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December 19, 1980

NUCLEAR PRODUCTION DEPARTMENT

U.S. Nuclear Regulatory Commission
Office of Nuclear Reactor Regulation
Washington, D.C. 20555

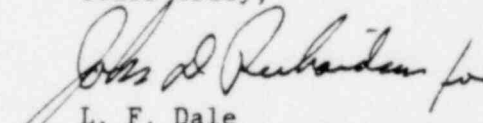
Attention: Mr. Harold R. Denton, Director

Dear Mr. Denton:

SUBJECT: Grand Gulf Nuclear Station
Units 1 and 2
Docket Nos. 50-416 and 50-417
File 0260/8121
Plant Service Water Radial Wells
AECM-80/307

Attached are preliminary responses to NRC Questions 371.07, 340.22 and 340.23. Note that these are preliminary drafts and that some minor changes in format and/or content may be incorporated into the final version as they will appear in Amendment 5 to the Grand Gulf Nuclear Station Final Environmental Report. This amendment is currently scheduled for submittal to the NRC on January 30, 1980.

Yours truly,


L. F. Dale
Nuclear Project Manager

GOS/JGC/JDR:lm

Attachments: Draft Responses to NRC Questions

1. 371.07
2. 340.22
3. 340.23

cc: Mr. N. L. Stampley (w/o)
Mr. G. B. Taylor (w/o)
Mr. R. B. McGehee (w/o)
Mr. T. B. Conner (w/o)

Mr. Victor Stello, Jr., Director (w/a)
Division of Inspection & Enforcement
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

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DRAFTS TO:
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The groundwater quality, as measured during testing of the Ranney wells, is apparently poorer than previously expected. Induced infiltration of Mississippi River water has seemingly not been achieved, due to high groundwater levels in the floodplain alluvium. Since groundwater levels, quality, and use differ from those parameters originally reported, we require the following additional information in order to assess the effects and impacts of the Ranney well system:

- a. Provide the results of the pumping tests performed on each of the Ranney wells. Information provided should include pumping rate, drawdowns and water levels in the pumped well and observation wells, and comparisons of water quality between the water withdrawn and the Mississippi River water.
- b. Provide analyses of the proportions and amounts of groundwater that will be withdrawn from the alluvial aquifer and the river under various conditions of groundwater levels and river levels. For each condition, discuss the expected differences in groundwater quality, as compared to the groundwater quality if induced infiltration were achieved.
- c. Discuss the cause of the abnormal groundwater levels. Provide rainfall records, analyses of groundwater levels and movement, and other pertinent data which support your conclusions.
- d. Discuss the adverse or beneficial effects of high groundwater levels on the Mississippi River, Hamilton Lake, Gin Lake, and other small nearby water bodies and streams.
- e. Identify the potential impact on plant facilities of the degraded water quality.

Response

Evidence of induced infiltration was first demonstrated in the test well program conducted during 1973-1974 and described in Section 2.4.13.2.4 (Hydrogeologic Properties of Subsurface Materials) and Appendix 2.4A (Pump Test Data and Well Logs from Radial Collector Well Exploration and Testing Program) of the FSAR. The long-term pumping tests of Ranney Wells #3 and #5 also demonstrate the close hydraulic connection between the wells and the river. The hydrographs of the pumping wells and the river are parallel during the pumping tests, indicating the stabilization of ground water levels by recharge from the river. The ground water levels during the performance of the long-term testing does not materially differ from what was expected, based on the original test well program.

Because water quality changes caused by induced infiltration of river water involve actual mass transport, detection at the pumping wells will be much slower than the potentiometric changes shown by the hydrographs. Water presently in the aquifer between the wells and the river will have to be extracted before water infiltrating from the river arrives at the wells. Our calculations indicate it will take at least one year of continuous pumping before 70% of the water pumped is infiltrated river

Response to 371.07 - Continued

water. However, this does not mean that water quality at the wells will reflect 70% of the water being derived from the river. Desorption of cations from the aquifer material can be expected to significantly alter the quality of the water. Therefore, it has been assumed that from a quality viewpoint only 50% of the pumped water will appear to be derived from the river.

- a. A long-term pumping test was performed with two radial collector wells from August 7, 1979 to December 19, 1979 (134 days). Wells #3 and #5 (Figure 371.07-1) were pumped at the average rates of 8000 gpm and 7600 gpm, respectively. Well #1 was not included in the long-term pumping test because work was being performed in the caisson during the time of the pumping test. The Well #1 caisson was intermittently dewatered during the pumping test and this pumping had minor interference effects on observation wells RW-1A and RW-1B (Figure 371.07-1).

Water level measurements were made periodically during the testing of Wells #3 and #5, at twenty-seven observation wells, and at staff gages in Hamilton Lake, Gin Lake, and the Mississippi River (locations shown in Figure 371.07-1). Periodic measurements of the pumping rates and the discharge water temperature from Wells #3 and #5, and the temperature of the Mississippi River were also taken. A compilation of all measurements made during the long-term pumping test is contained in Appendix 371.07-A.

The quality of the water withdrawn during the pumping test may be compared to Mississippi River water quality using the analytical data gathered during the test. The accompanying tables (Tables 371.07.1 and 371.07.2) summarize the data as provided by Betz and Analytical Services Laboratory to Mississippi Power & Light. Note, however, that the data for both the river and wells represent short term transient conditions due to the limited duration of the tests. Comparisons of long-term water qualities can be made using the projected average radial well water quality and the long-term average river water quality as presented in the enclosed copy of Table 3.6.3 (Revised) of the Grand Gulf Environmental Report.

- b. A complete description of the analysis used in responding to this question with appropriate figures will be submitted with the January Amendment to the Environmental Report. The following discussion incorporates the conclusions of the analysis.

The change in water source after pumping commences is slow because the river water must travel from the effective recharge boundary to the well. The ultimate proportions of river water and ground water entering the wells under steady state conditions were determined by first constructing a potentiometric surface that would result from pumping all six Ranney Wells at 8000 gpm. Utilizing this predicted potentiometric surface, a flow net was constructed to determine the flow pattern to the wells. The basis for constructing the potentiometric surface was the response of the long-term pumping test of Ranney Well #3. The interference between the wells was determined by superimposing the drawdown conditions of all six wells. The amount of interference was subtracted from potentiometric

Response to 371.07 - Continued

maps of high and low river stage conditions to generate maps of the potentiometric surface during pumping for both conditions. Lines of flow were drawn perpendicular to the potentiometric contours to produce flow tubes. The number of flow tubes originating from the river indicates that 77% of the discharge is derived from the river during low flow conditions and corresponding low groundwater conditions. Approximately 79% of the discharge is derived from the river during high water level conditions. However, these percentages are calculated for steady state conditions.

The time to reach steady state conditions was evaluated by calculating the length of time required for a water particle to travel along its flow path from the effective recharge boundary to the well. The evaluation indicates that it will take as long as one year for some water particles to arrive at the well. Thus, the minimum time for from 77% to 79% of the pumped water to be derived from the river is approximately one year. However, the quality of the water being pumped after one year will not reflect this ratio of river water and aquifer water because of the effects of absorption.

As river water of different quality enters the aquifer, ions absorbed onto the aquifer material will desorb into the infiltrating river water, increasing the dissolved solids content. Thus, the river water reaching the wells will be lesser quality. It is assumed that the available ion exchange capacity is large enough that the ultimate water quality of water pumped will be as if only 50% is derived from the river.

Projections based on statistical regression of test water quality data using a simple mixing model indicate approximately a 50:50 to a 75:25 volumetric mix. Due to the uncertainties inherent in currently employed hydrological methods for obtaining field data and the associated modeling procedures, no attempt has been made to predict short term radial well water quality as a function of changes in river water elevation or quality. Furthermore, due to the range of flow paths and time delays in river water traveling to the wells, along with the natural variations in river water quality, the relative mix of groundwater and river water exiting from the wells is not altogether straightforward. However, from an engineering standpoint, a simple, conservative, mixing assumption is adequate for systems evaluations. Given the above uncertainties and also since achieving a steady-state in terms of long-term water quality may require a year or more of plant operation, a new design water quality has been selected conservatively based on the 50:50 volumetric mix.

- c. Abnormal groundwater levels do not exist at the site. Groundwater level contours constructed from prepumping static levels are shown in Figure 371.07-1. Groundwater level contours constructed from levels measured during the pumping test are shown in Figure 371.07-2. These figures show normal ground water levels expected in a flood plain environment.

Response to 371.07 - Continued

The groundwater level in observation well MW-4 (location shown on FSAR Figure 2.4-35a) rose to greater than El. 112.0 in September, 1978 and El. 120.0 in January, 1979. These anomalously high water levels were caused by recharge to the sand backfill of ponded surface water at the observation well. A more complete description of the cause of the anomalously high levels and a description of the remedial action are given in the FSAR (Amendment 38) on page 2.5-64a. The hydrograph of observation well MW-4, showing the high groundwater levels and the return to normal levels after correction of the drainage condition, is shown in FSAR Figure 2.4-36a and Figure 2.4-36b.

- d. See revised subsection 2.4.5.4 enclosed.

A survey of water users within 2 miles of the site revealed that most use rainwater stored in cisterns, rather than wells (Figure 2.4-10 and Table 2.4.12). Twenty-nine wells were surveyed. Of these, four lie within the site boundary and will be abandoned prior to completion of the Grand Gulf Nuclear Station. Of the remaining 25 wells, 12 are developed in the Catahoula Formation, 11 in the Pleistocene terrace deposits, and 2 in the Mississippi River alluvium.

The estimated total ground water withdrawal within a 2-mile radius of the site is about 500 gpd. Future ground water demands are expected to parallel population growth. From Table 2.1.1, the population within 2 miles of the plant is expected to increase by 36 persons in the next 50 years. It is conservatively assumed that the additional residents will all use well water and that per capita use will remain constant. The estimated total ground water use by the year 2020 is about 7500 gpd. Because of this gradual increase, no change of ground water flow direction due to offsite use is foreseen.

2.4.5.4 Ground Water Levels and Movements

There are three levels of ground water in the site area: (1) the regional water table in the Mississippi River alluvium and adjacent terrace deposits, (2) perched water tables in the terrace deposits, and (3) the potentiometric level of the confined aquifer within the Catahoula Formation. Ground water levels measured in selected piezometers (Table 2.4.13) and observation wells (Table 2.4.14) are presented as hydrographs in Figure 2.4-11 (5 sheets). Hydrographs of water levels of the Mississippi River in the vicinity of the site and in Gin and Hamilton Lakes, based on field observations from 1972 to 1976, are shown on Figure 2.4-12. In the site area, the ground water table slopes gently westward, with local gradients dipping toward the major tributary valleys. The gradient steepens toward Hamilton and Gin Lakes. West of the lakes, the ground water table slopes toward the river at a gradient that varies with the prevailing river stage (Figure 2.4-9). The regional ground water table within the site property ranges from about 60 to 80 feet msl during normal river elevations. The normal ground water gradient in the floodplain and the bluffs is temporarily reversed during flood stages of the Mississippi River. Figure 2.4-13 shows the configuration of the ground water table at the site during the spring flood of 1973. These ground water contours represent the highest ground water levels recorded at the site during the period January 1972 to May 1976. The water level contours shown in Figures 2.4-9 and 2.4-13 indicate that the interaction of ground water and surface water in the site area is such that the ground water discharges into the Mississippi River during normal conditions and receives recharge

from the river during flood conditions. The water levels in Hamilton and Gin Lakes rise only when the lakes are recharged by the river during high flow periods (Figure 2.4-12). The water level fluctuations in observation wells and Hamilton and Gin Lakes (Figures 2.4-11 and 2.4-12) indicate that the lakes are not in direct hydraulic communication with the ground water.

371.03

Insert revision
See next page

Perched water zones occur in the areas indicated on Figure 2.4-9. The perched water levels range from 90 to 130 feet msl in the site area. The highest perched water level (130 feet msl) was recorded at observation well OW-201, located near the eastern site property line. Observation wells OW-6, OW-6A, OW-6B, OW-6C, OW-115A, OW-115B, OW-116, and OW-118 were constructed in the perched water zone in the vicinity of the power blocks for Units 1 and 2. The highest perched water level recorded in these wells was 112 feet msl at OW-6A (Figure 2.4-11, Sheets 4 and 5).

The water levels in observation wells and piezometers constructed within the Catahoula Formation range from about 55 to 80 feet msl during normal river elevations. The highest water level recorded in observation wells or piezometers in the Catahoula was 113 feet at P-117A; however, the hydrograph of P-117A (Figure 2.4-11, Sheet 5) indicates that the piezometer is not functioning properly. Therefore, the 113-foot water level does not represent actual ground water conditions. In the immediate station vicinity, the regional water table intersects the Catahoula Formation (Figure 2.4-14). In this area the Catahoula surface forms a ridge-like feature which rises above the regional water table to about 90 feet msl.

2.4.5.5 Ground Water Quality

Several samples of ground water and surface water were taken for chemical analyses to evaluate the quality of water in the site area. Ground water samples were taken from piezometers and observation wells at the site and from private wells completed in each of the local aquifers within the limits of the water-well survey. Surface water samples were obtained from the Mississippi River and Bayou Pierre. Locations where water samples were taken are shown on Figure 2.4-10, and results of chemical analyses are presented in Table 2.4.15.

Chemical analyses of samples taken from the Mississippi River alluvial aquifer indicate the water is a sodium-calcium bicarbonate type, high in total dissolved solids (358 to 604 ppm). Samples of ground water from the terrace deposits are a calcium-magnesium bicarbonate type with a total dissolved solids contents of 277 to 442 ppm. The total dissolved solids concentration of a water sample from the Catahoula Formation is 460 ppm. The surface water samples are low in dissolved solids and less mineralized than ground water sampled in the site locality.

INSERT TO FER SUBSECTION 2.4.5.4, p. 2.4-10.

The groundwater levels recorded in observation wells F-4 and F-6 and the water level in Hamilton Lake during the long-term pumping test of collector wells #3 and #5 are shown on the hydrograph in Figure 2.4-15. Hamilton Lake is located between observation wells F-4 and F-6 (Figure 371.07-1). The hydrograph indicates that the drawdown cone created during the test lowered ground water levels beneath Hamilton Lake. This phenomenon further indicates that Hamilton Lake is not in direct hydraulic communication with the ground water.

Response to 371.07 - Continued

- e. Two major potential impacts on plant operating facilities have been identified based on the change in radial well water quality as ascertained from data obtained during the pumping tests: (1) scaling and deposition in the cooling tower circulating water system, and (2) resin fouling plus slightly decreased capacity in the makeup demineralizer system. Each of these potential impacts is discussed briefly below.

The radial well is now projected to be significantly higher in hardness, alkalinity, and iron so as to be inherently scaling and iron depositing. Addition of appropriate scale inhibitors/dispersants will, therefore, be required for reliable operation of the circulating water system. Once such treatment is implemented, cycling of the chemical concentrations in the cooling tower loop due to evaporation can probably be increased. Therefore, assessment of the potential impacts due to blowdown from the cooling tower(s) are being revised to include operation at 5 cycles of concentration. Increased cycles of concentration may, in turn, reduce sulfuric acid addition requirements sufficiently such that operating costs are not greatly different than for operation at lower cycles of concentration with acid addition alone. In summary, calcium carbonate scaling and iron deposition control through appropriate chemical addition will limit the potentially serious impact of the lower quality radial well water on the circulating water system.

The higher total solids and iron levels, which are now being projected in the radial well water, present a potential impact on the plant's makeup demineralizer system. The former would reduce system capacity by increasing ionic loadings given the present design while the latter would cause fouling/degradation of cation exchange resins through oxidation and precipitation of soluble iron within the exchange media. Pretreatment of the well water is being investigated as a solution to both problems. In the short term, iron removal by oxidation and filtration (e.g., with greensand filters) should suffice, while in the long run, pretreatment to reduce hardness, alkalinity, and iron (e.g., by lime softening) may be preferred. The latter will most probably reduce both operating costs and problems as compared to the former while potentially increasing the capacity of the makeup demineralizer system. In summary, standard pretreatment of the radial well water will render it suitable as feed for the makeup demineralizer system in both the short and long term.

TABLE 371.07.1

INITIAL RADIAL WELL PUMPOUT AND RIVER WATER QUALITY

(mg/l except as noted)

	8/6/80			8/7/80		
	River	Well 3	Well 5	River	Well 3	River 5
Alkalinity M.O. (CaCO ₃)	120	408	441	94	420	414
Alkalinity P (CaCO ₃)	0	0	0	0	0	0
Aluminum (Al)	9.6	0.28	0.17	11	0.14	0.17
Ammonia (N)	0.38	0.65	0.67	0.36	0.79	0.65
Calcium (Ca)	41	138	147	43	145	148
Carbon Organic (C)	<1	<1	<1	4	5	8
COD (O ₂)	<50	<50	<50	<50	<50	<50
Chloride (Cl)	26	15	14	19	15	14
Chromium Total (Cr)	-	-	-	-	-	-
Color (APHA)	20	12	12	24	14	18
Copper (Cu)	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Fluoride (F)	-	-	-	-	-	-
Hardness (CaCO ₃)	158	488	506	164	512	511
Iron Total (Fe)	9.4	22.8	18.4	11.2	18.8	18.0
Magnesium (Mg)	13	35	34	14	36	34
Nitrate (N)	5.9	2.5	<1.0	5.9	<1.0	<1.0
Nitrite (N)	<1.0	<1.0	1.6	<1.0	<1.0	1.8
Nitrogen, Kjeldahl (N)	0.44	0.15	0.14	0.49	0.13	0.31
pH	7.2	6.9	7.1	7.1	7.1	7.0
Potassium (K)	4.4	3.8	3.4	4.9	3.3	3.3
Silica Soluble (SiO ₂)	33	26	25	45	26	24
Sodium (Na)	17.9	20.2	16.8	18.3	21.0	16.8
Solids Dissolved	290	508	522	228	530	530
Solids Suspended	-	-	-	-	-	-
Sp. Cond. 25°C µmhos/cm	375	810	853	366	848	850
Sulfate (SO ₄)	57	<10	<10	57	<10	<10
Sulfide (S)	0.1	0.21	<0.1	0.42	<0.1	<0.1
Turbidity (FTU)	82	92	115	110	115	110
Zinc (Zn)	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Sulfite (SO ₃)	I n c l u d e d I n S u l f a t e					
Aromatic Acids	-	-	-	-	-	-
Carbon Dioxide (CO ₂)	-	-	-	-	-	-

NOTE: Analyses by Betz

TABLE 371.07.2

RADIAL WELL PUMPOUT AND RIVER WAY

(mg/l ex)

