
55	=1000000*(D55+0.6*(E55-D55)+0.4*(F55-E55))/(SH\$1*30.48^3)
56	=1000000*(D56+0.6*(E56-D56)+0.4*(F56-E56))/(SH\$1*30.48^3)
57	=1000000*(D57+0.6*(E57-D57)+0.4*(F57-E57))/(SH\$1*30.48^3)
58	=1000000*(D58+0.6*(E58-D58)+0.4*(F58-E58))/(SH\$1*30.48^3)
59	=1000000*(D59+0.6*(E59-D59)+0.4*(F59-E59))/(SH\$1*30.48^3)
60	=1000000*(D60+0.6*(E60-D60)+0.4*(F60-E60))/(SH\$1*30.48^3)
61	=1000000*(D61+0.6*(E61-D61)+0.4*(F61-E61))/(SH\$1*30.48^3)
62	=1000000*(D62+0.6*(E62-D62)+0.4*(F62-E62))/(SH\$1*30.48^3)
63	=1000000*(D63+0.6*(E63-D63)+0.4*(F63-E63))/(SH\$1*30.48^3)
64	=1000000*(D64+0.6*(E64-D64)+0.4*(F64-E64))/(SH\$1*30.48^3)

Source Term Development for ECCS Piping Gamma Shine

The source terms developed for revision 0 of this calculation reflected the 60 isotopes that are used for RADTRAD analyses of doses to offsite receptors and for control room operators. While this set of isotopes are considered sufficient for inhalation and cloud immersion doses, the use for shielded ECCS sources was questioned by NRC. The following spreadsheet starts with the entire 800 plus fission products addressed by ORIGEN-2 and produces a more conservative set of isotopes for consideration.

The "Integrated Source" is summation of the average core activity over each period times the period duration, with standard factors for control room occupancy included for the shielding evaluation.

The "Integrated Source with Release, Timing Credit" is a similar summation but includes release fractions and timing to yield an ECCS fluid source in Ci-hrs. These sources are divided by the ECCS fluid volume to yield time integrated concentrations for use in MicroShield pipe dose analyses.

This analysis is slightly different from that performed in Revision 0. In the previous Revision, the activity in ECCS liquid as a function of time was determined by RADTRAD. In this revision it is determined by a spreadsheet based on release fractions. Special attention was paid to isotopes that have a parent with a higher release fraction than the daughter. This caused original RADTRAD based activity to be used for certain isotopes. In most cases both approaches yielded source terms in reasonable agreement.

Group	Gap EIR Integrated			Isotope	Shutdown	Integration with Release, Timing Credit				Effect of Rel. Delay Credit	128318		ECCS Water Volume (cu.ft.) Value, if controlled by parent per Original RADTRAD Results
	Release Fraction	Release Fraction (Ci-hrs)	Source			0-0.5hr (Ci-hrs)	0.5-2hr (Ci-hrs)	2-720hr (Ci-hrs)	Total (Ci-hrs)		Concentration (uCi/cc)	Concentration	
3	0.05	0.2	4.041E+07	RB 89	8.557E+07	5.299E+05	1.002E+06	1.137E+05	1.646E+06	0.1629	4.529E+02		
5	0	0.0025	3.360E+10	RB 90	1.331E+08	0.000E+00	2.493E+05	8.334E+07	8.359E+07	0.9951	2.301E+04		
5	0	0.0025	4.210E+09	RB 90M	9.673E+07	0.000E+00	1.811E+05	1.004E+07	1.022E+07	0.9713	2.814E+03		
5	0	0.0025	1.987E+08	RH105M	2.861E+07	0.000E+00	4.296E+04	3.699E+05	4.129E+05	0.8310	1.136E+02		
5	0	0.0025	1.878E+10	RB 90	6.461E+07	0.000E+00	1.140E+05	4.664E+07	4.675E+07	0.9959	1.287E+04		
5	0	0.0025	3.727E+10	RB 90	1.477E+08	0.000E+00	2.766E+05	9.245E+07	9.273E+07	0.9950	2.552E+04		
5	0	0.0025	7.077E+08	RB 90	1.022E+08	0.000E+00	1.530E+05	1.317E+06	1.470E+06	0.8310	4.046E+02		
5	0	0.0025	1.878E+10	RB 90	6.081E+07	0.000E+00	1.140E+05	4.664E+07	4.675E+07	0.9960	1.287E+04		
4	0	0.05	1.460E+07	SB122	2.388E+05	0.000E+00	8.799E+03	7.063E+05	7.151E+05	0.9797	1.968E+02		
4	0	0.05	4.041E+07	SB124	1.485E+05	0.000E+00	5.563E+03	2.006E+06	2.011E+06	0.9954	5.535E+02		
4	0	0.05	5.656E+08	SB125	1.796E+06	0.000E+00	6.735E+04	2.810E+07	2.817E+07	0.9960	7.752E+03		
4	0	0.05	1.807E+07	SB126	1.067E+05	0.000E+00	3.986E+03	8.930E+05	8.970E+05	0.9926	2.469E+02		
4	0	0.05	8.241E+08	SB127	1.018E+07	0.000E+00	3.796E+05	4.019E+07	4.057E+07	0.9846	1.117E+04		
4	0	0.05	2.013E+08	SB129	3.036E+07	0.000E+00	8.863E+05	7.432E+06	8.318E+06	0.8264	2.289E+03		
6	0	0.0002	2.363E+07	SM151	7.400E+04	0.000E+00	1.110E+01	4.697E+03	4.708E+03	0.9961	1.296E+00		
6	0	0.0002	2.173E+09	SM153	4.558E+07	0.000E+00	6.674E+03	4.167E+05	4.233E+05	0.9740	1.165E+02		
4	0	0.02	2.343E+10	RB 90	8.846E+07	0.000E+00	1.326E+06	4.650E+08	4.663E+08	0.9953	1.283E+05		
4	0	0.02	3.534E+09	RB 90	1.117E+07	0.000E+00	1.676E+05	7.024E+07	7.041E+07	0.9960	1.938E+04		
4	0	0.02	1.492E+09	RB 90	1.110E+08	0.000E+00	1.477E+06	2.570E+07	2.718E+07	0.9109	7.481E+03		
4	0	0.02	5.038E+08	RB 90	1.205E+08	0.000E+00	1.189E+06	6.293E+06	7.482E+06	0.7425	2.059E+03		
5	0	0.0025	6.367E+05	RB 90	2.004E+03	0.000E+00	3.758E+00	1.582E+03	1.586E+03	0.9961	4.363E-01		
5	0	0.0025	1.052E+10	RB 90M	1.563E+08	0.000E+00	2.925E+05	2.552E+07	2.581E+07	0.9814	7.103E+03		
5	0	0.0025	1.213E+08	TC101	1.612E+08	0.000E+00	2.629E+04	8.719E+03	3.501E+04	0.1154	9.635E+00		
4	0	0.05	6.902E+05	TE123M	2.355E+03	0.000E+00	8.829E+01	3.427E+04	3.436E+04	0.9957	9.456E+00		
4	0	0.05	1.253E+08	TE125M	3.927E+05	0.000E+00	1.473E+04	6.224E+06	6.239E+06	0.9961	1.717E+03		
4	0	0.05	1.171E+09	TE127	1.010E+07	0.000E+00	3.788E+05	5.755E+07	5.793E+07	0.9892	1.594E+04		
4	0	0.05	4.051E+08	TE127	1.355E+06	0.000E+00	5.081E+04	2.012E+07	2.017E+07	0.9958	5.552E+03		
4	0	0.05	9.312E+08	TE127	2.988E+07	0.000E+00	1.022E+06	4.371E+07	4.473E+07	0.9607	1.231E+04		
4	0	0.05	1.090E+09	TE127	4.453E+06	0.000E+00	1.669E+05	5.404E+07	5.421E+07	0.9949	1.492E+04		
4	0	0.05	2.018E+08	TE127	8.383E+07	0.000E+00	8.440E+05	5.548E+06	6.392E+06	0.6333	1.759E+03		
4	0	0.05	4.642E+08	TE127	1.360E+07	0.000E+00	4.930E+05	2.187E+07	2.237E+07	0.9638	6.156E+03		
4	0	0.05	9.464E+09	TE127	1.343E+08	0.000E+00	4.965E+06	4.599E+08	4.649E+08	0.9823	1.279E+05		
4	0	0.05	5.325E+07	TE133	1.135E+08	0.000E+00	1.889E+05	2.340E+05	4.229E+05	0.1588	1.164E+02		
4	0	0.05	1.008E+08	TE133M	6.990E+07	0.000E+00	8.025E+05	1.352E+06	2.155E+06	0.4274	5.930E+02		
4	0	0.05	1.740E+08	TE134	1.599E+08	0.000E+00	1.286E+06	1.559E+06	2.845E+06	0.3270	7.830E+02		
6	0	0.0002	3.555E+09	RB 90	1.150E+07	0.000E+00	1.724E+03	7.064E+05	7.081E+05	0.9960	1.949E+02	1.938E+04	
6	0	0.0002	3.118E+10	RB 90	1.143E+08	0.000E+00	1.715E+04	6.190E+06	6.208E+06	0.9954	1.708E+03	7.481E+03	
6	0	0.0002	9.401E+08	RB 90	6.440E+07	0.000E+00	9.135E+03	1.630E+05	1.721E+05	0.9153	4.736E+01	4.264E+03	
6	0	0.0002	1.138E+09	RB 90	1.210E+08	0.000E+00	1.710E+04	1.805E+05	1.976E+05	0.8685	5.438E+01	2.059E+03	
6	0	0.0002	2.011E+09	RB 90	1.404E+08	0.000E+00	1.903E+04	3.491E+05	3.681E+05	0.9154	1.013E+02		
6	0	0.0002	4.331E+10	RB 90	1.578E+08	0.000E+00	2.365E+04	8.600E+06	8.623E+06	0.9954	2.373E+03		
6	0	0.0002	3.421E+09	RB 90	1.578E+08	0.000E+00	2.212E+04	6.236E+05	6.457E+05	0.9437	1.777E+02		

Tan = Isotopes that could be neglected for thick shields because of gamma energies and yields (future).
 White = Isotopes that could be neglected for thick shields because of limited integrated source yields (future).
 Column AD addresses a limited set of cases where a parents release fraction exceeds that of the daughter. This can cause the daughter ingrowth in the ECCS fluid to dominate.

Case Title: LGS CS Pipe
Description: Case A, with 110 isotopes
Geometry: 7 - Cylinder Volume - Side Shields

Height Radius	Source Dimensions	
	609.6 cm 16.828 cm	20 ft 0.0 in 6.6 in

#	Dose Points		
	X	Y	Z
# 1	185.42 cm 6 ft 1.0 in	182.88 cm 6 ft	0 cm 0.0 in
# 2	246.38 cm 8 ft 1.0 in	182.88 cm 6 ft	0 cm 0.0 in
# 3	307.34 cm 10 ft 1.0 in	182.88 cm 6 ft	0 cm 0.0 in
# 4	368.3 cm 12 ft 1.0 in	182.88 cm 6 ft	0 cm 0.0 in
# 5	429.26 cm 14 ft 1.0 in	182.88 cm 6 ft	0 cm 0.0 in
# 6	490.22 cm 16 ft 1.0 in	182.88 cm 6 ft	0 cm 0.0 in

Shields			
Shield Name	Dimension	Material	Density
Source	19.151 ft ³	Water	1
Transition		Air	0.00122
Shield 2	1.5 ft	Air	0.00122
Shield 3	3.0 ft	Concrete	2.35
Air Gap		Air	0.00122
Wall Clad	.031 ft	Iron	7.86

Source Input
Grouping Method: Linear Energy
Number of Groups: 25
Lower Energy Cutoff: 0.015
Photons < 0.015: Excluded
Library: Grove

Nuclide	curies	becquerels	µCi/cm ³	Bq/cm ³
Am-241	3.4761e-001	1.2862e+010	6.4100e-001	2.3717e+004
Ba-137m	1.7744e+005	6.5652e+015	3.2720e+005	1.2106e+010
Ba-139	7.0281e+002	2.6004e+013	1.2960e+003	4.7952e+007
Ba-140	8.4652e+004	3.1321e+015	1.5610e+005	5.7757e+009
Ba-141	1.9729e+001	7.2996e+011	3.6380e+001	1.3461e+006
Ba-142	2.5385e+000	9.3924e+010	4.6810e+000	1.7320e+005
Br-82	9.7992e+002	3.6257e+013	1.8070e+003	6.6859e+007
Br-83	1.5466e+003	5.7225e+013	2.8520e+003	1.0552e+008
Br-84	2.6334e+002	9.7435e+012	4.8560e+002	1.7967e+007
Br-85	1.8628e+000	6.8923e+010	3.4350e+000	1.2710e+005
Ce-141	2.8394e+003	1.0506e+014	5.2360e+003	1.9373e+008
Ce-143	3.8465e+002	1.4232e+013	7.0930e+002	2.6244e+007
Ce-144	2.8790e+003	1.0652e+014	5.3090e+003	1.9643e+008
Cm-242	7.4836e+001	2.7689e+012	1.3800e+002	5.1060e+006
Cm-244	8.6225e+000	3.1903e+011	1.5900e+001	5.8830e+005
Co-58	5.5856e+001	2.0667e+012	1.0300e+002	3.8110e+006
Co-60	7.5379e+001	2.7890e+012	1.3900e+002	5.1430e+006
Cs-132	1.0651e+002	3.9407e+012	1.9640e+002	7.2668e+006
Cs-134	2.9766e+005	1.1014e+016	5.4890e+005	2.0309e+010
Cs-134m	7.0498e+002	2.6084e+013	1.3000e+003	4.8100e+007
Cs-135	1.0651e+000	3.9407e+010	1.9640e+000	7.2668e+004
Cs-136	4.5976e+004	1.7011e+015	8.4780e+004	3.1369e+009
Cs-137	1.8769e+005	6.9444e+015	3.4610e+005	1.2806e+010
Cs-138	2.9577e+003	1.0943e+014	5.4540e+003	2.0180e+008
Cs-139	1.4810e+002	5.4797e+012	2.7310e+002	1.0105e+007
Eu-154	1.4973e+001	5.5399e+011	2.7610e+001	1.0216e+006
Eu-155	1.0624e+001	3.9307e+011	1.9590e+001	7.2483e+005
Eu-156	9.7830e+001	3.6197e+012	1.8040e+002	6.6748e+006
I-128	9.8372e+000	3.6398e+011	1.8140e+001	6.7118e+005
I-130	2.4463e+003	9.0513e+013	4.5110e+003	1.6691e+008
I-131	5.6995e+005	2.1088e+016	1.0510e+006	3.8887e+010
I-132	4.2977e+005	1.5901e+016	7.9250e+005	2.9322e+010
I-133	2.1594e+005	7.9898e+015	3.9820e+005	1.4733e+010
I-134	1.2261e+004	4.5367e+014	2.2610e+004	8.3657e+008
I-135	7.0390e+004	2.6044e+015	1.2980e+005	4.8026e+009
I-136	9.7396e-001	3.6036e+010	1.7960e+000	6.6452e+004
La-140	7.6463e+004	2.8291e+015	1.4100e+005	5.2170e+009
La-141	2.4539e+001	9.0793e+011	4.5250e+001	1.6743e+006

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Case Title: LGS CS Pipe
Description: Case A, with 110 isotopes
Geometry: 7 - Cylinder Volume - Side Shields

Source Dimensions
Height 609.6 cm 20 ft 0.0 in
Radius 16.828 cm 6.6 in

Dose Points

#	X	Y	Z
# 1	185.42 cm 6 ft 1.0 in	182.88 cm 6 ft	0 cm 0.0 in
# 2	246.38 cm 8 ft 1.0 in	182.88 cm 6 ft	0 cm 0.0 in
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Shields

Shield Name	Dimension	Material	Density
Source	19.151 ft ³	Water	1
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Shield 2	1.5 ft	Air	0.00122
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Source Input
Grouping Method: Linear Energy
Number of Groups: 25
Lower Energy Cutoff: 0.015
Photons < 0.015: Excluded
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Nuclide	curies	becquerels	µCi/cm ³	Bq/cm ³
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Ba-139	7.0281e+002	2.6004e+013	1.2960e+003	4.7952e+007
Ba-140	8.4652e+004	3.1321e+015	1.5610e+005	5.7757e+009
Ba-141	1.9729e+001	7.2996e+011	3.6380e+001	1.3461e+006
Ba-142	2.5385e+000	9.3924e+010	4.6810e+000	1.7320e+005
Br-82	9.7992e+002	3.6257e+013	1.8070e+003	6.6859e+007
Br-83	1.5466e+003	5.7225e+013	2.8520e+003	1.0552e+008
Br-84	2.6334e+002	9.7435e+012	4.8560e+002	1.7967e+007
Br-85	1.8628e+000	6.8923e+010	3.4350e+000	1.2710e+005
Ce-141	2.8394e+003	1.0506e+014	5.2360e+003	1.9373e+008
Ce-143	3.8465e+002	1.4232e+013	7.0930e+002	2.6244e+007
Ce-144	2.8790e+003	1.0652e+014	5.3090e+003	1.9643e+008
Cm-242	7.4836e+001	2.7689e+012	1.3800e+002	5.1060e+006
Cm-244	8.6225e+000	3.1903e+011	1.5900e+001	5.8830e+005
Co-58	5.5856e+001	2.0667e+012	1.0300e+002	3.8110e+006
Co-60	7.5379e+001	2.7890e+012	1.3900e+002	5.1430e+006
Cs-132	1.0651e+002	3.9407e+012	1.9640e+002	7.2668e+006
Cs-134	2.9766e+005	1.1014e+016	5.4890e+005	2.0309e+010
Cs-134m	7.0498e+002	2.6084e+013	1.3000e+003	4.8100e+007
Cs-135	1.0651e+000	3.9407e+010	1.9640e+000	7.2668e+004
Cs-136	4.5976e+004	1.7011e+015	8.4780e+004	3.1369e+009
Cs-137	1.8769e+005	6.9444e+015	3.4610e+005	1.2806e+010
Cs-138	2.9577e+003	1.0943e+014	5.4540e+003	2.0180e+008
Cs-139	1.4810e+002	5.4797e+012	2.7310e+002	1.0105e+007
Eu-154	1.4973e+001	5.5399e+011	2.7610e+001	1.0216e+006
Eu-155	1.0624e+001	3.9307e+011	1.9590e+001	7.2483e+005
Eu-156	9.7830e+001	3.6197e+012	1.8040e+002	6.6748e+006
I-128	9.8372e+000	3.6398e+011	1.8140e+001	6.7118e+005
I-130	2.4463e+003	9.0513e+013	4.5110e+003	1.6691e+008
I-131	5.6995e+005	2.1088e+016	1.0510e+006	3.8887e+010
I-132	4.2977e+005	1.5901e+016	7.9250e+005	2.9322e+010
I-133	2.1594e+005	7.9898e+015	3.9820e+005	1.4733e+010
I-134	1.2261e+004	4.5367e+014	2.2610e+004	8.3657e+008
I-135	7.0390e+004	2.6044e+015	1.2980e+005	4.8026e+009
I-136	9.7396e+001	3.6036e+010	1.7960e+000	6.6452e+004
La-140	7.6463e+004	2.8291e+015	1.4100e+005	5.2170e+009
La-141	2.4539e+001	9.0793e+011	4.5250e+001	1.6743e+006

Nuclide	curies	becquerels	µCi/cm ³	Bq/cm ³
La-142	7.3210e+000	2.7088e+011	1.3500e+001	4.9950e+005
Mo-99	4.0450e+003	1.4966e+014	7.4590e+003	2.7598e+008
Mo-101	1.1930e+000	4.4143e+010	2.2000e+000	8.1400e+004
Nb-95	1.4555e+003	5.3854e+013	2.6840e+003	9.9308e+007
Nb-95m	9.4956e+000	3.5134e+011	1.7510e+001	6.4787e+005
Nb-97	1.0195e+002	3.7722e+012	1.8800e+002	6.9560e+006
Nb-97m	9.1268e+001	3.3769e+012	1.6830e+002	6.2271e+006
Nd-147	2.9913e+002	1.1068e+013	5.5160e+002	2.0409e+007
Nd-149	1.9040e+000	7.0448e+010	3.5110e+000	1.2991e+005
Np-239	7.2667e+003	2.6887e+014	1.3400e+004	4.9580e+008
Pd-109	2.0737e+002	7.6728e+012	3.8240e+002	1.4149e+007
Pm-147	1.5721e+002	5.8168e+012	2.8990e+002	1.0726e+007
Pm-148	7.9663e+001	2.9475e+012	1.4690e+002	5.4353e+006
Pm-148m	3.0987e+001	1.1465e+012	5.7140e+001	2.1142e+006
Pm-149	8.4652e+001	3.1321e+012	1.5610e+002	5.7757e+006
Pm-151	1.7955e+001	6.6435e+011	3.3110e+001	1.2251e+006
Pr-142	5.2727e+000	1.9509e+011	9.7230e+000	3.5975e+005
Pr-143	8.1127e+002	3.0017e+013	1.4960e+003	5.5352e+007
Pr-144	1.1518e+003	4.2618e+013	2.1240e+003	7.8588e+007
Pr-144m	1.3818e+001	5.1125e+011	2.5480e+001	9.4276e+005
Pu-238	1.4913e+001	5.5178e+011	2.7500e+001	1.0175e+006
Pu-239	1.0087e+000	3.7321e+010	1.8600e+000	6.8820e+004
Pu-240	1.0683e+000	3.9528e+010	1.9700e+000	7.2890e+004
Pu-241	5.1247e+002	1.8961e+013	9.4500e+002	3.4965e+007
Rb-86	1.7256e+003	6.3846e+013	3.1820e+003	1.1773e+008
Rb-88	9.4576e+003	3.4993e+014	1.7440e+004	6.4528e+008
Rb-89	2.4560e+002	9.0874e+012	4.5290e+002	1.6757e+007
Rb-90	5.3302e+000	1.9722e+011	9.8290e+000	3.6367e+005
Rb-90m	3.3389e+000	1.2354e+011	6.1570e+000	2.2781e+005
Rh-103m	1.2478e+004	4.6169e+014	2.3010e+004	8.5137e+008
Rh-105	1.5260e+003	5.6462e+013	2.8140e+003	1.0412e+008
Rh-105m	6.1604e+001	2.2794e+012	1.1360e+002	4.2032e+006
Rh-106	6.9793e+003	2.5823e+014	1.2870e+004	4.7619e+008
Ru-103	1.3828e+004	5.1165e+014	2.5500e+004	9.4350e+008
Ru-105	2.1941e+002	8.1182e+012	4.0460e+002	1.4970e+007
Ru-106	6.9793e+003	2.5823e+014	1.2870e+004	4.7619e+008
Sb-122	1.0672e+002	3.9488e+012	1.9680e+002	7.2816e+006
Sb-124	3.0016e+002	1.1106e+013	5.5350e+002	2.0479e+007
Sb-125	4.2039e+003	1.5554e+014	7.7520e+003	2.8682e+008
Sb-126	1.3389e+002	4.9540e+012	2.4690e+002	9.1353e+006
Sb-126m	2.9284e+001	1.0835e+010	5.4000e+001	1.9980e+004
Sb-127	6.0574e+003	2.2412e+014	1.1170e+004	4.1329e+008
Sb-129	1.2413e+003	4.5928e+013	2.2890e+003	8.4693e+007
Sm-151	7.0281e+001	2.6004e+010	1.2960e+000	4.7952e+004
Sm-153	6.3177e+001	2.3376e+012	1.1650e+002	4.3105e+006
Sr-89	6.9576e+004	2.5743e+015	1.2830e+005	4.7471e+009
Sr-90	1.0510e+004	3.8886e+014	1.9380e+004	7.1706e+008
Sr-91	4.0569e+003	1.5011e+014	7.4810e+003	2.7680e+008
Sr-92	1.1166e+003	4.1314e+013	2.0590e+003	7.6183e+007
Sr-93	4.1144e+001	1.5223e+010	7.5870e+001	2.8072e+004
Tc-99	2.3660e+001	8.7543e+009	4.3630e+001	1.6143e+004
Tc-99m	3.8519e+003	1.4252e+014	7.1030e+003	2.6281e+008
Tc-101	5.2250e+000	1.9332e+011	9.6350e+000	3.5650e+005
Te-123m	5.1279e+000	1.8973e+011	9.4560e+000	3.4987e+005
Te-125m	9.3112e+002	3.4451e+013	1.7170e+003	6.3529e+007
Te-127	8.6442e+003	3.1983e+014	1.5940e+004	5.8978e+008
Te-127m	3.0108e+003	1.1140e+014	5.5520e+003	2.0542e+008
Te-129	6.6756e+003	2.4700e+014	1.2310e+004	4.5547e+008
Te-129m	8.0910e+003	2.9937e+014	1.4920e+004	5.5204e+008
Te-131	9.5389e+002	3.5294e+013	1.7590e+003	6.5083e+007
Te-131m	3.3384e+003	1.2352e+014	6.1560e+003	2.2777e+008
Te-132	6.9359e+004	2.5663e+015	1.2790e+005	4.7323e+009
Te-133	6.3123e+001	2.3355e+012	1.1640e+002	4.3068e+006
Te-133m	3.2158e+002	1.1898e+013	5.9300e+002	2.1941e+007
Te-134	4.2462e+002	1.5711e+013	7.8300e+002	2.8971e+007
Y-90	1.0510e+004	3.8886e+014	1.9380e+004	7.1706e+008
Y-91	4.0569e+003	1.5011e+014	7.4810e+003	2.7680e+008
Y-91m	2.3123e+003	8.5556e+013	4.2640e+003	1.5777e+008
Y-92	1.1166e+003	4.1314e+013	2.0590e+003	7.6183e+007
Y-93	5.4934e+001	2.0326e+012	1.0130e+002	3.7481e+006
Zr-95	1.2869e+003	4.7614e+013	2.3730e+003	8.7801e+007
Zr-97	1.0575e+002	3.9126e+012	1.9500e+002	7.2150e+006

Buildup
 The material reference is : Shield 3

Integration Parameters

Radial	10
Circumferential	10
Y Direction (axial)	20

Results - Dose Point # 1 - (6.08e+00,6,0) ft

Energy MeV	Activity photons/sec	Fluence Rate MeV/cm ² /sec		Exposure Rate mR/hr		Exposure Rate mR/hr			
		No Buildup		With Buildup		No Buildup		With Buildup	
0.1016	9.710e+15	5.523e-10	1.289e-07	8.454e-13	1.974e-10				
0.3656	2.368e+16	2.124e-01	5.258e+01	4.112e-04	1.018e-01				
0.6172	5.608e+16	9.064e+01	8.618e+03	1.766e-01	1.679e+01				
0.8096	3.261e+16	6.368e+02	3.631e+04	1.210e+00	6.897e+01				
1.0825	4.612e+15	1.115e+03	3.740e+04	2.026e+00	6.795e+01				
1.3401	4.617e+15	6.322e+03	1.474e+05	1.095e+01	2.555e+02				
1.6044	3.191e+15	1.710e+04	3.021e+05	2.825e+01	4.989e+02				
1.8388	5.875e+14	8.288e+03	1.208e+05	1.315e+01	1.917e+02				
2.0402	2.758e+14	7.829e+03	9.924e+04	1.203e+01	1.525e+02				
2.3212	1.291e+14	8.338e+03	8.949e+04	1.229e+01	1.320e+02				
2.5398	1.194e+14	1.328e+04	1.276e+05	1.902e+01	1.827e+02				
2.7426	8.884e+11	1.541e+02	1.352e+03	2.153e-01	1.888e+00				
3.0171	1.144e+12	3.365e+02	2.648e+03	4.557e-01	3.586e+00				
3.2809	1.718e+12	7.864e+02	5.647e+03	1.037e+00	7.448e+00				
3.4931	5.900e+11	3.709e+02	2.492e+03	4.795e-01	3.222e+00				
3.7009	1.040e+10	8.668e+00	5.484e+01	1.100e-02	6.961e-02				
3.9384	7.150e+11	7.996e+02	4.747e+03	9.944e-01	5.904e+00				
4.3428	2.255e+10	3.914e+01	2.107e+02	4.707e-02	2.534e-01				
4.48	1.875e+09	3.723e+00	1.944e+01	4.428e-03	2.313e-02				
4.7418	5.068e+11	1.277e+03	6.319e+03	1.490e+00	7.372e+00				
5.0016	8.629e+08	2.698e+00	1.272e+01	3.093e-03	1.458e-02				
5.2304	3.993e+09	1.487e+01	6.744e+01	1.681e-02	7.623e-02				
5.608	5.502e+07	2.662e-01	1.140e+00	2.947e-04	1.262e-03				
5.8005	4.752e+07	2.598e-01	1.082e+00	2.848e-04	1.187e-03				
6.1042	5.002e+07	3.270e-01	1.308e+00	3.534e-04	1.413e-03				
TOTALS:	1.356e+17	6.680e+04	9.927e+05	1.039e+02	1.597e+03				

Results - Dose Point # 2 - (8.08e+00,6,0) ft

Energy MeV	Activity photons/sec	Fluence Rate MeV/cm ² /sec		Exposure Rate mR/hr		Exposure Rate mR/hr			
		No Buildup		With Buildup		No Buildup		With Buildup	
0.1016	9.710e+15	4.154e-10	9.702e-08	6.359e-13	1.485e-10				
0.3656	2.368e+16	1.600e-01	3.960e+01	3.098e-04	7.668e-02				
0.6172	5.608e+16	6.823e+01	6.485e+03	1.330e-01	1.264e+01				
0.8096	3.261e+16	4.791e+02	2.729e+04	9.099e-01	5.184e+01				
1.0825	4.612e+15	8.378e+02	2.807e+04	1.522e+00	5.100e+01				
1.3401	4.617e+15	4.744e+03	1.105e+05	8.218e+00	1.914e+02				
1.6044	3.191e+15	1.282e+04	2.260e+05	2.116e+01	3.732e+02				
1.8388	5.875e+14	6.202e+03	9.021e+04	9.842e+00	1.432e+02				
2.0402	2.758e+14	5.853e+03	7.403e+04	8.994e+00	1.138e+02				
2.3212	1.291e+14	6.224e+03	6.664e+04	9.177e+00	9.826e+01				
2.5398	1.194e+14	9.905e+03	9.492e+04	1.418e+01	1.359e+02				
2.7426	8.884e+11	1.148e+02	1.005e+03	1.604e-01	1.403e+00				
3.0171	1.144e+12	2.504e+02	1.965e+03	3.391e-01	2.661e+00				
3.2809	1.718e+12	5.845e+02	4.185e+03	7.709e-01	5.519e+00				
3.4931	5.900e+11	2.754e+02	1.845e+03	3.561e-01	2.385e+00				
3.7009	1.040e+10	6.432e+00	4.056e+01	8.165e-03	5.149e-02				
3.9384	7.150e+11	5.929e+02	3.508e+03	7.373e-01	4.363e+00				
4.3428	2.255e+10	2.898e+01	1.555e+02	3.485e-02	1.870e-01				
4.48	1.875e+09	2.755e+00	1.434e+01	3.278e-03	1.706e-02				
4.7418	5.068e+11	9.444e+02	4.656e+03	1.102e+00	5.432e+00				
5.0016	8.629e+08	1.994e+00	9.365e+00	2.285e-03	1.073e-02				
5.2304	3.993e+09	1.098e+01	4.963e+01	1.241e-02	5.609e-02				
5.608	5.502e+07	1.965e-01	8.379e-01	2.175e-04	9.276e-04				
5.8005	4.752e+07	1.916e-01	7.953e-01	2.101e-04	8.719e-04				
6.1042	5.002e+07	2.411e-01	9.603e-01	2.605e-04	1.038e-03				
TOTALS:	1.356e+17	4.994e+04	7.416e+05	7.767e+01	1.193e+03				

Results - Dose Point # 3 - (1.01e+01,6,0) ft

Energy MeV	Activity photons/sec	Fluence Rate MeV/cm ² /sec		Exposure Rate mR/hr		Exposure Rate mR/hr			
		No Buildup		With Buildup		No Buildup		With Buildup	
0.1016	9.710e+15	3.309e-10	7.732e-08	5.066e-13	1.184e-10				
0.3656	2.368e+16	1.276e-01	3.157e+01	2.471e-04	6.112e-02				
0.6172	5.608e+16	5.432e+01	5.157e+03	1.058e-01	1.005e+01				
0.8096	3.261e+16	3.808e+02	2.166e+04	7.232e-01	4.114e+01				
1.0825	4.612e+15	6.643e+02	2.221e+04	1.207e+00	4.036e+01				
1.3401	4.617e+15	3.753e+03	8.720e+04	6.502e+00	1.511e+02				
1.6044	3.191e+15	1.012e+04	1.779e+05	1.671e+01	2.938e+02				
1.8388	5.875e+14	4.887e+03	7.088e+04	7.755e+00	1.125e+02				
2.0402	2.758e+14	4.605e+03	5.808e+04	7.077e+00	8.925e+01				
2.3212	1.291e+14	4.888e+03	5.218e+04	7.207e+00	7.694e+01				
2.5398	1.194e+14	7.769e+03	7.422e+04	1.112e+01	1.063e+02				

Energy MeV	Activity photons/sec	Fluence Rate		Exposure Rate	
		MeV/cm ² /sec No Buildup	MeV/cm ² /sec With Buildup	mR/hr No Buildup	mR/hr With Buildup
2.7426	8.884e+11	8.997e+01	7.847e+02	1.256e-01	1.096e+00
3.0171	1.144e+12	1.959e+02	1.532e+03	2.653e-01	2.075e+00
3.2809	1.718e+12	4.567e+02	3.259e+03	6.024e-01	4.298e+00
3.4931	5.900e+11	2.150e+02	1.435e+03	2.780e-01	1.856e+00
3.7009	1.040e+10	5.017e+00	3.153e+01	6.369e-03	4.003e-02
3.9384	7.150e+11	4.621e+02	2.725e+03	5.746e-01	3.388e+00
4.3428	2.255e+10	2.256e+01	1.206e+02	2.713e-02	1.450e-01
4.48	1.875e+09	2.143e+00	1.112e+01	2.550e-03	1.322e-02
4.7418	5.068e+11	7.342e+02	3.607e+03	8.566e-01	4.208e+00
5.0016	8.629e+08	1.549e+00	7.250e+00	1.775e-03	8.310e-03
5.2304	3.993e+09	8.527e+00	3.839e+01	9.638e-03	4.340e-02
5.608	5.502e+07	1.524e-01	6.477e-01	1.687e-04	7.170e-04
5.8005	4.752e+07	1.486e-01	6.145e-01	1.629e-04	6.737e-04
6.1042	5.002e+07	1.868e-01	7.416e-01	2.019e-04	8.014e-04
TOTALS:	1.356e+17	3.931e+04	5.831e+05	6.116e+01	9.386e+02

Results - Dose Point # 4 - (1.21e+01,6,0) ft

Energy MeV	Activity photons/sec	Fluence Rate		Exposure Rate	
		MeV/cm ² /sec No Buildup	MeV/cm ² /sec With Buildup	mR/hr No Buildup	mR/hr With Buildup
0.1016	9.710e+15	2.737e-10	6.396e-08	4.189e-13	9.790e-11
0.3656	2.368e+16	1.053e-01	2.602e+01	2.039e-04	5.038e-02
0.6172	5.608e+16	4.469e+01	4.235e+03	8.708e-02	8.251e+00
0.8096	3.261e+16	3.125e+02	1.774e+04	5.936e-01	3.370e+01
1.0825	4.612e+15	5.435e+02	1.813e+04	9.874e-01	3.294e+01
1.3401	4.617e+15	3.063e+03	7.099e+04	5.306e+00	1.230e+02
1.6044	3.191e+15	8.237e+03	1.445e+05	1.360e+01	2.386e+02
1.8388	5.875e+14	3.972e+03	5.746e+04	6.303e+00	9.118e+01
2.0402	2.758e+14	3.738e+03	4.701e+04	5.744e+00	7.225e+01
2.3212	1.291e+14	3.961e+03	4.217e+04	5.840e+00	6.217e+01
2.5398	1.194e+14	6.287e+03	5.990e+04	9.002e+00	8.577e+01
2.7426	8.884e+11	7.274e+01	6.327e+02	1.016e-01	8.835e-01
3.0171	1.144e+12	1.582e+02	1.234e+03	2.142e-01	1.671e+00
3.2809	1.718e+12	3.684e+02	2.622e+03	4.859e-01	3.458e+00
3.4931	5.900e+11	1.733e+02	1.154e+03	2.241e-01	1.492e+00
3.7009	1.040e+10	4.042e+00	2.533e+01	5.130e-03	3.215e-02
3.9384	7.150e+11	3.719e+02	2.187e+03	4.625e-01	2.719e+00
4.3428	2.255e+10	1.814e+01	9.667e+01	2.181e-02	1.163e-01
4.48	1.875e+09	1.723e+00	8.907e+00	2.049e-03	1.060e-02
4.7418	5.068e+11	5.897e+02	2.889e+03	6.880e-01	3.370e+00
5.0016	8.629e+08	1.243e+00	5.802e+00	1.425e-03	6.651e-03
5.2304	3.993e+09	6.842e+00	3.071e+01	7.733e-03	3.471e-02
5.608	5.502e+07	1.222e-01	5.177e-01	1.353e-04	5.731e-04
5.8005	4.752e+07	1.191e-01	4.910e-01	1.306e-04	5.383e-04
6.1042	5.002e+07	1.497e-01	5.923e-01	1.617e-04	6.400e-04
TOTALS:	1.356e+17	3.192e+04	4.730e+05	4.968e+01	7.617e+02

Results - Dose Point # 5 - (1.41e+01,6,0) ft

Energy MeV	Activity photons/sec	Fluence Rate		Exposure Rate	
		MeV/cm ² /sec No Buildup	MeV/cm ² /sec With Buildup	mR/hr No Buildup	mR/hr With Buildup
0.1016	9.710e+15	2.320e-10	5.423e-08	3.552e-13	8.301e-11
0.3656	2.368e+16	8.882e-02	2.192e+01	1.720e-04	4.243e-02
0.6172	5.608e+16	3.755e+01	3.552e+03	7.317e-02	6.920e+00
0.8096	3.261e+16	2.620e+02	1.484e+04	4.975e-01	2.819e+01
1.0825	4.612e+15	4.543e+02	1.512e+04	8.253e-01	2.748e+01
1.3401	4.617e+15	2.554e+03	5.908e+04	4.425e+00	1.023e+02
1.6044	3.191e+15	6.855e+03	1.200e+05	1.132e+01	1.982e+02
1.8388	5.875e+14	3.301e+03	4.764e+04	5.238e+00	7.561e+01
2.0402	2.758e+14	3.103e+03	3.893e+04	4.768e+00	5.983e+01
2.3212	1.291e+14	3.283e+03	3.487e+04	4.841e+00	5.141e+01
2.5398	1.194e+14	5.207e+03	4.949e+04	7.455e+00	7.086e+01
2.7426	8.884e+11	6.019e+01	5.222e+02	8.405e-02	7.292e-01
3.0171	1.144e+12	1.307e+02	1.017e+03	1.771e-01	1.378e+00
3.2809	1.718e+12	3.043e+02	2.160e+03	4.013e-01	2.848e+00
3.4931	5.900e+11	1.430e+02	9.496e+02	1.849e-01	1.228e+00
3.7009	1.040e+10	3.333e+00	2.084e+01	4.231e-03	2.645e-02
3.9384	7.150e+11	3.065e+02	1.798e+03	3.812e-01	2.236e+00
4.3428	2.255e+10	1.493e+01	7.939e+01	1.796e-02	9.547e-02
4.48	1.875e+09	1.418e+00	7.313e+00	1.687e-03	8.700e-03
4.7418	5.068e+11	4.851e+02	2.370e+03	5.660e-01	2.765e+00
5.0016	8.629e+08	1.022e+00	4.758e+00	1.172e-03	5.454e-03
5.2304	3.993e+09	5.623e+00	2.518e+01	6.356e-03	2.846e-02
5.608	5.502e+07	1.004e-01	4.241e-01	1.111e-04	4.695e-04

JS File: LGSCS-AE.MS5
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 Duration: 00:00:11

<u>Energy</u> <u>MeV</u>	<u>Activity</u> <u>photons/sec</u>	<u>Fluence Rate</u> <u>MeV/cm²/sec</u> <u>No Buildup</u>	<u>Fluence Rate</u> <u>MeV/cm²/sec</u> <u>With Buildup</u>	<u>Exposure Rate</u> <u>mR/hr</u> <u>No Buildup</u>	<u>Exposure Rate</u> <u>mR/hr</u> <u>With Buildup</u>
5.8005	4.752e+07	9.780e-02	4.021e-01	1.072e-04	4.408e-04
6.1042	5.002e+07	1.228e-01	4.848e-01	1.328e-04	5.239e-04
TOTALS:	1.356e+17	2.651e+04	3.925e+05	4.127e+01	6.322e+02

Results - Dose Point # 6 - (1.61e+01,6,0) ft

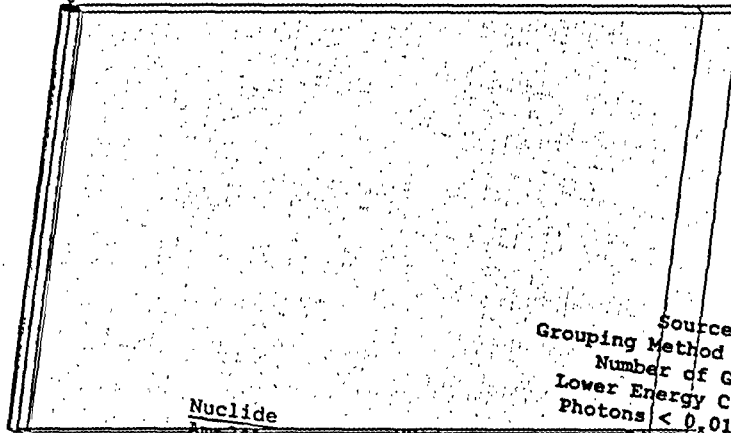
<u>Energy</u> <u>MeV</u>	<u>Activity</u> <u>photons/sec</u>	<u>Fluence Rate</u> <u>MeV/cm²/sec</u> <u>No Buildup</u>	<u>Fluence Rate</u> <u>MeV/cm²/sec</u> <u>With Buildup</u>	<u>Exposure Rate</u> <u>mR/hr</u> <u>No Buildup</u>	<u>Exposure Rate</u> <u>mR/hr</u> <u>With Buildup</u>
0.1016	9.710e+15	2.001e-10	4.676e-08	3.063e-13	7.158e-11
0.3656	2.368e+16	7.608e-02	1.874e+01	1.473e-04	3.629e-02
0.6172	5.608e+16	3.205e+01	3.026e+03	6.245e-02	5.897e+00
0.8096	3.261e+16	2.231e+02	1.262e+04	4.238e-01	2.397e+01
1.0825	4.612e+15	3.860e+02	1.283e+04	7.013e-01	2.331e+01
1.3401	4.617e+15	2.166e+03	5.001e+04	3.752e+00	8.664e+01
1.6044	3.191e+15	5.804e+03	1.014e+05	9.585e+00	1.675e+02
1.8388	5.875e+14	2.791e+03	4.021e+04	4.429e+00	6.381e+01
2.0402	2.758e+14	2.621e+03	3.282e+04	4.028e+00	5.044e+01
2.3212	1.291e+14	2.770e+03	2.936e+04	4.084e+00	4.329e+01
2.5398	1.194e+14	4.389e+03	4.162e+04	6.284e+00	5.960e+01
2.7426	8.884e+11	5.069e+01	4.389e+02	7.079e-02	6.129e-01
3.0171	1.144e+12	1.100e+02	8.542e+02	1.490e-01	1.157e+00
3.2809	1.718e+12	2.558e+02	1.812e+03	3.374e-01	2.389e+00
3.4931	5.900e+11	1.202e+02	7.961e+02	1.554e-01	1.029e+00
3.7009	1.040e+10	2.799e+00	1.746e+01	3.553e-03	2.216e-02
3.9384	7.150e+11	2.573e+02	1.505e+03	3.199e-01	1.872e+00
4.3428	2.255e+10	1.252e+01	6.641e+01	1.506e-02	7.986e-02
4.48	1.875e+09	1.189e+00	6.115e+00	1.414e-03	7.275e-03
4.7418	5.068e+11	4.065e+02	1.981e+03	4.742e-01	2.311e+00
5.0016	8.629e+08	8.561e-01	3.975e+00	9.814e-04	4.556e-03
5.2304	3.993e+09	4.707e+00	2.102e+01	5.320e-03	2.376e-02
5.608	5.502e+07	8.397e-02	3.539e-01	9.296e-05	3.918e-04
5.8005	4.752e+07	8.179e-02	3.354e-01	8.967e-05	3.677e-04
6.1042	5.002e+07	1.027e-01	4.042e-01	1.110e-04	4.368e-04
TOTALS:	1.356e+17	2.240e+04	3.314e+05	3.488e+01	5.340e+02

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 Duration: 00:00:02

MicroShield v5.05 (5.05-00210)
 Raytheon Engineers & Constructors

File Ref: _____
 Date: _____
 By: _____
 Checked: _____

Case Title: LGS RHR Pipe
 Description: Unit 1 ECCS Source Horizontal Pipe
 Geometry: 7 - Cylinder Volume - Side Shields



Height: 34 ft
 Radius: 8.5 in

Source Dimensions
 1.0e+3 cm
 21.59 cm

Dose Points
 X: 1661.16 cm (54 ft 6.0 in)
 Y: 990.6 cm (32 ft 6.0 in)
 Z: 0 cm (0.0 in)

Shield Name	Shields Dimension	Material	Density
Source	53.593 ft	Water	1
Transition		Air	0.00122
Shield 2	49.75 ft	Air	0.00122
Shield 3	3.0 ft	Concrete	2.35
Air Gap		Air	0.00122
Wall Clad	.042 ft	Iron	7.86

Source Input
 Grouping Method : Linear Energy
 Number of Groups : 25
 Lower Energy Cutoff : 0.015
 Photons < 0.015 : Excluded
 Library : Grove

Nuclide	Curies	becquerels	µCi/cm³	Bq/cm³
Am-241	9.7276e-001	3.5992e+010	6.4100e-001	2.3717e+004
Ba-137m	4.9655e+005	1.8372e+016	3.2720e+005	1.2106e+010
Ba-139	1.9668e+003	7.2771e+013	1.2960e+003	4.7952e+007
Ba-140	2.3689e+005	8.7650e+015	1.5610e+005	5.7757e+009
Ba-141	5.5209e+001	2.0427e+012	3.6380e+001	1.3461e+006
Ba-142	7.1038e+000	2.6284e+011	4.6810e+000	1.7320e+005
Br-82	2.7423e+003	1.0146e+014	1.8070e+003	6.6859e+007
Br-83	4.3281e+003	1.6014e+014	2.8520e+003	1.0552e+008
Br-84	7.3693e+002	2.7267e+013	4.8560e+002	1.7967e+007
Br-85	5.2129e+000	1.9288e+011	3.4350e+000	1.2709e+005
Ce-141	7.9460e+003	2.9400e+014	5.2360e+003	1.9373e+008
Ce-143	1.0764e+003	3.9827e+013	7.0930e+002	2.6244e+007
Ce-144	8.0568e+003	2.9810e+014	5.3090e+003	1.9643e+008
Cm-242	2.0942e+002	7.7487e+012	1.3800e+002	5.1060e+006
Cm-244	2.4129e+001	8.9279e+011	1.5900e+001	5.8830e+005
Co-58	1.5631e+002	5.7835e+012	1.0300e+002	3.8110e+006
Co-60	2.1094e+002	7.8049e+012	1.3900e+002	5.1430e+006
Cs-132	2.9805e+002	1.1028e+013	1.9640e+002	7.2668e+006
Cs-134	8.3299e+005	3.0821e+016	5.4890e+005	2.0309e+010
Cs-134m	1.9728e+003	7.2995e+013	1.3000e+003	4.8100e+007
Cs-135	2.9805e+000	1.1028e+011	1.9640e+000	7.2668e+004
Cs-136	1.2866e+005	4.7604e+015	8.4780e+004	3.1369e+009
Cs-137	5.2523e+005	1.9434e+016	3.4610e+005	1.2806e+010
Cs-138	8.2768e+003	3.0624e+014	5.4540e+003	2.0180e+008
Cs-139	4.1445e+002	1.5335e+013	2.7310e+002	1.0105e+007
Eu-154	4.1900e+001	1.5503e+012	2.7610e+001	1.0216e+006
Eu-155	2.9729e+001	1.1000e+012	1.9590e+001	7.2483e+005
Eu-156	2.7377e+002	1.0129e+013	1.8040e+002	6.6748e+006
I-128	2.7529e+001	1.0186e+012	1.8140e+001	6.7118e+005
I-130	6.8458e+003	2.5329e+014	4.5110e+003	1.6691e+008
I-131	1.5950e+006	5.9014e+016	1.0510e+006	3.8887e+010
I-132	1.2027e+006	4.4499e+016	7.9250e+005	2.9322e+010
I-133	6.0430e+005	2.2359e+016	3.9820e+005	1.4733e+010
I-134	3.4312e+004	1.2696e+015	2.2610e+004	8.3657e+008
I-135	1.9698e+005	7.2883e+015	1.2980e+005	4.8026e+009
I-136	2.7256e+000	1.0085e+011	1.7960e+000	6.6452e+004
La-140	2.1398e+005	7.9172e+015	1.4100e+005	5.2170e+009
La-141	6.8670e+001	2.5408e+012	4.5250e+001	1.6743e+006
La-142	2.0487e+001	7.5803e+011	1.3500e+001	4.9950e+005
Mo-99	1.1320e+004	4.1882e+014	7.4590e+003	2.7598e+008
Mo-101	3.3387e+000	1.2353e+011	2.2000e+000	8.1400e+004
Nb-95	4.0732e+003	1.5071e+014	2.6840e+003	9.9308e+007
Nb-95m	2.6573e+001	9.8319e+011	1.7510e+001	6.4787e+005
Nb-97	2.8530e+002	1.0556e+013	1.8800e+002	6.9560e+006
Nb-97m	2.5541e+002	9.4501e+012	5.5160e+002	6.2271e+006
Nd-147	8.3709e+002	3.0972e+013	1.8800e+002	2.0409e+007
Nd-149	5.3282e+000	1.9714e+011	3.5110e+000	1.2991e+005
Np-239	2.0335e+004	7.5241e+014	1.3400e+004	4.9580e+008

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Nuclide	curies	becquerels	$\mu\text{Ci}/\text{cm}^3$	Bq/cm^3
Pd-109	5.8032e+002	2.1472e+013	3.8240e+002	1.4149e+007
Pm-147	4.3994e+002	1.6278e+013	2.8990e+002	1.0726e+007
Pm-148	2.2293e+002	8.2485e+012	1.4690e+002	5.4353e+006
Pm-148m	8.6714e+001	3.2084e+012	5.7140e+001	2.1142e+006
Pm-149	2.3689e+002	8.7650e+012	1.5610e+002	5.7757e+006
Pm-151	5.0247e+001	1.8591e+012	3.3110e+001	1.2251e+006
Pr-142	1.4755e+001	5.4595e+011	9.7230e+000	3.5975e+005
Pr-143	2.2703e+003	8.4001e+013	1.4960e+003	5.5352e+007
Pr-144	3.2233e+003	1.1926e+014	2.1240e+003	7.8588e+007
Pr-144m	3.8668e+001	1.4307e+012	2.5480e+001	9.4276e+005
Pu-238	4.1733e+001	1.5441e+012	2.7500e+001	1.0175e+006
Pu-239	2.8227e+000	1.0444e+011	1.8600e+000	6.8820e+004
Pu-240	2.9896e+000	1.1062e+011	1.9700e+000	7.2890e+004
Pu-241	1.4341e+003	5.3062e+013	9.4500e+002	3.4965e+007
Rb-86	4.8289e+003	1.7867e+014	3.1820e+003	1.1773e+008
Rb-88	2.6466e+004	9.7926e+014	1.7440e+004	6.4528e+008
Rb-89	6.8731e+002	2.5430e+013	4.5290e+002	1.6757e+007
Rb-90	1.4916e+001	5.5190e+011	9.8290e+000	3.6367e+005
Rb-90m	9.3437e+000	3.4572e+011	6.1570e+000	2.2781e+005
Rh-103m	3.4919e+004	1.2920e+015	2.3010e+004	8.5137e+008
Rh-105	4.2704e+003	1.5801e+014	2.8140e+003	1.0412e+008
Rh-105m	1.7240e+002	6.3787e+012	1.1360e+002	4.2032e+006
Rh-106	1.9531e+004	7.2265e+014	1.2870e+004	4.7619e+008
Ru-103	3.8698e+004	1.4318e+015	2.5500e+004	9.4350e+008
Ru-105	6.1401e+002	2.2718e+013	4.0460e+002	1.4970e+007
Ru-106	1.9531e+004	7.2265e+014	1.2870e+004	4.7619e+008
Sb-122	2.9866e+002	1.1050e+013	1.9680e+002	7.2816e+006
Sb-124	8.3998e+002	3.1079e+013	5.5350e+002	2.0479e+007
Sb-125	1.1764e+004	4.3528e+014	7.7520e+003	2.8682e+008
Sb-126	3.7469e+002	1.3863e+013	2.4690e+002	9.1353e+006
Sb-126m	8.1949e-001	3.0321e+010	5.4000e-001	1.9980e+004
Sb-127	1.6951e+004	6.2720e+014	1.1170e+004	4.1329e+008
Sb-129	3.4737e+003	1.2853e+014	2.2890e+003	8.4693e+007
Sm-151	1.9668e+000	7.2771e+010	1.2960e+000	4.7952e+004
Sm-153	1.7680e+002	6.5415e+012	1.1650e+002	4.3105e+006
Sr-89	1.9470e+005	7.2041e+015	1.2830e+005	4.7471e+009
Sr-90	2.9411e+004	1.0882e+015	1.9380e+004	7.1706e+008
Sr-91	1.1353e+004	4.2006e+014	7.4810e+003	2.7680e+008
Sr-92	3.1247e+003	1.1561e+014	2.0590e+003	7.6183e+007
Sr-93	1.1514e+000	4.2601e+010	7.5870e-001	2.8072e+004
Tc-99	6.6212e-001	2.4498e+010	4.3630e-001	1.6143e+004
Tc-99m	1.0779e+004	3.9883e+014	7.1030e+003	2.6281e+008
Tc-101	1.4622e+001	5.4101e+011	9.6350e+000	3.5650e+005
Te-123m	1.4350e+001	5.3096e+011	9.4560e+000	3.4987e+005
Te-125m	2.6057e+003	9.6410e+013	1.7170e+003	6.3529e+007
Te-127	2.4190e+004	8.9503e+014	1.5940e+004	5.8978e+008
Te-127m	8.4256e+003	3.1175e+014	5.5520e+003	2.0542e+008
Te-129	1.8681e+004	6.9121e+014	1.2310e+004	4.5547e+008
Te-129m	2.2642e+004	8.3776e+014	1.4920e+004	5.5204e+008
Te-131	2.6694e+003	9.8768e+013	1.7590e+003	6.5083e+007
Te-131m	9.3422e+003	3.4566e+014	6.1560e+003	2.2777e+008
Te-132	1.9410e+005	7.1816e+015	1.2790e+005	4.7323e+009
Te-133	1.7665e+002	6.5359e+012	1.1640e+002	4.3068e+006
Te-133m	8.9992e+002	3.3297e+013	5.9300e+002	2.1941e+007
Te-134	1.1883e+003	4.3966e+013	7.8300e+002	2.8971e+007
Y-90	2.9411e+004	1.0882e+015	1.9380e+004	7.1706e+008
Y-91	1.1353e+004	4.2006e+014	7.4810e+003	2.7680e+008
Y-91m	6.4709e+003	2.3942e+014	4.2640e+003	1.5777e+008
Y-92	3.1247e+003	1.1561e+014	2.0590e+003	7.6183e+007
Y-93	1.5373e+002	5.6880e+012	1.0130e+002	3.7481e+006
Zr-95	3.6012e+003	1.3324e+014	2.3730e+003	8.7801e+007
Zr-97	2.9593e+002	1.0949e+013	1.9500e+002	7.2150e+006

Buildup
 The material reference is : Shield 3

Integration Parameters

Radial	10
Circumferential	10
Y Direction (axial)	20

Energy MeV	Activity photons/sec	Results			
		Fluence Rate	Fluence Rate	Exposure Rate	Exposure Rate
		MeV/cm ² /sec No Buildup	MeV/cm ² /sec With Buildup	mR/hr No Buildup	mR/hr With Buildup
0.1016	2.717e+16	1.402e-11	3.429e-09	2.146e-14	5.250e-12
0.3656	6.627e+16	1.099e-02	2.832e+00	2.128e-05	5.484e-03
0.6172	1.569e+17	5.149e+00	5.062e+02	1.003e-02	9.864e-01

JS File: LGS2REH.MS5
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 in Time: 1:14:10 PM
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<u>Energy</u> MeV	<u>Activity</u> photons/sec	<u>Fluence Rate</u>		<u>Exposure Rate</u>	
		<u>MeV/cm²/sec</u> <u>No Buildup</u>	<u>MeV/cm²/sec</u> <u>With Buildup</u>	<u>mR/hr</u> <u>No Buildup</u>	<u>mR/hr</u> <u>With Buildup</u>
0.8096	9.126e+16	3.774e+01	2.216e+03	7.168e-02	4.210e+00
1.0825	1.291e+16	6.887e+01	2.370e+03	1.251e-01	4.305e+00
1.3401	1.292e+16	4.012e+02	9.571e+03	6.951e-01	1.658e+01
1.6044	8.931e+15	1.107e+03	1.996e+04	1.829e+00	3.296e+01
1.8388	1.644e+15	5.436e+02	8.069e+03	8.626e-01	1.281e+01
2.0402	7.718e+14	5.181e+02	6.680e+03	7.962e-01	1.027e+01
2.3212	3.612e+14	5.571e+02	6.071e+03	8.214e-01	8.951e+00
2.5398	3.341e+14	8.928e+02	8.697e+03	1.278e+00	1.245e+01
2.7426	2.486e+12	1.041e+01	9.248e+01	1.453e-02	1.291e-01
3.0171	3.201e+12	2.283e+01	1.818e+02	3.092e-02	2.462e-01
3.2809	4.808e+12	5.355e+01	3.887e+02	7.063e-02	5.127e-01
3.4931	1.651e+12	2.532e+01	1.718e+02	3.273e-02	2.221e-01
3.7009	2.909e+10	5.929e-01	3.786e+00	7.525e-04	4.805e-03
3.9384	2.001e+12	5.479e+01	3.281e+02	6.814e-02	4.080e-01
4.3428	6.310e+10	2.689e+00	1.458e+01	3.233e-03	1.753e-02
4.48	5.247e+09	2.559e-01	1.346e+00	3.044e-04	1.601e-03
4.7418	1.418e+12	8.786e+01	4.376e+02	1.025e-01	5.106e-01
5.0016	2.415e+09	1.858e-01	8.812e-01	2.129e-04	1.010e-03
5.2304	1.117e+10	1.025e+00	4.673e+00	1.158e-03	5.282e-03
5.608	1.540e+08	1.836e-02	7.899e-02	2.032e-05	8.745e-05
5.8005	1.330e+08	1.792e-02	7.500e-02	1.964e-05	8.223e-05
6.1042	1.400e+08	2.256e-02	9.062e-02	2.438e-05	9.793e-05
TOTALS:	3.795e+17	4.391e+03	6.577e+04	6.814e+00	1.056e+02

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 In Date: September 20, 2005
 In Time: 1:19:28 PM
 Duration: 00:00:02

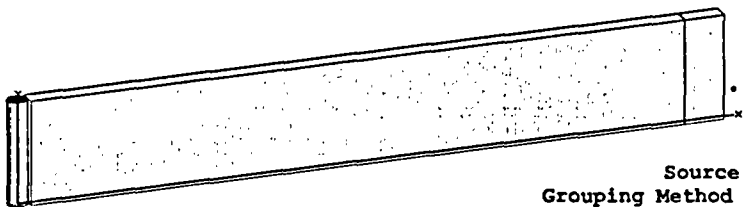
File Ref: _____
 Date: _____
 By: _____
 Checked: _____

Case Title: LGS RHR Pipe
 Description: Unit 1 ECCS Source 8 ft Vertical Pipe
 Geometry: 7 - Cylinder Volume - Side Shields

Source Dimensions
 Height 243.84 cm 8 ft
 Radius 21.59 cm 8.5 in

Dose Points
 # 1 X 1661.16 cm 60.96 cm Z 0 cm
 54 ft 6.0 in 2 ft 0.0 in

Shields			
Shield Name	Dimension	Material	Density
Source	12.61 ft ³	Water	1
Transition		Air	0.00122
Shield 2	49.75 ft	Air	0.00122
Shield 3	3.0 ft	Concrete	2.35
Air Gap		Air	0.00122
Wall Clad	.042 ft	Iron	7.86



Source Input
 Grouping Method : Linear Energy
 Number of Groups : 25
 Lower Energy Cutoff : 0.015
 Photons < 0.015 : Excluded

Nuclide	curies	becquerels	pCi/cm ³	Bq/cm ³
Am-241	2.2889e-001	8.4688e+009	6.4100e-001	2.3717e+004
Ba-137m	1.1684e+005	4.3229e+015	3.2720e+005	1.2106e+010
Ba-139	4.6277e+002	1.7122e+013	1.2960e+003	4.7952e+007
Ba-140	5.5739e+004	2.0624e+015	1.5610e+005	5.7757e+009
Ba-141	1.2990e+001	4.8065e+011	3.6380e+001	1.3461e+006
Ba-142	1.6715e+000	6.1844e+010	4.6810e+000	1.7320e+005
Br-82	6.4524e+002	2.3874e+013	1.8070e+003	6.6859e+007
Br-83	1.0184e+003	3.7680e+013	2.8520e+003	1.0552e+008
Br-84	1.7340e+002	6.4156e+012	4.8560e+002	1.7967e+007
Br-85	1.2266e+000	4.5383e+010	3.4350e+000	1.2709e+005
Ce-141	1.8696e+003	6.9177e+013	5.2360e+003	1.9373e+008
Ce-143	2.5327e+002	9.3711e+012	7.0930e+002	2.6244e+007
Ce-144	1.8957e+003	7.0141e+013	5.3090e+003	1.9643e+008
Cm-242	4.9276e+001	1.8232e+012	1.3800e+002	5.1060e+006
Cm-244	5.6775e+000	2.1007e+011	1.5900e+001	5.8830e+005
Co-58	3.6779e+001	1.3608e+012	1.0300e+002	3.8110e+006
Co-60	4.9634e+001	1.8364e+012	1.3900e+002	5.1430e+006
Cs-132	7.0130e+001	2.5948e+012	1.9640e+002	7.2668e+006
Cs-134	1.9600e+005	7.2520e+015	5.4890e+005	2.0309e+010
Cs-134m	4.6420e+002	1.7175e+013	1.3000e+003	4.8100e+007
Cs-135	7.0130e-001	2.5948e+010	1.9640e+000	7.2668e+004
Cs-136	3.0273e+004	1.1201e+015	8.4780e+004	3.1369e+009
Cs-137	1.2358e+005	4.5726e+015	3.4610e+005	1.2806e+010
Cs-138	1.9475e+003	7.2057e+013	5.4540e+003	2.0180e+008
Cs-139	9.7517e+001	3.6081e+012	2.7310e+002	1.0105e+007
Eu-154	9.8589e+000	3.6478e+011	2.7610e+001	1.0216e+006
Eu-155	6.9951e+000	2.5882e+011	1.9590e+001	7.2483e+005
Eu-156	6.4416e+001	2.3834e+012	1.8040e+002	6.6748e+006
I-128	6.4774e+000	2.3966e+011	1.8140e+001	6.7118e+005
I-130	1.6108e+003	5.9598e+013	4.5110e+003	1.6691e+008
I-131	3.7529e+005	1.3886e+016	1.0510e+006	3.8887e+010
I-132	2.8298e+005	1.0470e+016	7.9250e+005	2.9322e+010
I-133	1.4219e+005	5.2609e+015	3.9820e+005	1.4733e+010
I-134	8.0735e+003	2.9872e+014	2.2610e+004	8.3657e+008
I-135	4.6348e+004	1.7149e+015	1.2980e+005	4.8026e+009
I-136	6.4131e-001	2.3728e+010	1.7960e+000	6.6452e+004
La-140	5.0348e+004	1.8629e+015	1.4100e+005	5.2170e+009
La-141	1.6158e+001	5.9783e+011	4.5250e+001	1.6743e+006
La-142	4.8205e+000	1.7836e+011	1.3500e+001	4.9950e+005
Mo-99	2.6634e+003	9.8547e+013	7.4590e+003	2.7598e+008
Mo-101	7.8557e-001	2.9066e+010	2.2000e+000	8.1400e+004
Nb-95	9.5839e+002	3.5460e+013	2.6840e+003	9.9308e+007
Nb-95m	6.2524e+000	2.3134e+011	1.7510e+001	6.4787e+005
Nb-97	6.7130e+001	2.4838e+012	1.8800e+002	6.9560e+006
Nb-97m	6.0096e+001	2.2235e+012	1.6830e+002	6.2271e+006
Nd-147	1.9696e+002	7.2876e+012	5.5160e+002	2.0409e+007
Nd-149	1.2537e+000	4.6387e+010	3.5110e+000	1.2991e+005
Np-239	4.7848e+003	1.7704e+014	1.3400e+004	4.9580e+008

<u>Nuclide</u>	<u>curies</u>	<u>becquerels</u>	<u>µCi/cm³</u>	<u>Bq/cm³</u>
Pd-109	1.3655e+002	5.0522e+012	3.8240e+002	1.4149e+007
Pm-147	1.0352e+002	3.8301e+012	2.8990e+002	1.0726e+007
Pm-148	5.2454e+001	1.9408e+012	1.4690e+002	5.4353e+006
Pm-148m	2.0403e+001	7.5492e+011	5.7140e+001	2.1142e+006
Pm-149	5.5739e+001	2.0624e+012	1.5610e+002	5.7757e+006
Pm-151	1.1823e+001	4.3744e+011	3.3110e+001	1.2251e+006
Pr-142	3.4718e+000	1.2846e+011	9.7230e+000	3.5975e+005
Pr-143	5.3419e+002	1.9765e+013	1.4960e+003	5.5352e+007
Pr-144	7.5843e+002	2.8062e+013	2.1240e+003	7.8588e+007
Pr-144m	9.0983e+000	3.3664e+011	2.5480e+001	9.4276e+005
Pu-238	9.8196e+000	3.6332e+011	2.7500e+001	1.0175e+006
Pu-239	6.6416e-001	2.4574e+010	1.8600e+000	6.8820e+004
Pu-240	7.0344e-001	2.6027e+010	1.9700e+000	7.2890e+004
Pu-241	3.3744e+002	1.2485e+013	9.4500e+002	3.4965e+007
Rb-86	1.1362e+003	4.2040e+013	3.1820e+003	1.1773e+008
Rb-88	6.2274e+003	2.3041e+014	1.7440e+004	6.4528e+008
Rb-89	1.6172e+002	5.9836e+012	4.5290e+002	1.6757e+007
Rb-90	3.5097e+000	1.2986e+011	9.8290e+000	3.6367e+005
Rb-90m	2.1985e+000	8.1345e+010	6.1570e+000	2.2781e+005
Rh-103m	8.2163e+003	3.0400e+014	2.3010e+004	8.5137e+008
Rh-105	1.0048e+003	3.7178e+013	2.8140e+003	1.0412e+008
Rh-105m	4.0564e+001	1.5009e+012	1.1360e+002	4.2032e+006
Rh-106	4.5956e+003	1.7004e+014	1.2870e+004	4.7619e+008
Ru-103	9.1054e+003	3.3690e+014	2.5500e+004	9.4350e+008
Ru-105	1.4447e+002	5.3455e+012	4.0460e+002	1.4970e+007
Ru-106	4.5956e+003	1.7004e+014	1.2870e+004	4.7619e+008
Sb-122	7.0272e+001	2.6001e+012	1.9680e+002	7.2816e+006
Sb-124	1.9764e+002	7.3127e+012	5.5350e+002	2.0479e+007
Sb-125	2.7680e+003	1.0242e+014	7.7520e+003	2.8682e+008
Sb-126	8.8162e+001	3.2620e+012	2.4690e+002	9.1353e+006
Sb-126m	1.9282e-001	7.1344e+009	5.4000e-001	1.9980e+004
Sb-127	3.9885e+003	1.4758e+014	1.1170e+004	4.1329e+008
Sb-129	8.1735e+002	3.0242e+013	2.2890e+003	8.4693e+007
Sm-151	4.6277e-001	1.7122e+010	1.2960e+000	4.7952e+004
Sm-153	4.1599e+001	1.5392e+012	1.1650e+002	4.3105e+006
Sr-89	4.5813e+004	1.6951e+015	1.2830e+005	4.7471e+009
Sr-90	6.9201e+003	2.5604e+014	1.9380e+004	7.1706e+008
Sr-91	2.6713e+003	9.8837e+013	7.4810e+003	2.7680e+008
Sr-92	7.3522e+002	2.7203e+013	2.0590e+003	7.6183e+007
Sr-93	2.7091e-001	1.0024e+010	7.5870e-001	2.8072e+004
Tc-99	1.5579e-001	5.7643e+009	4.3630e-001	1.6143e+004
Tc-99m	2.5363e+003	9.3843e+013	7.1030e+003	2.6281e+008
Tc-101	3.4404e+000	1.2730e+011	9.6350e+000	3.5650e+005
Te-123m	3.3765e+000	1.2493e+011	9.4560e+000	3.4987e+005
Te-125m	6.1310e+002	2.2685e+013	1.7170e+003	6.3529e+007
Te-127	5.6918e+003	2.1060e+014	1.5940e+004	5.8978e+008
Te-127m	1.9825e+003	7.3352e+013	5.5520e+003	2.0542e+008
Te-129	4.3956e+003	1.6264e+014	1.2310e+004	4.5547e+008
Te-129m	5.3276e+003	1.9712e+014	1.4920e+004	5.5204e+008
Te-131	6.2810e+002	2.3240e+013	1.7590e+003	6.5083e+007
Te-131m	2.1982e+003	8.1332e+013	6.1560e+003	2.2777e+008
Te-132	4.5670e+004	1.6898e+015	1.2790e+005	4.7323e+009
Te-133	4.1564e+001	1.5379e+012	1.1640e+002	4.3068e+006
Te-133m	2.1175e+002	7.8346e+012	5.9300e+002	2.1941e+007
Te-134	2.7959e+002	1.0345e+013	7.8300e+002	2.8971e+007
Y-90	6.9201e+003	2.5604e+014	1.9380e+004	7.1706e+008
Y-91	2.6713e+003	9.8837e+013	7.4810e+003	2.7680e+008
Y-91m	1.5226e+003	5.6335e+013	4.2640e+003	1.5777e+008
Y-92	7.3522e+002	2.7203e+013	2.0590e+003	7.6183e+007
Y-93	3.6172e+001	1.3384e+012	1.0130e+002	3.7481e+006
Zr-95	8.4734e+002	3.1352e+013	2.3730e+003	8.7801e+007
Zr-97	6.9630e+001	2.5763e+012	1.9500e+002	7.2150e+006

Buildup
 The material reference is : Shield 3

Integration Parameters

Radial	10
Circumferential	10
Y Direction (axial)	20

Results

<u>Energy</u> MeV	<u>Activity</u> photons/sec	<u>Fluence Rate</u>		<u>Exposure Rate</u>		<u>Exposure Rate</u>	
		<u>MeV/cm²/sec</u>	<u>No Buildup</u>	<u>mR/hr</u>	<u>No Buildup</u>	<u>With Buildup</u>	<u>mR/hr</u>
0.1016	6.394e+15	8.823e-12	2.126e-09	1.351e-14	3.254e-12		
0.3656	1.559e+16	5.605e-03	1.396e+00	1.085e-05	2.702e-03		
0.6172	3.693e+16	2.423e+00	2.301e+02	4.721e-03	4.484e-01		

JS File: LGS2REV1.MS5
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<u>Energy</u> MeV	<u>Activity</u> photons/sec	<u>Fluence Rate</u> MeV/cm ² /sec		<u>Exposure Rate</u> mR/hr	
		<u>No Buildup</u>	<u>With Buildup</u>	<u>No Buildup</u>	<u>With Buildup</u>
0.8096	2.147e+16	1.699e+01	9.649e+02	3.228e-02	1.833e+00
1.0825	3.037e+15	2.955e+01	9.838e+02	5.368e-02	1.787e+00
1.3401	3.040e+15	1.660e+02	3.836e+03	2.877e-01	6.645e+00
1.6044	2.101e+15	4.448e+02	7.767e+03	7.346e-01	1.283e+01
1.8388	3.868e+14	2.137e+02	3.074e+03	3.391e-01	4.878e+00
2.0402	1.816e+14	2.004e+02	2.505e+03	3.079e-01	3.849e+00
2.3212	8.499e+13	2.114e+02	2.234e+03	3.116e-01	3.295e+00
2.5398	7.862e+13	3.343e+02	3.162e+03	4.787e-01	4.527e+00
2.7426	5.850e+11	3.856e+00	3.328e+01	5.385e-03	4.647e-02
3.0171	7.532e+11	8.351e+00	6.460e+01	1.131e-02	8.749e-02
3.2809	1.131e+12	1.938e+01	1.367e+02	2.556e-02	1.803e-01
3.4931	3.885e+11	9.089e+00	5.996e+01	1.175e-02	7.753e-02
3.7009	6.845e+09	2.114e-01	1.313e+00	2.683e-04	1.666e-03
3.9384	4.708e+11	1.940e+01	1.130e+02	2.412e-02	1.405e-01
4.3428	1.485e+10	9.416e-01	4.970e+00	1.132e-03	5.977e-03
4.48	1.234e+09	8.931e-02	4.573e-01	1.062e-04	5.440e-04
4.7418	3.337e+11	3.049e+01	1.479e+02	3.557e-02	1.725e-01
5.0016	5.682e+08	6.413e-02	2.962e-01	7.351e-05	3.396e-04
5.2304	2.629e+09	3.522e-01	1.565e+00	3.980e-04	1.769e-03
5.608	3.623e+07	6.270e-03	2.629e-02	6.942e-06	2.910e-05
5.8005	3.129e+07	6.102e-03	2.489e-02	6.691e-06	2.729e-05
6.1042	3.293e+07	7.652e-03	2.996e-02	8.269e-06	3.237e-05
TOTALS:	8.930e+16	1.712e+03	2.532e+04	2.666e+00	4.081e+01

Case Title: LGS RHR Pipe
Description: Unit 1 ECCS Source 28.5 ft Vertical Pipe
Geometry: 7 - Cylinder Volume - Side Shields

Source Dimensions
Height 868.68 cm 28 ft 6.0 in
Radius 21.59 cm 8.5 in

Dose Points

X Y Z
1 1661.16 cm 579.12 cm 993.648 cm
54 ft 6.0 in 19 ft 32 ft 7.2 in

Shields

Shield Name	Dimension	Material	Density
Source	44.923 ft ³	Water	1
Transition		Air	0.00122
Shield 2	49.75 ft	Air	0.00122
Shield 3	3.0 ft	Concrete	2.35
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Source Input

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Library : Grove

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Ba-141	4.6278e+001	1.7123e+012	3.6380e+001	1.3461e+006
Ba-142	5.9546e+000	2.2032e+011	4.6810e+000	1.7320e+005
Br-82	2.2987e+003	8.5050e+013	1.8070e+003	6.6859e+007
Br-83	3.6280e+003	1.3424e+014	2.8520e+003	1.0552e+008
Br-84	6.1772e+002	2.2856e+013	4.8560e+002	1.7967e+007
Br-85	4.3696e+000	1.6168e+011	3.4350e+000	1.2709e+005
Ce-141	6.6606e+003	2.4644e+014	5.2360e+003	1.9373e+008
Ce-143	9.0229e+002	3.3385e+013	7.0930e+002	2.6244e+007
Ce-144	6.7535e+003	2.4988e+014	5.3090e+003	1.9643e+008
Cm-242	1.7555e+002	6.4952e+012	1.3800e+002	5.1060e+006
Cm-244	2.0226e+001	7.4837e+011	1.5900e+001	5.8830e+005
Co-58	1.3102e+002	4.8479e+012	1.0300e+002	3.8110e+006
Co-60	1.7682e+002	6.5423e+012	1.3900e+002	5.1430e+006
Cs-132	2.4984e+002	9.2440e+012	1.9640e+002	7.2668e+006
Cs-134	6.9825e+005	2.5835e+016	5.4890e+005	2.0309e+010
Cs-134m	1.6537e+003	6.1187e+013	1.3000e+003	4.8100e+007
Cs-135	2.4984e+000	9.2440e+010	1.9640e+000	7.2668e+004
Cs-136	1.0785e+005	3.9903e+015	8.4780e+004	3.1369e+009
Cs-137	4.4027e+005	1.6290e+016	3.4610e+005	1.2806e+010
Cs-138	6.9379e+003	2.5670e+014	5.4540e+003	2.0180e+008
Cs-139	3.4741e+002	1.2854e+013	2.7310e+002	1.0105e+007
Eu-154	3.5122e+001	1.2995e+012	2.7610e+001	1.0216e+006
Eu-155	2.4920e+001	9.2204e+011	1.9590e+001	7.2483e+005
Eu-156	2.2948e+002	8.4909e+012	1.8040e+002	6.6748e+006
I-128	2.3076e+001	8.5380e+011	1.8140e+001	6.7118e+005
I-130	5.7384e+003	2.1232e+014	4.5110e+003	1.6691e+008
I-131	1.3370e+006	4.9467e+016	1.0510e+006	3.8887e+010
I-132	1.0081e+006	3.7301e+016	7.9250e+005	2.9322e+010
I-133	5.0654e+005	1.8742e+016	3.9820e+005	1.4733e+010
I-134	2.8762e+004	1.0642e+015	2.2610e+004	8.3657e+008
I-135	1.6512e+005	6.1093e+015	1.2980e+005	4.8026e+009
I-136	2.2847e+000	8.4532e+010	1.7960e+000	6.6452e+004
La-140	1.7936e+005	6.6364e+015	1.4100e+005	5.2170e+009
La-141	5.7562e+001	2.1298e+012	4.5250e+001	1.6743e+006
La-142	1.7173e+001	6.3540e+011	1.3500e+001	4.9950e+005
Mo-99	9.4885e+003	3.5107e+014	7.4590e+003	2.7598e+008
Mo-101	2.7986e+000	1.0355e+011	2.2000e+000	8.1400e+004
Nb-95	3.4143e+003	1.2633e+014	2.6840e+003	9.9308e+007
Nb-95m	2.2274e+001	8.2414e+011	1.7510e+001	6.4787e+005
Nb-97	2.3915e+002	8.8486e+012	1.8800e+002	6.9560e+006
Nb-97m	2.1409e+002	7.9214e+012	1.6830e+002	6.2271e+006
Nd-147	7.0168e+002	2.5962e+013	5.5160e+002	2.0409e+007
Nd-149	4.4663e+000	1.6525e+011	3.5110e+000	1.2991e+005
Np-239	1.7046e+004	6.3070e+014	1.3400e+004	4.9580e+008

Nuclide	curies	becquerels	$\mu\text{Ci}/\text{cm}^3$	Bq/cm^3
Pd-109	4.8644e+002	1.7998e+013	3.8240e+002	1.4149e+007
Pm-147	3.6878e+002	1.3645e+013	2.8990e+002	1.0726e+007
Pm-148	1.8687e+002	6.9141e+012	1.4690e+002	5.4353e+006
Pm-148m	7.2687e+001	2.6894e+012	5.7140e+001	2.1142e+006
Pm-149	1.9857e+002	7.3472e+012	1.5610e+002	5.7757e+006
Pm-151	4.2119e+001	1.5584e+012	3.3110e+001	1.2251e+006
Pr-142	1.2368e+001	4.5763e+011	9.7230e+000	3.5975e+005
Pr-143	1.9030e+003	7.0412e+013	1.4960e+003	5.5352e+007
Pr-144	2.7019e+003	9.9970e+013	2.1240e+003	7.8588e+007
Pr-144m	3.2413e+001	1.1993e+012	2.5480e+001	9.4276e+005
Pu-238	3.4982e+001	1.2943e+012	2.7500e+001	1.0175e+006
Pu-239	2.3661e+000	8.7545e+010	1.8600e+000	6.8820e+004
Pu-240	2.5060e+000	9.2722e+010	1.9700e+000	7.2890e+004
Pu-241	1.2021e+003	4.4478e+013	9.4500e+002	3.4965e+007
Rb-86	4.0478e+003	1.4977e+014	3.1820e+003	1.1773e+008
Rb-88	2.2185e+004	8.2085e+014	1.7440e+004	6.4528e+008
Rb-89	5.7613e+002	2.1317e+013	4.5290e+002	1.6757e+007
Rb-90	1.2503e+001	4.6262e+011	9.8290e+000	3.6367e+005
Rb-90m	7.8322e+000	2.8979e+011	6.1570e+000	2.2781e+005
Rh-103m	2.9271e+004	1.0830e+015	2.3010e+004	8.5137e+008
Rh-105	3.5796e+003	1.3245e+014	2.8140e+003	1.0412e+008
Rh-105m	1.4451e+002	5.3468e+012	1.1360e+002	4.2032e+006
Rh-106	1.6372e+004	6.0575e+014	1.2870e+004	4.7619e+008
Ru-103	3.2438e+004	1.2002e+015	2.5500e+004	9.4350e+008
Ru-105	5.1468e+002	1.9043e+013	4.0460e+002	1.4970e+007
Ru-106	1.6372e+004	6.0575e+014	1.2870e+004	4.7619e+008
Sb-122	2.5035e+002	9.2628e+012	1.9680e+002	7.2816e+006
Sb-124	7.0410e+002	2.6052e+013	5.5350e+002	2.0479e+007
Sb-125	9.8612e+003	3.6486e+014	7.7520e+003	2.8682e+008
Sb-126	3.1408e+002	1.1621e+013	2.4690e+002	9.1353e+006
Sb-126m	6.8692e-001	2.5416e+010	5.4000e-001	1.9980e+004
Sb-127	1.4209e+004	5.2574e+014	1.1170e+004	4.1329e+008
Sb-129	2.9118e+003	1.0774e+014	2.2890e+003	8.4693e+007
Sm-151	1.6486e+000	6.0999e+010	1.2960e+000	4.7952e+004
Sm-153	1.4820e+002	5.4833e+012	1.1650e+002	4.3105e+006
Sr-89	1.6321e+005	6.0387e+015	1.2830e+005	4.7471e+009
Sr-90	2.4653e+004	9.1216e+014	1.9380e+004	7.1706e+008
Sr-91	9.5164e+003	3.5211e+014	7.4810e+003	2.7680e+008
Sr-92	2.6192e+003	9.6911e+013	2.0590e+003	7.6183e+007
Sr-93	9.6513e-001	3.5710e+010	7.5870e-001	2.8072e+004
Tc-99	5.5501e-001	2.0535e+010	4.3630e-001	1.6143e+004
Tc-99m	9.0356e+003	3.3432e+014	7.1030e+003	2.6281e+008
Tc-101	1.2257e+001	4.5349e+011	9.6350e+000	3.5650e+005
Te-123m	1.2029e+001	4.4507e+011	9.4560e+000	3.4987e+005
Te-125m	2.1842e+003	8.0814e+013	1.7170e+003	6.3529e+007
Te-127	2.0277e+004	7.5025e+014	1.5940e+004	5.8978e+008
Te-127m	7.0626e+003	2.6132e+014	5.5520e+003	2.0542e+008
Te-129	1.5659e+004	5.7940e+014	1.2310e+004	4.5547e+008
Te-129m	1.8979e+004	7.0224e+014	1.4920e+004	5.5204e+008
Te-131	2.2376e+003	8.2791e+013	1.7590e+003	6.5083e+007
Te-131m	7.8309e+003	2.8974e+014	6.1560e+003	2.2777e+008
Te-132	1.6270e+005	6.0199e+015	1.2790e+005	4.7323e+009
Te-133	1.4807e+002	5.4786e+012	1.1640e+002	4.3068e+006
Te-133m	7.5434e+002	2.7911e+013	5.9300e+002	2.1941e+007
Te-134	9.9604e+002	3.6853e+013	7.8300e+002	2.8971e+007
Y-90	2.4653e+004	9.1216e+014	1.9380e+004	7.1706e+008
Y-91	9.5164e+003	3.5211e+014	7.4810e+003	2.7680e+008
Y-91m	5.4242e+003	2.0069e+014	4.2640e+003	1.5777e+008
Y-92	2.6192e+003	9.6911e+013	2.0590e+003	7.6183e+007
Y-93	1.2886e+002	4.7679e+012	1.0130e+002	3.7481e+006
Zr-95	3.0186e+003	1.1169e+014	2.3730e+003	8.7801e+007
Zr-97	2.4806e+002	9.1781e+012	1.9500e+002	7.2150e+006

Buildup
 The material reference is : Shield 3

Integration Parameters

Radial	10
Circumferential	10
Y Direction (axial)	20

Results

Energy MeV	Activity photons/sec	Fluence Rate	Fluence Rate	Exposure Rate	Exposure Rate
		$\text{MeV}/\text{cm}^2/\text{sec}$	$\text{MeV}/\text{cm}^2/\text{sec}$	mR/hr	mR/hr
		No Buildup	With Buildup	No Buildup	With Buildup
0.1016	2.278e+16	3.966e-14	1.218e-11	6.072e-17	1.865e-14
0.3656	5.555e+16	3.321e-04	1.139e-01	6.430e-07	2.205e-04
0.6172	1.316e+17	2.995e-01	3.709e+01	5.836e-04	7.226e-02

<u>Energy</u> MeV	<u>Activity</u> photons/sec	<u>Fluence Rate</u> MeV/cm ² /sec		<u>Exposure Rate</u> mR/hr	
		<u>No Buildup</u>	<u>With Buildup</u>	<u>No Buildup</u>	<u>With Buildup</u>
0.8096	7.650e+16	2.980e+00	2.146e+02	5.659e-03	4.075e-01
1.0825	1.082e+16	7.345e+00	3.016e+02	1.334e-02	5.479e-01
1.3401	1.083e+16	5.235e+01	1.465e+03	9.070e-02	2.538e+00
1.6044	7.486e+15	1.687e+02	3.525e+03	2.786e-01	5.821e+00
1.8388	1.378e+15	9.222e+01	1.574e+03	1.463e-01	2.498e+00
2.0402	6.470e+14	9.487e+01	1.398e+03	1.458e-01	2.148e+00
2.3212	3.028e+14	1.114e+02	1.377e+03	1.643e-01	2.030e+00
2.5398	2.801e+14	1.890e+02	2.077e+03	2.707e-01	2.974e+00
2.7426	2.084e+12	2.308e+00	2.303e+01	3.223e-03	3.216e-02
3.0171	2.683e+12	5.343e+00	4.755e+01	7.235e-03	6.439e-02
3.2809	4.031e+12	1.310e+01	1.059e+02	1.728e-02	1.397e-01
3.4931	1.384e+12	6.391e+00	4.818e+01	8.264e-03	6.230e-02
3.7009	2.439e+10	1.539e-01	1.089e+00	1.953e-04	1.382e-03
3.9384	1.677e+12	1.463e+01	9.681e+01	1.819e-02	1.204e-01
4.3428	5.289e+10	7.485e-01	4.467e+00	9.001e-04	5.372e-03
4.48	4.398e+09	7.213e-02	4.169e-01	8.580e-05	4.960e-04
4.7418	1.189e+12	2.532e+01	1.383e+02	2.954e-02	1.614e-01
5.0016	2.024e+09	5.460e-02	2.836e-01	6.258e-05	3.251e-04
5.2304	9.366e+09	3.059e-01	1.526e+00	3.457e-04	1.725e-03
5.608	1.291e+08	5.608e-03	2.635e-02	6.209e-06	2.918e-05
5.8005	1.115e+08	5.532e-03	2.527e-02	6.066e-06	2.770e-05
6.1042	1.173e+08	7.075e-03	3.095e-02	7.645e-06	3.345e-05
TOTALS:	3.181e+17	7.876e+02	1.244e+04	1.201e+00	1.963e+01

age : 1
JS File: LGS2REV3.MS5
in Date: September 20, 2005
in Time: 1:34:28 PM
ration: 00:00:02

File Ref: _____
Date: _____
By: _____
Checked: _____

Case Title: LGS RHR Pipe
Description: Unit 1 ECCS Source 20.5 ft Vertical Back Pipe (GBB-119)
Geometry: 7 - Cylinder Volume - Side Shields

Source Dimensions
Height 624.84 cm 20 ft 6.0 in
Radius 21.59 cm 8.5 in

Dose Points
1 X 1851.66 cm 579.12 cm 993.648 cm
60 ft 9.0 in 19 ft 32 ft 7.2 in

Shield Name	Dimension	Material	Density
Source	32.313 ft'	Water	1
Transition		Air	0.00122
Shield 2	56.0 ft	Air	0.00122
Shield 3	3.0 ft	Concrete	2.35
Air Gap		Air	0.00122
Wall Clad	.042 ft	Iron	7.86

Source Input
Grouping Method : Linear Energy
Number of Groups : 25
Lower Energy Cutoff : 0.015
Photons < 0.015 : Excluded
Library : Grove

Nuclide	curies	becquerels	µCi/cm³	Bq/cm³
Am-241	5.8652e-001	2.1701e+010	6.4100e-001	2.3717e+004
Ba-137m	2.9939e+005	1.1077e+016	3.2720e+005	1.2106e+010
Ba-139	1.1858e+003	4.3876e+013	1.2960e+003	4.7952e+007
Ba-140	1.4283e+005	5.2848e+015	1.5610e+005	5.7757e+009
Ba-141	3.3288e+001	1.2317e+012	3.6380e+001	1.3461e+006
Ba-142	4.2831e+000	1.5848e+011	4.6810e+000	1.7320e+005
Br-82	1.6534e+003	6.1176e+013	1.8070e+003	6.6859e+007
Br-83	2.6096e+003	9.6555e+013	2.8520e+003	1.0552e+008
Br-84	4.4433e+002	1.6440e+013	4.8560e+002	1.7967e+007
Br-85	3.1430e+000	1.1629e+011	3.4350e+000	1.2709e+005
Ce-141	4.7910e+003	1.7727e+014	5.2360e+003	1.9373e+008
Ce-143	6.4901e+002	2.4014e+013	7.0930e+002	2.6244e+007
Ce-144	4.8578e+003	1.7974e+014	5.3090e+003	1.9643e+008
Cm-242	1.2627e+002	4.6720e+012	1.3800e+002	5.1060e+006
Cm-244	1.4549e+001	5.3830e+011	1.5900e+001	5.8830e+005
Co-58	9.4246e+001	3.4871e+012	1.0300e+002	3.8110e+006
Co-60	1.2719e+002	4.7059e+012	1.3900e+002	5.1430e+006
Cs-132	1.7971e+002	6.6492e+012	1.9640e+002	7.2668e+006
Cs-134	5.0225e+005	1.8583e+016	5.4890e+005	2.0309e+010
Cs-134m	1.1895e+003	4.4012e+013	1.3000e+003	4.8100e+007
Cs-135	1.7971e+000	6.6492e+010	1.9640e+000	7.2668e+004
Cs-136	7.7574e+004	2.8702e+015	8.4780e+004	3.1369e+009
Cs-137	3.1668e+005	1.1717e+016	3.4610e+005	1.2806e+010
Cs-138	4.9904e+003	1.8465e+014	5.4540e+003	2.0180e+008
Cs-139	2.4989e+002	9.2459e+012	2.7310e+002	1.0105e+007
Eu-154	2.5263e+001	9.3474e+011	2.7610e+001	1.0216e+006
Eu-155	1.7925e+001	6.6322e+011	1.9590e+001	7.2483e+005
Eu-156	1.6507e+002	6.1075e+012	1.8040e+002	6.6748e+006
I-128	1.6598e+001	6.1413e+011	1.8140e+001	6.7118e+005
I-130	4.1276e+003	1.5272e+014	4.5110e+003	1.6691e+008
I-131	9.6167e+005	3.5582e+016	1.0510e+006	3.8887e+010
I-132	7.2514e+005	2.6830e+016	7.9250e+005	2.9323e+010
I-133	3.6436e+005	1.3481e+016	3.9820e+005	1.4733e+010
I-134	2.0688e+004	7.6547e+014	2.2610e+004	8.3657e+008
I-135	1.1877e+005	4.3944e+015	1.2980e+005	4.8026e+009
I-136	1.6434e+000	6.0804e+010	1.7960e+000	6.6452e+004
La-140	1.2902e+005	4.7736e+015	1.4100e+005	5.2170e+009
La-141	4.1404e+001	1.5319e+012	4.5250e+001	1.6743e+006
La-142	1.2353e+001	4.5705e+011	1.3500e+001	4.9950e+005
Mo-99	6.8250e+003	2.5253e+014	7.4590e+003	2.7598e+008
Mo-101	2.0130e+000	7.4481e+010	2.2000e+000	8.1400e+004
Nb-95	2.4559e+003	9.0867e+013	2.6840e+003	9.9308e+007
Nb-95m	1.6022e+001	5.9280e+011	1.7510e+001	6.4787e+005
Nb-97	1.7202e+002	6.3648e+012	1.8800e+002	6.9560e+006
Nb-97m	1.5400e+002	5.6978e+012	1.6830e+002	6.2271e+006
Nd-147	5.0472e+002	1.8675e+013	5.5160e+002	2.0409e+007
Nd-149	3.2126e+000	1.1887e+011	3.5110e+000	1.2991e+005
Np-239	1.2261e+004	4.5366e+014	1.3400e+004	4.9580e+008

Nuclide	curies	becquerels	$\mu\text{Ci}/\text{cm}^3$	Bq/cm^3
Pd-109	3.4990e+002	1.2946e+013	3.8240e+002	1.4149e+007
Pm-147	2.6526e+002	9.8146e+012	2.8990e+002	1.0726e+007
Pm-148	1.3441e+002	4.9733e+012	1.4690e+002	5.4353e+006
Pm-148m	5.2283e+001	1.9345e+012	5.7140e+001	2.1142e+006
Pm-149	1.4283e+002	5.2848e+012	1.5610e+002	5.7757e+006
Pm-151	3.0296e+001	1.1209e+012	3.3110e+001	1.2251e+006
Pr-142	8.8966e+000	3.2917e+011	9.7230e+000	3.5975e+005
Pr-143	1.3688e+003	5.0647e+013	1.4960e+003	5.5352e+007
Pr-144	1.9435e+003	7.1908e+013	2.1240e+003	7.8588e+007
Pr-144m	2.3314e+001	8.6263e+011	2.5480e+001	9.4276e+005
Pu-238	2.5163e+001	9.3102e+011	2.7500e+001	1.0175e+006
Pu-239	1.7019e+000	6.2971e+010	1.8600e+000	6.8820e+004
Pu-240	1.8026e+000	6.6695e+010	1.9700e+000	7.2890e+004
Pu-241	8.6468e+002	3.1993e+013	9.4500e+002	3.4965e+007
Rb-86	2.9115e+003	1.0773e+014	3.1820e+003	1.1773e+008
Rb-88	1.5958e+004	5.9044e+014	1.7440e+004	6.4528e+008
Rb-89	4.1441e+002	1.5333e+013	4.5290e+002	1.6757e+007
Rb-90	8.9936e+000	3.3276e+011	9.8290e+000	3.6367e+005
Rb-90m	5.6337e+000	2.0845e+011	6.1570e+000	2.2781e+005
Rh-103m	2.1054e+004	7.7901e+014	2.3010e+004	8.5137e+008
Rh-105	2.5748e+003	9.5269e+013	2.8140e+003	1.0412e+008
Rh-105m	1.0394e+002	3.8460e+012	1.1360e+002	4.2032e+006
Rh-106	1.1776e+004	4.3572e+014	1.2870e+004	4.7619e+008
Ru-103	2.3333e+004	8.6331e+014	2.5500e+004	9.4350e+008
Ru-105	3.7021e+002	1.3698e+013	4.0460e+002	1.4970e+007
Ru-106	1.1776e+004	4.3572e+014	1.2870e+004	4.7619e+008
Sb-122	1.8007e+002	6.6627e+012	1.9680e+002	7.2816e+006
Sb-124	5.0646e+002	1.8739e+013	5.5350e+002	2.0479e+007
Sb-125	7.0931e+003	2.6245e+014	7.7520e+003	2.8682e+008
Sb-126	2.2592e+002	8.3589e+012	2.4690e+002	9.1353e+006
Sb-126m	4.9410e-001	1.8282e+010	5.4000e-001	1.9980e+004
Sb-127	1.0221e+004	3.7816e+014	1.1170e+004	4.1329e+008
Sb-129	2.0944e+003	7.7495e+013	2.2890e+003	8.4693e+007
Sm-151	1.1858e+000	4.3876e+010	1.2960e+000	4.7952e+004
Sm-153	1.0660e+002	3.9441e+012	1.1650e+002	4.3105e+006
Sr-89	1.1740e+005	4.3436e+015	1.2830e+005	4.7471e+009
Sr-90	1.7733e+004	6.5611e+014	1.9380e+004	7.1706e+008
Sr-91	6.8452e+003	2.5327e+014	7.4810e+003	2.7680e+008
Sr-92	1.8840e+003	6.9708e+013	2.0590e+003	7.6183e+007
Sr-93	6.9422e-001	2.5686e+010	7.5870e-001	2.8072e+004
Tc-99	3.9922e-001	1.4771e+010	4.3630e-001	1.6143e+004
Tc-99m	6.4993e+003	2.4047e+014	7.1030e+003	2.6281e+008
Tc-101	8.8161e+000	3.2620e+011	9.6350e+000	3.5649e+005
Te-123m	8.6523e+000	3.2014e+011	9.4560e+000	3.4987e+005
Te-125m	1.5711e+003	5.8129e+013	1.7170e+003	6.3529e+007
Te-127	1.4585e+004	5.3965e+014	1.5940e+004	5.8978e+008
Te-127m	5.0801e+003	1.8796e+014	5.5520e+003	2.0542e+008
Te-129	1.1264e+004	4.1676e+014	1.2310e+004	4.5547e+008
Te-129m	1.3652e+004	5.0512e+014	1.4920e+004	5.5204e+008
Te-131	1.6095e+003	5.9551e+013	1.7590e+003	6.5083e+007
Te-131m	5.6328e+003	2.0841e+014	6.1560e+003	2.2777e+007
Te-132	1.1703e+005	4.3301e+015	1.2790e+005	4.7323e+009
Te-133	1.0651e+002	3.9407e+012	1.1640e+002	4.3068e+006
Te-133m	5.4260e+002	2.0076e+013	5.9300e+002	2.1941e+007
Te-134	7.1645e+002	2.6509e+013	7.8300e+002	2.8971e+007
Y-90	1.7733e+004	6.5611e+014	1.9380e+004	7.1706e+008
Y-91	6.8452e+003	2.5327e+014	7.4810e+003	2.7680e+008
Y-91m	3.9016e+003	1.4436e+014	4.2640e+003	1.5777e+008
Y-92	1.8840e+003	6.9708e+013	2.0590e+003	7.6183e+007
Y-93	9.2690e+001	3.4295e+012	1.0130e+002	3.7481e+006
Zr-95	2.1713e+003	8.0338e+013	2.3730e+003	8.7801e+007
Zr-97	1.7843e+002	6.6018e+012	1.9500e+002	7.2150e+006

Buildup
The material reference is : Shield 3

Integration Parameters

Radial	10
Circumferential	10
Y Direction (axial)	20

Energy MeV	Activity photons/sec	Fluence Rate		Exposure Rate		Exposure Rate
		MeV/cm ² /sec No Buildup	MeV/cm ² /sec With Buildup	mR/hr No Buildup	mR/hr With Buildup	mR/hr
0.1016	1.638e+16	6.852e-14	2.028e-11	1.049e-16	3.104e-14	3.104e-14
0.3656	3.996e+16	3.726e-04	1.216e-01	7.214e-07	2.355e-04	2.355e-04
0.6172	9.463e+16	2.981e-01	3.545e+01	5.809e-04	6.907e-02	6.907e-02

<u>Energy</u> MeV	<u>Activity</u> photons/sec	<u>Fluence Rate</u> MeV/cm ² /sec		<u>Exposure Rate</u> mR/hr	
		<u>No Buildup</u>	<u>With Buildup</u>	<u>No Buildup</u>	<u>With Buildup</u>
0.8096	5.502e+16	2.802e+00	1.946e+02	5.323e-03	3.696e-01
1.0825	7.781e+15	6.528e+00	2.596e+02	1.186e-02	4.716e-01
1.3401	7.790e+15	4.478e+01	1.217e+03	7.758e-02	2.108e+00
1.6044	5.385e+15	1.400e+02	2.847e+03	2.313e-01	4.702e+00
1.8388	9.913e+14	7.498e+01	1.247e+03	1.190e-01	1.979e+00
2.0402	4.654e+14	7.599e+01	1.092e+03	1.168e-01	1.678e+00
2.3212	2.178e+14	8.771e+01	1.058e+03	1.293e-01	1.560e+00
2.5398	2.015e+14	1.472e+02	1.580e+03	2.107e-01	2.262e+00
2.7426	1.499e+12	1.780e+00	1.737e+01	2.486e-03	2.426e-02
3.0171	1.930e+12	4.077e+00	3.552e+01	5.522e-03	4.810e-02
3.2809	2.899e+12	9.910e+00	7.846e+01	1.307e-02	1.035e-01
3.4931	9.956e+11	4.804e+00	3.548e+01	6.212e-03	4.588e-02
3.7009	1.754e+10	1.150e-01	7.977e-01	1.460e-04	1.012e-03
3.9384	1.206e+12	1.087e+01	7.055e+01	1.352e-02	8.773e-02
4.3428	3.805e+10	5.516e-01	3.230e+00	6.633e-04	3.884e-03
4.48	3.163e+09	5.302e-02	3.008e-01	6.307e-05	3.578e-04
4.7418	8.551e+11	1.853e+01	9.938e+01	2.162e-02	1.159e-01
5.0016	1.456e+09	3.980e-02	2.030e-01	4.562e-05	2.327e-04
5.2304	6.737e+09	2.222e-01	1.089e+00	2.512e-04	1.231e-03
5.608	9.284e+07	4.056e-03	1.873e-02	4.490e-06	2.073e-05
5.8005	8.018e+07	3.992e-03	1.792e-02	4.377e-06	1.964e-05
6.1042	8.440e+07	5.089e-03	2.188e-02	5.499e-06	2.365e-05
TOTALS:	2.288e+17	6.313e+02	9.874e+03	9.661e-01	1.563e+01

age : 1
 JS File: CLDNSHLD.MS5
 in Date: September 20, 2005
 in Time: 2:59:03 PM
 iration: 00:00:00

File Ref: _____
 Date: _____
 By: _____
 Checked: _____

Case Title: Cloud, No Shield
 Description: Case 1
 Geometry: 16 - Infinite Slab

Thickness 9.1e+3 cm 300 ft

Dose Points

#	X	Y	Z
1	9265.92 cm 304 ft	0 cm 0.0 in	0 cm 0.0 in

Shields

Shield Name	Dimension	Material	Density
Source	Infinite	Air	0.00122
Shield 1	3.0 ft	Air	0.00122
Air Gap		Air	0.00122

Source Input

Grouping Method : User Defined with Standard Indices

Buildup

The material reference is : Shield 1

Energy MeV	Activity photons/sec	Results			
		Fluence Rate MeV/cm ² /sec No Buildup	Fluence Rate MeV/cm ² /sec With Buildup	Exposure Rate mR/hr No Buildup	Exposure Rate mR/hr With Buildup
0.8	1.000e+06	3.464e+09	9.130e+09	6.588e+06	1.737e+07
TOTALS:	1.000e+06	3.464e+09	9.130e+09	6.588e+06	1.737e+07

age : 1
 JS File: CLDWSHLD.MS5
 in Date: September 20, 2005
 in Time: 3:00:42 PM
 iration: 00:00:00

File Ref: _____
 Date: _____
 By: _____
 Checked: _____

Case Title: Cloud, With Shield
 Description: Case 1
 Geometry: 16 - Infinite Slab

	Thickness	Source Dimensions	300 ft
		9.1e+3 cm	
		Dose Points	
		X	Y
# 1	9265.92 cm	0 cm	0 cm
	304 ft	0.0 in	0.0 in
		Shields	
	Shield Name	Dimension	Material
	Source	Infinite	Air
	Shield 1	3.0 ft	Concrete
	Air Gap		Air
			Density
			0.00122
			2.35
			0.00122

Source Input

Grouping Method : User Defined with Standard Indices

Buildup

The material reference is : Shield 1

Energy MeV	Activity photons/sec	Results			
		Fluence Rate MeV/cm ² /sec No Buildup	Fluence Rate MeV/cm ² /sec With Buildup	Exposure Rate mR/hr No Buildup	Exposure Rate mR/hr With Buildup
0.8	1.000e+06	3.736e+01	1.975e+03	7.105e-02	3.757e+00
TOTALS:	1.000e+06	3.736e+01	1.975e+03	7.105e-02	3.757e+00

Attachment D (Deleted)

SHEX-05A LGS SIL-636 CONT DBA-LOCA ANAL K=305

44 PC Leak Test Pressure (psig)

Leak Rates proportional to square root of ratio of the time

22 MSIV Leak Test Pressure (psig)

TIME	dependent delta P divided by the test delta P				PC Leak Fraction of Design Basis (Calculated)	MSIV Leak Fraction of Design Basis (Calculated)	Time (hours)	Time (days)
	DW PRESS (PSIA)	DW TEMP (F)	SP TEMP (F)					
0	1.55E+01	1.50E+02	9.50E+01			0.000E+00	0.000E+00	
60.1709	4.64E+01	2.76E+02	1.34E+02	0.848	1.200	1.671E-02	6.964E-04	
60.4834	4.63E+01	2.76E+02	1.34E+02	0.848	1.199	1.680E-02	7.000E-04	
60.7959	4.63E+01	2.76E+02	1.34E+02	0.848	1.199	1.689E-02	7.037E-04	
61.1084	4.63E+01	2.76E+02	1.34E+02	0.848	1.199	1.697E-02	7.073E-04	
61.4209	4.64E+01	2.76E+02	1.34E+02	0.848	1.199	1.706E-02	7.109E-04	
61.7334	4.63E+01	2.76E+02	1.34E+02	0.848	1.199	1.715E-02	7.145E-04	
62.0459	4.63E+01	2.76E+02	1.35E+02	0.848	1.199	1.723E-02	7.181E-04	
62.3584	4.63E+01	2.76E+02	1.35E+02	0.848	1.199	1.732E-02	7.217E-04	
62.6709	4.63E+01	2.76E+02	1.35E+02	0.848	1.199	1.741E-02	7.254E-04	
62.9834	4.63E+01	2.76E+02	1.35E+02	0.848	1.199	1.750E-02	7.290E-04	
63.2959	4.63E+01	2.76E+02	1.35E+02	0.848	1.199	1.758E-02	7.326E-04	
63.6084	4.63E+01	2.76E+02	1.35E+02	0.847	1.198	1.767E-02	7.362E-04	
63.9209	4.63E+01	2.76E+02	1.35E+02	0.848	1.199	1.776E-02	7.398E-04	
64.2334	4.63E+01	2.76E+02	1.35E+02	0.847	1.198	1.784E-02	7.434E-04	
64.5459	4.63E+01	2.76E+02	1.35E+02	0.848	1.199	1.793E-02	7.471E-04	
64.8584	4.63E+01	2.76E+02	1.35E+02	0.847	1.198	1.802E-02	7.507E-04	
65.1709	4.63E+01	2.76E+02	1.35E+02	0.847	1.198	1.810E-02	7.543E-04	
65.4834	4.63E+01	2.76E+02	1.35E+02	0.847	1.198	1.819E-02	7.579E-04	
65.7959	4.63E+01	2.76E+02	1.35E+02	0.847	1.198	1.828E-02	7.615E-04	
66.1084	4.63E+01	2.76E+02	1.35E+02	0.847	1.198	1.836E-02	7.651E-04	
66.4209	4.63E+01	2.76E+02	1.35E+02	0.847	1.198	1.845E-02	7.688E-04	
66.7334	4.63E+01	2.76E+02	1.35E+02	0.847	1.198	1.854E-02	7.724E-04	
67.0459	4.63E+01	2.76E+02	1.35E+02	0.847	1.198	1.862E-02	7.760E-04	
67.3584	4.63E+01	2.76E+02	1.35E+02	0.847	1.198	1.871E-02	7.796E-04	
67.6709	4.63E+01	2.76E+02	1.35E+02	0.848	1.199	1.880E-02	7.832E-04	
67.9834	4.63E+01	2.76E+02	1.35E+02	0.847	1.198	1.888E-02	7.868E-04	
68.2959	4.62E+01	2.76E+02	1.35E+02	0.846	1.197	1.897E-02	7.905E-04	
68.53027	4.63E+01	2.76E+02	1.35E+02	0.847	1.198	1.904E-02	7.932E-04	
68.84277	4.62E+01	2.76E+02	1.35E+02	0.847	1.197	1.912E-02	7.968E-04	
69.15527	4.62E+01	2.76E+02	1.35E+02	0.847	1.197	1.921E-02	8.004E-04	
69.46777	4.63E+01	2.76E+02	1.35E+02	0.847	1.198	1.930E-02	8.040E-04	
69.78027	4.63E+01	2.76E+02	1.35E+02	0.847	1.198	1.938E-02	8.076E-04	
70.09277	4.62E+01	2.76E+02	1.35E+02	0.847	1.197	1.947E-02	8.113E-04	
70.40527	4.62E+01	2.76E+02	1.35E+02	0.847	1.197	1.956E-02	8.149E-04	
70.71777	4.62E+01	2.76E+02	1.36E+02	0.847	1.197	1.964E-02	8.185E-04	
71.03027	4.62E+01	2.76E+02	1.36E+02	0.847	1.197	1.973E-02	8.221E-04	
71.34277	4.62E+01	2.76E+02	1.36E+02	0.847	1.197	1.982E-02	8.257E-04	
71.65527	4.62E+01	2.76E+02	1.36E+02	0.846	1.197	1.990E-02	8.293E-04	
71.96777	4.62E+01	2.76E+02	1.36E+02	0.846	1.197	1.999E-02	8.330E-04	
72.28027	4.62E+01	2.76E+02	1.36E+02	0.846	1.197	2.008E-02	8.366E-04	
72.59277	4.62E+01	2.76E+02	1.36E+02	0.846	1.196	2.016E-02	8.402E-04	
72.90527	4.62E+01	2.76E+02	1.36E+02	0.846	1.196	2.025E-02	8.438E-04	
73.21777	4.62E+01	2.76E+02	1.36E+02	0.846	1.197	2.034E-02	8.474E-04	
73.53027	4.62E+01	2.76E+02	1.36E+02	0.846	1.197	2.043E-02	8.510E-04	
73.84277	4.62E+01	2.76E+02	1.36E+02	0.846	1.196	2.051E-02	8.547E-04	
74.15527	4.62E+01	2.76E+02	1.36E+02	0.846	1.196	2.060E-02	8.583E-04	
74.46777	4.62E+01	2.76E+02	1.36E+02	0.846	1.196	2.069E-02	8.619E-04	
74.78027	4.62E+01	2.76E+02	1.36E+02	0.846	1.196	2.077E-02	8.655E-04	
75.09277	4.62E+01	2.76E+02	1.36E+02	0.846	1.196	2.086E-02	8.691E-04	
75.40527	4.62E+01	2.76E+02	1.36E+02	0.846	1.196	2.095E-02	8.727E-04	
75.71777	4.62E+01	2.76E+02	1.36E+02	0.845	1.196	2.103E-02	8.764E-04	

SHEX-05A LGS SIL-636 CONT DBA-LOCA ANAL K=305

44 PC Leak Test Pressure (psig)

Leak Rates proportional to square root of ratio of the time

22 MSIV Leak Test Pressure (psig)

TIME	dependent delta P divided by the test delta P				PC Leak Fraction of Design Basis	MSIV Leak Fraction of Design Basis	Time (hours)	Time (days)
	DW PRESS (PSIA)	DW TEMP (F)	SP TEMP (F)					
76.03027	4.62E+01	2.76E+02	1.36E+02	0.845	1.196	2.112E-02	8.800E-04	
76.34277	4.62E+01	2.76E+02	1.36E+02	0.846	1.196	2.121E-02	8.836E-04	
76.65527	4.61E+01	2.76E+02	1.36E+02	0.845	1.195	2.129E-02	8.872E-04	
76.96777	4.62E+01	2.76E+02	1.36E+02	0.845	1.196	2.138E-02	8.908E-04	
77.28027	4.61E+01	2.76E+02	1.36E+02	0.845	1.195	2.147E-02	8.944E-04	
77.59277	4.61E+01	2.76E+02	1.36E+02	0.845	1.195	2.155E-02	8.981E-04	
77.90527	4.61E+01	2.76E+02	1.36E+02	0.845	1.195	2.164E-02	9.017E-04	
78.21777	4.61E+01	2.76E+02	1.36E+02	0.845	1.195	2.173E-02	9.053E-04	
78.53027	4.61E+01	2.76E+02	1.36E+02	0.845	1.195	2.181E-02	9.089E-04	
78.84277	4.61E+01	2.76E+02	1.36E+02	0.845	1.195	2.190E-02	9.125E-04	
79.15527	4.61E+01	2.76E+02	1.36E+02	0.845	1.195	2.199E-02	9.161E-04	
79.46777	4.61E+01	2.76E+02	1.36E+02	0.845	1.195	2.207E-02	9.198E-04	
79.78027	4.61E+01	2.76E+02	1.36E+02	0.845	1.194	2.216E-02	9.234E-04	
80.09277	4.61E+01	2.76E+02	1.36E+02	0.845	1.194	2.225E-02	9.270E-04	
80.40527	4.61E+01	2.76E+02	1.36E+02	0.844	1.194	2.233E-02	9.306E-04	
80.71777	4.61E+01	2.76E+02	1.36E+02	0.845	1.194	2.242E-02	9.342E-04	
81.03027	4.61E+01	2.76E+02	1.36E+02	0.844	1.194	2.251E-02	9.379E-04	
81.34277	4.61E+01	2.76E+02	1.36E+02	0.844	1.194	2.260E-02	9.415E-04	
81.65527	4.61E+01	2.76E+02	1.37E+02	0.844	1.194	2.268E-02	9.451E-04	
81.96777	4.61E+01	2.76E+02	1.37E+02	0.844	1.194	2.277E-02	9.487E-04	
82.28027	4.60E+01	2.76E+02	1.37E+02	0.844	1.194	2.286E-02	9.523E-04	
82.59277	4.60E+01	2.76E+02	1.37E+02	0.844	1.194	2.294E-02	9.559E-04	
82.90527	4.60E+01	2.76E+02	1.37E+02	0.844	1.193	2.303E-02	9.596E-04	
83.21777	4.60E+01	2.76E+02	1.37E+02	0.844	1.193	2.312E-02	9.632E-04	
83.53027	4.60E+01	2.76E+02	1.37E+02	0.844	1.193	2.320E-02	9.668E-04	
83.84277	4.60E+01	2.76E+02	1.37E+02	0.844	1.193	2.329E-02	9.704E-04	
84.15527	4.60E+01	2.76E+02	1.37E+02	0.844	1.193	2.338E-02	9.740E-04	
84.46777	4.60E+01	2.76E+02	1.37E+02	0.844	1.193	2.346E-02	9.776E-04	
84.78027	4.60E+01	2.76E+02	1.37E+02	0.843	1.193	2.355E-02	9.813E-04	
85.09277	4.60E+01	2.76E+02	1.37E+02	0.843	1.193	2.364E-02	9.849E-04	
85.40527	4.60E+01	2.76E+02	1.37E+02	0.843	1.193	2.372E-02	9.885E-04	
85.71777	4.60E+01	2.76E+02	1.37E+02	0.843	1.192	2.381E-02	9.921E-04	
86.03027	4.60E+01	2.76E+02	1.37E+02	0.843	1.192	2.390E-02	9.957E-04	
86.34277	4.60E+01	2.76E+02	1.37E+02	0.843	1.192	2.398E-02	9.993E-04	
86.65527	4.60E+01	2.76E+02	1.37E+02	0.843	1.192	2.407E-02	1.003E-03	
86.96777	4.60E+01	2.76E+02	1.37E+02	0.843	1.192	2.416E-02	1.007E-03	
87.28027	4.60E+01	2.76E+02	1.37E+02	0.843	1.192	2.424E-02	1.010E-03	
87.59277	4.60E+01	2.76E+02	1.37E+02	0.843	1.192	2.433E-02	1.014E-03	
87.90527	4.59E+01	2.76E+02	1.37E+02	0.843	1.192	2.442E-02	1.017E-03	
88.21777	4.60E+01	2.76E+02	1.37E+02	0.843	1.192	2.450E-02	1.021E-03	
88.53027	4.59E+01	2.76E+02	1.37E+02	0.842	1.191	2.459E-02	1.025E-03	
88.84277	4.59E+01	2.76E+02	1.37E+02	0.842	1.191	2.468E-02	1.028E-03	
89.15527	4.59E+01	2.76E+02	1.37E+02	0.842	1.191	2.477E-02	1.032E-03	
89.46777	4.59E+01	2.76E+02	1.37E+02	0.842	1.191	2.485E-02	1.036E-03	
89.78027	4.59E+01	2.76E+02	1.37E+02	0.842	1.191	2.494E-02	1.039E-03	
90.09277	4.59E+01	2.76E+02	1.37E+02	0.842	1.191	2.503E-02	1.043E-03	
90.40527	4.59E+01	2.76E+02	1.37E+02	0.842	1.191	2.511E-02	1.046E-03	
90.71777	4.59E+01	2.76E+02	1.37E+02	0.842	1.190	2.520E-02	1.050E-03	
91.03027	4.59E+01	2.76E+02	1.37E+02	0.842	1.190	2.529E-02	1.054E-03	
91.34277	4.59E+01	2.76E+02	1.37E+02	0.842	1.190	2.537E-02	1.057E-03	
91.65527	4.59E+01	2.76E+02	1.37E+02	0.842	1.190	2.546E-02	1.061E-03	
91.96777	4.59E+01	2.76E+02	1.37E+02	0.842	1.190	2.555E-02	1.064E-03	

SHEX-05A LGS SIL-636 CONT DBA-LOCA ANAL K=305
 Leak Rates proportional to square root of ratio of the time

44 PC Leak Test Pressure (psig)
 22 MSIV Leak Test Pressure (psig)

TIME	dependent delta P divided by the test delta P			PC Leak Fraction of Design Basis	MSIV Leak Fraction of Design Basis	Time (hours)	Time (days)
	DW PRESS (PSIA)	DW TEMP (F)	SP TEMP (F)				
92.28027	4.59E+01	2.76E+02	1.37E+02	0.841	1.190	2.563E-02	1.068E-03
92.59277	4.59E+01	2.76E+02	1.37E+02	0.841	1.190	2.572E-02	1.072E-03
92.90527	4.58E+01	2.76E+02	1.37E+02	0.841	1.190	2.581E-02	1.075E-03
93.21777	4.58E+01	2.76E+02	1.37E+02	0.841	1.190	2.589E-02	1.079E-03
93.53027	4.58E+01	2.76E+02	1.37E+02	0.841	1.190	2.598E-02	1.083E-03
93.84277	4.58E+01	2.76E+02	1.37E+02	0.841	1.190	2.607E-02	1.086E-03
94.15527	4.58E+01	2.76E+02	1.37E+02	0.841	1.190	2.615E-02	1.090E-03
94.46777	4.58E+01	2.76E+02	1.37E+02	0.841	1.189	2.624E-02	1.093E-03
94.78027	4.58E+01	2.76E+02	1.37E+02	0.841	1.189	2.633E-02	1.097E-03
95.09277	4.58E+01	2.76E+02	1.37E+02	0.841	1.189	2.641E-02	1.101E-03
95.40527	4.58E+01	2.76E+02	1.37E+02	0.841	1.189	2.650E-02	1.104E-03
95.71777	4.58E+01	2.76E+02	1.37E+02	0.841	1.189	2.659E-02	1.108E-03
96.03027	4.58E+01	2.76E+02	1.37E+02	0.841	1.189	2.668E-02	1.111E-03
96.34277	4.58E+01	2.76E+02	1.37E+02	0.840	1.188	2.676E-02	1.115E-03
96.65527	4.58E+01	2.76E+02	1.37E+02	0.840	1.188	2.685E-02	1.119E-03
96.96777	4.58E+01	2.76E+02	1.37E+02	0.840	1.188	2.694E-02	1.122E-03
97.28027	4.58E+01	2.76E+02	1.37E+02	0.840	1.188	2.702E-02	1.126E-03
97.59277	4.58E+01	2.76E+02	1.37E+02	0.840	1.188	2.711E-02	1.130E-03
97.90527	4.57E+01	2.75E+02	1.37E+02	0.840	1.188	2.720E-02	1.133E-03
98.21777	4.58E+01	2.76E+02	1.38E+02	0.840	1.188	2.728E-02	1.137E-03
98.53027	4.57E+01	2.75E+02	1.38E+02	0.840	1.187	2.737E-02	1.140E-03
98.84277	4.57E+01	2.75E+02	1.38E+02	0.840	1.187	2.746E-02	1.144E-03
99.15527	4.57E+01	2.75E+02	1.38E+02	0.840	1.187	2.754E-02	1.148E-03
99.46777	4.57E+01	2.75E+02	1.38E+02	0.839	1.187	2.763E-02	1.151E-03
99.78027	4.57E+01	2.75E+02	1.38E+02	0.839	1.187	2.772E-02	1.155E-03
101.499	4.57E+01	2.75E+02	1.38E+02	0.839	1.186	2.819E-02	1.175E-03
104.624	4.56E+01	2.75E+02	1.38E+02	0.838	1.185	2.906E-02	1.211E-03
107.749	4.55E+01	2.75E+02	1.38E+02	0.837	1.184	2.993E-02	1.247E-03
110.874	4.54E+01	2.75E+02	1.38E+02	0.836	1.182	3.080E-02	1.283E-03
113.999	4.55E+01	2.75E+02	1.38E+02	0.837	1.184	3.167E-02	1.319E-03
117.124	4.57E+01	2.75E+02	1.38E+02	0.839	1.186	3.253E-02	1.356E-03
120.249	4.58E+01	2.76E+02	1.38E+02	0.840	1.188	3.340E-02	1.392E-03
123.374	4.59E+01	2.76E+02	1.38E+02	0.841	1.190	3.427E-02	1.428E-03
126.499	4.60E+01	2.76E+02	1.38E+02	0.843	1.192	3.514E-02	1.464E-03
129.624	4.60E+01	2.76E+02	1.39E+02	0.843	1.192	3.601E-02	1.500E-03
132.749	4.59E+01	2.76E+02	1.39E+02	0.842	1.191	3.687E-02	1.536E-03
135.874	4.59E+01	2.76E+02	1.39E+02	0.842	1.191	3.774E-02	1.573E-03
138.999	4.59E+01	2.76E+02	1.39E+02	0.842	1.191	3.861E-02	1.609E-03
142.124	4.58E+01	2.76E+02	1.39E+02	0.841	1.189	3.948E-02	1.645E-03
145.249	4.57E+01	2.75E+02	1.39E+02	0.840	1.188	4.035E-02	1.681E-03
148.374	4.56E+01	2.75E+02	1.39E+02	0.839	1.186	4.122E-02	1.717E-03
151.499	4.55E+01	2.75E+02	1.39E+02	0.837	1.184	4.208E-02	1.753E-03
154.624	4.55E+01	2.75E+02	1.39E+02	0.837	1.184	4.295E-02	1.790E-03
157.749	4.55E+01	2.75E+02	1.39E+02	0.837	1.183	4.382E-02	1.826E-03
160.874	4.55E+01	2.75E+02	1.39E+02	0.836	1.182	4.469E-02	1.862E-03
163.999	4.54E+01	2.75E+02	1.39E+02	0.835	1.181	4.556E-02	1.898E-03
167.124	4.53E+01	2.75E+02	1.39E+02	0.834	1.180	4.642E-02	1.934E-03
170.249	4.53E+01	2.75E+02	1.40E+02	0.834	1.180	4.729E-02	1.970E-03
173.374	4.53E+01	2.75E+02	1.40E+02	0.834	1.180	4.816E-02	2.007E-03
176.499	4.53E+01	2.75E+02	1.40E+02	0.834	1.180	4.903E-02	2.043E-03
179.624	4.53E+01	2.75E+02	1.40E+02	0.834	1.180	4.990E-02	2.079E-03
182.749	4.53E+01	2.75E+02	1.40E+02	0.834	1.180	5.076E-02	2.115E-03

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44 PC Leak Test Pressure (psig)

Leak Rates proportional to square root of ratio of the time

22 MSIV Leak Test Pressure (psig)

TIME	dependent delta P divided by the test delta P				PC Leak Fraction of Design Basis	MSIV Leak Fraction of Design Basis	Time (hours)	Time (days)
	DW PRESS (PSIA)	DW TEMP (F)	SP TEMP (F)					
185.874	4.53E+01	2.75E+02	1.40E+02	0.833	1.179	5.163E-02	2.151E-03	
188.999	4.52E+01	2.75E+02	1.40E+02	0.832	1.177	5.250E-02	2.187E-03	
192.124	4.51E+01	2.75E+02	1.40E+02	0.831	1.175	5.337E-02	2.224E-03	
195.249	4.50E+01	2.74E+02	1.40E+02	0.830	1.174	5.424E-02	2.260E-03	
198.374	4.49E+01	2.74E+02	1.40E+02	0.829	1.172	5.510E-02	2.296E-03	
201.499	4.48E+01	2.74E+02	1.40E+02	0.828	1.170	5.597E-02	2.332E-03	
204.624	4.47E+01	2.74E+02	1.41E+02	0.826	1.169	5.684E-02	2.368E-03	
207.749	4.47E+01	2.74E+02	1.41E+02	0.825	1.167	5.771E-02	2.405E-03	
210.874	4.46E+01	2.74E+02	1.41E+02	0.824	1.165	5.858E-02	2.441E-03	
213.999	4.45E+01	2.74E+02	1.41E+02	0.823	1.164	5.944E-02	2.477E-03	
217.124	4.44E+01	2.74E+02	1.41E+02	0.821	1.162	6.031E-02	2.513E-03	
220.249	4.43E+01	2.74E+02	1.41E+02	0.820	1.160	6.118E-02	2.549E-03	
223.374	4.42E+01	2.73E+02	1.41E+02	0.819	1.159	6.205E-02	2.585E-03	
226.499	4.42E+01	2.73E+02	1.41E+02	0.818	1.157	6.292E-02	2.622E-03	
229.624	4.41E+01	2.73E+02	1.41E+02	0.817	1.155	6.378E-02	2.658E-03	
232.749	4.40E+01	2.73E+02	1.41E+02	0.816	1.154	6.465E-02	2.694E-03	
235.874	4.39E+01	2.73E+02	1.41E+02	0.814	1.152	6.552E-02	2.730E-03	
238.999	4.38E+01	2.73E+02	1.41E+02	0.814	1.150	6.639E-02	2.766E-03	
242.124	4.37E+01	2.73E+02	1.41E+02	0.812	1.149	6.726E-02	2.802E-03	
245.249	4.37E+01	2.73E+02	1.41E+02	0.811	1.147	6.812E-02	2.839E-03	
248.374	4.36E+01	2.73E+02	1.41E+02	0.810	1.146	6.899E-02	2.875E-03	
251.499	4.35E+01	2.72E+02	1.41E+02	0.809	1.144	6.986E-02	2.911E-03	
254.624	4.34E+01	2.72E+02	1.41E+02	0.808	1.142	7.073E-02	2.947E-03	
257.749	4.33E+01	2.72E+02	1.41E+02	0.807	1.141	7.160E-02	2.983E-03	
260.874	4.32E+01	2.72E+02	1.41E+02	0.805	1.139	7.247E-02	3.019E-03	
263.999	4.32E+01	2.72E+02	1.41E+02	0.804	1.137	7.333E-02	3.056E-03	
267.124	4.31E+01	2.72E+02	1.41E+02	0.803	1.136	7.420E-02	3.092E-03	
270.249	4.30E+01	2.72E+02	1.42E+02	0.802	1.134	7.507E-02	3.128E-03	
273.374	4.29E+01	2.72E+02	1.42E+02	0.801	1.133	7.594E-02	3.164E-03	
276.499	4.28E+01	2.71E+02	1.42E+02	0.800	1.131	7.681E-02	3.200E-03	
279.624	4.28E+01	2.71E+02	1.42E+02	0.799	1.129	7.767E-02	3.236E-03	
282.749	4.27E+01	2.71E+02	1.42E+02	0.797	1.128	7.854E-02	3.273E-03	
285.874	4.26E+01	2.71E+02	1.42E+02	0.796	1.126	7.941E-02	3.309E-03	
288.999	4.25E+01	2.71E+02	1.42E+02	0.795	1.125	8.028E-02	3.345E-03	
292.124	4.24E+01	2.71E+02	1.42E+02	0.794	1.123	8.115E-02	3.381E-03	
295.249	4.24E+01	2.71E+02	1.42E+02	0.793	1.121	8.201E-02	3.417E-03	
298.374	4.23E+01	2.71E+02	1.42E+02	0.792	1.120	8.288E-02	3.453E-03	
301.499	4.22E+01	2.71E+02	1.42E+02	0.791	1.118	8.375E-02	3.490E-03	
304.624	4.21E+01	2.70E+02	1.42E+02	0.789	1.116	8.462E-02	3.526E-03	
307.749	4.21E+01	2.70E+02	1.42E+02	0.788	1.115	8.549E-02	3.562E-03	
310.874	4.20E+01	2.70E+02	1.42E+02	0.787	1.113	8.635E-02	3.598E-03	
313.999	4.19E+01	2.70E+02	1.42E+02	0.786	1.112	8.722E-02	3.634E-03	
317.124	4.18E+01	2.70E+02	1.42E+02	0.785	1.110	8.809E-02	3.670E-03	
320.249	4.17E+01	2.70E+02	1.42E+02	0.784	1.108	8.896E-02	3.707E-03	
323.374	4.16E+01	2.70E+02	1.42E+02	0.782	1.106	8.983E-02	3.743E-03	
326.499	4.16E+01	2.70E+02	1.42E+02	0.781	1.105	9.069E-02	3.779E-03	
329.624	4.15E+01	2.70E+02	1.42E+02	0.780	1.104	9.156E-02	3.815E-03	
332.749	4.14E+01	2.69E+02	1.42E+02	0.779	1.102	9.243E-02	3.851E-03	
335.874	4.14E+01	2.69E+02	1.42E+02	0.778	1.101	9.330E-02	3.887E-03	
338.999	4.13E+01	2.69E+02	1.42E+02	0.777	1.099	9.417E-02	3.924E-03	
342.124	4.12E+01	2.69E+02	1.42E+02	0.776	1.098	9.503E-02	3.960E-03	
345.249	4.12E+01	2.69E+02	1.42E+02	0.775	1.096	9.590E-02	3.996E-03	

SHEX-05A LGS SIL-636 CONT DBA-LOCA ANAL K=305

44 PC Leak Test Pressure (psig)

Leak Rates proportional to square root of ratio of the time

22 MSIV Leak Test Pressure (psig)

TIME	dependent delta P divided by the test delta P			PC Leak Fraction of Design Basis	MSIV Leak Fraction of Design Basis	Time (hours)	Time (days)
	DW PRESS (PSIA)	DW TEMP (F)	SP TEMP (F)				
348.374	4.11E+01	2.69E+02	1.42E+02	0.774	1.095	9.677E-02	4.032E-03
351.499	4.09E+01	2.69E+02	1.42E+02	0.772	1.092	9.764E-02	4.068E-03
354.624	4.07E+01	2.68E+02	1.42E+02	0.769	1.087	9.851E-02	4.104E-03
357.749	4.04E+01	2.68E+02	1.42E+02	0.764	1.081	9.937E-02	4.141E-03
360.874	4.00E+01	2.67E+02	1.42E+02	0.759	1.073	1.002E-01	4.177E-03
363.999	3.97E+01	2.67E+02	1.42E+02	0.754	1.066	1.011E-01	4.213E-03
367.124	3.93E+01	2.66E+02	1.42E+02	0.747	1.057	1.020E-01	4.249E-03
370.249	3.88E+01	2.65E+02	1.42E+02	0.740	1.047	1.028E-01	4.285E-03
373.374	3.83E+01	2.65E+02	1.42E+02	0.733	1.036	1.037E-01	4.321E-03
376.499	3.78E+01	2.64E+02	1.42E+02	0.725	1.025	1.046E-01	4.358E-03
379.624	3.73E+01	2.63E+02	1.42E+02	0.717	1.014	1.055E-01	4.394E-03
382.749	3.68E+01	2.62E+02	1.42E+02	0.708	1.002	1.063E-01	4.430E-03
385.874	3.62E+01	2.61E+02	1.42E+02	0.700	0.989	1.072E-01	4.466E-03
388.999	3.57E+01	2.60E+02	1.42E+02	0.690	0.976	1.081E-01	4.502E-03
392.124	3.51E+01	2.59E+02	1.43E+02	0.681	0.963	1.089E-01	4.538E-03
395.249	3.45E+01	2.59E+02	1.43E+02	0.671	0.949	1.098E-01	4.575E-03
398.374	3.42E+01	2.57E+02	1.43E+02	0.665	0.941	1.107E-01	4.611E-03
401.499	3.38E+01	2.56E+02	1.43E+02	0.658	0.931	1.115E-01	4.647E-03
404.624	3.34E+01	2.55E+02	1.43E+02	0.651	0.921	1.124E-01	4.683E-03
407.749	3.30E+01	2.54E+02	1.43E+02	0.644	0.911	1.133E-01	4.719E-03
410.874	3.26E+01	2.52E+02	1.44E+02	0.637	0.901	1.141E-01	4.755E-03
413.999	3.22E+01	2.51E+02	1.44E+02	0.630	0.891	1.150E-01	4.792E-03
417.124	3.18E+01	2.50E+02	1.44E+02	0.623	0.881	1.159E-01	4.828E-03
420.249	3.14E+01	2.48E+02	1.44E+02	0.616	0.871	1.167E-01	4.864E-03
423.374	3.10E+01	2.47E+02	1.45E+02	0.608	0.860	1.176E-01	4.900E-03
426.499	3.06E+01	2.46E+02	1.45E+02	0.602	0.851	1.185E-01	4.936E-03
429.624	3.03E+01	2.44E+02	1.45E+02	0.594	0.841	1.193E-01	4.973E-03
432.749	2.99E+01	2.43E+02	1.45E+02	0.587	0.831	1.202E-01	5.009E-03
435.874	2.95E+01	2.42E+02	1.46E+02	0.581	0.821	1.211E-01	5.045E-03
438.999	2.92E+01	2.40E+02	1.46E+02	0.573	0.811	1.219E-01	5.081E-03
442.124	2.88E+01	2.39E+02	1.46E+02	0.567	0.801	1.228E-01	5.117E-03
445.249	2.85E+01	2.38E+02	1.47E+02	0.560	0.792	1.237E-01	5.153E-03
448.374	2.82E+01	2.36E+02	1.47E+02	0.553	0.782	1.245E-01	5.190E-03
451.499	2.78E+01	2.35E+02	1.47E+02	0.546	0.773	1.254E-01	5.226E-03
454.624	2.75E+01	2.34E+02	1.47E+02	0.540	0.763	1.263E-01	5.262E-03
457.749	2.72E+01	2.32E+02	1.48E+02	0.533	0.753	1.272E-01	5.298E-03
460.874	2.69E+01	2.31E+02	1.48E+02	0.526	0.744	1.280E-01	5.334E-03
463.999	2.66E+01	2.29E+02	1.48E+02	0.520	0.735	1.289E-01	5.370E-03
467.124	2.63E+01	2.28E+02	1.49E+02	0.513	0.726	1.298E-01	5.407E-03
470.249	2.60E+01	2.27E+02	1.49E+02	0.507	0.717	1.306E-01	5.443E-03
473.374	2.58E+01	2.26E+02	1.49E+02	0.501	0.709	1.315E-01	5.479E-03
476.499	2.55E+01	2.24E+02	1.49E+02	0.496	0.702	1.324E-01	5.515E-03
479.624	2.53E+01	2.23E+02	1.50E+02	0.491	0.695	1.332E-01	5.551E-03
482.749	2.51E+01	2.22E+02	1.50E+02	0.487	0.689	1.341E-01	5.587E-03
485.874	2.50E+01	2.22E+02	1.50E+02	0.483	0.683	1.350E-01	5.624E-03
488.999	2.48E+01	2.21E+02	1.51E+02	0.479	0.677	1.358E-01	5.660E-03
492.124	2.46E+01	2.20E+02	1.51E+02	0.475	0.672	1.367E-01	5.696E-03
495.249	2.45E+01	2.19E+02	1.51E+02	0.472	0.668	1.376E-01	5.732E-03
498.374	2.44E+01	2.19E+02	1.51E+02	0.469	0.664	1.384E-01	5.768E-03
501.499	2.43E+01	2.18E+02	1.52E+02	0.466	0.660	1.393E-01	5.804E-03
504.624	2.42E+01	2.17E+02	1.52E+02	0.464	0.656	1.402E-01	5.841E-03
507.749	2.41E+01	2.17E+02	1.52E+02	0.461	0.653	1.410E-01	5.877E-03

SHEX-05A LGS SIL-636 CONT DBA-LOCA ANAL K=305
 Leak Rates proportional to square root of ratio of the time

44 PC Leak Test Pressure (psig)
 22 MSIV Leak Test Pressure (psig)

TIME	dependent delta P divided by the test delta P			PC Leak Fraction of Design Basis	MSIV Leak Fraction of Design Basis	Time (hours)	Time (days)
	DW PRESS (PSIA)	DW TEMP (F)	SP TEMP (F)				
510.874	2.40E+01	2.16E+02	1.52E+02	0.459	0.649	1.419E-01	5.913E-03
513.999	2.39E+01	2.16E+02	1.52E+02	0.457	0.647	1.428E-01	5.949E-03
517.124	2.38E+01	2.15E+02	1.53E+02	0.455	0.644	1.436E-01	5.985E-03
520.249	2.38E+01	2.15E+02	1.53E+02	0.454	0.641	1.445E-01	6.021E-03
523.374	2.37E+01	2.14E+02	1.53E+02	0.452	0.639	1.454E-01	6.058E-03
526.499	2.36E+01	2.14E+02	1.53E+02	0.450	0.636	1.462E-01	6.094E-03
529.624	2.36E+01	2.14E+02	1.54E+02	0.449	0.635	1.471E-01	6.130E-03
532.749	2.35E+01	2.13E+02	1.54E+02	0.447	0.632	1.480E-01	6.166E-03
535.874	2.34E+01	2.13E+02	1.54E+02	0.445	0.630	1.489E-01	6.202E-03
538.999	2.34E+01	2.13E+02	1.54E+02	0.444	0.628	1.497E-01	6.238E-03
542.124	2.33E+01	2.12E+02	1.54E+02	0.443	0.626	1.506E-01	6.275E-03
545.249	2.33E+01	2.12E+02	1.54E+02	0.442	0.624	1.515E-01	6.311E-03
548.374	2.32E+01	2.12E+02	1.55E+02	0.441	0.623	1.523E-01	6.347E-03
551.499	2.32E+01	2.11E+02	1.55E+02	0.440	0.622	1.532E-01	6.383E-03
554.624	2.32E+01	2.11E+02	1.55E+02	0.438	0.620	1.541E-01	6.419E-03
557.749	2.31E+01	2.11E+02	1.55E+02	0.437	0.618	1.549E-01	6.455E-03
560.874	2.31E+01	2.11E+02	1.55E+02	0.436	0.617	1.558E-01	6.492E-03
563.999	2.30E+01	2.10E+02	1.55E+02	0.435	0.615	1.567E-01	6.528E-03
567.124	2.30E+01	2.10E+02	1.56E+02	0.434	0.614	1.575E-01	6.564E-03
570.249	2.30E+01	2.10E+02	1.56E+02	0.433	0.613	1.584E-01	6.600E-03
573.374	2.29E+01	2.10E+02	1.56E+02	0.432	0.611	1.593E-01	6.636E-03
576.499	2.29E+01	2.09E+02	1.56E+02	0.431	0.610	1.601E-01	6.672E-03
579.624	2.29E+01	2.09E+02	1.56E+02	0.430	0.609	1.610E-01	6.709E-03
582.749	2.28E+01	2.09E+02	1.56E+02	0.429	0.607	1.619E-01	6.745E-03
585.874	2.28E+01	2.09E+02	1.56E+02	0.429	0.606	1.627E-01	6.781E-03
588.999	2.27E+01	2.09E+02	1.57E+02	0.427	0.605	1.636E-01	6.817E-03
592.124	2.27E+01	2.08E+02	1.57E+02	0.427	0.603	1.645E-01	6.853E-03
595.249	2.27E+01	2.08E+02	1.57E+02	0.426	0.602	1.653E-01	6.889E-03
598.374	2.27E+01	2.08E+02	1.57E+02	0.425	0.601	1.662E-01	6.926E-03
601.4053	2.26E+01	2.08E+02	1.57E+02	0.424	0.600	1.671E-01	6.961E-03
604.5303	2.26E+01	2.08E+02	1.57E+02	0.423	0.598	1.679E-01	6.997E-03
607.6553	2.26E+01	2.07E+02	1.57E+02	0.422	0.597	1.688E-01	7.033E-03
610.7803	2.25E+01	2.07E+02	1.57E+02	0.422	0.596	1.697E-01	7.069E-03
613.9053	2.25E+01	2.07E+02	1.58E+02	0.421	0.595	1.705E-01	7.105E-03
617.0303	2.25E+01	2.07E+02	1.58E+02	0.420	0.594	1.714E-01	7.142E-03
627.0303	2.24E+01	2.06E+02	1.58E+02	0.417	0.590	1.742E-01	7.257E-03
652.4053	2.21E+01	2.05E+02	1.59E+02	0.410	0.580	1.812E-01	7.551E-03
677.2178	2.18E+01	2.03E+02	1.60E+02	0.403	0.569	1.881E-01	7.838E-03
702.6553	2.16E+01	2.02E+02	1.60E+02	0.396	0.560	1.952E-01	8.133E-03
727.7178	2.14E+01	2.00E+02	1.61E+02	0.390	0.552	2.021E-01	8.423E-03
752.4678	2.12E+01	1.99E+02	1.62E+02	0.385	0.545	2.090E-01	8.709E-03
776.4678	2.11E+01	1.98E+02	1.63E+02	0.381	0.539	2.157E-01	8.987E-03
801.0303	2.10E+01	1.98E+02	1.63E+02	0.378	0.535	2.225E-01	9.271E-03
825.0928	2.09E+01	1.97E+02	1.64E+02	0.375	0.530	2.292E-01	9.550E-03
850.0928	2.08E+01	1.96E+02	1.65E+02	0.373	0.527	2.361E-01	9.839E-03
874.7178	2.07E+01	1.96E+02	1.65E+02	0.370	0.524	2.430E-01	1.012E-02
899.2178	2.07E+01	1.95E+02	1.66E+02	0.369	0.521	2.498E-01	1.041E-02
924.2178	2.06E+01	1.95E+02	1.66E+02	0.367	0.519	2.567E-01	1.070E-02
948.9053	2.06E+01	1.95E+02	1.67E+02	0.366	0.517	2.636E-01	1.098E-02
973.3428	2.06E+01	1.94E+02	1.67E+02	0.365	0.516	2.704E-01	1.127E-02
997.9678	2.05E+01	1.94E+02	1.68E+02	0.364	0.515	2.772E-01	1.155E-02
1023.093	2.05E+01	1.94E+02	1.68E+02	0.363	0.514	2.842E-01	1.184E-02

SHEX-05A LGS SIL-636 CONT DBA-LOCA ANAL K=305

44 PC Leak Test Pressure (psig)
22 MSIV Leak Test Pressure (psig)

Leak Rates proportional to square root of ratio of the time
dependent delta P divided by the test delta P

TIME	DW PRESS (PSIA)	DW TEMP (F)	SP TEMP (F)	PC Leak Fraction of Design Basis	MSIV Leak Fraction of Design Basis	Time (hours)	Time (days)
1047.843	2.05E+01	1.94E+02	1.69E+02	0.363	0.513	2.911E-01	1.213E-02
1072.968	2.05E+01	1.94E+02	1.69E+02	0.362	0.513	2.980E-01	1.242E-02
1098.03	2.05E+01	1.93E+02	1.69E+02	0.362	0.512	3.050E-01	1.271E-02
1122.655	2.05E+01	1.93E+02	1.70E+02	0.362	0.512	3.118E-01	1.299E-02
1147.468	2.05E+01	1.93E+02	1.70E+02	0.362	0.512	3.187E-01	1.328E-02
1172.28	2.05E+01	1.93E+02	1.70E+02	0.361	0.511	3.256E-01	1.357E-02
1197.093	2.05E+01	1.93E+02	1.71E+02	0.361	0.511	3.325E-01	1.386E-02
1222.28	2.05E+01	1.93E+02	1.71E+02	0.361	0.511	3.395E-01	1.415E-02
1247.093	2.05E+01	1.93E+02	1.71E+02	0.361	0.511	3.464E-01	1.443E-02
1271.905	2.05E+01	1.93E+02	1.72E+02	0.362	0.512	3.533E-01	1.472E-02
1297.28	2.05E+01	1.93E+02	1.72E+02	0.361	0.511	3.604E-01	1.501E-02
1322.093	2.05E+01	1.93E+02	1.72E+02	0.362	0.512	3.672E-01	1.530E-02
1346.905	2.05E+01	1.93E+02	1.73E+02	0.362	0.512	3.741E-01	1.559E-02
1371.718	2.05E+01	1.93E+02	1.73E+02	0.362	0.512	3.810E-01	1.588E-02
1396.718	2.05E+01	1.93E+02	1.73E+02	0.362	0.512	3.880E-01	1.617E-02
1421.53	2.05E+01	1.93E+02	1.74E+02	0.362	0.513	3.949E-01	1.645E-02
1446.343	2.05E+01	1.93E+02	1.74E+02	0.363	0.513	4.018E-01	1.674E-02
1471.968	2.05E+01	1.93E+02	1.74E+02	0.362	0.513	4.089E-01	1.704E-02
1496.78	2.05E+01	1.93E+02	1.74E+02	0.363	0.513	4.158E-01	1.732E-02
1522.28	2.05E+01	1.93E+02	1.75E+02	0.363	0.513	4.229E-01	1.762E-02
1547.093	2.05E+01	1.93E+02	1.75E+02	0.363	0.513	4.297E-01	1.791E-02
1572.28	2.05E+01	1.93E+02	1.75E+02	0.363	0.514	4.367E-01	1.820E-02
1597.655	2.05E+01	1.93E+02	1.75E+02	0.363	0.514	4.438E-01	1.849E-02
1622.718	2.05E+01	1.93E+02	1.76E+02	0.364	0.514	4.508E-01	1.878E-02
1647.968	2.05E+01	1.93E+02	1.76E+02	0.364	0.514	4.578E-01	1.907E-02
1673.155	2.05E+01	1.93E+02	1.76E+02	0.364	0.515	4.648E-01	1.937E-02
1697.968	2.05E+01	1.93E+02	1.76E+02	0.364	0.515	4.717E-01	1.965E-02
1723.343	2.05E+01	1.93E+02	1.77E+02	0.364	0.515	4.787E-01	1.995E-02
1748.28	2.06E+01	1.93E+02	1.77E+02	0.365	0.516	4.856E-01	2.023E-02
1773.905	2.05E+01	1.93E+02	1.77E+02	0.364	0.515	4.928E-01	2.053E-02
1799.468	2.06E+01	1.93E+02	1.77E+02	0.365	0.516	4.999E-01	2.083E-02
1824.405	2.06E+01	1.93E+02	1.77E+02	0.365	0.516	5.068E-01	2.112E-02
1849.405	2.06E+01	1.93E+02	1.78E+02	0.365	0.517	5.137E-01	2.141E-02
1874.218	2.06E+01	1.93E+02	1.78E+02	0.365	0.517	5.206E-01	2.169E-02
1899.218	2.06E+01	1.93E+02	1.78E+02	0.365	0.517	5.276E-01	2.198E-02
1924.03	2.06E+01	1.93E+02	1.78E+02	0.366	0.517	5.345E-01	2.227E-02
1949.155	2.06E+01	1.93E+02	1.78E+02	0.366	0.517	5.414E-01	2.256E-02
1974.468	2.06E+01	1.93E+02	1.79E+02	0.366	0.517	5.485E-01	2.285E-02
1999.53	2.06E+01	1.93E+02	1.79E+02	0.366	0.518	5.554E-01	2.314E-02
2024.53	2.06E+01	1.93E+02	1.79E+02	0.366	0.518	5.624E-01	2.343E-02
2049.968	2.06E+01	1.93E+02	1.79E+02	0.366	0.518	5.694E-01	2.373E-02
2074.968	2.06E+01	1.93E+02	1.79E+02	0.366	0.518	5.764E-01	2.402E-02
2099.905	2.06E+01	1.93E+02	1.80E+02	0.367	0.519	5.833E-01	2.430E-02
2125.655	2.06E+01	1.93E+02	1.80E+02	0.367	0.519	5.905E-01	2.460E-02
2150.593	2.06E+01	1.93E+02	1.80E+02	0.367	0.520	5.974E-01	2.489E-02
2175.968	2.06E+01	1.93E+02	1.80E+02	0.367	0.520	6.044E-01	2.518E-02
2201.218	2.06E+01	1.93E+02	1.80E+02	0.367	0.520	6.114E-01	2.548E-02
2226.53	2.07E+01	1.93E+02	1.80E+02	0.368	0.520	6.185E-01	2.577E-02
2252.405	2.07E+01	1.93E+02	1.81E+02	0.368	0.521	6.257E-01	2.607E-02
2277.468	2.07E+01	1.93E+02	1.81E+02	0.369	0.521	6.326E-01	2.636E-02
2303.343	2.07E+01	1.93E+02	1.81E+02	0.369	0.521	6.398E-01	2.666E-02
2329.468	2.07E+01	1.93E+02	1.81E+02	0.369	0.522	6.471E-01	2.696E-02

