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20

LOCKWOOD GREENE
ENGINEERING & CONSTRUCTION

1500 International Drive
864-578-2000
Spartanburg, SC 29303

Transmittal

Sheet 1 of 1

To Lockwood Greene
1500 International Drive
Spartanburg, SC 29303

Attn: Distribution

Date: 30-Mar-04
Job No.: 018511
Job Name: Urenco
Transmittal No: 195

The Following Data was sent via: Various

Code for Lockwood Greene Documents	
A - Approval	B - Bid
B/C - Bid / Construction	C - Construction
D - Design	I - Information
LA - License Application	P - Purchase
PE - Permit	R - Review
RD - Record Drawing	RF - Reference
SAR - SAR	T - Transmittal Only
X - See Comments	

Copies To	Qty.	Copies To	Qty.
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Comments:

Transmitted By: Roxanne Greenleaf
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Document No.	Rev. No.	Description	Code
LI-50-01-RES	01	Data/Information for Environmental Permit	I

U.S. NUCLEAR REGULATORY COMMISSION
In the Matter of LOUISIANA ENERGY SERVICES, LP
Docket No. 70-3103-ML Official Exhibit No. NIRS/PC 32
OFFERED by: Applicant/Licensee (Intervenor) NIRS/PC
NRC Staff Other
IDENTIFIED on 2/7/05 Witness/Panel G. Rice
Action Taken: (ADMITTED) REJECTED WITHDRAWN
Reporter/Clerk Bethany Engel

LES-00768

Template = SECY-028

SECY-02

LOCKWOOD GREENE
ENGINEERING & CONSTRUCTION

Client: LES

Project Name: NATIONAL ENRICHMENT FACILITY

Lockwood Greene Project Number: 018511.85

Department: MECHANICAL

Document Name: DATA/INFORMATION FOR ENVIRONMENTAL PERMIT

Bldg./Area-System-Equip. Number: All

Document Number: L4-50-01-RES

Rev.	Date	Description	Prepared	Checked	Approved
0	05-MAR-2004	Issued for Information	John Tramel	Chris Funk	Chris Funk
1	29-MAR-2004	Issued for Information	Chris Funk	Floyd Sauvé	Chris Funk

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2.2.2. Information needed for NDPES Form 2F as listed below:

a.	The latitude and longitude of the stormwater basin outfall location	See Figure 3.4-1, Figure 1 – NEF General Site Area Map
b.	A site map showing the topography	See Figure 3.4-1, Figure 1 – NEF General Site Area Map
b.i	The drainage area of the stormwater outfall	Included graphically in Figure C00002.dwg, Figure 2 – NEF Site Map.
b.ii	Paved areas and building within the drainage area of each stormwater outfall, each known past or present areas used for outdoor storage or disposal of significant materials, each existing structural control measure to reduce pollutants in storm water runoff, materials loading and access areas, areas where pesticides, herbicides, soil conditioners and fertilizers are applied.	Included graphically in Figure C00002.dwg, Figure 2 – NEF Site Map, except areas where pesticides, herbicides, soil conditioners and fertilizers are applied include but are not limited to termite treatment for under the slabs of the buildings, herbicides for joints in concrete (UBC pad), fertilizer for xeroscaped areas.
b.iii	Each of its hazardous waste treatment, storage or disposal facilities (including each area not required to have a RCRA permit which is used for accumulating hazardous wastes for less than 90 days). Assume that the only four buildings that store or accumulate hazardous materials are: the Separations Building; the Centrifuge Assembly Building; the Technical Services Building and the Central Utilities Building (anywhere within these buildings).	Included in Figure C00002.dwg, Figure 2 – NEF Site Map.
c.	For each outfall (stormwater basin only), provide an estimate of the area drained by the outfall that is covered by impervious surfaces, e.g., paved areas, building roofs, parking lots and roadways. Include an estimate of the total area (including all impervious and pervious areas) drained by each outfall.	Included graphically in Figure C00002.dwg, Figure 2 – NEF Site Map.
d.	A narrative description of the location, manner and frequency in which pesticides, herbicides, soil conditioners, and fertilizers are applied	Areas where pesticides, herbicides, soil conditioners and fertilizers are applied include but are not limited to termite treatment for under the slabs of the buildings, herbicides for joints in concrete (UBC pad), and fertilizer for xeroscaped areas