	11/13			11/15			11/27			11/29			12/4		
	River	Well 3	Well 5	River	Well 3	Well 5	River	Well 3	Well 5	River	Well 3	Well 5	River	Well 3	Well 5
Alkalinity M.O. (CaCO ₃)	-	205	265	-	270	240	-	250	220	-	248	208	-	248	200
Alkalinity P (CaCO ₃)	-	0	0	-	0	0	-	0	0	-	0	0	-	0	0
Aluminum (Al)	-	<0.1	<0.1	-	<0.1	<0.1	-	<0.1	<0.1	-	<0.1	<0.1	-	<0.1	<0.1
Ammonia (N)	-	0.7	0.7	-	0.6	0.2	-	0.7	0.6	-	0.8	1.0	-	1.3	1.2
Calcium (Ca)	-	72	74	-	73	68	-	80	76	-	76	68	-	72	66
Carbon Organic (C)	-	5	8	-	5	5	-	6	6	-	8	6	-	8	3
COD (O ₂)	-	8	8	-	12	12	-	4	8	-	4	4	-	8	<4
Chloride (Cl)	-	17	18	-	17	16	-	21	23	-	21	24	-	18	18
Chromium Total (Cr)	-	<0.03	<0.03	-	<0.03	<0.03	-	<0.03	<0.03	-	<0.03	<0.03	-	<0.03	<0.03
Color (APHA)	-	65	90	-	85	75	-	97	60	-	85	50	-	64	45
Copper (Cu)	-	0.04	0.05	-	<0.02	<0.02	-	<0.02	<0.02	-	<0.02	<0.02	-	<0.02	<0.02
Fluoride (F)	-	0.2	0.2	-	0.17	0.16	-	0.18	0.17	-	0.19	0.18	-	0.16	0.15
Hardness (CaCO ₃)	-	244	284	-	284	276	-	275	255	-	280	244	-	260	248
Iron Total (Fe)	-	7.5	12	-	14	8.4	-	15	8.5	-	13	8.3	-	14	5.0
Magnesium (Mg)	-	16	24	-	24	25	-	18	16	-	22	18	-	19	20
Nitrate (N)	-	<0.1	0.3	-	0.3	0.2	-	1.3	2.3	-	0.4	0.4	-	0.7	1.3
Nitrite (N)	-	<0.01	<0.01	-	<0.01	<0.01	-	<0.01	<0.01	-	<0.01	<0.01	-	<0.01	<0.01
Nitrogen, Kjeldahl (N)	-	0.7	0.7	-	0.9	1.2	-	1.2	1.0	-	0.9	1.0	-	1.6	1.2
pH	-	7.1	7.0	-	7.0	7.0	-	7.2	7.2	-	7.3	7.3	-	7.1	7.3
Potassium (K)	-	2.4	2.8	-	2.7	2.3	-	2.8	2.4	-	3.0	2.4	-	3.8	2.3
Silica Soluble (SiO ₂)	-	20	22	-	20	20	-	22	18	-	22	20	-	20	17
Sodium (Na)	-	14	19	-	20	15	-	22	20	-	20	20	-	21	18
Solids Dissolved	-	310	364	-	362	334	-	328	310	-	328	348	-	386	324
Solids Suspended	-	10	30	-	26	20	-	28	16	-	24	14	-	44	32
Sp. Cond., 25°C umhos/cm	-	500	600	-	600	550	-	590	530	-	510	520	-	570	510
Sulfate (SO ₄)	-	29	26	-	27	29	-	24	30	-	25	32	-	37	32
Sulfide (S)	-	<0.1	<0.1	-	<0.1	<0.1	-	<0.1	<0.1	-	<0.1	<0.1	-	<0.1	<0.1
Turbidity (NTU)	-	57	87	-	86	60	-	110	63	-	111	64	-	90	61
Zinc (Zn)	-	<0.02	0.13	-	0.1	<0.02	-	0.04	0.03	-	0.03	0.03	-	0.18	0.22
Sulfite (SO ₃)	-	<0.5	<0.5	-	<0.5	<0.5	-	<0.5	<0.5	-	<0.5	<0.5	-	<0.5	<0.5
Aromatic Acids	-	1.3	1.6	-	1.0	1.6	-	0.6	0.8	-	1.5	0.8	-	0.5	2.3
Carbon Dioxide (CO ₂)	-	33	52	-	54	48	-	31	27	-	26	21	-	39	20

NOTE: Analyses by Analytical Services Laboratory

(rept as noted)

River	12/6		No Date			12/12			12/14			12/17			Average			
	Well 3	Well 5	River	Well 3	Well 5	River	Well 3	Well 5	River	Well 3	Well 5	River	Well 3	Well 5	River	Well 3	Well 5	Well 355
-	230	180	84	230	200	81	224	196	88	228	208	95	180	215	87	231	213	222
-	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
-	<0.1	<0.1	1.7	<0.1	<0.1	1.7	<0.1	<0.1	8.2	<0.1	<0.1	2.6	<0.1	<0.1	3.6	<0.1	<0.1	<0.1
-	0.9	0.7	0.4	1.0	0.3	0.7	0.8	1	0.3	0.8	0.7	0.2	0.8	0.8	0.4	0.8	0.7	0.8
-	74	62	26	66	53	27	66	58	30	67	66	35	54	67	30	70	66	68
-	7	5	8	7	7	6	10	2	6	10	6	2	2	2	6	7	5	6
-	<4	<4	14	6	10	4	4	<4	8	12	8	4	<4	<4	8	<7	<7	<7
-	21	22	21	20	20	21	20	18	21	19	19	20	19	18	21	19.3	19.6	19.5
-	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03
-	50	35	-	-	-	15	74	50	30	75	60	15	75	60	20	67	52	60
-	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
-	0.21	0.18	0.14	0.19	0.18	0.13	0.28	0.16	0.14	0.19	0.16	0.16	0.22	0.19	0.14	0.2	0.17	0.19
-	260	228	124	256	224	124	256	240	130	260	260	140	210	240	130	258	250	254
-	14	7.7	2.7	9.9	6.3	2.5	11	7.0	3.2	11	6.5	3.5	13	7.5	3.0	12.2	7.7	10.0
-	18	18	15	22	19	14	22	23	13	22	23	13	18	19	14	20.1	20.5	20
-	0.3	<0.1	1.0	0.4	<0.1	1.4	0.2	0.2	1.6	<0.1	1.2	0.9	0.1	0.4	1.2	0.4	0.6	0.5
-	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.03	<0.01	<0.01	<0.01	0.03	<0.01	<0.01	<0.02	<0.01	<0.01	<0.01
-	1.2	0.7	0.9	1.0	0.9	1.2	0.9	0.8	0.7	0.8	0.8	0.8	0.8	0.8	0.9	1.0	0.9	1.0
-	7.7	7.2	7.6	7.1	7.2	7.2	7.2	7.2	7.6	7.3	7.3	7.5	7.1	7.1	7.4	7.1	7.2	7.2
-	3.0	2.6	3.6	2.5	2.2	3.3	2.6	2.5	4.1	4.2	3.7	3.8	2.5	2.4	3.7	3.0	2.6	2.8
-	21	19	10	23	18	11	22	21	16	21	20	21	20	21	14	20.6	19.6	20
-	18	20	16	21	19	17	22	18	18	22	19	19	20	19	18	20	19	19
-	356	280	182	358	274	204	330	328	238	356	326	226	308	330	212	342	322	332
-	28	16	70	26	22	22	18	16	112	42	22	92	30	24	74	28	21	24
-	550	510	330	560	530	360	590	540	340	570	570	360	480	530	348	552	539	546
-	37	38	35	36	38	36	36	36	38	36	38	46	40	36	39	33	30	31
-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
-	87	55	58	87	62	-	83	54	51	90	62	56	82	66	55	88	63	76
-	<0.02	0.16	0.03	<0.02	<0.02	<0.02	<0.02	<0.02	0.1	0.05	<0.02	0.36	0.05	0.4	<0.13	<0.05	0.07	<0.06
-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
-	<0.1	0.3	2.5	2.3	1.1	5.8	2.8	0.4	5.1	1.7	1.0	8	0.5	1.0	5.4	1.2	1.1	1.2
-	37	24	1.2	35	25	9	27	25	4	23	25	6	29	34	5	33	30	32

TABLE 3.6.3

INTAKE, CIRCULATING, BLOWDOWN, MISSISSIPPI RIVER AND DISCHARGE LIMIT WATER QUALITIES (a)

(mg/l or other units as noted)

Parameter	Intake (Radial Well System) Water	Circulating Water & Blowdown (b)			Mississippi River (d)	Federal Discharge Limit (e)
		2 Cycles	3 Cycles	5 Cycles		
Dissolved Solids	376	752	1128	1880	230	-
Hardness (CaCO ₃)	332	664	996	1660	40	-
Calcium	93	186	279	465	39	-
Magnesium	24	48	72	120	10	-
Sodium	18.4	36.8	55.2	92.0	20	-
Potassium	4.1	8.2	12.3	20.5	2.8	-
Sulfate (c)	33.5	385	653	1410	50	-
Chloride	19	38	57	95	23	-
Nitrate	3.6	7.2	10.8	18.0	2.8	-
Silica	17	34	51	85	8.7	-
Nitrogen (total)	5.5	11.0	16.5	27.5	2.0	-
Ammonia - Nitrogen	0.53	1.1	1.6	2.7	0.13	-
Aluminum	< 0.11	< 0.22	< 0.33	< 0.55	< 0.024	-
Copper	< 0.05	< 0.1	< 0.15	< 0.25	0.012	-
Iron (total)	10	20	30	50	0.039	-
Zinc	< 0.1	< 0.2	< 0.3	< 0.5	0.046	-
Chlorine Demand	3.9	7.8	11.7	19.5	2.4	-
Chlorine (free available)	N/A (k)	(f)	(f)	(f)	-	0.5 max., 0.2 avg.

TABLE 3.6.3

INTAKE, CIRCULATING, BLOWDOWN, MISSISSIPPI RIVER AND DISCHARGE LIMIT WATER QUALITIES (a)

(mg/l or other units as noted)

Parameter	Intake (Radial Well System) Water	Circulating Water & Blowdown (b)			Mississippi River (d)	Federal Discharge Limit (e)
		2 Cycles	3 Cycles	5 Cycles		
Dissolved Oxygen	N/A (k)	(g)	(g)	(g)	8.6	-
Carbon Dioxide	N/A (k)	(h)	(h)	(h)	4.0	-
pH (i)	7.2	8.0-8.5	8.0-8.5	8.0-8.5	7.5	6.0-9.0
Suspended Solids (j)	19.1	38.3	57.6	95.5	150	-
Conductivity	576	1152	1728	2880	370	-

- (a) Values in this table represent site specific groundwater quality with the exception of the data presented for the Mississippi River (see footnote d).
- (b) Blowdown refers to cooling tower blowdown not plant effluent. Plant service water may be mixed with blowdown prior to discharge.
- (c) Sulfate concentrations include sulfate from sulfuric acid addition.
- (d) U.S. Army Corps of Engineers Water Quality Data for St. Francisville, Louisiana (1954-1968) and Delta Point, Louisiana (1959-1968) plus river site monitoring data (November 1972 - November 1973) for dissolved oxygen suspended solids, and pH.
- (e) Federal discharge limitations are taken from U.S. EPA Standards of Performance for New Sources (40 CFR 423.15).
- (f) Chlorination is controlled to effect a maximum of less than 0.5 mg/l and an average of less than 0.2 mg/l free available chlorine in the blowdown. Neither free available chlorine nor total residual chlorine is discharged from any unit for more than two hours in any one day and not more than one unit will discharge free available or total residual chlorine at any one time.
- (g) Absorption in the cooling towers is expected to lead to concentrations consistently greater than 5.0 mg/l.
- (h) Carbon dioxide could vary from around 0.5 to tens of mg/l; several mg/l (of the order of the river) are usually to be expected.
- (i) pH will be adjusted during circulating water system operation.
- (j) Although suspended solids in the well water, as produced, are expected to be less than 1.0 mg/l, iron precipitation leads to significant suspended solids levels in the circulating water assuming ferric hydroxide formation.
- (k) N/A - Not Available

APPENDIX 371.07 - A

24C-49

WELL ELEV OF MEAS STAHI STAHI
 NO. PT. (FT., MSL) MALEM LEVEL (FT.) COORDINATES WATE LINE

F-1 78.90 21.03 52930N 213590E 080779 0830

DATE HOUR PUMPING STARTED (MIN) DEPTH IN WATER (FT) MALEM LEVEL ELEV (FT., MSL) DRAWDOWN (FT)

DATE	HOUR	PUMPING STARTED (MIN)	DEPTH IN WATER (FT)	MALEM LEVEL ELEV (FT., MSL)	DRAWDOWN (FT)
080179	0000	-0670.	22.21	56.69	1.16
080279	0000	-7250.	22.21	56.69	1.16
080379	0000	-5790.	22.11	56.79	1.08
080479	0000	-0350.	21.92	56.98	.89
080579	0000	-2410.	21.80	57.10	.77
080679	1025	-1325.	21.83	57.47	.80
080779	0818	112.	21.03	57.87	.00
080779	0952	24.	21.03	57.87	.00
080779	0959	89.	21.02	57.88	.01
080779	1057	187.	21.00	57.90	.03
080779	1221	281.	20.91	57.93	.06
080779	1330	300.	20.95	57.95	.08
080779	1427	357.	20.90	58.00	.13
080779	1526	416.	20.87	58.03	.16
080779	1715	525.	20.84	58.06	.19
080779	1842	612.	20.83	58.07	.20
080779	2217	827.	20.82	58.08	.21
080679	0100	990.	20.78	58.12	.25
080879	0845	1215.	20.79	58.11	.24
080879	0815	1425.	20.78	58.12	.25
080879	1325	1735.	20.75	58.15	.28
080679	2210	2260.	20.80	58.10	.23
080979	0300	2850.	20.84	58.06	.19
080979	0815	2865.	20.91	57.99	.12
080979	1015	3465.	20.82	58.08	.21
081079	0030	3840.	20.92	57.98	.11
081079	0730	4260.	20.99	57.91	.04
081079	1255	4585.	20.98	57.92	.05
081079	1910	4960.	20.99	57.91	.08
081179	0015	5265.	21.04	57.86	.01
081179	0615	5625.	21.22	57.68	.19
081179	1015	6105.	21.15	57.75	.12
081179	1910	6400.	21.21	57.69	.16
081279	0030	6720.	21.32	57.58	.29
081279	0630	7080.	21.45	57.45	.42
081279	1245	7455.	21.61	57.29	.58
081279	1910	7860.	21.58	57.32	.55
081279	2400	8130.	21.67	57.23	.64
081379	0630	8520.	21.85	57.05	.82
081379	1400	8970.	21.93	56.97	.90
081379	2100	9390.	22.09	56.81	1.06
081379	2400	9570.	22.11	56.79	1.08
081879	0630	9960.	22.08	56.82	1.05
081479	1430	10660.	22.21	56.69	1.16
081579	0740	11870.	22.84	56.46	1.41
081579	1410	12100.	22.55	56.35	1.52
081679	0730	12900.	22.80	56.10	1.77
081679	1625	13555.	22.90	56.00	1.87
081779	0645	14295.	23.18	55.72	2.15
081779	1425	14995.	23.30	55.60	2.27

240-50

WELL NO. 1 ELEV. OF MFSN PL. (FT., MSL) 78.99 STATIC WATER LEVEL (FT.) 21.03 COORDINATES 522430N, 273590E START DATE 080779 SHAFT DIA. 0830

TIME AFTER PUMPING STARTED (MIN) DEPTH TO WATER (FT.) WATER LEVEL ELEV. (FT., MSL) DRAINING TIME (FI)

DATE	HOUR	TIME AFTER PUMPING STARTED (MIN)	DEPTH TO WATER (FT.)	WATER LEVEL ELEV. (FT., MSL)	DRAINING TIME (FI)
081879	0700	15750	23.54	55.36	2.51
081879	1830	16400	23.65	55.25	2.62
081979	0915	17325	23.90	54.90	2.93
081979	1850	17900	24.08	54.82	3.05
082079	0700	18630	24.33	54.57	3.30
082079	1845	19335	24.46	54.44	3.43
082179	0700	20070	24.68	54.22	3.65
082179	1910	20800	24.86	54.04	3.83
082279	1745	22155	24.98	53.92	3.95
082379	1750	23600	25.11	53.79	4.08
082479	1755	25085	25.39	53.51	4.36
082579	1805	26495	25.68	53.22	4.65
082679	1750	27920	26.11	52.79	5.08
082779	1800	29370	26.49	52.41	5.46
082879	1800	30810	26.87	52.03	5.84
082979	1800	32250	27.21	51.69	6.18
083079	1750	33680	27.48	51.42	6.45
083179	1535	34985	27.57	51.33	6.54
090179	0925	36055	27.54	51.36	6.51
090279	0920	37490	27.46	51.44	6.43
090379	0940	38950	27.25	51.65	6.22
090479	1515	40725	26.92	51.98	5.89
090579	1840	42130	26.79	52.11	5.76
090779	1840	45130	26.18	52.72	5.15
090879	0815	47505	25.59	52.91	4.96
091179	0930	50460	25.79	53.11	4.76
091379	0755	53245	25.62	53.28	4.59
091579	1220	56390	26.28	52.62	5.25
091779	1515	59445	26.59	52.31	5.56
091979	1055	62065	27.20	51.70	6.17
092179	0810	64780	27.76	51.14	6.73
092579	0935	70625	27.80	51.10	6.77
092779	1020	73580	27.22	51.68	6.19
092979	1540	76750	26.70	52.20	5.67
100179	1455	79585	26.39	52.51	5.36
100379	1110	82240	26.04	52.86	5.01
100579	1345	85275	25.25	53.65	4.22
100779	1515	88245	24.98	53.92	3.95
100979	1045	90855	25.11	53.79	4.08
101179	1335	93905	25.37	53.53	4.34
101579	1910	100000	26.18	52.72	5.15
101879	1530	104100	26.50	52.40	5.47
102079	1605	107015	27.06	51.84	6.03
102279	1540	109870	27.78	51.12	6.75
102479	1800	112690	28.00	50.50	7.37
102679	0855	115225	28.82	50.08	7.79
102879	1445	118575	29.26	49.64	8.23
103079	1255	121225	29.41	49.49	8.38
110279	1050	125420	29.58	49.32	8.55
110479	0920	128210	30.12	48.78	9.09

2.4C-57

WELL NO. ELEV OF MEAS PT. (F.T., MSL) STATIC WATER LEVEL (F.T.) COORDINATES STATE DATE STATE DATE TIME

1 7A.90 21.03 552930N 271590E 080779 0850

DATE HOUR PUMPING STARTED (MIN) TIME AFLOW PUMPING STOPPED (MIN) DEPTH TO WATER (FT) WATER LEVEL ELEV (F.T., MSL) DRAWDOWN (FT)

110679	1055	131105.	50.90	08.00	9.67
110679	0910	133960.	51.00	07.42	10.45
111379	1255	141305.	52.53	06.37	11.50
111679	0915	145405.	52.38	06.52	11.35
112679	1210	160380.	51.20	07.01	10.24
112979	1105	164315.	50.65	06.25	9.62
121079	1600	180850.	23.63	55.27	2.60
121379	1520	184730.	22.60	56.30	1.57

2040-52

WELL ELEV OF MEAS STATIC CHURCHMANIFES START START
 NO. PI. (FT., MSL) WATER LEVEL (FT.) DATE DATE TIME TIME

P-2 68.61 10.37 51540N 213764E 080779 0830

DATE HOUR TIME AFTER PUMPING STARTED (MIN) DEPTH TO WATER (FT) WATER LEVEL ELEV (FT., MSL) DRAWDOWN (FT)