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44 PC Leak Test Pressure (psig)

Leak Rates proportional to square root of ratio of the time

22 MSIV Leak Test Pressure (psig)

TIME	dependent delta P divided by the test delta P				MSIV Leak Fraction of Design Basis	Time (hours)	Time (days)
	DW PRESS (PSIA)	DW TEMP (F)	SP TEMP (F)	PC Leak Fraction of Design Basis			
2355.343	2.07E+01	1.93E+02	1.81E+02	0.369	0.522	6.543E-01	2.726E-02
2380.405	2.07E+01	1.93E+02	1.81E+02	0.370	0.523	6.612E-01	2.755E-02
2406.405	2.07E+01	1.93E+02	1.82E+02	0.370	0.523	6.684E-01	2.785E-02
2432.155	2.07E+01	1.93E+02	1.82E+02	0.370	0.524	6.756E-01	2.815E-02
2457.405	2.07E+01	1.93E+02	1.82E+02	0.371	0.524	6.826E-01	2.844E-02
2482.343	2.08E+01	1.93E+02	1.82E+02	0.371	0.525	6.895E-01	2.873E-02
2507.593	2.08E+01	1.93E+02	1.82E+02	0.371	0.525	6.966E-01	2.902E-02
2533.093	2.08E+01	1.93E+02	1.82E+02	0.371	0.525	7.036E-01	2.932E-02
2557.905	2.08E+01	1.93E+02	1.82E+02	0.372	0.526	7.105E-01	2.961E-02
2582.905	2.08E+01	1.93E+02	1.83E+02	0.372	0.527	7.175E-01	2.989E-02
2608.405	2.08E+01	1.93E+02	1.83E+02	0.373	0.527	7.246E-01	3.019E-02
2633.655	2.08E+01	1.93E+02	1.83E+02	0.373	0.527	7.316E-01	3.048E-02
2658.718	2.08E+01	1.93E+02	1.83E+02	0.373	0.528	7.385E-01	3.077E-02
2684.593	2.08E+01	1.93E+02	1.83E+02	0.374	0.528	7.457E-01	3.107E-02
2709.593	2.09E+01	1.93E+02	1.83E+02	0.374	0.529	7.527E-01	3.136E-02
2734.843	2.09E+01	1.94E+02	1.83E+02	0.374	0.529	7.597E-01	3.165E-02
2759.78	2.09E+01	1.94E+02	1.83E+02	0.374	0.530	7.666E-01	3.194E-02
2784.905	2.09E+01	1.94E+02	1.84E+02	0.375	0.530	7.736E-01	3.223E-02
2810.155	2.09E+01	1.94E+02	1.84E+02	0.375	0.530	7.806E-01	3.252E-02
2835.155	2.09E+01	1.94E+02	1.84E+02	0.375	0.531	7.875E-01	3.281E-02
2860.155	2.09E+01	1.94E+02	1.84E+02	0.376	0.531	7.945E-01	3.310E-02
2885.343	2.09E+01	1.94E+02	1.84E+02	0.376	0.532	8.015E-01	3.340E-02
2910.593	2.09E+01	1.94E+02	1.84E+02	0.376	0.532	8.085E-01	3.369E-02
2936.218	2.09E+01	1.94E+02	1.84E+02	0.377	0.533	8.156E-01	3.398E-02
2961.593	2.10E+01	1.94E+02	1.85E+02	0.377	0.533	8.227E-01	3.428E-02
2986.53	2.10E+01	1.94E+02	1.85E+02	0.377	0.534	8.296E-01	3.457E-02
3011.53	2.10E+01	1.94E+02	1.85E+02	0.378	0.534	8.365E-01	3.486E-02
3036.53	2.10E+01	1.94E+02	1.85E+02	0.378	0.535	8.435E-01	3.515E-02
3061.53	2.10E+01	1.94E+02	1.85E+02	0.378	0.535	8.504E-01	3.543E-02
3086.343	2.10E+01	1.94E+02	1.85E+02	0.379	0.536	8.573E-01	3.572E-02
3111.155	2.10E+01	1.94E+02	1.85E+02	0.380	0.537	8.642E-01	3.601E-02
3136.343	2.11E+01	1.94E+02	1.85E+02	0.380	0.538	8.712E-01	3.630E-02
3161.655	2.11E+01	1.94E+02	1.85E+02	0.381	0.539	8.782E-01	3.659E-02
3186.468	2.11E+01	1.94E+02	1.86E+02	0.381	0.539	8.851E-01	3.688E-02
3211.28	2.11E+01	1.94E+02	1.86E+02	0.382	0.540	8.920E-01	3.717E-02
3236.218	2.11E+01	1.94E+02	1.86E+02	0.382	0.541	8.989E-01	3.746E-02
3261.655	2.12E+01	1.94E+02	1.86E+02	0.383	0.541	9.060E-01	3.775E-02
3286.593	2.12E+01	1.94E+02	1.86E+02	0.383	0.542	9.129E-01	3.804E-02
3311.593	2.12E+01	1.94E+02	1.86E+02	0.384	0.543	9.199E-01	3.833E-02
3336.405	2.12E+01	1.94E+02	1.86E+02	0.384	0.544	9.268E-01	3.862E-02
3361.343	2.12E+01	1.94E+02	1.86E+02	0.385	0.544	9.337E-01	3.890E-02
3386.655	2.12E+01	1.94E+02	1.86E+02	0.385	0.545	9.407E-01	3.920E-02
3411.468	2.13E+01	1.94E+02	1.86E+02	0.386	0.546	9.476E-01	3.948E-02
3436.28	2.13E+01	1.94E+02	1.87E+02	0.386	0.546	9.545E-01	3.977E-02
3461.093	2.13E+01	1.95E+02	1.87E+02	0.387	0.547	9.614E-01	4.006E-02
3486.468	2.13E+01	1.95E+02	1.87E+02	0.387	0.548	9.685E-01	4.035E-02
3511.28	2.13E+01	1.95E+02	1.87E+02	0.388	0.549	9.754E-01	4.064E-02
3536.218	2.13E+01	1.95E+02	1.87E+02	0.388	0.549	9.823E-01	4.093E-02
3561.405	2.14E+01	1.95E+02	1.87E+02	0.389	0.550	9.893E-01	4.122E-02
3586.468	2.14E+01	1.95E+02	1.87E+02	0.389	0.551	9.962E-01	4.151E-02
3612.343	2.14E+01	1.95E+02	1.87E+02	0.390	0.551	1.003E+00	4.181E-02
3637.155	2.14E+01	1.95E+02	1.87E+02	0.390	0.551	1.010E+00	4.210E-02

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44 PC Leak Test Pressure (psig)
22 MSIV Leak Test Pressure (psig)

Leak Rates proportional to square root of ratio of the time

TIME	dependent delta P divided by the test delta P				PC Leak Fraction of Design Basis	MSIV Leak Fraction of Design Basis	Time (hours)	Time (days)
	DW PRESS (PSIA)	DW TEMP (F)	SP TEMP (F)					
3663.093	2.14E+01	1.95E+02	1.87E+02	0.391	0.552	1.018E+00	4.240E-02	
3688.655	2.14E+01	1.95E+02	1.88E+02	0.391	0.553	1.025E+00	4.269E-02	
3713.78	2.14E+01	1.95E+02	1.88E+02	0.391	0.554	1.032E+00	4.298E-02	
3738.843	2.15E+01	1.95E+02	1.88E+02	0.392	0.554	1.039E+00	4.327E-02	
3764.03	2.15E+01	1.95E+02	1.88E+02	0.392	0.555	1.046E+00	4.357E-02	
3789.593	2.15E+01	1.95E+02	1.88E+02	0.393	0.556	1.053E+00	4.386E-02	
3814.843	2.15E+01	1.95E+02	1.88E+02	0.393	0.556	1.060E+00	4.415E-02	
3839.78	2.15E+01	1.95E+02	1.88E+02	0.393	0.556	1.067E+00	4.444E-02	
3865.218	2.15E+01	1.95E+02	1.88E+02	0.394	0.557	1.074E+00	4.474E-02	
3890.218	2.15E+01	1.95E+02	1.88E+02	0.394	0.558	1.081E+00	4.503E-02	
3916.155	2.16E+01	1.95E+02	1.88E+02	0.395	0.558	1.088E+00	4.533E-02	
3941.093	2.16E+01	1.95E+02	1.88E+02	0.395	0.559	1.095E+00	4.561E-02	
3966.093	2.16E+01	1.95E+02	1.89E+02	0.395	0.559	1.102E+00	4.590E-02	
3991.28	2.16E+01	1.95E+02	1.89E+02	0.396	0.560	1.109E+00	4.620E-02	
4016.343	2.16E+01	1.95E+02	1.89E+02	0.396	0.560	1.116E+00	4.649E-02	
4041.593	2.16E+01	1.95E+02	1.89E+02	0.397	0.561	1.123E+00	4.678E-02	
4066.655	2.16E+01	1.95E+02	1.89E+02	0.397	0.562	1.130E+00	4.707E-02	
4091.468	2.17E+01	1.95E+02	1.89E+02	0.397	0.562	1.137E+00	4.735E-02	
4116.468	2.17E+01	1.95E+02	1.89E+02	0.398	0.562	1.143E+00	4.764E-02	
4141.53	2.17E+01	1.95E+02	1.89E+02	0.398	0.563	1.150E+00	4.793E-02	
4166.53	2.17E+01	1.95E+02	1.89E+02	0.399	0.564	1.157E+00	4.822E-02	
4191.343	2.17E+01	1.95E+02	1.89E+02	0.399	0.564	1.164E+00	4.851E-02	
4216.468	2.17E+01	1.95E+02	1.89E+02	0.399	0.565	1.171E+00	4.880E-02	
4241.405	2.17E+01	1.95E+02	1.89E+02	0.400	0.566	1.178E+00	4.909E-02	
4266.53	2.18E+01	1.95E+02	1.89E+02	0.400	0.566	1.185E+00	4.938E-02	
4292.468	2.18E+01	1.96E+02	1.90E+02	0.401	0.566	1.192E+00	4.968E-02	
4318.218	2.18E+01	1.96E+02	1.90E+02	0.401	0.567	1.200E+00	4.998E-02	
4343.03	2.18E+01	1.96E+02	1.90E+02	0.401	0.568	1.206E+00	5.027E-02	
4368.405	2.18E+01	1.96E+02	1.90E+02	0.402	0.568	1.213E+00	5.056E-02	
4393.655	2.18E+01	1.96E+02	1.90E+02	0.402	0.568	1.220E+00	5.085E-02	
4418.593	2.18E+01	1.96E+02	1.90E+02	0.403	0.569	1.227E+00	5.114E-02	
4444.218	2.18E+01	1.96E+02	1.90E+02	0.403	0.570	1.235E+00	5.144E-02	
4469.405	2.19E+01	1.96E+02	1.90E+02	0.403	0.570	1.242E+00	5.173E-02	
4494.655	2.19E+01	1.96E+02	1.90E+02	0.404	0.571	1.249E+00	5.202E-02	
4519.718	2.19E+01	1.96E+02	1.90E+02	0.404	0.572	1.255E+00	5.231E-02	
4544.718	2.19E+01	1.96E+02	1.90E+02	0.405	0.572	1.262E+00	5.260E-02	
4569.968	2.19E+01	1.96E+02	1.90E+02	0.405	0.572	1.269E+00	5.289E-02	
4594.78	2.19E+01	1.96E+02	1.90E+02	0.405	0.573	1.276E+00	5.318E-02	
4620.405	2.19E+01	1.96E+02	1.90E+02	0.405	0.573	1.283E+00	5.348E-02	
4645.593	2.20E+01	1.96E+02	1.91E+02	0.406	0.574	1.290E+00	5.377E-02	
4670.593	2.20E+01	1.96E+02	1.91E+02	0.406	0.574	1.297E+00	5.406E-02	
4695.718	2.20E+01	1.96E+02	1.91E+02	0.406	0.575	1.304E+00	5.435E-02	
4720.655	2.20E+01	1.96E+02	1.91E+02	0.407	0.576	1.311E+00	5.464E-02	
4745.655	2.20E+01	1.96E+02	1.91E+02	0.407	0.576	1.318E+00	5.493E-02	
4770.655	2.20E+01	1.96E+02	1.91E+02	0.408	0.576	1.325E+00	5.522E-02	
4795.468	2.20E+01	1.96E+02	1.91E+02	0.408	0.577	1.332E+00	5.550E-02	
4820.468	2.20E+01	1.96E+02	1.91E+02	0.408	0.578	1.339E+00	5.579E-02	
4845.843	2.21E+01	1.96E+02	1.91E+02	0.409	0.578	1.346E+00	5.609E-02	
4870.655	2.21E+01	1.96E+02	1.91E+02	0.409	0.579	1.353E+00	5.637E-02	
4895.655	2.21E+01	1.96E+02	1.91E+02	0.410	0.579	1.360E+00	5.666E-02	
4920.78	2.21E+01	1.96E+02	1.91E+02	0.410	0.579	1.367E+00	5.695E-02	
4946.718	2.21E+01	1.96E+02	1.91E+02	0.410	0.580	1.374E+00	5.725E-02	

SHEX-05A LGS SIL-636 CONT DBA-LOCA ANAL K=305

44 PC Leak Test Pressure (psig)
22 MSIV Leak Test Pressure (psig)

Leak Rates proportional to square root of ratio of the time

TIME	dependent delta P divided by the test delta P			PC Leak Fraction of Design Basis	MSIV Leak Fraction of Design Basis	Time (hours)	Time (days)
	DW PRESS (PSIA)	DW TEMP (F)	SP TEMP (F)				
4971.968	2.21E+01	1.97E+02	1.91E+02	0.410	0.580	1.381E+00	5.755E-02
4997.718	2.21E+01	1.97E+02	1.91E+02	0.411	0.581	1.388E+00	5.784E-02
5022.53	2.21E+01	1.97E+02	1.92E+02	0.411	0.582	1.395E+00	5.813E-02
5047.655	2.22E+01	1.97E+02	1.92E+02	0.411	0.582	1.402E+00	5.842E-02
5072.905	2.22E+01	1.97E+02	1.92E+02	0.412	0.582	1.409E+00	5.871E-02
5097.905	2.22E+01	1.97E+02	1.92E+02	0.412	0.582	1.416E+00	5.900E-02
5122.843	2.22E+01	1.97E+02	1.92E+02	0.412	0.583	1.423E+00	5.929E-02
5147.968	2.22E+01	1.97E+02	1.92E+02	0.413	0.583	1.430E+00	5.958E-02
5172.968	2.22E+01	1.97E+02	1.92E+02	0.413	0.584	1.437E+00	5.987E-02
5198.03	2.22E+01	1.97E+02	1.92E+02	0.413	0.585	1.444E+00	6.016E-02
5223.03	2.22E+01	1.97E+02	1.92E+02	0.414	0.585	1.451E+00	6.045E-02
5248.405	2.22E+01	1.97E+02	1.92E+02	0.414	0.585	1.458E+00	6.075E-02
5273.53	2.22E+01	1.97E+02	1.92E+02	0.414	0.585	1.465E+00	6.104E-02
5298.468	2.23E+01	1.97E+02	1.92E+02	0.415	0.586	1.472E+00	6.132E-02
5324.218	2.23E+01	1.97E+02	1.92E+02	0.415	0.587	1.479E+00	6.162E-02
5349.843	2.23E+01	1.97E+02	1.92E+02	0.415	0.587	1.486E+00	6.192E-02
5375.093	2.23E+01	1.97E+02	1.92E+02	0.415	0.587	1.493E+00	6.221E-02
5399.905	2.23E+01	1.97E+02	1.92E+02	0.416	0.588	1.500E+00	6.250E-02
5424.905	2.23E+01	1.97E+02	1.92E+02	0.416	0.588	1.507E+00	6.279E-02
5450.655	2.23E+01	1.97E+02	1.93E+02	0.416	0.588	1.514E+00	6.309E-02
5476.405	2.23E+01	1.97E+02	1.93E+02	0.416	0.589	1.521E+00	6.338E-02
5501.218	2.23E+01	1.97E+02	1.93E+02	0.417	0.589	1.528E+00	6.367E-02
5526.218	2.24E+01	1.97E+02	1.93E+02	0.417	0.590	1.535E+00	6.396E-02
5551.343	2.24E+01	1.97E+02	1.93E+02	0.417	0.590	1.542E+00	6.425E-02
5576.593	2.24E+01	1.97E+02	1.93E+02	0.417	0.590	1.549E+00	6.454E-02
5601.405	2.24E+01	1.97E+02	1.93E+02	0.418	0.591	1.556E+00	6.483E-02
5626.405	2.24E+01	1.97E+02	1.93E+02	0.418	0.591	1.563E+00	6.512E-02
5651.78	2.24E+01	1.97E+02	1.93E+02	0.418	0.591	1.570E+00	6.541E-02
5677.655	2.24E+01	1.97E+02	1.93E+02	0.418	0.592	1.577E+00	6.571E-02
5702.718	2.24E+01	1.97E+02	1.93E+02	0.419	0.592	1.584E+00	6.600E-02
5727.718	2.24E+01	1.97E+02	1.93E+02	0.419	0.592	1.591E+00	6.629E-02
5752.718	2.24E+01	1.97E+02	1.93E+02	0.419	0.593	1.598E+00	6.658E-02
5777.843	2.24E+01	1.97E+02	1.93E+02	0.419	0.593	1.605E+00	6.687E-02
5803.218	2.25E+01	1.98E+02	1.93E+02	0.420	0.594	1.612E+00	6.717E-02
5828.78	2.25E+01	1.98E+02	1.93E+02	0.420	0.594	1.619E+00	6.746E-02
5854.155	2.25E+01	1.98E+02	1.93E+02	0.420	0.594	1.626E+00	6.776E-02
5879.155	2.25E+01	1.98E+02	1.93E+02	0.420	0.595	1.633E+00	6.805E-02
5904.28	2.25E+01	1.98E+02	1.94E+02	0.420	0.595	1.640E+00	6.834E-02
5929.218	2.25E+01	1.98E+02	1.94E+02	0.421	0.595	1.647E+00	6.863E-02
5954.968	2.25E+01	1.98E+02	1.94E+02	0.421	0.596	1.654E+00	6.892E-02
5980.343	2.25E+01	1.98E+02	1.94E+02	0.421	0.596	1.661E+00	6.922E-02
6006.593	2.25E+01	1.98E+02	1.94E+02	0.422	0.596	1.668E+00	6.952E-02
6031.968	2.25E+01	1.98E+02	1.94E+02	0.422	0.597	1.676E+00	6.981E-02
6057.03	2.25E+01	1.98E+02	1.94E+02	0.422	0.597	1.683E+00	7.010E-02
6082.03	2.26E+01	1.98E+02	1.94E+02	0.422	0.597	1.689E+00	7.039E-02
6107.03	2.26E+01	1.98E+02	1.94E+02	0.423	0.598	1.696E+00	7.068E-02
6132.28	2.26E+01	1.98E+02	1.94E+02	0.423	0.598	1.703E+00	7.098E-02
6158.655	2.26E+01	1.98E+02	1.94E+02	0.423	0.598	1.711E+00	7.128E-02
6183.78	2.26E+01	1.98E+02	1.94E+02	0.423	0.598	1.718E+00	7.157E-02
6209.03	2.26E+01	1.98E+02	1.94E+02	0.423	0.598	1.725E+00	7.186E-02
6234.218	2.26E+01	1.98E+02	1.94E+02	0.424	0.599	1.732E+00	7.216E-02
6259.343	2.26E+01	1.98E+02	1.94E+02	0.424	0.600	1.739E+00	7.245E-02

SHEX-05A LGS SIL-636 CONT DBA-LOCA ANAL K=305
 Leak Rates proportional to square root of ratio of the time

44 PC Leak Test Pressure (psig)
 22 MSIV Leak Test Pressure (psig)

TIME	dependent delta P divided by the test delta P				PC Leak Fraction of Design Basis	MSIV Leak Fraction of Design Basis	Time (hours)	Time (days)
	DW PRESS (PSIA)	DW TEMP (F)	SP TEMP (F)					
6284.468	2.26E+01	1.98E+02	1.94E+02	0.424	0.600	1.746E+00	7.274E-02	
6309.593	2.26E+01	1.98E+02	1.94E+02	0.424	0.600	1.753E+00	7.303E-02	
6334.968	2.26E+01	1.98E+02	1.94E+02	0.425	0.600	1.760E+00	7.332E-02	
6360.218	2.26E+01	1.98E+02	1.94E+02	0.425	0.601	1.767E+00	7.361E-02	
6385.218	2.27E+01	1.98E+02	1.94E+02	0.425	0.601	1.774E+00	7.390E-02	
6410.218	2.27E+01	1.98E+02	1.94E+02	0.425	0.601	1.781E+00	7.419E-02	
6435.28	2.27E+01	1.98E+02	1.95E+02	0.426	0.602	1.788E+00	7.448E-02	
6460.28	2.27E+01	1.98E+02	1.95E+02	0.426	0.602	1.795E+00	7.477E-02	
6485.53	2.27E+01	1.98E+02	1.95E+02	0.426	0.602	1.802E+00	7.506E-02	
6510.78	2.27E+01	1.98E+02	1.95E+02	0.426	0.603	1.809E+00	7.536E-02	
6536.905	2.27E+01	1.98E+02	1.95E+02	0.426	0.603	1.816E+00	7.566E-02	
6561.905	2.27E+01	1.98E+02	1.95E+02	0.427	0.603	1.823E+00	7.595E-02	
6587.53	2.27E+01	1.98E+02	1.95E+02	0.427	0.603	1.830E+00	7.624E-02	
6612.593	2.27E+01	1.98E+02	1.95E+02	0.427	0.604	1.837E+00	7.653E-02	
6637.968	2.27E+01	1.98E+02	1.95E+02	0.427	0.605	1.844E+00	7.683E-02	
6663.343	2.28E+01	1.98E+02	1.95E+02	0.428	0.605	1.851E+00	7.712E-02	
6688.593	2.28E+01	1.99E+02	1.95E+02	0.428	0.605	1.858E+00	7.741E-02	
6713.718	2.28E+01	1.99E+02	1.95E+02	0.428	0.605	1.865E+00	7.771E-02	
6738.843	2.28E+01	1.99E+02	1.95E+02	0.428	0.606	1.872E+00	7.800E-02	
6764.468	2.28E+01	1.99E+02	1.95E+02	0.428	0.606	1.879E+00	7.829E-02	
6790.093	2.28E+01	1.99E+02	1.95E+02	0.429	0.606	1.886E+00	7.859E-02	
6815.093	2.28E+01	1.99E+02	1.95E+02	0.429	0.606	1.893E+00	7.888E-02	
6841.093	2.28E+01	1.99E+02	1.95E+02	0.429	0.607	1.900E+00	7.918E-02	
6866.093	2.28E+01	1.99E+02	1.95E+02	0.429	0.607	1.907E+00	7.947E-02	
6890.905	2.28E+01	1.99E+02	1.95E+02	0.430	0.608	1.914E+00	7.976E-02	
6916.03	2.28E+01	1.99E+02	1.95E+02	0.430	0.608	1.921E+00	8.005E-02	
6941.155	2.28E+01	1.99E+02	1.95E+02	0.430	0.608	1.928E+00	8.034E-02	
6966.655	2.28E+01	1.99E+02	1.95E+02	0.430	0.608	1.935E+00	8.063E-02	
6991.655	2.29E+01	1.99E+02	1.95E+02	0.430	0.609	1.942E+00	8.092E-02	
7016.655	2.29E+01	1.99E+02	1.96E+02	0.430	0.609	1.949E+00	8.121E-02	
7042.155	2.29E+01	1.99E+02	1.96E+02	0.431	0.609	1.956E+00	8.151E-02	
7067.155	2.29E+01	1.99E+02	1.96E+02	0.431	0.609	1.963E+00	8.180E-02	
7092.155	2.29E+01	1.99E+02	1.96E+02	0.431	0.609	1.970E+00	8.209E-02	
7117.405	2.29E+01	1.99E+02	1.96E+02	0.431	0.610	1.977E+00	8.238E-02	
7142.53	2.29E+01	1.99E+02	1.96E+02	0.431	0.610	1.984E+00	8.267E-02	
7167.78	2.29E+01	1.99E+02	1.96E+02	0.431	0.610	1.991E+00	8.296E-02	
7193.03	2.29E+01	1.99E+02	1.96E+02	0.432	0.611	1.998E+00	8.325E-02	
7218.03	2.29E+01	1.99E+02	1.96E+02	0.432	0.611	2.005E+00	8.354E-02	
7242.843	2.29E+01	1.99E+02	1.96E+02	0.432	0.611	2.012E+00	8.383E-02	
7267.843	2.29E+01	1.99E+02	1.96E+02	0.432	0.611	2.019E+00	8.412E-02	
7293.843	2.29E+01	1.99E+02	1.96E+02	0.432	0.612	2.026E+00	8.442E-02	
7319.343	2.29E+01	1.99E+02	1.96E+02	0.433	0.612	2.033E+00	8.471E-02	
7344.593	2.30E+01	1.99E+02	1.96E+02	0.433	0.612	2.040E+00	8.501E-02	
7369.968	2.30E+01	1.99E+02	1.96E+02	0.433	0.612	2.047E+00	8.530E-02	
7395.093	2.30E+01	1.99E+02	1.96E+02	0.433	0.613	2.054E+00	8.559E-02	
7420.718	2.30E+01	1.99E+02	1.96E+02	0.433	0.613	2.061E+00	8.589E-02	
7446.093	2.30E+01	1.99E+02	1.96E+02	0.434	0.613	2.068E+00	8.618E-02	
7471.343	2.30E+01	1.99E+02	1.96E+02	0.434	0.613	2.075E+00	8.647E-02	
7497.218	2.30E+01	1.99E+02	1.96E+02	0.434	0.613	2.083E+00	8.677E-02	
7522.218	2.30E+01	1.99E+02	1.96E+02	0.434	0.614	2.090E+00	8.706E-02	
7547.78	2.30E+01	1.99E+02	1.96E+02	0.434	0.614	2.097E+00	8.736E-02	
7572.905	2.30E+01	1.99E+02	1.96E+02	0.435	0.615	2.104E+00	8.765E-02	

SHEX-05A LGS SIL-636 CONT DBA-LOCA ANAL K=305

44 PC Leak Test Pressure (psig)

Leak Rates proportional to square root of ratio of the time

22 MSIV Leak Test Pressure (psig)

TIME	dependent delta P divided by the test delta P				PC Leak Fraction of Design Basis	MSIV Leak Fraction of Design Basis	Time (hours)	Time (days)
	DW PRESS (PSIA)	DW TEMP (F)	SP TEMP (F)					
7597.905	2.30E+01	1.99E+02	1.96E+02	0.435	0.615	2.111E+00	8.794E-02	
7623.03	2.30E+01	1.99E+02	1.96E+02	0.435	0.615	2.118E+00	8.823E-02	
7648.405	2.30E+01	1.99E+02	1.96E+02	0.435	0.615	2.125E+00	8.852E-02	
7673.405	2.30E+01	1.99E+02	1.97E+02	0.435	0.615	2.132E+00	8.881E-02	
7698.405	2.30E+01	2.00E+02	1.97E+02	0.435	0.616	2.138E+00	8.910E-02	
7723.905	2.30E+01	2.00E+02	1.97E+02	0.435	0.616	2.146E+00	8.940E-02	
7749.28	2.31E+01	2.00E+02	1.97E+02	0.436	0.616	2.153E+00	8.969E-02	
7774.28	2.31E+01	2.00E+02	1.97E+02	0.436	0.616	2.160E+00	8.998E-02	
7799.28	2.31E+01	2.00E+02	1.97E+02	0.436	0.616	2.166E+00	9.027E-02	
7824.405	2.31E+01	2.00E+02	1.97E+02	0.436	0.617	2.173E+00	9.056E-02	
7849.53	2.31E+01	2.00E+02	1.97E+02	0.436	0.617	2.180E+00	9.085E-02	
7874.78	2.31E+01	2.00E+02	1.97E+02	0.436	0.617	2.187E+00	9.114E-02	
7900.28	2.31E+01	2.00E+02	1.97E+02	0.436	0.617	2.195E+00	9.144E-02	
7925.53	2.31E+01	2.00E+02	1.97E+02	0.437	0.618	2.202E+00	9.173E-02	
7950.655	2.31E+01	2.00E+02	1.97E+02	0.437	0.618	2.209E+00	9.202E-02	
7976.155	2.31E+01	2.00E+02	1.97E+02	0.437	0.618	2.216E+00	9.232E-02	
8001.405	2.31E+01	2.00E+02	1.97E+02	0.437	0.618	2.223E+00	9.261E-02	
8026.843	2.31E+01	2.00E+02	1.97E+02	0.437	0.619	2.230E+00	9.290E-02	
8052.843	2.31E+01	2.00E+02	1.97E+02	0.438	0.619	2.237E+00	9.320E-02	
8078.718	2.31E+01	2.00E+02	1.97E+02	0.438	0.619	2.244E+00	9.350E-02	
8103.718	2.31E+01	2.00E+02	1.97E+02	0.438	0.619	2.251E+00	9.379E-02	
8129.093	2.31E+01	2.00E+02	1.97E+02	0.438	0.619	2.258E+00	9.409E-02	
8154.343	2.32E+01	2.00E+02	1.97E+02	0.438	0.620	2.265E+00	9.438E-02	
8179.468	2.32E+01	2.00E+02	1.97E+02	0.438	0.620	2.272E+00	9.467E-02	
8204.718	2.32E+01	2.00E+02	1.97E+02	0.438	0.620	2.279E+00	9.496E-02	
8230.968	2.32E+01	2.00E+02	1.97E+02	0.438	0.620	2.286E+00	9.527E-02	
8256.843	2.32E+01	2.00E+02	1.97E+02	0.439	0.620	2.294E+00	9.557E-02	
8282.093	2.32E+01	2.00E+02	1.97E+02	0.439	0.620	2.301E+00	9.586E-02	
8307.468	2.32E+01	2.00E+02	1.97E+02	0.439	0.621	2.308E+00	9.615E-02	
8333.218	2.32E+01	2.00E+02	1.97E+02	0.439	0.621	2.315E+00	9.645E-02	
8358.468	2.32E+01	2.00E+02	1.97E+02	0.439	0.621	2.322E+00	9.674E-02	
8384.968	2.32E+01	2.00E+02	1.97E+02	0.440	0.622	2.329E+00	9.705E-02	
8410.468	2.32E+01	2.00E+02	1.98E+02	0.440	0.622	2.336E+00	9.734E-02	
8435.468	2.32E+01	2.00E+02	1.98E+02	0.440	0.622	2.343E+00	9.763E-02	
8460.593	2.32E+01	2.00E+02	1.98E+02	0.440	0.622	2.350E+00	9.792E-02	
8485.718	2.32E+01	2.00E+02	1.98E+02	0.440	0.622	2.357E+00	9.821E-02	
8510.718	2.32E+01	2.00E+02	1.98E+02	0.440	0.622	2.364E+00	9.850E-02	
8536.843	2.32E+01	2.00E+02	1.98E+02	0.440	0.623	2.371E+00	9.881E-02	
8562.218	2.32E+01	2.00E+02	1.98E+02	0.440	0.623	2.378E+00	9.910E-02	
8587.718	2.32E+01	2.00E+02	1.98E+02	0.441	0.623	2.385E+00	9.939E-02	
8613.093	2.32E+01	2.00E+02	1.98E+02	0.441	0.623	2.393E+00	9.969E-02	
8638.093	2.33E+01	2.00E+02	1.98E+02	0.441	0.623	2.399E+00	9.998E-02	
8663.093	2.33E+01	2.00E+02	1.98E+02	0.441	0.623	2.406E+00	1.003E-01	
8688.718	2.33E+01	2.00E+02	1.98E+02	0.441	0.624	2.414E+00	1.006E-01	
8713.968	2.33E+01	2.00E+02	1.98E+02	0.441	0.624	2.421E+00	1.009E-01	
8739.343	2.33E+01	2.00E+02	1.98E+02	0.441	0.624	2.428E+00	1.011E-01	
8764.968	2.33E+01	2.00E+02	1.98E+02	0.441	0.624	2.435E+00	1.014E-01	
8791.468	2.33E+01	2.00E+02	1.98E+02	0.442	0.624	2.442E+00	1.018E-01	
8816.718	2.33E+01	2.00E+02	1.98E+02	0.442	0.624	2.449E+00	1.020E-01	
8841.843	2.33E+01	2.00E+02	1.98E+02	0.442	0.625	2.456E+00	1.023E-01	
8866.843	2.33E+01	2.00E+02	1.98E+02	0.442	0.625	2.463E+00	1.026E-01	
8891.968	2.33E+01	2.00E+02	1.98E+02	0.442	0.625	2.470E+00	1.029E-01	

SHEX-05A LGS SIL-636 CONT DBA-LOCA ANAL K=305
 Leak Rates proportional to square root of ratio of the time

44 PC Leak Test Pressure (psig)
 22 MSIV Leak Test Pressure (psig)

TIME	dependent delta P divided by the test delta P			PC Leak Fraction of Design Basis	MSIV Leak Fraction of Design Basis	Time (hours)	Time (days)
	DW PRESS (PSIA)	DW TEMP (F)	SP TEMP (F)				
8916.968	2.33E+01	2.00E+02	1.98E+02	0.442	0.625	2.477E+00	1.032E-01
8941.78	2.33E+01	2.01E+02	1.98E+02	0.443	0.626	2.484E+00	1.035E-01
8967.155	2.33E+01	2.01E+02	1.98E+02	0.443	0.626	2.491E+00	1.038E-01
8992.53	2.33E+01	2.01E+02	1.98E+02	0.443	0.626	2.498E+00	1.041E-01
9017.655	2.33E+01	2.01E+02	1.98E+02	0.443	0.626	2.505E+00	1.044E-01
9042.78	2.33E+01	2.01E+02	1.98E+02	0.443	0.627	2.512E+00	1.047E-01
9068.155	2.33E+01	2.01E+02	1.98E+02	0.443	0.627	2.519E+00	1.050E-01
9093.155	2.34E+01	2.01E+02	1.98E+02	0.443	0.627	2.526E+00	1.052E-01
9118.655	2.34E+01	2.01E+02	1.98E+02	0.443	0.627	2.533E+00	1.055E-01
9143.78	2.34E+01	2.01E+02	1.98E+02	0.444	0.627	2.540E+00	1.058E-01
9169.155	2.34E+01	2.01E+02	1.98E+02	0.444	0.627	2.547E+00	1.061E-01
9194.405	2.34E+01	2.01E+02	1.98E+02	0.444	0.628	2.554E+00	1.064E-01
9219.78	2.34E+01	2.01E+02	1.98E+02	0.444	0.628	2.561E+00	1.067E-01
9244.78	2.34E+01	2.01E+02	1.98E+02	0.444	0.628	2.568E+00	1.070E-01
9269.905	2.34E+01	2.01E+02	1.99E+02	0.444	0.628	2.575E+00	1.073E-01
9295.655	2.34E+01	2.01E+02	1.99E+02	0.444	0.628	2.582E+00	1.076E-01
9320.905	2.34E+01	2.01E+02	1.99E+02	0.444	0.628	2.589E+00	1.079E-01
9345.905	2.34E+01	2.01E+02	1.99E+02	0.444	0.628	2.596E+00	1.082E-01
9370.905	2.34E+01	2.01E+02	1.99E+02	0.445	0.629	2.603E+00	1.085E-01
9397.03	2.34E+01	2.01E+02	1.99E+02	0.445	0.629	2.610E+00	1.088E-01
9422.155	2.34E+01	2.01E+02	1.99E+02	0.445	0.629	2.617E+00	1.091E-01
9447.78	2.34E+01	2.01E+02	1.99E+02	0.445	0.629	2.624E+00	1.093E-01
9473.03	2.34E+01	2.01E+02	1.99E+02	0.445	0.629	2.631E+00	1.096E-01
9499.28	2.34E+01	2.01E+02	1.99E+02	0.445	0.630	2.639E+00	1.099E-01
9524.53	2.34E+01	2.01E+02	1.99E+02	0.445	0.630	2.646E+00	1.102E-01
9550.155	2.34E+01	2.01E+02	1.99E+02	0.445	0.630	2.653E+00	1.105E-01
9575.53	2.34E+01	2.01E+02	1.99E+02	0.445	0.630	2.660E+00	1.108E-01
9600.53	2.34E+01	2.01E+02	1.99E+02	0.445	0.630	2.667E+00	1.111E-01
9625.53	2.34E+01	2.01E+02	1.99E+02	0.446	0.630	2.674E+00	1.114E-01
9650.53	2.34E+01	2.01E+02	1.99E+02	0.446	0.630	2.681E+00	1.117E-01
9675.53	2.35E+01	2.01E+02	1.99E+02	0.446	0.631	2.688E+00	1.120E-01
9700.53	2.35E+01	2.01E+02	1.99E+02	0.446	0.631	2.695E+00	1.123E-01
9725.78	2.35E+01	2.01E+02	1.99E+02	0.446	0.631	2.702E+00	1.126E-01
9750.78	2.35E+01	2.01E+02	1.99E+02	0.446	0.631	2.709E+00	1.129E-01
9776.03	2.35E+01	2.01E+02	1.99E+02	0.446	0.631	2.716E+00	1.131E-01
9801.78	2.35E+01	2.01E+02	1.99E+02	0.446	0.631	2.723E+00	1.134E-01
9826.78	2.35E+01	2.01E+02	1.99E+02	0.446	0.631	2.730E+00	1.137E-01
9851.905	2.35E+01	2.01E+02	1.99E+02	0.447	0.632	2.737E+00	1.140E-01
9877.53	2.35E+01	2.01E+02	1.99E+02	0.447	0.632	2.744E+00	1.143E-01
9902.53	2.35E+01	2.01E+02	1.99E+02	0.447	0.632	2.751E+00	1.146E-01
9927.53	2.35E+01	2.01E+02	1.99E+02	0.447	0.632	2.758E+00	1.149E-01
9952.655	2.35E+01	2.01E+02	1.99E+02	0.447	0.632	2.765E+00	1.152E-01
9978.155	2.35E+01	2.01E+02	1.99E+02	0.447	0.632	2.772E+00	1.155E-01
10003.28	2.35E+01	2.01E+02	1.99E+02	0.447	0.632	2.779E+00	1.158E-01
10028.28	2.35E+01	2.01E+02	1.99E+02	0.447	0.632	2.786E+00	1.161E-01
10053.41	2.35E+01	2.01E+02	1.99E+02	0.447	0.633	2.793E+00	1.164E-01
10078.53	2.35E+01	2.01E+02	1.99E+02	0.447	0.633	2.800E+00	1.166E-01
10103.53	2.35E+01	2.01E+02	1.99E+02	0.447	0.633	2.807E+00	1.169E-01
10129.03	2.35E+01	2.01E+02	1.99E+02	0.448	0.633	2.814E+00	1.172E-01
10154.03	2.35E+01	2.01E+02	1.99E+02	0.448	0.633	2.821E+00	1.175E-01
10179.03	2.35E+01	2.01E+02	1.99E+02	0.448	0.633	2.828E+00	1.178E-01
10204.03	2.35E+01	2.01E+02	1.99E+02	0.448	0.634	2.834E+00	1.181E-01

SHEX-05A LGS SIL-636 CONT DBA-LOCA ANAL K=305
 Leak Rates proportional to square root of ratio of the time

44 PC Leak Test Pressure (psig)
 22 MSIV Leak Test Pressure (psig)

TIME	dependent delta P divided by the test delta P				PC Leak Fraction of Design Basis	MSIV Leak Fraction of Design Basis	Time (hours)	Time (days)
	DW PRESS (PSIA)	DW TEMP (F)	SP TEMP (F)					
10229.53	2.35E+01	2.01E+02	1.99E+02	0.448	0.634	2.842E+00	1.184E-01	
10254.66	2.35E+01	2.01E+02	1.99E+02	0.448	0.634	2.849E+00	1.187E-01	
10279.91	2.35E+01	2.01E+02	2.00E+02	0.448	0.634	2.856E+00	1.190E-01	
10305.66	2.36E+01	2.01E+02	2.00E+02	0.448	0.634	2.863E+00	1.193E-01	
10330.66	2.36E+01	2.01E+02	2.00E+02	0.448	0.634	2.870E+00	1.196E-01	
10356.91	2.36E+01	2.01E+02	2.00E+02	0.448	0.634	2.877E+00	1.199E-01	
10382.16	2.36E+01	2.01E+02	2.00E+02	0.449	0.635	2.884E+00	1.202E-01	
10408.03	2.36E+01	2.01E+02	2.00E+02	0.449	0.635	2.891E+00	1.205E-01	
10433.16	2.36E+01	2.01E+02	2.00E+02	0.449	0.635	2.898E+00	1.208E-01	
10458.41	2.36E+01	2.01E+02	2.00E+02	0.449	0.635	2.905E+00	1.210E-01	
10483.41	2.36E+01	2.01E+02	2.00E+02	0.449	0.635	2.912E+00	1.213E-01	
10509.03	2.36E+01	2.02E+02	2.00E+02	0.449	0.635	2.919E+00	1.216E-01	
10534.03	2.36E+01	2.02E+02	2.00E+02	0.449	0.635	2.926E+00	1.219E-01	
10559.03	2.36E+01	2.02E+02	2.00E+02	0.449	0.636	2.933E+00	1.222E-01	
10584.03	2.36E+01	2.02E+02	2.00E+02	0.449	0.636	2.940E+00	1.225E-01	
10609.16	2.36E+01	2.02E+02	2.00E+02	0.449	0.636	2.947E+00	1.228E-01	
10634.16	2.36E+01	2.02E+02	2.00E+02	0.450	0.636	2.954E+00	1.231E-01	
10659.16	2.36E+01	2.02E+02	2.00E+02	0.450	0.636	2.961E+00	1.234E-01	
10684.16	2.36E+01	2.02E+02	2.00E+02	0.450	0.636	2.968E+00	1.237E-01	
10709.53	2.36E+01	2.02E+02	2.00E+02	0.450	0.636	2.975E+00	1.240E-01	
10735.16	2.36E+01	2.02E+02	2.00E+02	0.450	0.636	2.982E+00	1.242E-01	
10760.78	2.36E+01	2.02E+02	2.00E+02	0.450	0.637	2.989E+00	1.245E-01	
10786.28	2.36E+01	2.02E+02	2.00E+02	0.450	0.637	2.996E+00	1.248E-01	
10811.28	2.36E+01	2.02E+02	2.00E+02	0.450	0.637	3.003E+00	1.251E-01	
10836.66	2.36E+01	2.02E+02	2.00E+02	0.451	0.637	3.010E+00	1.254E-01	
10861.66	2.36E+01	2.02E+02	2.00E+02	0.451	0.637	3.017E+00	1.257E-01	
10887.03	2.36E+01	2.02E+02	2.00E+02	0.451	0.637	3.024E+00	1.260E-01	
10912.16	2.36E+01	2.02E+02	2.00E+02	0.451	0.637	3.031E+00	1.263E-01	
10937.16	2.36E+01	2.02E+02	2.00E+02	0.451	0.637	3.038E+00	1.266E-01	
10962.53	2.37E+01	2.02E+02	2.00E+02	0.451	0.638	3.045E+00	1.269E-01	
10987.91	2.37E+01	2.02E+02	2.00E+02	0.451	0.638	3.052E+00	1.272E-01	
11013.91	2.37E+01	2.02E+02	2.00E+02	0.451	0.638	3.059E+00	1.275E-01	
11039.66	2.37E+01	2.02E+02	2.00E+02	0.451	0.638	3.067E+00	1.278E-01	
11064.78	2.37E+01	2.02E+02	2.00E+02	0.451	0.638	3.074E+00	1.281E-01	
11089.78	2.37E+01	2.02E+02	2.00E+02	0.451	0.638	3.080E+00	1.284E-01	
11114.91	2.37E+01	2.02E+02	2.00E+02	0.452	0.639	3.087E+00	1.286E-01	
11140.03	2.37E+01	2.02E+02	2.00E+02	0.452	0.639	3.094E+00	1.289E-01	
11165.78	2.37E+01	2.02E+02	2.00E+02	0.452	0.639	3.102E+00	1.292E-01	
11190.78	2.37E+01	2.02E+02	2.00E+02	0.452	0.639	3.109E+00	1.295E-01	
11216.03	2.37E+01	2.02E+02	2.00E+02	0.452	0.639	3.116E+00	1.298E-01	
11241.03	2.37E+01	2.02E+02	2.00E+02	0.452	0.639	3.123E+00	1.301E-01	
11266.03	2.37E+01	2.02E+02	2.00E+02	0.452	0.639	3.129E+00	1.304E-01	
11292.03	2.37E+01	2.02E+02	2.00E+02	0.452	0.639	3.137E+00	1.307E-01	
11317.28	2.37E+01	2.02E+02	2.00E+02	0.452	0.639	3.144E+00	1.310E-01	
11342.53	2.37E+01	2.02E+02	2.00E+02	0.452	0.640	3.151E+00	1.313E-01	
11368.03	2.37E+01	2.02E+02	2.00E+02	0.452	0.640	3.158E+00	1.316E-01	
11393.03	2.37E+01	2.02E+02	2.00E+02	0.453	0.640	3.165E+00	1.319E-01	
11418.53	2.37E+01	2.02E+02	2.00E+02	0.453	0.640	3.172E+00	1.322E-01	
11443.91	2.37E+01	2.02E+02	2.00E+02	0.453	0.640	3.179E+00	1.325E-01	
11470.03	2.37E+01	2.02E+02	2.00E+02	0.453	0.640	3.186E+00	1.328E-01	
11495.41	2.37E+01	2.02E+02	2.01E+02	0.453	0.640	3.193E+00	1.330E-01	
11520.41	2.37E+01	2.02E+02	2.01E+02	0.453	0.640	3.200E+00	1.333E-01	

SHEX-05A LGS SIL-636 CONT DBA-LOCA ANAL K=305
 Leak Rates proportional to square root of ratio of the time

44 PC Leak Test Pressure (psig)
 22 MSIV Leak Test Pressure (psig)

TIME	dependent delta P divided by the test delta P			PC Leak Fraction of Design Basis	MSIV Leak Fraction of Design Basis	Time (hours)	Time (days)
	DW PRESS (PSIA)	DW TEMP (F)	SP TEMP (F)				
11545.66	2.37E+01	2.02E+02	2.01E+02	0.453	0.641	3.207E+00	1.336E-01
11571.03	2.37E+01	2.02E+02	2.01E+02	0.453	0.641	3.214E+00	1.339E-01
11596.53	2.37E+01	2.02E+02	2.01E+02	0.453	0.641	3.221E+00	1.342E-01
11622.91	2.37E+01	2.02E+02	2.01E+02	0.453	0.641	3.229E+00	1.345E-01
11649.03	2.37E+01	2.02E+02	2.01E+02	0.453	0.641	3.236E+00	1.348E-01
11674.03	2.37E+01	2.02E+02	2.01E+02	0.453	0.641	3.243E+00	1.351E-01
11699.03	2.38E+01	2.02E+02	2.01E+02	0.454	0.641	3.250E+00	1.354E-01
11724.03	2.38E+01	2.02E+02	2.01E+02	0.454	0.641	3.257E+00	1.357E-01
11749.28	2.38E+01	2.02E+02	2.01E+02	0.454	0.641	3.264E+00	1.360E-01
11774.66	2.38E+01	2.02E+02	2.01E+02	0.454	0.641	3.271E+00	1.363E-01
11799.78	2.38E+01	2.02E+02	2.01E+02	0.454	0.642	3.278E+00	1.366E-01
11826.03	2.38E+01	2.02E+02	2.01E+02	0.454	0.642	3.285E+00	1.369E-01
11851.91	2.38E+01	2.02E+02	2.01E+02	0.454	0.642	3.292E+00	1.372E-01
11877.28	2.38E+01	2.02E+02	2.01E+02	0.454	0.642	3.299E+00	1.375E-01
11902.78	2.38E+01	2.02E+02	2.01E+02	0.454	0.642	3.306E+00	1.378E-01
11928.41	2.38E+01	2.02E+02	2.01E+02	0.454	0.642	3.313E+00	1.381E-01
11953.41	2.38E+01	2.02E+02	2.01E+02	0.454	0.642	3.320E+00	1.383E-01
11978.41	2.38E+01	2.02E+02	2.01E+02	0.454	0.642	3.327E+00	1.386E-01
12003.91	2.38E+01	2.02E+02	2.01E+02	0.454	0.642	3.334E+00	1.389E-01
12029.41	2.38E+01	2.02E+02	2.01E+02	0.455	0.643	3.342E+00	1.392E-01
12054.41	2.38E+01	2.02E+02	2.01E+02	0.455	0.643	3.348E+00	1.395E-01
12079.41	2.38E+01	2.02E+02	2.01E+02	0.455	0.643	3.355E+00	1.398E-01
12105.53	2.38E+01	2.02E+02	2.01E+02	0.455	0.643	3.363E+00	1.401E-01
12130.91	2.38E+01	2.02E+02	2.01E+02	0.455	0.643	3.370E+00	1.404E-01
12156.03	2.38E+01	2.02E+02	2.01E+02	0.455	0.643	3.377E+00	1.407E-01
12181.28	2.38E+01	2.02E+02	2.01E+02	0.455	0.643	3.384E+00	1.410E-01
12206.28	2.38E+01	2.02E+02	2.01E+02	0.455	0.643	3.391E+00	1.413E-01
12231.28	2.38E+01	2.02E+02	2.01E+02	0.455	0.643	3.398E+00	1.416E-01
12256.28	2.38E+01	2.02E+02	2.01E+02	0.455	0.643	3.405E+00	1.419E-01
12281.66	2.38E+01	2.02E+02	2.01E+02	0.455	0.643	3.412E+00	1.421E-01
12306.66	2.38E+01	2.02E+02	2.01E+02	0.455	0.644	3.419E+00	1.424E-01
12331.91	2.38E+01	2.02E+02	2.01E+02	0.455	0.644	3.426E+00	1.427E-01
12357.66	2.38E+01	2.02E+02	2.01E+02	0.455	0.644	3.433E+00	1.430E-01
12383.03	2.38E+01	2.02E+02	2.01E+02	0.456	0.644	3.440E+00	1.433E-01
12408.03	2.38E+01	2.02E+02	2.01E+02	0.456	0.644	3.447E+00	1.436E-01
12433.03	2.38E+01	2.02E+02	2.01E+02	0.456	0.644	3.454E+00	1.439E-01
12458.16	2.38E+01	2.02E+02	2.01E+02	0.456	0.644	3.461E+00	1.442E-01
12483.16	2.38E+01	2.02E+02	2.01E+02	0.456	0.645	3.468E+00	1.445E-01
12508.28	2.38E+01	2.02E+02	2.01E+02	0.456	0.645	3.475E+00	1.448E-01
12533.28	2.38E+01	2.03E+02	2.01E+02	0.456	0.645	3.481E+00	1.451E-01
12558.28	2.38E+01	2.03E+02	2.01E+02	0.456	0.645	3.488E+00	1.454E-01
12583.66	2.39E+01	2.03E+02	2.01E+02	0.456	0.645	3.495E+00	1.456E-01
12608.78	2.39E+01	2.03E+02	2.01E+02	0.456	0.645	3.502E+00	1.459E-01
12633.78	2.39E+01	2.03E+02	2.01E+02	0.456	0.645	3.509E+00	1.462E-01
12658.78	2.39E+01	2.03E+02	2.01E+02	0.456	0.645	3.516E+00	1.465E-01
12684.66	2.39E+01	2.03E+02	2.01E+02	0.456	0.645	3.524E+00	1.468E-01
12709.91	2.39E+01	2.03E+02	2.01E+02	0.456	0.645	3.531E+00	1.471E-01
12735.53	2.39E+01	2.03E+02	2.01E+02	0.456	0.645	3.538E+00	1.474E-01
12760.91	2.39E+01	2.03E+02	2.01E+02	0.456	0.645	3.545E+00	1.477E-01
12786.16	2.39E+01	2.03E+02	2.01E+02	0.457	0.646	3.552E+00	1.480E-01
12811.66	2.39E+01	2.03E+02	2.01E+02	0.457	0.646	3.559E+00	1.483E-01
12836.91	2.39E+01	2.03E+02	2.01E+02	0.457	0.646	3.566E+00	1.486E-01

SHEX-05A LGS SIL-636 CONT DBA-LOCA ANAL K=305

44 PC Leak Test Pressure (psig)
22 MSIV Leak Test Pressure (psig)

Leak Rates proportional to square root of ratio of the time

TIME	dependent delta P divided by the test delta P				PC Leak Fraction of Design Basis	MSIV Leak Fraction of Design Basis	Time (hours)	Time (days)
	DW PRESS (PSIA)	DW TEMP (F)	SP TEMP (F)					
12862.41	2.39E+01	2.03E+02	2.01E+02	0.457	0.646	3.573E+00	1.489E-01	
12887.41	2.39E+01	2.03E+02	2.01E+02	0.457	0.646	3.580E+00	1.492E-01	
12913.03	2.39E+01	2.03E+02	2.01E+02	0.457	0.646	3.587E+00	1.495E-01	
12938.16	2.39E+01	2.03E+02	2.01E+02	0.457	0.646	3.594E+00	1.497E-01	
12963.16	2.39E+01	2.03E+02	2.01E+02	0.457	0.646	3.601E+00	1.500E-01	
12989.03	2.39E+01	2.03E+02	2.01E+02	0.457	0.646	3.608E+00	1.503E-01	
13014.28	2.39E+01	2.03E+02	2.01E+02	0.457	0.646	3.615E+00	1.506E-01	
13039.28	2.39E+01	2.03E+02	2.02E+02	0.457	0.646	3.622E+00	1.509E-01	
13064.41	2.39E+01	2.03E+02	2.02E+02	0.457	0.646	3.629E+00	1.512E-01	
13089.91	2.39E+01	2.03E+02	2.02E+02	0.457	0.646	3.636E+00	1.515E-01	
13114.91	2.39E+01	2.03E+02	2.02E+02	0.457	0.647	3.643E+00	1.518E-01	
13139.91	2.39E+01	2.03E+02	2.02E+02	0.457	0.647	3.650E+00	1.521E-01	
13164.91	2.39E+01	2.03E+02	2.02E+02	0.457	0.647	3.657E+00	1.524E-01	
13190.28	2.39E+01	2.03E+02	2.02E+02	0.458	0.647	3.664E+00	1.527E-01	
13215.53	2.39E+01	2.03E+02	2.02E+02	0.458	0.647	3.671E+00	1.530E-01	
13240.78	2.39E+01	2.03E+02	2.02E+02	0.458	0.647	3.678E+00	1.532E-01	
13265.78	2.39E+01	2.03E+02	2.02E+02	0.458	0.647	3.685E+00	1.535E-01	
13290.91	2.39E+01	2.03E+02	2.02E+02	0.458	0.647	3.692E+00	1.538E-01	
13316.03	2.39E+01	2.03E+02	2.02E+02	0.458	0.647	3.699E+00	1.541E-01	
13341.03	2.39E+01	2.03E+02	2.02E+02	0.458	0.647	3.706E+00	1.544E-01	
13366.41	2.39E+01	2.03E+02	2.02E+02	0.458	0.647	3.713E+00	1.547E-01	
13391.53	2.39E+01	2.03E+02	2.02E+02	0.458	0.647	3.720E+00	1.550E-01	
13416.53	2.39E+01	2.03E+02	2.02E+02	0.458	0.647	3.727E+00	1.553E-01	
13441.53	2.39E+01	2.03E+02	2.02E+02	0.458	0.648	3.734E+00	1.556E-01	
13466.53	2.39E+01	2.03E+02	2.02E+02	0.458	0.648	3.741E+00	1.559E-01	
13491.78	2.39E+01	2.03E+02	2.02E+02	0.458	0.648	3.748E+00	1.562E-01	
13517.03	2.39E+01	2.03E+02	2.02E+02	0.458	0.648	3.755E+00	1.564E-01	
13542.91	2.39E+01	2.03E+02	2.02E+02	0.458	0.648	3.762E+00	1.567E-01	
13568.41	2.39E+01	2.03E+02	2.02E+02	0.458	0.648	3.769E+00	1.570E-01	
13593.41	2.39E+01	2.03E+02	2.02E+02	0.458	0.648	3.776E+00	1.573E-01	
13618.53	2.39E+01	2.03E+02	2.02E+02	0.458	0.648	3.783E+00	1.576E-01	
13643.78	2.39E+01	2.03E+02	2.02E+02	0.458	0.648	3.790E+00	1.579E-01	
13668.59	2.40E+01	2.03E+02	2.02E+02	0.459	0.648	3.797E+00	1.582E-01	
13693.59	2.40E+01	2.03E+02	2.02E+02	0.459	0.649	3.804E+00	1.585E-01	
13719.34	2.40E+01	2.03E+02	2.02E+02	0.459	0.649	3.811E+00	1.588E-01	
13744.34	2.40E+01	2.03E+02	2.02E+02	0.459	0.649	3.818E+00	1.591E-01	
13769.72	2.40E+01	2.03E+02	2.02E+02	0.459	0.649	3.825E+00	1.594E-01	
13794.72	2.40E+01	2.03E+02	2.02E+02	0.459	0.649	3.832E+00	1.597E-01	
13819.72	2.40E+01	2.03E+02	2.02E+02	0.459	0.649	3.839E+00	1.600E-01	
13845.22	2.40E+01	2.03E+02	2.02E+02	0.459	0.649	3.846E+00	1.602E-01	
13870.22	2.40E+01	2.03E+02	2.02E+02	0.459	0.649	3.853E+00	1.605E-01	
13895.47	2.40E+01	2.03E+02	2.02E+02	0.459	0.649	3.860E+00	1.608E-01	
13920.47	2.40E+01	2.03E+02	2.02E+02	0.459	0.649	3.867E+00	1.611E-01	
13945.59	2.40E+01	2.03E+02	2.02E+02	0.459	0.649	3.874E+00	1.614E-01	
13970.72	2.40E+01	2.03E+02	2.02E+02	0.459	0.649	3.881E+00	1.617E-01	
13995.72	2.40E+01	2.03E+02	2.02E+02	0.459	0.649	3.888E+00	1.620E-01	
14021.09	2.40E+01	2.03E+02	2.02E+02	0.459	0.649	3.895E+00	1.623E-01	
14046.34	2.40E+01	2.03E+02	2.02E+02	0.459	0.649	3.902E+00	1.626E-01	
14071.34	2.40E+01	2.03E+02	2.02E+02	0.459	0.649	3.909E+00	1.629E-01	
14096.59	2.40E+01	2.03E+02	2.02E+02	0.459	0.650	3.916E+00	1.632E-01	
14121.97	2.40E+01	2.03E+02	2.02E+02	0.459	0.650	3.923E+00	1.634E-01	
14146.97	2.40E+01	2.03E+02	2.02E+02	0.459	0.650	3.930E+00	1.637E-01	

SHEX-05A LGS SIL-636 CONT DBA-LOCA ANAL K=305

44 PC Leak Test Pressure (psig)
22 MSIV Leak Test Pressure (psig)

Leak Rates proportional to square root of ratio of the time

TIME	dependent delta P divided by the test delta P			PC Leak Fraction of Design Basis	MSIV Leak Fraction of Design Basis	Time (hours)	Time (days)
	DW PRESS (PSIA)	DW TEMP (F)	SP TEMP (F)				
14172.59	2.40E+01	2.03E+02	2.02E+02	0.459	0.650	3.937E+00	1.640E-01
14197.72	2.40E+01	2.03E+02	2.02E+02	0.459	0.650	3.944E+00	1.643E-01
14223.22	2.40E+01	2.03E+02	2.02E+02	0.459	0.650	3.951E+00	1.646E-01
14248.22	2.40E+01	2.03E+02	2.02E+02	0.459	0.650	3.958E+00	1.649E-01
14273.22	2.40E+01	2.03E+02	2.02E+02	0.460	0.650	3.965E+00	1.652E-01
14298.47	2.40E+01	2.03E+02	2.02E+02	0.460	0.650	3.972E+00	1.655E-01
14323.47	2.40E+01	2.03E+02	2.02E+02	0.460	0.650	3.979E+00	1.658E-01
14348.59	2.40E+01	2.03E+02	2.02E+02	0.460	0.650	3.986E+00	1.661E-01
14373.72	2.40E+01	2.03E+02	2.02E+02	0.460	0.650	3.993E+00	1.664E-01
14399.09	2.40E+01	2.03E+02	2.02E+02	0.460	0.650	4.000E+00	1.667E-01
14424.03	2.40E+01	2.03E+02	2.02E+02	0.460	0.651	4.007E+00	1.669E-01
14449.03	2.40E+01	2.03E+02	2.02E+02	0.460	0.651	4.014E+00	1.672E-01
14474.03	2.40E+01	2.03E+02	2.02E+02	0.460	0.651	4.021E+00	1.675E-01
14499.03	2.40E+01	2.03E+02	2.02E+02	0.460	0.651	4.028E+00	1.678E-01
14524.16	2.40E+01	2.03E+02	2.02E+02	0.460	0.651	4.034E+00	1.681E-01
14549.41	2.40E+01	2.03E+02	2.02E+02	0.460	0.651	4.042E+00	1.684E-01
14574.41	2.40E+01	2.03E+02	2.02E+02	0.460	0.651	4.048E+00	1.687E-01
14599.66	2.40E+01	2.03E+02	2.02E+02	0.460	0.651	4.055E+00	1.690E-01
14624.66	2.40E+01	2.03E+02	2.02E+02	0.460	0.651	4.062E+00	1.693E-01
14649.66	2.40E+01	2.03E+02	2.02E+02	0.460	0.651	4.069E+00	1.696E-01
14674.66	2.40E+01	2.03E+02	2.02E+02	0.460	0.651	4.076E+00	1.698E-01
14700.28	2.40E+01	2.03E+02	2.02E+02	0.460	0.651	4.083E+00	1.701E-01
14725.78	2.40E+01	2.03E+02	2.02E+02	0.460	0.651	4.090E+00	1.704E-01
14751.16	2.40E+01	2.03E+02	2.02E+02	0.460	0.651	4.098E+00	1.707E-01
14776.66	2.40E+01	2.03E+02	2.02E+02	0.460	0.651	4.105E+00	1.710E-01
14801.78	2.40E+01	2.03E+02	2.02E+02	0.461	0.652	4.112E+00	1.713E-01
14826.91	2.40E+01	2.03E+02	2.02E+02	0.461	0.652	4.119E+00	1.716E-01
14851.91	2.40E+01	2.03E+02	2.02E+02	0.461	0.652	4.126E+00	1.719E-01
14877.16	2.40E+01	2.03E+02	2.02E+02	0.461	0.652	4.133E+00	1.722E-01
14902.28	2.40E+01	2.03E+02	2.02E+02	0.461	0.652	4.140E+00	1.725E-01
14927.66	2.40E+01	2.03E+02	2.02E+02	0.461	0.652	4.147E+00	1.728E-01
14952.91	2.40E+01	2.03E+02	2.02E+02	0.461	0.652	4.154E+00	1.731E-01
14978.03	2.40E+01	2.03E+02	2.02E+02	0.461	0.652	4.161E+00	1.734E-01
15003.16	2.40E+01	2.03E+02	2.02E+02	0.461	0.652	4.168E+00	1.736E-01
15028.66	2.41E+01	2.03E+02	2.02E+02	0.461	0.652	4.175E+00	1.739E-01
15053.78	2.41E+01	2.03E+02	2.02E+02	0.461	0.652	4.182E+00	1.742E-01
15078.78	2.41E+01	2.03E+02	2.02E+02	0.461	0.652	4.189E+00	1.745E-01
15103.91	2.41E+01	2.03E+02	2.02E+02	0.461	0.652	4.196E+00	1.748E-01
15128.72	2.41E+01	2.03E+02	2.02E+02	0.461	0.652	4.202E+00	1.751E-01
15153.84	2.41E+01	2.03E+02	2.02E+02	0.461	0.652	4.209E+00	1.754E-01
15178.84	2.41E+01	2.03E+02	2.02E+02	0.461	0.652	4.216E+00	1.757E-01
15203.97	2.41E+01	2.03E+02	2.02E+02	0.461	0.652	4.223E+00	1.760E-01
15229.34	2.41E+01	2.03E+02	2.03E+02	0.461	0.652	4.230E+00	1.763E-01
15254.72	2.41E+01	2.03E+02	2.03E+02	0.461	0.652	4.237E+00	1.766E-01
15279.97	2.41E+01	2.03E+02	2.03E+02	0.461	0.653	4.244E+00	1.769E-01
15304.97	2.41E+01	2.03E+02	2.03E+02	0.461	0.653	4.251E+00	1.771E-01
15330.59	2.41E+01	2.03E+02	2.03E+02	0.461	0.653	4.258E+00	1.774E-01
15355.59	2.41E+01	2.03E+02	2.03E+02	0.461	0.653	4.265E+00	1.777E-01
15380.84	2.41E+01	2.03E+02	2.03E+02	0.461	0.653	4.272E+00	1.780E-01
15405.84	2.41E+01	2.03E+02	2.03E+02	0.461	0.653	4.279E+00	1.783E-01
15431.34	2.41E+01	2.03E+02	2.03E+02	0.462	0.653	4.286E+00	1.786E-01
15456.72	2.41E+01	2.03E+02	2.03E+02	0.462	0.653	4.294E+00	1.789E-01

SHEX-05A LGS SIL-636 CONT DBA-LOCA ANAL K=305

44 PC Leak Test Pressure (psig)
22 MSIV Leak Test Pressure (psig)

Leak Rates proportional to square root of ratio of the time

TIME	dependent delta P divided by the test delta P				PC Leak Fraction of Design Basis	MSIV Leak Fraction of Design Basis	Time (hours)	Time (days)
	DW PRESS (PSIA)	DW TEMP (F)	SP TEMP (F)					
15481.72	2.41E+01	2.03E+02	2.03E+02	0.462	0.653	4.300E+00	1.792E-01	
15507.34	2.41E+01	2.03E+02	2.03E+02	0.462	0.653	4.308E+00	1.795E-01	
15532.34	2.41E+01	2.03E+02	2.03E+02	0.462	0.653	4.315E+00	1.798E-01	
15557.72	2.41E+01	2.03E+02	2.03E+02	0.462	0.653	4.322E+00	1.801E-01	
15583.09	2.41E+01	2.03E+02	2.03E+02	0.462	0.653	4.329E+00	1.804E-01	
15608.72	2.41E+01	2.03E+02	2.03E+02	0.462	0.653	4.336E+00	1.807E-01	
15634.09	2.41E+01	2.03E+02	2.03E+02	0.462	0.653	4.343E+00	1.810E-01	
15659.34	2.41E+01	2.03E+02	2.03E+02	0.462	0.653	4.350E+00	1.812E-01	
15685.22	2.41E+01	2.03E+02	2.03E+02	0.462	0.653	4.357E+00	1.815E-01	
15710.34	2.41E+01	2.03E+02	2.03E+02	0.462	0.653	4.364E+00	1.818E-01	
15735.47	2.41E+01	2.03E+02	2.03E+02	0.462	0.653	4.371E+00	1.821E-01	
15761.09	2.41E+01	2.03E+02	2.03E+02	0.462	0.653	4.378E+00	1.824E-01	
15786.22	2.41E+01	2.03E+02	2.03E+02	0.462	0.653	4.385E+00	1.827E-01	
15811.22	2.41E+01	2.03E+02	2.03E+02	0.462	0.653	4.392E+00	1.830E-01	
15836.03	2.41E+01	2.03E+02	2.03E+02	0.462	0.654	4.399E+00	1.833E-01	
15861.53	2.41E+01	2.03E+02	2.03E+02	0.462	0.654	4.406E+00	1.836E-01	
15886.53	2.41E+01	2.03E+02	2.03E+02	0.462	0.654	4.413E+00	1.839E-01	
15911.53	2.41E+01	2.03E+02	2.03E+02	0.462	0.654	4.420E+00	1.842E-01	
15936.91	2.41E+01	2.03E+02	2.03E+02	0.462	0.654	4.427E+00	1.845E-01	
15961.91	2.41E+01	2.03E+02	2.03E+02	0.462	0.654	4.434E+00	1.847E-01	
15986.91	2.41E+01	2.03E+02	2.03E+02	0.462	0.654	4.441E+00	1.850E-01	
16012.28	2.41E+01	2.03E+02	2.03E+02	0.462	0.654	4.448E+00	1.853E-01	
16037.66	2.41E+01	2.03E+02	2.03E+02	0.462	0.654	4.455E+00	1.856E-01	
16062.91	2.41E+01	2.03E+02	2.03E+02	0.462	0.654	4.462E+00	1.859E-01	
16088.03	2.41E+01	2.03E+02	2.03E+02	0.463	0.654	4.469E+00	1.862E-01	
16113.16	2.41E+01	2.03E+02	2.03E+02	0.463	0.654	4.476E+00	1.865E-01	
16138.28	2.41E+01	2.03E+02	2.03E+02	0.463	0.654	4.483E+00	1.868E-01	
16164.66	2.41E+01	2.03E+02	2.03E+02	0.463	0.654	4.490E+00	1.871E-01	
16189.66	2.41E+01	2.03E+02	2.03E+02	0.463	0.654	4.497E+00	1.874E-01	
16214.66	2.41E+01	2.03E+02	2.03E+02	0.463	0.654	4.504E+00	1.877E-01	
16240.28	2.41E+01	2.03E+02	2.03E+02	0.463	0.654	4.511E+00	1.880E-01	
16265.78	2.41E+01	2.03E+02	2.03E+02	0.463	0.654	4.518E+00	1.883E-01	
16291.16	2.41E+01	2.03E+02	2.03E+02	0.463	0.654	4.525E+00	1.886E-01	
16316.53	2.41E+01	2.03E+02	2.03E+02	0.463	0.654	4.532E+00	1.888E-01	
16341.91	2.41E+01	2.03E+02	2.03E+02	0.463	0.654	4.539E+00	1.891E-01	
16367.41	2.41E+01	2.03E+02	2.03E+02	0.463	0.655	4.547E+00	1.894E-01	
16392.53	2.41E+01	2.03E+02	2.03E+02	0.463	0.655	4.553E+00	1.897E-01	
16419.16	2.41E+01	2.03E+02	2.03E+02	0.463	0.654	4.561E+00	1.900E-01	
16443.97	2.41E+01	2.03E+02	2.03E+02	0.463	0.655	4.568E+00	1.903E-01	
16469.72	2.41E+01	2.03E+02	2.03E+02	0.463	0.655	4.575E+00	1.906E-01	
16494.72	2.41E+01	2.03E+02	2.03E+02	0.463	0.655	4.582E+00	1.909E-01	
16520.34	2.41E+01	2.03E+02	2.03E+02	0.463	0.655	4.589E+00	1.912E-01	
16545.47	2.41E+01	2.03E+02	2.03E+02	0.463	0.655	4.596E+00	1.915E-01	
16570.72	2.41E+01	2.03E+02	2.03E+02	0.463	0.655	4.603E+00	1.918E-01	
16596.34	2.41E+01	2.03E+02	2.03E+02	0.463	0.655	4.610E+00	1.921E-01	
16621.34	2.41E+01	2.03E+02	2.03E+02	0.463	0.655	4.617E+00	1.924E-01	
16646.47	2.41E+01	2.03E+02	2.03E+02	0.463	0.655	4.624E+00	1.927E-01	
16671.59	2.41E+01	2.03E+02	2.03E+02	0.463	0.655	4.631E+00	1.930E-01	
16696.97	2.41E+01	2.03E+02	2.03E+02	0.463	0.655	4.638E+00	1.933E-01	
16721.97	2.42E+01	2.03E+02	2.03E+02	0.463	0.655	4.645E+00	1.935E-01	
16747.84	2.42E+01	2.03E+02	2.03E+02	0.463	0.655	4.652E+00	1.938E-01	
16773.09	2.42E+01	2.03E+02	2.03E+02	0.463	0.655	4.659E+00	1.941E-01	

SHEX-05A LGS SIL-636 CONT DBA-LOCA ANAL K=305

44 PC Leak Test Pressure (psig)
22 MSIV Leak Test Pressure (psig)

Leak Rates proportional to square root of ratio of the time
dependent delta P divided by the test delta P

TIME	DW PRESS (PSIA)	DW TEMP (F)	SP TEMP (F)	PC Leak Fraction of Design Basis	MSIV Leak Fraction of Design Basis	Time (hours)	Time (days)
16798.59	2.42E+01	2.03E+02	2.03E+02	0.463	0.655	4.666E+00	1.944E-01
16823.59	2.42E+01	2.03E+02	2.03E+02	0.463	0.655	4.673E+00	1.947E-01
16849.09	2.42E+01	2.03E+02	2.03E+02	0.463	0.655	4.680E+00	1.950E-01
16874.34	2.42E+01	2.03E+02	2.03E+02	0.463	0.655	4.687E+00	1.953E-01
16899.47	2.42E+01	2.03E+02	2.03E+02	0.463	0.655	4.694E+00	1.956E-01
16924.72	2.42E+01	2.03E+02	2.03E+02	0.463	0.655	4.701E+00	1.959E-01
16950.03	2.42E+01	2.03E+02	2.03E+02	0.464	0.656	4.708E+00	1.962E-01
16975.03	2.42E+01	2.03E+02	2.03E+02	0.464	0.656	4.715E+00	1.965E-01
17000.03	2.42E+01	2.03E+02	2.03E+02	0.464	0.656	4.722E+00	1.968E-01
17025.78	2.42E+01	2.03E+02	2.03E+02	0.464	0.656	4.729E+00	1.971E-01
17050.78	2.42E+01	2.03E+02	2.03E+02	0.464	0.656	4.736E+00	1.973E-01
17076.16	2.42E+01	2.03E+02	2.03E+02	0.464	0.656	4.743E+00	1.976E-01
17101.41	2.42E+01	2.03E+02	2.03E+02	0.464	0.656	4.750E+00	1.979E-01
17127.28	2.42E+01	2.03E+02	2.03E+02	0.464	0.656	4.758E+00	1.982E-01
17152.28	2.42E+01	2.03E+02	2.03E+02	0.464	0.656	4.765E+00	1.985E-01
17178.16	2.42E+01	2.03E+02	2.03E+02	0.464	0.656	4.772E+00	1.988E-01
17203.41	2.42E+01	2.03E+02	2.03E+02	0.464	0.656	4.779E+00	1.991E-01
17228.41	2.42E+01	2.03E+02	2.03E+02	0.464	0.656	4.786E+00	1.994E-01
17253.41	2.42E+01	2.03E+02	2.03E+02	0.464	0.656	4.793E+00	1.997E-01
17278.41	2.42E+01	2.03E+02	2.03E+02	0.464	0.656	4.800E+00	2.000E-01
17303.78	2.42E+01	2.03E+02	2.03E+02	0.464	0.656	4.807E+00	2.003E-01
17328.78	2.42E+01	2.03E+02	2.03E+02	0.464	0.656	4.814E+00	2.006E-01
17354.03	2.42E+01	2.03E+02	2.03E+02	0.464	0.656	4.821E+00	2.009E-01
17379.66	2.42E+01	2.03E+02	2.03E+02	0.464	0.656	4.828E+00	2.012E-01
17405.16	2.42E+01	2.03E+02	2.03E+02	0.464	0.656	4.835E+00	2.014E-01
17430.16	2.42E+01	2.03E+02	2.03E+02	0.464	0.656	4.842E+00	2.017E-01
17455.16	2.42E+01	2.03E+02	2.03E+02	0.464	0.656	4.849E+00	2.020E-01
17481.28	2.42E+01	2.04E+02	2.03E+02	0.464	0.656	4.856E+00	2.023E-01
17506.91	2.42E+01	2.04E+02	2.03E+02	0.464	0.656	4.863E+00	2.026E-01
17531.91	2.42E+01	2.04E+02	2.03E+02	0.464	0.656	4.870E+00	2.029E-01
17557.16	2.42E+01	2.04E+02	2.03E+02	0.464	0.656	4.877E+00	2.032E-01
17583.16	2.42E+01	2.04E+02	2.03E+02	0.464	0.656	4.884E+00	2.035E-01
17608.53	2.42E+01	2.04E+02	2.03E+02	0.464	0.656	4.891E+00	2.038E-01
17633.53	2.42E+01	2.04E+02	2.03E+02	0.464	0.656	4.898E+00	2.041E-01
17658.53	2.42E+01	2.04E+02	2.03E+02	0.464	0.656	4.905E+00	2.044E-01
17683.78	2.42E+01	2.04E+02	2.03E+02	0.464	0.656	4.912E+00	2.047E-01
17709.16	2.42E+01	2.04E+02	2.03E+02	0.464	0.656	4.919E+00	2.050E-01
17734.28	2.42E+01	2.04E+02	2.03E+02	0.464	0.656	4.926E+00	2.053E-01
17759.78	2.42E+01	2.04E+02	2.03E+02	0.464	0.656	4.933E+00	2.056E-01
17784.78	2.42E+01	2.04E+02	2.03E+02	0.464	0.656	4.940E+00	2.058E-01
17809.91	2.42E+01	2.04E+02	2.03E+02	0.464	0.656	4.947E+00	2.061E-01
17835.66	2.42E+01	2.04E+02	2.03E+02	0.464	0.656	4.954E+00	2.064E-01
17860.78	2.42E+01	2.04E+02	2.03E+02	0.464	0.656	4.961E+00	2.067E-01
17886.16	2.42E+01	2.04E+02	2.03E+02	0.464	0.656	4.968E+00	2.070E-01
17911.66	2.42E+01	2.04E+02	2.03E+02	0.464	0.656	4.975E+00	2.073E-01
17936.91	2.42E+01	2.04E+02	2.03E+02	0.464	0.656	4.982E+00	2.076E-01
17962.03	2.42E+01	2.04E+02	2.03E+02	0.464	0.656	4.989E+00	2.079E-01
17987.41	2.42E+01	2.04E+02	2.03E+02	0.464	0.656	4.997E+00	2.082E-01
18012.91	2.42E+01	2.04E+02	2.03E+02	0.464	0.656	5.004E+00	2.085E-01
18038.28	2.42E+01	2.04E+02	2.03E+02	0.464	0.656	5.011E+00	2.088E-01
18063.66	2.42E+01	2.04E+02	2.03E+02	0.464	0.656	5.018E+00	2.091E-01
18088.66	2.42E+01	2.04E+02	2.03E+02	0.464	0.656	5.025E+00	2.094E-01

SHEX-05A LGS SIL-636 CONT DBA-LOCA ANAL K=305
 Leak Rates proportional to square root of ratio of the time

44 PC Leak Test Pressure (psig)
 22 MSIV Leak Test Pressure (psig)

TIME	dependent delta P divided by the test delta P			PC Leak Fraction of Design Basis	MSIV Leak Fraction of Design Basis	Time (hours)	Time (days)
	DW PRESS (PSIA)	DW TEMP (F)	SP TEMP (F)				
18113.91	2.42E+01	2.04E+02	2.03E+02	0.464	0.656	5.032E+00	2.097E-01
18138.91	2.42E+01	2.04E+02	2.03E+02	0.464	0.656	5.039E+00	2.099E-01
18164.53	2.42E+01	2.04E+02	2.03E+02	0.464	0.656	5.046E+00	2.102E-01
18189.53	2.42E+01	2.04E+02	2.03E+02	0.464	0.656	5.053E+00	2.105E-01
18214.53	2.42E+01	2.04E+02	2.03E+02	0.464	0.656	5.060E+00	2.108E-01
18239.78	2.42E+01	2.04E+02	2.03E+02	0.464	0.656	5.067E+00	2.111E-01
18264.78	2.42E+01	2.04E+02	2.03E+02	0.464	0.656	5.074E+00	2.114E-01
18290.66	2.42E+01	2.04E+02	2.03E+02	0.464	0.656	5.081E+00	2.117E-01
18315.66	2.42E+01	2.04E+02	2.03E+02	0.464	0.656	5.088E+00	2.120E-01
18340.78	2.42E+01	2.04E+02	2.03E+02	0.464	0.657	5.095E+00	2.123E-01
18365.78	2.42E+01	2.04E+02	2.03E+02	0.464	0.657	5.102E+00	2.126E-01
18391.03	2.42E+01	2.04E+02	2.03E+02	0.464	0.657	5.109E+00	2.129E-01
18416.41	2.42E+01	2.04E+02	2.03E+02	0.464	0.657	5.116E+00	2.132E-01
18441.41	2.42E+01	2.04E+02	2.03E+02	0.464	0.656	5.123E+00	2.134E-01
18466.41	2.42E+01	2.04E+02	2.03E+02	0.464	0.656	5.130E+00	2.137E-01
18491.41	2.42E+01	2.04E+02	2.03E+02	0.464	0.657	5.137E+00	2.140E-01
18516.53	2.42E+01	2.04E+02	2.03E+02	0.464	0.657	5.143E+00	2.143E-01
18541.66	2.42E+01	2.04E+02	2.03E+02	0.464	0.657	5.150E+00	2.146E-01
18566.66	2.42E+01	2.04E+02	2.03E+02	0.464	0.657	5.157E+00	2.149E-01
18592.03	2.42E+01	2.04E+02	2.03E+02	0.464	0.656	5.164E+00	2.152E-01
18617.03	2.42E+01	2.04E+02	2.03E+02	0.464	0.656	5.171E+00	2.155E-01
18642.16	2.42E+01	2.04E+02	2.03E+02	0.464	0.657	5.178E+00	2.158E-01
18668.16	2.42E+01	2.04E+02	2.03E+02	0.464	0.657	5.186E+00	2.161E-01
18693.53	2.42E+01	2.04E+02	2.03E+02	0.464	0.656	5.193E+00	2.164E-01
18718.91	2.42E+01	2.04E+02	2.03E+02	0.464	0.657	5.200E+00	2.167E-01
18743.66	2.42E+01	2.04E+02	2.03E+02	0.464	0.657	5.207E+00	2.169E-01
18768.78	2.42E+01	2.04E+02	2.03E+02	0.464	0.657	5.214E+00	2.172E-01
18793.91	2.42E+01	2.04E+02	2.03E+02	0.464	0.656	5.221E+00	2.175E-01
18818.91	2.42E+01	2.04E+02	2.03E+02	0.464	0.656	5.227E+00	2.178E-01
18843.91	2.42E+01	2.04E+02	2.03E+02	0.464	0.656	5.234E+00	2.181E-01
18868.72	2.42E+01	2.04E+02	2.03E+02	0.465	0.657	5.241E+00	2.184E-01
18894.22	2.42E+01	2.04E+02	2.03E+02	0.464	0.657	5.248E+00	2.187E-01
18919.22	2.42E+01	2.04E+02	2.03E+02	0.465	0.657	5.255E+00	2.190E-01
18944.34	2.42E+01	2.04E+02	2.03E+02	0.465	0.657	5.262E+00	2.193E-01
18969.34	2.42E+01	2.04E+02	2.03E+02	0.465	0.657	5.269E+00	2.196E-01
18994.34	2.42E+01	2.04E+02	2.03E+02	0.465	0.657	5.276E+00	2.198E-01
19019.72	2.42E+01	2.04E+02	2.03E+02	0.464	0.657	5.283E+00	2.201E-01
19044.84	2.42E+01	2.04E+02	2.03E+02	0.465	0.657	5.290E+00	2.204E-01
19070.09	2.42E+01	2.04E+02	2.03E+02	0.465	0.657	5.297E+00	2.207E-01
19095.34	2.42E+01	2.04E+02	2.03E+02	0.464	0.657	5.304E+00	2.210E-01
19120.34	2.42E+01	2.04E+02	2.03E+02	0.465	0.657	5.311E+00	2.213E-01
19145.34	2.42E+01	2.04E+02	2.03E+02	0.464	0.657	5.318E+00	2.216E-01
19170.59	2.42E+01	2.04E+02	2.03E+02	0.464	0.657	5.325E+00	2.219E-01
19195.59	2.42E+01	2.04E+02	2.03E+02	0.464	0.657	5.332E+00	2.222E-01
19220.59	2.42E+01	2.04E+02	2.03E+02	0.464	0.657	5.339E+00	2.225E-01
19246.47	2.42E+01	2.04E+02	2.03E+02	0.465	0.657	5.346E+00	2.228E-01
19272.09	2.42E+01	2.04E+02	2.03E+02	0.465	0.657	5.353E+00	2.231E-01
19297.84	2.42E+01	2.04E+02	2.03E+02	0.464	0.657	5.361E+00	2.234E-01
19322.97	2.42E+01	2.04E+02	2.03E+02	0.464	0.657	5.367E+00	2.236E-01
19347.97	2.42E+01	2.04E+02	2.03E+02	0.464	0.657	5.374E+00	2.239E-01
19373.22	2.42E+01	2.04E+02	2.03E+02	0.464	0.657	5.381E+00	2.242E-01
19398.34	2.42E+01	2.04E+02	2.03E+02	0.464	0.657	5.388E+00	2.245E-01

SHEX-05A LGS SIL-636 CONT DBA-LOCA ANAL K=305

44 PC Leak Test Pressure (psig)

Leak Rates proportional to square root of ratio of the time

22 MSIV Leak Test Pressure (psig)

dependent delta P divided by the test delta P

TIME	DW PRESS (PSIA)	DW TEMP (F)	SP TEMP (F)	PC Leak Fraction of Design Basis	MSIV Leak Fraction of Design Basis	Time (hours)	Time (days)
19423.34	2.42E+01	2.04E+02	2.03E+02	0.464	0.657	5.395E+00	2.248E-01
19448.34	2.42E+01	2.04E+02	2.03E+02	0.464	0.657	5.402E+00	2.251E-01
19473.34	2.42E+01	2.04E+02	2.03E+02	0.464	0.657	5.409E+00	2.254E-01
19498.59	2.42E+01	2.04E+02	2.03E+02	0.464	0.657	5.416E+00	2.257E-01
19524.22	2.42E+01	2.04E+02	2.03E+02	0.464	0.657	5.423E+00	2.260E-01
19549.47	2.42E+01	2.04E+02	2.03E+02	0.465	0.657	5.430E+00	2.263E-01
19574.59	2.42E+01	2.04E+02	2.03E+02	0.464	0.657	5.437E+00	2.266E-01
19599.84	2.42E+01	2.04E+02	2.03E+02	0.464	0.657	5.444E+00	2.269E-01
19625.22	2.42E+01	2.04E+02	2.03E+02	0.464	0.657	5.451E+00	2.271E-01
19650.22	2.42E+01	2.04E+02	2.03E+02	0.464	0.657	5.458E+00	2.274E-01
19675.84	2.42E+01	2.04E+02	2.03E+02	0.464	0.657	5.466E+00	2.277E-01
19701.34	2.42E+01	2.04E+02	2.03E+02	0.464	0.657	5.473E+00	2.280E-01
19726.97	2.42E+01	2.04E+02	2.03E+02	0.464	0.657	5.480E+00	2.283E-01
19752.72	2.42E+01	2.04E+02	2.03E+02	0.464	0.657	5.487E+00	2.286E-01
19777.84	2.42E+01	2.04E+02	2.03E+02	0.464	0.657	5.494E+00	2.289E-01
19803.09	2.42E+01	2.04E+02	2.03E+02	0.464	0.657	5.501E+00	2.292E-01
19828.34	2.42E+01	2.04E+02	2.03E+02	0.464	0.657	5.508E+00	2.295E-01
19853.34	2.42E+01	2.04E+02	2.03E+02	0.464	0.657	5.515E+00	2.298E-01
19878.47	2.42E+01	2.04E+02	2.03E+02	0.464	0.657	5.522E+00	2.301E-01
19903.72	2.42E+01	2.04E+02	2.03E+02	0.464	0.657	5.529E+00	2.304E-01
19929.09	2.42E+01	2.04E+02	2.03E+02	0.464	0.657	5.536E+00	2.307E-01
19954.84	2.42E+01	2.04E+02	2.03E+02	0.464	0.657	5.543E+00	2.310E-01
19979.84	2.42E+01	2.04E+02	2.03E+02	0.464	0.657	5.550E+00	2.312E-01
20011.09	2.42E+01	2.04E+02	2.03E+02	0.464	0.657	5.559E+00	2.316E-01
20049.97	2.42E+01	2.04E+02	2.03E+02	0.464	0.657	5.569E+00	2.321E-01
20087.59	2.42E+01	2.04E+02	2.03E+02	0.464	0.657	5.580E+00	2.325E-01
20125.84	2.42E+01	2.04E+02	2.03E+02	0.464	0.657	5.591E+00	2.329E-01
20163.34	2.42E+01	2.04E+02	2.03E+02	0.464	0.657	5.601E+00	2.334E-01
20200.97	2.42E+01	2.04E+02	2.03E+02	0.464	0.657	5.611E+00	2.338E-01
20239.09	2.42E+01	2.04E+02	2.03E+02	0.464	0.657	5.622E+00	2.342E-01
20276.72	2.42E+01	2.04E+02	2.03E+02	0.464	0.657	5.632E+00	2.347E-01
20314.34	2.42E+01	2.04E+02	2.03E+02	0.464	0.657	5.643E+00	2.351E-01
20352.22	2.42E+01	2.04E+02	2.03E+02	0.464	0.657	5.653E+00	2.356E-01
20390.22	2.42E+01	2.04E+02	2.03E+02	0.464	0.657	5.664E+00	2.360E-01
20428.22	2.42E+01	2.04E+02	2.03E+02	0.464	0.657	5.675E+00	2.364E-01
20466.28	2.42E+01	2.04E+02	2.03E+02	0.465	0.657	5.685E+00	2.369E-01
20504.66	2.42E+01	2.04E+02	2.03E+02	0.465	0.657	5.696E+00	2.373E-01
20542.16	2.42E+01	2.04E+02	2.03E+02	0.465	0.657	5.706E+00	2.378E-01
20580.66	2.42E+01	2.04E+02	2.03E+02	0.465	0.657	5.717E+00	2.382E-01
20618.16	2.42E+01	2.04E+02	2.03E+02	0.465	0.657	5.727E+00	2.386E-01
20655.66	2.42E+01	2.03E+02	2.03E+02	0.464	0.657	5.738E+00	2.391E-01
20693.28	2.42E+01	2.04E+02	2.03E+02	0.465	0.657	5.748E+00	2.395E-01
20730.91	2.42E+01	2.04E+02	2.03E+02	0.465	0.657	5.759E+00	2.399E-01
20768.78	2.42E+01	2.04E+02	2.03E+02	0.465	0.657	5.769E+00	2.404E-01
20806.28	2.42E+01	2.04E+02	2.03E+02	0.465	0.657	5.780E+00	2.408E-01
20844.03	2.42E+01	2.03E+02	2.03E+02	0.464	0.657	5.790E+00	2.413E-01
20881.53	2.42E+01	2.03E+02	2.03E+02	0.465	0.657	5.800E+00	2.417E-01
20919.16	2.42E+01	2.03E+02	2.03E+02	0.464	0.657	5.811E+00	2.421E-01
20956.91	2.42E+01	2.03E+02	2.03E+02	0.464	0.657	5.821E+00	2.426E-01
20994.66	2.42E+01	2.03E+02	2.03E+02	0.464	0.657	5.832E+00	2.430E-01
21032.91	2.42E+01	2.03E+02	2.03E+02	0.464	0.657	5.842E+00	2.434E-01
21070.41	2.42E+01	2.03E+02	2.03E+02	0.464	0.657	5.853E+00	2.439E-01

SHEX-05A LGS SIL-636 CONT DBA-LOCA ANAL K=305
 Leak Rates proportional to square root of ratio of the time

44 PC Leak Test Pressure (psig)
 22 MSIV Leak Test Pressure (psig)

TIME	dependent delta P divided by the test delta P				PC Leak Fraction of Design Basis	MSIV Leak Fraction of Design Basis	Time (hours)	Time (days)
	DW PRESS (PSIA)	DW TEMP (F)	SP TEMP (F)					
21108.16	2.42E+01	2.03E+02	2.03E+02	0.464	0.657	5.863E+00	2.443E-01	
21146.28	2.42E+01	2.03E+02	2.03E+02	0.464	0.657	5.874E+00	2.447E-01	
21184.41	2.42E+01	2.03E+02	2.03E+02	0.464	0.657	5.885E+00	2.452E-01	
21222.16	2.42E+01	2.03E+02	2.03E+02	0.464	0.657	5.895E+00	2.456E-01	
21259.66	2.42E+01	2.03E+02	2.03E+02	0.464	0.657	5.905E+00	2.461E-01	
21297.66	2.42E+01	2.03E+02	2.03E+02	0.464	0.657	5.916E+00	2.465E-01	
21335.41	2.42E+01	2.03E+02	2.03E+02	0.464	0.657	5.927E+00	2.469E-01	
21373.41	2.42E+01	2.03E+02	2.03E+02	0.464	0.657	5.937E+00	2.474E-01	
21411.16	2.42E+01	2.03E+02	2.03E+02	0.464	0.657	5.948E+00	2.478E-01	
21448.66	2.42E+01	2.03E+02	2.03E+02	0.464	0.657	5.958E+00	2.482E-01	
21487.28	2.42E+01	2.03E+02	2.03E+02	0.464	0.657	5.969E+00	2.487E-01	
21525.28	2.42E+01	2.03E+02	2.03E+02	0.464	0.656	5.979E+00	2.491E-01	
21562.91	2.42E+01	2.03E+02	2.03E+02	0.464	0.656	5.990E+00	2.496E-01	
21600.78	2.42E+01	2.03E+02	2.03E+02	0.464	0.657	6.000E+00	2.500E-01	
21639.78	2.42E+01	2.03E+02	2.03E+02	0.464	0.657	6.011E+00	2.505E-01	
21677.78	2.42E+01	2.03E+02	2.03E+02	0.464	0.656	6.022E+00	2.509E-01	
21715.41	2.42E+01	2.03E+02	2.03E+02	0.464	0.656	6.032E+00	2.513E-01	
21753.34	2.42E+01	2.03E+02	2.03E+02	0.464	0.657	6.043E+00	2.518E-01	
21791.22	2.42E+01	2.03E+02	2.03E+02	0.464	0.657	6.053E+00	2.522E-01	
21829.84	2.42E+01	2.03E+02	2.03E+02	0.464	0.657	6.064E+00	2.527E-01	
21867.34	2.42E+01	2.03E+02	2.03E+02	0.464	0.657	6.074E+00	2.531E-01	
21905.47	2.42E+01	2.03E+02	2.03E+02	0.464	0.657	6.085E+00	2.535E-01	
21942.97	2.42E+01	2.03E+02	2.03E+02	0.464	0.657	6.095E+00	2.540E-01	
21981.09	2.42E+01	2.03E+02	2.03E+02	0.464	0.657	6.106E+00	2.544E-01	
22018.59	2.42E+01	2.03E+02	2.03E+02	0.464	0.657	6.116E+00	2.548E-01	
22057.34	2.42E+01	2.03E+02	2.03E+02	0.464	0.657	6.127E+00	2.553E-01	
22095.72	2.42E+01	2.03E+02	2.03E+02	0.464	0.657	6.138E+00	2.557E-01	
22133.59	2.42E+01	2.03E+02	2.03E+02	0.464	0.657	6.148E+00	2.562E-01	
22171.59	2.42E+01	2.03E+02	2.03E+02	0.464	0.657	6.159E+00	2.566E-01	
22210.47	2.42E+01	2.03E+02	2.03E+02	0.464	0.657	6.170E+00	2.571E-01	
22248.72	2.42E+01	2.03E+02	2.03E+02	0.464	0.657	6.180E+00	2.575E-01	
22286.22	2.42E+01	2.03E+02	2.03E+02	0.464	0.657	6.191E+00	2.579E-01	
22324.22	2.42E+01	2.03E+02	2.03E+02	0.464	0.657	6.201E+00	2.584E-01	
22362.34	2.42E+01	2.03E+02	2.03E+02	0.464	0.656	6.212E+00	2.588E-01	
22400.22	2.42E+01	2.03E+02	2.03E+02	0.464	0.656	6.222E+00	2.593E-01	
22438.72	2.42E+01	2.03E+02	2.03E+02	0.464	0.656	6.233E+00	2.597E-01	
22476.97	2.42E+01	2.03E+02	2.03E+02	0.464	0.656	6.244E+00	2.602E-01	
22514.84	2.42E+01	2.03E+02	2.03E+02	0.464	0.656	6.254E+00	2.606E-01	
22553.09	2.42E+01	2.03E+02	2.03E+02	0.464	0.656	6.265E+00	2.610E-01	
22591.09	2.42E+01	2.03E+02	2.03E+02	0.464	0.656	6.275E+00	2.615E-01	
22628.97	2.42E+01	2.03E+02	2.03E+02	0.464	0.656	6.286E+00	2.619E-01	
22666.72	2.42E+01	2.03E+02	2.03E+02	0.464	0.656	6.296E+00	2.623E-01	
22704.72	2.42E+01	2.03E+02	2.03E+02	0.464	0.656	6.307E+00	2.628E-01	
22742.34	2.42E+01	2.03E+02	2.03E+02	0.464	0.656	6.317E+00	2.632E-01	
22779.84	2.42E+01	2.03E+02	2.03E+02	0.464	0.656	6.328E+00	2.637E-01	
22817.72	2.42E+01	2.03E+02	2.03E+02	0.464	0.656	6.338E+00	2.641E-01	
22855.84	2.42E+01	2.03E+02	2.03E+02	0.464	0.656	6.349E+00	2.645E-01	
22893.59	2.42E+01	2.03E+02	2.03E+02	0.464	0.656	6.359E+00	2.650E-01	
22931.03	2.42E+01	2.03E+02	2.03E+02	0.464	0.656	6.370E+00	2.654E-01	
22968.66	2.42E+01	2.03E+02	2.03E+02	0.464	0.656	6.380E+00	2.658E-01	
23006.16	2.42E+01	2.03E+02	2.03E+02	0.464	0.656	6.391E+00	2.663E-01	
23043.91	2.42E+01	2.03E+02	2.03E+02	0.464	0.656	6.401E+00	2.667E-01	

SHEX-05A LGS SIL-636 CONT DBA-LOCA ANAL K=305
 Leak Rates proportional to square root of ratio of the time

44 PC Leak Test Pressure (psig)
 22 MSIV Leak Test Pressure (psig)

TIME	dependent delta P divided by the test delta P			PC Leak Fraction of Design Basis	MSIV Leak Fraction of Design Basis	Time (hours)	Time (days)
	DW PRESS (PSIA)	DW TEMP (F)	SP TEMP (F)				
23081.53	2.42E+01	2.03E+02	2.03E+02	0.464	0.656	6.412E+00	2.671E-01
23119.53	2.42E+01	2.03E+02	2.03E+02	0.464	0.656	6.422E+00	2.676E-01
23157.28	2.42E+01	2.03E+02	2.03E+02	0.464	0.656	6.433E+00	2.680E-01
23196.41	2.42E+01	2.03E+02	2.03E+02	0.464	0.656	6.443E+00	2.685E-01
23234.16	2.42E+01	2.03E+02	2.03E+02	0.464	0.656	6.454E+00	2.689E-01
23271.66	2.42E+01	2.03E+02	2.03E+02	0.464	0.656	6.464E+00	2.693E-01
23309.16	2.42E+01	2.03E+02	2.03E+02	0.464	0.656	6.475E+00	2.698E-01
23347.41	2.42E+01	2.03E+02	2.03E+02	0.464	0.656	6.485E+00	2.702E-01
23385.53	2.42E+01	2.03E+02	2.03E+02	0.464	0.656	6.496E+00	2.707E-01
23423.03	2.42E+01	2.03E+02	2.03E+02	0.464	0.656	6.506E+00	2.711E-01
23460.53	2.42E+01	2.03E+02	2.03E+02	0.464	0.656	6.517E+00	2.715E-01
23498.16	2.42E+01	2.03E+02	2.03E+02	0.464	0.656	6.527E+00	2.720E-01
23535.66	2.42E+01	2.03E+02	2.03E+02	0.464	0.656	6.538E+00	2.724E-01
23573.16	2.42E+01	2.03E+02	2.03E+02	0.464	0.656	6.548E+00	2.728E-01
23610.66	2.42E+01	2.03E+02	2.03E+02	0.464	0.656	6.559E+00	2.733E-01
23649.03	2.42E+01	2.03E+02	2.03E+02	0.464	0.656	6.569E+00	2.737E-01
23686.91	2.42E+01	2.03E+02	2.03E+02	0.464	0.656	6.580E+00	2.742E-01
23725.41	2.42E+01	2.03E+02	2.03E+02	0.464	0.656	6.590E+00	2.746E-01
23763.53	2.42E+01	2.03E+02	2.03E+02	0.464	0.656	6.601E+00	2.750E-01
23801.28	2.42E+01	2.03E+02	2.03E+02	0.464	0.656	6.611E+00	2.755E-01
23839.03	2.42E+01	2.03E+02	2.03E+02	0.464	0.656	6.622E+00	2.759E-01
23877.41	2.42E+01	2.03E+02	2.03E+02	0.464	0.656	6.633E+00	2.764E-01
23915.53	2.42E+01	2.03E+02	2.03E+02	0.464	0.656	6.643E+00	2.768E-01
23953.03	2.42E+01	2.03E+02	2.03E+02	0.464	0.656	6.654E+00	2.772E-01
23990.84	2.42E+01	2.03E+02	2.03E+02	0.464	0.656	6.664E+00	2.777E-01
24028.84	2.42E+01	2.03E+02	2.03E+02	0.464	0.656	6.675E+00	2.781E-01
24066.72	2.42E+01	2.03E+02	2.03E+02	0.464	0.656	6.685E+00	2.785E-01
24105.22	2.42E+01	2.03E+02	2.03E+02	0.464	0.656	6.696E+00	2.790E-01
24142.72	2.42E+01	2.03E+02	2.03E+02	0.464	0.656	6.706E+00	2.794E-01
24180.72	2.42E+01	2.03E+02	2.03E+02	0.464	0.656	6.717E+00	2.799E-01
24218.34	2.42E+01	2.03E+02	2.03E+02	0.464	0.656	6.727E+00	2.803E-01
24255.97	2.42E+01	2.03E+02	2.03E+02	0.464	0.656	6.738E+00	2.807E-01
24293.84	2.42E+01	2.03E+02	2.03E+02	0.464	0.656	6.748E+00	2.812E-01
24331.47	2.42E+01	2.03E+02	2.03E+02	0.464	0.656	6.759E+00	2.816E-01
24369.72	2.42E+01	2.03E+02	2.03E+02	0.464	0.656	6.769E+00	2.821E-01
24407.47	2.42E+01	2.03E+02	2.03E+02	0.464	0.656	6.780E+00	2.825E-01
24445.22	2.42E+01	2.03E+02	2.03E+02	0.464	0.656	6.790E+00	2.829E-01
24483.09	2.42E+01	2.03E+02	2.03E+02	0.464	0.656	6.801E+00	2.834E-01
24520.59	2.42E+01	2.03E+02	2.03E+02	0.464	0.656	6.811E+00	2.838E-01
24558.59	2.42E+01	2.03E+02	2.03E+02	0.464	0.656	6.822E+00	2.842E-01
24596.47	2.42E+01	2.03E+02	2.03E+02	0.464	0.656	6.832E+00	2.847E-01
24634.47	2.42E+01	2.03E+02	2.03E+02	0.464	0.656	6.843E+00	2.851E-01
24672.59	2.42E+01	2.03E+02	2.03E+02	0.463	0.655	6.853E+00	2.856E-01
24710.72	2.42E+01	2.03E+02	2.03E+02	0.463	0.655	6.864E+00	2.860E-01
24748.72	2.42E+01	2.03E+02	2.03E+02	0.463	0.655	6.875E+00	2.864E-01
24786.22	2.42E+01	2.03E+02	2.03E+02	0.463	0.655	6.885E+00	2.869E-01
24824.09	2.42E+01	2.03E+02	2.03E+02	0.463	0.655	6.896E+00	2.873E-01
24862.09	2.42E+01	2.03E+02	2.03E+02	0.463	0.655	6.906E+00	2.878E-01
24900.34	2.42E+01	2.03E+02	2.03E+02	0.463	0.655	6.917E+00	2.882E-01
24938.09	2.42E+01	2.03E+02	2.03E+02	0.463	0.655	6.927E+00	2.886E-01
24977.03	2.42E+01	2.03E+02	2.03E+02	0.464	0.656	6.938E+00	2.891E-01
25014.78	2.42E+01	2.03E+02	2.03E+02	0.463	0.655	6.949E+00	2.895E-01

SHEX-05A LGS SIL-636 CONT DBA-LOCA ANAL K=305

44 PC Leak Test Pressure (psig)

Leak Rates proportional to square root of ratio of the time

22 MSIV Leak Test Pressure (psig)

dependent delta P divided by the test delta P

TIME	DW PRESS (PSIA)	DW TEMP (F)	SP TEMP (F)	PC Leak Fraction of Design Basis	MSIV Leak Fraction of Design Basis	Time (hours)	Time (days)
25052.28	2.42E+01	2.03E+02	2.03E+02	0.463	0.655	6.959E+00	2.900E-01
25090.16	2.42E+01	2.03E+02	2.03E+02	0.463	0.655	6.969E+00	2.904E-01
25127.66	2.42E+01	2.03E+02	2.03E+02	0.463	0.655	6.980E+00	2.908E-01
25165.16	2.42E+01	2.03E+02	2.03E+02	0.463	0.655	6.990E+00	2.913E-01
25203.53	2.42E+01	2.03E+02	2.03E+02	0.463	0.655	7.001E+00	2.917E-01
25241.41	2.42E+01	2.03E+02	2.03E+02	0.463	0.655	7.012E+00	2.921E-01
25278.91	2.42E+01	2.03E+02	2.03E+02	0.463	0.655	7.022E+00	2.926E-01
25316.78	2.42E+01	2.03E+02	2.03E+02	0.463	0.655	7.032E+00	2.930E-01
25354.53	2.41E+01	2.03E+02	2.03E+02	0.463	0.655	7.043E+00	2.935E-01
25393.16	2.41E+01	2.03E+02	2.03E+02	0.463	0.655	7.054E+00	2.939E-01
25431.16	2.41E+01	2.03E+02	2.03E+02	0.463	0.655	7.064E+00	2.943E-01
25468.91	2.41E+01	2.03E+02	2.03E+02	0.463	0.655	7.075E+00	2.948E-01
25506.91	2.41E+01	2.03E+02	2.03E+02	0.463	0.655	7.085E+00	2.952E-01
25544.41	2.41E+01	2.03E+02	2.03E+02	0.463	0.655	7.096E+00	2.957E-01
25582.16	2.41E+01	2.03E+02	2.03E+02	0.463	0.655	7.106E+00	2.961E-01
25620.66	2.41E+01	2.03E+02	2.03E+02	0.463	0.655	7.117E+00	2.965E-01
25659.28	2.41E+01	2.03E+02	2.03E+02	0.463	0.655	7.128E+00	2.970E-01
25697.16	2.41E+01	2.03E+02	2.03E+02	0.463	0.655	7.138E+00	2.974E-01
25735.41	2.41E+01	2.03E+02	2.03E+02	0.463	0.655	7.149E+00	2.979E-01
25773.09	2.41E+01	2.03E+02	2.03E+02	0.463	0.655	7.159E+00	2.983E-01
25810.72	2.41E+01	2.03E+02	2.03E+02	0.463	0.655	7.170E+00	2.987E-01
25848.72	2.41E+01	2.03E+02	2.03E+02	0.463	0.655	7.180E+00	2.992E-01
25886.22	2.41E+01	2.03E+02	2.03E+02	0.463	0.655	7.191E+00	2.996E-01
25924.22	2.41E+01	2.03E+02	2.03E+02	0.463	0.655	7.201E+00	3.000E-01
25962.22	2.41E+01	2.03E+02	2.03E+02	0.463	0.655	7.212E+00	3.005E-01
25999.84	2.41E+01	2.03E+02	2.03E+02	0.463	0.655	7.222E+00	3.009E-01
26037.59	2.41E+01	2.03E+02	2.03E+02	0.463	0.655	7.233E+00	3.014E-01
26077.09	2.41E+01	2.03E+02	2.03E+02	0.463	0.655	7.244E+00	3.018E-01
26115.72	2.41E+01	2.03E+02	2.03E+02	0.463	0.655	7.254E+00	3.023E-01
26153.34	2.41E+01	2.03E+02	2.03E+02	0.463	0.655	7.265E+00	3.027E-01
26190.84	2.41E+01	2.03E+02	2.03E+02	0.463	0.655	7.275E+00	3.031E-01
26229.09	2.41E+01	2.03E+02	2.03E+02	0.463	0.654	7.286E+00	3.036E-01
26266.97	2.41E+01	2.03E+02	2.03E+02	0.463	0.655	7.296E+00	3.040E-01
26304.84	2.41E+01	2.03E+02	2.03E+02	0.463	0.654	7.307E+00	3.045E-01
26342.34	2.41E+01	2.03E+02	2.03E+02	0.463	0.654	7.317E+00	3.049E-01
26380.34	2.41E+01	2.03E+02	2.03E+02	0.463	0.654	7.328E+00	3.053E-01
26417.97	2.41E+01	2.03E+02	2.03E+02	0.463	0.654	7.338E+00	3.058E-01
26455.59	2.41E+01	2.03E+02	2.03E+02	0.463	0.654	7.349E+00	3.062E-01
26493.09	2.41E+01	2.03E+02	2.03E+02	0.463	0.654	7.359E+00	3.066E-01
26530.59	2.41E+01	2.03E+02	2.03E+02	0.462	0.654	7.370E+00	3.071E-01
26568.47	2.41E+01	2.03E+02	2.03E+02	0.463	0.654	7.380E+00	3.075E-01
26605.91	2.41E+01	2.03E+02	2.03E+02	0.463	0.654	7.391E+00	3.079E-01
26644.16	2.41E+01	2.03E+02	2.03E+02	0.463	0.654	7.401E+00	3.084E-01
26682.41	2.41E+01	2.03E+02	2.03E+02	0.463	0.654	7.412E+00	3.088E-01
26721.03	2.41E+01	2.03E+02	2.03E+02	0.463	0.654	7.423E+00	3.093E-01
26759.41	2.41E+01	2.03E+02	2.03E+02	0.463	0.654	7.433E+00	3.097E-01
26796.91	2.41E+01	2.03E+02	2.03E+02	0.463	0.654	7.444E+00	3.101E-01
26835.53	2.41E+01	2.03E+02	2.03E+02	0.462	0.654	7.454E+00	3.106E-01
26873.03	2.41E+01	2.03E+02	2.03E+02	0.462	0.654	7.465E+00	3.110E-01
26911.03	2.41E+01	2.03E+02	2.03E+02	0.462	0.654	7.475E+00	3.115E-01
26948.53	2.41E+01	2.03E+02	2.03E+02	0.462	0.654	7.486E+00	3.119E-01
26986.66	2.41E+01	2.03E+02	2.03E+02	0.462	0.654	7.496E+00	3.123E-01

SHEX-05A LGS SIL-636 CONT DBA-LOCA ANAL K=305
 Leak Rates proportional to square root of ratio of the time

44 PC Leak Test Pressure (psig)
 22 MSIV Leak Test Pressure (psig)

TIME	dependent delta P divided by the test delta P			PC Leak Fraction of Design Basis	MSIV Leak Fraction of Design Basis	Time (hours)	Time (days)
	DW PRESS (PSIA)	DW TEMP (F)	SP TEMP (F)				
27024.16	2.41E+01	2.03E+02	2.03E+02	0.462	0.654	7.507E+00	3.128E-01
27061.91	2.41E+01	2.03E+02	2.03E+02	0.462	0.654	7.517E+00	3.132E-01
27099.66	2.41E+01	2.03E+02	2.03E+02	0.462	0.654	7.528E+00	3.137E-01
27138.16	2.41E+01	2.03E+02	2.03E+02	0.462	0.654	7.538E+00	3.141E-01
27175.66	2.41E+01	2.03E+02	2.03E+02	0.462	0.654	7.549E+00	3.145E-01
27213.78	2.41E+01	2.03E+02	2.03E+02	0.462	0.654	7.559E+00	3.150E-01
27251.28	2.41E+01	2.03E+02	2.03E+02	0.462	0.654	7.570E+00	3.154E-01
27289.78	2.41E+01	2.03E+02	2.03E+02	0.462	0.654	7.580E+00	3.159E-01
27327.59	2.41E+01	2.03E+02	2.03E+02	0.462	0.654	7.591E+00	3.163E-01
27365.84	2.41E+01	2.03E+02	2.03E+02	0.462	0.654	7.602E+00	3.167E-01
27403.84	2.41E+01	2.03E+02	2.03E+02	0.462	0.654	7.612E+00	3.172E-01
27441.59	2.41E+01	2.03E+02	2.03E+02	0.462	0.654	7.623E+00	3.176E-01
27479.47	2.41E+01	2.03E+02	2.03E+02	0.462	0.654	7.633E+00	3.180E-01
27516.97	2.41E+01	2.03E+02	2.03E+02	0.462	0.654	7.644E+00	3.185E-01
27554.72	2.41E+01	2.03E+02	2.03E+02	0.462	0.654	7.654E+00	3.189E-01
27593.22	2.41E+01	2.03E+02	2.03E+02	0.462	0.654	7.665E+00	3.194E-01
27630.72	2.41E+01	2.03E+02	2.03E+02	0.462	0.654	7.675E+00	3.198E-01
27668.22	2.41E+01	2.03E+02	2.03E+02	0.462	0.653	7.686E+00	3.202E-01
27706.34	2.41E+01	2.03E+02	2.03E+02	0.462	0.653	7.696E+00	3.207E-01
27744.22	2.41E+01	2.03E+02	2.03E+02	0.462	0.653	7.707E+00	3.211E-01
27782.22	2.41E+01	2.03E+02	2.03E+02	0.462	0.653	7.717E+00	3.216E-01
27820.72	2.41E+01	2.03E+02	2.03E+02	0.462	0.653	7.728E+00	3.220E-01
27858.34	2.41E+01	2.03E+02	2.03E+02	0.462	0.653	7.738E+00	3.224E-01
27896.59	2.41E+01	2.03E+02	2.03E+02	0.462	0.653	7.749E+00	3.229E-01
27934.72	2.41E+01	2.03E+02	2.03E+02	0.462	0.653	7.760E+00	3.233E-01
27972.03	2.41E+01	2.03E+02	2.03E+02	0.462	0.653	7.770E+00	3.238E-01
28010.03	2.41E+01	2.03E+02	2.03E+02	0.462	0.653	7.781E+00	3.242E-01
28047.91	2.41E+01	2.03E+02	2.03E+02	0.462	0.653	7.791E+00	3.246E-01
28086.41	2.41E+01	2.03E+02	2.03E+02	0.462	0.653	7.802E+00	3.251E-01
28124.28	2.41E+01	2.03E+02	2.03E+02	0.462	0.653	7.812E+00	3.255E-01
28162.03	2.41E+01	2.03E+02	2.03E+02	0.462	0.653	7.823E+00	3.259E-01
28199.91	2.41E+01	2.03E+02	2.03E+02	0.462	0.653	7.833E+00	3.264E-01
28237.78	2.41E+01	2.03E+02	2.03E+02	0.462	0.653	7.844E+00	3.268E-01
28276.78	2.41E+01	2.03E+02	2.03E+02	0.462	0.653	7.855E+00	3.273E-01
28314.66	2.41E+01	2.03E+02	2.03E+02	0.462	0.653	7.865E+00	3.277E-01
28353.16	2.41E+01	2.03E+02	2.03E+02	0.461	0.653	7.876E+00	3.282E-01
28391.03	2.41E+01	2.03E+02	2.03E+02	0.461	0.653	7.886E+00	3.286E-01
28428.66	2.41E+01	2.03E+02	2.03E+02	0.461	0.653	7.897E+00	3.290E-01
28466.28	2.41E+01	2.03E+02	2.03E+02	0.461	0.653	7.907E+00	3.295E-01
28504.53	2.41E+01	2.03E+02	2.03E+02	0.461	0.653	7.918E+00	3.299E-01
28542.66	2.41E+01	2.03E+02	2.03E+02	0.461	0.652	7.929E+00	3.304E-01
28580.66	2.41E+01	2.03E+02	2.03E+02	0.461	0.652	7.939E+00	3.308E-01
28617.97	2.41E+01	2.03E+02	2.03E+02	0.461	0.653	7.949E+00	3.312E-01
28655.84	2.41E+01	2.03E+02	2.03E+02	0.461	0.653	7.960E+00	3.317E-01
28693.59	2.41E+01	2.03E+02	2.03E+02	0.461	0.653	7.970E+00	3.321E-01
28731.59	2.41E+01	2.03E+02	2.03E+02	0.461	0.653	7.981E+00	3.325E-01
28769.47	2.41E+01	2.03E+02	2.03E+02	0.461	0.653	7.992E+00	3.330E-01
28807.72	2.41E+01	2.03E+02	2.03E+02	0.461	0.652	8.002E+00	3.334E-01
28845.84	2.41E+01	2.03E+02	2.03E+02	0.461	0.652	8.013E+00	3.339E-01
28883.72	2.41E+01	2.03E+02	2.03E+02	0.461	0.652	8.023E+00	3.343E-01
28921.84	2.41E+01	2.03E+02	2.03E+02	0.461	0.652	8.034E+00	3.347E-01
28959.84	2.41E+01	2.03E+02	2.03E+02	0.461	0.652	8.044E+00	3.352E-01

SHEX-05A LGS SIL-636 CONT DBA-LOCA ANAL K=305
 Leak Rates proportional to square root of ratio of the time

44 PC Leak Test Pressure (psig)
 22 MSIV Leak Test Pressure (psig)

TIME	dependent delta P divided by the test delta P			PC Leak Fraction of Design Basis	MSIV Leak Fraction of Design Basis	Time (hours)	Time (days)
	DW PRESS (PSIA)	DW TEMP (F)	SP TEMP (F)				
28997.72	2.41E+01	2.03E+02	2.03E+02	0.461	0.652	8.055E+00	3.356E-01
29035.34	2.41E+01	2.03E+02	2.03E+02	0.461	0.652	8.065E+00	3.361E-01
29073.09	2.41E+01	2.03E+02	2.03E+02	0.461	0.652	8.076E+00	3.365E-01
29111.22	2.41E+01	2.03E+02	2.03E+02	0.461	0.652	8.086E+00	3.369E-01
29149.34	2.41E+01	2.03E+02	2.03E+02	0.461	0.652	8.097E+00	3.374E-01
29187.22	2.41E+01	2.03E+02	2.03E+02	0.461	0.652	8.108E+00	3.378E-01
29225.41	2.41E+01	2.03E+02	2.03E+02	0.461	0.652	8.118E+00	3.383E-01
29263.66	2.41E+01	2.03E+02	2.03E+02	0.461	0.652	8.129E+00	3.387E-01
29301.28	2.41E+01	2.03E+02	2.03E+02	0.461	0.652	8.139E+00	3.391E-01
29339.03	2.41E+01	2.03E+02	2.03E+02	0.461	0.652	8.150E+00	3.396E-01
29376.66	2.41E+01	2.03E+02	2.03E+02	0.461	0.652	8.160E+00	3.400E-01
29414.16	2.40E+01	2.03E+02	2.03E+02	0.461	0.652	8.171E+00	3.404E-01
29452.03	2.40E+01	2.03E+02	2.03E+02	0.461	0.652	8.181E+00	3.409E-01
29489.91	2.40E+01	2.03E+02	2.03E+02	0.461	0.652	8.192E+00	3.413E-01
29527.41	2.40E+01	2.03E+02	2.03E+02	0.461	0.652	8.202E+00	3.418E-01
29565.53	2.40E+01	2.03E+02	2.03E+02	0.461	0.652	8.213E+00	3.422E-01
29603.03	2.40E+01	2.02E+02	2.03E+02	0.461	0.652	8.223E+00	3.426E-01
29641.66	2.40E+01	2.02E+02	2.03E+02	0.460	0.651	8.234E+00	3.431E-01
29679.78	2.40E+01	2.02E+02	2.03E+02	0.460	0.651	8.244E+00	3.435E-01
29717.78	2.40E+01	2.02E+02	2.03E+02	0.460	0.651	8.255E+00	3.440E-01
29755.41	2.40E+01	2.02E+02	2.03E+02	0.460	0.651	8.265E+00	3.444E-01
29793.28	2.40E+01	2.02E+02	2.03E+02	0.460	0.651	8.276E+00	3.448E-01
29830.59	2.40E+01	2.02E+02	2.03E+02	0.461	0.652	8.286E+00	3.453E-01
29868.72	2.40E+01	2.02E+02	2.03E+02	0.460	0.651	8.297E+00	3.457E-01
29906.47	2.40E+01	2.02E+02	2.03E+02	0.460	0.651	8.307E+00	3.461E-01
29944.22	2.40E+01	2.02E+02	2.03E+02	0.460	0.651	8.318E+00	3.466E-01
29982.09	2.40E+01	2.02E+02	2.03E+02	0.460	0.651	8.328E+00	3.470E-01
30020.34	2.40E+01	2.02E+02	2.03E+02	0.460	0.651	8.339E+00	3.475E-01
30058.34	2.40E+01	2.02E+02	2.03E+02	0.460	0.651	8.350E+00	3.479E-01
30096.72	2.40E+01	2.02E+02	2.03E+02	0.460	0.651	8.360E+00	3.483E-01
30134.34	2.40E+01	2.02E+02	2.03E+02	0.460	0.651	8.371E+00	3.488E-01
30172.47	2.40E+01	2.02E+02	2.03E+02	0.460	0.651	8.381E+00	3.492E-01
30210.22	2.40E+01	2.02E+02	2.03E+02	0.460	0.651	8.392E+00	3.497E-01
30247.72	2.40E+01	2.02E+02	2.03E+02	0.460	0.651	8.402E+00	3.501E-01
30285.59	2.40E+01	2.02E+02	2.03E+02	0.460	0.651	8.413E+00	3.505E-01
30323.47	2.40E+01	2.02E+02	2.03E+02	0.460	0.651	8.423E+00	3.510E-01
30360.97	2.40E+01	2.02E+02	2.03E+02	0.460	0.651	8.434E+00	3.514E-01
30398.72	2.40E+01	2.02E+02	2.03E+02	0.460	0.651	8.444E+00	3.518E-01
30436.78	2.40E+01	2.02E+02	2.03E+02	0.460	0.651	8.455E+00	3.523E-01
30474.78	2.40E+01	2.02E+02	2.03E+02	0.460	0.651	8.465E+00	3.527E-01
30512.53	2.40E+01	2.02E+02	2.03E+02	0.460	0.651	8.476E+00	3.532E-01
30550.53	2.40E+01	2.02E+02	2.03E+02	0.460	0.651	8.486E+00	3.536E-01
30588.66	2.40E+01	2.02E+02	2.03E+02	0.460	0.651	8.497E+00	3.540E-01
30626.28	2.40E+01	2.02E+02	2.03E+02	0.460	0.650	8.507E+00	3.545E-01
30663.78	2.40E+01	2.02E+02	2.03E+02	0.460	0.650	8.518E+00	3.549E-01
30701.66	2.40E+01	2.02E+02	2.03E+02	0.460	0.650	8.528E+00	3.553E-01
30739.16	2.40E+01	2.02E+02	2.03E+02	0.460	0.650	8.539E+00	3.558E-01
30777.16	2.40E+01	2.02E+02	2.03E+02	0.460	0.650	8.549E+00	3.562E-01
30815.16	2.40E+01	2.02E+02	2.03E+02	0.459	0.650	8.560E+00	3.567E-01
30852.91	2.40E+01	2.02E+02	2.03E+02	0.459	0.650	8.570E+00	3.571E-01
30890.78	2.40E+01	2.02E+02	2.03E+02	0.459	0.650	8.581E+00	3.575E-01
30929.03	2.40E+01	2.02E+02	2.03E+02	0.459	0.650	8.591E+00	3.580E-01

SHEX-05A LGS SIL-636 CONT DBA-LOCA ANAL K=305
 Leak Rates proportional to square root of ratio of the time

44 PC Leak Test Pressure (psig)
 22 MSIV Leak Test Pressure (psig)

TIME	dependent delta P divided by the test delta P			PC Leak Fraction of Design Basis	MSIV Leak Fraction of Design Basis	Time (hours)	Time (days)
	DW PRESS (PSIA)	DW TEMP (F)	SP TEMP (F)				
30967.28	2.40E+01	2.02E+02	2.03E+02	0.459	0.650	8.602E+00	3.584E-01
31004.84	2.40E+01	2.02E+02	2.03E+02	0.459	0.650	8.612E+00	3.589E-01
31043.34	2.40E+01	2.02E+02	2.03E+02	0.459	0.650	8.623E+00	3.593E-01
31081.22	2.40E+01	2.02E+02	2.03E+02	0.459	0.650	8.634E+00	3.597E-01
31119.34	2.40E+01	2.02E+02	2.03E+02	0.459	0.650	8.644E+00	3.602E-01
31157.22	2.40E+01	2.02E+02	2.03E+02	0.459	0.650	8.655E+00	3.606E-01
31195.72	2.40E+01	2.02E+02	2.03E+02	0.459	0.649	8.665E+00	3.611E-01
31233.97	2.40E+01	2.02E+02	2.03E+02	0.459	0.649	8.676E+00	3.615E-01
31271.47	2.40E+01	2.02E+02	2.03E+02	0.459	0.649	8.687E+00	3.619E-01
31309.09	2.40E+01	2.02E+02	2.03E+02	0.459	0.649	8.697E+00	3.624E-01
31346.84	2.40E+01	2.02E+02	2.03E+02	0.459	0.649	8.707E+00	3.628E-01
31384.59	2.40E+01	2.02E+02	2.02E+02	0.459	0.649	8.718E+00	3.632E-01
31422.72	2.40E+01	2.02E+02	2.02E+02	0.459	0.649	8.729E+00	3.637E-01
31460.22	2.40E+01	2.02E+02	2.02E+02	0.459	0.649	8.739E+00	3.641E-01
31497.84	2.40E+01	2.02E+02	2.02E+02	0.459	0.649	8.749E+00	3.646E-01
31535.41	2.40E+01	2.02E+02	2.02E+02	0.459	0.649	8.760E+00	3.650E-01
31574.28	2.40E+01	2.02E+02	2.02E+02	0.459	0.649	8.771E+00	3.654E-01
31612.41	2.40E+01	2.02E+02	2.02E+02	0.459	0.649	8.781E+00	3.659E-01
31650.03	2.40E+01	2.02E+02	2.02E+02	0.459	0.649	8.792E+00	3.663E-01
31687.53	2.40E+01	2.02E+02	2.02E+02	0.459	0.649	8.802E+00	3.668E-01
31725.53	2.40E+01	2.02E+02	2.02E+02	0.459	0.649	8.813E+00	3.672E-01
31763.03	2.40E+01	2.02E+02	2.02E+02	0.459	0.649	8.823E+00	3.676E-01
31800.91	2.40E+01	2.02E+02	2.02E+02	0.459	0.649	8.834E+00	3.681E-01
31838.91	2.40E+01	2.02E+02	2.02E+02	0.459	0.649	8.844E+00	3.685E-01
31876.66	2.40E+01	2.02E+02	2.02E+02	0.459	0.649	8.855E+00	3.689E-01
31915.03	2.40E+01	2.02E+02	2.02E+02	0.459	0.649	8.865E+00	3.694E-01
31952.91	2.40E+01	2.02E+02	2.02E+02	0.459	0.648	8.876E+00	3.698E-01
31991.16	2.40E+01	2.02E+02	2.02E+02	0.459	0.648	8.886E+00	3.703E-01
32028.66	2.40E+01	2.02E+02	2.02E+02	0.459	0.648	8.897E+00	3.707E-01
32066.16	2.40E+01	2.02E+02	2.02E+02	0.459	0.648	8.907E+00	3.711E-01
32103.72	2.40E+01	2.02E+02	2.02E+02	0.459	0.648	8.918E+00	3.716E-01
32142.09	2.40E+01	2.02E+02	2.02E+02	0.459	0.648	8.928E+00	3.720E-01
32179.59	2.40E+01	2.02E+02	2.02E+02	0.459	0.648	8.939E+00	3.724E-01
32218.59	2.40E+01	2.02E+02	2.02E+02	0.459	0.648	8.950E+00	3.729E-01
32256.59	2.40E+01	2.02E+02	2.02E+02	0.459	0.648	8.960E+00	3.733E-01
32294.59	2.39E+01	2.02E+02	2.02E+02	0.458	0.648	8.971E+00	3.738E-01
32332.59	2.39E+01	2.02E+02	2.02E+02	0.458	0.648	8.981E+00	3.742E-01
32370.59	2.39E+01	2.02E+02	2.02E+02	0.458	0.648	8.992E+00	3.747E-01
32408.22	2.39E+01	2.02E+02	2.02E+02	0.458	0.648	9.002E+00	3.751E-01
32446.22	2.39E+01	2.02E+02	2.02E+02	0.458	0.648	9.013E+00	3.755E-01
32484.09	2.39E+01	2.02E+02	2.02E+02	0.458	0.648	9.023E+00	3.760E-01
32521.59	2.39E+01	2.02E+02	2.02E+02	0.458	0.648	9.034E+00	3.764E-01
32559.72	2.39E+01	2.02E+02	2.02E+02	0.458	0.648	9.044E+00	3.768E-01
32597.47	2.39E+01	2.02E+02	2.02E+02	0.458	0.648	9.055E+00	3.773E-01
32635.09	2.39E+01	2.02E+02	2.02E+02	0.458	0.647	9.065E+00	3.777E-01
32673.53	2.39E+01	2.02E+02	2.02E+02	0.458	0.648	9.076E+00	3.782E-01
32711.78	2.39E+01	2.02E+02	2.02E+02	0.458	0.648	9.087E+00	3.786E-01
32749.78	2.39E+01	2.02E+02	2.02E+02	0.458	0.648	9.097E+00	3.790E-01
32788.28	2.39E+01	2.02E+02	2.02E+02	0.458	0.648	9.108E+00	3.795E-01
32826.28	2.39E+01	2.02E+02	2.02E+02	0.458	0.647	9.118E+00	3.799E-01
32863.91	2.39E+01	2.02E+02	2.02E+02	0.458	0.647	9.129E+00	3.804E-01
32901.91	2.39E+01	2.02E+02	2.02E+02	0.458	0.647	9.139E+00	3.808E-01

SHEX-05A LGS SIL-636 CONT DBA-LOCA ANAL K=305
 Leak Rates proportional to square root of ratio of the time

44 PC Leak Test Pressure (psig)
 22 MSIV Leak Test Pressure (psig)

TIME	dependent delta P divided by the test delta P			PC Leak Fraction of Design Basis	MSIV Leak Fraction of Design Basis	Time (hours)	Time (days)
	DW PRESS (PSIA)	DW TEMP (F)	SP TEMP (F)				
32939.91	2.39E+01	2.02E+02	2.02E+02	0.458	0.647	9.150E+00	3.812E-01
32978.03	2.39E+01	2.02E+02	2.02E+02	0.458	0.647	9.161E+00	3.817E-01
33015.53	2.39E+01	2.02E+02	2.02E+02	0.458	0.647	9.171E+00	3.821E-01
33053.16	2.39E+01	2.02E+02	2.02E+02	0.458	0.647	9.181E+00	3.826E-01
33091.03	2.39E+01	2.02E+02	2.02E+02	0.458	0.647	9.192E+00	3.830E-01
33129.28	2.39E+01	2.02E+02	2.02E+02	0.457	0.647	9.203E+00	3.834E-01
33167.28	2.39E+01	2.02E+02	2.02E+02	0.457	0.647	9.213E+00	3.839E-01
33204.59	2.39E+01	2.02E+02	2.02E+02	0.458	0.647	9.223E+00	3.843E-01
33242.09	2.39E+01	2.02E+02	2.02E+02	0.458	0.647	9.234E+00	3.847E-01
33280.84	2.39E+01	2.02E+02	2.02E+02	0.457	0.647	9.245E+00	3.852E-01
33320.09	2.39E+01	2.02E+02	2.02E+02	0.457	0.647	9.256E+00	3.856E-01
33357.59	2.39E+01	2.02E+02	2.02E+02	0.457	0.647	9.266E+00	3.861E-01
33395.22	2.39E+01	2.02E+02	2.02E+02	0.457	0.647	9.276E+00	3.865E-01
33433.34	2.39E+01	2.02E+02	2.02E+02	0.457	0.646	9.287E+00	3.870E-01
33471.09	2.39E+01	2.02E+02	2.02E+02	0.457	0.646	9.298E+00	3.874E-01
33509.09	2.39E+01	2.02E+02	2.02E+02	0.457	0.646	9.308E+00	3.878E-01
33546.97	2.39E+01	2.02E+02	2.02E+02	0.457	0.646	9.319E+00	3.883E-01
33585.22	2.39E+01	2.02E+02	2.02E+02	0.457	0.646	9.329E+00	3.887E-01
33622.72	2.39E+01	2.02E+02	2.02E+02	0.457	0.646	9.340E+00	3.892E-01
33660.59	2.39E+01	2.02E+02	2.02E+02	0.457	0.646	9.350E+00	3.896E-01
33698.34	2.39E+01	2.02E+02	2.02E+02	0.457	0.646	9.361E+00	3.900E-01
33735.84	2.39E+01	2.02E+02	2.02E+02	0.457	0.646	9.371E+00	3.905E-01
33773.53	2.39E+01	2.02E+02	2.02E+02	0.457	0.646	9.382E+00	3.909E-01
33811.03	2.39E+01	2.02E+02	2.02E+02	0.457	0.646	9.392E+00	3.913E-01
33848.66	2.39E+01	2.02E+02	2.02E+02	0.457	0.646	9.402E+00	3.918E-01
33886.41	2.39E+01	2.02E+02	2.02E+02	0.457	0.646	9.413E+00	3.922E-01
33924.28	2.39E+01	2.02E+02	2.02E+02	0.457	0.646	9.423E+00	3.926E-01
33961.78	2.39E+01	2.02E+02	2.02E+02	0.457	0.646	9.434E+00	3.931E-01
33999.41	2.39E+01	2.02E+02	2.02E+02	0.457	0.646	9.444E+00	3.935E-01
34037.53	2.39E+01	2.02E+02	2.02E+02	0.457	0.646	9.455E+00	3.940E-01
34075.28	2.39E+01	2.02E+02	2.02E+02	0.456	0.645	9.465E+00	3.944E-01
34113.16	2.39E+01	2.02E+02	2.02E+02	0.457	0.646	9.476E+00	3.948E-01
34151.28	2.39E+01	2.02E+02	2.02E+02	0.456	0.645	9.486E+00	3.953E-01
34188.78	2.39E+01	2.01E+02	2.02E+02	0.456	0.645	9.497E+00	3.957E-01
34226.66	2.39E+01	2.01E+02	2.02E+02	0.456	0.645	9.507E+00	3.961E-01
34264.16	2.39E+01	2.01E+02	2.02E+02	0.456	0.645	9.518E+00	3.966E-01
34301.59	2.39E+01	2.01E+02	2.02E+02	0.456	0.645	9.528E+00	3.970E-01
34339.84	2.39E+01	2.01E+02	2.02E+02	0.456	0.645	9.539E+00	3.975E-01
34377.47	2.39E+01	2.01E+02	2.02E+02	0.456	0.645	9.549E+00	3.979E-01
34415.59	2.39E+01	2.01E+02	2.02E+02	0.456	0.645	9.560E+00	3.983E-01
34453.72	2.39E+01	2.01E+02	2.02E+02	0.456	0.645	9.570E+00	3.988E-01
34491.47	2.39E+01	2.01E+02	2.02E+02	0.456	0.645	9.581E+00	3.992E-01
34529.09	2.39E+01	2.01E+02	2.02E+02	0.456	0.645	9.591E+00	3.996E-01
34566.84	2.38E+01	2.01E+02	2.02E+02	0.456	0.645	9.602E+00	4.001E-01
34604.34	2.38E+01	2.01E+02	2.02E+02	0.456	0.645	9.612E+00	4.005E-01
34642.22	2.38E+01	2.01E+02	2.02E+02	0.456	0.645	9.623E+00	4.010E-01
34679.84	2.38E+01	2.01E+02	2.02E+02	0.456	0.645	9.633E+00	4.014E-01
34717.59	2.38E+01	2.01E+02	2.02E+02	0.456	0.645	9.644E+00	4.018E-01
34755.09	2.38E+01	2.01E+02	2.02E+02	0.456	0.644	9.654E+00	4.023E-01
34793.09	2.38E+01	2.01E+02	2.02E+02	0.456	0.644	9.665E+00	4.027E-01
34831.03	2.38E+01	2.01E+02	2.02E+02	0.456	0.645	9.675E+00	4.031E-01
34868.53	2.38E+01	2.01E+02	2.02E+02	0.456	0.644	9.686E+00	4.036E-01

SHEX-05A LGS SIL-636 CONT DBA-LOCA ANAL K=305
 Leak Rates proportional to square root of ratio of the time

44 PC Leak Test Pressure (psig)
 22 MSIV Leak Test Pressure (psig)

TIME	dependent delta P divided by the test delta P			PC Leak Fraction of Design Basis	MSIV Leak Fraction of Design Basis	Time (hours)	Time (days)
	DW PRESS (PSIA)	DW TEMP (F)	SP TEMP (F)				
34906.03	2.38E+01	2.01E+02	2.02E+02	0.456	0.644	9.696E+00	4.040E-01
34943.91	2.38E+01	2.01E+02	2.02E+02	0.456	0.644	9.707E+00	4.044E-01
34981.91	2.38E+01	2.01E+02	2.02E+02	0.456	0.644	9.717E+00	4.049E-01
35020.16	2.38E+01	2.01E+02	2.02E+02	0.456	0.644	9.728E+00	4.053E-01
35057.66	2.38E+01	2.01E+02	2.02E+02	0.455	0.644	9.738E+00	4.058E-01
35095.78	2.38E+01	2.01E+02	2.02E+02	0.455	0.644	9.749E+00	4.062E-01
35134.03	2.38E+01	2.01E+02	2.02E+02	0.455	0.644	9.759E+00	4.066E-01
35171.91	2.38E+01	2.01E+02	2.02E+02	0.455	0.643	9.770E+00	4.071E-01
35209.91	2.38E+01	2.01E+02	2.02E+02	0.455	0.643	9.781E+00	4.075E-01
35247.91	2.38E+01	2.01E+02	2.02E+02	0.455	0.643	9.791E+00	4.080E-01
35285.78	2.38E+01	2.01E+02	2.02E+02	0.455	0.643	9.802E+00	4.084E-01
35323.28	2.38E+01	2.01E+02	2.02E+02	0.455	0.643	9.812E+00	4.088E-01
35360.84	2.38E+01	2.01E+02	2.02E+02	0.455	0.643	9.822E+00	4.093E-01
35398.34	2.38E+01	2.01E+02	2.02E+02	0.455	0.643	9.833E+00	4.097E-01
35435.97	2.38E+01	2.01E+02	2.02E+02	0.455	0.643	9.843E+00	4.101E-01
35473.59	2.38E+01	2.01E+02	2.02E+02	0.455	0.643	9.854E+00	4.106E-01
35511.09	2.38E+01	2.01E+02	2.02E+02	0.455	0.643	9.864E+00	4.110E-01
35549.34	2.38E+01	2.01E+02	2.02E+02	0.455	0.643	9.875E+00	4.115E-01
35587.34	2.38E+01	2.01E+02	2.02E+02	0.455	0.643	9.885E+00	4.119E-01
35625.22	2.38E+01	2.01E+02	2.02E+02	0.455	0.643	9.896E+00	4.123E-01
35663.09	2.38E+01	2.01E+02	2.02E+02	0.455	0.643	9.906E+00	4.128E-01
35701.34	2.38E+01	2.01E+02	2.02E+02	0.455	0.643	9.917E+00	4.132E-01
35739.59	2.38E+01	2.01E+02	2.02E+02	0.455	0.643	9.928E+00	4.137E-01
35777.09	2.38E+01	2.01E+02	2.02E+02	0.455	0.643	9.938E+00	4.141E-01
35814.59	2.38E+01	2.01E+02	2.02E+02	0.454	0.642	9.948E+00	4.145E-01
35852.66	2.38E+01	2.01E+02	2.02E+02	0.455	0.643	9.959E+00	4.150E-01
35891.16	2.38E+01	2.01E+02	2.02E+02	0.455	0.643	9.970E+00	4.154E-01
35929.03	2.38E+01	2.01E+02	2.02E+02	0.455	0.643	9.980E+00	4.158E-01
35966.91	2.38E+01	2.01E+02	2.02E+02	0.454	0.642	9.991E+00	4.163E-01
36004.91	2.38E+01	2.01E+02	2.02E+02	0.454	0.642	1.000E+01	4.167E-01
36042.53	2.38E+01	2.01E+02	2.02E+02	0.454	0.642	1.001E+01	4.172E-01
36080.16	2.38E+01	2.01E+02	2.02E+02	0.454	0.642	1.002E+01	4.176E-01
36118.16	2.38E+01	2.01E+02	2.01E+02	0.454	0.642	1.003E+01	4.180E-01
36156.16	2.38E+01	2.01E+02	2.01E+02	0.454	0.642	1.004E+01	4.185E-01
36193.78	2.38E+01	2.01E+02	2.01E+02	0.454	0.642	1.005E+01	4.189E-01
36231.66	2.38E+01	2.01E+02	2.01E+02	0.454	0.642	1.006E+01	4.193E-01
36269.41	2.38E+01	2.01E+02	2.01E+02	0.454	0.642	1.007E+01	4.198E-01
36307.16	2.38E+01	2.01E+02	2.01E+02	0.454	0.642	1.009E+01	4.202E-01
36345.41	2.38E+01	2.01E+02	2.01E+02	0.454	0.642	1.010E+01	4.207E-01
36382.84	2.38E+01	2.01E+02	2.01E+02	0.454	0.642	1.011E+01	4.211E-01
36420.59	2.38E+01	2.01E+02	2.01E+02	0.454	0.642	1.012E+01	4.215E-01
36459.09	2.38E+01	2.01E+02	2.01E+02	0.454	0.642	1.013E+01	4.220E-01
36496.84	2.38E+01	2.01E+02	2.01E+02	0.454	0.642	1.014E+01	4.224E-01
36534.47	2.38E+01	2.01E+02	2.01E+02	0.454	0.642	1.015E+01	4.229E-01
36572.47	2.38E+01	2.01E+02	2.01E+02	0.454	0.641	1.016E+01	4.233E-01
36610.59	2.38E+01	2.01E+02	2.01E+02	0.454	0.641	1.017E+01	4.237E-01
36648.09	2.38E+01	2.01E+02	2.01E+02	0.454	0.641	1.018E+01	4.242E-01
36686.22	2.38E+01	2.01E+02	2.01E+02	0.454	0.641	1.019E+01	4.246E-01
36724.47	2.37E+01	2.01E+02	2.01E+02	0.453	0.641	1.020E+01	4.251E-01
36761.97	2.37E+01	2.01E+02	2.01E+02	0.453	0.641	1.021E+01	4.255E-01
36799.59	2.37E+01	2.01E+02	2.01E+02	0.453	0.641	1.022E+01	4.259E-01
36837.72	2.37E+01	2.01E+02	2.01E+02	0.453	0.641	1.023E+01	4.264E-01

SHEX-05A LGS SIL-636 CONT DBA-LOCA ANAL K=305
 Leak Rates proportional to square root of ratio of the time