2.3. Groundwater Discharge Permit as listed below:

1.	Map 1 (GW 2): A local road map clearly defining the location of the facility and the route to get to the facility (use ER Figure 2.1-1)	See drawing with file name New Mexico Figures.dwg, NEF Road Map, NM Groundwater Discharge Permit.

2.	Latitude and longitude of all surface discharge locations (all three basins and septic system)	Per e-mail from Carroll Walker to George Harper, dated 12-March-2004: UBC basin: Lat. 32d 26' 2" - Long. 103d 5' 3" Site SW basin: Lat. 32d 25' 51" - Long. 103d 4' 41" Treated Effluent Basin: Lat. 32d 26' 2" - Long. 103d 4' 55" Tank 1: Lat. 32d 25' 57" - Long. 103d 4' 36" Tank 2: Lat. 32d 26' 11" - Long. 103d 5' 6" Tank 3: Lat. 32d 26' 10" - Long. 103d 4' 49" Tank 4: Lat. 32d 25' 59" - Long. 103d 4' 46" Tank 5: Lat. 32d 26' 2" - Long. 103d 4' 39" Tank 6: Lat. 32d 25' 52" - Long. 103d 4' 29"
3.	Basis of Design for the Liquid Effluent Collection and Treatment System and all liquid discharges to basins. Peak design discharge rate (the maximum volume of wastewater the system was designed to treat on a daily basis. This is generally based on the capacity of the different components of the system – size of the basins, volume of tanks, etc.) in gallons per day (all three basins and septic system)	During a 23-March-04 meeting at LG attended by C. Walker, C. Funk, G. Harper, & E. Mahr, the following inputs were agreed to for the basis of the discharge calculations: Rainfall: 6 in. per day, peak 14 in. per year, avg Areas: TEEB 1.1 acres UBC 43 acres (23-pad + 20-other) Stormwater 95.6 acres (See L4-53-50-BOD, L4-53-51-BOD, & L4-53-55-CALC for details.)
4.	Average discharge rate on an annual basis in gallons per day of actual flow (all three basins and septic system)	See BODs listed above and email with spreadsheet from Carroll Walker to George Harper, dated 2-March-2004, concerning septic system.
5.	The methods used to meter or calculate discharge volume (all three basins and septic system). Also include boiler blow-down water.	See BODs listed above.
6.	The Total Dissolved Solids influent and effluent concentrations and concentration information about any other contaminants, e.g., chemicals used in the algaecides, biocides and corrosion inhibitors, that are added to the cooling tower blow-down water and the boiler blow-down water. See list of regulated of chemicals in 20.2.6.7 and 20.6.2.3103. For the Liquid Effluent Collection and Treatment System we will need: Basis of design Liquid Effluent Collection &Treatment System process flow diagram	See L4-53-26-BOD and Figure 0000-R-1001.dwg, Block Flow Diagram, Liquid Effluent Collection and Treatment System. Typical blow-down concentrations may be as follows: Phosphate = 4-12 ppm Epoxy carboxylate polymer = 4-8 ppm Hydroxyl sulfurate polymer = 5-10 ppm Copper inhibitor HRA = 2-4 ppm Typical chemicals used in cooling tower water treatment are as follows: 96% Sulfuric Acid Continuum AEC3109 Liquid Bromine
7.	The total volumetric capacities of tanks, basins, leachfields, and any other storage units. Area must be provided for all land application areas (if any), leachfields or other area features.	See L4-53-51-BOD, L4-53-56-Calc, and L4-53-26-BOD.