080179	0000	-0679.	11.87	56.74	1.50
080279	0000	-7230.	11.88	56.73	1.51
080379	0000	-5799.	11.64	56.97	1.27
080479	0000	-9350.	11.32	57.29	.95
080579	1130	-2700.	11.36	57.25	.99
080679	1130	-1260.	10.80	57.81	.43
080779	0822	-8.	10.37	58.24	.00
080779	1030	120.	10.33	58.28	-.04
080779	1230	240.	10.30	58.31	-.07
080779	1430	360.	10.26	58.35	-.11
080779	1630	480.	10.22	58.39	-.15
080779	1829	599.	10.21	58.40	-.16
080879	1910	2080.	10.08	58.52	-.28
080879	2100	2190.	10.12	58.49	-.25
080879	2300	2310.	10.13	58.48	-.24
080979	0100	2430.	10.12	58.49	-.25
080979	0300	2550.	10.11	58.50	-.26
080979	0500	2670.	10.11	58.50	-.26
080979	0700	2790.	10.13	58.48	-.28
080979	0900	2910.	10.15	58.46	-.22
080979	1100	3030.	10.15	58.46	-.22
080979	1300	3150.	10.15	58.46	-.22
080979	1500	3270.	10.14	58.47	-.23
080979	1700	3390.	10.14	58.47	-.23
080979	1900	3510.	10.16	58.45	-.21
080979	2100	3630.	10.18	58.43	-.19
080979	2300	3750.	10.22	58.39	-.15
081079	0100	3870.	10.23	58.38	-.14
081079	0300	3990.	10.23	58.38	-.14
081079	0500	4110.	10.26	58.35	-.11
081079	0715	4235.	10.28	58.33	-.09
081079	0900	4350.	10.29	58.32	-.08
081079	1100	4470.	10.29	58.32	-.08
081079	1300	4590.	10.29	58.32	-.08
081079	1500	4710.	10.28	58.33	-.09
081079	1700	4830.	10.29	58.32	-.08
081079	1900	4950.	10.29	58.32	-.08
081079	2100	5070.	10.35	58.26	-.02
081079	2300	5190.	10.37	58.24	.00
081179	0100	5310.	10.39	58.22	.02
081179	0300	5430.	10.39	58.22	.02
081179	0500	5550.	10.40	58.21	.03
081179	0700	5670.	10.43	58.18	.06
081179	0900	5790.	10.48	58.13	.11
081179	1100	5910.	10.50	58.11	.13
081179	1200	5970.	10.52	58.09	.15
081179	1400	6090.	10.54	58.07	.17
081179	1600	6210.	10.57	58.04	.20
081179	1800	6330.	10.60	58.01	.23
081179	2000	6450.	10.65	57.96	.28

2.4/C-53

WELL NO.	ELEV (IB, MEAN PI, FE, MSL)	STATIC WATER LEVEL (FT)	LIQUIDITY TESTS	STAGE DATE	STAGE TIME
F-2	68.61	10.17	551596N - 273369E	080779	0810
DATE	WELL NO.	TIME BEING PUMPED (MIN)	DEPTH TO WATER (FT)	WATER LEVEL ELEV (FT, MSL)	STAGE TIME
	081179	2900	10.75	57.86	8.38
	081279	6930	10.80	57.91	8.43
	081279	7170	10.89	57.72	8.52
	081279	7410	10.98	57.63	8.61
	081279	7650	11.04	57.57	8.67
	081279	7890	11.12	57.49	8.75
	081279	8130	11.22	57.39	8.85
	081379	8490	11.38	57.23	1.01
	081379	8850	11.51	57.10	1.18
	081379	9210	11.62	56.99	1.25
	081379	9570	11.75	56.86	1.38
	081479	9930	11.89	56.72	1.52
	081479	10650	12.05	56.56	1.68
	081579	11370	12.28	56.33	1.91
	081579	11860	12.36	56.25	1.99
	081679	12410	12.62	55.99	2.25
	081679	13000	12.75	55.86	2.38
	081779	13250	12.92	55.69	2.55
	081779	13970	13.04	55.57	2.67
	081879	14690	13.25	55.36	2.88
	081979	1515	13.65	54.96	3.28
	082079	1570	13.90	54.71	3.53
	082079	16350	14.04	54.57	3.67
	082179	20010	14.20	54.41	3.83
	082179	20550	14.26	54.35	3.89
	082279	21450	14.45	54.16	4.08
	082279	22170	14.62	53.99	4.25
	082379	22890	14.69	53.92	4.32
	082379	23610	14.77	53.84	4.40
	082479	24330	14.95	53.66	4.58
	082479	25030	15.03	53.58	4.66
	082579	25770	15.23	53.38	4.86
	082579	26490	15.36	53.25	4.99
	082679	26970	15.45	53.16	5.08
	082679	27800	15.55	53.06	5.16
	082879	30270	16.10	52.51	5.73
	082979	31530	16.38	52.27	5.97
	083079	33790	16.83	51.78	6.46
	083179	35120	16.94	51.62	6.62
	090279	1045	17.08	51.53	6.71
	090379	10945	17.08	51.53	6.71
	090479	1310	16.83	51.78	6.46
	090579	1115	16.83	51.78	6.46
	090779	1625	16.56	52.05	6.19
	090979	1805	16.31	52.30	5.94
	091179	1940	16.13	52.48	5.76
	091379	2140	16.10	52.51	5.73
	091579	2330	16.47	52.14	6.10
	091779	2535	16.73	51.88	6.36
	091979	2760	17.18	51.43	6.81

24054

WELL NO. ELEV OF MEAS PL. (FT., MSL) STATIC WATER LEVEL (FT.) COORDINATES STAKE DATE STAKE LINE

F-2 68.61 19.37 5215444 ' 213764E 080779 0830

DATE HOUR TIME AFTER PUMPING STARTED (MIN) DEPTH TO WATER (FT) WATER LEVEL ELEV (FT., MSL) DRAWDOWN (FT)

DATE	HOUR	TIME AFTER PUMPING STARTED (MIN)	DEPTH TO WATER (FT)	WATER LEVEL ELEV (FT., MSL)	DRAWDOWN (FT)
092179	0810	60700.	17.35	51.26	0.98
092579	0930	70620.	17.51	51.10	7.14
092779	1100	73590.	17.06	51.55	0.69
092979	1350	76640.	16.75	51.46	6.38
100179	1510	79600.	16.38	52.23	6.01
100379	1325	82375.	15.67	52.74	5.50
100579	1755	85525.	15.31	53.30	4.94
100779	1525	88255.	15.46	53.15	5.09
100979	1105	90875.	15.60	53.01	5.23
101179	1345	93915.	15.61	52.80	5.44
101379	1930	101600.	16.58	52.03	6.21
101879	1540	104110.	16.82	51.79	6.45
102079	1615	107025.	17.20	51.41	6.83
102279	1550	109800.	17.78	50.83	7.41
102479	1810	112900.	18.40	50.21	8.03
102679	1330	115500.	18.55	50.06	8.18
102879	1655	118505.	18.95	49.66	8.58
103079	1305	121235.	19.19	49.42	8.82
110279	1100	125030.	19.60	49.01	9.23
110479	0930	126220.	19.94	48.67	9.57
110679	1105	131195.	20.42	48.19	10.05
110879	0920	133970.	20.62	47.79	10.45
111379	1310	141800.	21.94	46.67	11.57
111679	0925	145495.	22.12	46.49	11.75
112679	1710	160360.	21.95	47.16	11.08
112979	1115	164325.	21.13	47.40	10.76
121479	1130	105940.	11.96	56.65	1.59

2.4C-55

WELL NO.	ELEV OF MEAS PT. (FT./MSL)	STATION	COORDINATES	START DATE	START TIME
F-3	70.97	12.87	55099N 12201E	08079	0830
DATE	HOUR	TIME AFTER PUMPING STARTED (MIN)	DEPTH TO WATER (FT)	WATER LEVEL ELEV (FT./MSL)	DRAWDOWN (FT)
080179	0000	08010	18.67	56.10	2.20
080279	0000	7230	14.65	56.32	2.18
080379	1320	5820	18.17	56.80	1.70
080479	0000	0350	13.67	57.30	1.20
080579	1100	2230	13.55	57.42	1.08
080679	1030	1320	12.91	58.06	.44
080779	0800	10	12.87	58.50	.00
080779	1100	150	12.50	58.47	.03
080779	1300	270	12.68	58.29	.21
080779	1500	300	12.83	58.18	.36
080779	1800	630	12.88	58.02	.48
080879	0915	1485	13.36	57.61	.89
080879	1955	2125	13.65	57.32	1.18
080879	2200	2250	13.74	57.23	1.27
080979	0000	2370	13.78	57.19	1.31
080979	0200	2490	13.80	57.17	1.33
080979	0400	2610	13.85	57.12	1.38
080979	0600	2730	13.92	57.05	1.45
080979	0800	2850	13.98	56.98	1.51
080979	1000	2970	14.00	56.97	1.53
080979	1200	3080	14.05	56.92	1.58
080979	1400	3210	14.07	56.90	1.60
080979	1600	3330	14.10	56.87	1.63
080979	1800	3450	14.15	56.82	1.68
080979	2000	3570	14.18	56.79	1.71
080979	2200	3690	14.25	56.72	1.78
081079	0000	3810	14.28	56.69	1.81
081079	0200	3930	14.30	56.67	1.83
081079	0400	4050	14.32	56.65	1.85
081079	0600	4170	14.36	56.61	1.89
081079	0815	4305	14.39	56.58	1.92
081079	1000	4410	14.37	56.60	1.90
081079	1200	4530	14.38	56.59	1.91
081079	1400	4650	14.38	56.59	1.91
081079	1600	4770	14.40	56.57	1.93
081079	1800	4890	14.42	56.55	1.95
081079	2000	5010	14.50	56.47	2.03
081079	2200	5130	14.55	56.42	2.08
081179	0000	5250	14.58	56.39	2.11
081179	0200	5370	14.59	56.38	2.12
081179	0400	5490	14.63	56.34	2.16
081179	0600	5610	14.66	56.31	2.19
081179	0800	5730	14.73	56.28	2.26
081179	1000	5850	14.75	56.22	2.28
081179	1230	6000	14.80	56.17	2.33
081179	1400	6090	14.82	56.15	2.35
081179	1600	6210	14.86	56.11	2.39
081179	1800	6330	14.90	56.07	2.43
081179	2000	6450	14.97	56.00	2.50
081179	2200	6570	15.05	55.92	2.58

2.4C-56

WELL NO. F-3
 ELEV OF MFS 70.97
 STATIC WATER LEVEL (FT) 12.47
 COORDINATES 520496N, 272613E
 START DATE 080779
 START TIME 0830

DATE PUMPING STARTED (HH:MM) DEPTH TO WATER (FT) WATER LEVEL ELEV (FT, MSL) DRAINAGE (FI)

DATE	TIME PUMPING STARTED (HH:MM)	DEPTH TO WATER (FT)	WATER LEVEL ELEV (FT, MSL)	DRAINAGE (FI)
081279	0800	15.00	52.09	2.01
081279	0810	15.09	52.09	2.02
081279	0830	15.13	52.09	2.06
081279	0900	15.22	52.09	2.75
081279	1100	15.28	52.09	2.81
081279	1200	15.33	52.09	2.86
081279	1400	15.37	52.09	2.90
081279	1600	15.41	52.09	2.94
081279	1800	15.43	52.09	2.96
081279	2000	15.47	52.09	3.00
081279	2200	15.52	52.09	3.05
081379	0010	15.58	52.09	3.11
081379	0130	15.61	52.09	3.14
081379	0300	15.71	52.09	3.24
081379	0400	15.83	52.09	3.36
081379	0650	15.89	52.09	3.42
081379	0800	15.96	52.09	3.49
081379	0930	16.07	52.09	3.60
081379	1000	16.14	52.09	3.67
081379	1100	16.25	52.09	3.78
081379	1200	16.31	52.09	3.84
081379	1290	16.34	52.09	3.87
081379	1400	16.41	52.09	3.96
081379	1500	16.59	52.09	4.12
081379	1600	16.66	52.09	4.19
081379	1700	16.83	52.09	4.36
081379	1800	16.90	52.09	4.43
081379	1900	17.02	52.09	4.55
081379	2000	17.05	52.09	4.58
081379	2100	17.14	52.09	4.67
081379	2200	17.24	52.09	4.77
081379	2300	17.28	52.09	4.81
081379	0000	17.35	52.09	4.88
081379	0100	17.44	52.09	4.97
081379	0200	17.48	52.09	5.01
081379	0300	17.58	52.09	5.11
081379	0400	17.65	52.09	5.18
081379	0500	17.68	52.09	5.21
081379	0600	17.73	52.09	5.26
081379	0700	17.82	52.09	5.35
081379	0800	17.91	52.09	5.40
081379	0900	17.94	52.09	5.47
081379	1000	18.00	52.09	5.53
081379	1100	18.03	52.09	5.56
081379	1200	18.06	52.09	5.61
081379	1300	18.14	52.09	5.72
081379	1400	18.30	52.09	5.91
081379	1500	18.45	52.09	5.98
081379	1600	18.55	52.09	6.08
081379	1700	18.57	52.09	6.10

P.4/C-57

WELL NO. ELEV OF MEAS PT. (FEET, MSL) STATIC WATER LEVEL (FT) COORDINATES STAHT DATE STAHT TIME

70.97 12.87 550444N, 1272613E 080779 0810

DATE HOUR PUMPING STARTED (MIN) TIME AFTER PUMPING STARTED (MIN) DEPTH TO WATER (FT) WATER LEVEL ELEV (FT, MSL) URADUUMN (FT)

DATE	HOUR	PUMPING STARTED (MIN)	TIME AFTER PUMPING STARTED (MIN)	DEPTH TO WATER (FT)	WATER LEVEL ELEV (FT, MSL)	URADUUMN (FT)
082079	0800	18690.		18.65	52.52	6.10
082079	1200	18930.		18.70	52.27	6.23
082079	1600	19170.		18.74	52.23	6.27
082079	2000	19410.		18.81	52.16	6.34
082179	0000	19650.		18.88	52.09	6.41
082179	0400	19890.		18.93	52.04	6.46
082179	0800	20130.		19.00	51.97	6.53
082179	1200	20370.		19.02	51.95	6.55
082179	1600	20610.		19.04	51.89	6.61
082279	0100	21150.		19.19	51.78	6.72
082279	0500	21510.		19.24	51.73	6.77
082279	0900	21900.		19.33	51.64	6.86
082279	1300	22350.		19.42	51.55	6.95
082379	0500	22830.		19.51	51.46	7.04
082379	0900	23310.		19.59	51.38	7.12
082379	1300	23670.		19.65	51.32	7.18
082479	0500	24210.		19.80	51.17	7.33
082479	0900	24630.		19.88	51.09	7.41
082579	1225	25075.		19.98	50.99	7.51
082579	0000	25410.		20.07	50.90	7.60
082579	0400	25890.		20.18	50.79	7.71
082579	0800	26370.		20.27	50.70	7.80
082679	0000	26850.		20.38	50.58	7.92
082679	0400	27210.		20.50	50.47	8.03
082679	0800	27690.		20.59	50.38	8.12
082679	1225	28015.		20.69	50.28	8.22
083079	1925	33775.		21.33	49.64	8.86
083179	1720	35090.		21.45	49.52	8.98
080279	1025	37555.		22.08	48.89	9.61
090379	1050	39020.		22.16	48.81	9.69
090479	1305	40595.		22.08	48.89	9.61
090579	1120	41930.		22.08	48.89	9.61
090779	1710	45160.		21.60	49.37	9.13
090979	0450	47540.		21.36	49.61	8.89
081479	0805	50415.		21.12	49.85	8.65
091379	0430	53280.		21.15	49.82	8.68
091579	1145	56355.		21.55	49.42	9.08
091779	1450	59420.		21.90	49.07	9.43
091979	1220	62150.		22.25	48.72	9.78
092179	0900	64830.		22.55	48.42	10.08
092579	1320	70850.		22.28	48.69	9.81
092779	0655	73465.		21.98	48.99	9.51
092979	1510	76720.		21.61	49.36	9.14
100179	1425	79555.		21.33	49.64	8.86
100379	1305	82355.		20.93	50.04	8.46
100579	1735	85505.		20.56	50.41	8.09
100779	1420	88180.		20.48	50.49	8.01
100979	1000	90810.		20.63	50.34	8.16
101179	1300	93870.		20.88	50.09	8.41
101679	1040	101410.		21.81	49.16	9.34

2.4/C-58

WELL NO. ELEV OF MEAS PT. (F, MSL) STATIC WATER LEVEL (F, MSL) COORDINATES START DATE START TIME

F-3 70.97 12.47 550498H - 2/26/3E 040774 0430

DATE TIME AFTER PUMPING STARTED (MIN) DEPTH TO WATER (FT) MAIN LEVEL ELEV (F, MSL) DRAINAGE (FT)

DATE	TIME AFTER PUMPING STARTED (MIN)	DEPTH TO WATER (FT)	MAIN LEVEL ELEV (F, MSL)	DRAINAGE (FT)
101879	1425	22.22	48.75	9.75
102079	1505	27.71	48.26	10.24
102279	1435	23.19	47.78	10.72
102479	1720	23.63	47.34	11.16
102679	0825	23.88	47.09	11.41
102879	1610	24.39	46.58	11.92
103079	0945	24.74	46.23	12.27
110279	1000	25.31	45.66	12.84
110479	0830	25.82	45.15	13.35
110679	0835	26.32	44.65	13.85
110879	0830	26.78	44.19	14.31
111379	1055	27.54	43.43	15.07
111679	0830	27.88	43.53	14.97
112679	0930	26.56	44.41	14.09
112879	1010	26.14	44.83	13.67
121179	0930	16.87	54.10	4.40
121379	1020	16.81	54.16	4.38

2.4C-59

WELL NO. ELEV. OF PUMP, FEAS. STATIC WATER LEVEL (FEET) CUMULATIVE WATER LEVEL (FEET) STAHI DATE STAHI TIME

For 08.30 0.69 50555W 2720ISE 080779 0830

DATE HOUR PUMPING STARTED (MIN) TIME AFTER PUMPING STARTED (MIN) DEPTH TO WATER (FT) WATER LEVEL ELEV. (FT) URAMULUMN (FT)

DATE	HOUR	PUMPING STARTED (MIN)	TIME AFTER PUMPING STARTED (MIN)	DEPTH TO WATER (FT)	WATER LEVEL ELEV. (FT)	URAMULUMN (FT)
080179	0000	08070		12.17	50.13	3.98
080279	0000	-7230		12.02	50.28	3.33
080379	1345	5845		11.25	51.05	2.56
080479	0000	-8350		10.67	51.63	1.98
080579	1015	2275		10.18	52.12	1.49
080679	1000	-1350		9.39	52.91	.70
080779	0822	08		8.69	53.61	.00
080779	1850	620		9.57	52.73	.88
080779	2000	890		9.65	52.65	.96
080779	2200	810		9.75	52.55	1.06
080779	2400	840		9.79	52.51	1.10
080879	0200	1050		9.81	52.49	1.12
080879	0800	1170		9.83	52.47	1.14
080879	0600	1290		9.89	52.41	1.20
080879	0845	1455		9.98	52.32	1.29
080879	1010	1500		10.15	52.15	1.46
080879	1200	1650		10.17	52.13	1.48
080879	1400	1770		10.18	52.12	1.49
080879	1600	1890		10.22	52.08	1.53
080879	1800	2010		10.28	52.02	1.59
080879	2000	2130		10.36	51.94	1.67
080879	2200	2250		10.43	51.87	1.74
080879	2400	2370		10.47	51.83	1.78
080979	0200	2490		10.50	51.80	1.81
080979	0800	2610		10.53	51.77	1.84
080979	0600	2730		10.56	51.74	1.87
080979	0800	2850		10.62	51.68	1.93
080979	1000	2970		10.71	51.59	2.02
080979	1200	3090		10.77	51.53	2.08
080979	1400	3210		10.81	51.49	2.12
080979	1600	3330		10.85	51.45	2.16
080979	1800	3450		10.89	51.41	2.20
080979	2000	3570		10.91	51.39	2.22
080979	2200	3690		10.95	51.35	2.26
080979	2400	3810		10.97	51.33	2.28
081079	0400	4050		10.98	51.32	2.29
081079	0600	4290		11.05	51.25	2.36
081079	1200	4530		11.14	51.16	2.45
081079	1600	4770		11.18	51.12	2.49
081079	2000	5010		11.31	50.99	2.62
081079	2400	5250		11.39	50.91	2.70
081179	0400	5490		11.43	50.87	2.74
081179	0800	5730		11.54	50.76	2.83
081179	1200	5970		11.61	50.69	2.92
081179	1600	6210		11.68	50.62	2.99
081179	2000	6450		11.82	50.48	3.13
081179	2400	6690		11.93	50.37	3.24
081279	0600	7050		12.13	50.17	3.44
081279	1200	7410		12.28	50.02	3.59
081279	1500	7590		12.37	50.03	3.68