44 PC Leak Test Pressure (psig)
 22 MSIV Leak Test Pressure (psig)

TIME	dependent delta P divided by the test delta P			PC Leak Fraction of Design Basis	MSIV Leak Fraction of Design Basis	Time (hours)	Time (days)
	DW PRESS (PSIA)	DW TEMP (F)	SP TEMP (F)				
36875.28	2.37E+01	2.01E+02	2.01E+02	0.453	0.641	1.024E+01	4.268E-01
36912.78	2.37E+01	2.01E+02	2.01E+02	0.453	0.641	1.025E+01	4.272E-01
36950.28	2.37E+01	2.01E+02	2.01E+02	0.453	0.641	1.026E+01	4.277E-01
36988.16	2.37E+01	2.01E+02	2.01E+02	0.453	0.641	1.027E+01	4.281E-01
37025.78	2.37E+01	2.01E+02	2.01E+02	0.453	0.641	1.028E+01	4.285E-01
37063.78	2.37E+01	2.01E+02	2.01E+02	0.453	0.641	1.030E+01	4.290E-01
37102.03	2.37E+01	2.01E+02	2.01E+02	0.453	0.640	1.031E+01	4.294E-01
37139.53	2.37E+01	2.01E+02	2.01E+02	0.453	0.640	1.032E+01	4.299E-01
37177.28	2.37E+01	2.01E+02	2.01E+02	0.453	0.640	1.033E+01	4.303E-01
37215.66	2.37E+01	2.01E+02	2.01E+02	0.453	0.640	1.034E+01	4.307E-01
37253.53	2.37E+01	2.01E+02	2.01E+02	0.453	0.640	1.035E+01	4.312E-01
37291.91	2.37E+01	2.01E+02	2.01E+02	0.453	0.640	1.036E+01	4.316E-01
37329.78	2.37E+01	2.01E+02	2.01E+02	0.453	0.640	1.037E+01	4.321E-01
37367.47	2.37E+01	2.01E+02	2.01E+02	0.453	0.640	1.038E+01	4.325E-01
37405.09	2.37E+01	2.01E+02	2.01E+02	0.453	0.640	1.039E+01	4.329E-01
37442.59	2.37E+01	2.01E+02	2.01E+02	0.453	0.640	1.040E+01	4.334E-01
37480.22	2.37E+01	2.01E+02	2.01E+02	0.453	0.640	1.041E+01	4.338E-01
37518.22	2.37E+01	2.01E+02	2.01E+02	0.453	0.640	1.042E+01	4.342E-01
37555.97	2.37E+01	2.01E+02	2.01E+02	0.453	0.640	1.043E+01	4.347E-01
37593.59	2.37E+01	2.01E+02	2.01E+02	0.452	0.640	1.044E+01	4.351E-01
37631.84	2.37E+01	2.01E+02	2.01E+02	0.452	0.640	1.045E+01	4.356E-01
37669.72	2.37E+01	2.01E+02	2.01E+02	0.452	0.639	1.046E+01	4.360E-01
37707.59	2.37E+01	2.01E+02	2.01E+02	0.452	0.639	1.047E+01	4.364E-01
37745.72	2.37E+01	2.01E+02	2.01E+02	0.452	0.639	1.048E+01	4.369E-01
37783.22	2.37E+01	2.01E+02	2.01E+02	0.452	0.639	1.050E+01	4.373E-01
37820.97	2.37E+01	2.01E+02	2.01E+02	0.452	0.639	1.051E+01	4.377E-01
37858.28	2.37E+01	2.01E+02	2.01E+02	0.452	0.639	1.052E+01	4.382E-01
37895.78	2.37E+01	2.01E+02	2.01E+02	0.452	0.639	1.053E+01	4.386E-01
37933.53	2.37E+01	2.01E+02	2.01E+02	0.452	0.639	1.054E+01	4.390E-01
37971.91	2.37E+01	2.01E+02	2.01E+02	0.452	0.639	1.055E+01	4.395E-01
38010.28	2.37E+01	2.00E+02	2.01E+02	0.452	0.639	1.056E+01	4.399E-01
38048.41	2.37E+01	2.00E+02	2.01E+02	0.452	0.639	1.057E+01	4.404E-01
38086.66	2.37E+01	2.00E+02	2.01E+02	0.452	0.639	1.058E+01	4.408E-01
38125.03	2.37E+01	2.00E+02	2.01E+02	0.452	0.639	1.059E+01	4.413E-01
38162.78	2.37E+01	2.00E+02	2.01E+02	0.452	0.639	1.060E+01	4.417E-01
38200.78	2.37E+01	2.00E+02	2.01E+02	0.452	0.639	1.061E+01	4.421E-01
38238.53	2.37E+01	2.00E+02	2.01E+02	0.451	0.638	1.062E+01	4.426E-01
38276.78	2.37E+01	2.00E+02	2.01E+02	0.451	0.638	1.063E+01	4.430E-01
38314.47	2.37E+01	2.00E+02	2.01E+02	0.452	0.639	1.064E+01	4.435E-01
38352.09	2.37E+01	2.00E+02	2.01E+02	0.452	0.639	1.065E+01	4.439E-01
38389.59	2.37E+01	2.00E+02	2.01E+02	0.451	0.638	1.066E+01	4.443E-01
38427.09	2.37E+01	2.00E+02	2.01E+02	0.451	0.638	1.067E+01	4.448E-01
38464.59	2.37E+01	2.00E+02	2.01E+02	0.451	0.638	1.068E+01	4.452E-01
38503.22	2.37E+01	2.00E+02	2.01E+02	0.451	0.638	1.070E+01	4.456E-01
38541.34	2.37E+01	2.00E+02	2.01E+02	0.451	0.638	1.071E+01	4.461E-01
38579.22	2.37E+01	2.00E+02	2.01E+02	0.451	0.638	1.072E+01	4.465E-01
38617.22	2.37E+01	2.00E+02	2.01E+02	0.451	0.638	1.073E+01	4.470E-01
38654.72	2.37E+01	2.00E+02	2.01E+02	0.451	0.638	1.074E+01	4.474E-01
38692.34	2.36E+01	2.00E+02	2.01E+02	0.451	0.637	1.075E+01	4.478E-01
38730.09	2.36E+01	2.00E+02	2.01E+02	0.451	0.637	1.076E+01	4.483E-01
38767.91	2.37E+01	2.00E+02	2.01E+02	0.451	0.638	1.077E+01	4.487E-01
38805.66	2.36E+01	2.00E+02	2.01E+02	0.451	0.637	1.078E+01	4.491E-01

SHEX-05A LGS SIL-636 CONT DBA-LOCA ANAL K=305
 Leak Rates proportional to square root of ratio of the time

44 PC Leak Test Pressure (psig)
 22 MSIV Leak Test Pressure (psig)

TIME	dependent delta P divided by the test delta P			PC Leak Fraction of Design Basis	MSIV Leak Fraction of Design Basis	Time (hours)	Time (days)
	DW PRESS (PSIA)	DW TEMP (F)	SP TEMP (F)				
38843.16	2.36E+01	2.00E+02	2.01E+02	0.451	0.637	1.079E+01	4.496E-01
38880.78	2.36E+01	2.00E+02	2.01E+02	0.451	0.637	1.080E+01	4.500E-01
38918.78	2.36E+01	2.00E+02	2.01E+02	0.451	0.637	1.081E+01	4.504E-01
38957.41	2.36E+01	2.00E+02	2.01E+02	0.451	0.637	1.082E+01	4.509E-01
38995.53	2.36E+01	2.00E+02	2.01E+02	0.451	0.637	1.083E+01	4.513E-01
39033.28	2.36E+01	2.00E+02	2.01E+02	0.451	0.637	1.084E+01	4.518E-01
39070.91	2.36E+01	2.00E+02	2.01E+02	0.450	0.637	1.085E+01	4.522E-01
39108.78	2.36E+01	2.00E+02	2.01E+02	0.450	0.637	1.086E+01	4.526E-01
39147.53	2.36E+01	2.00E+02	2.01E+02	0.450	0.637	1.087E+01	4.531E-01
39185.53	2.36E+01	2.00E+02	2.01E+02	0.450	0.637	1.088E+01	4.535E-01
39222.84	2.36E+01	2.00E+02	2.01E+02	0.450	0.637	1.090E+01	4.540E-01
39260.97	2.36E+01	2.00E+02	2.01E+02	0.450	0.637	1.091E+01	4.544E-01
39298.72	2.36E+01	2.00E+02	2.01E+02	0.450	0.637	1.092E+01	4.548E-01
39336.47	2.36E+01	2.00E+02	2.01E+02	0.450	0.637	1.093E+01	4.553E-01
39373.97	2.36E+01	2.00E+02	2.01E+02	0.450	0.636	1.094E+01	4.557E-01
39411.97	2.36E+01	2.00E+02	2.01E+02	0.450	0.636	1.095E+01	4.562E-01
39449.97	2.36E+01	2.00E+02	2.01E+02	0.450	0.636	1.096E+01	4.566E-01
39487.47	2.36E+01	2.00E+02	2.01E+02	0.450	0.636	1.097E+01	4.570E-01
39526.22	2.36E+01	2.00E+02	2.01E+02	0.450	0.636	1.098E+01	4.575E-01
39563.97	2.36E+01	2.00E+02	2.01E+02	0.450	0.636	1.099E+01	4.579E-01
39601.84	2.36E+01	2.00E+02	2.01E+02	0.450	0.636	1.100E+01	4.584E-01
39639.59	2.36E+01	2.00E+02	2.01E+02	0.449	0.636	1.101E+01	4.588E-01
39677.91	2.36E+01	2.00E+02	2.01E+02	0.450	0.636	1.102E+01	4.592E-01
39715.66	2.36E+01	2.00E+02	2.01E+02	0.450	0.636	1.103E+01	4.597E-01
39753.41	2.36E+01	2.00E+02	2.01E+02	0.449	0.636	1.104E+01	4.601E-01
39791.03	2.36E+01	2.00E+02	2.01E+02	0.449	0.636	1.105E+01	4.605E-01
39828.91	2.36E+01	2.00E+02	2.01E+02	0.449	0.636	1.106E+01	4.610E-01
39866.41	2.36E+01	2.00E+02	2.01E+02	0.449	0.636	1.107E+01	4.614E-01
39904.53	2.36E+01	2.00E+02	2.00E+02	0.449	0.635	1.108E+01	4.619E-01
39942.03	2.36E+01	2.00E+02	2.00E+02	0.449	0.635	1.110E+01	4.623E-01
39980.28	2.36E+01	2.00E+02	2.00E+02	0.449	0.635	1.111E+01	4.627E-01
40018.53	2.36E+01	2.00E+02	2.00E+02	0.449	0.635	1.112E+01	4.632E-01
40056.41	2.36E+01	2.00E+02	2.00E+02	0.449	0.635	1.113E+01	4.636E-01
40094.66	2.36E+01	2.00E+02	2.00E+02	0.449	0.635	1.114E+01	4.641E-01
40132.72	2.36E+01	2.00E+02	2.00E+02	0.449	0.635	1.115E+01	4.645E-01
40170.97	2.36E+01	2.00E+02	2.00E+02	0.449	0.635	1.116E+01	4.649E-01
40209.09	2.36E+01	2.00E+02	2.00E+02	0.449	0.635	1.117E+01	4.654E-01
40246.59	2.36E+01	2.00E+02	2.00E+02	0.449	0.635	1.118E+01	4.658E-01
40284.22	2.36E+01	2.00E+02	2.00E+02	0.449	0.635	1.119E+01	4.663E-01
40321.97	2.36E+01	2.00E+02	2.00E+02	0.449	0.635	1.120E+01	4.667E-01
40359.59	2.36E+01	2.00E+02	2.00E+02	0.449	0.635	1.121E+01	4.671E-01
40398.09	2.36E+01	2.00E+02	2.00E+02	0.449	0.635	1.122E+01	4.676E-01
40435.84	2.36E+01	2.00E+02	2.00E+02	0.448	0.634	1.123E+01	4.680E-01
40473.47	2.36E+01	2.00E+02	2.00E+02	0.448	0.634	1.124E+01	4.684E-01
40511.34	2.36E+01	2.00E+02	2.00E+02	0.448	0.634	1.125E+01	4.689E-01
40549.47	2.36E+01	2.00E+02	2.00E+02	0.448	0.634	1.126E+01	4.693E-01
40587.03	2.36E+01	2.00E+02	2.00E+02	0.448	0.634	1.127E+01	4.698E-01
40625.28	2.36E+01	2.00E+02	2.00E+02	0.448	0.634	1.128E+01	4.702E-01
40662.91	2.36E+01	2.00E+02	2.00E+02	0.448	0.634	1.130E+01	4.706E-01
40700.41	2.35E+01	2.00E+02	2.00E+02	0.448	0.634	1.131E+01	4.711E-01
40737.91	2.35E+01	2.00E+02	2.00E+02	0.448	0.634	1.132E+01	4.715E-01
40775.53	2.35E+01	2.00E+02	2.00E+02	0.448	0.634	1.133E+01	4.719E-01

SHEX-05A LGS SIL-636 CONT DBA-LOCA ANAL K=305
 Leak Rates proportional to square root of ratio of the time

44 PC Leak Test Pressure (psig)
 22 MSIV Leak Test Pressure (psig)

TIME	dependent delta P divided by the test delta P			PC Leak Fraction of Design Basis	MSIV Leak Fraction of Design Basis	Time (hours)	Time (days)
	DW PRESS (PSIA)	DW TEMP (F)	SP TEMP (F)				
40813.03	2.35E+01	2.00E+02	2.00E+02	0.448	0.634	1.134E+01	4.724E-01
40851.03	2.35E+01	2.00E+02	2.00E+02	0.448	0.634	1.135E+01	4.728E-01
40888.78	2.35E+01	2.00E+02	2.00E+02	0.448	0.634	1.136E+01	4.732E-01
40926.66	2.35E+01	2.00E+02	2.00E+02	0.448	0.634	1.137E+01	4.737E-01
40965.41	2.35E+01	2.00E+02	2.00E+02	0.448	0.634	1.138E+01	4.741E-01
41002.91	2.35E+01	2.00E+02	2.00E+02	0.448	0.633	1.139E+01	4.746E-01
41040.53	2.35E+01	2.00E+02	2.00E+02	0.448	0.633	1.140E+01	4.750E-01
41078.72	2.35E+01	2.00E+02	2.00E+02	0.448	0.634	1.141E+01	4.754E-01
41116.47	2.35E+01	2.00E+02	2.00E+02	0.448	0.634	1.142E+01	4.759E-01
41154.47	2.35E+01	2.00E+02	2.00E+02	0.448	0.633	1.143E+01	4.763E-01
41191.97	2.35E+01	2.00E+02	2.00E+02	0.448	0.633	1.144E+01	4.768E-01
41229.72	2.35E+01	2.00E+02	2.00E+02	0.448	0.633	1.145E+01	4.772E-01
41267.34	2.35E+01	2.00E+02	2.00E+02	0.448	0.633	1.146E+01	4.776E-01
41305.22	2.35E+01	2.00E+02	2.00E+02	0.447	0.633	1.147E+01	4.781E-01
41343.72	2.35E+01	2.00E+02	2.00E+02	0.447	0.633	1.148E+01	4.785E-01
41381.34	2.35E+01	2.00E+02	2.00E+02	0.447	0.633	1.149E+01	4.790E-01
41418.97	2.35E+01	2.00E+02	2.00E+02	0.447	0.632	1.151E+01	4.794E-01
41457.34	2.35E+01	1.99E+02	2.00E+02	0.447	0.632	1.152E+01	4.798E-01
41495.09	2.35E+01	1.99E+02	2.00E+02	0.447	0.632	1.153E+01	4.803E-01
41532.72	2.35E+01	1.99E+02	2.00E+02	0.447	0.632	1.154E+01	4.807E-01
41570.41	2.35E+01	1.99E+02	2.00E+02	0.447	0.632	1.155E+01	4.811E-01
41608.28	2.35E+01	1.99E+02	2.00E+02	0.447	0.632	1.156E+01	4.816E-01
41646.16	2.35E+01	1.99E+02	2.00E+02	0.447	0.632	1.157E+01	4.820E-01
41684.53	2.35E+01	1.99E+02	2.00E+02	0.447	0.632	1.158E+01	4.825E-01
41722.28	2.35E+01	1.99E+02	2.00E+02	0.447	0.632	1.159E+01	4.829E-01
41760.66	2.35E+01	1.99E+02	2.00E+02	0.447	0.632	1.160E+01	4.833E-01
41798.78	2.35E+01	1.99E+02	2.00E+02	0.447	0.632	1.161E+01	4.838E-01
41837.03	2.35E+01	1.99E+02	2.00E+02	0.447	0.632	1.162E+01	4.842E-01
41875.41	2.35E+01	1.99E+02	2.00E+02	0.447	0.632	1.163E+01	4.847E-01
41913.03	2.35E+01	1.99E+02	2.00E+02	0.447	0.632	1.164E+01	4.851E-01
41950.66	2.35E+01	1.99E+02	2.00E+02	0.447	0.632	1.165E+01	4.855E-01
41989.28	2.35E+01	1.99E+02	2.00E+02	0.447	0.632	1.166E+01	4.860E-01
42026.91	2.35E+01	1.99E+02	2.00E+02	0.446	0.631	1.167E+01	4.864E-01
42064.47	2.35E+01	1.99E+02	2.00E+02	0.447	0.632	1.168E+01	4.869E-01
42101.97	2.35E+01	1.99E+02	2.00E+02	0.446	0.631	1.169E+01	4.873E-01
42140.22	2.35E+01	1.99E+02	2.00E+02	0.446	0.631	1.171E+01	4.877E-01
42178.84	2.35E+01	1.99E+02	2.00E+02	0.446	0.631	1.172E+01	4.882E-01
42217.22	2.35E+01	1.99E+02	2.00E+02	0.446	0.631	1.173E+01	4.886E-01
42256.09	2.35E+01	1.99E+02	2.00E+02	0.446	0.631	1.174E+01	4.891E-01
42294.59	2.35E+01	1.99E+02	2.00E+02	0.446	0.631	1.175E+01	4.895E-01
42332.84	2.35E+01	1.99E+02	2.00E+02	0.446	0.631	1.176E+01	4.900E-01
42370.47	2.35E+01	1.99E+02	2.00E+02	0.446	0.631	1.177E+01	4.904E-01
42408.34	2.35E+01	1.99E+02	2.00E+02	0.446	0.631	1.178E+01	4.908E-01
42446.22	2.35E+01	1.99E+02	2.00E+02	0.446	0.631	1.179E+01	4.913E-01
42484.22	2.35E+01	1.99E+02	2.00E+02	0.446	0.631	1.180E+01	4.917E-01
42522.53	2.35E+01	1.99E+02	2.00E+02	0.446	0.631	1.181E+01	4.922E-01
42560.03	2.35E+01	1.99E+02	2.00E+02	0.446	0.631	1.182E+01	4.926E-01
42597.66	2.35E+01	1.99E+02	2.00E+02	0.446	0.631	1.183E+01	4.930E-01
42635.28	2.35E+01	1.99E+02	2.00E+02	0.446	0.631	1.184E+01	4.935E-01
42673.03	2.34E+01	1.99E+02	2.00E+02	0.446	0.630	1.185E+01	4.939E-01
42711.91	2.34E+01	1.99E+02	2.00E+02	0.446	0.630	1.186E+01	4.944E-01
42749.78	2.34E+01	1.99E+02	2.00E+02	0.446	0.630	1.187E+01	4.948E-01

SHEX-05A LGS SIL-636 CONT DBA-LOCA ANAL K=305
 Leak Rates proportional to square root of ratio of the time

44 PC Leak Test Pressure (psig)
 22 MSIV Leak Test Pressure (psig)

TIME	dependent delta P divided by the test delta P			PC Leak Fraction of Design Basis	MSIV Leak Fraction of Design Basis	Time (hours)	Time (days)
	DW PRESS (PSIA)	DW TEMP (F)	SP TEMP (F)				
42787.91	2.34E+01	1.99E+02	2.00E+02	0.446	0.630	1.189E+01	4.952E-01
42826.91	2.34E+01	1.99E+02	2.00E+02	0.446	0.630	1.190E+01	4.957E-01
42864.78	2.34E+01	1.99E+02	2.00E+02	0.445	0.630	1.191E+01	4.961E-01
42903.16	2.34E+01	1.99E+02	2.00E+02	0.445	0.630	1.192E+01	4.966E-01
42940.66	2.34E+01	1.99E+02	2.00E+02	0.445	0.630	1.193E+01	4.970E-01
42978.59	2.34E+01	1.99E+02	2.00E+02	0.445	0.630	1.194E+01	4.974E-01
43016.47	2.34E+01	1.99E+02	2.00E+02	0.445	0.630	1.195E+01	4.979E-01
43054.84	2.34E+01	1.99E+02	2.00E+02	0.445	0.630	1.196E+01	4.983E-01
43093.22	2.34E+01	1.99E+02	2.00E+02	0.445	0.630	1.197E+01	4.988E-01
43131.09	2.34E+01	1.99E+02	2.00E+02	0.445	0.630	1.198E+01	4.992E-01
43169.22	2.34E+01	1.99E+02	2.00E+02	0.445	0.630	1.199E+01	4.996E-01
43207.22	2.34E+01	1.99E+02	2.00E+02	0.445	0.630	1.200E+01	5.001E-01
43245.34	2.34E+01	1.99E+02	2.00E+02	0.445	0.630	1.201E+01	5.005E-01
43283.59	2.34E+01	1.99E+02	2.00E+02	0.445	0.629	1.202E+01	5.010E-01
43321.59	2.34E+01	1.99E+02	2.00E+02	0.445	0.629	1.203E+01	5.014E-01
43359.09	2.34E+01	1.99E+02	2.00E+02	0.445	0.629	1.204E+01	5.018E-01
43397.22	2.34E+01	1.99E+02	2.00E+02	0.445	0.629	1.205E+01	5.023E-01
43435.22	2.34E+01	1.99E+02	1.99E+02	0.445	0.629	1.207E+01	5.027E-01
43473.53	2.34E+01	1.99E+02	1.99E+02	0.445	0.629	1.208E+01	5.032E-01
43511.03	2.34E+01	1.99E+02	1.99E+02	0.445	0.629	1.209E+01	5.036E-01
43549.41	2.34E+01	1.99E+02	1.99E+02	0.445	0.629	1.210E+01	5.040E-01
43588.03	2.34E+01	1.99E+02	1.99E+02	0.445	0.629	1.211E+01	5.045E-01
43625.66	2.34E+01	1.99E+02	1.99E+02	0.445	0.629	1.212E+01	5.049E-01
43663.16	2.34E+01	1.99E+02	1.99E+02	0.445	0.629	1.213E+01	5.054E-01
43701.28	2.34E+01	1.99E+02	1.99E+02	0.444	0.628	1.214E+01	5.058E-01
43739.53	2.34E+01	1.99E+02	1.99E+02	0.444	0.628	1.215E+01	5.062E-01
43777.28	2.34E+01	1.99E+02	1.99E+02	0.444	0.628	1.216E+01	5.067E-01
43814.91	2.34E+01	1.99E+02	1.99E+02	0.444	0.628	1.217E+01	5.071E-01
43853.03	2.34E+01	1.99E+02	1.99E+02	0.444	0.628	1.218E+01	5.076E-01
43890.53	2.34E+01	1.99E+02	1.99E+02	0.444	0.628	1.219E+01	5.080E-01
43928.03	2.34E+01	1.99E+02	1.99E+02	0.444	0.628	1.220E+01	5.084E-01
43965.97	2.34E+01	1.99E+02	1.99E+02	0.444	0.628	1.221E+01	5.089E-01
44003.97	2.34E+01	1.99E+02	1.99E+02	0.444	0.628	1.222E+01	5.093E-01
44041.84	2.34E+01	1.99E+02	1.99E+02	0.444	0.628	1.223E+01	5.097E-01
44079.72	2.34E+01	1.99E+02	1.99E+02	0.444	0.628	1.224E+01	5.102E-01
44118.09	2.34E+01	1.99E+02	1.99E+02	0.444	0.628	1.226E+01	5.106E-01
44155.59	2.34E+01	1.99E+02	1.99E+02	0.444	0.628	1.227E+01	5.111E-01
44194.09	2.34E+01	1.99E+02	1.99E+02	0.444	0.628	1.228E+01	5.115E-01
44231.84	2.34E+01	1.99E+02	1.99E+02	0.444	0.628	1.229E+01	5.119E-01
44269.34	2.34E+01	1.99E+02	1.99E+02	0.444	0.627	1.230E+01	5.124E-01
44307.84	2.34E+01	1.99E+02	1.99E+02	0.444	0.627	1.231E+01	5.128E-01
44345.34	2.34E+01	1.99E+02	1.99E+02	0.444	0.627	1.232E+01	5.133E-01
44382.84	2.34E+01	1.99E+02	1.99E+02	0.443	0.627	1.233E+01	5.137E-01
44420.59	2.34E+01	1.99E+02	1.99E+02	0.443	0.627	1.234E+01	5.141E-01
44458.66	2.34E+01	1.99E+02	1.99E+02	0.444	0.627	1.235E+01	5.146E-01
44496.91	2.34E+01	1.99E+02	1.99E+02	0.444	0.627	1.236E+01	5.150E-01
44534.91	2.34E+01	1.99E+02	1.99E+02	0.444	0.627	1.237E+01	5.155E-01
44573.28	2.34E+01	1.99E+02	1.99E+02	0.443	0.627	1.238E+01	5.159E-01
44610.91	2.34E+01	1.99E+02	1.99E+02	0.443	0.627	1.239E+01	5.163E-01
44648.78	2.34E+01	1.99E+02	1.99E+02	0.443	0.627	1.240E+01	5.168E-01
44686.28	2.34E+01	1.99E+02	1.99E+02	0.443	0.627	1.241E+01	5.172E-01
44724.16	2.33E+01	1.99E+02	1.99E+02	0.443	0.627	1.242E+01	5.176E-01

SHEX-05A LGS SIL-636 CONT DBA-LOCA ANAL K=305
 Leak Rates proportional to square root of ratio of the time

44 PC Leak Test Pressure (psig)
 22 MSIV Leak Test Pressure (psig)

TIME	dependent delta P divided by the test delta P			PC Leak Fraction of Design Basis	MSIV Leak Fraction of Design Basis	Time (hours)	Time (days)
	DW PRESS (PSIA)	DW TEMP (F)	SP TEMP (F)				
44762.16	2.33E+01	1.99E+02	1.99E+02	0.443	0.627	1.243E+01	5.181E-01
44800.03	2.33E+01	1.99E+02	1.99E+02	0.443	0.627	1.244E+01	5.185E-01
44837.91	2.33E+01	1.99E+02	1.99E+02	0.443	0.627	1.245E+01	5.190E-01
44875.78	2.33E+01	1.99E+02	1.99E+02	0.443	0.626	1.247E+01	5.194E-01
44913.28	2.33E+01	1.99E+02	1.99E+02	0.443	0.626	1.248E+01	5.198E-01
44950.72	2.33E+01	1.99E+02	1.99E+02	0.443	0.627	1.249E+01	5.203E-01
44988.34	2.33E+01	1.98E+02	1.99E+02	0.443	0.626	1.250E+01	5.207E-01
45025.97	2.33E+01	1.98E+02	1.99E+02	0.443	0.626	1.251E+01	5.211E-01
45063.47	2.33E+01	1.98E+02	1.99E+02	0.443	0.626	1.252E+01	5.216E-01
45101.34	2.33E+01	1.98E+02	1.99E+02	0.443	0.626	1.253E+01	5.220E-01
45139.09	2.33E+01	1.98E+02	1.99E+02	0.443	0.626	1.254E+01	5.224E-01
45177.09	2.33E+01	1.98E+02	1.99E+02	0.443	0.626	1.255E+01	5.229E-01
45214.59	2.33E+01	1.98E+02	1.99E+02	0.443	0.626	1.256E+01	5.233E-01
45252.34	2.33E+01	1.98E+02	1.99E+02	0.443	0.626	1.257E+01	5.238E-01
45290.34	2.33E+01	1.98E+02	1.99E+02	0.442	0.626	1.258E+01	5.242E-01
45328.09	2.33E+01	1.98E+02	1.99E+02	0.442	0.626	1.259E+01	5.246E-01
45365.59	2.33E+01	1.98E+02	1.99E+02	0.442	0.626	1.260E+01	5.251E-01
45403.34	2.33E+01	1.98E+02	1.99E+02	0.442	0.626	1.261E+01	5.255E-01
45441.53	2.33E+01	1.98E+02	1.99E+02	0.442	0.626	1.262E+01	5.259E-01
45479.53	2.33E+01	1.98E+02	1.99E+02	0.442	0.626	1.263E+01	5.264E-01
45517.16	2.33E+01	1.98E+02	1.99E+02	0.442	0.626	1.264E+01	5.268E-01
45555.16	2.33E+01	1.98E+02	1.99E+02	0.442	0.626	1.265E+01	5.273E-01
45592.78	2.33E+01	1.98E+02	1.99E+02	0.442	0.625	1.266E+01	5.277E-01
45630.53	2.33E+01	1.98E+02	1.99E+02	0.442	0.625	1.268E+01	5.281E-01
45668.41	2.33E+01	1.98E+02	1.99E+02	0.442	0.625	1.269E+01	5.286E-01
45705.91	2.33E+01	1.98E+02	1.99E+02	0.442	0.625	1.270E+01	5.290E-01
45744.53	2.33E+01	1.98E+02	1.99E+02	0.442	0.625	1.271E+01	5.295E-01
45782.53	2.33E+01	1.98E+02	1.99E+02	0.442	0.625	1.272E+01	5.299E-01
45820.41	2.33E+01	1.98E+02	1.99E+02	0.442	0.625	1.273E+01	5.303E-01
45858.03	2.33E+01	1.98E+02	1.99E+02	0.442	0.625	1.274E+01	5.308E-01
45895.53	2.33E+01	1.98E+02	1.99E+02	0.442	0.624	1.275E+01	5.312E-01
45934.09	2.33E+01	1.98E+02	1.99E+02	0.442	0.625	1.276E+01	5.316E-01
45971.97	2.33E+01	1.98E+02	1.99E+02	0.442	0.625	1.277E+01	5.321E-01
46010.22	2.33E+01	1.98E+02	1.99E+02	0.442	0.624	1.278E+01	5.325E-01
46047.97	2.33E+01	1.98E+02	1.99E+02	0.442	0.624	1.279E+01	5.330E-01
46086.59	2.33E+01	1.98E+02	1.99E+02	0.442	0.624	1.280E+01	5.334E-01
46124.72	2.33E+01	1.98E+02	1.99E+02	0.442	0.624	1.281E+01	5.339E-01
46162.34	2.33E+01	1.98E+02	1.99E+02	0.441	0.624	1.282E+01	5.343E-01
46200.22	2.33E+01	1.98E+02	1.99E+02	0.441	0.624	1.283E+01	5.347E-01
46238.22	2.33E+01	1.98E+02	1.99E+02	0.441	0.624	1.284E+01	5.352E-01
46276.09	2.33E+01	1.98E+02	1.99E+02	0.441	0.624	1.285E+01	5.356E-01
46313.59	2.33E+01	1.98E+02	1.99E+02	0.441	0.624	1.286E+01	5.360E-01
46352.09	2.33E+01	1.98E+02	1.99E+02	0.441	0.624	1.288E+01	5.365E-01
46390.16	2.33E+01	1.98E+02	1.99E+02	0.441	0.624	1.289E+01	5.369E-01
46428.41	2.33E+01	1.98E+02	1.99E+02	0.441	0.624	1.290E+01	5.374E-01
46466.91	2.33E+01	1.98E+02	1.99E+02	0.441	0.624	1.291E+01	5.378E-01
46505.16	2.33E+01	1.98E+02	1.99E+02	0.441	0.624	1.292E+01	5.383E-01
46542.78	2.33E+01	1.98E+02	1.99E+02	0.441	0.624	1.293E+01	5.387E-01
46581.03	2.33E+01	1.98E+02	1.99E+02	0.441	0.624	1.294E+01	5.391E-01
46618.53	2.33E+01	1.98E+02	1.99E+02	0.441	0.623	1.295E+01	5.396E-01
46656.66	2.33E+01	1.98E+02	1.99E+02	0.441	0.623	1.296E+01	5.400E-01
46694.66	2.33E+01	1.98E+02	1.99E+02	0.441	0.623	1.297E+01	5.404E-01

SHEX-05A LGS SIL-636 CONT DBA-LOCA ANAL K=305
 Leak Rates proportional to square root of ratio of the time

44 PC Leak Test Pressure (psig)
 22 MSIV Leak Test Pressure (psig)

TIME	dependent delta P divided by the test delta P			PC Leak Fraction of Design Basis	MSIV Leak Fraction of Design Basis	Time (hours)	Time (days)
	DW PRESS (PSIA)	DW TEMP (F)	SP TEMP (F)				
46733.28	2.32E+01	1.98E+02	1.99E+02	0.441	0.623	1.298E+01	5.409E-01
46771.41	2.32E+01	1.98E+02	1.99E+02	0.441	0.623	1.299E+01	5.413E-01
46808.91	2.32E+01	1.98E+02	1.99E+02	0.441	0.623	1.300E+01	5.418E-01
46846.91	2.32E+01	1.98E+02	1.99E+02	0.441	0.623	1.301E+01	5.422E-01
46884.97	2.32E+01	1.98E+02	1.99E+02	0.441	0.623	1.302E+01	5.427E-01
46922.97	2.32E+01	1.98E+02	1.99E+02	0.441	0.623	1.303E+01	5.431E-01
46960.47	2.32E+01	1.98E+02	1.99E+02	0.441	0.623	1.304E+01	5.435E-01
46998.47	2.32E+01	1.98E+02	1.98E+02	0.441	0.623	1.306E+01	5.440E-01
47036.84	2.32E+01	1.98E+02	1.98E+02	0.440	0.623	1.307E+01	5.444E-01
47074.59	2.32E+01	1.98E+02	1.98E+02	0.440	0.623	1.308E+01	5.448E-01
47112.34	2.32E+01	1.98E+02	1.98E+02	0.440	0.623	1.309E+01	5.453E-01
47149.97	2.32E+01	1.98E+02	1.98E+02	0.440	0.623	1.310E+01	5.457E-01
47187.84	2.32E+01	1.98E+02	1.98E+02	0.440	0.623	1.311E+01	5.462E-01
47225.59	2.32E+01	1.98E+02	1.98E+02	0.440	0.622	1.312E+01	5.466E-01
47263.59	2.32E+01	1.98E+02	1.98E+02	0.440	0.622	1.313E+01	5.470E-01
47301.59	2.32E+01	1.98E+02	1.98E+02	0.440	0.622	1.314E+01	5.475E-01
47339.41	2.32E+01	1.98E+02	1.98E+02	0.440	0.623	1.315E+01	5.479E-01
47377.66	2.32E+01	1.98E+02	1.98E+02	0.440	0.622	1.316E+01	5.484E-01
47415.16	2.32E+01	1.98E+02	1.98E+02	0.440	0.622	1.317E+01	5.488E-01
47452.78	2.32E+01	1.98E+02	1.98E+02	0.440	0.622	1.318E+01	5.492E-01
47490.66	2.32E+01	1.98E+02	1.98E+02	0.440	0.622	1.319E+01	5.497E-01
47528.66	2.32E+01	1.98E+02	1.98E+02	0.440	0.622	1.320E+01	5.501E-01
47566.41	2.32E+01	1.98E+02	1.98E+02	0.440	0.622	1.321E+01	5.505E-01
47604.66	2.32E+01	1.98E+02	1.98E+02	0.440	0.622	1.322E+01	5.510E-01
47642.16	2.32E+01	1.98E+02	1.98E+02	0.440	0.622	1.323E+01	5.514E-01
47680.28	2.32E+01	1.98E+02	1.98E+02	0.440	0.622	1.324E+01	5.519E-01
47718.16	2.32E+01	1.98E+02	1.98E+02	0.440	0.622	1.326E+01	5.523E-01
47755.66	2.32E+01	1.98E+02	1.98E+02	0.440	0.622	1.327E+01	5.527E-01
47793.78	2.32E+01	1.98E+02	1.98E+02	0.439	0.621	1.328E+01	5.532E-01
47831.09	2.32E+01	1.98E+02	1.98E+02	0.440	0.622	1.329E+01	5.536E-01
47868.59	2.32E+01	1.98E+02	1.98E+02	0.440	0.622	1.330E+01	5.540E-01
47907.22	2.32E+01	1.98E+02	1.98E+02	0.440	0.622	1.331E+01	5.545E-01
47945.09	2.32E+01	1.98E+02	1.98E+02	0.439	0.621	1.332E+01	5.549E-01
47982.72	2.32E+01	1.98E+02	1.98E+02	0.439	0.621	1.333E+01	5.554E-01
48020.84	2.32E+01	1.98E+02	1.98E+02	0.439	0.621	1.334E+01	5.558E-01
48058.47	2.32E+01	1.98E+02	1.98E+02	0.439	0.621	1.335E+01	5.562E-01
48095.97	2.32E+01	1.98E+02	1.98E+02	0.439	0.621	1.336E+01	5.567E-01
48133.59	2.32E+01	1.98E+02	1.98E+02	0.439	0.621	1.337E+01	5.571E-01
48171.22	2.32E+01	1.98E+02	1.98E+02	0.439	0.621	1.338E+01	5.575E-01
48208.84	2.32E+01	1.98E+02	1.98E+02	0.439	0.620	1.339E+01	5.580E-01
48246.59	2.32E+01	1.98E+02	1.98E+02	0.439	0.620	1.340E+01	5.584E-01
48284.47	2.32E+01	1.98E+02	1.98E+02	0.439	0.620	1.341E+01	5.588E-01
48322.72	2.32E+01	1.98E+02	1.98E+02	0.439	0.620	1.342E+01	5.593E-01
48360.91	2.32E+01	1.98E+02	1.98E+02	0.439	0.621	1.343E+01	5.597E-01
48398.66	2.32E+01	1.98E+02	1.98E+02	0.439	0.620	1.344E+01	5.602E-01
48437.78	2.32E+01	1.98E+02	1.98E+02	0.439	0.620	1.345E+01	5.606E-01
48475.53	2.32E+01	1.98E+02	1.98E+02	0.439	0.620	1.347E+01	5.611E-01
48513.53	2.32E+01	1.98E+02	1.98E+02	0.438	0.620	1.348E+01	5.615E-01
48551.28	2.32E+01	1.98E+02	1.98E+02	0.438	0.620	1.349E+01	5.619E-01
48589.41	2.32E+01	1.97E+02	1.98E+02	0.438	0.620	1.350E+01	5.624E-01
48627.16	2.32E+01	1.97E+02	1.98E+02	0.438	0.620	1.351E+01	5.628E-01
48664.78	2.32E+01	1.97E+02	1.98E+02	0.438	0.620	1.352E+01	5.632E-01

SHEX-05A LGS SIL-636 CONT DBA-LOCA ANAL K=305
 Leak Rates proportional to square root of ratio of the time

44 PC Leak Test Pressure (psig)
 22 MSIV Leak Test Pressure (psig)

TIME	dependent delta P divided by the test delta P			PC Leak Fraction of Design Basis	MSIV Leak Fraction of Design Basis	Time (hours)	Time (days)
	DW PRESS (PSIA)	DW TEMP (F)	SP TEMP (F)				
48702.66	2.32E+01	1.97E+02	1.98E+02	0.438	0.620	1.353E+01	5.637E-01
48740.53	2.32E+01	1.97E+02	1.98E+02	0.438	0.620	1.354E+01	5.641E-01
48778.66	2.32E+01	1.97E+02	1.98E+02	0.438	0.620	1.355E+01	5.646E-01
48815.97	2.32E+01	1.97E+02	1.98E+02	0.438	0.620	1.356E+01	5.650E-01
48853.72	2.32E+01	1.97E+02	1.98E+02	0.438	0.620	1.357E+01	5.654E-01
48891.97	2.32E+01	1.97E+02	1.98E+02	0.438	0.620	1.358E+01	5.659E-01
48929.97	2.31E+01	1.97E+02	1.98E+02	0.438	0.619	1.359E+01	5.663E-01
48967.72	2.31E+01	1.97E+02	1.98E+02	0.438	0.619	1.360E+01	5.668E-01
49006.47	2.31E+01	1.97E+02	1.98E+02	0.438	0.619	1.361E+01	5.672E-01
49044.72	2.31E+01	1.97E+02	1.98E+02	0.438	0.619	1.362E+01	5.676E-01
49082.84	2.31E+01	1.97E+02	1.98E+02	0.438	0.619	1.363E+01	5.681E-01
49121.22	2.31E+01	1.97E+02	1.98E+02	0.438	0.619	1.364E+01	5.685E-01
49158.72	2.31E+01	1.97E+02	1.98E+02	0.438	0.619	1.366E+01	5.690E-01
49196.22	2.31E+01	1.97E+02	1.98E+02	0.438	0.619	1.367E+01	5.694E-01
49235.22	2.31E+01	1.97E+02	1.98E+02	0.438	0.619	1.368E+01	5.699E-01
49273.34	2.31E+01	1.97E+02	1.98E+02	0.437	0.619	1.369E+01	5.703E-01
49310.66	2.31E+01	1.97E+02	1.98E+02	0.438	0.619	1.370E+01	5.707E-01
49348.28	2.31E+01	1.97E+02	1.98E+02	0.438	0.619	1.371E+01	5.712E-01
49386.03	2.31E+01	1.97E+02	1.98E+02	0.437	0.619	1.372E+01	5.716E-01
49423.91	2.31E+01	1.97E+02	1.98E+02	0.437	0.619	1.373E+01	5.720E-01
49461.53	2.31E+01	1.97E+02	1.98E+02	0.437	0.619	1.374E+01	5.725E-01
49499.16	2.31E+01	1.97E+02	1.98E+02	0.437	0.619	1.375E+01	5.729E-01
49536.66	2.31E+01	1.97E+02	1.98E+02	0.437	0.619	1.376E+01	5.733E-01
49574.53	2.31E+01	1.97E+02	1.98E+02	0.437	0.618	1.377E+01	5.738E-01
49612.41	2.31E+01	1.97E+02	1.98E+02	0.437	0.618	1.378E+01	5.742E-01
49650.16	2.31E+01	1.97E+02	1.98E+02	0.437	0.618	1.379E+01	5.747E-01
49687.78	2.31E+01	1.97E+02	1.98E+02	0.437	0.618	1.380E+01	5.751E-01
49725.41	2.31E+01	1.97E+02	1.98E+02	0.437	0.618	1.381E+01	5.755E-01
49762.91	2.31E+01	1.97E+02	1.98E+02	0.437	0.618	1.382E+01	5.760E-01
49800.72	2.31E+01	1.97E+02	1.98E+02	0.437	0.618	1.383E+01	5.764E-01
49838.47	2.31E+01	1.97E+02	1.98E+02	0.437	0.618	1.384E+01	5.768E-01
49875.97	2.31E+01	1.97E+02	1.98E+02	0.437	0.618	1.385E+01	5.773E-01
49913.97	2.31E+01	1.97E+02	1.98E+02	0.437	0.618	1.386E+01	5.777E-01
49951.84	2.31E+01	1.97E+02	1.98E+02	0.437	0.618	1.388E+01	5.781E-01
49989.84	2.31E+01	1.97E+02	1.98E+02	0.437	0.618	1.389E+01	5.786E-01
50027.97	2.31E+01	1.97E+02	1.98E+02	0.437	0.618	1.390E+01	5.790E-01
50065.84	2.31E+01	1.97E+02	1.98E+02	0.437	0.618	1.391E+01	5.795E-01
50103.72	2.31E+01	1.97E+02	1.98E+02	0.437	0.618	1.392E+01	5.799E-01
50142.59	2.31E+01	1.97E+02	1.98E+02	0.436	0.617	1.393E+01	5.804E-01
50180.22	2.31E+01	1.97E+02	1.98E+02	0.436	0.617	1.394E+01	5.808E-01
50217.72	2.31E+01	1.97E+02	1.98E+02	0.436	0.617	1.395E+01	5.812E-01
50255.84	2.31E+01	1.97E+02	1.98E+02	0.436	0.617	1.396E+01	5.817E-01
50293.41	2.31E+01	1.97E+02	1.98E+02	0.436	0.617	1.397E+01	5.821E-01
50331.41	2.31E+01	1.97E+02	1.98E+02	0.436	0.617	1.398E+01	5.825E-01
50369.41	2.31E+01	1.97E+02	1.98E+02	0.436	0.617	1.399E+01	5.830E-01
50407.66	2.31E+01	1.97E+02	1.98E+02	0.436	0.617	1.400E+01	5.834E-01
50445.16	2.31E+01	1.97E+02	1.98E+02	0.436	0.617	1.401E+01	5.839E-01
50482.66	2.31E+01	1.97E+02	1.98E+02	0.436	0.617	1.402E+01	5.843E-01
50520.91	2.31E+01	1.97E+02	1.98E+02	0.436	0.617	1.403E+01	5.847E-01
50558.66	2.31E+01	1.97E+02	1.97E+02	0.436	0.616	1.404E+01	5.852E-01
50597.03	2.31E+01	1.97E+02	1.97E+02	0.436	0.616	1.405E+01	5.856E-01
50634.91	2.31E+01	1.97E+02	1.97E+02	0.436	0.616	1.407E+01	5.861E-01

SHEX-05A LGS SIL-636 CONT DBA-LOCA ANAL K=305
 Leak Rates proportional to square root of ratio of the time

44 PC Leak Test Pressure (psig)
 22 MSIV Leak Test Pressure (psig)

TIME	dependent delta P divided by the test delta P				PC Leak Fraction of Design Basis	MSIV Leak Fraction of Design Basis	Time (hours)	Time (days)
	DW PRESS (PSIA)	DW TEMP (F)	SP TEMP (F)					
50672.41	2.31E+01	1.97E+02	1.97E+02	0.436	0.616	1.408E+01	5.865E-01	
50710.41	2.31E+01	1.97E+02	1.97E+02	0.436	0.616	1.409E+01	5.869E-01	
50748.53	2.31E+01	1.97E+02	1.97E+02	0.436	0.616	1.410E+01	5.874E-01	
50786.09	2.31E+01	1.97E+02	1.97E+02	0.436	0.616	1.411E+01	5.878E-01	
50824.59	2.31E+01	1.97E+02	1.97E+02	0.436	0.616	1.412E+01	5.882E-01	
50862.72	2.31E+01	1.97E+02	1.97E+02	0.436	0.616	1.413E+01	5.887E-01	
50901.34	2.31E+01	1.97E+02	1.97E+02	0.436	0.616	1.414E+01	5.891E-01	
50939.84	2.31E+01	1.97E+02	1.97E+02	0.436	0.616	1.415E+01	5.896E-01	
50978.22	2.30E+01	1.97E+02	1.97E+02	0.435	0.616	1.416E+01	5.900E-01	
51016.47	2.30E+01	1.97E+02	1.97E+02	0.435	0.616	1.417E+01	5.905E-01	
51053.97	2.30E+01	1.97E+02	1.97E+02	0.435	0.616	1.418E+01	5.909E-01	
51091.59	2.30E+01	1.97E+02	1.97E+02	0.435	0.616	1.419E+01	5.913E-01	
51129.22	2.30E+01	1.97E+02	1.97E+02	0.435	0.615	1.420E+01	5.918E-01	
51167.47	2.30E+01	1.97E+02	1.97E+02	0.435	0.615	1.421E+01	5.922E-01	
51205.34	2.30E+01	1.97E+02	1.97E+02	0.435	0.615	1.422E+01	5.927E-01	
51243.16	2.30E+01	1.97E+02	1.97E+02	0.435	0.616	1.423E+01	5.931E-01	
51280.66	2.30E+01	1.97E+02	1.97E+02	0.435	0.615	1.424E+01	5.935E-01	
51318.91	2.30E+01	1.97E+02	1.97E+02	0.435	0.615	1.426E+01	5.940E-01	
51356.41	2.30E+01	1.97E+02	1.97E+02	0.435	0.615	1.427E+01	5.944E-01	
51394.03	2.30E+01	1.97E+02	1.97E+02	0.435	0.615	1.428E+01	5.948E-01	
51431.66	2.30E+01	1.97E+02	1.97E+02	0.435	0.615	1.429E+01	5.953E-01	
51469.53	2.30E+01	1.97E+02	1.97E+02	0.435	0.615	1.430E+01	5.957E-01	
51508.03	2.30E+01	1.97E+02	1.97E+02	0.435	0.615	1.431E+01	5.962E-01	
51546.41	2.30E+01	1.97E+02	1.97E+02	0.435	0.615	1.432E+01	5.966E-01	
51584.03	2.30E+01	1.97E+02	1.97E+02	0.435	0.615	1.433E+01	5.970E-01	
51621.53	2.30E+01	1.97E+02	1.97E+02	0.435	0.615	1.434E+01	5.975E-01	
51659.53	2.30E+01	1.97E+02	1.97E+02	0.435	0.615	1.435E+01	5.979E-01	
51697.66	2.30E+01	1.97E+02	1.97E+02	0.435	0.615	1.436E+01	5.984E-01	
51735.59	2.30E+01	1.97E+02	1.97E+02	0.435	0.615	1.437E+01	5.988E-01	
51773.34	2.30E+01	1.97E+02	1.97E+02	0.435	0.615	1.438E+01	5.992E-01	
51811.09	2.30E+01	1.97E+02	1.97E+02	0.435	0.615	1.439E+01	5.997E-01	
51848.59	2.30E+01	1.97E+02	1.97E+02	0.434	0.614	1.440E+01	6.001E-01	
51887.09	2.30E+01	1.97E+02	1.97E+02	0.434	0.614	1.441E+01	6.005E-01	
51925.72	2.30E+01	1.97E+02	1.97E+02	0.434	0.614	1.442E+01	6.010E-01	
51963.34	2.30E+01	1.97E+02	1.97E+02	0.434	0.614	1.443E+01	6.014E-01	
52001.22	2.30E+01	1.97E+02	1.97E+02	0.434	0.614	1.444E+01	6.019E-01	
52039.22	2.30E+01	1.97E+02	1.97E+02	0.434	0.614	1.446E+01	6.023E-01	
52077.09	2.30E+01	1.96E+02	1.97E+02	0.434	0.614	1.447E+01	6.027E-01	
52114.72	2.30E+01	1.96E+02	1.97E+02	0.434	0.614	1.448E+01	6.032E-01	
52152.22	2.30E+01	1.96E+02	1.97E+02	0.434	0.613	1.449E+01	6.036E-01	
52189.97	2.30E+01	1.96E+02	1.97E+02	0.434	0.613	1.450E+01	6.041E-01	
52227.53	2.30E+01	1.96E+02	1.97E+02	0.434	0.614	1.451E+01	6.045E-01	
52265.91	2.30E+01	1.96E+02	1.97E+02	0.434	0.613	1.452E+01	6.049E-01	
52303.41	2.30E+01	1.96E+02	1.97E+02	0.434	0.613	1.453E+01	6.054E-01	
52340.91	2.30E+01	1.96E+02	1.97E+02	0.434	0.613	1.454E+01	6.058E-01	
52378.66	2.30E+01	1.96E+02	1.97E+02	0.434	0.613	1.455E+01	6.062E-01	
52416.53	2.30E+01	1.96E+02	1.97E+02	0.434	0.613	1.456E+01	6.067E-01	
52454.53	2.30E+01	1.96E+02	1.97E+02	0.434	0.613	1.457E+01	6.071E-01	
52492.16	2.30E+01	1.96E+02	1.97E+02	0.434	0.613	1.458E+01	6.075E-01	
52529.78	2.30E+01	1.96E+02	1.97E+02	0.434	0.613	1.459E+01	6.080E-01	
52567.78	2.30E+01	1.96E+02	1.97E+02	0.434	0.613	1.460E+01	6.084E-01	
52605.78	2.30E+01	1.96E+02	1.97E+02	0.433	0.613	1.461E+01	6.089E-01	

Leak Rates proportional to square root of ratio of the time

22 MSIV Leak Test Pressure (psig)

TIME	dependent delta P divided by the test delta P			PC Leak Fraction of Design Basis	MSIV Leak Fraction of Design Basis	Time (hours)	Time (days)
	DW PRESS (PSIA)	DW TEMP (F)	SP TEMP (F)				
52643.28	2.30E+01	1.96E+02	1.97E+02	0.433	0.613	1.462E+01	6.093E-01
52681.78	2.30E+01	1.96E+02	1.97E+02	0.433	0.613	1.463E+01	6.097E-01
52719.47	2.30E+01	1.96E+02	1.97E+02	0.433	0.613	1.464E+01	6.102E-01
52758.34	2.30E+01	1.96E+02	1.97E+02	0.433	0.613	1.466E+01	6.106E-01
52796.09	2.30E+01	1.96E+02	1.97E+02	0.433	0.613	1.467E+01	6.111E-01
52833.97	2.30E+01	1.96E+02	1.97E+02	0.433	0.613	1.468E+01	6.115E-01
52871.84	2.30E+01	1.96E+02	1.97E+02	0.433	0.612	1.469E+01	6.119E-01
52910.09	2.30E+01	1.96E+02	1.97E+02	0.433	0.612	1.470E+01	6.124E-01
52948.09	2.30E+01	1.96E+02	1.97E+02	0.433	0.612	1.471E+01	6.128E-01
52985.59	2.30E+01	1.96E+02	1.97E+02	0.433	0.612	1.472E+01	6.133E-01
53023.72	2.29E+01	1.96E+02	1.97E+02	0.433	0.612	1.473E+01	6.137E-01
53061.97	2.29E+01	1.96E+02	1.97E+02	0.433	0.612	1.474E+01	6.141E-01
53099.59	2.29E+01	1.96E+02	1.97E+02	0.433	0.612	1.475E+01	6.146E-01
53137.09	2.29E+01	1.96E+02	1.97E+02	0.432	0.612	1.476E+01	6.150E-01
53174.78	2.29E+01	1.96E+02	1.97E+02	0.433	0.612	1.477E+01	6.154E-01
53212.41	2.29E+01	1.96E+02	1.97E+02	0.433	0.612	1.478E+01	6.159E-01
53251.03	2.29E+01	1.96E+02	1.97E+02	0.432	0.612	1.479E+01	6.163E-01
53288.53	2.29E+01	1.96E+02	1.97E+02	0.432	0.612	1.480E+01	6.168E-01
53326.41	2.29E+01	1.96E+02	1.97E+02	0.432	0.612	1.481E+01	6.172E-01
53364.41	2.29E+01	1.96E+02	1.97E+02	0.432	0.612	1.482E+01	6.176E-01
53402.28	2.29E+01	1.96E+02	1.97E+02	0.432	0.612	1.483E+01	6.181E-01
53440.41	2.29E+01	1.96E+02	1.97E+02	0.432	0.611	1.484E+01	6.185E-01
53478.03	2.29E+01	1.96E+02	1.97E+02	0.432	0.611	1.486E+01	6.190E-01
53516.28	2.29E+01	1.96E+02	1.97E+02	0.432	0.611	1.487E+01	6.194E-01
53554.53	2.29E+01	1.96E+02	1.97E+02	0.432	0.611	1.488E+01	6.198E-01
53592.41	2.29E+01	1.96E+02	1.97E+02	0.432	0.611	1.489E+01	6.203E-01
53629.84	2.29E+01	1.96E+02	1.97E+02	0.432	0.611	1.490E+01	6.207E-01
53667.72	2.29E+01	1.96E+02	1.97E+02	0.432	0.611	1.491E+01	6.212E-01
53705.59	2.29E+01	1.96E+02	1.97E+02	0.432	0.611	1.492E+01	6.216E-01
53744.72	2.29E+01	1.96E+02	1.97E+02	0.432	0.611	1.493E+01	6.220E-01
53782.97	2.29E+01	1.96E+02	1.97E+02	0.432	0.611	1.494E+01	6.225E-01
53821.47	2.29E+01	1.96E+02	1.97E+02	0.432	0.611	1.495E+01	6.229E-01
53858.97	2.29E+01	1.96E+02	1.97E+02	0.432	0.611	1.496E+01	6.234E-01
53896.47	2.29E+01	1.96E+02	1.97E+02	0.432	0.611	1.497E+01	6.238E-01
53933.97	2.29E+01	1.96E+02	1.97E+02	0.432	0.611	1.498E+01	6.242E-01
53972.22	2.29E+01	1.96E+02	1.97E+02	0.431	0.610	1.499E+01	6.247E-01
54009.97	2.29E+01	1.96E+02	1.97E+02	0.431	0.610	1.500E+01	6.251E-01
54047.84	2.29E+01	1.96E+02	1.96E+02	0.431	0.610	1.501E+01	6.256E-01
54085.41	2.29E+01	1.96E+02	1.96E+02	0.432	0.611	1.502E+01	6.260E-01
54123.03	2.29E+01	1.96E+02	1.96E+02	0.432	0.611	1.503E+01	6.264E-01
54160.66	2.29E+01	1.96E+02	1.96E+02	0.431	0.610	1.504E+01	6.269E-01
54198.53	2.29E+01	1.96E+02	1.96E+02	0.431	0.610	1.506E+01	6.273E-01
54236.66	2.29E+01	1.96E+02	1.96E+02	0.431	0.610	1.507E+01	6.277E-01
54275.03	2.29E+01	1.96E+02	1.96E+02	0.431	0.610	1.508E+01	6.282E-01
54312.53	2.29E+01	1.96E+02	1.96E+02	0.431	0.610	1.509E+01	6.286E-01
54350.78	2.29E+01	1.96E+02	1.96E+02	0.431	0.610	1.510E+01	6.291E-01
54388.78	2.29E+01	1.96E+02	1.96E+02	0.431	0.610	1.511E+01	6.295E-01
54426.78	2.29E+01	1.96E+02	1.96E+02	0.431	0.609	1.512E+01	6.299E-01
54464.78	2.29E+01	1.96E+02	1.96E+02	0.431	0.609	1.513E+01	6.304E-01
54502.41	2.29E+01	1.96E+02	1.96E+02	0.431	0.609	1.514E+01	6.308E-01
54540.03	2.29E+01	1.96E+02	1.96E+02	0.431	0.609	1.515E+01	6.313E-01
54577.34	2.29E+01	1.96E+02	1.96E+02	0.431	0.609	1.516E+01	6.317E-01

SHEX-05A LGS SIL-636 CONT DBA-LOCA ANAL K=305

44 PC Leak Test Pressure (psig)

Leak Rates proportional to square root of ratio of the time

22 MSIV Leak Test Pressure (psig)

TIME	dependent delta P divided by the test delta P			PC Leak Fraction of Design Basis	MSIV Leak Fraction of Design Basis	Time (hours)	Time (days)
	DW PRESS (PSIA)	DW TEMP (F)	SP TEMP (F)				
54614.97	2.29E+01	1.96E+02	1.96E+02	0.431	0.609	1.517E+01	6.321E-01
54653.22	2.29E+01	1.96E+02	1.96E+02	0.431	0.609	1.518E+01	6.326E-01
54691.34	2.29E+01	1.96E+02	1.96E+02	0.431	0.609	1.519E+01	6.330E-01
54729.22	2.29E+01	1.96E+02	1.96E+02	0.431	0.609	1.520E+01	6.334E-01
54767.22	2.29E+01	1.96E+02	1.96E+02	0.431	0.609	1.521E+01	6.339E-01
54806.59	2.29E+01	1.96E+02	1.96E+02	0.431	0.609	1.522E+01	6.343E-01
54844.59	2.29E+01	1.96E+02	1.96E+02	0.430	0.609	1.523E+01	6.348E-01
54882.34	2.29E+01	1.96E+02	1.96E+02	0.430	0.609	1.525E+01	6.352E-01
54920.22	2.29E+01	1.96E+02	1.96E+02	0.430	0.609	1.526E+01	6.357E-01
54957.72	2.29E+01	1.96E+02	1.96E+02	0.430	0.609	1.527E+01	6.361E-01
54995.22	2.28E+01	1.96E+02	1.96E+02	0.430	0.608	1.528E+01	6.365E-01
55033.03	2.29E+01	1.96E+02	1.96E+02	0.430	0.609	1.529E+01	6.370E-01
55071.28	2.29E+01	1.96E+02	1.96E+02	0.430	0.609	1.530E+01	6.374E-01
55109.66	2.29E+01	1.96E+02	1.96E+02	0.430	0.609	1.531E+01	6.378E-01
55147.66	2.28E+01	1.96E+02	1.96E+02	0.430	0.608	1.532E+01	6.383E-01
55185.41	2.28E+01	1.96E+02	1.96E+02	0.430	0.608	1.533E+01	6.387E-01
55223.41	2.28E+01	1.96E+02	1.96E+02	0.430	0.608	1.534E+01	6.392E-01
55261.41	2.28E+01	1.96E+02	1.96E+02	0.430	0.608	1.535E+01	6.396E-01
55299.41	2.28E+01	1.96E+02	1.96E+02	0.430	0.608	1.536E+01	6.400E-01
55337.28	2.28E+01	1.96E+02	1.96E+02	0.430	0.608	1.537E+01	6.405E-01
55375.16	2.28E+01	1.96E+02	1.96E+02	0.430	0.608	1.538E+01	6.409E-01
55412.91	2.28E+01	1.95E+02	1.96E+02	0.430	0.608	1.539E+01	6.414E-01
55450.78	2.28E+01	1.95E+02	1.96E+02	0.430	0.608	1.540E+01	6.418E-01
55489.22	2.28E+01	1.95E+02	1.96E+02	0.430	0.608	1.541E+01	6.422E-01
55527.47	2.28E+01	1.95E+02	1.96E+02	0.430	0.608	1.542E+01	6.427E-01
55565.72	2.28E+01	1.95E+02	1.96E+02	0.430	0.608	1.543E+01	6.431E-01
55603.59	2.28E+01	1.95E+02	1.96E+02	0.430	0.608	1.545E+01	6.436E-01
55641.09	2.28E+01	1.95E+02	1.96E+02	0.430	0.608	1.546E+01	6.440E-01
55678.97	2.28E+01	1.95E+02	1.96E+02	0.429	0.607	1.547E+01	6.444E-01
55716.47	2.28E+01	1.95E+02	1.96E+02	0.429	0.607	1.548E+01	6.449E-01
55754.59	2.28E+01	1.95E+02	1.96E+02	0.429	0.607	1.549E+01	6.453E-01
55792.72	2.28E+01	1.95E+02	1.96E+02	0.429	0.607	1.550E+01	6.457E-01
55830.72	2.28E+01	1.95E+02	1.96E+02	0.429	0.607	1.551E+01	6.462E-01
55868.97	2.28E+01	1.95E+02	1.96E+02	0.429	0.607	1.552E+01	6.466E-01
55906.72	2.28E+01	1.95E+02	1.96E+02	0.429	0.607	1.553E+01	6.471E-01
55944.66	2.28E+01	1.95E+02	1.96E+02	0.429	0.607	1.554E+01	6.475E-01
55982.16	2.28E+01	1.95E+02	1.96E+02	0.429	0.607	1.555E+01	6.479E-01
56019.91	2.28E+01	1.95E+02	1.96E+02	0.429	0.607	1.556E+01	6.484E-01
56057.78	2.28E+01	1.95E+02	1.96E+02	0.429	0.607	1.557E+01	6.488E-01
56095.28	2.28E+01	1.95E+02	1.96E+02	0.429	0.606	1.558E+01	6.493E-01
56132.91	2.28E+01	1.95E+02	1.96E+02	0.429	0.606	1.559E+01	6.497E-01
56171.03	2.28E+01	1.95E+02	1.96E+02	0.429	0.606	1.560E+01	6.501E-01
56209.66	2.28E+01	1.95E+02	1.96E+02	0.429	0.606	1.561E+01	6.506E-01
56247.41	2.28E+01	1.95E+02	1.96E+02	0.429	0.606	1.562E+01	6.510E-01
56285.03	2.28E+01	1.95E+02	1.96E+02	0.429	0.606	1.563E+01	6.514E-01
56322.78	2.28E+01	1.95E+02	1.96E+02	0.429	0.606	1.565E+01	6.519E-01
56360.41	2.28E+01	1.95E+02	1.96E+02	0.428	0.606	1.566E+01	6.523E-01
56398.28	2.28E+01	1.95E+02	1.96E+02	0.428	0.606	1.567E+01	6.528E-01
56435.59	2.28E+01	1.95E+02	1.96E+02	0.429	0.606	1.568E+01	6.532E-01
56473.59	2.28E+01	1.95E+02	1.96E+02	0.429	0.606	1.569E+01	6.536E-01
56511.84	2.28E+01	1.95E+02	1.96E+02	0.428	0.606	1.570E+01	6.541E-01
56549.59	2.28E+01	1.95E+02	1.96E+02	0.428	0.606	1.571E+01	6.545E-01

SHEX-05A LGS SIL-636 CONT DBA-LOCA ANAL K=305
 Leak Rates proportional to square root of ratio of the time

44 PC Leak Test Pressure (psig)
 22 MSIV Leak Test Pressure (psig)

TIME	dependent delta P divided by the test delta P			PC Leak Fraction of Design Basis	MSIV Leak Fraction of Design Basis	Time (hours)	Time (days)
	DW PRESS (PSIA)	DW TEMP (F)	SP TEMP (F)				
56587.84	2.28E+01	1.95E+02	1.96E+02	0.428	0.606	1.572E+01	6.550E-01
56625.72	2.28E+01	1.95E+02	1.96E+02	0.428	0.606	1.573E+01	6.554E-01
56663.59	2.28E+01	1.95E+02	1.96E+02	0.428	0.605	1.574E+01	6.558E-01
56701.34	2.28E+01	1.95E+02	1.96E+02	0.428	0.605	1.575E+01	6.563E-01
56739.59	2.28E+01	1.95E+02	1.96E+02	0.428	0.605	1.576E+01	6.567E-01
56777.09	2.28E+01	1.95E+02	1.96E+02	0.428	0.605	1.577E+01	6.571E-01
56814.97	2.28E+01	1.95E+02	1.96E+02	0.428	0.605	1.578E+01	6.576E-01
56853.47	2.28E+01	1.95E+02	1.96E+02	0.428	0.605	1.579E+01	6.580E-01
56891.66	2.28E+01	1.95E+02	1.96E+02	0.428	0.605	1.580E+01	6.585E-01
56929.41	2.28E+01	1.95E+02	1.96E+02	0.428	0.605	1.581E+01	6.589E-01
56968.16	2.28E+01	1.95E+02	1.96E+02	0.428	0.605	1.582E+01	6.594E-01
57006.03	2.28E+01	1.95E+02	1.96E+02	0.428	0.605	1.584E+01	6.598E-01
57044.03	2.27E+01	1.95E+02	1.96E+02	0.427	0.605	1.585E+01	6.602E-01
57082.28	2.27E+01	1.95E+02	1.96E+02	0.427	0.605	1.586E+01	6.607E-01
57119.91	2.27E+01	1.95E+02	1.96E+02	0.427	0.605	1.587E+01	6.611E-01
57157.53	2.27E+01	1.95E+02	1.96E+02	0.427	0.605	1.588E+01	6.615E-01
57195.16	2.27E+01	1.95E+02	1.96E+02	0.427	0.604	1.589E+01	6.620E-01
57233.16	2.27E+01	1.95E+02	1.96E+02	0.427	0.604	1.590E+01	6.624E-01
57270.78	2.27E+01	1.95E+02	1.96E+02	0.427	0.604	1.591E+01	6.629E-01
57308.53	2.27E+01	1.95E+02	1.96E+02	0.427	0.604	1.592E+01	6.633E-01
57346.22	2.27E+01	1.95E+02	1.96E+02	0.427	0.604	1.593E+01	6.637E-01
57383.72	2.27E+01	1.95E+02	1.95E+02	0.427	0.604	1.594E+01	6.642E-01
57421.22	2.27E+01	1.95E+02	1.95E+02	0.427	0.604	1.595E+01	6.646E-01
57458.97	2.27E+01	1.95E+02	1.95E+02	0.427	0.604	1.596E+01	6.650E-01
57496.59	2.27E+01	1.95E+02	1.95E+02	0.427	0.604	1.597E+01	6.655E-01
57534.34	2.27E+01	1.95E+02	1.95E+02	0.427	0.604	1.598E+01	6.659E-01
57572.34	2.27E+01	1.95E+02	1.95E+02	0.427	0.604	1.599E+01	6.663E-01
57610.09	2.27E+01	1.95E+02	1.95E+02	0.427	0.603	1.600E+01	6.668E-01
57648.09	2.27E+01	1.95E+02	1.95E+02	0.427	0.603	1.601E+01	6.672E-01
57686.47	2.27E+01	1.95E+02	1.95E+02	0.427	0.603	1.602E+01	6.677E-01
57723.97	2.27E+01	1.95E+02	1.95E+02	0.427	0.603	1.603E+01	6.681E-01
57761.59	2.27E+01	1.95E+02	1.95E+02	0.426	0.603	1.604E+01	6.685E-01
57799.03	2.27E+01	1.95E+02	1.95E+02	0.427	0.603	1.606E+01	6.690E-01
57836.78	2.27E+01	1.95E+02	1.95E+02	0.427	0.603	1.607E+01	6.694E-01
57875.03	2.27E+01	1.95E+02	1.95E+02	0.426	0.603	1.608E+01	6.698E-01
57913.28	2.27E+01	1.95E+02	1.95E+02	0.426	0.603	1.609E+01	6.703E-01
57950.78	2.27E+01	1.95E+02	1.95E+02	0.426	0.603	1.610E+01	6.707E-01
57988.28	2.27E+01	1.95E+02	1.95E+02	0.426	0.603	1.611E+01	6.712E-01
58025.91	2.27E+01	1.95E+02	1.95E+02	0.426	0.603	1.612E+01	6.716E-01
58063.66	2.27E+01	1.95E+02	1.95E+02	0.426	0.603	1.613E+01	6.720E-01
58102.03	2.27E+01	1.95E+02	1.95E+02	0.426	0.603	1.614E+01	6.725E-01
58139.53	2.27E+01	1.95E+02	1.95E+02	0.426	0.602	1.615E+01	6.729E-01
58177.41	2.27E+01	1.95E+02	1.95E+02	0.426	0.602	1.616E+01	6.733E-01
58215.41	2.27E+01	1.95E+02	1.95E+02	0.426	0.602	1.617E+01	6.738E-01
58253.41	2.27E+01	1.95E+02	1.95E+02	0.426	0.602	1.618E+01	6.742E-01
58290.72	2.27E+01	1.95E+02	1.95E+02	0.426	0.602	1.619E+01	6.747E-01
58328.34	2.27E+01	1.95E+02	1.95E+02	0.426	0.602	1.620E+01	6.751E-01
58365.84	2.27E+01	1.95E+02	1.95E+02	0.426	0.602	1.621E+01	6.755E-01
58403.59	2.27E+01	1.95E+02	1.95E+02	0.426	0.602	1.622E+01	6.760E-01
58441.59	2.27E+01	1.95E+02	1.95E+02	0.426	0.602	1.623E+01	6.764E-01
58479.22	2.27E+01	1.95E+02	1.95E+02	0.426	0.602	1.624E+01	6.768E-01
58516.84	2.27E+01	1.95E+02	1.95E+02	0.426	0.602	1.625E+01	6.773E-01

SHEX-05A LGS SIL-636 CONT DBA-LOCA ANAL K=305
 Leak Rates proportional to square root of ratio of the time

44 PC Leak Test Pressure (psig)
 22 MSIV Leak Test Pressure (psig)

TIME	dependent delta P divided by the test delta P			PC Leak Fraction of Design Basis	MSIV Leak Fraction of Design Basis	Time (hours)	Time (days)
	DW PRESS (PSIA)	DW TEMP (F)	SP TEMP (F)				
58554.97	2.27E+01	1.95E+02	1.95E+02	0.426	0.602	1.627E+01	6.777E-01
58593.72	2.27E+01	1.95E+02	1.95E+02	0.425	0.602	1.628E+01	6.782E-01
58631.59	2.27E+01	1.94E+02	1.95E+02	0.425	0.602	1.629E+01	6.786E-01
58669.34	2.27E+01	1.94E+02	1.95E+02	0.425	0.602	1.630E+01	6.790E-01
58706.84	2.27E+01	1.94E+02	1.95E+02	0.425	0.601	1.631E+01	6.795E-01
58744.16	2.27E+01	1.94E+02	1.95E+02	0.425	0.602	1.632E+01	6.799E-01
58782.16	2.27E+01	1.94E+02	1.95E+02	0.425	0.602	1.633E+01	6.803E-01
58820.16	2.27E+01	1.94E+02	1.95E+02	0.425	0.602	1.634E+01	6.808E-01
58858.66	2.27E+01	1.94E+02	1.95E+02	0.425	0.601	1.635E+01	6.812E-01
58896.41	2.27E+01	1.94E+02	1.95E+02	0.425	0.601	1.636E+01	6.817E-01
58934.03	2.27E+01	1.94E+02	1.95E+02	0.425	0.601	1.637E+01	6.821E-01
58972.03	2.27E+01	1.94E+02	1.95E+02	0.425	0.601	1.638E+01	6.825E-01
59009.66	2.26E+01	1.94E+02	1.95E+02	0.425	0.601	1.639E+01	6.830E-01
59047.66	2.26E+01	1.94E+02	1.95E+02	0.425	0.601	1.640E+01	6.834E-01
59085.28	2.26E+01	1.94E+02	1.95E+02	0.425	0.601	1.641E+01	6.839E-01
59123.41	2.26E+01	1.94E+02	1.95E+02	0.425	0.600	1.642E+01	6.843E-01
59161.03	2.26E+01	1.94E+02	1.95E+02	0.425	0.600	1.643E+01	6.847E-01
59198.66	2.26E+01	1.94E+02	1.95E+02	0.425	0.600	1.644E+01	6.852E-01
59236.09	2.26E+01	1.94E+02	1.95E+02	0.425	0.601	1.645E+01	6.856E-01
59273.59	2.26E+01	1.94E+02	1.95E+02	0.425	0.600	1.646E+01	6.860E-01
59311.22	2.26E+01	1.94E+02	1.95E+02	0.425	0.600	1.648E+01	6.865E-01
59348.97	2.26E+01	1.94E+02	1.95E+02	0.425	0.600	1.649E+01	6.869E-01
59386.84	2.26E+01	1.94E+02	1.95E+02	0.424	0.600	1.650E+01	6.873E-01
59424.72	2.26E+01	1.94E+02	1.95E+02	0.424	0.600	1.651E+01	6.878E-01
59462.47	2.26E+01	1.94E+02	1.95E+02	0.424	0.600	1.652E+01	6.882E-01
59501.09	2.26E+01	1.94E+02	1.95E+02	0.424	0.600	1.653E+01	6.887E-01
59539.22	2.26E+01	1.94E+02	1.95E+02	0.424	0.600	1.654E+01	6.891E-01
59577.22	2.26E+01	1.94E+02	1.95E+02	0.424	0.600	1.655E+01	6.896E-01
59614.97	2.26E+01	1.94E+02	1.95E+02	0.424	0.600	1.656E+01	6.900E-01
59652.41	2.26E+01	1.94E+02	1.95E+02	0.424	0.600	1.657E+01	6.904E-01
59690.41	2.26E+01	1.94E+02	1.95E+02	0.424	0.600	1.658E+01	6.909E-01
59729.28	2.26E+01	1.94E+02	1.95E+02	0.424	0.600	1.659E+01	6.913E-01
59767.66	2.26E+01	1.94E+02	1.95E+02	0.424	0.600	1.660E+01	6.918E-01
59805.41	2.26E+01	1.94E+02	1.95E+02	0.424	0.599	1.661E+01	6.922E-01
59843.03	2.26E+01	1.94E+02	1.95E+02	0.424	0.599	1.662E+01	6.926E-01
59880.66	2.26E+01	1.94E+02	1.95E+02	0.424	0.599	1.663E+01	6.931E-01
59918.41	2.26E+01	1.94E+02	1.95E+02	0.424	0.599	1.664E+01	6.935E-01
59957.28	2.26E+01	1.94E+02	1.95E+02	0.423	0.599	1.665E+01	6.940E-01
59995.66	2.26E+01	1.94E+02	1.95E+02	0.423	0.599	1.667E+01	6.944E-01
60033.53	2.26E+01	1.94E+02	1.95E+02	0.423	0.598	1.668E+01	6.948E-01
60070.97	2.26E+01	1.94E+02	1.95E+02	0.423	0.599	1.669E+01	6.953E-01
60108.59	2.26E+01	1.94E+02	1.95E+02	0.423	0.599	1.670E+01	6.957E-01
60146.09	2.26E+01	1.94E+02	1.95E+02	0.423	0.599	1.671E+01	6.961E-01
60184.09	2.26E+01	1.94E+02	1.95E+02	0.423	0.599	1.672E+01	6.966E-01
60221.97	2.26E+01	1.94E+02	1.95E+02	0.423	0.598	1.673E+01	6.970E-01
60259.59	2.26E+01	1.94E+02	1.95E+02	0.423	0.598	1.674E+01	6.974E-01
60297.34	2.26E+01	1.94E+02	1.95E+02	0.423	0.598	1.675E+01	6.979E-01
60336.72	2.26E+01	1.94E+02	1.95E+02	0.423	0.598	1.676E+01	6.983E-01
60374.22	2.26E+01	1.94E+02	1.95E+02	0.423	0.598	1.677E+01	6.988E-01
60413.47	2.26E+01	1.94E+02	1.95E+02	0.423	0.598	1.678E+01	6.992E-01
60452.22	2.26E+01	1.94E+02	1.95E+02	0.423	0.598	1.679E+01	6.997E-01
60489.72	2.26E+01	1.94E+02	1.95E+02	0.423	0.598	1.680E+01	7.001E-01

SHEX-05A LGS SIL-636 CONT DBA-LOCA ANAL K=305
 Leak Rates proportional to square root of ratio of the time

44 PC Leak Test Pressure (psig)
 22 MSIV Leak Test Pressure (psig)

TIME	dependent delta P divided by the test delta P			PC Leak Fraction of Design Basis	MSIV Leak Fraction of Design Basis	Time (hours)	Time (days)
	DW PRESS (PSIA)	DW TEMP (F)	SP TEMP (F)				
60527.91	2.26E+01	1.94E+02	1.95E+02	0.423	0.598	1.681E+01	7.006E-01
60567.28	2.26E+01	1.94E+02	1.95E+02	0.423	0.598	1.682E+01	7.010E-01
60605.03	2.26E+01	1.94E+02	1.94E+02	0.423	0.598	1.683E+01	7.014E-01
60642.78	2.26E+01	1.94E+02	1.94E+02	0.423	0.598	1.685E+01	7.019E-01
60680.41	2.26E+01	1.94E+02	1.94E+02	0.423	0.598	1.686E+01	7.023E-01
60718.16	2.26E+01	1.94E+02	1.94E+02	0.423	0.598	1.687E+01	7.028E-01
60755.91	2.26E+01	1.94E+02	1.94E+02	0.422	0.597	1.688E+01	7.032E-01
60793.91	2.26E+01	1.94E+02	1.94E+02	0.422	0.597	1.689E+01	7.036E-01
60831.53	2.26E+01	1.94E+02	1.94E+02	0.422	0.597	1.690E+01	7.041E-01
60869.53	2.26E+01	1.94E+02	1.94E+02	0.422	0.597	1.691E+01	7.045E-01
60907.66	2.25E+01	1.94E+02	1.94E+02	0.422	0.597	1.692E+01	7.049E-01
60945.28	2.25E+01	1.94E+02	1.94E+02	0.422	0.597	1.693E+01	7.054E-01
60983.03	2.25E+01	1.94E+02	1.94E+02	0.422	0.597	1.694E+01	7.058E-01
61020.97	2.25E+01	1.94E+02	1.94E+02	0.422	0.597	1.695E+01	7.063E-01
61058.97	2.25E+01	1.94E+02	1.94E+02	0.422	0.597	1.696E+01	7.067E-01
61096.59	2.25E+01	1.94E+02	1.94E+02	0.422	0.597	1.697E+01	7.071E-01
61134.34	2.25E+01	1.94E+02	1.94E+02	0.422	0.597	1.698E+01	7.076E-01
61172.09	2.25E+01	1.94E+02	1.94E+02	0.422	0.597	1.699E+01	7.080E-01
61209.97	2.25E+01	1.94E+02	1.94E+02	0.422	0.597	1.700E+01	7.084E-01
61248.34	2.25E+01	1.94E+02	1.94E+02	0.422	0.597	1.701E+01	7.089E-01
61286.84	2.25E+01	1.94E+02	1.94E+02	0.422	0.597	1.702E+01	7.093E-01
61324.59	2.25E+01	1.94E+02	1.94E+02	0.422	0.596	1.703E+01	7.098E-01
61362.97	2.25E+01	1.94E+02	1.94E+02	0.422	0.596	1.705E+01	7.102E-01
61400.47	2.25E+01	1.94E+02	1.94E+02	0.422	0.596	1.706E+01	7.107E-01
61438.47	2.25E+01	1.94E+02	1.94E+02	0.422	0.596	1.707E+01	7.111E-01
61477.03	2.25E+01	1.94E+02	1.94E+02	0.422	0.596	1.708E+01	7.115E-01
61515.66	2.25E+01	1.94E+02	1.94E+02	0.422	0.596	1.709E+01	7.120E-01
61553.41	2.25E+01	1.94E+02	1.94E+02	0.421	0.596	1.710E+01	7.124E-01
61591.53	2.25E+01	1.94E+02	1.94E+02	0.421	0.596	1.711E+01	7.129E-01
61629.03	2.25E+01	1.94E+02	1.94E+02	0.421	0.596	1.712E+01	7.133E-01
61666.78	2.25E+01	1.94E+02	1.94E+02	0.421	0.596	1.713E+01	7.137E-01
61704.41	2.25E+01	1.94E+02	1.94E+02	0.421	0.596	1.714E+01	7.142E-01
61743.41	2.25E+01	1.94E+02	1.94E+02	0.421	0.595	1.715E+01	7.146E-01
61781.03	2.25E+01	1.94E+02	1.94E+02	0.421	0.595	1.716E+01	7.151E-01
61818.78	2.25E+01	1.93E+02	1.94E+02	0.421	0.595	1.717E+01	7.155E-01
61856.53	2.25E+01	1.93E+02	1.94E+02	0.421	0.595	1.718E+01	7.159E-01
61894.16	2.25E+01	1.93E+02	1.94E+02	0.421	0.595	1.719E+01	7.164E-01
61932.09	2.25E+01	1.93E+02	1.94E+02	0.421	0.595	1.720E+01	7.168E-01
61969.59	2.25E+01	1.93E+02	1.94E+02	0.421	0.595	1.721E+01	7.172E-01
62007.34	2.25E+01	1.93E+02	1.94E+02	0.421	0.595	1.722E+01	7.177E-01
62045.34	2.25E+01	1.93E+02	1.94E+02	0.421	0.595	1.723E+01	7.181E-01
62083.47	2.25E+01	1.93E+02	1.94E+02	0.421	0.595	1.725E+01	7.186E-01
62121.09	2.25E+01	1.93E+02	1.94E+02	0.421	0.595	1.726E+01	7.190E-01
62159.47	2.25E+01	1.93E+02	1.94E+02	0.420	0.595	1.727E+01	7.194E-01
62197.22	2.25E+01	1.93E+02	1.94E+02	0.420	0.595	1.728E+01	7.199E-01
62234.97	2.25E+01	1.93E+02	1.94E+02	0.420	0.595	1.729E+01	7.203E-01
62272.47	2.25E+01	1.93E+02	1.94E+02	0.420	0.594	1.730E+01	7.207E-01
62310.34	2.25E+01	1.93E+02	1.94E+02	0.420	0.594	1.731E+01	7.212E-01
62347.97	2.25E+01	1.93E+02	1.94E+02	0.420	0.594	1.732E+01	7.216E-01
62385.41	2.25E+01	1.93E+02	1.94E+02	0.420	0.595	1.733E+01	7.221E-01
62423.16	2.25E+01	1.93E+02	1.94E+02	0.420	0.594	1.734E+01	7.225E-01
62460.66	2.25E+01	1.93E+02	1.94E+02	0.420	0.594	1.735E+01	7.229E-01

SHEX-05A LGS SIL-636 CONT DBA-LOCA ANAL K=305
 Leak Rates proportional to square root of ratio of the time

44 PC Leak Test Pressure (psig)
 22 MSIV Leak Test Pressure (psig)

TIME	dependent delta P divided by the test delta P			PC Leak Fraction of Design Basis	MSIV Leak Fraction of Design Basis	Time (hours)	Time (days)
	DW PRESS (PSIA)	DW TEMP (F)	SP TEMP (F)				
62498.28	2.25E+01	1.93E+02	1.94E+02	0.420	0.594	1.736E+01	7.234E-01
62536.03	2.25E+01	1.93E+02	1.94E+02	0.420	0.594	1.737E+01	7.238E-01
62573.53	2.25E+01	1.93E+02	1.94E+02	0.420	0.594	1.738E+01	7.242E-01
62611.53	2.25E+01	1.93E+02	1.94E+02	0.420	0.594	1.739E+01	7.247E-01
62650.28	2.25E+01	1.93E+02	1.94E+02	0.420	0.594	1.740E+01	7.251E-01
62688.53	2.25E+01	1.93E+02	1.94E+02	0.420	0.594	1.741E+01	7.256E-01
62726.03	2.25E+01	1.93E+02	1.94E+02	0.420	0.594	1.742E+01	7.260E-01
62764.78	2.25E+01	1.93E+02	1.94E+02	0.420	0.594	1.743E+01	7.264E-01
62802.41	2.25E+01	1.93E+02	1.94E+02	0.420	0.594	1.745E+01	7.269E-01
62840.03	2.24E+01	1.93E+02	1.94E+02	0.419	0.593	1.746E+01	7.273E-01
62877.47	2.25E+01	1.93E+02	1.94E+02	0.420	0.594	1.747E+01	7.277E-01
62915.34	2.25E+01	1.93E+02	1.94E+02	0.420	0.594	1.748E+01	7.282E-01
62953.34	2.25E+01	1.93E+02	1.94E+02	0.420	0.594	1.749E+01	7.286E-01
62991.47	2.24E+01	1.93E+02	1.94E+02	0.419	0.593	1.750E+01	7.291E-01
63028.97	2.24E+01	1.93E+02	1.94E+02	0.419	0.593	1.751E+01	7.295E-01
63066.97	2.24E+01	1.93E+02	1.94E+02	0.419	0.593	1.752E+01	7.299E-01
63106.09	2.24E+01	1.93E+02	1.94E+02	0.419	0.593	1.753E+01	7.304E-01
63143.59	2.24E+01	1.93E+02	1.94E+02	0.419	0.593	1.754E+01	7.308E-01
63181.09	2.24E+01	1.93E+02	1.94E+02	0.419	0.593	1.755E+01	7.313E-01
63218.72	2.24E+01	1.93E+02	1.94E+02	0.419	0.593	1.756E+01	7.317E-01
63256.97	2.24E+01	1.93E+02	1.94E+02	0.419	0.592	1.757E+01	7.321E-01
63295.09	2.24E+01	1.93E+02	1.94E+02	0.419	0.592	1.758E+01	7.326E-01
63332.41	2.24E+01	1.93E+02	1.94E+02	0.419	0.593	1.759E+01	7.330E-01
63370.66	2.24E+01	1.93E+02	1.94E+02	0.419	0.593	1.760E+01	7.335E-01
63408.53	2.24E+01	1.93E+02	1.94E+02	0.419	0.592	1.761E+01	7.339E-01
63447.16	2.24E+01	1.93E+02	1.94E+02	0.419	0.592	1.762E+01	7.343E-01
63487.16	2.24E+01	1.93E+02	1.94E+02	0.419	0.593	1.764E+01	7.348E-01
63525.66	2.24E+01	1.93E+02	1.94E+02	0.419	0.592	1.765E+01	7.353E-01
63563.53	2.24E+01	1.93E+02	1.94E+02	0.419	0.592	1.766E+01	7.357E-01
63601.16	2.24E+01	1.93E+02	1.94E+02	0.419	0.592	1.767E+01	7.361E-01
63639.66	2.24E+01	1.93E+02	1.94E+02	0.419	0.592	1.768E+01	7.366E-01
63677.66	2.24E+01	1.93E+02	1.94E+02	0.419	0.592	1.769E+01	7.370E-01
63715.16	2.24E+01	1.93E+02	1.94E+02	0.418	0.592	1.770E+01	7.374E-01
63753.03	2.24E+01	1.93E+02	1.94E+02	0.418	0.592	1.771E+01	7.379E-01
63790.59	2.24E+01	1.93E+02	1.93E+02	0.419	0.592	1.772E+01	7.383E-01
63828.34	2.24E+01	1.93E+02	1.93E+02	0.418	0.592	1.773E+01	7.388E-01
63866.34	2.24E+01	1.93E+02	1.93E+02	0.418	0.592	1.774E+01	7.392E-01
63903.84	2.24E+01	1.93E+02	1.93E+02	0.418	0.592	1.775E+01	7.396E-01
63941.84	2.24E+01	1.93E+02	1.93E+02	0.418	0.592	1.776E+01	7.401E-01
63979.72	2.24E+01	1.93E+02	1.93E+02	0.418	0.591	1.777E+01	7.405E-01
64017.59	2.24E+01	1.93E+02	1.93E+02	0.418	0.591	1.778E+01	7.409E-01
64055.47	2.24E+01	1.93E+02	1.93E+02	0.418	0.591	1.779E+01	7.414E-01
64093.09	2.24E+01	1.93E+02	1.93E+02	0.418	0.591	1.780E+01	7.418E-01
64131.34	2.24E+01	1.93E+02	1.93E+02	0.418	0.591	1.781E+01	7.423E-01
64169.72	2.24E+01	1.93E+02	1.93E+02	0.418	0.591	1.782E+01	7.427E-01
64207.47	2.24E+01	1.93E+02	1.93E+02	0.418	0.591	1.784E+01	7.431E-01
64245.78	2.24E+01	1.93E+02	1.93E+02	0.418	0.591	1.785E+01	7.436E-01
64283.66	2.24E+01	1.93E+02	1.93E+02	0.418	0.591	1.786E+01	7.440E-01
64321.91	2.24E+01	1.93E+02	1.93E+02	0.418	0.591	1.787E+01	7.445E-01
64359.53	2.24E+01	1.93E+02	1.93E+02	0.418	0.591	1.788E+01	7.449E-01
64397.41	2.24E+01	1.93E+02	1.93E+02	0.418	0.590	1.789E+01	7.453E-01
64435.16	2.24E+01	1.93E+02	1.93E+02	0.418	0.590	1.790E+01	7.458E-01

SHEX-05A LGS SIL-636 CONT DBA-LOCA ANAL K=305
 Leak Rates proportional to square root of ratio of the time

44 PC Leak Test Pressure (psig)
 22 MSIV Leak Test Pressure (psig)

TIME	dependent delta P divided by the test delta P			PC Leak Fraction of Design Basis	MSIV Leak Fraction of Design Basis	Time (hours)	Time (days)
	DW PRESS (PSIA)	DW TEMP (F)	SP TEMP (F)				
64472.91	2.24E+01	1.93E+02	1.93E+02	0.418	0.590	1.791E+01	7.462E-01
64510.53	2.24E+01	1.93E+02	1.93E+02	0.418	0.590	1.792E+01	7.466E-01
64548.66	2.24E+01	1.93E+02	1.93E+02	0.417	0.590	1.793E+01	7.471E-01
64586.53	2.24E+01	1.93E+02	1.93E+02	0.417	0.590	1.794E+01	7.475E-01
64624.03	2.24E+01	1.93E+02	1.93E+02	0.417	0.590	1.795E+01	7.480E-01
64662.53	2.24E+01	1.93E+02	1.93E+02	0.417	0.590	1.796E+01	7.484E-01
64700.16	2.24E+01	1.93E+02	1.93E+02	0.417	0.590	1.797E+01	7.488E-01
64737.59	2.24E+01	1.93E+02	1.93E+02	0.417	0.590	1.798E+01	7.493E-01
64775.84	2.24E+01	1.93E+02	1.93E+02	0.417	0.590	1.799E+01	7.497E-01
64814.47	2.24E+01	1.93E+02	1.93E+02	0.417	0.590	1.800E+01	7.502E-01
64853.22	2.24E+01	1.93E+02	1.93E+02	0.417	0.590	1.801E+01	7.506E-01
64890.97	2.24E+01	1.93E+02	1.93E+02	0.417	0.590	1.803E+01	7.511E-01
64929.84	2.24E+01	1.93E+02	1.93E+02	0.417	0.590	1.804E+01	7.515E-01
64967.84	2.23E+01	1.93E+02	1.93E+02	0.417	0.589	1.805E+01	7.519E-01
65005.47	2.23E+01	1.92E+02	1.93E+02	0.417	0.589	1.806E+01	7.524E-01
65043.34	2.23E+01	1.92E+02	1.93E+02	0.417	0.589	1.807E+01	7.528E-01
65080.97	2.23E+01	1.92E+02	1.93E+02	0.417	0.589	1.808E+01	7.533E-01
65118.84	2.23E+01	1.92E+02	1.93E+02	0.416	0.589	1.809E+01	7.537E-01
65156.72	2.23E+01	1.92E+02	1.93E+02	0.416	0.589	1.810E+01	7.541E-01
65194.03	2.23E+01	1.92E+02	1.93E+02	0.417	0.589	1.811E+01	7.546E-01
65231.53	2.23E+01	1.92E+02	1.93E+02	0.417	0.589	1.812E+01	7.550E-01
65269.78	2.23E+01	1.92E+02	1.93E+02	0.416	0.589	1.813E+01	7.554E-01
65307.28	2.23E+01	1.92E+02	1.93E+02	0.416	0.589	1.814E+01	7.559E-01
65345.16	2.23E+01	1.92E+02	1.93E+02	0.416	0.589	1.815E+01	7.563E-01
65383.03	2.23E+01	1.92E+02	1.93E+02	0.416	0.589	1.816E+01	7.567E-01
65421.16	2.23E+01	1.92E+02	1.93E+02	0.416	0.589	1.817E+01	7.572E-01
65459.78	2.23E+01	1.92E+02	1.93E+02	0.416	0.589	1.818E+01	7.576E-01
65497.66	2.23E+01	1.92E+02	1.93E+02	0.416	0.589	1.819E+01	7.581E-01
65535.28	2.23E+01	1.92E+02	1.93E+02	0.416	0.589	1.820E+01	7.585E-01
65572.78	2.23E+01	1.92E+02	1.93E+02	0.416	0.588	1.821E+01	7.589E-01
65610.91	2.23E+01	1.92E+02	1.93E+02	0.416	0.588	1.823E+01	7.594E-01
65648.66	2.23E+01	1.92E+02	1.93E+02	0.416	0.588	1.824E+01	7.598E-01
65686.97	2.23E+01	1.92E+02	1.93E+02	0.416	0.588	1.825E+01	7.603E-01
65724.47	2.23E+01	1.92E+02	1.93E+02	0.416	0.588	1.826E+01	7.607E-01
65763.09	2.23E+01	1.92E+02	1.93E+02	0.416	0.588	1.827E+01	7.611E-01
65801.09	2.23E+01	1.92E+02	1.93E+02	0.416	0.588	1.828E+01	7.616E-01
65838.97	2.23E+01	1.92E+02	1.93E+02	0.416	0.588	1.829E+01	7.620E-01
65876.47	2.23E+01	1.92E+02	1.93E+02	0.416	0.588	1.830E+01	7.625E-01
65914.22	2.23E+01	1.92E+02	1.93E+02	0.416	0.588	1.831E+01	7.629E-01
65952.09	2.23E+01	1.92E+02	1.93E+02	0.415	0.587	1.832E+01	7.633E-01
65990.34	2.23E+01	1.92E+02	1.93E+02	0.415	0.587	1.833E+01	7.638E-01
66028.59	2.23E+01	1.92E+02	1.93E+02	0.415	0.587	1.834E+01	7.642E-01
66066.59	2.23E+01	1.92E+02	1.93E+02	0.415	0.587	1.835E+01	7.647E-01
66104.59	2.23E+01	1.92E+02	1.93E+02	0.415	0.587	1.836E+01	7.651E-01
66142.66	2.23E+01	1.92E+02	1.93E+02	0.415	0.587	1.837E+01	7.655E-01
66180.28	2.23E+01	1.92E+02	1.93E+02	0.415	0.587	1.838E+01	7.660E-01
66218.16	2.23E+01	1.92E+02	1.93E+02	0.415	0.587	1.839E+01	7.664E-01
66255.78	2.23E+01	1.92E+02	1.93E+02	0.415	0.587	1.840E+01	7.668E-01
66294.53	2.23E+01	1.92E+02	1.93E+02	0.415	0.587	1.842E+01	7.673E-01
66332.91	2.23E+01	1.92E+02	1.93E+02	0.415	0.587	1.843E+01	7.677E-01
66370.78	2.23E+01	1.92E+02	1.93E+02	0.415	0.587	1.844E+01	7.682E-01
66408.91	2.23E+01	1.92E+02	1.93E+02	0.415	0.587	1.845E+01	7.686E-01

SHEX-05A LGS SIL-636 CONT DBA-LOCA ANAL K=305
 Leak Rates proportional to square root of ratio of the time

44 PC Leak Test Pressure (psig)
 22 MSIV Leak Test Pressure (psig)

TIME	dependent delta P divided by the test delta P			PC Leak Fraction of Design Basis	MSIV Leak Fraction of Design Basis	Time (hours)	Time (days)
	DW PRESS (PSIA)	DW TEMP (F)	SP TEMP (F)				
66447.16	2.23E+01	1.92E+02	1.93E+02	0.415	0.587	1.846E+01	7.691E-01
66485.03	2.23E+01	1.92E+02	1.93E+02	0.415	0.587	1.847E+01	7.695E-01
66523.41	2.23E+01	1.92E+02	1.93E+02	0.415	0.587	1.848E+01	7.699E-01
66561.53	2.23E+01	1.92E+02	1.93E+02	0.415	0.586	1.849E+01	7.704E-01
66599.03	2.23E+01	1.92E+02	1.93E+02	0.415	0.586	1.850E+01	7.708E-01
66636.84	2.23E+01	1.92E+02	1.93E+02	0.415	0.587	1.851E+01	7.713E-01
66674.84	2.23E+01	1.92E+02	1.93E+02	0.415	0.586	1.852E+01	7.717E-01
66712.47	2.23E+01	1.92E+02	1.93E+02	0.415	0.586	1.853E+01	7.721E-01
66750.09	2.23E+01	1.92E+02	1.93E+02	0.415	0.586	1.854E+01	7.726E-01
66787.97	2.23E+01	1.92E+02	1.93E+02	0.415	0.586	1.855E+01	7.730E-01
66825.97	2.23E+01	1.92E+02	1.93E+02	0.415	0.586	1.856E+01	7.734E-01
66863.84	2.23E+01	1.92E+02	1.93E+02	0.414	0.586	1.857E+01	7.739E-01
66901.47	2.23E+01	1.92E+02	1.93E+02	0.414	0.586	1.858E+01	7.743E-01
66938.97	2.23E+01	1.92E+02	1.93E+02	0.414	0.586	1.859E+01	7.748E-01
66976.72	2.23E+01	1.92E+02	1.93E+02	0.414	0.586	1.860E+01	7.752E-01
67014.22	2.22E+01	1.92E+02	1.92E+02	0.414	0.585	1.862E+01	7.756E-01
67052.59	2.22E+01	1.92E+02	1.92E+02	0.414	0.585	1.863E+01	7.761E-01
67090.47	2.22E+01	1.92E+02	1.92E+02	0.414	0.585	1.864E+01	7.765E-01
67127.91	2.22E+01	1.92E+02	1.92E+02	0.414	0.585	1.865E+01	7.769E-01
67166.03	2.22E+01	1.92E+02	1.92E+02	0.414	0.585	1.866E+01	7.774E-01
67205.16	2.22E+01	1.92E+02	1.92E+02	0.414	0.585	1.867E+01	7.778E-01
67242.78	2.22E+01	1.92E+02	1.92E+02	0.414	0.585	1.868E+01	7.783E-01
67280.53	2.22E+01	1.92E+02	1.92E+02	0.414	0.585	1.869E+01	7.787E-01
67319.03	2.22E+01	1.92E+02	1.92E+02	0.414	0.585	1.870E+01	7.792E-01
67357.66	2.22E+01	1.92E+02	1.92E+02	0.414	0.585	1.871E+01	7.796E-01
67395.28	2.22E+01	1.92E+02	1.92E+02	0.414	0.585	1.872E+01	7.800E-01
67433.41	2.22E+01	1.92E+02	1.92E+02	0.413	0.585	1.873E+01	7.805E-01
67471.16	2.22E+01	1.92E+02	1.92E+02	0.413	0.585	1.874E+01	7.809E-01
67509.41	2.22E+01	1.92E+02	1.92E+02	0.413	0.585	1.875E+01	7.814E-01
67547.03	2.22E+01	1.92E+02	1.92E+02	0.413	0.585	1.876E+01	7.818E-01
67584.34	2.22E+01	1.92E+02	1.92E+02	0.413	0.585	1.877E+01	7.822E-01
67622.22	2.22E+01	1.92E+02	1.92E+02	0.413	0.585	1.878E+01	7.827E-01
67660.72	2.22E+01	1.92E+02	1.92E+02	0.413	0.585	1.879E+01	7.831E-01
67698.59	2.22E+01	1.92E+02	1.92E+02	0.413	0.585	1.881E+01	7.835E-01
67736.34	2.22E+01	1.92E+02	1.92E+02	0.413	0.584	1.882E+01	7.840E-01
67774.72	2.22E+01	1.92E+02	1.92E+02	0.413	0.584	1.883E+01	7.844E-01
67812.22	2.22E+01	1.92E+02	1.92E+02	0.413	0.584	1.884E+01	7.849E-01
67849.97	2.22E+01	1.92E+02	1.92E+02	0.413	0.584	1.885E+01	7.853E-01
67888.34	2.22E+01	1.92E+02	1.92E+02	0.413	0.584	1.886E+01	7.857E-01
67925.97	2.22E+01	1.92E+02	1.92E+02	0.413	0.584	1.887E+01	7.862E-01
67963.72	2.22E+01	1.92E+02	1.92E+02	0.413	0.584	1.888E+01	7.866E-01
68002.97	2.22E+01	1.92E+02	1.92E+02	0.413	0.583	1.889E+01	7.871E-01
68041.47	2.22E+01	1.92E+02	1.92E+02	0.413	0.583	1.890E+01	7.875E-01
68079.03	2.22E+01	1.92E+02	1.92E+02	0.413	0.584	1.891E+01	7.880E-01
68116.66	2.22E+01	1.92E+02	1.92E+02	0.413	0.584	1.892E+01	7.884E-01
68155.41	2.22E+01	1.92E+02	1.92E+02	0.413	0.583	1.893E+01	7.888E-01
68193.78	2.22E+01	1.92E+02	1.92E+02	0.413	0.583	1.894E+01	7.893E-01
68231.66	2.22E+01	1.91E+02	1.92E+02	0.413	0.583	1.895E+01	7.897E-01
68269.78	2.22E+01	1.91E+02	1.92E+02	0.412	0.583	1.896E+01	7.902E-01
68307.78	2.22E+01	1.91E+02	1.92E+02	0.412	0.583	1.897E+01	7.906E-01
68345.53	2.22E+01	1.91E+02	1.92E+02	0.412	0.583	1.898E+01	7.910E-01
68383.16	2.22E+01	1.91E+02	1.92E+02	0.412	0.583	1.900E+01	7.915E-01

SHEX-05A LGS SIL-636 CONT DBA-LOCA ANAL K=305
 Leak Rates proportional to square root of ratio of the time

44 PC Leak Test Pressure (psig)
 22 MSIV Leak Test Pressure (psig)

TIME	dependent delta P divided by the test delta P			PC Leak Fraction of Design Basis	MSIV Leak Fraction of Design Basis	Time (hours)	Time (days)
	DW PRESS (PSIA)	DW TEMP (F)	SP TEMP (F)				
68422.03	2.22E+01	1.91E+02	1.92E+02	0.412	0.583	1.901E+01	7.919E-01
68459.66	2.22E+01	1.91E+02	1.92E+02	0.412	0.583	1.902E+01	7.924E-01
68497.16	2.22E+01	1.91E+02	1.92E+02	0.412	0.583	1.903E+01	7.928E-01
68535.03	2.22E+01	1.91E+02	1.92E+02	0.412	0.583	1.904E+01	7.932E-01
68573.34	2.22E+01	1.91E+02	1.92E+02	0.412	0.583	1.905E+01	7.937E-01
68611.34	2.22E+01	1.91E+02	1.92E+02	0.412	0.583	1.906E+01	7.941E-01
68649.34	2.22E+01	1.91E+02	1.92E+02	0.412	0.583	1.907E+01	7.946E-01
68687.59	2.22E+01	1.91E+02	1.92E+02	0.412	0.583	1.908E+01	7.950E-01
68725.34	2.22E+01	1.91E+02	1.92E+02	0.412	0.582	1.909E+01	7.954E-01
68763.59	2.22E+01	1.91E+02	1.92E+02	0.412	0.582	1.910E+01	7.959E-01
68801.34	2.22E+01	1.91E+02	1.92E+02	0.412	0.582	1.911E+01	7.963E-01
68839.47	2.22E+01	1.91E+02	1.92E+02	0.412	0.582	1.912E+01	7.968E-01
68877.34	2.22E+01	1.91E+02	1.92E+02	0.412	0.582	1.913E+01	7.972E-01
68914.84	2.22E+01	1.91E+02	1.92E+02	0.411	0.582	1.914E+01	7.976E-01
68952.84	2.22E+01	1.91E+02	1.92E+02	0.411	0.582	1.915E+01	7.981E-01
68991.22	2.22E+01	1.91E+02	1.92E+02	0.411	0.582	1.916E+01	7.985E-01
69029.59	2.21E+01	1.91E+02	1.92E+02	0.411	0.582	1.917E+01	7.990E-01
69067.66	2.22E+01	1.91E+02	1.92E+02	0.411	0.582	1.919E+01	7.994E-01
69105.53	2.22E+01	1.91E+02	1.92E+02	0.411	0.582	1.920E+01	7.998E-01
69143.41	2.22E+01	1.91E+02	1.92E+02	0.411	0.582	1.921E+01	8.003E-01
69181.16	2.21E+01	1.91E+02	1.92E+02	0.411	0.582	1.922E+01	8.007E-01
69219.03	2.21E+01	1.91E+02	1.92E+02	0.411	0.582	1.923E+01	8.011E-01
69257.16	2.21E+01	1.91E+02	1.92E+02	0.411	0.582	1.924E+01	8.016E-01
69295.03	2.21E+01	1.91E+02	1.92E+02	0.411	0.582	1.925E+01	8.020E-01
69332.66	2.21E+01	1.91E+02	1.92E+02	0.411	0.582	1.926E+01	8.025E-01
69370.28	2.21E+01	1.91E+02	1.92E+02	0.411	0.581	1.927E+01	8.029E-01
69408.41	2.21E+01	1.91E+02	1.92E+02	0.411	0.581	1.928E+01	8.033E-01
69446.28	2.21E+01	1.91E+02	1.92E+02	0.411	0.581	1.929E+01	8.038E-01
69483.78	2.21E+01	1.91E+02	1.92E+02	0.411	0.581	1.930E+01	8.042E-01
69521.28	2.21E+01	1.91E+02	1.92E+02	0.411	0.581	1.931E+01	8.046E-01
69559.22	2.21E+01	1.91E+02	1.92E+02	0.411	0.581	1.932E+01	8.051E-01
69597.47	2.21E+01	1.91E+02	1.92E+02	0.411	0.581	1.933E+01	8.055E-01
69635.97	2.21E+01	1.91E+02	1.92E+02	0.411	0.581	1.934E+01	8.060E-01
69673.47	2.21E+01	1.91E+02	1.92E+02	0.411	0.581	1.935E+01	8.064E-01
69710.97	2.21E+01	1.91E+02	1.92E+02	0.411	0.581	1.936E+01	8.068E-01
69749.59	2.21E+01	1.91E+02	1.92E+02	0.411	0.581	1.937E+01	8.073E-01
69787.47	2.21E+01	1.91E+02	1.92E+02	0.410	0.580	1.939E+01	8.077E-01
69826.22	2.21E+01	1.91E+02	1.92E+02	0.410	0.580	1.940E+01	8.082E-01
69864.09	2.21E+01	1.91E+02	1.92E+02	0.410	0.580	1.941E+01	8.086E-01
69902.22	2.21E+01	1.91E+02	1.92E+02	0.410	0.580	1.942E+01	8.091E-01
69939.84	2.21E+01	1.91E+02	1.92E+02	0.410	0.580	1.943E+01	8.095E-01
69977.72	2.21E+01	1.91E+02	1.92E+02	0.410	0.580	1.944E+01	8.099E-01
70015.47	2.21E+01	1.91E+02	1.92E+02	0.410	0.580	1.945E+01	8.104E-01
70053.41	2.21E+01	1.91E+02	1.92E+02	0.410	0.580	1.946E+01	8.108E-01
70091.41	2.21E+01	1.91E+02	1.92E+02	0.410	0.580	1.947E+01	8.112E-01
70129.66	2.21E+01	1.91E+02	1.92E+02	0.410	0.580	1.948E+01	8.117E-01
70168.03	2.21E+01	1.91E+02	1.92E+02	0.410	0.580	1.949E+01	8.121E-01
70206.03	2.21E+01	1.91E+02	1.92E+02	0.410	0.580	1.950E+01	8.126E-01
70244.28	2.21E+01	1.91E+02	1.91E+02	0.410	0.580	1.951E+01	8.130E-01
70282.41	2.21E+01	1.91E+02	1.91E+02	0.410	0.580	1.952E+01	8.135E-01
70320.16	2.21E+01	1.91E+02	1.91E+02	0.410	0.580	1.953E+01	8.139E-01
70357.78	2.21E+01	1.91E+02	1.91E+02	0.410	0.580	1.954E+01	8.143E-01

SHEX-05A LGS SIL-636 CONT DBA-LOCA ANAL K=305
 Leak Rates proportional to square root of ratio of the time

44 PC Leak Test Pressure (psig)
 22 MSIV Leak Test Pressure (psig)

TIME	dependent delta P divided by the test delta P			PC Leak Fraction of Design Basis	MSIV Leak Fraction of Design Basis	Time (hours)	Time (days)
	DW PRESS (PSIA)	DW TEMP (F)	SP TEMP (F)				
70395.28	2.21E+01	1.91E+02	1.91E+02	0.410	0.579	1.955E+01	8.148E-01
70432.91	2.21E+01	1.91E+02	1.91E+02	0.410	0.579	1.956E+01	8.152E-01
70470.91	2.21E+01	1.91E+02	1.91E+02	0.410	0.579	1.958E+01	8.156E-01
70508.41	2.21E+01	1.91E+02	1.91E+02	0.409	0.579	1.959E+01	8.161E-01
70545.97	2.21E+01	1.91E+02	1.91E+02	0.410	0.579	1.960E+01	8.165E-01
70583.72	2.21E+01	1.91E+02	1.91E+02	0.410	0.579	1.961E+01	8.169E-01
70621.59	2.21E+01	1.91E+02	1.91E+02	0.410	0.579	1.962E+01	8.174E-01
70659.09	2.21E+01	1.91E+02	1.91E+02	0.410	0.579	1.963E+01	8.178E-01
70696.59	2.21E+01	1.91E+02	1.91E+02	0.409	0.579	1.964E+01	8.182E-01
70734.72	2.21E+01	1.91E+02	1.91E+02	0.409	0.579	1.965E+01	8.187E-01
70772.34	2.21E+01	1.91E+02	1.91E+02	0.409	0.579	1.966E+01	8.191E-01
70811.09	2.21E+01	1.91E+02	1.91E+02	0.409	0.579	1.967E+01	8.196E-01
70848.59	2.21E+01	1.91E+02	1.91E+02	0.409	0.578	1.968E+01	8.200E-01
70886.47	2.21E+01	1.91E+02	1.91E+02	0.409	0.578	1.969E+01	8.204E-01
70925.22	2.21E+01	1.91E+02	1.91E+02	0.409	0.578	1.970E+01	8.209E-01
70962.84	2.21E+01	1.91E+02	1.91E+02	0.409	0.578	1.971E+01	8.213E-01
71000.97	2.21E+01	1.91E+02	1.91E+02	0.409	0.578	1.972E+01	8.218E-01
71038.47	2.21E+01	1.91E+02	1.91E+02	0.409	0.578	1.973E+01	8.222E-01
71075.78	2.21E+01	1.91E+02	1.91E+02	0.409	0.578	1.974E+01	8.226E-01
71113.41	2.21E+01	1.91E+02	1.91E+02	0.409	0.578	1.975E+01	8.231E-01
71150.91	2.21E+01	1.91E+02	1.91E+02	0.409	0.578	1.976E+01	8.235E-01
71188.53	2.21E+01	1.91E+02	1.91E+02	0.409	0.578	1.977E+01	8.239E-01
71226.66	2.21E+01	1.91E+02	1.91E+02	0.409	0.578	1.979E+01	8.244E-01
71264.78	2.21E+01	1.91E+02	1.91E+02	0.409	0.578	1.980E+01	8.248E-01
71302.41	2.20E+01	1.91E+02	1.91E+02	0.408	0.578	1.981E+01	8.253E-01
71340.91	2.20E+01	1.91E+02	1.91E+02	0.408	0.578	1.982E+01	8.257E-01
71379.16	2.20E+01	1.91E+02	1.91E+02	0.408	0.578	1.983E+01	8.261E-01
71416.78	2.20E+01	1.91E+02	1.91E+02	0.408	0.577	1.984E+01	8.266E-01
71454.28	2.20E+01	1.91E+02	1.91E+02	0.408	0.577	1.985E+01	8.270E-01
71492.03	2.20E+01	1.91E+02	1.91E+02	0.408	0.577	1.986E+01	8.275E-01
71529.66	2.20E+01	1.90E+02	1.91E+02	0.408	0.577	1.987E+01	8.279E-01
71566.97	2.20E+01	1.90E+02	1.91E+02	0.408	0.577	1.988E+01	8.283E-01
71605.09	2.20E+01	1.90E+02	1.91E+02	0.408	0.577	1.989E+01	8.288E-01
71642.84	2.20E+01	1.90E+02	1.91E+02	0.408	0.577	1.990E+01	8.292E-01
71680.72	2.20E+01	1.90E+02	1.91E+02	0.408	0.577	1.991E+01	8.296E-01
71718.84	2.20E+01	1.90E+02	1.91E+02	0.408	0.577	1.992E+01	8.301E-01
71756.34	2.20E+01	1.90E+02	1.91E+02	0.408	0.577	1.993E+01	8.305E-01
71793.97	2.20E+01	1.90E+02	1.91E+02	0.408	0.577	1.994E+01	8.309E-01
71831.47	2.20E+01	1.90E+02	1.91E+02	0.408	0.577	1.995E+01	8.314E-01
71869.34	2.20E+01	1.90E+02	1.91E+02	0.408	0.577	1.996E+01	8.318E-01
71907.09	2.20E+01	1.90E+02	1.91E+02	0.408	0.576	1.997E+01	8.323E-01
71944.72	2.20E+01	1.90E+02	1.91E+02	0.408	0.576	1.998E+01	8.327E-01
71982.34	2.20E+01	1.90E+02	1.91E+02	0.408	0.576	2.000E+01	8.331E-01
72020.59	2.20E+01	1.90E+02	1.91E+02	0.407	0.576	2.001E+01	8.336E-01
72058.09	2.20E+01	1.90E+02	1.91E+02	0.407	0.576	2.002E+01	8.340E-01
72095.66	2.20E+01	1.90E+02	1.91E+02	0.408	0.576	2.003E+01	8.344E-01
72133.53	2.20E+01	1.90E+02	1.91E+02	0.408	0.576	2.004E+01	8.349E-01
72172.41	2.20E+01	1.90E+02	1.91E+02	0.407	0.576	2.005E+01	8.353E-01
72209.91	2.20E+01	1.90E+02	1.91E+02	0.407	0.576	2.006E+01	8.358E-01
72247.53	2.20E+01	1.90E+02	1.91E+02	0.407	0.576	2.007E+01	8.362E-01
72285.66	2.20E+01	1.90E+02	1.91E+02	0.407	0.576	2.008E+01	8.366E-01
72323.66	2.20E+01	1.90E+02	1.91E+02	0.407	0.576	2.009E+01	8.371E-01

SHEX-05A LGS SIL-636 CONT DBA-LOCA ANAL K=305
 Leak Rates proportional to square root of ratio of the time

44 PC Leak Test Pressure (psig)
 22 MSIV Leak Test Pressure (psig)

TIME	dependent delta P divided by the test delta P			PC Leak Fraction of Design Basis	MSIV Leak Fraction of Design Basis	Time (hours)	Time (days)
	DW PRESS (PSIA)	DW TEMP (F)	SP TEMP (F)				
72361.41	2.20E+01	1.90E+02	1.91E+02	0.407	0.576	2.010E+01	8.375E-01
72399.03	2.20E+01	1.90E+02	1.91E+02	0.407	0.576	2.011E+01	8.380E-01
72437.03	2.20E+01	1.90E+02	1.91E+02	0.407	0.576	2.012E+01	8.384E-01
72474.91	2.20E+01	1.90E+02	1.91E+02	0.407	0.575	2.013E+01	8.388E-01
72513.53	2.20E+01	1.90E+02	1.91E+02	0.407	0.575	2.014E+01	8.393E-01
72551.66	2.20E+01	1.90E+02	1.91E+02	0.407	0.575	2.015E+01	8.397E-01
72589.84	2.20E+01	1.90E+02	1.91E+02	0.407	0.576	2.016E+01	8.402E-01
72627.34	2.20E+01	1.90E+02	1.91E+02	0.407	0.575	2.017E+01	8.406E-01
72664.97	2.20E+01	1.90E+02	1.91E+02	0.407	0.575	2.018E+01	8.410E-01
72703.22	2.20E+01	1.90E+02	1.91E+02	0.407	0.575	2.020E+01	8.415E-01
72740.97	2.20E+01	1.90E+02	1.91E+02	0.407	0.575	2.021E+01	8.419E-01
72779.59	2.20E+01	1.90E+02	1.91E+02	0.406	0.575	2.022E+01	8.424E-01
72817.97	2.20E+01	1.90E+02	1.91E+02	0.406	0.575	2.023E+01	8.428E-01
72855.72	2.20E+01	1.90E+02	1.91E+02	0.406	0.575	2.024E+01	8.432E-01
72893.22	2.20E+01	1.90E+02	1.91E+02	0.406	0.575	2.025E+01	8.437E-01
72931.84	2.20E+01	1.90E+02	1.91E+02	0.406	0.574	2.026E+01	8.441E-01
72970.22	2.20E+01	1.90E+02	1.91E+02	0.406	0.574	2.027E+01	8.446E-01
73007.97	2.20E+01	1.90E+02	1.91E+02	0.406	0.574	2.028E+01	8.450E-01
73045.59	2.20E+01	1.90E+02	1.91E+02	0.406	0.574	2.029E+01	8.454E-01
73083.09	2.20E+01	1.90E+02	1.91E+02	0.406	0.574	2.030E+01	8.459E-01
73120.53	2.20E+01	1.90E+02	1.91E+02	0.406	0.574	2.031E+01	8.463E-01
73159.03	2.20E+01	1.90E+02	1.91E+02	0.406	0.574	2.032E+01	8.467E-01
73196.53	2.20E+01	1.90E+02	1.91E+02	0.406	0.574	2.033E+01	8.472E-01
73234.16	2.20E+01	1.90E+02	1.91E+02	0.406	0.574	2.034E+01	8.476E-01
73271.66	2.20E+01	1.90E+02	1.91E+02	0.406	0.574	2.035E+01	8.481E-01
73309.41	2.20E+01	1.90E+02	1.91E+02	0.406	0.574	2.036E+01	8.485E-01
73346.91	2.19E+01	1.90E+02	1.91E+02	0.406	0.574	2.037E+01	8.489E-01
73385.91	2.19E+01	1.90E+02	1.91E+02	0.406	0.574	2.038E+01	8.494E-01
73423.66	2.19E+01	1.90E+02	1.91E+02	0.406	0.574	2.040E+01	8.498E-01
73461.78	2.19E+01	1.90E+02	1.91E+02	0.406	0.574	2.041E+01	8.503E-01
73499.41	2.19E+01	1.90E+02	1.91E+02	0.406	0.574	2.042E+01	8.507E-01
73537.16	2.19E+01	1.90E+02	1.90E+02	0.405	0.573	2.043E+01	8.511E-01
73574.66	2.19E+01	1.90E+02	1.90E+02	0.405	0.573	2.044E+01	8.516E-01
73612.16	2.19E+01	1.90E+02	1.90E+02	0.405	0.573	2.045E+01	8.520E-01
73650.59	2.19E+01	1.90E+02	1.90E+02	0.406	0.574	2.046E+01	8.524E-01
73688.72	2.19E+01	1.90E+02	1.90E+02	0.405	0.573	2.047E+01	8.529E-01
73726.34	2.19E+01	1.90E+02	1.90E+02	0.405	0.573	2.048E+01	8.533E-01
73764.47	2.19E+01	1.90E+02	1.90E+02	0.405	0.573	2.049E+01	8.538E-01
73801.97	2.19E+01	1.90E+02	1.90E+02	0.405	0.573	2.050E+01	8.542E-01
73840.34	2.19E+01	1.90E+02	1.90E+02	0.405	0.573	2.051E+01	8.546E-01
73878.09	2.19E+01	1.90E+02	1.90E+02	0.405	0.573	2.052E+01	8.551E-01
73915.72	2.19E+01	1.90E+02	1.90E+02	0.405	0.573	2.053E+01	8.555E-01
73953.59	2.19E+01	1.90E+02	1.90E+02	0.405	0.573	2.054E+01	8.559E-01
73991.22	2.19E+01	1.90E+02	1.90E+02	0.405	0.572	2.055E+01	8.564E-01
74028.84	2.19E+01	1.90E+02	1.90E+02	0.405	0.572	2.056E+01	8.568E-01
74067.09	2.19E+01	1.90E+02	1.90E+02	0.405	0.572	2.057E+01	8.573E-01
74104.91	2.19E+01	1.90E+02	1.90E+02	0.405	0.573	2.058E+01	8.577E-01
74142.41	2.19E+01	1.90E+02	1.90E+02	0.405	0.572	2.060E+01	8.581E-01
74180.16	2.19E+01	1.90E+02	1.90E+02	0.405	0.572	2.061E+01	8.586E-01
74217.91	2.19E+01	1.90E+02	1.90E+02	0.405	0.572	2.062E+01	8.590E-01
74256.03	2.19E+01	1.90E+02	1.90E+02	0.405	0.572	2.063E+01	8.594E-01
74294.41	2.19E+01	1.90E+02	1.90E+02	0.405	0.572	2.064E+01	8.599E-01

SHEX-05A LGS SIL-636 CONT DBA-LOCA ANAL K=305
 Leak Rates proportional to square root of ratio of the time

44 PC Leak Test Pressure (psig)
 22 MSIV Leak Test Pressure (psig)

TIME	dependent delta P divided by the test delta P			PC Leak Fraction of Design Basis	MSIV Leak Fraction of Design Basis	Time (hours)	Time (days)
	DW PRESS (PSIA)	DW TEMP (F)	SP TEMP (F)				
74333.41	2.19E+01	1.90E+02	1.90E+02	0.405	0.572	2.065E+01	8.603E-01
74372.53	2.19E+01	1.90E+02	1.90E+02	0.405	0.572	2.066E+01	8.608E-01
74410.03	2.19E+01	1.90E+02	1.90E+02	0.405	0.572	2.067E+01	8.612E-01
74447.53	2.19E+01	1.90E+02	1.90E+02	0.404	0.572	2.068E+01	8.617E-01
74485.53	2.19E+01	1.90E+02	1.90E+02	0.404	0.572	2.069E+01	8.621E-01
74523.53	2.19E+01	1.90E+02	1.90E+02	0.404	0.572	2.070E+01	8.625E-01
74561.78	2.19E+01	1.90E+02	1.90E+02	0.404	0.572	2.071E+01	8.630E-01
74599.66	2.19E+01	1.90E+02	1.90E+02	0.404	0.572	2.072E+01	8.634E-01
74637.59	2.19E+01	1.90E+02	1.90E+02	0.404	0.572	2.073E+01	8.639E-01
74675.22	2.19E+01	1.90E+02	1.90E+02	0.404	0.572	2.074E+01	8.643E-01
74713.22	2.19E+01	1.90E+02	1.90E+02	0.404	0.572	2.075E+01	8.647E-01
74751.84	2.19E+01	1.90E+02	1.90E+02	0.404	0.572	2.076E+01	8.652E-01
74789.84	2.19E+01	1.90E+02	1.90E+02	0.404	0.571	2.077E+01	8.656E-01
74827.72	2.19E+01	1.89E+02	1.90E+02	0.404	0.571	2.079E+01	8.661E-01
74865.84	2.19E+01	1.89E+02	1.90E+02	0.404	0.571	2.080E+01	8.665E-01
74903.34	2.19E+01	1.89E+02	1.90E+02	0.404	0.571	2.081E+01	8.669E-01
74940.97	2.19E+01	1.89E+02	1.90E+02	0.404	0.571	2.082E+01	8.674E-01
74978.84	2.19E+01	1.89E+02	1.90E+02	0.404	0.571	2.083E+01	8.678E-01
75017.59	2.19E+01	1.89E+02	1.90E+02	0.404	0.571	2.084E+01	8.683E-01
75055.47	2.19E+01	1.89E+02	1.90E+02	0.404	0.571	2.085E+01	8.687E-01
75093.09	2.19E+01	1.89E+02	1.90E+02	0.403	0.570	2.086E+01	8.691E-01
75131.16	2.19E+01	1.89E+02	1.90E+02	0.404	0.571	2.087E+01	8.696E-01
75169.28	2.19E+01	1.89E+02	1.90E+02	0.404	0.571	2.088E+01	8.700E-01
75207.78	2.19E+01	1.89E+02	1.90E+02	0.403	0.570	2.089E+01	8.705E-01
75245.28	2.19E+01	1.89E+02	1.90E+02	0.403	0.570	2.090E+01	8.709E-01
75283.28	2.19E+01	1.89E+02	1.90E+02	0.403	0.570	2.091E+01	8.713E-01
75321.16	2.19E+01	1.89E+02	1.90E+02	0.403	0.570	2.092E+01	8.718E-01
75359.53	2.19E+01	1.89E+02	1.90E+02	0.403	0.570	2.093E+01	8.722E-01
75397.03	2.19E+01	1.89E+02	1.90E+02	0.403	0.570	2.094E+01	8.727E-01
75435.66	2.19E+01	1.89E+02	1.90E+02	0.403	0.570	2.095E+01	8.731E-01
75473.53	2.19E+01	1.89E+02	1.90E+02	0.403	0.570	2.096E+01	8.735E-01
75511.16	2.18E+01	1.89E+02	1.90E+02	0.403	0.570	2.098E+01	8.740E-01
75548.66	2.18E+01	1.89E+02	1.90E+02	0.403	0.570	2.099E+01	8.744E-01
75586.78	2.18E+01	1.89E+02	1.90E+02	0.403	0.570	2.100E+01	8.748E-01
75624.91	2.18E+01	1.89E+02	1.90E+02	0.403	0.570	2.101E+01	8.753E-01
75662.34	2.18E+01	1.89E+02	1.90E+02	0.403	0.570	2.102E+01	8.757E-01
75700.34	2.18E+01	1.89E+02	1.90E+02	0.403	0.570	2.103E+01	8.762E-01
75738.22	2.18E+01	1.89E+02	1.90E+02	0.403	0.570	2.104E+01	8.766E-01
75775.97	2.18E+01	1.89E+02	1.90E+02	0.403	0.570	2.105E+01	8.770E-01
75813.47	2.18E+01	1.89E+02	1.90E+02	0.403	0.570	2.106E+01	8.775E-01
75851.59	2.18E+01	1.89E+02	1.90E+02	0.403	0.569	2.107E+01	8.779E-01
75890.09	2.18E+01	1.89E+02	1.90E+02	0.403	0.569	2.108E+01	8.784E-01
75928.72	2.18E+01	1.89E+02	1.90E+02	0.403	0.569	2.109E+01	8.788E-01
75966.47	2.18E+01	1.89E+02	1.90E+02	0.403	0.569	2.110E+01	8.792E-01
76004.72	2.18E+01	1.89E+02	1.90E+02	0.402	0.569	2.111E+01	8.797E-01
76042.84	2.18E+01	1.89E+02	1.90E+02	0.402	0.569	2.112E+01	8.801E-01
76080.47	2.18E+01	1.89E+02	1.90E+02	0.402	0.569	2.113E+01	8.806E-01
76118.09	2.18E+01	1.89E+02	1.90E+02	0.402	0.568	2.114E+01	8.810E-01
76156.41	2.18E+01	1.89E+02	1.90E+02	0.402	0.569	2.115E+01	8.814E-01
76193.91	2.18E+01	1.89E+02	1.90E+02	0.402	0.569	2.116E+01	8.819E-01
76232.16	2.18E+01	1.89E+02	1.90E+02	0.402	0.569	2.118E+01	8.823E-01
76270.28	2.18E+01	1.89E+02	1.90E+02	0.402	0.569	2.119E+01	8.828E-01

SHEX-05A LGS SIL-636 CONT DBA-LOCA ANAL K=305
 Leak Rates proportional to square root of ratio of the time

44 PC Leak Test Pressure (psig)
 22 MSIV Leak Test Pressure (psig)

TIME	dependent delta P divided by the test delta P			PC Leak Fraction of Design Basis	MSIV Leak Fraction of Design Basis	Time (hours)	Time (days)
	DW PRESS (PSIA)	DW TEMP (F)	SP TEMP (F)				
76309.03	2.18E+01	1.89E+02	1.90E+02	0.402	0.568	2.120E+01	8.832E-01
76347.53	2.18E+01	1.89E+02	1.90E+02	0.402	0.568	2.121E+01	8.837E-01
76385.41	2.18E+01	1.89E+02	1.90E+02	0.402	0.568	2.122E+01	8.841E-01
76423.53	2.18E+01	1.89E+02	1.90E+02	0.402	0.568	2.123E+01	8.845E-01
76461.16	2.18E+01	1.89E+02	1.90E+02	0.402	0.568	2.124E+01	8.850E-01
76499.16	2.18E+01	1.89E+02	1.90E+02	0.402	0.568	2.125E+01	8.854E-01
76536.66	2.18E+01	1.89E+02	1.90E+02	0.402	0.568	2.126E+01	8.858E-01
76574.41	2.18E+01	1.89E+02	1.90E+02	0.402	0.568	2.127E+01	8.863E-01
76612.28	2.18E+01	1.89E+02	1.90E+02	0.401	0.568	2.128E+01	8.867E-01
76650.03	2.18E+01	1.89E+02	1.90E+02	0.401	0.568	2.129E+01	8.872E-01
76687.47	2.18E+01	1.89E+02	1.90E+02	0.402	0.568	2.130E+01	8.876E-01
76725.09	2.18E+01	1.89E+02	1.90E+02	0.401	0.568	2.131E+01	8.880E-01
76762.72	2.18E+01	1.89E+02	1.90E+02	0.401	0.568	2.132E+01	8.885E-01
76800.47	2.18E+01	1.89E+02	1.90E+02	0.401	0.568	2.133E+01	8.889E-01
76838.09	2.18E+01	1.89E+02	1.89E+02	0.401	0.568	2.134E+01	8.893E-01
76875.59	2.18E+01	1.89E+02	1.89E+02	0.401	0.568	2.135E+01	8.898E-01
76913.59	2.18E+01	1.89E+02	1.89E+02	0.401	0.568	2.136E+01	8.902E-01
76952.22	2.18E+01	1.89E+02	1.89E+02	0.401	0.567	2.138E+01	8.907E-01
76990.22	2.18E+01	1.89E+02	1.89E+02	0.401	0.567	2.139E+01	8.911E-01
77027.97	2.18E+01	1.89E+02	1.89E+02	0.401	0.567	2.140E+01	8.915E-01
77066.34	2.18E+01	1.89E+02	1.89E+02	0.401	0.567	2.141E+01	8.920E-01
77104.72	2.18E+01	1.89E+02	1.89E+02	0.401	0.567	2.142E+01	8.924E-01
77142.22	2.18E+01	1.89E+02	1.89E+02	0.401	0.567	2.143E+01	8.928E-01
77179.66	2.18E+01	1.89E+02	1.89E+02	0.401	0.567	2.144E+01	8.933E-01
77217.28	2.18E+01	1.89E+02	1.89E+02	0.401	0.567	2.145E+01	8.937E-01
77255.66	2.18E+01	1.89E+02	1.89E+02	0.401	0.567	2.146E+01	8.942E-01
77293.41	2.18E+01	1.89E+02	1.89E+02	0.401	0.567	2.147E+01	8.946E-01
77331.03	2.18E+01	1.89E+02	1.89E+02	0.401	0.567	2.148E+01	8.950E-01
77369.03	2.18E+01	1.89E+02	1.89E+02	0.401	0.566	2.149E+01	8.955E-01
77407.28	2.18E+01	1.89E+02	1.89E+02	0.401	0.566	2.150E+01	8.959E-01
77445.16	2.18E+01	1.89E+02	1.89E+02	0.401	0.566	2.151E+01	8.964E-01
77483.28	2.18E+01	1.89E+02	1.89E+02	0.401	0.566	2.152E+01	8.968E-01
77521.03	2.18E+01	1.89E+02	1.89E+02	0.401	0.566	2.153E+01	8.972E-01
77558.78	2.18E+01	1.89E+02	1.89E+02	0.400	0.566	2.154E+01	8.977E-01
77596.41	2.18E+01	1.89E+02	1.89E+02	0.400	0.566	2.155E+01	8.981E-01
77634.28	2.18E+01	1.89E+02	1.89E+02	0.400	0.566	2.157E+01	8.985E-01
77671.78	2.18E+01	1.89E+02	1.89E+02	0.400	0.566	2.158E+01	8.990E-01
77709.97	2.18E+01	1.89E+02	1.89E+02	0.400	0.566	2.159E+01	8.994E-01
77747.59	2.18E+01	1.89E+02	1.89E+02	0.400	0.566	2.160E+01	8.999E-01
77785.47	2.18E+01	1.89E+02	1.89E+02	0.400	0.566	2.161E+01	9.003E-01
77823.47	2.18E+01	1.89E+02	1.89E+02	0.400	0.566	2.162E+01	9.007E-01
77861.84	2.17E+01	1.89E+02	1.89E+02	0.400	0.566	2.163E+01	9.012E-01
77899.47	2.17E+01	1.89E+02	1.89E+02	0.400	0.566	2.164E+01	9.016E-01
77937.59	2.17E+01	1.89E+02	1.89E+02	0.400	0.566	2.165E+01	9.021E-01
77975.72	2.17E+01	1.89E+02	1.89E+02	0.400	0.566	2.166E+01	9.025E-01
78013.72	2.17E+01	1.89E+02	1.89E+02	0.400	0.565	2.167E+01	9.029E-01
78051.22	2.17E+01	1.89E+02	1.89E+02	0.400	0.565	2.168E+01	9.034E-01
78089.47	2.17E+01	1.89E+02	1.89E+02	0.400	0.565	2.169E+01	9.038E-01
78127.09	2.17E+01	1.89E+02	1.89E+02	0.400	0.565	2.170E+01	9.042E-01
78165.22	2.17E+01	1.88E+02	1.89E+02	0.399	0.565	2.171E+01	9.047E-01
78203.16	2.17E+01	1.88E+02	1.89E+02	0.400	0.565	2.172E+01	9.051E-01
78241.03	2.17E+01	1.88E+02	1.89E+02	0.400	0.565	2.173E+01	9.056E-01

SHEX-05A LGS SIL-636 CONT DBA-LOCA ANAL K=305
 Leak Rates proportional to square root of ratio of the time

44 PC Leak Test Pressure (psig)
 22 MSIV Leak Test Pressure (psig)

TIME	dependent delta P divided by the test delta P			PC Leak Fraction of Design Basis	MSIV Leak Fraction of Design Basis	Time (hours)	Time (days)
	DW PRESS (PSIA)	DW TEMP (F)	SP TEMP (F)				
78278.78	2.17E+01	1.88E+02	1.89E+02	0.399	0.565	2.174E+01	9.060E-01
78316.53	2.17E+01	1.88E+02	1.89E+02	0.399	0.565	2.175E+01	9.064E-01
78354.66	2.17E+01	1.88E+02	1.89E+02	0.399	0.565	2.177E+01	9.069E-01
78392.66	2.17E+01	1.88E+02	1.89E+02	0.399	0.565	2.178E+01	9.073E-01
78430.53	2.17E+01	1.88E+02	1.89E+02	0.399	0.565	2.179E+01	9.078E-01
78468.53	2.17E+01	1.88E+02	1.89E+02	0.399	0.564	2.180E+01	9.082E-01
78506.16	2.17E+01	1.88E+02	1.89E+02	0.399	0.564	2.181E+01	9.086E-01
78543.78	2.17E+01	1.88E+02	1.89E+02	0.399	0.564	2.182E+01	9.091E-01
78581.66	2.17E+01	1.88E+02	1.89E+02	0.399	0.564	2.183E+01	9.095E-01
78619.53	2.17E+01	1.88E+02	1.89E+02	0.399	0.564	2.184E+01	9.099E-01
78657.16	2.17E+01	1.88E+02	1.89E+02	0.399	0.564	2.185E+01	9.104E-01
78694.66	2.17E+01	1.88E+02	1.89E+02	0.399	0.564	2.186E+01	9.108E-01
78731.97	2.17E+01	1.88E+02	1.89E+02	0.399	0.564	2.187E+01	9.112E-01
78769.84	2.17E+01	1.88E+02	1.89E+02	0.399	0.564	2.188E+01	9.117E-01
78807.84	2.17E+01	1.88E+02	1.89E+02	0.399	0.564	2.189E+01	9.121E-01
78845.47	2.17E+01	1.88E+02	1.89E+02	0.399	0.564	2.190E+01	9.126E-01
78883.09	2.17E+01	1.88E+02	1.89E+02	0.399	0.564	2.191E+01	9.130E-01
78920.84	2.17E+01	1.88E+02	1.89E+02	0.399	0.564	2.192E+01	9.134E-01
78958.72	2.17E+01	1.88E+02	1.89E+02	0.399	0.564	2.193E+01	9.139E-01
78997.84	2.17E+01	1.88E+02	1.89E+02	0.399	0.564	2.194E+01	9.143E-01
79036.84	2.17E+01	1.88E+02	1.89E+02	0.399	0.564	2.195E+01	9.148E-01
79074.34	2.17E+01	1.88E+02	1.89E+02	0.399	0.564	2.197E+01	9.152E-01
79111.84	2.17E+01	1.88E+02	1.89E+02	0.398	0.563	2.198E+01	9.156E-01
79149.84	2.17E+01	1.88E+02	1.89E+02	0.398	0.563	2.199E+01	9.161E-01
79187.72	2.17E+01	1.88E+02	1.89E+02	0.398	0.563	2.200E+01	9.165E-01
79225.72	2.17E+01	1.88E+02	1.89E+02	0.398	0.563	2.201E+01	9.170E-01
79263.91	2.17E+01	1.88E+02	1.89E+02	0.398	0.563	2.202E+01	9.174E-01
79302.78	2.17E+01	1.88E+02	1.89E+02	0.398	0.563	2.203E+01	9.179E-01
79341.91	2.17E+01	1.88E+02	1.89E+02	0.398	0.563	2.204E+01	9.183E-01
79379.78	2.17E+01	1.88E+02	1.89E+02	0.398	0.563	2.205E+01	9.187E-01
79417.91	2.17E+01	1.88E+02	1.89E+02	0.398	0.563	2.206E+01	9.192E-01
79455.91	2.17E+01	1.88E+02	1.89E+02	0.398	0.563	2.207E+01	9.196E-01
79494.53	2.17E+01	1.88E+02	1.89E+02	0.398	0.563	2.208E+01	9.201E-01
79532.03	2.17E+01	1.88E+02	1.89E+02	0.398	0.562	2.209E+01	9.205E-01
79569.53	2.17E+01	1.88E+02	1.89E+02	0.398	0.562	2.210E+01	9.209E-01
79607.03	2.17E+01	1.88E+02	1.89E+02	0.398	0.562	2.211E+01	9.214E-01
79644.53	2.17E+01	1.88E+02	1.89E+02	0.398	0.562	2.212E+01	9.218E-01
79682.91	2.17E+01	1.88E+02	1.89E+02	0.398	0.562	2.213E+01	9.223E-01
79721.53	2.17E+01	1.88E+02	1.89E+02	0.397	0.562	2.214E+01	9.227E-01
79759.28	2.17E+01	1.88E+02	1.89E+02	0.397	0.562	2.216E+01	9.231E-01
79796.84	2.17E+01	1.88E+02	1.89E+02	0.398	0.562	2.217E+01	9.236E-01
79835.22	2.17E+01	1.88E+02	1.89E+02	0.398	0.562	2.218E+01	9.240E-01
79873.34	2.17E+01	1.88E+02	1.89E+02	0.397	0.562	2.219E+01	9.245E-01
79911.84	2.17E+01	1.88E+02	1.89E+02	0.397	0.562	2.220E+01	9.249E-01
79949.59	2.17E+01	1.88E+02	1.89E+02	0.397	0.562	2.221E+01	9.253E-01
79987.22	2.17E+01	1.88E+02	1.89E+02	0.397	0.562	2.222E+01	9.258E-01
80025.72	2.16E+01	1.88E+02	1.89E+02	0.397	0.562	2.223E+01	9.262E-01
80063.47	2.16E+01	1.88E+02	1.89E+02	0.397	0.562	2.224E+01	9.267E-01
80102.47	2.16E+01	1.88E+02	1.89E+02	0.397	0.562	2.225E+01	9.271E-01
80140.47	2.16E+01	1.88E+02	1.88E+02	0.397	0.562	2.226E+01	9.276E-01
80178.34	2.16E+01	1.88E+02	1.88E+02	0.397	0.562	2.227E+01	9.280E-01
80216.59	2.16E+01	1.88E+02	1.88E+02	0.397	0.561	2.228E+01	9.284E-01

SHEX-05A LGS SIL-636 CONT DBA-LOCA ANAL K=305
 Leak Rates proportional to square root of ratio of the time

44 PC Leak Test Pressure (psig)
 22 MSIV Leak Test Pressure (psig)

TIME	dependent delta P divided by the test delta P			PC Leak Fraction of Design Basis	MSIV Leak Fraction of Design Basis	Time (hours)	Time (days)
	DW PRESS (PSIA)	DW TEMP (F)	SP TEMP (F)				
80254.97	2.16E+01	1.88E+02	1.88E+02	0.397	0.561	2.229E+01	9.289E-01
80293.41	2.16E+01	1.88E+02	1.88E+02	0.397	0.562	2.230E+01	9.293E-01
80331.16	2.16E+01	1.88E+02	1.88E+02	0.397	0.561	2.231E+01	9.298E-01
80369.53	2.16E+01	1.88E+02	1.88E+02	0.397	0.561	2.232E+01	9.302E-01
80407.41	2.16E+01	1.88E+02	1.88E+02	0.397	0.561	2.234E+01	9.306E-01
80445.78	2.16E+01	1.88E+02	1.88E+02	0.397	0.561	2.235E+01	9.311E-01
80484.28	2.16E+01	1.88E+02	1.88E+02	0.397	0.561	2.236E+01	9.315E-01
80522.28	2.16E+01	1.88E+02	1.88E+02	0.397	0.561	2.237E+01	9.320E-01
80560.03	2.16E+01	1.88E+02	1.88E+02	0.397	0.561	2.238E+01	9.324E-01
80598.16	2.16E+01	1.88E+02	1.88E+02	0.397	0.561	2.239E+01	9.328E-01
80635.91	2.16E+01	1.88E+02	1.88E+02	0.397	0.561	2.240E+01	9.333E-01
80673.66	2.16E+01	1.88E+02	1.88E+02	0.396	0.560	2.241E+01	9.337E-01
80711.91	2.16E+01	1.88E+02	1.88E+02	0.396	0.560	2.242E+01	9.342E-01
80749.41	2.16E+01	1.88E+02	1.88E+02	0.396	0.560	2.243E+01	9.346E-01
80786.91	2.16E+01	1.88E+02	1.88E+02	0.396	0.560	2.244E+01	9.350E-01
80824.59	2.16E+01	1.88E+02	1.88E+02	0.396	0.560	2.245E+01	9.355E-01
80862.34	2.16E+01	1.88E+02	1.88E+02	0.396	0.560	2.246E+01	9.359E-01
80899.84	2.16E+01	1.88E+02	1.88E+02	0.396	0.560	2.247E+01	9.363E-01
80937.34	2.16E+01	1.88E+02	1.88E+02	0.396	0.560	2.248E+01	9.368E-01
80974.84	2.16E+01	1.88E+02	1.88E+02	0.396	0.560	2.249E+01	9.372E-01
81012.47	2.16E+01	1.88E+02	1.88E+02	0.396	0.560	2.250E+01	9.376E-01
81050.47	2.16E+01	1.88E+02	1.88E+02	0.396	0.560	2.251E+01	9.381E-01
81088.22	2.16E+01	1.88E+02	1.88E+02	0.396	0.560	2.252E+01	9.385E-01
81126.47	2.16E+01	1.88E+02	1.88E+02	0.396	0.560	2.254E+01	9.390E-01
81165.09	2.16E+01	1.88E+02	1.88E+02	0.396	0.560	2.255E+01	9.394E-01
81203.22	2.16E+01	1.88E+02	1.88E+02	0.396	0.560	2.256E+01	9.399E-01
81241.09	2.16E+01	1.88E+02	1.88E+02	0.396	0.560	2.257E+01	9.403E-01
81278.72	2.16E+01	1.88E+02	1.88E+02	0.396	0.560	2.258E+01	9.407E-01
81316.22	2.16E+01	1.88E+02	1.88E+02	0.396	0.560	2.259E+01	9.412E-01
81353.53	2.16E+01	1.88E+02	1.88E+02	0.396	0.560	2.260E+01	9.416E-01
81391.66	2.16E+01	1.88E+02	1.88E+02	0.396	0.560	2.261E+01	9.420E-01
81429.66	2.16E+01	1.88E+02	1.88E+02	0.396	0.560	2.262E+01	9.425E-01
81467.16	2.16E+01	1.88E+02	1.88E+02	0.396	0.560	2.263E+01	9.429E-01
81505.16	2.16E+01	1.87E+02	1.88E+02	0.395	0.559	2.264E+01	9.433E-01
81543.78	2.16E+01	1.87E+02	1.88E+02	0.395	0.559	2.265E+01	9.438E-01
81582.41	2.16E+01	1.87E+02	1.88E+02	0.395	0.559	2.266E+01	9.442E-01
81619.91	2.16E+01	1.87E+02	1.88E+02	0.395	0.559	2.267E+01	9.447E-01
81658.28	2.16E+01	1.87E+02	1.88E+02	0.395	0.559	2.268E+01	9.451E-01
81696.78	2.16E+01	1.87E+02	1.88E+02	0.395	0.559	2.269E+01	9.456E-01
81734.78	2.16E+01	1.87E+02	1.88E+02	0.395	0.559	2.270E+01	9.460E-01
81772.66	2.16E+01	1.87E+02	1.88E+02	0.395	0.559	2.271E+01	9.464E-01
81810.16	2.16E+01	1.87E+02	1.88E+02	0.395	0.558	2.273E+01	9.469E-01
81848.53	2.16E+01	1.87E+02	1.88E+02	0.395	0.558	2.274E+01	9.473E-01
81886.41	2.16E+01	1.87E+02	1.88E+02	0.395	0.558	2.275E+01	9.478E-01
81924.22	2.16E+01	1.87E+02	1.88E+02	0.395	0.559	2.276E+01	9.482E-01
81961.84	2.16E+01	1.87E+02	1.88E+02	0.395	0.558	2.277E+01	9.486E-01
82000.34	2.16E+01	1.87E+02	1.88E+02	0.395	0.558	2.278E+01	9.491E-01
82038.59	2.16E+01	1.87E+02	1.88E+02	0.395	0.558	2.279E+01	9.495E-01
82076.22	2.16E+01	1.87E+02	1.88E+02	0.395	0.558	2.280E+01	9.500E-01
82114.09	2.16E+01	1.87E+02	1.88E+02	0.395	0.558	2.281E+01	9.504E-01
82151.97	2.16E+01	1.87E+02	1.88E+02	0.395	0.558	2.282E+01	9.508E-01
82190.22	2.16E+01	1.87E+02	1.88E+02	0.395	0.558	2.283E+01	9.513E-01

SHEX-05A LGS SIL-636 CONT DBA-LOCA ANAL K=305
 Leak Rates proportional to square root of ratio of the time