8.	Describe in detail (provide latest narratives) the operational plan, including all conveyance, collection, treatment, distribution and disposal systems. Possibly in SAR.	See BOD L4-53-51-BOD and L4-53-26-BOD.
9.	Map 2 (GW 4): Detailed Site Map. Indicate site monitoring locations on a facility map (11" x 14"). (start with marked-up ER Figure 6.1-2 and remove TLD and air sampling locations, as well as wind rose sectors) In addition, provide the following:	See Figure 6.1-2.dwg, NEF Detailed Site Map, NM Groundwater Discharge Permit.
a.	Locations of flow meter monitors, monitoring sites (water, soil vegetation, etc.) and site monitoring wells;	See Figure 6.1-2.dwg, NEF Detailed Site Map, NM Groundwater Discharge Permit (no flow monitors are included)
b.	Latitude and longitude of these monitoring sites, flow monitors and monitoring wells;	See Figure 6.1-2.dwg, NEF Detailed Site Map, NM Groundwater Discharge Permit.
c.	Northing, Easting and elevation of these monitoring sites, flow monitors and monitoring wells (to the nearest 1/100 foot)	See Figure 6.1-2.dwg, NEF Detailed Site Map, NM Groundwater Discharge Permit.
10.	Map 3 (GW 3): Facilities buildings (use marked up ER Figure 2.1-4)	See Figure C00002.dwg, Figure 2 – NEF Site Map.
11.	Maps 4 (GW 1): Area Map that is a 7.5 minute topographical quadrangle map, Use marked-up ER Figure 3.4-1 and transfer the one USGS observation well site location (from ER Figure 4.4-7) onto the USGA topographic map. Identify the location of all water supply wells, injection wells, seeps, springs, bodies of water, and watercourses within one mile of the outside perimeter of the discharge site.	See Figure 3.4-1.dwg, NEF Area Map, Groundwater Discharge Permit
12.	Map 5 (GW 5): A USDA National Resources Conservation Service (NRCS) soil survey map and descriptive information for soil(s) associated with the discharge site. Use marked-up ER Figure 3.3-6)	See drawing file MSWord Figures.dwg, NEF Site Soil Map, NM Groundwater Discharge Permit.
13.	Verify that boiler blowdown is discharged to the UBC Storage Pad Stormwater Retention Basin	The boiler blow-down discharges to the UBC Storage Stormwater Retention Basin
14.	Chemistry of incoming and outgoing potable fresh water supply(s) and effluents to the UBC Storage Pad Stormwater Retention Basin and the Treated Effluent Evaporative Basin. As a minimum we need the total dissolved solids (TDS).	The water analysis for the six wells that serve the city of Eunice is in attachment D. LG recommends using worst case TDS from attachment D with 4 cycles of concentration for total TDS to evaporative basin.

2.4 Air Permit

[redacted]

Remainder of Document Redacted
Except for Attachments D and L

9. REGULATORY GUIDANCE

For Codes and Standards refer to Lockwood Greene's L4-53-04-LIST, Project Regulatory Requirements & Guidance Documents.

10. REFERENCES

L4-50-01-HVAC – Confinement Ventilation Code Summary
L4-50-02-HVAC – Building HVAC Systems Summary
L4-50-05-NAR – GEVS - Technical Services Building Narrative
L4-50-06-NAR – GEVS - Separation/Blend & Sample Narrative
L4-53-26-BOD – Liquid Effluent Collections and Treatment System - BOD
L4-53-50-BOD- UBC Storage Storm Water Retention Basin - BOD
L4-53-51-BOD- Treated Effluent Evaporative Basin - BOD
1500-H-1001 – Flow Diagram, TSB Contamination Workshops HVAC System
1300-H-1003 – Flow Diagram, Centrifuge Storage & Misc. Areas (CAB) HVAC System
1600A4000 – Central Utilities Building Sections
0000R1002 - Attachment A, NEF Process Block Diagram, NM Air Permit.
0000-R-1001 - Block Flow Diagram, Liquid Effluent Collection and Treatment System.