2.4C-60

WELL NO. FLEV UP MEAN PL. (F.T.MSL) STATIC MAJEM LEVEL (FT) COORDINATES MAJEM LEVEL DATE STAMI TIME

F-4 05.30 0.00 549535N 212012E 000779 0030

DATE HOUR TIME AFTER PUMPING STARTED (MIN) DEPTH TO WATER (FT) MAJEM LEVEL ELEV (F.T.MSL) UPANULIN (FT)

DATE	HOUR	TIME AFTER PUMPING STARTED (MIN)	DEPTH TO WATER (FT)	MAJEM LEVEL ELEV (F.T.MSL)	UPANULIN (FT)
081279	1800	7770.	12.43	55.87	3.74
081279	2400	8130.	12.61	55.69	3.92
081379	0600	0490.	12.79	55.51	4.10
081379	1200	0850.	12.95	55.35	4.26
081379	1800	1310.	13.12	55.18	4.43
081379	2400	9570.	13.30	55.00	4.61
081479	0600	9930.	13.49	54.86	4.75
081479	1200	10290.	13.58	54.72	4.89
081479	1800	10650.	13.67	54.63	4.98
081479	2200	10890.	13.73	54.57	5.04
081579	1530	11980.	14.17	54.13	5.48
081579	1800	12090.	14.21	54.09	5.52
081579	2400	12450.	14.37	53.93	5.66
081679	0600	12810.	14.48	53.82	5.79
081679	1800	13530.	14.76	53.52	6.09
081779	0600	14250.	15.04	53.26	6.35
081779	1800	14970.	15.28	53.02	6.59
081879	0600	15690.	15.50	52.80	6.81
081879	1800	16410.	15.66	52.64	6.97
081979	0600	17130.	15.86	52.44	7.17
081979	1800	17850.	15.98	52.32	7.29
082079	0600	18570.	16.15	52.15	7.46
082079	1800	19290.	16.37	51.93	7.68
082179	0600	20010.	16.50	51.80	7.81
082179	1530	20580.	16.62	51.66	7.93
082179	1800	20730.	16.66	51.64	7.97
082279	1800	22170.	17.05	51.25	8.36
082379	1800	23610.	17.29	51.01	8.60
082479	1915	25125.	17.69	50.61	9.00
082579	1800	26490.	18.17	50.13	9.48
082679	1900	27990.	18.72	49.58	10.03
082779	1800	29370.	19.22	49.08	10.53
082879	0940	30310.	19.45	48.85	10.76
082979	1800	32250.	19.78	48.52	11.09
083079	1900	33750.	19.84	48.46	11.15
083179	1630	35040.	19.72	48.58	11.03
090279	1035	37565.	19.19	49.11	10.50
090379	1025	38995.	18.90	49.40	10.21
090479	1300	40590.	18.56	49.78	9.87
090579	1130	41940.	18.40	49.90	9.71
090779	1740	45190.	17.75	50.55	9.06
090979	0930	47540.	17.43	50.87	8.74
091179	0910	50340.	17.35	50.95	8.66
091379	0900	53310.	17.75	50.55	9.06
091579	1100	56310.	18.47	49.83	9.78
091779	1405	59375.	19.17	49.13	10.48
091979	1125	62095.	19.45	48.85	11.16
092179	0945	64875.	19.77	48.53	11.08
092579	1345	70875.	18.39	49.91	9.70
092779	0830	73440.	17.88	50.42	9.19

2.4C-61

WELL NO. ELEV. OF HEAD PI. (FT., MSL) STATIC WATER LEVEL (FT.) CINDER CONCRETE START DATE START TIME

FWA 68.30 6.64 549535N * 2/2015 080719 0830

DATE HOUR TIME BEGIN PUMPING STARTED (MIN) DEPTH TO WATER (FT.) WATER LEVEL ELEV. (FT., MSL) DRAWDOWN (FT.)

092479	1840	76690.	17.87	50.83	6.78
100179	1345	79515.	17.33	50.97	6.64
100379	1245	82335.	16.88	51.86	6.15
100579	1715	85445.	16.53	51.77	7.04
100779	1350	88160.	16.56	51.74	7.87
100979	0930	90780.	17.15	51.15	6.46
101179	1230	93880.	17.69	50.81	4.00
101679	1815	101365.	19.25	49.05	10.56
101879	1335	103985.	19.88	48.82	11.19
102079	1350	106880.	20.31	47.99	11.62
102279	1330	109780.	20.81	47.48	12.12
102479	1710	112880.	21.18	47.16	12.45
102679	0805	115175.	21.35	46.95	12.66
102879	1545	118515.	21.76	46.54	13.07
103079	0910	121000.	22.89	45.81	13.80
110279	0920	125330.	23.43	44.87	14.78
110479	0750	128120.	23.84	44.36	15.25
110679	0755	131005.	24.42	43.88	15.73
110879	0805	133895.	24.88	43.46	16.15
111379	1015	141225.	24.82	43.88	15.73
111679	0740	145380.	23.71	44.59	15.02
112679	1000	159930.	22.18	46.14	13.47
112879	0830	164220.	21.62	46.68	12.93

2.HC-62

WELL ELEV UP NEAR STATIC COORDINATES STAHI STAHI
 NO. PL. (FT., MSL) MAIER LEVEL (FT) DATE DATE TIME

F-5 09.50 0.00 309120N - 209400E 090719 0930

DATE HOUR TIME AFTER PUMPING STARTED(MIN) DEPTH TO WATER(FT) WATER LEVEL ELEV(FT,MSL) DRAWDOWN (FT)

DATE	HOUR	TIME AFTER PUMPING STARTED(MIN)	DEPTH TO WATER(FT)	WATER LEVEL ELEV(FT,MSL)	DRAWDOWN (FT)
080179	0000	-0670.	13.42	56.16	4.26
080279	0000	-7230.	12.96	56.62	4.10
080379	0000	-5190.	12.11	57.47	3.25
080479	0000	-4350.	10.96	58.60	2.12
080579	1320	-2590.	10.10	59.48	1.24
080679	0930	-1380.	9.39	60.19	.53
080779	0743	-47.	8.86	60.72	.00
080779	0844	14.	8.86	60.72	.00
080779	0950	80.	8.86	60.72	.00
080779	1047	137.	8.82	60.76	-.04
080779	1218	228.	8.87	60.71	-.01
080779	1319	289.	8.83	60.75	-.03
080779	1415	305.	8.79	60.79	-.07
080779	1517	407.	8.77	60.81	-.09
080779	1613	463.	8.76	60.82	-.10
080779	1806	576.	8.73	60.85	-.13
080779	2035	725.	8.70	60.88	-.16
080779	2234	844.	8.65	60.93	-.21
080879	0015	945.	8.62	60.96	-.24
080879	0430	1200.	8.52	61.06	-.34
080879	0745	1395.	8.43	61.15	-.43
080879	1320	1730.	8.48	61.10	-.38
080879	2220	2210.	8.42	61.16	-.42
080979	0230	2520.	8.39	61.19	-.47
080979	0800	2850.	8.30	61.28	-.56
080979	1435	3485.	8.35	61.23	-.51
081079	0015	3825.	8.32	61.26	-.54
081079	0700	4230.	8.27	61.31	-.59
081079	1305	4535.	8.30	61.20	-.40
081079	1920	4970.	8.42	61.16	-.44
081079	2400	5250.	8.53	61.05	-.53
081179	0615	5625.	8.47	61.11	-.39
081179	1425	6115.	8.52	61.06	-.44
081179	1915	6405.	8.59	60.99	-.27
081179	2400	6690.	8.68	60.90	-.18
081279	0610	7080.	8.74	60.84	-.12
081279	1230	7440.	8.89	60.69	.03
081279	1920	7850.	9.07	60.51	.21
081279	2345	8115.	9.20	60.38	.34
081379	0630	8520.	9.34	60.24	.48
081379	1410	8980.	9.21	60.37	.35
081379	2000	9330.	9.10	60.48	.24
081379	2400	9570.	9.97	59.61	1.11
081479	0615	9945.	10.10	59.48	1.24
081479	1420	10670.	10.51	59.07	1.65
081579	0730	11460.	10.02	59.56	1.16
081579	1400	12090.	11.06	58.52	2.20
081679	0720	12890.	11.31	58.27	2.45
081679	1420	13550.	11.65	57.93	2.79
081779	0635	14285.	11.91	57.67	3.05

24C-63

WELL NO. ELEV OF HEAD ST. (FT., MSL) STATIC WATER LEVEL (FT.) COORDINATES START DATE START TIME

AMS 49.58 8.66 LIME PUMPING STA. (UMIN) DEPTH TO WATER (FT) WATER LEVEL ELEV (FT, MSL) DRUMDUM (FT)

DATE HOUR PUMPING STA. (UMIN) DEPTH TO WATER (FT) WATER LEVEL ELEV (FT, MSL) DRUMDUM (FT)

DATE	HOUR	PUMPING STA. (UMIN)	DEPTH TO WATER (FT)	WATER LEVEL ELEV (FT, MSL)	DRUMDUM (FT)
081179	1815	18985	12.20	57.38	3.38
081879	0650	15780	12.41	57.17	3.55
081879	1815	16825	12.55	57.03	3.69
081979	1020	17390	12.76	56.82	3.90
081879	1800	17800	12.82	56.76	4.06
082079	0650	18620	12.87	56.71	4.01
082079	1830	19320	13.10	56.48	4.28
082179	0640	20050	13.18	56.40	4.32
082179	1905	20785	13.47	56.11	4.61
082279	1740	22150	13.73	55.85	4.87
082379	1745	23585	14.17	55.41	5.31
082479	1745	25015	14.66	54.72	6.00
082579	1815	26505	15.59	53.99	6.73
082679	1720	27890	16.34	53.24	7.48
082779	1750	29360	17.00	52.58	8.14
082879	1755	30805	17.04	52.54	8.16
082879	1750	32240	18.69	51.89	8.83
083079	1740	33670	16.02	53.56	7.16
083179	1830	34980	15.32	54.26	6.46
090179	0920	36050	14.75	54.83	5.89
090279	0910	37480	13.92	55.66	5.06
090379	0930	38890	13.33	56.25	4.47
090479	1800	40350	12.71	56.87	3.85
090579	1455	42185	12.17	57.41	3.31
090779	1800	43090	11.33	58.25	2.47
090979	0750	47480	11.04	58.54	2.18
091179	0950	50880	11.59	57.99	2.73
091379	0730	53220	12.52	57.06	3.66
091579	1235	56805	14.06	55.52	5.20
091779	1545	59475	15.32	54.26	6.46
091979	1030	62040	16.21	53.37	7.35
092179	0742	64752	15.33	54.25	6.47
092579	0915	70605	11.19	58.39	2.33
092779	1110	73600	11.26	58.30	2.42
093079	1555	76165	10.62	58.76	1.86
100179	1515	79605	10.75	58.63	1.89
100379	1115	82245	10.22	59.36	1.36
100579	1350	85280	10.46	59.12	1.60
100779	1530	88260	10.66	58.92	1.80
100979	1115	90885	11.85	57.73	2.99
101179	1350	93920	12.48	56.70	4.02
101679	1935	101465	15.55	54.03	6.69
101879	1555	104125	16.40	53.18	7.54
102079	1625	107035	16.32	53.26	7.46
102279	1600	109690	16.52	53.06	7.66
102479	1815	112905	16.84	52.74	7.98
102679	1335	115585	17.35	52.23	8.49
102879	1700	118590	17.93	51.65	9.07
103079	1315	121245	19.56	50.02	10.70
110279	1110	125480	20.84	48.69	12.03

214C-64

WELL NO. ELEV. OF MEAS. STATIC WATER LEVEL (FT) CON. TO WATERS STAGE DATE STAGE TIME

F-5 69.59 0.09 541224 - 200000 080779 0830

DATE HOUR TIME AFTER PUMPING STARTED (MIN) DEPTH TO WATER LEVEL DRAMDOWN WATER LEVEL ELEV. (F.T.M.S.L.) (FT)

DATE	HOUR	TIME AFTER PUMPING STARTED (MIN)	DEPTH TO WATER LEVEL (FT)	WATER LEVEL ELEV. (F.T.M.S.L.)	DRAMDOWN (FT)
110879	0935	120225.	20.82	48.76	11.96
110679	1110.	131200.	21.23	48.35	12.37
110879	0925	133775.	21.02	48.56	12.16
111379	1315	141405.	17.58	52.00	8.72
111679	0935	145505.	16.19	53.39	7.33
112679	1720	160370.	13.61	55.97	4.75
112979	1120	164330.	13.09	56.50	4.18
121179	1105	161595.	6.83	63.15	-2.43
121379	1530	164740.	7.33	62.25	-1.53

240-65

WELL NO. ELEV. MEAN STATIC WATER LEVEL (FT.) CUMULATIVE DEPTH TO WATER (FT.) WATER LEVEL ELEV. (FT., MSL) START DATE DRAINAGE LINE

F-6 80.74 21.61 SANDSON # 272016 DR0179 DRAD

DATE HOUR TIME AFTER PUMPING STARTED (MIN) DEPTH TO WATER (FT.) WATER LEVEL ELEV. (FT., MSL) DRAINAGE LINE (FT.)

DATE	HOUR	TIME AFTER PUMPING STARTED (MIN)	DEPTH TO WATER (FT.)	WATER LEVEL ELEV. (FT., MSL)	DRAINAGE LINE (FT.)
080179	0000	0000	23.23	57.51	1.62
080279	0000	7230	23.21	57.53	1.60
080379	0000	5190	23.13	57.61	1.52
080479	0000	4350	22.75	57.99	1.14
080579	1320	2500	22.08	58.76	.87
080679	0945	1365	22.05	58.89	.44
080779	0737	853	21.61	59.13	.00
080879	0940	10	21.61	59.13	.00
080979	0945	75	21.61	59.13	.00
081079	1042	132	21.61	59.13	.00
081179	1213	233	21.63	59.11	.02
081279	1311	281	21.63	59.11	.02
081379	1410	380	21.63	59.11	.02
081479	1511	481	21.63	59.11	.02
081579	1607	572	21.63	59.11	.02
081679	1802	772	21.65	59.09	.04
081779	2027	1117	21.70	59.04	.00
081879	2227	837	21.64	59.10	.03
081979	0045	975	21.64	59.10	.03
082079	0430	1200	21.61	59.13	.00
082179	0745	1395	21.62	59.12	.01
082279	1315	1725	21.73	59.01	.12
082379	2230	2280	21.81	58.93	.20
082479	0230	2520	21.85	58.89	.24
082579	0800	2850	21.79	58.95	.18
082679	1430	3480	21.67	59.07	.26
082779	2400	5250	22.00	58.74	.39
082879	0015	3825	21.90	58.84	.29
082979	0645	4215	21.94	58.80	.29
083079	1310	4600	21.97	58.77	.36
083179	1925	4975	21.98	58.76	.37
083279	0600	5610	22.20	58.54	.59
083379	1430	6120	22.13	58.61	.52
083479	1920	6410	22.16	58.58	.55
083579	0015	6705	22.32	58.42	.71
083679	0615	7065	22.38	58.36	.77
083779	1235	7485	22.50	58.24	.89
083879	1925	7855	22.59	58.15	.98
083979	2345	8115	22.71	58.03	1.10
084079	0630	8520	22.92	57.82	1.31
084179	1415	8985	23.12	57.62	1.51
084279	1955	9325	23.23	57.51	1.62
084379	2400	9570	23.31	57.43	1.70
084479	0615	9945	23.35	57.39	1.74
084579	1415	10665	23.54	57.20	1.93
084679	0720	11450	23.75	56.99	2.14
084779	1755	12085	24.96	56.78	2.35
084879	0710	12880	24.61	56.57	2.61
084979	1415	13585	24.34	56.40	2.73
085079	0640	14290	24.54	56.20	2.93

24C-66

WELL NO. F-6 ELEV. OF MEAS. PT. (FEET, MSL) 00.74 STATIC WATER LEVEL (FEET) 21.61 COORDINATES 548558N 272010E START DATE 080779 STAKE TIME 0830

DATE 110279 HOUR 1115 TIME AFTER PUMPING STARTED (MIN) 1240 DEPTH TO WATER (FEET) 27.96 WATER LEVEL ELEV. (FEET, MSL) 52.78 STATION 0830

DATE	HOUR	TIME AFTER PUMPING STARTED (MIN)	DEPTH TO WATER (FEET)	WATER LEVEL ELEV. (FEET, MSL)	STATION
081779	1820	18990.	28.69	52.05	0830
081879	0645	15735.	29.48	55.66	0830
081879	1820	16430.	29.94	55.00	0830
081979	1025	17395.	25.21	55.53	0830
081979	1835	17885.	25.27	55.47	0830
082079	0640	16610.	25.49	55.25	0830
082079	1835	19325.	25.55	55.19	0830
082179	0650	20060.	25.72	55.02	0830
082179	1900	20790.	25.80	54.94	0830
082279	1735	22145.	26.04	54.70	0830
082379	1740	23590.	26.28	54.46	0830
082479	1720	25010.	26.59	54.15	0830
082579	1820	26510.	26.91	53.83	0830
082679	1715	27085.	27.22	53.52	0830
082779	1745	29355.	27.61	53.13	0830
082879	1750	30800.	27.85	52.89	0830
082979	1745	32235.	28.05	52.69	0830
083079	1740	33670.	28.13	52.61	0830
083179	1525	38975.	28.18	52.60	0830
090179	0915	36085.	28.17	52.57	0830
090279	0915	37485.	28.00	52.74	0830
090379	0835	38685.	27.96	52.78	0830
090479	1535	40185.	27.96	52.78	0830
090579	1850	42140.	27.93	52.91	0830
090779	1555	45085.	27.46	53.28	0830
090979	0750	47480.	27.30	53.44	0830
091179	0955	50485.	27.37	53.37	0830
091379	0725	53215.	27.41	53.33	0830
091579	1240	56410.	27.93	52.81	0830
091779	1550	59480.	28.33	52.41	0830
091979	1025	62035.	28.69	52.05	0830
092179	0745	64755.	28.57	52.17	0830
092579	0910	70600.	28.01	52.73	0830
092779	1115	73605.	27.99	52.75	0830
092979	1608	76710.	27.52	53.22	0830
100179	1520	79610.	27.93	53.31	0830
100379	1120	82250.	27.16	53.58	0830
100579	1355	85295.	26.98	53.76	0830
100779	1535	88265.	26.51	53.93	0830
100979	1120	90890.	27.23	53.51	0830
101179	1808	93930.	27.58	53.16	0830
101679	1900	101470.	28.59	52.15	0830
101879	1600	104130.	29.01	51.73	0830
102079	1630	107040.	29.08	51.66	0830
102279	1605	109695.	29.33	51.41	0830
102479	1620	112910.	29.68	51.06	0830
102679	1340	115510.	29.95	50.79	0830
102879	1705	118595.	30.23	50.51	0830
103079	1315	121245.	30.79	49.95	0830
110279	1115	125485.	31.28	49.46	0830

24C67

WELL NO. ELEV. OF NEAR STATIC WATER LEVEL (FT.) CURRICULUMS START DATE START TIME

20.74 21.61 5000000 212010E 000719 0030

DATE MIN. TIME AFTER PUMPING STARTED (MIN) DEPTH TO WATER (FT) WATER LEVEL ELEV. (FT, MSL) DRAINAGE (FT)