44 PC Leak Test Pressure (psig)
 22 MSIV Leak Test Pressure (psig)

TIME	dependent delta P divided by the test delta P			PC Leak Fraction of Design Basis	MSIV Leak Fraction of Design Basis	Time (hours)	Time (days)
	DW PRESS (PSIA)	DW TEMP (F)	SP TEMP (F)				
82229.09	2.16E+01	1.87E+02	1.88E+02	0.395	0.558	2.284E+01	9.517E-01
82266.72	2.15E+01	1.87E+02	1.88E+02	0.394	0.558	2.285E+01	9.522E-01
82304.22	2.15E+01	1.87E+02	1.88E+02	0.394	0.558	2.286E+01	9.526E-01
82341.72	2.15E+01	1.87E+02	1.88E+02	0.394	0.558	2.287E+01	9.530E-01
82379.97	2.15E+01	1.87E+02	1.88E+02	0.394	0.558	2.288E+01	9.535E-01
82417.72	2.15E+01	1.87E+02	1.88E+02	0.394	0.558	2.289E+01	9.539E-01
82455.91	2.16E+01	1.87E+02	1.88E+02	0.395	0.558	2.290E+01	9.544E-01
82494.28	2.15E+01	1.87E+02	1.88E+02	0.394	0.558	2.292E+01	9.548E-01
82532.03	2.15E+01	1.87E+02	1.88E+02	0.394	0.558	2.293E+01	9.552E-01
82570.28	2.15E+01	1.87E+02	1.88E+02	0.394	0.558	2.294E+01	9.557E-01
82608.66	2.15E+01	1.87E+02	1.88E+02	0.394	0.558	2.295E+01	9.561E-01
82646.53	2.15E+01	1.87E+02	1.88E+02	0.394	0.557	2.296E+01	9.566E-01
82685.03	2.15E+01	1.87E+02	1.88E+02	0.394	0.557	2.297E+01	9.570E-01
82722.78	2.15E+01	1.87E+02	1.88E+02	0.394	0.557	2.298E+01	9.574E-01
82760.53	2.15E+01	1.87E+02	1.88E+02	0.394	0.557	2.299E+01	9.579E-01
82799.03	2.15E+01	1.87E+02	1.88E+02	0.394	0.557	2.300E+01	9.583E-01
82837.03	2.15E+01	1.87E+02	1.88E+02	0.394	0.557	2.301E+01	9.588E-01
82875.28	2.15E+01	1.87E+02	1.88E+02	0.394	0.557	2.302E+01	9.592E-01
82913.03	2.15E+01	1.87E+02	1.88E+02	0.394	0.557	2.303E+01	9.596E-01
82950.72	2.15E+01	1.87E+02	1.88E+02	0.394	0.557	2.304E+01	9.601E-01
82988.59	2.15E+01	1.87E+02	1.88E+02	0.394	0.557	2.305E+01	9.605E-01
83026.09	2.15E+01	1.87E+02	1.88E+02	0.394	0.557	2.306E+01	9.610E-01
83063.84	2.15E+01	1.87E+02	1.88E+02	0.394	0.557	2.307E+01	9.614E-01
83101.47	2.15E+01	1.87E+02	1.88E+02	0.394	0.557	2.308E+01	9.618E-01
83139.47	2.15E+01	1.87E+02	1.88E+02	0.393	0.556	2.309E+01	9.623E-01
83177.22	2.15E+01	1.87E+02	1.88E+02	0.393	0.556	2.310E+01	9.627E-01
83214.72	2.15E+01	1.87E+02	1.88E+02	0.393	0.556	2.312E+01	9.631E-01
83253.09	2.15E+01	1.87E+02	1.88E+02	0.393	0.556	2.313E+01	9.636E-01
83291.09	2.15E+01	1.87E+02	1.88E+02	0.393	0.556	2.314E+01	9.640E-01
83329.59	2.15E+01	1.87E+02	1.88E+02	0.393	0.556	2.315E+01	9.645E-01
83367.09	2.15E+01	1.87E+02	1.88E+02	0.393	0.556	2.316E+01	9.649E-01
83405.59	2.15E+01	1.87E+02	1.88E+02	0.393	0.556	2.317E+01	9.653E-01
83443.97	2.15E+01	1.87E+02	1.88E+02	0.393	0.556	2.318E+01	9.658E-01
83481.47	2.15E+01	1.87E+02	1.87E+02	0.393	0.556	2.319E+01	9.662E-01
83518.91	2.15E+01	1.87E+02	1.87E+02	0.393	0.556	2.320E+01	9.667E-01
83557.16	2.15E+01	1.87E+02	1.87E+02	0.393	0.556	2.321E+01	9.671E-01
83595.16	2.15E+01	1.87E+02	1.87E+02	0.393	0.556	2.322E+01	9.675E-01
83633.41	2.15E+01	1.87E+02	1.87E+02	0.393	0.556	2.323E+01	9.680E-01
83671.41	2.15E+01	1.87E+02	1.87E+02	0.393	0.556	2.324E+01	9.684E-01
83709.03	2.15E+01	1.87E+02	1.87E+02	0.393	0.556	2.325E+01	9.689E-01
83747.41	2.15E+01	1.87E+02	1.87E+02	0.393	0.556	2.326E+01	9.693E-01
83784.91	2.15E+01	1.87E+02	1.87E+02	0.393	0.555	2.327E+01	9.697E-01
83823.91	2.15E+01	1.87E+02	1.87E+02	0.393	0.555	2.328E+01	9.702E-01
83861.91	2.15E+01	1.87E+02	1.87E+02	0.393	0.555	2.329E+01	9.706E-01
83899.78	2.15E+01	1.87E+02	1.87E+02	0.393	0.555	2.331E+01	9.711E-01
83937.41	2.15E+01	1.87E+02	1.87E+02	0.393	0.555	2.332E+01	9.715E-01
83975.03	2.15E+01	1.87E+02	1.87E+02	0.392	0.555	2.333E+01	9.719E-01
84012.66	2.15E+01	1.87E+02	1.87E+02	0.392	0.555	2.334E+01	9.724E-01
84050.47	2.15E+01	1.87E+02	1.87E+02	0.393	0.555	2.335E+01	9.728E-01
84088.22	2.15E+01	1.87E+02	1.87E+02	0.393	0.555	2.336E+01	9.732E-01
84126.34	2.15E+01	1.87E+02	1.87E+02	0.392	0.555	2.337E+01	9.737E-01
84163.84	2.15E+01	1.87E+02	1.87E+02	0.392	0.555	2.338E+01	9.741E-01

SHEX-05A LGS SIL-636 CONT DBA-LOCA ANAL K=305
 Leak Rates proportional to square root of ratio of the time

44 PC Leak Test Pressure (psig)
 22 MSIV Leak Test Pressure (psig)

TIME	dependent delta P divided by the test delta P			PC Leak Fraction of Design Basis	MSIV Leak Fraction of Design Basis	Time (hours)	Time (days)
	DW PRESS (PSIA)	DW TEMP (F)	SP TEMP (F)				
84201.47	2.15E+01	1.87E+02	1.87E+02	0.392	0.555	2.339E+01	9.746E-01
84239.22	2.15E+01	1.87E+02	1.87E+02	0.392	0.555	2.340E+01	9.750E-01
84276.72	2.15E+01	1.87E+02	1.87E+02	0.392	0.554	2.341E+01	9.754E-01
84315.72	2.15E+01	1.87E+02	1.87E+02	0.392	0.554	2.342E+01	9.759E-01
84353.59	2.15E+01	1.87E+02	1.87E+02	0.392	0.554	2.343E+01	9.763E-01
84391.47	2.15E+01	1.87E+02	1.87E+02	0.392	0.554	2.344E+01	9.768E-01
84429.34	2.15E+01	1.87E+02	1.87E+02	0.392	0.554	2.345E+01	9.772E-01
84467.22	2.15E+01	1.87E+02	1.87E+02	0.392	0.554	2.346E+01	9.776E-01
84504.72	2.15E+01	1.87E+02	1.87E+02	0.392	0.554	2.347E+01	9.781E-01
84542.34	2.15E+01	1.87E+02	1.87E+02	0.392	0.554	2.348E+01	9.785E-01
84580.09	2.15E+01	1.87E+02	1.87E+02	0.392	0.554	2.349E+01	9.789E-01
84617.53	2.15E+01	1.87E+02	1.87E+02	0.392	0.554	2.350E+01	9.794E-01
84656.03	2.15E+01	1.87E+02	1.87E+02	0.392	0.554	2.352E+01	9.798E-01
84693.91	2.15E+01	1.87E+02	1.87E+02	0.392	0.554	2.353E+01	9.803E-01
84732.91	2.15E+01	1.87E+02	1.87E+02	0.392	0.554	2.354E+01	9.807E-01
84770.53	2.15E+01	1.87E+02	1.87E+02	0.392	0.554	2.355E+01	9.811E-01
84808.03	2.14E+01	1.87E+02	1.87E+02	0.391	0.554	2.356E+01	9.816E-01
84845.53	2.14E+01	1.87E+02	1.87E+02	0.391	0.554	2.357E+01	9.820E-01
84883.66	2.14E+01	1.87E+02	1.87E+02	0.391	0.554	2.358E+01	9.824E-01
84921.78	2.14E+01	1.87E+02	1.87E+02	0.391	0.554	2.359E+01	9.829E-01
84959.66	2.14E+01	1.86E+02	1.87E+02	0.391	0.554	2.360E+01	9.833E-01
84998.16	2.14E+01	1.86E+02	1.87E+02	0.391	0.553	2.361E+01	9.838E-01
85036.28	2.14E+01	1.86E+02	1.87E+02	0.391	0.553	2.362E+01	9.842E-01
85073.91	2.14E+01	1.86E+02	1.87E+02	0.391	0.553	2.363E+01	9.847E-01
85111.53	2.14E+01	1.86E+02	1.87E+02	0.391	0.553	2.364E+01	9.851E-01
85149.78	2.14E+01	1.86E+02	1.87E+02	0.391	0.553	2.365E+01	9.855E-01
85187.59	2.14E+01	1.86E+02	1.87E+02	0.391	0.553	2.366E+01	9.860E-01
85226.47	2.14E+01	1.86E+02	1.87E+02	0.391	0.553	2.367E+01	9.864E-01
85265.34	2.14E+01	1.86E+02	1.87E+02	0.391	0.553	2.368E+01	9.869E-01
85302.84	2.14E+01	1.86E+02	1.87E+02	0.391	0.553	2.370E+01	9.873E-01
85341.97	2.14E+01	1.86E+02	1.87E+02	0.391	0.553	2.371E+01	9.878E-01
85379.97	2.14E+01	1.86E+02	1.87E+02	0.391	0.553	2.372E+01	9.882E-01
85417.72	2.14E+01	1.86E+02	1.87E+02	0.391	0.553	2.373E+01	9.886E-01
85455.47	2.14E+01	1.86E+02	1.87E+02	0.391	0.552	2.374E+01	9.891E-01
85492.97	2.14E+01	1.86E+02	1.87E+02	0.391	0.552	2.375E+01	9.895E-01
85531.09	2.14E+01	1.86E+02	1.87E+02	0.391	0.552	2.376E+01	9.899E-01
85568.84	2.14E+01	1.86E+02	1.87E+02	0.391	0.552	2.377E+01	9.904E-01
85606.97	2.14E+01	1.86E+02	1.87E+02	0.390	0.552	2.378E+01	9.908E-01
85644.59	2.14E+01	1.86E+02	1.87E+02	0.390	0.552	2.379E+01	9.913E-01
85682.09	2.14E+01	1.86E+02	1.87E+02	0.390	0.552	2.380E+01	9.917E-01
85719.66	2.14E+01	1.86E+02	1.87E+02	0.391	0.552	2.381E+01	9.921E-01
85758.03	2.14E+01	1.86E+02	1.87E+02	0.391	0.552	2.382E+01	9.926E-01
85795.78	2.14E+01	1.86E+02	1.87E+02	0.391	0.552	2.383E+01	9.930E-01
85833.41	2.14E+01	1.86E+02	1.87E+02	0.390	0.552	2.384E+01	9.934E-01
85871.41	2.14E+01	1.86E+02	1.87E+02	0.390	0.552	2.385E+01	9.939E-01
85908.91	2.14E+01	1.86E+02	1.87E+02	0.390	0.552	2.386E+01	9.943E-01
85947.03	2.14E+01	1.86E+02	1.87E+02	0.390	0.552	2.387E+01	9.948E-01
85985.66	2.14E+01	1.86E+02	1.87E+02	0.390	0.551	2.388E+01	9.952E-01
86023.78	2.14E+01	1.86E+02	1.87E+02	0.390	0.551	2.390E+01	9.956E-01
86061.28	2.14E+01	1.86E+02	1.87E+02	0.390	0.551	2.391E+01	9.961E-01
86099.28	2.14E+01	1.86E+02	1.87E+02	0.390	0.551	2.392E+01	9.965E-01
86137.53	2.14E+01	1.86E+02	1.87E+02	0.390	0.551	2.393E+01	9.970E-01

SHEX-05A LGS SIL-636 CONT DBA-LOCA ANAL K=305
 Leak Rates proportional to square root of ratio of the time

44 PC Leak Test Pressure (psig)
 22 MSIV Leak Test Pressure (psig)

TIME	dependent delta P divided by the test delta P			PC Leak Fraction of Design Basis	MSIV Leak Fraction of Design Basis	Time (hours)	Time (days)
	DW PRESS (PSIA)	DW TEMP (F)	SP TEMP (F)				
86175.03	2.14E+01	1.86E+02	1.87E+02	0.390	0.551	2.394E+01	9.974E-01
86212.53	2.14E+01	1.86E+02	1.87E+02	0.390	0.551	2.395E+01	9.978E-01
86250.78	2.14E+01	1.86E+02	1.87E+02	0.390	0.551	2.396E+01	9.983E-01
86288.09	2.14E+01	1.86E+02	1.87E+02	0.390	0.551	2.397E+01	9.987E-01
86326.47	2.14E+01	1.86E+02	1.87E+02	0.390	0.551	2.398E+01	9.991E-01
86363.97	2.14E+01	1.86E+02	1.87E+02	0.390	0.551	2.399E+01	9.996E-01
86403.59	2.14E+01	1.86E+02	1.87E+02	0.390	0.551	2.400E+01	1.000E+00
86441.97	2.14E+01	1.86E+02	1.87E+02	0.390	0.551	2.401E+01	1.000E+00
86479.72	2.14E+01	1.86E+02	1.87E+02	0.389	0.551	2.402E+01	1.001E+00
86517.59	2.14E+01	1.86E+02	1.87E+02	0.389	0.551	2.403E+01	1.001E+00
86556.34	2.14E+01	1.86E+02	1.87E+02	0.389	0.551	2.404E+01	1.002E+00
86594.84	2.14E+01	1.86E+02	1.87E+02	0.389	0.551	2.405E+01	1.002E+00
86632.97	2.14E+01	1.86E+02	1.87E+02	0.389	0.551	2.406E+01	1.003E+00
86670.59	2.14E+01	1.86E+02	1.87E+02	0.389	0.550	2.408E+01	1.003E+00
86708.09	2.14E+01	1.86E+02	1.87E+02	0.389	0.550	2.409E+01	1.004E+00
86745.72	2.14E+01	1.86E+02	1.87E+02	0.389	0.550	2.410E+01	1.004E+00
86783.47	2.14E+01	1.86E+02	1.87E+02	0.389	0.550	2.411E+01	1.004E+00
86821.16	2.14E+01	1.86E+02	1.87E+02	0.389	0.550	2.412E+01	1.005E+00
86858.66	2.14E+01	1.86E+02	1.87E+02	0.389	0.550	2.413E+01	1.005E+00
86897.03	2.14E+01	1.86E+02	1.87E+02	0.389	0.550	2.414E+01	1.006E+00
86934.91	2.14E+01	1.86E+02	1.86E+02	0.389	0.550	2.415E+01	1.006E+00
86972.91	2.14E+01	1.86E+02	1.86E+02	0.389	0.550	2.416E+01	1.007E+00
87010.66	2.14E+01	1.86E+02	1.86E+02	0.389	0.550	2.417E+01	1.007E+00
87048.41	2.14E+01	1.86E+02	1.86E+02	0.389	0.550	2.418E+01	1.008E+00
87086.41	2.14E+01	1.86E+02	1.86E+02	0.389	0.550	2.419E+01	1.008E+00
87124.28	2.14E+01	1.86E+02	1.86E+02	0.389	0.550	2.420E+01	1.008E+00
87161.91	2.14E+01	1.86E+02	1.86E+02	0.389	0.550	2.421E+01	1.009E+00
87199.91	2.13E+01	1.86E+02	1.86E+02	0.388	0.549	2.422E+01	1.009E+00
87238.91	2.13E+01	1.86E+02	1.86E+02	0.388	0.549	2.423E+01	1.010E+00
87276.53	2.13E+01	1.86E+02	1.86E+02	0.388	0.549	2.424E+01	1.010E+00
87314.16	2.13E+01	1.86E+02	1.86E+02	0.388	0.549	2.425E+01	1.011E+00
87352.03	2.13E+01	1.86E+02	1.86E+02	0.388	0.549	2.426E+01	1.011E+00
87389.78	2.13E+01	1.86E+02	1.86E+02	0.388	0.549	2.427E+01	1.011E+00
87427.72	2.13E+01	1.86E+02	1.86E+02	0.388	0.549	2.429E+01	1.012E+00
87465.84	2.13E+01	1.86E+02	1.86E+02	0.388	0.549	2.430E+01	1.012E+00
87503.47	2.13E+01	1.86E+02	1.86E+02	0.388	0.549	2.431E+01	1.013E+00
87541.72	2.13E+01	1.86E+02	1.86E+02	0.388	0.549	2.432E+01	1.013E+00
87579.34	2.13E+01	1.86E+02	1.86E+02	0.388	0.549	2.433E+01	1.014E+00
87616.84	2.13E+01	1.86E+02	1.86E+02	0.388	0.549	2.434E+01	1.014E+00
87654.97	2.13E+01	1.86E+02	1.86E+02	0.388	0.549	2.435E+01	1.015E+00
87692.47	2.13E+01	1.86E+02	1.86E+02	0.388	0.549	2.436E+01	1.015E+00
87731.09	2.13E+01	1.86E+02	1.86E+02	0.388	0.549	2.437E+01	1.015E+00
87768.84	2.13E+01	1.86E+02	1.86E+02	0.388	0.549	2.438E+01	1.016E+00
87806.59	2.13E+01	1.86E+02	1.86E+02	0.388	0.549	2.439E+01	1.016E+00
87844.97	2.13E+01	1.86E+02	1.86E+02	0.388	0.549	2.440E+01	1.017E+00
87882.72	2.13E+01	1.86E+02	1.86E+02	0.388	0.548	2.441E+01	1.017E+00
87920.59	2.13E+01	1.86E+02	1.86E+02	0.388	0.548	2.442E+01	1.018E+00
87958.34	2.13E+01	1.86E+02	1.86E+02	0.388	0.548	2.443E+01	1.018E+00
87996.91	2.13E+01	1.86E+02	1.86E+02	0.388	0.549	2.444E+01	1.018E+00
88034.91	2.13E+01	1.86E+02	1.86E+02	0.388	0.548	2.445E+01	1.019E+00
88072.66	2.13E+01	1.86E+02	1.86E+02	0.388	0.548	2.446E+01	1.019E+00
88110.53	2.13E+01	1.86E+02	1.86E+02	0.388	0.548	2.448E+01	1.020E+00

SHEX-05A LGS SIL-636 CONT DBA-LOCA ANAL K=305
 Leak Rates proportional to square root of ratio of the time

44 PC Leak Test Pressure (psig)
 22 MSIV Leak Test Pressure (psig)

TIME	dependent delta P divided by the test delta P			PC Leak Fraction of Design Basis	MSIV Leak Fraction of Design Basis	Time (hours)	Time (days)
	DW PRESS (PSIA)	DW TEMP (F)	SP TEMP (F)				
88148.16	2.13E+01	1.86E+02	1.86E+02	0.388	0.548	2.449E+01	1.020E+00
88187.16	2.13E+01	1.86E+02	1.86E+02	0.388	0.548	2.450E+01	1.021E+00
88225.16	2.13E+01	1.86E+02	1.86E+02	0.387	0.548	2.451E+01	1.021E+00
88262.66	2.13E+01	1.86E+02	1.86E+02	0.387	0.548	2.452E+01	1.022E+00
88300.28	2.13E+01	1.86E+02	1.86E+02	0.387	0.548	2.453E+01	1.022E+00
88338.16	2.13E+01	1.86E+02	1.86E+02	0.387	0.548	2.454E+01	1.022E+00
88377.16	2.13E+01	1.86E+02	1.86E+02	0.387	0.548	2.455E+01	1.023E+00
88415.16	2.13E+01	1.86E+02	1.86E+02	0.387	0.547	2.456E+01	1.023E+00
88453.03	2.13E+01	1.86E+02	1.86E+02	0.387	0.547	2.457E+01	1.024E+00
88490.78	2.13E+01	1.85E+02	1.86E+02	0.387	0.547	2.458E+01	1.024E+00
88528.41	2.13E+01	1.85E+02	1.86E+02	0.387	0.547	2.459E+01	1.025E+00
88565.97	2.13E+01	1.85E+02	1.86E+02	0.387	0.548	2.460E+01	1.025E+00
88603.72	2.13E+01	1.85E+02	1.86E+02	0.387	0.547	2.461E+01	1.026E+00
88641.47	2.13E+01	1.85E+02	1.86E+02	0.387	0.547	2.462E+01	1.026E+00
88679.59	2.13E+01	1.85E+02	1.86E+02	0.387	0.547	2.463E+01	1.026E+00
88717.34	2.13E+01	1.85E+02	1.86E+02	0.387	0.547	2.464E+01	1.027E+00
88755.09	2.13E+01	1.85E+02	1.86E+02	0.387	0.547	2.465E+01	1.027E+00
88793.09	2.13E+01	1.85E+02	1.86E+02	0.387	0.547	2.466E+01	1.028E+00
88830.59	2.13E+01	1.85E+02	1.86E+02	0.387	0.547	2.468E+01	1.028E+00
88868.09	2.13E+01	1.85E+02	1.86E+02	0.387	0.547	2.469E+01	1.029E+00
88906.34	2.13E+01	1.85E+02	1.86E+02	0.387	0.547	2.470E+01	1.029E+00
88945.59	2.13E+01	1.85E+02	1.86E+02	0.387	0.547	2.471E+01	1.029E+00
88984.34	2.13E+01	1.85E+02	1.86E+02	0.386	0.546	2.472E+01	1.030E+00
89021.84	2.13E+01	1.85E+02	1.86E+02	0.386	0.546	2.473E+01	1.030E+00
89059.34	2.13E+01	1.85E+02	1.86E+02	0.386	0.546	2.474E+01	1.031E+00
89096.97	2.13E+01	1.85E+02	1.86E+02	0.386	0.546	2.475E+01	1.031E+00
89135.28	2.13E+01	1.85E+02	1.86E+02	0.387	0.547	2.476E+01	1.032E+00
89173.03	2.13E+01	1.85E+02	1.86E+02	0.386	0.546	2.477E+01	1.032E+00
89211.03	2.13E+01	1.85E+02	1.86E+02	0.386	0.546	2.478E+01	1.033E+00
89249.28	2.13E+01	1.85E+02	1.86E+02	0.386	0.546	2.479E+01	1.033E+00
89286.78	2.13E+01	1.85E+02	1.86E+02	0.386	0.546	2.480E+01	1.033E+00
89324.41	2.13E+01	1.85E+02	1.86E+02	0.386	0.546	2.481E+01	1.034E+00
89361.91	2.13E+01	1.85E+02	1.86E+02	0.386	0.546	2.482E+01	1.034E+00
89399.91	2.13E+01	1.85E+02	1.86E+02	0.386	0.546	2.483E+01	1.035E+00
89438.16	2.13E+01	1.85E+02	1.86E+02	0.386	0.546	2.484E+01	1.035E+00
89476.03	2.13E+01	1.85E+02	1.86E+02	0.386	0.546	2.485E+01	1.036E+00
89513.53	2.13E+01	1.85E+02	1.86E+02	0.386	0.546	2.486E+01	1.036E+00
89551.28	2.13E+01	1.85E+02	1.86E+02	0.386	0.546	2.488E+01	1.036E+00
89589.28	2.13E+01	1.85E+02	1.86E+02	0.386	0.546	2.489E+01	1.037E+00
89627.28	2.13E+01	1.85E+02	1.86E+02	0.386	0.546	2.490E+01	1.037E+00
89665.16	2.12E+01	1.85E+02	1.86E+02	0.386	0.545	2.491E+01	1.038E+00
89702.91	2.12E+01	1.85E+02	1.86E+02	0.386	0.545	2.492E+01	1.038E+00
89740.22	2.13E+01	1.85E+02	1.86E+02	0.386	0.546	2.493E+01	1.039E+00
89778.34	2.13E+01	1.85E+02	1.86E+02	0.386	0.546	2.494E+01	1.039E+00
89816.34	2.13E+01	1.85E+02	1.86E+02	0.386	0.546	2.495E+01	1.040E+00
89853.84	2.12E+01	1.85E+02	1.86E+02	0.386	0.545	2.496E+01	1.040E+00
89892.34	2.12E+01	1.85E+02	1.86E+02	0.386	0.545	2.497E+01	1.040E+00
89930.47	2.12E+01	1.85E+02	1.86E+02	0.386	0.545	2.498E+01	1.041E+00
89968.34	2.12E+01	1.85E+02	1.86E+02	0.386	0.545	2.499E+01	1.041E+00
90006.47	2.12E+01	1.85E+02	1.86E+02	0.386	0.545	2.500E+01	1.042E+00
90043.97	2.12E+01	1.85E+02	1.86E+02	0.385	0.545	2.501E+01	1.042E+00
90082.09	2.12E+01	1.85E+02	1.86E+02	0.385	0.545	2.502E+01	1.043E+00

SHEX-05A LGS SIL-636 CONT DBA-LOCA ANAL K=305
 Leak Rates proportional to square root of ratio of the time

44 PC Leak Test Pressure (psig)
 22 MSIV Leak Test Pressure (psig)

TIME	dependent delta P divided by the test delta P			PC Leak Fraction of Design Basis	MSIV Leak Fraction of Design Basis	Time (hours)	Time (days)
	DW PRESS (PSIA)	DW TEMP (F)	SP TEMP (F)				
90119.72	2.12E+01	1.85E+02	1.86E+02	0.385	0.545	2.503E+01	1.043E+00
90157.34	2.12E+01	1.85E+02	1.86E+02	0.385	0.545	2.504E+01	1.043E+00
90195.09	2.12E+01	1.85E+02	1.86E+02	0.385	0.544	2.505E+01	1.044E+00
90232.97	2.12E+01	1.85E+02	1.86E+02	0.385	0.544	2.506E+01	1.044E+00
90271.22	2.12E+01	1.85E+02	1.86E+02	0.385	0.544	2.508E+01	1.045E+00
90308.78	2.12E+01	1.85E+02	1.86E+02	0.385	0.545	2.509E+01	1.045E+00
90346.28	2.12E+01	1.85E+02	1.86E+02	0.385	0.545	2.510E+01	1.046E+00
90383.78	2.12E+01	1.85E+02	1.86E+02	0.385	0.544	2.511E+01	1.046E+00
90421.53	2.12E+01	1.85E+02	1.86E+02	0.385	0.544	2.512E+01	1.047E+00
90460.53	2.12E+01	1.85E+02	1.86E+02	0.385	0.544	2.513E+01	1.047E+00
90498.16	2.12E+01	1.85E+02	1.85E+02	0.385	0.544	2.514E+01	1.047E+00
90536.16	2.12E+01	1.85E+02	1.85E+02	0.385	0.544	2.515E+01	1.048E+00
90574.16	2.12E+01	1.85E+02	1.85E+02	0.385	0.544	2.516E+01	1.048E+00
90612.28	2.12E+01	1.85E+02	1.85E+02	0.385	0.544	2.517E+01	1.049E+00
90650.41	2.12E+01	1.85E+02	1.85E+02	0.385	0.544	2.518E+01	1.049E+00
90689.03	2.12E+01	1.85E+02	1.85E+02	0.385	0.544	2.519E+01	1.050E+00
90726.78	2.12E+01	1.85E+02	1.85E+02	0.384	0.544	2.520E+01	1.050E+00
90764.91	2.12E+01	1.85E+02	1.85E+02	0.384	0.544	2.521E+01	1.051E+00
90802.41	2.12E+01	1.85E+02	1.85E+02	0.384	0.544	2.522E+01	1.051E+00
90840.66	2.12E+01	1.85E+02	1.85E+02	0.384	0.544	2.523E+01	1.051E+00
90878.66	2.12E+01	1.85E+02	1.85E+02	0.384	0.544	2.524E+01	1.052E+00
90916.47	2.12E+01	1.85E+02	1.85E+02	0.385	0.544	2.525E+01	1.052E+00
90954.09	2.12E+01	1.85E+02	1.85E+02	0.384	0.544	2.527E+01	1.053E+00
90991.59	2.12E+01	1.85E+02	1.85E+02	0.384	0.544	2.528E+01	1.053E+00
91029.47	2.12E+01	1.85E+02	1.85E+02	0.384	0.544	2.529E+01	1.054E+00
91066.97	2.12E+01	1.85E+02	1.85E+02	0.384	0.544	2.530E+01	1.054E+00
91105.47	2.12E+01	1.85E+02	1.85E+02	0.384	0.544	2.531E+01	1.054E+00
91143.09	2.12E+01	1.85E+02	1.85E+02	0.384	0.543	2.532E+01	1.055E+00
91181.22	2.12E+01	1.85E+02	1.85E+02	0.384	0.543	2.533E+01	1.055E+00
91219.22	2.12E+01	1.85E+02	1.85E+02	0.384	0.543	2.534E+01	1.056E+00
91257.59	2.12E+01	1.85E+02	1.85E+02	0.384	0.543	2.535E+01	1.056E+00
91295.34	2.12E+01	1.85E+02	1.85E+02	0.384	0.543	2.536E+01	1.057E+00
91332.84	2.12E+01	1.85E+02	1.85E+02	0.384	0.543	2.537E+01	1.057E+00
91370.47	2.12E+01	1.85E+02	1.85E+02	0.384	0.543	2.538E+01	1.058E+00
91407.97	2.12E+01	1.85E+02	1.85E+02	0.384	0.543	2.539E+01	1.058E+00
91445.47	2.12E+01	1.85E+02	1.85E+02	0.384	0.543	2.540E+01	1.058E+00
91484.47	2.12E+01	1.85E+02	1.85E+02	0.384	0.543	2.541E+01	1.059E+00
91523.03	2.12E+01	1.85E+02	1.85E+02	0.384	0.543	2.542E+01	1.059E+00
91560.78	2.12E+01	1.85E+02	1.85E+02	0.384	0.543	2.543E+01	1.060E+00
91598.91	2.12E+01	1.85E+02	1.85E+02	0.384	0.543	2.544E+01	1.060E+00
91636.53	2.12E+01	1.85E+02	1.85E+02	0.384	0.543	2.545E+01	1.061E+00
91674.78	2.12E+01	1.85E+02	1.85E+02	0.383	0.542	2.547E+01	1.061E+00
91713.28	2.12E+01	1.85E+02	1.85E+02	0.383	0.542	2.548E+01	1.061E+00
91752.03	2.12E+01	1.85E+02	1.85E+02	0.383	0.542	2.549E+01	1.062E+00
91789.78	2.12E+01	1.85E+02	1.85E+02	0.383	0.542	2.550E+01	1.062E+00
91827.41	2.12E+01	1.85E+02	1.85E+02	0.383	0.542	2.551E+01	1.063E+00
91865.41	2.12E+01	1.85E+02	1.85E+02	0.383	0.542	2.552E+01	1.063E+00
91903.78	2.12E+01	1.85E+02	1.85E+02	0.383	0.542	2.553E+01	1.064E+00
91941.66	2.12E+01	1.85E+02	1.85E+02	0.383	0.542	2.554E+01	1.064E+00
91979.28	2.12E+01	1.85E+02	1.85E+02	0.383	0.542	2.555E+01	1.065E+00
92016.78	2.12E+01	1.85E+02	1.85E+02	0.383	0.542	2.556E+01	1.065E+00
92054.78	2.12E+01	1.85E+02	1.85E+02	0.383	0.541	2.557E+01	1.065E+00

SHEX-05A LGS SIL-636 CONT DBA-LOCA ANAL K=305
 Leak Rates proportional to square root of ratio of the time

44 PC Leak Test Pressure (psig)
 22 MSIV Leak Test Pressure (psig)

TIME	dependent delta P divided by the test delta P			PC Leak Fraction of Design Basis	MSIV Leak Fraction of Design Basis	Time (hours)	Time (days)
	DW PRESS (PSIA)	DW TEMP (F)	SP TEMP (F)				
92093.03	2.12E+01	1.85E+02	1.85E+02	0.383	0.541	2.558E+01	1.066E+00
92131.09	2.12E+01	1.85E+02	1.85E+02	0.383	0.542	2.559E+01	1.066E+00
92168.97	2.12E+01	1.85E+02	1.85E+02	0.383	0.542	2.560E+01	1.067E+00
92207.34	2.12E+01	1.84E+02	1.85E+02	0.383	0.542	2.561E+01	1.067E+00
92244.97	2.12E+01	1.84E+02	1.85E+02	0.383	0.541	2.562E+01	1.068E+00
92283.22	2.12E+01	1.84E+02	1.85E+02	0.383	0.541	2.563E+01	1.068E+00
92321.47	2.12E+01	1.84E+02	1.85E+02	0.383	0.541	2.564E+01	1.069E+00
92359.47	2.12E+01	1.84E+02	1.85E+02	0.383	0.541	2.566E+01	1.069E+00
92396.97	2.12E+01	1.84E+02	1.85E+02	0.383	0.541	2.567E+01	1.069E+00
92434.97	2.11E+01	1.84E+02	1.85E+02	0.383	0.541	2.568E+01	1.070E+00
92472.84	2.11E+01	1.84E+02	1.85E+02	0.383	0.541	2.569E+01	1.070E+00
92510.97	2.11E+01	1.84E+02	1.85E+02	0.383	0.541	2.570E+01	1.071E+00
92549.34	2.11E+01	1.84E+02	1.85E+02	0.383	0.541	2.571E+01	1.071E+00
92587.22	2.11E+01	1.84E+02	1.85E+02	0.383	0.541	2.572E+01	1.072E+00
92625.47	2.11E+01	1.84E+02	1.85E+02	0.382	0.541	2.573E+01	1.072E+00
92663.47	2.11E+01	1.84E+02	1.85E+02	0.382	0.541	2.574E+01	1.072E+00
92701.72	2.11E+01	1.84E+02	1.85E+02	0.382	0.541	2.575E+01	1.073E+00
92739.41	2.11E+01	1.84E+02	1.85E+02	0.383	0.541	2.576E+01	1.073E+00
92777.16	2.11E+01	1.84E+02	1.85E+02	0.383	0.541	2.577E+01	1.074E+00
92814.66	2.11E+01	1.84E+02	1.85E+02	0.382	0.541	2.578E+01	1.074E+00
92853.41	2.11E+01	1.84E+02	1.85E+02	0.382	0.541	2.579E+01	1.075E+00
92891.03	2.11E+01	1.84E+02	1.85E+02	0.382	0.541	2.580E+01	1.075E+00
92928.53	2.11E+01	1.84E+02	1.85E+02	0.382	0.541	2.581E+01	1.076E+00
92966.78	2.11E+01	1.84E+02	1.85E+02	0.382	0.541	2.582E+01	1.076E+00
93004.53	2.11E+01	1.84E+02	1.85E+02	0.382	0.540	2.583E+01	1.076E+00
93042.03	2.11E+01	1.84E+02	1.85E+02	0.382	0.540	2.585E+01	1.077E+00
93079.66	2.11E+01	1.84E+02	1.85E+02	0.382	0.540	2.586E+01	1.077E+00
93118.03	2.11E+01	1.84E+02	1.85E+02	0.382	0.540	2.587E+01	1.078E+00
93156.53	2.11E+01	1.84E+02	1.85E+02	0.382	0.540	2.588E+01	1.078E+00
93194.03	2.11E+01	1.84E+02	1.85E+02	0.382	0.540	2.589E+01	1.079E+00
93231.66	2.11E+01	1.84E+02	1.85E+02	0.382	0.540	2.590E+01	1.079E+00
93269.28	2.11E+01	1.84E+02	1.85E+02	0.382	0.540	2.591E+01	1.080E+00
93307.03	2.11E+01	1.84E+02	1.85E+02	0.382	0.540	2.592E+01	1.080E+00
93345.09	2.11E+01	1.84E+02	1.85E+02	0.382	0.540	2.593E+01	1.080E+00
93382.72	2.11E+01	1.84E+02	1.85E+02	0.382	0.540	2.594E+01	1.081E+00
93421.97	2.11E+01	1.84E+02	1.85E+02	0.382	0.540	2.595E+01	1.081E+00
93459.97	2.11E+01	1.84E+02	1.85E+02	0.382	0.540	2.596E+01	1.082E+00
93498.09	2.11E+01	1.84E+02	1.85E+02	0.382	0.540	2.597E+01	1.082E+00
93535.72	2.11E+01	1.84E+02	1.85E+02	0.381	0.539	2.598E+01	1.083E+00
93573.59	2.11E+01	1.84E+02	1.85E+02	0.381	0.539	2.599E+01	1.083E+00
93611.72	2.11E+01	1.84E+02	1.85E+02	0.381	0.539	2.600E+01	1.083E+00
93649.34	2.11E+01	1.84E+02	1.85E+02	0.381	0.539	2.601E+01	1.084E+00
93687.47	2.11E+01	1.84E+02	1.85E+02	0.381	0.539	2.602E+01	1.084E+00
93725.59	2.11E+01	1.84E+02	1.85E+02	0.381	0.539	2.603E+01	1.085E+00
93763.22	2.11E+01	1.84E+02	1.85E+02	0.381	0.539	2.605E+01	1.085E+00
93801.22	2.11E+01	1.84E+02	1.85E+02	0.381	0.539	2.606E+01	1.086E+00
93839.72	2.11E+01	1.84E+02	1.85E+02	0.381	0.539	2.607E+01	1.086E+00
93879.09	2.11E+01	1.84E+02	1.85E+02	0.381	0.539	2.608E+01	1.087E+00
93916.72	2.11E+01	1.84E+02	1.85E+02	0.381	0.539	2.609E+01	1.087E+00
93954.22	2.11E+01	1.84E+02	1.85E+02	0.381	0.539	2.610E+01	1.087E+00
93992.28	2.11E+01	1.84E+02	1.85E+02	0.381	0.539	2.611E+01	1.088E+00
94030.66	2.11E+01	1.84E+02	1.85E+02	0.381	0.539	2.612E+01	1.088E+00

SHEX-05A LGS SIL-636 CONT DBA-LOCA ANAL K=305
 Leak Rates proportional to square root of ratio of the time

44 PC Leak Test Pressure (psig)
 22 MSIV Leak Test Pressure (psig)

TIME	dependent delta P divided by the test delta P			PC Leak Fraction of Design Basis	MSIV Leak Fraction of Design Basis	Time (hours)	Time (days)
	DW PRESS (PSIA)	DW TEMP (F)	SP TEMP (F)				
94068.53	2.11E+01	1.84E+02	1.85E+02	0.381	0.539	2.613E+01	1.089E+00
94106.03	2.11E+01	1.84E+02	1.85E+02	0.381	0.539	2.614E+01	1.089E+00
94144.28	2.11E+01	1.84E+02	1.85E+02	0.381	0.539	2.615E+01	1.090E+00
94181.91	2.11E+01	1.84E+02	1.84E+02	0.381	0.539	2.616E+01	1.090E+00
94220.16	2.11E+01	1.84E+02	1.84E+02	0.381	0.539	2.617E+01	1.091E+00
94258.41	2.11E+01	1.84E+02	1.84E+02	0.381	0.539	2.618E+01	1.091E+00
94297.41	2.11E+01	1.84E+02	1.84E+02	0.381	0.539	2.619E+01	1.091E+00
94334.91	2.11E+01	1.84E+02	1.84E+02	0.380	0.538	2.620E+01	1.092E+00
94372.66	2.11E+01	1.84E+02	1.84E+02	0.380	0.538	2.621E+01	1.092E+00
94410.66	2.11E+01	1.84E+02	1.84E+02	0.380	0.538	2.623E+01	1.093E+00
94448.28	2.11E+01	1.84E+02	1.84E+02	0.380	0.538	2.624E+01	1.093E+00
94485.91	2.11E+01	1.84E+02	1.84E+02	0.380	0.538	2.625E+01	1.094E+00
94523.78	2.11E+01	1.84E+02	1.84E+02	0.380	0.538	2.626E+01	1.094E+00
94562.03	2.11E+01	1.84E+02	1.84E+02	0.380	0.538	2.627E+01	1.094E+00
94599.66	2.11E+01	1.84E+02	1.84E+02	0.380	0.538	2.628E+01	1.095E+00
94637.59	2.11E+01	1.84E+02	1.84E+02	0.380	0.538	2.629E+01	1.095E+00
94675.34	2.11E+01	1.84E+02	1.84E+02	0.380	0.538	2.630E+01	1.096E+00
94713.09	2.11E+01	1.84E+02	1.84E+02	0.380	0.538	2.631E+01	1.096E+00
94750.97	2.11E+01	1.84E+02	1.84E+02	0.380	0.538	2.632E+01	1.097E+00
94788.47	2.11E+01	1.84E+02	1.84E+02	0.380	0.538	2.633E+01	1.097E+00
94826.47	2.11E+01	1.84E+02	1.84E+02	0.380	0.538	2.634E+01	1.098E+00
94864.09	2.11E+01	1.84E+02	1.84E+02	0.380	0.538	2.635E+01	1.098E+00
94902.59	2.11E+01	1.84E+02	1.84E+02	0.380	0.537	2.636E+01	1.098E+00
94940.47	2.11E+01	1.84E+02	1.84E+02	0.380	0.537	2.637E+01	1.099E+00
94978.22	2.11E+01	1.84E+02	1.84E+02	0.380	0.537	2.638E+01	1.099E+00
95016.47	2.11E+01	1.84E+02	1.84E+02	0.380	0.537	2.639E+01	1.100E+00
95054.09	2.11E+01	1.84E+02	1.84E+02	0.380	0.537	2.640E+01	1.100E+00
95092.09	2.10E+01	1.84E+02	1.84E+02	0.380	0.537	2.641E+01	1.101E+00
95129.72	2.10E+01	1.84E+02	1.84E+02	0.380	0.537	2.642E+01	1.101E+00
95167.34	2.10E+01	1.84E+02	1.84E+02	0.380	0.537	2.644E+01	1.101E+00
95204.97	2.10E+01	1.84E+02	1.84E+02	0.380	0.537	2.645E+01	1.102E+00
95242.97	2.10E+01	1.84E+02	1.84E+02	0.380	0.537	2.646E+01	1.102E+00
95280.78	2.10E+01	1.84E+02	1.84E+02	0.380	0.537	2.647E+01	1.103E+00
95318.28	2.10E+01	1.84E+02	1.84E+02	0.380	0.537	2.648E+01	1.103E+00
95355.78	2.10E+01	1.84E+02	1.84E+02	0.380	0.537	2.649E+01	1.104E+00
95393.66	2.10E+01	1.84E+02	1.84E+02	0.380	0.537	2.650E+01	1.104E+00
95432.16	2.10E+01	1.84E+02	1.84E+02	0.380	0.537	2.651E+01	1.105E+00
95470.53	2.10E+01	1.84E+02	1.84E+02	0.380	0.537	2.652E+01	1.105E+00
95508.41	2.10E+01	1.84E+02	1.84E+02	0.379	0.536	2.653E+01	1.105E+00
95546.03	2.10E+01	1.84E+02	1.84E+02	0.379	0.536	2.654E+01	1.106E+00
95584.28	2.10E+01	1.84E+02	1.84E+02	0.379	0.536	2.655E+01	1.106E+00
95622.53	2.10E+01	1.84E+02	1.84E+02	0.379	0.536	2.656E+01	1.107E+00
95660.53	2.10E+01	1.84E+02	1.84E+02	0.379	0.536	2.657E+01	1.107E+00
95698.16	2.10E+01	1.84E+02	1.84E+02	0.379	0.536	2.658E+01	1.108E+00
95735.66	2.10E+01	1.84E+02	1.84E+02	0.379	0.536	2.659E+01	1.108E+00
95773.66	2.10E+01	1.84E+02	1.84E+02	0.379	0.536	2.660E+01	1.108E+00
95811.53	2.10E+01	1.84E+02	1.84E+02	0.379	0.536	2.661E+01	1.109E+00
95849.28	2.10E+01	1.84E+02	1.84E+02	0.379	0.536	2.662E+01	1.109E+00
95886.72	2.10E+01	1.84E+02	1.84E+02	0.379	0.536	2.664E+01	1.110E+00
95924.22	2.10E+01	1.84E+02	1.84E+02	0.379	0.536	2.665E+01	1.110E+00
95962.22	2.10E+01	1.84E+02	1.84E+02	0.379	0.536	2.666E+01	1.111E+00
96000.22	2.10E+01	1.83E+02	1.84E+02	0.379	0.536	2.667E+01	1.111E+00

SHEX-05A LGS SIL-636 CONT DBA-LOCA ANAL K=305
 Leak Rates proportional to square root of ratio of the time

44 PC Leak Test Pressure (psig)
 22 MSIV Leak Test Pressure (psig)

TIME	dependent delta P divided by the test delta P			PC Leak Fraction of Design Basis	MSIV Leak Fraction of Design Basis	Time (hours)	Time (days)
	DW PRESS (PSIA)	DW TEMP (F)	SP TEMP (F)				
96038.47	2.10E+01	1.83E+02	1.84E+02	0.379	0.536	2.668E+01	1.112E+00
96076.72	2.10E+01	1.83E+02	1.84E+02	0.379	0.536	2.669E+01	1.112E+00
96114.59	2.10E+01	1.83E+02	1.84E+02	0.379	0.536	2.670E+01	1.112E+00
96152.34	2.10E+01	1.83E+02	1.84E+02	0.379	0.536	2.671E+01	1.113E+00
96190.09	2.10E+01	1.83E+02	1.84E+02	0.379	0.536	2.672E+01	1.113E+00
96227.59	2.10E+01	1.83E+02	1.84E+02	0.378	0.535	2.673E+01	1.114E+00
96265.59	2.10E+01	1.83E+02	1.84E+02	0.378	0.535	2.674E+01	1.114E+00
96303.09	2.10E+01	1.83E+02	1.84E+02	0.378	0.535	2.675E+01	1.115E+00
96340.59	2.10E+01	1.83E+02	1.84E+02	0.378	0.535	2.676E+01	1.115E+00
96379.72	2.10E+01	1.83E+02	1.84E+02	0.378	0.535	2.677E+01	1.116E+00
96417.34	2.10E+01	1.83E+02	1.84E+02	0.378	0.535	2.678E+01	1.116E+00
96455.34	2.10E+01	1.83E+02	1.84E+02	0.378	0.535	2.679E+01	1.116E+00
96492.97	2.10E+01	1.83E+02	1.84E+02	0.378	0.535	2.680E+01	1.117E+00
96530.66	2.10E+01	1.83E+02	1.84E+02	0.378	0.535	2.681E+01	1.117E+00
96569.03	2.10E+01	1.83E+02	1.84E+02	0.378	0.535	2.682E+01	1.118E+00
96606.91	2.10E+01	1.83E+02	1.84E+02	0.378	0.535	2.684E+01	1.118E+00
96644.41	2.10E+01	1.83E+02	1.84E+02	0.378	0.535	2.685E+01	1.119E+00
96682.03	2.10E+01	1.83E+02	1.84E+02	0.378	0.535	2.686E+01	1.119E+00
96719.53	2.10E+01	1.83E+02	1.84E+02	0.378	0.535	2.687E+01	1.119E+00
96757.16	2.10E+01	1.83E+02	1.84E+02	0.378	0.535	2.688E+01	1.120E+00
96795.28	2.10E+01	1.83E+02	1.84E+02	0.378	0.535	2.689E+01	1.120E+00
96832.91	2.10E+01	1.83E+02	1.84E+02	0.378	0.535	2.690E+01	1.121E+00
96870.66	2.10E+01	1.83E+02	1.84E+02	0.378	0.534	2.691E+01	1.121E+00
96908.16	2.10E+01	1.83E+02	1.84E+02	0.378	0.534	2.692E+01	1.122E+00
96946.28	2.10E+01	1.83E+02	1.84E+02	0.378	0.534	2.693E+01	1.122E+00
96984.78	2.10E+01	1.83E+02	1.84E+02	0.378	0.534	2.694E+01	1.123E+00
97023.78	2.10E+01	1.83E+02	1.84E+02	0.377	0.534	2.695E+01	1.123E+00
97061.91	2.10E+01	1.83E+02	1.84E+02	0.377	0.534	2.696E+01	1.123E+00
97099.78	2.10E+01	1.83E+02	1.84E+02	0.377	0.534	2.697E+01	1.124E+00
97138.03	2.10E+01	1.83E+02	1.84E+02	0.377	0.534	2.698E+01	1.124E+00
97175.34	2.10E+01	1.83E+02	1.84E+02	0.378	0.534	2.699E+01	1.125E+00
97212.84	2.10E+01	1.83E+02	1.84E+02	0.377	0.534	2.700E+01	1.125E+00
97250.34	2.10E+01	1.83E+02	1.84E+02	0.377	0.534	2.701E+01	1.126E+00
97288.47	2.10E+01	1.83E+02	1.84E+02	0.377	0.534	2.702E+01	1.126E+00
97325.97	2.10E+01	1.83E+02	1.84E+02	0.377	0.534	2.703E+01	1.126E+00
97363.72	2.10E+01	1.83E+02	1.84E+02	0.377	0.534	2.705E+01	1.127E+00
97402.84	2.10E+01	1.83E+02	1.84E+02	0.377	0.534	2.706E+01	1.127E+00
97440.72	2.10E+01	1.83E+02	1.84E+02	0.377	0.533	2.707E+01	1.128E+00
97478.47	2.10E+01	1.83E+02	1.84E+02	0.377	0.533	2.708E+01	1.128E+00
97516.34	2.10E+01	1.83E+02	1.84E+02	0.377	0.533	2.709E+01	1.129E+00
97554.72	2.10E+01	1.83E+02	1.84E+02	0.377	0.533	2.710E+01	1.129E+00
97593.72	2.10E+01	1.83E+02	1.84E+02	0.377	0.533	2.711E+01	1.130E+00
97631.72	2.10E+01	1.83E+02	1.84E+02	0.377	0.533	2.712E+01	1.130E+00
97669.47	2.10E+01	1.83E+02	1.84E+02	0.377	0.533	2.713E+01	1.130E+00
97706.97	2.10E+01	1.83E+02	1.84E+02	0.377	0.533	2.714E+01	1.131E+00
97744.59	2.10E+01	1.83E+02	1.84E+02	0.377	0.533	2.715E+01	1.131E+00
97782.66	2.10E+01	1.83E+02	1.84E+02	0.377	0.533	2.716E+01	1.132E+00
97820.16	2.10E+01	1.83E+02	1.84E+02	0.377	0.533	2.717E+01	1.132E+00
97858.53	2.10E+01	1.83E+02	1.84E+02	0.377	0.533	2.718E+01	1.133E+00
97896.03	2.10E+01	1.83E+02	1.84E+02	0.377	0.533	2.719E+01	1.133E+00
97935.03	2.10E+01	1.83E+02	1.84E+02	0.377	0.533	2.720E+01	1.134E+00
97972.53	2.10E+01	1.83E+02	1.83E+02	0.377	0.533	2.721E+01	1.134E+00

SHEX-05A LGS SIL-636 CONT DBA-LOCA ANAL K=305
 Leak Rates proportional to square root of ratio of the time

44 PC Leak Test Pressure (psig)
 22 MSIV Leak Test Pressure (psig)

TIME	dependent delta P divided by the test delta P				MSIV Leak Fraction of Design Basis	Time (hours)	Time (days)
	DW PRESS (PSIA)	DW TEMP (F)	SP TEMP (F)	PC Leak Fraction of Design Basis			
98010.28	2.09E+01	1.83E+02	1.83E+02	0.377	0.533	2.723E+01	1.134E+00
98048.28	2.09E+01	1.83E+02	1.83E+02	0.377	0.533	2.724E+01	1.135E+00
98087.41	2.09E+01	1.83E+02	1.83E+02	0.377	0.533	2.725E+01	1.135E+00
98125.53	2.09E+01	1.83E+02	1.83E+02	0.377	0.533	2.726E+01	1.136E+00
98163.28	2.09E+01	1.83E+02	1.83E+02	0.377	0.533	2.727E+01	1.136E+00
98201.16	2.09E+01	1.83E+02	1.83E+02	0.377	0.533	2.728E+01	1.137E+00
98238.78	2.09E+01	1.83E+02	1.83E+02	0.376	0.532	2.729E+01	1.137E+00
98278.66	2.09E+01	1.83E+02	1.83E+02	0.376	0.532	2.730E+01	1.137E+00
98316.41	2.09E+01	1.83E+02	1.83E+02	0.376	0.532	2.731E+01	1.138E+00
98354.03	2.09E+01	1.83E+02	1.83E+02	0.376	0.532	2.732E+01	1.138E+00
98392.03	2.09E+01	1.83E+02	1.83E+02	0.376	0.532	2.733E+01	1.139E+00
98429.72	2.09E+01	1.83E+02	1.83E+02	0.376	0.532	2.734E+01	1.139E+00
98467.22	2.09E+01	1.83E+02	1.83E+02	0.376	0.532	2.735E+01	1.140E+00
98505.22	2.09E+01	1.83E+02	1.83E+02	0.376	0.532	2.736E+01	1.140E+00
98544.09	2.09E+01	1.83E+02	1.83E+02	0.376	0.532	2.737E+01	1.141E+00
98582.09	2.09E+01	1.83E+02	1.83E+02	0.376	0.532	2.738E+01	1.141E+00
98620.34	2.09E+01	1.83E+02	1.83E+02	0.376	0.532	2.739E+01	1.141E+00
98658.34	2.09E+01	1.83E+02	1.83E+02	0.376	0.532	2.741E+01	1.142E+00
98696.47	2.09E+01	1.83E+02	1.83E+02	0.376	0.532	2.742E+01	1.142E+00
98734.22	2.09E+01	1.83E+02	1.83E+02	0.376	0.532	2.743E+01	1.143E+00
98772.47	2.09E+01	1.83E+02	1.83E+02	0.376	0.532	2.744E+01	1.143E+00
98810.47	2.09E+01	1.83E+02	1.83E+02	0.376	0.531	2.745E+01	1.144E+00
98848.47	2.09E+01	1.83E+02	1.83E+02	0.376	0.531	2.746E+01	1.144E+00
98886.16	2.09E+01	1.83E+02	1.83E+02	0.376	0.531	2.747E+01	1.145E+00
98924.34	2.09E+01	1.83E+02	1.83E+02	0.376	0.531	2.748E+01	1.145E+00
98961.97	2.09E+01	1.83E+02	1.83E+02	0.376	0.531	2.749E+01	1.145E+00
98999.97	2.09E+01	1.83E+02	1.83E+02	0.376	0.531	2.750E+01	1.146E+00
99037.72	2.09E+01	1.83E+02	1.83E+02	0.375	0.531	2.751E+01	1.146E+00
99075.28	2.09E+01	1.83E+02	1.83E+02	0.376	0.531	2.752E+01	1.147E+00
99113.66	2.09E+01	1.83E+02	1.83E+02	0.376	0.531	2.753E+01	1.147E+00
99151.66	2.09E+01	1.83E+02	1.83E+02	0.376	0.531	2.754E+01	1.148E+00
99189.16	2.09E+01	1.83E+02	1.83E+02	0.376	0.531	2.755E+01	1.148E+00
99227.41	2.09E+01	1.83E+02	1.83E+02	0.375	0.531	2.756E+01	1.148E+00
99265.78	2.09E+01	1.83E+02	1.83E+02	0.375	0.531	2.757E+01	1.149E+00
99304.16	2.09E+01	1.83E+02	1.83E+02	0.375	0.531	2.758E+01	1.149E+00
99341.78	2.09E+01	1.83E+02	1.83E+02	0.375	0.531	2.759E+01	1.150E+00
99379.91	2.09E+01	1.83E+02	1.83E+02	0.375	0.531	2.761E+01	1.150E+00
99417.53	2.09E+01	1.83E+02	1.83E+02	0.375	0.531	2.762E+01	1.151E+00
99455.16	2.09E+01	1.83E+02	1.83E+02	0.375	0.530	2.763E+01	1.151E+00
99493.53	2.09E+01	1.83E+02	1.83E+02	0.375	0.530	2.764E+01	1.152E+00
99531.16	2.09E+01	1.83E+02	1.83E+02	0.375	0.530	2.765E+01	1.152E+00
99569.41	2.09E+01	1.83E+02	1.83E+02	0.375	0.530	2.766E+01	1.152E+00
99607.16	2.09E+01	1.83E+02	1.83E+02	0.375	0.530	2.767E+01	1.153E+00
99645.53	2.09E+01	1.83E+02	1.83E+02	0.375	0.530	2.768E+01	1.153E+00
99683.28	2.09E+01	1.83E+02	1.83E+02	0.375	0.530	2.769E+01	1.154E+00
99720.84	2.09E+01	1.83E+02	1.83E+02	0.375	0.530	2.770E+01	1.154E+00
99759.22	2.09E+01	1.83E+02	1.83E+02	0.375	0.530	2.771E+01	1.155E+00
99796.84	2.09E+01	1.83E+02	1.83E+02	0.375	0.530	2.772E+01	1.155E+00
99834.72	2.09E+01	1.83E+02	1.83E+02	0.375	0.530	2.773E+01	1.155E+00
99872.47	2.09E+01	1.83E+02	1.83E+02	0.375	0.530	2.774E+01	1.156E+00
99910.09	2.09E+01	1.82E+02	1.83E+02	0.375	0.530	2.775E+01	1.156E+00
99948.34	2.09E+01	1.82E+02	1.83E+02	0.375	0.530	2.776E+01	1.157E+00

SHEX-05A LGS SIL-636 CONT DBA-LOCA ANAL K=305
 Leak Rates proportional to square root of ratio of the time

44 PC Leak Test Pressure (psig)
 22 MSIV Leak Test Pressure (psig)

TIME	dependent delta P divided by the test delta P			PC Leak Fraction of Design Basis	MSIV Leak Fraction of Design Basis	Time (hours)	Time (days)
	DW PRESS (PSIA)	DW TEMP (F)	SP TEMP (F)				
99986.59	2.09E+01	1.82E+02	1.83E+02	0.375	0.530	2.777E+01	1.157E+00
100000.1	2.09E+01	1.82E+02	1.83E+02	0.375	0.530	2.778E+01	1.157E+00

Results:

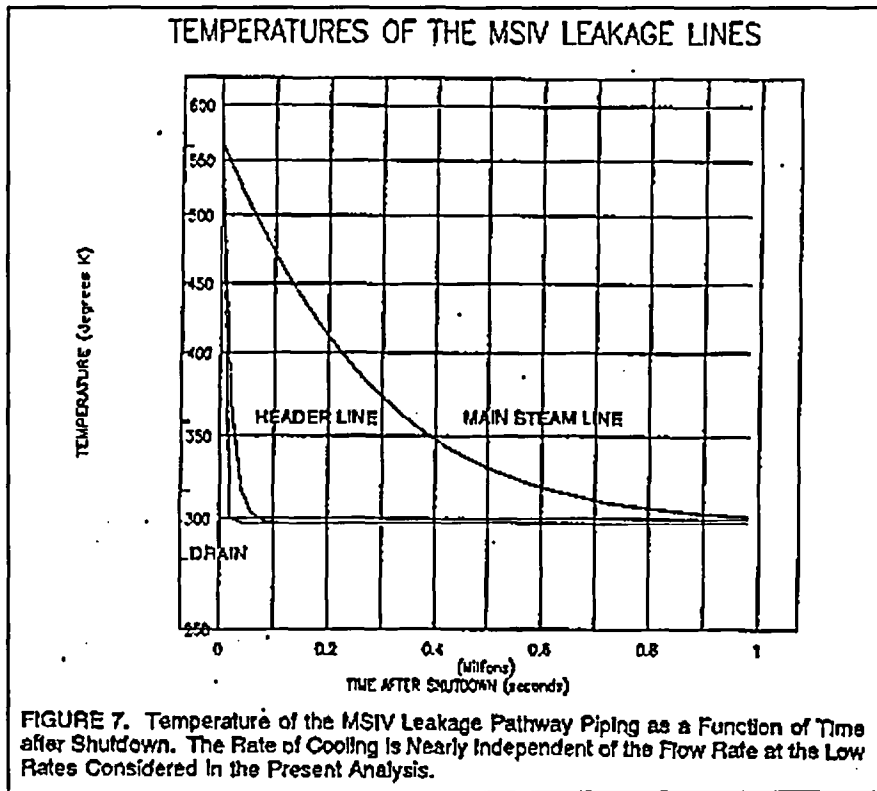
1. Based on Containment Pressure, PC leakage is reduced by at least 50% by 24 hours.
2. Based on Containment Pressure, MSIVs will see pressure exceeding test pressures for only 6.5 minutes at the start of the design basis LOCA, with the peak leak rate estimated at 1.2 time the measured value.
3. Informal test runs suggest that leakage during this period results in negligible dose contributions even if an adjustment were made to extrapolate leakage to what might be expected if MSIVs were tested at the PGS Pa of 44 psig.
4. However, to provide design margin, the MSIV leakages is assumed to be 25% higher than the test acceptance criteria. This margin also allows MSIV Leakage to be stepped down by 50% at 24 hours, rather than the somewhat higher values shown above.

Assessment of Steam Line Temperatures for Piping Deposition Credit Analysis

Main steam line wall temperatures following a LOCA have not been calculated specifically for LGS. A generic cooldown analysis developed by GE and reported in August 1990 Cline Report (Reference 32) is used. Cooling is considered independent of leakage flow. Only conduction is considered. The function to the right is from Reference 32 and fits the figure below (from Reference 33) and is used for Limerick:

$$T(^{\circ}K) = 299.7 + 265.6 * e^{-0.428 * 10^{-6} * t}$$

where
t time, sec .



Time (hrs)	Temperature		Value Used $^{\circ}F$
	$^{\circ}K$	$^{\circ}F$	
0	565.3	557.9	
1	561.1	550.3	550
2	557.0	542.9	
3	552.9	535.5	
4	548.9	528.3	
5	545.0	521.2	
6	541.1	514.3	
7	537.3	507.4	
8	533.5	500.6	
9	529.8	494.0	
10	526.2	487.4	
11	522.6	481.0	
12	519.1	474.6	
13	515.6	468.4	
14	512.2	462.2	
15	508.8	456.2	
16	505.5	450.2	
17	502.3	444.4	
18	499.0	438.6	
19	495.9	432.9	
20	492.8	427.4	
21	489.7	421.9	
22	486.7	416.5	
23	483.8	411.1	W
24	480.9	405.9	410
48	423.3	302.2	
72	384.0	231.5	W
96	357.2	183.3	200

Calculation No. LM-0646, Rev. 1
 “Re-analysis of Loss of Coolant Accident (LOCA) Using Alternative Source Term Methodology ”
 Attachment G
 Evaluation of post-LOCA Doses to LGS Vital Areas

Purpose

The purpose of this attachment is to examine dose consequences to areas vital to the post-LOCA operational support of Limerick Generating Station. Two of these Vital Areas, requiring continuous occupancy, have been identified for evaluation; they are the Technical Support Center (TSC) and the Security Center. This evaluation determines the impact of an AST treatment of the accident, and shows that the TID-14844 analysis bounds for airborne releases.

Approach

Of the two Vital Areas identified, it was determined that, due to less favorable dispersion coefficients and the lack of intake filtration, the Security Center dose analysis bounds that of the TSC. Therefore, only the Security Center dose was evaluated. The parameters that characterize the two facilities are shown in Table 1 below.

The three post-LOCA release pathways, Primary Containment leakage, MSIV leakage, and ECCS fluid leakage, were modeled the same way as was done for the Control Room dose analysis, using the RADTRAD code. However, for the Security Center analysis, historical dispersion factors, or λ/Q 's, from LGS Calc. 1042, Rev. 3 are used to characterize the release point to intake relationship of this vital area. To achieve rapid equilibrium and conservatively model infiltration and exfiltration of the Security Center, one unfiltered air-change per minute was used to model the flow. For added conservatism, the geometry factor associated with the building volume was not credited for an “External” analysis, then compared to an “Internal” analysis crediting the geometry factor. The External analysis was modeled by calculating the dose external to the Security Center and applying the dispersion factors to a dose location within the Environment compartment.

Table 1: Vital Area Parameters

Parameter	Technical Support Center	Security Center
Volume (ft ³)	294,000*	74,880*
Intake Flow (cfm)	1,000*	74,880 (modeled for 1 air-change per minute)
Recirculation Flow (cfm)	2,000*	0
Inleakage Flow (cfm)	500 (vs. 10*)	0
Exfiltration/Exhaust (cfm)	1,500	74,880
Filter Efficiency	95%*	0%
Dispersion Factors (sec/m³)		
0-8 hrs	1.04E-05*	3.41E-05*
8-24 hrs	6.15E-06*	2.01E-05*
24-96 hrs	3.91E-06*	1.28E-05*
96-720 hrs	1.72E-06*	5.62E-06*
Calculated Geometry Factor	0.060118	0.037865

*from LGS Calc. 1042, Rev. 3

The dose acceptance criterion used for the evaluation of Vital Areas is the same 10CFR 50.67 30-day limit of 5 rem TEDE, as is used for the Control Room.

Table 2 below compares the doses to the Security Center as evaluated using a TID-14844 methodology to the AST-based doses calculated using the RADTRAD code. Because the historically evaluated doses from airborne releases are only given in whole body and thyroid rem units, they must be converted to a Total Effective Dose Equivalent (TEDE) rem units for comparison. For purposes of simplification, the TEDE dose is considered equal to the Whole Body dose, plus 0.03 times the Thyroid dose, per Federal Guidance Report 11. The total AST-based dose to the Security Center results from the sum of airborne releases from the three contributing pathways detailed in the LOCA analysis. As discussed in the body of this analysis, the shine dose from ECCS piping and a Reactor Enclosure cloud is clearly bounded by the historical analysis. Therefore, in comparing total doses, this source is added to both the historical TID-14844 and the AST dose, for conservatism.

Table 2: Comparison of Security Center Doses (UFSAR TID-14844 Based vs. AST-Based)

Dose Contributor	TID-14844 Based Analysis	AST Based Analysis (External)	AST Based Analysis (Internal)
PC Leakage Dose (rem TEDE)	-----	5.655E-01	2.174E-02
MSIV Leakage Dose (rem TEDE)	-----	6.050E-02	2.355E-02
ECCS Fluid Leakage Dose (rem TEDE)	-----	4.196E-04	4.134E-04
Airborne Whole Body Dose (rem Whole Body)	1.300E+00	-----	-----
Airborne Thyroid Dose (rem Thyroid)	3.500E+01	-----	-----
Total Shine Dose (rem)	7.300E-01	7.300E-01	7.300E-01
MSIV Resuspension Allowance (10%), conservative estimate based on CR results in Attachment A		6.050E-03	2.355E-03
Total Dose (rem TEDE)	3.08	1.36	0.78

Conclusion

Based on this evaluation, the existing TID-14844 based analyses included in Section 1.13 of the UFSAR are shown to be conservative and bounding. Given compliance with GDC-19 limit of 5 rem when dose is based on TID-14844 source terms, compliance with 10CFR 50.67 control room dose limits is provided with the AST-based analysis. Therefore, the historically analyzed cases are sufficient, and no additional analysis of Vital Areas at LGS is necessary.

LGS PC Leak - Vital Area-Security Center R1.01

RADTRAD Version 3.03 (Spring 2001) run on 9/20/2005 at 7:31:14
#####

File information
#####

Plant file = C:\Program Files\radtrad3-03\Input\LGS LOCA R1 Attachment G
Runs\LGS PC Leak - Vital Area-Security Center R1.psf
Inventory file = c:\program files\radtrad3-03\defaults\pb-lgs ast source terms.nif
Release file = c:\program files\radtrad3-03\defaults\bwr_dba.rft
Dose Conversion file = c:\program files\radtrad3-03\defaults\fgr11&12.inp

```
#####      #####      #####      # #      # #####      # #      #####  
# # #      #      # # #      # #      # #      # #      #  
# # #      #      # # #      # # #      # #      # #      #  
#####      #####      # # #      # #####      # #      #  
# # #      # #      # # #      # # #      # #      # #      #  
# # #      # #      # # #      # # #      # #      # #      #  
# # #      # #      # # #      # # #      # #      # #      #  
# # #      # #      # # #      # # #      # #      # #      #
```

Radtrad 3.03 4/15/2001
LGS PC Leak - Vital Area-Security Center
Nuclide Inventory File:
c:\program files\radtrad3-03\defaults\pb-lgs ast source terms.nif
Plant Power Level:
3.5270E+03
Compartments:
5
Compartment 1:
Primary Containment
3
3.7907E+05
0
0
0
1
0
Compartment 2:
Reactor Enclosure
3
9.0000E+05
0
0
1
0
0
Compartment 3:
Environment
2
0.0000E+00
0
0

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0
0
0

Compartment 4:
Security Center

1
7.4880E+04

0
0
0
0
0

Compartment 5:
SGTS Node

3
1.0000E+00

0
0
0
0
0

Pathways:

5

Pathway 1:

Primary Containment to Reactor Enclosure

1
2
4

Pathway 2:

Reactor Enclosure to SGTS Node

2
5
2

Pathway 3:

Environment to Security Center - Unfiltered

3
4
2

Pathway 4:

Security Center to Environment

4
3
2

Pathway 5:

SGTS Node to Environment

5
3
2

End of Plant Model File

Scenario Description Name:

Plant Model Filename:

Source Term:

1
1 1.0000E+00

c:\program files\radtrad3-03\defaults\fgr11&12.inp

c:\program files\radtrad3-03\defaults\bwr_dba.rft

0.0000E+00

1

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9.5000E-01 4.8500E-02 1.5000E-03 1.0000E+00

Overlying Pool:

0
0.0000E+00
0
0
0
0

Compartments:

5

Compartment 1:

0
1
0
0
0
0
0
3
3
1.0000E+01
1
1
0.0000E+00 0.0000E+00

Compartment 2:

0
1
0
0
0
0
1
5.1000E+04
3
0.0000E+00 0.0000E+00 0.0000E+00 0.0000E+00
1.6670E-02 9.9000E+01 9.5000E+01 9.5000E+01
7.2000E+02 0.0000E+00 0.0000E+00 0.0000E+00
0
0

Compartment 3:

0
1
0
0
0
0
0
0
0
0

Compartment 4:

0
1
0
0
0
0
0
0
0

Compartment 5:

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0
1
0
0
0
0
0
0
0
0

Pathways:

5

Pathway 1:

0
0
0
0
0
0
0
0
0
0
0
1
3

0.0000E+00	5.0000E-01
2.4000E+01	2.5000E-01
7.2000E+02	0.0000E+00

Pathway 2:

0
0
0
0
0
1
4

0.0000E+00	9.0000E+06	0.0000E+00	0.0000E+00	0.0000E+00
1.6700E-02	3.0000E+03	9.9000E+01	9.5000E+01	9.5000E+01
2.5830E-01	2.5000E+03	9.9000E+01	9.5000E+01	9.5000E+01
7.2000E+02	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00

0
0
0
0
0
0

Pathway 3:

0
0
0
0
0
1
2

0.0000E+00	7.4880E+04	0.0000E+00	0.0000E+00	0.0000E+00
7.2000E+02	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00

0
0
0
0

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0
 0
 Pathway 4:
 0
 0
 0
 0
 0
 1
 2
 0.0000E+00 7.4880E+04 1.0000E+02 1.0000E+02 1.0000E+02
 7.2000E+02 0.0000E+00 0.0000E+00 0.0000E+00 0.0000E+00
 0
 0
 0
 0
 0
 0

Pathway 5:
 0
 0
 0
 0
 0
 1
 4
 0.0000E+00 9.0000E+06 0.0000E+00 0.0000E+00 0.0000E+00
 1.6700E-02 3.0000E+03 0.0000E+00 0.0000E+00 0.0000E+00
 2.5830E-01 2.5000E+03 9.9000E+01 9.9000E+01 9.9000E+01
 7.2000E+02 0.0000E+00 0.0000E+00 0.0000E+00 0.0000E+00
 0
 0
 0
 0
 0
 0

Dose Locations:

4
 Location 1:
 Security Center (Internal)
 4
 0
 1
 2
 0.0000E+00 3.5000E-04
 7.2000E+02 0.0000E+00
 1
 4
 0.0000E+00 1.0000E+00
 2.4000E+01 6.0000E-01
 9.6000E+01 4.0000E-01
 7.2000E+02 0.0000E+00

Location 2:
 EAB
 3
 1
 2
 0.0000E+00 3.1800E-04
 8.0000E+00 0.0000E+00
 1

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2
0.0000E+00 3.5000E-04
8.0000E+00 0.0000E+00

0

Location 3:

LPZ

3

1

5

0.0000E+00 5.7900E-05
8.0000E+00 4.1000E-05
2.4000E+01 1.9500E-05
9.6000E+01 6.6800E-06
7.2000E+02 0.0000E+00

1

4

0.0000E+00 3.5000E-04
8.0000E+00 1.8000E-04
2.4000E+01 2.3000E-04
7.2000E+02 0.0000E+00

0

Location 4:

Security Center (External)

3

1

5

0.0000E+00 3.4100E-05
8.0000E+00 2.0100E-05
2.4000E+01 7.6800E-06
9.6000E+01 2.2500E-06
7.2000E+02 0.0000E+00

1

2

0.0000E+00 3.5000E-04
7.2000E+02 0.0000E+00

0

Effective Volume Location:

1

5

0.0000E+00 3.4100E-05
8.0000E+00 2.0100E-05
2.4000E+01 1.2800E-05
9.6000E+01 5.6200E-06
7.2000E+02 0.0000E+00

Simulation Parameters:

3

0.0000E+00 1.6670E-03
1.6700E-02 2.5000E-02
2.5830E-01 0.0000E+00

Output Filename:

C:\Program Files\radtrad3-03\Input\LGS LOCA R1 Attachment G Runs\LGS PC Leak - Vital Area-Security Center R1.01

1

1

1

0

1

End of Scenario File

LGS PC Leak - Vital Area-Security Center R1.01

RADTRAD Version 3.03 (Spring 2001) run on 9/20/2005 at 7:31:14
#####

Plant Description
#####

Number of Nuclides = 60

Inventory Power = 1.0000E+00 MWth
Plant Power Level = 3.5270E+03 MWth

Number of compartments = 5

Compartment information

Compartment number 1 (Source term fraction = 1.0000E+00
)

Name: Primary Containment
Compartment volume = 3.7907E+05 (Cubic feet)
Compartment type is Normal

Removal devices within compartment:
Deposition

Pathways into and out of compartment 1
Exit Pathway Number 1: Primary Containment to Reactor Enclosure

Compartment number 2
Name: Reactor Enclosure
Compartment volume = 9.0000E+05 (Cubic feet)
Compartment type is Normal

Removal devices within compartment:
Filter(s)

Pathways into and out of compartment 2
Inlet Pathway Number 1: Primary Containment to Reactor Enclosure
Exit Pathway Number 2: Reactor Enclosure to SGTS Node

Compartment number 3
Name: Environment
Compartment type is Environment
Pathways into and out of compartment 3
Inlet Pathway Number 4: Security Center to Environment
Inlet Pathway Number 5: SGTS Node to Environment
Exit Pathway Number 3: Environment to Security Center - Unfiltered

Compartment number 4
Name: Security Center
Compartment volume = 7.4880E+04 (Cubic feet)
Compartment type is Control Room
Pathways into and out of compartment 4
Inlet Pathway Number 3: Environment to Security Center - Unfiltered
Exit Pathway Number 4: Security Center to Environment

Compartment number 5
Name: SGTS Node
Compartment volume = 1.0000E+00 (Cubic feet)
Compartment type is Normal
Pathways into and out of compartment 5
Inlet Pathway Number 2: Reactor Enclosure to SGTS Node

LGS PC Leak - Vital Area-Security Center R1.01

Exit Pathway Number 5: SGTS Node to Environment

Total number of pathways = 5

```
#####
RADTRAD Version 3.03 (Spring 2001) run on 9/20/2005 at 7:31:14
#####
#####
Scenario Description
#####
```

Radioactive Decay is enabled
 Calculation of Daughters is enabled

Release Fractions and Timings

	GAP	EARLY IN-VESSEL	LATE RELEASE	RELEASE MASS
	0.500000 hr	1.5000 hrs	0.0000 hrs	(gm)
NOBLES	5.0000E-02	9.5000E-01	0.0000E+00	4.625E+03
IODINE	5.0000E-02	2.5000E-01	0.0000E+00	3.033E+02
CESIUM	5.0000E-02	2.0000E-01	0.0000E+00	5.099E+04
TELLURIUM	0.0000E+00	5.0000E-02	0.0000E+00	4.012E+01
STRONTIUM	0.0000E+00	2.0000E-02	0.0000E+00	1.712E+03
BARIUM	0.0000E+00	2.0000E-02	0.0000E+00	4.739E+01
RUTHENIUM	0.0000E+00	2.5000E-03	0.0000E+00	5.988E+01
CERIUM	0.0000E+00	5.0000E-04	0.0000E+00	5.914E+02
LANTHANUM	0.0000E+00	2.0000E-04	0.0000E+00	8.731E+00

Inventory Power = 3527. MWt

Nuclide Name	Group	Specific Inventory (Ci/MWt)	half life (s)	Whole Body DCF (Sv-m3/Bq-s)	Inhaled Thyroid (Sv/Bq)	Inhaled Effective (Sv/Bq)
Co-58	7	1.529E+02	6.117E+06	4.760E-14	8.720E-10	2.940E-09
Co-60	7	1.830E+02	1.663E+08	1.260E-13	1.620E-08	5.910E-08
Kr-85	1	3.946E+02	3.383E+08	1.190E-16	0.000E+00	0.000E+00
Kr-85m	1	8.313E+03	1.613E+04	7.480E-15	0.000E+00	0.000E+00
Kr-87	1	1.633E+04	4.578E+03	4.120E-14	0.000E+00	0.000E+00
Kr-88	1	2.303E+04	1.022E+04	1.020E-13	0.000E+00	0.000E+00
Rb-86	3	6.518E+01	1.612E+06	4.810E-15	1.330E-09	1.790E-09
Sr-89	5	2.798E+04	4.363E+06	7.730E-17	7.960E-12	1.120E-08
Sr-90	5	3.178E+03	9.190E+08	7.530E-18	2.690E-10	3.510E-07
Sr-91	5	3.801E+04	3.420E+04	4.924E-14	9.930E-12	4.547E-10
Sr-92	5	4.017E+04	9.756E+03	6.790E-14	3.920E-12	2.180E-10
Y-90	9	3.272E+03	2.304E+05	1.900E-16	5.170E-13	2.280E-09
Y-91	9	3.448E+04	5.055E+06	2.600E-16	8.500E-12	1.320E-08
Y-92	9	4.029E+04	1.274E+04	1.300E-14	1.050E-12	2.110E-10
Y-93	9	4.526E+04	3.636E+04	4.800E-15	9.260E-13	5.820E-10
Zr-95	9	4.489E+04	5.528E+06	3.600E-14	1.440E-09	6.390E-09
Zr-97	9	4.657E+04	6.084E+04	4.432E-14	2.315E-11	1.171E-09
Nb-95	9	4.512E+04	3.037E+06	3.740E-14	3.580E-10	1.570E-09
Mo-99	7	5.078E+04	2.376E+05	7.280E-15	1.520E-11	1.070E-09
Tc-99m	7	4.447E+04	2.167E+04	5.890E-15	5.010E-11	8.800E-12
Ru-103	7	4.202E+04	3.394E+06	2.251E-14	2.570E-10	2.421E-09
Ru-105	7	2.908E+04	1.598E+04	3.810E-14	4.150E-12	1.230E-10
Ru-106	7	1.730E+04	3.181E+07	1.040E-14	1.720E-09	1.290E-07
Rh-105	7	2.752E+04	1.273E+05	3.720E-15	2.880E-12	2.580E-10
Sb-127	4	2.896E+03	3.326E+05	3.330E-14	6.150E-11	1.630E-09
Sb-129	4	8.638E+03	1.555E+04	7.140E-14	9.720E-12	1.740E-10
Te-127	4	2.873E+03	3.366E+04	2.420E-16	1.840E-12	8.600E-11
Te-127m	4	3.855E+02	9.418E+06	1.470E-16	9.660E-11	5.810E-09
Te-129	4	8.501E+03	4.176E+03	2.750E-15	5.090E-13	2.090E-11
Te-129m	4	1.267E+03	2.903E+06	3.337E-15	1.563E-10	6.484E-09

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Te-131m	4	3.869E+03	1.080E+05	7.463E-14	3.669E-08	1.758E-09
Te-132	4	3.821E+04	2.815E+05	1.030E-14	6.280E-08	2.550E-09
I-131	2	2.687E+04	6.947E+05	1.820E-14	2.920E-07	8.890E-09
I-132	2	3.881E+04	8.280E+03	1.120E-13	1.740E-09	1.030E-10
I-133	2	5.556E+04	7.488E+04	2.940E-14	4.860E-08	1.580E-09
I-134	2	6.165E+04	3.156E+03	1.300E-13	2.880E-10	3.550E-11
I-135	2	5.192E+04	2.380E+04	8.294E-14	8.460E-09	3.320E-10
Xe-133	1	5.491E+04	4.532E+05	1.560E-15	0.000E+00	0.000E+00
Xe-135	1	2.228E+04	3.272E+04	1.190E-14	0.000E+00	0.000E+00
Cs-134	3	7.280E+03	6.507E+07	7.570E-14	1.110E-08	1.250E-08
Cs-136	3	2.027E+03	1.132E+06	1.060E-13	1.730E-09	1.980E-09
Cs-137	3	4.538E+03	9.467E+08	2.725E-14	7.930E-09	8.630E-09
Ba-139	6	5.084E+04	4.962E+03	2.170E-15	2.400E-12	4.640E-11
Ba-140	6	4.896E+04	1.101E+06	8.580E-15	2.560E-10	1.010E-09
La-140	9	5.019E+04	1.450E+05	1.170E-13	6.870E-11	1.310E-09
La-141	9	4.640E+04	1.415E+04	2.390E-15	9.400E-12	1.570E-10
La-142	9	4.532E+04	5.550E+03	1.440E-13	8.740E-12	6.840E-11
Ce-141	8	4.492E+04	2.808E+06	3.430E-15	2.550E-11	2.420E-09
Ce-143	8	4.427E+04	1.188E+05	1.290E-14	6.230E-12	9.160E-10
Ce-144	8	3.596E+04	2.456E+07	2.773E-15	2.920E-10	1.010E-07
Pr-143	9	4.293E+04	1.172E+06	2.100E-17	1.680E-18	2.190E-09
Nd-147	9	1.838E+04	9.487E+05	6.190E-15	1.820E-11	1.850E-09
Np-239	8	5.397E+05	2.035E+05	7.690E-15	7.620E-12	6.780E-10
Pu-238	8	1.796E+02	2.769E+09	4.880E-18	3.860E-10	7.790E-05
Pu-239	8	1.200E+01	7.594E+11	4.240E-18	3.750E-10	8.330E-05
Pu-240	8	1.288E+01	2.063E+11	4.750E-18	3.760E-10	8.330E-05
Pu-241	8	6.182E+03	4.544E+08	7.250E-20	9.150E-12	1.340E-06
Am-241	9	9.528E+00	1.364E+10	8.180E-16	1.600E-09	1.200E-04
Cm-242	9	2.388E+03	1.407E+07	5.690E-18	9.410E-10	4.670E-06
Cm-244	9	2.602E+02	5.715E+08	4.910E-18	1.010E-09	6.700E-05

Nuclide	Daughter	Fraction	Daughter	Fraction	Daughter	Fraction
Kr-85m	Kr-85	0.21	none	0.00	none	0.00
Kr-87	Rb-87	1.00	none	0.00	none	0.00
Kr-88	Rb-88	1.00	none	0.00	none	0.00
Sr-90	Y-90	1.00	none	0.00	none	0.00
Sr-91	Y-91m	0.58	Y-91	0.42	none	0.00
Sr-92	Y-92	1.00	none	0.00	none	0.00
Y-93	Zr-93	1.00	none	0.00	none	0.00
Zr-95	Nb-95m	0.01	Nb-95	0.99	none	0.00
Zr-97	Nb-97m	0.95	Nb-97	0.05	none	0.00
Mo-99	Tc-99m	0.88	Tc-99	0.12	none	0.00
Tc-99m	Tc-99	1.00	none	0.00	none	0.00
Ru-103	Rh-103m	1.00	none	0.00	none	0.00
Ru-105	Rh-105	1.00	none	0.00	none	0.00
Ru-106	Rh-106	1.00	none	0.00	none	0.00
Sb-127	Te-127m	0.18	Te-127	0.82	none	0.00
Sb-129	Te-129m	0.22	Te-129	0.77	none	0.00
Te-127m	Te-127	0.98	none	0.00	none	0.00
Te-129	I-129	1.00	none	0.00	none	0.00
Te-129m	Te-129	0.65	I-129	0.35	none	0.00
Te-131m	Te-131	0.22	I-131	0.78	none	0.00
Te-132	I-132	1.00	none	0.00	none	0.00
I-131	Xe-131m	0.01	none	0.00	none	0.00
I-133	Xe-133m	0.03	Xe-133	0.97	none	0.00
I-135	Xe-135m	0.15	Xe-135	0.85	none	0.00
Xe-135	Cs-135	1.00	none	0.00	none	0.00
Cs-137	Ba-137m	0.95	none	0.00	none	0.00
Ba-140	La-140	1.00	none	0.00	none	0.00
La-141	Ce-141	1.00	none	0.00	none	0.00

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Ce-143	Pr-143	1.00	none	0.00	none	0.00
Ce-144	Pr-144m	0.02	Pr-144	0.98	none	0.00
Nd-147	Pm-147	1.00	none	0.00	none	0.00
Np-239	Pu-239	1.00	none	0.00	none	0.00
Pu-238	U-234	1.00	none	0.00	none	0.00
Pu-239	U-235	1.00	none	0.00	none	0.00
Pu-240	U-236	1.00	none	0.00	none	0.00
Pu-241	U-237	0.00	Am-241	1.00	none	0.00
Am-241	Np-237	1.00	none	0.00	none	0.00
Cm-242	Pu-238	1.00	none	0.00	none	0.00
Cm-244	Pu-240	1.00	none	0.00	none	0.00

Iodine fractions

Aerosol	=	9.5000E-01
Elemental	=	4.8500E-02
Organic	=	1.5000E-03

COMPARTMENT DATA

Compartment number 1: Primary Containment
 Natural Deposition (Powers' model): Aerosol data
 Reactor type: 3
 Percentile = 10 (%)

Natural Deposition: Elemental Removal Data
 Time (hr) Removal Coef. (hr⁻¹)
 0.0000E+00 0.0000E+00

Compartment number 2: Reactor Enclosure

Compartment Filter Data

Time (hr)	Flow Rate (cfm)	Filter Efficiencies (%)		
		Aerosol	Elemental	Organic
0.0000E+00	5.1000E+04	0.0000E+00	0.0000E+00	0.0000E+00
1.6670E-02	5.1000E+04	9.9000E+01	9.5000E+01	9.5000E+01
7.2000E+02	5.1000E+04	0.0000E+00	0.0000E+00	0.0000E+00

Compartment number 3: Environment

Compartment number 4: Security Center

Compartment number 5: SGTS Node

PATHWAY DATA

Pathway number 1: Primary Containment to Reactor Enclosure

Convection Data

Time (hr)	Flow Rate (% / day)
0.0000E+00	5.0000E-01
2.4000E+01	2.5000E-01
7.2000E+02	0.0000E+00

Pathway number 2: Reactor Enclosure to SGTS Node

Pathway Filter: Removal Data

Time (hr)	Flow Rate (cfm)	Filter Efficiencies (%)		
		Aerosol	Elemental	Organic

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0.0000E+00	9.0000E+06	0.0000E+00	0.0000E+00	0.0000E+00
1.6700E-02	3.0000E+03	9.9000E+01	9.5000E+01	9.5000E+01
2.5830E-01	2.5000E+03	9.9000E+01	9.5000E+01	9.5000E+01
7.2000E+02	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00

Pathway number 3: Environment to Security Center - Unfiltered

Pathway Filter: Removal Data

Time (hr)	Flow Rate (cfm)	Filter Efficiencies (%)		
		Aerosol	Elemental	Organic
0.0000E+00	7.4880E+04	0.0000E+00	0.0000E+00	0.0000E+00
7.2000E+02	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00

Pathway number 4: Security Center to Environment

Pathway Filter: Removal Data

Time (hr)	Flow Rate (cfm)	Filter Efficiencies (%)		
		Aerosol	Elemental	Organic
0.0000E+00	7.4880E+04	1.0000E+02	1.0000E+02	1.0000E+02
7.2000E+02	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00

Pathway number 5: SGTS Node to Environment

Pathway Filter: Removal Data

Time (hr)	Flow Rate (cfm)	Filter Efficiencies (%)		
		Aerosol	Elemental	Organic
0.0000E+00	9.0000E+06	0.0000E+00	0.0000E+00	0.0000E+00
1.6700E-02	3.0000E+03	0.0000E+00	0.0000E+00	0.0000E+00
2.5830E-01	2.5000E+03	9.9000E+01	9.9000E+01	9.9000E+01
7.2000E+02	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00

LOCATION DATA

Location Security Center (Internal) is in compartment 4

Location X/Q Data

Time (hr)	X/Q (s * m ⁻³)
0.0000E+00	3.4100E-05
8.0000E+00	2.0100E-05
2.4000E+01	1.2800E-05
9.6000E+01	5.6200E-06
7.2000E+02	0.0000E+00

Location Breathing Rate Data

Time (hr)	Breathing Rate (m ³ * sec ⁻¹)
0.0000E+00	3.5000E-04
7.2000E+02	0.0000E+00

Location Occupancy Factor Data

Time (hr)	Occupancy Factor
0.0000E+00	1.0000E+00
2.4000E+01	6.0000E-01
9.6000E+01	4.0000E-01
7.2000E+02	0.0000E+00

Location EAB is in compartment 3

Location X/Q Data

Time (hr)	X/Q (s * m ⁻³)
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0.0000E+00	3.1800E-04
8.0000E+00	0.0000E+00

Location Breathing Rate Data

Time (hr)	Breathing Rate (m ³ * sec ⁻¹)
0.0000E+00	3.5000E-04
8.0000E+00	0.0000E+00

Location LPZ is in compartment 3

Location X/Q Data

Time (hr)	X/Q (s * m ⁻³)
0.0000E+00	5.7900E-05
8.0000E+00	4.1000E-05
2.4000E+01	1.9500E-05
9.6000E+01	6.6800E-06
7.2000E+02	0.0000E+00

Location Breathing Rate Data

Time (hr)	Breathing Rate (m ³ * sec ⁻¹)
0.0000E+00	3.5000E-04
8.0000E+00	1.8000E-04
2.4000E+01	2.3000E-04
7.2000E+02	0.0000E+00

Location Security Center (External) is in compartment 3

Location X/Q Data

Time (hr)	X/Q (s * m ⁻³)
0.0000E+00	3.4100E-05
8.0000E+00	2.0100E-05
2.4000E+01	7.6800E-06
9.6000E+01	2.2500E-06
7.2000E+02	0.0000E+00

Location Breathing Rate Data

Time (hr)	Breathing Rate (m ³ * sec ⁻¹)
0.0000E+00	3.5000E-04
7.2000E+02	0.0000E+00

USER SPECIFIED TIME STEP DATA - SUPPLEMENTAL TIME STEPS

Time	Time step
0.0000E+00	1.6670E-03
1.6700E-02	2.5000E-02
2.5830E-01	0.0000E+00

 RADTRAD Version 3.03 (Spring 2001) run on 9/20/2005 at 7:31:14
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 Dose Output
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Detailed model information at time (H) = 0.0167

Natural deposition - Powers' Model, Compartment 1

Deposition Lambda (1 / Hours)
 Noble Elemental Organic Aerosol
 0.0000E+00 0.0000E+00 0.0000E+00 7.0466E-01

Deposition Net DF
 Noble Elemental Organic Aerosol
 1.0000E+00 1.0000E+00 1.0000E+00 1.0059E+00

Security Center (Internal) Doses:

Time (h) =	0.0167	Whole Body	Thyroid	TEDE
Delta dose (rem)		2.2785E-07	1.0236E-03	4.4530E-05
Accumulated dose (rem)		2.2785E-07	1.0236E-03	4.4530E-05

EAB Doses:

Time (h) =	0.0167	Whole Body	Thyroid	TEDE
Delta dose (rem)		2.2614E-04	3.8445E-02	1.8901E-03
Accumulated dose (rem)		2.2614E-04	3.8445E-02	1.8901E-03

LPZ Doses:

Time (h) =	0.0167	Whole Body	Thyroid	TEDE
Delta dose (rem)		4.1174E-05	7.0000E-03	3.4413E-04
Accumulated dose (rem)		4.1174E-05	7.0000E-03	3.4413E-04

Security Center (External) Doses:

Time (h) =	0.0167	Whole Body	Thyroid	TEDE
Delta dose (rem)		2.4249E-05	4.1226E-03	2.0268E-04
Accumulated dose (rem)		2.4249E-05	4.1226E-03	2.0268E-04

Detailed model information at time (H) = 0.0167

Natural deposition - Powers' Model, Compartment 1

Deposition Lambda (1 / Hours)

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Noble	Elemental	Organic	Aerosol
0.0000E+00	0.0000E+00	0.0000E+00	7.0466E-01
Deposition Net DF			
Noble	Elemental	Organic	Aerosol
1.0000E+00	1.0000E+00	1.0000E+00	1.0059E+00

Security Center (Internal) Doses:

Time (h) =	0.0167	Whole Body	Thyroid	TEDE
Delta dose (rem)		1.2435E-09	5.5956E-06	2.4342E-07
Accumulated dose (rem)		2.2909E-07	1.0292E-03	4.4774E-05

EAB Doses:

Time (h) =	0.0167	Whole Body	Thyroid	TEDE
Delta dose (rem)		8.9099E-07	1.5176E-04	7.4589E-06
Accumulated dose (rem)		2.2703E-04	3.8597E-02	1.8975E-03

LPZ Doses:

Time (h) =	0.0167	Whole Body	Thyroid	TEDE
Delta dose (rem)		1.6223E-07	2.7631E-05	1.3581E-06
Accumulated dose (rem)		4.1336E-05	7.0276E-03	3.4549E-04

Security Center (External) Doses:

Time (h) =	0.0167	Whole Body	Thyroid	TEDE
Delta dose (rem)		9.5543E-08	1.6273E-05	7.9984E-07
Accumulated dose (rem)		2.4345E-05	4.1389E-03	2.0348E-04

Detailed model information at time (H) = 0.2583

Natural deposition ~ Powers' Model, Compartment 1

Deposition Lambda (1 / Hours)			
Noble	Elemental	Organic	Aerosol
0.0000E+00	0.0000E+00	0.0000E+00	7.0466E-01
Deposition Net DF			
Noble	Elemental	Organic	Aerosol
1.0000E+00	1.0000E+00	1.0000E+00	1.0938E+00

Security Center (Internal) Doses:

Time (h) =	0.2583	Whole Body	Thyroid	TEDE
Delta dose (rem)		1.3361E-06	3.6428E-03	1.5867E-04
Accumulated dose (rem)		1.5652E-06	4.6720E-03	2.0344E-04

EAB Doses:

Time (h) =	0.2583	Whole Body	Thyroid	TEDE
Delta dose (rem)		1.6718E-04	1.7930E-03	2.4113E-04
Accumulated dose (rem)		3.9421E-04	4.0390E-02	2.1386E-03

LPZ Doses:

Time (h) =	0.2583	Whole Body	Thyroid	TEDE
Delta dose (rem)		3.0440E-05	3.2647E-04	4.3904E-05
Accumulated dose (rem)		7.1776E-05	7.3541E-03	3.8939E-04

Security Center (External) Doses:

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Time (h) =	0.2583	Whole Body	Thyroid	TEDE
Delta dose (rem)	1.7927E-05	1.7927E-05	1.9227E-04	2.5857E-05
Accumulated dose (rem)	4.2272E-05	4.2272E-05	4.3311E-03	2.2933E-04

Detailed model information at time (H) = 0.5000

Natural deposition - Powers' Model, Compartment 1
 Deposition Lambda (1 / Hours)

Noble	Elemental	Organic	Aerosol
0.0000E+00	0.0000E+00	0.0000E+00	7.0466E-01
Deposition Net DF			
Noble	Elemental	Organic	Aerosol
1.0000E+00	1.0000E+00	1.0000E+00	1.1865E+00

Security Center (Internal) Doses:

Time (h) =	0.5000	Whole Body	Thyroid	TEDE
Delta dose (rem)	3.0401E-06	3.0401E-06	9.9556E-05	7.1421E-06
Accumulated dose (rem)	4.6053E-06	4.6053E-06	4.7715E-03	2.1058E-04

EAB Doses:

Time (h) =	0.5000	Whole Body	Thyroid	TEDE
Delta dose (rem)	7.8813E-04	7.8813E-04	7.3368E-05	7.9114E-04
Accumulated dose (rem)	1.1823E-03	1.1823E-03	4.0464E-02	2.9298E-03

LPZ Doses:

Time (h) =	0.5000	Whole Body	Thyroid	TEDE
Delta dose (rem)	1.4350E-04	1.4350E-04	1.3359E-05	1.4405E-04
Accumulated dose (rem)	2.1527E-04	2.1527E-04	7.3674E-03	5.3344E-04

Security Center (External) Doses:

Time (h) =	0.5000	Whole Body	Thyroid	TEDE
Delta dose (rem)	8.4513E-05	8.4513E-05	7.8675E-06	8.4837E-05
Accumulated dose (rem)	1.2679E-04	1.2679E-04	4.3390E-03	3.1417E-04

Detailed model information at time (H) = 2.0000

Natural deposition - Powers' Model, Compartment 1
 Deposition Lambda (1 / Hours)

Noble	Elemental	Organic	Aerosol
0.0000E+00	0.0000E+00	0.0000E+00	3.0681E-01
Deposition Net DF			
Noble	Elemental	Organic	Aerosol
1.0000E+00	1.0000E+00	1.0000E+00	1.3635E+00

Security Center (Internal) Doses:

Time (h) =	2.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)	5.3124E-04	5.3124E-04	3.3960E-04	5.4852E-04
Accumulated dose (rem)	5.3584E-04	5.3584E-04	5.1111E-03	7.5910E-04

EAB Doses:

Time (h) =	2.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)	1.3466E-01	1.3466E-01	3.2247E-03	1.3483E-01
Accumulated dose (rem)	1.3584E-01	1.3584E-01	4.3688E-02	1.3776E-01

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LPZ Doses:

Time (h) =	2.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)		2.4519E-02	5.8714E-04	2.4549E-02
Accumulated dose (rem)		2.4734E-02	7.9546E-03	2.5082E-02

Security Center (External) Doses:

Time (h) =	2.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)		1.4440E-02	3.4579E-04	1.4458E-02
Accumulated dose (rem)		1.4567E-02	4.6848E-03	1.4772E-02

Detailed model information at time (H) = 8.0000

Natural deposition - Powers' Model, Compartment 1
 Deposition Lambda (1 / Hours)

Noble	Elemental	Organic	Aerosol
0.0000E+00	0.0000E+00	0.0000E+00	6.2057E-01

Deposition Net DF

Noble	Elemental	Organic	Aerosol
1.0000E+00	1.0000E+00	1.0000E+00	1.8279E+02

Security Center (Internal) Doses:

Time (h) =	8.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)		9.5570E-03	1.1847E-03	9.6075E-03
Accumulated dose (rem)		1.0093E-02	6.2959E-03	1.0367E-02

EAB Doses:

Time (h) =	8.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)		2.3643E+00	1.1007E-02	2.3648E+00
Accumulated dose (rem)		2.5002E+00	5.4695E-02	2.5025E+00

LPZ Doses:

Time (h) =	8.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)		4.3048E-01	2.0040E-03	4.3057E-01
Accumulated dose (rem)		4.5522E-01	9.9586E-03	4.5565E-01

Security Center (External) Doses:

Time (h) =	8.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)		2.5353E-01	1.1803E-03	2.5358E-01
Accumulated dose (rem)		2.6810E-01	5.8651E-03	2.6835E-01

Detailed model information at time (H) = 24.0000

Natural deposition - Powers' Model, Compartment 1
 Deposition Lambda (1 / Hours)

Noble	Elemental	Organic	Aerosol
0.0000E+00	0.0000E+00	0.0000E+00	4.8360E-01

Deposition Net DF

Noble	Elemental	Organic	Aerosol
1.0000E+00	1.0000E+00	1.0000E+00	6.0637E+05

Security Center (Internal) Doses:

Time (h) =	24.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)		7.9175E-03	1.0319E-03	7.9495E-03

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Accumulated dose (rem) 1.8010E-02 7.3277E-03 1.8316E-02

EAB Doses:

Time (h) = 24.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)	0.0000E+00	0.0000E+00	0.0000E+00
Accumulated dose (rem)	2.5002E+00	5.4695E-02	2.5025E+00

LPZ Doses:

Time (h) = 24.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)	4.2516E-01	1.0798E-03	4.2520E-01
Accumulated dose (rem)	8.8038E-01	1.1038E-02	8.8085E-01

Security Center (External) Doses:

Time (h) = 24.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)	2.0843E-01	1.0293E-03	2.0847E-01
Accumulated dose (rem)	4.7653E-01	6.8944E-03	4.7682E-01

Detailed model information at time (H) = 96.0000

Natural deposition - Powers' Model, Compartment 1
 Deposition Lambda (1 / Hours)

Noble	Elemental	Organic	Aerosol
0.0000E+00	0.0000E+00	0.0000E+00	1.0000E-01

Deposition Net DF

Noble	Elemental	Organic	Aerosol
1.0000E+00	1.0000E+00	1.0000E+00	8.2005E+08

Security Center (Internal) Doses:

Time (h) = 96.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)	2.3722E-03	6.6820E-04	2.3926E-03
Accumulated dose (rem)	2.0382E-02	7.9959E-03	2.0709E-02

EAB Doses:

Time (h) = 96.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)	0.0000E+00	0.0000E+00	0.0000E+00
Accumulated dose (rem)	2.5002E+00	5.4695E-02	2.5025E+00

LPZ Doses:

Time (h) = 96.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)	1.5696E-01	1.0996E-03	1.5700E-01
Accumulated dose (rem)	1.0373E+00	1.2138E-02	1.0378E+00

Security Center (External) Doses:

Time (h) = 96.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)	6.1819E-02	6.5901E-04	6.1839E-02
Accumulated dose (rem)	5.3835E-01	7.5534E-03	5.3866E-01

Detailed model information at time (H) = 720.0000

Natural deposition - Powers' Model, Compartment 1
 Deposition Lambda (1 / Hours)

Noble	Elemental	Organic	Aerosol
0.0000E+00	0.0000E+00	0.0000E+00	1.0000E-01

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Deposition Net DF

Noble	Elemental	Organic	Aerosol
1.0000E+00	1.0000E+00	1.0000E+00	1.1106E+36

Security Center (Internal) Doses:

Time (h) = 720.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)	1.0193E-03	5.3020E-04	1.0354E-03
Accumulated dose (rem)	2.1402E-02	8.5261E-03	2.1744E-02

EAB Doses:

Time (h) = 720.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)	0.0000E+00	0.0000E+00	0.0000E+00
Accumulated dose (rem)	2.5002E+00	5.4695E-02	2.5025E+00

LPZ Doses:

Time (h) = 720.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)	7.9700E-02	1.0326E-03	7.9732E-02
Accumulated dose (rem)	1.1170E+00	1.3171E-02	1.1176E+00

Security Center (External) Doses:

Time (h) = 720.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)	2.6845E-02	5.2927E-04	2.6861E-02
Accumulated dose (rem)	5.6520E-01	8.0827E-03	5.6552E-01

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 I-131 Summary
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Time (hr)	Primary Containment	Reactor Enclosure	Environment
	I-131 (Curies)	I-131 (Curies)	I-131 (Curies)
0.000	5.2640E+03	2.7344E-04	3.1208E-05
0.017	1.5710E+05	4.9118E-02	2.2418E-01
0.017	1.5738E+05	4.9216E-02	2.2507E-01
0.258	2.2465E+06	4.6525E+01	2.3557E-01
0.500	4.0239E+06	1.3107E+02	2.3600E-01
0.900	9.2485E+06	3.5670E+02	2.3793E-01
1.200	1.2852E+07	5.6278E+02	2.4078E-01
1.500	1.6204E+07	7.6752E+02	2.4495E-01
1.800	1.9322E+07	9.6252E+02	2.5039E-01
2.000	2.1277E+07	1.0859E+03	2.5471E-01
2.300	1.6059E+07	1.0745E+03	2.6179E-01
2.600	1.2210E+07	9.0201E+02	2.6842E-01
2.900	9.3722E+06	7.1788E+02	2.7416E-01
3.200	7.2788E+06	5.6237E+02	2.7906E-01
3.500	5.7347E+06	4.4084E+02	2.8328E-01
3.800	4.5957E+06	3.4884E+02	2.8696E-01
4.100	3.7554E+06	2.8015E+02	2.9024E-01
4.400	3.1353E+06	2.2919E+02	2.9322E-01
4.700	2.6777E+06	1.9149E+02	2.9598E-01
5.000	2.3398E+06	1.6363E+02	2.9858E-01
5.300	2.1770E+06	1.4515E+02	3.0106E-01
5.600	2.0416E+06	1.3311E+02	3.0346E-01
5.900	1.9292E+06	1.2426E+02	3.0581E-01
6.200	1.8356E+06	1.1730E+02	3.0812E-01

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6.500	1.7578E+06	1.1165E+02	3.1039E-01
6.800	1.6930E+06	1.0700E+02	3.1264E-01
7.100	1.6390E+06	1.0314E+02	3.1486E-01
7.400	1.5939E+06	9.9926E+01	3.1707E-01
7.700	1.5563E+06	9.7249E+01	3.1926E-01
8.000	1.5249E+06	9.5014E+01	3.2143E-01
8.300	1.4985E+06	9.3144E+01	3.2359E-01
8.600	1.4789E+06	9.1638E+01	3.2574E-01
8.900	1.4620E+06	9.0422E+01	3.2789E-01
9.200	1.4474E+06	8.9401E+01	3.3002E-01
9.500	1.4348E+06	8.8528E+01	3.3215E-01
9.800	1.4238E+06	8.7775E+01	3.3427E-01
10.100	1.4143E+06	8.7122E+01	3.3639E-01
10.400	1.4059E+06	8.6552E+01	3.3850E-01
24.000	1.2984E+06	7.9643E+01	4.3108E-01
96.000	9.9499E+05	3.0515E+01	6.4144E-01
720.000	9.9109E+04	3.0395E+00	1.2598E+00

Time (hr)	Security Center I-131 (Curies)	SGTS Node I-131 (Curies)
0.000	3.7292E-08	3.0382E-10
0.017	2.0338E-04	5.4575E-08
0.017	2.0408E-04	5.4684E-08
0.258	2.0312E-06	6.2785E-07
0.500	5.1336E-08	1.7906E-06
0.900	1.4347E-07	4.9163E-06
1.200	2.2995E-07	7.7953E-06
1.500	3.1731E-07	1.0692E-05
1.800	4.0183E-07	1.3491E-05
2.000	4.5602E-07	1.5285E-05
2.300	4.7055E-07	1.5556E-05
2.600	4.1850E-07	1.3780E-05
2.900	3.5811E-07	1.1782E-05
3.200	3.0590E-07	1.0068E-05
3.500	2.6470E-07	8.7204E-06
3.800	2.3335E-07	7.6962E-06
4.100	2.0988E-07	6.9296E-06
4.400	1.9241E-07	6.3594E-06
4.700	1.7945E-07	5.9363E-06
5.000	1.6984E-07	5.6225E-06
5.300	1.6334E-07	5.4128E-06
5.600	1.5910E-07	5.2748E-06
5.900	1.5597E-07	5.1722E-06
6.200	1.5348E-07	5.0905E-06
6.500	1.5144E-07	5.0235E-06
6.800	1.4973E-07	4.9675E-06
7.100	1.4830E-07	4.9203E-06
7.400	1.4708E-07	4.8803E-06
7.700	1.4605E-07	4.8463E-06
8.000	1.4516E-07	4.8172E-06
8.300	8.5117E-08	4.7921E-06
8.600	8.4739E-08	4.7711E-06
8.900	8.4421E-08	4.7533E-06
9.200	8.4142E-08	4.7377E-06
9.500	8.3893E-08	4.7237E-06
9.800	8.3667E-08	4.7111E-06
10.100	8.3462E-08	4.6996E-06
10.400	8.3273E-08	4.6890E-06
24.000	7.8571E-08	4.4245E-06
96.000	1.9171E-08	1.6953E-06

LGS PC Leak - Vital Area-Security Center R1.01

720.000

8.3843E-10

1.6886E-07

 Cumulative Dose Summary
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Time (hr)	Security Center (Inte		EAB		LPZ	
	Thyroid (rem)	TEDE (rem)	Thyroid (rem)	TEDE (rem)	Thyroid (rem)	TEDE (rem)
0.000	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00
0.017	1.0236E-03	4.4530E-05	3.8445E-02	1.8901E-03	7.0000E-03	3.4413E-04
0.017	1.0292E-03	4.4774E-05	3.8597E-02	1.8975E-03	7.0276E-03	3.4549E-04
0.258	4.6720E-03	2.0344E-04	4.0390E-02	2.1386E-03	7.3541E-03	3.8939E-04
0.500	4.7715E-03	2.1058E-04	4.0464E-02	2.9298E-03	7.3674E-03	5.3344E-04
0.900	4.8057E-03	2.3609E-04	4.0795E-02	9.2106E-03	7.4277E-03	1.6770E-03
1.200	4.8572E-03	2.9711E-04	4.1287E-02	2.4285E-02	7.5174E-03	4.4217E-03
1.500	4.9329E-03	4.1324E-04	4.2006E-02	5.2868E-02	7.6482E-03	9.6260E-03
1.800	5.0322E-03	5.9614E-04	4.2945E-02	9.7783E-02	7.8192E-03	1.7804E-02
2.000	5.1111E-03	7.5910E-04	4.3688E-02	1.3776E-01	7.9546E-03	2.5082E-02
2.300	5.2410E-03	1.0655E-03	4.4905E-02	2.1286E-01	8.1760E-03	3.8756E-02
2.600	5.3632E-03	1.4339E-03	4.6037E-02	3.0322E-01	8.3823E-03	5.5208E-02
2.900	5.4688E-03	1.8506E-03	4.7013E-02	4.0559E-01	8.5600E-03	7.3847E-02
3.200	5.5583E-03	2.3046E-03	4.7840E-02	5.1725E-01	8.7106E-03	9.4179E-02
3.500	5.6347E-03	2.7868E-03	4.8546E-02	6.3596E-01	8.8391E-03	1.1579E-01
3.800	5.7009E-03	3.2897E-03	4.9159E-02	7.5982E-01	8.9507E-03	1.3835E-01
4.100	5.7594E-03	3.8070E-03	4.9702E-02	8.8727E-01	9.0494E-03	1.6155E-01
4.400	5.8122E-03	4.3335E-03	5.0191E-02	1.0170E+00	9.1386E-03	1.8517E-01
4.700	5.8607E-03	4.8648E-03	5.0642E-02	1.1479E+00	9.2207E-03	2.0901E-01
5.000	5.9061E-03	5.3976E-03	5.1063E-02	1.2792E+00	9.2974E-03	2.3291E-01
5.300	5.9491E-03	5.9287E-03	5.1464E-02	1.4100E+00	9.3703E-03	2.5673E-01
5.600	5.9906E-03	6.4558E-03	5.1850E-02	1.5399E+00	9.4406E-03	2.8038E-01
5.900	6.0310E-03	6.9771E-03	5.2226E-02	1.6683E+00	9.5091E-03	3.0375E-01
6.200	6.0705E-03	7.4909E-03	5.2594E-02	1.7948E+00	9.5761E-03	3.2679E-01
6.500	6.1093E-03	7.9961E-03	5.2956E-02	1.9192E+00	9.6420E-03	3.4943E-01
6.800	6.1475E-03	8.4917E-03	5.3312E-02	2.0412E+00	9.7069E-03	3.7165E-01
7.100	6.1852E-03	8.9769E-03	5.3664E-02	2.1606E+00	9.7708E-03	3.9339E-01
7.400	6.2225E-03	9.4514E-03	5.4011E-02	2.2774E+00	9.8341E-03	4.1465E-01
7.700	6.2593E-03	9.9147E-03	5.4354E-02	2.3914E+00	9.8966E-03	4.3541E-01
8.000	6.2959E-03	1.0367E-02	5.4695E-02	2.5025E+00	9.9586E-03	4.5565E-01
8.300	6.3197E-03	1.0657E-02	5.4695E-02	2.5025E+00	9.9810E-03	4.6962E-01
8.600	6.3409E-03	1.0909E-02	5.4695E-02	2.5025E+00	1.0003E-02	4.8322E-01
8.900	6.3619E-03	1.1156E-02	5.4695E-02	2.5025E+00	1.0025E-02	4.9646E-01
9.200	6.3828E-03	1.1395E-02	5.4695E-02	2.5025E+00	1.0047E-02	5.0934E-01
9.500	6.4036E-03	1.1628E-02	5.4695E-02	2.5025E+00	1.0069E-02	5.2186E-01
9.800	6.4243E-03	1.1854E-02	5.4695E-02	2.5025E+00	1.0091E-02	5.3404E-01
10.100	6.4449E-03	1.2075E-02	5.4695E-02	2.5025E+00	1.0112E-02	5.4588E-01
10.400	6.4653E-03	1.2289E-02	5.4695E-02	2.5025E+00	1.0134E-02	5.5739E-01
24.000	7.3277E-03	1.8316E-02	5.4695E-02	2.5025E+00	1.1038E-02	8.8085E-01
96.000	7.9959E-03	2.0709E-02	5.4695E-02	2.5025E+00	1.2138E-02	1.0378E+00
720.000	8.5261E-03	2.1744E-02	5.4695E-02	2.5025E+00	1.3171E-02	1.1176E+00

Time (hr)	Security Center (Exte	
	Thyroid (rem)	TEDE (rem)
0.000	0.0000E+00	0.0000E+00
0.017	4.1226E-03	2.0268E-04
0.017	4.1389E-03	2.0348E-04
0.258	4.3311E-03	2.2933E-04
0.500	4.3390E-03	3.1417E-04
0.900	4.3745E-03	9.8767E-04

LGS PC Leak - Vital Area-Security Center R1.01

1.200 4.4273E-03 2.6041E-03
 1.500 4.5044E-03 5.6692E-03
 1.800 4.6051E-03 1.0486E-02
 2.000 4.6848E-03 1.4772E-02
 2.300 4.8152E-03 2.2825E-02
 2.600 4.9367E-03 3.2515E-02
 2.900 5.0414E-03 4.3492E-02
 3.200 5.1301E-03 5.5467E-02
 3.500 5.2058E-03 6.8196E-02
 3.800 5.2715E-03 8.1478E-02
 4.100 5.3296E-03 9.5144E-02
 4.400 5.3822E-03 1.0906E-01
 4.700 5.4305E-03 1.2310E-01
 5.000 5.4757E-03 1.3717E-01
 5.300 5.5186E-03 1.5120E-01
 5.600 5.5600E-03 1.6513E-01
 5.900 5.6003E-03 1.7889E-01
 6.200 5.6398E-03 1.9246E-01
 6.500 5.6786E-03 2.0580E-01
 6.800 5.7168E-03 2.1888E-01
 7.100 5.7545E-03 2.3169E-01
 7.400 5.7917E-03 2.4421E-01
 7.700 5.8286E-03 2.5643E-01
 8.000 5.8651E-03 2.6835E-01
 8.300 5.8864E-03 2.7520E-01
 8.600 5.9076E-03 2.8187E-01
 8.900 5.9286E-03 2.8836E-01
 9.200 5.9495E-03 2.9467E-01
 9.500 5.9703E-03 3.0081E-01
 9.800 5.9910E-03 3.0679E-01
 10.100 6.0116E-03 3.1259E-01
 10.400 6.0320E-03 3.1823E-01
 24.000 6.8944E-03 4.7682E-01
 96.000 7.5534E-03 5.3866E-01
 720.000 8.0827E-03 5.6552E-01

 Worst Two-Hour Doses
 #####

EAB

Time (hr)	Whole Body (rem)	Thyroid (rem)	TEDE (rem)
3.9	8.6585E-01	2.8861E-03	8.6596E-01

LGS LOCA 200scfh MSIV Leak - Vital Area-Security Center R1.o1

RADTRAD Version 3.03 (Spring 2001) run on 9/20/2005 at 7:48:19
#####

File information
#####

Plant file = C:\Program Files\radtrad3-03\Input\LGS LOCA R1 Attachment G
Runs\LGS LOCA 200scfh MSIV Leak - Vital Area-Security Center R1.psf
Inventory file = c:\program files\radtrad3-03\defaults\pb-lgs ast source
terms.nif
Release file = c:\program files\radtrad3-03\defaults\bwr_dba.rft
Dose Conversion file = c:\program files\radtrad3-03\defaults\fgr11&12.inp

```
#####      #####      #####      # #      # #####      # #      #####  
# # #      #      # ##      # #      # #      # #      #  
# # #      #      # # #      # #      # #      # #      #  
#####      #####      # #      # #      #####      # #      #  
# #      # #      # #      # #      # #      # #      #  
# #      # #      # #      # #      # #      # #      #  
# #      # #      # #      # #      # #      # #      #  
# #      # #      # #      # #      # #      # #      #
```

Radtrad 3.03 4/15/2001
LGS LOCA 200scfh MSIV Leak - Vital Area-Security Center
Nuclide Inventory File:
c:\program files\radtrad3-03\defaults\pb-lgs ast source terms.nif
Plant Power Level:
3.5270E+03
Compartments:
9
Compartment 1:
Containment
3
3.7907E+05
0
0
0
1
0
Compartment 2:
(Node 1) Inboard MSL A Volume
3
2.5800E+02
0
0
0
0
0
0
Compartment 3:
(Node 1) Inboard MSL B Volume
3
1.0000E-08
0

LGS LOCA 200scfh MSIV Leak - Vital Area-Security Center R1.o1

0
0
0
0

Compartment 4:
(Node 2) Outboard MSL A Volume

3
1.1820E+03

0
0
0
0
0

Compartment 5:
(Node 2) Outboard MSL B Volume

3
1.0510E+03

0
0
0
0
0

Compartment 6:
Condenser

3
5.4750E+04

0
0
0
0
0

Compartment 7:
Environment

2
0.0000E+00

0
0
0
0
0

Compartment 8:
Security Center

1
7.4880E+04

0
0
0
0
0

Compartment 9:
Hold

3
1.0000E+00

0
0
0
0
0

Pathways:
10

LGS LOCA 200scfh MSIV Leak - Vital Area-Security Center R1.o1

Pathway 1:

Containment to (Node 1) Inboard MSL A Volume

1
2
2

Pathway 2:

Containment to (Node 1) Inboard MSL B Volume

1
3
2

Pathway 3:

Containment to Hold (PC Leakage)

1
9
4

Pathway 4:

(Node 1) Inboard MSL A Volume to (Node 2) Outboard MSL A Volume

2
4
2

Pathway 5:

(Node 1) Inboard MSL B Volume to (Node 2) Outboard MSL B Volume

3
5
2

Pathway 6:

(Node 2) Outboard MSL A Volume to Condenser

4
6
2

Pathway 7:

(Node 2) Outboard MSL B Volume to Condenser

5
6
2

Pathway 8:

Condenser Leak to Environment

6
7
2

Pathway 9:

Unfiltered Intake to Security Center

7
8
2

Pathway 10:

Security Center Exhaust to Environment

8
7
2

End of Plant Model File

Scenario Description Name:

Plant Model Filename:

Source Term:

1

1 1.0000E+00

c:\program files\radtrad3-03\defaults\fgr11&12.inp

c:\program files\radtrad3-03\defaults\bwr_dba.rft

LGS LOCA 200scfh MSIV Leak - Vital Area-Security Center R1.o1

0.0000E+00
1
9.5000E-01 4.8500E-02 1.5000E-03 1.0000E+00

Overlying Pool:

0
0.0000E+00
0
0
0
0

Compartments:

9

Compartment 1:

0
1
0
0
0
0
0
0
3
3
1.0000E+01

1
1
0.0000E+00 0.0000E+00

Compartment 2:

0
1
0
0
0
0
0
0
0
0

Compartment 3:

0
1
0
0
0
0
0
0
0
0

Compartment 4:

0
1
0
0
0
0
0
0
0
0

Compartment 5:

0
1
0

LGS LOCA 200scfh MSIV Leak - Vital Area-Security Center R1.01

0
0
0
0
0
0

Compartment 6:

0
1
0
0
0
0
0
0
0

Compartment 7:

0
1
0
0
0
0
0
0
0

Compartment 8:

0
1
0
0
0
0
0
0
0

Compartment 9:

0
1
0
0
0
0
0
0
0

Pathways:

10

Pathway 1:

0
0
0
0
0
1
5

0.0000E+00	1.5240E+00	9.9980E+01	9.9690E+01	0.0000E+00
2.0000E+00	9.3060E-01	9.9980E+01	9.9690E+01	0.0000E+00
2.4000E+01	5.1270E-01	0.0000E+00	9.9970E+01	0.0000E+00
9.6000E+01	5.1270E-01	0.0000E+00	9.9990E+01	0.0000E+00

LGS LOCA 200scfh MSIV Leak - Vital Area-Security Center R1.o1

7.2000E+02 0.0000E+00 0.0000E+00 0.0000E+00 0.0000E+00
 0
 0
 0
 0
 0
 0

Pathway 2:

0
 0
 0
 0
 0
 1
 5
 0.0000E+00 1.5240E+00 9.9910E+01 9.9480E+01 0.0000E+00
 2.0000E+00 9.3060E-01 9.9910E+01 9.9480E+01 0.0000E+00
 2.4000E+01 5.1270E-01 0.0000E+00 9.9890E+01 0.0000E+00
 9.6000E+01 5.1270E-01 0.0000E+00 9.9980E+01 0.0000E+00
 7.2000E+02 0.0000E+00 0.0000E+00 0.0000E+00 0.0000E+00
 0
 0
 0
 0
 0
 0

Pathway 3:

0
 0
 0
 0
 0
 0
 0
 0
 0
 0
 1
 3
 0.0000E+00 5.0000E-01
 2.4000E+01 2.5000E-01
 7.2000E+02 0.0000E+00
 0

Pathway 4:

0
 0
 0
 0
 0
 1
 4
 0.0000E+00 9.3060E-01 0.0000E+00 0.0000E+00 0.0000E+00
 2.4000E+01 5.1270E-01 0.0000E+00 0.0000E+00 0.0000E+00
 9.6000E+01 5.1270E-01 0.0000E+00 0.0000E+00 0.0000E+00
 7.2000E+02 0.0000E+00 0.0000E+00 0.0000E+00 0.0000E+00
 0
 0
 0
 0
 0

LGS LOCA 200scfh MSIV Leak - Vital Area-Security Center R1.o1

0
 Pathway 5:
 0
 0
 0
 0
 0
 1
 4
 0.0000E+00 9.3060E-01 0.0000E+00 0.0000E+00 0.0000E+00
 2.4000E+01 5.1270E-01 0.0000E+00 0.0000E+00 0.0000E+00
 9.6000E+01 5.1270E-01 0.0000E+00 0.0000E+00 0.0000E+00
 7.2000E+02 0.0000E+00 0.0000E+00 0.0000E+00 0.0000E+00
 0
 0
 0
 0
 0
 0

Pathway 6:
 0
 0
 0
 0
 0
 1
 4
 0.0000E+00 3.1880E+00 0.0000E+00 0.0000E+00 0.0000E+00
 2.4000E+01 1.5130E+00 0.0000E+00 0.0000E+00 0.0000E+00
 9.6000E+01 1.1480E+00 0.0000E+00 0.0000E+00 0.0000E+00
 7.2000E+02 0.0000E+00 0.0000E+00 0.0000E+00 0.0000E+00
 0
 0
 0
 0
 0
 0

Pathway 7:
 0
 0
 0
 0
 0
 1
 4
 0.0000E+00 3.1880E+00 0.0000E+00 0.0000E+00 0.0000E+00
 2.4000E+01 1.5130E+00 0.0000E+00 0.0000E+00 0.0000E+00
 9.6000E+01 1.1480E+00 0.0000E+00 0.0000E+00 0.0000E+00
 7.2000E+02 0.0000E+00 0.0000E+00 0.0000E+00 0.0000E+00
 0
 0
 0
 0
 0
 0

Pathway 8:
 0
 0
 0
 0

LGS LOCA 200scfh MSIV Leak - Vital Area-Security Center R1.o1

0
 1
 4
 0.0000E+00 3.6620E+00 0.0000E+00 0.0000E+00 0.0000E+00
 2.4000E+01 2.0180E+00 0.0000E+00 0.0000E+00 0.0000E+00
 9.6000E+01 2.0180E+00 0.0000E+00 0.0000E+00 0.0000E+00
 7.2000E+02 0.0000E+00 0.0000E+00 0.0000E+00 0.0000E+00

0
 0
 0
 0
 0
 0

Pathway 9:

0
 0
 0
 0
 0
 1
 2
 0.0000E+00 7.4880E+04 0.0000E+00 0.0000E+00 0.0000E+00
 7.2000E+02 0.0000E+00 0.0000E+00 0.0000E+00 0.0000E+00

0
 0
 0
 0
 0

Pathway 10:

0
 0
 0
 0
 0
 1
 2
 0.0000E+00 7.4880E+04 1.0000E+02 1.0000E+02 1.0000E+02
 7.2000E+02 0.0000E+00 0.0000E+00 0.0000E+00 0.0000E+00

0
 0
 0
 0
 0

Dose Locations:

4

Location 1:

Exclusion Area Boundary (EAB)

7
 1
 2
 0.0000E+00 3.1800E-04
 2.4000E+01 0.0000E+00
 1
 4
 0.0000E+00 3.5000E-04
 8.0000E+00 1.8000E-04
 2.4000E+01 2.3000E-04
 7.2000E+02 0.0000E+00

LGS LOCA 200scfh MSIV Leak - Vital Area-Security Center R1.o1

0

Location 2:

Low Population Zone (LPZ)

7

1

10

0.0000E+00	5.7900E-05
8.0000E+00	4.1000E-05
2.4000E+01	1.9500E-05
4.8000E+01	1.9500E-05
7.2000E+01	1.9500E-05
9.6000E+01	6.6800E-06
1.2000E+02	6.6800E-06
1.6800E+02	6.6800E-06
3.3600E+02	6.6800E-06
7.2000E+02	0.0000E+00

1

4

0.0000E+00	3.5000E-04
8.0000E+00	1.8000E-04
2.4000E+01	2.3000E-04
7.2000E+02	0.0000E+00

0

Location 3:

Security Center (Internal)

8

0

1

2

0.0000E+00	3.5000E-04
7.2000E+02	0.0000E+00

1

4

0.0000E+00	1.0000E+00
2.4000E+01	6.0000E-01
9.6000E+01	4.0000E-01
7.2000E+02	0.0000E+00

Location 4:

Security Center (External)

7

1

5

0.0000E+00	3.4100E-05
8.0000E+00	2.0100E-05
2.4000E+01	7.6800E-06
9.6000E+01	2.2500E-06
7.2000E+02	0.0000E+00

1

2

0.0000E+00	3.5000E-04
7.2000E+02	0.0000E+00

0

Effective Volume Location:

1

5

0.0000E+00	3.4100E-05
8.0000E+00	2.0100E-05
2.4000E+01	1.2800E-05
9.6000E+01	5.6200E-06
7.2000E+02	0.0000E+00

LGS LOCA 200scfh MSIV Leak - Vital Area-Security Center R1.o1

Simulation Parameters:

1

0.0000E+00 0.0000E+00

Output Filename:

C:\Program Files\radtrad3-03\Input\LGS LOCA R1 Attachment G Runs\LGS LOCA 200scfh
MSIV Leak - Vital Area-Security Center R1.o1

1

1

1

0

1

End of Scenario File

LGS LOCA 200scfh MSIV Leak - Vital Area-Security Center R1.o1

RADTRAD Version 3.03 (Spring 2001) run on 9/20/2005 at 7:48:19
#####

Plant Description
#####

Number of Nuclides = 60

Inventory Power = 1.0000E+00 MWth
Plant Power Level = 3.5270E+03 MWth

Number of compartments = 9

Compartment information

Compartment number 1 (Source term fraction = 1.0000E+00
)

Name: Containment
Compartment volume = 3.7907E+05 (Cubic feet)
Compartment type is Normal
Removal devices within compartment:
Deposition

Pathways into and out of compartment 1

Exit Pathway Number 1: Containment to (Node 1) Inboard MSL A Volume
Exit Pathway Number 2: Containment to (Node 1) Inboard MSL B Volume
Exit Pathway Number 3: Containment to Hold (PC Leakage)

Compartment number 2

Name: (Node 1) Inboard MSL A Volume
Compartment volume = 2.5800E+02 (Cubic feet)
Compartment type is Normal
Pathways into and out of compartment 2

Inlet Pathway Number 1: Containment to (Node 1) Inboard MSL A Volume
Exit Pathway Number 4: (Node 1) Inboard MSL A Volume to (Node 2) Outboard

Compartment number 3

Name: (Node 1) Inboard MSL B Volume
Compartment volume = 1.0000E-08 (Cubic feet)
Compartment type is Normal
Pathways into and out of compartment 3

Inlet Pathway Number 2: Containment to (Node 1) Inboard MSL B Volume
Exit Pathway Number 5: (Node 1) Inboard MSL B Volume to (Node 2) Outboard

Compartment number 4

Name: (Node 2) Outboard MSL A Volume
Compartment volume = 1.1820E+03 (Cubic feet)
Compartment type is Normal
Pathways into and out of compartment 4

Inlet Pathway Number 4: (Node 1) Inboard MSL A Volume to (Node 2) Outboard
Exit Pathway Number 6: (Node 2) Outboard MSL A Volume to Condenser

Compartment number 5

Name: (Node 2) Outboard MSL B Volume
Compartment volume = 1.0510E+03 (Cubic feet)
Compartment type is Normal
Pathways into and out of compartment 5

Inlet Pathway Number 5: (Node 1) Inboard MSL B Volume to (Node 2) Outboard

LGS LOCA 200scfh MSIV Leak - Vital Area-Security Center R1.o1

Exit Pathway Number 7: (Node 2) Outboard MSL B Volume to Condenser

Compartment number 6

Name: Condenser

Compartment volume = 5.4750E+04 (Cubic feet)

Compartment type is Normal

Pathways into and out of compartment 6

Inlet Pathway Number 6: (Node 2) Outboard MSL A Volume to Condenser

Inlet Pathway Number 7: (Node 2) Outboard MSL B Volume to Condenser

Exit Pathway Number 8: Condenser Leak to Environment

Compartment number 7

Name: Environment

Compartment type is Environment

Pathways into and out of compartment 7

Inlet Pathway Number 8: Condenser Leak to Environment

Inlet Pathway Number 10: Security Center Exhaust to Environment

Exit Pathway Number 9: Unfiltered Intake to Security Center

Compartment number 8

Name: Security Center

Compartment volume = 7.4880E+04 (Cubic feet)

Compartment type is Control Room

Pathways into and out of compartment 8

Inlet Pathway Number 9: Unfiltered Intake to Security Center

Exit Pathway Number 10: Security Center Exhaust to Environment

Compartment number 9

Name: Hold

Compartment volume = 1.0000E+00 (Cubic feet)

Compartment type is Normal

Pathways into and out of compartment 9

Inlet Pathway Number 3: Containment to Hold (PC Leakage)

Total number of pathways = 10

 RADTRAD Version 3.03 (Spring 2001) run on 9/20/2005 at 7:48:19
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 Scenario Description
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Radioactive Decay is enabled
 Calculation of Daughters is enabled

Release Fractions and Timings

	GAP	EARLY IN-VESSEL	LATE RELEASE	RELEASE MASS
	0.500000 hr	1.5000 hrs	0.0000 hrs	(gm)
NOBLES	5.0000E-02	9.5000E-01	0.0000E+00	4.625E+03
IODINE	5.0000E-02	2.5000E-01	0.0000E+00	3.033E+02
CESIUM	5.0000E-02	2.0000E-01	0.0000E+00	5.099E+04
TELLURIUM	0.0000E+00	5.0000E-02	0.0000E+00	4.012E+01
STRONTIUM	0.0000E+00	2.0000E-02	0.0000E+00	1.712E+03
BARIUM	0.0000E+00	2.0000E-02	0.0000E+00	4.739E+01
RUTHENIUM	0.0000E+00	2.5000E-03	0.0000E+00	5.988E+01
CERIUM	0.0000E+00	5.0000E-04	0.0000E+00	5.914E+02
LANTHANUM	0.0000E+00	2.0000E-04	0.0000E+00	8.731E+00

Inventory Power = 3527. MWt

Nuclide Name	Group	Specific Inventory (Ci/MWt)	half life (s)	Whole Body DCF (Sv-m3/Bq-s)	Inhaled Thyroid (Sv/Bq)	Inhaled Effective (Sv/Bq)
Co-58	7	1.529E+02	6.117E+06	4.760E-14	8.720E-10	2.940E-09
Co-60	7	1.830E+02	1.663E+08	1.260E-13	1.620E-08	5.910E-08
Kr-85	1	3.946E+02	3.383E+08	1.190E-16	0.000E+00	0.000E+00
Kr-85m	1	8.313E+03	1.613E+04	7.480E-15	0.000E+00	0.000E+00
Kr-87	1	1.633E+04	4.578E+03	4.120E-14	0.000E+00	0.000E+00
Kr-88	1	2.303E+04	1.022E+04	1.020E-13	0.000E+00	0.000E+00
Rb-86	3	6.518E+01	1.612E+06	4.810E-15	1.330E-09	1.790E-09
Sr-89	5	2.798E+04	4.363E+06	7.730E-17	7.960E-12	1.120E-08
Sr-90	5	3.178E+03	9.190E+08	7.530E-18	2.690E-10	3.510E-07
Sr-91	5	3.801E+04	3.420E+04	4.924E-14	9.930E-12	4.547E-10
Sr-92	5	4.017E+04	9.756E+03	6.790E-14	3.920E-12	2.180E-10
Y-90	9	3.272E+03	2.304E+05	1.900E-16	5.170E-13	2.280E-09
Y-91	9	3.448E+04	5.055E+06	2.600E-16	8.500E-12	1.320E-08
Y-92	9	4.029E+04	1.274E+04	1.300E-14	1.050E-12	2.110E-10
Y-93	9	4.526E+04	3.636E+04	4.800E-15	9.260E-13	5.820E-10
Zr-95	9	4.489E+04	5.528E+06	3.600E-14	1.440E-09	6.390E-09
Zr-97	9	4.657E+04	6.084E+04	4.432E-14	2.315E-11	1.171E-09
Nb-95	9	4.512E+04	3.037E+06	3.740E-14	3.580E-10	1.570E-09
Mo-99	7	5.078E+04	2.376E+05	7.280E-15	1.520E-11	1.070E-09
Tc-99m	7	4.447E+04	2.167E+04	5.890E-15	5.010E-11	8.800E-12
Ru-103	7	4.202E+04	3.394E+06	2.251E-14	2.570E-10	2.421E-09
Ru-105	7	2.908E+04	1.598E+04	3.810E-14	4.150E-12	1.230E-10
Ru-106	7	1.730E+04	3.181E+07	1.040E-14	1.720E-09	1.290E-07
Rh-105	7	2.752E+04	1.273E+05	3.720E-15	2.880E-12	2.580E-10
Sb-127	4	2.896E+03	3.326E+05	3.330E-14	6.150E-11	1.630E-09
Sb-129	4	8.638E+03	1.555E+04	7.140E-14	9.720E-12	1.740E-10
Te-127	4	2.873E+03	3.366E+04	2.420E-16	1.840E-12	8.600E-11
Te-127m	4	3.855E+02	9.418E+06	1.470E-16	9.660E-11	5.810E-09
Te-129	4	8.501E+03	4.176E+03	2.750E-15	5.090E-13	2.090E-11
Te-129m	4	1.267E+03	2.903E+06	3.337E-15	1.563E-10	6.484E-09

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Te-131m	4	3.869E+03	1.080E+05	7.463E-14	3.669E-08	1.758E-09
Te-132	4	3.821E+04	2.815E+05	1.030E-14	6.280E-08	2.550E-09
I-131	2	2.687E+04	6.947E+05	1.820E-14	2.920E-07	8.890E-09
I-132	2	3.881E+04	8.280E+03	1.120E-13	1.740E-09	1.030E-10
I-133	2	5.556E+04	7.488E+04	2.940E-14	4.860E-08	1.580E-09
I-134	2	6.165E+04	3.156E+03	1.300E-13	2.880E-10	3.550E-11
I-135	2	5.192E+04	2.380E+04	8.294E-14	8.460E-09	3.320E-10
Xe-133	1	5.491E+04	4.532E+05	1.560E-15	0.000E+00	0.000E+00
Xe-135	1	2.228E+04	3.272E+04	1.190E-14	0.000E+00	0.000E+00
Cs-134	3	7.280E+03	6.507E+07	7.570E-14	1.110E-08	1.250E-08
Cs-136	3	2.027E+03	1.132E+06	1.060E-13	1.730E-09	1.980E-09
Cs-137	3	4.538E+03	9.467E+08	2.725E-14	7.930E-09	8.630E-09
Ba-139	6	5.084E+04	4.962E+03	2.170E-15	2.400E-12	4.640E-11
Ba-140	6	4.896E+04	1.101E+06	8.580E-15	2.560E-10	1.010E-09
La-140	9	5.019E+04	1.450E+05	1.170E-13	6.870E-11	1.310E-09
La-141	9	4.640E+04	1.415E+04	2.390E-15	9.400E-12	1.570E-10
La-142	9	4.532E+04	5.550E+03	1.440E-13	8.740E-12	6.840E-11
Ce-141	8	4.492E+04	2.808E+06	3.430E-15	2.550E-11	2.420E-09
Ce-143	8	4.427E+04	1.188E+05	1.290E-14	6.230E-12	9.160E-10
Ce-144	8	3.596E+04	2.456E+07	2.773E-15	2.920E-10	1.010E-07
Pr-143	9	4.293E+04	1.172E+06	2.100E-17	1.680E-18	2.190E-09
Nd-147	9	1.838E+04	9.487E+05	6.190E-15	1.820E-11	1.850E-09
Np-239	8	5.397E+05	2.035E+05	7.690E-15	7.620E-12	6.780E-10
Pu-238	8	1.796E+02	2.769E+09	4.880E-18	3.860E-10	7.790E-05
Pu-239	8	1.200E+01	7.594E+11	4.240E-18	3.750E-10	8.330E-05
Pu-240	8	1.288E+01	2.063E+11	4.750E-18	3.760E-10	8.330E-05
Pu-241	8	6.182E+03	4.544E+08	7.250E-20	9.150E-12	1.340E-06
Am-241	9	9.528E+00	1.364E+10	8.180E-16	1.600E-09	1.200E-04
Cm-242	9	2.388E+03	1.407E+07	5.690E-18	9.410E-10	4.670E-06
Cm-244	9	2.602E+02	5.715E+08	4.910E-18	1.010E-09	6.700E-05

Nuclide	Daughter	Fraction	Daughter	Fraction	Daughter	Fraction
Kr-85m	Kr-85	0.21	none	0.00	none	0.00
Kr-87	Rb-87	1.00	none	0.00	none	0.00
Kr-88	Rb-88	1.00	none	0.00	none	0.00
Sr-90	Y-90	1.00	none	0.00	none	0.00
Sr-91	Y-91m	0.58	Y-91	0.42	none	0.00
Sr-92	Y-92	1.00	none	0.00	none	0.00
Y-93	Zr-93	1.00	none	0.00	none	0.00
Zr-95	Nb-95m	0.01	Nb-95	0.99	none	0.00
Zr-97	Nb-97m	0.95	Nb-97	0.05	none	0.00
Mo-99	Tc-99m	0.88	Tc-99	0.12	none	0.00
Tc-99m	Tc-99	1.00	none	0.00	none	0.00
Ru-103	Rh-103m	1.00	none	0.00	none	0.00
Ru-105	Rh-105	1.00	none	0.00	none	0.00
Ru-106	Rh-106	1.00	none	0.00	none	0.00
Sb-127	Te-127m	0.18	Te-127	0.82	none	0.00
Sb-129	Te-129m	0.22	Te-129	0.77	none	0.00
Te-127m	Te-127	0.98	none	0.00	none	0.00
Te-129	I-129	1.00	none	0.00	none	0.00
Te-129m	Te-129	0.65	I-129	0.35	none	0.00
Te-131m	Te-131	0.22	I-131	0.78	none	0.00
Te-132	I-132	1.00	none	0.00	none	0.00
I-131	Xe-131m	0.01	none	0.00	none	0.00
I-133	Xe-133m	0.03	Xe-133	0.97	none	0.00
I-135	Xe-135m	0.15	Xe-135	0.85	none	0.00
Xe-135	Cs-135	1.00	none	0.00	none	0.00
Cs-137	Ba-137m	0.95	none	0.00	none	0.00
Ba-140	La-140	1.00	none	0.00	none	0.00
La-141	Ce-141	1.00	none	0.00	none	0.00

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Ce-143	Pr-143	1.00	none	0.00	none	0.00
Ce-144	Pr-144m	0.02	Pr-144	0.98	none	0.00
Nd-147	Pm-147	1.00	none	0.00	none	0.00
Np-239	Pu-239	1.00	none	0.00	none	0.00
Pu-238	U-234	1.00	none	0.00	none	0.00
Pu-239	U-235	1.00	none	0.00	none	0.00
Pu-240	U-236	1.00	none	0.00	none	0.00
Pu-241	U-237	0.00	Am-241	1.00	none	0.00
Am-241	Np-237	1.00	none	0.00	none	0.00
Cm-242	Pu-238	1.00	none	0.00	none	0.00
Cm-244	Pu-240	1.00	none	0.00	none	0.00

Iodine fractions

Aerosol	=	9.5000E-01
Elemental	=	4.8500E-02
Organic	=	1.5000E-03

COMPARTMENT DATA

Compartment number 1: Containment
 Natural Deposition (Powers' model): Aerosol data
 Reactor type: 3
 Percentile = 10 (%)

Natural Deposition: Elemental Removal Data
 Time (hr) Removal Coef. (hr⁻¹)
 0.0000E+00 0.0000E+00

- Compartment number 2: (Node 1) Inboard MSL A Volume
- Compartment number 3: (Node 1) Inboard MSL B Volume
- Compartment number 4: (Node 2) Outboard MSL A Volume
- Compartment number 5: (Node 2) Outboard MSL B Volume
- Compartment number 6: Condenser
- Compartment number 7: Environment
- Compartment number 8: Security Center
- Compartment number 9: Hold

PATHWAY DATA

Pathway number 1: Containment to (Node 1) Inboard MSL A Volume

Pathway Filter: Removal Data

Time (hr)	Flow Rate (cfm)	Filter Efficiencies (%)		
		Aerosol	Elemental	Organic
0.0000E+00	1.5240E+00	9.9980E+01	9.9690E+01	0.0000E+00
2.0000E+00	9.3060E-01	9.9980E+01	9.9690E+01	0.0000E+00
2.4000E+01	5.1270E-01	0.0000E+00	9.9970E+01	0.0000E+00
9.6000E+01	5.1270E-01	0.0000E+00	9.9990E+01	0.0000E+00
7.2000E+02	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00

Pathway number 2: Containment to (Node 1) Inboard MSL B Volume

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Pathway Filter: Removal Data

Time (hr)	Flow Rate (cfm)	Filter Efficiencies (%)		
		Aerosol	Elemental	Organic
0.0000E+00	1.5240E+00	9.9910E+01	9.9480E+01	0.0000E+00
2.0000E+00	9.3060E-01	9.9910E+01	9.9480E+01	0.0000E+00
2.4000E+01	5.1270E-01	0.0000E+00	9.9890E+01	0.0000E+00
9.6000E+01	5.1270E-01	0.0000E+00	9.9980E+01	0.0000E+00
7.2000E+02	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00

Pathway number 3: Containment to Hold (PC Leakage)

Convection Data

Time (hr)	Flow Rate (% / day)
0.0000E+00	5.0000E-01
2.4000E+01	2.5000E-01
7.2000E+02	0.0000E+00

Pathway number 4: (Node 1) Inboard MSL A Volume to (Node 2) Outboard

Pathway Filter: Removal Data

Time (hr)	Flow Rate (cfm)	Filter Efficiencies (%)		
		Aerosol	Elemental	Organic
0.0000E+00	9.3060E-01	0.0000E+00	0.0000E+00	0.0000E+00
2.4000E+01	5.1270E-01	0.0000E+00	0.0000E+00	0.0000E+00
9.6000E+01	5.1270E-01	0.0000E+00	0.0000E+00	0.0000E+00
7.2000E+02	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00

Pathway number 5: (Node 1) Inboard MSL B Volume to (Node 2) Outboard

Pathway Filter: Removal Data

Time (hr)	Flow Rate (cfm)	Filter Efficiencies (%)		
		Aerosol	Elemental	Organic
0.0000E+00	9.3060E-01	0.0000E+00	0.0000E+00	0.0000E+00
2.4000E+01	5.1270E-01	0.0000E+00	0.0000E+00	0.0000E+00
9.6000E+01	5.1270E-01	0.0000E+00	0.0000E+00	0.0000E+00
7.2000E+02	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00

Pathway number 6: (Node 2) Outboard MSL A Volume to Condenser

Pathway Filter: Removal Data

Time (hr)	Flow Rate (cfm)	Filter Efficiencies (%)		
		Aerosol	Elemental	Organic
0.0000E+00	3.1880E+00	0.0000E+00	0.0000E+00	0.0000E+00
2.4000E+01	1.5130E+00	0.0000E+00	0.0000E+00	0.0000E+00
9.6000E+01	1.1480E+00	0.0000E+00	0.0000E+00	0.0000E+00
7.2000E+02	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00

Pathway number 7: (Node 2) Outboard MSL B Volume to Condenser

Pathway Filter: Removal Data

Time (hr)	Flow Rate (cfm)	Filter Efficiencies (%)		
		Aerosol	Elemental	Organic
0.0000E+00	3.1880E+00	0.0000E+00	0.0000E+00	0.0000E+00
2.4000E+01	1.5130E+00	0.0000E+00	0.0000E+00	0.0000E+00
9.6000E+01	1.1480E+00	0.0000E+00	0.0000E+00	0.0000E+00

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7.2000E+02 0.0000E+00 0.0000E+00 0.0000E+00 0.0000E+00

Pathway number 8: Condenser Leak to Environment

Pathway Filter: Removal Data

Time (hr)	Flow Rate (cfm)	Filter Efficiencies (%)		
		Aerosol	Elemental	Organic
0.0000E+00	3.6620E+00	0.0000E+00	0.0000E+00	0.0000E+00
2.4000E+01	2.0180E+00	0.0000E+00	0.0000E+00	0.0000E+00
9.6000E+01	2.0180E+00	0.0000E+00	0.0000E+00	0.0000E+00
7.2000E+02	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00

Pathway number 9: Unfiltered Intake to Security Center

Pathway Filter: Removal Data

Time (hr)	Flow Rate (cfm)	Filter Efficiencies (%)		
		Aerosol	Elemental	Organic
0.0000E+00	7.4880E+04	0.0000E+00	0.0000E+00	0.0000E+00
7.2000E+02	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00