11. ATTACHMENTS

Attachment A: Boiler Emissions Data (4 Pages)

Attachment B: Boiler Stack Data (1 Page)

Attachment C: Diesel Generator Data (11 Pages)

Attachment D: Eunice Water Quality (6 Pages)

Attachment E: HXV Cooling Tower Brochure (8 Pages)

Attachment F: Boiler Ratings (1 Page)

Attachment G: Boiler Dimensions (1 Page)

Attachment H: Fuel Tank Description (13 Pages)

Attachment I: ER Boiler Emissions (2 Pages)

Attachment J: Fuel Tank Quote (4 Pages)

Attachment K: Number 2 Fuel Oil MSDS (7 Pages)

Attachment L: Annual Stormwater Discharge Calculation (2 Pages)

(D-2/6)

Soil Water and Air Testing Lab
New Mexico State University
BOX 30003
Las Cruces, NM 88003
(505)646-4422

Report #9706301034

Date: 06/30/97

ANALYTICAL REPORT

RECEIVED
JUL - 2 1997
HOBBS OFFICE

To: City Of Eunice 394-2576
Attn: Larry Haase
P.O. Box 147
Eunice, NM 88231
Purchase Order #

Below are the results for Secondary Group Analyses. (MDL=Method detection limit)

Sample I.D. AA79177

Sample Description: Well #6 Hobbs North Src. #8
Sample collection date: 03/05/97 Sample collection time: 10:15
Submittal date: 03/06/97 Submittal time: 15:44
WSS# 21513 Request ID No. U028643 Collector: MYRA MEYERS
Sample Purpose: Monitoring Sampling Information: Grab

Element	Method	Result	Units	MDL	Date of Analysis	Analyst
Calcium by ICP-	EPA200.7	77	mg/L	0.1	03/07/97	MBL
Magnesium by ICP-	EPA 200.7	10.3	mg/L	0.1	03/07/97	MBL
Sodium by ICP-	EPA 200.7	35.2	mg/L	0.1	03/07/97	MBL
Potassium by ICP-	EPA 200.7	4.0	mg/L	0.1	03/24/97	MBL
Hardness (as CaCO3)	EPA 130.2	234	mg/L	1	06/28/97	ALB
Alkalinity (as CaCO3)	EPA 310.1	168.0	mg/L	0.1	03/20/97	BJH
Carbonate alkalinity	EPA 310.1	0.0	mg/L	1.0	03/07/97	BJH
Bicarbonate alkalinity	EPA 310.1	205.0	mg/L	1.0	03/07/97	BJH
Chloride by Autoanalyzer	EPA 325.2	36.0	mg/L	0.5	03/20/97	BJH
Sulfate	EPA 375.4	70	mg/L	2	03/18/97	BJH
Electrical Conductivity	EPA 120.1	571	micromhos/cm	1	03/07/97	BJH
pH of water	EPA 150.1	7.25			03/07/97	BJH
Total Dissolved Solids	StdMtd 2540C	365	mg/L	1	03/26/97	BJH
Platinum-Cobalt color-	EPA 110.2	0.5		5	03/07/97	SLS
Odor by dilution-	EPA 140.1	Not detected		1	03/07/97	SLS
Turbidity by nephelometric-	EPA 180.1	3.70	NTU	0.01	03/07/97	SLS
Surfactants by MBAS-	EPA 425.1	Not detected	mg/L	0.025	03/07/97	SLS

Sample I.D. AA79178

Sample Description: Well #5 Hobbs North Src. #7
Sample collection date: 03/05/97 Sample collection time: 10:00
Submittal date: 03/06/97 Submittal time: 15:44
WSS# 21513 Request ID No. U028642 Collector: MYRA MEYERS
Sample Purpose: Monitoring Sampling Information: Grab