110879	0980	120230.	31.81	89.33	9.80
110679	1115	131205.	31.87	88.87	10.26
110879	0930	133000.	31.97	88.77	10.36
111379	1320	141410.	32.09	88.65	10.48
111879	0040	145510.	31.84	88.83	10.30
112679	1725	160375.	31.51	89.43	9.70
112979	1130	160300.	31.08	89.70	9.83
121079	1610	180460.	26.1-	54.60	4.53
121379	1535	180705.	25.56	55.18	3.95

24C-68

WELL NO. 65-67
 ELEV. OF MEAS. PL. (FT., MSL) 7.40M
 STATIC WATER LEVEL (FT.) 54911/N - 2705011
 CHURCHMAN'S DATE 080779
 START TIME 0830

DATE 080779
 TIME AT 12H PUMPING STARTED (MIN) 0000
 DEPTH TO WATER LEVEL (FT.) 14.13
 WATER LEVEL ELEV. (FT., MSL) 54.24
 DRAWDOWN (FT.) 6.25

TIME	MIN	SEC	DEPTH TO WATER LEVEL (FT.)	WATER LEVEL ELEV. (FT., MSL)	DRAWDOWN (FT.)
080779	0000	-0670	14.13	54.24	6.25
080779	0000	-7230	13.06	55.21	5.58
080779	0000	-5790	12.49	56.19	4.61
080779	0000	-4350	10.18	58.49	2.30
080779	0000	-2910	9.17	59.50	1.29
080779	0035	-1375	7.23	59.44	1.35
080779	0727	-63	7.08	60.79	0.00
080779	0916	46	6.69	59.98	0.61
080779	1010	104	6.67	60.00	0.78
080779	1109	159	6.66	60.01	0.79
080779	1223	231	6.67	60.00	0.79
080779	1325	295	6.67	60.00	0.79
080779	1415	345	6.66	59.99	0.80
080779	1505	395	6.67	60.00	0.79
080779	1605	455	6.62	60.05	0.74
080779	1635	605	6.59	60.08	0.71
080779	2115	785	6.26	60.41	0.38
080779	2310	880	6.10	60.57	0.22
080879	0130	1020	7.86	60.81	0.02
080879	0530	1260	7.96	61.21	0.42
080879	0830	1480	8.49	60.18	0.61
080879	1425	1795	8.57	60.10	0.69
080879	2145	2235	8.25	60.82	0.37
080979	0300	2550	7.69	60.98	0.19
080979	0845	2895	6.53	60.14	0.65
080979	1650	3380	6.49	60.18	0.61
081079	0045	3855	7.89	60.18	0.61
081079	0745	4275	7.76	60.91	0.12
081079	1200	4530	6.77	59.90	0.69
081079	1815	4905	6.54	60.13	0.66
081179	0045	5295	6.22	60.45	0.34
081179	0645	5655	6.01	60.66	0.13
081179	1320	6050	6.15	60.52	0.27
081179	1815	6345	6.30	60.37	0.42
081279	0045	6735	6.48	60.19	0.60
081279	0645	7095	6.65	60.02	0.77
081279	1410	7500	6.61	59.66	0.93
081279	1815	7785	6.90	59.77	1.02
081379	0015	8145	9.18	59.49	1.30
081379	0700	8550	9.57	59.10	1.69
081379	1340	8950	10.77	57.90	2.89
081379	2020	9350	10.77	57.90	2.89
081479	0030	9600	10.45	58.22	2.57
081479	0700	9990	10.26	58.41	2.38
081479	1925	10735	11.58	57.09	3.70
081579	0815	11505	11.96	56.69	4.10
081579	1630	12120	12.21	56.46	4.33
081679	0750	12920	12.59	56.08	4.71
081679	1900	13590	12.71	55.96	4.83
081779	0735	14395	13.45	55.22	5.57

240-69

WELL NO. 08-07
 ELEV. OF MEAS. POINT (FT.) 15030
 STATIC WATER LEVEL (FT.) 55.02
 CHROCHIMATFS DATE 08-07
 START TIME 080779
 STAFF LINE 0830

DATE	MOON	TIME AFTER PUMPING STARTED (MIN)	DEPTH TO WATER LEVEL (FT)	WATER LEVEL ELEV (FT, MSL)	DRAWDOWN (FT)
081179	1900	15030	13.05	55.02	5.17
081879	0735	15785	12.96	55.71	5.04
081879	1910	16080	13.10	55.57	5.22
081979	0905	17355	13.26	55.30	5.40
081979	1920	17930	13.10	55.47	5.02
082079	0730	18660	14.43	54.20	6.55
082079	1910	19360	14.81	54.26	6.53
082179	0730	20100	14.70	53.97	6.82
082179	1930	20820	14.75	53.92	6.87
082279	1020	22190	15.23	53.40	7.35
082379	1820	24630	15.80	52.87	7.92
082479	1935	25145	16.41	52.26	8.53
082579	1650	26020	15.93	52.74	8.05
082679	1840	27970	17.54	51.13	9.66
082779	1905	29035	18.99	49.68	11.11
082879	1655	30865	18.85	49.82	10.97
082979	1655	32305	18.20	50.47	10.32
083079	1850	33740	17.25	51.42	9.37
083179	1610	35020	16.02	52.25	8.54
090179	0950	36080	14.79	53.88	6.91
090279	0950	37520	13.50	55.17	5.62
090379	1005	38975	13.83	54.84	5.95
090479	1055	40705	13.47	55.00	5.79
090579	1810	42120	12.96	55.71	5.08
090779	1805	45215	11.66	57.01	3.78
090979	0950	47600	10.67	58.00	2.79
091179	0750	50360	12.96	55.71	5.08
091379	0920	53330	14.15	54.52	6.27
091579	1050	56300	14.52	54.15	6.68
091779	1335	59345	17.08	51.59	9.20
091979	1105	62075	16.10	50.57	10.22
092179	1000	64890	16.56	52.11	8.68
092579	1305	70835	14.82	53.85	6.94
092779	0810	73420	13.72	54.95	5.84
092879	1420	76670	10.84	58.23	2.56
100179	1335	79485	10.44	54.23	6.56
100379	1030	82200	14.05	58.62	6.17
100579	1300	85230	13.27	55.40	5.39
100779	1325	88135	10.86	58.21	2.58
100979	0905	90755	15.51	53.16	7.63
101179	1210	93620	16.83	51.84	8.95
101679	1755	101365	18.66	50.01	10.78
101879	1310	103960	21.75	46.92	13.87
102079	1320	106850	16.93	51.74	9.05
102279	1300	109710	18.49	50.18	10.61
102479	1420	112670	20.47	48.20	12.59
102679	0745	115155	20.61	48.06	12.73
102879	1550	118500	18.92	49.75	11.04
103079	0850	120480	24.66	44.01	16.78
110179	1155	124025	27.43	41.24	19.55

2.4C-70

WELL NO. ELEV OF MEAS. POINT (F, MSL) STATIC WATER LEVEL (F, MSL) COORDINATES START DATE START TIME

RM-1A 68.67 7.80 509117N 270501E 080779 0830

DATE HOUR TIME AFTER PUMPING STARTED (MIN) DEPTH TO WATER (FT) WATER LEVEL ELEV (F, MSL) DRAWDOWN (FT)

110279	0900	125110.	26.30	42.37	18.42
110879	0730	128100.	21.92	46.75	14.08
110879	0740	130990.	24.81	43.86	18.93
110879	0745	133875.	21.98	46.69	14.10
111379	0950	141200.	23.11	42.56	15.23
111679	0715	145365.	19.13	49.54	11.25
112679	1020	159950.	18.34	50.33	18.46
112979	0905	164195.	12.80	55.87	4.92
121179	0905	181475.	5.59	63.08	-2.29
121379	1330	184620.	6.84	61.83	-1.04

2.4C-71

WELL NO. ELEV OF MBR ST. (FT., MSL) STATIC WATER LEVEL (FT.) COORDINATES START DATE START TIME

RW11R 71.21 10.00 SW1100N 270532E 080779 0830

DATE	TIME AFTER PUMPING STARTED (MIN)	DEPTH TO WATER (FT)	WATER LEVEL ELEV (FT., MSL)	UPRANURN (FT)
080179	0000	16.42	59.79	5.98
080279	0000	15.79	55.42	5.35
080379	0000	14.79	56.42	4.35
080479	0000	12.91	58.30	2.47
080579	0000	11.67	59.54	1.23
080679	0930	11.54	59.67	1.10
080779	0730	10.44	60.77	.00
080779	0914	10.91	60.30	.47
080779	1009	11.00	60.21	.56
080779	1105	10.93	60.28	.49
080779	1220	10.26	60.45	.52
080779	1322	10.98	60.23	.54
080779	1415	10.99	60.22	.55
080779	1502	10.99	60.22	.55
080779	1600	10.96	60.25	.52
080779	1840	10.88	60.33	.44
080779	2134	10.66	60.55	.22
080779	2305	10.51	60.70	.07
080879	0130	10.37	60.84	.07
080879	0530	10.00	61.21	-.44
080879	0830	10.43	60.38	.39
080879	1425	10.85	60.36	.41
080879	2140	10.64	60.57	.27
080979	0300	10.28	60.93	-.16
080979	0845	11.63	59.58	1.19
080979	1655	10.79	60.42	.35
081079	0045	10.38	60.83	-.06
081079	0745	10.29	60.92	-.15
081079	1200	11.04	60.13	.64
081079	1815	10.94	60.27	.50
081179	0045	10.70	60.51	.26
081179	0645	10.58	60.63	.14
081179	1320	10.71	60.50	.27
081179	1815	10.85	60.36	.41
081279	0045	11.01	60.20	.57
081279	0645	11.18	60.03	.74
081279	1410	11.45	59.76	1.01
081279	1815	11.58	59.62	1.14
081379	0015	11.72	59.49	1.28
081379	0700	12.12	59.09	1.68
081379	1345	13.14	58.09	2.68
081379	2025	13.16	58.05	2.72
081479	0030	12.97	58.24	2.53
081479	0700	12.79	58.42	2.35
081479	1925	13.96	57.25	3.52
081579	0100	14.32	56.89	3.88
081579	1830	14.57	56.68	4.13
081679	0750	14.97	56.24	4.53
081679	1855	15.14	56.07	4.70
081779	0755	15.78	55.43	5.34

240-72

WELL NO. 71-21
 ELEV. OF MFS. PI. (F.L.MSL.) 10.40
 STATIC WATER LEVEL (F.L.) 10.40
 COORDINATES 080779 080779
 START DATE 080779
 START TIME 0830

DATE	HOUR	TIME AFTER PUMPING STARTED (MIN)	DEPTH TO WATER (FT)	WATER LEVEL ELEV (F.L.MSL)	DRAM (GAL)
081179	1900	15030.	15.53	55.08	5.09
081179	0730	15760.	15.52	55.09	5.08
081179	1910	16480.	15.65	55.21	5.21
081179	0950	17360.	15.85	55.36	5.41
081179	1920	17930.	15.98	55.33	5.44
082079	0730	18660.	16.74	54.47	6.30
082079	1910	19350.	16.74	54.43	6.34
082179	0730	20100.	17.03	54.18	6.59
082179	1930	20820.	17.11	54.10	6.67
082279	1820	21190.	17.58	53.63	7.14
082379	1820	23030.	18.15	53.06	7.71
082479	1945	25155.	18.18	53.03	7.74
082579	1650	26420.	19.20	52.01	8.76
082679	1840	27970.	20.11	51.10	9.67
082779	1905	29435.	20.69	50.52	10.25
082879	1855	30865.	20.59	50.62	10.15
082979	1855	32305.	20.53	50.68	10.09
083079	1850	33740.	19.00	52.21	8.56
083179	1610	35020.	18.82	52.39	8.38
090179	0950	36080.	17.38	53.83	6.94
090279	0950	37520.	16.54	54.67	6.10
090379	1000	38970.	15.83	55.38	5.39
090479	1455	40705.	15.92	55.29	5.48
090579	1430	42120.	15.29	55.92	4.85
090779	1400	45210.	14.10	57.11	3.66
090979	0950	47600.	13.30	57.91	2.86
091179	0750	50360.	10.96	56.25	4.52
091379	0920	53330.	16.40	54.81	5.96
091579	1050	56300.	17.08	54.13	6.64
091779	1355	59345.	19.46	51.75	9.02
091979	1105	62075.	20.39	50.82	9.95
092179	1000	64890.	18.93	52.28	8.49
092379	1312	70642.	17.10	54.11	6.66
092779	0810	73420.	16.21	55.00	5.77
092979	1420	76270.	13.01	58.20	2.57
100179	1315	79485.	16.06	55.15	5.62
100379	1030	82200.	16.71	54.50	6.27
100579	1300	85230.	15.07	56.14	4.63
100779	1325	88135.	13.05	58.16	2.61
100979	0905	90755.	17.23	53.98	6.79
101179	1210	93920.	18.50	52.71	8.06
101679	1755	101365.	20.56	50.65	10.12
101879	1310	103960.	23.30	47.91	12.86
102079	1320	106850.	19.53	51.68	9.09
102279	1300	109710.	20.57	50.64	10.13
102479	1420	112670.	22.30	48.91	11.86
102679	0745	115155.	22.48	48.73	12.84
102879	1530	118500.	21.49	49.72	11.05
103079	0850	120980.	26.19	45.92	15.75
110179	1135	124025.	26.51	42.70	18.07

2.40.73

WELL NO. 71.21 ELEV OF MESS. WATER LEVEL (FT) 10.80 STATIC WATER LEVEL (FT) 509150N 270532E COORDINATES 0807/9 START DATE 0830 START TIME

DATE HOUR TIME AFTER PUMPING STARTED (MIN) DEPTH TO WATER (FT) WATER LEVEL ELEV (FT, MSL) DRAWDOWN (FT)

DATE	HOUR	TIME AFTER PUMPING STARTED (MIN)	DEPTH TO WATER (FT)	WATER LEVEL ELEV (FT, MSL)	DRAWDOWN (FT)
110279	0900	125310.	27.87	83.30	17.43
110279	0730	126100.	28.52	86.69	14.08
110279	0700	130900.	26.83	84.38	16.39
110279	0745	133075.	28.63	86.58	14.19
111379	0850	141200.	28.52	86.68	14.08
111679	0715	145365.	21.19	50.02	10.75
112679	1020	159450.	19.90	51.31	9.46
112979	0905	164195.	15.49	55.72	5.05
121079	1055	180185.	7.98	63.23	2.46
121379	1330	186620.	9.49	61.72	2.95

240-74

WELL NO. ELEV OF HEAD P.L. (F.T., MSL) WATER LEVEL (F.T.) DATE START DATE START TIME

Rm-3A 75.63 15.25 55013N 27100E 080779 0830

DATE HOUR TIME AFTER PUMPING STARTED (MIN) DEPTH TO WATER (FT) WATER LEVEL ELEV (F.T., MSL) DRAWDOWN (FT)

DATE	HOUR	TIME AFTER PUMPING STARTED (MIN)	DEPTH TO WATER (FT)	WATER LEVEL ELEV (F.T., MSL)	DRAWDOWN (FT)
080179	0000	-8670.4	19.90	55.73	4.85
080279	0000	-7230.	19.63	56.00	4.38
080379	0000	-5790.4	18.63	57.00	3.38
080479	0000	-4350.	17.55	58.08	2.30
080579	0000	-2910.	16.71	58.92	1.46
080679	1020	-1330.	15.83	59.80	.58
080779	0750	-80.	15.25	60.38	.00
080779	0854	24.	19.08	56.15	4.23
080779	0949	79.	22.35	53.28	7.12
080779	1044	138.	23.07	52.56	7.82
080779	1203	213.	23.83	52.20	8.18
080779	1250	260.	23.60	52.03	8.35
080779	1345	315.	23.82	51.81	8.57
080779	1440	370.	23.93	51.70	8.68
080779	1512	402.	23.98	51.65	8.73
080779	1612	582.	24.26	51.37	9.01
080779	2110	760.	24.53	51.08	9.30
080779	2300	870.	24.61	51.02	9.36
080879	0130	1020.	24.90	50.73	9.65
080879	0515	1245.	24.93	50.70	9.68
080879	0630	1440.	24.75	50.89	9.50
080879	1400	1770.	26.74	48.89	11.49
080879	2110	2200.	28.92	46.71	13.67
080979	0300	2550.	29.76	45.87	14.51
080979	0805	2895.	30.77	44.86	15.52
080979	1730	3420.	31.70	43.93	16.45
081079	0005	3852.	29.93	45.10	14.68
081079	0730	4260.	30.06	45.57	14.81
081079	1220	4550.	30.14	45.49	14.89
081079	1845	4935.	32.47	43.16	17.22
081179	0030	5280.	32.49	43.14	17.24
081179	0630	5640.	32.77	42.86	17.52
081179	1350	6080.	33.11	42.52	17.86
081179	1845	6375.	33.35	42.28	18.10
081279	0030	6720.	33.59	42.04	18.34
081279	0630	7080.	33.76	41.87	18.51
081279	1345	7515.	34.20	41.43	18.95
081279	1835	7805.	34.40	41.23	19.15
081379	0015	8145.	34.38	41.25	19.13
081379	0645	8535.	34.72	40.91	19.47
081379	1320	8930.	35.00	40.63	19.75
081379	2030	9360.	35.32	40.31	20.07
081479	0015	9585.	35.34	40.29	20.09
081479	0645	9975.	35.39	40.20	20.14
081479	1900	10310.	35.71	39.92	20.46
081579	080	11490.	36.12	39.51	20.87
081579	14	12110.	36.45	39.18	21.20
081679	6	12985.	37.01	38.62	21.76
081679	11	13580.	36.74	38.89	21.49
081779	672	14335.	36.65	38.98	21.40