Pathway number 10: Security Center Exhaust to Environment

Pathway Filter: Removal Data

Time (hr)	Flow Rate (cfm)	Filter Efficiencies (%)		
		Aerosol	Elemental	Organic
0.0000E+00	7.4880E+04	1.0000E+02	1.0000E+02	1.0000E+02
7.2000E+02	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00

LOCATION DATA

Location Exclusion Area Boundary (EAB) is in compartment 7

Location X/Q Data

Time (hr)	X/Q (s * m ⁻³)
0.0000E+00	3.1800E-04
2.4000E+01	0.0000E+00

Location Breathing Rate Data

Time (hr)	Breathing Rate (m ³ * sec ⁻¹)
0.0000E+00	3.5000E-04
8.0000E+00	1.8000E-04
2.4000E+01	2.3000E-04
7.2000E+02	0.0000E+00

Location Low Population Zone (LPZ) is in compartment 7

Location X/Q Data

Time (hr)	X/Q (s * m ⁻³)
0.0000E+00	5.7900E-05
8.0000E+00	4.1000E-05
2.4000E+01	1.9500E-05
4.8000E+01	1.9500E-05
7.2000E+01	1.9500E-05
9.6000E+01	6.6800E-06
1.2000E+02	6.6800E-06
1.6800E+02	6.6800E-06
3.3600E+02	6.6800E-06
7.2000E+02	0.0000E+00

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Location Breathing Rate Data

Time (hr)	Breathing Rate (m ³ * sec ⁻¹)
0.0000E+00	3.5000E-04
8.0000E+00	1.8000E-04
2.4000E+01	2.3000E-04
7.2000E+02	0.0000E+00

Location Security Center (Internal) is in compartment 8

Location X/Q Data

Time (hr)	X/Q (s * m ⁻³)
0.0000E+00	3.4100E-05
8.0000E+00	2.0100E-05
2.4000E+01	1.2800E-05
9.6000E+01	5.6200E-06
7.2000E+02	0.0000E+00

Location Breathing Rate Data

Time (hr)	Breathing Rate (m ³ * sec ⁻¹)
0.0000E+00	3.5000E-04
7.2000E+02	0.0000E+00

Location Occupancy Factor Data

Time (hr)	Occupancy Factor
0.0000E+00	1.0000E+00
2.4000E+01	6.0000E-01
9.6000E+01	4.0000E-01
7.2000E+02	0.0000E+00

Location Security Center (External) is in compartment 7

Location X/Q Data

Time (hr)	X/Q (s * m ⁻³)
0.0000E+00	3.4100E-05
8.0000E+00	2.0100E-05
2.4000E+01	7.6800E-06
9.6000E+01	2.2500E-06
7.2000E+02	0.0000E+00

Location Breathing Rate Data

Time (hr)	Breathing Rate (m ³ * sec ⁻¹)
0.0000E+00	3.5000E-04
7.2000E+02	0.0000E+00

USER SPECIFIED TIME STEP DATA - SUPPLEMENTAL TIME STEPS

Time	Time step
0.0000E+00	0.0000E+00

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 RADTRAD Version 3.03 (Spring 2001) run on 9/20/2005 at 7:48:19
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 Dose Output
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Detailed model information at time (H) = 0.5000

Natural deposition - Powers' Model, Compartment 1
 Deposition Lambda (1 / Hours)
 Noble Elemental Organic Aerosol
 0.0000E+00 0.0000E+00 0.0000E+00 7.0466E-01
 Deposition Net DF
 Noble Elemental Organic Aerosol
 1.0000E+00 1.0000E+00 1.0000E+00 1.1865E+00

Exclusion Area Boundary (EAB) Doses:

Time (h) =	0.5000	Whole Body	Thyroid	TEDE
Delta dose (rem)		6.0364E-07	1.8676E-06	6.6979E-07
Accumulated dose (rem)		6.0364E-07	1.8676E-06	6.6979E-07

Low Population Zone (LPZ) Doses:

Time (h) =	0.5000	Whole Body	Thyroid	TEDE
Delta dose (rem)		1.0991E-07	3.4004E-07	1.2195E-07
Accumulated dose (rem)		1.0991E-07	3.4004E-07	1.2195E-07

Security Center (Internal) Doses:

Time (h) =	0.5000	Whole Body	Thyroid	TEDE
Delta dose (rem)		2.2455E-09	1.8350E-07	8.7447E-09
Accumulated dose (rem)		2.2455E-09	1.8350E-07	8.7447E-09

Security Center (External) Doses:

Time (h) =	0.5000	Whole Body	Thyroid	TEDE
Delta dose (rem)		6.4730E-08	2.0026E-07	7.1823E-08
Accumulated dose (rem)		6.4730E-08	2.0026E-07	7.1823E-08

Detailed model information at time (H) = 2.0000

Natural deposition - Powers' Model, Compartment 1
 Deposition Lambda (1 / Hours)

LGS LOCA 200scfh MSIV Leak - Vital Area-Security Center RI.01

	Noble	Elemental	Organic	Aerosol
	0.0000E+00	0.0000E+00	0.0000E+00	3.0681E-01
Deposition Net DF				
	Noble	Elemental	Organic	Aerosol
	1.0000E+00	1.0000E+00	1.0000E+00	1.3636E+00

Exclusion Area Boundary (EAB) Doses:

Time (h) =	2.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)		2.9759E-04	5.4263E-04	3.1800E-04
Accumulated dose (rem)		2.9819E-04	5.4450E-04	3.1867E-04

Low Population Zone (LPZ) Doses:

Time (h) =	2.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)		5.4184E-05	9.8800E-05	5.7899E-05
Accumulated dose (rem)		5.4293E-05	9.9140E-05	5.8021E-05

Security Center (Internal) Doses:

Time (h) =	2.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)		1.1649E-06	5.6375E-05	3.2842E-06
Accumulated dose (rem)		1.1671E-06	5.6558E-05	3.2929E-06

Security Center (External) Doses:

Time (h) =	2.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)		3.1911E-05	5.8188E-05	3.4100E-05
Accumulated dose (rem)		3.1976E-05	5.8388E-05	3.4171E-05

Detailed model information at time (H) = 8.0000

Natural deposition - Powers' Model, Compartment 1
 Deposition Lambda (1 / Hours)

	Noble	Elemental	Organic	Aerosol
	0.0000E+00	0.0000E+00	0.0000E+00	6.2057E-01
Deposition Net DF				
	Noble	Elemental	Organic	Aerosol
	1.0000E+00	1.0000E+00	1.0000E+00	1.8309E+02

Exclusion Area Boundary (EAB) Doses:

Time (h) =	8.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)		2.4266E-02	6.4402E-02	2.6596E-02
Accumulated dose (rem)		2.4565E-02	6.4946E-02	2.6915E-02

Low Population Zone (LPZ) Doses:

Time (h) =	8.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)		4.4183E-03	1.1726E-02	4.8425E-03
Accumulated dose (rem)		4.4726E-03	1.1825E-02	4.9005E-03

Security Center (Internal) Doses:

Time (h) =	8.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)		9.7810E-05	6.8651E-03	3.4619E-04
Accumulated dose (rem)		9.8977E-05	6.9217E-03	3.4948E-04

Security Center (External) Doses:

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Time (h) =	8.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)		2.6021E-03	6.9060E-03	2.8519E-03
Accumulated dose (rem)		2.6341E-03	6.9644E-03	2.8861E-03

Detailed model information at time (H) = 24.0000

Natural deposition - Powers' Model, Compartment 1

Deposition Lambda (1 / Hours)

Noble	Elemental	Organic	Aerosol
0.0000E+00	0.0000E+00	0.0000E+00	4.8360E-01

Deposition Net DF

Noble	Elemental	Organic	Aerosol
1.0000E+00	1.0000E+00	1.0000E+00	6.1021E+05

Exclusion Area Boundary (EAB) Doses:

Time (h) =	24.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)		1.4433E-01	5.7042E-01	1.6302E-01
Accumulated dose (rem)		1.6889E-01	6.3536E-01	1.8994E-01

Low Population Zone (LPZ) Doses:

Time (h) =	24.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)		1.8608E-02	7.3545E-02	2.1019E-02
Accumulated dose (rem)		2.3081E-02	8.5370E-02	2.5919E-02

Security Center (Internal) Doses:

Time (h) =	24.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)		3.4534E-04	7.0054E-02	2.6418E-03
Accumulated dose (rem)		4.4432E-04	7.6976E-02	2.9913E-03

Security Center (External) Doses:

Time (h) =	24.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)		9.1225E-03	7.0106E-02	1.1420E-02
Accumulated dose (rem)		1.1757E-02	7.7071E-02	1.4307E-02

Detailed model information at time (H) = 48.0000

Natural deposition - Powers' Model, Compartment 1

Deposition Lambda (1 / Hours)

Noble	Elemental	Organic	Aerosol
0.0000E+00	0.0000E+00	0.0000E+00	1.0000E-01

Deposition Net DF

Noble	Elemental	Organic	Aerosol
1.0000E+00	1.0000E+00	1.0000E+00	6.7754E+06

Exclusion Area Boundary (EAB) Doses:

Time (h) =	48.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)		0.0000E+00	0.0000E+00	0.0000E+00
Accumulated dose (rem)		1.6889E-01	6.3536E-01	1.8994E-01

Low Population Zone (LPZ) Doses:

Time (h) =	48.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)		7.7231E-03	7.5043E-02	1.0103E-02
Accumulated dose (rem)		3.0804E-02	1.6041E-01	3.6022E-02

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Security Center (Internal) Doses:

Time (h) =	48.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)		1.1978E-04	4.6383E-02	1.5912E-03
Accumulated dose (rem)		5.6410E-04	1.2336E-01	4.5825E-03

Security Center (External) Doses:

Time (h) =	48.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)		3.0417E-03	4.4975E-02	4.4680E-03
Accumulated dose (rem)		1.4798E-02	1.2205E-01	1.8775E-02

Detailed model information at time (H) = 72.0000

Natural deposition - Powers' Model, Compartment 1
 Deposition Lambda (1 / Hours)

Noble	Elemental	Organic	Aerosol
0.0000E+00	0.0000E+00	0.0000E+00	1.0000E-01

Deposition Net DF

Noble	Elemental	Organic	Aerosol
1.0000E+00	1.0000E+00	1.0000E+00	7.5217E+07

Exclusion Area Boundary (EAB) Doses:

Time (h) =	72.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)		0.0000E+00	0.0000E+00	0.0000E+00
Accumulated dose (rem)		1.6889E-01	6.3536E-01	1.8994E-01

Low Population Zone (LPZ) Doses:

Time (h) =	72.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)		8.3008E-03	9.7295E-02	1.1349E-02
Accumulated dose (rem)		3.9105E-02	2.5771E-01	4.7371E-02

Security Center (Internal) Doses:

Time (h) =	72.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)		1.2375E-04	5.8298E-02	1.9503E-03
Accumulated dose (rem)		6.8785E-04	1.8166E-01	6.5328E-03

Security Center (External) Doses:

Time (h) =	72.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)		3.2692E-03	5.8312E-02	5.0961E-03
Accumulated dose (rem)		1.8068E-02	1.8036E-01	2.3871E-02

Detailed model information at time (H) = 96.0000

Natural deposition - Powers' Model, Compartment 1
 Deposition Lambda (1 / Hours)

Noble	Elemental	Organic	Aerosol
0.0000E+00	0.0000E+00	0.0000E+00	1.0000E-01

Deposition Net DF

Noble	Elemental	Organic	Aerosol
1.0000E+00	1.0000E+00	1.0000E+00	8.3494E+08

Exclusion Area Boundary (EAB) Doses:

Time (h) =	96.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)		0.0000E+00	0.0000E+00	0.0000E+00

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Accumulated dose (rem) 1.6889E-01 6.3536E-01 1.8994E-01

Low Population Zone (LPZ) Doses:

Time (h) = 96.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)	9.3414E-03	1.1404E-01	1.2891E-02
Accumulated dose (rem)	4.8446E-02	3.7175E-01	6.0262E-02

Security Center (Internal) Doses:

Time (h) = 96.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)	1.3928E-04	6.8338E-02	2.2663E-03
Accumulated dose (rem)	8.2713E-04	2.5000E-01	8.7991E-03

Security Center (External) Doses:

Time (h) = 96.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)	3.6791E-03	6.8349E-02	5.8065E-03
Accumulated dose (rem)	2.1747E-02	2.4871E-01	2.9677E-02

Detailed model information at time (H) = 120.0000

Natural deposition - Powers' Model, Compartment 1
 Deposition Lambda (1 / Hours)

Noble	Elemental	Organic	Aerosol
0.0000E+00	0.0000E+00	0.0000E+00	1.0000E-01

Deposition Net DF

Noble	Elemental	Organic	Aerosol
1.0000E+00	1.0000E+00	1.0000E+00	9.2676E+09

Exclusion Area Boundary (EAB) Doses:

Time (h) = 120.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)	0.0000E+00	0.0000E+00	0.0000E+00
Accumulated dose (rem)	1.6889E-01	6.3536E-01	1.8994E-01

Low Population Zone (LPZ) Doses:

Time (h) = 120.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)	3.3946E-03	4.2506E-02	4.7130E-03
Accumulated dose (rem)	5.1841E-02	4.1426E-01	6.4975E-02

Security Center (Internal) Doses:

Time (h) = 120.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)	4.4383E-05	2.2329E-02	7.3693E-04
Accumulated dose (rem)	8.7151E-04	2.7232E-01	9.5361E-03

Security Center (External) Doses:

Time (h) = 120.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)	1.1434E-03	2.1787E-02	1.8191E-03
Accumulated dose (rem)	2.2890E-02	2.7049E-01	3.1496E-02

Detailed model information at time (H) = 168.0000

Natural deposition - Powers' Model, Compartment 1
 Deposition Lambda (1 / Hours)

Noble	Elemental	Organic	Aerosol
0.0000E+00	0.0000E+00	0.0000E+00	1.0000E-01

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Deposition Net DF

Noble	Elemental	Organic	Aerosol
1.0000E+00	1.0000E+00	1.0000E+00	1.1417E+12

Exclusion Area Boundary (EAB) Doses:

Time (h) = 168.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)	0.0000E+00	0.0000E+00	0.0000E+00
Accumulated dose (rem)	1.6889E-01	6.3536E-01	1.8994E-01

Low Population Zone (LPZ) Doses:

Time (h) = 168.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)	6.9973E-03	9.1603E-02	9.8294E-03
Accumulated dose (rem)	5.8838E-02	5.0586E-01	7.4805E-02

Security Center (Internal) Doses:

Time (h) = 168.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)	8.9150E-05	4.6906E-02	1.5394E-03
Accumulated dose (rem)	9.6066E-04	3.1923E-01	1.1075E-02

Security Center (External) Doses:

Time (h) = 168.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)	2.3569E-03	4.6952E-02	3.8085E-03
Accumulated dose (rem)	2.5247E-02	3.1745E-01	3.5305E-02

Detailed model information at time (H) = 336.0000

Natural deposition - Powers' Model, Compartment 1

Deposition Lambda (1 / Hours)

Noble	Elemental	Organic	Aerosol
0.0000E+00	0.0000E+00	0.0000E+00	1.0000E-01

Deposition Net DF

Noble	Elemental	Organic	Aerosol
1.0000E+00	1.0000E+00	1.0000E+00	2.3674E+19

Exclusion Area Boundary (EAB) Doses:

Time (h) = 336.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)	0.0000E+00	0.0000E+00	0.0000E+00
Accumulated dose (rem)	1.6889E-01	6.3536E-01	1.8994E-01

Low Population Zone (LPZ) Doses:

Time (h) = 336.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)	2.0884E-02	3.2365E-01	3.0853E-02
Accumulated dose (rem)	7.9721E-02	8.2951E-01	1.0566E-01

Security Center (Internal) Doses:

Time (h) = 336.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)	2.6609E-04	1.6574E-01	5.3712E-03
Accumulated dose (rem)	1.2267E-03	4.8497E-01	1.6447E-02

Security Center (External) Doses:

Time (h) = 336.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)	7.0342E-03	1.6589E-01	1.2144E-02

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Accumulated dose (rem) 3.2281E-02 4.8334E-01 4.7449E-02

Detailed model information at time (H) = 720.0000

Natural deposition - Powers' Model, Compartment 1

Deposition Lambda (1 / Hours)

Noble	Elemental	Organic	Aerosol
0.0000E+00	0.0000E+00	0.0000E+00	1.0000E-01

Deposition Net DF

Noble	Elemental	Organic	Aerosol
1.0000E+00	1.0000E+00	1.0000E+00	1.2513E+36

Exclusion Area Boundary (EAB) Doses:

Time (h) = 720.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)	0.0000E+00	0.0000E+00	0.0000E+00
Accumulated dose (rem)	1.6889E-01	6.3536E-01	1.8994E-01

Low Population Zone (LPZ) Doses:

Time (h) = 720.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)	1.8351E-02	4.3578E-01	3.1761E-02
Accumulated dose (rem)	9.8073E-02	1.2653E+00	1.3742E-01

Security Center (Internal) Doses:

Time (h) = 720.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)	2.3383E-04	2.2316E-01	7.1012E-03
Accumulated dose (rem)	1.4606E-03	7.0813E-01	2.3548E-02

Security Center (External) Doses:

Time (h) = 720.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)	6.1811E-03	2.2337E-01	1.3055E-02
Accumulated dose (rem)	3.8462E-02	7.0670E-01	6.0504E-02

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 I-131 Summary
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Time (hr)	Containment I-131 (Curies)	(Node 1) Inboard MSL I-131 (Curies)	(Node 1) Inboard MSL I-131 (Curies)
0.000	5.2640E+03	6.4922E-07	5.9299E-13
0.401	3.3308E+06	3.2537E-01	4.0944E-10
0.500	4.0234E+06	5.0079E-01	5.0526E-10
0.800	7.9873E+06	1.3710E+00	1.0074E-09
1.100	1.1677E+07	2.7806E+00	1.4981E-09
1.400	1.5110E+07	4.6902E+00	1.9780E-09
1.700	1.8302E+07	7.0631E+00	2.4477E-09
2.000	2.1269E+07	9.8652E+00	2.9079E-09
2.300	1.6051E+07	1.1371E+01	1.6502E-09
2.600	1.2203E+07	1.2740E+01	1.5573E-09
2.900	9.3660E+06	1.3991E+01	1.4884E-09
3.200	7.2733E+06	1.5139E+01	1.4372E-09
3.500	5.7299E+06	1.6195E+01	1.3990E-09
3.800	4.5914E+06	1.7171E+01	1.3705E-09
4.100	3.7515E+06	1.8073E+01	1.3490E-09
4.400	3.1318E+06	1.8909E+01	1.3327E-09

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4.700	2.6745E+06	1.9685E+01	1.3203E-09
5.000	2.3368E+06	2.0405E+01	1.3108E-09
5.300	2.1739E+06	2.1075E+01	1.3054E-09
5.600	2.0386E+06	2.1699E+01	1.3007E-09
5.900	1.9261E+06	2.2279E+01	1.2965E-09
6.200	1.8326E+06	2.2819E+01	1.2927E-09
6.500	1.7547E+06	2.3321E+01	1.2893E-09
6.800	1.6899E+06	2.3788E+01	1.2863E-09
7.100	1.6358E+06	2.4223E+01	1.2835E-09
7.400	1.5907E+06	2.4627E+01	1.2809E-09
7.700	1.5530E+06	2.5002E+01	1.2784E-09
8.000	1.5215E+06	2.5351E+01	1.2762E-09
8.300	1.4951E+06	2.5675E+01	1.2740E-09
8.600	1.4754E+06	2.5975E+01	1.2720E-09
8.900	1.4584E+06	2.6254E+01	1.2701E-09
9.200	1.4437E+06	2.6513E+01	1.2683E-09
9.500	1.4310E+06	2.6753E+01	1.2664E-09
9.800	1.4199E+06	2.6974E+01	1.2647E-09
10.100	1.4103E+06	2.7180E+01	1.2629E-09
10.400	1.4018E+06	2.7369E+01	1.2612E-09
24.000	1.2895E+06	2.8867E+01	1.1920E-09
48.000	1.1754E+06	2.4409E+01	9.6338E-10
72.000	1.0714E+06	2.2145E+01	8.7811E-10
96.000	9.7667E+05	2.0181E+01	8.0044E-10
120.000	8.9030E+05	1.8285E+01	7.0915E-10
168.000	7.3978E+05	1.5188E+01	5.8926E-10
336.000	3.8690E+05	7.9432E+00	3.0818E-10
720.000	8.7935E+04	1.8053E+00	7.0043E-11

Time (hr)	(Node 2) Outboard MSL I-131 (Curies)	(Node 2) Outboard MSL I-131 (Curies)	Condenser I-131 (Curies)
0.000	2.6019E-11	9.1972E-07	3.0999E-11
0.401	9.3507E-03	4.5376E-01	1.1337E-02
0.500	1.7909E-02	6.9590E-01	2.1811E-02
0.800	7.3594E-02	1.8960E+00	9.0936E-02
1.100	1.9914E-01	3.8398E+00	2.5018E-01
1.400	4.2407E-01	6.4688E+00	5.4241E-01
1.700	7.7404E-01	9.7289E+00	1.0086E+00
2.000	1.2712E+00	1.3570E+01	1.6881E+00
2.300	1.8834E+00	1.5620E+01	2.5580E+00
2.600	2.5569E+00	1.7382E+01	3.5607E+00
2.900	3.2806E+00	1.8919E+01	4.6848E+00
3.200	4.0451E+00	2.0276E+01	5.9211E+00
3.500	4.8424E+00	2.1486E+01	7.2625E+00
3.800	5.6653E+00	2.2578E+01	8.7027E+00
4.100	6.5078E+00	2.3569E+01	1.0237E+01
4.400	7.3645E+00	2.4477E+01	1.1860E+01
4.700	8.2308E+00	2.5312E+01	1.3569E+01
5.000	9.1024E+00	2.6085E+01	1.5361E+01
5.300	9.9759E+00	2.6803E+01	1.7231E+01
5.600	1.0848E+01	2.7475E+01	1.9177E+01
5.900	1.1716E+01	2.8102E+01	2.1196E+01
6.200	1.2577E+01	2.8690E+01	2.3286E+01
6.500	1.3430E+01	2.9240E+01	2.5443E+01
6.800	1.4272E+01	2.9754E+01	2.7666E+01
7.100	1.5102E+01	3.0236E+01	2.9951E+01
7.400	1.5918E+01	3.0688E+01	3.2296E+01
7.700	1.6719E+01	3.1111E+01	3.4700E+01
8.000	1.7505E+01	3.1507E+01	3.7158E+01
8.300	1.8274E+01	3.1878E+01	3.9670E+01

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8.600	1.9025E+01	3.2226E+01	4.2232E+01
8.900	1.9758E+01	3.2552E+01	4.4843E+01
9.200	2.0473E+01	3.2857E+01	4.7500E+01
9.500	2.1169E+01	3.3143E+01	5.0201E+01
9.800	2.1846E+01	3.3410E+01	5.2945E+01
10.100	2.2503E+01	3.3659E+01	5.5729E+01
10.400	2.3141E+01	3.3893E+01	5.8551E+01
24.000	3.6320E+01	3.6282E+01	2.0411E+02
48.000	3.7672E+01	3.4251E+01	3.1175E+02
72.000	3.4498E+01	3.1352E+01	3.9669E+02
96.000	3.1442E+01	2.8593E+01	4.5964E+02
120.000	3.5400E+01	3.1886E+01	4.9043E+02
168.000	3.1107E+01	2.7716E+01	5.3523E+02
336.000	1.6327E+01	1.4524E+01	4.7457E+02
720.000	3.7108E+00	3.3011E+00	1.6811E+02

Time (hr)	Environment I-131 (Curies)	Security Center I-131 (Curies)	Hold I-131 (Curies)
0.000	1.7278E-17	2.0684E-20	3.0465E-04
0.401	4.5875E-06	8.0976E-10	1.4535E+02
0.500	1.1016E-05	1.5951E-09	2.2112E+02
0.800	7.2043E-05	6.8725E-09	5.9764E+02
1.100	2.6613E-04	1.9217E-08	1.2127E+03
1.400	7.2773E-04	4.2092E-08	2.0494E+03
1.700	1.6418E-03	7.8811E-08	3.0920E+03
2.000	3.2416E-03	1.3255E-07	4.3258E+03
2.300	5.7832E-03	2.0200E-07	5.4786E+03
2.600	9.4531E-03	2.8225E-07	6.3492E+03
2.900	1.4404E-02	3.7232E-07	7.0116E+03
3.200	2.0777E-02	4.7148E-07	7.5206E+03
3.500	2.8701E-02	5.7913E-07	7.9163E+03
3.800	3.8300E-02	6.9478E-07	8.2285E+03
4.100	4.9690E-02	8.1801E-07	8.4790E+03
4.400	6.2981E-02	9.4847E-07	8.6840E+03
4.700	7.8278E-02	1.0858E-06	8.8554E+03
5.000	9.5682E-02	1.2299E-06	9.0020E+03
5.300	1.1529E-01	1.3802E-06	9.1332E+03
5.600	1.3719E-01	1.5367E-06	9.2549E+03
5.900	1.6149E-01	1.6992E-06	9.3688E+03
6.200	1.8825E-01	1.8673E-06	9.4762E+03
6.500	2.1757E-01	2.0409E-06	9.5781E+03
6.800	2.4953E-01	2.2197E-06	9.6755E+03
7.100	2.8420E-01	2.4036E-06	9.7690E+03
7.400	3.2166E-01	2.5924E-06	9.8594E+03
7.700	3.6198E-01	2.7858E-06	9.9470E+03
8.000	4.0522E-01	2.9837E-06	1.0032E+04
8.300	4.5146E-01	1.8779E-06	1.0116E+04
8.600	5.0074E-01	1.9995E-06	1.0198E+04
8.900	5.5315E-01	2.1234E-06	1.0279E+04
9.200	6.0872E-01	2.2495E-06	1.0358E+04
9.500	6.6752E-01	2.3778E-06	1.0437E+04
9.800	7.2959E-01	2.5080E-06	1.0515E+04
10.100	7.9500E-01	2.6401E-06	1.0592E+04
10.400	8.6377E-01	2.7741E-06	1.0669E+04
24.000	7.9410E+00	9.6884E-06	1.3846E+04
48.000	2.1687E+01	5.1963E-06	1.5656E+04
72.000	4.0559E+01	6.6126E-06	1.7053E+04
96.000	6.3332E+01	7.6624E-06	1.8096E+04
120.000	8.8475E+01	3.5897E-06	1.8835E+04
168.000	1.4316E+02	3.9178E-06	1.9576E+04

LGS LOCA 200scfh MSIV Leak - Vital Area-Security Center R1.o1

336.000	3.3731E+02	3.4739E-06	1.7631E+04
720.000	5.9887E+02	1.2306E-06	8.1416E+03

 Cumulative Dose Summary
 #####

Time (hr)	Exclusion Area Bounda		Low Population Zone (Security Center (Inte	
	Thyroid (rem)	TEDE (rem)	Thyroid (rem)	TEDE (rem)	Thyroid (rem)	TEDE (rem)
0.000	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00
0.401	7.7862E-07	2.8319E-07	1.4177E-07	5.1562E-08	7.5973E-08	3.6389E-09
0.500	1.8676E-06	6.6979E-07	3.4004E-07	1.2195E-07	1.8350E-07	8.7447E-09
0.800	1.2180E-05	4.5184E-06	2.2177E-06	8.2268E-07	1.2232E-06	5.8900E-08
1.100	4.4922E-05	1.9738E-05	8.1791E-06	3.5939E-06	4.5706E-06	2.3401E-07
1.400	1.2267E-04	6.2201E-05	2.2335E-05	1.1325E-05	1.2594E-05	6.8456E-07
1.700	2.7629E-04	1.5343E-04	5.0306E-05	2.7935E-05	2.8556E-05	1.6189E-06
2.000	5.4450E-04	3.1867E-04	9.9140E-05	5.8021E-05	5.6558E-05	3.2929E-06
2.300	9.6941E-04	5.8241E-04	1.7651E-04	1.0604E-04	1.0111E-04	5.9755E-06
2.600	1.5811E-03	9.5685E-04	2.8787E-04	1.7422E-04	1.6554E-04	9.8395E-06
2.900	2.4035E-03	1.4484E-03	4.3762E-04	2.6372E-04	2.5242E-04	1.5001E-05
3.200	3.4585E-03	2.0610E-03	6.2971E-04	3.7526E-04	3.6410E-04	2.1552E-05
3.500	4.7659E-03	2.7965E-03	8.6775E-04	5.0918E-04	5.0273E-04	2.9568E-05
3.800	6.3441E-03	3.6551E-03	1.1551E-03	6.6550E-04	6.7029E-04	3.9108E-05
4.100	8.2103E-03	4.6357E-03	1.4949E-03	8.4404E-04	8.6862E-04	5.0221E-05
4.400	1.0380E-02	5.7362E-03	1.8900E-03	1.0444E-03	1.0994E-03	6.2948E-05
4.700	1.2870E-02	6.9537E-03	2.3433E-03	1.2661E-03	1.3644E-03	7.7320E-05
5.000	1.5693E-02	8.2847E-03	2.8573E-03	1.5084E-03	1.6650E-03	9.3366E-05
5.300	1.8863E-02	9.7254E-03	3.4344E-03	1.7708E-03	2.0028E-03	1.1111E-04
5.600	2.2393E-02	1.1272E-02	4.0771E-03	2.0523E-03	2.3791E-03	1.3056E-04
5.900	2.6295E-02	1.2919E-02	4.7876E-03	2.3522E-03	2.7952E-03	1.5175E-04
6.200	3.0581E-02	1.4663E-02	5.5681E-03	2.6698E-03	3.2524E-03	1.7468E-04
6.500	3.5262E-02	1.6499E-02	6.4204E-03	3.0041E-03	3.7519E-03	1.9937E-04
6.800	4.0349E-02	1.8424E-02	7.3466E-03	3.3545E-03	4.2949E-03	2.2582E-04
7.100	4.5852E-02	2.0431E-02	8.3485E-03	3.7201E-03	4.8823E-03	2.5405E-04
7.400	5.1780E-02	2.2518E-02	9.4278E-03	4.1001E-03	5.5153E-03	2.8407E-04
7.700	5.8142E-02	2.4681E-02	1.0586E-02	4.4938E-03	6.1948E-03	3.1587E-04
8.000	6.4946E-02	2.6915E-02	1.1825E-02	4.9005E-03	6.9217E-03	3.4948E-04
8.300	6.8678E-02	2.9093E-02	1.2306E-02	5.1813E-03	7.4302E-03	3.7272E-04
8.600	7.2645E-02	3.1328E-02	1.2818E-02	5.4695E-03	7.9160E-03	3.9466E-04
8.900	7.6851E-02	3.3617E-02	1.3360E-02	5.7646E-03	8.4313E-03	4.1767E-04
9.200	8.1300E-02	3.5956E-02	1.3934E-02	6.0662E-03	8.9763E-03	4.4175E-04
9.500	8.5996E-02	3.8342E-02	1.4539E-02	6.3739E-03	9.5516E-03	4.6690E-04
9.800	9.0940E-02	4.0774E-02	1.5177E-02	6.6873E-03	1.0157E-02	4.9314E-04
10.100	9.6136E-02	4.3247E-02	1.5846E-02	7.0063E-03	1.0794E-02	5.2045E-04
10.400	1.0159E-01	4.5761E-02	1.6549E-02	7.3303E-03	1.1462E-02	5.4884E-04
24.000	6.3536E-01	1.8994E-01	8.5370E-02	2.5919E-02	7.6976E-02	2.9913E-03
48.000	6.3536E-01	1.8994E-01	1.6041E-01	3.6022E-02	1.2336E-01	4.5825E-03
72.000	6.3536E-01	1.8994E-01	2.5771E-01	4.7371E-02	1.8166E-01	6.5328E-03
96.000	6.3536E-01	1.8994E-01	3.7175E-01	6.0262E-02	2.5000E-01	8.7991E-03
120.000	6.3536E-01	1.8994E-01	4.1426E-01	6.4975E-02	2.7232E-01	9.5361E-03
168.000	6.3536E-01	1.8994E-01	5.0586E-01	7.4805E-02	3.1923E-01	1.1075E-02
336.000	6.3536E-01	1.8994E-01	8.2951E-01	1.0566E-01	4.8497E-01	1.6447E-02
720.000	6.3536E-01	1.8994E-01	1.2653E+00	1.3742E-01	7.0813E-01	2.3548E-02

Time (hr)	Security Center (Exte	
	Thyroid (rem)	TEDE (rem)
0.000	0.0000E+00	0.0000E+00
0.401	8.3493E-08	3.0367E-08

LGS LOCA 200scfh MSIV Leak - Vital Area-Security Center R1.01

0.500 2.0026E-07 7.1823E-08
 0.800 1.3061E-06 4.8452E-07
 1.100 4.8171E-06 2.1166E-06
 1.400 1.3154E-05 6.6699E-06
 1.700 2.9628E-05 1.6452E-05
 2.000 5.8388E-05 3.4171E-05
 2.300 1.0395E-04 6.2453E-05
 2.600 1.6954E-04 1.0261E-04
 2.900 2.5774E-04 1.5532E-04
 3.200 3.7086E-04 2.2101E-04
 3.500 5.1106E-04 2.9988E-04
 3.800 6.8030E-04 3.9195E-04
 4.100 8.8041E-04 4.9710E-04
 4.400 1.1131E-03 6.1510E-04
 4.700 1.3801E-03 7.4566E-04
 5.000 1.6828E-03 8.8839E-04
 5.300 2.0227E-03 1.0429E-03
 5.600 2.4012E-03 1.2087E-03
 5.900 2.8197E-03 1.3853E-03
 6.200 3.2793E-03 1.5724E-03
 6.500 3.7813E-03 1.7693E-03
 6.800 4.3268E-03 1.9756E-03
 7.100 4.9168E-03 2.1909E-03
 7.400 5.5525E-03 2.4147E-03
 7.700 6.2347E-03 2.6466E-03
 8.000 6.9644E-03 2.8861E-03
 8.300 7.4230E-03 3.0316E-03
 8.600 7.9105E-03 3.1811E-03
 8.900 8.4275E-03 3.3345E-03
 9.200 8.9743E-03 3.4916E-03
 9.500 9.5514E-03 3.6521E-03
 9.800 1.0159E-02 3.8159E-03
 10.100 1.0798E-02 3.9829E-03
 10.400 1.1468E-02 4.1529E-03
 24.000 7.7071E-02 1.4307E-02
 48.000 1.2205E-01 1.8775E-02
 72.000 1.8036E-01 2.3871E-02
 96.000 2.4871E-01 2.9677E-02
 120.000 2.7049E-01 3.1496E-02
 168.000 3.1745E-01 3.5305E-02
 336.000 4.8334E-01 4.7449E-02
 720.000 7.0670E-01 6.0504E-02

 Worst Two-Hour Doses
 #####

Exclusion Area Boundary (EAB)

Time (hr)	Whole Body (rem)	Thyroid (rem)	TEDE (rem)
10.4	1.8639E-02	7.8497E-02	2.1203E-02

ECCS Leak - Vital Area-Security Center R1.o2

```
#####
RADTRAD Version 3.03 (Spring 2001) run on 9/20/2005 at 7:36:49
#####
```

```
#####
File information
#####
```

```
Plant file      = C:\Program Files\radtrad3-03\Input\LGS LOCA R1 Attachment G
Runs\ECCS Leak - Vital Area-Security Center R1.psf
Inventory file  = c:\program files\radtrad3-03\defaults\pb-lgs ast eccs source
terms.nif
Release file    = c:\program files\radtrad3-03\defaults\bwr_dba.rft
Dose Conversion file = c:\program files\radtrad3-03\defaults\fgr11&12.inp
```

```
#####      #####      #####      # #      # #####      #      # #####
# # #      #      # # #      # #      # #      # #      #
# # #      #      # # #      # # #      # #      # #      #
#####      #####      #####      # # #      # #####      # #      #
#          # #      # # #      # # #      # #      # #      #
#          # #      # # #      # # #      # #      # #      #
#          #####      #      # #      # #      #####      #
```

```
Radtrad 3.03 4/15/2001
ECCS Leak - Vital Area-Security Center
Nuclide Inventory File:
c:\program files\radtrad3-03\defaults\pb-lgs ast eccs source terms.nif
Plant Power Level:
3.5270E+03
Compartments:
5
Compartment 1:
ECCS Fluid
3
9.5989E+05
0
0
0
0
0
Compartment 2:
Reactor Building
3
9.0000E+05
0
0
1
0
0
Compartment 3:
Environment
2
0.0000E+00
0
```

ECCS Leak - Vital Area-Security Center R1.o2

0
0
0
0

Compartment 4:
Security Center

1
7.4880E+04
0
0
0
0
0

Compartment 5:
SGTS Node

3
1.0000E+00
0
0
0
0
0

Pathways:

5

Pathway 1:

ECCS Fluid to Reactor Building

1
2
2

Pathway 2:

Unfiltered Environment to Security Center

3
4
2

Pathway 3:

Exhaust from Security Center to Environment

4
3
2

Pathway 4:

Reactor Building to SGTS Node

2
5
2

Pathway 5:

SGTS Node to Environment

5
3
2

End of Plant Model File

Scenario Description Name:

Plant Model Filename:

Source Term:

1

1 1.0000E+00

c:\program files\radtrad3-03\defaults\fgr11&12.inp

c:\program files\radtrad3-03\defaults\bwr_dba.rft

0.0000E+00

ECCS Leak - Vital Area-Security Center R1.o2

```

0
0.0000E+00  9.7000E-01  3.0000E-02  1.0000E+00
Overlying Pool:
0
0.0000E+00
0
0
0
0
0
Compartments:
5
Compartment 1:
0
1
0
0
0
0
0
0
0
0
0
Compartment 2:
0
1
0
0
0
0
1
5.1000E+04
3
0.0000E+00  0.0000E+00  0.0000E+00  0.0000E+00
1.6670E-02  9.9000E+01  9.5000E+01  9.5000E+01
7.2000E+02  0.0000E+00  0.0000E+00  0.0000E+00
0
0
Compartment 3:
0
1
0
0
0
0
0
0
0
0
0
Compartment 4:
0
1
0
0
0
0
0
0
0
0
0
Compartment 5:
0
1
0

```

ECCS Leak - Vital Area-Security Center R1.o2

0
0
0
0
0
0

Pathways:

5

Pathway 1:

0
0
0
0
0

1

3

0.0000E+00	5.0000E+00	9.0000E+01	9.0000E+01	9.0000E+01
2.4000E+01	5.0000E+00	9.0000E+01	9.0000E+01	9.0000E+01
7.2000E+02	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00

0
0
0
0
0
0

Pathway 2:

0
0
0
0
0

1

2

0.0000E+00	7.4880E+04	0.0000E+00	0.0000E+00	0.0000E+00
7.2000E+02	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00

0
0
0
0
0
0

Pathway 3:

0
0
0
0
0

1

2

0.0000E+00	7.4880E+04	1.0000E+02	1.0000E+02	1.0000E+02
7.2000E+02	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00

0
0
0
0
0
0

Pathway 4:

0
0

ECCS Leak - Vital Area-Security Center R1.o2

0
0
0
1
4
0
0
0
0
0
0
0
0

0.0000E+00	9.0000E+06	0.0000E+00	0.0000E+00	0.0000E+00
1.6670E-02	3.0000E+03	9.9000E+01	9.5000E+01	9.5000E+01
2.5830E-01	2.5000E+03	9.9000E+01	9.5000E+01	9.5000E+01
7.2000E+02	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00

Pathway 5:

0
0
0
0
0
1
4
0
0
0
0
0
0
0

0.0000E+00	9.0000E+06	0.0000E+00	0.0000E+00	0.0000E+00
1.6700E-02	3.0000E+03	0.0000E+00	0.0000E+00	0.0000E+00
2.5830E-01	2.5000E+03	9.9000E+01	9.9000E+01	9.9000E+01
7.2000E+02	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00

Dose Locations:

4

Location 1:

EAB

3
1
2
1
2
0

0.0000E+00	3.1800E-04
8.0000E+00	0.0000E+00
0.0000E+00	3.5000E-04
8.0000E+00	0.0000E+00

Location 2:

LPZ

3
1
5
1
4

0.0000E+00	5.7900E-05
8.0000E+00	4.1000E-05
2.4000E+01	1.9500E-05
9.6000E+01	6.6800E-06
7.2000E+02	2.6200E-06
0.0000E+00	3.5000E-04

ECCS Leak - Vital Area-Security Center R1.o2

8.0000E+00 1.8000E-04
2.4000E+01 2.3000E-04
7.2000E+02 0.0000E+00
0

Location 3:

Security Center (Internal)

4
0
1
2
0.0000E+00 3.5000E-04
7.2000E+02 0.0000E+00
1
4
0.0000E+00 1.0000E+00
2.4000E+01 6.0000E-01
9.6000E+01 4.0000E-01
7.2000E+02 0.0000E+00

Location 4:

Security Center (External)

3
1
5
0.0000E+00 3.4100E-05
8.0000E+00 2.0100E-05
2.4000E+01 7.6800E-06
9.6000E+01 2.2500E-06
7.2000E+02 0.0000E+00
1
2
0.0000E+00 3.5000E-04
7.2000E+02 0.0000E+00
0

Effective Volume Location:

1
5
0.0000E+00 3.4100E-05
8.0000E+00 2.0100E-05
2.4000E+01 1.2800E-05
9.6000E+01 5.6200E-06
7.2000E+02 0.0000E+00

Simulation Parameters:

4
0.0000E+00 1.6670E-03
1.6700E-02 2.5000E-02
2.5830E-01 1.0000E-01
1.2000E+01 0.0000E+00

Output Filename:

C:\Program Files\radtrad3-03\Input\LGS LOCA R1 Attachment G Runs\ECCS Leak - Vital Area-Security Center R1.o2

1
2
1
0
1

End of Scenario File

ECCS Leak - Vital Area-Security Center R1.o2

RADTRAD Version 3.03 (Spring 2001) run on 9/20/2005 at 7:36:49
#####

Plant Description
#####

Number of Nuclides = 60

Inventory Power = 1.0000E+00 MWth
Plant Power Level = 3.5270E+03 MWth

Number of compartments = 5

Compartment information

Compartment number 1 (Source term fraction = 1.0000E+00
)

Name: ECCS Fluid

Compartment volume = 9.5989E+05 (Cubic feet)

Compartment type is Normal

Pathways into and out of compartment 1

Exit Pathway Number 1: ECCS Fluid to Reactor Building

Compartment number 2

Name: Reactor Building

Compartment volume = 9.0000E+05 (Cubic feet)

Compartment type is Normal

Removal devices within compartment:

Filter(s)

Pathways into and out of compartment 2

Inlet Pathway Number 1: ECCS Fluid to Reactor Building

Exit Pathway Number 4: Reactor Building to SGTS Node

Compartment number 3

Name: Environment

Compartment type is Environment

Pathways into and out of compartment 3

Inlet Pathway Number 3: Exhaust from Security Center to Environment

Inlet Pathway Number 5: SGTS Node to Environment

Exit Pathway Number 2: Unfiltered Environment to Security Center

Compartment number 4

Name: Security Center

Compartment volume = 7.4880E+04 (Cubic feet)

Compartment type is Control Room

Pathways into and out of compartment 4

Inlet Pathway Number 2: Unfiltered Environment to Security Center

Exit Pathway Number 3: Exhaust from Security Center to Environment

Compartment number 5

Name: SGTS Node

Compartment volume = 1.0000E+00 (Cubic feet)

Compartment type is Normal

Pathways into and out of compartment 5

Inlet Pathway Number 4: Reactor Building to SGTS Node

Exit Pathway Number 5: SGTS Node to Environment

ECCS Leak - Vital Area-Security Center R1.o2

Total number of pathways = 5

 RADTRAD Version 3.03 (Spring 2001) run on 9/20/2005 at 7:36:49
 #####

```

#####
# # # # # # # # # #
# # # # # # # # # #
# # # # # # # # # #
# # # # # # # # # #
# # # # # # # # # #
#####

```


 Dose Output
 #####

Detailed model information at time (H) = 0.0167

EAB Doses:

Time (h) =	0.0167	Whole Body	Thyroid	TEDE
Delta dose (rem)		2.7639E-05	5.7249E-03	2.0866E-04
Accumulated dose (rem)		2.7639E-05	5.7249E-03	2.0866E-04

LPZ Doses:

Time (h) =	0.0167	Whole Body	Thyroid	TEDE
Delta dose (rem)		5.0323E-06	1.0424E-03	3.7992E-05
Accumulated dose (rem)		5.0323E-06	1.0424E-03	3.7992E-05

Security Center (Internal) Doses:

Time (h) =	0.0167	Whole Body	Thyroid	TEDE
Delta dose (rem)		2.7831E-08	1.5232E-04	4.8441E-06
Accumulated dose (rem)		2.7831E-08	1.5232E-04	4.8441E-06

Security Center (External) Doses:

Time (h) =	0.0167	Whole Body	Thyroid	TEDE
Delta dose (rem)		2.9638E-06	6.1390E-04	2.2375E-05
Accumulated dose (rem)		2.9638E-06	6.1390E-04	2.2375E-05

Detailed model information at time (H) = 0.0167

EAB Doses:

Time (h) =	0.0167	Whole Body	Thyroid	TEDE
Delta dose (rem)		1.0901E-07	2.2636E-05	8.2473E-07
Accumulated dose (rem)		2.7748E-05	5.7475E-03	2.0948E-04

LPZ Doses:

Time (h) =	0.0167	Whole Body	Thyroid	TEDE
Delta dose (rem)		1.9848E-08	4.1214E-06	1.5016E-07

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Accumulated dose (rem) 5.0522E-06 1.0465E-03 3.8142E-05

Security Center (Internal) Doses:

Time (h) =	0.0167	Whole Body	Thyroid	TEDE
Delta dose (rem)		1.5197E-10	8.3344E-07	2.6504E-08
Accumulated dose (rem)		2.7983E-08	1.5315E-04	4.8706E-06

Security Center (External) Doses:

Time (h) =	0.0167	Whole Body	Thyroid	TEDE
Delta dose (rem)		1.1689E-08	2.4273E-06	8.8438E-08
Accumulated dose (rem)		2.9755E-06	6.1632E-04	2.2464E-05

Detailed model information at time (H) = 0.2583

EAB Doses:

Time (h) =	0.2583	Whole Body	Thyroid	TEDE
Delta dose (rem)		5.2290E-06	1.1596E-03	4.1857E-05
Accumulated dose (rem)		3.2977E-05	6.9071E-03	2.5134E-04

LPZ Doses:

Time (h) =	0.2583	Whole Body	Thyroid	TEDE
Delta dose (rem)		9.5207E-07	2.1113E-04	7.6212E-06
Accumulated dose (rem)		6.0043E-06	1.2576E-03	4.5763E-05

Security Center (Internal) Doses:

Time (h) =	0.2583	Whole Body	Thyroid	TEDE
Delta dose (rem)		1.1198E-07	6.2300E-04	1.9806E-05
Accumulated dose (rem)		1.3996E-07	7.7616E-04	2.4677E-05

Security Center (External) Doses:

Time (h) =	0.2583	Whole Body	Thyroid	TEDE
Delta dose (rem)		5.6072E-07	1.2434E-04	4.4884E-06
Accumulated dose (rem)		3.5362E-06	7.4067E-04	2.6952E-05

Detailed model information at time (H) = 0.5000

EAB Doses:

Time (h) =	0.5000	Whole Body	Thyroid	TEDE
Delta dose (rem)		2.0995E-07	4.9754E-05	1.7800E-06
Accumulated dose (rem)		3.3187E-05	6.9569E-03	2.5312E-04

LPZ Doses:

Time (h) =	0.5000	Whole Body	Thyroid	TEDE
Delta dose (rem)		3.8227E-08	9.0590E-06	3.2410E-07
Accumulated dose (rem)		6.0425E-06	1.2667E-03	4.6087E-05

Security Center (Internal) Doses:

Time (h) =	0.5000	Whole Body	Thyroid	TEDE
Delta dose (rem)		6.0808E-09	3.7005E-05	1.1743E-06
Accumulated dose (rem)		1.4604E-07	8.1316E-04	2.5851E-05

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Security Center (External) Doses:

Time (h) =	0.5000	Whole Body	Thyroid	TEDE
Delta dose (rem)		2.2513E-08	5.3353E-06	1.9088E-07
Accumulated dose (rem)		3.5587E-06	7.4600E-04	2.7143E-05

Detailed model information at time (H) = 2.0000

EAB Doses:

Time (h) =	2.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)		7.0790E-06	2.3620E-03	8.1280E-05
Accumulated dose (rem)		4.0266E-05	9.3188E-03	3.3440E-04

LPZ Doses:

Time (h) =	2.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)		1.2889E-06	4.3005E-04	1.4799E-05
Accumulated dose (rem)		7.3314E-06	1.6967E-03	6.0886E-05

Security Center (Internal) Doses:

Time (h) =	2.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)		2.8179E-08	2.4855E-04	7.8363E-06
Accumulated dose (rem)		1.7422E-07	1.0617E-03	3.3687E-05

Security Center (External) Doses:

Time (h) =	2.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)		7.5910E-07	2.5328E-04	8.7159E-06
Accumulated dose (rem)		4.3178E-06	9.9928E-04	3.5859E-05

Detailed model information at time (H) = 8.0000

EAB Doses:

Time (h) =	8.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)		3.3619E-05	2.0424E-02	6.7059E-04
Accumulated dose (rem)		7.3885E-05	2.9743E-02	1.0050E-03

LPZ Doses:

Time (h) =	8.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)		6.1212E-06	3.7187E-03	1.2210E-04
Accumulated dose (rem)		1.3453E-05	5.4154E-03	1.8298E-04

Security Center (Internal) Doses:

Time (h) =	8.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)		1.3638E-07	2.1889E-03	6.8401E-05
Accumulated dose (rem)		3.1060E-07	3.2506E-03	1.0209E-04

Security Center (External) Doses:

Time (h) =	8.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)		3.6051E-06	2.1901E-03	7.1909E-05
Accumulated dose (rem)		7.9229E-06	3.1894E-03	1.0777E-04

Detailed model information at time (H) = 24.0000

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EAB Doses:

Time (h) = 24.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)	0.0000E+00	0.0000E+00	0.0000E+00
Accumulated dose (rem)	7.3885E-05	2.9743E-02	1.0050E-03

LPZ Doses:

Time (h) = 24.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)	4.9945E-06	3.2473E-03	1.0540E-04
Accumulated dose (rem)	1.8447E-05	8.6628E-03	2.8838E-04

Security Center (Internal) Doses:

Time (h) = 24.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)	9.3028E-08	3.1028E-03	9.6029E-05
Accumulated dose (rem)	4.0363E-07	6.3534E-03	1.9812E-04

Security Center (External) Doses:

Time (h) = 24.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)	2.4485E-06	3.0955E-03	9.8158E-05
Accumulated dose (rem)	1.0371E-05	6.2849E-03	2.0593E-04

Detailed model information at time (H) = 96.0000

EAB Doses:

Time (h) = 96.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)	0.0000E+00	0.0000E+00	0.0000E+00
Accumulated dose (rem)	7.3885E-05	2.9743E-02	1.0050E-03

LPZ Doses:

Time (h) = 96.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)	3.1193E-06	6.5580E-03	2.0380E-04
Accumulated dose (rem)	2.1566E-05	1.5221E-02	4.9218E-04

Security Center (Internal) Doses:

Time (h) = 96.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)	4.8032E-08	4.0077E-03	1.2270E-04
Accumulated dose (rem)	4.5166E-07	1.0361E-02	3.2082E-04

Security Center (External) Doses:

Time (h) = 96.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)	1.2285E-06	3.9304E-03	1.2150E-04
Accumulated dose (rem)	1.1600E-05	1.0215E-02	3.2743E-04

Detailed model information at time (H) = 720.0000

EAB Doses:

Time (h) = 720.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)	0.0000E+00	0.0000E+00	0.0000E+00
Accumulated dose (rem)	7.3885E-05	2.9743E-02	1.0050E-03

LPZ Doses:

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Time (h) = 720.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)	1.6286E-06	5.8732E-03	1.8047E-04
Accumulated dose (rem)	2.3195E-05	2.1094E-02	6.7265E-04

Security Center (Internal) Doses:

Time (h) = 720.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)	2.1014E-08	3.0409E-03	9.2621E-05
Accumulated dose (rem)	4.7268E-07	1.3402E-02	4.1344E-04

Security Center (External) Doses:

Time (h) = 720.0000	Whole Body	Thyroid	TEDE
Delta dose (rem)	5.4856E-07	3.0104E-03	9.2217E-05
Accumulated dose (rem)	1.2148E-05	1.3226E-02	4.1964E-04

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 I-131 Summary
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Time (hr)	ECCS Fluid I-131 (Curies)	Reactor Building I-131 (Curies)	Environment I-131 (Curies)
0.000	5.2650E+03	4.1026E-05	4.6822E-06
0.017	1.5797E+05	7.4060E-03	3.3746E-02
0.017	1.5826E+05	7.4208E-03	3.3880E-02
0.258	2.4456E+06	7.4879E+00	4.0731E-02
0.500	4.7297E+06	2.2569E+01	4.1025E-02
0.800	9.4488E+06	5.2127E+01	4.1930E-02
1.100	1.4157E+07	9.0484E+01	4.3702E-02
1.400	1.8855E+07	1.3195E+02	4.6478E-02
1.700	2.3543E+07	1.7448E+02	5.0307E-02
2.000	2.8220E+07	2.1733E+02	5.5203E-02
2.300	2.8186E+07	2.4410E+02	6.1027E-02
2.600	2.8153E+07	2.5357E+02	6.7267E-02
2.900	2.8121E+07	2.5678E+02	7.3652E-02
3.200	2.8088E+07	2.5775E+02	8.0085E-02
3.500	2.8055E+07	2.5790E+02	8.6531E-02
3.800	2.8022E+07	2.5777E+02	9.2976E-02
4.100	2.7989E+07	2.5752E+02	9.9416E-02
4.400	2.7956E+07	2.5724E+02	1.0585E-01
4.700	2.7924E+07	2.5695E+02	1.1228E-01
5.000	2.7891E+07	2.5665E+02	1.1869E-01
5.300	2.7858E+07	2.5635E+02	1.2511E-01
5.600	2.7826E+07	2.5605E+02	1.3151E-01
5.900	2.7793E+07	2.5575E+02	1.3791E-01
6.200	2.7761E+07	2.5545E+02	1.4430E-01
6.500	2.7728E+07	2.5516E+02	1.5068E-01
6.800	2.7696E+07	2.5486E+02	1.5705E-01
7.100	2.7663E+07	2.5456E+02	1.6342E-01
7.400	2.7631E+07	2.5426E+02	1.6978E-01
7.700	2.7598E+07	2.5396E+02	1.7613E-01
8.000	2.7566E+07	2.5367E+02	1.8247E-01
8.300	2.7534E+07	2.5337E+02	1.8881E-01
8.600	2.7502E+07	2.5307E+02	1.9514E-01
8.900	2.7469E+07	2.5278E+02	2.0146E-01
9.200	2.7437E+07	2.5248E+02	2.0778E-01
9.500	2.7405E+07	2.5218E+02	2.1408E-01
9.800	2.7373E+07	2.5189E+02	2.2038E-01

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10.100	2.7341E+07	2.5159E+02	2.2667E-01
10.400	2.7309E+07	2.5130E+02	2.3296E-01
24.000	2.5897E+07	2.3830E+02	5.0899E-01
96.000	1.9550E+07	1.7990E+02	1.7465E+00
720.000	1.7099E+06	1.5735E+01	5.2249E+00

Time (hr)	Security Center I-131 (Curies)	SGTS Node I-131 (Curies)
0.000	5.5949E-09	4.5584E-11
0.017	3.0622E-05	8.2289E-09
0.017	3.0728E-05	8.2454E-09
0.258	1.3412E-06	4.1598E-07
0.500	3.5816E-08	1.2538E-06
0.800	8.3990E-08	2.8959E-06
1.100	1.4769E-07	5.0268E-06
1.400	2.1692E-07	7.3306E-06
1.700	2.8804E-07	9.6932E-06
2.000	3.5973E-07	1.2074E-05
2.300	4.0703E-07	1.3561E-05
2.600	4.2384E-07	1.4087E-05
2.900	4.2958E-07	1.4266E-05
3.200	4.3133E-07	1.4319E-05
3.500	4.3163E-07	1.4328E-05
3.800	4.3142E-07	1.4320E-05
4.100	4.3102E-07	1.4307E-05
4.400	4.3056E-07	1.4291E-05
4.700	4.3006E-07	1.4275E-05
5.000	4.2957E-07	1.4259E-05
5.300	4.2907E-07	1.4242E-05
5.600	4.2856E-07	1.4225E-05
5.900	4.2806E-07	1.4209E-05
6.200	4.2756E-07	1.4192E-05
6.500	4.2706E-07	1.4175E-05
6.800	4.2656E-07	1.4159E-05
7.100	4.2606E-07	1.4142E-05
7.400	4.2556E-07	1.4126E-05
7.700	4.2506E-07	1.4109E-05
8.000	4.2457E-07	1.4093E-05
8.300	2.4996E-07	1.4076E-05
8.600	2.4967E-07	1.4060E-05
8.900	2.4938E-07	1.4043E-05
9.200	2.4909E-07	1.4027E-05
9.500	2.4880E-07	1.4010E-05
9.800	2.4850E-07	1.3994E-05
10.100	2.4821E-07	1.3977E-05
10.400	2.4792E-07	1.3961E-05
24.000	2.3510E-07	1.3239E-05
96.000	1.1302E-07	9.9945E-06
720.000	4.3403E-09	8.7414E-07

 Cumulative Dose Summary
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Time (hr)	EAB		LPZ		Security Center (Inte)	
	Thyroid (rem)	TEDE (rem)	Thyroid (rem)	TEDE (rem)	Thyroid (rem)	TEDE (rem)
0.000	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00	0.0000E+00
0.017	5.7249E-03	2.0866E-04	1.0424E-03	3.7992E-05	1.5232E-04	4.8441E-06
0.017	5.7475E-03	2.0948E-04	1.0465E-03	3.8142E-05	1.5315E-04	4.8706E-06

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0.258	6.9071E-03	2.5134E-04	1.2576E-03	4.5763E-05	7.7616E-04	2.4677E-05
0.500	6.9569E-03	2.5312E-04	1.2667E-03	4.6087E-05	8.1316E-04	2.5851E-05
0.800	7.1091E-03	2.5850E-04	1.2944E-03	4.7067E-05	8.2882E-04	2.6347E-05
1.100	7.4062E-03	2.6888E-04	1.3485E-03	4.8956E-05	8.5975E-04	2.7324E-05
1.400	7.8699E-03	2.8492E-04	1.4329E-03	5.1876E-05	9.0845E-04	2.8861E-05
1.700	8.5070E-03	3.0676E-04	1.5489E-03	5.5854E-05	9.7571E-04	3.0981E-05
2.000	9.3188E-03	3.3440E-04	1.6967E-03	6.0886E-05	1.0617E-03	3.3687E-05
2.300	1.0281E-02	3.6695E-04	1.8719E-03	6.6813E-05	1.1641E-03	3.6906E-05
2.600	1.1309E-02	4.0152E-04	2.0590E-03	7.3108E-05	1.2740E-03	4.0358E-05
2.900	1.2357E-02	4.3661E-04	2.2498E-03	7.9497E-05	1.3862E-03	4.3881E-05
3.200	1.3409E-02	4.7170E-04	2.4414E-03	8.5885E-05	1.4990E-03	4.7418E-05
3.500	1.4460E-02	5.0661E-04	2.6328E-03	9.2241E-05	1.6117E-03	5.0949E-05
3.800	1.5507E-02	5.4129E-04	2.8235E-03	9.8555E-05	1.7240E-03	5.4466E-05
4.100	1.6551E-02	5.7573E-04	3.0135E-03	1.0483E-04	1.8359E-03	5.7968E-05
4.400	1.7590E-02	6.0993E-04	3.2027E-03	1.1105E-04	1.9474E-03	6.1453E-05
4.700	1.8625E-02	6.4391E-04	3.3912E-03	1.1724E-04	2.0584E-03	6.4923E-05
5.000	1.9656E-02	6.7768E-04	3.5788E-03	1.2339E-04	2.1689E-03	6.8376E-05
5.300	2.0682E-02	7.1124E-04	3.7658E-03	1.2950E-04	2.2790E-03	7.1813E-05
5.600	2.1705E-02	7.4460E-04	3.9519E-03	1.3557E-04	2.3886E-03	7.5235E-05
5.900	2.2723E-02	7.7776E-04	4.1373E-03	1.4161E-04	2.4978E-03	7.8642E-05
6.200	2.3738E-02	8.1074E-04	4.3220E-03	1.4762E-04	2.6066E-03	8.2034E-05
6.500	2.4748E-02	8.4354E-04	4.5060E-03	1.5359E-04	2.7150E-03	8.5412E-05
6.800	2.5755E-02	8.7616E-04	4.6893E-03	1.5953E-04	2.8229E-03	8.8775E-05
7.100	2.6757E-02	9.0861E-04	4.8718E-03	1.6544E-04	2.9304E-03	9.2124E-05
7.400	2.7756E-02	9.4090E-04	5.0537E-03	1.7132E-04	3.0375E-03	9.5459E-05
7.700	2.8751E-02	9.7303E-04	5.2349E-03	1.7716E-04	3.1442E-03	9.8780E-05
8.000	2.9743E-02	1.0050E-03	5.4154E-03	1.8298E-04	3.2506E-03	1.0209E-04
8.300	2.9743E-02	1.0050E-03	5.4809E-03	1.8517E-04	3.3203E-03	1.0426E-04
8.600	2.9743E-02	1.0050E-03	5.5462E-03	1.8733E-04	3.3825E-03	1.0619E-04
8.900	2.9743E-02	1.0050E-03	5.6112E-03	1.8949E-04	3.4445E-03	1.0812E-04
9.200	2.9743E-02	1.0050E-03	5.6760E-03	1.9164E-04	3.5063E-03	1.1004E-04
9.500	2.9743E-02	1.0050E-03	5.7406E-03	1.9377E-04	3.5678E-03	1.1195E-04
9.800	2.9743E-02	1.0050E-03	5.8049E-03	1.9589E-04	3.6291E-03	1.1385E-04
10.100	2.9743E-02	1.0050E-03	5.8690E-03	1.9801E-04	3.6902E-03	1.1575E-04
10.400	2.9743E-02	1.0050E-03	5.9329E-03	2.0011E-04	3.7512E-03	1.1764E-04
24.000	2.9743E-02	1.0050E-03	8.6628E-03	2.8838E-04	6.3534E-03	1.9812E-04
96.000	2.9743E-02	1.0050E-03	1.5221E-02	4.9218E-04	1.0361E-02	3.2082E-04
720.000	2.9743E-02	1.0050E-03	2.1094E-02	6.7265E-04	1.3402E-02	4.1344E-04

Time (hr)	Security Center (Exte	
	Thyroid (rem)	TEDE (rem)
0.000	0.0000E+00	0.0000E+00
0.017	6.1390E-04	2.2375E-05
0.017	6.1632E-04	2.2464E-05
0.258	7.4067E-04	2.6952E-05
0.500	7.4600E-04	2.7143E-05
0.800	7.6233E-04	2.7720E-05
1.100	7.9418E-04	2.8833E-05
1.400	8.4391E-04	3.0552E-05
1.700	9.1222E-04	3.2895E-05
2.000	9.9928E-04	3.5859E-05
2.300	1.1025E-03	3.9349E-05
2.600	1.2126E-03	4.3057E-05
2.900	1.3250E-03	4.6819E-05
3.200	1.4379E-03	5.0581E-05
3.500	1.5506E-03	5.4325E-05
3.800	1.6629E-03	5.8043E-05
4.100	1.7748E-03	6.1737E-05
4.400	1.8862E-03	6.5405E-05

ECCS Leak - Vital Area-Security Center R1.o2

4.700 1.9972E-03 6.9049E-05
 5.000 2.1077E-03 7.2669E-05
 5.300 2.2178E-03 7.6268E-05
 5.600 2.3275E-03 7.9845E-05
 5.900 2.4367E-03 8.3401E-05
 6.200 2.5454E-03 8.6938E-05
 6.500 2.6538E-03 9.0455E-05
 6.800 2.7617E-03 9.3953E-05
 7.100 2.8693E-03 9.7433E-05
 7.400 2.9764E-03 1.0090E-04
 7.700 3.0831E-03 1.0434E-04
 8.000 3.1894E-03 1.0777E-04
 8.300 3.2518E-03 1.0978E-04
 8.600 3.3141E-03 1.1178E-04
 8.900 3.3760E-03 1.1377E-04
 9.200 3.4378E-03 1.1576E-04
 9.500 3.4993E-03 1.1773E-04
 9.800 3.5607E-03 1.1969E-04
 10.100 3.6218E-03 1.2165E-04
 10.400 3.6827E-03 1.2360E-04
 24.000 6.2849E-03 2.0593E-04
 96.000 1.0215E-02 3.2743E-04
 720.000 1.3226E-02 4.1964E-04

 Worst Two-Hour Doses
 #####

EAB

Time (hr)	Whole Body (rem)	Thyroid (rem)	TEDE (rem)
0.0	4.0266E-05	9.3188E-03	3.3440E-04

Computer Disclosure Sheet

Discipline Nuclear

Client: Exelon Corporation
Project: Limerick Generating Station AST LOCA

Date: September 2005
Job No.

Program(s) used
Spreadsheets in various Attachments

Rev No.

Rev Date
N/A

Calculation Set No.: LM-0646, Rev. 1.
N/A

Status Prelim.
 Final
 Void

WGI Prequalification Yes
 No

Run No.

Description:

Analysis Description: Spreadsheets were used to execute arithmetic manipulations of numbers, for various applications within the attachments of this analysis.

The attached computer output has been reviewed, the input data checked,
And the results approved for release. Input criteria for this analysis were established.

By:
Run by: Paul Reichert

On: September 2005
Paul Reichert *Alexa Boatright*

Checked by: H. Rothstein

H. Rothstein

Approved by: H. Rothstein

H. Rothstein

Remarks:

These spreadsheets were applied in a straight-forward manner and were hand checked.

Computer Disclosure Sheet

Discipline Nuclear

Client: Exelon Corporation
Project: Limerick Generating Station AST LOCA

Date: September 2005
Job No.

Program(s) used: RADTRAD 3.03 Runs in Att. A, C, and G
Rev No. 0
Rev Date 0
Calculation Set No.: LM-0646, Rev. 1
6/2003

Status Prelim.
 Final
 Void

WGI Prequalification Yes
 No

Run No. Description:

Analysis Description: RADTRAD output files for the primary LOCA dose assessments are in Attachment A, with input described in the calculation. In Attachment C RADTRAD is used to determine the whole body (shine) dose of a given source. In Attachment G, RADTRAD is used to calculate doses near Security Building, as illustrative for Vital Area access.

The attached computer output has been reviewed, the input data checked,
And the results approved for release. Input criteria for this analysis were established.

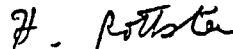
By:

On: September 2005

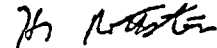
Run by: Aleem Boatright / Paul Reichert



Checked by: H. Rothstein



Approved by: H. Rothstein



Remarks:

The RADTRAD computer code is applied in a manner fitting its intended purpose, and well within it's operating parameters. All outputs were hand checked. Attachments A include the Nuclide Information File and Release Fraction and Timing File used by the RADTRAD code and generated specifically for the Limerick Generating Station. Both were also hand checked for accuracy.

Computer Disclosure Sheet

Discipline Nuclear

Client: Exelon Corporation
Project: Limerick Generating Station AST LOCA

Date: September 2005
Job No.

Program(s) used: Rev No. Rev Date Calculation Set No.: LM-0646, Rev. 1
Microshield 5.05 (MC-201) 0 6/2003

Status Prelim.
 Final
 Void

WGI Prequalification Yes
 No

Run No. Description:

Analysis Description: MicroShield is used to gauge RE/CR wall shielding effectiveness, and to determine dose from RHR & CS piping..

The attached computer output has been reviewed, the input data checked,
And the results approved for release. Input criteria for this analysis were established.

By: On: September 2005

Run by: P. Reichert



Checked by: H. Rothstein



Approved by: H. Rothstein



Remarks:

Computer Disclosure Sheet

Discipline Nuclear

Client: Exelon Corporation
Project: Limerick Generating Station AST LOCA

Date: September 2005
Job No.

Program(s) used: RDTRDYYY Rev No. N/A Rev Date N/A Calculation Set No.: LM-0646, Rev. 1

Status Prelim.
 Final
 Void

WGI Prequalification Yes
 No

Run No. Description:

Analysis Description: The RDTRDYYY program is prepared, ad hoc, to extract from RADTRAD output files the calculated activities in a compartment as a function of time. The program then linearly integrates the activity for each isotope over each time interval. The success of extraction can be performed by inspection. The success of integration is confirmed by spot-checking.

The attached computer output has been reviewed, the input data checked,
And the results approved for release. Input criteria for this analysis were established.

By: On: September 2005

Run by: P. Reichert



Checked by: H. Rothstein



Approved by: H. Rothstein



Remarks:

Calculation No. LM-0646, Rev. 0
 "Re-analysis of Loss of Coolant Accident (LOCA) Using Alternative Source Term Methodology"
 Attachment I
 Evaluation of High Wind Speed Conditions

Regulatory Guide 1.183, Appendix A, Section 4.3 is as follows:

The effect of high wind speeds on the ability of the secondary containment to maintain a negative pressure should be evaluated on an individual case basis. The wind speed to be assumed is the 1-hour average value that is exceeded only 5% of the total number of hours in the data set. Ambient temperatures used in these assessments should be the 1-hour average value that is exceeded only 5% or 95% of the total numbers of hours in the data set, whichever is conservative for the intended use (e.g., if high temperatures are limiting, use those exceeded only 5%).

LGS Response:

As noted on the Page 2 of this Attachment the wind speed only exceeded 5% of the time is 19.7 mph, based on measurements at the 175 ft met tower elevation. This location is conservative for the top of the Reactor Enclosures and is used in this evaluation.

Pages 3 through 9 evaluates the effects of a wind striking the Reactor Enclosure. This wind creates a negative pressure region along the roof and rear side and a positive pressure region on the upwind side of the Reactor Enclosure. This evaluation shows that an adequate vacuum can be obtained even up to a wind speed of 35 mph. As noted on page 6, these wind speeds can result in inleakage increases, for instance at high wind speed:

In-Leakage Surface	ΔP at 35 mph	Inleakage Flow Rate Factor
Windward Side	1.017	2.49
Leeward Side	0.309	1.15
Refuel Floor	0.545	1.66
	ΔP at 20 mph	
Windward Side	0.490	1.55
Leeward Side	0.269	1.08
Refuel Floor	0.346	1.24
	ΔP at 0 mph	
No Wind Case	0.25	1.00

These potential increases in flow are accommodated by changes in damper positioning. Increased flow removes activity from the secondary containment at a faster rate, but this is offset by the X/Os expected at these elevated wind speeds. These are impacted by the fact that wind speed is in the denominator of derivation equations, and high wind speeds are generally associated with atmospheric stability classes that result in better dispersion.

From trac1.thomas@wgint.com (Traci Thomas)

Date Friday, February 6, 2004 10:48 am

To "Paul Reichert" <paul.reichert@wgint.com>

Cc "Harold Rothstein" <harold.rothstein@wgint.com>, "Jack Robinson" <jack.robinson@wgint.com>

Subject Limerick wind speed not exceeded more than 5% of the time

Paul,

As you requested, we have analyzed Exeter's Limerick Generating Station meteorological database for the years 1996 through 2000 in order to determine the wind speed value that is not exceeded more than 5% of the time. We found that within this five-year period, there are 43688 valid wind speeds available from the 30-foot meteorological tower level, and 43767 valid speeds from the 175-foot level. Listing these data in order of ascending magnitude, first for 30-ft speed, and then for 175-ft speed, resulted in demonstrating that the wind speed not exceeded more than 5% of the time is 13.7 mph at 30 feet and 19.7 mph at 175 feet.

Traci

Limerick Generating Station
P.O. Box 2300
Saratoga, PA 17464
(717) 718-2426



Fax

To: <u>TOM MSCISZ</u>	From: <u>MIKE MCGILL</u>
Fax: <u>803-5651</u>	Pages: <u>7</u>
Phone:	Date: <u>2/5/04</u>
Rec:	CC:

- Urgent
 For Review
 Please Comment
 Please Reply
 Please Recycle

• Comments:

10-00000-01

CALCULATION SHEET

PHILADELPHIA ELECTRIC CO.

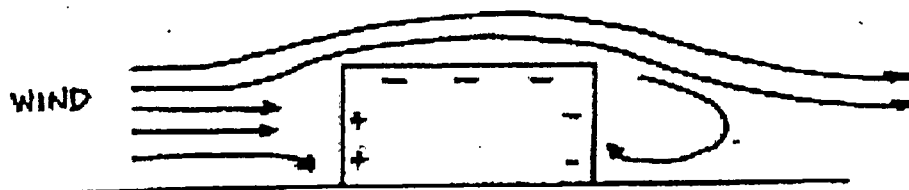
NAME MJMCGILL

LOCATION LGS

DATE _____ SHEET NO. 1 OF 5

SUBJECT ATTACHMENT TO SGTS WLEAKAGE COMPUTATION JOB/CA NO. _____

THE WIND STRIKING A BUILDING CREATES A NEGATIVE PRESSURE REGION ALONG THE ROOF AND REAR SIDE AND A POSITIVE PRESSURE REGION ON THE UPWIND SIDE AS SHOWN BELOW.



THE WIND VELOCITY PRESSURE AT THE ROOF LEVEL IS CALCULATED AS FOLLOWS.

$$P_v = 0.000482 V^2$$

WHERE:

P_v = WIND VELOCITY PRESSURE (IN. W.G.)

V = WIND SPEED (MPH)

THE PRESSURE ON THE BUILDING SURFACE, RELATIVE TO THE LOCAL ATMOSPHERIC PRESSURE IS CALCULATED AS FOLLOWS:

$$P_s = C_p \times P_v$$

WHERE:

P_s = SURFACE PRESSURE (IN. W.G.)

C_p = SURFACE PRESSURE COEFFICIENT

FROM TABLE 2 OF CHAPTER 14 OF ASHRAE, THE C_p FOR A FLAT ROOF (I.E. LGS) WITH A 90° WIND DIRECTION IS -0.5 (THE NEGATIVE SIGN INDICATES THAT THE SURFACE PRESSURE IS LESS THAN THE UPWARD PRESSURE). C_p FOR UPWIND WALLS IS +0.8 AND REAR IS -0.4. THE USE OF 90° DIRECTION IS THE WORST CASE.

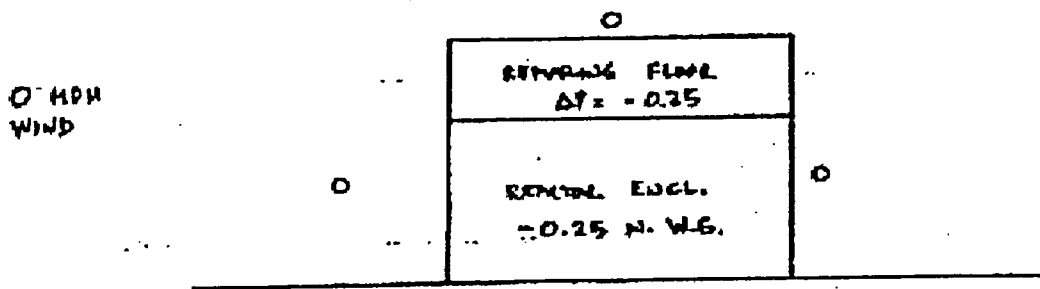
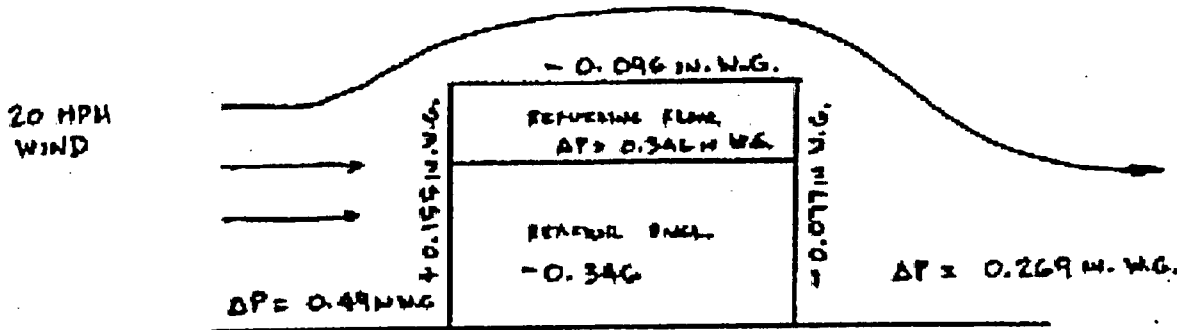
CALCULATION SHEET

PHILADELPHIA ELECTRIC CO.

NAME _____

LOCATION _____ DATE _____ SHEET NO. 3 of 6

SUBJECT _____ JOB/CA NO. _____



IT CAN BE SEEN FROM THE ABOVE ILLUSTRATIONS, THAT EVEN THOUGH THE REACTOR ENCLOSURE IS MAINTAINED AT A -0.25 IN. W.G., THE ΔP ACROSS THE EXTERIOR WALLS AND THE REACTOR FLOOR/REACTOR ENCLOSURE INTERFACE FAR EXCEED THE 0.25 IN. W.G.. THIS WILL AND DOES RESULT IN EXCESSIVE IN-LEAKAGE AS SHOWN BELOW.

THE GENERAL EQUATION GOVERNING INFILTRATION THROUGH A WALL IS:

$$Q = C(\Delta P)^n$$

WHERE:

CALCULATION SHEET

PHILADELPHIA ELECTRIC CO.

NAME _____

LOCATION _____ DATE _____ SHEET NO. 2 of 6

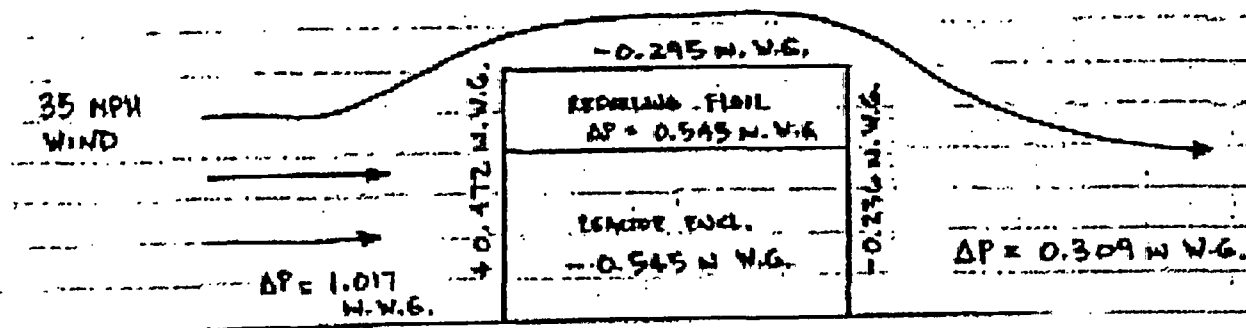
SUBJECT _____ JOB/CR NO. _____

WITH THE ABOVE INFORMATION THE FOLLOWING DATA WAS TABULATED.

WIND SPEED	P_v (IN W.G.)	ROOF SURFACE PRESSURE	PRESSURE UPWIND WALL	PRESSURE REAR WALL
0	0.000	0.000	0.000	0.000
5	0.012	-0.006	0.010	-0.005
10	0.048	-0.024	0.039	-0.019
15	0.109	-0.054	0.087	-0.044
20	0.193	-0.096	0.155	-0.077
25	0.302	-0.151	0.241	-0.121
30	0.434	-0.217	0.347	-0.174
35	0.591	-0.295	0.472	-0.236
40	0.771	-0.386	0.617	-0.308
7	0.024	-0.012	0.019	-0.010
10	0.048	-0.024	0.039	-0.020
13.2	0.084	0.042	0.0692	-0.0336

THE PRESENT DESIGN OF THE SGTS WILL MAINTAIN A -0.25 IN W.G. BUILDING PRESSURE RELATIVE TO THE OUTSIDE AIR PRESSURE SENSOR LOCATED ON THE ROOF (THIS IS THE WORST CASE LOCATION)

FROM THE TABULATED DATA ABOVE, A PRESSURE PROFILE OF LGS CAN BE DRAWN TO ILLUSTRATE THE EFFECTS OF WIND SPEED. WIND SPEEDS OF 0, 20, AND 35 MPH WERE CHOSEN



$\Delta P =$ OUTSIDE / INSIDE

100-20112 10-20

CALCULATION SHEET

PHILADELPHIA ELECTRIC CO.

NAME _____

LOCATION _____ DATE _____ SHEET NO. 4 of 6

SUBJECT _____ JOB/CA NO. _____

- Q = CUBIC FEET PER MINUTE (CFM)
- C = FLOW COEFFICIENT
- ΔP = PRESSURE DIFFERENCE BETWEEN TWO LOCATIONS
- n = FLOW EXPONENT, USUALLY BETWEEN 0.5 & 1.0. USE 0.65 FOR LEAKAGE OPENINGS

$$\therefore Q = C (\Delta P)^{0.65}$$

FROM THIS EQUATION YOU CAN SEE THAT THE INCREASE IN THE ΔP'S RESULTING FROM WINDS WILL INCREASE THE INFILTRATION LEAKAGE.

WIND SURFACE PRESSURES

The curvature of wind streamlines passing over a building generates surface pressures dependent on the dynamic pressure of the approach wind^{1,2,3} (see Chapter 22).

Approach wind gusts and high levels of turbulent fluctuation generated by flow separation cause surface pressures to fluctuate rapidly with time. If wind direction does not change, these fluctuations are random, with time periods as short as 0.3 s. An average surface pressure may be defined over a time period of about 10 min. The fluctuating pressures can then be treated as a random variation superimposed on the average pressure.

Both the average and the fluctuating surface pressures are directly proportional to the velocity pressure P in 0.6 approach wind. Thus,

$$P_s = 0.0042 q U_w^2 \quad (1)$$

$$= 0.00042 q U_w^2 \quad (1a)$$

where

P_s = wind velocity pressure at roof level, in. H_2O

q = air density, lb/ft^3

U_w = wind speed at roof level, ft/min

should be MP19 SEE 1977 Handbook

The constant 0.00042 in Eq.(1a) is based on a standard air density of 0.075 lb/ft^3 .

Computing the Surface Pressure

The pressure on a building surface, relative to local atmospheric pressure, may be computed from the pressure coefficient C_p , defined as

$$P_s = C_p \cdot P \quad (2)$$

where

P_s = wind pressure on building surface, in. H_2O

C_p = pressure coefficient, dimensionless

The pressure P_s is relative to local atmospheric pressure at ground level away from any influence of the building. For system design, the differential pressure between the building surface and interior must be estimated. Internal pressure depends on building surface pressures, leakage characteristics and intake and exhaust fan systems (see Chapter 22). Changes in wind direction cause considerable variation in system operating conditions by varying intake and exhaust pressures.

By definition of surface pressure coefficient C_p in Eq.(2), positive values are associated with stagnation regions, where surface pressure is higher than the upstream barometric reference pressure. In separated flow regions on the roof, sides and rear of flat-roofed buildings, surface pressures are always less than the upwind barometric reference pressure and, thus, have negative coefficients.

Average surface pressure coefficients for a cubical building (Fig. 5) show that C_p varies greatly with position on the building. When the wind strikes a building at angles other than perpendicular to a wall, the strong vortex along upwind

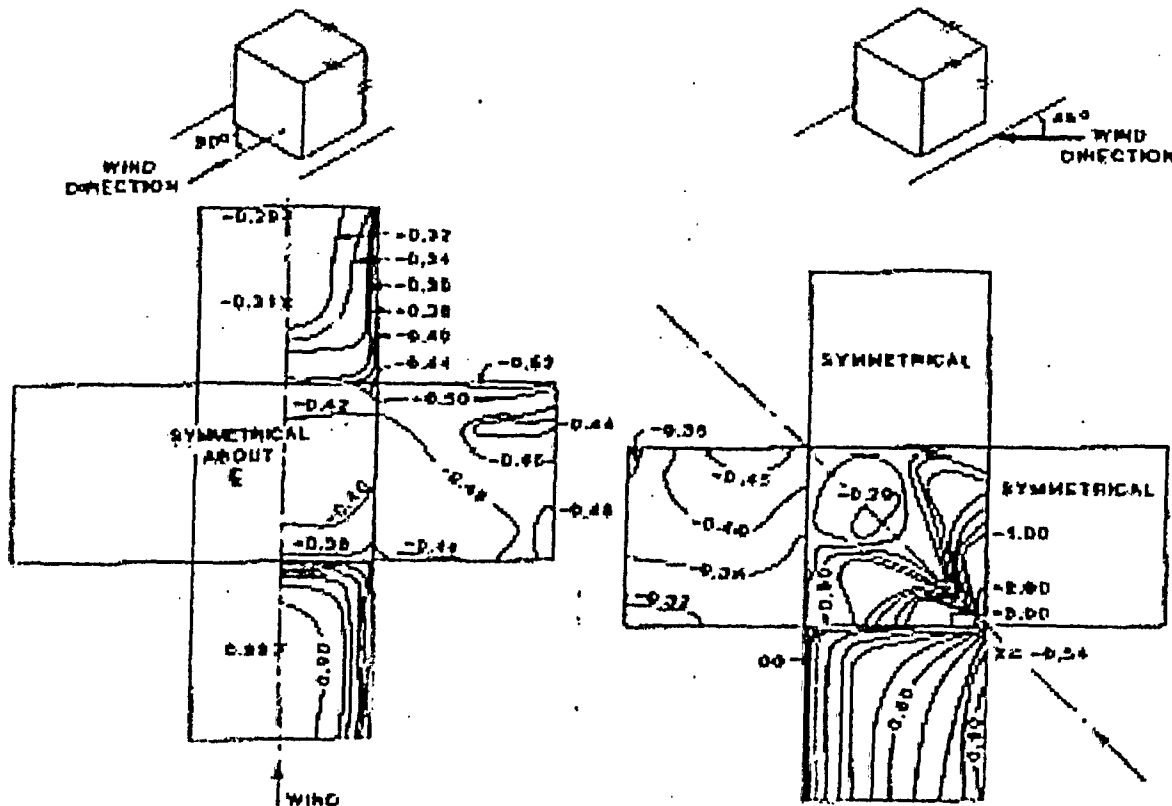


Fig. 5 Surface Pressure Coefficients on Cubical Building^{1,4}

Air Flow Around Buildings

roof edges cause large surface pressure variations on the roof. The high velocities in these roof vortices generate large negative pressure coefficients. The largest variations in pressure occur near ridges (Fig. 5), but the center of the roof retains a relatively constant pressure coefficient of -0.4 for the two wind directions considered.

Except for the large variations in pressure close to the edges of building surfaces, the surface pressure coefficients in Table 2 are representative average values applicable to a variety of rectangular building shapes. Surface pressures on pitched roofs depend on roof pitch angle, and whether the pitch is windward or leeward. For a roof pitch less than 20° , negative pressures occur on the windward pitched surface with C_p approximately -1.0 near the upwind edge and an average value of about -0.5 . For pitch in the range 25° to 45° , C_p is positive on the windward roof. On the downwind side of a pitched roof the pressure coefficients are relatively constant over the roof surface, with C_p values about -0.5 . Wall pressures are relatively unaffected by roof pitch. The differential pressure for an interior space at any point is the difference between external pressure, computed using the coefficients in Table 2, plus the interior pressure (which can be negative).

Surface Pressure on Taller Buildings

When airport wind speed measurements of U_z at height Z are used in the calculation of surface pressure P_s , they must be extrapolated to corresponding values of U_{z0} at height H since available pressure coefficients $C_{p,N}$ are referred to U_{z0} . The extrapolation is made with the power law for neutral stability, since pressures are of concern mainly at high wind speeds that occur only with neutral stability. The power law is:

$$U_H/U_z = (H/Z)^{0.2} \quad (3)$$

and Eq. (3) becomes:

$$P_s = 0.5 C_{p,N} \rho U_z^2 (H/Z)^{0.4} \quad (4)$$

For convenience, Eq. (4) can be written as:

$$P_s = 0.5 C_{p,N} \rho U_z^2 \quad (5)$$

where:

$$C_{p,z} = C_{p,N} U/HZP^2 \quad (6)$$

Fluctuating Pressure

Wind turbulence and flow fluctuations in recirculating flow zones can generate large momentary pressure fluctuations, that cause vibration and intermittent opening and closing of backflow dampers and other short term variations in system operation. On the upwind surface, turbulence in the approach flow causes pressure fluctuations. Upwind structures and terrain irregularities determine the magnitude of these effects. On downwind walls, the building flow separations also induce pressure fluctuations. Large negative pressure peaks (with C_p from -3.0 to -5.0) occur close to sharp building corners where local vortex systems form. These peaks generally have time periods from one to several seconds.

Effects Caused by Adjacent Buildings

A new building can considerably alter flow patterns and surface pressures on existing buildings. This may require changing the height of exhaust stacks and reworking or redesigning intake and exhaust systems. The effects of a near-

Table 2 Representative Average Surface Pressure Coefficients

Location	Wind Direction	
	90°	45°
Upwind wall	+0.8	+0.5
Side	-0.4	-
Leeward wall	-0.4	-0.3
Flat Roof	-0.5	+0.5

by building are complicated because, as wind direction changes, the building induces upwind, side and downwind effects.

An upwind building creates a low velocity, highly turbulent wake that alters the flow patterns over the downwind building. An upwind building can generate significant effects for a distance approximately twice as long as the zone of recirculating flow that exists behind it. This recirculating flow zone (Fig. 4) depends on the dimensions of the building and is typically five to ten times the minimum building dimension facing the wind (width W or height H), with a zone of downwind influence 10 to 20 building heights or widths. An adjacent building can cause wind speed to increase by channeling flow between the two buildings, resulting in negative pressure coefficients as low as -2.0 .

A building downwind of an existing structure generally has little effect on pressure coefficients, but can substantially alter the zone of recirculating flow on the downwind face of the building.

ATMOSPHERIC DISPERSION OF BUILDING EXHAUST GAS

General Description and Definitions

A building exhaust system is frequently used to release a mixture of pure gas and building air at concentration C_s into the atmosphere through a stack or a flush vent in the building surface. The emission opening is the source. The effluent subsequently mixes with atmospheric air to form a field of concentration C around the building. A fresh air intake or a person located in the field of C is a receptor. A receptor is said to be contaminated if C at the receptor location is larger than a specified allowable concentration C_{allow} . Dispersion calculations are made to provide an estimate of C for comparison with C_{allow} .

It is often convenient to express the field of C as a field of dilution D between source and receptor, with D defined as:

$$D = C_s/C \quad (7)$$

D has a minimum value of 1 at the source where $C = C_s$ and approaches ∞ as C approaches 0 at great distances from the source.

If C is replaced by C_{allow} in Eq. (7), the required atmospheric dilution D_{req} is obtained to meet the allowable concentration at the receptor:

$$D_{req} = C_s/C_{allow} \quad (8)$$

The source concentration C_s is given by:

$$C_s = Q/Q_e = Q/A_e V_e \quad (9)$$

where:

- Q = pure gas release rate (mass/time)
- Q_e = effluent mixture release rate (vol/time)
- A_e = internal stack or vent area (length²)
- V_e = emission velocity (length/time)

ADDITIONAL ATTACHMENTS TO
10-10-05 Letter: Supplement to Request for LAR Application of AST
Attachment 012 AST – LM-0646 Rev 1 LOCA

ADDITIONAL ATTACHMENTS TO
10-10-05 Letter: Supplement to Request for LAR Application of AST
Attachment 013 AST – LM-0646 Rev 1 LOCA (1 of 3) Att B.

	A	B	C	D
1				
2				
3			Unbroken	Broken
4	Pipe Surface Area (ft ²)	=MS Piping Summary1A65	Inboard A	Inboard B
5	Total Pipe Volume (ft ³)	=MS Piping Summary1A66		
6	Pipe Surface Area (ft ²)	=MS Piping Summary1A55		
7	Pipe Surface Area (ft ²)	=MS Piping Summary1A54/12)*(MS Piping Summary1A52/12)		
8	Total Pipe Volume (ft ³)	=MS Piping Summary1A56		
9	Settling Velocity (ft/s)	0.00117		
10	Settling Velocity (ft/s)	=C390.3048		
11	Velocity 0-24hrs (m/sec)	=EXP((2809*\$B\$78)-12.5)/100		
12	Velocity 24-96hrs (m/sec)	=EXP((2809*\$B\$80)-12.5)/100		
13	Velocity 96-720hrs (m/sec)	=EXP((2809*\$B\$82)-12.5)/100		
14	Velocity 0-24hrs (ft/sec)	=C110.3048		
15	Velocity 24-96hrs (ft/sec)	=C120.3048		
16	Velocity 96-720hrs (ft/sec)	=C130.3048		
17	Velocity 0-24hrs (m/sec)	=EXP((2809*\$B\$78)-19.3)/100		
18	Velocity 24-96hrs (m/sec)	=EXP((2809*\$B\$80)-19.3)/100		
19	Velocity 96-720hrs (m/sec)	=EXP((2809*\$B\$82)-19.3)/100		
20	Velocity 0-24hrs (ft/sec)	=C170.3048		
21	Velocity 24-96hrs (ft/sec)	=C180.3048		
22	Velocity 96-720hrs (ft/sec)	=C190.3048		
23	Expected Flow Rate (cfm)	100		
24	Low Rate 0-24 hrs (cfm)	=C323*((\$B\$92*\$B\$91)*(\$B\$89/(\$B\$87+\$B\$89))*(\$B\$83+460)/(\$B\$86+460))/60		
25	Low Rate 24-96 hrs (cfm)	=C323*((\$B\$89/(\$B\$87+\$B\$89))*(\$B\$83+460)/(\$B\$86+460))/60		
26	Low Rate 96-720 hrs (cfm)	=C327*\$B\$90		
27	Low Rate 0-24 hrs (cfm)	=C323*((\$B\$89/(\$B\$87+\$B\$89))*(\$B\$83+460)/(\$B\$86+460))/60		
28	Low Rate 24-96 hrs (cfm)	=C327*\$B\$90		
29	Low Rate 96-720 hrs (cfm)	=C327*\$B\$90		
30	Low Rate 0-24 hrs (cfm)	=C327*60		
31	Low Rate 24-96 hrs (cfm)	=C329*60		
32	Low Rate 96-720 hrs (cfm)	=C329*60		
33				
34	Flow Rate Constant (hr ⁻¹)	=(C310^C37)/C38)^3600		
35	Constant 0-24hr (hr ⁻¹)	=(C14^C34)/C35)^3600		
36	Constant 24-96hr (hr ⁻¹)	=(C15^C34)/C35)^3600		
37	Constant 96-720hr (hr ⁻¹)	=(C16^C34)/C35)^3600		
38	Flow Rate 0-24hr (%/day)	=C35^24		
39	Flow Rate 24-96hr (%/day)	=C36^24		
40	Flow Rate 96-720hr (%/day)	=C37^24		
41	Constant 0-24hr (hr ⁻²)	=(2.32*2)^10^-5)*EXP(-600*\$B\$78)		
42	Constant 24-96hr (hr ⁻²)	=(2.32*2)^10^-5)*EXP(-600*\$B\$80)		
43	Constant 96-720hr (hr ⁻²)	=(2.32*2)^10^-5)*EXP(-600*\$B\$82)		
44	Flow Rate 0-24hr (%/day)	=C41^24		
45	Flow Rate 24-96hr (%/day)	=C42^24		
46	Flow Rate 96-720hr (%/day)	=C43^24		
47	Constant 0-24hr (hr ⁻⁴)	=(1.3-0.75)^10^-4)*EXP(-1185*\$B\$78)		
48	Constant 24-96hr (hr ⁻⁴)	=(1.3-0.75)^10^-4)*EXP(-1185*\$B\$80)		
49	Constant 96-720hr (hr ⁻⁴)	=(1.3-0.75)^10^-4)*EXP(-1185*\$B\$82)		
50	Flow Rate 0-24hr (%/day)	=C47^24		
51	Flow Rate 24-96hr (%/day)	=C48^24		
52	Flow Rate 96-720hr (%/day)	=C49^24		
53	Constant 0-24hr (hr ⁻¹)	=(C20^C34)/C35)^3600		
54	Constant 24-96hr (hr ⁻¹)	=(C21^C34)/C35)^3600		
55	Constant 96-720hr (hr ⁻¹)	=(C22^C34)/C35)^3600		
56				
57	Efficiency (0-24 hrs)	=F(C323-0.0,1,1/(1+(C334^C38)/C30)))		
58	Efficiency (24-96 hrs)	=F(C323-0.0,1,1/(1+(C334^C38)/C31)))		
59	Efficiency (96-720 hrs)	=F(C323-0.0,1,1/(1+(C334^C38)/C32)))		
60	Efficiency (0-24 hrs)	=F(C323-0.0,1,1/(1+(C35^C35)/C30)))		
61	Efficiency (24-96 hrs)	=F(C323-0.0,1,1/(1+(C36^C35)/C31)))		
62	Efficiency (96-720 hrs)	=F(C323-0.0,1,1/(1+(C37^C35)/C32)))		
63	Efficiency (0-24 hrs)	=F(C323-0.0,1,1/(1+(C33^C35)/C30)))		
64	Efficiency (24-96 hrs)	=F(C323-0.0,1,1/(1+(C34^C35)/C31)))		
65	Efficiency (96-720 hrs)	=F(C323-0.0,1,1/(1+(C35^C35)/C32)))		
66	Aerosol DF (0-24 hrs)	=F(C323-0.1,1,1/(1+(C334^C38)/C30)))		
67	Aerosol DF (24-96 hrs)	=F(C323-0.1,1,1/(1+(C334^C38)/C31)))		
68	Aerosol DF (96-720 hrs)	=F(C323-0.1,1,1/(1+(C334^C38)/C32)))		
69	Elemental DF (0-24 hrs)	=F(C323-0.1,1,1/(1+(C35^C35)/C30)))		
70	Elemental DF (24-96 hrs)	=F(C323-0.1,1,1/(1+(C36^C35)/C31)))		
71	Elemental DF (96-720 hrs)	=F(C323-0.1,1,1/(1+(C37^C35)/C32)))		
72	Organic DF (0-24 hrs)	=F(C323-0.1,1,1/(1+(C33^C35)/C30)))		
73	Organic DF (24-96 hrs)	=F(C323-0.1,1,1/(1+(C34^C35)/C31)))		
74	Organic DF (96-720 hrs)	=F(C323-0.1,1,1/(1+(C35^C35)/C32)))		
75				
76				
77	Temperature, 0-24hr (F)	550		
78	Temperature, 0-24hr (K)	=(B77-32)*(5/9)+273.15		
79	Temperature, 24-96hr (F)	410		
80	Temperature, 24-96hr (K)	=(B79-32)*(5/9)+273.15		
81	Temperature, 96-720hr (F)	200		
82	Temperature, 96-720hr (K)	=(B81-32)*(5/9)+273.15		
83	Peak Temperature (F)	276		
84	Temperature, constant (F)	120		
85	Temperature, constant (K)	=(B84-32)*(5/9)+273.15		
86	Temperature, constant (F)	68		
87	Pressure, constant (psig)	22		
88	Pressure, constant (psia)	44		
89	Pressure, constant (psia)	14.7		
90	Correction Factor at 24 hours	0.551		
91	Drywell Volume (ft ³)	=0.95*243580		
92	Containment Volume (ft ³)	=147670+\$B\$91		

	E	F	G
1			Determ
2			
3	Inboard C	Inboard D	
4	=MS Piping Summary1C66	=MS Piping Summary1D66	
5	=MS Piping Summary1C66	=MS Piping Summary1D66	
6	=MS Piping Summary1C55	=MS Piping Summary1D55	
7	=MS Piping Summary1C354/12)*(MS Piping Summary1\$A\$2/12)	=MS Piping Summary1D354/12)*(MS Piping Summary1\$A\$2/12)	
8	=MS Piping Summary1C56	=MS Piping Summary1D56	
9	0.00117	0.00117	
10	=E\$9.0.3048	=F\$9.0.3048	
11	=EXP(2809*\$B\$78)-12.5/100	=EXP(2809*\$B\$78)-12.5/100	
12	=EXP(2809*\$B\$80)-12.5/100	=EXP(2809*\$B\$80)-12.5/100	
13	=EXP(2809*\$B\$82)-12.5/100	=EXP(2809*\$B\$82)-12.5/100	
14	=E11.0.3048	=F11.0.3048	
15	=E12.0.3048	=F12.0.3048	
16	=E13.0.3048	=F13.0.3048	
17	=EXP(2809*\$B\$78)-19.3/100	=EXP(2809*\$B\$78)-19.3/100	
18	=EXP(2809*\$B\$80)-19.3/100	=EXP(2809*\$B\$80)-19.3/100	
19	=EXP(2809*\$B\$82)-19.3/100	=EXP(2809*\$B\$82)-19.3/100	
20	=E17.0.3048	=F17.0.3048	
21	=E18.0.3048	=F18.0.3048	
22	=E19.0.3048	=F19.0.3048	
23	0	0	
24	=E\$23*((\$B\$92/\$B\$91)*(\$B\$89/(\$B\$87+\$B\$89)))/(((\$B\$83+\$B\$86+\$B\$89)/(\$B\$83+\$B\$86+\$B\$89)))/60	=F\$23*((\$B\$92/\$B\$91)*(\$B\$89/(\$B\$87+\$B\$89)))/(((\$B\$83+\$B\$86+\$B\$89)/(\$B\$83+\$B\$86+\$B\$89)))/60	
25	=E\$23*((\$B\$89/(\$B\$87+\$B\$89)))/(((\$B\$83+\$B\$86+\$B\$89)/(\$B\$83+\$B\$86+\$B\$89)))/60	=F\$23*((\$B\$89/(\$B\$87+\$B\$89)))/(((\$B\$83+\$B\$86+\$B\$89)/(\$B\$83+\$B\$86+\$B\$89)))/60	
26	=E\$25*\$B\$90	=F\$25*\$B\$90	
27	=E\$23*((\$B\$89/(\$B\$87+\$B\$89)))/(((\$B\$83+\$B\$86+\$B\$89)/(\$B\$83+\$B\$86+\$B\$89)))/60	=F\$23*((\$B\$89/(\$B\$87+\$B\$89)))/(((\$B\$83+\$B\$86+\$B\$89)/(\$B\$83+\$B\$86+\$B\$89)))/60	
28	=E\$27*\$B\$90	=F\$27*\$B\$90	
29	=E\$27*\$B\$90	=F\$27*\$B\$90	
30	=E\$27*60	=F\$27*60	
31	=E\$29*60	=F\$29*60	
32	=E\$29*60	=F\$29*60	
33			
34	=(E\$10*E\$7)*E\$8/3600	=(F\$10*F\$7)*F\$8/3600	
35	=(E14*E\$4)*E\$5/3600	=(F14*F\$4)*F\$5/3600	
36	=(E15*E\$4)*E\$5/3600	=(F15*F\$4)*F\$5/3600	
37	=(E16*E\$4)*E\$5/3600	=(F16*F\$4)*F\$5/3600	
38	=E35*24	=F35*24	
39	=E36*24	=F36*24	
40	=E37*24	=F37*24	
41	=(2.32+2)*10^-6)*EXP(-600*\$B\$78)	=(2.32+2)*10^-6)*EXP(-600*\$B\$78)	
42	=(2.32+2)*10^-6)*EXP(-600*\$B\$80)	=(2.32+2)*10^-6)*EXP(-600*\$B\$80)	
43	=(2.32+2)*10^-6)*EXP(-600*\$B\$82)	=(2.32+2)*10^-6)*EXP(-600*\$B\$82)	
44	=E41*24	=F41*24	
45	=E42*24	=F42*24	
46	=E43*24	=F43*24	
47	=(1.3-0.75)*10^-4)*EXP(-1185*\$B\$78)	=(1.3-0.75)*10^-4)*EXP(-1185*\$B\$78)	
48	=(1.3-0.75)*10^-4)*EXP(-1185*\$B\$80)	=(1.3-0.75)*10^-4)*EXP(-1185*\$B\$80)	
49	=(1.3-0.75)*10^-4)*EXP(-1185*\$B\$82)	=(1.3-0.75)*10^-4)*EXP(-1185*\$B\$82)	
50	=E47*24	=F47*24	
51	=E48*24	=F48*24	
52	=E49*24	=F49*24	
53	=(E20*E\$4)*E\$5/3600	=(F20*F\$4)*F\$5/3600	
54	=(E21*E\$4)*E\$5/3600	=(F21*F\$4)*F\$5/3600	
55	=(E22*E\$4)*E\$5/3600	=(F22*F\$4)*F\$5/3600	
56			
57	=F(E\$23-0.0,1-(1+(E\$34*E\$8)/E\$30)))	=F(F\$23-0.0,1-(1+(F\$34*F\$8)/F\$30)))	
58	=F(E\$23-0.0,1-(1+(E\$34*E\$8)/E\$31)))	=F(F\$23-0.0,1-(1+(F\$34*F\$8)/F\$31)))	
59	=F(E\$23-0.0,1-(1+(E\$34*E\$8)/E\$32)))	=F(F\$23-0.0,1-(1+(F\$34*F\$8)/F\$32)))	
60	=F(E\$23-0.0,1-(1+(E\$35*E\$5)/E\$30)))	=F(F\$23-0.0,1-(1+(F\$35*F\$5)/F\$30)))	
61	=F(E\$23-0.0,1-(1+(E\$36*E\$5)/E\$31)))	=F(F\$23-0.0,1-(1+(F\$36*F\$5)/F\$31)))	
62	=F(E\$23-0.0,1-(1+(E\$37*E\$5)/E\$32)))	=F(F\$23-0.0,1-(1+(F\$37*F\$5)/F\$32)))	
63	=F(E\$23-0.0,1-(1+(E\$37*E\$5)/E\$30)))	=F(F\$23-0.0,1-(1+(F\$37*F\$5)/F\$30)))	
64	=F(E\$23-0.0,1-(1+(E\$4*E\$5)/E\$31)))	=F(F\$23-0.0,1-(1+(F\$4*F\$5)/F\$31)))	
65	=F(E\$23-0.0,1-(1+(E\$5*E\$5)/E\$32)))	=F(F\$23-0.0,1-(1+(F\$5*F\$5)/F\$32)))	
66	=F(E\$23-0.1,1+(E\$34*E\$8)/E\$30)))	=F(F\$23-0.1,1+(F\$34*F\$8)/F\$30)))	
67	=F(E\$23-0.1,1+(E\$34*E\$8)/E\$31)))	=F(F\$23-0.1,1+(F\$34*F\$8)/F\$31)))	
68	=F(E\$23-0.1,1+(E\$34*E\$8)/E\$32)))	=F(F\$23-0.1,1+(F\$34*F\$8)/F\$32)))	
69	=F(E\$23-0.1,1+(E\$35*E\$5)/E\$30)))	=F(F\$23-0.1,1+(F\$35*F\$5)/F\$30)))	
70	=F(E\$23-0.1,1+(E\$36*E\$5)/E\$31)))	=F(F\$23-0.1,1+(F\$36*F\$5)/F\$31)))	
71	=F(E\$23-0.1,1+(E\$37*E\$5)/E\$32)))	=F(F\$23-0.1,1+(F\$37*F\$5)/F\$32)))	
72	=F(E\$23-0.1,1+(E\$37*E\$5)/E\$30)))	=F(F\$23-0.1,1+(F\$37*F\$5)/F\$30)))	
73	=F(E\$23-0.1,1+(E\$4*E\$5)/E\$31)))	=F(F\$23-0.1,1+(F\$4*F\$5)/F\$31)))	
74	=F(E\$23-0.1,1+(E\$5*E\$5)/E\$32)))	=F(F\$23-0.1,1+(F\$5*F\$5)/F\$32)))	
75			
76			
77	References:		
78		1 Piping Take-offs and Condenser Characterization (Pages B-9 and B-14)	
79		2 USNRC Document AEB-98-03, 12/9/1998, Page A-3, Median Value	
80		3 USNRC Document AEB-98-03, 12/9/1998, Page A-2, Formula 2	
81		4 USNRC Document AEB-98-03, 12/9/1998, Page A-2, Formula 4	
82		5 Cline, J.E. "MSIV Leakage Iodine Transport Analysis", 3/26/1991	
83		6 NUREG/CR-6604, RADTRAD Manual, 4/1996, Supplement 1, 6/1999	
84		7 Cline, J.E. 8/1990, as shown in Design Analysis LM-0646, Rev. 0, Attachment F (this Calc.)	
85		8 Typical conservative value for H.P. Condenser Volume	
86		9 LGS Technical Specification LCO 3.6.1.2.c	
87		10 LGS Technical Specification SR 4.6.6.1.c.2	
88			
89			
90			
91			
92			

H		I	J
1	Ination of MSL Decontamination Factors Due to Iodine Deposition		
2			
3	Outboard A	Outboard B	Outboard C
4	=MS Piping Summary1A68	=MS Piping Summary1B68	=MS Piping Summary1C68
5	=MS Piping Summary1A69	=MS Piping Summary1B69	=MS Piping Summary1C69
6	=MS Piping Summary1A58	=MS Piping Summary1B58	=MS Piping Summary1C58
7	=MS Piping Summary1A57/12)(MS Piping Summary1A52/12)	=MS Piping Summary1B57/12)(MS Piping Summary1A52/12)	=MS Piping Summary1C57/12)(MS Piping Summary1A52/12)
8	=MS Piping Summary1A59	=MS Piping Summary1B59	=MS Piping Summary1C59
9	0.00117	0.00117	0.00117
10	=H90.3048	=H90.3048	=H90.3048
11	=EXP(2809\$B\$78)-12.5/100	=EXP(2809\$B\$78)-12.5/100	=EXP(2809\$B\$78)-12.5/100
12	=EXP(2809\$B\$80)-12.5/100	=EXP(2809\$B\$80)-12.5/100	=EXP(2809\$B\$80)-12.5/100
13	=EXP(2809\$B\$82)-12.5/100	=EXP(2809\$B\$82)-12.5/100	=EXP(2809\$B\$82)-12.5/100
14	=H110.3048	=H110.3048	=H110.3048
15	=H120.3048	=H120.3048	=H120.3048
16	=H130.3048	=H130.3048	=H130.3048
17	=EXP(2809\$B\$78)-19.3/100	=EXP(2809\$B\$78)-19.3/100	=EXP(2809\$B\$78)-19.3/100
18	=EXP(2809\$B\$80)-19.3/100	=EXP(2809\$B\$80)-19.3/100	=EXP(2809\$B\$80)-19.3/100
19	=EXP(2809\$B\$82)-19.3/100	=EXP(2809\$B\$82)-19.3/100	=EXP(2809\$B\$82)-19.3/100
20	=H170.3048	=H170.3048	=H170.3048
21	=H180.3048	=H180.3048	=H180.3048
22	=H190.3048	=H190.3048	=H190.3048
23	100	100	0
24	N/A	N/A	N/A
25	N/A	N/A	N/A
26	N/A	N/A	N/A
27	=(H\$23*((H\$77+460)/(H\$86+460)))\$60	=(H\$23*((H\$77+460)/(H\$86+460)))\$60	=(H\$23*((H\$77+460)/(H\$86+460)))\$60
28	=(H\$23*((H\$79+460)/(H\$86+460)))\$60*\$B\$90	=(H\$23*((H\$79+460)/(H\$86+460)))\$60*\$B\$90	=(H\$23*((H\$79+460)/(H\$86+460)))\$60*\$B\$90
29	=(H\$23*((H\$81+460)/(H\$86+460)))\$60*\$B\$90	=(H\$23*((H\$81+460)/(H\$86+460)))\$60*\$B\$90	=(H\$23*((H\$81+460)/(H\$86+460)))\$60*\$B\$90
30	=H\$27'60	=H\$27'60	=H\$27'60
31	=H\$28'60	=H\$28'60	=H\$28'60
32	=H\$29'60	=H\$29'60	=H\$29'60
33			
34	=(H\$10*(H\$7)/(H\$8))*3600	=(H\$10*(H\$7)/(H\$8))*3600	=(H\$10*(H\$7)/(H\$8))*3600
35	=(H\$11*(H\$4)/(H\$5))*3600	=(H\$11*(H\$4)/(H\$5))*3600	=(H\$11*(H\$4)/(H\$5))*3600
36	=(H\$15*(H\$4)/(H\$5))*3600	=(H\$15*(H\$4)/(H\$5))*3600	=(H\$15*(H\$4)/(H\$5))*3600
37	=(H\$16*(H\$4)/(H\$5))*3600	=(H\$16*(H\$4)/(H\$5))*3600	=(H\$16*(H\$4)/(H\$5))*3600
38	=H\$5'24	=H\$5'24	=H\$5'24
39	=H\$6'24	=H\$6'24	=H\$6'24
40	=H\$7'24	=H\$7'24	=H\$7'24
41	=(2.32+2)*10^-5)*EXP(-600*\$B\$78)	=(2.32+2)*10^-5)*EXP(-600*\$B\$78)	=(2.32+2)*10^-5)*EXP(-600*\$B\$78)
42	=(2.32+2)*10^-5)*EXP(-600*\$B\$80)	=(2.32+2)*10^-5)*EXP(-600*\$B\$80)	=(2.32+2)*10^-5)*EXP(-600*\$B\$80)
43	=(2.32+2)*10^-5)*EXP(-600*\$B\$82)	=(2.32+2)*10^-5)*EXP(-600*\$B\$82)	=(2.32+2)*10^-5)*EXP(-600*\$B\$82)
44	=H\$1'24	=H\$1'24	=H\$1'24
45	=H\$2'24	=H\$2'24	=H\$2'24
46	=H\$3'24	=H\$3'24	=H\$3'24
47	=(1.3-0.75)*10^-4)*EXP(-1185*\$B\$78)	=(1.3-0.75)*10^-4)*EXP(-1185*\$B\$78)	=(1.3-0.75)*10^-4)*EXP(-1185*\$B\$78)
48	=(1.3-0.75)*10^-4)*EXP(-1185*\$B\$80)	=(1.3-0.75)*10^-4)*EXP(-1185*\$B\$80)	=(1.3-0.75)*10^-4)*EXP(-1185*\$B\$80)
49	=(1.3-0.75)*10^-4)*EXP(-1185*\$B\$82)	=(1.3-0.75)*10^-4)*EXP(-1185*\$B\$82)	=(1.3-0.75)*10^-4)*EXP(-1185*\$B\$82)
50	=H\$7'24	=H\$7'24	=H\$7'24
51	=H\$8'24	=H\$8'24	=H\$8'24
52	=H\$9'24	=H\$9'24	=H\$9'24
53	=(H\$20*(H\$4)/(H\$5))*3600	=(H\$20*(H\$4)/(H\$5))*3600	=(H\$20*(H\$4)/(H\$5))*3600
54	=(H\$21*(H\$4)/(H\$5))*3600	=(H\$21*(H\$4)/(H\$5))*3600	=(H\$21*(H\$4)/(H\$5))*3600
55	=(H\$22*(H\$4)/(H\$5))*3600	=(H\$22*(H\$4)/(H\$5))*3600	=(H\$22*(H\$4)/(H\$5))*3600
56			
57	=F(H\$23-0.0,1,1/(1+(H\$34*(H\$8)/(H\$30))))	=F(H\$23-0.0,1,1/(1+(H\$34*(H\$8)/(H\$30))))	=F(H\$23-0.0,1,1/(1+(H\$34*(H\$8)/(H\$30))))
58	=F(H\$23-0.0,1,1/(1+(H\$34*(H\$8)/(H\$31))))	=F(H\$23-0.0,1,1/(1+(H\$34*(H\$8)/(H\$31))))	=F(H\$23-0.0,1,1/(1+(H\$34*(H\$8)/(H\$31))))
59	=F(H\$23-0.0,1,1/(1+(H\$34*(H\$8)/(H\$32))))	=F(H\$23-0.0,1,1/(1+(H\$34*(H\$8)/(H\$32))))	=F(H\$23-0.0,1,1/(1+(H\$34*(H\$8)/(H\$32))))
60	=F(H\$23-0.0,1,1/(1+(H\$35*(H\$5)/(H\$30))))	=F(H\$23-0.0,1,1/(1+(H\$35*(H\$5)/(H\$30))))	=F(H\$23-0.0,1,1/(1+(H\$35*(H\$5)/(H\$30))))
61	=F(H\$23-0.0,1,1/(1+(H\$35*(H\$5)/(H\$31))))	=F(H\$23-0.0,1,1/(1+(H\$35*(H\$5)/(H\$31))))	=F(H\$23-0.0,1,1/(1+(H\$35*(H\$5)/(H\$31))))
62	=F(H\$23-0.0,1,1/(1+(H\$35*(H\$5)/(H\$32))))	=F(H\$23-0.0,1,1/(1+(H\$35*(H\$5)/(H\$32))))	=F(H\$23-0.0,1,1/(1+(H\$35*(H\$5)/(H\$32))))
63	=F(H\$23-0.0,1,1/(1+(H\$37*(H\$5)/(H\$30))))	=F(H\$23-0.0,1,1/(1+(H\$37*(H\$5)/(H\$30))))	=F(H\$23-0.0,1,1/(1+(H\$37*(H\$5)/(H\$30))))
64	=F(H\$23-0.0,1,1/(1+(H\$37*(H\$5)/(H\$31))))	=F(H\$23-0.0,1,1/(1+(H\$37*(H\$5)/(H\$31))))	=F(H\$23-0.0,1,1/(1+(H\$37*(H\$5)/(H\$31))))
65	=F(H\$23-0.0,1,1/(1+(H\$37*(H\$5)/(H\$32))))	=F(H\$23-0.0,1,1/(1+(H\$37*(H\$5)/(H\$32))))	=F(H\$23-0.0,1,1/(1+(H\$37*(H\$5)/(H\$32))))
66	=F(H\$23-0.0,1,1/(1+(H\$34*(H\$8)/(H\$30))))	=F(H\$23-0.0,1,1/(1+(H\$34*(H\$8)/(H\$30))))	=F(H\$23-0.0,1,1/(1+(H\$34*(H\$8)/(H\$30))))
67	=F(H\$23-0.0,1,1/(1+(H\$34*(H\$8)/(H\$31))))	=F(H\$23-0.0,1,1/(1+(H\$34*(H\$8)/(H\$31))))	=F(H\$23-0.0,1,1/(1+(H\$34*(H\$8)/(H\$31))))
68	=F(H\$23-0.0,1,1/(1+(H\$34*(H\$8)/(H\$32))))	=F(H\$23-0.0,1,1/(1+(H\$34*(H\$8)/(H\$32))))	=F(H\$23-0.0,1,1/(1+(H\$34*(H\$8)/(H\$32))))
69	=F(H\$23-0.0,1,1/(1+(H\$35*(H\$5)/(H\$30))))	=F(H\$23-0.0,1,1/(1+(H\$35*(H\$5)/(H\$30))))	=F(H\$23-0.0,1,1/(1+(H\$35*(H\$5)/(H\$30))))
70	=F(H\$23-0.0,1,1/(1+(H\$35*(H\$5)/(H\$31))))	=F(H\$23-0.0,1,1/(1+(H\$35*(H\$5)/(H\$31))))	=F(H\$23-0.0,1,1/(1+(H\$35*(H\$5)/(H\$31))))
71	=F(H\$23-0.0,1,1/(1+(H\$35*(H\$5)/(H\$32))))	=F(H\$23-0.0,1,1/(1+(H\$35*(H\$5)/(H\$32))))	=F(H\$23-0.0,1,1/(1+(H\$35*(H\$5)/(H\$32))))
72	=F(H\$23-0.0,1,1/(1+(H\$37*(H\$5)/(H\$30))))	=F(H\$23-0.0,1,1/(1+(H\$37*(H\$5)/(H\$30))))	=F(H\$23-0.0,1,1/(1+(H\$37*(H\$5)/(H\$30))))
73	=F(H\$23-0.0,1,1/(1+(H\$37*(H\$5)/(H\$31))))	=F(H\$23-0.0,1,1/(1+(H\$37*(H\$5)/(H\$31))))	=F(H\$23-0.0,1,1/(1+(H\$37*(H\$5)/(H\$31))))
74	=F(H\$23-0.0,1,1/(1+(H\$37*(H\$5)/(H\$32))))	=F(H\$23-0.0,1,1/(1+(H\$37*(H\$5)/(H\$32))))	=F(H\$23-0.0,1,1/(1+(H\$37*(H\$5)/(H\$32))))
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56	MSIV Leakage Pathway Combined Elemental Removal Efficiency	
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60	$=1-(1-C60)*(1+H60)*(1-SM60)$	$=1-(1-D60)*(1-R60)*(1-SM60)$
61	$=1-(1-C61)*(1+H61)*(1-SM61)$	$=1-(1-D61)*(1-R61)*(1-SM61)$
62	$=1-(1-C62)*(1+H62)*(1-SM62)$	$=1-(1-D62)*(1-R62)*(1-SM62)$
63	$=1-(1-C63)*(1+H63)*(1-SM63)$	$=1-(1-D63)*(1-R63)*(1-SM63)$
64	$=1-(1-C64)*(1+H64)*(1-SM64)$	$=1-(1-D64)*(1-R64)*(1-SM64)$
65	$=1-(1-C65)*(1+H65)*(1-SM65)$	$=1-(1-D65)*(1-R65)*(1-SM65)$
66		
67	Combined DF	
68	Line A	Line B
69	$=1/(1-Q60)$	$=1/(1-R60)$
70	$=1/(1-Q61)$	$=1/(1-R61)$
71	$=1/(1-Q62)$	$=1/(1-R62)$
72	$=1/(1-Q63)$	$=1/(1-R63)$
73	$=1/(1-Q64)$	$=1/(1-R64)$
74	$=1/(1-Q65)$	$=1/(1-R65)$
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	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V				
1				LGS Main Steam Piping Removal Efficiency Based on the																						
2				NRC AEB-98-03 Monte Carlo Settling Velocity Distribution																						
3																										
4																						Line A				
5																										
6	Probability	Lower	Upper	Settling	Settling	Removal Efficiency				Line A	Removal Efficiency				Line B							Released Settling	Cumulative			
7	Group	Bound	Bound	Velocity	Velocity	Line A	Line A	Line A thru	Net Release	Line B	Line B	Line B thru	Net Release	Line B								Velocity Probability	Probability			
8				(m/sec)	(ft/sec)	Inboard	Outboard	Condenser	Fraction	Inboard	Outboard	Condenser	Fraction									Distribution				
9	1	0.00%	0.01%	1.170E-04	3.839E-04	63.34%	83.81%	89.44%	6.27E-07	0.00%	82.07%	89.44%	1.89E-06					99.3733%	98.1063%			0.440%	0.44%			
10	2	0.01%	0.30%	1.331E-04	4.366E-04	66.28%	85.49%	90.59%	1.34E-05	0.00%	83.89%	90.59%	4.39E-05					99.5396%	98.4846%			9.372%	9.81%			
11	3	0.30%	1.00%	1.661E-04	5.451E-04	71.05%	88.03%	92.32%	1.86E-05	0.00%	86.67%	92.32%	7.17E-05					99.7339%	98.9764%			13.077%	22.89%			
12	4	1.00%	3.00%	1.965E-04	6.447E-04	74.37%	89.69%	93.43%	3.47E-05	0.00%	88.49%	93.43%	1.51E-04					99.8264%	99.2438%			24.378%	47.27%			
13	5	3.00%	5.00%	2.509E-04	8.231E-04	78.75%	91.74%	94.78%	1.83E-05	0.00%	90.76%	94.78%	9.65E-05					99.9084%	99.5174%			12.868%	60.14%			
14	6	5.00%	8.00%	2.967E-04	9.733E-04	81.42%	92.92%	95.55%	1.76E-05	0.00%	92.07%	95.55%	1.06E-04					99.9415%	99.6470%			12.326%	72.46%			
15	7	8.00%	10.00%	3.589E-04	1.178E-03	84.13%	94.08%	96.29%	6.97E-06	0.00%	93.35%	96.29%	4.93E-05					99.9652%	99.7536%			4.891%	77.35%			
16	8	10.00%	15.00%	3.995E-04	1.311E-03	85.51%	94.65%	96.66%	1.30E-05	0.00%	93.99%	96.66%	1.01E-04					99.9741%	99.7990%			9.105%	86.48%			
17	9	15.00%	20.00%	4.971E-04	1.631E-03	88.01%	95.65%	97.30%	7.05E-06	0.00%	95.11%	97.30%	6.61E-05					99.9859%	99.8678%			4.948%	91.40%			
18	10	20.00%	25.00%	6.015E-04	1.973E-03	89.88%	96.38%	97.75%	4.11E-06	0.00%	95.92%	97.75%	4.58E-05					99.9918%	99.9085%			2.887%	94.29%			
19	11	25.00%	30.00%	7.104E-04	2.331E-03	91.30%	96.92%	98.09%	2.56E-06	0.00%	96.53%	98.09%	3.31E-05					99.9949%	99.9337%			1.796%	96.09%			
20	12	30.00%	35.00%	8.229E-04	2.700E-03	92.40%	97.33%	98.35%	1.68E-06	0.00%	96.99%	98.35%	2.49E-05					99.9966%	99.9503%			1.178%	97.27%			
21	13	35.00%	40.00%	9.510E-04	3.120E-03	93.35%	97.68%	98.57%	1.10E-06	0.00%	97.38%	98.57%	1.87E-05					99.9978%	99.9625%			0.775%	98.04%			
22	14	40.00%	45.00%	1.093E-03	3.585E-03	94.17%	97.97%	98.75%	7.38E-07	0.00%	97.71%	98.75%	1.43E-05					99.9985%	99.9715%			0.518%	98.56%			
23	15	45.00%	50.00%	1.235E-03	4.053E-03	94.80%	98.20%	98.89%	5.16E-07	0.00%	97.97%	98.89%	1.12E-05					99.9990%	99.9776%			0.362%	98.92%			
24	16	50.00%	60.00%	1.383E-03	4.538E-03	95.33%	98.39%	99.01%	7.42E-07	0.00%	98.19%	99.01%	1.79E-05					99.9993%	99.9821%			0.521%	99.44%			
25	17	60.00%	70.00%	1.689E-03	5.542E-03	96.15%	98.68%	99.19%	4.13E-07	0.00%	98.51%	99.19%	1.21E-05					99.9996%	99.9879%			0.290%	99.73%			
26	18	70.00%	80.00%	2.099E-03	6.887E-03	96.88%	98.94%	99.35%	2.18E-07	0.00%	98.80%	99.35%	7.87E-06					99.9998%	99.9921%			0.153%	99.89%			
27	19	80.00%	90.00%	2.606E-03	8.549E-03	97.47%	99.14%	99.47%	1.15E-07	0.00%	99.03%	99.47%	5.12E-06					99.9999%	99.9949%			0.081%	99.97%			
28	20	90.00%	100.00%	3.478E-03	1.141E-02	98.09%	99.35%	99.60%	4.88E-08	0.00%	99.27%	99.60%	2.89E-06					100.0000%	99.9971%			0.034%	100.00%			
29									TOTAL				TOTAL										1.00E+00			
30										Line A Effective Removal Efficiency	99.986%		Line B Effective Removal Efficiency		99.912%											

	A	B	C	D	E	F	G
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5		Lower	Upper		Settling	Settling	
6	Probability	Probability	Probability		Velocity	Velocity	
7	Group	Bound	Bound		(m/sec)	(ft/sec)	
8	1	0	0.0001		0.000117	=E8/0.3048	
9	2	0.0001	0.003		0.000133081520809853	=E9/0.3048	
10	3	0.003	0.01		0.000166148245494175	=E10/0.3048	
11	4	0.01	0.03		0.000196502227772591	=E11/0.3048	
12	5	0.03	0.05		0.000250891316056278	=E12/0.3048	
13	6	0.05	0.08		0.000296662738031939	=E13/0.3048	
14	7	0.08	0.1		0.00035893926944301	=E14/0.3048	
15	8	0.1	0.15		0.000399477587485597	=E15/0.3048	
16	9	0.15	0.2		0.000497103736800292	=E16/0.3048	
17	10	0.2	0.25		0.000601518740129469	=E17/0.3048	
18	11	0.25	0.3		0.000710385385958295	=E18/0.3048	
19	12	0.3	0.35		0.000822937226009122	=E19/0.3048	
20	13	0.35	0.4		0.000950984320404363	=E20/0.3048	
21	14	0.4	0.45		0.00109271254281089	=E21/0.3048	
22	15	0.45	0.5		0.00123526764811351	=E22/0.3048	
23	16	0.5	0.6		0.00138306639186177	=E23/0.3048	
24	17	0.6	0.7		0.00168908304608882	=E24/0.3048	
25	18	0.7	0.8		0.00209925495855976	=E25/0.3048	
26	19	0.8	0.9		0.00260576880730875	=E26/0.3048	
27	20	0.9	1		0.00347806038525462	=E27/0.3048	
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6	Line A
7	Inboard
8	$=1-(1/(1+((((F8*DF Determination!\$C\$7)/DF Determination!\$C\$8)*3600)*DF Determination!\$C\$8)/DF Determination!\$C\$30)))$
9	$=1-(1/(1+((((F9*DF Determination!\$C\$7)/DF Determination!\$C\$8)*3600)*DF Determination!\$C\$8)/DF Determination!\$C\$30)))$
10	$=1-(1/(1+((((F10*DF Determination!\$C\$7)/DF Determination!\$C\$8)*3600)*DF Determination!\$C\$8)/DF Determination!\$C\$30)))$
11	$=1-(1/(1+((((F11*DF Determination!\$C\$7)/DF Determination!\$C\$8)*3600)*DF Determination!\$C\$8)/DF Determination!\$C\$30)))$
12	$=1-(1/(1+((((F12*DF Determination!\$C\$7)/DF Determination!\$C\$8)*3600)*DF Determination!\$C\$8)/DF Determination!\$C\$30)))$
13	$=1-(1/(1+((((F13*DF Determination!\$C\$7)/DF Determination!\$C\$8)*3600)*DF Determination!\$C\$8)/DF Determination!\$C\$30)))$
14	$=1-(1/(1+((((F14*DF Determination!\$C\$7)/DF Determination!\$C\$8)*3600)*DF Determination!\$C\$8)/DF Determination!\$C\$30)))$
15	$=1-(1/(1+((((F15*DF Determination!\$C\$7)/DF Determination!\$C\$8)*3600)*DF Determination!\$C\$8)/DF Determination!\$C\$30)))$
16	$=1-(1/(1+((((F16*DF Determination!\$C\$7)/DF Determination!\$C\$8)*3600)*DF Determination!\$C\$8)/DF Determination!\$C\$30)))$
17	$=1-(1/(1+((((F17*DF Determination!\$C\$7)/DF Determination!\$C\$8)*3600)*DF Determination!\$C\$8)/DF Determination!\$C\$30)))$
18	$=1-(1/(1+((((F18*DF Determination!\$C\$7)/DF Determination!\$C\$8)*3600)*DF Determination!\$C\$8)/DF Determination!\$C\$30)))$
19	$=1-(1/(1+((((F19*DF Determination!\$C\$7)/DF Determination!\$C\$8)*3600)*DF Determination!\$C\$8)/DF Determination!\$C\$30)))$
20	$=1-(1/(1+((((F20*DF Determination!\$C\$7)/DF Determination!\$C\$8)*3600)*DF Determination!\$C\$8)/DF Determination!\$C\$30)))$
21	$=1-(1/(1+((((F21*DF Determination!\$C\$7)/DF Determination!\$C\$8)*3600)*DF Determination!\$C\$8)/DF Determination!\$C\$30)))$
22	$=1-(1/(1+((((F22*DF Determination!\$C\$7)/DF Determination!\$C\$8)*3600)*DF Determination!\$C\$8)/DF Determination!\$C\$30)))$
23	$=1-(1/(1+((((F23*DF Determination!\$C\$7)/DF Determination!\$C\$8)*3600)*DF Determination!\$C\$8)/DF Determination!\$C\$30)))$
24	$=1-(1/(1+((((F24*DF Determination!\$C\$7)/DF Determination!\$C\$8)*3600)*DF Determination!\$C\$8)/DF Determination!\$C\$30)))$
25	$=1-(1/(1+((((F25*DF Determination!\$C\$7)/DF Determination!\$C\$8)*3600)*DF Determination!\$C\$8)/DF Determination!\$C\$30)))$
26	$=1-(1/(1+((((F26*DF Determination!\$C\$7)/DF Determination!\$C\$8)*3600)*DF Determination!\$C\$8)/DF Determination!\$C\$30)))$
27	$=1-(1/(1+((((F27*DF Determination!\$C\$7)/DF Determination!\$C\$8)*3600)*DF Determination!\$C\$8)/DF Determination!\$C\$30)))$
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1	LGS Main Steam Piping Removal Efficiency Based on the N
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5	Removal Efficiency
6	Line A
7	Outboard
8	$=1-(1/(1+((((F8*DF Determination!H7)/DF Determination!H8)*3600)*DF Determination!H8)/DF Determination!H30)))$
9	$=1-(1/(1+((((F9*DF Determination!H7)/DF Determination!H8)*3600)*DF Determination!H8)/DF Determination!H30)))$
10	$=1-(1/(1+((((F10*DF Determination!H7)/DF Determination!H8)*3600)*DF Determination!H8)/DF Determination!H30)))$
11	$=1-(1/(1+((((F11*DF Determination!H7)/DF Determination!H8)*3600)*DF Determination!H8)/DF Determination!H30)))$
12	$=1-(1/(1+((((F12*DF Determination!H7)/DF Determination!H8)*3600)*DF Determination!H8)/DF Determination!H30)))$
13	$=1-(1/(1+((((F13*DF Determination!H7)/DF Determination!H8)*3600)*DF Determination!H8)/DF Determination!H30)))$
14	$=1-(1/(1+((((F14*DF Determination!H7)/DF Determination!H8)*3600)*DF Determination!H8)/DF Determination!H30)))$
15	$=1-(1/(1+((((F15*DF Determination!H7)/DF Determination!H8)*3600)*DF Determination!H8)/DF Determination!H30)))$
16	$=1-(1/(1+((((F16*DF Determination!H7)/DF Determination!H8)*3600)*DF Determination!H8)/DF Determination!H30)))$
17	$=1-(1/(1+((((F17*DF Determination!H7)/DF Determination!H8)*3600)*DF Determination!H8)/DF Determination!H30)))$
18	$=1-(1/(1+((((F18*DF Determination!H7)/DF Determination!H8)*3600)*DF Determination!H8)/DF Determination!H30)))$
19	$=1-(1/(1+((((F19*DF Determination!H7)/DF Determination!H8)*3600)*DF Determination!H8)/DF Determination!H30)))$
20	$=1-(1/(1+((((F20*DF Determination!H7)/DF Determination!H8)*3600)*DF Determination!H8)/DF Determination!H30)))$
21	$=1-(1/(1+((((F21*DF Determination!H7)/DF Determination!H8)*3600)*DF Determination!H8)/DF Determination!H30)))$
22	$=1-(1/(1+((((F22*DF Determination!H7)/DF Determination!H8)*3600)*DF Determination!H8)/DF Determination!H30)))$
23	$=1-(1/(1+((((F23*DF Determination!H7)/DF Determination!H8)*3600)*DF Determination!H8)/DF Determination!H30)))$
24	$=1-(1/(1+((((F24*DF Determination!H7)/DF Determination!H8)*3600)*DF Determination!H8)/DF Determination!H30)))$
25	$=1-(1/(1+((((F25*DF Determination!H7)/DF Determination!H8)*3600)*DF Determination!H8)/DF Determination!H30)))$
26	$=1-(1/(1+((((F26*DF Determination!H7)/DF Determination!H8)*3600)*DF Determination!H8)/DF Determination!H30)))$
27	$=1-(1/(1+((((F27*DF Determination!H7)/DF Determination!H8)*3600)*DF Determination!H8)/DF Determination!H30)))$
28	TOTAL
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1	IRC AEB-98-03 Monte Carlo Settling Velocity Distribution
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6	Line A thru
7	Condenser
8	=1-(1/(1+(((((\$F8*DF Determination!\$M\$7)/DF Determination!\$M\$8)*3600)*DF Determination!\$M\$8)/DF Determination!\$M\$30)))
9	=1-(1/(1+(((((\$F9*DF Determination!\$M\$7)/DF Determination!\$M\$8)*3600)*DF Determination!\$M\$8)/DF Determination!\$M\$30)))
10	=1-(1/(1+(((((\$F10*DF Determination!\$M\$7)/DF Determination!\$M\$8)*3600)*DF Determination!\$M\$8)/DF Determination!\$M\$30)))
11	=1-(1/(1+(((((\$F11*DF Determination!\$M\$7)/DF Determination!\$M\$8)*3600)*DF Determination!\$M\$8)/DF Determination!\$M\$30)))
12	=1-(1/(1+(((((\$F12*DF Determination!\$M\$7)/DF Determination!\$M\$8)*3600)*DF Determination!\$M\$8)/DF Determination!\$M\$30)))
13	=1-(1/(1+(((((\$F13*DF Determination!\$M\$7)/DF Determination!\$M\$8)*3600)*DF Determination!\$M\$8)/DF Determination!\$M\$30)))
14	=1-(1/(1+(((((\$F14*DF Determination!\$M\$7)/DF Determination!\$M\$8)*3600)*DF Determination!\$M\$8)/DF Determination!\$M\$30)))
15	=1-(1/(1+(((((\$F15*DF Determination!\$M\$7)/DF Determination!\$M\$8)*3600)*DF Determination!\$M\$8)/DF Determination!\$M\$30)))
16	=1-(1/(1+(((((\$F16*DF Determination!\$M\$7)/DF Determination!\$M\$8)*3600)*DF Determination!\$M\$8)/DF Determination!\$M\$30)))
17	=1-(1/(1+(((((\$F17*DF Determination!\$M\$7)/DF Determination!\$M\$8)*3600)*DF Determination!\$M\$8)/DF Determination!\$M\$30)))
18	=1-(1/(1+(((((\$F18*DF Determination!\$M\$7)/DF Determination!\$M\$8)*3600)*DF Determination!\$M\$8)/DF Determination!\$M\$30)))
19	=1-(1/(1+(((((\$F19*DF Determination!\$M\$7)/DF Determination!\$M\$8)*3600)*DF Determination!\$M\$8)/DF Determination!\$M\$30)))
20	=1-(1/(1+(((((\$F20*DF Determination!\$M\$7)/DF Determination!\$M\$8)*3600)*DF Determination!\$M\$8)/DF Determination!\$M\$30)))
21	=1-(1/(1+(((((\$F21*DF Determination!\$M\$7)/DF Determination!\$M\$8)*3600)*DF Determination!\$M\$8)/DF Determination!\$M\$30)))
22	=1-(1/(1+(((((\$F22*DF Determination!\$M\$7)/DF Determination!\$M\$8)*3600)*DF Determination!\$M\$8)/DF Determination!\$M\$30)))
23	=1-(1/(1+(((((\$F23*DF Determination!\$M\$7)/DF Determination!\$M\$8)*3600)*DF Determination!\$M\$8)/DF Determination!\$M\$30)))
24	=1-(1/(1+(((((\$F24*DF Determination!\$M\$7)/DF Determination!\$M\$8)*3600)*DF Determination!\$M\$8)/DF Determination!\$M\$30)))
25	=1-(1/(1+(((((\$F25*DF Determination!\$M\$7)/DF Determination!\$M\$8)*3600)*DF Determination!\$M\$8)/DF Determination!\$M\$30)))
26	=1-(1/(1+(((((\$F26*DF Determination!\$M\$7)/DF Determination!\$M\$8)*3600)*DF Determination!\$M\$8)/DF Determination!\$M\$30)))
27	=1-(1/(1+(((((\$F27*DF Determination!\$M\$7)/DF Determination!\$M\$8)*3600)*DF Determination!\$M\$8)/DF Determination!\$M\$30)))
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30	Line A Effective Removal Efficiency

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5	Line A	
6	Net Release	
7	Fraction	
8	$=($C8-$B8)*(1-H8)*(1-I8)*(1-J8)$	
9	$=($C9-$B9)*(1-H9)*(1-I9)*(1-J9)$	
10	$=($C10-$B10)*(1-H10)*(1-I10)*(1-J10)$	
11	$=($C11-$B11)*(1-H11)*(1-I11)*(1-J11)$	
12	$=($C12-$B12)*(1-H12)*(1-I12)*(1-J12)$	
13	$=($C13-$B13)*(1-H13)*(1-I13)*(1-J13)$	
14	$=($C14-$B14)*(1-H14)*(1-I14)*(1-J14)$	
15	$=($C15-$B15)*(1-H15)*(1-I15)*(1-J15)$	
16	$=($C16-$B16)*(1-H16)*(1-I16)*(1-J16)$	
17	$=($C17-$B17)*(1-H17)*(1-I17)*(1-J17)$	
18	$=($C18-$B18)*(1-H18)*(1-I18)*(1-J18)$	
19	$=($C19-$B19)*(1-H19)*(1-I19)*(1-J19)$	
20	$=($C20-$B20)*(1-H20)*(1-I20)*(1-J20)$	
21	$=($C21-$B21)*(1-H21)*(1-I21)*(1-J21)$	
22	$=($C22-$B22)*(1-H22)*(1-I22)*(1-J22)$	
23	$=($C23-$B23)*(1-H23)*(1-I23)*(1-J23)$	
24	$=($C24-$B24)*(1-H24)*(1-I24)*(1-J24)$	
25	$=($C25-$B25)*(1-H25)*(1-I25)*(1-J25)$	
26	$=($C26-$B26)*(1-H26)*(1-I26)*(1-J26)$	
27	$=($C27-$B27)*(1-H27)*(1-I27)*(1-J27)$	
28	=SUM(K8:K27)	
29		
30	=1-K28	

	M
1	
2	
3	
4	
5	
6	Line B
7	Inboard
8	=IF("DF Determination"!\$D\$23=0,0,1-(1/(1+(((((\$F8*DF Determination"!\$D\$7)/DF Determination"!\$D\$8)*3600)**DF Determination"!\$D\$8)/DF Determination
9	=IF("DF Determination"!\$D\$23=0,0,1-(1/(1+(((((\$F9*DF Determination"!\$D\$7)/DF Determination"!\$D\$8)*3600)**DF Determination"!\$D\$8)/DF Determination
10	=IF("DF Determination"!\$D\$23=0,0,1-(1/(1+(((((\$F10*DF Determination"!\$D\$7)/DF Determination"!\$D\$8)*3600)**DF Determination"!\$D\$8)/DF Determination
11	=IF("DF Determination"!\$D\$23=0,0,1-(1/(1+(((((\$F11*DF Determination"!\$D\$7)/DF Determination"!\$D\$8)*3600)**DF Determination"!\$D\$8)/DF Determination
12	=IF("DF Determination"!\$D\$23=0,0,1-(1/(1+(((((\$F12*DF Determination"!\$D\$7)/DF Determination"!\$D\$8)*3600)**DF Determination"!\$D\$8)/DF Determination
13	=IF("DF Determination"!\$D\$23=0,0,1-(1/(1+(((((\$F13*DF Determination"!\$D\$7)/DF Determination"!\$D\$8)*3600)**DF Determination"!\$D\$8)/DF Determination
14	=IF("DF Determination"!\$D\$23=0,0,1-(1/(1+(((((\$F14*DF Determination"!\$D\$7)/DF Determination"!\$D\$8)*3600)**DF Determination"!\$D\$8)/DF Determination
15	=IF("DF Determination"!\$D\$23=0,0,1-(1/(1+(((((\$F15*DF Determination"!\$D\$7)/DF Determination"!\$D\$8)*3600)**DF Determination"!\$D\$8)/DF Determination
16	=IF("DF Determination"!\$D\$23=0,0,1-(1/(1+(((((\$F16*DF Determination"!\$D\$7)/DF Determination"!\$D\$8)*3600)**DF Determination"!\$D\$8)/DF Determination
17	=IF("DF Determination"!\$D\$23=0,0,1-(1/(1+(((((\$F17*DF Determination"!\$D\$7)/DF Determination"!\$D\$8)*3600)**DF Determination"!\$D\$8)/DF Determination
18	=IF("DF Determination"!\$D\$23=0,0,1-(1/(1+(((((\$F18*DF Determination"!\$D\$7)/DF Determination"!\$D\$8)*3600)**DF Determination"!\$D\$8)/DF Determination
19	=IF("DF Determination"!\$D\$23=0,0,1-(1/(1+(((((\$F19*DF Determination"!\$D\$7)/DF Determination"!\$D\$8)*3600)**DF Determination"!\$D\$8)/DF Determination
20	=IF("DF Determination"!\$D\$23=0,0,1-(1/(1+(((((\$F20*DF Determination"!\$D\$7)/DF Determination"!\$D\$8)*3600)**DF Determination"!\$D\$8)/DF Determination
21	=IF("DF Determination"!\$D\$23=0,0,1-(1/(1+(((((\$F21*DF Determination"!\$D\$7)/DF Determination"!\$D\$8)*3600)**DF Determination"!\$D\$8)/DF Determination
22	=IF("DF Determination"!\$D\$23=0,0,1-(1/(1+(((((\$F22*DF Determination"!\$D\$7)/DF Determination"!\$D\$8)*3600)**DF Determination"!\$D\$8)/DF Determination
23	=IF("DF Determination"!\$D\$23=0,0,1-(1/(1+(((((\$F23*DF Determination"!\$D\$7)/DF Determination"!\$D\$8)*3600)**DF Determination"!\$D\$8)/DF Determination
24	=IF("DF Determination"!\$D\$23=0,0,1-(1/(1+(((((\$F24*DF Determination"!\$D\$7)/DF Determination"!\$D\$8)*3600)**DF Determination"!\$D\$8)/DF Determination
25	=IF("DF Determination"!\$D\$23=0,0,1-(1/(1+(((((\$F25*DF Determination"!\$D\$7)/DF Determination"!\$D\$8)*3600)**DF Determination"!\$D\$8)/DF Determination
26	=IF("DF Determination"!\$D\$23=0,0,1-(1/(1+(((((\$F26*DF Determination"!\$D\$7)/DF Determination"!\$D\$8)*3600)**DF Determination"!\$D\$8)/DF Determination
27	=IF("DF Determination"!\$D\$23=0,0,1-(1/(1+(((((\$F27*DF Determination"!\$D\$7)/DF Determination"!\$D\$8)*3600)**DF Determination"!\$D\$8)/DF Determination
28	
29	
30	