Element	Method	Result	Units	MDL	Date of Analysis	Analyst
Calcium by ICP-	EPA200.7	82	mg/L	0.1	03/07/97	MBL
Magnesium by ICP-	EPA 200.7	11.3	mg/L	0.1	03/07/97	MBL
Sodium by ICP-	EPA 200.7	40.6	mg/L	0.1	03/07/97	MBL
Potassium by ICP-	EPA 200.7	4.4	mg/L	0.1	03/24/97	MBL
Hardness (as CaCO3)	EPA 130.2	251	mg/L	1	06/28/97	ALB
Alkalinity (as CaCO3)	EPA 310.1	179.0	mg/L	0.1	03/20/97	BJH
Carbonate alkalinity	EPA 310.1	0.0	mg/L	1.0	03/07/97	BJH
Bicarbonate alkalinity	EPA 310.1	218.4	mg/L	1.0	03/07/97	BJH
Chloride by Autoanalyzer	EPA 325.2	57.9	mg/L	0.5	03/20/97	BJH
Sulfate	EPA 375.4	66	mg/L	2	03/18/97	BJH
Electrical Conductivity	EPA 120.1	703	micromhos/cm	1	03/07/97	BJH

(D-3/6)

Report #9701230104

Sample I.D. AA79178

Sample Description: Well #5 Hobbs North Src. #7
Sample collection date: 03/05/97 Sample collection time: 10:00
Submittal date: 03/06/97 Submittal time: 15:44
WSS# 21513 Request ID No. U028642 Collector: MYRA MEYERS
Sample Purpose: Monitoring Sampling Information: Grab

Element	Method	Result	Units	MDL	Date of Analysis	Analyst
pH of water	EPA 150.1	7.18			03/07/97	BJH
Total Dissolved Solids	StdMtd 2540C	407	mg/L	1	03/26/97	BJH
Platinum-Cobalt color-	EPA 110.2	Not detected		5	03/07/97	SLS
Odor by dilution-	EPA 140.1	Not detected		1	03/07/97	SLS
Turbidity by nephelometer-	EPA 180.1	0.80	NTU	0.01	03/07/97	SLS
Surfactants by MBAS-	EPA 425.1	Not detected	mg/L	0.025	03/07/97	SLS

Sample I.D. AA79179

Sample Description: Well #4 Hobbs South Src. #6
Sample collection date: 03/05/97 Sample collection time: 09:20
Submittal date: 03/06/97 Submittal time: 15:44
WSS# 21513 Request ID No. U028641 Collector: MYRA MEYERS
Sample Purpose: Monitoring Sampling Information: Grab

Element	Method	Result	Units	MDL	Date of Analysis	Analyst
Calcium by ICP-	EPA200.7	72.3	mg/L	0.1	03/07/97	MBL
Magnesium by ICP-	EPA 200.7	10.4	mg/L	0.1	03/07/97	MBL
Sodium by ICP-	EPA 200.7	43.7	mg/L	0.1	03/07/97	MBL
Potassium by ICP-	EPA 200.7	4.7	mg/L	0.1	03/24/97	MBL
Hardness (as CaCO3)	EPA 130.2	223	mg/L	1	06/28/97	ALB
Alkalinity (as CaCO3)	EPA 310.1	184.9	mg/L	0.1	03/20/97	BJH
Carbonate alkalinity	EPA 310.1	0.0	mg/L	1.0	03/07/97	BJH
Bicarbonate alkalinity	EPA 310.1	225.7	mg/L	1.0	03/07/97	BJH
Chloride by Autoanalyzer	EPA 325.2	37.1	mg/L	0.5	03/20/97	BJH
Sulfate	EPA 375.4	68	mg/L	2	03/18/97	BJH
Electrical Conductivity	EPA 120.1	656	micromhos/cm	1	03/07/97	BJH
pH of water	EPA 150.1	7.21			03/07/97	BJH
Total Dissolved Solids	StdMtd 2540C	356	mg/L	1	03/26/97	BJH
Platinum-Cobalt color-	EPA 110.2	Not detected		5	03/07/97	SLS
Odor by dilution-	EPA 140.1	Not detected		1	03/07/97	SLS