2.4C-75

WELL NO. 75.63 STATIC WATER LEVEL (FT) 15.25 CHIMNEY/INLET WATER LEVEL (FT) 0830 STAMP DATE 08779

DATE	WELL NO.	ELEV. OF MEAS. POINT (FT, MSL)	TIME AFTER PUMPING STARTED (MIN)	DEPTH TO WATER (FT)	WATER LEVEL ELEV. (FT, MSL)	STAMP DATE
081779	75.63	15.25	15020	36.75	36.88	21.50
081879	75.63	15.25	15775	36.97	36.66	21.72
081979	75.63	15.25	16470	37.14	36.49	21.89
082079	75.63	15.25	17165	37.41	36.22	22.16
082179	75.63	15.25	17860	37.66	35.97	22.41
082279	75.63	15.25	18555	37.95	35.68	22.70
082379	75.63	15.25	19250	38.10	35.53	22.85
082479	75.63	15.25	20090	38.10	35.53	22.85
082579	75.63	15.25	20810	38.11	35.52	22.86
082679	75.63	15.25	21500	38.40	35.23	23.15
082779	75.63	15.25	22200	38.74	34.89	23.49
082879	75.63	15.25	22900	38.61	35.02	23.36
082979	75.63	15.25	23600	39.40	34.23	24.15
083079	75.63	15.25	24300	40.99	34.64	25.74
083179	75.63	15.25	25000	41.57	34.06	26.32
083279	75.63	15.25	25700	41.37	34.26	26.12
083379	75.63	15.25	26400	41.23	34.40	26.18
083479	75.63	15.25	27100	41.11	34.52	25.86
083579	75.63	15.25	27800	40.69	34.94	25.44
083679	75.63	15.25	28500	41.00	34.63	25.75
083779	75.63	15.25	29200	40.77	34.86	25.52
083879	75.63	15.25	29900	40.42	35.21	25.17
083979	75.63	15.25	30600	39.75	35.88	24.50
084079	75.63	15.25	31300	39.96	35.67	24.71
084179	75.63	15.25	32000	38.07	37.56	22.82
084279	75.63	15.25	32700	37.67	37.96	22.42
084379	75.63	15.25	33400	37.75	37.88	22.50
084479	75.63	15.25	34100	37.99	37.64	22.74
084579	75.63	15.25	34800	39.43	36.21	24.18
084679	75.63	15.25	35500	40.34	35.29	25.09
084779	75.63	15.25	36200	41.01	34.62	25.76
084879	75.63	15.25	36900	38.96	36.67	23.71
084979	75.63	15.25	37600	38.06	37.57	22.81
085079	75.63	15.25	38300	37.57	38.06	22.32
085179	75.63	15.25	39000	37.40	38.23	22.15
085279	75.63	15.25	39700	37.08	38.55	21.83
085379	75.63	15.25	40400	35.55	40.08	20.30
085479	75.63	15.25	41100	36.32	39.31	21.07
085579	75.63	15.25	41800	36.82	38.81	21.57
085679	75.63	15.25	42500	37.53	38.10	22.28
085779	75.63	15.25	43200	38.31	37.32	23.06
085879	75.63	15.25	43900	40.75	34.88	25.50
085979	75.63	15.25	44600	41.83	33.80	26.58
086079	75.63	15.25	45300	42.70	32.93	27.45
086179	75.63	15.25	46000	42.54	33.04	27.34
086279	75.63	15.25	46700	42.78	32.85	27.53
086379	75.63	15.25	47400	43.14	32.49	27.89
086479	75.63	15.25	48100	44.32	31.31	29.07
086579	75.63	15.25	48800	44.93	30.70	29.68
086679	75.63	15.25	49500	45.61	30.02	30.36

24C-76

WELL NO. ELEV OF MEAS PT. (FT., MSL) STATIC WATER LEVEL (FT.) COORDINATES START DATE START TIME

PH-3A 75.63 12.25 520713N 271404E 080779 0830

DATE HOUR TIME AFTER PUMPING STARTED (MIN) DEPTH TO WATER (FT) WATER LEVEL ELEV (FT., MSL) DRAWDOWN (FT)

110279	0930	125390.	46.20	29.43	30.95
110279	0805	128135.	46.95	28.68	31.70
110279	0805	131015.	47.6	28.07	32.31
110279	0815	133905.	47.98	27.69	32.69
111379	1030	141240.	46.17	29.86	30.92
111679	0800	145410.	45.00	30.63	29.75
112679	0940	159910.	43.47	32.16	28.22
112979	0945	160235.	42.63	33.00	27.38
121079	1140	180190.	36.30	34.33	21.05
121379	1400	184650.	36.48	39.15	21.23

240-77

WELL NO. ELEV. OF HEAD AT LEVEL, WATER LEVEL (FT) STATIC WATER LEVEL (FT) CIRCUMFERENCE START DATE START TIME

RM-311 76.09 15.12 55065UN 271369E 080779 0830

DATE HOUR TIME AFTER PUMPING STARTED (MIN) DEPTH TO WATER (FT) WATER LEVEL ELEV. (MSL) DRAWDOWN (FT)

DATE	HOUR	TIME AFTER PUMPING STARTED (MIN)	DEPTH TO WATER (FT)	WATER LEVEL ELEV. (MSL)	DRAWDOWN (FT)
080179	0000	0070	19.75	56.50	6.63
080279	0000	7230	19.32	56.77	6.20
080379	0000	5790	18.82	57.67	5.50
080479	0000	4350	17.56	58.71	2.26
080579	0000	2910	16.50	59.55	1.42
080679	1015	1335	15.67	60.42	.55
080779	0700	002	15.12	60.97	.00
080779	0850	20	19.20	56.89	4.08
080779	0951	81	21.50	54.59	6.38
080779	1050	140	21.73	54.36	6.61
080779	1205	215	21.55	54.50	6.43
080779	1254	264	22.20	53.89	7.08
080779	1350	320	22.35	53.70	7.23
080779	1445	375	22.45	53.60	7.33
080779	1545	435	22.57	53.52	7.45
080779	1615	505	22.87	53.22	7.75
080779	2115	765	23.11	52.98	7.99
080779	2300	870	23.23	52.86	8.11
080879	0130	1020	23.80	52.69	8.28
080879	0515	1245	23.62	52.47	8.50
080879	0830	1480	23.62	52.47	8.50
080879	1800	1770	24.97	51.12	9.85
080879	2115	2205	26.78	49.31	11.66
080979	0300	2550	26.18	49.91	11.06
080979	0845	2895	28.47	47.62	13.35
080979	1730	3420	29.35	46.74	14.23
081079	0045	3855	27.25	48.89	12.13
081079	0730	4260	28.02	48.07	12.90
081079	1225	4555	28.16	47.93	13.09
081079	1845	4935	29.93	46.16	14.81
081179	0030	5280	30.12	45.97	15.00
081179	0630	5640	30.42	45.67	15.30
081179	1350	6080	30.73	45.36	15.61
081179	1840	6370	30.99	45.10	15.87
081279	0030	6720	31.28	44.81	16.16
081279	1350	7520	31.85	44.24	16.73
081279	1835	7805	32.05	44.04	16.93
081379	0015	8145	31.33	44.76	16.21
081379	0700	8550	32.38	43.71	17.26
081379	1320	8930	32.64	43.45	17.52
081379	2030	9360	32.90	43.19	17.78
081479	0015	9595	32.98	43.11	17.66
081479	0645	9975	33.03	43.06	17.91
081479	1900	10710	33.00	42.69	18.28
081579	0805	11495	33.04	43.00	17.97
081579	1825	12115	34.19	41.90	19.07
081679	0815	12945	34.90	41.19	19.78
081679	1850	13580	34.43	41.66	19.31
081779	0725	14335	34.56	41.53	19.44
081779	1850	15020	34.67	41.42	19.55

24C-78

WELL NO. 76-09 76-09 15.12 550650N 2113AVE 080719 0630

WELL NO.	FLOW OF MEAS	STATIC WATER LEVEL (FT)	CORRECTED	START DATE	START TIME
DATE	HOUR	TIME AFTER PUMPING STARTED (MIN)	DEPTH TO WATER (FT)	WATER LEVEL ELEV (FT, MSL)	DRAMMING (FT)
081879	0725	15775	34.90	41.19	19.78
081879	1000	16470	35.07	41.02	19.95
081979	0940	17350	35.23	40.76	20.21
081979	1910	17920	35.55	40.50	20.03
082079	0720	18650	35.83	40.26	20.71
082079	1900	19350	35.90	40.13	20.80
082179	0720	20090	36.03	40.06	20.91
082179	1925	20815	35.67	40.42	20.55
082279	1815	22185	36.36	39.73	21.24
082379	1815	23025	35.98	40.11	20.86
082479	1900	25110	37.28	38.81	22.16
082579	1715	26445	35.60	40.49	20.48
082679	1825	27955	39.94	37.05	23.92
082779	1835	29405	39.56	36.53	24.40
082879	1840	30850	39.91	36.00	24.29
082979	1835	32285	39.63	36.46	24.51
083079	1835	33725	39.21	36.88	24.09
083179	1600	35010	38.95	37.24	23.73
090179	0950	36080	39.08	37.01	23.96
090279	0945	37515	38.77	37.32	23.65
090379	0955	38965	38.37	37.72	23.25
090479	1050	40700	37.75	38.34	22.63
090579	1005	42095	37.15	38.94	22.03
090779	1725	45175	36.12	39.97	21.00
090979	0915	47565	35.72	40.37	20.60
091179	0825	50395	35.78	40.31	20.66
091379	0845	53295	36.03	39.66	21.31
091579	1120	56330	37.47	38.62	22.35
091779	1025	59295	38.52	37.57	23.40
091979	1140	62110	39.14	36.95	24.02
092179	0915	64855	37.12	38.97	22.00
092579	1330	70660	36.14	39.95	21.02
092779	0835	73005	35.67	40.42	20.55
092979	1050	76700	35.48	40.61	20.36
100179	1910	79580	35.16	40.93	20.04
100379	1040	82210	33.77	42.52	18.65
100579	1310	85240	30.39	41.70	19.27
100779	1400	88170	34.85	41.24	19.73
100979	0940	90790	35.51	40.58	20.39
101179	1245	93655	36.25	39.84	21.13
101679	1825	101395	38.09	37.43	23.54
101879	1350	104000	39.73	36.36	24.61
102079	1005	106695	40.52	35.57	25.40
102279	1340	109750	40.48	35.61	25.36
102479	1425	112675	40.61	35.48	25.49
102679	0815	115185	40.92	35.17	25.80
102879	1555	118525	42.01	34.08	26.89
103079	0920	121010	42.64	33.45	27.52
110179	1105	124035	43.35	32.74	28.23
110279	0930	125300	43.92	32.17	28.80

24C-79

WELL NO. 76.09 ELEV OF HEAD 76.09 STATIC WATER ELEV. 15.12 COORDINATES 550650N 271369E START DATE 080779 START TIME 0830

DATE 110879 DEPT. 0805 DEPTH TO WATER (FT) 88.65 WATER LEVEL ELEV (FT, MSL) 31.48 DRAWDOWN (FT) 29.53

110879 0815 133005 45.20 30.89 30.08

110879 0815 133005 45.57 30.52 30.45

111379 1030 141240 43.79 32.30 28.67

111679 0800 145410 42.53 33.56 27.41

112679 0905 159915 40.79 35.30 25.67

112879 0940 164230 40.12 35.97 25.00

121079 1140 180190 33.38 42.71 18.26

121379 1400 184650 33.65 42.44 18.53

2.4C-86

WELL NO. R-5A
 ELEV OF MEAS. POINT (FT., MSL) 77.08
 STATIC WATER LEVEL (FT.) 10.34
 COORDINATES 553092N 272342E
 START DATE 080779
 START TIME 0830

DATE	HOUR	TIME AFTER PUMPING STARTED (MIN)	DEPTH TO WATER (FT)	WATER LEVEL ELEV (FT., MSL)	DRAWDOWN (FT)
080179	0002	-0670.	22.50	54.59	4.16
080279	0000	-7230.	22.27	54.81	3.93
080379	0000	-5190.	21.51	55.57	3.17
080479	0000	-4350.	20.80	56.28	2.46
080579	0000	-2810.	19.73	57.35	1.39
080679	1105	-1285.	18.72	58.36	.38
080779	0754	-36.	18.34	58.74	.00
080779	0857	27.	18.29	58.79	-.05
080779	1006	96.	18.25	58.83	-.09
080779	1103	153.	22.15	54.93	3.81
080779	1234	234.	22.68	54.40	4.34
080779	1335	305.	23.02	54.06	4.68
080779	1431	361.	23.21	53.87	4.87
080779	1532	422.	23.37	53.71	5.03
080779	1635	485.	23.56	53.52	5.22
080779	1844	614.	23.90	53.18	5.56
080779	2044	744.	24.10	52.98	5.76
080779	2249	859.	24.19	52.89	5.85
080879	0100	990.	24.35	52.73	6.01
080879	0500	1230.	24.58	52.50	6.24
080879	0815	1425.	24.69	52.39	6.35
080879	1330	1740.	25.69	51.39	7.35
080879	2200	2250.	27.60	49.48	9.26
080979	0300	2550.	28.26	48.82	9.92
080979	0830	2880.	28.65	48.43	10.31
080979	1400	3450.	29.20	47.88	10.86
081079	0030	3840.	29.12	47.96	10.78
081079	0730	4260.	29.51	48.57	10.17
081079	1245	4575.	28.72	48.36	10.38
081079	1905	4955.	29.55	47.53	11.21
081179	0030	5280.	29.77	47.31	11.43
081179	0615	5625.	30.02	47.06	11.68
081179	1410	6100.	30.15	46.93	11.81
081179	1900	6390.	30.34	46.74	12.00
081279	0030	6720.	30.44	46.64	12.10
081279	0630	7080.	30.75	46.33	12.41
081279	1255	7465.	31.11	45.97	12.77
081279	1900	7830.	31.14	45.94	12.80
081279	2400	8130.	30.45	46.63	12.11
081379	0630	8520.	31.46	45.62	13.12
081379	1300	8910.	31.68	45.40	13.34
081379	2050	9380.	31.72	45.36	13.36
081479	0015	9585.	31.81	45.27	13.47
081479	0645	9975.	31.82	45.26	13.48
081479	1435	10685.	31.77	45.31	13.43
081579	0745	11475.	32.00	44.68	14.06
081579	1410	12100.	33.02	44.06	14.68
081679	0735	12905.	33.65	43.43	15.31
081679	1430	13560.	34.00	43.08	15.66
081779	0705	14315.	34.48	42.60	16.14

24C-81

WELL NO. 77.08, ELV OF HEAD PI. (FT, MSL), STATIC WATER LEVEL (FT), CONTINUES, START DATE, START TIME

DATE	HOUR	TIME AFTER PUMPING STARTED (MIN)	DEPTH TO WATER (FT)	WATER LEVEL RISE (FT, MSL)	START DATE	START TIME	UNWINDING (FT)
Rm5A	77.08	18.30	553095N	272502E	080779	0830	
081779	1830	15000.	32.08	45.00			13.79
081879	0710	15760.	34.91	42.17			16.57
081879	1800	16050.	35.23	41.85			16.89
081979	0920	17330.	35.61	41.47			17.27
081979	1800	17910.	35.88	41.20			17.58
082079	0710	18600.	35.97	41.11			17.63
082079	1850	19300.	36.08	41.00			17.78
082179	0710	20080.	36.24	40.84			17.90
082179	1910	20800.	33.38	43.70			15.08
082279	1800	22170.	32.14	44.94			13.80
082279	1805	23615.	33.63	43.45			15.29
082479	1805	25055.	35.79	41.29			17.45
082579	1755	26485.	37.63	39.45			19.29
082679	1810	27900.	38.71	38.37			20.37
082779	1815	29385.	37.80	39.68			19.06
082879	1815	30825.	37.64	39.84			19.30
082979	1810	32260.	38.69	38.35			20.35
083079	1815	33705.	36.71	40.37			18.37
083179	1850	35000.	32.38	44.70			14.04
090179	0935	36065.	31.25	45.83			12.91
090279	0930	37500.	30.38	46.70			12.00
090379	0940	38950.	29.92	47.16			11.56
090479	1020	40670.	31.86	45.62			13.12
090579	1345	42075.	30.00	47.08			11.66
090779	1855	45145.	31.95	45.13			13.81
090979	0830	47520.	32.65	44.43			14.31
091179	0900	50430.	30.31	46.77			11.97
091379	0810	53260.	33.77	43.31			15.43
091579	1200	56370.	32.97	44.11			14.63
091779	1510	59480.	36.32	40.76			17.98
091979	1240	62170.	38.23	38.85			19.89
092179	0825	64795.	38.02	39.06			19.68
092579	1055	70705.	33.57	43.51			15.23
092779	1015	73505.	32.78	44.30			14.48
092979	1530	76740.	33.20	43.88			14.86
100179	1440	79570.	32.69	44.39			14.35
100379	1055	82225.	29.20	49.88			8.86
100579	1320	85250.	29.30	49.78			10.96
100779	1435	88205.	31.17	45.91			12.83
100979	1015	90825.	32.04	45.04			13.70
101179	1315	93885.	33.06	44.02			14.72
101679	1855	101425.	30.73	46.35			12.39
101879	1855	104065.	31.31	45.77			18.97
102079	1525	106975.	38.32	38.76			19.98
102279	1855	109825.	39.20	37.88			20.88
102479	1740	112670.	39.57	37.51			21.23
102679	0840	115410.	37.66	39.42			19.32
102879	1625	118555.	37.04	40.04			18.70
103079	1000	121050.	34.33	42.75			15.99
110179	1200	124050.	30.25	42.83			15.91

24C-82

WELL NO. 77.08
 ELEV OF MEAS. P.L. (FEET, MSL) 14.33
 STATIC WATER LEVEL (FT) 53092M 2/23/2E
 COMPUTATIONS 080779
 START DATE 0830

DATE	TIME AFTER PUMPING STARTED (MIN)	DEPTH TO WATER (FT)	WATER LEVEL ELEV (FT, MSL)	DRAWDOWN (FT)
110279	1020	37.43	39.05	19.09
110479	0850	42.66	34.40	24.34
110679	0910	41.67	35.41	23.33
110879	0850	43.45	33.13	25.61
111379	1120	42.14	34.94	23.80
111679	0845	40.93	36.15	22.59
112679	1045	37.77	39.31	19.43
112979	1030	35.63	41.45	17.29
121079	1545	28.52	40.56	19.10
121379	1440	30.85	46.23	12.51

24C-83

WELL NO. 77.04
 ELEV. OF HEAD PI. (ELEV. HSL) 19.05
 STATIC WATER LEVEL (FT) 55.035H 27255HE
 CIRCUIT NO. 080779
 STAGE DATE 0830
 STAGE TIME 0830

DATE	GROUP	TIME AFTER PUMPING STARTED (MIN)	DEPTH IN WATER (FT)	WATER LEVEL ELEV. (FT MSL)	URAMOUNT (FT)
080179	0000	0670	23.13	53.95	4.08
080279	0000	7230	22.92	54.16	3.87
080379	0000	5790	22.20	54.88	3.15
080479	0000	4350	21.08	55.60	2.43
080579	0000	2910	20.04	56.66	1.47
080679	1110	1200	19.91	57.67	.56
080779	0257	0330	19.05	58.03	.00
080779	0459	29	19.00	58.08	-.05
080779	1010	108	18.95	58.13	-.10
080779	1109	159	21.99	55.09	2.94
080779	1245	208	22.50	54.58	3.45
080779	1239	249	22.83	54.25	3.78
080779	1034	364	23.02	54.06	3.97
080779	1534	424	23.18	53.90	4.13
080779	1640	490	23.36	53.72	4.31
080779	1850	620	23.64	53.44	4.59
080779	2047	737	23.90	53.18	4.85
080779	2253	863	24.00	53.08	4.95
080879	0100	990	24.13	52.95	5.08
080879	0500	1230	24.39	52.69	5.34
080879	0815	1425	24.46	52.62	5.41
080879	1335	1745	25.25	51.83	6.20
080879	2200	2250	26.97	50.11	7.92
080979	0300	2550	26.35	50.73	7.30
080979	0830	2880	27.92	49.16	8.87
080979	1805	3455	28.52	48.56	9.47
081079	0030	3840	28.24	48.84	9.19
081079	0730	4260	27.96	49.12	8.91
081079	1250	4580	28.17	48.91	9.12
081079	1905	4955	28.91	48.17	9.86
081179	0030	5280	29.12	47.96	10.07
081179	0615	5625	29.94	47.14	10.89
081179	1410	6100	29.53	47.55	10.48
081179	1855	6395	29.71	47.37	10.66
081279	0030	6720	29.88	47.20	10.83
081279	0630	7090	30.12	46.96	11.07
081279	1300	7470	30.89	46.59	11.44
081279	1855	7825	30.56	46.52	11.51
081279	2400	8130	29.94	47.10	10.93
081379	0645	8535	30.83	46.25	11.78
081379	1300	8910	31.05	46.03	12.00
081379	2050	9340	31.21	45.87	12.16
081479	0015	9585	31.26	45.82	12.21
081479	0645	9975	31.28	45.80	12.23
081479	1440	10690	31.27	45.81	12.22
081579	0745	11475	31.90	45.18	12.85
081579	1415	12105	32.48	44.60	13.43
081679	0740	12910	33.07	44.01	14.02
081679	1230	13560	33.92	43.66	14.37
081779	0710	14320	33.93	43.15	14.88

2.40-84.