	N
1	
2	
3	
4	
5	Removal Efficiency
6	Line B
7	Outboard
8	$=1-(1/(1+((((\$F8*DF Determination!\$I\$7)/DF Determination!\$I\$8)*3600)*DF Determination!\$I\$8)/DF Determination!\$I\$30)))$
9	$=1-(1/(1+((((\$F9*DF Determination!\$I\$7)/DF Determination!\$I\$8)*3600)*DF Determination!\$I\$8)/DF Determination!\$I\$30)))$
10	$=1-(1/(1+((((\$F10*DF Determination!\$I\$7)/DF Determination!\$I\$8)*3600)*DF Determination!\$I\$8)/DF Determination!\$I\$30)))$
11	$=1-(1/(1+((((\$F11*DF Determination!\$I\$7)/DF Determination!\$I\$8)*3600)*DF Determination!\$I\$8)/DF Determination!\$I\$30)))$
12	$=1-(1/(1+((((\$F12*DF Determination!\$I\$7)/DF Determination!\$I\$8)*3600)*DF Determination!\$I\$8)/DF Determination!\$I\$30)))$
13	$=1-(1/(1+((((\$F13*DF Determination!\$I\$7)/DF Determination!\$I\$8)*3600)*DF Determination!\$I\$8)/DF Determination!\$I\$30)))$
14	$=1-(1/(1+((((\$F14*DF Determination!\$I\$7)/DF Determination!\$I\$8)*3600)*DF Determination!\$I\$8)/DF Determination!\$I\$30)))$
15	$=1-(1/(1+((((\$F15*DF Determination!\$I\$7)/DF Determination!\$I\$8)*3600)*DF Determination!\$I\$8)/DF Determination!\$I\$30)))$
16	$=1-(1/(1+((((\$F16*DF Determination!\$I\$7)/DF Determination!\$I\$8)*3600)*DF Determination!\$I\$8)/DF Determination!\$I\$30)))$
17	$=1-(1/(1+((((\$F17*DF Determination!\$I\$7)/DF Determination!\$I\$8)*3600)*DF Determination!\$I\$8)/DF Determination!\$I\$30)))$
18	$=1-(1/(1+((((\$F18*DF Determination!\$I\$7)/DF Determination!\$I\$8)*3600)*DF Determination!\$I\$8)/DF Determination!\$I\$30)))$
19	$=1-(1/(1+((((\$F19*DF Determination!\$I\$7)/DF Determination!\$I\$8)*3600)*DF Determination!\$I\$8)/DF Determination!\$I\$30)))$
20	$=1-(1/(1+((((\$F20*DF Determination!\$I\$7)/DF Determination!\$I\$8)*3600)*DF Determination!\$I\$8)/DF Determination!\$I\$30)))$
21	$=1-(1/(1+((((\$F21*DF Determination!\$I\$7)/DF Determination!\$I\$8)*3600)*DF Determination!\$I\$8)/DF Determination!\$I\$30)))$
22	$=1-(1/(1+((((\$F22*DF Determination!\$I\$7)/DF Determination!\$I\$8)*3600)*DF Determination!\$I\$8)/DF Determination!\$I\$30)))$
23	$=1-(1/(1+((((\$F23*DF Determination!\$I\$7)/DF Determination!\$I\$8)*3600)*DF Determination!\$I\$8)/DF Determination!\$I\$30)))$
24	$=1-(1/(1+((((\$F24*DF Determination!\$I\$7)/DF Determination!\$I\$8)*3600)*DF Determination!\$I\$8)/DF Determination!\$I\$30)))$
25	$=1-(1/(1+((((\$F25*DF Determination!\$I\$7)/DF Determination!\$I\$8)*3600)*DF Determination!\$I\$8)/DF Determination!\$I\$30)))$
26	$=1-(1/(1+((((\$F26*DF Determination!\$I\$7)/DF Determination!\$I\$8)*3600)*DF Determination!\$I\$8)/DF Determination!\$I\$30)))$
27	$=1-(1/(1+((((\$F27*DF Determination!\$I\$7)/DF Determination!\$I\$8)*3600)*DF Determination!\$I\$8)/DF Determination!\$I\$30)))$
28	TOTAL
29	
30	Line B Effective Removal Efficiency

	0
1	
2	
3	
4	
5	
6	Line B thru
7	Condenser
8	$=1-(1/(1+((((\$F8*DF Determination!\$M\$7)/DF Determination!\$M\$8)*3600)*DF Determination!\$M\$8)/DF Determination!\$M\$30)))$
9	$=1-(1/(1+((((\$F9*DF Determination!\$M\$7)/DF Determination!\$M\$8)*3600)*DF Determination!\$M\$8)/DF Determination!\$M\$30)))$
10	$=1-(1/(1+((((\$F10*DF Determination!\$M\$7)/DF Determination!\$M\$8)*3600)*DF Determination!\$M\$8)/DF Determination!\$M\$30)))$
11	$=1-(1/(1+((((\$F11*DF Determination!\$M\$7)/DF Determination!\$M\$8)*3600)*DF Determination!\$M\$8)/DF Determination!\$M\$30)))$
12	$=1-(1/(1+((((\$F12*DF Determination!\$M\$7)/DF Determination!\$M\$8)*3600)*DF Determination!\$M\$8)/DF Determination!\$M\$30)))$
13	$=1-(1/(1+((((\$F13*DF Determination!\$M\$7)/DF Determination!\$M\$8)*3600)*DF Determination!\$M\$8)/DF Determination!\$M\$30)))$
14	$=1-(1/(1+((((\$F14*DF Determination!\$M\$7)/DF Determination!\$M\$8)*3600)*DF Determination!\$M\$8)/DF Determination!\$M\$30)))$
15	$=1-(1/(1+((((\$F15*DF Determination!\$M\$7)/DF Determination!\$M\$8)*3600)*DF Determination!\$M\$8)/DF Determination!\$M\$30)))$
16	$=1-(1/(1+((((\$F16*DF Determination!\$M\$7)/DF Determination!\$M\$8)*3600)*DF Determination!\$M\$8)/DF Determination!\$M\$30)))$
17	$=1-(1/(1+((((\$F17*DF Determination!\$M\$7)/DF Determination!\$M\$8)*3600)*DF Determination!\$M\$8)/DF Determination!\$M\$30)))$
18	$=1-(1/(1+((((\$F18*DF Determination!\$M\$7)/DF Determination!\$M\$8)*3600)*DF Determination!\$M\$8)/DF Determination!\$M\$30)))$
19	$=1-(1/(1+((((\$F19*DF Determination!\$M\$7)/DF Determination!\$M\$8)*3600)*DF Determination!\$M\$8)/DF Determination!\$M\$30)))$
20	$=1-(1/(1+((((\$F20*DF Determination!\$M\$7)/DF Determination!\$M\$8)*3600)*DF Determination!\$M\$8)/DF Determination!\$M\$30)))$
21	$=1-(1/(1+((((\$F21*DF Determination!\$M\$7)/DF Determination!\$M\$8)*3600)*DF Determination!\$M\$8)/DF Determination!\$M\$30)))$
22	$=1-(1/(1+((((\$F22*DF Determination!\$M\$7)/DF Determination!\$M\$8)*3600)*DF Determination!\$M\$8)/DF Determination!\$M\$30)))$
23	$=1-(1/(1+((((\$F23*DF Determination!\$M\$7)/DF Determination!\$M\$8)*3600)*DF Determination!\$M\$8)/DF Determination!\$M\$30)))$
24	$=1-(1/(1+((((\$F24*DF Determination!\$M\$7)/DF Determination!\$M\$8)*3600)*DF Determination!\$M\$8)/DF Determination!\$M\$30)))$
25	$=1-(1/(1+((((\$F25*DF Determination!\$M\$7)/DF Determination!\$M\$8)*3600)*DF Determination!\$M\$8)/DF Determination!\$M\$30)))$
26	$=1-(1/(1+((((\$F26*DF Determination!\$M\$7)/DF Determination!\$M\$8)*3600)*DF Determination!\$M\$8)/DF Determination!\$M\$30)))$
27	$=1-(1/(1+((((\$F27*DF Determination!\$M\$7)/DF Determination!\$M\$8)*3600)*DF Determination!\$M\$8)/DF Determination!\$M\$30)))$
28	
29	
30	

	P	Q	R
1			
2			
3			
4			
5	Line B		
6	Net Release		
7	Fraction		
8	$=(\$C8-\$B8)*(1-M8)*(1-N8)*(1-O8)$		$=1-(1-H8)*(1-I8)*(1-J8)$
9	$=(\$C9-\$B9)*(1-M9)*(1-N9)*(1-O9)$		$=1-(1-H9)*(1-I9)*(1-J9)$
10	$=(\$C10-\$B10)*(1-M10)*(1-N10)*(1-O10)$		$=1-(1-H10)*(1-I10)*(1-J10)$
11	$=(\$C11-\$B11)*(1-M11)*(1-N11)*(1-O11)$		$=1-(1-H11)*(1-I11)*(1-J11)$
12	$=(\$C12-\$B12)*(1-M12)*(1-N12)*(1-O12)$		$=1-(1-H12)*(1-I12)*(1-J12)$
13	$=(\$C13-\$B13)*(1-M13)*(1-N13)*(1-O13)$		$=1-(1-H13)*(1-I13)*(1-J13)$
14	$=(\$C14-\$B14)*(1-M14)*(1-N14)*(1-O14)$		$=1-(1-H14)*(1-I14)*(1-J14)$
15	$=(\$C15-\$B15)*(1-M15)*(1-N15)*(1-O15)$		$=1-(1-H15)*(1-I15)*(1-J15)$
16	$=(\$C16-\$B16)*(1-M16)*(1-N16)*(1-O16)$		$=1-(1-H16)*(1-I16)*(1-J16)$
17	$=(\$C17-\$B17)*(1-M17)*(1-N17)*(1-O17)$		$=1-(1-H17)*(1-I17)*(1-J17)$
18	$=(\$C18-\$B18)*(1-M18)*(1-N18)*(1-O18)$		$=1-(1-H18)*(1-I18)*(1-J18)$
19	$=(\$C19-\$B19)*(1-M19)*(1-N19)*(1-O19)$		$=1-(1-H19)*(1-I19)*(1-J19)$
20	$=(\$C20-\$B20)*(1-M20)*(1-N20)*(1-O20)$		$=1-(1-H20)*(1-I20)*(1-J20)$
21	$=(\$C21-\$B21)*(1-M21)*(1-N21)*(1-O21)$		$=1-(1-H21)*(1-I21)*(1-J21)$
22	$=(\$C22-\$B22)*(1-M22)*(1-N22)*(1-O22)$		$=1-(1-H22)*(1-I22)*(1-J22)$
23	$=(\$C23-\$B23)*(1-M23)*(1-N23)*(1-O23)$		$=1-(1-H23)*(1-I23)*(1-J23)$
24	$=(\$C24-\$B24)*(1-M24)*(1-N24)*(1-O24)$		$=1-(1-H24)*(1-I24)*(1-J24)$
25	$=(\$C25-\$B25)*(1-M25)*(1-N25)*(1-O25)$		$=1-(1-H25)*(1-I25)*(1-J25)$
26	$=(\$C26-\$B26)*(1-M26)*(1-N26)*(1-O26)$		$=1-(1-H26)*(1-I26)*(1-J26)$
27	$=(\$C27-\$B27)*(1-M27)*(1-N27)*(1-O27)$		$=1-(1-H27)*(1-I27)*(1-J27)$
28	=SUM(P8:P27)		
29			
30	=1-P28		

	S	T	U	V
1				
2				
3				
4			Line A	
5			Released Setting	
6			Velocity	Cumulative
7			Probability	Probability
			Distribution	
8	=1-(1-M8)*(1-N8)*(1-O8)		=K8/\$K\$28	=V7+U8
9	=1-(1-M9)*(1-N9)*(1-O9)		=K9/\$K\$28	=V8+U9
10	=1-(1-M10)*(1-N10)*(1-O10)		=K10/\$K\$28	=V9+U10
11	=1-(1-M11)*(1-N11)*(1-O11)		=K11/\$K\$28	=V10+U11
12	=1-(1-M12)*(1-N12)*(1-O12)		=K12/\$K\$28	=V11+U12
13	=1-(1-M13)*(1-N13)*(1-O13)		=K13/\$K\$28	=V12+U13
14	=1-(1-M14)*(1-N14)*(1-O14)		=K14/\$K\$28	=V13+U14
15	=1-(1-M15)*(1-N15)*(1-O15)		=K15/\$K\$28	=V14+U15
16	=1-(1-M16)*(1-N16)*(1-O16)		=K16/\$K\$28	=V15+U16
17	=1-(1-M17)*(1-N17)*(1-O17)		=K17/\$K\$28	=V16+U17
18	=1-(1-M18)*(1-N18)*(1-O18)		=K18/\$K\$28	=V17+U18
19	=1-(1-M19)*(1-N19)*(1-O19)		=K19/\$K\$28	=V18+U19
20	=1-(1-M20)*(1-N20)*(1-O20)		=K20/\$K\$28	=V19+U20
21	=1-(1-M21)*(1-N21)*(1-O21)		=K21/\$K\$28	=V20+U21
22	=1-(1-M22)*(1-N22)*(1-O22)		=K22/\$K\$28	=V21+U22
23	=1-(1-M23)*(1-N23)*(1-O23)		=K23/\$K\$28	=V22+U23
24	=1-(1-M24)*(1-N24)*(1-O24)		=K24/\$K\$28	=V23+U24
25	=1-(1-M25)*(1-N25)*(1-O25)		=K25/\$K\$28	=V24+U25
26	=1-(1-M26)*(1-N26)*(1-O26)		=K26/\$K\$28	=V25+U26
27	=1-(1-M27)*(1-N27)*(1-O27)		=K27/\$K\$28	=V26+U27
28			=SUM(U8:U27)	
29				
30				

LGS Condenser Characterization

High Pressure Condenser			Intermediate Pressure Condenser			Low Pressure Condenser		
Base Section (Rectangular Volume)			Base Section (Rectangular Volume)			Base Section (Rectangular Volume)		
33.96	Height (ft.)		33.96	Height (ft.)		33.96	Height (ft.)	
29.00	Length (East - West Direction) (ft.)		29.00	Length (East - West Direction) (ft.)		29.00	Length (East - West Direction) (ft.)	
46.42	Width (North - South Direction) (ft.)		40.42	Width (North - South Direction) (ft.)		34.42	Width (North - South Direction) (ft.)	
45710.75	Volume (ft ³)		39802.00	Volume (ft ³)		33893.25	Volume (ft ³)	
Flue Section (Trapezoidal Volume)			Flue Section (Trapezoidal Volume)			Flue Section (Trapezoidal Volume)		
18.67	Height (vertical) (ft.)		18.67	Height (vertical) (ft.)		18.67	Height (vertical) (ft.)	
29.00	Length (East - West Direction) (ft.)		29.00	Length (East - West Direction) (ft.)		29.00	Length (East - West Direction) (ft.)	
23.67	Top Width (North - South Direction) (ft.)		23.67	Top Width (North - South Direction) (ft.)		23.67	Top Width (North - South Direction) (ft.)	
46.42	Bottom Width (North - South Direction) (ft.)		40.42	Bottom Width (North - South Direction) (ft.)		34.42	Bottom Width (North - South Direction) (ft.)	
21.88	Slant Length (ft.)		20.46	Slant Length (ft.)		19.43	Slant Length (ft.)	
18969.22	Volume (ft ³)		17345.22	Volume (ft ³)		15721.22	Volume (ft ³)	
Top Section (Rectangular Volume)			Top Section (Rectangular Volume)			Top Section (Rectangular Volume)		
6.00	Height (ft.)		6.00	Height (ft.)		6.00	Height (ft.)	
29.00	Length (East - West Direction) (ft.)		29.00	Length (East - West Direction) (ft.)		29.00	Length (East - West Direction) (ft.)	
23.67	Width (North - South Direction) (ft.)		23.67	Width (North - South Direction) (ft.)		23.67	Width (North - South Direction) (ft.)	
4118.00	Volume (ft ³)		4118.00	Volume (ft ³)		4118.00	Volume (ft ³)	
4.33	Water Level (ft.)		4.33	Water Level (ft.)		4.33	Water Level (ft.)	
1346.08	Condenser Base Area (ft ²)		1172.08	Condenser Base Area (ft ²)		998.08	Condenser Base Area (ft ²)	
5833.03	Contained Water Volume (ft ³)		5079.03	Contained Water Volume (ft ³)		4325.03	Contained Water Volume (ft ³)	
350.696	Condenser Tube Surface Area (ft ²)		306.666	Condenser Tube Surface Area (ft ²)		262.638	Condenser Tube Surface Area (ft ²)	
1,190.720	Calculated Length of Tubes (ft.)		1,041,225	Calculated Length of Tubes (ft.)		891,736	Calculated Length of Tubes (ft.)	
8,219.44	Volume Displaced by Tubes (ft ³)		7,187.48	Volume Displaced by Tubes (ft ³)		6,155.58	Volume Displaced by Tubes (ft ³)	
1,346.08	Settling Area (floor only)		1,172.08	Settling Area (floor only)		998.08	Settling Area (floor only)	
9022.59	Deposition Area (floor plus Walls)		8299.89	Deposition Area (floor plus Walls)		7598.40	Deposition Area (floor plus Walls)	
Shell Volume (ft³) 68,797.97			Shell Volume (ft³) 61,265.22			Shell Volume (ft³) 53,732.47		
Volume Above Hotwell (ft³) 62,964.94			Volume Above Hotwell (ft³) 58,186.19			Volume Above Hotwell (ft³) 49,407.44		
Free Air Volume (ft³) 54,745.50			Free Air Volume (ft³) 48,998.71			Free Air Volume (ft³) 43,251.86		
Tube Lengths 48			Tube Lengths 42			Tube Lengths 36		
Condenser Tube O.D. (ft.) 0.09375								
Total Condenser Tube Surface Area (ft²) 920,000								
Tube Surface Area (ft ²), by shell 350,476			Tube Surface Area (ft ²), by shell 306,667			Tube Surface Area (ft ²), by shell 262,857		
Calculated Total Length of Tubes (ft.) 3,123,681								
Calculated Total Volume Displaced by Tubes (ft³) 21,562.50								
						References:		
			Total Shell Volume (ft³) 183,796			¹ LGS Dwg. No. 90-1097-5-100, Rev. F		
			Total Volume Above Hotwell (ft³) 168,559			² LGS Dwg. No. 90-1097-5-101, Rev. E		
			Total Free Air Volume (ft³) 146,996			³ LGS Dwg. No. 90-1097-5-102, Rev. E		
						⁴ LGS Dwg. No. 90-1097-5-112, Rev. K		
						⁵ LGS DBD No. L-S-21, Rev. 10, "Condensate & Condenser System"		

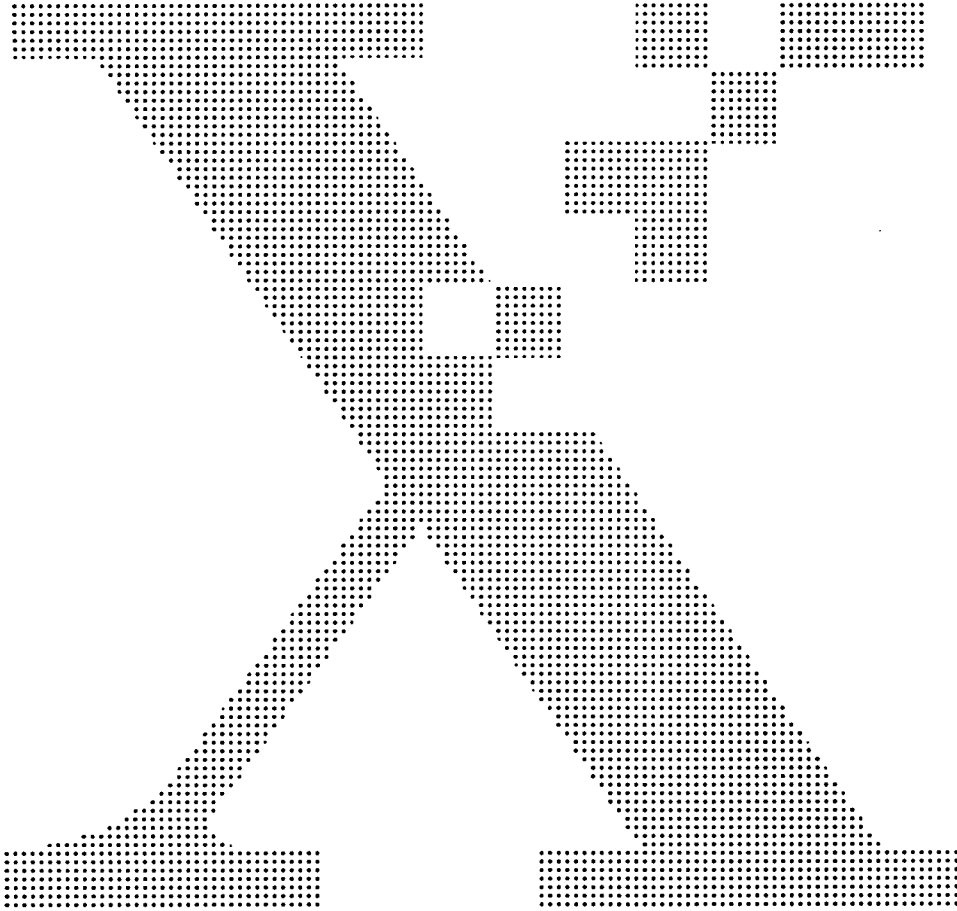
	A	B	C	D
1				
2				
3		Hlg		
4				
5			Base Section (Rectangular Volume)	
6				
7		$= (24 + (9/12)) * (9 + (2.5/12))$		Height (ft.)
8		29		Length (East - West)
9		$= (23 + (2.5/12)) * (23 + (2.5/12))$		Width (North - South)
10		$= C7 * C8 * C9$		Volume (ft ³)
11				
12				
13			Flue Section (Trapezoidal Volume)	
14				
15		$= 18 * (8/12)$		Height (vertical) (ft.)
16		$= C8$		Length (East - West)
17		$= 23 * (8/12)$		Top Width (North - South)
18		$= C9$		Bottom Width (North - South)
19		$= \text{SQRT}(C15^2 + ((C18 - C17)/2)^2)$		Slant Length (ft.)
20		$= (C17 * C15 * C16) * (((C18 - C17)/2) * C15 * C16)$		Volume (ft ³)
21				
22				
23			Top Section (Rectangular Volume)	
24				
25		6		Height (ft.)
26		$= C8$		Length (East - West)
27		$= 23 * (8/12)$		Width (North - South)
28		$= C25 * C26 * C27$		Volume (ft ³)
29				
30		$= (208 + (2.5/12)) * (203 + (10.5/12))$		Water Level (ft.)
31		$= C8 * C9$		Condenser Base Area
32		$= C30 * C31$		Contained Water Volume
33				
34		350696		Condenser Tube Surface Area
35		$= C34 * (\$E\$45 * \text{PI}())$		Calculated Length
36		$= C35 * (\text{PI}()) * (\$E\$45/2)^2$		Volume Displaced
37				
38		$= C8 * C9$		Settling Area (floor)
39		$= C38 + ((C7 - C30)^2 * (C9 + C8)) + C19^2 * C16 + C15 * (C17 + C18) + (2 * C25 * C26 + 2 * C25 * C27)$		Deposition Area (ft ²)
40				
41			Shell Volume (ft ³)	$= C10 + C20 + C28$
42			Volume Above Hotwell (ft ³)	$= D41 - C32$
43			Free Air Volume (ft ³)	$= D42 - C36$
44			Tube Lengths	48
45			Condenser Tube O.D. (ft.)	
46			Tube Surface Area (ft ²)	
47			Settling Area (ft ²) by shell	
48			Area (ft ²) by shell	
49			Length of Tubes (ft.)	
50			Volume Displaced by Tubes (ft ³)	
51				
52				
53				
54				
55				

	E	F	G	H	I	J
1						
2						
3				In		
4						
5					Base Section (Rectangular Volume)	
6						
7					$= (24 + (9/12)) + (9 + (2.5/12))$	Height (ft.)
8					29	Length (East - We
9					$= (20 + (2.5/12)) + (20 + (2.5/12))$	Width (North - Sou
10					$= 17'18''19$	Volume (ft ³)
11						
12						
13					Flue Section (Trapezoidal Volume)	
14						
15					$= 18 + (8/12)$	Height (vertical) (f
16					$= 18$	Length (East - We
17					$= 23 + (8/12)$	Top Width (North
18					$= 19$	Bottom Width (No
19					$= \text{SQRT}((115^2 + ((118 - 117)/2)^2)$	Slant Length (ft)
20					$= ((117 * 115 * 116) + (((118 - 117)/2) * 115 * 116))$	Volume (ft ³)
21						
22						
23					Top Section (Rectangular Volume)	
24						
25					6	Height (ft.)
26					$= 18$	Length (East - We
27					$= 23 + (8/12)$	Width (North - Sou
28					$= 125 * 126 * 127$	Volume (ft ³)
29						
30					$= (208 + (2.5/12)) - (203 + (10.5/12))$	Water Level (ft.)
31					$= 18'19$	Condenser Base /
32					$= 130'131$	Contained Water V
33						
34					306666	Condenser Tube S
35					$= 134 * (\$E\$45 * P(I))$	Calculated Length
36					$= 135 * (PI() * (\$E\$45 / 2)^2)$	Volume Displaced
37						
38					$= 18'19$	Setting Area (floc
39					$= 138 + ((17 - 130)^2 * (9 + 18)) + 119 * (2 * 116) + 115 * ((117 + 118) * (2 * 125 * 126 + 2 * 125 * 127))$	Deposition Area (f
40						
41					Shell Volume (ft ³)	$= 110 + 120 + 128$
42					Volume Above Hotwell (ft ³)	$= J41 - I32$
43					Free Air Volume (ft ³)	$= J42 - I36$
44					Tube Lengths	42
45	0.09375					
46	$= C34 + I34 + O34$					
47	$= D44 * (\$E\$46 / (\$D44 + \$J44 + \$P44))$					Area (ft ²), by shell
48	$= E46 / (E45 * PI())$					
49	$= E48 * (PI() * (E45 / 2)^2)$					
50						
51					Total Shell Volume (ft ³)	$= D41 + J41 + F$
52					Total Volume Above Hotwell (ft ³)	$= \text{SUM}(D42, J$
53					Total Free Air Volume (ft ³)	$= D42 + J42 + F$
54						
55						

	K	L	M	N	O	P	Q
1							
2							
3				L			
4							
5					Base Section (Rectangular Volume)		
6							
7					$= (24 + (9/12)) + (9 + (2.5/12))$	Height (ft.)	
8					29	Length (East - West)	
9					$= (17 + (2.5/12)) + (17 + (2.5/12))$	Width (North - South)	
10					$= 07 * 08 * 09$	Volume (ft ³)	
11							
12							
13					Flue Section (Trapezoidal Volume)		
14							
15					$= 18 + (8/12)$	Height (vertical) (ft)	
16					$= 08$	Length (East - West)	
17					$= 23 + (8/12)$	Top Width (North - South)	
18					$= 09$	Bottom Width (North - South)	
19					$= \text{SQRT}((015^2 + ((018 - 017)/2)^2)$	Slant Length (ft)	
20					$= (017 * 015 * 016) + (((018 - 017)/2) * 015 * 016)$	Volume (ft ³)	
21							
22							
23					Top Section (Rectangular Volume)		
24							
25					6	Height (ft.)	
26					$= 08$	Length (East - West)	
27					$= 23 + (8/12)$	Width (North - South)	
28					$= 025 * 026 * 027$	Volume (ft ³)	
29							
30					$= (208 + (2.5/12)) - (203 + (10.5/12))$	Water Level (ft.)	
31					$= 08 * 09$	Condenser Base Area	
32					$= 030 * 031$	Contained Water Volume	
33							
34					262638	Condenser Tube Surface Area	
35					$= 034 * (\$E\$45 * \text{PI}())$	Calculated Length	
36					$= 035 * (\text{PI}()) * (\$E\$45 / 2)^2$	Volume Displaced	
37							
38					$= 08 * 09$	Setting Area (floor)	
39					$= 038 + ((07 - 030) * 2 * (09 + 08)) + 019 * (2 * 016) + 015 * (017 + 018) + (2 * 025 * 026 + 2 * 025 * 027)$	Deposition Area (ft ²)	
40							
41					Shell Volume (ft ³)	$= 010 + 020 + 028$	
42					Volume Above Hotwell (ft ³)	$= 041 - 032$	
43					Free Air Volume (ft ³)	$= 042 - 036$	
44					Tube Lengths	36	
45							
46							
47					$= \text{J44} * \$E\$46 / (\$D44 + \$J44 + \$P44)$	Area (ft ²), by shell	$= \text{P44} * \$E\$46 / (\$D44 + \$J44 + \$P44)$
48							
49							
50					References:		
51							¹ LGS Dwg. No. 90-1097-5-100, Rev. 1
52							² LGS Dwg. No. 90-1097-5-101, Rev. 1
53							³ LGS Dwg. No. 90-1097-5-102, Rev. 1
54							⁴ LGS Dwg. No. 90-1097-5-112, Rev. 1
55							⁵ LGS D8D No. L-S-21, Rev. 10, "Condenser System"

DPAdmin

(LGS) LM-0646 Rev 1 LOCA Attachment B MS
11/16/05 02:59 PM



	A	B	C	D	E	F	G	H	I	J	K
1	Main Steam Piping Summary Unit 1										
2	24.14	Main Steam 26 inch pipe ID			LGS Spec. P-300, Rev. 44, "Piping Materials & Instrum. Piping Standards"						
3											
4	TOTAL MS PIPING										
5	A	B	C	D							
6	5435.75	5122.09	5822.59	5524.75	26 Inch piping (inches)						
7	2863	2698	3066	2910	26 inch piping inside surface area (sq. ft.)						
8	1440	1357	1542	1463	26 inch piping inside volume (cu. ft.)						
9	2863	2698	3066	2910	Total inside surface area (sq. ft.)						
10	1440	1357	1542	1463	Total inside volume (cu. ft.)						
11											
12											
13	2863	2698	3066	2910	Total inside surface area (sq. ft.)						
14	1440	1357	1542	1463	Total inside volume (cu. ft.)						
15											
16	HORIZONTAL MS PIPING ONLY										
17	A	B	C	D							
18	4692.50	4378.84	5079.34	4781.50	26 inch piping (inches)						
19	2471	2306	2675	2518	26 inch piping inside surface area (sq. ft.)						
20	1243	1160	1345	1266	26 inch piping inside volume (cu. ft.)						
21											
22											
23	2471	2306	2675	2518	Total inside surface area (sq. ft.)						
24	1243	1160	1345	1266	Total inside volume (cu. ft.)						
25											
26											
27											
28											
29											
30	Horizontal Totals										
31											
32	4276.00	3780.34	4480.84	4365.00	26 inch Outboard Piping, length (inches)						
33	2252	1991	2360	2299	Total Outboard Pipe Surface Area Credit (sq. ft.)						
34	1133	1001	1187	1156	Total Outboard Pipe Volume Credit (cu. ft.)						
35											
36	416.50	598.50	598.50	416.50	26 inch Inboard Piping, length (inches)						
37	219	315	315	219	Total Inboard Pipe Surface Area Credit (sq. ft.)						
38	110	159	159	110	Total Inboard Pipe Volume Credit (cu. ft.)						
39											
40											
41	Totals										
42											
43	4462.75	3967.09	4667.59	4551.75	26 inch Outboard Piping, length (inches)						
44	2350	2089	2458	2397	Total Outboard Pipe Surface Area Credit (sq. ft.)						
45	1182	1051	1236	1206	Total Outboard Pipe Volume Credit (cu. ft.)						
46											
47	973.00	1155.00	1155.00	973.00	26 inch Inboard Piping, length (inches)						
48	512	608	608	512	Total Inboard Pipe Surface Area Credit (sq. ft.)						
49	258	306	306	258	Total Inboard Pipe Volume Credit (cu. ft.)						
50											
51											
52	Nodalization (Horizontals)										
53											
54	416.50	598.50	598.50	416.50	Node 1 Length (inches)						
55	219	315	315	219	Node 1 Surface Area (sq. ft.)						
56	110	159	159	110	Node 1 Volume (cu. ft.)						
57	4276.00	3780.34	4480.84	4365.00	Node 2 Length (inches)						
58	2252	1991	2360	2299	Node 2 Surface Area (sq. ft.)						
59	1133	1001	1187	1156	Node 2 Volume (cu. ft.)						
60											
61											
62	Nodalization (Totals)										
63											
64	973.00	1155.00	1155.00	973.00	Node 1 Length (inches)						
65	512	608.28	608	512	Node 1 Surface Area (sq. ft.)						
66	258	305.92	306	258	Node 1 Volume (cu. ft.)						
67	4462.75	3967.09	4667.59	4551.75	Node 2 Length (inches)						
68	2350	2089	2458	2397	Node 2 Surface Area (sq. ft.)						
69	1182	1051	1236	1206	Node 2 Volume (cu. ft.)						

	A	B	C	D	E	F	G	H	I	J
1	Main Steam Line A									
2	NOZZLE No	DWG No	PIPE DIA	LENGTH (IN)	COMMENTS					
3	TIE-IN									
4		EBB-103-1	26"							
5				236.000	HORZ PIPE LENGTH OUT OF REACTOR VESSEL					
6				186.750	VERT PIPE LENGTH FROM ELEVATION 274' 8 ³ / ₄ " TO ELEV 259' 2"					
7				228.000	HORZ PIPE AT ELEV 259' 2" TO ELEV 259' 1"					
8				2423.000	HORZ PIPE AT ELEV 259' 1" TO ELEV 257' 4 ¹ / ₂ "					
9				921.000	HORZ PIPE AT ELEV 257' 4 ¹ / ₂ " TO ELEV 256' 6"					
10				240.500	HORZ PIPE AT ELEV 256' 6" UP TO STOP VALVE MSV-2					
11			SubTotal	4235.250						
12		M-226	26"							
13		6.5in. per 1mm		227.500	HORZ PIPE LENGTH BETWEEN INBOARD AND OUTBOARD VALVES AT ELEV 274' 9"					
14			SubTotal	227.500						
15										
16		M-215	26"							
17		7in. per 1mm		72.000	HORZ PIPE LENGTH COMING DIRECTLY OUT OF THE REACTOR VESSEL AT ELEV 321' 1 1/2"					
18				556.500	VERT PIPE LENGTH FROM ELEVATION 321' 1 1/2" TO ELEV 274' 9"					
19		M-226	26"							
20		6.5in. per 1mm		279.500	HORZ PIPE AT ELEV 274' 5" TO ISOLATION VALVE					
21				65.000	HORZ PIPE AT ELEV 274' 5" TO ISOLATION VALVE - INBOARD VALVE					
22			SubTotal	973.000						
23						Vertical	Horizontal			
24				TOTAL		Segments	Only			
25				5435.750	Total Inches	743.250	4692.500			
26				452.979	Total Feet	61.938	391.042			
27										
28										
29										
30	SP-EBB-105 2"									
31			46.625		VERT PIPE LENGTH FROM ELEV 274' 9" TO 270' 10"					
32			42.000		HORZ PIPE FROM ELEV 270' 10" TO 270' 9 9/16"					
33		SubTotal	88.625							

	A	B	C	D	E	F	G	H	I	J
1	Main Steam Line B									
2	NOZZLE No	DWG No	PIPE DIA	LENGTH (IN)	COMMENTS					
3	TIE-IN									
4		EBB-104-1	26"							
5				236.000	HORZ PIPE LENGTH FROM OUTBOARD VALVE					
6				186.750	VERT PIPE LENGTH FROM ELEVATION 274' 8 ³ / ₄ " TO ELEV 259' 2"					
7				276.000	HORZ PIPE AT ELEV 259' 2" TO ELEV 259' 1"					
8				2025.000	HORZ PIPE AT ELEV 259' 1" TO ELEV 257' 4 ¹ / ₂ "					
9				795.000	HORZ PIPE AT ELEV 257' 4 ¹ / ₂ " TO ELEV 256' 6"					
10				192.500	HORZ PIPE AT ELEV 256' 6" UP TO STOP VALVE MSV-2					
11			SubTotal	3711.250						
12		M-217	26"							
13		6.25in. Per 1mm		255.840	HORZ PIPE LENGTH BETWEEN INBOARD AND OUTBOARD VALVES AT ELEV 274' 9"					
14			SubTotal	255.840						
15										
16		M-215	26"							
17		7in. per 1mm		72.000	HORZ PIPE LENGTH COMING DIRECTLY OUT OF THE REACTOR VESSEL AT ELEV 321' 1 1/2"					
18				556.500	VERT PIPE LENGTH FROM ELEVATION 321' 1 1/2" TO ELEV 274' 9"					
19		M-226	26"							
20		6.5in. per 1mm		136.500	HORZ PIPE AT ELEV 274' 5" TO ISOLATION VALVE - FIRST BEND					
21				325.000	HORZ PIPE AT ELEV 274' 5" TO ISOLATION VALVE - SECOND BEND					
22				65.000	HORZ PIPE AT ELEV 274' 5" TO ISOLATION VALVE - INBOARD VALVE					
23			SubTotal	1155.000						
24										
25				TOTAL		Vertical Segments	Horizontal Only			
26				5122.090	Total Inches	743.250	4378.840			
27				426.841	Total Feet	61.938	364.903			
28										
29										
30	EBB-105-E1	2"								
31			19.000		VERT PIPE FROM ELEV 274' 9" TO 272"					
32			9.875		HORZ PIPE AT ELEV 272'					
33			15.000		VERT PIPE FROM ELEV 272' TO 271' 1 1/2"					
34			9.500		HORZ PIPE AT ELEV 271' 1 1/2"					
35			128.000		HORZ PIPE AT ELEV 271' 1"					
36			78.500		HORZ PIPE AT ELEV 270' 11 3/4"					
37			93.000		HORZ PIPE AT ELEV 270' 10"					
38		SubTotal	309.000							

	A	B	C	D	E	F	G	H
1	Main Steam Line C							
2	NOZZLE No	DWG No	PIPE DIA	LENGTH (IN)	COMMENTS			
3	TIE-IN							
4		EBB-101-1	26"					
5				236.000	HORZ PIPE LENGTH FROM OUTBOARD VALVE AT ELEV 274' 9"			
6				186.750	VERT PIPE LENGTH FROM ELEVATION 274' 8 ³ / ₄ " TO ELEV 259' 2"			
7				132.000	HORZ PIPE AT ELEV 259' 2" TO ELEV 259' 1"			
8				2346.000	HORZ PIPE AT ELEV 259' 1" TO ELEV 257' 4 ¹ / ₂ "			
9				1173.000	HORZ PIPE AT ELEV 257' 4 ¹ / ₂ " TO ELEV 256' 6"			
10				338.000	HORZ PIPE AT ELEV 256' 6" UP TO STOP VALVE MSV-2			
11			SubTotal	4411.750				
12		M-217	26"					
13		6.25in. Per 1mm		255.840	HORZ PIPE LENGTH BETWEEN INBOARD AND OUTBOARD VALVES AT ELEV 274' 9"			
14			SubTotal	255.840				
15								
16		M-215	26"					
17		7in. per 1mm		72.000	HORZ PIPE LENGTH COMING DIRECTLY OUT OF THE REACTOR VESSEL AT ELEV 321' 1 1/2"			
18				556.500	VERT PIPE LENGTH FROM ELEVATION 321' 1 1/2" TO ELEV 274' 9"			
19		M-226	26"					
20		6.5in. per 1mm		136.500	HORZ PIPE AT ELEV 274' 9" TO ISOLATION VALVE - FIRST BEND			
21				325.000	HORZ PIPE AT ELEV 274' 9" TO ISOLATION VALVE - SECOND BEND			
22				65.000	HORZ PIPE AT ELEV 274' 9" TO ISOLATION VALVE - INBOARD VALVE			
23			SubTotal	1155.000				
24						Vertical	Horizontal	
25				TOTAL		Segments	Only	
26				5822.590	Total Inches	743.250	5079.340	
27				485.216	Total Feet	61.938	423.278	
28								
29	SP-EBB-105	2"						
30			46.500		VERT PIPE LENGTH FROM ELEV 274' 9" TO 270' 9 1/2"			
31			42.000		HORZ PIPE AT ELEV 270' 9 1/2" TO 270' 9 9/16"			
32		SubTotal	88.500					

	A	B	C	D	E	F	G	H	I	J	K
1	Main Steam Line D										
2	NOZZLE No	DWG No	PIPE DIA	LENGTH (IN)	COMMENTS						
3	TIE-IN										
4		EBB-102-1	26"								
5				236.000	HORZ PIPE LENGTH OUT OF REACTOR VESSEL AT ELEV 274' 9"						
6				186.750	VERT PIPE LENGTH FROM ELEVATION 274' 8 3/4" TO ELEV 259' 2"						
7				180.000	HORZ PIPE AT ELEV 259' 2" TO ELEV 259' 1"						
8				2386.000	HORZ PIPE AT ELEV 259' 1" TO ELEV 257' 4 1/2"						
9				1047.000	HORZ PIPE AT ELEV 257' 4 1/2" TO ELEV 256' 6"						
10				288.500	HORZ PIPE AT ELEV 256' 6" UP TO STOP VALVE MSV-2						
11			SubTotal	4324.250							
12		M-226	26"								
13		6.5in. per 1mm		227.500	HORZ PIPE LENGTH BETWEEN INBOARD AND OUTBOARD VALVES AT ELEV 274' 9"						
14			SubTotal	227.500							
15											
16		M-215	26"								
17		7in. per 1mm		72.000	HORZ PIPE LENGTH COMING DIRECTLY OUT OF THE REACTOR VESSEL AT ELEV 321' 1 1/2"						
18				556.500	VERT PIPE LENGTH FROM ELEVATION 321' 1 1/2" TO ELEV 274' 9"						
19		M-226	26"								
20		6.5in. per 1mm		279.500	HORZ PIPE AT ELEV 274' 5" TO ISOLATION VALVE						
21				65.000	HORZ PIPE AT ELEV 274' 5" TO ISOLATION VALVE - INBOARD VALVE						
22			SubTotal	973.000							
23						Vertical	Horizontal				
24			TOTAL			Segments	Only				
25				5524.750	Total Inches	743.250	4781.500				
26				460.396	Total Feet	61.938	398.458				
27											
28	SP-EBB-105 2"										
29			45.750		VERT PIPE LENGTH FROM ELEV 274' 9" TO 270' 10"						
30			41.000		HORZ PIPE FROM ELEV 270' 10" TO 270' 9 9/16"						
31		SubTotal	86.750								

		A
1	Main Steam Piping Summary Unit 1	
2	24.14	
3		
4	TOTAL MS PIPING	
5		A
6	=MSL A (Dwg. No. EBB-103)'ID25	
7	=A6*PI()*\$A\$2/144	
8	=A6*PI()*(\$A\$2/2)^2/1728	
9	=A7	
10	=A8	
11		
12		
13	=A9	
14	=A10	
15		
16	HORIZONTAL MS PIPING ONLY	
17		A
18	=MSL A (Dwg. No. EBB-103)'IG25	
19	=A18*PI()*\$A\$2/144	
20	=A18*PI()*(\$A\$2/2)^2/1728	
21		
22		
23	=A19	
24	=A20	
25		
26		
27		
28		
29		
30	Horizontal Totals	
31		
32		
33	=A32*PI()*\$A\$2/144	
34	=A32*PI()*(\$A\$2/2)^2/1728	
35		
36	=MSL A (Dwg. No. EBB-103)'ID17+MSL A (Dwg. No. EBB-103)'ID20+MSL A (Dwg. No. EBB-103)'ID21	
37	=A36*PI()*\$A\$2/144	
38	=A36*PI()*(\$A\$2/2)^2/1728	
39		
40		
41	Totals	
42		
43	=MSL A (Dwg. No. EBB-103)'ID11+MSL A (Dwg. No. EBB-103)'ID14	
44	=A43*PI()*\$A\$2/144	
45	=A43*PI()*(\$A\$2/2)^2/1728	
46		
47	=MSL A (Dwg. No. EBB-103)'ID22	
48	=A47*PI()*\$A\$2/144	
49	=A47*PI()*(\$A\$2/2)^2/1728	
50		
51		
52	Nodalization (Horizontals)	
53		
54	=A36	
55	=A37	
56	=A38	
57	=A32	
58	=A33	
59	=A34	
60		
61		
62	Nodalization (Totals)	
63		
64	=A47	
65	=A48	
66	=A49	
67	=A43	
68	=A44	
69	=A45	

	B
1	
2	Main Steam 26 Inch pipe ID
3	
4	
5	B
6	=MSL B (Dwg. No. EBB-104)'ID26
7	=B6*PI()*\$A\$2/144
8	=B6*PI()*(\$A\$2/2)^2/1728
9	=B7
10	=B8
11	
12	
13	=B9
14	=B10
15	
16	
17	B
18	=MSL B (Dwg. No. EBB-104)'IG26
19	=B18*PI()*\$A\$2/144
20	=B18*PI()*(\$A\$2/2)^2/1728
21	
22	
23	=B19
24	=B20
25	
26	
27	
28	
29	
30	
31	
32	=MSL B (Dwg. No. EBB-104)'ID13+SUM(MSL B (Dwg. No. EBB-104)'ID7:D10)+MSL B (Dwg. No. EBB-104)'ID5
33	=B32*PI()*\$A\$2/144
34	=B32*PI()*(\$A\$2/2)^2/1728
35	
36	=MSL B (Dwg. No. EBB-104)'ID17+MSL B (Dwg. No. EBB-104)'ID20+MSL B (Dwg. No. EBB-104)'ID21+MSL B (Dwg. No. EBB-104)'ID22
37	=B36*PI()*\$A\$2/144
38	=B36*PI()*(\$A\$2/2)^2/1728
39	
40	
41	
42	
43	=MSL B (Dwg. No. EBB-104)'ID11+MSL B (Dwg. No. EBB-104)'ID14
44	=B43*PI()*\$A\$2/144
45	=B43*PI()*(\$A\$2/2)^2/1728
46	
47	=MSL B (Dwg. No. EBB-104)'ID23
48	=B47*PI()*\$A\$2/144
49	=B47*PI()*(\$A\$2/2)^2/1728
50	
51	
52	
53	
54	=B36
55	=B37
56	=B39
57	=B32
58	=B33
59	=B34
60	
61	
62	
63	
64	=B47
65	=B48
66	=B49
67	=B43
68	=B44
69	=B45

	C
1	
2	
3	
4	
5	C
6	=MSL C (Dwg. No. EBB-101)'ID26
7	=C6*PI()*\$A\$2/144
8	=C6*PI()*(\$A\$2/2)^2/1728
9	=C7
10	=C8
11	
12	
13	=C9
14	=C10
15	
16	
17	C
18	=MSL C (Dwg. No. EBB-101)'IG26
19	=C18*PI()*\$A\$2/144
20	=C18*PI()*(\$A\$2/2)^2/1728
21	
22	
23	=C19
24	=C20
25	
26	
27	
28	
29	
30	
31	
32	=MSL C (Dwg. No. EBB-101)'ID13+SUM(MSL C (Dwg. No. EBB-101)'ID7:D10)+MSL C (Dwg. No. EBB-101)'ID5
33	=C32*PI()*\$A\$2/144
34	=C32*PI()*(\$A\$2/2)^2/1728
35	
36	=MSL C (Dwg. No. EBB-101)'ID17+MSL C (Dwg. No. EBB-101)'ID20+MSL C (Dwg. No. EBB-101)'ID21+MSL C (Dwg. No. EBB-101)'ID22
37	=C36*PI()*\$A\$2/144
38	=C36*PI()*(\$A\$2/2)^2/1728
39	
40	
41	
42	
43	=MSL C (Dwg. No. EBB-101)'ID11+MSL C (Dwg. No. EBB-101)'ID14
44	=C43*PI()*\$A\$2/144
45	=C43*PI()*(\$A\$2/2)^2/1728
46	
47	=MSL C (Dwg. No. EBB-101)'ID23
48	=C47*PI()*\$A\$2/144
49	=C47*PI()*(\$A\$2/2)^2/1728
50	
51	
52	
53	
54	=C36
55	=C37
56	=C38
57	=C32
58	=C33
59	=C34
60	
61	
62	
63	
64	=C47
65	=C48
66	=C49
67	=C43
68	=C44
69	=C45

	D
1	
2	
3	
4	
5	D
6	=MSL D (Dwg. No. EBB-102)'ID25
7	=D6*PI()*\$A\$2/144
8	=D6*PI()*(\$A\$2/2)^2/1728
9	=D7
10	=D8
11	
12	
13	=D9
14	=D10
15	
16	
17	D
18	=MSL D (Dwg. No. EBB-102)'IG25
19	=D18*PI()*\$A\$2/144
20	=D18*PI()*(\$A\$2/2)^2/1728
21	
22	
23	=D19
24	=D20
25	
26	
27	
28	
29	
30	
31	
32	=MSL D (Dwg. No. EBB-102)'ID13+SUM(MSL D (Dwg. No. EBB-102)'ID7:D10)+MSL D (Dwg. No. EBB-102)'ID5
33	=D32*PI()*\$A\$2/144
34	=D32*PI()*(\$A\$2/2)^2/1728
35	
36	=MSL D (Dwg. No. EBB-102)'ID17+MSL D (Dwg. No. EBB-102)'ID20+MSL D (Dwg. No. EBB-102)'ID21
37	=D36*PI()*\$A\$2/144
38	=D36*PI()*(\$A\$2/2)^2/1728
39	
40	
41	
42	
43	=MSL D (Dwg. No. EBB-102)'ID11+MSL D (Dwg. No. EBB-102)'ID14
44	=D43*PI()*\$A\$2/144
45	=D43*PI()*(\$A\$2/2)^2/1728
46	
47	=MSL D (Dwg. No. EBB-102)'ID22
48	=D47*PI()*\$A\$2/144
49	=D47*PI()*(\$A\$2/2)^2/1728
50	
51	
52	
53	
54	=D36
55	=D37
56	=D38
57	=D32
58	=D33
59	=D34
60	
61	
62	
63	
64	=D47
65	=D48
66	=D49
67	=D43
68	=D44
69	=D45

	E	F	G
1			
2	LGS Spec. P-300, Rev. 44, "Piping Materials & Instrum. Piping Stand		
3			
4			
5			
6	26 inch piping (inches)		
7	26 inch piping inside surface area (sq. ft.)		
8	26 inch piping inside volume (cu. ft.)		
9	Total inside surface area (sq. ft.)		
10	Total inside volume (cu. ft.)		
11			
12			
13	Total inside surface area (sq. ft.)		
14	Total inside volume (cu. ft.)		
15			
16			
17			
18	26 inch piping (inches)		
19	26 inch piping inside surface area (sq. ft.)		
20	26 inch piping inside volume (cu. ft.)		
21			
22			
23	Total inside surface area (sq. ft.)		
24	Total inside volume (cu. ft.)		
25			
26			
27			
28			
29			
30			
31			
32	26 Inch Outboard Piping, length (inches)		
33	Total Outboard Pipe Surface Area Credit (sq. ft.)		
34	Total Outboard Pipe Volume Credit (cu. ft.)		
35			
36	26 inch Inboard Piping, length (inches)		
37	Total Inboard Pipe Surface Area Credit (sq. ft.)		
38	Total Inboard Pipe Volume Credit (cu. ft.)		
39			
40			
41			
42			
43	26 Inch Outboard Piping, length (inches)		
44	Total Outboard Pipe Surface Area Credit (sq. ft.)		
45	Total Outboard Pipe Volume Credit (cu. ft.)		
46			
47	26 inch Inboard Piping, length (inches)		
48	Total Inboard Pipe Surface Area Credit (sq. ft.)		
49	Total Inboard Pipe Volume Credit (cu. ft.)		
50			
51			
52			
53			
54	Node 1 Length (inches)		
55	Node 1 Surface Area (sq. ft.)		
56	Node 1 Volume (cu. ft.)		
57	Node 2 Length (inches)		
58	Node 2 Surface Area (sq. ft.)		
59	Node 2 Volume (cu. ft.)		
60			
61			
62			
63			
64	Node 1 Length (inches)		
65	Node 1 Surface Area (sq. ft.)		
66	Node 1 Volume (cu. ft.)		
67	Node 2 Length (inches)		
68	Node 2 Surface Area (sq. ft.)		
69	Node 2 Volume (cu. ft.)		

	A	B	C	D	E	F	G
1	Main Steam Line A						
2	NOZZLE No	DWG No	PIPE DIA	LENGTH (IN)	COMMENTS		
3	TIE-IN						
4		EBB-103-1	26"				
5				236	HORZ PIPE LENGTH OUT OF REACTOR VESSEL		
6				186.75	VERT PIPE LENGTH FROM ELEVATION 274' 8 ³ / ₄ " TO ELEV 25		
7				228	HORZ PIPE AT ELEV 259' 2" TO ELEV 259' 1"		
8				2423	HORZ PIPE AT ELEV 259' 1" TO ELEV 257' 4 ¹ / ₂ "		
9				921	HORZ PIPE AT ELEV 257' 4 ¹ / ₂ " TO ELEV 256' 6"		
10				240.5	HORZ PIPE AT ELEV 256' 6" UP TO STOP VALVE MSV-2		
11			SubTotal	=SUM(D5:D10)			
12		M-226	26"				
13		6.5in. per 1mm		227.5	HORZ PIPE LENGTH BETWEEN INBOARD AND OUTBOARD V		
14			SubTotal	=SUM(D13)			
15							
16		M-215	26"				
17		7in. per 1mm		72	HORZ PIPE LENGTH COMING DIRECTLY OUT OF THE REACT		
18				556.5	VERT PIPE LENGTH FROM ELEVATION 321' 1 ¹ / ₂ " TO ELEV 27		
19		M-226	26"				
20		6.5in. per 1mm		279.5	HORZ PIPE AT ELEV 274' 5" TO ISOLATION VALVE		
21				65	HORZ PIPE AT ELEV 274' 5" TO ISOLATION VALVE - INBOARD		
22			SubTotal	=SUM(D17:D21)			
23							
24				TOTAL		Vertical Segments	Horizontal Only
25				=D11+D14+D22	Total Inches	=D6+D18	=D25-F25
26				=D25/12	Total Feet	=F25/12	=D26-F26
27							
28							
29							
30	SP-EBB-105-E3	2"					
31			46.625		VERT PIPE LENGTH FROM ELE		
32			42		HORZ PIPE FROM ELEV 270' 10		
33		SubTotal	=SUM(C31:C32)				

	A	B	C	D	E	F	G
1	Main Steam Line B						
2	NOZZLE No	DWG No	PIPE DIA	LENGTH (IN)	COMMENTS		
3	TIE-IN						
4		EBB-104-1	26"				
5				236	HORZ PIPE LENGTH FROM OUTBOARD VALVE		
6				186.75	VERT PIPE LENGTH FROM ELEVATION 274' 8 ³ / ₄ " TO ELEV 259' 2"		
7				276	HORZ PIPE AT ELEV 259' 2" TO ELEV 259' 1"		
8				2025	HORZ PIPE AT ELEV 259' 1" TO ELEV 257' 4 ¹ / ₂ "		
9				795	HORZ PIPE AT ELEV 257' 4 ¹ / ₂ " TO ELEV 256' 6"		
10				192.5	HORZ PIPE AT ELEV 256' 6" UP TO STOP VALVE MSV-2		
11			SubTotal	=SUM(D5:D10)			
12		M-217	26"				
13		6.25in. Per 1mm		255.84	HORZ PIPE LENGTH BETWEEN INBOARD AND OUTBOARD VALVE		
14			SubTotal	=SUM(D13)			
15							
16		M-215	26"				
17		7in. per 1mm		72	HORZ PIPE LENGTH COMING DIRECTLY OUT OF THE REACTOR		
18				556.5	VERT PIPE LENGTH FROM ELEVATION 321' 1 1/2" TO ELEV 274' 5"		
19		M-226	26"				
20		6.5in. per 1mm		136.5	HORZ PIPE AT ELEV 274' 5" TO ISOLATION VALVE - FIRST BEND		
21				325	HORZ PIPE AT ELEV 274' 5" TO ISOLATION VALVE - SECOND BEND		
22				65	HORZ PIPE AT ELEV 274' 5" TO ISOLATION VALVE - INBOARD		
23			SubTotal	=SUM(D17:D22)			
24							
25				TOTAL		Vertical Segments	Horizontal Only
26				=D11+D14+D23	Total Inches	=D6+D18	=D26-F26
27				=D26/12	Total Feet	=F26/12	=D27-F27
28							
29							
30	EBB-105-E1	2"					
31			19		VERT PIPE FROM ELEV 274' 9"		
32			9.875		HORZ PIPE AT ELEV 272'		
33			15		VERT PIPE FROM ELEV 272' TO 270' 10"		
34			9.5		HORZ PIPE AT ELEV 271' 1 1/2"		
35			128		HORZ PIPE AT ELEV 271' 1"		
36			78.5		HORZ PIPE AT ELEV 270' 11 3/4"		
37			93		HORZ PIPE AT ELEV 270' 10"		
38		SubTotal	=SUM(C34:C37)				

	A	B	C	D	E	F	G	H
1	Main Steam Line C							
2	NOZZLE No	DWG No	PIPE DIA	LENGTH (IN)	COMMENTS			
3	TIE-IN							
4		EBB-101-1	26"					
5				236	HORZ PIPE LENGTH FROM OUTBOARD V			
6				186.75	VERT PIPE LENGTH FROM ELEVATION 2			
7				132	HORZ PIPE AT ELEV 259' 2" TO ELEV 259			
8				2346	HORZ PIPE AT ELEV 259' 1" TO ELEV 257			
9				1173	HORZ PIPE AT ELEV 257' 4 1/2" TO ELEV 2			
10				338	HORZ PIPE AT ELEV 256' 6" UP TO STOP			
11			SubTotal	=SUM(D5:D10)				
12		M-217	26"					
13		6.25in. Per 1mm		255.84	HORZ PIPE LENGTH BETWEEN INBOARD			
14			SubTotal	=SUM(D13)				
15								
16		M-215	26"					
17		7in. per 1mm		72	HORZ PIPE LENGTH COMING DIRECTLY			
18				556.5	VERT PIPE LENGTH FROM ELEVATION 3			
19		M-226	26"					
20		6.5in. per 1mm		136.5	HORZ PIPE AT ELEV 274' 9" TO ISOLATIO			
21				325	HORZ PIPE AT ELEV 274' 9" TO ISOLATIO			
22				65	HORZ PIPE AT ELEV 274' 9" TO ISOLATIO			
23			SubTotal	=SUM(D17:D22)				
24								
25				TOTAL		Vertical Segments	Horizontal Only	
26				=D11+D14+D23	Total Inches	=D6+D18	=D26-F26	
27				=D26/12	Total Feet	=F26/12	=D27-F27	
28								
29	SP-EBB-105-E1	2"						
30			46.5		VERT PIPE LENGTH FROM ELE			
31			42		HORZ PIPE AT ELEV 270' 9 1/2"			
32		SubTotal	=SUM(C30:C31)					

	A	B	C	D	E	F	G
1	Main Steam Line D						
2	NOZZLE No	DWG No	PIPE DIA	LENGTH (IN)	COMMENTS		
3	TIE-IN						
4		EBB-102-1	26"				
5				236	HORZ PIPE LENGTH OUT OF R		
6				186.75	VERT PIPE LENGTH FROM ELE		
7				180	HORZ PIPE AT ELEV 259' 2" TO		
8				2386	HORZ PIPE AT ELEV 259' 1" TO		
9				1047	HORZ PIPE AT ELEV 257' 4 1/2"		
10				288.5	HORZ PIPE AT ELEV 256' 6" UP		
11			SubTotal	=SUM(D5:D10)			
12		M-226	26"				
13		6.5in. per 1mm		227.5	HORZ PIPE LENGTH BETWEEN		
14			SubTotal	=SUM(D13)			
15							
16		M-215	26"				
17		7in. per 1mm		72	HORZ PIPE LENGTH COMING D		
18				556.5	VERT PIPE LENGTH FROM ELE		
19		M-226	26"				
20		6.5in. per 1mm		279.5	HORZ PIPE AT ELEV 274' 5" TO		
21				65	HORZ PIPE AT ELEV 274' 5" TO		
22			SubTotal	=SUM(D17:D21)			
23							
24				TOTAL		Vertical Segments	Horizontal Only
25				=D11+D14+D22	Total Inches	=D6+D18	=D25-F25
26				=D25/12	Total Feet	=F25/12	=D26-F26
27							
28	SP-EBB-105-E3	2"					
29			45.75		VERT PIPE LENGTH FROM ELEV 274' 9" TO 27		
30			41		HORZ PIPE FROM ELEV 270' 10" TO 270' 9 9/16"		
31		SubTotal	=SUM(C29:C30)				

ADDITIONAL ATTACHMENTS TO

10-10-05 Letter: Supplement to Request for LAR Application of AST

Attachment 014 AST – LM-0646 Rev 1 LOCA (2 of 3) Att E.

TIME	DW PRESS (PSIA)	DW TEMP (F)	SP TEMP (F)	PC Leak Fraction of Design Basis (Calculated)	MSIV Leak Fraction of Design Basis (Calculated)	Time (hours)	Time (days)
0	1.55E+01	1.50E+02	9.50E+01	0.848	1.200	0.000E+00	0.000E+00
60.1709	4.64E+01	2.76E+02	1.34E+02	0.848	1.199	1.671E-02	6.964E-04
60.4834	4.63E+01	2.76E+02	1.34E+02	0.848	1.199	1.680E-02	7.000E-04
60.7959	4.63E+01	2.76E+02	1.34E+02	0.848	1.199	1.689E-02	7.037E-04
61.1084	4.63E+01	2.76E+02	1.34E+02	0.848	1.199	1.697E-02	7.073E-04
61.4209	4.64E+01	2.76E+02	1.34E+02	0.848	1.199	1.706E-02	7.109E-04
61.7334	4.63E+01	2.76E+02	1.34E+02	0.848	1.199	1.715E-02	7.145E-04
62.0459	4.63E+01	2.76E+02	1.35E+02	0.848	1.199	1.723E-02	7.181E-04
62.3584	4.63E+01	2.76E+02	1.35E+02	0.848	1.199	1.732E-02	7.217E-04
62.6709	4.63E+01	2.76E+02	1.35E+02	0.848	1.199	1.741E-02	7.254E-04
62.9834	4.63E+01	2.76E+02	1.35E+02	0.848	1.199	1.750E-02	7.290E-04
63.2959	4.63E+01	2.76E+02	1.35E+02	0.848	1.199	1.758E-02	7.326E-04
63.6084	4.63E+01	2.76E+02	1.35E+02	0.847	1.198	1.767E-02	7.362E-04
63.9209	4.63E+01	2.76E+02	1.35E+02	0.848	1.199	1.776E-02	7.398E-04
64.2334	4.63E+01	2.76E+02	1.35E+02	0.847	1.198	1.784E-02	7.434E-04
64.5459	4.63E+01	2.76E+02	1.35E+02	0.848	1.199	1.793E-02	7.471E-04
64.8584	4.63E+01	2.76E+02	1.35E+02	0.847	1.198	1.802E-02	7.507E-04
65.1709	4.63E+01	2.76E+02	1.35E+02	0.847	1.198	1.810E-02	7.543E-04
65.4834	4.63E+01	2.76E+02	1.35E+02	0.847	1.198	1.819E-02	7.579E-04
65.7959	4.63E+01	2.76E+02	1.35E+02	0.847	1.198	1.828E-02	7.615E-04
66.1084	4.63E+01	2.76E+02	1.35E+02	0.847	1.198	1.836E-02	7.651E-04
66.4209	4.63E+01	2.76E+02	1.35E+02	0.847	1.198	1.845E-02	7.688E-04
66.7334	4.63E+01	2.76E+02	1.35E+02	0.847	1.198	1.854E-02	7.724E-04
67.0459	4.63E+01	2.76E+02	1.35E+02	0.847	1.198	1.862E-02	7.760E-04
67.3584	4.63E+01	2.76E+02	1.35E+02	0.847	1.198	1.871E-02	7.796E-04
67.6709	4.63E+01	2.76E+02	1.35E+02	0.848	1.199	1.880E-02	7.832E-04
67.9834	4.63E+01	2.76E+02	1.35E+02	0.847	1.198	1.888E-02	7.868E-04
68.2959	4.62E+01	2.76E+02	1.35E+02	0.846	1.197	1.897E-02	7.905E-04
68.53027	4.63E+01	2.76E+02	1.35E+02	0.847	1.198	1.904E-02	7.932E-04
68.84277	4.62E+01	2.76E+02	1.35E+02	0.847	1.197	1.912E-02	7.968E-04
69.15527	4.62E+01	2.76E+02	1.35E+02	0.847	1.197	1.921E-02	8.004E-04
69.46777	4.63E+01	2.76E+02	1.35E+02	0.847	1.198	1.930E-02	8.040E-04
69.78027	4.63E+01	2.76E+02	1.35E+02	0.847	1.198	1.938E-02	8.076E-04
70.09277	4.62E+01	2.76E+02	1.35E+02	0.847	1.197	1.947E-02	8.113E-04
70.40527	4.62E+01	2.76E+02	1.35E+02	0.847	1.197	1.956E-02	8.149E-04
70.71777	4.62E+01	2.76E+02	1.36E+02	0.847	1.197	1.964E-02	8.185E-04
71.03027	4.62E+01	2.76E+02	1.36E+02	0.847	1.197	1.973E-02	8.221E-04
71.34277	4.62E+01	2.76E+02	1.36E+02	0.847	1.197	1.982E-02	8.257E-04
71.65527	4.62E+01	2.76E+02	1.36E+02	0.846	1.197	1.990E-02	8.293E-04
71.96777	4.62E+01	2.76E+02	1.36E+02	0.846	1.197	1.999E-02	8.330E-04
72.28027	4.62E+01	2.76E+02	1.36E+02	0.846	1.197	2.008E-02	8.366E-04
72.59277	4.62E+01	2.76E+02	1.36E+02	0.846	1.196	2.016E-02	8.402E-04
72.90527	4.62E+01	2.76E+02	1.36E+02	0.846	1.196	2.025E-02	8.438E-04
73.21777	4.62E+01	2.76E+02	1.36E+02	0.846	1.197	2.034E-02	8.474E-04
73.53027	4.62E+01	2.76E+02	1.36E+02	0.846	1.197	2.043E-02	8.510E-04
73.84277	4.62E+01	2.76E+02	1.36E+02	0.846	1.196	2.051E-02	8.547E-04
74.15527	4.62E+01	2.76E+02	1.36E+02	0.846	1.196	2.060E-02	8.583E-04
74.46777	4.62E+01	2.76E+02	1.36E+02	0.846	1.196	2.069E-02	8.619E-04
74.78027	4.62E+01	2.76E+02	1.36E+02	0.846	1.196	2.077E-02	8.655E-04
75.09277	4.62E+01	2.76E+02	1.36E+02	0.846	1.196	2.086E-02	8.691E-04
75.40527	4.62E+01	2.76E+02	1.36E+02	0.846	1.196	2.095E-02	8.727E-04
75.71777	4.62E+01	2.76E+02	1.36E+02	0.845	1.196	2.103E-02	8.764E-04

TIME	DW PRESS (PSIA)	DW TEMP (F)	SP TEMP (F)	PC Leak Fraction of Design Basis	MSIV Leak Fraction of Design Basis	Time (hours)	Time (days)
76.03027	4.62E+01	2.76E+02	1.36E+02	0.845	1.196	2.112E-02	8.800E-04
76.34277	4.62E+01	2.76E+02	1.36E+02	0.846	1.196	2.121E-02	8.836E-04
76.65527	4.61E+01	2.76E+02	1.36E+02	0.845	1.195	2.129E-02	8.872E-04
76.96777	4.62E+01	2.76E+02	1.36E+02	0.845	1.196	2.138E-02	8.908E-04
77.28027	4.61E+01	2.76E+02	1.36E+02	0.845	1.195	2.147E-02	8.944E-04
77.59277	4.61E+01	2.76E+02	1.36E+02	0.845	1.195	2.155E-02	8.981E-04
77.90527	4.61E+01	2.76E+02	1.36E+02	0.845	1.195	2.164E-02	9.017E-04
78.21777	4.61E+01	2.76E+02	1.36E+02	0.845	1.195	2.173E-02	9.053E-04
78.53027	4.61E+01	2.76E+02	1.36E+02	0.845	1.195	2.181E-02	9.089E-04
78.84277	4.61E+01	2.76E+02	1.36E+02	0.845	1.195	2.190E-02	9.125E-04
79.15527	4.61E+01	2.76E+02	1.36E+02	0.845	1.195	2.199E-02	9.161E-04
79.46777	4.61E+01	2.76E+02	1.36E+02	0.845	1.195	2.207E-02	9.198E-04
79.78027	4.61E+01	2.76E+02	1.36E+02	0.845	1.194	2.216E-02	9.234E-04
80.09277	4.61E+01	2.76E+02	1.36E+02	0.845	1.194	2.225E-02	9.270E-04
80.40527	4.61E+01	2.76E+02	1.36E+02	0.844	1.194	2.233E-02	9.306E-04
80.71777	4.61E+01	2.76E+02	1.36E+02	0.845	1.194	2.242E-02	9.342E-04
81.03027	4.61E+01	2.76E+02	1.36E+02	0.844	1.194	2.251E-02	9.379E-04
81.34277	4.61E+01	2.76E+02	1.36E+02	0.844	1.194	2.260E-02	9.415E-04
81.65527	4.61E+01	2.76E+02	1.37E+02	0.844	1.194	2.268E-02	9.451E-04
81.96777	4.61E+01	2.76E+02	1.37E+02	0.844	1.194	2.277E-02	9.487E-04
82.28027	4.60E+01	2.76E+02	1.37E+02	0.844	1.194	2.286E-02	9.523E-04
82.59277	4.60E+01	2.76E+02	1.37E+02	0.844	1.194	2.294E-02	9.559E-04
82.90527	4.60E+01	2.76E+02	1.37E+02	0.844	1.193	2.303E-02	9.596E-04
83.21777	4.60E+01	2.76E+02	1.37E+02	0.844	1.193	2.312E-02	9.632E-04
83.53027	4.60E+01	2.76E+02	1.37E+02	0.844	1.193	2.320E-02	9.668E-04
83.84277	4.60E+01	2.76E+02	1.37E+02	0.844	1.193	2.329E-02	9.704E-04
84.15527	4.60E+01	2.76E+02	1.37E+02	0.844	1.193	2.338E-02	9.740E-04
84.46777	4.60E+01	2.76E+02	1.37E+02	0.844	1.193	2.346E-02	9.776E-04
84.78027	4.60E+01	2.76E+02	1.37E+02	0.843	1.193	2.355E-02	9.813E-04
85.09277	4.60E+01	2.76E+02	1.37E+02	0.843	1.193	2.364E-02	9.849E-04
85.40527	4.60E+01	2.76E+02	1.37E+02	0.843	1.193	2.372E-02	9.885E-04
85.71777	4.60E+01	2.76E+02	1.37E+02	0.843	1.192	2.381E-02	9.921E-04
86.03027	4.60E+01	2.76E+02	1.37E+02	0.843	1.192	2.390E-02	9.957E-04
86.34277	4.60E+01	2.76E+02	1.37E+02	0.843	1.192	2.398E-02	9.993E-04
86.65527	4.60E+01	2.76E+02	1.37E+02	0.843	1.192	2.407E-02	1.003E-03
86.96777	4.60E+01	2.76E+02	1.37E+02	0.843	1.192	2.416E-02	1.007E-03
87.28027	4.60E+01	2.76E+02	1.37E+02	0.843	1.192	2.424E-02	1.010E-03
87.59277	4.60E+01	2.76E+02	1.37E+02	0.843	1.192	2.433E-02	1.014E-03
87.90527	4.59E+01	2.76E+02	1.37E+02	0.843	1.192	2.442E-02	1.017E-03
88.21777	4.60E+01	2.76E+02	1.37E+02	0.843	1.192	2.450E-02	1.021E-03
88.53027	4.59E+01	2.76E+02	1.37E+02	0.842	1.191	2.459E-02	1.025E-03
88.84277	4.59E+01	2.76E+02	1.37E+02	0.842	1.191	2.468E-02	1.028E-03
89.15527	4.59E+01	2.76E+02	1.37E+02	0.842	1.191	2.477E-02	1.032E-03
89.46777	4.59E+01	2.76E+02	1.37E+02	0.842	1.191	2.485E-02	1.036E-03
89.78027	4.59E+01	2.76E+02	1.37E+02	0.842	1.191	2.494E-02	1.039E-03
90.09277	4.59E+01	2.76E+02	1.37E+02	0.842	1.191	2.503E-02	1.043E-03
90.40527	4.59E+01	2.76E+02	1.37E+02	0.842	1.191	2.511E-02	1.046E-03
90.71777	4.59E+01	2.76E+02	1.37E+02	0.842	1.190	2.520E-02	1.050E-03
91.03027	4.59E+01	2.76E+02	1.37E+02	0.842	1.190	2.529E-02	1.054E-03
91.34277	4.59E+01	2.76E+02	1.37E+02	0.842	1.190	2.537E-02	1.057E-03
91.65527	4.59E+01	2.76E+02	1.37E+02	0.842	1.190	2.546E-02	1.061E-03
91.96777	4.59E+01	2.76E+02	1.37E+02	0.842	1.190	2.555E-02	1.064E-03

TIME	DW PRESS (PSIA)	DW TEMP (F)	SP TEMP (F)	PC Leak Fraction of Design Basis	MSIV Leak Fraction of Design Basis	Time (hours)	Time (days)
92.28027	4.59E+01	2.76E+02	1.37E+02	0.841	1.190	2.563E-02	1.068E-03
92.59277	4.59E+01	2.76E+02	1.37E+02	0.841	1.190	2.572E-02	1.072E-03
92.90527	4.58E+01	2.76E+02	1.37E+02	0.841	1.190	2.581E-02	1.075E-03
93.21777	4.58E+01	2.76E+02	1.37E+02	0.841	1.190	2.589E-02	1.079E-03
93.53027	4.58E+01	2.76E+02	1.37E+02	0.841	1.190	2.598E-02	1.083E-03
93.84277	4.58E+01	2.76E+02	1.37E+02	0.841	1.190	2.607E-02	1.086E-03
94.15527	4.58E+01	2.76E+02	1.37E+02	0.841	1.190	2.615E-02	1.090E-03
94.46777	4.58E+01	2.76E+02	1.37E+02	0.841	1.189	2.624E-02	1.093E-03
94.78027	4.58E+01	2.76E+02	1.37E+02	0.841	1.189	2.633E-02	1.097E-03
95.09277	4.58E+01	2.76E+02	1.37E+02	0.841	1.189	2.641E-02	1.101E-03
95.40527	4.58E+01	2.76E+02	1.37E+02	0.841	1.189	2.650E-02	1.104E-03
95.71777	4.58E+01	2.76E+02	1.37E+02	0.841	1.189	2.659E-02	1.108E-03
96.03027	4.58E+01	2.76E+02	1.37E+02	0.841	1.189	2.668E-02	1.111E-03
96.34277	4.58E+01	2.76E+02	1.37E+02	0.840	1.188	2.676E-02	1.115E-03
96.65527	4.58E+01	2.76E+02	1.37E+02	0.840	1.188	2.685E-02	1.119E-03
96.96777	4.58E+01	2.76E+02	1.37E+02	0.840	1.188	2.694E-02	1.122E-03
97.28027	4.58E+01	2.76E+02	1.37E+02	0.840	1.188	2.702E-02	1.126E-03
97.59277	4.58E+01	2.76E+02	1.37E+02	0.840	1.188	2.711E-02	1.130E-03
97.90527	4.57E+01	2.75E+02	1.37E+02	0.840	1.188	2.720E-02	1.133E-03
98.21777	4.58E+01	2.76E+02	1.38E+02	0.840	1.188	2.728E-02	1.137E-03
98.53027	4.57E+01	2.75E+02	1.38E+02	0.840	1.187	2.737E-02	1.140E-03
98.84277	4.57E+01	2.75E+02	1.38E+02	0.840	1.187	2.746E-02	1.144E-03
99.15527	4.57E+01	2.75E+02	1.38E+02	0.840	1.187	2.754E-02	1.148E-03
99.46777	4.57E+01	2.75E+02	1.38E+02	0.839	1.187	2.763E-02	1.151E-03
99.78027	4.57E+01	2.75E+02	1.38E+02	0.839	1.187	2.772E-02	1.155E-03
101.499	4.57E+01	2.75E+02	1.38E+02	0.839	1.186	2.819E-02	1.175E-03
104.624	4.56E+01	2.75E+02	1.38E+02	0.838	1.185	2.906E-02	1.211E-03
107.749	4.55E+01	2.75E+02	1.38E+02	0.837	1.184	2.993E-02	1.247E-03
110.874	4.54E+01	2.75E+02	1.38E+02	0.836	1.182	3.080E-02	1.283E-03
113.999	4.55E+01	2.75E+02	1.38E+02	0.837	1.184	3.167E-02	1.319E-03
117.124	4.57E+01	2.75E+02	1.38E+02	0.839	1.186	3.253E-02	1.356E-03
120.249	4.58E+01	2.76E+02	1.38E+02	0.840	1.188	3.340E-02	1.392E-03
123.374	4.59E+01	2.76E+02	1.38E+02	0.841	1.190	3.427E-02	1.428E-03
126.499	4.60E+01	2.76E+02	1.38E+02	0.843	1.192	3.514E-02	1.464E-03
129.624	4.60E+01	2.76E+02	1.39E+02	0.843	1.192	3.601E-02	1.500E-03
132.749	4.59E+01	2.76E+02	1.39E+02	0.842	1.191	3.687E-02	1.536E-03
135.874	4.59E+01	2.76E+02	1.39E+02	0.842	1.191	3.774E-02	1.573E-03
138.999	4.59E+01	2.76E+02	1.39E+02	0.842	1.191	3.861E-02	1.609E-03
142.124	4.58E+01	2.76E+02	1.39E+02	0.841	1.189	3.948E-02	1.645E-03
145.249	4.57E+01	2.75E+02	1.39E+02	0.840	1.188	4.035E-02	1.681E-03
148.374	4.56E+01	2.75E+02	1.39E+02	0.839	1.186	4.122E-02	1.717E-03
151.499	4.55E+01	2.75E+02	1.39E+02	0.837	1.184	4.208E-02	1.753E-03
154.624	4.55E+01	2.75E+02	1.39E+02	0.837	1.184	4.295E-02	1.790E-03
157.749	4.55E+01	2.75E+02	1.39E+02	0.837	1.183	4.382E-02	1.826E-03
160.874	4.55E+01	2.75E+02	1.39E+02	0.836	1.182	4.469E-02	1.862E-03
163.999	4.54E+01	2.75E+02	1.39E+02	0.835	1.181	4.556E-02	1.898E-03
167.124	4.53E+01	2.75E+02	1.39E+02	0.834	1.180	4.642E-02	1.934E-03
170.249	4.53E+01	2.75E+02	1.40E+02	0.834	1.180	4.729E-02	1.970E-03
173.374	4.53E+01	2.75E+02	1.40E+02	0.834	1.180	4.816E-02	2.007E-03
176.499	4.53E+01	2.75E+02	1.40E+02	0.834	1.180	4.903E-02	2.043E-03
179.624	4.53E+01	2.75E+02	1.40E+02	0.834	1.180	4.990E-02	2.079E-03
182.749	4.53E+01	2.75E+02	1.40E+02	0.834	1.180	5.076E-02	2.115E-03

TIME	DW PRESS (PSIA)	DW TEMP (F)	SP TEMP (F)	PC Leak Fraction of Design Basis	MSIV Leak Fraction of Design Basis	Time (hours)	Time (days)
185.874	4.53E+01	2.75E+02	1.40E+02	0.833	1.179	5.163E-02	2.151E-03
188.999	4.52E+01	2.75E+02	1.40E+02	0.832	1.177	5.250E-02	2.187E-03
192.124	4.51E+01	2.75E+02	1.40E+02	0.831	1.175	5.337E-02	2.224E-03
195.249	4.50E+01	2.74E+02	1.40E+02	0.830	1.174	5.424E-02	2.260E-03
198.374	4.49E+01	2.74E+02	1.40E+02	0.829	1.172	5.510E-02	2.296E-03
201.499	4.48E+01	2.74E+02	1.40E+02	0.828	1.170	5.597E-02	2.332E-03
204.624	4.47E+01	2.74E+02	1.41E+02	0.826	1.169	5.684E-02	2.368E-03
207.749	4.47E+01	2.74E+02	1.41E+02	0.825	1.167	5.771E-02	2.405E-03
210.874	4.46E+01	2.74E+02	1.41E+02	0.824	1.165	5.858E-02	2.441E-03
213.999	4.45E+01	2.74E+02	1.41E+02	0.823	1.164	5.944E-02	2.477E-03
217.124	4.44E+01	2.74E+02	1.41E+02	0.821	1.162	6.031E-02	2.513E-03
220.249	4.43E+01	2.74E+02	1.41E+02	0.820	1.160	6.118E-02	2.549E-03
223.374	4.42E+01	2.73E+02	1.41E+02	0.819	1.159	6.205E-02	2.585E-03
226.499	4.42E+01	2.73E+02	1.41E+02	0.818	1.157	6.292E-02	2.622E-03
229.624	4.41E+01	2.73E+02	1.41E+02	0.817	1.155	6.378E-02	2.658E-03
232.749	4.40E+01	2.73E+02	1.41E+02	0.816	1.154	6.465E-02	2.694E-03
235.874	4.39E+01	2.73E+02	1.41E+02	0.814	1.152	6.552E-02	2.730E-03
238.999	4.38E+01	2.73E+02	1.41E+02	0.814	1.150	6.639E-02	2.766E-03
242.124	4.37E+01	2.73E+02	1.41E+02	0.812	1.149	6.726E-02	2.802E-03
245.249	4.37E+01	2.73E+02	1.41E+02	0.811	1.147	6.812E-02	2.839E-03
248.374	4.36E+01	2.73E+02	1.41E+02	0.810	1.146	6.899E-02	2.875E-03
251.499	4.35E+01	2.72E+02	1.41E+02	0.809	1.144	6.986E-02	2.911E-03
254.624	4.34E+01	2.72E+02	1.41E+02	0.808	1.142	7.073E-02	2.947E-03
257.749	4.33E+01	2.72E+02	1.41E+02	0.807	1.141	7.160E-02	2.983E-03
260.874	4.32E+01	2.72E+02	1.41E+02	0.805	1.139	7.247E-02	3.019E-03
263.999	4.32E+01	2.72E+02	1.41E+02	0.804	1.137	7.333E-02	3.056E-03
267.124	4.31E+01	2.72E+02	1.41E+02	0.803	1.136	7.420E-02	3.092E-03
270.249	4.30E+01	2.72E+02	1.42E+02	0.802	1.134	7.507E-02	3.128E-03
273.374	4.29E+01	2.72E+02	1.42E+02	0.801	1.133	7.594E-02	3.164E-03
276.499	4.28E+01	2.71E+02	1.42E+02	0.800	1.131	7.681E-02	3.200E-03
279.624	4.28E+01	2.71E+02	1.42E+02	0.799	1.129	7.767E-02	3.236E-03
282.749	4.27E+01	2.71E+02	1.42E+02	0.797	1.128	7.854E-02	3.273E-03
285.874	4.26E+01	2.71E+02	1.42E+02	0.796	1.126	7.941E-02	3.309E-03
288.999	4.25E+01	2.71E+02	1.42E+02	0.795	1.125	8.028E-02	3.345E-03
292.124	4.24E+01	2.71E+02	1.42E+02	0.794	1.123	8.115E-02	3.381E-03
295.249	4.24E+01	2.71E+02	1.42E+02	0.793	1.121	8.201E-02	3.417E-03
298.374	4.23E+01	2.71E+02	1.42E+02	0.792	1.120	8.288E-02	3.453E-03
301.499	4.22E+01	2.71E+02	1.42E+02	0.791	1.118	8.375E-02	3.490E-03
304.624	4.21E+01	2.70E+02	1.42E+02	0.789	1.116	8.462E-02	3.526E-03
307.749	4.21E+01	2.70E+02	1.42E+02	0.788	1.115	8.549E-02	3.562E-03
310.874	4.20E+01	2.70E+02	1.42E+02	0.787	1.113	8.635E-02	3.598E-03
313.999	4.19E+01	2.70E+02	1.42E+02	0.786	1.112	8.722E-02	3.634E-03
317.124	4.18E+01	2.70E+02	1.42E+02	0.785	1.110	8.809E-02	3.670E-03
320.249	4.17E+01	2.70E+02	1.42E+02	0.784	1.108	8.896E-02	3.707E-03
323.374	4.16E+01	2.70E+02	1.42E+02	0.782	1.106	8.983E-02	3.743E-03
326.499	4.16E+01	2.70E+02	1.42E+02	0.781	1.105	9.069E-02	3.779E-03
329.624	4.15E+01	2.70E+02	1.42E+02	0.780	1.104	9.156E-02	3.815E-03
332.749	4.14E+01	2.69E+02	1.42E+02	0.779	1.102	9.243E-02	3.851E-03
335.874	4.14E+01	2.69E+02	1.42E+02	0.778	1.101	9.330E-02	3.887E-03
338.999	4.13E+01	2.69E+02	1.42E+02	0.777	1.099	9.417E-02	3.924E-03
342.124	4.12E+01	2.69E+02	1.42E+02	0.776	1.098	9.503E-02	3.960E-03
345.249	4.12E+01	2.69E+02	1.42E+02	0.775	1.096	9.590E-02	3.996E-03

TIME	DW PRESS (PSIA)	DW TEMP (F)	SP TEMP (F)	PC Leak Fraction of Design Basis	MSIV Leak Fraction of Design Basis	Time (hours)	Time (days)
348.374	4.11E+01	2.69E+02	1.42E+02	0.774	1.095	9.677E-02	4.032E-03
351.499	4.09E+01	2.69E+02	1.42E+02	0.772	1.092	9.764E-02	4.068E-03
354.624	4.07E+01	2.68E+02	1.42E+02	0.769	1.087	9.851E-02	4.104E-03
357.749	4.04E+01	2.68E+02	1.42E+02	0.764	1.081	9.937E-02	4.141E-03
360.874	4.00E+01	2.67E+02	1.42E+02	0.759	1.073	1.002E-01	4.177E-03
363.999	3.97E+01	2.67E+02	1.42E+02	0.754	1.066	1.011E-01	4.213E-03
367.124	3.93E+01	2.66E+02	1.42E+02	0.747	1.057	1.020E-01	4.249E-03
370.249	3.88E+01	2.65E+02	1.42E+02	0.740	1.047	1.028E-01	4.285E-03
373.374	3.83E+01	2.65E+02	1.42E+02	0.733	1.036	1.037E-01	4.321E-03
376.499	3.78E+01	2.64E+02	1.42E+02	0.725	1.025	1.046E-01	4.358E-03
379.624	3.73E+01	2.63E+02	1.42E+02	0.717	1.014	1.055E-01	4.394E-03
382.749	3.68E+01	2.62E+02	1.42E+02	0.708	1.002	1.063E-01	4.430E-03
385.874	3.62E+01	2.61E+02	1.42E+02	0.700	0.989	1.072E-01	4.466E-03
388.999	3.57E+01	2.60E+02	1.42E+02	0.690	0.976	1.081E-01	4.502E-03
392.124	3.51E+01	2.59E+02	1.43E+02	0.681	0.963	1.089E-01	4.538E-03
395.249	3.45E+01	2.59E+02	1.43E+02	0.671	0.949	1.098E-01	4.575E-03
398.374	3.42E+01	2.57E+02	1.43E+02	0.665	0.941	1.107E-01	4.611E-03
401.499	3.38E+01	2.56E+02	1.43E+02	0.658	0.931	1.115E-01	4.647E-03
404.624	3.34E+01	2.55E+02	1.43E+02	0.651	0.921	1.124E-01	4.683E-03
407.749	3.30E+01	2.54E+02	1.43E+02	0.644	0.911	1.133E-01	4.719E-03
410.874	3.26E+01	2.52E+02	1.44E+02	0.637	0.901	1.141E-01	4.755E-03
413.999	3.22E+01	2.51E+02	1.44E+02	0.630	0.891	1.150E-01	4.792E-03
417.124	3.18E+01	2.50E+02	1.44E+02	0.623	0.881	1.159E-01	4.828E-03
420.249	3.14E+01	2.48E+02	1.44E+02	0.616	0.871	1.167E-01	4.864E-03
423.374	3.10E+01	2.47E+02	1.45E+02	0.608	0.860	1.176E-01	4.900E-03
426.499	3.06E+01	2.46E+02	1.45E+02	0.602	0.851	1.185E-01	4.936E-03
429.624	3.03E+01	2.44E+02	1.45E+02	0.594	0.841	1.193E-01	4.973E-03
432.749	2.99E+01	2.43E+02	1.45E+02	0.587	0.831	1.202E-01	5.009E-03
435.874	2.95E+01	2.42E+02	1.46E+02	0.581	0.821	1.211E-01	5.045E-03
438.999	2.92E+01	2.40E+02	1.46E+02	0.573	0.811	1.219E-01	5.081E-03
442.124	2.88E+01	2.39E+02	1.46E+02	0.567	0.801	1.228E-01	5.117E-03
445.249	2.85E+01	2.38E+02	1.47E+02	0.560	0.792	1.237E-01	5.153E-03
448.374	2.82E+01	2.36E+02	1.47E+02	0.553	0.782	1.245E-01	5.190E-03
451.499	2.78E+01	2.35E+02	1.47E+02	0.546	0.773	1.254E-01	5.226E-03
454.624	2.75E+01	2.34E+02	1.47E+02	0.540	0.763	1.263E-01	5.262E-03
457.749	2.72E+01	2.32E+02	1.48E+02	0.533	0.753	1.272E-01	5.298E-03
460.874	2.69E+01	2.31E+02	1.48E+02	0.526	0.744	1.280E-01	5.334E-03
463.999	2.66E+01	2.29E+02	1.48E+02	0.520	0.735	1.289E-01	5.370E-03
467.124	2.63E+01	2.28E+02	1.49E+02	0.513	0.726	1.298E-01	5.407E-03
470.249	2.60E+01	2.27E+02	1.49E+02	0.507	0.717	1.306E-01	5.443E-03
473.374	2.58E+01	2.26E+02	1.49E+02	0.501	0.709	1.315E-01	5.479E-03
476.499	2.55E+01	2.24E+02	1.49E+02	0.496	0.702	1.324E-01	5.515E-03
479.624	2.53E+01	2.23E+02	1.50E+02	0.491	0.695	1.332E-01	5.551E-03
482.749	2.51E+01	2.22E+02	1.50E+02	0.487	0.689	1.341E-01	5.587E-03
485.874	2.50E+01	2.22E+02	1.50E+02	0.483	0.683	1.350E-01	5.624E-03
488.999	2.48E+01	2.21E+02	1.51E+02	0.479	0.677	1.358E-01	5.660E-03
492.124	2.46E+01	2.20E+02	1.51E+02	0.475	0.672	1.367E-01	5.696E-03
495.249	2.45E+01	2.19E+02	1.51E+02	0.472	0.668	1.376E-01	5.732E-03
498.374	2.44E+01	2.19E+02	1.51E+02	0.469	0.664	1.384E-01	5.768E-03
501.499	2.43E+01	2.18E+02	1.52E+02	0.466	0.660	1.393E-01	5.804E-03
504.624	2.42E+01	2.17E+02	1.52E+02	0.464	0.656	1.402E-01	5.841E-03
507.749	2.41E+01	2.17E+02	1.52E+02	0.461	0.653	1.410E-01	5.877E-03

TIME	DW PRESS (PSIA)	DW TEMP (F)	SP TEMP (F)	PC Leak Fraction of Design Basis	MSIV Leak Fraction of Design Basis	Time (hours)	Time (days)
510.874	2.40E+01	2.16E+02	1.52E+02	0.459	0.649	1.419E-01	5.913E-03
513.999	2.39E+01	2.16E+02	1.52E+02	0.457	0.647	1.428E-01	5.949E-03
517.124	2.38E+01	2.15E+02	1.53E+02	0.455	0.644	1.436E-01	5.985E-03
520.249	2.38E+01	2.15E+02	1.53E+02	0.454	0.641	1.445E-01	6.021E-03
523.374	2.37E+01	2.14E+02	1.53E+02	0.452	0.639	1.454E-01	6.058E-03
526.499	2.36E+01	2.14E+02	1.53E+02	0.450	0.636	1.462E-01	6.094E-03
529.624	2.36E+01	2.14E+02	1.54E+02	0.449	0.635	1.471E-01	6.130E-03
532.749	2.35E+01	2.13E+02	1.54E+02	0.447	0.632	1.480E-01	6.166E-03
535.874	2.34E+01	2.13E+02	1.54E+02	0.445	0.630	1.489E-01	6.202E-03
538.999	2.34E+01	2.13E+02	1.54E+02	0.444	0.628	1.497E-01	6.238E-03
542.124	2.33E+01	2.12E+02	1.54E+02	0.443	0.626	1.506E-01	6.275E-03
545.249	2.33E+01	2.12E+02	1.54E+02	0.442	0.624	1.515E-01	6.311E-03
548.374	2.32E+01	2.12E+02	1.55E+02	0.441	0.623	1.523E-01	6.347E-03
551.499	2.32E+01	2.11E+02	1.55E+02	0.440	0.622	1.532E-01	6.383E-03
554.624	2.32E+01	2.11E+02	1.55E+02	0.438	0.620	1.541E-01	6.419E-03
557.749	2.31E+01	2.11E+02	1.55E+02	0.437	0.618	1.549E-01	6.455E-03
560.874	2.31E+01	2.11E+02	1.55E+02	0.436	0.617	1.558E-01	6.492E-03
563.999	2.30E+01	2.10E+02	1.55E+02	0.435	0.615	1.567E-01	6.528E-03
567.124	2.30E+01	2.10E+02	1.56E+02	0.434	0.614	1.575E-01	6.564E-03
570.249	2.30E+01	2.10E+02	1.56E+02	0.433	0.613	1.584E-01	6.600E-03
573.374	2.29E+01	2.10E+02	1.56E+02	0.432	0.611	1.593E-01	6.636E-03
576.499	2.29E+01	2.09E+02	1.56E+02	0.431	0.610	1.601E-01	6.672E-03
579.624	2.29E+01	2.09E+02	1.56E+02	0.430	0.609	1.610E-01	6.709E-03
582.749	2.28E+01	2.09E+02	1.56E+02	0.429	0.607	1.619E-01	6.745E-03
585.874	2.28E+01	2.09E+02	1.56E+02	0.429	0.606	1.627E-01	6.781E-03
588.999	2.27E+01	2.09E+02	1.57E+02	0.427	0.605	1.636E-01	6.817E-03
592.124	2.27E+01	2.08E+02	1.57E+02	0.427	0.603	1.645E-01	6.853E-03
595.249	2.27E+01	2.08E+02	1.57E+02	0.426	0.602	1.653E-01	6.889E-03
598.374	2.27E+01	2.08E+02	1.57E+02	0.425	0.601	1.662E-01	6.926E-03
601.4053	2.26E+01	2.08E+02	1.57E+02	0.424	0.600	1.671E-01	6.961E-03
604.5303	2.26E+01	2.08E+02	1.57E+02	0.423	0.598	1.679E-01	6.997E-03
607.6553	2.26E+01	2.07E+02	1.57E+02	0.422	0.597	1.688E-01	7.033E-03
610.7803	2.25E+01	2.07E+02	1.57E+02	0.422	0.596	1.697E-01	7.069E-03
613.9053	2.25E+01	2.07E+02	1.58E+02	0.421	0.595	1.705E-01	7.105E-03
617.0303	2.25E+01	2.07E+02	1.58E+02	0.420	0.594	1.714E-01	7.142E-03
627.0303	2.24E+01	2.06E+02	1.58E+02	0.417	0.590	1.742E-01	7.257E-03
652.4053	2.21E+01	2.05E+02	1.59E+02	0.410	0.580	1.812E-01	7.551E-03
677.2178	2.18E+01	2.03E+02	1.60E+02	0.403	0.569	1.881E-01	7.838E-03
702.6553	2.16E+01	2.02E+02	1.60E+02	0.396	0.560	1.952E-01	8.133E-03
727.7178	2.14E+01	2.00E+02	1.61E+02	0.390	0.552	2.021E-01	8.423E-03
752.4678	2.12E+01	1.99E+02	1.62E+02	0.385	0.545	2.090E-01	8.709E-03
776.4678	2.11E+01	1.98E+02	1.63E+02	0.381	0.539	2.157E-01	8.987E-03
801.0303	2.10E+01	1.98E+02	1.63E+02	0.378	0.535	2.225E-01	9.271E-03
825.0928	2.09E+01	1.97E+02	1.64E+02	0.375	0.530	2.292E-01	9.550E-03
850.0928	2.08E+01	1.96E+02	1.65E+02	0.373	0.527	2.361E-01	9.839E-03
874.7178	2.07E+01	1.96E+02	1.65E+02	0.370	0.524	2.430E-01	1.012E-02
899.2178	2.07E+01	1.95E+02	1.66E+02	0.369	0.521	2.498E-01	1.041E-02
924.2178	2.06E+01	1.95E+02	1.66E+02	0.367	0.519	2.567E-01	1.070E-02
948.9053	2.06E+01	1.95E+02	1.67E+02	0.366	0.517	2.636E-01	1.098E-02
973.3428	2.06E+01	1.94E+02	1.67E+02	0.365	0.516	2.704E-01	1.127E-02
997.9678	2.05E+01	1.94E+02	1.68E+02	0.364	0.515	2.772E-01	1.155E-02
1023.093	2.05E+01	1.94E+02	1.68E+02	0.363	0.514	2.842E-01	1.184E-02

TIME	DW PRESS (PSIA)	DW TEMP (F)	SP TEMP (F)	PC Leak Fraction of Design Basis	MSIV Leak Fraction of Design Basis	Time (hours)	Time (days)
1047.843	2.05E+01	1.94E+02	1.69E+02	0.363	0.513	2.911E-01	1.213E-02
1072.968	2.05E+01	1.94E+02	1.69E+02	0.362	0.513	2.980E-01	1.242E-02
1098.03	2.05E+01	1.93E+02	1.69E+02	0.362	0.512	3.050E-01	1.271E-02
1122.655	2.05E+01	1.93E+02	1.70E+02	0.362	0.512	3.118E-01	1.299E-02
1147.468	2.05E+01	1.93E+02	1.70E+02	0.362	0.512	3.187E-01	1.328E-02
1172.28	2.05E+01	1.93E+02	1.70E+02	0.361	0.511	3.256E-01	1.357E-02
1197.093	2.05E+01	1.93E+02	1.71E+02	0.361	0.511	3.325E-01	1.386E-02
1222.28	2.05E+01	1.93E+02	1.71E+02	0.361	0.511	3.395E-01	1.415E-02
1247.093	2.05E+01	1.93E+02	1.71E+02	0.361	0.511	3.464E-01	1.443E-02
1271.905	2.05E+01	1.93E+02	1.72E+02	0.362	0.512	3.533E-01	1.472E-02
1297.28	2.05E+01	1.93E+02	1.72E+02	0.361	0.511	3.604E-01	1.501E-02
1322.093	2.05E+01	1.93E+02	1.72E+02	0.362	0.512	3.672E-01	1.530E-02
1346.905	2.05E+01	1.93E+02	1.73E+02	0.362	0.512	3.741E-01	1.559E-02
1371.718	2.05E+01	1.93E+02	1.73E+02	0.362	0.512	3.810E-01	1.588E-02
1396.718	2.05E+01	1.93E+02	1.73E+02	0.362	0.512	3.880E-01	1.617E-02
1421.53	2.05E+01	1.93E+02	1.74E+02	0.362	0.513	3.949E-01	1.645E-02
1446.343	2.05E+01	1.93E+02	1.74E+02	0.363	0.513	4.018E-01	1.674E-02
1471.968	2.05E+01	1.93E+02	1.74E+02	0.362	0.513	4.089E-01	1.704E-02
1496.78	2.05E+01	1.93E+02	1.74E+02	0.363	0.513	4.158E-01	1.732E-02
1522.28	2.05E+01	1.93E+02	1.75E+02	0.363	0.513	4.229E-01	1.762E-02
1547.093	2.05E+01	1.93E+02	1.75E+02	0.363	0.513	4.297E-01	1.791E-02
1572.28	2.05E+01	1.93E+02	1.75E+02	0.363	0.514	4.367E-01	1.820E-02
1597.655	2.05E+01	1.93E+02	1.75E+02	0.363	0.514	4.438E-01	1.849E-02
1622.718	2.05E+01	1.93E+02	1.76E+02	0.364	0.514	4.508E-01	1.878E-02
1647.968	2.05E+01	1.93E+02	1.76E+02	0.364	0.514	4.578E-01	1.907E-02
1673.155	2.05E+01	1.93E+02	1.76E+02	0.364	0.515	4.648E-01	1.937E-02
1697.968	2.05E+01	1.93E+02	1.76E+02	0.364	0.515	4.717E-01	1.965E-02
1723.343	2.05E+01	1.93E+02	1.77E+02	0.364	0.515	4.787E-01	1.995E-02
1748.28	2.06E+01	1.93E+02	1.77E+02	0.365	0.516	4.856E-01	2.023E-02
1773.905	2.05E+01	1.93E+02	1.77E+02	0.364	0.515	4.928E-01	2.053E-02
1799.468	2.06E+01	1.93E+02	1.77E+02	0.365	0.516	4.999E-01	2.083E-02
1824.405	2.06E+01	1.93E+02	1.77E+02	0.365	0.516	5.068E-01	2.112E-02
1849.405	2.06E+01	1.93E+02	1.78E+02	0.365	0.517	5.137E-01	2.141E-02
1874.218	2.06E+01	1.93E+02	1.78E+02	0.365	0.517	5.206E-01	2.169E-02
1899.218	2.06E+01	1.93E+02	1.78E+02	0.365	0.517	5.276E-01	2.198E-02
1924.03	2.06E+01	1.93E+02	1.78E+02	0.366	0.517	5.345E-01	2.227E-02
1949.155	2.06E+01	1.93E+02	1.78E+02	0.366	0.517	5.414E-01	2.256E-02
1974.468	2.06E+01	1.93E+02	1.79E+02	0.366	0.517	5.485E-01	2.285E-02
1999.53	2.06E+01	1.93E+02	1.79E+02	0.366	0.518	5.554E-01	2.314E-02
2024.53	2.06E+01	1.93E+02	1.79E+02	0.366	0.518	5.624E-01	2.343E-02
2049.968	2.06E+01	1.93E+02	1.79E+02	0.366	0.518	5.694E-01	2.373E-02
2074.968	2.06E+01	1.93E+02	1.79E+02	0.366	0.518	5.764E-01	2.402E-02
2099.905	2.06E+01	1.93E+02	1.80E+02	0.367	0.519	5.833E-01	2.430E-02
2125.655	2.06E+01	1.93E+02	1.80E+02	0.367	0.519	5.905E-01	2.460E-02
2150.593	2.06E+01	1.93E+02	1.80E+02	0.367	0.520	5.974E-01	2.489E-02
2175.968	2.06E+01	1.93E+02	1.80E+02	0.367	0.520	6.044E-01	2.518E-02
2201.218	2.06E+01	1.93E+02	1.80E+02	0.367	0.520	6.114E-01	2.548E-02
2226.53	2.07E+01	1.93E+02	1.80E+02	0.368	0.520	6.185E-01	2.577E-02
2252.405	2.07E+01	1.93E+02	1.81E+02	0.368	0.521	6.257E-01	2.607E-02
2277.468	2.07E+01	1.93E+02	1.81E+02	0.369	0.521	6.326E-01	2.636E-02
2303.343	2.07E+01	1.93E+02	1.81E+02	0.369	0.521	6.398E-01	2.666E-02
2329.468	2.07E+01	1.93E+02	1.81E+02	0.369	0.522	6.471E-01	2.696E-02

TIME	DW PRESS (PSIA)	DW TEMP (F)	SP TEMP (F)	PC Leak Fraction of Design Basis	MSIV Leak Fraction of Design Basis	Time (hours)	Time (days)
2355.343	2.07E+01	1.93E+02	1.81E+02	0.369	0.522	6.543E-01	2.726E-02
2380.405	2.07E+01	1.93E+02	1.81E+02	0.370	0.523	6.612E-01	2.755E-02
2406.405	2.07E+01	1.93E+02	1.82E+02	0.370	0.523	6.684E-01	2.785E-02
2432.155	2.07E+01	1.93E+02	1.82E+02	0.370	0.524	6.756E-01	2.815E-02
2457.405	2.07E+01	1.93E+02	1.82E+02	0.371	0.524	6.826E-01	2.844E-02
2482.343	2.08E+01	1.93E+02	1.82E+02	0.371	0.525	6.895E-01	2.873E-02
2507.593	2.08E+01	1.93E+02	1.82E+02	0.371	0.525	6.966E-01	2.902E-02
2533.093	2.08E+01	1.93E+02	1.82E+02	0.371	0.525	7.036E-01	2.932E-02
2557.905	2.08E+01	1.93E+02	1.82E+02	0.372	0.526	7.105E-01	2.961E-02
2582.905	2.08E+01	1.93E+02	1.83E+02	0.372	0.527	7.175E-01	2.989E-02
2608.405	2.08E+01	1.93E+02	1.83E+02	0.373	0.527	7.246E-01	3.019E-02
2633.655	2.08E+01	1.93E+02	1.83E+02	0.373	0.527	7.316E-01	3.048E-02
2658.718	2.08E+01	1.93E+02	1.83E+02	0.373	0.528	7.385E-01	3.077E-02
2684.593	2.08E+01	1.93E+02	1.83E+02	0.374	0.528	7.457E-01	3.107E-02
2709.593	2.09E+01	1.93E+02	1.83E+02	0.374	0.529	7.527E-01	3.136E-02
2734.843	2.09E+01	1.94E+02	1.83E+02	0.374	0.529	7.597E-01	3.165E-02
2759.78	2.09E+01	1.94E+02	1.83E+02	0.374	0.530	7.666E-01	3.194E-02
2784.905	2.09E+01	1.94E+02	1.84E+02	0.375	0.530	7.736E-01	3.223E-02
2810.155	2.09E+01	1.94E+02	1.84E+02	0.375	0.530	7.806E-01	3.252E-02
2835.155	2.09E+01	1.94E+02	1.84E+02	0.375	0.531	7.875E-01	3.281E-02
2860.155	2.09E+01	1.94E+02	1.84E+02	0.376	0.531	7.945E-01	3.310E-02
2885.343	2.09E+01	1.94E+02	1.84E+02	0.376	0.532	8.015E-01	3.340E-02
2910.593	2.09E+01	1.94E+02	1.84E+02	0.376	0.532	8.085E-01	3.369E-02
2936.218	2.09E+01	1.94E+02	1.84E+02	0.377	0.533	8.156E-01	3.398E-02
2961.593	2.10E+01	1.94E+02	1.85E+02	0.377	0.533	8.227E-01	3.428E-02
2986.53	2.10E+01	1.94E+02	1.85E+02	0.377	0.534	8.296E-01	3.457E-02
3011.53	2.10E+01	1.94E+02	1.85E+02	0.378	0.534	8.365E-01	3.486E-02
3036.53	2.10E+01	1.94E+02	1.85E+02	0.378	0.535	8.435E-01	3.515E-02
3061.53	2.10E+01	1.94E+02	1.85E+02	0.378	0.535	8.504E-01	3.543E-02
3086.343	2.10E+01	1.94E+02	1.85E+02	0.379	0.536	8.573E-01	3.572E-02
3111.155	2.10E+01	1.94E+02	1.85E+02	0.380	0.537	8.642E-01	3.601E-02
3136.343	2.11E+01	1.94E+02	1.85E+02	0.380	0.538	8.712E-01	3.630E-02
3161.655	2.11E+01	1.94E+02	1.85E+02	0.381	0.539	8.782E-01	3.659E-02
3186.468	2.11E+01	1.94E+02	1.86E+02	0.381	0.539	8.851E-01	3.688E-02
3211.28	2.11E+01	1.94E+02	1.86E+02	0.382	0.540	8.920E-01	3.717E-02
3236.218	2.11E+01	1.94E+02	1.86E+02	0.382	0.541	8.989E-01	3.746E-02
3261.655	2.12E+01	1.94E+02	1.86E+02	0.383	0.541	9.060E-01	3.775E-02
3286.593	2.12E+01	1.94E+02	1.86E+02	0.383	0.542	9.129E-01	3.804E-02
3311.593	2.12E+01	1.94E+02	1.86E+02	0.384	0.543	9.199E-01	3.833E-02
3336.405	2.12E+01	1.94E+02	1.86E+02	0.384	0.544	9.268E-01	3.862E-02
3361.343	2.12E+01	1.94E+02	1.86E+02	0.385	0.544	9.337E-01	3.890E-02
3386.655	2.12E+01	1.94E+02	1.86E+02	0.385	0.545	9.407E-01	3.920E-02
3411.468	2.13E+01	1.94E+02	1.86E+02	0.386	0.546	9.476E-01	3.948E-02
3436.28	2.13E+01	1.94E+02	1.87E+02	0.386	0.546	9.545E-01	3.977E-02
3461.093	2.13E+01	1.95E+02	1.87E+02	0.387	0.547	9.614E-01	4.006E-02
3486.468	2.13E+01	1.95E+02	1.87E+02	0.387	0.548	9.685E-01	4.035E-02
3511.28	2.13E+01	1.95E+02	1.87E+02	0.388	0.549	9.754E-01	4.064E-02
3536.218	2.13E+01	1.95E+02	1.87E+02	0.388	0.549	9.823E-01	4.093E-02
3561.405	2.14E+01	1.95E+02	1.87E+02	0.389	0.550	9.893E-01	4.122E-02
3586.468	2.14E+01	1.95E+02	1.87E+02	0.389	0.551	9.962E-01	4.151E-02
3612.343	2.14E+01	1.95E+02	1.87E+02	0.390	0.551	1.003E+00	4.181E-02
3637.155	2.14E+01	1.95E+02	1.87E+02	0.390	0.551	1.010E+00	4.210E-02

TIME	DW PRESS (PSIA)	DW TEMP (F)	SP TEMP (F)	PC Leak Fraction of Design Basis	MSIV Leak Fraction of Design Basis	Time (hours)	Time (days)
3663.093	2.14E+01	1.95E+02	1.87E+02	0.391	0.552	1.018E+00	4.240E-02
3688.655	2.14E+01	1.95E+02	1.88E+02	0.391	0.553	1.025E+00	4.269E-02
3713.78	2.14E+01	1.95E+02	1.88E+02	0.391	0.554	1.032E+00	4.298E-02
3738.843	2.15E+01	1.95E+02	1.88E+02	0.392	0.554	1.039E+00	4.327E-02
3764.03	2.15E+01	1.95E+02	1.88E+02	0.392	0.555	1.046E+00	4.357E-02
3789.593	2.15E+01	1.95E+02	1.88E+02	0.393	0.556	1.053E+00	4.386E-02
3814.843	2.15E+01	1.95E+02	1.88E+02	0.393	0.556	1.060E+00	4.415E-02
3839.78	2.15E+01	1.95E+02	1.88E+02	0.393	0.556	1.067E+00	4.444E-02
3865.218	2.15E+01	1.95E+02	1.88E+02	0.394	0.557	1.074E+00	4.474E-02
3890.218	2.15E+01	1.95E+02	1.88E+02	0.394	0.558	1.081E+00	4.503E-02
3916.155	2.16E+01	1.95E+02	1.88E+02	0.395	0.558	1.088E+00	4.533E-02
3941.093	2.16E+01	1.95E+02	1.88E+02	0.395	0.559	1.095E+00	4.561E-02
3966.093	2.16E+01	1.95E+02	1.89E+02	0.395	0.559	1.102E+00	4.590E-02
3991.28	2.16E+01	1.95E+02	1.89E+02	0.396	0.560	1.109E+00	4.620E-02
4016.343	2.16E+01	1.95E+02	1.89E+02	0.396	0.560	1.116E+00	4.649E-02
4041.593	2.16E+01	1.95E+02	1.89E+02	0.397	0.561	1.123E+00	4.678E-02
4066.655	2.16E+01	1.95E+02	1.89E+02	0.397	0.562	1.130E+00	4.707E-02
4091.468	2.17E+01	1.95E+02	1.89E+02	0.397	0.562	1.137E+00	4.735E-02
4116.468	2.17E+01	1.95E+02	1.89E+02	0.398	0.562	1.143E+00	4.764E-02
4141.53	2.17E+01	1.95E+02	1.89E+02	0.398	0.563	1.150E+00	4.793E-02
4166.53	2.17E+01	1.95E+02	1.89E+02	0.399	0.564	1.157E+00	4.822E-02
4191.343	2.17E+01	1.95E+02	1.89E+02	0.399	0.564	1.164E+00	4.851E-02
4216.468	2.17E+01	1.95E+02	1.89E+02	0.399	0.565	1.171E+00	4.880E-02
4241.405	2.17E+01	1.95E+02	1.89E+02	0.400	0.566	1.178E+00	4.909E-02
4266.53	2.18E+01	1.95E+02	1.89E+02	0.400	0.566	1.185E+00	4.938E-02
4292.468	2.18E+01	1.96E+02	1.90E+02	0.401	0.566	1.192E+00	4.968E-02
4318.218	2.18E+01	1.96E+02	1.90E+02	0.401	0.567	1.200E+00	4.998E-02
4343.03	2.18E+01	1.96E+02	1.90E+02	0.401	0.568	1.206E+00	5.027E-02
4368.405	2.18E+01	1.96E+02	1.90E+02	0.402	0.568	1.213E+00	5.056E-02
4393.655	2.18E+01	1.96E+02	1.90E+02	0.402	0.568	1.220E+00	5.085E-02
4418.593	2.18E+01	1.96E+02	1.90E+02	0.403	0.569	1.227E+00	5.114E-02
4444.218	2.18E+01	1.96E+02	1.90E+02	0.403	0.570	1.235E+00	5.144E-02
4469.405	2.19E+01	1.96E+02	1.90E+02	0.403	0.570	1.242E+00	5.173E-02
4494.655	2.19E+01	1.96E+02	1.90E+02	0.404	0.571	1.249E+00	5.202E-02
4519.718	2.19E+01	1.96E+02	1.90E+02	0.404	0.572	1.255E+00	5.231E-02
4544.718	2.19E+01	1.96E+02	1.90E+02	0.405	0.572	1.262E+00	5.260E-02
4569.968	2.19E+01	1.96E+02	1.90E+02	0.405	0.572	1.269E+00	5.289E-02
4594.78	2.19E+01	1.96E+02	1.90E+02	0.405	0.573	1.276E+00	5.318E-02
4620.405	2.19E+01	1.96E+02	1.90E+02	0.405	0.573	1.283E+00	5.348E-02
4645.593	2.20E+01	1.96E+02	1.91E+02	0.406	0.574	1.290E+00	5.377E-02
4670.593	2.20E+01	1.96E+02	1.91E+02	0.406	0.574	1.297E+00	5.406E-02
4695.718	2.20E+01	1.96E+02	1.91E+02	0.406	0.575	1.304E+00	5.435E-02
4720.655	2.20E+01	1.96E+02	1.91E+02	0.407	0.576	1.311E+00	5.464E-02
4745.655	2.20E+01	1.96E+02	1.91E+02	0.407	0.576	1.318E+00	5.493E-02
4770.655	2.20E+01	1.96E+02	1.91E+02	0.408	0.576	1.325E+00	5.522E-02
4795.468	2.20E+01	1.96E+02	1.91E+02	0.408	0.577	1.332E+00	5.550E-02
4820.468	2.20E+01	1.96E+02	1.91E+02	0.408	0.578	1.339E+00	5.579E-02
4845.843	2.21E+01	1.96E+02	1.91E+02	0.409	0.578	1.346E+00	5.609E-02
4870.655	2.21E+01	1.96E+02	1.91E+02	0.409	0.579	1.353E+00	5.637E-02
4895.655	2.21E+01	1.96E+02	1.91E+02	0.410	0.579	1.360E+00	5.666E-02
4920.78	2.21E+01	1.96E+02	1.91E+02	0.410	0.579	1.367E+00	5.695E-02
4946.718	2.21E+01	1.96E+02	1.91E+02	0.410	0.580	1.374E+00	5.725E-02

TIME	DW PRESS (PSIA)	DW TEMP (F)	SP TEMP (F)	PC Leak Fraction of Design Basis	MSIV Leak Fraction of Design Basis	Time (hours)	Time (days)
4971.968	2.21E+01	1.97E+02	1.91E+02	0.410	0.580	1.381E+00	5.755E-02
4997.718	2.21E+01	1.97E+02	1.91E+02	0.411	0.581	1.388E+00	5.784E-02
5022.53	2.21E+01	1.97E+02	1.92E+02	0.411	0.582	1.395E+00	5.813E-02
5047.655	2.22E+01	1.97E+02	1.92E+02	0.411	0.582	1.402E+00	5.842E-02
5072.905	2.22E+01	1.97E+02	1.92E+02	0.412	0.582	1.409E+00	5.871E-02
5097.905	2.22E+01	1.97E+02	1.92E+02	0.412	0.582	1.416E+00	5.900E-02
5122.843	2.22E+01	1.97E+02	1.92E+02	0.412	0.583	1.423E+00	5.929E-02
5147.968	2.22E+01	1.97E+02	1.92E+02	0.413	0.583	1.430E+00	5.958E-02
5172.968	2.22E+01	1.97E+02	1.92E+02	0.413	0.584	1.437E+00	5.987E-02
5198.03	2.22E+01	1.97E+02	1.92E+02	0.413	0.585	1.444E+00	6.016E-02
5223.03	2.22E+01	1.97E+02	1.92E+02	0.414	0.585	1.451E+00	6.045E-02
5248.405	2.22E+01	1.97E+02	1.92E+02	0.414	0.585	1.458E+00	6.075E-02
5273.53	2.22E+01	1.97E+02	1.92E+02	0.414	0.585	1.465E+00	6.104E-02
5298.468	2.23E+01	1.97E+02	1.92E+02	0.415	0.586	1.472E+00	6.132E-02
5324.218	2.23E+01	1.97E+02	1.92E+02	0.415	0.587	1.479E+00	6.162E-02
5349.843	2.23E+01	1.97E+02	1.92E+02	0.415	0.587	1.486E+00	6.192E-02
5375.093	2.23E+01	1.97E+02	1.92E+02	0.415	0.587	1.493E+00	6.221E-02
5399.905	2.23E+01	1.97E+02	1.92E+02	0.416	0.588	1.500E+00	6.250E-02
5424.905	2.23E+01	1.97E+02	1.92E+02	0.416	0.588	1.507E+00	6.279E-02
5450.655	2.23E+01	1.97E+02	1.93E+02	0.416	0.588	1.514E+00	6.309E-02
5476.405	2.23E+01	1.97E+02	1.93E+02	0.416	0.589	1.521E+00	6.338E-02
5501.218	2.23E+01	1.97E+02	1.93E+02	0.417	0.589	1.528E+00	6.367E-02
5526.218	2.24E+01	1.97E+02	1.93E+02	0.417	0.590	1.535E+00	6.396E-02
5551.343	2.24E+01	1.97E+02	1.93E+02	0.417	0.590	1.542E+00	6.425E-02
5576.593	2.24E+01	1.97E+02	1.93E+02	0.417	0.590	1.549E+00	6.454E-02
5601.405	2.24E+01	1.97E+02	1.93E+02	0.418	0.591	1.556E+00	6.483E-02
5626.405	2.24E+01	1.97E+02	1.93E+02	0.418	0.591	1.563E+00	6.512E-02
5651.78	2.24E+01	1.97E+02	1.93E+02	0.418	0.591	1.570E+00	6.541E-02
5677.655	2.24E+01	1.97E+02	1.93E+02	0.418	0.592	1.577E+00	6.571E-02
5702.718	2.24E+01	1.97E+02	1.93E+02	0.419	0.592	1.584E+00	6.600E-02
5727.718	2.24E+01	1.97E+02	1.93E+02	0.419	0.592	1.591E+00	6.629E-02
5752.718	2.24E+01	1.97E+02	1.93E+02	0.419	0.593	1.598E+00	6.658E-02
5777.843	2.24E+01	1.97E+02	1.93E+02	0.419	0.593	1.605E+00	6.687E-02
5803.218	2.25E+01	1.98E+02	1.93E+02	0.420	0.594	1.612E+00	6.717E-02
5828.78	2.25E+01	1.98E+02	1.93E+02	0.420	0.594	1.619E+00	6.746E-02
5854.155	2.25E+01	1.98E+02	1.93E+02	0.420	0.594	1.626E+00	6.776E-02
5879.155	2.25E+01	1.98E+02	1.93E+02	0.420	0.595	1.633E+00	6.805E-02
5904.28	2.25E+01	1.98E+02	1.94E+02	0.420	0.595	1.640E+00	6.834E-02
5929.218	2.25E+01	1.98E+02	1.94E+02	0.421	0.595	1.647E+00	6.863E-02
5954.968	2.25E+01	1.98E+02	1.94E+02	0.421	0.596	1.654E+00	6.892E-02
5980.343	2.25E+01	1.98E+02	1.94E+02	0.421	0.596	1.661E+00	6.922E-02
6006.593	2.25E+01	1.98E+02	1.94E+02	0.422	0.596	1.668E+00	6.952E-02
6031.968	2.25E+01	1.98E+02	1.94E+02	0.422	0.597	1.676E+00	6.981E-02
6057.03	2.25E+01	1.98E+02	1.94E+02	0.422	0.597	1.683E+00	7.010E-02
6082.03	2.26E+01	1.98E+02	1.94E+02	0.422	0.597	1.689E+00	7.039E-02
6107.03	2.26E+01	1.98E+02	1.94E+02	0.423	0.598	1.696E+00	7.068E-02
6132.28	2.26E+01	1.98E+02	1.94E+02	0.423	0.598	1.703E+00	7.098E-02
6158.655	2.26E+01	1.98E+02	1.94E+02	0.423	0.598	1.711E+00	7.128E-02
6183.78	2.26E+01	1.98E+02	1.94E+02	0.423	0.598	1.718E+00	7.157E-02
6209.03	2.26E+01	1.98E+02	1.94E+02	0.423	0.598	1.725E+00	7.186E-02
6234.218	2.26E+01	1.98E+02	1.94E+02	0.424	0.599	1.732E+00	7.216E-02
6259.343	2.26E+01	1.98E+02	1.94E+02	0.424	0.600	1.739E+00	7.245E-02

TIME	DW PRESS (PSIA)	DW TEMP (F)	SP TEMP (F)	PC Leak Fraction of Design Basis	MSIV Leak Fraction of Design Basis	Time (hours)	Time (days)
6284.468	2.26E+01	1.98E+02	1.94E+02	0.424	0.600	1.746E+00	7.274E-02
6309.593	2.26E+01	1.98E+02	1.94E+02	0.424	0.600	1.753E+00	7.303E-02
6334.968	2.26E+01	1.98E+02	1.94E+02	0.425	0.600	1.760E+00	7.332E-02
6360.218	2.26E+01	1.98E+02	1.94E+02	0.425	0.601	1.767E+00	7.361E-02
6385.218	2.27E+01	1.98E+02	1.94E+02	0.425	0.601	1.774E+00	7.390E-02
6410.218	2.27E+01	1.98E+02	1.94E+02	0.425	0.601	1.781E+00	7.419E-02
6435.28	2.27E+01	1.98E+02	1.95E+02	0.426	0.602	1.788E+00	7.448E-02
6460.28	2.27E+01	1.98E+02	1.95E+02	0.426	0.602	1.795E+00	7.477E-02
6485.53	2.27E+01	1.98E+02	1.95E+02	0.426	0.602	1.802E+00	7.506E-02
6510.78	2.27E+01	1.98E+02	1.95E+02	0.426	0.603	1.809E+00	7.536E-02
6536.905	2.27E+01	1.98E+02	1.95E+02	0.426	0.603	1.816E+00	7.566E-02
6561.905	2.27E+01	1.98E+02	1.95E+02	0.427	0.603	1.823E+00	7.595E-02
6587.53	2.27E+01	1.98E+02	1.95E+02	0.427	0.603	1.830E+00	7.624E-02
6612.593	2.27E+01	1.98E+02	1.95E+02	0.427	0.604	1.837E+00	7.653E-02
6637.968	2.27E+01	1.98E+02	1.95E+02	0.427	0.605	1.844E+00	7.683E-02
6663.343	2.28E+01	1.98E+02	1.95E+02	0.428	0.605	1.851E+00	7.712E-02
6688.593	2.28E+01	1.99E+02	1.95E+02	0.428	0.605	1.858E+00	7.741E-02
6713.718	2.28E+01	1.99E+02	1.95E+02	0.428	0.605	1.865E+00	7.771E-02
6738.843	2.28E+01	1.99E+02	1.95E+02	0.428	0.606	1.872E+00	7.800E-02
6764.468	2.28E+01	1.99E+02	1.95E+02	0.428	0.606	1.879E+00	7.829E-02
6790.093	2.28E+01	1.99E+02	1.95E+02	0.429	0.606	1.886E+00	7.859E-02
6815.093	2.28E+01	1.99E+02	1.95E+02	0.429	0.606	1.893E+00	7.888E-02
6841.093	2.28E+01	1.99E+02	1.95E+02	0.429	0.607	1.900E+00	7.918E-02
6866.093	2.28E+01	1.99E+02	1.95E+02	0.429	0.607	1.907E+00	7.947E-02
6890.905	2.28E+01	1.99E+02	1.95E+02	0.430	0.608	1.914E+00	7.976E-02
6916.03	2.28E+01	1.99E+02	1.95E+02	0.430	0.608	1.921E+00	8.005E-02
6941.155	2.28E+01	1.99E+02	1.95E+02	0.430	0.608	1.928E+00	8.034E-02
6966.655	2.28E+01	1.99E+02	1.95E+02	0.430	0.608	1.935E+00	8.063E-02
6991.655	2.29E+01	1.99E+02	1.95E+02	0.430	0.609	1.942E+00	8.092E-02
7016.655	2.29E+01	1.99E+02	1.96E+02	0.430	0.609	1.949E+00	8.121E-02
7042.155	2.29E+01	1.99E+02	1.96E+02	0.431	0.609	1.956E+00	8.151E-02
7067.155	2.29E+01	1.99E+02	1.96E+02	0.431	0.609	1.963E+00	8.180E-02
7092.155	2.29E+01	1.99E+02	1.96E+02	0.431	0.609	1.970E+00	8.209E-02
7117.405	2.29E+01	1.99E+02	1.96E+02	0.431	0.610	1.977E+00	8.238E-02
7142.53	2.29E+01	1.99E+02	1.96E+02	0.431	0.610	1.984E+00	8.267E-02
7167.78	2.29E+01	1.99E+02	1.96E+02	0.431	0.610	1.991E+00	8.296E-02
7193.03	2.29E+01	1.99E+02	1.96E+02	0.432	0.611	1.998E+00	8.325E-02
7218.03	2.29E+01	1.99E+02	1.96E+02	0.432	0.611	2.005E+00	8.354E-02
7242.843	2.29E+01	1.99E+02	1.96E+02	0.432	0.611	2.012E+00	8.383E-02
7267.843	2.29E+01	1.99E+02	1.96E+02	0.432	0.611	2.019E+00	8.412E-02
7293.843	2.29E+01	1.99E+02	1.96E+02	0.432	0.612	2.026E+00	8.442E-02
7319.343	2.29E+01	1.99E+02	1.96E+02	0.433	0.612	2.033E+00	8.471E-02
7344.593	2.30E+01	1.99E+02	1.96E+02	0.433	0.612	2.040E+00	8.501E-02
7369.968	2.30E+01	1.99E+02	1.96E+02	0.433	0.612	2.047E+00	8.530E-02
7395.093	2.30E+01	1.99E+02	1.96E+02	0.433	0.613	2.054E+00	8.559E-02
7420.718	2.30E+01	1.99E+02	1.96E+02	0.433	0.613	2.061E+00	8.589E-02
7446.093	2.30E+01	1.99E+02	1.96E+02	0.434	0.613	2.068E+00	8.618E-02
7471.343	2.30E+01	1.99E+02	1.96E+02	0.434	0.613	2.075E+00	8.647E-02
7497.218	2.30E+01	1.99E+02	1.96E+02	0.434	0.613	2.083E+00	8.677E-02
7522.218	2.30E+01	1.99E+02	1.96E+02	0.434	0.614	2.090E+00	8.706E-02
7547.78	2.30E+01	1.99E+02	1.96E+02	0.434	0.614	2.097E+00	8.736E-02
7572.905	2.30E+01	1.99E+02	1.96E+02	0.435	0.615	2.104E+00	8.765E-02

TIME	DW PRESS (PSIA)	DW TEMP (F)	SP TEMP (F)	PC Leak Fraction of Design Basis	MSIV Leak Fraction of Design Basis	Time (hours)	Time (days)
7597.905	2.30E+01	1.99E+02	1.96E+02	0.435	0.615	2.111E+00	8.794E-02
7623.03	2.30E+01	1.99E+02	1.96E+02	0.435	0.615	2.118E+00	8.823E-02
7648.405	2.30E+01	1.99E+02	1.96E+02	0.435	0.615	2.125E+00	8.852E-02
7673.405	2.30E+01	1.99E+02	1.97E+02	0.435	0.615	2.132E+00	8.881E-02
7698.405	2.30E+01	2.00E+02	1.97E+02	0.435	0.616	2.138E+00	8.910E-02
7723.905	2.30E+01	2.00E+02	1.97E+02	0.435	0.616	2.146E+00	8.940E-02
7749.28	2.31E+01	2.00E+02	1.97E+02	0.436	0.616	2.153E+00	8.969E-02
7774.28	2.31E+01	2.00E+02	1.97E+02	0.436	0.616	2.160E+00	8.998E-02
7799.28	2.31E+01	2.00E+02	1.97E+02	0.436	0.616	2.166E+00	9.027E-02
7824.405	2.31E+01	2.00E+02	1.97E+02	0.436	0.617	2.173E+00	9.056E-02
7849.53	2.31E+01	2.00E+02	1.97E+02	0.436	0.617	2.180E+00	9.085E-02
7874.78	2.31E+01	2.00E+02	1.97E+02	0.436	0.617	2.187E+00	9.114E-02
7900.28	2.31E+01	2.00E+02	1.97E+02	0.436	0.617	2.195E+00	9.144E-02
7925.53	2.31E+01	2.00E+02	1.97E+02	0.437	0.618	2.202E+00	9.173E-02
7950.655	2.31E+01	2.00E+02	1.97E+02	0.437	0.618	2.209E+00	9.202E-02
7976.155	2.31E+01	2.00E+02	1.97E+02	0.437	0.618	2.216E+00	9.232E-02
8001.405	2.31E+01	2.00E+02	1.97E+02	0.437	0.618	2.223E+00	9.261E-02
8026.843	2.31E+01	2.00E+02	1.97E+02	0.437	0.619	2.230E+00	9.290E-02
8052.843	2.31E+01	2.00E+02	1.97E+02	0.438	0.619	2.237E+00	9.320E-02
8078.718	2.31E+01	2.00E+02	1.97E+02	0.438	0.619	2.244E+00	9.350E-02
8103.718	2.31E+01	2.00E+02	1.97E+02	0.438	0.619	2.251E+00	9.379E-02
8129.093	2.31E+01	2.00E+02	1.97E+02	0.438	0.619	2.258E+00	9.409E-02
8154.343	2.32E+01	2.00E+02	1.97E+02	0.438	0.620	2.265E+00	9.438E-02
8179.468	2.32E+01	2.00E+02	1.97E+02	0.438	0.620	2.272E+00	9.467E-02
8204.718	2.32E+01	2.00E+02	1.97E+02	0.438	0.620	2.279E+00	9.496E-02
8230.968	2.32E+01	2.00E+02	1.97E+02	0.438	0.620	2.286E+00	9.527E-02
8256.843	2.32E+01	2.00E+02	1.97E+02	0.439	0.620	2.294E+00	9.557E-02
8282.093	2.32E+01	2.00E+02	1.97E+02	0.439	0.620	2.301E+00	9.586E-02
8307.468	2.32E+01	2.00E+02	1.97E+02	0.439	0.621	2.308E+00	9.615E-02
8333.218	2.32E+01	2.00E+02	1.97E+02	0.439	0.621	2.315E+00	9.645E-02
8358.468	2.32E+01	2.00E+02	1.97E+02	0.439	0.621	2.322E+00	9.674E-02
8384.968	2.32E+01	2.00E+02	1.97E+02	0.440	0.622	2.329E+00	9.705E-02
8410.468	2.32E+01	2.00E+02	1.98E+02	0.440	0.622	2.336E+00	9.734E-02
8435.468	2.32E+01	2.00E+02	1.98E+02	0.440	0.622	2.343E+00	9.763E-02
8460.593	2.32E+01	2.00E+02	1.98E+02	0.440	0.622	2.350E+00	9.792E-02
8485.718	2.32E+01	2.00E+02	1.98E+02	0.440	0.622	2.357E+00	9.821E-02
8510.718	2.32E+01	2.00E+02	1.98E+02	0.440	0.622	2.364E+00	9.850E-02
8536.843	2.32E+01	2.00E+02	1.98E+02	0.440	0.623	2.371E+00	9.881E-02
8562.218	2.32E+01	2.00E+02	1.98E+02	0.440	0.623	2.378E+00	9.910E-02
8587.718	2.32E+01	2.00E+02	1.98E+02	0.441	0.623	2.385E+00	9.939E-02
8613.093	2.32E+01	2.00E+02	1.98E+02	0.441	0.623	2.393E+00	9.969E-02
8638.093	2.33E+01	2.00E+02	1.98E+02	0.441	0.623	2.399E+00	9.998E-02
8663.093	2.33E+01	2.00E+02	1.98E+02	0.441	0.623	2.406E+00	1.003E-01
8688.718	2.33E+01	2.00E+02	1.98E+02	0.441	0.624	2.414E+00	1.006E-01
8713.968	2.33E+01	2.00E+02	1.98E+02	0.441	0.624	2.421E+00	1.009E-01
8739.343	2.33E+01	2.00E+02	1.98E+02	0.441	0.624	2.428E+00	1.011E-01
8764.968	2.33E+01	2.00E+02	1.98E+02	0.441	0.624	2.435E+00	1.014E-01
8791.468	2.33E+01	2.00E+02	1.98E+02	0.442	0.624	2.442E+00	1.018E-01
8816.718	2.33E+01	2.00E+02	1.98E+02	0.442	0.624	2.449E+00	1.020E-01
8841.843	2.33E+01	2.00E+02	1.98E+02	0.442	0.625	2.456E+00	1.023E-01
8866.843	2.33E+01	2.00E+02	1.98E+02	0.442	0.625	2.463E+00	1.026E-01
8891.968	2.33E+01	2.00E+02	1.98E+02	0.442	0.625	2.470E+00	1.029E-01

TIME	DW PRESS (PSIA)	DW TEMP (F)	SP TEMP (F)	PC Leak Fraction of Design Basis	MSIV Leak Fraction of Design Basis	Time (hours)	Time (days)
8916.968	2.33E+01	2.00E+02	1.98E+02	0.442	0.625	2.477E+00	1.032E-01
8941.78	2.33E+01	2.01E+02	1.98E+02	0.443	0.626	2.484E+00	1.035E-01
8967.155	2.33E+01	2.01E+02	1.98E+02	0.443	0.626	2.491E+00	1.038E-01
8992.53	2.33E+01	2.01E+02	1.98E+02	0.443	0.626	2.498E+00	1.041E-01
9017.655	2.33E+01	2.01E+02	1.98E+02	0.443	0.626	2.505E+00	1.044E-01
9042.78	2.33E+01	2.01E+02	1.98E+02	0.443	0.627	2.512E+00	1.047E-01
9068.155	2.33E+01	2.01E+02	1.98E+02	0.443	0.627	2.519E+00	1.050E-01
9093.155	2.34E+01	2.01E+02	1.98E+02	0.443	0.627	2.526E+00	1.052E-01
9118.655	2.34E+01	2.01E+02	1.98E+02	0.443	0.627	2.533E+00	1.055E-01
9143.78	2.34E+01	2.01E+02	1.98E+02	0.444	0.627	2.540E+00	1.058E-01
9169.155	2.34E+01	2.01E+02	1.98E+02	0.444	0.627	2.547E+00	1.061E-01
9194.405	2.34E+01	2.01E+02	1.98E+02	0.444	0.628	2.554E+00	1.064E-01
9219.78	2.34E+01	2.01E+02	1.98E+02	0.444	0.628	2.561E+00	1.067E-01
9244.78	2.34E+01	2.01E+02	1.98E+02	0.444	0.628	2.568E+00	1.070E-01
9269.905	2.34E+01	2.01E+02	1.99E+02	0.444	0.628	2.575E+00	1.073E-01
9295.655	2.34E+01	2.01E+02	1.99E+02	0.444	0.628	2.582E+00	1.076E-01
9320.905	2.34E+01	2.01E+02	1.99E+02	0.444	0.628	2.589E+00	1.079E-01
9345.905	2.34E+01	2.01E+02	1.99E+02	0.444	0.628	2.596E+00	1.082E-01
9370.905	2.34E+01	2.01E+02	1.99E+02	0.445	0.629	2.603E+00	1.085E-01
9397.03	2.34E+01	2.01E+02	1.99E+02	0.445	0.629	2.610E+00	1.088E-01
9422.155	2.34E+01	2.01E+02	1.99E+02	0.445	0.629	2.617E+00	1.091E-01
9447.78	2.34E+01	2.01E+02	1.99E+02	0.445	0.629	2.624E+00	1.093E-01
9473.03	2.34E+01	2.01E+02	1.99E+02	0.445	0.629	2.631E+00	1.096E-01
9499.28	2.34E+01	2.01E+02	1.99E+02	0.445	0.630	2.639E+00	1.099E-01
9524.53	2.34E+01	2.01E+02	1.99E+02	0.445	0.630	2.646E+00	1.102E-01
9550.155	2.34E+01	2.01E+02	1.99E+02	0.445	0.630	2.653E+00	1.105E-01
9575.53	2.34E+01	2.01E+02	1.99E+02	0.445	0.630	2.660E+00	1.108E-01
9600.53	2.34E+01	2.01E+02	1.99E+02	0.445	0.630	2.667E+00	1.111E-01
9625.53	2.34E+01	2.01E+02	1.99E+02	0.446	0.630	2.674E+00	1.114E-01
9650.53	2.34E+01	2.01E+02	1.99E+02	0.446	0.630	2.681E+00	1.117E-01
9675.53	2.35E+01	2.01E+02	1.99E+02	0.446	0.631	2.688E+00	1.120E-01
9700.53	2.35E+01	2.01E+02	1.99E+02	0.446	0.631	2.695E+00	1.123E-01
9725.78	2.35E+01	2.01E+02	1.99E+02	0.446	0.631	2.702E+00	1.126E-01
9750.78	2.35E+01	2.01E+02	1.99E+02	0.446	0.631	2.709E+00	1.129E-01
9776.03	2.35E+01	2.01E+02	1.99E+02	0.446	0.631	2.716E+00	1.131E-01
9801.78	2.35E+01	2.01E+02	1.99E+02	0.446	0.631	2.723E+00	1.134E-01
9826.78	2.35E+01	2.01E+02	1.99E+02	0.446	0.631	2.730E+00	1.137E-01
9851.905	2.35E+01	2.01E+02	1.99E+02	0.447	0.632	2.737E+00	1.140E-01
9877.53	2.35E+01	2.01E+02	1.99E+02	0.447	0.632	2.744E+00	1.143E-01
9902.53	2.35E+01	2.01E+02	1.99E+02	0.447	0.632	2.751E+00	1.146E-01
9927.53	2.35E+01	2.01E+02	1.99E+02	0.447	0.632	2.758E+00	1.149E-01
9952.655	2.35E+01	2.01E+02	1.99E+02	0.447	0.632	2.765E+00	1.152E-01
9978.155	2.35E+01	2.01E+02	1.99E+02	0.447	0.632	2.772E+00	1.155E-01
10003.28	2.35E+01	2.01E+02	1.99E+02	0.447	0.632	2.779E+00	1.158E-01
10028.28	2.35E+01	2.01E+02	1.99E+02	0.447	0.632	2.786E+00	1.161E-01
10053.41	2.35E+01	2.01E+02	1.99E+02	0.447	0.633	2.793E+00	1.164E-01
10078.53	2.35E+01	2.01E+02	1.99E+02	0.447	0.633	2.800E+00	1.166E-01
10103.53	2.35E+01	2.01E+02	1.99E+02	0.447	0.633	2.807E+00	1.169E-01
10129.03	2.35E+01	2.01E+02	1.99E+02	0.448	0.633	2.814E+00	1.172E-01
10154.03	2.35E+01	2.01E+02	1.99E+02	0.448	0.633	2.821E+00	1.175E-01
10179.03	2.35E+01	2.01E+02	1.99E+02	0.448	0.633	2.828E+00	1.178E-01
10204.03	2.35E+01	2.01E+02	1.99E+02	0.448	0.634	2.834E+00	1.181E-01

TIME	DW PRESS (PSIA)	DW TEMP (F)	SP TEMP (F)	PC Leak Fraction of Design Basis	MSIV Leak Fraction of Design Basis	Time (hours)	Time (days)
10229.53	2.35E+01	2.01E+02	1.99E+02	0.448	0.634	2.842E+00	1.184E-01
10254.66	2.35E+01	2.01E+02	1.99E+02	0.448	0.634	2.849E+00	1.187E-01
10279.91	2.35E+01	2.01E+02	2.00E+02	0.448	0.634	2.856E+00	1.190E-01
10305.66	2.36E+01	2.01E+02	2.00E+02	0.448	0.634	2.863E+00	1.193E-01
10330.66	2.36E+01	2.01E+02	2.00E+02	0.448	0.634	2.870E+00	1.196E-01
10356.91	2.36E+01	2.01E+02	2.00E+02	0.448	0.634	2.877E+00	1.199E-01
10382.16	2.36E+01	2.01E+02	2.00E+02	0.449	0.635	2.884E+00	1.202E-01
10408.03	2.36E+01	2.01E+02	2.00E+02	0.449	0.635	2.891E+00	1.205E-01
10433.16	2.36E+01	2.01E+02	2.00E+02	0.449	0.635	2.898E+00	1.208E-01
10458.41	2.36E+01	2.01E+02	2.00E+02	0.449	0.635	2.905E+00	1.210E-01
10483.41	2.36E+01	2.01E+02	2.00E+02	0.449	0.635	2.912E+00	1.213E-01
10509.03	2.36E+01	2.02E+02	2.00E+02	0.449	0.635	2.919E+00	1.216E-01
10534.03	2.36E+01	2.02E+02	2.00E+02	0.449	0.635	2.926E+00	1.219E-01
10559.03	2.36E+01	2.02E+02	2.00E+02	0.449	0.636	2.933E+00	1.222E-01
10584.03	2.36E+01	2.02E+02	2.00E+02	0.449	0.636	2.940E+00	1.225E-01
10609.16	2.36E+01	2.02E+02	2.00E+02	0.449	0.636	2.947E+00	1.228E-01
10634.16	2.36E+01	2.02E+02	2.00E+02	0.450	0.636	2.954E+00	1.231E-01
10659.16	2.36E+01	2.02E+02	2.00E+02	0.450	0.636	2.961E+00	1.234E-01
10684.16	2.36E+01	2.02E+02	2.00E+02	0.450	0.636	2.968E+00	1.237E-01
10709.53	2.36E+01	2.02E+02	2.00E+02	0.450	0.636	2.975E+00	1.240E-01
10735.16	2.36E+01	2.02E+02	2.00E+02	0.450	0.636	2.982E+00	1.242E-01
10760.78	2.36E+01	2.02E+02	2.00E+02	0.450	0.637	2.989E+00	1.245E-01
10786.28	2.36E+01	2.02E+02	2.00E+02	0.450	0.637	2.996E+00	1.248E-01
10811.28	2.36E+01	2.02E+02	2.00E+02	0.450	0.637	3.003E+00	1.251E-01
10836.66	2.36E+01	2.02E+02	2.00E+02	0.451	0.637	3.010E+00	1.254E-01
10861.66	2.36E+01	2.02E+02	2.00E+02	0.451	0.637	3.017E+00	1.257E-01
10887.03	2.36E+01	2.02E+02	2.00E+02	0.451	0.637	3.024E+00	1.260E-01
10912.16	2.36E+01	2.02E+02	2.00E+02	0.451	0.637	3.031E+00	1.263E-01
10937.16	2.36E+01	2.02E+02	2.00E+02	0.451	0.637	3.038E+00	1.266E-01
10962.53	2.37E+01	2.02E+02	2.00E+02	0.451	0.638	3.045E+00	1.269E-01
10987.91	2.37E+01	2.02E+02	2.00E+02	0.451	0.638	3.052E+00	1.272E-01
11013.91	2.37E+01	2.02E+02	2.00E+02	0.451	0.638	3.059E+00	1.275E-01
11039.66	2.37E+01	2.02E+02	2.00E+02	0.451	0.638	3.067E+00	1.278E-01
11064.78	2.37E+01	2.02E+02	2.00E+02	0.451	0.638	3.074E+00	1.281E-01
11089.78	2.37E+01	2.02E+02	2.00E+02	0.451	0.638	3.080E+00	1.284E-01
11114.91	2.37E+01	2.02E+02	2.00E+02	0.452	0.639	3.087E+00	1.286E-01
11140.03	2.37E+01	2.02E+02	2.00E+02	0.452	0.639	3.094E+00	1.289E-01
11165.78	2.37E+01	2.02E+02	2.00E+02	0.452	0.639	3.102E+00	1.292E-01
11190.78	2.37E+01	2.02E+02	2.00E+02	0.452	0.639	3.109E+00	1.295E-01
11216.03	2.37E+01	2.02E+02	2.00E+02	0.452	0.639	3.116E+00	1.298E-01
11241.03	2.37E+01	2.02E+02	2.00E+02	0.452	0.639	3.123E+00	1.301E-01
11266.03	2.37E+01	2.02E+02	2.00E+02	0.452	0.639	3.129E+00	1.304E-01
11292.03	2.37E+01	2.02E+02	2.00E+02	0.452	0.639	3.137E+00	1.307E-01
11317.28	2.37E+01	2.02E+02	2.00E+02	0.452	0.639	3.144E+00	1.310E-01
11342.53	2.37E+01	2.02E+02	2.00E+02	0.452	0.640	3.151E+00	1.313E-01
11368.03	2.37E+01	2.02E+02	2.00E+02	0.452	0.640	3.158E+00	1.316E-01
11393.03	2.37E+01	2.02E+02	2.00E+02	0.453	0.640	3.165E+00	1.319E-01
11418.53	2.37E+01	2.02E+02	2.00E+02	0.453	0.640	3.172E+00	1.322E-01
11443.91	2.37E+01	2.02E+02	2.00E+02	0.453	0.640	3.179E+00	1.325E-01
11470.03	2.37E+01	2.02E+02	2.00E+02	0.453	0.640	3.186E+00	1.328E-01
11495.41	2.37E+01	2.02E+02	2.01E+02	0.453	0.640	3.193E+00	1.330E-01
11520.41	2.37E+01	2.02E+02	2.01E+02	0.453	0.640	3.200E+00	1.333E-01