Sample I.D. AA79179

Sample Description: Well #4 Hobbs South Src. #6
Sample collection date: 03/05/97 Sample collection time: 09:20
Submittal date: 03/06/97 Submittal time: 15:44
WSS# 21513 Request ID No. U028641 Collector: MYRA MEYERS
Sample Purpose: Monitoring Sampling Information: Grab

Element	Method	Result	Units	MDL	Date of Analysis	Analyst
Turbidity by nephelometer-	EPA 180.1	0.51	NTU	0.01	03/07/97	SLS
Surfactants by MBAS-	EPA 425.1	Not detected	mg/L	0.025	03/07/97	SLS

Sample I.D. AA79180

Sample Description: Well #3 Hobbs South Src. #5
Sample collection date: 03/05/97 Sample collection time: 09:10
Submittal date: 03/06/97 Submittal time: 15:44
WSS# 21513 Request ID No. U028640 Collector: MYRA MEYERS
Sample Purpose: Monitoring Sampling Information: Grab

Element	Method	Result	Units	MDL	Date of Analysis	Analyst
Calcium by ICP-	EPA200.7	59.7	mg/L	0.1	03/19/97	MBL
Magnesium by ICP-	EPA 200.7	10.4	mg/L	0.1	03/19/97	MBL
Sodium by ICP-	EPA 200.7	31.5	mg/L	0.1	03/19/97	MBL
Potassium by ICP-	EPA 200.7	4.04	mg/L	0.1	03/19/97	MBL
Hardness (as CaCO3)	EPA 130.2	192	mg/L	1	06/28/97	ALB
Alkalinity (as CaCO3)	EPA 310.1	178.5	mg/L	0.1	03/20/97	BJH
Carbonate alkalinity	EPA 310.1	0.0	mg/L	1.0	03/07/97	BJH
Bicarbonate alkalinity	EPA 310.1	217.8	mg/L	1.0	03/07/97	BJH
Chloride by Autoanalyzer	EPA 325.2	29.2	mg/L	0.5	03/20/97	BJH
Sulfate	EPA 375.4	55	mg/L	2	03/18/97	BJH
Electrical Conductivity	EPA 120.1	544	micromhos/cm	1	03/07/97	BJH
pH of water	EPA 150.1	7.34			03/07/97	BJH
Total Dissolved Solids	StdMtd 2540C	302	mg/L	1	03/26/97	BJH
Platinum-Cobalt color-	EPA 110.2	0.5		5	03/07/97	SLS
Odor by dilution-	EPA 140.1	Not detected		1	03/07/97	SLS
Turbidity by nephelometer-	EPA 180.1	0.58	NTU	0.01	03/07/97	SLS
Surfactants by MBAS-	EPA 425.1	Not detected	mg/L	0.025	03/07/97	SLS

Sample I.D. AA79181

Sample Description: Well #2 Hobbs North Src. #3
Sample collection date: 03/05/97 Sample collection time: 09:55
Submittal date: 03/06/97 Submittal time: 15:44
WSS# 21513 Request ID No. U028639 Collector: MYRA MEYERS
Sample Purpose: Monitoring Sampling Information: Grab

Element	Method	Result	Units	MDL	Date of Analysis	Analyst
Calcium by ICP-	EPA200.7	113.8	mg/L	0.1	03/19/97	MBL
Magnesium by ICP-	EPA 200.7	13.8	mg/L	0.1	03/19/97	MBL
Sodium by ICP-	EPA 200.7	60.5	mg/L	0.1	03/19/97	MBL
Potassium by ICP-	EPA 200.7	6.5	mg/L	0.1	03/24/97	MBL
Hardness (as CaCO3)	EPA 130.2	341	mg/L	1	06/23/97	ALB
Alkalinity (as CaCO3)	EPA 310.1	224.9	mg/L	0.1	03/20/97	BJH
Carbonate alkalinity	EPA 310.1	0.0	mg/L	1.0	03/07/97	BJH
Bicarbonate alkalinity	EPA 310.1	274.5	mg/L	1.0	03/07/97	BJH