WELL NO. ELEV OF HEAD PUMPING STARTED (MIN) STATIC WATER LEVEL (FT) COORDINATES START DATE TIME

WELL NO.	ELEV OF HEAD	PUMPING STARTED (MIN)	STATIC WATER LEVEL (FT)	COORDINATES	START DATE	START TIME
RM-5R	77.08	19.05	553035N 272558E	000779	0030	0030
DATE	HOUR	TIME AFTER PUMPING STARTED (MIN)	DEPTH TO WATER (FT)	WATER LEVEL ELEV (FT, PSL)	WATER LEVEL ELEV (FT, PSL)	DRAWDOWN (FT)
081779	1835	15002.	32.07	42.01	42.01	13.02
081879	0715	15765.	34.40	42.68	42.68	15.35
081879	1840	16450.	34.68	42.40	42.40	12.63
081979	0920	17350.	35.06	42.02	42.02	16.01
081979	1900	17910.	35.32	41.76	41.76	18.27
082079	0710	18690.	35.44	41.64	41.64	16.39
082079	1850	19340.	35.52	41.52	41.52	18.58
082179	0710	20090.	35.71	41.37	41.37	16.66
082179	1915	20805.	33.48	43.60	43.60	14.43
082279	1800	22170.	32.15	44.93	44.93	13.10
082379	1805	23615.	33.30	43.78	43.78	14.25
082479	1810	25060.	35.33	41.75	41.75	16.28
082579	1755	26485.	37.12	39.96	39.96	18.07
082679	1810	27940.	34.20	38.88	38.88	19.15
082779	1815	29385.	37.29	39.79	39.79	18.24
082879	1815	30825.	37.14	39.89	39.89	18.14
082979	1815	32265.	38.20	38.88	38.88	19.15
083079	1815	33705.	36.45	40.63	40.63	17.40
083179	1550	35000.	32.58	44.50	44.50	13.53
090179	0940	36070.	31.42	45.66	45.66	12.37
090279	0935	37505.	30.56	46.52	46.52	11.51
090379	0945	38955.	30.12	46.96	46.96	11.07
090479	1025	40415.	31.15	45.93	45.93	12.10
090579	1050	42140.	30.21	46.87	46.87	11.16
090779	1655	45145.	31.59	45.52	45.52	12.51
090979	0830	47520.	32.21	44.87	44.87	13.16
091179	0900	50430.	30.42	46.96	46.96	11.37
091379	0810	53260.	33.30	43.78	43.78	18.25
091579	1200	56370.	33.08	44.00	44.00	14.03
091779	1510	59480.	35.96	41.12	41.12	16.91
091979	1240	62170.	37.84	39.84	39.84	18.79
092179	0825	64795.	37.71	39.37	39.37	18.66
092579	1055	70705.	33.27	43.81	43.81	14.22
092779	1015	73505.	32.46	44.62	44.62	13.41
092979	1530	76240.	32.88	44.20	44.20	13.83
100179	1040	79570.	32.37	44.71	44.71	13.32
100379	1055	82225.	27.49	49.59	49.59	8.44
100579	1320	85250.	29.12	47.96	47.96	10.07
100779	1435	88205.	30.91	46.17	46.17	11.66
100979	1015	90825.	31.71	45.37	45.37	12.66
101179	1315	93885.	32.78	44.32	44.32	13.71
101679	1855	101425.	30.98	46.10	46.10	11.93
101879	1450	104060.	36.81	40.27	40.27	17.76
102079	1525	106475.	37.83	39.25	39.25	18.78
102279	1855	109825.	38.71	38.37	38.37	19.66
102479	1740	112870.	39.06	36.07	36.07	20.01
102679	0840	115210.	37.89	39.28	39.28	18.75
102879	1625	118555.	36.91	40.17	40.17	17.66
103079	1000	121050.	34.53	42.55	42.55	15.88
110179	1200	124050.	34.54	42.54	42.54	15.49

24C-85

WELL ELEV OF MEAS STATIC START TIME
NO. (FT,MSL) WATER METER (G.P.G.) UALL

BRUSH 77.00 19.05 55345N 21235NE 080779 0830

DATE HOUR TIME AFTER PUMPING STARTED (MIN) DEPTH TO WATER (FT) WATER LEVEL ELEV (FT,MSL) DRAWDOWNS (FT)

DATE	HOUR	TIME AFTER PUMPING STARTED (MIN)	DEPTH TO WATER (FT)	WATER LEVEL ELEV (FT,MSL)	DRAWDOWNS (FT)
110279	1020	125390.	33.03	49.05	13.98
110479	0850	124180.	42.10	34.96	25.05
110679	0910	131080.	41.20	35.88	22.15
110879	0950	134000.	43.40	33.68	24.35
111379	1120	141200.	41.58	35.40	24.58
111679	0945	145455.	40.34	36.74	21.29
112679	1080	159870.	37.37	39.71	18.32
112979	1030	164280.	35.23	41.05	16.18
121079	1545	180435.	27.90	49.18	8.85
121379	1440	184490.	50.00	47.08	10.95

2.02.86

WELL NO. 71.22

VIEW OF MEAS. PL. (ELEV. MSL) - MAIN LEVEL (ELEV. MSL) - STATIC WATER LEVEL (ELEV. MSL) - COORDINATES - START DATE - START LINE

DATE 11.22 11.17 549611H 21117E 080779 0830

DATE	TIME AFTER PUMPING STARTED (MIN)	DEPTH TO WATER (FT)	WATER LEVEL ELEV. (FT, MSL)	START DATE	START LINE
080179	0000	15.87	55.55	080779	0830
080279	-0670	15.87	55.55		
080379	-7230	15.58	55.64		4.41
080479	-5790	14.89	59.42		3.63
080579	-0350	13.57	57.05		2.40
080679	-2535	12.58	58.84		1.41
080779	-1360	11.90	59.32		.73
080879	-0739	11.17	60.05		.00
080979	0906	11.26	59.96		.09
081079	1000	11.29	59.93		.12
081179	1100	11.40	59.82		.23
081279	1218	11.53	59.69		.36
081379	1311	11.57	59.65		.40
081479	1408	11.58	59.64		.41
081579	1500	11.61	59.61		.44
081679	1600	11.69	59.53		.52
081779	1830	11.83	59.39		.66
081879	2128	11.90	59.32		.73
081979	2320	11.94	59.28		.77
082079	0130	11.85	59.37		.68
082179	0545	11.92	59.30		.75
082279	0830	11.94	59.28		.77
082379	1420	12.02	59.20		.85
082479	2050	12.18	59.04		1.01
082579	0300	12.26	58.96		1.09
082679	0900	12.36	58.86		1.19
082779	1710	12.53	58.69		1.36
082879	0100	12.54	58.68		1.37
082979	0800	12.54	58.68		1.37
083079	1210	12.72	58.50		1.55
083179	1825	12.85	58.37		1.68
083279	0100	12.92	58.30		1.75
083379	0645	13.02	58.20		1.85
083479	1335	13.16	58.06		1.99
083579	1825	13.30	57.92		2.13
083679	0045	13.52	57.70		2.35
083779	0700	13.68	57.54		2.51
083879	1400	13.90	57.32		2.73
083979	1820	14.04	57.18		2.87
084079	0030	14.13	57.09		2.96
084179	0700	14.56	56.66		3.39
084279	1335	14.78	56.44		3.61
084379	2015	15.05	56.17		3.88
084479	0030	15.19	56.03		4.02
084579	0700	15.22	56.00		4.05
084679	1415	15.25	55.95		4.05
084779	0825	15.62	55.27		4.78
084879	1435	16.22	52.00		5.85
084979	0800	16.59	50.63		5.42
085079	1405	16.92	50.30		5.75
085179	0740	17.06	50.16		5.89

64C-87

WELL NO. 01179 ELEV. OF M.P.S. 11.22 STATIC WATER LEVEL (FT) 53.80 CONDUCIVITIES 08/17/79 START DATE 08/30
 01179 ELEV. OF M.P.S. 11.22 STATIC WATER LEVEL (FT) 53.80 CONDUCIVITIES 08/17/79 START DATE 08/30

DATE	TIME	MINOR PUMPING STARTED (MIN)	DEPTH TO WATER (FT)	WATER LEVEL ELEV. (FT, MSL)	START DATE	START TIME	UNSATURATED (FT)
08179	1910	15000	17.82	53.80	08.25		
081879	0745	15745	17.69	53.53	08.52		
081879	1920	16890	17.80	53.82	08.03		
081979	1000	17370	18.08	53.14	08.91		
081979	1930	17660	18.11	53.08	7.00		
082079	0740	18670	18.37	52.85	7.20		
082079	1920	19370	18.53	52.69	7.36		
082179	0740	20110	18.70	52.52	7.53		
082179	1935	20825	18.88	52.38	7.67		
082279	1825	22195	19.19	52.03	8.02		
082379	1848	23636	19.84	51.58	8.46		
082479	1930	25180	19.59	51.83	8.42		
082579	1700	26430	20.13	51.09	8.96		
082679	1850	27980	21.72	49.50	10.55		
082779	1900	29830	22.32	48.90	11.15		
082879	1850	30860	22.61	48.61	11.44		
082979	1850	32400	22.85	48.47	11.68		
083079	1845	33735	21.46	49.76	10.29		
083179	1625	35035	20.96	50.26	9.79		
090179	1050	36140	21.08	50.14	9.91		
090279	1000	37530	20.54	50.68	9.37		
090379	1010	38980	19.92	51.30	8.75		
090479	1808	40416	19.42	51.80	8.26		
090579	1820	42110	19.00	52.22	7.83		
090779	1755	45205	17.98	53.28	6.77		
090979	0940	47590	17.55	53.67	6.38		
091179	0755	50365	17.98	53.24	6.81		
091379	0910	53320	18.99	52.23	7.82		
091579	1100	56310	20.08	51.22	8.83		
091779	1350	59360	21.19	50.23	10.02		
091979	1115	62085	22.08	49.18	10.91		
092179	1130	64980	21.52	49.70	10.35		
092379	1350	70880	18.51	52.71	7.38		
092779	0820	73430	17.96	53.26	6.79		
092879	1830	76680	17.54	53.70	6.35		
100179	1330	79500	17.60	53.62	6.43		
100379	1235	82325	17.05	54.17	5.88		
100579	1710	85480	16.67	54.55	5.50		
100779	1335	88185	16.97	54.25	5.80		
100979	0915	90765	16.18	55.04	7.01		
101179	1240	93830	19.07	52.15	7.90		
101679	1805	101375	21.41	49.81	10.24		
101879	1320	103970	22.29	48.93	11.12		
102079	1335	106865	22.45	48.77	11.28		
102279	1315	109725	22.91	48.31	11.78		
102479	1700	112630	23.24	47.98	12.07		
102679	0755	115165	23.17	47.85	12.20		
102879	1535	118075	24.10	47.12	12.93		
103079	0940	120990	25.39	45.83	14.22		
110279	0905	125315	26.73	44.49	15.56		

2.4C-88

WELL NO. PH-04 ELEV OF MEAS PLATE 71.22 STATIC WATER LEVEL 33.17 COORDINATES S49°11'N 72°11'17"E STAKE NO. 080779 STAKE DATE 0830

DATE	MIOR	TIME AFTER PUMPING STARTED (MIN)	DEPTH TO WATER (FT)	WATER LEVEL ELEV. (FT, MSL)	DRAWDOWN (FT)
110879	0740	126110.	26.94	44.28	15.77
110879	0745	130995.	27.43	43.79	16.26
110879	0750	133880.	27.71	43.51	16.54
111379	1000	141210.	25.67	45.55	14.50
111679	0725	145375.	24.27	46.95	13.10
112679	1015	159445.	22.04	49.18	10.87
112979	0915	164205.	21.23	49.99	10.96
121079	1100	160150.	13.39	57.83	2.22
121379	1335	164425.	13.97	57.25	2.89

2.4C-89

WELL NO. 10.01
 ELEV OF HEAD 10.01
 STATIC WATER LEVEL
 CONDUIT ID 080719
 START DATE 0810
 END DATE 0810

DATE	TIME	MOON	PUMPING STARTED(MIN)	DEPTH TO WATER(F)	WATER LEVEL ELEV(F),MSL	DRAWDOWN (FT)
080179	0000		080719	15.86	55.45	4.05
080279	0000		080719	15.08	55.03	4.47
080379	0000		080719	14.17	56.78	3.56
080479	0000		080719	12.90	56.01	2.29
080579	0000		080719	11.41	54.10	1.20
080679	0045		080719	11.18	59.73	.57
080779	0008		080719	10.61	60.30	.00
080879	1003		080719	10.64	60.27	.03
080979	1102		080719	10.72	60.19	.11
081079	1215		080719	10.81	60.10	.20
081179	1310		080719	10.81	60.08	.22
081279	1405		080719	10.87	60.04	.26
081379	1455		080719	10.93	59.98	.32
081479	1555		080719	10.96	59.95	.35
081579	1625		080719	11.03	59.88	.42
081679	1726		080719	11.10	59.81	.49
081779	1815		080719	11.08	59.82	.48
081879	0130		080719	11.03	59.88	.42
081979	0245		080719	10.97	59.94	.36
082079	0330		080719	11.02	59.89	.41
082179	0420		080719	11.20	59.71	.59
082279	0515		080719	11.29	59.62	.68
082379	0600		080719	11.30	59.61	.69
082479	0645		080719	11.43	59.48	.82
082579	0730		080719	11.59	59.32	.98
082679	0815		080719	11.99	59.42	.88
082779	0900		080719	11.63	59.28	1.02
082879	0945		080719	11.78	59.13	1.17
082979	1025		080719	11.90	59.01	1.29
083079	1100		080719	11.92	58.99	1.31
083179	1145		080719	12.06	58.85	1.45
083279	1230		080719	12.15	58.76	1.54
083379	1320		080719	12.32	58.59	1.71
083479	1405		080719	12.54	58.37	1.93
083579	1445		080719	12.67	58.24	2.06
083679	1535		080719	12.69	58.02	2.28
083779	1625		080719	13.02	57.89	2.41
083879	1710		080719	13.09	57.82	2.48
083979	1800		080719	13.55	57.36	2.99
084079	1835		080719	13.81	57.10	3.20
084179	1915		080719	14.12	56.79	3.51
084279	0030		080719	14.18	56.73	3.57
084379	0100		080719	14.22	56.69	3.61
084479	0130		080719	14.69	56.22	4.08
084579	0200		080719	15.00	55.91	4.39
084679	0235		080719	15.32	55.59	4.71
084779	0300		080719	15.66	55.25	5.05
084879	0345		080719	15.99	54.92	5.38
084979	0415		080719	16.37	54.54	5.76
085079	0445		080719	16.54	54.37	5.93

2.4C.90

WELL NO. 10.91
 RLY OF HEAD PL. (FT., MSL) 10.91
 STATIC WATER LEVEL (FT.) 54.95
 START DATE 08/07/94
 START TIME 0830

DATE	TIME	LINE AFTER PUMPING STARTED (MIN)	DEP. TO WATER (FT.)	MAJ. LEVEL ELEV. (FT., MSL)	QUANTITY (PT)
081879	0755	13195	16.76	54.15	6.15
081879	1920	16490	16.90	54.01	6.29
081879	1000	17370	17.14	53.77	6.53
081879	1930	17400	17.21	53.70	6.60
082079	0740	16670	17.95	53.96	6.89
082079	1920	19370	17.61	53.30	7.00
082179	0740	20110	17.76	53.15	7.15
082179	1935	20025	17.90	53.01	7.29
082279	1925	22195	16.27	52.69	7.96
082379	1925	23035	16.66	52.25	8.05
082479	1930	25180	16.71	52.20	8.10
082579	1700	26430	20.03	50.88	9.42
082679	1850	27980	20.90	50.01	10.29
082779	1900	29430	21.56	49.35	10.95
082879	1850	30880	21.15	49.76	10.54
082979	1950	32300	20.97	49.94	10.36
083079	1925	33135	20.87	50.88	9.86
083179	1625	35035	19.71	51.20	9.10
083179	1055	36185	19.68	51.03	9.27
083279	0955	37525	19.29	51.62	8.66
083379	1010	38980	19.67	52.24	8.06
083479	1505	40715	16.25	52.66	7.64
083579	1815	42105	17.56	53.33	6.97
083779	1755	45205	16.57	54.34	5.96
083879	0940	47590	18.21	54.70	5.60
083979	0755	50365	16.71	54.20	6.10
084179	0910	53320	17.61	53.10	7.20
084379	1100	56310	16.97	51.94	8.36
084479	1350	59360	20.25	50.86	9.84
084679	1115	62045	21.15	49.76	10.54
084779	1130	64980	20.43	50.48	9.62
084979	1350	70080	17.21	53.70	6.60
085179	0820	73430	16.65	54.26	6.04
085279	1430	76680	16.15	54.76	5.54
100179	1330	79580	16.31	54.60	5.70
100379	1235	82325	15.60	55.11	5.19
100579	1710	85880	15.55	55.36	4.94
100779	1335	88195	15.72	55.19	5.11
100979	0915	90785	17.08	53.83	6.47
101179	1220	93830	16.04	52.67	7.43
101379	1005	101375	20.50	50.41	9.69
101679	1320	103970	21.43	49.48	10.62
102079	1335	108865	21.83	49.08	10.82
102279	1315	109725	21.93	48.98	11.32
102479	1700	112830	22.22	48.69	11.61
102679	0754	115165	22.46	48.43	11.87
102879	1535	118505	23.14	47.77	12.53
113079	0900	165630	24.61	46.30	14.00
110279	0905	125315	25.97	44.94	15.36
110879	0740	128110	26.14	44.77	15.53

2.4C.91

WELL ELEV (IF HFS) STATIC CIRCUMFERENCE STAGE STAGE
NO. (ELEV) (ELEV) (ELEV) (ELEV) DATE TIME

PROB 70.91 10.01 50958IN 21100SE 080719 0810

DATE HIGH PUMPING STARTED (H) IN) DEPTH TO WATER LEVEL DRAWDOWN
(FT) (FT) (FT)

DATE	HIGH	PUMPING STARTED (H) IN)	DEPTH TO WATER LEVEL (FT)	ELEV (FT, MSL)	DRAWDOWN (FT)
110879	0785	13095.	26.55	44.16	15.98
110879	0750	13380.	26.72	44.19	16.11
111379	1000	141210.	24.48	46.43	13.67
111679	0725	145375.	22.91	46.00	12.30
112679	1010	148000.	20.71	46.20	10.10
112979	0915	168205.	19.78	51.13	9.17
121079	1100	180150.	11.91	59.00	1.30
121379	1335	184625.	12.65	56.26	2.04

2.40.72

WELL NO. PH-7A
 ELEV OF MEAS. POINT, WELL WATER LEVEL (FT) 72.39
 STATIC WATER LEVEL (FT) 12.74
 COORDINATES 521100N 211907E
 START DATE 08/779
 START TIME 0830

DATE 08/0179
 TIME AFTER PUMPING STARTED (MIN) 0000
 MUON 0000
 DEPTH TO WATER (FT) 16.02
 WATER LEVEL ELEV (FT) 56.34
 DRAMMUM (FT) 3.68