TIME	DW PRESS (PSIA)	DW TEMP (F)	SP TEMP (F)	PC Leak Fraction of Design Basis	MSIV Leak Fraction of Design Basis	Time (hours)	Time (days)
11545.66	2.37E+01	2.02E+02	2.01E+02	0.453	0.641	3.207E+00	1.336E-01
11571.03	2.37E+01	2.02E+02	2.01E+02	0.453	0.641	3.214E+00	1.339E-01
11596.53	2.37E+01	2.02E+02	2.01E+02	0.453	0.641	3.221E+00	1.342E-01
11622.91	2.37E+01	2.02E+02	2.01E+02	0.453	0.641	3.229E+00	1.345E-01
11649.03	2.37E+01	2.02E+02	2.01E+02	0.453	0.641	3.236E+00	1.348E-01
11674.03	2.37E+01	2.02E+02	2.01E+02	0.453	0.641	3.243E+00	1.351E-01
11699.03	2.38E+01	2.02E+02	2.01E+02	0.454	0.641	3.250E+00	1.354E-01
11724.03	2.38E+01	2.02E+02	2.01E+02	0.454	0.641	3.257E+00	1.357E-01
11749.28	2.38E+01	2.02E+02	2.01E+02	0.454	0.641	3.264E+00	1.360E-01
11774.66	2.38E+01	2.02E+02	2.01E+02	0.454	0.641	3.271E+00	1.363E-01
11799.78	2.38E+01	2.02E+02	2.01E+02	0.454	0.642	3.278E+00	1.366E-01
11826.03	2.38E+01	2.02E+02	2.01E+02	0.454	0.642	3.285E+00	1.369E-01
11851.91	2.38E+01	2.02E+02	2.01E+02	0.454	0.642	3.292E+00	1.372E-01
11877.28	2.38E+01	2.02E+02	2.01E+02	0.454	0.642	3.299E+00	1.375E-01
11902.78	2.38E+01	2.02E+02	2.01E+02	0.454	0.642	3.306E+00	1.378E-01
11928.41	2.38E+01	2.02E+02	2.01E+02	0.454	0.642	3.313E+00	1.381E-01
11953.41	2.38E+01	2.02E+02	2.01E+02	0.454	0.642	3.320E+00	1.383E-01
11978.41	2.38E+01	2.02E+02	2.01E+02	0.454	0.642	3.327E+00	1.386E-01
12003.91	2.38E+01	2.02E+02	2.01E+02	0.454	0.642	3.334E+00	1.389E-01
12029.41	2.38E+01	2.02E+02	2.01E+02	0.455	0.643	3.342E+00	1.392E-01
12054.41	2.38E+01	2.02E+02	2.01E+02	0.455	0.643	3.348E+00	1.395E-01
12079.41	2.38E+01	2.02E+02	2.01E+02	0.455	0.643	3.355E+00	1.398E-01
12105.53	2.38E+01	2.02E+02	2.01E+02	0.455	0.643	3.363E+00	1.401E-01
12130.91	2.38E+01	2.02E+02	2.01E+02	0.455	0.643	3.370E+00	1.404E-01
12156.03	2.38E+01	2.02E+02	2.01E+02	0.455	0.643	3.377E+00	1.407E-01
12181.28	2.38E+01	2.02E+02	2.01E+02	0.455	0.643	3.384E+00	1.410E-01
12206.28	2.38E+01	2.02E+02	2.01E+02	0.455	0.643	3.391E+00	1.413E-01
12231.28	2.38E+01	2.02E+02	2.01E+02	0.455	0.643	3.398E+00	1.416E-01
12256.28	2.38E+01	2.02E+02	2.01E+02	0.455	0.643	3.405E+00	1.419E-01
12281.66	2.38E+01	2.02E+02	2.01E+02	0.455	0.643	3.412E+00	1.421E-01
12306.66	2.38E+01	2.02E+02	2.01E+02	0.455	0.644	3.419E+00	1.424E-01
12331.91	2.38E+01	2.02E+02	2.01E+02	0.455	0.644	3.426E+00	1.427E-01
12357.66	2.38E+01	2.02E+02	2.01E+02	0.455	0.644	3.433E+00	1.430E-01
12383.03	2.38E+01	2.02E+02	2.01E+02	0.456	0.644	3.440E+00	1.433E-01
12408.03	2.38E+01	2.02E+02	2.01E+02	0.456	0.644	3.447E+00	1.436E-01
12433.03	2.38E+01	2.02E+02	2.01E+02	0.456	0.644	3.454E+00	1.439E-01
12458.16	2.38E+01	2.02E+02	2.01E+02	0.456	0.644	3.461E+00	1.442E-01
12483.16	2.38E+01	2.02E+02	2.01E+02	0.456	0.645	3.468E+00	1.445E-01
12508.28	2.38E+01	2.02E+02	2.01E+02	0.456	0.645	3.475E+00	1.448E-01
12533.28	2.38E+01	2.03E+02	2.01E+02	0.456	0.645	3.481E+00	1.451E-01
12558.28	2.38E+01	2.03E+02	2.01E+02	0.456	0.645	3.488E+00	1.454E-01
12583.66	2.39E+01	2.03E+02	2.01E+02	0.456	0.645	3.495E+00	1.456E-01
12608.78	2.39E+01	2.03E+02	2.01E+02	0.456	0.645	3.502E+00	1.459E-01
12633.78	2.39E+01	2.03E+02	2.01E+02	0.456	0.645	3.509E+00	1.462E-01
12658.78	2.39E+01	2.03E+02	2.01E+02	0.456	0.645	3.516E+00	1.465E-01
12684.66	2.39E+01	2.03E+02	2.01E+02	0.456	0.645	3.524E+00	1.468E-01
12709.91	2.39E+01	2.03E+02	2.01E+02	0.456	0.645	3.531E+00	1.471E-01
12735.53	2.39E+01	2.03E+02	2.01E+02	0.456	0.645	3.538E+00	1.474E-01
12760.91	2.39E+01	2.03E+02	2.01E+02	0.456	0.645	3.545E+00	1.477E-01
12786.16	2.39E+01	2.03E+02	2.01E+02	0.457	0.646	3.552E+00	1.480E-01
12811.66	2.39E+01	2.03E+02	2.01E+02	0.457	0.646	3.559E+00	1.483E-01
12836.91	2.39E+01	2.03E+02	2.01E+02	0.457	0.646	3.566E+00	1.486E-01

TIME	DW PRESS (PSIA)	DW TEMP (F)	SP TEMP (F)	PC Leak Fraction of Design Basis	MSIV Leak Fraction of Design Basis	Time (hours)	Time (days)
12862.41	2.39E+01	2.03E+02	2.01E+02	0.457	0.646	3.573E+00	1.489E-01
12887.41	2.39E+01	2.03E+02	2.01E+02	0.457	0.646	3.580E+00	1.492E-01
12913.03	2.39E+01	2.03E+02	2.01E+02	0.457	0.646	3.587E+00	1.495E-01
12938.16	2.39E+01	2.03E+02	2.01E+02	0.457	0.646	3.594E+00	1.497E-01
12963.16	2.39E+01	2.03E+02	2.01E+02	0.457	0.646	3.601E+00	1.500E-01
12989.03	2.39E+01	2.03E+02	2.01E+02	0.457	0.646	3.608E+00	1.503E-01
13014.28	2.39E+01	2.03E+02	2.01E+02	0.457	0.646	3.615E+00	1.506E-01
13039.28	2.39E+01	2.03E+02	2.02E+02	0.457	0.646	3.622E+00	1.509E-01
13064.41	2.39E+01	2.03E+02	2.02E+02	0.457	0.646	3.629E+00	1.512E-01
13089.91	2.39E+01	2.03E+02	2.02E+02	0.457	0.646	3.636E+00	1.515E-01
13114.91	2.39E+01	2.03E+02	2.02E+02	0.457	0.647	3.643E+00	1.518E-01
13139.91	2.39E+01	2.03E+02	2.02E+02	0.457	0.647	3.650E+00	1.521E-01
13164.91	2.39E+01	2.03E+02	2.02E+02	0.457	0.647	3.657E+00	1.524E-01
13190.28	2.39E+01	2.03E+02	2.02E+02	0.458	0.647	3.664E+00	1.527E-01
13215.53	2.39E+01	2.03E+02	2.02E+02	0.458	0.647	3.671E+00	1.530E-01
13240.78	2.39E+01	2.03E+02	2.02E+02	0.458	0.647	3.678E+00	1.532E-01
13265.78	2.39E+01	2.03E+02	2.02E+02	0.458	0.647	3.685E+00	1.535E-01
13290.91	2.39E+01	2.03E+02	2.02E+02	0.458	0.647	3.692E+00	1.538E-01
13316.03	2.39E+01	2.03E+02	2.02E+02	0.458	0.647	3.699E+00	1.541E-01
13341.03	2.39E+01	2.03E+02	2.02E+02	0.458	0.647	3.706E+00	1.544E-01
13366.41	2.39E+01	2.03E+02	2.02E+02	0.458	0.647	3.713E+00	1.547E-01
13391.53	2.39E+01	2.03E+02	2.02E+02	0.458	0.647	3.720E+00	1.550E-01
13416.53	2.39E+01	2.03E+02	2.02E+02	0.458	0.647	3.727E+00	1.553E-01
13441.53	2.39E+01	2.03E+02	2.02E+02	0.458	0.648	3.734E+00	1.556E-01
13466.53	2.39E+01	2.03E+02	2.02E+02	0.458	0.648	3.741E+00	1.559E-01
13491.78	2.39E+01	2.03E+02	2.02E+02	0.458	0.648	3.748E+00	1.562E-01
13517.03	2.39E+01	2.03E+02	2.02E+02	0.458	0.648	3.755E+00	1.564E-01
13542.91	2.39E+01	2.03E+02	2.02E+02	0.458	0.648	3.762E+00	1.567E-01
13568.41	2.39E+01	2.03E+02	2.02E+02	0.458	0.648	3.769E+00	1.570E-01
13593.41	2.39E+01	2.03E+02	2.02E+02	0.458	0.648	3.776E+00	1.573E-01
13618.53	2.39E+01	2.03E+02	2.02E+02	0.458	0.648	3.783E+00	1.576E-01
13643.78	2.39E+01	2.03E+02	2.02E+02	0.458	0.648	3.790E+00	1.579E-01
13668.59	2.40E+01	2.03E+02	2.02E+02	0.459	0.648	3.797E+00	1.582E-01
13693.59	2.40E+01	2.03E+02	2.02E+02	0.459	0.649	3.804E+00	1.585E-01
13719.34	2.40E+01	2.03E+02	2.02E+02	0.459	0.649	3.811E+00	1.588E-01
13744.34	2.40E+01	2.03E+02	2.02E+02	0.459	0.649	3.818E+00	1.591E-01
13769.72	2.40E+01	2.03E+02	2.02E+02	0.459	0.649	3.825E+00	1.594E-01
13794.72	2.40E+01	2.03E+02	2.02E+02	0.459	0.649	3.832E+00	1.597E-01
13819.72	2.40E+01	2.03E+02	2.02E+02	0.459	0.649	3.839E+00	1.600E-01
13845.22	2.40E+01	2.03E+02	2.02E+02	0.459	0.649	3.846E+00	1.602E-01
13870.22	2.40E+01	2.03E+02	2.02E+02	0.459	0.649	3.853E+00	1.605E-01
13895.47	2.40E+01	2.03E+02	2.02E+02	0.459	0.649	3.860E+00	1.608E-01
13920.47	2.40E+01	2.03E+02	2.02E+02	0.459	0.649	3.867E+00	1.611E-01
13945.59	2.40E+01	2.03E+02	2.02E+02	0.459	0.649	3.874E+00	1.614E-01
13970.72	2.40E+01	2.03E+02	2.02E+02	0.459	0.649	3.881E+00	1.617E-01
13995.72	2.40E+01	2.03E+02	2.02E+02	0.459	0.649	3.888E+00	1.620E-01
14021.09	2.40E+01	2.03E+02	2.02E+02	0.459	0.649	3.895E+00	1.623E-01
14046.34	2.40E+01	2.03E+02	2.02E+02	0.459	0.649	3.902E+00	1.626E-01
14071.34	2.40E+01	2.03E+02	2.02E+02	0.459	0.649	3.909E+00	1.629E-01
14096.59	2.40E+01	2.03E+02	2.02E+02	0.459	0.650	3.916E+00	1.632E-01
14121.97	2.40E+01	2.03E+02	2.02E+02	0.459	0.650	3.923E+00	1.634E-01
14146.97	2.40E+01	2.03E+02	2.02E+02	0.459	0.650	3.930E+00	1.637E-01

TIME	DW PRESS (PSIA)	DW TEMP (F)	SP TEMP (F)	PC Leak Fraction of Design Basis	MSIV Leak Fraction of Design Basis	Time (hours)	Time (days)
14172.59	2.40E+01	2.03E+02	2.02E+02	0.459	0.650	3.937E+00	1.640E-01
14197.72	2.40E+01	2.03E+02	2.02E+02	0.459	0.650	3.944E+00	1.643E-01
14223.22	2.40E+01	2.03E+02	2.02E+02	0.459	0.650	3.951E+00	1.646E-01
14248.22	2.40E+01	2.03E+02	2.02E+02	0.459	0.650	3.958E+00	1.649E-01
14273.22	2.40E+01	2.03E+02	2.02E+02	0.460	0.650	3.965E+00	1.652E-01
14298.47	2.40E+01	2.03E+02	2.02E+02	0.460	0.650	3.972E+00	1.655E-01
14323.47	2.40E+01	2.03E+02	2.02E+02	0.460	0.650	3.979E+00	1.658E-01
14348.59	2.40E+01	2.03E+02	2.02E+02	0.460	0.650	3.986E+00	1.661E-01
14373.72	2.40E+01	2.03E+02	2.02E+02	0.460	0.650	3.993E+00	1.664E-01
14399.09	2.40E+01	2.03E+02	2.02E+02	0.460	0.650	4.000E+00	1.667E-01
14424.03	2.40E+01	2.03E+02	2.02E+02	0.460	0.651	4.007E+00	1.669E-01
14449.03	2.40E+01	2.03E+02	2.02E+02	0.460	0.651	4.014E+00	1.672E-01
14474.03	2.40E+01	2.03E+02	2.02E+02	0.460	0.651	4.021E+00	1.675E-01
14499.03	2.40E+01	2.03E+02	2.02E+02	0.460	0.651	4.028E+00	1.678E-01
14524.16	2.40E+01	2.03E+02	2.02E+02	0.460	0.651	4.034E+00	1.681E-01
14549.41	2.40E+01	2.03E+02	2.02E+02	0.460	0.651	4.042E+00	1.684E-01
14574.41	2.40E+01	2.03E+02	2.02E+02	0.460	0.651	4.048E+00	1.687E-01
14599.66	2.40E+01	2.03E+02	2.02E+02	0.460	0.651	4.055E+00	1.690E-01
14624.66	2.40E+01	2.03E+02	2.02E+02	0.460	0.651	4.062E+00	1.693E-01
14649.66	2.40E+01	2.03E+02	2.02E+02	0.460	0.651	4.069E+00	1.696E-01
14674.66	2.40E+01	2.03E+02	2.02E+02	0.460	0.651	4.076E+00	1.698E-01
14700.28	2.40E+01	2.03E+02	2.02E+02	0.460	0.651	4.083E+00	1.701E-01
14725.78	2.40E+01	2.03E+02	2.02E+02	0.460	0.651	4.090E+00	1.704E-01
14751.16	2.40E+01	2.03E+02	2.02E+02	0.460	0.651	4.098E+00	1.707E-01
14776.66	2.40E+01	2.03E+02	2.02E+02	0.460	0.651	4.105E+00	1.710E-01
14801.78	2.40E+01	2.03E+02	2.02E+02	0.461	0.652	4.112E+00	1.713E-01
14826.91	2.40E+01	2.03E+02	2.02E+02	0.461	0.652	4.119E+00	1.716E-01
14851.91	2.40E+01	2.03E+02	2.02E+02	0.461	0.652	4.126E+00	1.719E-01
14877.16	2.40E+01	2.03E+02	2.02E+02	0.461	0.652	4.133E+00	1.722E-01
14902.28	2.40E+01	2.03E+02	2.02E+02	0.461	0.652	4.140E+00	1.725E-01
14927.66	2.40E+01	2.03E+02	2.02E+02	0.461	0.652	4.147E+00	1.728E-01
14952.91	2.40E+01	2.03E+02	2.02E+02	0.461	0.652	4.154E+00	1.731E-01
14978.03	2.40E+01	2.03E+02	2.02E+02	0.461	0.652	4.161E+00	1.734E-01
15003.16	2.40E+01	2.03E+02	2.02E+02	0.461	0.652	4.168E+00	1.736E-01
15028.66	2.41E+01	2.03E+02	2.02E+02	0.461	0.652	4.175E+00	1.739E-01
15053.78	2.41E+01	2.03E+02	2.02E+02	0.461	0.652	4.182E+00	1.742E-01
15078.78	2.41E+01	2.03E+02	2.02E+02	0.461	0.652	4.189E+00	1.745E-01
15103.91	2.41E+01	2.03E+02	2.02E+02	0.461	0.652	4.196E+00	1.748E-01
15128.72	2.41E+01	2.03E+02	2.02E+02	0.461	0.652	4.202E+00	1.751E-01
15153.84	2.41E+01	2.03E+02	2.02E+02	0.461	0.652	4.209E+00	1.754E-01
15178.84	2.41E+01	2.03E+02	2.02E+02	0.461	0.652	4.216E+00	1.757E-01
15203.97	2.41E+01	2.03E+02	2.02E+02	0.461	0.652	4.223E+00	1.760E-01
15229.34	2.41E+01	2.03E+02	2.03E+02	0.461	0.652	4.230E+00	1.763E-01
15254.72	2.41E+01	2.03E+02	2.03E+02	0.461	0.652	4.237E+00	1.766E-01
15279.97	2.41E+01	2.03E+02	2.03E+02	0.461	0.653	4.244E+00	1.769E-01
15304.97	2.41E+01	2.03E+02	2.03E+02	0.461	0.653	4.251E+00	1.771E-01
15330.59	2.41E+01	2.03E+02	2.03E+02	0.461	0.653	4.258E+00	1.774E-01
15355.59	2.41E+01	2.03E+02	2.03E+02	0.461	0.653	4.265E+00	1.777E-01
15380.84	2.41E+01	2.03E+02	2.03E+02	0.461	0.653	4.272E+00	1.780E-01
15405.84	2.41E+01	2.03E+02	2.03E+02	0.461	0.653	4.279E+00	1.783E-01
15431.34	2.41E+01	2.03E+02	2.03E+02	0.462	0.653	4.286E+00	1.786E-01
15456.72	2.41E+01	2.03E+02	2.03E+02	0.462	0.653	4.294E+00	1.789E-01

TIME	DW PRESS (PSIA)	DW TEMP (F)	SP TEMP (F)	PC Leak Fraction of Design Basis	MSIV Leak Fraction of Design Basis	Time (hours)	Time (days)
15481.72	2.41E+01	2.03E+02	2.03E+02	0.462	0.653	4.300E+00	1.792E-01
15507.34	2.41E+01	2.03E+02	2.03E+02	0.462	0.653	4.308E+00	1.795E-01
15532.34	2.41E+01	2.03E+02	2.03E+02	0.462	0.653	4.315E+00	1.798E-01
15557.72	2.41E+01	2.03E+02	2.03E+02	0.462	0.653	4.322E+00	1.801E-01
15583.09	2.41E+01	2.03E+02	2.03E+02	0.462	0.653	4.329E+00	1.804E-01
15608.72	2.41E+01	2.03E+02	2.03E+02	0.462	0.653	4.336E+00	1.807E-01
15634.09	2.41E+01	2.03E+02	2.03E+02	0.462	0.653	4.343E+00	1.810E-01
15659.34	2.41E+01	2.03E+02	2.03E+02	0.462	0.653	4.350E+00	1.812E-01
15685.22	2.41E+01	2.03E+02	2.03E+02	0.462	0.653	4.357E+00	1.815E-01
15710.34	2.41E+01	2.03E+02	2.03E+02	0.462	0.653	4.364E+00	1.818E-01
15735.47	2.41E+01	2.03E+02	2.03E+02	0.462	0.653	4.371E+00	1.821E-01
15761.09	2.41E+01	2.03E+02	2.03E+02	0.462	0.653	4.378E+00	1.824E-01
15786.22	2.41E+01	2.03E+02	2.03E+02	0.462	0.653	4.385E+00	1.827E-01
15811.22	2.41E+01	2.03E+02	2.03E+02	0.462	0.653	4.392E+00	1.830E-01
15836.03	2.41E+01	2.03E+02	2.03E+02	0.462	0.654	4.399E+00	1.833E-01
15861.53	2.41E+01	2.03E+02	2.03E+02	0.462	0.654	4.406E+00	1.836E-01
15886.53	2.41E+01	2.03E+02	2.03E+02	0.462	0.654	4.413E+00	1.839E-01
15911.53	2.41E+01	2.03E+02	2.03E+02	0.462	0.654	4.420E+00	1.842E-01
15936.91	2.41E+01	2.03E+02	2.03E+02	0.462	0.654	4.427E+00	1.845E-01
15961.91	2.41E+01	2.03E+02	2.03E+02	0.462	0.654	4.434E+00	1.847E-01
15986.91	2.41E+01	2.03E+02	2.03E+02	0.462	0.654	4.441E+00	1.850E-01
16012.28	2.41E+01	2.03E+02	2.03E+02	0.462	0.654	4.448E+00	1.853E-01
16037.66	2.41E+01	2.03E+02	2.03E+02	0.462	0.654	4.455E+00	1.856E-01
16062.91	2.41E+01	2.03E+02	2.03E+02	0.462	0.654	4.462E+00	1.859E-01
16088.03	2.41E+01	2.03E+02	2.03E+02	0.463	0.654	4.469E+00	1.862E-01
16113.16	2.41E+01	2.03E+02	2.03E+02	0.463	0.654	4.476E+00	1.865E-01
16138.28	2.41E+01	2.03E+02	2.03E+02	0.463	0.654	4.483E+00	1.868E-01
16164.66	2.41E+01	2.03E+02	2.03E+02	0.463	0.654	4.490E+00	1.871E-01
16189.66	2.41E+01	2.03E+02	2.03E+02	0.463	0.654	4.497E+00	1.874E-01
16214.66	2.41E+01	2.03E+02	2.03E+02	0.463	0.654	4.504E+00	1.877E-01
16240.28	2.41E+01	2.03E+02	2.03E+02	0.463	0.654	4.511E+00	1.880E-01
16265.78	2.41E+01	2.03E+02	2.03E+02	0.463	0.654	4.518E+00	1.883E-01
16291.16	2.41E+01	2.03E+02	2.03E+02	0.463	0.654	4.525E+00	1.886E-01
16316.53	2.41E+01	2.03E+02	2.03E+02	0.463	0.654	4.532E+00	1.888E-01
16341.91	2.41E+01	2.03E+02	2.03E+02	0.463	0.654	4.539E+00	1.891E-01
16367.41	2.41E+01	2.03E+02	2.03E+02	0.463	0.655	4.547E+00	1.894E-01
16392.53	2.41E+01	2.03E+02	2.03E+02	0.463	0.655	4.553E+00	1.897E-01
16419.16	2.41E+01	2.03E+02	2.03E+02	0.463	0.654	4.561E+00	1.900E-01
16443.97	2.41E+01	2.03E+02	2.03E+02	0.463	0.655	4.568E+00	1.903E-01
16469.72	2.41E+01	2.03E+02	2.03E+02	0.463	0.655	4.575E+00	1.906E-01
16494.72	2.41E+01	2.03E+02	2.03E+02	0.463	0.655	4.582E+00	1.909E-01
16520.34	2.41E+01	2.03E+02	2.03E+02	0.463	0.655	4.589E+00	1.912E-01
16545.47	2.41E+01	2.03E+02	2.03E+02	0.463	0.655	4.596E+00	1.915E-01
16570.72	2.41E+01	2.03E+02	2.03E+02	0.463	0.655	4.603E+00	1.918E-01
16596.34	2.41E+01	2.03E+02	2.03E+02	0.463	0.655	4.610E+00	1.921E-01
16621.34	2.41E+01	2.03E+02	2.03E+02	0.463	0.655	4.617E+00	1.924E-01
16646.47	2.41E+01	2.03E+02	2.03E+02	0.463	0.655	4.624E+00	1.927E-01
16671.59	2.41E+01	2.03E+02	2.03E+02	0.463	0.655	4.631E+00	1.930E-01
16696.97	2.41E+01	2.03E+02	2.03E+02	0.463	0.655	4.638E+00	1.933E-01
16721.97	2.42E+01	2.03E+02	2.03E+02	0.463	0.655	4.645E+00	1.935E-01
16747.84	2.42E+01	2.03E+02	2.03E+02	0.463	0.655	4.652E+00	1.938E-01
16773.09	2.42E+01	2.03E+02	2.03E+02	0.463	0.655	4.659E+00	1.941E-01

TIME	DW PRESS (PSIA)	DW TEMP (F)	SP TEMP (F)	PC Leak Fraction of Design Basis	MSIV Leak Fraction of Design Basis	Time (hours)	Time (days)
16798.59	2.42E+01	2.03E+02	2.03E+02	0.463	0.655	4.666E+00	1.944E-01
16823.59	2.42E+01	2.03E+02	2.03E+02	0.463	0.655	4.673E+00	1.947E-01
16849.09	2.42E+01	2.03E+02	2.03E+02	0.463	0.655	4.680E+00	1.950E-01
16874.34	2.42E+01	2.03E+02	2.03E+02	0.463	0.655	4.687E+00	1.953E-01
16899.47	2.42E+01	2.03E+02	2.03E+02	0.463	0.655	4.694E+00	1.956E-01
16924.72	2.42E+01	2.03E+02	2.03E+02	0.463	0.655	4.701E+00	1.959E-01
16950.03	2.42E+01	2.03E+02	2.03E+02	0.464	0.656	4.708E+00	1.962E-01
16975.03	2.42E+01	2.03E+02	2.03E+02	0.464	0.656	4.715E+00	1.965E-01
17000.03	2.42E+01	2.03E+02	2.03E+02	0.464	0.656	4.722E+00	1.968E-01
17025.78	2.42E+01	2.03E+02	2.03E+02	0.464	0.656	4.729E+00	1.971E-01
17050.78	2.42E+01	2.03E+02	2.03E+02	0.464	0.656	4.736E+00	1.973E-01
17076.16	2.42E+01	2.03E+02	2.03E+02	0.464	0.656	4.743E+00	1.976E-01
17101.41	2.42E+01	2.03E+02	2.03E+02	0.464	0.656	4.750E+00	1.979E-01
17127.28	2.42E+01	2.03E+02	2.03E+02	0.464	0.656	4.758E+00	1.982E-01
17152.28	2.42E+01	2.03E+02	2.03E+02	0.464	0.656	4.765E+00	1.985E-01
17178.16	2.42E+01	2.03E+02	2.03E+02	0.464	0.656	4.772E+00	1.988E-01
17203.41	2.42E+01	2.03E+02	2.03E+02	0.464	0.656	4.779E+00	1.991E-01
17228.41	2.42E+01	2.03E+02	2.03E+02	0.464	0.656	4.786E+00	1.994E-01
17253.41	2.42E+01	2.03E+02	2.03E+02	0.464	0.656	4.793E+00	1.997E-01
17278.41	2.42E+01	2.03E+02	2.03E+02	0.464	0.656	4.800E+00	2.000E-01
17303.78	2.42E+01	2.03E+02	2.03E+02	0.464	0.656	4.807E+00	2.003E-01
17328.78	2.42E+01	2.03E+02	2.03E+02	0.464	0.656	4.814E+00	2.006E-01
17354.03	2.42E+01	2.03E+02	2.03E+02	0.464	0.656	4.821E+00	2.009E-01
17379.66	2.42E+01	2.03E+02	2.03E+02	0.464	0.656	4.828E+00	2.012E-01
17405.16	2.42E+01	2.03E+02	2.03E+02	0.464	0.656	4.835E+00	2.014E-01
17430.16	2.42E+01	2.03E+02	2.03E+02	0.464	0.656	4.842E+00	2.017E-01
17455.16	2.42E+01	2.03E+02	2.03E+02	0.464	0.656	4.849E+00	2.020E-01
17481.28	2.42E+01	2.04E+02	2.03E+02	0.464	0.656	4.856E+00	2.023E-01
17506.91	2.42E+01	2.04E+02	2.03E+02	0.464	0.656	4.863E+00	2.026E-01
17531.91	2.42E+01	2.04E+02	2.03E+02	0.464	0.656	4.870E+00	2.029E-01
17557.16	2.42E+01	2.04E+02	2.03E+02	0.464	0.656	4.877E+00	2.032E-01
17583.16	2.42E+01	2.04E+02	2.03E+02	0.464	0.656	4.884E+00	2.035E-01
17608.53	2.42E+01	2.04E+02	2.03E+02	0.464	0.656	4.891E+00	2.038E-01
17633.53	2.42E+01	2.04E+02	2.03E+02	0.464	0.656	4.898E+00	2.041E-01
17658.53	2.42E+01	2.04E+02	2.03E+02	0.464	0.656	4.905E+00	2.044E-01
17683.78	2.42E+01	2.04E+02	2.03E+02	0.464	0.656	4.912E+00	2.047E-01
17709.16	2.42E+01	2.04E+02	2.03E+02	0.464	0.656	4.919E+00	2.050E-01
17734.28	2.42E+01	2.04E+02	2.03E+02	0.464	0.656	4.926E+00	2.053E-01
17759.78	2.42E+01	2.04E+02	2.03E+02	0.464	0.656	4.933E+00	2.056E-01
17784.78	2.42E+01	2.04E+02	2.03E+02	0.464	0.656	4.940E+00	2.058E-01
17809.91	2.42E+01	2.04E+02	2.03E+02	0.464	0.656	4.947E+00	2.061E-01
17835.66	2.42E+01	2.04E+02	2.03E+02	0.464	0.656	4.954E+00	2.064E-01
17860.78	2.42E+01	2.04E+02	2.03E+02	0.464	0.656	4.961E+00	2.067E-01
17886.16	2.42E+01	2.04E+02	2.03E+02	0.464	0.656	4.968E+00	2.070E-01
17911.66	2.42E+01	2.04E+02	2.03E+02	0.464	0.656	4.975E+00	2.073E-01
17936.91	2.42E+01	2.04E+02	2.03E+02	0.464	0.656	4.982E+00	2.076E-01
17962.03	2.42E+01	2.04E+02	2.03E+02	0.464	0.656	4.989E+00	2.079E-01
17987.41	2.42E+01	2.04E+02	2.03E+02	0.464	0.656	4.997E+00	2.082E-01
18012.91	2.42E+01	2.04E+02	2.03E+02	0.464	0.656	5.004E+00	2.085E-01
18038.28	2.42E+01	2.04E+02	2.03E+02	0.464	0.656	5.011E+00	2.088E-01
18063.66	2.42E+01	2.04E+02	2.03E+02	0.464	0.656	5.018E+00	2.091E-01
18088.66	2.42E+01	2.04E+02	2.03E+02	0.464	0.656	5.025E+00	2.094E-01

TIME	DW PRESS (PSIA)	DW TEMP (F)	SP TEMP (F)	PC Leak Fraction of Design Basis	MSIV Leak Fraction of Design Basis	Time (hours)	Time (days)
18113.91	2.42E+01	2.04E+02	2.03E+02	0.464	0.656	5.032E+00	2.097E-01
18138.91	2.42E+01	2.04E+02	2.03E+02	0.464	0.656	5.039E+00	2.099E-01
18164.53	2.42E+01	2.04E+02	2.03E+02	0.464	0.656	5.046E+00	2.102E-01
18189.53	2.42E+01	2.04E+02	2.03E+02	0.464	0.656	5.053E+00	2.105E-01
18214.53	2.42E+01	2.04E+02	2.03E+02	0.464	0.656	5.060E+00	2.108E-01
18239.78	2.42E+01	2.04E+02	2.03E+02	0.464	0.656	5.067E+00	2.111E-01
18264.78	2.42E+01	2.04E+02	2.03E+02	0.464	0.656	5.074E+00	2.114E-01
18290.66	2.42E+01	2.04E+02	2.03E+02	0.464	0.656	5.081E+00	2.117E-01
18315.66	2.42E+01	2.04E+02	2.03E+02	0.464	0.656	5.088E+00	2.120E-01
18340.78	2.42E+01	2.04E+02	2.03E+02	0.464	0.657	5.095E+00	2.123E-01
18365.78	2.42E+01	2.04E+02	2.03E+02	0.464	0.657	5.102E+00	2.126E-01
18391.03	2.42E+01	2.04E+02	2.03E+02	0.464	0.657	5.109E+00	2.129E-01
18416.41	2.42E+01	2.04E+02	2.03E+02	0.464	0.657	5.116E+00	2.132E-01
18441.41	2.42E+01	2.04E+02	2.03E+02	0.464	0.656	5.123E+00	2.134E-01
18466.41	2.42E+01	2.04E+02	2.03E+02	0.464	0.656	5.130E+00	2.137E-01
18491.41	2.42E+01	2.04E+02	2.03E+02	0.464	0.657	5.137E+00	2.140E-01
18516.53	2.42E+01	2.04E+02	2.03E+02	0.464	0.657	5.143E+00	2.143E-01
18541.66	2.42E+01	2.04E+02	2.03E+02	0.464	0.657	5.150E+00	2.146E-01
18566.66	2.42E+01	2.04E+02	2.03E+02	0.464	0.657	5.157E+00	2.149E-01
18592.03	2.42E+01	2.04E+02	2.03E+02	0.464	0.656	5.164E+00	2.152E-01
18617.03	2.42E+01	2.04E+02	2.03E+02	0.464	0.656	5.171E+00	2.155E-01
18642.16	2.42E+01	2.04E+02	2.03E+02	0.464	0.657	5.178E+00	2.158E-01
18668.16	2.42E+01	2.04E+02	2.03E+02	0.464	0.657	5.186E+00	2.161E-01
18693.53	2.42E+01	2.04E+02	2.03E+02	0.464	0.656	5.193E+00	2.164E-01
18718.91	2.42E+01	2.04E+02	2.03E+02	0.464	0.657	5.200E+00	2.167E-01
18743.66	2.42E+01	2.04E+02	2.03E+02	0.464	0.657	5.207E+00	2.169E-01
18768.78	2.42E+01	2.04E+02	2.03E+02	0.464	0.657	5.214E+00	2.172E-01
18793.91	2.42E+01	2.04E+02	2.03E+02	0.464	0.656	5.221E+00	2.175E-01
18818.91	2.42E+01	2.04E+02	2.03E+02	0.464	0.656	5.227E+00	2.178E-01
18843.91	2.42E+01	2.04E+02	2.03E+02	0.464	0.656	5.234E+00	2.181E-01
18868.72	2.42E+01	2.04E+02	2.03E+02	0.465	0.657	5.241E+00	2.184E-01
18894.22	2.42E+01	2.04E+02	2.03E+02	0.464	0.657	5.248E+00	2.187E-01
18919.22	2.42E+01	2.04E+02	2.03E+02	0.465	0.657	5.255E+00	2.190E-01
18944.34	2.42E+01	2.04E+02	2.03E+02	0.465	0.657	5.262E+00	2.193E-01
18969.34	2.42E+01	2.04E+02	2.03E+02	0.465	0.657	5.269E+00	2.196E-01
18994.34	2.42E+01	2.04E+02	2.03E+02	0.465	0.657	5.276E+00	2.198E-01
19019.72	2.42E+01	2.04E+02	2.03E+02	0.464	0.657	5.283E+00	2.201E-01
19044.84	2.42E+01	2.04E+02	2.03E+02	0.465	0.657	5.290E+00	2.204E-01
19070.09	2.42E+01	2.04E+02	2.03E+02	0.465	0.657	5.297E+00	2.207E-01
19095.34	2.42E+01	2.04E+02	2.03E+02	0.464	0.657	5.304E+00	2.210E-01
19120.34	2.42E+01	2.04E+02	2.03E+02	0.465	0.657	5.311E+00	2.213E-01
19145.34	2.42E+01	2.04E+02	2.03E+02	0.464	0.657	5.318E+00	2.216E-01
19170.59	2.42E+01	2.04E+02	2.03E+02	0.464	0.657	5.325E+00	2.219E-01
19195.59	2.42E+01	2.04E+02	2.03E+02	0.464	0.657	5.332E+00	2.222E-01
19220.59	2.42E+01	2.04E+02	2.03E+02	0.464	0.657	5.339E+00	2.225E-01
19246.47	2.42E+01	2.04E+02	2.03E+02	0.465	0.657	5.346E+00	2.228E-01
19272.09	2.42E+01	2.04E+02	2.03E+02	0.465	0.657	5.353E+00	2.231E-01
19297.84	2.42E+01	2.04E+02	2.03E+02	0.464	0.657	5.361E+00	2.234E-01
19322.97	2.42E+01	2.04E+02	2.03E+02	0.464	0.657	5.367E+00	2.236E-01
19347.97	2.42E+01	2.04E+02	2.03E+02	0.464	0.657	5.374E+00	2.239E-01
19373.22	2.42E+01	2.04E+02	2.03E+02	0.464	0.657	5.381E+00	2.242E-01
19398.34	2.42E+01	2.04E+02	2.03E+02	0.464	0.657	5.388E+00	2.245E-01

TIME	DW PRESS (PSIA)	DW TEMP (F)	SP TEMP (F)	PC Leak Fraction of Design Basis	MSIV Leak Fraction of Design Basis	Time (hours)	Time (days)
19423.34	2.42E+01	2.04E+02	2.03E+02	0.464	0.657	5.395E+00	2.248E-01
19448.34	2.42E+01	2.04E+02	2.03E+02	0.464	0.657	5.402E+00	2.251E-01
19473.34	2.42E+01	2.04E+02	2.03E+02	0.464	0.657	5.409E+00	2.254E-01
19498.59	2.42E+01	2.04E+02	2.03E+02	0.464	0.657	5.416E+00	2.257E-01
19524.22	2.42E+01	2.04E+02	2.03E+02	0.464	0.657	5.423E+00	2.260E-01
19549.47	2.42E+01	2.04E+02	2.03E+02	0.465	0.657	5.430E+00	2.263E-01
19574.59	2.42E+01	2.04E+02	2.03E+02	0.464	0.657	5.437E+00	2.266E-01
19599.84	2.42E+01	2.04E+02	2.03E+02	0.464	0.657	5.444E+00	2.269E-01
19625.22	2.42E+01	2.04E+02	2.03E+02	0.464	0.657	5.451E+00	2.271E-01
19650.22	2.42E+01	2.04E+02	2.03E+02	0.464	0.657	5.458E+00	2.274E-01
19675.84	2.42E+01	2.04E+02	2.03E+02	0.464	0.657	5.466E+00	2.277E-01
19701.34	2.42E+01	2.04E+02	2.03E+02	0.464	0.657	5.473E+00	2.280E-01
19726.97	2.42E+01	2.04E+02	2.03E+02	0.464	0.657	5.480E+00	2.283E-01
19752.72	2.42E+01	2.04E+02	2.03E+02	0.464	0.657	5.487E+00	2.286E-01
19777.84	2.42E+01	2.04E+02	2.03E+02	0.464	0.657	5.494E+00	2.289E-01
19803.09	2.42E+01	2.04E+02	2.03E+02	0.464	0.657	5.501E+00	2.292E-01
19828.34	2.42E+01	2.04E+02	2.03E+02	0.464	0.657	5.508E+00	2.295E-01
19853.34	2.42E+01	2.04E+02	2.03E+02	0.464	0.657	5.515E+00	2.298E-01
19878.47	2.42E+01	2.04E+02	2.03E+02	0.464	0.657	5.522E+00	2.301E-01
19903.72	2.42E+01	2.04E+02	2.03E+02	0.464	0.657	5.529E+00	2.304E-01
19929.09	2.42E+01	2.04E+02	2.03E+02	0.464	0.657	5.536E+00	2.307E-01
19954.84	2.42E+01	2.04E+02	2.03E+02	0.464	0.657	5.543E+00	2.310E-01
19979.84	2.42E+01	2.04E+02	2.03E+02	0.464	0.657	5.550E+00	2.312E-01
20011.09	2.42E+01	2.04E+02	2.03E+02	0.464	0.657	5.559E+00	2.316E-01
20049.97	2.42E+01	2.04E+02	2.03E+02	0.464	0.657	5.569E+00	2.321E-01
20087.59	2.42E+01	2.04E+02	2.03E+02	0.464	0.657	5.580E+00	2.325E-01
20125.84	2.42E+01	2.04E+02	2.03E+02	0.464	0.657	5.591E+00	2.329E-01
20163.34	2.42E+01	2.04E+02	2.03E+02	0.464	0.657	5.601E+00	2.334E-01
20200.97	2.42E+01	2.04E+02	2.03E+02	0.464	0.657	5.611E+00	2.338E-01
20239.09	2.42E+01	2.04E+02	2.03E+02	0.464	0.657	5.622E+00	2.342E-01
20276.72	2.42E+01	2.04E+02	2.03E+02	0.464	0.657	5.632E+00	2.347E-01
20314.34	2.42E+01	2.04E+02	2.03E+02	0.464	0.657	5.643E+00	2.351E-01
20352.22	2.42E+01	2.04E+02	2.03E+02	0.464	0.657	5.653E+00	2.356E-01
20390.22	2.42E+01	2.04E+02	2.03E+02	0.464	0.657	5.664E+00	2.360E-01
20428.22	2.42E+01	2.04E+02	2.03E+02	0.464	0.657	5.675E+00	2.364E-01
20466.28	2.42E+01	2.04E+02	2.03E+02	0.465	0.657	5.685E+00	2.369E-01
20504.66	2.42E+01	2.04E+02	2.03E+02	0.465	0.657	5.696E+00	2.373E-01
20542.16	2.42E+01	2.04E+02	2.03E+02	0.465	0.657	5.706E+00	2.378E-01
20580.66	2.42E+01	2.04E+02	2.03E+02	0.465	0.657	5.717E+00	2.382E-01
20618.16	2.42E+01	2.04E+02	2.03E+02	0.465	0.657	5.727E+00	2.386E-01
20655.66	2.42E+01	2.03E+02	2.03E+02	0.464	0.657	5.738E+00	2.391E-01
20693.28	2.42E+01	2.04E+02	2.03E+02	0.465	0.657	5.748E+00	2.395E-01
20730.91	2.42E+01	2.04E+02	2.03E+02	0.465	0.657	5.759E+00	2.399E-01
20768.78	2.42E+01	2.04E+02	2.03E+02	0.465	0.657	5.769E+00	2.404E-01
20806.28	2.42E+01	2.04E+02	2.03E+02	0.465	0.657	5.780E+00	2.408E-01
20844.03	2.42E+01	2.03E+02	2.03E+02	0.464	0.657	5.790E+00	2.413E-01
20881.53	2.42E+01	2.03E+02	2.03E+02	0.465	0.657	5.800E+00	2.417E-01
20919.16	2.42E+01	2.03E+02	2.03E+02	0.464	0.657	5.811E+00	2.421E-01
20956.91	2.42E+01	2.03E+02	2.03E+02	0.464	0.657	5.821E+00	2.426E-01
20994.66	2.42E+01	2.03E+02	2.03E+02	0.464	0.657	5.832E+00	2.430E-01
21032.91	2.42E+01	2.03E+02	2.03E+02	0.464	0.657	5.842E+00	2.434E-01
21070.41	2.42E+01	2.03E+02	2.03E+02	0.464	0.657	5.853E+00	2.439E-01

TIME	DW PRESS (PSIA)	DW TEMP (F)	SP TEMP (F)	PC Leak Fraction of Design Basis	MSIV Leak Fraction of Design Basis	Time (hours)	Time (days)
21108.16	2.42E+01	2.03E+02	2.03E+02	0.464	0.657	5.863E+00	2.443E-01
21146.28	2.42E+01	2.03E+02	2.03E+02	0.464	0.657	5.874E+00	2.447E-01
21184.41	2.42E+01	2.03E+02	2.03E+02	0.464	0.657	5.885E+00	2.452E-01
21222.16	2.42E+01	2.03E+02	2.03E+02	0.464	0.657	5.895E+00	2.456E-01
21259.66	2.42E+01	2.03E+02	2.03E+02	0.464	0.657	5.905E+00	2.461E-01
21297.66	2.42E+01	2.03E+02	2.03E+02	0.464	0.657	5.916E+00	2.465E-01
21335.41	2.42E+01	2.03E+02	2.03E+02	0.464	0.657	5.927E+00	2.469E-01
21373.41	2.42E+01	2.03E+02	2.03E+02	0.464	0.657	5.937E+00	2.474E-01
21411.16	2.42E+01	2.03E+02	2.03E+02	0.464	0.657	5.948E+00	2.478E-01
21448.66	2.42E+01	2.03E+02	2.03E+02	0.464	0.657	5.958E+00	2.482E-01
21487.28	2.42E+01	2.03E+02	2.03E+02	0.464	0.657	5.969E+00	2.487E-01
21525.28	2.42E+01	2.03E+02	2.03E+02	0.464	0.656	5.979E+00	2.491E-01
21562.91	2.42E+01	2.03E+02	2.03E+02	0.464	0.656	5.990E+00	2.496E-01
21600.78	2.42E+01	2.03E+02	2.03E+02	0.464	0.657	6.000E+00	2.500E-01
21639.78	2.42E+01	2.03E+02	2.03E+02	0.464	0.657	6.011E+00	2.505E-01
21677.78	2.42E+01	2.03E+02	2.03E+02	0.464	0.656	6.022E+00	2.509E-01
21715.41	2.42E+01	2.03E+02	2.03E+02	0.464	0.656	6.032E+00	2.513E-01
21753.34	2.42E+01	2.03E+02	2.03E+02	0.464	0.657	6.043E+00	2.518E-01
21791.22	2.42E+01	2.03E+02	2.03E+02	0.464	0.657	6.053E+00	2.522E-01
21829.84	2.42E+01	2.03E+02	2.03E+02	0.464	0.657	6.064E+00	2.527E-01
21867.34	2.42E+01	2.03E+02	2.03E+02	0.464	0.657	6.074E+00	2.531E-01
21905.47	2.42E+01	2.03E+02	2.03E+02	0.464	0.657	6.085E+00	2.535E-01
21942.97	2.42E+01	2.03E+02	2.03E+02	0.464	0.657	6.095E+00	2.540E-01
21981.09	2.42E+01	2.03E+02	2.03E+02	0.464	0.657	6.106E+00	2.544E-01
22018.59	2.42E+01	2.03E+02	2.03E+02	0.464	0.657	6.116E+00	2.548E-01
22057.34	2.42E+01	2.03E+02	2.03E+02	0.464	0.657	6.127E+00	2.553E-01
22095.72	2.42E+01	2.03E+02	2.03E+02	0.464	0.657	6.138E+00	2.557E-01
22133.59	2.42E+01	2.03E+02	2.03E+02	0.464	0.657	6.148E+00	2.562E-01
22171.59	2.42E+01	2.03E+02	2.03E+02	0.464	0.657	6.159E+00	2.566E-01
22210.47	2.42E+01	2.03E+02	2.03E+02	0.464	0.657	6.170E+00	2.571E-01
22248.72	2.42E+01	2.03E+02	2.03E+02	0.464	0.657	6.180E+00	2.575E-01
22286.22	2.42E+01	2.03E+02	2.03E+02	0.464	0.657	6.191E+00	2.579E-01
22324.22	2.42E+01	2.03E+02	2.03E+02	0.464	0.657	6.201E+00	2.584E-01
22362.34	2.42E+01	2.03E+02	2.03E+02	0.464	0.656	6.212E+00	2.588E-01
22400.22	2.42E+01	2.03E+02	2.03E+02	0.464	0.656	6.222E+00	2.593E-01
22438.72	2.42E+01	2.03E+02	2.03E+02	0.464	0.656	6.233E+00	2.597E-01
22476.97	2.42E+01	2.03E+02	2.03E+02	0.464	0.656	6.244E+00	2.602E-01
22514.84	2.42E+01	2.03E+02	2.03E+02	0.464	0.656	6.254E+00	2.606E-01
22553.09	2.42E+01	2.03E+02	2.03E+02	0.464	0.656	6.265E+00	2.610E-01
22591.09	2.42E+01	2.03E+02	2.03E+02	0.464	0.656	6.275E+00	2.615E-01
22628.97	2.42E+01	2.03E+02	2.03E+02	0.464	0.656	6.286E+00	2.619E-01
22666.72	2.42E+01	2.03E+02	2.03E+02	0.464	0.656	6.296E+00	2.623E-01
22704.72	2.42E+01	2.03E+02	2.03E+02	0.464	0.656	6.307E+00	2.628E-01
22742.34	2.42E+01	2.03E+02	2.03E+02	0.464	0.656	6.317E+00	2.632E-01
22779.84	2.42E+01	2.03E+02	2.03E+02	0.464	0.656	6.328E+00	2.637E-01
22817.72	2.42E+01	2.03E+02	2.03E+02	0.464	0.656	6.338E+00	2.641E-01
22855.84	2.42E+01	2.03E+02	2.03E+02	0.464	0.656	6.349E+00	2.645E-01
22893.59	2.42E+01	2.03E+02	2.03E+02	0.464	0.656	6.359E+00	2.650E-01
22931.03	2.42E+01	2.03E+02	2.03E+02	0.464	0.656	6.370E+00	2.654E-01
22968.66	2.42E+01	2.03E+02	2.03E+02	0.464	0.656	6.380E+00	2.658E-01
23006.16	2.42E+01	2.03E+02	2.03E+02	0.464	0.656	6.391E+00	2.663E-01
23043.91	2.42E+01	2.03E+02	2.03E+02	0.464	0.656	6.401E+00	2.667E-01

TIME	DW PRESS (PSIA)	DW TEMP (F)	SP TEMP (F)	PC Leak Fraction of Design Basis	MSIV Leak Fraction of Design Basis	Time (hours)	Time (days)
23081.53	2.42E+01	2.03E+02	2.03E+02	0.464	0.656	6.412E+00	2.671E-01
23119.53	2.42E+01	2.03E+02	2.03E+02	0.464	0.656	6.422E+00	2.676E-01
23157.28	2.42E+01	2.03E+02	2.03E+02	0.464	0.656	6.433E+00	2.680E-01
23196.41	2.42E+01	2.03E+02	2.03E+02	0.464	0.656	6.443E+00	2.685E-01
23234.16	2.42E+01	2.03E+02	2.03E+02	0.464	0.656	6.454E+00	2.689E-01
23271.66	2.42E+01	2.03E+02	2.03E+02	0.464	0.656	6.464E+00	2.693E-01
23309.16	2.42E+01	2.03E+02	2.03E+02	0.464	0.656	6.475E+00	2.698E-01
23347.41	2.42E+01	2.03E+02	2.03E+02	0.464	0.656	6.485E+00	2.702E-01
23385.53	2.42E+01	2.03E+02	2.03E+02	0.464	0.656	6.496E+00	2.707E-01
23423.03	2.42E+01	2.03E+02	2.03E+02	0.464	0.656	6.506E+00	2.711E-01
23460.53	2.42E+01	2.03E+02	2.03E+02	0.464	0.656	6.517E+00	2.715E-01
23498.16	2.42E+01	2.03E+02	2.03E+02	0.464	0.656	6.527E+00	2.720E-01
23535.66	2.42E+01	2.03E+02	2.03E+02	0.464	0.656	6.538E+00	2.724E-01
23573.16	2.42E+01	2.03E+02	2.03E+02	0.464	0.656	6.548E+00	2.728E-01
23610.66	2.42E+01	2.03E+02	2.03E+02	0.464	0.656	6.559E+00	2.733E-01
23649.03	2.42E+01	2.03E+02	2.03E+02	0.464	0.656	6.569E+00	2.737E-01
23686.91	2.42E+01	2.03E+02	2.03E+02	0.464	0.656	6.580E+00	2.742E-01
23725.41	2.42E+01	2.03E+02	2.03E+02	0.464	0.656	6.590E+00	2.746E-01
23763.53	2.42E+01	2.03E+02	2.03E+02	0.464	0.656	6.601E+00	2.750E-01
23801.28	2.42E+01	2.03E+02	2.03E+02	0.464	0.656	6.611E+00	2.755E-01
23839.03	2.42E+01	2.03E+02	2.03E+02	0.464	0.656	6.622E+00	2.759E-01
23877.41	2.42E+01	2.03E+02	2.03E+02	0.464	0.656	6.633E+00	2.764E-01
23915.53	2.42E+01	2.03E+02	2.03E+02	0.464	0.656	6.643E+00	2.768E-01
23953.03	2.42E+01	2.03E+02	2.03E+02	0.464	0.656	6.654E+00	2.772E-01
23990.84	2.42E+01	2.03E+02	2.03E+02	0.464	0.656	6.664E+00	2.777E-01
24028.84	2.42E+01	2.03E+02	2.03E+02	0.464	0.656	6.675E+00	2.781E-01
24066.72	2.42E+01	2.03E+02	2.03E+02	0.464	0.656	6.685E+00	2.785E-01
24105.22	2.42E+01	2.03E+02	2.03E+02	0.464	0.656	6.696E+00	2.790E-01
24142.72	2.42E+01	2.03E+02	2.03E+02	0.464	0.656	6.706E+00	2.794E-01
24180.72	2.42E+01	2.03E+02	2.03E+02	0.464	0.656	6.717E+00	2.799E-01
24218.34	2.42E+01	2.03E+02	2.03E+02	0.464	0.656	6.727E+00	2.803E-01
24255.97	2.42E+01	2.03E+02	2.03E+02	0.464	0.656	6.738E+00	2.807E-01
24293.84	2.42E+01	2.03E+02	2.03E+02	0.464	0.656	6.748E+00	2.812E-01
24331.47	2.42E+01	2.03E+02	2.03E+02	0.464	0.656	6.759E+00	2.816E-01
24369.72	2.42E+01	2.03E+02	2.03E+02	0.464	0.656	6.769E+00	2.821E-01
24407.47	2.42E+01	2.03E+02	2.03E+02	0.464	0.656	6.780E+00	2.825E-01
24445.22	2.42E+01	2.03E+02	2.03E+02	0.464	0.656	6.790E+00	2.829E-01
24483.09	2.42E+01	2.03E+02	2.03E+02	0.464	0.656	6.801E+00	2.834E-01
24520.59	2.42E+01	2.03E+02	2.03E+02	0.464	0.656	6.811E+00	2.838E-01
24558.59	2.42E+01	2.03E+02	2.03E+02	0.464	0.656	6.822E+00	2.842E-01
24596.47	2.42E+01	2.03E+02	2.03E+02	0.464	0.656	6.832E+00	2.847E-01
24634.47	2.42E+01	2.03E+02	2.03E+02	0.464	0.656	6.843E+00	2.851E-01
24672.59	2.42E+01	2.03E+02	2.03E+02	0.463	0.655	6.853E+00	2.856E-01
24710.72	2.42E+01	2.03E+02	2.03E+02	0.463	0.655	6.864E+00	2.860E-01
24748.72	2.42E+01	2.03E+02	2.03E+02	0.463	0.655	6.875E+00	2.864E-01
24786.22	2.42E+01	2.03E+02	2.03E+02	0.463	0.655	6.885E+00	2.869E-01
24824.09	2.42E+01	2.03E+02	2.03E+02	0.463	0.655	6.896E+00	2.873E-01
24862.09	2.42E+01	2.03E+02	2.03E+02	0.463	0.655	6.906E+00	2.878E-01
24900.34	2.42E+01	2.03E+02	2.03E+02	0.463	0.655	6.917E+00	2.882E-01
24938.09	2.42E+01	2.03E+02	2.03E+02	0.463	0.655	6.927E+00	2.886E-01
24977.03	2.42E+01	2.03E+02	2.03E+02	0.464	0.656	6.938E+00	2.891E-01
25014.78	2.42E+01	2.03E+02	2.03E+02	0.463	0.655	6.949E+00	2.895E-01

TIME	DW PRESS (PSIA)	DW TEMP (F)	SP TEMP (F)	PC Leak Fraction of Design Basis	MSIV Leak Fraction of Design Basis	Time (hours)	Time (days)
25052.28	2.42E+01	2.03E+02	2.03E+02	0.463	0.655	6.959E+00	2.900E-01
25090.16	2.42E+01	2.03E+02	2.03E+02	0.463	0.655	6.969E+00	2.904E-01
25127.66	2.42E+01	2.03E+02	2.03E+02	0.463	0.655	6.980E+00	2.908E-01
25165.16	2.42E+01	2.03E+02	2.03E+02	0.463	0.655	6.990E+00	2.913E-01
25203.53	2.42E+01	2.03E+02	2.03E+02	0.463	0.655	7.001E+00	2.917E-01
25241.41	2.42E+01	2.03E+02	2.03E+02	0.463	0.655	7.012E+00	2.921E-01
25278.91	2.42E+01	2.03E+02	2.03E+02	0.463	0.655	7.022E+00	2.926E-01
25316.78	2.42E+01	2.03E+02	2.03E+02	0.463	0.655	7.032E+00	2.930E-01
25354.53	2.41E+01	2.03E+02	2.03E+02	0.463	0.655	7.043E+00	2.935E-01
25393.16	2.41E+01	2.03E+02	2.03E+02	0.463	0.655	7.054E+00	2.939E-01
25431.16	2.41E+01	2.03E+02	2.03E+02	0.463	0.655	7.064E+00	2.943E-01
25468.91	2.41E+01	2.03E+02	2.03E+02	0.463	0.655	7.075E+00	2.948E-01
25506.91	2.41E+01	2.03E+02	2.03E+02	0.463	0.655	7.085E+00	2.952E-01
25544.41	2.41E+01	2.03E+02	2.03E+02	0.463	0.655	7.096E+00	2.957E-01
25582.16	2.41E+01	2.03E+02	2.03E+02	0.463	0.655	7.106E+00	2.961E-01
25620.66	2.41E+01	2.03E+02	2.03E+02	0.463	0.655	7.117E+00	2.965E-01
25659.28	2.41E+01	2.03E+02	2.03E+02	0.463	0.655	7.128E+00	2.970E-01
25697.16	2.41E+01	2.03E+02	2.03E+02	0.463	0.655	7.138E+00	2.974E-01
25735.41	2.41E+01	2.03E+02	2.03E+02	0.463	0.655	7.149E+00	2.979E-01
25773.09	2.41E+01	2.03E+02	2.03E+02	0.463	0.655	7.159E+00	2.983E-01
25810.72	2.41E+01	2.03E+02	2.03E+02	0.463	0.655	7.170E+00	2.987E-01
25848.72	2.41E+01	2.03E+02	2.03E+02	0.463	0.655	7.180E+00	2.992E-01
25886.22	2.41E+01	2.03E+02	2.03E+02	0.463	0.655	7.191E+00	2.996E-01
25924.22	2.41E+01	2.03E+02	2.03E+02	0.463	0.655	7.201E+00	3.000E-01
25962.22	2.41E+01	2.03E+02	2.03E+02	0.463	0.655	7.212E+00	3.005E-01
25999.84	2.41E+01	2.03E+02	2.03E+02	0.463	0.655	7.222E+00	3.009E-01
26037.59	2.41E+01	2.03E+02	2.03E+02	0.463	0.655	7.233E+00	3.014E-01
26077.09	2.41E+01	2.03E+02	2.03E+02	0.463	0.655	7.244E+00	3.018E-01
26115.72	2.41E+01	2.03E+02	2.03E+02	0.463	0.655	7.254E+00	3.023E-01
26153.34	2.41E+01	2.03E+02	2.03E+02	0.463	0.655	7.265E+00	3.027E-01
26190.84	2.41E+01	2.03E+02	2.03E+02	0.463	0.655	7.275E+00	3.031E-01
26229.09	2.41E+01	2.03E+02	2.03E+02	0.463	0.654	7.286E+00	3.036E-01
26266.97	2.41E+01	2.03E+02	2.03E+02	0.463	0.655	7.296E+00	3.040E-01
26304.84	2.41E+01	2.03E+02	2.03E+02	0.463	0.654	7.307E+00	3.045E-01
26342.34	2.41E+01	2.03E+02	2.03E+02	0.463	0.654	7.317E+00	3.049E-01
26380.34	2.41E+01	2.03E+02	2.03E+02	0.463	0.654	7.328E+00	3.053E-01
26417.97	2.41E+01	2.03E+02	2.03E+02	0.463	0.654	7.338E+00	3.058E-01
26455.59	2.41E+01	2.03E+02	2.03E+02	0.463	0.654	7.349E+00	3.062E-01
26493.09	2.41E+01	2.03E+02	2.03E+02	0.463	0.654	7.359E+00	3.066E-01
26530.59	2.41E+01	2.03E+02	2.03E+02	0.462	0.654	7.370E+00	3.071E-01
26568.47	2.41E+01	2.03E+02	2.03E+02	0.463	0.654	7.380E+00	3.075E-01
26605.91	2.41E+01	2.03E+02	2.03E+02	0.463	0.654	7.391E+00	3.079E-01
26644.16	2.41E+01	2.03E+02	2.03E+02	0.463	0.654	7.401E+00	3.084E-01
26682.41	2.41E+01	2.03E+02	2.03E+02	0.463	0.654	7.412E+00	3.088E-01
26721.03	2.41E+01	2.03E+02	2.03E+02	0.463	0.654	7.423E+00	3.093E-01
26759.41	2.41E+01	2.03E+02	2.03E+02	0.463	0.654	7.433E+00	3.097E-01
26796.91	2.41E+01	2.03E+02	2.03E+02	0.463	0.654	7.444E+00	3.101E-01
26835.53	2.41E+01	2.03E+02	2.03E+02	0.462	0.654	7.454E+00	3.106E-01
26873.03	2.41E+01	2.03E+02	2.03E+02	0.462	0.654	7.465E+00	3.110E-01
26911.03	2.41E+01	2.03E+02	2.03E+02	0.462	0.654	7.475E+00	3.115E-01
26948.53	2.41E+01	2.03E+02	2.03E+02	0.462	0.654	7.486E+00	3.119E-01
26986.66	2.41E+01	2.03E+02	2.03E+02	0.462	0.654	7.496E+00	3.123E-01

TIME	DW PRESS (PSIA)	DW TEMP (F)	SP TEMP (F)	PC Leak Fraction of Design Basis	MSIV Leak Fraction of Design Basis	Time (hours)	Time (days)
27024.16	2.41E+01	2.03E+02	2.03E+02	0.462	0.654	7.507E+00	3.128E-01
27061.91	2.41E+01	2.03E+02	2.03E+02	0.462	0.654	7.517E+00	3.132E-01
27099.66	2.41E+01	2.03E+02	2.03E+02	0.462	0.654	7.528E+00	3.137E-01
27138.16	2.41E+01	2.03E+02	2.03E+02	0.462	0.654	7.538E+00	3.141E-01
27175.66	2.41E+01	2.03E+02	2.03E+02	0.462	0.654	7.549E+00	3.145E-01
27213.78	2.41E+01	2.03E+02	2.03E+02	0.462	0.654	7.559E+00	3.150E-01
27251.28	2.41E+01	2.03E+02	2.03E+02	0.462	0.654	7.570E+00	3.154E-01
27289.78	2.41E+01	2.03E+02	2.03E+02	0.462	0.654	7.580E+00	3.159E-01
27327.59	2.41E+01	2.03E+02	2.03E+02	0.462	0.654	7.591E+00	3.163E-01
27365.84	2.41E+01	2.03E+02	2.03E+02	0.462	0.654	7.602E+00	3.167E-01
27403.84	2.41E+01	2.03E+02	2.03E+02	0.462	0.654	7.612E+00	3.172E-01
27441.59	2.41E+01	2.03E+02	2.03E+02	0.462	0.654	7.623E+00	3.176E-01
27479.47	2.41E+01	2.03E+02	2.03E+02	0.462	0.654	7.633E+00	3.180E-01
27516.97	2.41E+01	2.03E+02	2.03E+02	0.462	0.654	7.644E+00	3.185E-01
27554.72	2.41E+01	2.03E+02	2.03E+02	0.462	0.654	7.654E+00	3.189E-01
27593.22	2.41E+01	2.03E+02	2.03E+02	0.462	0.654	7.665E+00	3.194E-01
27630.72	2.41E+01	2.03E+02	2.03E+02	0.462	0.654	7.675E+00	3.198E-01
27668.22	2.41E+01	2.03E+02	2.03E+02	0.462	0.653	7.686E+00	3.202E-01
27706.34	2.41E+01	2.03E+02	2.03E+02	0.462	0.653	7.696E+00	3.207E-01
27744.22	2.41E+01	2.03E+02	2.03E+02	0.462	0.653	7.707E+00	3.211E-01
27782.22	2.41E+01	2.03E+02	2.03E+02	0.462	0.653	7.717E+00	3.216E-01
27820.72	2.41E+01	2.03E+02	2.03E+02	0.462	0.653	7.728E+00	3.220E-01
27858.34	2.41E+01	2.03E+02	2.03E+02	0.462	0.653	7.738E+00	3.224E-01
27896.59	2.41E+01	2.03E+02	2.03E+02	0.462	0.653	7.749E+00	3.229E-01
27934.72	2.41E+01	2.03E+02	2.03E+02	0.462	0.653	7.760E+00	3.233E-01
27972.03	2.41E+01	2.03E+02	2.03E+02	0.462	0.653	7.770E+00	3.238E-01
28010.03	2.41E+01	2.03E+02	2.03E+02	0.462	0.653	7.781E+00	3.242E-01
28047.91	2.41E+01	2.03E+02	2.03E+02	0.462	0.653	7.791E+00	3.246E-01
28086.41	2.41E+01	2.03E+02	2.03E+02	0.462	0.653	7.802E+00	3.251E-01
28124.28	2.41E+01	2.03E+02	2.03E+02	0.462	0.653	7.812E+00	3.255E-01
28162.03	2.41E+01	2.03E+02	2.03E+02	0.462	0.653	7.823E+00	3.259E-01
28199.91	2.41E+01	2.03E+02	2.03E+02	0.462	0.653	7.833E+00	3.264E-01
28237.78	2.41E+01	2.03E+02	2.03E+02	0.462	0.653	7.844E+00	3.268E-01
28276.78	2.41E+01	2.03E+02	2.03E+02	0.462	0.653	7.855E+00	3.273E-01
28314.66	2.41E+01	2.03E+02	2.03E+02	0.462	0.653	7.865E+00	3.277E-01
28353.16	2.41E+01	2.03E+02	2.03E+02	0.461	0.653	7.876E+00	3.282E-01
28391.03	2.41E+01	2.03E+02	2.03E+02	0.461	0.653	7.886E+00	3.286E-01
28428.66	2.41E+01	2.03E+02	2.03E+02	0.461	0.653	7.897E+00	3.290E-01
28466.28	2.41E+01	2.03E+02	2.03E+02	0.461	0.653	7.907E+00	3.295E-01
28504.53	2.41E+01	2.03E+02	2.03E+02	0.461	0.653	7.918E+00	3.299E-01
28542.66	2.41E+01	2.03E+02	2.03E+02	0.461	0.652	7.929E+00	3.304E-01
28580.66	2.41E+01	2.03E+02	2.03E+02	0.461	0.652	7.939E+00	3.308E-01
28617.97	2.41E+01	2.03E+02	2.03E+02	0.461	0.653	7.949E+00	3.312E-01
28655.84	2.41E+01	2.03E+02	2.03E+02	0.461	0.653	7.960E+00	3.317E-01
28693.59	2.41E+01	2.03E+02	2.03E+02	0.461	0.653	7.970E+00	3.321E-01
28731.59	2.41E+01	2.03E+02	2.03E+02	0.461	0.653	7.981E+00	3.325E-01
28769.47	2.41E+01	2.03E+02	2.03E+02	0.461	0.653	7.992E+00	3.330E-01
28807.72	2.41E+01	2.03E+02	2.03E+02	0.461	0.652	8.002E+00	3.334E-01
28845.84	2.41E+01	2.03E+02	2.03E+02	0.461	0.652	8.013E+00	3.339E-01
28883.72	2.41E+01	2.03E+02	2.03E+02	0.461	0.652	8.023E+00	3.343E-01
28921.84	2.41E+01	2.03E+02	2.03E+02	0.461	0.652	8.034E+00	3.347E-01
28959.84	2.41E+01	2.03E+02	2.03E+02	0.461	0.652	8.044E+00	3.352E-01

TIME	DW PRESS (PSIA)	DW TEMP (F)	SP TEMP (F)	PC Leak Fraction of Design Basis	MSIV Leak Fraction of Design Basis	Time (hours)	Time (days)
28997.72	2.41E+01	2.03E+02	2.03E+02	0.461	0.652	8.055E+00	3.356E-01
29035.34	2.41E+01	2.03E+02	2.03E+02	0.461	0.652	8.065E+00	3.361E-01
29073.09	2.41E+01	2.03E+02	2.03E+02	0.461	0.652	8.076E+00	3.365E-01
29111.22	2.41E+01	2.03E+02	2.03E+02	0.461	0.652	8.086E+00	3.369E-01
29149.34	2.41E+01	2.03E+02	2.03E+02	0.461	0.652	8.097E+00	3.374E-01
29187.22	2.41E+01	2.03E+02	2.03E+02	0.461	0.652	8.108E+00	3.378E-01
29225.41	2.41E+01	2.03E+02	2.03E+02	0.461	0.652	8.118E+00	3.383E-01
29263.66	2.41E+01	2.03E+02	2.03E+02	0.461	0.652	8.129E+00	3.387E-01
29301.28	2.41E+01	2.03E+02	2.03E+02	0.461	0.652	8.139E+00	3.391E-01
29339.03	2.41E+01	2.03E+02	2.03E+02	0.461	0.652	8.150E+00	3.396E-01
29376.66	2.41E+01	2.03E+02	2.03E+02	0.461	0.652	8.160E+00	3.400E-01
29414.16	2.40E+01	2.03E+02	2.03E+02	0.461	0.652	8.171E+00	3.404E-01
29452.03	2.40E+01	2.03E+02	2.03E+02	0.461	0.652	8.181E+00	3.409E-01
29489.91	2.40E+01	2.03E+02	2.03E+02	0.461	0.652	8.192E+00	3.413E-01
29527.41	2.40E+01	2.03E+02	2.03E+02	0.461	0.652	8.202E+00	3.418E-01
29565.53	2.40E+01	2.03E+02	2.03E+02	0.461	0.652	8.213E+00	3.422E-01
29603.03	2.40E+01	2.02E+02	2.03E+02	0.461	0.652	8.223E+00	3.426E-01
29641.66	2.40E+01	2.02E+02	2.03E+02	0.460	0.651	8.234E+00	3.431E-01
29679.78	2.40E+01	2.02E+02	2.03E+02	0.460	0.651	8.244E+00	3.435E-01
29717.78	2.40E+01	2.02E+02	2.03E+02	0.460	0.651	8.255E+00	3.440E-01
29755.41	2.40E+01	2.02E+02	2.03E+02	0.460	0.651	8.265E+00	3.444E-01
29793.28	2.40E+01	2.02E+02	2.03E+02	0.460	0.651	8.276E+00	3.448E-01
29830.59	2.40E+01	2.02E+02	2.03E+02	0.461	0.652	8.286E+00	3.453E-01
29868.72	2.40E+01	2.02E+02	2.03E+02	0.460	0.651	8.297E+00	3.457E-01
29906.47	2.40E+01	2.02E+02	2.03E+02	0.460	0.651	8.307E+00	3.461E-01
29944.22	2.40E+01	2.02E+02	2.03E+02	0.460	0.651	8.318E+00	3.466E-01
29982.09	2.40E+01	2.02E+02	2.03E+02	0.460	0.651	8.328E+00	3.470E-01
30020.34	2.40E+01	2.02E+02	2.03E+02	0.460	0.651	8.339E+00	3.475E-01
30058.34	2.40E+01	2.02E+02	2.03E+02	0.460	0.651	8.350E+00	3.479E-01
30096.72	2.40E+01	2.02E+02	2.03E+02	0.460	0.651	8.360E+00	3.483E-01
30134.34	2.40E+01	2.02E+02	2.03E+02	0.460	0.651	8.371E+00	3.488E-01
30172.47	2.40E+01	2.02E+02	2.03E+02	0.460	0.651	8.381E+00	3.492E-01
30210.22	2.40E+01	2.02E+02	2.03E+02	0.460	0.651	8.392E+00	3.497E-01
30247.72	2.40E+01	2.02E+02	2.03E+02	0.460	0.651	8.402E+00	3.501E-01
30285.59	2.40E+01	2.02E+02	2.03E+02	0.460	0.651	8.413E+00	3.505E-01
30323.47	2.40E+01	2.02E+02	2.03E+02	0.460	0.651	8.423E+00	3.510E-01
30360.97	2.40E+01	2.02E+02	2.03E+02	0.460	0.651	8.434E+00	3.514E-01
30398.72	2.40E+01	2.02E+02	2.03E+02	0.460	0.651	8.444E+00	3.518E-01
30436.78	2.40E+01	2.02E+02	2.03E+02	0.460	0.651	8.455E+00	3.523E-01
30474.78	2.40E+01	2.02E+02	2.03E+02	0.460	0.651	8.465E+00	3.527E-01
30512.53	2.40E+01	2.02E+02	2.03E+02	0.460	0.651	8.476E+00	3.532E-01
30550.53	2.40E+01	2.02E+02	2.03E+02	0.460	0.651	8.486E+00	3.536E-01
30588.66	2.40E+01	2.02E+02	2.03E+02	0.460	0.651	8.497E+00	3.540E-01
30626.28	2.40E+01	2.02E+02	2.03E+02	0.460	0.650	8.507E+00	3.545E-01
30663.78	2.40E+01	2.02E+02	2.03E+02	0.460	0.650	8.518E+00	3.549E-01
30701.66	2.40E+01	2.02E+02	2.03E+02	0.460	0.650	8.528E+00	3.553E-01
30739.16	2.40E+01	2.02E+02	2.03E+02	0.460	0.650	8.539E+00	3.558E-01
30777.16	2.40E+01	2.02E+02	2.03E+02	0.460	0.650	8.549E+00	3.562E-01
30815.16	2.40E+01	2.02E+02	2.03E+02	0.459	0.650	8.560E+00	3.567E-01
30852.91	2.40E+01	2.02E+02	2.03E+02	0.459	0.650	8.570E+00	3.571E-01
30890.78	2.40E+01	2.02E+02	2.03E+02	0.459	0.650	8.581E+00	3.575E-01
30929.03	2.40E+01	2.02E+02	2.03E+02	0.459	0.650	8.591E+00	3.580E-01

TIME	DW PRESS (PSIA)	DW TEMP (F)	SP TEMP (F)	PC Leak Fraction of Design Basis	MSIV Leak Fraction of Design Basis	Time (hours)	Time (days)
30967.28	2.40E+01	2.02E+02	2.03E+02	0.459	0.650	8.602E+00	3.584E-01
31004.84	2.40E+01	2.02E+02	2.03E+02	0.459	0.650	8.612E+00	3.589E-01
31043.34	2.40E+01	2.02E+02	2.03E+02	0.459	0.650	8.623E+00	3.593E-01
31081.22	2.40E+01	2.02E+02	2.03E+02	0.459	0.650	8.634E+00	3.597E-01
31119.34	2.40E+01	2.02E+02	2.03E+02	0.459	0.650	8.644E+00	3.602E-01
31157.22	2.40E+01	2.02E+02	2.03E+02	0.459	0.650	8.655E+00	3.606E-01
31195.72	2.40E+01	2.02E+02	2.03E+02	0.459	0.649	8.665E+00	3.611E-01
31233.97	2.40E+01	2.02E+02	2.03E+02	0.459	0.649	8.676E+00	3.615E-01
31271.47	2.40E+01	2.02E+02	2.03E+02	0.459	0.649	8.687E+00	3.619E-01
31309.09	2.40E+01	2.02E+02	2.03E+02	0.459	0.649	8.697E+00	3.624E-01
31346.84	2.40E+01	2.02E+02	2.03E+02	0.459	0.649	8.707E+00	3.628E-01
31384.59	2.40E+01	2.02E+02	2.02E+02	0.459	0.649	8.718E+00	3.632E-01
31422.72	2.40E+01	2.02E+02	2.02E+02	0.459	0.649	8.729E+00	3.637E-01
31460.22	2.40E+01	2.02E+02	2.02E+02	0.459	0.649	8.739E+00	3.641E-01
31497.84	2.40E+01	2.02E+02	2.02E+02	0.459	0.649	8.749E+00	3.646E-01
31535.41	2.40E+01	2.02E+02	2.02E+02	0.459	0.649	8.760E+00	3.650E-01
31574.28	2.40E+01	2.02E+02	2.02E+02	0.459	0.649	8.771E+00	3.654E-01
31612.41	2.40E+01	2.02E+02	2.02E+02	0.459	0.649	8.781E+00	3.659E-01
31650.03	2.40E+01	2.02E+02	2.02E+02	0.459	0.649	8.792E+00	3.663E-01
31687.53	2.40E+01	2.02E+02	2.02E+02	0.459	0.649	8.802E+00	3.668E-01
31725.53	2.40E+01	2.02E+02	2.02E+02	0.459	0.649	8.813E+00	3.672E-01
31763.03	2.40E+01	2.02E+02	2.02E+02	0.459	0.649	8.823E+00	3.676E-01
31800.91	2.40E+01	2.02E+02	2.02E+02	0.459	0.649	8.834E+00	3.681E-01
31838.91	2.40E+01	2.02E+02	2.02E+02	0.459	0.649	8.844E+00	3.685E-01
31876.66	2.40E+01	2.02E+02	2.02E+02	0.459	0.649	8.855E+00	3.689E-01
31915.03	2.40E+01	2.02E+02	2.02E+02	0.459	0.649	8.865E+00	3.694E-01
31952.91	2.40E+01	2.02E+02	2.02E+02	0.459	0.648	8.876E+00	3.698E-01
31991.16	2.40E+01	2.02E+02	2.02E+02	0.459	0.648	8.886E+00	3.703E-01
32028.66	2.40E+01	2.02E+02	2.02E+02	0.459	0.648	8.897E+00	3.707E-01
32066.16	2.40E+01	2.02E+02	2.02E+02	0.459	0.648	8.907E+00	3.711E-01
32103.72	2.40E+01	2.02E+02	2.02E+02	0.459	0.648	8.918E+00	3.716E-01
32142.09	2.40E+01	2.02E+02	2.02E+02	0.459	0.648	8.928E+00	3.720E-01
32179.59	2.40E+01	2.02E+02	2.02E+02	0.459	0.648	8.939E+00	3.724E-01
32218.59	2.40E+01	2.02E+02	2.02E+02	0.459	0.648	8.950E+00	3.729E-01
32256.59	2.40E+01	2.02E+02	2.02E+02	0.459	0.648	8.960E+00	3.733E-01
32294.59	2.39E+01	2.02E+02	2.02E+02	0.458	0.648	8.971E+00	3.738E-01
32332.59	2.39E+01	2.02E+02	2.02E+02	0.458	0.648	8.981E+00	3.742E-01
32370.59	2.39E+01	2.02E+02	2.02E+02	0.458	0.648	8.992E+00	3.747E-01
32408.22	2.39E+01	2.02E+02	2.02E+02	0.458	0.648	9.002E+00	3.751E-01
32446.22	2.39E+01	2.02E+02	2.02E+02	0.458	0.648	9.013E+00	3.755E-01
32484.09	2.39E+01	2.02E+02	2.02E+02	0.458	0.648	9.023E+00	3.760E-01
32521.59	2.39E+01	2.02E+02	2.02E+02	0.458	0.648	9.034E+00	3.764E-01
32559.72	2.39E+01	2.02E+02	2.02E+02	0.458	0.648	9.044E+00	3.768E-01
32597.47	2.39E+01	2.02E+02	2.02E+02	0.458	0.648	9.055E+00	3.773E-01
32635.09	2.39E+01	2.02E+02	2.02E+02	0.458	0.647	9.065E+00	3.777E-01
32673.53	2.39E+01	2.02E+02	2.02E+02	0.458	0.648	9.076E+00	3.782E-01
32711.78	2.39E+01	2.02E+02	2.02E+02	0.458	0.648	9.087E+00	3.786E-01
32749.78	2.39E+01	2.02E+02	2.02E+02	0.458	0.648	9.097E+00	3.790E-01
32788.28	2.39E+01	2.02E+02	2.02E+02	0.458	0.648	9.108E+00	3.795E-01
32826.28	2.39E+01	2.02E+02	2.02E+02	0.458	0.647	9.118E+00	3.799E-01
32863.91	2.39E+01	2.02E+02	2.02E+02	0.458	0.647	9.129E+00	3.804E-01
32901.91	2.39E+01	2.02E+02	2.02E+02	0.458	0.647	9.139E+00	3.808E-01

TIME	DW PRESS (PSIA)	DW TEMP (F)	SP TEMP (F)	PC Leak Fraction of Design Basis	MSIV Leak Fraction of Design Basis	Time (hours)	Time (days)
32939.91	2.39E+01	2.02E+02	2.02E+02	0.458	0.647	9.150E+00	3.812E-01
32978.03	2.39E+01	2.02E+02	2.02E+02	0.458	0.647	9.161E+00	3.817E-01
33015.53	2.39E+01	2.02E+02	2.02E+02	0.458	0.647	9.171E+00	3.821E-01
33053.16	2.39E+01	2.02E+02	2.02E+02	0.458	0.647	9.181E+00	3.826E-01
33091.03	2.39E+01	2.02E+02	2.02E+02	0.458	0.647	9.192E+00	3.830E-01
33129.28	2.39E+01	2.02E+02	2.02E+02	0.457	0.647	9.203E+00	3.834E-01
33167.28	2.39E+01	2.02E+02	2.02E+02	0.457	0.647	9.213E+00	3.839E-01
33204.59	2.39E+01	2.02E+02	2.02E+02	0.458	0.647	9.223E+00	3.843E-01
33242.09	2.39E+01	2.02E+02	2.02E+02	0.458	0.647	9.234E+00	3.847E-01
33280.84	2.39E+01	2.02E+02	2.02E+02	0.457	0.647	9.245E+00	3.852E-01
33320.09	2.39E+01	2.02E+02	2.02E+02	0.457	0.647	9.256E+00	3.856E-01
33357.59	2.39E+01	2.02E+02	2.02E+02	0.457	0.647	9.266E+00	3.861E-01
33395.22	2.39E+01	2.02E+02	2.02E+02	0.457	0.647	9.276E+00	3.865E-01
33433.34	2.39E+01	2.02E+02	2.02E+02	0.457	0.646	9.287E+00	3.870E-01
33471.09	2.39E+01	2.02E+02	2.02E+02	0.457	0.646	9.298E+00	3.874E-01
33509.09	2.39E+01	2.02E+02	2.02E+02	0.457	0.646	9.308E+00	3.878E-01
33546.97	2.39E+01	2.02E+02	2.02E+02	0.457	0.646	9.319E+00	3.883E-01
33585.22	2.39E+01	2.02E+02	2.02E+02	0.457	0.646	9.329E+00	3.887E-01
33622.72	2.39E+01	2.02E+02	2.02E+02	0.457	0.646	9.340E+00	3.892E-01
33660.59	2.39E+01	2.02E+02	2.02E+02	0.457	0.646	9.350E+00	3.896E-01
33698.34	2.39E+01	2.02E+02	2.02E+02	0.457	0.646	9.361E+00	3.900E-01
33735.84	2.39E+01	2.02E+02	2.02E+02	0.457	0.646	9.371E+00	3.905E-01
33773.53	2.39E+01	2.02E+02	2.02E+02	0.457	0.646	9.382E+00	3.909E-01
33811.03	2.39E+01	2.02E+02	2.02E+02	0.457	0.646	9.392E+00	3.913E-01
33848.66	2.39E+01	2.02E+02	2.02E+02	0.457	0.646	9.402E+00	3.918E-01
33886.41	2.39E+01	2.02E+02	2.02E+02	0.457	0.646	9.413E+00	3.922E-01
33924.28	2.39E+01	2.02E+02	2.02E+02	0.457	0.646	9.423E+00	3.926E-01
33961.78	2.39E+01	2.02E+02	2.02E+02	0.457	0.646	9.434E+00	3.931E-01
33999.41	2.39E+01	2.02E+02	2.02E+02	0.457	0.646	9.444E+00	3.935E-01
34037.53	2.39E+01	2.02E+02	2.02E+02	0.457	0.646	9.455E+00	3.940E-01
34075.28	2.39E+01	2.02E+02	2.02E+02	0.456	0.645	9.465E+00	3.944E-01
34113.16	2.39E+01	2.02E+02	2.02E+02	0.457	0.646	9.476E+00	3.948E-01
34151.28	2.39E+01	2.02E+02	2.02E+02	0.456	0.645	9.486E+00	3.953E-01
34188.78	2.39E+01	2.01E+02	2.02E+02	0.456	0.645	9.497E+00	3.957E-01
34226.66	2.39E+01	2.01E+02	2.02E+02	0.456	0.645	9.507E+00	3.961E-01
34264.16	2.39E+01	2.01E+02	2.02E+02	0.456	0.645	9.518E+00	3.966E-01
34301.59	2.39E+01	2.01E+02	2.02E+02	0.456	0.645	9.528E+00	3.970E-01
34339.84	2.39E+01	2.01E+02	2.02E+02	0.456	0.645	9.539E+00	3.975E-01
34377.47	2.39E+01	2.01E+02	2.02E+02	0.456	0.645	9.549E+00	3.979E-01
34415.59	2.39E+01	2.01E+02	2.02E+02	0.456	0.645	9.560E+00	3.983E-01
34453.72	2.39E+01	2.01E+02	2.02E+02	0.456	0.645	9.570E+00	3.988E-01
34491.47	2.39E+01	2.01E+02	2.02E+02	0.456	0.645	9.581E+00	3.992E-01
34529.09	2.39E+01	2.01E+02	2.02E+02	0.456	0.645	9.591E+00	3.996E-01
34566.84	2.38E+01	2.01E+02	2.02E+02	0.456	0.645	9.602E+00	4.001E-01
34604.34	2.38E+01	2.01E+02	2.02E+02	0.456	0.645	9.612E+00	4.005E-01
34642.22	2.38E+01	2.01E+02	2.02E+02	0.456	0.645	9.623E+00	4.010E-01
34679.84	2.38E+01	2.01E+02	2.02E+02	0.456	0.645	9.633E+00	4.014E-01
34717.59	2.38E+01	2.01E+02	2.02E+02	0.456	0.645	9.644E+00	4.018E-01
34755.09	2.38E+01	2.01E+02	2.02E+02	0.456	0.644	9.654E+00	4.023E-01
34793.09	2.38E+01	2.01E+02	2.02E+02	0.456	0.644	9.665E+00	4.027E-01
34831.03	2.38E+01	2.01E+02	2.02E+02	0.456	0.645	9.675E+00	4.031E-01
34868.53	2.38E+01	2.01E+02	2.02E+02	0.456	0.644	9.686E+00	4.036E-01

TIME	DW PRESS (PSIA)	DW TEMP (F)	SP TEMP (F)	PC Leak Fraction of Design Basis	MSIV Leak Fraction of Design Basis	Time (hours)	Time (days)
34906.03	2.38E+01	2.01E+02	2.02E+02	0.456	0.644	9.696E+00	4.040E-01
34943.91	2.38E+01	2.01E+02	2.02E+02	0.456	0.644	9.707E+00	4.044E-01
34981.91	2.38E+01	2.01E+02	2.02E+02	0.456	0.644	9.717E+00	4.049E-01
35020.16	2.38E+01	2.01E+02	2.02E+02	0.456	0.644	9.728E+00	4.053E-01
35057.66	2.38E+01	2.01E+02	2.02E+02	0.455	0.644	9.738E+00	4.058E-01
35095.78	2.38E+01	2.01E+02	2.02E+02	0.455	0.644	9.749E+00	4.062E-01
35134.03	2.38E+01	2.01E+02	2.02E+02	0.455	0.644	9.759E+00	4.066E-01
35171.91	2.38E+01	2.01E+02	2.02E+02	0.455	0.643	9.770E+00	4.071E-01
35209.91	2.38E+01	2.01E+02	2.02E+02	0.455	0.643	9.781E+00	4.075E-01
35247.91	2.38E+01	2.01E+02	2.02E+02	0.455	0.643	9.791E+00	4.080E-01
35285.78	2.38E+01	2.01E+02	2.02E+02	0.455	0.643	9.802E+00	4.084E-01
35323.28	2.38E+01	2.01E+02	2.02E+02	0.455	0.643	9.812E+00	4.088E-01
35360.84	2.38E+01	2.01E+02	2.02E+02	0.455	0.643	9.822E+00	4.093E-01
35398.34	2.38E+01	2.01E+02	2.02E+02	0.455	0.643	9.833E+00	4.097E-01
35435.97	2.38E+01	2.01E+02	2.02E+02	0.455	0.643	9.843E+00	4.101E-01
35473.59	2.38E+01	2.01E+02	2.02E+02	0.455	0.643	9.854E+00	4.106E-01
35511.09	2.38E+01	2.01E+02	2.02E+02	0.455	0.643	9.864E+00	4.110E-01
35549.34	2.38E+01	2.01E+02	2.02E+02	0.455	0.643	9.875E+00	4.115E-01
35587.34	2.38E+01	2.01E+02	2.02E+02	0.455	0.643	9.885E+00	4.119E-01
35625.22	2.38E+01	2.01E+02	2.02E+02	0.455	0.643	9.896E+00	4.123E-01
35663.09	2.38E+01	2.01E+02	2.02E+02	0.455	0.643	9.906E+00	4.128E-01
35701.34	2.38E+01	2.01E+02	2.02E+02	0.455	0.643	9.917E+00	4.132E-01
35739.59	2.38E+01	2.01E+02	2.02E+02	0.455	0.643	9.928E+00	4.137E-01
35777.09	2.38E+01	2.01E+02	2.02E+02	0.455	0.643	9.938E+00	4.141E-01
35814.59	2.38E+01	2.01E+02	2.02E+02	0.454	0.642	9.948E+00	4.145E-01
35852.66	2.38E+01	2.01E+02	2.02E+02	0.455	0.643	9.959E+00	4.150E-01
35891.16	2.38E+01	2.01E+02	2.02E+02	0.455	0.643	9.970E+00	4.154E-01
35929.03	2.38E+01	2.01E+02	2.02E+02	0.455	0.643	9.980E+00	4.158E-01
35966.91	2.38E+01	2.01E+02	2.02E+02	0.454	0.642	9.991E+00	4.163E-01
36004.91	2.38E+01	2.01E+02	2.02E+02	0.454	0.642	1.000E+01	4.167E-01
36042.53	2.38E+01	2.01E+02	2.02E+02	0.454	0.642	1.001E+01	4.172E-01
36080.16	2.38E+01	2.01E+02	2.02E+02	0.454	0.642	1.002E+01	4.176E-01
36118.16	2.38E+01	2.01E+02	2.01E+02	0.454	0.642	1.003E+01	4.180E-01
36156.16	2.38E+01	2.01E+02	2.01E+02	0.454	0.642	1.004E+01	4.185E-01
36193.78	2.38E+01	2.01E+02	2.01E+02	0.454	0.642	1.005E+01	4.189E-01
36231.66	2.38E+01	2.01E+02	2.01E+02	0.454	0.642	1.006E+01	4.193E-01
36269.41	2.38E+01	2.01E+02	2.01E+02	0.454	0.642	1.007E+01	4.198E-01
36307.16	2.38E+01	2.01E+02	2.01E+02	0.454	0.642	1.009E+01	4.202E-01
36345.41	2.38E+01	2.01E+02	2.01E+02	0.454	0.642	1.010E+01	4.207E-01
36382.84	2.38E+01	2.01E+02	2.01E+02	0.454	0.642	1.011E+01	4.211E-01
36420.59	2.38E+01	2.01E+02	2.01E+02	0.454	0.642	1.012E+01	4.215E-01
36459.09	2.38E+01	2.01E+02	2.01E+02	0.454	0.642	1.013E+01	4.220E-01
36496.84	2.38E+01	2.01E+02	2.01E+02	0.454	0.642	1.014E+01	4.224E-01
36534.47	2.38E+01	2.01E+02	2.01E+02	0.454	0.642	1.015E+01	4.229E-01
36572.47	2.38E+01	2.01E+02	2.01E+02	0.454	0.641	1.016E+01	4.233E-01
36610.59	2.38E+01	2.01E+02	2.01E+02	0.454	0.641	1.017E+01	4.237E-01
36648.09	2.38E+01	2.01E+02	2.01E+02	0.454	0.641	1.018E+01	4.242E-01
36686.22	2.38E+01	2.01E+02	2.01E+02	0.454	0.641	1.019E+01	4.246E-01
36724.47	2.37E+01	2.01E+02	2.01E+02	0.453	0.641	1.020E+01	4.251E-01
36761.97	2.37E+01	2.01E+02	2.01E+02	0.453	0.641	1.021E+01	4.255E-01
36799.59	2.37E+01	2.01E+02	2.01E+02	0.453	0.641	1.022E+01	4.259E-01
36837.72	2.37E+01	2.01E+02	2.01E+02	0.453	0.641	1.023E+01	4.264E-01

TIME	DW PRESS (PSIA)	DW TEMP (F)	SP TEMP (F)	PC Leak Fraction of Design Basis	MSIV Leak Fraction of Design Basis	Time (hours)	Time (days)
36875.28	2.37E+01	2.01E+02	2.01E+02	0.453	0.641	1.024E+01	4.268E-01
36912.78	2.37E+01	2.01E+02	2.01E+02	0.453	0.641	1.025E+01	4.272E-01
36950.28	2.37E+01	2.01E+02	2.01E+02	0.453	0.641	1.026E+01	4.277E-01
36988.16	2.37E+01	2.01E+02	2.01E+02	0.453	0.641	1.027E+01	4.281E-01
37025.78	2.37E+01	2.01E+02	2.01E+02	0.453	0.641	1.028E+01	4.285E-01
37063.78	2.37E+01	2.01E+02	2.01E+02	0.453	0.641	1.030E+01	4.290E-01
37102.03	2.37E+01	2.01E+02	2.01E+02	0.453	0.640	1.031E+01	4.294E-01
37139.53	2.37E+01	2.01E+02	2.01E+02	0.453	0.640	1.032E+01	4.299E-01
37177.28	2.37E+01	2.01E+02	2.01E+02	0.453	0.640	1.033E+01	4.303E-01
37215.66	2.37E+01	2.01E+02	2.01E+02	0.453	0.640	1.034E+01	4.307E-01
37253.53	2.37E+01	2.01E+02	2.01E+02	0.453	0.640	1.035E+01	4.312E-01
37291.91	2.37E+01	2.01E+02	2.01E+02	0.453	0.640	1.036E+01	4.316E-01
37329.78	2.37E+01	2.01E+02	2.01E+02	0.453	0.640	1.037E+01	4.321E-01
37367.47	2.37E+01	2.01E+02	2.01E+02	0.453	0.640	1.038E+01	4.325E-01
37405.09	2.37E+01	2.01E+02	2.01E+02	0.453	0.640	1.039E+01	4.329E-01
37442.59	2.37E+01	2.01E+02	2.01E+02	0.453	0.640	1.040E+01	4.334E-01
37480.22	2.37E+01	2.01E+02	2.01E+02	0.453	0.640	1.041E+01	4.338E-01
37518.22	2.37E+01	2.01E+02	2.01E+02	0.453	0.640	1.042E+01	4.342E-01
37555.97	2.37E+01	2.01E+02	2.01E+02	0.453	0.640	1.043E+01	4.347E-01
37593.59	2.37E+01	2.01E+02	2.01E+02	0.452	0.640	1.044E+01	4.351E-01
37631.84	2.37E+01	2.01E+02	2.01E+02	0.452	0.640	1.045E+01	4.356E-01
37669.72	2.37E+01	2.01E+02	2.01E+02	0.452	0.639	1.046E+01	4.360E-01
37707.59	2.37E+01	2.01E+02	2.01E+02	0.452	0.639	1.047E+01	4.364E-01
37745.72	2.37E+01	2.01E+02	2.01E+02	0.452	0.639	1.048E+01	4.369E-01
37783.22	2.37E+01	2.01E+02	2.01E+02	0.452	0.639	1.050E+01	4.373E-01
37820.97	2.37E+01	2.01E+02	2.01E+02	0.452	0.639	1.051E+01	4.377E-01
37858.28	2.37E+01	2.01E+02	2.01E+02	0.452	0.639	1.052E+01	4.382E-01
37895.78	2.37E+01	2.01E+02	2.01E+02	0.452	0.639	1.053E+01	4.386E-01
37933.53	2.37E+01	2.01E+02	2.01E+02	0.452	0.639	1.054E+01	4.390E-01
37971.91	2.37E+01	2.01E+02	2.01E+02	0.452	0.639	1.055E+01	4.395E-01
38010.28	2.37E+01	2.00E+02	2.01E+02	0.452	0.639	1.056E+01	4.399E-01
38048.41	2.37E+01	2.00E+02	2.01E+02	0.452	0.639	1.057E+01	4.404E-01
38086.66	2.37E+01	2.00E+02	2.01E+02	0.452	0.639	1.058E+01	4.408E-01
38125.03	2.37E+01	2.00E+02	2.01E+02	0.452	0.639	1.059E+01	4.413E-01
38162.78	2.37E+01	2.00E+02	2.01E+02	0.452	0.639	1.060E+01	4.417E-01
38200.78	2.37E+01	2.00E+02	2.01E+02	0.452	0.639	1.061E+01	4.421E-01
38238.53	2.37E+01	2.00E+02	2.01E+02	0.451	0.638	1.062E+01	4.426E-01
38276.78	2.37E+01	2.00E+02	2.01E+02	0.451	0.638	1.063E+01	4.430E-01
38314.47	2.37E+01	2.00E+02	2.01E+02	0.452	0.639	1.064E+01	4.435E-01
38352.09	2.37E+01	2.00E+02	2.01E+02	0.452	0.639	1.065E+01	4.439E-01
38389.59	2.37E+01	2.00E+02	2.01E+02	0.451	0.638	1.066E+01	4.443E-01
38427.09	2.37E+01	2.00E+02	2.01E+02	0.451	0.638	1.067E+01	4.448E-01
38464.59	2.37E+01	2.00E+02	2.01E+02	0.451	0.638	1.068E+01	4.452E-01
38503.22	2.37E+01	2.00E+02	2.01E+02	0.451	0.638	1.070E+01	4.456E-01
38541.34	2.37E+01	2.00E+02	2.01E+02	0.451	0.638	1.071E+01	4.461E-01
38579.22	2.37E+01	2.00E+02	2.01E+02	0.451	0.638	1.072E+01	4.465E-01
38617.22	2.37E+01	2.00E+02	2.01E+02	0.451	0.638	1.073E+01	4.470E-01
38654.72	2.37E+01	2.00E+02	2.01E+02	0.451	0.638	1.074E+01	4.474E-01
38692.34	2.36E+01	2.00E+02	2.01E+02	0.451	0.637	1.075E+01	4.478E-01
38730.09	2.36E+01	2.00E+02	2.01E+02	0.451	0.637	1.076E+01	4.483E-01
38767.91	2.37E+01	2.00E+02	2.01E+02	0.451	0.638	1.077E+01	4.487E-01
38805.66	2.36E+01	2.00E+02	2.01E+02	0.451	0.637	1.078E+01	4.491E-01

TIME	DW PRESS (PSIA)	DW TEMP (F)	SP TEMP (F)	PC Leak Fraction of Design Basis	MSIV Leak Fraction of Design Basis	Time (hours)	Time (days)
38843.16	2.36E+01	2.00E+02	2.01E+02	0.451	0.637	1.079E+01	4.496E-01
38880.78	2.36E+01	2.00E+02	2.01E+02	0.451	0.637	1.080E+01	4.500E-01
38918.78	2.36E+01	2.00E+02	2.01E+02	0.451	0.637	1.081E+01	4.504E-01
38957.41	2.36E+01	2.00E+02	2.01E+02	0.451	0.637	1.082E+01	4.509E-01
38995.53	2.36E+01	2.00E+02	2.01E+02	0.451	0.637	1.083E+01	4.513E-01
39033.28	2.36E+01	2.00E+02	2.01E+02	0.451	0.637	1.084E+01	4.518E-01
39070.91	2.36E+01	2.00E+02	2.01E+02	0.450	0.637	1.085E+01	4.522E-01
39108.78	2.36E+01	2.00E+02	2.01E+02	0.450	0.637	1.086E+01	4.526E-01
39147.53	2.36E+01	2.00E+02	2.01E+02	0.450	0.637	1.087E+01	4.531E-01
39185.53	2.36E+01	2.00E+02	2.01E+02	0.450	0.637	1.088E+01	4.535E-01
39222.84	2.36E+01	2.00E+02	2.01E+02	0.450	0.637	1.090E+01	4.540E-01
39260.97	2.36E+01	2.00E+02	2.01E+02	0.450	0.637	1.091E+01	4.544E-01
39298.72	2.36E+01	2.00E+02	2.01E+02	0.450	0.637	1.092E+01	4.548E-01
39336.47	2.36E+01	2.00E+02	2.01E+02	0.450	0.637	1.093E+01	4.553E-01
39373.97	2.36E+01	2.00E+02	2.01E+02	0.450	0.636	1.094E+01	4.557E-01
39411.97	2.36E+01	2.00E+02	2.01E+02	0.450	0.636	1.095E+01	4.562E-01
39449.97	2.36E+01	2.00E+02	2.01E+02	0.450	0.636	1.096E+01	4.566E-01
39487.47	2.36E+01	2.00E+02	2.01E+02	0.450	0.636	1.097E+01	4.570E-01
39526.22	2.36E+01	2.00E+02	2.01E+02	0.450	0.636	1.098E+01	4.575E-01
39563.97	2.36E+01	2.00E+02	2.01E+02	0.450	0.636	1.099E+01	4.579E-01
39601.84	2.36E+01	2.00E+02	2.01E+02	0.450	0.636	1.100E+01	4.584E-01
39639.59	2.36E+01	2.00E+02	2.01E+02	0.449	0.636	1.101E+01	4.588E-01
39677.91	2.36E+01	2.00E+02	2.01E+02	0.450	0.636	1.102E+01	4.592E-01
39715.66	2.36E+01	2.00E+02	2.01E+02	0.450	0.636	1.103E+01	4.597E-01
39753.41	2.36E+01	2.00E+02	2.01E+02	0.449	0.636	1.104E+01	4.601E-01
39791.03	2.36E+01	2.00E+02	2.01E+02	0.449	0.636	1.105E+01	4.605E-01
39828.91	2.36E+01	2.00E+02	2.01E+02	0.449	0.636	1.106E+01	4.610E-01
39866.41	2.36E+01	2.00E+02	2.01E+02	0.449	0.636	1.107E+01	4.614E-01
39904.53	2.36E+01	2.00E+02	2.00E+02	0.449	0.635	1.108E+01	4.619E-01
39942.03	2.36E+01	2.00E+02	2.00E+02	0.449	0.635	1.110E+01	4.623E-01
39980.28	2.36E+01	2.00E+02	2.00E+02	0.449	0.635	1.111E+01	4.627E-01
40018.53	2.36E+01	2.00E+02	2.00E+02	0.449	0.635	1.112E+01	4.632E-01
40056.41	2.36E+01	2.00E+02	2.00E+02	0.449	0.635	1.113E+01	4.636E-01
40094.66	2.36E+01	2.00E+02	2.00E+02	0.449	0.635	1.114E+01	4.641E-01
40132.72	2.36E+01	2.00E+02	2.00E+02	0.449	0.635	1.115E+01	4.645E-01
40170.97	2.36E+01	2.00E+02	2.00E+02	0.449	0.635	1.116E+01	4.649E-01
40209.09	2.36E+01	2.00E+02	2.00E+02	0.449	0.635	1.117E+01	4.654E-01
40246.59	2.36E+01	2.00E+02	2.00E+02	0.449	0.635	1.118E+01	4.658E-01
40284.22	2.36E+01	2.00E+02	2.00E+02	0.449	0.635	1.119E+01	4.663E-01
40321.97	2.36E+01	2.00E+02	2.00E+02	0.449	0.635	1.120E+01	4.667E-01
40359.59	2.36E+01	2.00E+02	2.00E+02	0.449	0.635	1.121E+01	4.671E-01
40398.09	2.36E+01	2.00E+02	2.00E+02	0.449	0.635	1.122E+01	4.676E-01
40435.84	2.36E+01	2.00E+02	2.00E+02	0.448	0.634	1.123E+01	4.680E-01
40473.47	2.36E+01	2.00E+02	2.00E+02	0.448	0.634	1.124E+01	4.684E-01
40511.34	2.36E+01	2.00E+02	2.00E+02	0.448	0.634	1.125E+01	4.689E-01
40549.47	2.36E+01	2.00E+02	2.00E+02	0.448	0.634	1.126E+01	4.693E-01
40587.03	2.36E+01	2.00E+02	2.00E+02	0.448	0.634	1.127E+01	4.698E-01
40625.28	2.36E+01	2.00E+02	2.00E+02	0.448	0.634	1.128E+01	4.702E-01
40662.91	2.36E+01	2.00E+02	2.00E+02	0.448	0.634	1.130E+01	4.706E-01
40700.41	2.35E+01	2.00E+02	2.00E+02	0.448	0.634	1.131E+01	4.711E-01
40737.91	2.35E+01	2.00E+02	2.00E+02	0.448	0.634	1.132E+01	4.715E-01
40775.53	2.35E+01	2.00E+02	2.00E+02	0.448	0.634	1.133E+01	4.719E-01

TIME	DW PRESS (PSIA)	DW TEMP (F)	SP TEMP (F)	PC Leak Fraction of Design Basis	MSIV Leak Fraction of Design Basis	Time (hours)	Time (days)
40813.03	2.35E+01	2.00E+02	2.00E+02	0.448	0.634	1.134E+01	4.724E-01
40851.03	2.35E+01	2.00E+02	2.00E+02	0.448	0.634	1.135E+01	4.728E-01
40888.78	2.35E+01	2.00E+02	2.00E+02	0.448	0.634	1.136E+01	4.732E-01
40926.66	2.35E+01	2.00E+02	2.00E+02	0.448	0.634	1.137E+01	4.737E-01
40965.41	2.35E+01	2.00E+02	2.00E+02	0.448	0.634	1.138E+01	4.741E-01
41002.91	2.35E+01	2.00E+02	2.00E+02	0.448	0.633	1.139E+01	4.746E-01
41040.53	2.35E+01	2.00E+02	2.00E+02	0.448	0.633	1.140E+01	4.750E-01
41078.72	2.35E+01	2.00E+02	2.00E+02	0.448	0.634	1.141E+01	4.754E-01
41116.47	2.35E+01	2.00E+02	2.00E+02	0.448	0.634	1.142E+01	4.759E-01
41154.47	2.35E+01	2.00E+02	2.00E+02	0.448	0.633	1.143E+01	4.763E-01
41191.97	2.35E+01	2.00E+02	2.00E+02	0.448	0.633	1.144E+01	4.768E-01
41229.72	2.35E+01	2.00E+02	2.00E+02	0.448	0.633	1.145E+01	4.772E-01
41267.34	2.35E+01	2.00E+02	2.00E+02	0.448	0.633	1.146E+01	4.776E-01
41305.22	2.35E+01	2.00E+02	2.00E+02	0.447	0.633	1.147E+01	4.781E-01
41343.72	2.35E+01	2.00E+02	2.00E+02	0.447	0.633	1.148E+01	4.785E-01
41381.34	2.35E+01	2.00E+02	2.00E+02	0.447	0.633	1.149E+01	4.790E-01
41418.97	2.35E+01	2.00E+02	2.00E+02	0.447	0.632	1.151E+01	4.794E-01
41457.34	2.35E+01	1.99E+02	2.00E+02	0.447	0.632	1.152E+01	4.798E-01
41495.09	2.35E+01	1.99E+02	2.00E+02	0.447	0.632	1.153E+01	4.803E-01
41532.72	2.35E+01	1.99E+02	2.00E+02	0.447	0.632	1.154E+01	4.807E-01
41570.41	2.35E+01	1.99E+02	2.00E+02	0.447	0.632	1.155E+01	4.811E-01
41608.28	2.35E+01	1.99E+02	2.00E+02	0.447	0.632	1.156E+01	4.816E-01
41646.16	2.35E+01	1.99E+02	2.00E+02	0.447	0.632	1.157E+01	4.820E-01
41684.53	2.35E+01	1.99E+02	2.00E+02	0.447	0.632	1.158E+01	4.825E-01
41722.28	2.35E+01	1.99E+02	2.00E+02	0.447	0.632	1.159E+01	4.829E-01
41760.66	2.35E+01	1.99E+02	2.00E+02	0.447	0.632	1.160E+01	4.833E-01
41798.78	2.35E+01	1.99E+02	2.00E+02	0.447	0.632	1.161E+01	4.838E-01
41837.03	2.35E+01	1.99E+02	2.00E+02	0.447	0.632	1.162E+01	4.842E-01
41875.41	2.35E+01	1.99E+02	2.00E+02	0.447	0.632	1.163E+01	4.847E-01
41913.03	2.35E+01	1.99E+02	2.00E+02	0.447	0.632	1.164E+01	4.851E-01
41950.66	2.35E+01	1.99E+02	2.00E+02	0.447	0.632	1.165E+01	4.855E-01
41989.28	2.35E+01	1.99E+02	2.00E+02	0.447	0.632	1.166E+01	4.860E-01
42026.91	2.35E+01	1.99E+02	2.00E+02	0.446	0.631	1.167E+01	4.864E-01
42064.47	2.35E+01	1.99E+02	2.00E+02	0.447	0.632	1.168E+01	4.869E-01
42101.97	2.35E+01	1.99E+02	2.00E+02	0.446	0.631	1.169E+01	4.873E-01
42140.22	2.35E+01	1.99E+02	2.00E+02	0.446	0.631	1.171E+01	4.877E-01
42178.84	2.35E+01	1.99E+02	2.00E+02	0.446	0.631	1.172E+01	4.882E-01
42217.22	2.35E+01	1.99E+02	2.00E+02	0.446	0.631	1.173E+01	4.886E-01
42256.09	2.35E+01	1.99E+02	2.00E+02	0.446	0.631	1.174E+01	4.891E-01
42294.59	2.35E+01	1.99E+02	2.00E+02	0.446	0.631	1.175E+01	4.895E-01
42332.84	2.35E+01	1.99E+02	2.00E+02	0.446	0.631	1.176E+01	4.900E-01
42370.47	2.35E+01	1.99E+02	2.00E+02	0.446	0.631	1.177E+01	4.904E-01
42408.34	2.35E+01	1.99E+02	2.00E+02	0.446	0.631	1.178E+01	4.908E-01
42446.22	2.35E+01	1.99E+02	2.00E+02	0.446	0.631	1.179E+01	4.913E-01
42484.22	2.35E+01	1.99E+02	2.00E+02	0.446	0.631	1.180E+01	4.917E-01
42522.53	2.35E+01	1.99E+02	2.00E+02	0.446	0.631	1.181E+01	4.922E-01
42560.03	2.35E+01	1.99E+02	2.00E+02	0.446	0.631	1.182E+01	4.926E-01
42597.66	2.35E+01	1.99E+02	2.00E+02	0.446	0.631	1.183E+01	4.930E-01
42635.28	2.35E+01	1.99E+02	2.00E+02	0.446	0.631	1.184E+01	4.935E-01
42673.03	2.34E+01	1.99E+02	2.00E+02	0.446	0.630	1.185E+01	4.939E-01
42711.91	2.34E+01	1.99E+02	2.00E+02	0.446	0.630	1.186E+01	4.944E-01
42749.78	2.34E+01	1.99E+02	2.00E+02	0.446	0.630	1.187E+01	4.948E-01

TIME	DW PRESS (PSIA)	DW TEMP (F)	SP TEMP (F)	PC Leak Fraction of Design Basis	MSIV Leak Fraction of Design Basis	Time (hours)	Time (days)
42787.91	2.34E+01	1.99E+02	2.00E+02	0.446	0.630	1.189E+01	4.952E-01
42826.91	2.34E+01	1.99E+02	2.00E+02	0.446	0.630	1.190E+01	4.957E-01
42864.78	2.34E+01	1.99E+02	2.00E+02	0.445	0.630	1.191E+01	4.961E-01
42903.16	2.34E+01	1.99E+02	2.00E+02	0.445	0.630	1.192E+01	4.966E-01
42940.66	2.34E+01	1.99E+02	2.00E+02	0.445	0.630	1.193E+01	4.970E-01
42978.59	2.34E+01	1.99E+02	2.00E+02	0.445	0.630	1.194E+01	4.974E-01
43016.47	2.34E+01	1.99E+02	2.00E+02	0.445	0.630	1.195E+01	4.979E-01
43054.84	2.34E+01	1.99E+02	2.00E+02	0.445	0.630	1.196E+01	4.983E-01
43093.22	2.34E+01	1.99E+02	2.00E+02	0.445	0.630	1.197E+01	4.988E-01
43131.09	2.34E+01	1.99E+02	2.00E+02	0.445	0.630	1.198E+01	4.992E-01
43169.22	2.34E+01	1.99E+02	2.00E+02	0.445	0.630	1.199E+01	4.996E-01
43207.22	2.34E+01	1.99E+02	2.00E+02	0.445	0.630	1.200E+01	5.001E-01
43245.34	2.34E+01	1.99E+02	2.00E+02	0.445	0.630	1.201E+01	5.005E-01
43283.59	2.34E+01	1.99E+02	2.00E+02	0.445	0.629	1.202E+01	5.010E-01
43321.59	2.34E+01	1.99E+02	2.00E+02	0.445	0.629	1.203E+01	5.014E-01
43359.09	2.34E+01	1.99E+02	2.00E+02	0.445	0.629	1.204E+01	5.018E-01
43397.22	2.34E+01	1.99E+02	2.00E+02	0.445	0.629	1.205E+01	5.023E-01
43435.22	2.34E+01	1.99E+02	1.99E+02	0.445	0.629	1.207E+01	5.027E-01
43473.53	2.34E+01	1.99E+02	1.99E+02	0.445	0.629	1.208E+01	5.032E-01
43511.03	2.34E+01	1.99E+02	1.99E+02	0.445	0.629	1.209E+01	5.036E-01
43549.41	2.34E+01	1.99E+02	1.99E+02	0.445	0.629	1.210E+01	5.040E-01
43588.03	2.34E+01	1.99E+02	1.99E+02	0.445	0.629	1.211E+01	5.045E-01
43625.66	2.34E+01	1.99E+02	1.99E+02	0.445	0.629	1.212E+01	5.049E-01
43663.16	2.34E+01	1.99E+02	1.99E+02	0.445	0.629	1.213E+01	5.054E-01
43701.28	2.34E+01	1.99E+02	1.99E+02	0.444	0.628	1.214E+01	5.058E-01
43739.53	2.34E+01	1.99E+02	1.99E+02	0.444	0.628	1.215E+01	5.062E-01
43777.28	2.34E+01	1.99E+02	1.99E+02	0.444	0.628	1.216E+01	5.067E-01
43814.91	2.34E+01	1.99E+02	1.99E+02	0.444	0.628	1.217E+01	5.071E-01
43853.03	2.34E+01	1.99E+02	1.99E+02	0.444	0.628	1.218E+01	5.076E-01
43890.53	2.34E+01	1.99E+02	1.99E+02	0.444	0.628	1.219E+01	5.080E-01
43928.03	2.34E+01	1.99E+02	1.99E+02	0.444	0.628	1.220E+01	5.084E-01
43965.97	2.34E+01	1.99E+02	1.99E+02	0.444	0.628	1.221E+01	5.089E-01
44003.97	2.34E+01	1.99E+02	1.99E+02	0.444	0.628	1.222E+01	5.093E-01
44041.84	2.34E+01	1.99E+02	1.99E+02	0.444	0.628	1.223E+01	5.097E-01
44079.72	2.34E+01	1.99E+02	1.99E+02	0.444	0.628	1.224E+01	5.102E-01
44118.09	2.34E+01	1.99E+02	1.99E+02	0.444	0.628	1.226E+01	5.106E-01
44155.59	2.34E+01	1.99E+02	1.99E+02	0.444	0.628	1.227E+01	5.111E-01
44194.09	2.34E+01	1.99E+02	1.99E+02	0.444	0.628	1.228E+01	5.115E-01
44231.84	2.34E+01	1.99E+02	1.99E+02	0.444	0.628	1.229E+01	5.119E-01
44269.34	2.34E+01	1.99E+02	1.99E+02	0.444	0.627	1.230E+01	5.124E-01
44307.84	2.34E+01	1.99E+02	1.99E+02	0.444	0.627	1.231E+01	5.128E-01
44345.34	2.34E+01	1.99E+02	1.99E+02	0.444	0.627	1.232E+01	5.133E-01
44382.84	2.34E+01	1.99E+02	1.99E+02	0.443	0.627	1.233E+01	5.137E-01
44420.59	2.34E+01	1.99E+02	1.99E+02	0.443	0.627	1.234E+01	5.141E-01
44458.66	2.34E+01	1.99E+02	1.99E+02	0.444	0.627	1.235E+01	5.146E-01
44496.91	2.34E+01	1.99E+02	1.99E+02	0.444	0.627	1.236E+01	5.150E-01
44534.91	2.34E+01	1.99E+02	1.99E+02	0.444	0.627	1.237E+01	5.155E-01
44573.28	2.34E+01	1.99E+02	1.99E+02	0.443	0.627	1.238E+01	5.159E-01
44610.91	2.34E+01	1.99E+02	1.99E+02	0.443	0.627	1.239E+01	5.163E-01
44648.78	2.34E+01	1.99E+02	1.99E+02	0.443	0.627	1.240E+01	5.168E-01
44686.28	2.34E+01	1.99E+02	1.99E+02	0.443	0.627	1.241E+01	5.172E-01
44724.16	2.33E+01	1.99E+02	1.99E+02	0.443	0.627	1.242E+01	5.176E-01

TIME	DW PRESS (PSIA)	DW TEMP (F)	SP TEMP (F)	PC Leak Fraction of Design Basis	MSIV Leak Fraction of Design Basis	Time (hours)	Time (days)
44762.16	2.33E+01	1.99E+02	1.99E+02	0.443	0.627	1.243E+01	5.181E-01
44800.03	2.33E+01	1.99E+02	1.99E+02	0.443	0.627	1.244E+01	5.185E-01
44837.91	2.33E+01	1.99E+02	1.99E+02	0.443	0.627	1.245E+01	5.190E-01
44875.78	2.33E+01	1.99E+02	1.99E+02	0.443	0.626	1.247E+01	5.194E-01
44913.28	2.33E+01	1.99E+02	1.99E+02	0.443	0.626	1.248E+01	5.198E-01
44950.72	2.33E+01	1.99E+02	1.99E+02	0.443	0.627	1.249E+01	5.203E-01
44988.34	2.33E+01	1.98E+02	1.99E+02	0.443	0.626	1.250E+01	5.207E-01
45025.97	2.33E+01	1.98E+02	1.99E+02	0.443	0.626	1.251E+01	5.211E-01
45063.47	2.33E+01	1.98E+02	1.99E+02	0.443	0.626	1.252E+01	5.216E-01
45101.34	2.33E+01	1.98E+02	1.99E+02	0.443	0.626	1.253E+01	5.220E-01
45139.09	2.33E+01	1.98E+02	1.99E+02	0.443	0.626	1.254E+01	5.224E-01
45177.09	2.33E+01	1.98E+02	1.99E+02	0.443	0.626	1.255E+01	5.229E-01
45214.59	2.33E+01	1.98E+02	1.99E+02	0.443	0.626	1.256E+01	5.233E-01
45252.34	2.33E+01	1.98E+02	1.99E+02	0.443	0.626	1.257E+01	5.238E-01
45290.34	2.33E+01	1.98E+02	1.99E+02	0.442	0.626	1.258E+01	5.242E-01
45328.09	2.33E+01	1.98E+02	1.99E+02	0.442	0.626	1.259E+01	5.246E-01
45365.59	2.33E+01	1.98E+02	1.99E+02	0.442	0.626	1.260E+01	5.251E-01
45403.34	2.33E+01	1.98E+02	1.99E+02	0.442	0.626	1.261E+01	5.255E-01
45441.53	2.33E+01	1.98E+02	1.99E+02	0.442	0.626	1.262E+01	5.259E-01
45479.53	2.33E+01	1.98E+02	1.99E+02	0.442	0.626	1.263E+01	5.264E-01
45517.16	2.33E+01	1.98E+02	1.99E+02	0.442	0.626	1.264E+01	5.268E-01
45555.16	2.33E+01	1.98E+02	1.99E+02	0.442	0.626	1.265E+01	5.273E-01
45592.78	2.33E+01	1.98E+02	1.99E+02	0.442	0.625	1.266E+01	5.277E-01
45630.53	2.33E+01	1.98E+02	1.99E+02	0.442	0.625	1.268E+01	5.281E-01
45668.41	2.33E+01	1.98E+02	1.99E+02	0.442	0.625	1.269E+01	5.286E-01
45705.91	2.33E+01	1.98E+02	1.99E+02	0.442	0.625	1.270E+01	5.290E-01
45744.53	2.33E+01	1.98E+02	1.99E+02	0.442	0.625	1.271E+01	5.295E-01
45782.53	2.33E+01	1.98E+02	1.99E+02	0.442	0.625	1.272E+01	5.299E-01
45820.41	2.33E+01	1.98E+02	1.99E+02	0.442	0.625	1.273E+01	5.303E-01
45858.03	2.33E+01	1.98E+02	1.99E+02	0.442	0.625	1.274E+01	5.308E-01
45895.53	2.33E+01	1.98E+02	1.99E+02	0.442	0.624	1.275E+01	5.312E-01
45934.09	2.33E+01	1.98E+02	1.99E+02	0.442	0.625	1.276E+01	5.316E-01
45971.97	2.33E+01	1.98E+02	1.99E+02	0.442	0.625	1.277E+01	5.321E-01
46010.22	2.33E+01	1.98E+02	1.99E+02	0.442	0.624	1.278E+01	5.325E-01
46047.97	2.33E+01	1.98E+02	1.99E+02	0.442	0.624	1.279E+01	5.330E-01
46086.59	2.33E+01	1.98E+02	1.99E+02	0.442	0.624	1.280E+01	5.334E-01
46124.72	2.33E+01	1.98E+02	1.99E+02	0.442	0.624	1.281E+01	5.339E-01
46162.34	2.33E+01	1.98E+02	1.99E+02	0.441	0.624	1.282E+01	5.343E-01
46200.22	2.33E+01	1.98E+02	1.99E+02	0.441	0.624	1.283E+01	5.347E-01
46238.22	2.33E+01	1.98E+02	1.99E+02	0.441	0.624	1.284E+01	5.352E-01
46276.09	2.33E+01	1.98E+02	1.99E+02	0.441	0.624	1.285E+01	5.356E-01
46313.59	2.33E+01	1.98E+02	1.99E+02	0.441	0.624	1.286E+01	5.360E-01
46352.09	2.33E+01	1.98E+02	1.99E+02	0.441	0.624	1.288E+01	5.365E-01
46390.16	2.33E+01	1.98E+02	1.99E+02	0.441	0.624	1.289E+01	5.369E-01
46428.41	2.33E+01	1.98E+02	1.99E+02	0.441	0.624	1.290E+01	5.374E-01
46466.91	2.33E+01	1.98E+02	1.99E+02	0.441	0.624	1.291E+01	5.378E-01
46505.16	2.33E+01	1.98E+02	1.99E+02	0.441	0.624	1.292E+01	5.383E-01
46542.78	2.33E+01	1.98E+02	1.99E+02	0.441	0.624	1.293E+01	5.387E-01
46581.03	2.33E+01	1.98E+02	1.99E+02	0.441	0.624	1.294E+01	5.391E-01
46618.53	2.33E+01	1.98E+02	1.99E+02	0.441	0.623	1.295E+01	5.396E-01
46656.66	2.33E+01	1.98E+02	1.99E+02	0.441	0.623	1.296E+01	5.400E-01
46694.66	2.33E+01	1.98E+02	1.99E+02	0.441	0.623	1.297E+01	5.404E-01

TIME	DW PRESS (PSIA)	DW TEMP (F)	SP TEMP (F)	PC Leak Fraction of Design Basis	MSIV Leak Fraction of Design Basis	Time (hours)	Time (days)
46733.28	2.32E+01	1.98E+02	1.99E+02	0.441	0.623	1.298E+01	5.409E-01
46771.41	2.32E+01	1.98E+02	1.99E+02	0.441	0.623	1.299E+01	5.413E-01
46808.91	2.32E+01	1.98E+02	1.99E+02	0.441	0.623	1.300E+01	5.418E-01
46846.91	2.32E+01	1.98E+02	1.99E+02	0.441	0.623	1.301E+01	5.422E-01
46884.97	2.32E+01	1.98E+02	1.99E+02	0.441	0.623	1.302E+01	5.427E-01
46922.97	2.32E+01	1.98E+02	1.99E+02	0.441	0.623	1.303E+01	5.431E-01
46960.47	2.32E+01	1.98E+02	1.99E+02	0.441	0.623	1.304E+01	5.435E-01
46998.47	2.32E+01	1.98E+02	1.98E+02	0.441	0.623	1.306E+01	5.440E-01
47036.84	2.32E+01	1.98E+02	1.98E+02	0.440	0.623	1.307E+01	5.444E-01
47074.59	2.32E+01	1.98E+02	1.98E+02	0.440	0.623	1.308E+01	5.448E-01
47112.34	2.32E+01	1.98E+02	1.98E+02	0.440	0.623	1.309E+01	5.453E-01
47149.97	2.32E+01	1.98E+02	1.98E+02	0.440	0.623	1.310E+01	5.457E-01
47187.84	2.32E+01	1.98E+02	1.98E+02	0.440	0.623	1.311E+01	5.462E-01
47225.59	2.32E+01	1.98E+02	1.98E+02	0.440	0.622	1.312E+01	5.466E-01
47263.59	2.32E+01	1.98E+02	1.98E+02	0.440	0.622	1.313E+01	5.470E-01
47301.59	2.32E+01	1.98E+02	1.98E+02	0.440	0.622	1.314E+01	5.475E-01
47339.41	2.32E+01	1.98E+02	1.98E+02	0.440	0.623	1.315E+01	5.479E-01
47377.66	2.32E+01	1.98E+02	1.98E+02	0.440	0.622	1.316E+01	5.484E-01
47415.16	2.32E+01	1.98E+02	1.98E+02	0.440	0.622	1.317E+01	5.488E-01
47452.78	2.32E+01	1.98E+02	1.98E+02	0.440	0.622	1.318E+01	5.492E-01
47490.66	2.32E+01	1.98E+02	1.98E+02	0.440	0.622	1.319E+01	5.497E-01
47528.66	2.32E+01	1.98E+02	1.98E+02	0.440	0.622	1.320E+01	5.501E-01
47566.41	2.32E+01	1.98E+02	1.98E+02	0.440	0.622	1.321E+01	5.505E-01
47604.66	2.32E+01	1.98E+02	1.98E+02	0.440	0.622	1.322E+01	5.510E-01
47642.16	2.32E+01	1.98E+02	1.98E+02	0.440	0.622	1.323E+01	5.514E-01
47680.28	2.32E+01	1.98E+02	1.98E+02	0.440	0.622	1.324E+01	5.519E-01
47718.16	2.32E+01	1.98E+02	1.98E+02	0.440	0.622	1.326E+01	5.523E-01
47755.66	2.32E+01	1.98E+02	1.98E+02	0.440	0.622	1.327E+01	5.527E-01
47793.78	2.32E+01	1.98E+02	1.98E+02	0.439	0.621	1.328E+01	5.532E-01
47831.09	2.32E+01	1.98E+02	1.98E+02	0.440	0.622	1.329E+01	5.536E-01
47868.59	2.32E+01	1.98E+02	1.98E+02	0.440	0.622	1.330E+01	5.540E-01
47907.22	2.32E+01	1.98E+02	1.98E+02	0.440	0.622	1.331E+01	5.545E-01
47945.09	2.32E+01	1.98E+02	1.98E+02	0.439	0.621	1.332E+01	5.549E-01
47982.72	2.32E+01	1.98E+02	1.98E+02	0.439	0.621	1.333E+01	5.554E-01
48020.84	2.32E+01	1.98E+02	1.98E+02	0.439	0.621	1.334E+01	5.558E-01
48058.47	2.32E+01	1.98E+02	1.98E+02	0.439	0.621	1.335E+01	5.562E-01
48095.97	2.32E+01	1.98E+02	1.98E+02	0.439	0.621	1.336E+01	5.567E-01
48133.59	2.32E+01	1.98E+02	1.98E+02	0.439	0.621	1.337E+01	5.571E-01
48171.22	2.32E+01	1.98E+02	1.98E+02	0.439	0.621	1.338E+01	5.575E-01
48208.84	2.32E+01	1.98E+02	1.98E+02	0.439	0.620	1.339E+01	5.580E-01
48246.59	2.32E+01	1.98E+02	1.98E+02	0.439	0.620	1.340E+01	5.584E-01
48284.47	2.32E+01	1.98E+02	1.98E+02	0.439	0.620	1.341E+01	5.588E-01
48322.72	2.32E+01	1.98E+02	1.98E+02	0.439	0.620	1.342E+01	5.593E-01
48360.91	2.32E+01	1.98E+02	1.98E+02	0.439	0.621	1.343E+01	5.597E-01
48398.66	2.32E+01	1.98E+02	1.98E+02	0.439	0.620	1.344E+01	5.602E-01
48437.78	2.32E+01	1.98E+02	1.98E+02	0.439	0.620	1.345E+01	5.606E-01
48475.53	2.32E+01	1.98E+02	1.98E+02	0.439	0.620	1.347E+01	5.611E-01
48513.53	2.32E+01	1.98E+02	1.98E+02	0.438	0.620	1.348E+01	5.615E-01
48551.28	2.32E+01	1.98E+02	1.98E+02	0.438	0.620	1.349E+01	5.619E-01
48589.41	2.32E+01	1.97E+02	1.98E+02	0.438	0.620	1.350E+01	5.624E-01
48627.16	2.32E+01	1.97E+02	1.98E+02	0.438	0.620	1.351E+01	5.628E-01
48664.78	2.32E+01	1.97E+02	1.98E+02	0.438	0.620	1.352E+01	5.632E-01

TIME	DW PRESS (PSIA)	DW TEMP (F)	SP TEMP (F)	PC Leak Fraction of Design Basis	MSIV Leak Fraction of Design Basis	Time (hours)	Time (days)
48702.66	2.32E+01	1.97E+02	1.98E+02	0.438	0.620	1.353E+01	5.637E-01
48740.53	2.32E+01	1.97E+02	1.98E+02	0.438	0.620	1.354E+01	5.641E-01
48778.66	2.32E+01	1.97E+02	1.98E+02	0.438	0.620	1.355E+01	5.646E-01
48815.97	2.32E+01	1.97E+02	1.98E+02	0.438	0.620	1.356E+01	5.650E-01
48853.72	2.32E+01	1.97E+02	1.98E+02	0.438	0.620	1.357E+01	5.654E-01
48891.97	2.32E+01	1.97E+02	1.98E+02	0.438	0.620	1.358E+01	5.659E-01
48929.97	2.31E+01	1.97E+02	1.98E+02	0.438	0.619	1.359E+01	5.663E-01
48967.72	2.31E+01	1.97E+02	1.98E+02	0.438	0.619	1.360E+01	5.668E-01
49006.47	2.31E+01	1.97E+02	1.98E+02	0.438	0.619	1.361E+01	5.672E-01
49044.72	2.31E+01	1.97E+02	1.98E+02	0.438	0.619	1.362E+01	5.676E-01
49082.84	2.31E+01	1.97E+02	1.98E+02	0.438	0.619	1.363E+01	5.681E-01
49121.22	2.31E+01	1.97E+02	1.98E+02	0.438	0.619	1.364E+01	5.685E-01
49158.72	2.31E+01	1.97E+02	1.98E+02	0.438	0.619	1.366E+01	5.690E-01
49196.22	2.31E+01	1.97E+02	1.98E+02	0.438	0.619	1.367E+01	5.694E-01
49235.22	2.31E+01	1.97E+02	1.98E+02	0.438	0.619	1.368E+01	5.699E-01
49273.34	2.31E+01	1.97E+02	1.98E+02	0.437	0.619	1.369E+01	5.703E-01
49310.66	2.31E+01	1.97E+02	1.98E+02	0.438	0.619	1.370E+01	5.707E-01
49348.28	2.31E+01	1.97E+02	1.98E+02	0.438	0.619	1.371E+01	5.712E-01
49386.03	2.31E+01	1.97E+02	1.98E+02	0.437	0.619	1.372E+01	5.716E-01
49423.91	2.31E+01	1.97E+02	1.98E+02	0.437	0.619	1.373E+01	5.720E-01
49461.53	2.31E+01	1.97E+02	1.98E+02	0.437	0.619	1.374E+01	5.725E-01
49499.16	2.31E+01	1.97E+02	1.98E+02	0.437	0.619	1.375E+01	5.729E-01
49536.66	2.31E+01	1.97E+02	1.98E+02	0.437	0.619	1.376E+01	5.733E-01
49574.53	2.31E+01	1.97E+02	1.98E+02	0.437	0.618	1.377E+01	5.738E-01
49612.41	2.31E+01	1.97E+02	1.98E+02	0.437	0.618	1.378E+01	5.742E-01
49650.16	2.31E+01	1.97E+02	1.98E+02	0.437	0.618	1.379E+01	5.747E-01
49687.78	2.31E+01	1.97E+02	1.98E+02	0.437	0.618	1.380E+01	5.751E-01
49725.41	2.31E+01	1.97E+02	1.98E+02	0.437	0.618	1.381E+01	5.755E-01
49762.91	2.31E+01	1.97E+02	1.98E+02	0.437	0.618	1.382E+01	5.760E-01
49800.72	2.31E+01	1.97E+02	1.98E+02	0.437	0.618	1.383E+01	5.764E-01
49838.47	2.31E+01	1.97E+02	1.98E+02	0.437	0.618	1.384E+01	5.768E-01
49875.97	2.31E+01	1.97E+02	1.98E+02	0.437	0.618	1.385E+01	5.773E-01
49913.97	2.31E+01	1.97E+02	1.98E+02	0.437	0.618	1.386E+01	5.777E-01
49951.84	2.31E+01	1.97E+02	1.98E+02	0.437	0.618	1.388E+01	5.781E-01
49989.84	2.31E+01	1.97E+02	1.98E+02	0.437	0.618	1.389E+01	5.786E-01
50027.97	2.31E+01	1.97E+02	1.98E+02	0.437	0.618	1.390E+01	5.790E-01
50065.84	2.31E+01	1.97E+02	1.98E+02	0.437	0.618	1.391E+01	5.795E-01
50103.72	2.31E+01	1.97E+02	1.98E+02	0.437	0.618	1.392E+01	5.799E-01
50142.59	2.31E+01	1.97E+02	1.98E+02	0.436	0.617	1.393E+01	5.804E-01
50180.22	2.31E+01	1.97E+02	1.98E+02	0.436	0.617	1.394E+01	5.808E-01
50217.72	2.31E+01	1.97E+02	1.98E+02	0.436	0.617	1.395E+01	5.812E-01
50255.84	2.31E+01	1.97E+02	1.98E+02	0.436	0.617	1.396E+01	5.817E-01
50293.41	2.31E+01	1.97E+02	1.98E+02	0.436	0.617	1.397E+01	5.821E-01
50331.41	2.31E+01	1.97E+02	1.98E+02	0.436	0.617	1.398E+01	5.825E-01
50369.41	2.31E+01	1.97E+02	1.98E+02	0.436	0.617	1.399E+01	5.830E-01
50407.66	2.31E+01	1.97E+02	1.98E+02	0.436	0.617	1.400E+01	5.834E-01
50445.16	2.31E+01	1.97E+02	1.98E+02	0.436	0.617	1.401E+01	5.839E-01
50482.66	2.31E+01	1.97E+02	1.98E+02	0.436	0.617	1.402E+01	5.843E-01
50520.91	2.31E+01	1.97E+02	1.98E+02	0.436	0.617	1.403E+01	5.847E-01
50558.66	2.31E+01	1.97E+02	1.97E+02	0.436	0.616	1.404E+01	5.852E-01
50597.03	2.31E+01	1.97E+02	1.97E+02	0.436	0.616	1.405E+01	5.856E-01
50634.91	2.31E+01	1.97E+02	1.97E+02	0.436	0.616	1.407E+01	5.861E-01

TIME	DW PRESS (PSIA)	DW TEMP (F)	SP TEMP (F)	PC Leak Fraction of Design Basis	MSIV Leak Fraction of Design Basis	Time (hours)	Time (days)
50672.41	2.31E+01	1.97E+02	1.97E+02	0.436	0.616	1.408E+01	5.865E-01
50710.41	2.31E+01	1.97E+02	1.97E+02	0.436	0.616	1.409E+01	5.869E-01
50748.53	2.31E+01	1.97E+02	1.97E+02	0.436	0.616	1.410E+01	5.874E-01
50786.09	2.31E+01	1.97E+02	1.97E+02	0.436	0.616	1.411E+01	5.878E-01
50824.59	2.31E+01	1.97E+02	1.97E+02	0.436	0.616	1.412E+01	5.882E-01
50862.72	2.31E+01	1.97E+02	1.97E+02	0.436	0.616	1.413E+01	5.887E-01
50901.34	2.31E+01	1.97E+02	1.97E+02	0.436	0.616	1.414E+01	5.891E-01
50939.84	2.31E+01	1.97E+02	1.97E+02	0.436	0.616	1.415E+01	5.896E-01
50978.22	2.30E+01	1.97E+02	1.97E+02	0.435	0.616	1.416E+01	5.900E-01
51016.47	2.30E+01	1.97E+02	1.97E+02	0.435	0.616	1.417E+01	5.905E-01
51053.97	2.30E+01	1.97E+02	1.97E+02	0.435	0.616	1.418E+01	5.909E-01
51091.59	2.30E+01	1.97E+02	1.97E+02	0.435	0.616	1.419E+01	5.913E-01
51129.22	2.30E+01	1.97E+02	1.97E+02	0.435	0.615	1.420E+01	5.918E-01
51167.47	2.30E+01	1.97E+02	1.97E+02	0.435	0.615	1.421E+01	5.922E-01
51205.34	2.30E+01	1.97E+02	1.97E+02	0.435	0.615	1.422E+01	5.927E-01
51243.16	2.30E+01	1.97E+02	1.97E+02	0.435	0.616	1.423E+01	5.931E-01
51280.66	2.30E+01	1.97E+02	1.97E+02	0.435	0.615	1.424E+01	5.935E-01
51318.91	2.30E+01	1.97E+02	1.97E+02	0.435	0.615	1.426E+01	5.940E-01
51356.41	2.30E+01	1.97E+02	1.97E+02	0.435	0.615	1.427E+01	5.944E-01
51394.03	2.30E+01	1.97E+02	1.97E+02	0.435	0.615	1.428E+01	5.948E-01
51431.66	2.30E+01	1.97E+02	1.97E+02	0.435	0.615	1.429E+01	5.953E-01
51469.53	2.30E+01	1.97E+02	1.97E+02	0.435	0.615	1.430E+01	5.957E-01
51508.03	2.30E+01	1.97E+02	1.97E+02	0.435	0.615	1.431E+01	5.962E-01
51546.41	2.30E+01	1.97E+02	1.97E+02	0.435	0.615	1.432E+01	5.966E-01
51584.03	2.30E+01	1.97E+02	1.97E+02	0.435	0.615	1.433E+01	5.970E-01
51621.53	2.30E+01	1.97E+02	1.97E+02	0.435	0.615	1.434E+01	5.975E-01
51659.53	2.30E+01	1.97E+02	1.97E+02	0.435	0.615	1.435E+01	5.979E-01
51697.66	2.30E+01	1.97E+02	1.97E+02	0.435	0.615	1.436E+01	5.984E-01
51735.59	2.30E+01	1.97E+02	1.97E+02	0.435	0.615	1.437E+01	5.988E-01
51773.34	2.30E+01	1.97E+02	1.97E+02	0.435	0.615	1.438E+01	5.992E-01
51811.09	2.30E+01	1.97E+02	1.97E+02	0.435	0.615	1.439E+01	5.997E-01
51848.59	2.30E+01	1.97E+02	1.97E+02	0.434	0.614	1.440E+01	6.001E-01
51887.09	2.30E+01	1.97E+02	1.97E+02	0.434	0.614	1.441E+01	6.005E-01
51925.72	2.30E+01	1.97E+02	1.97E+02	0.434	0.614	1.442E+01	6.010E-01
51963.34	2.30E+01	1.97E+02	1.97E+02	0.434	0.614	1.443E+01	6.014E-01
52001.22	2.30E+01	1.97E+02	1.97E+02	0.434	0.614	1.444E+01	6.019E-01
52039.22	2.30E+01	1.97E+02	1.97E+02	0.434	0.614	1.446E+01	6.023E-01
52077.09	2.30E+01	1.96E+02	1.97E+02	0.434	0.614	1.447E+01	6.027E-01
52114.72	2.30E+01	1.96E+02	1.97E+02	0.434	0.614	1.448E+01	6.032E-01
52152.22	2.30E+01	1.96E+02	1.97E+02	0.434	0.613	1.449E+01	6.036E-01
52189.97	2.30E+01	1.96E+02	1.97E+02	0.434	0.613	1.450E+01	6.041E-01
52227.53	2.30E+01	1.96E+02	1.97E+02	0.434	0.614	1.451E+01	6.045E-01
52265.91	2.30E+01	1.96E+02	1.97E+02	0.434	0.613	1.452E+01	6.049E-01
52303.41	2.30E+01	1.96E+02	1.97E+02	0.434	0.613	1.453E+01	6.054E-01
52340.91	2.30E+01	1.96E+02	1.97E+02	0.434	0.613	1.454E+01	6.058E-01
52378.66	2.30E+01	1.96E+02	1.97E+02	0.434	0.613	1.455E+01	6.062E-01
52416.53	2.30E+01	1.96E+02	1.97E+02	0.434	0.613	1.456E+01	6.067E-01
52454.53	2.30E+01	1.96E+02	1.97E+02	0.434	0.613	1.457E+01	6.071E-01
52492.16	2.30E+01	1.96E+02	1.97E+02	0.434	0.613	1.458E+01	6.075E-01
52529.78	2.30E+01	1.96E+02	1.97E+02	0.434	0.613	1.459E+01	6.080E-01
52567.78	2.30E+01	1.96E+02	1.97E+02	0.434	0.613	1.460E+01	6.084E-01
52605.78	2.30E+01	1.96E+02	1.97E+02	0.433	0.613	1.461E+01	6.089E-01

TIME	DW PRESS (PSIA)	DW TEMP (F)	SP TEMP (F)	PC Leak Fraction of Design Basis	MSIV Leak Fraction of Design Basis	Time (hours)	Time (days)
52643.28	2.30E+01	1.96E+02	1.97E+02	0.433	0.613	1.462E+01	6.093E-01
52681.78	2.30E+01	1.96E+02	1.97E+02	0.433	0.613	1.463E+01	6.097E-01
52719.47	2.30E+01	1.96E+02	1.97E+02	0.433	0.613	1.464E+01	6.102E-01
52758.34	2.30E+01	1.96E+02	1.97E+02	0.433	0.613	1.466E+01	6.106E-01
52796.09	2.30E+01	1.96E+02	1.97E+02	0.433	0.613	1.467E+01	6.111E-01
52833.97	2.30E+01	1.96E+02	1.97E+02	0.433	0.613	1.468E+01	6.115E-01
52871.84	2.30E+01	1.96E+02	1.97E+02	0.433	0.612	1.469E+01	6.119E-01
52910.09	2.30E+01	1.96E+02	1.97E+02	0.433	0.612	1.470E+01	6.124E-01
52948.09	2.30E+01	1.96E+02	1.97E+02	0.433	0.612	1.471E+01	6.128E-01
52985.59	2.30E+01	1.96E+02	1.97E+02	0.433	0.612	1.472E+01	6.133E-01
53023.72	2.29E+01	1.96E+02	1.97E+02	0.433	0.612	1.473E+01	6.137E-01
53061.97	2.29E+01	1.96E+02	1.97E+02	0.433	0.612	1.474E+01	6.141E-01
53099.59	2.29E+01	1.96E+02	1.97E+02	0.433	0.612	1.475E+01	6.146E-01
53137.09	2.29E+01	1.96E+02	1.97E+02	0.432	0.612	1.476E+01	6.150E-01
53174.78	2.29E+01	1.96E+02	1.97E+02	0.433	0.612	1.477E+01	6.154E-01
53212.41	2.29E+01	1.96E+02	1.97E+02	0.433	0.612	1.478E+01	6.159E-01
53251.03	2.29E+01	1.96E+02	1.97E+02	0.432	0.612	1.479E+01	6.163E-01
53288.53	2.29E+01	1.96E+02	1.97E+02	0.432	0.612	1.480E+01	6.168E-01
53326.41	2.29E+01	1.96E+02	1.97E+02	0.432	0.612	1.481E+01	6.172E-01
53364.41	2.29E+01	1.96E+02	1.97E+02	0.432	0.612	1.482E+01	6.176E-01
53402.28	2.29E+01	1.96E+02	1.97E+02	0.432	0.612	1.483E+01	6.181E-01
53440.41	2.29E+01	1.96E+02	1.97E+02	0.432	0.611	1.484E+01	6.185E-01
53478.03	2.29E+01	1.96E+02	1.97E+02	0.432	0.611	1.486E+01	6.190E-01
53516.28	2.29E+01	1.96E+02	1.97E+02	0.432	0.611	1.487E+01	6.194E-01
53554.53	2.29E+01	1.96E+02	1.97E+02	0.432	0.611	1.488E+01	6.198E-01
53592.41	2.29E+01	1.96E+02	1.97E+02	0.432	0.611	1.489E+01	6.203E-01
53629.84	2.29E+01	1.96E+02	1.97E+02	0.432	0.611	1.490E+01	6.207E-01
53667.72	2.29E+01	1.96E+02	1.97E+02	0.432	0.611	1.491E+01	6.212E-01
53705.59	2.29E+01	1.96E+02	1.97E+02	0.432	0.611	1.492E+01	6.216E-01
53744.72	2.29E+01	1.96E+02	1.97E+02	0.432	0.611	1.493E+01	6.220E-01
53782.97	2.29E+01	1.96E+02	1.97E+02	0.432	0.611	1.494E+01	6.225E-01
53821.47	2.29E+01	1.96E+02	1.97E+02	0.432	0.611	1.495E+01	6.229E-01
53858.97	2.29E+01	1.96E+02	1.97E+02	0.432	0.611	1.496E+01	6.234E-01
53896.47	2.29E+01	1.96E+02	1.97E+02	0.432	0.611	1.497E+01	6.238E-01
53933.97	2.29E+01	1.96E+02	1.97E+02	0.432	0.611	1.498E+01	6.242E-01
53972.22	2.29E+01	1.96E+02	1.97E+02	0.431	0.610	1.499E+01	6.247E-01
54009.97	2.29E+01	1.96E+02	1.97E+02	0.431	0.610	1.500E+01	6.251E-01
54047.84	2.29E+01	1.96E+02	1.96E+02	0.431	0.610	1.501E+01	6.256E-01
54085.41	2.29E+01	1.96E+02	1.96E+02	0.432	0.611	1.502E+01	6.260E-01
54123.03	2.29E+01	1.96E+02	1.96E+02	0.432	0.611	1.503E+01	6.264E-01
54160.66	2.29E+01	1.96E+02	1.96E+02	0.431	0.610	1.504E+01	6.269E-01
54198.53	2.29E+01	1.96E+02	1.96E+02	0.431	0.610	1.506E+01	6.273E-01
54236.66	2.29E+01	1.96E+02	1.96E+02	0.431	0.610	1.507E+01	6.277E-01
54275.03	2.29E+01	1.96E+02	1.96E+02	0.431	0.610	1.508E+01	6.282E-01
54312.53	2.29E+01	1.96E+02	1.96E+02	0.431	0.610	1.509E+01	6.286E-01
54350.78	2.29E+01	1.96E+02	1.96E+02	0.431	0.610	1.510E+01	6.291E-01
54388.78	2.29E+01	1.96E+02	1.96E+02	0.431	0.610	1.511E+01	6.295E-01
54426.78	2.29E+01	1.96E+02	1.96E+02	0.431	0.609	1.512E+01	6.299E-01
54464.78	2.29E+01	1.96E+02	1.96E+02	0.431	0.609	1.513E+01	6.304E-01
54502.41	2.29E+01	1.96E+02	1.96E+02	0.431	0.609	1.514E+01	6.308E-01
54540.03	2.29E+01	1.96E+02	1.96E+02	0.431	0.609	1.515E+01	6.313E-01
54577.34	2.29E+01	1.96E+02	1.96E+02	0.431	0.609	1.516E+01	6.317E-01