(0-5/6)

Report #970630103x1

Sample I.D. AA79181

Sample Description: Well #2 Hobbs North Src. #3
Sample collection date: 03/05/97 Sample collection time: 09:55
Submittal date: 03/06/97 Submittal time: 15:44
WSS# 21513 Request ID No. U028639 Collector: MYRA MEYERS
Sample Purpose: Monitoring Sampling Information: Grab

Element	Method	Result	Units	MDL	Date of Analysis	Analyst
Chloride by Autoanalyzer	EPA 325.2	141.9	mg/L	2.5	03/20/97	BJH
Sulfate	EPA 375.4	80	mg/L	2	03/18/97	BJH
Electrical Conductivity	EPA 120.1	1060	micromhos/cm	1	03/07/97	BJH
pH of water	EPA 150.1	7.02			03/07/97	BJH
Total Dissolved Solids	StdMtd 2540C	586	mg/L	1	03/26/97	BJH
Platinum-Cobalt color-	EPA 110.2	0.5		5	03/07/97	SLS
Odor by dilution-	EPA 140.1	Not detected		1	03/07/97	SLS
Turbidity by nephelometer-	EPA 180.1	0.08	NTU	0.01	03/07/97	SLS
Surfactants by MBAS-	EPA 425.1	2.89e-02	mg/L	0.025	03/07/97	SLS

Sample I.D. AA79182

Sample Description: Well #1 Hobbs North Src. #1
Sample collection date: 03/05/97 Sample collection time: 09:50
Submittal date: 03/06/97 Submittal time: 15:44
WSS# 21513 Request ID No. U028638 Collector: MYRA MEYERS
Sample Purpose: Monitoring Sampling Information: Grab

Element	Method	Result	Units	MDL	Date of Analysis	Analyst
Calcium by ICP-	EPA200.7	78	mg/L	0.1	03/19/97	MBL
Magnesium by ICP-	EPA 200.7	12.8	mg/L	0.1	03/19/97	MBL
Sodium by ICP-	EPA 200.7	43.8	mg/L	0.1	03/19/97	MBL
Potassium by ICP-	EPA 200.7	5.2	mg/L	0.1	03/24/97	MBL
Hardness (as CaCO3)	EPA 130.2	247	mg/L	1	06/28/97	ALB
Alkalinity (as CaCO3)	EPA 310.1	183.5	mg/L	0.1	03/20/97	BJH
Carbonate alkalinity	EPA 310.1	0.0	mg/L	1.0	03/07/97	BJH
Bicarbonate alkalinity	EPA 310.1	223.9	mg/L	1.0	03/07/97	BJH
Chloride by Autoanalyzer	EPA 325.2	78.3	mg/L	2.5	03/20/97	BJH
Sulfate	EPA 375.4	64	mg/L	2	03/18/97	BJH
Electrical Conductivity	EPA 120.1	767	micromhos/cm	1	03/07/97	BJH
pH of water	EPA 150.1	7.35			03/07/97	BJH
Total Dissolved Solids	StdMtd 2540C	478	mg/L	1	03/26/97	BJH
Platinum-Cobalt color-	EPA 110.2	Not detected		5	03/07/97	SLS
Odor by dilution-	EPA 140.1	Not detected		1	03/07/97	SLS
Turbidity by nephelometer-	EPA 180.1	0.04	NTU	0.01	03/07/97	SLS
Surfactants by MBAS-	EPA 425.1	Not detected	mg/L	0.025	03/07/97	SLS

Results relate only to the items tested. This report shall not be reproduced except in full, without the written approval of the laboratory. This laboratory is accredited by the American Association for Laboratory Accreditation (A2LA) and the results shown in this report have been determined in accordance with the laboratory's terms of accreditation unless stated otherwise in the report. Those tests not presently accredited are noted by a hyphen.