TIME	DW PRESS (PSIA)	DW TEMP (F)	SP TEMP (F)	PC Leak Fraction of Design Basis	MSIV Leak Fraction of Design Basis	Time (hours)	Time (days)
54614.97	2.29E+01	1.96E+02	1.96E+02	0.431	0.609	1.517E+01	6.321E-01
54653.22	2.29E+01	1.96E+02	1.96E+02	0.431	0.609	1.518E+01	6.326E-01
54691.34	2.29E+01	1.96E+02	1.96E+02	0.431	0.609	1.519E+01	6.330E-01
54729.22	2.29E+01	1.96E+02	1.96E+02	0.431	0.609	1.520E+01	6.334E-01
54767.22	2.29E+01	1.96E+02	1.96E+02	0.431	0.609	1.521E+01	6.339E-01
54806.59	2.29E+01	1.96E+02	1.96E+02	0.431	0.609	1.522E+01	6.343E-01
54844.59	2.29E+01	1.96E+02	1.96E+02	0.430	0.609	1.523E+01	6.348E-01
54882.34	2.29E+01	1.96E+02	1.96E+02	0.430	0.609	1.525E+01	6.352E-01
54920.22	2.29E+01	1.96E+02	1.96E+02	0.430	0.609	1.526E+01	6.357E-01
54957.72	2.29E+01	1.96E+02	1.96E+02	0.430	0.609	1.527E+01	6.361E-01
54995.22	2.28E+01	1.96E+02	1.96E+02	0.430	0.608	1.528E+01	6.365E-01
55033.03	2.29E+01	1.96E+02	1.96E+02	0.430	0.609	1.529E+01	6.370E-01
55071.28	2.29E+01	1.96E+02	1.96E+02	0.430	0.609	1.530E+01	6.374E-01
55109.66	2.29E+01	1.96E+02	1.96E+02	0.430	0.609	1.531E+01	6.378E-01
55147.66	2.28E+01	1.96E+02	1.96E+02	0.430	0.608	1.532E+01	6.383E-01
55185.41	2.28E+01	1.96E+02	1.96E+02	0.430	0.608	1.533E+01	6.387E-01
55223.41	2.28E+01	1.96E+02	1.96E+02	0.430	0.608	1.534E+01	6.392E-01
55261.41	2.28E+01	1.96E+02	1.96E+02	0.430	0.608	1.535E+01	6.396E-01
55299.41	2.28E+01	1.96E+02	1.96E+02	0.430	0.608	1.536E+01	6.400E-01
55337.28	2.28E+01	1.96E+02	1.96E+02	0.430	0.608	1.537E+01	6.405E-01
55375.16	2.28E+01	1.96E+02	1.96E+02	0.430	0.608	1.538E+01	6.409E-01
55412.91	2.28E+01	1.95E+02	1.96E+02	0.430	0.608	1.539E+01	6.414E-01
55450.78	2.28E+01	1.95E+02	1.96E+02	0.430	0.608	1.540E+01	6.418E-01
55489.22	2.28E+01	1.95E+02	1.96E+02	0.430	0.608	1.541E+01	6.422E-01
55527.47	2.28E+01	1.95E+02	1.96E+02	0.430	0.608	1.542E+01	6.427E-01
55565.72	2.28E+01	1.95E+02	1.96E+02	0.430	0.608	1.543E+01	6.431E-01
55603.59	2.28E+01	1.95E+02	1.96E+02	0.430	0.608	1.545E+01	6.436E-01
55641.09	2.28E+01	1.95E+02	1.96E+02	0.430	0.608	1.546E+01	6.440E-01
55678.97	2.28E+01	1.95E+02	1.96E+02	0.429	0.607	1.547E+01	6.444E-01
55716.47	2.28E+01	1.95E+02	1.96E+02	0.429	0.607	1.548E+01	6.449E-01
55754.59	2.28E+01	1.95E+02	1.96E+02	0.429	0.607	1.549E+01	6.453E-01
55792.72	2.28E+01	1.95E+02	1.96E+02	0.429	0.607	1.550E+01	6.457E-01
55830.72	2.28E+01	1.95E+02	1.96E+02	0.429	0.607	1.551E+01	6.462E-01
55868.97	2.28E+01	1.95E+02	1.96E+02	0.429	0.607	1.552E+01	6.466E-01
55906.72	2.28E+01	1.95E+02	1.96E+02	0.429	0.607	1.553E+01	6.471E-01
55944.66	2.28E+01	1.95E+02	1.96E+02	0.429	0.607	1.554E+01	6.475E-01
55982.16	2.28E+01	1.95E+02	1.96E+02	0.429	0.607	1.555E+01	6.479E-01
56019.91	2.28E+01	1.95E+02	1.96E+02	0.429	0.607	1.556E+01	6.484E-01
56057.78	2.28E+01	1.95E+02	1.96E+02	0.429	0.607	1.557E+01	6.488E-01
56095.28	2.28E+01	1.95E+02	1.96E+02	0.429	0.606	1.558E+01	6.493E-01
56132.91	2.28E+01	1.95E+02	1.96E+02	0.429	0.606	1.559E+01	6.497E-01
56171.03	2.28E+01	1.95E+02	1.96E+02	0.429	0.606	1.560E+01	6.501E-01
56209.66	2.28E+01	1.95E+02	1.96E+02	0.429	0.606	1.561E+01	6.506E-01
56247.41	2.28E+01	1.95E+02	1.96E+02	0.429	0.606	1.562E+01	6.510E-01
56285.03	2.28E+01	1.95E+02	1.96E+02	0.429	0.606	1.563E+01	6.514E-01
56322.78	2.28E+01	1.95E+02	1.96E+02	0.429	0.606	1.565E+01	6.519E-01
56360.41	2.28E+01	1.95E+02	1.96E+02	0.428	0.606	1.566E+01	6.523E-01
56398.28	2.28E+01	1.95E+02	1.96E+02	0.428	0.606	1.567E+01	6.528E-01
56435.59	2.28E+01	1.95E+02	1.96E+02	0.429	0.606	1.568E+01	6.532E-01
56473.59	2.28E+01	1.95E+02	1.96E+02	0.429	0.606	1.569E+01	6.536E-01
56511.84	2.28E+01	1.95E+02	1.96E+02	0.428	0.606	1.570E+01	6.541E-01
56549.59	2.28E+01	1.95E+02	1.96E+02	0.428	0.606	1.571E+01	6.545E-01

TIME	DW PRESS (PSIA)	DW TEMP (F)	SP TEMP (F)	PC Leak Fraction of Design Basis	MSIV Leak Fraction of Design Basis	Time (hours)	Time (days)
56587.84	2.28E+01	1.95E+02	1.96E+02	0.428	0.606	1.572E+01	6.550E-01
56625.72	2.28E+01	1.95E+02	1.96E+02	0.428	0.606	1.573E+01	6.554E-01
56663.59	2.28E+01	1.95E+02	1.96E+02	0.428	0.605	1.574E+01	6.558E-01
56701.34	2.28E+01	1.95E+02	1.96E+02	0.428	0.605	1.575E+01	6.563E-01
56739.59	2.28E+01	1.95E+02	1.96E+02	0.428	0.605	1.576E+01	6.567E-01
56777.09	2.28E+01	1.95E+02	1.96E+02	0.428	0.605	1.577E+01	6.571E-01
56814.97	2.28E+01	1.95E+02	1.96E+02	0.428	0.605	1.578E+01	6.576E-01
56853.47	2.28E+01	1.95E+02	1.96E+02	0.428	0.605	1.579E+01	6.580E-01
56891.66	2.28E+01	1.95E+02	1.96E+02	0.428	0.605	1.580E+01	6.585E-01
56929.41	2.28E+01	1.95E+02	1.96E+02	0.428	0.605	1.581E+01	6.589E-01
56968.16	2.28E+01	1.95E+02	1.96E+02	0.428	0.605	1.582E+01	6.594E-01
57006.03	2.28E+01	1.95E+02	1.96E+02	0.428	0.605	1.584E+01	6.598E-01
57044.03	2.27E+01	1.95E+02	1.96E+02	0.427	0.605	1.585E+01	6.602E-01
57082.28	2.27E+01	1.95E+02	1.96E+02	0.427	0.605	1.586E+01	6.607E-01
57119.91	2.27E+01	1.95E+02	1.96E+02	0.427	0.605	1.587E+01	6.611E-01
57157.53	2.27E+01	1.95E+02	1.96E+02	0.427	0.605	1.588E+01	6.615E-01
57195.16	2.27E+01	1.95E+02	1.96E+02	0.427	0.604	1.589E+01	6.620E-01
57233.16	2.27E+01	1.95E+02	1.96E+02	0.427	0.604	1.590E+01	6.624E-01
57270.78	2.27E+01	1.95E+02	1.96E+02	0.427	0.604	1.591E+01	6.629E-01
57308.53	2.27E+01	1.95E+02	1.96E+02	0.427	0.604	1.592E+01	6.633E-01
57346.22	2.27E+01	1.95E+02	1.96E+02	0.427	0.604	1.593E+01	6.637E-01
57383.72	2.27E+01	1.95E+02	1.95E+02	0.427	0.604	1.594E+01	6.642E-01
57421.22	2.27E+01	1.95E+02	1.95E+02	0.427	0.604	1.595E+01	6.646E-01
57458.97	2.27E+01	1.95E+02	1.95E+02	0.427	0.604	1.596E+01	6.650E-01
57496.59	2.27E+01	1.95E+02	1.95E+02	0.427	0.604	1.597E+01	6.655E-01
57534.34	2.27E+01	1.95E+02	1.95E+02	0.427	0.604	1.598E+01	6.659E-01
57572.34	2.27E+01	1.95E+02	1.95E+02	0.427	0.604	1.599E+01	6.663E-01
57610.09	2.27E+01	1.95E+02	1.95E+02	0.427	0.603	1.600E+01	6.668E-01
57648.09	2.27E+01	1.95E+02	1.95E+02	0.427	0.603	1.601E+01	6.672E-01
57686.47	2.27E+01	1.95E+02	1.95E+02	0.427	0.603	1.602E+01	6.677E-01
57723.97	2.27E+01	1.95E+02	1.95E+02	0.427	0.603	1.603E+01	6.681E-01
57761.59	2.27E+01	1.95E+02	1.95E+02	0.426	0.603	1.604E+01	6.685E-01
57799.03	2.27E+01	1.95E+02	1.95E+02	0.427	0.603	1.606E+01	6.690E-01
57836.78	2.27E+01	1.95E+02	1.95E+02	0.427	0.603	1.607E+01	6.694E-01
57875.03	2.27E+01	1.95E+02	1.95E+02	0.426	0.603	1.608E+01	6.698E-01
57913.28	2.27E+01	1.95E+02	1.95E+02	0.426	0.603	1.609E+01	6.703E-01
57950.78	2.27E+01	1.95E+02	1.95E+02	0.426	0.603	1.610E+01	6.707E-01
57988.28	2.27E+01	1.95E+02	1.95E+02	0.426	0.603	1.611E+01	6.712E-01
58025.91	2.27E+01	1.95E+02	1.95E+02	0.426	0.603	1.612E+01	6.716E-01
58063.66	2.27E+01	1.95E+02	1.95E+02	0.426	0.603	1.613E+01	6.720E-01
58102.03	2.27E+01	1.95E+02	1.95E+02	0.426	0.603	1.614E+01	6.725E-01
58139.53	2.27E+01	1.95E+02	1.95E+02	0.426	0.602	1.615E+01	6.729E-01
58177.41	2.27E+01	1.95E+02	1.95E+02	0.426	0.602	1.616E+01	6.733E-01
58215.41	2.27E+01	1.95E+02	1.95E+02	0.426	0.602	1.617E+01	6.738E-01
58253.41	2.27E+01	1.95E+02	1.95E+02	0.426	0.602	1.618E+01	6.742E-01
58290.72	2.27E+01	1.95E+02	1.95E+02	0.426	0.602	1.619E+01	6.747E-01
58328.34	2.27E+01	1.95E+02	1.95E+02	0.426	0.602	1.620E+01	6.751E-01
58365.84	2.27E+01	1.95E+02	1.95E+02	0.426	0.602	1.621E+01	6.755E-01
58403.59	2.27E+01	1.95E+02	1.95E+02	0.426	0.602	1.622E+01	6.760E-01
58441.59	2.27E+01	1.95E+02	1.95E+02	0.426	0.602	1.623E+01	6.764E-01
58479.22	2.27E+01	1.95E+02	1.95E+02	0.426	0.602	1.624E+01	6.768E-01
58516.84	2.27E+01	1.95E+02	1.95E+02	0.426	0.602	1.625E+01	6.773E-01

TIME	DW PRESS (PSIA)	DW TEMP (F)	SP TEMP (F)	PC Leak Fraction of Design Basis	MSIV Leak Fraction of Design Basis	Time (hours)	Time (days)
58554.97	2.27E+01	1.95E+02	1.95E+02	0.426	0.602	1.627E+01	6.777E-01
58593.72	2.27E+01	1.95E+02	1.95E+02	0.425	0.602	1.628E+01	6.782E-01
58631.59	2.27E+01	1.94E+02	1.95E+02	0.425	0.602	1.629E+01	6.786E-01
58669.34	2.27E+01	1.94E+02	1.95E+02	0.425	0.602	1.630E+01	6.790E-01
58706.84	2.27E+01	1.94E+02	1.95E+02	0.425	0.601	1.631E+01	6.795E-01
58744.16	2.27E+01	1.94E+02	1.95E+02	0.425	0.602	1.632E+01	6.799E-01
58782.16	2.27E+01	1.94E+02	1.95E+02	0.425	0.602	1.633E+01	6.803E-01
58820.16	2.27E+01	1.94E+02	1.95E+02	0.425	0.602	1.634E+01	6.808E-01
58858.66	2.27E+01	1.94E+02	1.95E+02	0.425	0.601	1.635E+01	6.812E-01
58896.41	2.27E+01	1.94E+02	1.95E+02	0.425	0.601	1.636E+01	6.817E-01
58934.03	2.27E+01	1.94E+02	1.95E+02	0.425	0.601	1.637E+01	6.821E-01
58972.03	2.27E+01	1.94E+02	1.95E+02	0.425	0.601	1.638E+01	6.825E-01
59009.66	2.26E+01	1.94E+02	1.95E+02	0.425	0.601	1.639E+01	6.830E-01
59047.66	2.26E+01	1.94E+02	1.95E+02	0.425	0.601	1.640E+01	6.834E-01
59085.28	2.26E+01	1.94E+02	1.95E+02	0.425	0.601	1.641E+01	6.839E-01
59123.41	2.26E+01	1.94E+02	1.95E+02	0.425	0.600	1.642E+01	6.843E-01
59161.03	2.26E+01	1.94E+02	1.95E+02	0.425	0.600	1.643E+01	6.847E-01
59198.66	2.26E+01	1.94E+02	1.95E+02	0.425	0.600	1.644E+01	6.852E-01
59236.09	2.26E+01	1.94E+02	1.95E+02	0.425	0.601	1.645E+01	6.856E-01
59273.59	2.26E+01	1.94E+02	1.95E+02	0.425	0.600	1.646E+01	6.860E-01
59311.22	2.26E+01	1.94E+02	1.95E+02	0.425	0.600	1.648E+01	6.865E-01
59348.97	2.26E+01	1.94E+02	1.95E+02	0.425	0.600	1.649E+01	6.869E-01
59386.84	2.26E+01	1.94E+02	1.95E+02	0.424	0.600	1.650E+01	6.873E-01
59424.72	2.26E+01	1.94E+02	1.95E+02	0.424	0.600	1.651E+01	6.878E-01
59462.47	2.26E+01	1.94E+02	1.95E+02	0.424	0.600	1.652E+01	6.882E-01
59501.09	2.26E+01	1.94E+02	1.95E+02	0.424	0.600	1.653E+01	6.887E-01
59539.22	2.26E+01	1.94E+02	1.95E+02	0.424	0.600	1.654E+01	6.891E-01
59577.22	2.26E+01	1.94E+02	1.95E+02	0.424	0.600	1.655E+01	6.896E-01
59614.97	2.26E+01	1.94E+02	1.95E+02	0.424	0.600	1.656E+01	6.900E-01
59652.41	2.26E+01	1.94E+02	1.95E+02	0.424	0.600	1.657E+01	6.904E-01
59690.41	2.26E+01	1.94E+02	1.95E+02	0.424	0.600	1.658E+01	6.909E-01
59729.28	2.26E+01	1.94E+02	1.95E+02	0.424	0.600	1.659E+01	6.913E-01
59767.66	2.26E+01	1.94E+02	1.95E+02	0.424	0.600	1.660E+01	6.918E-01
59805.41	2.26E+01	1.94E+02	1.95E+02	0.424	0.599	1.661E+01	6.922E-01
59843.03	2.26E+01	1.94E+02	1.95E+02	0.424	0.599	1.662E+01	6.926E-01
59880.66	2.26E+01	1.94E+02	1.95E+02	0.424	0.599	1.663E+01	6.931E-01
59918.41	2.26E+01	1.94E+02	1.95E+02	0.424	0.599	1.664E+01	6.935E-01
59957.28	2.26E+01	1.94E+02	1.95E+02	0.423	0.599	1.665E+01	6.940E-01
59995.66	2.26E+01	1.94E+02	1.95E+02	0.423	0.599	1.667E+01	6.944E-01
60033.53	2.26E+01	1.94E+02	1.95E+02	0.423	0.598	1.668E+01	6.948E-01
60070.97	2.26E+01	1.94E+02	1.95E+02	0.423	0.599	1.669E+01	6.953E-01
60108.59	2.26E+01	1.94E+02	1.95E+02	0.423	0.599	1.670E+01	6.957E-01
60146.09	2.26E+01	1.94E+02	1.95E+02	0.423	0.599	1.671E+01	6.961E-01
60184.09	2.26E+01	1.94E+02	1.95E+02	0.423	0.599	1.672E+01	6.966E-01
60221.97	2.26E+01	1.94E+02	1.95E+02	0.423	0.598	1.673E+01	6.970E-01
60259.59	2.26E+01	1.94E+02	1.95E+02	0.423	0.598	1.674E+01	6.974E-01
60297.34	2.26E+01	1.94E+02	1.95E+02	0.423	0.598	1.675E+01	6.979E-01
60336.72	2.26E+01	1.94E+02	1.95E+02	0.423	0.598	1.676E+01	6.983E-01
60374.22	2.26E+01	1.94E+02	1.95E+02	0.423	0.598	1.677E+01	6.988E-01
60413.47	2.26E+01	1.94E+02	1.95E+02	0.423	0.598	1.678E+01	6.992E-01
60452.22	2.26E+01	1.94E+02	1.95E+02	0.423	0.598	1.679E+01	6.997E-01
60489.72	2.26E+01	1.94E+02	1.95E+02	0.423	0.598	1.680E+01	7.001E-01

TIME	DW PRESS (PSIA)	DW TEMP (F)	SP TEMP (F)	PC Leak Fraction of Design Basis	MSIV Leak Fraction of Design Basis	Time (hours)	Time (days)
60527.91	2.26E+01	1.94E+02	1.95E+02	0.423	0.598	1.681E+01	7.006E-01
60567.28	2.26E+01	1.94E+02	1.95E+02	0.423	0.598	1.682E+01	7.010E-01
60605.03	2.26E+01	1.94E+02	1.94E+02	0.423	0.598	1.683E+01	7.014E-01
60642.78	2.26E+01	1.94E+02	1.94E+02	0.423	0.598	1.685E+01	7.019E-01
60680.41	2.26E+01	1.94E+02	1.94E+02	0.423	0.598	1.686E+01	7.023E-01
60718.16	2.26E+01	1.94E+02	1.94E+02	0.423	0.598	1.687E+01	7.028E-01
60755.91	2.26E+01	1.94E+02	1.94E+02	0.422	0.597	1.688E+01	7.032E-01
60793.91	2.26E+01	1.94E+02	1.94E+02	0.422	0.597	1.689E+01	7.036E-01
60831.53	2.26E+01	1.94E+02	1.94E+02	0.422	0.597	1.690E+01	7.041E-01
60869.53	2.26E+01	1.94E+02	1.94E+02	0.422	0.597	1.691E+01	7.045E-01
60907.66	2.25E+01	1.94E+02	1.94E+02	0.422	0.597	1.692E+01	7.049E-01
60945.28	2.25E+01	1.94E+02	1.94E+02	0.422	0.597	1.693E+01	7.054E-01
60983.03	2.25E+01	1.94E+02	1.94E+02	0.422	0.597	1.694E+01	7.058E-01
61020.97	2.25E+01	1.94E+02	1.94E+02	0.422	0.597	1.695E+01	7.063E-01
61058.97	2.25E+01	1.94E+02	1.94E+02	0.422	0.597	1.696E+01	7.067E-01
61096.59	2.25E+01	1.94E+02	1.94E+02	0.422	0.597	1.697E+01	7.071E-01
61134.34	2.25E+01	1.94E+02	1.94E+02	0.422	0.597	1.698E+01	7.076E-01
61172.09	2.25E+01	1.94E+02	1.94E+02	0.422	0.597	1.699E+01	7.080E-01
61209.97	2.25E+01	1.94E+02	1.94E+02	0.422	0.597	1.700E+01	7.084E-01
61248.34	2.25E+01	1.94E+02	1.94E+02	0.422	0.597	1.701E+01	7.089E-01
61286.84	2.25E+01	1.94E+02	1.94E+02	0.422	0.597	1.702E+01	7.093E-01
61324.59	2.25E+01	1.94E+02	1.94E+02	0.422	0.596	1.703E+01	7.098E-01
61362.97	2.25E+01	1.94E+02	1.94E+02	0.422	0.596	1.705E+01	7.102E-01
61400.47	2.25E+01	1.94E+02	1.94E+02	0.422	0.596	1.706E+01	7.107E-01
61438.47	2.25E+01	1.94E+02	1.94E+02	0.422	0.596	1.707E+01	7.111E-01
61477.03	2.25E+01	1.94E+02	1.94E+02	0.422	0.596	1.708E+01	7.115E-01
61515.66	2.25E+01	1.94E+02	1.94E+02	0.422	0.596	1.709E+01	7.120E-01
61553.41	2.25E+01	1.94E+02	1.94E+02	0.421	0.596	1.710E+01	7.124E-01
61591.53	2.25E+01	1.94E+02	1.94E+02	0.421	0.596	1.711E+01	7.129E-01
61629.03	2.25E+01	1.94E+02	1.94E+02	0.421	0.596	1.712E+01	7.133E-01
61666.78	2.25E+01	1.94E+02	1.94E+02	0.421	0.596	1.713E+01	7.137E-01
61704.41	2.25E+01	1.94E+02	1.94E+02	0.421	0.596	1.714E+01	7.142E-01
61743.41	2.25E+01	1.94E+02	1.94E+02	0.421	0.595	1.715E+01	7.146E-01
61781.03	2.25E+01	1.94E+02	1.94E+02	0.421	0.595	1.716E+01	7.151E-01
61818.78	2.25E+01	1.93E+02	1.94E+02	0.421	0.595	1.717E+01	7.155E-01
61856.53	2.25E+01	1.93E+02	1.94E+02	0.421	0.595	1.718E+01	7.159E-01
61894.16	2.25E+01	1.93E+02	1.94E+02	0.421	0.595	1.719E+01	7.164E-01
61932.09	2.25E+01	1.93E+02	1.94E+02	0.421	0.595	1.720E+01	7.168E-01
61969.59	2.25E+01	1.93E+02	1.94E+02	0.421	0.595	1.721E+01	7.172E-01
62007.34	2.25E+01	1.93E+02	1.94E+02	0.421	0.595	1.722E+01	7.177E-01
62045.34	2.25E+01	1.93E+02	1.94E+02	0.421	0.595	1.723E+01	7.181E-01
62083.47	2.25E+01	1.93E+02	1.94E+02	0.421	0.595	1.725E+01	7.186E-01
62121.09	2.25E+01	1.93E+02	1.94E+02	0.421	0.595	1.726E+01	7.190E-01
62159.47	2.25E+01	1.93E+02	1.94E+02	0.420	0.595	1.727E+01	7.194E-01
62197.22	2.25E+01	1.93E+02	1.94E+02	0.420	0.595	1.728E+01	7.199E-01
62234.97	2.25E+01	1.93E+02	1.94E+02	0.420	0.595	1.729E+01	7.203E-01
62272.47	2.25E+01	1.93E+02	1.94E+02	0.420	0.594	1.730E+01	7.207E-01
62310.34	2.25E+01	1.93E+02	1.94E+02	0.420	0.594	1.731E+01	7.212E-01
62347.97	2.25E+01	1.93E+02	1.94E+02	0.420	0.594	1.732E+01	7.216E-01
62385.41	2.25E+01	1.93E+02	1.94E+02	0.420	0.595	1.733E+01	7.221E-01
62423.16	2.25E+01	1.93E+02	1.94E+02	0.420	0.594	1.734E+01	7.225E-01
62460.66	2.25E+01	1.93E+02	1.94E+02	0.420	0.594	1.735E+01	7.229E-01

TIME	DW PRESS (PSIA)	DW TEMP (F)	SP TEMP (F)	PC Leak Fraction of Design Basis	MSIV Leak Fraction of Design Basis	Time (hours)	Time (days)
62498.28	2.25E+01	1.93E+02	1.94E+02	0.420	0.594	1.736E+01	7.234E-01
62536.03	2.25E+01	1.93E+02	1.94E+02	0.420	0.594	1.737E+01	7.238E-01
62573.53	2.25E+01	1.93E+02	1.94E+02	0.420	0.594	1.738E+01	7.242E-01
62611.53	2.25E+01	1.93E+02	1.94E+02	0.420	0.594	1.739E+01	7.247E-01
62650.28	2.25E+01	1.93E+02	1.94E+02	0.420	0.594	1.740E+01	7.251E-01
62688.53	2.25E+01	1.93E+02	1.94E+02	0.420	0.594	1.741E+01	7.256E-01
62726.03	2.25E+01	1.93E+02	1.94E+02	0.420	0.594	1.742E+01	7.260E-01
62764.78	2.25E+01	1.93E+02	1.94E+02	0.420	0.594	1.743E+01	7.264E-01
62802.41	2.25E+01	1.93E+02	1.94E+02	0.420	0.594	1.745E+01	7.269E-01
62840.03	2.24E+01	1.93E+02	1.94E+02	0.419	0.593	1.746E+01	7.273E-01
62877.47	2.25E+01	1.93E+02	1.94E+02	0.420	0.594	1.747E+01	7.277E-01
62915.34	2.25E+01	1.93E+02	1.94E+02	0.420	0.594	1.748E+01	7.282E-01
62953.34	2.25E+01	1.93E+02	1.94E+02	0.420	0.594	1.749E+01	7.286E-01
62991.47	2.24E+01	1.93E+02	1.94E+02	0.419	0.593	1.750E+01	7.291E-01
63028.97	2.24E+01	1.93E+02	1.94E+02	0.419	0.593	1.751E+01	7.295E-01
63066.97	2.24E+01	1.93E+02	1.94E+02	0.419	0.593	1.752E+01	7.299E-01
63106.09	2.24E+01	1.93E+02	1.94E+02	0.419	0.593	1.753E+01	7.304E-01
63143.59	2.24E+01	1.93E+02	1.94E+02	0.419	0.593	1.754E+01	7.308E-01
63181.09	2.24E+01	1.93E+02	1.94E+02	0.419	0.593	1.755E+01	7.313E-01
63218.72	2.24E+01	1.93E+02	1.94E+02	0.419	0.593	1.756E+01	7.317E-01
63256.97	2.24E+01	1.93E+02	1.94E+02	0.419	0.592	1.757E+01	7.321E-01
63295.09	2.24E+01	1.93E+02	1.94E+02	0.419	0.592	1.758E+01	7.326E-01
63332.41	2.24E+01	1.93E+02	1.94E+02	0.419	0.593	1.759E+01	7.330E-01
63370.66	2.24E+01	1.93E+02	1.94E+02	0.419	0.593	1.760E+01	7.335E-01
63408.53	2.24E+01	1.93E+02	1.94E+02	0.419	0.592	1.761E+01	7.339E-01
63447.16	2.24E+01	1.93E+02	1.94E+02	0.419	0.592	1.762E+01	7.343E-01
63487.16	2.24E+01	1.93E+02	1.94E+02	0.419	0.593	1.764E+01	7.348E-01
63525.66	2.24E+01	1.93E+02	1.94E+02	0.419	0.592	1.765E+01	7.353E-01
63563.53	2.24E+01	1.93E+02	1.94E+02	0.419	0.592	1.766E+01	7.357E-01
63601.16	2.24E+01	1.93E+02	1.94E+02	0.419	0.592	1.767E+01	7.361E-01
63639.66	2.24E+01	1.93E+02	1.94E+02	0.419	0.592	1.768E+01	7.366E-01
63677.66	2.24E+01	1.93E+02	1.94E+02	0.419	0.592	1.769E+01	7.370E-01
63715.16	2.24E+01	1.93E+02	1.94E+02	0.418	0.592	1.770E+01	7.374E-01
63753.03	2.24E+01	1.93E+02	1.94E+02	0.418	0.592	1.771E+01	7.379E-01
63790.59	2.24E+01	1.93E+02	1.93E+02	0.419	0.592	1.772E+01	7.383E-01
63828.34	2.24E+01	1.93E+02	1.93E+02	0.418	0.592	1.773E+01	7.388E-01
63866.34	2.24E+01	1.93E+02	1.93E+02	0.418	0.592	1.774E+01	7.392E-01
63903.84	2.24E+01	1.93E+02	1.93E+02	0.418	0.592	1.775E+01	7.396E-01
63941.84	2.24E+01	1.93E+02	1.93E+02	0.418	0.592	1.776E+01	7.401E-01
63979.72	2.24E+01	1.93E+02	1.93E+02	0.418	0.591	1.777E+01	7.405E-01
64017.59	2.24E+01	1.93E+02	1.93E+02	0.418	0.591	1.778E+01	7.409E-01
64055.47	2.24E+01	1.93E+02	1.93E+02	0.418	0.591	1.779E+01	7.414E-01
64093.09	2.24E+01	1.93E+02	1.93E+02	0.418	0.591	1.780E+01	7.418E-01
64131.34	2.24E+01	1.93E+02	1.93E+02	0.418	0.591	1.781E+01	7.423E-01
64169.72	2.24E+01	1.93E+02	1.93E+02	0.418	0.591	1.782E+01	7.427E-01
64207.47	2.24E+01	1.93E+02	1.93E+02	0.418	0.591	1.784E+01	7.431E-01
64245.78	2.24E+01	1.93E+02	1.93E+02	0.418	0.591	1.785E+01	7.436E-01
64283.66	2.24E+01	1.93E+02	1.93E+02	0.418	0.591	1.786E+01	7.440E-01
64321.91	2.24E+01	1.93E+02	1.93E+02	0.418	0.591	1.787E+01	7.445E-01
64359.53	2.24E+01	1.93E+02	1.93E+02	0.418	0.591	1.788E+01	7.449E-01
64397.41	2.24E+01	1.93E+02	1.93E+02	0.418	0.590	1.789E+01	7.453E-01
64435.16	2.24E+01	1.93E+02	1.93E+02	0.418	0.590	1.790E+01	7.458E-01

TIME	DW PRESS (PSIA)	DW TEMP (F)	SP TEMP (F)	PC Leak Fraction of Design Basis	MSIV Leak Fraction of Design Basis	Time (hours)	Time (days)
64472.91	2.24E+01	1.93E+02	1.93E+02	0.418	0.590	1.791E+01	7.462E-01
64510.53	2.24E+01	1.93E+02	1.93E+02	0.418	0.590	1.792E+01	7.466E-01
64548.66	2.24E+01	1.93E+02	1.93E+02	0.417	0.590	1.793E+01	7.471E-01
64586.53	2.24E+01	1.93E+02	1.93E+02	0.417	0.590	1.794E+01	7.475E-01
64624.03	2.24E+01	1.93E+02	1.93E+02	0.417	0.590	1.795E+01	7.480E-01
64662.53	2.24E+01	1.93E+02	1.93E+02	0.417	0.590	1.796E+01	7.484E-01
64700.16	2.24E+01	1.93E+02	1.93E+02	0.417	0.590	1.797E+01	7.488E-01
64737.59	2.24E+01	1.93E+02	1.93E+02	0.417	0.590	1.798E+01	7.493E-01
64775.84	2.24E+01	1.93E+02	1.93E+02	0.417	0.590	1.799E+01	7.497E-01
64814.47	2.24E+01	1.93E+02	1.93E+02	0.417	0.590	1.800E+01	7.502E-01
64853.22	2.24E+01	1.93E+02	1.93E+02	0.417	0.590	1.801E+01	7.506E-01
64890.97	2.24E+01	1.93E+02	1.93E+02	0.417	0.590	1.803E+01	7.511E-01
64929.84	2.24E+01	1.93E+02	1.93E+02	0.417	0.590	1.804E+01	7.515E-01
64967.84	2.23E+01	1.93E+02	1.93E+02	0.417	0.589	1.805E+01	7.519E-01
65005.47	2.23E+01	1.92E+02	1.93E+02	0.417	0.589	1.806E+01	7.524E-01
65043.34	2.23E+01	1.92E+02	1.93E+02	0.417	0.589	1.807E+01	7.528E-01
65080.97	2.23E+01	1.92E+02	1.93E+02	0.417	0.589	1.808E+01	7.533E-01
65118.84	2.23E+01	1.92E+02	1.93E+02	0.416	0.589	1.809E+01	7.537E-01
65156.72	2.23E+01	1.92E+02	1.93E+02	0.416	0.589	1.810E+01	7.541E-01
65194.03	2.23E+01	1.92E+02	1.93E+02	0.417	0.589	1.811E+01	7.546E-01
65231.53	2.23E+01	1.92E+02	1.93E+02	0.417	0.589	1.812E+01	7.550E-01
65269.78	2.23E+01	1.92E+02	1.93E+02	0.416	0.589	1.813E+01	7.554E-01
65307.28	2.23E+01	1.92E+02	1.93E+02	0.416	0.589	1.814E+01	7.559E-01
65345.16	2.23E+01	1.92E+02	1.93E+02	0.416	0.589	1.815E+01	7.563E-01
65383.03	2.23E+01	1.92E+02	1.93E+02	0.416	0.589	1.816E+01	7.567E-01
65421.16	2.23E+01	1.92E+02	1.93E+02	0.416	0.589	1.817E+01	7.572E-01
65459.78	2.23E+01	1.92E+02	1.93E+02	0.416	0.589	1.818E+01	7.576E-01
65497.66	2.23E+01	1.92E+02	1.93E+02	0.416	0.589	1.819E+01	7.581E-01
65535.28	2.23E+01	1.92E+02	1.93E+02	0.416	0.589	1.820E+01	7.585E-01
65572.78	2.23E+01	1.92E+02	1.93E+02	0.416	0.588	1.821E+01	7.589E-01
65610.91	2.23E+01	1.92E+02	1.93E+02	0.416	0.588	1.823E+01	7.594E-01
65648.66	2.23E+01	1.92E+02	1.93E+02	0.416	0.588	1.824E+01	7.598E-01
65686.97	2.23E+01	1.92E+02	1.93E+02	0.416	0.588	1.825E+01	7.603E-01
65724.47	2.23E+01	1.92E+02	1.93E+02	0.416	0.588	1.826E+01	7.607E-01
65763.09	2.23E+01	1.92E+02	1.93E+02	0.416	0.588	1.827E+01	7.611E-01
65801.09	2.23E+01	1.92E+02	1.93E+02	0.416	0.588	1.828E+01	7.616E-01
65838.97	2.23E+01	1.92E+02	1.93E+02	0.416	0.588	1.829E+01	7.620E-01
65876.47	2.23E+01	1.92E+02	1.93E+02	0.416	0.588	1.830E+01	7.625E-01
65914.22	2.23E+01	1.92E+02	1.93E+02	0.416	0.588	1.831E+01	7.629E-01
65952.09	2.23E+01	1.92E+02	1.93E+02	0.415	0.587	1.832E+01	7.633E-01
65990.34	2.23E+01	1.92E+02	1.93E+02	0.415	0.587	1.833E+01	7.638E-01
66028.59	2.23E+01	1.92E+02	1.93E+02	0.415	0.587	1.834E+01	7.642E-01
66066.59	2.23E+01	1.92E+02	1.93E+02	0.415	0.587	1.835E+01	7.647E-01
66104.59	2.23E+01	1.92E+02	1.93E+02	0.415	0.587	1.836E+01	7.651E-01
66142.66	2.23E+01	1.92E+02	1.93E+02	0.415	0.587	1.837E+01	7.655E-01
66180.28	2.23E+01	1.92E+02	1.93E+02	0.415	0.587	1.838E+01	7.660E-01
66218.16	2.23E+01	1.92E+02	1.93E+02	0.415	0.587	1.839E+01	7.664E-01
66255.78	2.23E+01	1.92E+02	1.93E+02	0.415	0.587	1.840E+01	7.668E-01
66294.53	2.23E+01	1.92E+02	1.93E+02	0.415	0.587	1.842E+01	7.673E-01
66332.91	2.23E+01	1.92E+02	1.93E+02	0.415	0.587	1.843E+01	7.677E-01
66370.78	2.23E+01	1.92E+02	1.93E+02	0.415	0.587	1.844E+01	7.682E-01
66408.91	2.23E+01	1.92E+02	1.93E+02	0.415	0.587	1.845E+01	7.686E-01

TIME	DW PRESS (PSIA)	DW TEMP (F)	SP TEMP (F)	PC Leak Fraction of Design Basis	MSIV Leak Fraction of Design Basis	Time (hours)	Time (days)
66447.16	2.23E+01	1.92E+02	1.93E+02	0.415	0.587	1.846E+01	7.691E-01
66485.03	2.23E+01	1.92E+02	1.93E+02	0.415	0.587	1.847E+01	7.695E-01
66523.41	2.23E+01	1.92E+02	1.93E+02	0.415	0.587	1.848E+01	7.699E-01
66561.53	2.23E+01	1.92E+02	1.93E+02	0.415	0.586	1.849E+01	7.704E-01
66599.03	2.23E+01	1.92E+02	1.93E+02	0.415	0.586	1.850E+01	7.708E-01
66636.84	2.23E+01	1.92E+02	1.93E+02	0.415	0.587	1.851E+01	7.713E-01
66674.84	2.23E+01	1.92E+02	1.93E+02	0.415	0.586	1.852E+01	7.717E-01
66712.47	2.23E+01	1.92E+02	1.93E+02	0.415	0.586	1.853E+01	7.721E-01
66750.09	2.23E+01	1.92E+02	1.93E+02	0.415	0.586	1.854E+01	7.726E-01
66787.97	2.23E+01	1.92E+02	1.93E+02	0.415	0.586	1.855E+01	7.730E-01
66825.97	2.23E+01	1.92E+02	1.93E+02	0.415	0.586	1.856E+01	7.734E-01
66863.84	2.23E+01	1.92E+02	1.93E+02	0.414	0.586	1.857E+01	7.739E-01
66901.47	2.23E+01	1.92E+02	1.93E+02	0.414	0.586	1.858E+01	7.743E-01
66938.97	2.23E+01	1.92E+02	1.93E+02	0.414	0.586	1.859E+01	7.748E-01
66976.72	2.23E+01	1.92E+02	1.93E+02	0.414	0.586	1.860E+01	7.752E-01
67014.22	2.22E+01	1.92E+02	1.92E+02	0.414	0.585	1.862E+01	7.756E-01
67052.59	2.22E+01	1.92E+02	1.92E+02	0.414	0.585	1.863E+01	7.761E-01
67090.47	2.22E+01	1.92E+02	1.92E+02	0.414	0.585	1.864E+01	7.765E-01
67127.91	2.22E+01	1.92E+02	1.92E+02	0.414	0.585	1.865E+01	7.769E-01
67166.03	2.22E+01	1.92E+02	1.92E+02	0.414	0.585	1.866E+01	7.774E-01
67205.16	2.22E+01	1.92E+02	1.92E+02	0.414	0.585	1.867E+01	7.778E-01
67242.78	2.22E+01	1.92E+02	1.92E+02	0.414	0.585	1.868E+01	7.783E-01
67280.53	2.22E+01	1.92E+02	1.92E+02	0.414	0.585	1.869E+01	7.787E-01
67319.03	2.22E+01	1.92E+02	1.92E+02	0.414	0.585	1.870E+01	7.792E-01
67357.66	2.22E+01	1.92E+02	1.92E+02	0.414	0.585	1.871E+01	7.796E-01
67395.28	2.22E+01	1.92E+02	1.92E+02	0.414	0.585	1.872E+01	7.800E-01
67433.41	2.22E+01	1.92E+02	1.92E+02	0.413	0.585	1.873E+01	7.805E-01
67471.16	2.22E+01	1.92E+02	1.92E+02	0.413	0.585	1.874E+01	7.809E-01
67509.41	2.22E+01	1.92E+02	1.92E+02	0.413	0.585	1.875E+01	7.814E-01
67547.03	2.22E+01	1.92E+02	1.92E+02	0.413	0.585	1.876E+01	7.818E-01
67584.34	2.22E+01	1.92E+02	1.92E+02	0.413	0.585	1.877E+01	7.822E-01
67622.22	2.22E+01	1.92E+02	1.92E+02	0.413	0.585	1.878E+01	7.827E-01
67660.72	2.22E+01	1.92E+02	1.92E+02	0.413	0.585	1.879E+01	7.831E-01
67698.59	2.22E+01	1.92E+02	1.92E+02	0.413	0.585	1.881E+01	7.835E-01
67736.34	2.22E+01	1.92E+02	1.92E+02	0.413	0.584	1.882E+01	7.840E-01
67774.72	2.22E+01	1.92E+02	1.92E+02	0.413	0.584	1.883E+01	7.844E-01
67812.22	2.22E+01	1.92E+02	1.92E+02	0.413	0.584	1.884E+01	7.849E-01
67849.97	2.22E+01	1.92E+02	1.92E+02	0.413	0.584	1.885E+01	7.853E-01
67888.34	2.22E+01	1.92E+02	1.92E+02	0.413	0.584	1.886E+01	7.857E-01
67925.97	2.22E+01	1.92E+02	1.92E+02	0.413	0.584	1.887E+01	7.862E-01
67963.72	2.22E+01	1.92E+02	1.92E+02	0.413	0.584	1.888E+01	7.866E-01
68002.97	2.22E+01	1.92E+02	1.92E+02	0.413	0.583	1.889E+01	7.871E-01
68041.47	2.22E+01	1.92E+02	1.92E+02	0.413	0.583	1.890E+01	7.875E-01
68079.03	2.22E+01	1.92E+02	1.92E+02	0.413	0.584	1.891E+01	7.880E-01
68116.66	2.22E+01	1.92E+02	1.92E+02	0.413	0.584	1.892E+01	7.884E-01
68155.41	2.22E+01	1.92E+02	1.92E+02	0.413	0.583	1.893E+01	7.888E-01
68193.78	2.22E+01	1.92E+02	1.92E+02	0.413	0.583	1.894E+01	7.893E-01
68231.66	2.22E+01	1.91E+02	1.92E+02	0.413	0.583	1.895E+01	7.897E-01
68269.78	2.22E+01	1.91E+02	1.92E+02	0.412	0.583	1.896E+01	7.902E-01
68307.78	2.22E+01	1.91E+02	1.92E+02	0.412	0.583	1.897E+01	7.906E-01
68345.53	2.22E+01	1.91E+02	1.92E+02	0.412	0.583	1.898E+01	7.910E-01
68383.16	2.22E+01	1.91E+02	1.92E+02	0.412	0.583	1.900E+01	7.915E-01

TIME	DW PRESS (PSIA)	DW TEMP (F)	SP TEMP (F)	PC Leak Fraction of Design Basis	MSIV Leak Fraction of Design Basis	Time (hours)	Time (days)
68422.03	2.22E+01	1.91E+02	1.92E+02	0.412	0.583	1.901E+01	7.919E-01
68459.66	2.22E+01	1.91E+02	1.92E+02	0.412	0.583	1.902E+01	7.924E-01
68497.16	2.22E+01	1.91E+02	1.92E+02	0.412	0.583	1.903E+01	7.928E-01
68535.03	2.22E+01	1.91E+02	1.92E+02	0.412	0.583	1.904E+01	7.932E-01
68573.34	2.22E+01	1.91E+02	1.92E+02	0.412	0.583	1.905E+01	7.937E-01
68611.34	2.22E+01	1.91E+02	1.92E+02	0.412	0.583	1.906E+01	7.941E-01
68649.34	2.22E+01	1.91E+02	1.92E+02	0.412	0.583	1.907E+01	7.946E-01
68687.59	2.22E+01	1.91E+02	1.92E+02	0.412	0.583	1.908E+01	7.950E-01
68725.34	2.22E+01	1.91E+02	1.92E+02	0.412	0.582	1.909E+01	7.954E-01
68763.59	2.22E+01	1.91E+02	1.92E+02	0.412	0.582	1.910E+01	7.959E-01
68801.34	2.22E+01	1.91E+02	1.92E+02	0.412	0.582	1.911E+01	7.963E-01
68839.47	2.22E+01	1.91E+02	1.92E+02	0.412	0.582	1.912E+01	7.968E-01
68877.34	2.22E+01	1.91E+02	1.92E+02	0.412	0.582	1.913E+01	7.972E-01
68914.84	2.22E+01	1.91E+02	1.92E+02	0.411	0.582	1.914E+01	7.976E-01
68952.84	2.22E+01	1.91E+02	1.92E+02	0.411	0.582	1.915E+01	7.981E-01
68991.22	2.22E+01	1.91E+02	1.92E+02	0.411	0.582	1.916E+01	7.985E-01
69029.59	2.21E+01	1.91E+02	1.92E+02	0.411	0.582	1.917E+01	7.990E-01
69067.66	2.22E+01	1.91E+02	1.92E+02	0.411	0.582	1.919E+01	7.994E-01
69105.53	2.22E+01	1.91E+02	1.92E+02	0.411	0.582	1.920E+01	7.998E-01
69143.41	2.22E+01	1.91E+02	1.92E+02	0.411	0.582	1.921E+01	8.003E-01
69181.16	2.21E+01	1.91E+02	1.92E+02	0.411	0.582	1.922E+01	8.007E-01
69219.03	2.21E+01	1.91E+02	1.92E+02	0.411	0.582	1.923E+01	8.011E-01
69257.16	2.21E+01	1.91E+02	1.92E+02	0.411	0.582	1.924E+01	8.016E-01
69295.03	2.21E+01	1.91E+02	1.92E+02	0.411	0.582	1.925E+01	8.020E-01
69332.66	2.21E+01	1.91E+02	1.92E+02	0.411	0.582	1.926E+01	8.025E-01
69370.28	2.21E+01	1.91E+02	1.92E+02	0.411	0.581	1.927E+01	8.029E-01
69408.41	2.21E+01	1.91E+02	1.92E+02	0.411	0.581	1.928E+01	8.033E-01
69446.28	2.21E+01	1.91E+02	1.92E+02	0.411	0.581	1.929E+01	8.038E-01
69483.78	2.21E+01	1.91E+02	1.92E+02	0.411	0.581	1.930E+01	8.042E-01
69521.28	2.21E+01	1.91E+02	1.92E+02	0.411	0.581	1.931E+01	8.046E-01
69559.22	2.21E+01	1.91E+02	1.92E+02	0.411	0.581	1.932E+01	8.051E-01
69597.47	2.21E+01	1.91E+02	1.92E+02	0.411	0.581	1.933E+01	8.055E-01
69635.97	2.21E+01	1.91E+02	1.92E+02	0.411	0.581	1.934E+01	8.060E-01
69673.47	2.21E+01	1.91E+02	1.92E+02	0.411	0.581	1.935E+01	8.064E-01
69710.97	2.21E+01	1.91E+02	1.92E+02	0.411	0.581	1.936E+01	8.068E-01
69749.59	2.21E+01	1.91E+02	1.92E+02	0.411	0.581	1.937E+01	8.073E-01
69787.47	2.21E+01	1.91E+02	1.92E+02	0.410	0.580	1.939E+01	8.077E-01
69826.22	2.21E+01	1.91E+02	1.92E+02	0.410	0.580	1.940E+01	8.082E-01
69864.09	2.21E+01	1.91E+02	1.92E+02	0.410	0.580	1.941E+01	8.086E-01
69902.22	2.21E+01	1.91E+02	1.92E+02	0.410	0.580	1.942E+01	8.091E-01
69939.84	2.21E+01	1.91E+02	1.92E+02	0.410	0.580	1.943E+01	8.095E-01
69977.72	2.21E+01	1.91E+02	1.92E+02	0.410	0.580	1.944E+01	8.099E-01
70015.47	2.21E+01	1.91E+02	1.92E+02	0.410	0.580	1.945E+01	8.104E-01
70053.41	2.21E+01	1.91E+02	1.92E+02	0.410	0.580	1.946E+01	8.108E-01
70091.41	2.21E+01	1.91E+02	1.92E+02	0.410	0.580	1.947E+01	8.112E-01
70129.66	2.21E+01	1.91E+02	1.92E+02	0.410	0.580	1.948E+01	8.117E-01
70168.03	2.21E+01	1.91E+02	1.92E+02	0.410	0.580	1.949E+01	8.121E-01
70206.03	2.21E+01	1.91E+02	1.92E+02	0.410	0.580	1.950E+01	8.126E-01
70244.28	2.21E+01	1.91E+02	1.91E+02	0.410	0.580	1.951E+01	8.130E-01
70282.41	2.21E+01	1.91E+02	1.91E+02	0.410	0.580	1.952E+01	8.135E-01
70320.16	2.21E+01	1.91E+02	1.91E+02	0.410	0.580	1.953E+01	8.139E-01
70357.78	2.21E+01	1.91E+02	1.91E+02	0.410	0.580	1.954E+01	8.143E-01

TIME	DW PRESS (PSIA)	DW TEMP (F)	SP TEMP (F)	PC Leak Fraction of Design Basis	MSIV Leak Fraction of Design Basis	Time (hours)	Time (days)
70395.28	2.21E+01	1.91E+02	1.91E+02	0.410	0.579	1.955E+01	8.148E-01
70432.91	2.21E+01	1.91E+02	1.91E+02	0.410	0.579	1.956E+01	8.152E-01
70470.91	2.21E+01	1.91E+02	1.91E+02	0.410	0.579	1.958E+01	8.156E-01
70508.41	2.21E+01	1.91E+02	1.91E+02	0.409	0.579	1.959E+01	8.161E-01
70545.97	2.21E+01	1.91E+02	1.91E+02	0.410	0.579	1.960E+01	8.165E-01
70583.72	2.21E+01	1.91E+02	1.91E+02	0.410	0.579	1.961E+01	8.169E-01
70621.59	2.21E+01	1.91E+02	1.91E+02	0.410	0.579	1.962E+01	8.174E-01
70659.09	2.21E+01	1.91E+02	1.91E+02	0.410	0.579	1.963E+01	8.178E-01
70696.59	2.21E+01	1.91E+02	1.91E+02	0.409	0.579	1.964E+01	8.182E-01
70734.72	2.21E+01	1.91E+02	1.91E+02	0.409	0.579	1.965E+01	8.187E-01
70772.34	2.21E+01	1.91E+02	1.91E+02	0.409	0.579	1.966E+01	8.191E-01
70811.09	2.21E+01	1.91E+02	1.91E+02	0.409	0.579	1.967E+01	8.196E-01
70848.59	2.21E+01	1.91E+02	1.91E+02	0.409	0.578	1.968E+01	8.200E-01
70886.47	2.21E+01	1.91E+02	1.91E+02	0.409	0.578	1.969E+01	8.204E-01
70925.22	2.21E+01	1.91E+02	1.91E+02	0.409	0.578	1.970E+01	8.209E-01
70962.84	2.21E+01	1.91E+02	1.91E+02	0.409	0.578	1.971E+01	8.213E-01
71000.97	2.21E+01	1.91E+02	1.91E+02	0.409	0.578	1.972E+01	8.218E-01
71038.47	2.21E+01	1.91E+02	1.91E+02	0.409	0.578	1.973E+01	8.222E-01
71075.78	2.21E+01	1.91E+02	1.91E+02	0.409	0.578	1.974E+01	8.226E-01
71113.41	2.21E+01	1.91E+02	1.91E+02	0.409	0.578	1.975E+01	8.231E-01
71150.91	2.21E+01	1.91E+02	1.91E+02	0.409	0.578	1.976E+01	8.235E-01
71188.53	2.21E+01	1.91E+02	1.91E+02	0.409	0.578	1.977E+01	8.239E-01
71226.66	2.21E+01	1.91E+02	1.91E+02	0.409	0.578	1.979E+01	8.244E-01
71264.78	2.21E+01	1.91E+02	1.91E+02	0.409	0.578	1.980E+01	8.248E-01
71302.41	2.20E+01	1.91E+02	1.91E+02	0.408	0.578	1.981E+01	8.253E-01
71340.91	2.20E+01	1.91E+02	1.91E+02	0.408	0.578	1.982E+01	8.257E-01
71379.16	2.20E+01	1.91E+02	1.91E+02	0.408	0.578	1.983E+01	8.261E-01
71416.78	2.20E+01	1.91E+02	1.91E+02	0.408	0.577	1.984E+01	8.266E-01
71454.28	2.20E+01	1.91E+02	1.91E+02	0.408	0.577	1.985E+01	8.270E-01
71492.03	2.20E+01	1.91E+02	1.91E+02	0.408	0.577	1.986E+01	8.275E-01
71529.66	2.20E+01	1.90E+02	1.91E+02	0.408	0.577	1.987E+01	8.279E-01
71566.97	2.20E+01	1.90E+02	1.91E+02	0.408	0.577	1.988E+01	8.283E-01
71605.09	2.20E+01	1.90E+02	1.91E+02	0.408	0.577	1.989E+01	8.288E-01
71642.84	2.20E+01	1.90E+02	1.91E+02	0.408	0.577	1.990E+01	8.292E-01
71680.72	2.20E+01	1.90E+02	1.91E+02	0.408	0.577	1.991E+01	8.296E-01
71718.84	2.20E+01	1.90E+02	1.91E+02	0.408	0.577	1.992E+01	8.301E-01
71756.34	2.20E+01	1.90E+02	1.91E+02	0.408	0.577	1.993E+01	8.305E-01
71793.97	2.20E+01	1.90E+02	1.91E+02	0.408	0.577	1.994E+01	8.309E-01
71831.47	2.20E+01	1.90E+02	1.91E+02	0.408	0.577	1.995E+01	8.314E-01
71869.34	2.20E+01	1.90E+02	1.91E+02	0.408	0.577	1.996E+01	8.318E-01
71907.09	2.20E+01	1.90E+02	1.91E+02	0.408	0.576	1.997E+01	8.323E-01
71944.72	2.20E+01	1.90E+02	1.91E+02	0.408	0.576	1.998E+01	8.327E-01
71982.34	2.20E+01	1.90E+02	1.91E+02	0.408	0.576	2.000E+01	8.331E-01
72020.59	2.20E+01	1.90E+02	1.91E+02	0.407	0.576	2.001E+01	8.336E-01
72058.09	2.20E+01	1.90E+02	1.91E+02	0.407	0.576	2.002E+01	8.340E-01
72095.66	2.20E+01	1.90E+02	1.91E+02	0.408	0.576	2.003E+01	8.344E-01
72133.53	2.20E+01	1.90E+02	1.91E+02	0.408	0.576	2.004E+01	8.349E-01
72172.41	2.20E+01	1.90E+02	1.91E+02	0.407	0.576	2.005E+01	8.353E-01
72209.91	2.20E+01	1.90E+02	1.91E+02	0.407	0.576	2.006E+01	8.358E-01
72247.53	2.20E+01	1.90E+02	1.91E+02	0.407	0.576	2.007E+01	8.362E-01
72285.66	2.20E+01	1.90E+02	1.91E+02	0.407	0.576	2.008E+01	8.366E-01
72323.66	2.20E+01	1.90E+02	1.91E+02	0.407	0.576	2.009E+01	8.371E-01

TIME	DW PRESS (PSIA)	DW TEMP (F)	SP TEMP (F)	PC Leak Fraction of Design Basis	MSIV Leak Fraction of Design Basis	Time (hours)	Time (days)
72361.41	2.20E+01	1.90E+02	1.91E+02	0.407	0.576	2.010E+01	8.375E-01
72399.03	2.20E+01	1.90E+02	1.91E+02	0.407	0.576	2.011E+01	8.380E-01
72437.03	2.20E+01	1.90E+02	1.91E+02	0.407	0.576	2.012E+01	8.384E-01
72474.91	2.20E+01	1.90E+02	1.91E+02	0.407	0.575	2.013E+01	8.388E-01
72513.53	2.20E+01	1.90E+02	1.91E+02	0.407	0.575	2.014E+01	8.393E-01
72551.66	2.20E+01	1.90E+02	1.91E+02	0.407	0.575	2.015E+01	8.397E-01
72589.84	2.20E+01	1.90E+02	1.91E+02	0.407	0.576	2.016E+01	8.402E-01
72627.34	2.20E+01	1.90E+02	1.91E+02	0.407	0.575	2.017E+01	8.406E-01
72664.97	2.20E+01	1.90E+02	1.91E+02	0.407	0.575	2.018E+01	8.410E-01
72703.22	2.20E+01	1.90E+02	1.91E+02	0.407	0.575	2.020E+01	8.415E-01
72740.97	2.20E+01	1.90E+02	1.91E+02	0.407	0.575	2.021E+01	8.419E-01
72779.59	2.20E+01	1.90E+02	1.91E+02	0.406	0.575	2.022E+01	8.424E-01
72817.97	2.20E+01	1.90E+02	1.91E+02	0.406	0.575	2.023E+01	8.428E-01
72855.72	2.20E+01	1.90E+02	1.91E+02	0.406	0.575	2.024E+01	8.432E-01
72893.22	2.20E+01	1.90E+02	1.91E+02	0.406	0.575	2.025E+01	8.437E-01
72931.84	2.20E+01	1.90E+02	1.91E+02	0.406	0.574	2.026E+01	8.441E-01
72970.22	2.20E+01	1.90E+02	1.91E+02	0.406	0.574	2.027E+01	8.446E-01
73007.97	2.20E+01	1.90E+02	1.91E+02	0.406	0.574	2.028E+01	8.450E-01
73045.59	2.20E+01	1.90E+02	1.91E+02	0.406	0.574	2.029E+01	8.454E-01
73083.09	2.20E+01	1.90E+02	1.91E+02	0.406	0.574	2.030E+01	8.459E-01
73120.53	2.20E+01	1.90E+02	1.91E+02	0.406	0.574	2.031E+01	8.463E-01
73159.03	2.20E+01	1.90E+02	1.91E+02	0.406	0.574	2.032E+01	8.467E-01
73196.53	2.20E+01	1.90E+02	1.91E+02	0.406	0.574	2.033E+01	8.472E-01
73234.16	2.20E+01	1.90E+02	1.91E+02	0.406	0.574	2.034E+01	8.476E-01
73271.66	2.20E+01	1.90E+02	1.91E+02	0.406	0.574	2.035E+01	8.481E-01
73309.41	2.20E+01	1.90E+02	1.91E+02	0.406	0.574	2.036E+01	8.485E-01
73346.91	2.19E+01	1.90E+02	1.91E+02	0.406	0.574	2.037E+01	8.489E-01
73385.91	2.19E+01	1.90E+02	1.91E+02	0.406	0.574	2.038E+01	8.494E-01
73423.66	2.19E+01	1.90E+02	1.91E+02	0.406	0.574	2.040E+01	8.498E-01
73461.78	2.19E+01	1.90E+02	1.91E+02	0.406	0.574	2.041E+01	8.503E-01
73499.41	2.19E+01	1.90E+02	1.91E+02	0.406	0.574	2.042E+01	8.507E-01
73537.16	2.19E+01	1.90E+02	1.90E+02	0.405	0.573	2.043E+01	8.511E-01
73574.66	2.19E+01	1.90E+02	1.90E+02	0.405	0.573	2.044E+01	8.516E-01
73612.16	2.19E+01	1.90E+02	1.90E+02	0.405	0.573	2.045E+01	8.520E-01
73650.59	2.19E+01	1.90E+02	1.90E+02	0.406	0.574	2.046E+01	8.524E-01
73688.72	2.19E+01	1.90E+02	1.90E+02	0.405	0.573	2.047E+01	8.529E-01
73726.34	2.19E+01	1.90E+02	1.90E+02	0.405	0.573	2.048E+01	8.533E-01
73764.47	2.19E+01	1.90E+02	1.90E+02	0.405	0.573	2.049E+01	8.538E-01
73801.97	2.19E+01	1.90E+02	1.90E+02	0.405	0.573	2.050E+01	8.542E-01
73840.34	2.19E+01	1.90E+02	1.90E+02	0.405	0.573	2.051E+01	8.546E-01
73878.09	2.19E+01	1.90E+02	1.90E+02	0.405	0.573	2.052E+01	8.551E-01
73915.72	2.19E+01	1.90E+02	1.90E+02	0.405	0.573	2.053E+01	8.555E-01
73953.59	2.19E+01	1.90E+02	1.90E+02	0.405	0.573	2.054E+01	8.559E-01
73991.22	2.19E+01	1.90E+02	1.90E+02	0.405	0.572	2.055E+01	8.564E-01
74028.84	2.19E+01	1.90E+02	1.90E+02	0.405	0.572	2.056E+01	8.568E-01
74067.09	2.19E+01	1.90E+02	1.90E+02	0.405	0.572	2.057E+01	8.573E-01
74104.91	2.19E+01	1.90E+02	1.90E+02	0.405	0.573	2.058E+01	8.577E-01
74142.41	2.19E+01	1.90E+02	1.90E+02	0.405	0.572	2.060E+01	8.581E-01
74180.16	2.19E+01	1.90E+02	1.90E+02	0.405	0.572	2.061E+01	8.586E-01
74217.91	2.19E+01	1.90E+02	1.90E+02	0.405	0.572	2.062E+01	8.590E-01
74256.03	2.19E+01	1.90E+02	1.90E+02	0.405	0.572	2.063E+01	8.594E-01
74294.41	2.19E+01	1.90E+02	1.90E+02	0.405	0.572	2.064E+01	8.599E-01

TIME	DW PRESS (PSIA)	DW TEMP (F)	SP TEMP (F)	PC Leak Fraction of Design Basis	MSIV Leak Fraction of Design Basis	Time (hours)	Time (days)
74333.41	2.19E+01	1.90E+02	1.90E+02	0.405	0.572	2.065E+01	8.603E-01
74372.53	2.19E+01	1.90E+02	1.90E+02	0.405	0.572	2.066E+01	8.608E-01
74410.03	2.19E+01	1.90E+02	1.90E+02	0.405	0.572	2.067E+01	8.612E-01
74447.53	2.19E+01	1.90E+02	1.90E+02	0.404	0.572	2.068E+01	8.617E-01
74485.53	2.19E+01	1.90E+02	1.90E+02	0.404	0.572	2.069E+01	8.621E-01
74523.53	2.19E+01	1.90E+02	1.90E+02	0.404	0.572	2.070E+01	8.625E-01
74561.78	2.19E+01	1.90E+02	1.90E+02	0.404	0.572	2.071E+01	8.630E-01
74599.66	2.19E+01	1.90E+02	1.90E+02	0.404	0.572	2.072E+01	8.634E-01
74637.59	2.19E+01	1.90E+02	1.90E+02	0.404	0.572	2.073E+01	8.639E-01
74675.22	2.19E+01	1.90E+02	1.90E+02	0.404	0.572	2.074E+01	8.643E-01
74713.22	2.19E+01	1.90E+02	1.90E+02	0.404	0.572	2.075E+01	8.647E-01
74751.84	2.19E+01	1.90E+02	1.90E+02	0.404	0.572	2.076E+01	8.652E-01
74789.84	2.19E+01	1.90E+02	1.90E+02	0.404	0.571	2.077E+01	8.656E-01
74827.72	2.19E+01	1.89E+02	1.90E+02	0.404	0.571	2.079E+01	8.661E-01
74865.84	2.19E+01	1.89E+02	1.90E+02	0.404	0.571	2.080E+01	8.665E-01
74903.34	2.19E+01	1.89E+02	1.90E+02	0.404	0.571	2.081E+01	8.669E-01
74940.97	2.19E+01	1.89E+02	1.90E+02	0.404	0.571	2.082E+01	8.674E-01
74978.84	2.19E+01	1.89E+02	1.90E+02	0.404	0.571	2.083E+01	8.678E-01
75017.59	2.19E+01	1.89E+02	1.90E+02	0.404	0.571	2.084E+01	8.683E-01
75055.47	2.19E+01	1.89E+02	1.90E+02	0.404	0.571	2.085E+01	8.687E-01
75093.09	2.19E+01	1.89E+02	1.90E+02	0.403	0.570	2.086E+01	8.691E-01
75131.16	2.19E+01	1.89E+02	1.90E+02	0.404	0.571	2.087E+01	8.696E-01
75169.28	2.19E+01	1.89E+02	1.90E+02	0.404	0.571	2.088E+01	8.700E-01
75207.78	2.19E+01	1.89E+02	1.90E+02	0.403	0.570	2.089E+01	8.705E-01
75245.28	2.19E+01	1.89E+02	1.90E+02	0.403	0.570	2.090E+01	8.709E-01
75283.28	2.19E+01	1.89E+02	1.90E+02	0.403	0.570	2.091E+01	8.713E-01
75321.16	2.19E+01	1.89E+02	1.90E+02	0.403	0.570	2.092E+01	8.718E-01
75359.53	2.19E+01	1.89E+02	1.90E+02	0.403	0.570	2.093E+01	8.722E-01
75397.03	2.19E+01	1.89E+02	1.90E+02	0.403	0.570	2.094E+01	8.727E-01
75435.66	2.19E+01	1.89E+02	1.90E+02	0.403	0.570	2.095E+01	8.731E-01
75473.53	2.19E+01	1.89E+02	1.90E+02	0.403	0.570	2.096E+01	8.735E-01
75511.16	2.18E+01	1.89E+02	1.90E+02	0.403	0.570	2.098E+01	8.740E-01
75548.66	2.18E+01	1.89E+02	1.90E+02	0.403	0.570	2.099E+01	8.744E-01
75586.78	2.18E+01	1.89E+02	1.90E+02	0.403	0.570	2.100E+01	8.748E-01
75624.91	2.18E+01	1.89E+02	1.90E+02	0.403	0.570	2.101E+01	8.753E-01
75662.34	2.18E+01	1.89E+02	1.90E+02	0.403	0.570	2.102E+01	8.757E-01
75700.34	2.18E+01	1.89E+02	1.90E+02	0.403	0.570	2.103E+01	8.762E-01
75738.22	2.18E+01	1.89E+02	1.90E+02	0.403	0.570	2.104E+01	8.766E-01
75775.97	2.18E+01	1.89E+02	1.90E+02	0.403	0.570	2.105E+01	8.770E-01
75813.47	2.18E+01	1.89E+02	1.90E+02	0.403	0.570	2.106E+01	8.775E-01
75851.59	2.18E+01	1.89E+02	1.90E+02	0.403	0.569	2.107E+01	8.779E-01
75890.09	2.18E+01	1.89E+02	1.90E+02	0.403	0.569	2.108E+01	8.784E-01
75928.72	2.18E+01	1.89E+02	1.90E+02	0.403	0.569	2.109E+01	8.788E-01
75966.47	2.18E+01	1.89E+02	1.90E+02	0.403	0.569	2.110E+01	8.792E-01
76004.72	2.18E+01	1.89E+02	1.90E+02	0.402	0.569	2.111E+01	8.797E-01
76042.84	2.18E+01	1.89E+02	1.90E+02	0.402	0.569	2.112E+01	8.801E-01
76080.47	2.18E+01	1.89E+02	1.90E+02	0.402	0.569	2.113E+01	8.806E-01
76118.09	2.18E+01	1.89E+02	1.90E+02	0.402	0.568	2.114E+01	8.810E-01
76156.41	2.18E+01	1.89E+02	1.90E+02	0.402	0.569	2.115E+01	8.814E-01
76193.91	2.18E+01	1.89E+02	1.90E+02	0.402	0.569	2.116E+01	8.819E-01
76232.16	2.18E+01	1.89E+02	1.90E+02	0.402	0.569	2.118E+01	8.823E-01
76270.28	2.18E+01	1.89E+02	1.90E+02	0.402	0.569	2.119E+01	8.828E-01

TIME	DW PRESS (PSIA)	DW TEMP (F)	SP TEMP (F)	PC Leak Fraction of Design Basis	MSIV Leak Fraction of Design Basis	Time (hours)	Time (days)
76309.03	2.18E+01	1.89E+02	1.90E+02	0.402	0.568	2.120E+01	8.832E-01
76347.53	2.18E+01	1.89E+02	1.90E+02	0.402	0.568	2.121E+01	8.837E-01
76385.41	2.18E+01	1.89E+02	1.90E+02	0.402	0.568	2.122E+01	8.841E-01
76423.53	2.18E+01	1.89E+02	1.90E+02	0.402	0.568	2.123E+01	8.845E-01
76461.16	2.18E+01	1.89E+02	1.90E+02	0.402	0.568	2.124E+01	8.850E-01
76499.16	2.18E+01	1.89E+02	1.90E+02	0.402	0.568	2.125E+01	8.854E-01
76536.66	2.18E+01	1.89E+02	1.90E+02	0.402	0.568	2.126E+01	8.858E-01
76574.41	2.18E+01	1.89E+02	1.90E+02	0.402	0.568	2.127E+01	8.863E-01
76612.28	2.18E+01	1.89E+02	1.90E+02	0.401	0.568	2.128E+01	8.867E-01
76650.03	2.18E+01	1.89E+02	1.90E+02	0.401	0.568	2.129E+01	8.872E-01
76687.47	2.18E+01	1.89E+02	1.90E+02	0.402	0.568	2.130E+01	8.876E-01
76725.09	2.18E+01	1.89E+02	1.90E+02	0.401	0.568	2.131E+01	8.880E-01
76762.72	2.18E+01	1.89E+02	1.90E+02	0.401	0.568	2.132E+01	8.885E-01
76800.47	2.18E+01	1.89E+02	1.90E+02	0.401	0.568	2.133E+01	8.889E-01
76838.09	2.18E+01	1.89E+02	1.89E+02	0.401	0.568	2.134E+01	8.893E-01
76875.59	2.18E+01	1.89E+02	1.89E+02	0.401	0.568	2.135E+01	8.898E-01
76913.59	2.18E+01	1.89E+02	1.89E+02	0.401	0.568	2.136E+01	8.902E-01
76952.22	2.18E+01	1.89E+02	1.89E+02	0.401	0.567	2.138E+01	8.907E-01
76990.22	2.18E+01	1.89E+02	1.89E+02	0.401	0.567	2.139E+01	8.911E-01
77027.97	2.18E+01	1.89E+02	1.89E+02	0.401	0.567	2.140E+01	8.915E-01
77066.34	2.18E+01	1.89E+02	1.89E+02	0.401	0.567	2.141E+01	8.920E-01
77104.72	2.18E+01	1.89E+02	1.89E+02	0.401	0.567	2.142E+01	8.924E-01
77142.22	2.18E+01	1.89E+02	1.89E+02	0.401	0.567	2.143E+01	8.928E-01
77179.66	2.18E+01	1.89E+02	1.89E+02	0.401	0.567	2.144E+01	8.933E-01
77217.28	2.18E+01	1.89E+02	1.89E+02	0.401	0.567	2.145E+01	8.937E-01
77255.66	2.18E+01	1.89E+02	1.89E+02	0.401	0.567	2.146E+01	8.942E-01
77293.41	2.18E+01	1.89E+02	1.89E+02	0.401	0.567	2.147E+01	8.946E-01
77331.03	2.18E+01	1.89E+02	1.89E+02	0.401	0.567	2.148E+01	8.950E-01
77369.03	2.18E+01	1.89E+02	1.89E+02	0.401	0.566	2.149E+01	8.955E-01
77407.28	2.18E+01	1.89E+02	1.89E+02	0.401	0.566	2.150E+01	8.959E-01
77445.16	2.18E+01	1.89E+02	1.89E+02	0.401	0.566	2.151E+01	8.964E-01
77483.28	2.18E+01	1.89E+02	1.89E+02	0.401	0.566	2.152E+01	8.968E-01
77521.03	2.18E+01	1.89E+02	1.89E+02	0.401	0.566	2.153E+01	8.972E-01
77558.78	2.18E+01	1.89E+02	1.89E+02	0.400	0.566	2.154E+01	8.977E-01
77596.41	2.18E+01	1.89E+02	1.89E+02	0.400	0.566	2.155E+01	8.981E-01
77634.28	2.18E+01	1.89E+02	1.89E+02	0.400	0.566	2.157E+01	8.985E-01
77671.78	2.18E+01	1.89E+02	1.89E+02	0.400	0.566	2.158E+01	8.990E-01
77709.97	2.18E+01	1.89E+02	1.89E+02	0.400	0.566	2.159E+01	8.994E-01
77747.59	2.18E+01	1.89E+02	1.89E+02	0.400	0.566	2.160E+01	8.999E-01
77785.47	2.18E+01	1.89E+02	1.89E+02	0.400	0.566	2.161E+01	9.003E-01
77823.47	2.18E+01	1.89E+02	1.89E+02	0.400	0.566	2.162E+01	9.007E-01
77861.84	2.17E+01	1.89E+02	1.89E+02	0.400	0.566	2.163E+01	9.012E-01
77899.47	2.17E+01	1.89E+02	1.89E+02	0.400	0.566	2.164E+01	9.016E-01
77937.59	2.17E+01	1.89E+02	1.89E+02	0.400	0.566	2.165E+01	9.021E-01
77975.72	2.17E+01	1.89E+02	1.89E+02	0.400	0.566	2.166E+01	9.025E-01
78013.72	2.17E+01	1.89E+02	1.89E+02	0.400	0.565	2.167E+01	9.029E-01
78051.22	2.17E+01	1.89E+02	1.89E+02	0.400	0.565	2.168E+01	9.034E-01
78089.47	2.17E+01	1.89E+02	1.89E+02	0.400	0.565	2.169E+01	9.038E-01
78127.09	2.17E+01	1.89E+02	1.89E+02	0.400	0.565	2.170E+01	9.042E-01
78165.22	2.17E+01	1.88E+02	1.89E+02	0.399	0.565	2.171E+01	9.047E-01
78203.16	2.17E+01	1.88E+02	1.89E+02	0.400	0.565	2.172E+01	9.051E-01
78241.03	2.17E+01	1.88E+02	1.89E+02	0.400	0.565	2.173E+01	9.056E-01

TIME	DW PRESS (PSIA)	DW TEMP (F)	SP TEMP (F)	PC Leak Fraction of Design Basis	MSIV Leak Fraction of Design Basis	Time (hours)	Time (days)
78278.78	2.17E+01	1.88E+02	1.89E+02	0.399	0.565	2.174E+01	9.060E-01
78316.53	2.17E+01	1.88E+02	1.89E+02	0.399	0.565	2.175E+01	9.064E-01
78354.66	2.17E+01	1.88E+02	1.89E+02	0.399	0.565	2.177E+01	9.069E-01
78392.66	2.17E+01	1.88E+02	1.89E+02	0.399	0.565	2.178E+01	9.073E-01
78430.53	2.17E+01	1.88E+02	1.89E+02	0.399	0.565	2.179E+01	9.078E-01
78468.53	2.17E+01	1.88E+02	1.89E+02	0.399	0.564	2.180E+01	9.082E-01
78506.16	2.17E+01	1.88E+02	1.89E+02	0.399	0.564	2.181E+01	9.086E-01
78543.78	2.17E+01	1.88E+02	1.89E+02	0.399	0.564	2.182E+01	9.091E-01
78581.66	2.17E+01	1.88E+02	1.89E+02	0.399	0.564	2.183E+01	9.095E-01
78619.53	2.17E+01	1.88E+02	1.89E+02	0.399	0.564	2.184E+01	9.099E-01
78657.16	2.17E+01	1.88E+02	1.89E+02	0.399	0.564	2.185E+01	9.104E-01
78694.66	2.17E+01	1.88E+02	1.89E+02	0.399	0.564	2.186E+01	9.108E-01
78731.97	2.17E+01	1.88E+02	1.89E+02	0.399	0.564	2.187E+01	9.112E-01
78769.84	2.17E+01	1.88E+02	1.89E+02	0.399	0.564	2.188E+01	9.117E-01
78807.84	2.17E+01	1.88E+02	1.89E+02	0.399	0.564	2.189E+01	9.121E-01
78845.47	2.17E+01	1.88E+02	1.89E+02	0.399	0.564	2.190E+01	9.126E-01
78883.09	2.17E+01	1.88E+02	1.89E+02	0.399	0.564	2.191E+01	9.130E-01
78920.84	2.17E+01	1.88E+02	1.89E+02	0.399	0.564	2.192E+01	9.134E-01
78958.72	2.17E+01	1.88E+02	1.89E+02	0.399	0.564	2.193E+01	9.139E-01
78997.84	2.17E+01	1.88E+02	1.89E+02	0.399	0.564	2.194E+01	9.143E-01
79036.84	2.17E+01	1.88E+02	1.89E+02	0.399	0.564	2.195E+01	9.148E-01
79074.34	2.17E+01	1.88E+02	1.89E+02	0.399	0.564	2.197E+01	9.152E-01
79111.84	2.17E+01	1.88E+02	1.89E+02	0.398	0.563	2.198E+01	9.156E-01
79149.84	2.17E+01	1.88E+02	1.89E+02	0.398	0.563	2.199E+01	9.161E-01
79187.72	2.17E+01	1.88E+02	1.89E+02	0.398	0.563	2.200E+01	9.165E-01
79225.72	2.17E+01	1.88E+02	1.89E+02	0.398	0.563	2.201E+01	9.170E-01
79263.91	2.17E+01	1.88E+02	1.89E+02	0.398	0.563	2.202E+01	9.174E-01
79302.78	2.17E+01	1.88E+02	1.89E+02	0.398	0.563	2.203E+01	9.179E-01
79341.91	2.17E+01	1.88E+02	1.89E+02	0.398	0.563	2.204E+01	9.183E-01
79379.78	2.17E+01	1.88E+02	1.89E+02	0.398	0.563	2.205E+01	9.187E-01
79417.91	2.17E+01	1.88E+02	1.89E+02	0.398	0.563	2.206E+01	9.192E-01
79455.91	2.17E+01	1.88E+02	1.89E+02	0.398	0.563	2.207E+01	9.196E-01
79494.53	2.17E+01	1.88E+02	1.89E+02	0.398	0.563	2.208E+01	9.201E-01
79532.03	2.17E+01	1.88E+02	1.89E+02	0.398	0.562	2.209E+01	9.205E-01
79569.53	2.17E+01	1.88E+02	1.89E+02	0.398	0.562	2.210E+01	9.209E-01
79607.03	2.17E+01	1.88E+02	1.89E+02	0.398	0.562	2.211E+01	9.214E-01
79644.53	2.17E+01	1.88E+02	1.89E+02	0.398	0.562	2.212E+01	9.218E-01
79682.91	2.17E+01	1.88E+02	1.89E+02	0.398	0.562	2.213E+01	9.223E-01
79721.53	2.17E+01	1.88E+02	1.89E+02	0.397	0.562	2.214E+01	9.227E-01
79759.28	2.17E+01	1.88E+02	1.89E+02	0.397	0.562	2.216E+01	9.231E-01
79796.84	2.17E+01	1.88E+02	1.89E+02	0.398	0.562	2.217E+01	9.236E-01
79835.22	2.17E+01	1.88E+02	1.89E+02	0.398	0.562	2.218E+01	9.240E-01
79873.34	2.17E+01	1.88E+02	1.89E+02	0.397	0.562	2.219E+01	9.245E-01
79911.84	2.17E+01	1.88E+02	1.89E+02	0.397	0.562	2.220E+01	9.249E-01
79949.59	2.17E+01	1.88E+02	1.89E+02	0.397	0.562	2.221E+01	9.253E-01
79987.22	2.17E+01	1.88E+02	1.89E+02	0.397	0.562	2.222E+01	9.258E-01
80025.72	2.16E+01	1.88E+02	1.89E+02	0.397	0.562	2.223E+01	9.262E-01
80063.47	2.16E+01	1.88E+02	1.89E+02	0.397	0.562	2.224E+01	9.267E-01
80102.47	2.16E+01	1.88E+02	1.89E+02	0.397	0.562	2.225E+01	9.271E-01
80140.47	2.16E+01	1.88E+02	1.88E+02	0.397	0.562	2.226E+01	9.276E-01
80178.34	2.16E+01	1.88E+02	1.88E+02	0.397	0.562	2.227E+01	9.280E-01
80216.59	2.16E+01	1.88E+02	1.88E+02	0.397	0.561	2.228E+01	9.284E-01

TIME	DW PRESS (PSIA)	DW TEMP (F)	SP TEMP (F)	PC Leak Fraction of Design Basis	MSIV Leak Fraction of Design Basis	Time (hours)	Time (days)
80254.97	2.16E+01	1.88E+02	1.88E+02	0.397	0.561	2.229E+01	9.289E-01
80293.41	2.16E+01	1.88E+02	1.88E+02	0.397	0.562	2.230E+01	9.293E-01
80331.16	2.16E+01	1.88E+02	1.88E+02	0.397	0.561	2.231E+01	9.298E-01
80369.53	2.16E+01	1.88E+02	1.88E+02	0.397	0.561	2.232E+01	9.302E-01
80407.41	2.16E+01	1.88E+02	1.88E+02	0.397	0.561	2.234E+01	9.306E-01
80445.78	2.16E+01	1.88E+02	1.88E+02	0.397	0.561	2.235E+01	9.311E-01
80484.28	2.16E+01	1.88E+02	1.88E+02	0.397	0.561	2.236E+01	9.315E-01
80522.28	2.16E+01	1.88E+02	1.88E+02	0.397	0.561	2.237E+01	9.320E-01
80560.03	2.16E+01	1.88E+02	1.88E+02	0.397	0.561	2.238E+01	9.324E-01
80598.16	2.16E+01	1.88E+02	1.88E+02	0.397	0.561	2.239E+01	9.328E-01
80635.91	2.16E+01	1.88E+02	1.88E+02	0.397	0.561	2.240E+01	9.333E-01
80673.66	2.16E+01	1.88E+02	1.88E+02	0.396	0.560	2.241E+01	9.337E-01
80711.91	2.16E+01	1.88E+02	1.88E+02	0.396	0.560	2.242E+01	9.342E-01
80749.41	2.16E+01	1.88E+02	1.88E+02	0.396	0.560	2.243E+01	9.346E-01
80786.91	2.16E+01	1.88E+02	1.88E+02	0.396	0.560	2.244E+01	9.350E-01
80824.59	2.16E+01	1.88E+02	1.88E+02	0.396	0.560	2.245E+01	9.355E-01
80862.34	2.16E+01	1.88E+02	1.88E+02	0.396	0.560	2.246E+01	9.359E-01
80899.84	2.16E+01	1.88E+02	1.88E+02	0.396	0.560	2.247E+01	9.363E-01
80937.34	2.16E+01	1.88E+02	1.88E+02	0.396	0.560	2.248E+01	9.368E-01
80974.84	2.16E+01	1.88E+02	1.88E+02	0.396	0.560	2.249E+01	9.372E-01
81012.47	2.16E+01	1.88E+02	1.88E+02	0.396	0.560	2.250E+01	9.376E-01
81050.47	2.16E+01	1.88E+02	1.88E+02	0.396	0.560	2.251E+01	9.381E-01
81088.22	2.16E+01	1.88E+02	1.88E+02	0.396	0.560	2.252E+01	9.385E-01
81126.47	2.16E+01	1.88E+02	1.88E+02	0.396	0.560	2.254E+01	9.390E-01
81165.09	2.16E+01	1.88E+02	1.88E+02	0.396	0.560	2.255E+01	9.394E-01
81203.22	2.16E+01	1.88E+02	1.88E+02	0.396	0.560	2.256E+01	9.399E-01
81241.09	2.16E+01	1.88E+02	1.88E+02	0.396	0.560	2.257E+01	9.403E-01
81278.72	2.16E+01	1.88E+02	1.88E+02	0.396	0.560	2.258E+01	9.407E-01
81316.22	2.16E+01	1.88E+02	1.88E+02	0.396	0.560	2.259E+01	9.412E-01
81353.53	2.16E+01	1.88E+02	1.88E+02	0.396	0.560	2.260E+01	9.416E-01
81391.66	2.16E+01	1.88E+02	1.88E+02	0.396	0.560	2.261E+01	9.420E-01
81429.66	2.16E+01	1.88E+02	1.88E+02	0.396	0.560	2.262E+01	9.425E-01
81467.16	2.16E+01	1.88E+02	1.88E+02	0.396	0.560	2.263E+01	9.429E-01
81505.16	2.16E+01	1.87E+02	1.88E+02	0.395	0.559	2.264E+01	9.433E-01
81543.78	2.16E+01	1.87E+02	1.88E+02	0.395	0.559	2.265E+01	9.438E-01
81582.41	2.16E+01	1.87E+02	1.88E+02	0.395	0.559	2.266E+01	9.442E-01
81619.91	2.16E+01	1.87E+02	1.88E+02	0.395	0.559	2.267E+01	9.447E-01
81658.28	2.16E+01	1.87E+02	1.88E+02	0.395	0.559	2.268E+01	9.451E-01
81696.78	2.16E+01	1.87E+02	1.88E+02	0.395	0.559	2.269E+01	9.456E-01
81734.78	2.16E+01	1.87E+02	1.88E+02	0.395	0.559	2.270E+01	9.460E-01
81772.66	2.16E+01	1.87E+02	1.88E+02	0.395	0.559	2.271E+01	9.464E-01
81810.16	2.16E+01	1.87E+02	1.88E+02	0.395	0.558	2.273E+01	9.469E-01
81848.53	2.16E+01	1.87E+02	1.88E+02	0.395	0.558	2.274E+01	9.473E-01
81886.41	2.16E+01	1.87E+02	1.88E+02	0.395	0.558	2.275E+01	9.478E-01
81924.22	2.16E+01	1.87E+02	1.88E+02	0.395	0.559	2.276E+01	9.482E-01
81961.84	2.16E+01	1.87E+02	1.88E+02	0.395	0.558	2.277E+01	9.486E-01
82000.34	2.16E+01	1.87E+02	1.88E+02	0.395	0.558	2.278E+01	9.491E-01
82038.59	2.16E+01	1.87E+02	1.88E+02	0.395	0.558	2.279E+01	9.495E-01
82076.22	2.16E+01	1.87E+02	1.88E+02	0.395	0.558	2.280E+01	9.500E-01
82114.09	2.16E+01	1.87E+02	1.88E+02	0.395	0.558	2.281E+01	9.504E-01
82151.97	2.16E+01	1.87E+02	1.88E+02	0.395	0.558	2.282E+01	9.508E-01
82190.22	2.16E+01	1.87E+02	1.88E+02	0.395	0.558	2.283E+01	9.513E-01

TIME	DW PRESS (PSIA)	DW TEMP (F)	SP TEMP (F)	PC Leak Fraction of Design Basis	MSIV Leak Fraction of Design Basis	Time (hours)	Time (days)
82229.09	2.16E+01	1.87E+02	1.88E+02	0.395	0.558	2.284E+01	9.517E-01
82266.72	2.15E+01	1.87E+02	1.88E+02	0.394	0.558	2.285E+01	9.522E-01
82304.22	2.15E+01	1.87E+02	1.88E+02	0.394	0.558	2.286E+01	9.526E-01
82341.72	2.15E+01	1.87E+02	1.88E+02	0.394	0.558	2.287E+01	9.530E-01
82379.97	2.15E+01	1.87E+02	1.88E+02	0.394	0.558	2.288E+01	9.535E-01
82417.72	2.15E+01	1.87E+02	1.88E+02	0.394	0.558	2.289E+01	9.539E-01
82455.91	2.16E+01	1.87E+02	1.88E+02	0.395	0.558	2.290E+01	9.544E-01
82494.28	2.15E+01	1.87E+02	1.88E+02	0.394	0.558	2.292E+01	9.548E-01
82532.03	2.15E+01	1.87E+02	1.88E+02	0.394	0.558	2.293E+01	9.552E-01
82570.28	2.15E+01	1.87E+02	1.88E+02	0.394	0.558	2.294E+01	9.557E-01
82608.66	2.15E+01	1.87E+02	1.88E+02	0.394	0.558	2.295E+01	9.561E-01
82646.53	2.15E+01	1.87E+02	1.88E+02	0.394	0.557	2.296E+01	9.566E-01
82685.03	2.15E+01	1.87E+02	1.88E+02	0.394	0.557	2.297E+01	9.570E-01
82722.78	2.15E+01	1.87E+02	1.88E+02	0.394	0.557	2.298E+01	9.574E-01
82760.53	2.15E+01	1.87E+02	1.88E+02	0.394	0.557	2.299E+01	9.579E-01
82799.03	2.15E+01	1.87E+02	1.88E+02	0.394	0.557	2.300E+01	9.583E-01
82837.03	2.15E+01	1.87E+02	1.88E+02	0.394	0.557	2.301E+01	9.588E-01
82875.28	2.15E+01	1.87E+02	1.88E+02	0.394	0.557	2.302E+01	9.592E-01
82913.03	2.15E+01	1.87E+02	1.88E+02	0.394	0.557	2.303E+01	9.596E-01
82950.72	2.15E+01	1.87E+02	1.88E+02	0.394	0.557	2.304E+01	9.601E-01
82988.59	2.15E+01	1.87E+02	1.88E+02	0.394	0.557	2.305E+01	9.605E-01
83026.09	2.15E+01	1.87E+02	1.88E+02	0.394	0.557	2.306E+01	9.610E-01
83063.84	2.15E+01	1.87E+02	1.88E+02	0.394	0.557	2.307E+01	9.614E-01
83101.47	2.15E+01	1.87E+02	1.88E+02	0.394	0.557	2.308E+01	9.618E-01
83139.47	2.15E+01	1.87E+02	1.88E+02	0.393	0.556	2.309E+01	9.623E-01
83177.22	2.15E+01	1.87E+02	1.88E+02	0.393	0.556	2.310E+01	9.627E-01
83214.72	2.15E+01	1.87E+02	1.88E+02	0.393	0.556	2.312E+01	9.631E-01
83253.09	2.15E+01	1.87E+02	1.88E+02	0.393	0.556	2.313E+01	9.636E-01
83291.09	2.15E+01	1.87E+02	1.88E+02	0.393	0.556	2.314E+01	9.640E-01
83329.59	2.15E+01	1.87E+02	1.88E+02	0.393	0.556	2.315E+01	9.645E-01
83367.09	2.15E+01	1.87E+02	1.88E+02	0.393	0.556	2.316E+01	9.649E-01
83405.59	2.15E+01	1.87E+02	1.88E+02	0.393	0.556	2.317E+01	9.653E-01
83443.97	2.15E+01	1.87E+02	1.88E+02	0.393	0.556	2.318E+01	9.658E-01
83481.47	2.15E+01	1.87E+02	1.87E+02	0.393	0.556	2.319E+01	9.662E-01
83518.91	2.15E+01	1.87E+02	1.87E+02	0.393	0.556	2.320E+01	9.667E-01
83557.16	2.15E+01	1.87E+02	1.87E+02	0.393	0.556	2.321E+01	9.671E-01
83595.16	2.15E+01	1.87E+02	1.87E+02	0.393	0.556	2.322E+01	9.675E-01
83633.41	2.15E+01	1.87E+02	1.87E+02	0.393	0.556	2.323E+01	9.680E-01
83671.41	2.15E+01	1.87E+02	1.87E+02	0.393	0.556	2.324E+01	9.684E-01
83709.03	2.15E+01	1.87E+02	1.87E+02	0.393	0.556	2.325E+01	9.689E-01
83747.41	2.15E+01	1.87E+02	1.87E+02	0.393	0.556	2.326E+01	9.693E-01
83784.91	2.15E+01	1.87E+02	1.87E+02	0.393	0.555	2.327E+01	9.697E-01
83823.91	2.15E+01	1.87E+02	1.87E+02	0.393	0.555	2.328E+01	9.702E-01
83861.91	2.15E+01	1.87E+02	1.87E+02	0.393	0.555	2.329E+01	9.706E-01
83899.78	2.15E+01	1.87E+02	1.87E+02	0.393	0.555	2.331E+01	9.711E-01
83937.41	2.15E+01	1.87E+02	1.87E+02	0.393	0.555	2.332E+01	9.715E-01
83975.03	2.15E+01	1.87E+02	1.87E+02	0.392	0.555	2.333E+01	9.719E-01
84012.66	2.15E+01	1.87E+02	1.87E+02	0.392	0.555	2.334E+01	9.724E-01
84050.47	2.15E+01	1.87E+02	1.87E+02	0.393	0.555	2.335E+01	9.728E-01
84088.22	2.15E+01	1.87E+02	1.87E+02	0.393	0.555	2.336E+01	9.732E-01
84126.34	2.15E+01	1.87E+02	1.87E+02	0.392	0.555	2.337E+01	9.737E-01
84163.84	2.15E+01	1.87E+02	1.87E+02	0.392	0.555	2.338E+01	9.741E-01

TIME	DW PRESS (PSIA)	DW TEMP (F)	SP TEMP (F)	PC Leak Fraction of Design Basis	MSIV Leak Fraction of Design Basis	Time (hours)	Time (days)
84201.47	2.15E+01	1.87E+02	1.87E+02	0.392	0.555	2.339E+01	9.746E-01
84239.22	2.15E+01	1.87E+02	1.87E+02	0.392	0.555	2.340E+01	9.750E-01
84276.72	2.15E+01	1.87E+02	1.87E+02	0.392	0.554	2.341E+01	9.754E-01
84315.72	2.15E+01	1.87E+02	1.87E+02	0.392	0.554	2.342E+01	9.759E-01
84353.59	2.15E+01	1.87E+02	1.87E+02	0.392	0.554	2.343E+01	9.763E-01
84391.47	2.15E+01	1.87E+02	1.87E+02	0.392	0.554	2.344E+01	9.768E-01
84429.34	2.15E+01	1.87E+02	1.87E+02	0.392	0.554	2.345E+01	9.772E-01
84467.22	2.15E+01	1.87E+02	1.87E+02	0.392	0.554	2.346E+01	9.776E-01
84504.72	2.15E+01	1.87E+02	1.87E+02	0.392	0.554	2.347E+01	9.781E-01
84542.34	2.15E+01	1.87E+02	1.87E+02	0.392	0.554	2.348E+01	9.785E-01
84580.09	2.15E+01	1.87E+02	1.87E+02	0.392	0.554	2.349E+01	9.789E-01
84617.53	2.15E+01	1.87E+02	1.87E+02	0.392	0.554	2.350E+01	9.794E-01
84656.03	2.15E+01	1.87E+02	1.87E+02	0.392	0.554	2.352E+01	9.798E-01
84693.91	2.15E+01	1.87E+02	1.87E+02	0.392	0.554	2.353E+01	9.803E-01
84732.91	2.15E+01	1.87E+02	1.87E+02	0.392	0.554	2.354E+01	9.807E-01
84770.53	2.15E+01	1.87E+02	1.87E+02	0.392	0.554	2.355E+01	9.811E-01
84808.03	2.14E+01	1.87E+02	1.87E+02	0.391	0.554	2.356E+01	9.816E-01
84845.53	2.14E+01	1.87E+02	1.87E+02	0.391	0.554	2.357E+01	9.820E-01
84883.66	2.14E+01	1.87E+02	1.87E+02	0.391	0.554	2.358E+01	9.824E-01
84921.78	2.14E+01	1.87E+02	1.87E+02	0.391	0.554	2.359E+01	9.829E-01
84959.66	2.14E+01	1.86E+02	1.87E+02	0.391	0.554	2.360E+01	9.833E-01
84998.16	2.14E+01	1.86E+02	1.87E+02	0.391	0.553	2.361E+01	9.838E-01
85036.28	2.14E+01	1.86E+02	1.87E+02	0.391	0.553	2.362E+01	9.842E-01
85073.91	2.14E+01	1.86E+02	1.87E+02	0.391	0.553	2.363E+01	9.847E-01
85111.53	2.14E+01	1.86E+02	1.87E+02	0.391	0.553	2.364E+01	9.851E-01
85149.78	2.14E+01	1.86E+02	1.87E+02	0.391	0.553	2.365E+01	9.855E-01
85187.59	2.14E+01	1.86E+02	1.87E+02	0.391	0.553	2.366E+01	9.860E-01
85226.47	2.14E+01	1.86E+02	1.87E+02	0.391	0.553	2.367E+01	9.864E-01
85265.34	2.14E+01	1.86E+02	1.87E+02	0.391	0.553	2.368E+01	9.869E-01
85302.84	2.14E+01	1.86E+02	1.87E+02	0.391	0.553	2.370E+01	9.873E-01
85341.97	2.14E+01	1.86E+02	1.87E+02	0.391	0.553	2.371E+01	9.878E-01
85379.97	2.14E+01	1.86E+02	1.87E+02	0.391	0.553	2.372E+01	9.882E-01
85417.72	2.14E+01	1.86E+02	1.87E+02	0.391	0.553	2.373E+01	9.886E-01
85455.47	2.14E+01	1.86E+02	1.87E+02	0.391	0.552	2.374E+01	9.891E-01
85492.97	2.14E+01	1.86E+02	1.87E+02	0.391	0.552	2.375E+01	9.895E-01
85531.09	2.14E+01	1.86E+02	1.87E+02	0.391	0.552	2.376E+01	9.899E-01
85568.84	2.14E+01	1.86E+02	1.87E+02	0.391	0.552	2.377E+01	9.904E-01
85606.97	2.14E+01	1.86E+02	1.87E+02	0.390	0.552	2.378E+01	9.908E-01
85644.59	2.14E+01	1.86E+02	1.87E+02	0.390	0.552	2.379E+01	9.913E-01
85682.09	2.14E+01	1.86E+02	1.87E+02	0.390	0.552	2.380E+01	9.917E-01
85719.66	2.14E+01	1.86E+02	1.87E+02	0.391	0.552	2.381E+01	9.921E-01
85758.03	2.14E+01	1.86E+02	1.87E+02	0.391	0.552	2.382E+01	9.926E-01
85795.78	2.14E+01	1.86E+02	1.87E+02	0.391	0.552	2.383E+01	9.930E-01
85833.41	2.14E+01	1.86E+02	1.87E+02	0.390	0.552	2.384E+01	9.934E-01
85871.41	2.14E+01	1.86E+02	1.87E+02	0.390	0.552	2.385E+01	9.939E-01
85908.91	2.14E+01	1.86E+02	1.87E+02	0.390	0.552	2.386E+01	9.943E-01
85947.03	2.14E+01	1.86E+02	1.87E+02	0.390	0.552	2.387E+01	9.948E-01
85985.66	2.14E+01	1.86E+02	1.87E+02	0.390	0.551	2.388E+01	9.952E-01
86023.78	2.14E+01	1.86E+02	1.87E+02	0.390	0.551	2.390E+01	9.956E-01
86061.28	2.14E+01	1.86E+02	1.87E+02	0.390	0.551	2.391E+01	9.961E-01
86099.28	2.14E+01	1.86E+02	1.87E+02	0.390	0.551	2.392E+01	9.965E-01
86137.53	2.14E+01	1.86E+02	1.87E+02	0.390	0.551	2.393E+01	9.970E-01

TIME	DW PRESS (PSIA)	DW TEMP (F)	SP TEMP (F)	PC Leak Fraction of Design Basis	MSIV Leak Fraction of Design Basis	Time (hours)	Time (days)
86175.03	2.14E+01	1.86E+02	1.87E+02	0.390	0.551	2.394E+01	9.974E-01
86212.53	2.14E+01	1.86E+02	1.87E+02	0.390	0.551	2.395E+01	9.978E-01
86250.78	2.14E+01	1.86E+02	1.87E+02	0.390	0.551	2.396E+01	9.983E-01
86288.09	2.14E+01	1.86E+02	1.87E+02	0.390	0.551	2.397E+01	9.987E-01
86326.47	2.14E+01	1.86E+02	1.87E+02	0.390	0.551	2.398E+01	9.991E-01
86363.97	2.14E+01	1.86E+02	1.87E+02	0.390	0.551	2.399E+01	9.996E-01
86403.59	2.14E+01	1.86E+02	1.87E+02	0.390	0.551	2.400E+01	1.000E+00
86441.97	2.14E+01	1.86E+02	1.87E+02	0.390	0.551	2.401E+01	1.000E+00
86479.72	2.14E+01	1.86E+02	1.87E+02	0.389	0.551	2.402E+01	1.001E+00
86517.59	2.14E+01	1.86E+02	1.87E+02	0.389	0.551	2.403E+01	1.001E+00
86556.34	2.14E+01	1.86E+02	1.87E+02	0.389	0.551	2.404E+01	1.002E+00
86594.84	2.14E+01	1.86E+02	1.87E+02	0.389	0.551	2.405E+01	1.002E+00
86632.97	2.14E+01	1.86E+02	1.87E+02	0.389	0.551	2.406E+01	1.003E+00
86670.59	2.14E+01	1.86E+02	1.87E+02	0.389	0.550	2.408E+01	1.003E+00
86708.09	2.14E+01	1.86E+02	1.87E+02	0.389	0.550	2.409E+01	1.004E+00
86745.72	2.14E+01	1.86E+02	1.87E+02	0.389	0.550	2.410E+01	1.004E+00
86783.47	2.14E+01	1.86E+02	1.87E+02	0.389	0.550	2.411E+01	1.004E+00
86821.16	2.14E+01	1.86E+02	1.87E+02	0.389	0.550	2.412E+01	1.005E+00
86858.66	2.14E+01	1.86E+02	1.87E+02	0.389	0.550	2.413E+01	1.005E+00
86897.03	2.14E+01	1.86E+02	1.87E+02	0.389	0.550	2.414E+01	1.006E+00
86934.91	2.14E+01	1.86E+02	1.86E+02	0.389	0.550	2.415E+01	1.006E+00
86972.91	2.14E+01	1.86E+02	1.86E+02	0.389	0.550	2.416E+01	1.007E+00
87010.66	2.14E+01	1.86E+02	1.86E+02	0.389	0.550	2.417E+01	1.007E+00
87048.41	2.14E+01	1.86E+02	1.86E+02	0.389	0.550	2.418E+01	1.008E+00
87086.41	2.14E+01	1.86E+02	1.86E+02	0.389	0.550	2.419E+01	1.008E+00
87124.28	2.14E+01	1.86E+02	1.86E+02	0.389	0.550	2.420E+01	1.008E+00
87161.91	2.14E+01	1.86E+02	1.86E+02	0.389	0.550	2.421E+01	1.009E+00
87199.91	2.13E+01	1.86E+02	1.86E+02	0.388	0.549	2.422E+01	1.009E+00
87238.91	2.13E+01	1.86E+02	1.86E+02	0.388	0.549	2.423E+01	1.010E+00
87276.53	2.13E+01	1.86E+02	1.86E+02	0.388	0.549	2.424E+01	1.010E+00
87314.16	2.13E+01	1.86E+02	1.86E+02	0.388	0.549	2.425E+01	1.011E+00
87352.03	2.13E+01	1.86E+02	1.86E+02	0.388	0.549	2.426E+01	1.011E+00
87389.78	2.13E+01	1.86E+02	1.86E+02	0.388	0.549	2.427E+01	1.011E+00
87427.72	2.13E+01	1.86E+02	1.86E+02	0.388	0.549	2.429E+01	1.012E+00
87465.84	2.13E+01	1.86E+02	1.86E+02	0.388	0.549	2.430E+01	1.012E+00
87503.47	2.13E+01	1.86E+02	1.86E+02	0.388	0.549	2.431E+01	1.013E+00
87541.72	2.13E+01	1.86E+02	1.86E+02	0.388	0.549	2.432E+01	1.013E+00
87579.34	2.13E+01	1.86E+02	1.86E+02	0.388	0.549	2.433E+01	1.014E+00
87616.84	2.13E+01	1.86E+02	1.86E+02	0.388	0.549	2.434E+01	1.014E+00
87654.97	2.13E+01	1.86E+02	1.86E+02	0.388	0.549	2.435E+01	1.015E+00
87692.47	2.13E+01	1.86E+02	1.86E+02	0.388	0.549	2.436E+01	1.015E+00
87731.09	2.13E+01	1.86E+02	1.86E+02	0.388	0.549	2.437E+01	1.015E+00
87768.84	2.13E+01	1.86E+02	1.86E+02	0.388	0.549	2.438E+01	1.016E+00
87806.59	2.13E+01	1.86E+02	1.86E+02	0.388	0.549	2.439E+01	1.016E+00
87844.97	2.13E+01	1.86E+02	1.86E+02	0.388	0.549	2.440E+01	1.017E+00
87882.72	2.13E+01	1.86E+02	1.86E+02	0.388	0.548	2.441E+01	1.017E+00
87920.59	2.13E+01	1.86E+02	1.86E+02	0.388	0.548	2.442E+01	1.018E+00
87958.34	2.13E+01	1.86E+02	1.86E+02	0.388	0.548	2.443E+01	1.018E+00
87996.91	2.13E+01	1.86E+02	1.86E+02	0.388	0.549	2.444E+01	1.018E+00
88034.91	2.13E+01	1.86E+02	1.86E+02	0.388	0.548	2.445E+01	1.019E+00
88072.66	2.13E+01	1.86E+02	1.86E+02	0.388	0.548	2.446E+01	1.019E+00
88110.53	2.13E+01	1.86E+02	1.86E+02	0.388	0.548	2.448E+01	1.020E+00

TIME	DW PRESS (PSIA)	DW TEMP (F)	SP TEMP (F)	PC Leak Fraction of Design Basis	MSIV Leak Fraction of Design Basis	Time (hours)	Time (days)
88148.16	2.13E+01	1.86E+02	1.86E+02	0.388	0.548	2.449E+01	1.020E+00
88187.16	2.13E+01	1.86E+02	1.86E+02	0.388	0.548	2.450E+01	1.021E+00
88225.16	2.13E+01	1.86E+02	1.86E+02	0.387	0.548	2.451E+01	1.021E+00
88262.66	2.13E+01	1.86E+02	1.86E+02	0.387	0.548	2.452E+01	1.022E+00
88300.28	2.13E+01	1.86E+02	1.86E+02	0.387	0.548	2.453E+01	1.022E+00
88338.16	2.13E+01	1.86E+02	1.86E+02	0.387	0.548	2.454E+01	1.022E+00
88377.16	2.13E+01	1.86E+02	1.86E+02	0.387	0.548	2.455E+01	1.023E+00
88415.16	2.13E+01	1.86E+02	1.86E+02	0.387	0.547	2.456E+01	1.023E+00
88453.03	2.13E+01	1.86E+02	1.86E+02	0.387	0.547	2.457E+01	1.024E+00
88490.78	2.13E+01	1.85E+02	1.86E+02	0.387	0.547	2.458E+01	1.024E+00
88528.41	2.13E+01	1.85E+02	1.86E+02	0.387	0.547	2.459E+01	1.025E+00
88565.97	2.13E+01	1.85E+02	1.86E+02	0.387	0.548	2.460E+01	1.025E+00
88603.72	2.13E+01	1.85E+02	1.86E+02	0.387	0.547	2.461E+01	1.026E+00
88641.47	2.13E+01	1.85E+02	1.86E+02	0.387	0.547	2.462E+01	1.026E+00
88679.59	2.13E+01	1.85E+02	1.86E+02	0.387	0.547	2.463E+01	1.026E+00
88717.34	2.13E+01	1.85E+02	1.86E+02	0.387	0.547	2.464E+01	1.027E+00
88755.09	2.13E+01	1.85E+02	1.86E+02	0.387	0.547	2.465E+01	1.027E+00
88793.09	2.13E+01	1.85E+02	1.86E+02	0.387	0.547	2.466E+01	1.028E+00
88830.59	2.13E+01	1.85E+02	1.86E+02	0.387	0.547	2.468E+01	1.028E+00
88868.09	2.13E+01	1.85E+02	1.86E+02	0.387	0.547	2.469E+01	1.029E+00
88906.34	2.13E+01	1.85E+02	1.86E+02	0.387	0.547	2.470E+01	1.029E+00
88945.59	2.13E+01	1.85E+02	1.86E+02	0.387	0.547	2.471E+01	1.029E+00
88984.34	2.13E+01	1.85E+02	1.86E+02	0.386	0.546	2.472E+01	1.030E+00
89021.84	2.13E+01	1.85E+02	1.86E+02	0.386	0.546	2.473E+01	1.030E+00
89059.34	2.13E+01	1.85E+02	1.86E+02	0.386	0.546	2.474E+01	1.031E+00
89096.97	2.13E+01	1.85E+02	1.86E+02	0.386	0.546	2.475E+01	1.031E+00
89135.28	2.13E+01	1.85E+02	1.86E+02	0.387	0.547	2.476E+01	1.032E+00
89173.03	2.13E+01	1.85E+02	1.86E+02	0.386	0.546	2.477E+01	1.032E+00
89211.03	2.13E+01	1.85E+02	1.86E+02	0.386	0.546	2.478E+01	1.033E+00
89249.28	2.13E+01	1.85E+02	1.86E+02	0.386	0.546	2.479E+01	1.033E+00
89286.78	2.13E+01	1.85E+02	1.86E+02	0.386	0.546	2.480E+01	1.033E+00
89324.41	2.13E+01	1.85E+02	1.86E+02	0.386	0.546	2.481E+01	1.034E+00
89361.91	2.13E+01	1.85E+02	1.86E+02	0.386	0.546	2.482E+01	1.034E+00
89399.91	2.13E+01	1.85E+02	1.86E+02	0.386	0.546	2.483E+01	1.035E+00
89438.16	2.13E+01	1.85E+02	1.86E+02	0.386	0.546	2.484E+01	1.035E+00
89476.03	2.13E+01	1.85E+02	1.86E+02	0.386	0.546	2.485E+01	1.036E+00
89513.53	2.13E+01	1.85E+02	1.86E+02	0.386	0.546	2.486E+01	1.036E+00
89551.28	2.13E+01	1.85E+02	1.86E+02	0.386	0.546	2.488E+01	1.036E+00
89589.28	2.13E+01	1.85E+02	1.86E+02	0.386	0.546	2.489E+01	1.037E+00
89627.28	2.13E+01	1.85E+02	1.86E+02	0.386	0.546	2.490E+01	1.037E+00
89665.16	2.12E+01	1.85E+02	1.86E+02	0.386	0.545	2.491E+01	1.038E+00
89702.91	2.12E+01	1.85E+02	1.86E+02	0.386	0.545	2.492E+01	1.038E+00
89740.22	2.13E+01	1.85E+02	1.86E+02	0.386	0.546	2.493E+01	1.039E+00
89778.34	2.13E+01	1.85E+02	1.86E+02	0.386	0.546	2.494E+01	1.039E+00
89816.34	2.13E+01	1.85E+02	1.86E+02	0.386	0.546	2.495E+01	1.040E+00
89853.84	2.12E+01	1.85E+02	1.86E+02	0.386	0.545	2.496E+01	1.040E+00
89892.34	2.12E+01	1.85E+02	1.86E+02	0.386	0.545	2.497E+01	1.040E+00
89930.47	2.12E+01	1.85E+02	1.86E+02	0.386	0.545	2.498E+01	1.041E+00
89968.34	2.12E+01	1.85E+02	1.86E+02	0.386	0.545	2.499E+01	1.041E+00
90006.47	2.12E+01	1.85E+02	1.86E+02	0.386	0.545	2.500E+01	1.042E+00
90043.97	2.12E+01	1.85E+02	1.86E+02	0.385	0.545	2.501E+01	1.042E+00
90082.09	2.12E+01	1.85E+02	1.86E+02	0.385	0.545	2.502E+01	1.043E+00

TIME	DW PRESS (PSIA)	DW TEMP (F)	SP TEMP (F)	PC Leak Fraction of Design Basis	MSIV Leak Fraction of Design Basis	Time (hours)	Time (days)
90119.72	2.12E+01	1.85E+02	1.86E+02	0.385	0.545	2.503E+01	1.043E+00
90157.34	2.12E+01	1.85E+02	1.86E+02	0.385	0.545	2.504E+01	1.043E+00
90195.09	2.12E+01	1.85E+02	1.86E+02	0.385	0.544	2.505E+01	1.044E+00
90232.97	2.12E+01	1.85E+02	1.86E+02	0.385	0.544	2.506E+01	1.044E+00
90271.22	2.12E+01	1.85E+02	1.86E+02	0.385	0.544	2.508E+01	1.045E+00
90308.78	2.12E+01	1.85E+02	1.86E+02	0.385	0.545	2.509E+01	1.045E+00
90346.28	2.12E+01	1.85E+02	1.86E+02	0.385	0.545	2.510E+01	1.046E+00
90383.78	2.12E+01	1.85E+02	1.86E+02	0.385	0.544	2.511E+01	1.046E+00
90421.53	2.12E+01	1.85E+02	1.86E+02	0.385	0.544	2.512E+01	1.047E+00
90460.53	2.12E+01	1.85E+02	1.86E+02	0.385	0.544	2.513E+01	1.047E+00
90498.16	2.12E+01	1.85E+02	1.85E+02	0.385	0.544	2.514E+01	1.047E+00
90536.16	2.12E+01	1.85E+02	1.85E+02	0.385	0.544	2.515E+01	1.048E+00
90574.16	2.12E+01	1.85E+02	1.85E+02	0.385	0.544	2.516E+01	1.048E+00
90612.28	2.12E+01	1.85E+02	1.85E+02	0.385	0.544	2.517E+01	1.049E+00
90650.41	2.12E+01	1.85E+02	1.85E+02	0.385	0.544	2.518E+01	1.049E+00
90689.03	2.12E+01	1.85E+02	1.85E+02	0.385	0.544	2.519E+01	1.050E+00
90726.78	2.12E+01	1.85E+02	1.85E+02	0.384	0.544	2.520E+01	1.050E+00
90764.91	2.12E+01	1.85E+02	1.85E+02	0.384	0.544	2.521E+01	1.051E+00
90802.41	2.12E+01	1.85E+02	1.85E+02	0.384	0.544	2.522E+01	1.051E+00
90840.66	2.12E+01	1.85E+02	1.85E+02	0.384	0.544	2.523E+01	1.051E+00
90878.66	2.12E+01	1.85E+02	1.85E+02	0.384	0.544	2.524E+01	1.052E+00
90916.47	2.12E+01	1.85E+02	1.85E+02	0.385	0.544	2.525E+01	1.052E+00
90954.09	2.12E+01	1.85E+02	1.85E+02	0.384	0.544	2.527E+01	1.053E+00
90991.59	2.12E+01	1.85E+02	1.85E+02	0.384	0.544	2.528E+01	1.053E+00
91029.47	2.12E+01	1.85E+02	1.85E+02	0.384	0.544	2.529E+01	1.054E+00
91066.97	2.12E+01	1.85E+02	1.85E+02	0.384	0.544	2.530E+01	1.054E+00
91105.47	2.12E+01	1.85E+02	1.85E+02	0.384	0.544	2.531E+01	1.054E+00
91143.09	2.12E+01	1.85E+02	1.85E+02	0.384	0.543	2.532E+01	1.055E+00
91181.22	2.12E+01	1.85E+02	1.85E+02	0.384	0.543	2.533E+01	1.055E+00
91219.22	2.12E+01	1.85E+02	1.85E+02	0.384	0.543	2.534E+01	1.056E+00
91257.59	2.12E+01	1.85E+02	1.85E+02	0.384	0.543	2.535E+01	1.056E+00
91295.34	2.12E+01	1.85E+02	1.85E+02	0.384	0.543	2.536E+01	1.057E+00
91332.84	2.12E+01	1.85E+02	1.85E+02	0.384	0.543	2.537E+01	1.057E+00
91370.47	2.12E+01	1.85E+02	1.85E+02	0.384	0.543	2.538E+01	1.058E+00
91407.97	2.12E+01	1.85E+02	1.85E+02	0.384	0.543	2.539E+01	1.058E+00
91445.47	2.12E+01	1.85E+02	1.85E+02	0.384	0.543	2.540E+01	1.058E+00
91484.47	2.12E+01	1.85E+02	1.85E+02	0.384	0.543	2.541E+01	1.059E+00
91523.03	2.12E+01	1.85E+02	1.85E+02	0.384	0.543	2.542E+01	1.059E+00
91560.78	2.12E+01	1.85E+02	1.85E+02	0.384	0.543	2.543E+01	1.060E+00
91598.91	2.12E+01	1.85E+02	1.85E+02	0.384	0.543	2.544E+01	1.060E+00
91636.53	2.12E+01	1.85E+02	1.85E+02	0.384	0.543	2.545E+01	1.061E+00
91674.78	2.12E+01	1.85E+02	1.85E+02	0.383	0.542	2.547E+01	1.061E+00
91713.28	2.12E+01	1.85E+02	1.85E+02	0.383	0.542	2.548E+01	1.061E+00
91752.03	2.12E+01	1.85E+02	1.85E+02	0.383	0.542	2.549E+01	1.062E+00
91789.78	2.12E+01	1.85E+02	1.85E+02	0.383	0.542	2.550E+01	1.062E+00
91827.41	2.12E+01	1.85E+02	1.85E+02	0.383	0.542	2.551E+01	1.063E+00
91865.41	2.12E+01	1.85E+02	1.85E+02	0.383	0.542	2.552E+01	1.063E+00
91903.78	2.12E+01	1.85E+02	1.85E+02	0.383	0.542	2.553E+01	1.064E+00
91941.66	2.12E+01	1.85E+02	1.85E+02	0.383	0.542	2.554E+01	1.064E+00
91979.28	2.12E+01	1.85E+02	1.85E+02	0.383	0.542	2.555E+01	1.065E+00
92016.78	2.12E+01	1.85E+02	1.85E+02	0.383	0.542	2.556E+01	1.065E+00
92054.78	2.12E+01	1.85E+02	1.85E+02	0.383	0.541	2.557E+01	1.065E+00

TIME	DW PRESS (PSIA)	DW TEMP (F)	SP TEMP (F)	PC Leak Fraction of Design Basis	MSIV Leak Fraction of Design Basis	Time (hours)	Time (days)
92093.03	2.12E+01	1.85E+02	1.85E+02	0.383	0.541	2.558E+01	1.066E+00
92131.09	2.12E+01	1.85E+02	1.85E+02	0.383	0.542	2.559E+01	1.066E+00
92168.97	2.12E+01	1.85E+02	1.85E+02	0.383	0.542	2.560E+01	1.067E+00
92207.34	2.12E+01	1.84E+02	1.85E+02	0.383	0.542	2.561E+01	1.067E+00
92244.97	2.12E+01	1.84E+02	1.85E+02	0.383	0.541	2.562E+01	1.068E+00
92283.22	2.12E+01	1.84E+02	1.85E+02	0.383	0.541	2.563E+01	1.068E+00
92321.47	2.12E+01	1.84E+02	1.85E+02	0.383	0.541	2.564E+01	1.069E+00
92359.47	2.12E+01	1.84E+02	1.85E+02	0.383	0.541	2.566E+01	1.069E+00
92396.97	2.12E+01	1.84E+02	1.85E+02	0.383	0.541	2.567E+01	1.069E+00
92434.97	2.11E+01	1.84E+02	1.85E+02	0.383	0.541	2.568E+01	1.070E+00
92472.84	2.11E+01	1.84E+02	1.85E+02	0.383	0.541	2.569E+01	1.070E+00
92510.97	2.11E+01	1.84E+02	1.85E+02	0.383	0.541	2.570E+01	1.071E+00
92549.34	2.11E+01	1.84E+02	1.85E+02	0.383	0.541	2.571E+01	1.071E+00
92587.22	2.11E+01	1.84E+02	1.85E+02	0.383	0.541	2.572E+01	1.072E+00
92625.47	2.11E+01	1.84E+02	1.85E+02	0.382	0.541	2.573E+01	1.072E+00
92663.47	2.11E+01	1.84E+02	1.85E+02	0.382	0.541	2.574E+01	1.072E+00
92701.72	2.11E+01	1.84E+02	1.85E+02	0.382	0.541	2.575E+01	1.073E+00
92739.41	2.11E+01	1.84E+02	1.85E+02	0.383	0.541	2.576E+01	1.073E+00
92777.16	2.11E+01	1.84E+02	1.85E+02	0.383	0.541	2.577E+01	1.074E+00
92814.66	2.11E+01	1.84E+02	1.85E+02	0.382	0.541	2.578E+01	1.074E+00
92853.41	2.11E+01	1.84E+02	1.85E+02	0.382	0.541	2.579E+01	1.075E+00
92891.03	2.11E+01	1.84E+02	1.85E+02	0.382	0.541	2.580E+01	1.075E+00
92928.53	2.11E+01	1.84E+02	1.85E+02	0.382	0.541	2.581E+01	1.076E+00
92966.78	2.11E+01	1.84E+02	1.85E+02	0.382	0.541	2.582E+01	1.076E+00
93004.53	2.11E+01	1.84E+02	1.85E+02	0.382	0.540	2.583E+01	1.076E+00
93042.03	2.11E+01	1.84E+02	1.85E+02	0.382	0.540	2.585E+01	1.077E+00
93079.66	2.11E+01	1.84E+02	1.85E+02	0.382	0.540	2.586E+01	1.077E+00
93118.03	2.11E+01	1.84E+02	1.85E+02	0.382	0.540	2.587E+01	1.078E+00
93156.53	2.11E+01	1.84E+02	1.85E+02	0.382	0.540	2.588E+01	1.078E+00
93194.03	2.11E+01	1.84E+02	1.85E+02	0.382	0.540	2.589E+01	1.079E+00
93231.66	2.11E+01	1.84E+02	1.85E+02	0.382	0.540	2.590E+01	1.079E+00
93269.28	2.11E+01	1.84E+02	1.85E+02	0.382	0.540	2.591E+01	1.080E+00
93307.03	2.11E+01	1.84E+02	1.85E+02	0.382	0.540	2.592E+01	1.080E+00
93345.09	2.11E+01	1.84E+02	1.85E+02	0.382	0.540	2.593E+01	1.080E+00
93382.72	2.11E+01	1.84E+02	1.85E+02	0.382	0.540	2.594E+01	1.081E+00
93421.97	2.11E+01	1.84E+02	1.85E+02	0.382	0.540	2.595E+01	1.081E+00
93459.97	2.11E+01	1.84E+02	1.85E+02	0.382	0.540	2.596E+01	1.082E+00
93498.09	2.11E+01	1.84E+02	1.85E+02	0.382	0.540	2.597E+01	1.082E+00
93535.72	2.11E+01	1.84E+02	1.85E+02	0.381	0.539	2.598E+01	1.083E+00
93573.59	2.11E+01	1.84E+02	1.85E+02	0.381	0.539	2.599E+01	1.083E+00
93611.72	2.11E+01	1.84E+02	1.85E+02	0.381	0.539	2.600E+01	1.083E+00
93649.34	2.11E+01	1.84E+02	1.85E+02	0.381	0.539	2.601E+01	1.084E+00
93687.47	2.11E+01	1.84E+02	1.85E+02	0.381	0.539	2.602E+01	1.084E+00
93725.59	2.11E+01	1.84E+02	1.85E+02	0.381	0.539	2.603E+01	1.085E+00
93763.22	2.11E+01	1.84E+02	1.85E+02	0.381	0.539	2.605E+01	1.085E+00
93801.22	2.11E+01	1.84E+02	1.85E+02	0.381	0.539	2.606E+01	1.086E+00
93839.72	2.11E+01	1.84E+02	1.85E+02	0.381	0.539	2.607E+01	1.086E+00
93879.09	2.11E+01	1.84E+02	1.85E+02	0.381	0.539	2.608E+01	1.087E+00
93916.72	2.11E+01	1.84E+02	1.85E+02	0.381	0.539	2.609E+01	1.087E+00
93954.22	2.11E+01	1.84E+02	1.85E+02	0.381	0.539	2.610E+01	1.087E+00
93992.28	2.11E+01	1.84E+02	1.85E+02	0.381	0.539	2.611E+01	1.088E+00
94030.66	2.11E+01	1.84E+02	1.85E+02	0.381	0.539	2.612E+01	1.088E+00

TIME	DW PRESS (PSIA)	DW TEMP (F)	SP TEMP (F)	PC Leak Fraction of Design Basis	MSIV Leak Fraction of Design Basis	Time (hours)	Time (days)
94068.53	2.11E+01	1.84E+02	1.85E+02	0.381	0.539	2.613E+01	1.089E+00
94106.03	2.11E+01	1.84E+02	1.85E+02	0.381	0.539	2.614E+01	1.089E+00
94144.28	2.11E+01	1.84E+02	1.85E+02	0.381	0.539	2.615E+01	1.090E+00
94181.91	2.11E+01	1.84E+02	1.84E+02	0.381	0.539	2.616E+01	1.090E+00
94220.16	2.11E+01	1.84E+02	1.84E+02	0.381	0.539	2.617E+01	1.091E+00
94258.41	2.11E+01	1.84E+02	1.84E+02	0.381	0.539	2.618E+01	1.091E+00
94297.41	2.11E+01	1.84E+02	1.84E+02	0.381	0.539	2.619E+01	1.091E+00
94334.91	2.11E+01	1.84E+02	1.84E+02	0.380	0.538	2.620E+01	1.092E+00
94372.66	2.11E+01	1.84E+02	1.84E+02	0.380	0.538	2.621E+01	1.092E+00
94410.66	2.11E+01	1.84E+02	1.84E+02	0.380	0.538	2.623E+01	1.093E+00
94448.28	2.11E+01	1.84E+02	1.84E+02	0.380	0.538	2.624E+01	1.093E+00
94485.91	2.11E+01	1.84E+02	1.84E+02	0.380	0.538	2.625E+01	1.094E+00
94523.78	2.11E+01	1.84E+02	1.84E+02	0.380	0.538	2.626E+01	1.094E+00
94562.03	2.11E+01	1.84E+02	1.84E+02	0.380	0.538	2.627E+01	1.094E+00
94599.66	2.11E+01	1.84E+02	1.84E+02	0.380	0.538	2.628E+01	1.095E+00
94637.59	2.11E+01	1.84E+02	1.84E+02	0.380	0.538	2.629E+01	1.095E+00
94675.34	2.11E+01	1.84E+02	1.84E+02	0.380	0.538	2.630E+01	1.096E+00
94713.09	2.11E+01	1.84E+02	1.84E+02	0.380	0.538	2.631E+01	1.096E+00
94750.97	2.11E+01	1.84E+02	1.84E+02	0.380	0.538	2.632E+01	1.097E+00
94788.47	2.11E+01	1.84E+02	1.84E+02	0.380	0.538	2.633E+01	1.097E+00
94826.47	2.11E+01	1.84E+02	1.84E+02	0.380	0.538	2.634E+01	1.098E+00
94864.09	2.11E+01	1.84E+02	1.84E+02	0.380	0.538	2.635E+01	1.098E+00
94902.59	2.11E+01	1.84E+02	1.84E+02	0.380	0.537	2.636E+01	1.098E+00
94940.47	2.11E+01	1.84E+02	1.84E+02	0.380	0.537	2.637E+01	1.099E+00
94978.22	2.11E+01	1.84E+02	1.84E+02	0.380	0.537	2.638E+01	1.099E+00
95016.47	2.11E+01	1.84E+02	1.84E+02	0.380	0.537	2.639E+01	1.100E+00
95054.09	2.11E+01	1.84E+02	1.84E+02	0.380	0.537	2.640E+01	1.100E+00
95092.09	2.10E+01	1.84E+02	1.84E+02	0.380	0.537	2.641E+01	1.101E+00
95129.72	2.10E+01	1.84E+02	1.84E+02	0.380	0.537	2.642E+01	1.101E+00
95167.34	2.10E+01	1.84E+02	1.84E+02	0.380	0.537	2.644E+01	1.101E+00
95204.97	2.10E+01	1.84E+02	1.84E+02	0.380	0.537	2.645E+01	1.102E+00
95242.97	2.10E+01	1.84E+02	1.84E+02	0.380	0.537	2.646E+01	1.102E+00
95280.78	2.10E+01	1.84E+02	1.84E+02	0.380	0.537	2.647E+01	1.103E+00
95318.28	2.10E+01	1.84E+02	1.84E+02	0.380	0.537	2.648E+01	1.103E+00
95355.78	2.10E+01	1.84E+02	1.84E+02	0.380	0.537	2.649E+01	1.104E+00
95393.66	2.10E+01	1.84E+02	1.84E+02	0.380	0.537	2.650E+01	1.104E+00
95432.16	2.10E+01	1.84E+02	1.84E+02	0.380	0.537	2.651E+01	1.105E+00
95470.53	2.10E+01	1.84E+02	1.84E+02	0.380	0.537	2.652E+01	1.105E+00
95508.41	2.10E+01	1.84E+02	1.84E+02	0.379	0.536	2.653E+01	1.105E+00
95546.03	2.10E+01	1.84E+02	1.84E+02	0.379	0.536	2.654E+01	1.106E+00
95584.28	2.10E+01	1.84E+02	1.84E+02	0.379	0.536	2.655E+01	1.106E+00
95622.53	2.10E+01	1.84E+02	1.84E+02	0.379	0.536	2.656E+01	1.107E+00
95660.53	2.10E+01	1.84E+02	1.84E+02	0.379	0.536	2.657E+01	1.107E+00
95698.16	2.10E+01	1.84E+02	1.84E+02	0.379	0.536	2.658E+01	1.108E+00
95735.66	2.10E+01	1.84E+02	1.84E+02	0.379	0.536	2.659E+01	1.108E+00
95773.66	2.10E+01	1.84E+02	1.84E+02	0.379	0.536	2.660E+01	1.108E+00
95811.53	2.10E+01	1.84E+02	1.84E+02	0.379	0.536	2.661E+01	1.109E+00
95849.28	2.10E+01	1.84E+02	1.84E+02	0.379	0.536	2.662E+01	1.109E+00
95886.72	2.10E+01	1.84E+02	1.84E+02	0.379	0.536	2.664E+01	1.110E+00
95924.22	2.10E+01	1.84E+02	1.84E+02	0.379	0.536	2.665E+01	1.110E+00
95962.22	2.10E+01	1.84E+02	1.84E+02	0.379	0.536	2.666E+01	1.111E+00
96000.22	2.10E+01	1.83E+02	1.84E+02	0.379	0.536	2.667E+01	1.111E+00

TIME	DW PRESS (PSIA)	DW TEMP (F)	SP TEMP (F)	PC Leak Fraction of Design Basis	MSIV Leak Fraction of Design Basis	Time (hours)	Time (days)
96038.47	2.10E+01	1.83E+02	1.84E+02	0.379	0.536	2.668E+01	1.112E+00
96076.72	2.10E+01	1.83E+02	1.84E+02	0.379	0.536	2.669E+01	1.112E+00
96114.59	2.10E+01	1.83E+02	1.84E+02	0.379	0.536	2.670E+01	1.112E+00
96152.34	2.10E+01	1.83E+02	1.84E+02	0.379	0.536	2.671E+01	1.113E+00
96190.09	2.10E+01	1.83E+02	1.84E+02	0.379	0.536	2.672E+01	1.113E+00
96227.59	2.10E+01	1.83E+02	1.84E+02	0.378	0.535	2.673E+01	1.114E+00
96265.59	2.10E+01	1.83E+02	1.84E+02	0.378	0.535	2.674E+01	1.114E+00
96303.09	2.10E+01	1.83E+02	1.84E+02	0.378	0.535	2.675E+01	1.115E+00
96340.59	2.10E+01	1.83E+02	1.84E+02	0.378	0.535	2.676E+01	1.115E+00
96379.72	2.10E+01	1.83E+02	1.84E+02	0.378	0.535	2.677E+01	1.116E+00
96417.34	2.10E+01	1.83E+02	1.84E+02	0.378	0.535	2.678E+01	1.116E+00
96455.34	2.10E+01	1.83E+02	1.84E+02	0.378	0.535	2.679E+01	1.116E+00
96492.97	2.10E+01	1.83E+02	1.84E+02	0.378	0.535	2.680E+01	1.117E+00
96530.66	2.10E+01	1.83E+02	1.84E+02	0.378	0.535	2.681E+01	1.117E+00
96569.03	2.10E+01	1.83E+02	1.84E+02	0.378	0.535	2.682E+01	1.118E+00
96606.91	2.10E+01	1.83E+02	1.84E+02	0.378	0.535	2.684E+01	1.118E+00
96644.41	2.10E+01	1.83E+02	1.84E+02	0.378	0.535	2.685E+01	1.119E+00
96682.03	2.10E+01	1.83E+02	1.84E+02	0.378	0.535	2.686E+01	1.119E+00
96719.53	2.10E+01	1.83E+02	1.84E+02	0.378	0.535	2.687E+01	1.119E+00
96757.16	2.10E+01	1.83E+02	1.84E+02	0.378	0.535	2.688E+01	1.120E+00
96795.28	2.10E+01	1.83E+02	1.84E+02	0.378	0.535	2.689E+01	1.120E+00
96832.91	2.10E+01	1.83E+02	1.84E+02	0.378	0.535	2.690E+01	1.121E+00
96870.66	2.10E+01	1.83E+02	1.84E+02	0.378	0.534	2.691E+01	1.121E+00
96908.16	2.10E+01	1.83E+02	1.84E+02	0.378	0.534	2.692E+01	1.122E+00
96946.28	2.10E+01	1.83E+02	1.84E+02	0.378	0.534	2.693E+01	1.122E+00
96984.78	2.10E+01	1.83E+02	1.84E+02	0.378	0.534	2.694E+01	1.123E+00
97023.78	2.10E+01	1.83E+02	1.84E+02	0.377	0.534	2.695E+01	1.123E+00
97061.91	2.10E+01	1.83E+02	1.84E+02	0.377	0.534	2.696E+01	1.123E+00
97099.78	2.10E+01	1.83E+02	1.84E+02	0.377	0.534	2.697E+01	1.124E+00
97138.03	2.10E+01	1.83E+02	1.84E+02	0.377	0.534	2.698E+01	1.124E+00
97175.34	2.10E+01	1.83E+02	1.84E+02	0.378	0.534	2.699E+01	1.125E+00
97212.84	2.10E+01	1.83E+02	1.84E+02	0.377	0.534	2.700E+01	1.125E+00
97250.34	2.10E+01	1.83E+02	1.84E+02	0.377	0.534	2.701E+01	1.126E+00
97288.47	2.10E+01	1.83E+02	1.84E+02	0.377	0.534	2.702E+01	1.126E+00
97325.97	2.10E+01	1.83E+02	1.84E+02	0.377	0.534	2.703E+01	1.126E+00
97363.72	2.10E+01	1.83E+02	1.84E+02	0.377	0.534	2.705E+01	1.127E+00
97402.84	2.10E+01	1.83E+02	1.84E+02	0.377	0.534	2.706E+01	1.127E+00
97440.72	2.10E+01	1.83E+02	1.84E+02	0.377	0.533	2.707E+01	1.128E+00
97478.47	2.10E+01	1.83E+02	1.84E+02	0.377	0.533	2.708E+01	1.128E+00
97516.34	2.10E+01	1.83E+02	1.84E+02	0.377	0.533	2.709E+01	1.129E+00
97554.72	2.10E+01	1.83E+02	1.84E+02	0.377	0.533	2.710E+01	1.129E+00
97593.72	2.10E+01	1.83E+02	1.84E+02	0.377	0.533	2.711E+01	1.130E+00
97631.72	2.10E+01	1.83E+02	1.84E+02	0.377	0.533	2.712E+01	1.130E+00
97669.47	2.10E+01	1.83E+02	1.84E+02	0.377	0.533	2.713E+01	1.130E+00
97706.97	2.10E+01	1.83E+02	1.84E+02	0.377	0.533	2.714E+01	1.131E+00
97744.59	2.10E+01	1.83E+02	1.84E+02	0.377	0.533	2.715E+01	1.131E+00
97782.66	2.10E+01	1.83E+02	1.84E+02	0.377	0.533	2.716E+01	1.132E+00
97820.16	2.10E+01	1.83E+02	1.84E+02	0.377	0.533	2.717E+01	1.132E+00
97858.53	2.10E+01	1.83E+02	1.84E+02	0.377	0.533	2.718E+01	1.133E+00
97896.03	2.10E+01	1.83E+02	1.84E+02	0.377	0.533	2.719E+01	1.133E+00
97935.03	2.10E+01	1.83E+02	1.84E+02	0.377	0.533	2.720E+01	1.134E+00
97972.53	2.10E+01	1.83E+02	1.83E+02	0.377	0.533	2.721E+01	1.134E+00

TIME	DW PRESS (PSIA)	DW TEMP (F)	SP TEMP (F)	PC Leak Fraction of Design Basis	MSIV Leak Fraction of Design Basis	Time (hours)	Time (days)
98010.28	2.09E+01	1.83E+02	1.83E+02	0.377	0.533	2.723E+01	1.134E+00
98048.28	2.09E+01	1.83E+02	1.83E+02	0.377	0.533	2.724E+01	1.135E+00
98087.41	2.09E+01	1.83E+02	1.83E+02	0.377	0.533	2.725E+01	1.135E+00
98125.53	2.09E+01	1.83E+02	1.83E+02	0.377	0.533	2.726E+01	1.136E+00
98163.28	2.09E+01	1.83E+02	1.83E+02	0.377	0.533	2.727E+01	1.136E+00
98201.16	2.09E+01	1.83E+02	1.83E+02	0.377	0.533	2.728E+01	1.137E+00
98238.78	2.09E+01	1.83E+02	1.83E+02	0.376	0.532	2.729E+01	1.137E+00
98278.66	2.09E+01	1.83E+02	1.83E+02	0.376	0.532	2.730E+01	1.137E+00
98316.41	2.09E+01	1.83E+02	1.83E+02	0.376	0.532	2.731E+01	1.138E+00
98354.03	2.09E+01	1.83E+02	1.83E+02	0.376	0.532	2.732E+01	1.138E+00
98392.03	2.09E+01	1.83E+02	1.83E+02	0.376	0.532	2.733E+01	1.139E+00
98429.72	2.09E+01	1.83E+02	1.83E+02	0.376	0.532	2.734E+01	1.139E+00
98467.22	2.09E+01	1.83E+02	1.83E+02	0.376	0.532	2.735E+01	1.140E+00
98505.22	2.09E+01	1.83E+02	1.83E+02	0.376	0.532	2.736E+01	1.140E+00
98544.09	2.09E+01	1.83E+02	1.83E+02	0.376	0.532	2.737E+01	1.141E+00
98582.09	2.09E+01	1.83E+02	1.83E+02	0.376	0.532	2.738E+01	1.141E+00
98620.34	2.09E+01	1.83E+02	1.83E+02	0.376	0.532	2.739E+01	1.141E+00
98658.34	2.09E+01	1.83E+02	1.83E+02	0.376	0.532	2.741E+01	1.142E+00
98696.47	2.09E+01	1.83E+02	1.83E+02	0.376	0.532	2.742E+01	1.142E+00
98734.22	2.09E+01	1.83E+02	1.83E+02	0.376	0.532	2.743E+01	1.143E+00
98772.47	2.09E+01	1.83E+02	1.83E+02	0.376	0.532	2.744E+01	1.143E+00
98810.47	2.09E+01	1.83E+02	1.83E+02	0.376	0.531	2.745E+01	1.144E+00
98848.47	2.09E+01	1.83E+02	1.83E+02	0.376	0.531	2.746E+01	1.144E+00
98886.16	2.09E+01	1.83E+02	1.83E+02	0.376	0.531	2.747E+01	1.145E+00
98924.34	2.09E+01	1.83E+02	1.83E+02	0.376	0.531	2.748E+01	1.145E+00
98961.97	2.09E+01	1.83E+02	1.83E+02	0.376	0.531	2.749E+01	1.145E+00
98999.97	2.09E+01	1.83E+02	1.83E+02	0.376	0.531	2.750E+01	1.146E+00
99037.72	2.09E+01	1.83E+02	1.83E+02	0.375	0.531	2.751E+01	1.146E+00
99075.28	2.09E+01	1.83E+02	1.83E+02	0.376	0.531	2.752E+01	1.147E+00
99113.66	2.09E+01	1.83E+02	1.83E+02	0.376	0.531	2.753E+01	1.147E+00
99151.66	2.09E+01	1.83E+02	1.83E+02	0.376	0.531	2.754E+01	1.148E+00
99189.16	2.09E+01	1.83E+02	1.83E+02	0.376	0.531	2.755E+01	1.148E+00
99227.41	2.09E+01	1.83E+02	1.83E+02	0.375	0.531	2.756E+01	1.148E+00
99265.78	2.09E+01	1.83E+02	1.83E+02	0.375	0.531	2.757E+01	1.149E+00
99304.16	2.09E+01	1.83E+02	1.83E+02	0.375	0.531	2.758E+01	1.149E+00
99341.78	2.09E+01	1.83E+02	1.83E+02	0.375	0.531	2.759E+01	1.150E+00
99379.91	2.09E+01	1.83E+02	1.83E+02	0.375	0.531	2.761E+01	1.150E+00
99417.53	2.09E+01	1.83E+02	1.83E+02	0.375	0.531	2.762E+01	1.151E+00
99455.16	2.09E+01	1.83E+02	1.83E+02	0.375	0.530	2.763E+01	1.151E+00
99493.53	2.09E+01	1.83E+02	1.83E+02	0.375	0.530	2.764E+01	1.152E+00
99531.16	2.09E+01	1.83E+02	1.83E+02	0.375	0.530	2.765E+01	1.152E+00
99569.41	2.09E+01	1.83E+02	1.83E+02	0.375	0.530	2.766E+01	1.152E+00
99607.16	2.09E+01	1.83E+02	1.83E+02	0.375	0.530	2.767E+01	1.153E+00
99645.53	2.09E+01	1.83E+02	1.83E+02	0.375	0.530	2.768E+01	1.153E+00
99683.28	2.09E+01	1.83E+02	1.83E+02	0.375	0.530	2.769E+01	1.154E+00
99720.84	2.09E+01	1.83E+02	1.83E+02	0.375	0.530	2.770E+01	1.154E+00
99759.22	2.09E+01	1.83E+02	1.83E+02	0.375	0.530	2.771E+01	1.155E+00
99796.84	2.09E+01	1.83E+02	1.83E+02	0.375	0.530	2.772E+01	1.155E+00
99834.72	2.09E+01	1.83E+02	1.83E+02	0.375	0.530	2.773E+01	1.155E+00
99872.47	2.09E+01	1.83E+02	1.83E+02	0.375	0.530	2.774E+01	1.156E+00
99910.09	2.09E+01	1.82E+02	1.83E+02	0.375	0.530	2.775E+01	1.156E+00
99948.34	2.09E+01	1.82E+02	1.83E+02	0.375	0.530	2.776E+01	1.157E+00

TIME	DW PRESS (PSIA)	DW TEMP (F)	SP TEMP (F)	PC Leak Fraction of Design Basis	MSIV Leak Fraction of Design Basis	Time (hours)	Time (days)
99986.59	2.09E+01	1.82E+02	1.83E+02	0.375	0.530	2.777E+01	1.157E+00
100000.1	2.09E+01	1.82E+02	1.83E+02	0.375	0.530	2.778E+01	1.157E+00

Results:

1. Based on Containment Pressure, PC leakage is reduced by at least 50% by 24 hours.
2. Based on Containment Pressure, MSIVs will see pressure exceeding test pressures for only 6.5 minutes at the start of the design basis LOCA, with the peak leak rate estimated at 1.2 time the measured value.
3. Informal test runs suggest that leakage during this period results in negligible dose contributions even if an adjustment were made to extrapolate leakage to what might be expected if MSIVs were tested at the PGS Pa of 44 psig.
4. However, to provide design margin, the MSIV leakages is assumed to be 25% higher than the test acceptance criteria. This margin also allows MSIV Leakage to be stepped down by 50% at 24 hours, rather than the somewhat higher values shown above.

ADDITIONAL ATTACHMENTS TO
10-10-05 Letter: Supplement to Request for LAR Application of AST
Attachment 015 AST – LM-0646 Rev 1 LOCA (3 of 3) Att F.

Assessment of Steam Line Temperatures for Piping Deposition Credit Analysis

Main steam line wall temperatures following a LOCA have not been calculated specifically for LGS. A generic cooldown analysis developed by GE and reported in August 1990 Cline Report (Reference 28) is used. Cooling is considered independent of leakage flow. Only conduction is considered. The function to the right is from Reference 28 and fits the figure below (from Reference 29) and is used for Limerick:

$$T(^{\circ}K) = 299.7 + 265.6 * e^{04.428 * 10^{-6} * t}$$

where
t time, sec.

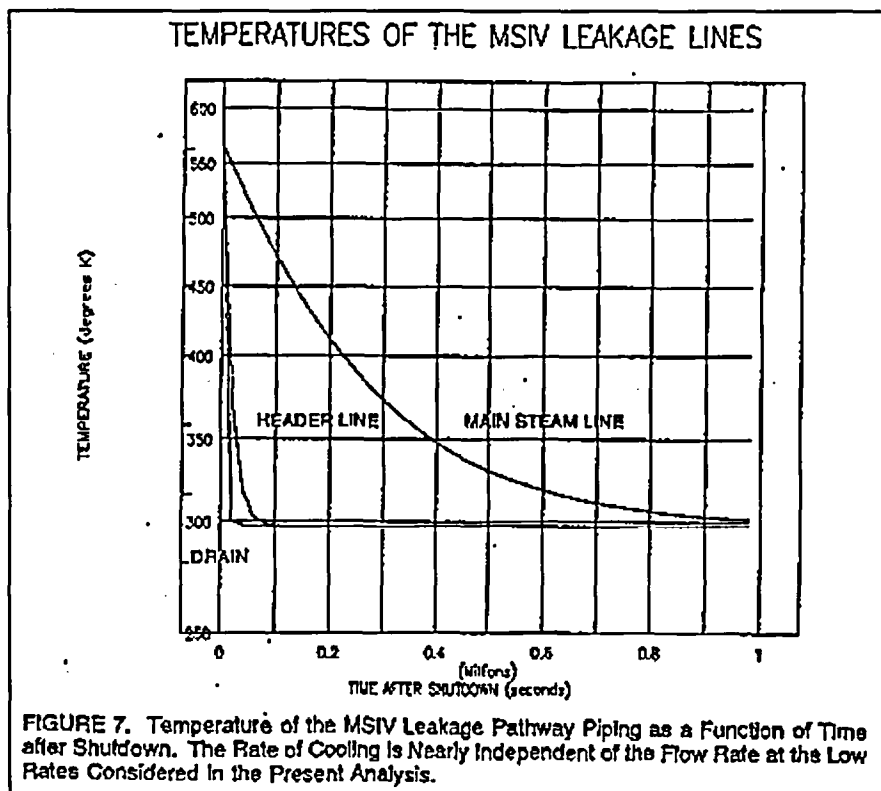


FIGURE 7. Temperature of the MSIV Leakage Pathway Piping as a Function of Time after Shutdown. The Rate of Cooling is Nearly Independent of the Flow Rate at the Low Rates Considered in the Present Analysis.

Time (hrs)	Temperature		Value Used °F
	°K	°F	
0	565.3	557.9	
1	561.1	550.3	550
2	557.0	542.9	
3	552.9	535.5	
4	548.9	528.3	
5	545.0	521.2	
6	541.1	514.3	
7	537.3	507.4	
8	533.5	500.6	
9	529.8	494.0	
10	526.2	487.4	
11	522.6	481.0	
12	519.1	474.6	
13	515.6	468.4	
14	512.2	462.2	
15	508.8	456.2	
16	505.5	450.2	
17	502.3	444.4	
18	499.0	438.6	
19	495.9	432.9	
20	492.8	427.4	
21	489.7	421.9	
22	486.7	416.5	
23	483.8	411.1	∇
24	480.9	405.9	410
48	423.3	302.2	
72	384.0	231.5	∇
96	357.2	183.3	200