Please advise should you have questions concerning these data.
Respectfully submitted,

Andrew Lee Bristol
Laboratory Manager
(505)646-4622

PRELIMINARY
(to be verified in final design)

ATTACHMENT L (1/2)

National Enrichment Facility
Lea County, New Mexico

Job No.	18511.01
Sheet No.	1 of 2
Date	27-Oct-03
Computed By	D. MICKANEN
Checked By	C. WALKER

Annual Stormwater Discharge

Assumptions:
1. Rainfall data obtained from "Normal Annual Total Precipitation" map, US Dept. of Commerce, "Climatic Atlas of the United States", 1968, map page 43.
2. Site area based on boundary survey for site by Pettigrew and Associates dated 8-26-03.
3. Site consists of deep sandy soils per USDA SCS, "Soil Survey, Lea County, New Mexico, 1974"
4. Assumed factor for runoff losses due to infiltration, evaporation, and transpiration is due to deep sandy soils throughout the site.
5. All annual rain falling on developed site will be stored in site retention/detention basins.

$$Q_{Total}=A_G \cdot P_A$$

$$Q_{Offsite}=(A_G-A_1-A_2) \cdot P_A$$

$$Q_{Site}=(A_1 \cdot P_A)+(A_2 \cdot P_A)$$

$$Q_{Net}=Q_{Total} - [(Q_{Offsite} \cdot I_r)+Q_{Site}]$$

Where:
Q_{Total} = total gross annual discharge (acre-ft, ft^3, or m^3)
$Q_{Offsite}$ = gross annual discharge (acre-ft, ft^3, or m^3) on the unimproved area
Q_{Site} = gross annual discharge (acre-ft, ft^3, or m^3) on the developed site
Q_{Net} = net annual discharge resulting from stored volumes in site basins and infilt. losses (acre-ft, ft^3, or m^3)
A_G = gross surface area of site (acres or ft^2)
A_1 = drainage area of developed site draining into south detention basin (acres or ft^2)
A_2 = drainage area of UBC storage pad draining into west retention basin (acres or ft^2)
P_A = total depth of annual rainfall (in or ft) from Ref. 1.
I_r = factor for losses due to infiltration, evaporation, and transpiration (unitless)

A_G =	543 acres	=	23,653,080 ft^2
A_1 =	95.6 acres	=	4,164,336 ft^2
A_2 =	40.1 acres	=	1,746,756 ft^2
P_A =	14 inches	=	1.17 ft
I_r =	0.6		

PRELIMINARY
(to be verified in final design) (L-2/2)

National Enrichment Facility
Lea County, New Mexico

Job No.	18511.01
Sheet No.	1 of 2
Date	27-Oct-03
Computed By	D. MICKANEN
Checked By	C. WALKER

Annual Stormwater Discharge (cont.)

Q_{Total}= (23653080 ft^2) * (1.17 ft)

Q_{Total}= 27,674,100 ft^3 = 7,831,800 m^3

$Q_{Offsite}$= [(23653080 ft^2) - (4164336 ft^2) - (1746756 ft^2)] * (1.17 ft)]

$Q_{Offsite}$= 20,758,100 ft^3 = 5,874,500 m^3

Q_{Site}= [(4164336 ft^2) * (1.17 ft)] + [(1746756 ft^2)*(1.17 ft)]

Q_{Site}= 6,916,000 ft^3 = 1,957,200 m^3

Q_{Net}= (27674100 ft^3) - {[(20758100 ft^3) * (0.6)] + (6916000 ft^3)}

Q_{Net}= 8,303,200 ft^3 = 2,349,800 m^3