DATE	TIME AFTER PUMPING STARTED (MIN)	MUON	DEPTH TO WATER (FT)	WATER LEVEL ELEV (FT)	DRAMMUM (FT)
08/0179	0000	0000	16.02	56.34	3.68
08/0279	0000	0000	15.65	56.51	3.11
08/0379	0000	0000	15.34	57.02	2.60
08/0479	0000	0000	14.65	57.71	1.91
08/0579	0000	0000	13.97	58.39	1.23
08/0679	1050	0000	13.31	59.05	.57
08/0779	0800	0000	12.74	59.62	.00
08/0779	0900	0000	13.27	59.09	.53
08/0779	1020	0000	13.75	58.61	1.01
08/0779	1118	0000	13.96	58.40	1.22
08/0779	1253	0000	14.18	58.18	1.44
08/0779	1356	0000	14.28	58.08	1.54
08/0779	1500	0000	14.37	57.99	1.63
08/0779	1548	0000	14.43	57.93	1.69
08/0779	1653	0000	14.51	57.85	1.77
08/0779	1904	0000	14.64	57.72	1.90
08/0779	2100	0000	14.78	57.58	2.04
08/0779	2330	0000	14.85	57.51	2.11
08/0879	0145	0000	14.99	57.42	2.20
08/0879	0600	0000	14.92	57.44	2.18
08/0879	0930	0000	15.12	57.24	2.38
08/0879	1350	0000	15.38	56.98	2.64
08/0879	2120	0000	15.68	56.68	2.94
08/0979	0330	0000	16.13	56.23	3.39
08/0979	0900	0000	16.91	55.95	3.67
08/0979	1750	0000	16.70	55.66	3.96
08/1079	0115	0000	16.60	55.76	3.86
08/1079	0645	0000	16.79	55.57	4.05
08/1079	1235	0000	16.80	55.56	4.06
08/1079	1850	0000	17.14	55.22	4.40
08/1179	0100	0000	17.30	54.98	4.64
08/1179	0630	0000	17.53	54.83	4.79
08/1179	1325	0000	17.69	54.72	4.90
08/1179	1850	0000	17.85	54.51	5.11
08/1279	0100	0000	17.93	54.53	5.19
08/1279	0715	0000	18.02	54.34	5.28
08/1279	1315	0000	18.01	53.95	5.07
08/1279	1845	0000	18.59	53.77	5.05
08/1379	0045	0000	18.69	53.67	5.95
08/1379	0715	0000	18.95	53.41	6.21
08/1379	1315	0000	19.08	53.30	6.32
08/1379	2045	0000	19.34	53.02	6.60
08/1479	0100	0000	19.32	53.04	6.58
08/1479	0700	0000	19.46	52.90	6.72
08/1479	1855	0000	19.65	52.71	6.91
08/1579	0755	0000	20.02	52.34	7.28
08/1579	1440	0000	20.28	52.10	7.52
08/1679	0820	0000	20.67	51.69	7.93
08/1679	1920	0000	20.92	51.44	8.18
08/1779	0755	0000	21.12	51.24	8.38

24C-93

WELL NO. PH-7A
 ELEV. OF MFS STATIC WATER LEVEL (FT) 511.00
 DATE 12.30.88
 COORDINATES 480779 0830

DATE	TIME	LINE	DEPTH (FT)	WATER LEVEL (ELEV. FT, MSL)	URADIMEN (FT)
08179	1930	15060	21.27	51.09	8.53
08179	0900	15010	21.51	50.85	8.77
08179	1940	16510	21.68	50.68	8.98
08179	1010	17300	21.95	50.41	9.21
08179	1040	17850	22.14	50.24	9.49
08209	0755	18685	22.32	50.08	9.58
08209	1935	19485	22.51	49.85	9.77
08219	0755	20125	22.71	49.65	9.97
08219	2005	20855	22.91	49.45	10.17
08229	1035	22205	23.12	49.28	10.39
08239	1035	23005	23.37	49.08	10.61
08249	1015	25065	23.90	48.46	11.16
08259	1750	26080	24.46	47.90	11.72
08269	1015	27905	25.07	47.29	12.33
08279	1025	29395	25.60	46.76	12.86
08289	1025	30835	25.91	46.45	13.17
08299	1026	32275	26.06	46.30	13.32
08309	1025	33715	25.35	47.01	12.61
08319	1055	35085	25.14	47.22	12.40
09019	1235	36285	25.62	46.74	12.88
09029	0935	37505	25.54	46.82	12.80
09039	1035	39005	25.92	46.44	12.68
09049	1000	40600	25.00	47.36	12.26
09059	1400	42090	26.79	47.57	12.05
09079	1700	45150	28.03	48.33	11.29
09099	0840	47530	23.83	48.53	11.09
09119	0850	50820	23.68	48.68	10.98
09139	0920	53270	28.09	48.27	11.35
09159	1150	56360	28.74	47.51	12.08
09179	1455	59825	25.50	48.66	12.76
09199	1225	62155	26.14	48.17	13.45
09219	0850	64920	25.61	48.55	13.07
09239	1300	70030	28.52	47.68	11.78
09279	1005	73535	28.09	48.27	11.35
09289	1515	76225	23.86	48.50	11.12
10019	1430	79560	23.56	48.80	10.82
10039	1310	82360	22.89	49.47	10.15
10059	1740	85510	22.76	49.58	10.04
10079	1825	88195	22.96	49.40	10.22
10099	1005	90615	23.33	49.03	10.59
10119	1305	93075	23.81	48.55	11.07
10169	1045	101415	25.40	46.96	12.66
10189	1935	109095	26.13	46.23	13.39
10209	1515	116965	26.86	45.50	14.12
10229	1440	129010	27.30	45.06	14.56
10249	1725	132855	27.61	44.75	14.87
10269	0830	145200	27.89	44.47	15.15
10289	1015	148545	28.69	43.67	15.95
10309	0950	151000	29.22	43.14	16.48
11029	1016	155300	30.03	42.33	17.29

240.74

WELL NO. 72-36 ELEV OF MEAN PI. (FT., MSL) 12.19 STATIC WATER LEVEL (FT.) 521180N 271167E COORDINATES DATE 090779 STAGE DATE STAGE LINE

PH-7A 72-36 12.19 521180N 271167E 090779 0830

DATE HOUR TIME AT WHICH PUMPING STARTED (MIN) DEPTH TO WATER (FT) WATER LEVEL ELEV (FT., MSL) UP AND/DOWN (FT)

110479	0835	120162*	30.72	41.68	17.98
110679	0900	131070*	31.31	41.05	16.57
110879	0835	133425*	31.92	40.54	19.08
111379	1100	141270*	31.04	40.92	16.70
111679	0835	145885*	30.63	41.73	17.89
112679	0920	159690*	29.14	43.22	16.40
112979	1015	164265*	28.41	43.95	15.67
121079	1240	180250*	21.73	50.63	8.99
121379	1830	185680*	20.95	51.41	8.21

21.4.95

WELL NO. 19.57 19.57 552152W 212222E 080719 0850

DATE	TIME AFTER PUMPING STARTED(MIN)	DEPTH TO WATER (FT)	WATER LEVEL ELEV.(FT,MSL)	START DATE	START TIME
080179	0000	23.08	55.35		3.51
080279	0000	22.94	55.49		3.37
080379	0000	22.29	56.14		2.72
080479	0000	21.74	56.69		2.17
080579	0000	20.14	58.25		0.57
080679	0000	20.00	58.43		0.43
080779	0000	19.57	58.86		0.00
080879	0000	19.57	58.86		0.00
080979	0000	19.53	58.90		0.04
081079	0000	19.50	58.93		0.07
081179	0000	19.53	58.88		0.02
081279	0000	19.52	58.91		0.05
081379	0000	19.51	58.92		0.06
081479	0000	19.50	58.93		0.07
081579	0000	19.53	58.90		0.04
081679	0000	19.52	58.91		0.05
081779	0000	19.59	58.84		0.02
081879	0000	19.60	58.83		0.03
081979	0000	19.52	58.91		0.05
082079	0000	19.62	58.81		0.05
082179	0000	19.59	58.84		0.02
082279	0000	19.57	58.86		0.00
082379	0000	19.71	58.70		0.16
082479	0000	19.81	58.62		0.23
082579	0000	19.74	58.65		0.21
082679	0000	19.93	58.50		0.36
082779	0000	20.00	58.43		0.43
082879	0000	20.11	58.32		0.54
082979	0000	20.12	58.31		0.55
083079	0000	20.24	58.19		0.67
083179	0000	20.29	58.14		0.72
083279	0000	20.45	57.98		0.88
083379	0000	20.56	57.87		0.99
083479	0000	20.71	57.72		1.14
083579	0000	20.83	57.60		1.26
083679	0000	20.96	57.57		1.29
083779	0000	21.19	57.24		1.62
083879	0000	21.36	57.07		1.79
083979	0000	21.54	56.89		1.97
084079	0000	21.74	56.69		2.17
084179	0000	21.89	56.50		2.32
084279	0000	22.16	56.27		2.59
084379	0000	22.20	56.23		2.63
084479	0000	22.25	56.18		2.68
084579	0000	22.55	55.88		2.98
084679	0000	22.95	55.48		3.38
084779	0000	23.12	55.31		3.55
084879	0000	23.59	54.84		4.02
084979	0000	23.89	54.59		4.27
085079	0000	24.23	54.20		4.66

2.40-96

WELL ELEV OF HEAD STATIC STATION COORDINATES STATE STATE
 NO. PT. (ELEV. MSL) WATER LEVEL (FT) DEPTH TO MAIN LEVEL PROGRAM
 P-08 78.03 19.57 522152N 512222E 080719 0859

DATE HOUR PUMPING STATION (ELEV. FT) DEPTH TO MAIN LEVEL PROGRAM
 DATE TIME

DATE	HOUR	PUMPING STATION (ELEV. FT)	DEPTH TO MAIN LEVEL (FT)	MAIN LEVEL ELEV. (FT, MSL)	PROGRAM
081179	1800	15910.	29.04	53.99	4.07
081870	0720	15770.	29.75	53.04	5.10
081879	1850	16450.	29.98	53.99	5.17
081979	0930	17340.	25.20	53.15	5.71
081979	1905	17915.	25.81	53.02	5.88
082079	0715	18685.	25.63	52.80	6.06
082079	1855	19395.	25.75	52.80	6.10
082179	0715	20085.	25.95	52.98	6.30
082179	2010	20080.	26.06	52.37	6.89
082279	1800	22210.	26.11	52.32	6.50
082379	1800	24650.	25.67	52.76	6.10
082479	1810	25080.	26.30	52.13	6.73
082579	1740	26970.	27.91	50.22	8.34
082679	1810	27400.	28.62	49.81	9.05
082779	1820	29390.	29.28	49.19	9.87
082879	1820	30830.	29.20	49.23	9.63
082979	1820	32270.	29.02	49.41	9.45
083079	1820	33710.	29.58	49.85	9.01
083179	1555	35025.	27.88	50.27	8.29
090179	1105	36155.	27.25	51.18	7.68
090279	1810	37580.	26.71	51.72	7.19
090379	1040	39010.	26.29	52.14	6.72
090479	1830	40080.	25.67	52.76	6.10
090579	1355	42085.	25.44	52.99	5.87
090779	1855	45145.	24.46	53.97	4.89
090979	0835	47525.	24.54	53.89	4.97
091179	0855	50425.	24.89	53.24	5.32
091379	0940	53350.	25.54	52.89	5.97
091579	1155	56365.	27.82	51.91	7.45
091779	1500	59430.	27.82	50.61	8.25
091979	1230	62160.	29.01	49.42	9.48
092179	0840	64810.	29.01	49.42	9.48
092579	1305	70635.	25.51	52.92	5.94
092779	1010	73540.	25.14	53.29	5.57
092979	1520	76730.	25.10	53.33	5.53
100179	1835	79565.	24.77	53.66	5.20
100379	1315	82365.	24.10	54.33	4.53
100579	1740	85510.	23.79	54.64	4.22
100779	1830	88200.	24.33	54.10	4.76
100979	1010	90820.	24.88	53.55	5.31
101179	1310	93880.	25.58	52.85	6.01
101679	1850	101420.	27.34	51.09	7.77
101879	1845	104055.	28.34	50.09	8.77
102079	1520	106970.	29.12	49.31	9.55
102279	1845	109815.	29.73	48.70	10.16
102479	1730	112660.	30.01	48.42	10.44
102679	0835	115285.	30.35	48.08	10.78
102879	1620	118550.	31.01	47.42	11.44
103079	0925	121825.	31.88	46.95	11.91
110279	1015	125385.	32.04	46.39	12.47

240-97

WELL NO. ELEV OF MEAS. ST. ELEV. STATIC WATER LEVEL (FT.) COORDINATES STATE DATE STATE TIME

PROBA 70.83 14.57 552152N 272222E 080719 0830

DATE HOUR TIME AFTER PUMPING STARTED (MIN) DEPTH TO WATER (FT.) WAT. LEVEL ELEV. (FT., MSL) DRAWDOWN (FT.)

110879	0885	120175.	33.31	85.12	13.78
110879	0905	131075.	30.08	84.35	14.51
110879	0880	133930.	30.55	83.08	14.98
111379	1110	141280.	33.29	85.14	13.72
114270	0880	145850.	32.08	86.34	12.52
112079	0910	150880.	30.15	86.28	10.58
112979	1025	160275.	28.08	84.39	9.87
121079	1245	180255.	21.52	86.91	1.95
121379	1035	180825.	21.08	86.57	2.29

2.4c.98

WELL ELEV OF MEAS STATIC CIRCUMFERENCE STAGE STAGE
 NO. PL. (FT, MSL) WATER LEVEL (FT) DATE DATE TIME TIME
 TH-4 78.23 12.97 550400H 02/14/79 080779 0830

DATE	TIME AFTER PUMPING STARTED (MIN)	DEPTH TO WATER (FT)	PAIEM LEVEL ELEV (FT, MSL)	STAGE DATE	STAGE TIME	DRAG-UP (FT)
080379	0000	15.67	58.26			-.10
080279	-0670	15.77	58.46			-.20
080379	-7230	15.94	58.29			-.03
080079	-0350	15.96	58.27			-.01
080579	02810	16.00	58.23			-.03
080679	1010	15.96	58.27			-.01
080779	0745	15.97	58.26			-.00
080779	0900	15.99	58.24			-.02
080779	0950	15.98	58.27			-.01
080779	1054	15.98	58.25			-.01
080779	1209	15.96	58.27			-.01
080779	1300	15.95	58.28			-.02
080779	1400	15.95	58.28			-.02
080779	1450	15.94	58.29			-.03
080779	1550	15.95	58.28			-.02
080779	1620	16.10	58.13			-.13
080779	2120	15.98	58.25			-.01
080779	2330	16.03	58.20			-.06
080879	0145	16.01	58.22			-.04
080879	0545	16.02	58.21			-.05
080879	0900	16.06	58.17			-.09
080879	1410	16.09	58.14			-.12
080879	2150	16.18	58.05			-.21
080979	0330	16.27	57.96			-.30
080979	0900	16.21	58.02			-.24
080979	1720	16.32	57.91			-.35
081079	0100	16.42	57.81			-.45
081079	0800	16.50	57.73			-.53
081079	1415	16.58	57.67			-.59
081079	1835	16.62	57.61			-.65
081179	0100	16.68	57.55			-.71
081179	0645	16.80	57.43			-.83
081179	1345	16.88	57.37			-.89
081179	1835	16.94	57.29			-.97
081279	0045	17.03	57.20			-1.06
081279	0700	17.13	57.10			-1.16
081279	1355	17.39	56.89			-1.42
081279	1830	17.46	56.77			-1.49
081379	0045	17.54	56.69			-1.57
081379	0715	17.9	56.58			-1.72
081379	1325	17.97	56.49			-1.82
081379	2035	18.01	56.31			-1.95
081479	0045	18.02	56.21			-2.04
081479	0700	18.02	56.21			-2.05
081479	1410	18.17	56.06			-2.20
081579	0830	18.03	55.80			-2.46
081579	1835	18.22	55.61			-2.65
081679	0810	18.49	55.34			-2.92
081679	1915	18.12	55.11			-3.15
081779	0750	19.40	54.83			-3.43

24C-99

WELL NO. 15-97 STATION 0830

DATE 12-23-87

TIME AFTER PUMPING STOPPED (MIN) 15.97

DEPTH TO WATER (FT) 55.00

WATER LEVEL ELEV (F.T.M.S.L.) 0830

DATE	TIME AFTER PUMPING STOPPED (MIN)	DEPTH TO WATER (FT)	WATER LEVEL ELEV (F.T.M.S.L.)	STATION	STAMP
08179	1920	19.60	58.63	0830	
08179	1905	19.85	58.38		
08179	1830	20.02	58.21		
08179	1805	20.33	57.90		
08179	1815	20.51	57.72		
08209	1745	20.73	57.50		
08209	1730	20.93	57.30		
08219	1710	21.19	57.04		
08219	1645	21.47	56.76		
08219	1630	21.75	56.48		
08219	1615	22.14	56.10		
08219	1605	21.81	56.42		
08219	1600	22.18	56.05		
08219	1545	22.61	55.62		
08219	1535	23.06	55.17		
08219	1525	23.07	55.16		
08219	1510	23.44	54.79		
08219	1500	24.18	54.05		
08219	1450	24.27	53.96		
08219	1440	25.42	52.81		
08219	1435	25.63	52.60		
08219	1425	25.88	52.35		
08219	1410	26.08	52.15		
08219	1400	26.35	51.88		
08219	1355	26.49	51.74		
08219	1350	26.62	51.62		
08219	1345	26.77	51.46		
08219	1340	26.95	51.28		
08219	1330	27.22	50.91		
08219	1320	27.49	50.64		
08219	1315	27.78	50.35		
08219	1310	28.18	49.95		
08219	1305	28.25	49.88		
08219	1300	28.38	49.75		
08219	1250	28.31	49.82		
08219	1240	28.26	49.87		
08219	1235	28.22	49.91		
08219	1230	28.22	49.91		
08219	1225	28.25	49.88		
08219	1220	28.28	49.85		
08219	1215	28.34	49.79		
08219	1210	28.38	49.75		
08219	1205	28.49	49.64		
08219	1200	28.97	49.16		
08219	1155	29.28	48.85		
08219	1150	29.61	48.52		
08219	1145	29.84	48.29		
08219	1140	30.14	48.00		
08219	1135	30.60	47.54		
08219	1130	30.96	47.18		
08219	1125				

WELL NO. 1H-9
 ELEV. OF M.F.S. PL. (FT., MSL) 74.21
 STATIC WATER LEVEL (FEET) 15.97
 COORDINATES 520400M 211472E
 START DATE 08/19
 START LINE 0830

2.4C-100

DATE	MOOR	TIME AFTER PUMPING STARTED (MIN)	DEPTH TO WATER (FT)	WATER LEVEL ELEV (FT, MSL)	WATER LEVEL ELEV (FT, MSL)	WATER LEVEL ELEV (FT, MSL)
110479	0755	120125.	31.35	42.08	15.36	
110679	0800.	131010.	31.63	42.60	15.66	
110879	0810	133900.	32.19	42.94	16.22	
111379	1020	141230.	33.03	41.20	17.06	
111679	0785	145395.	33.26	40.97	17.29	
112679	0950	159220.	33.56	40.67	17.59	
112979	0935	162225.	33.57	40.85	17.60	
121079	1110	180160.	32.27	41.96	16.30	
121379	1350	184630.	31.50	42.73	15.53	

24C-101

WELL NO. 10879112 ELEV OF HEAD PT. (GAL, MSL) 78.56 STATIC WATER LEVEL (GAL, MSL) 80.00 CHUMDINATES 550037N 273092E START DATE 080779 START TIME 0830

DATE	HOUR	TIME AFTER PUMPING STARTED(MIN)	DEPTH TO WATER(FT)	WATER LEVEL ELEV(FT, MSL)	DRAWDOWN (FT)
100579	1300	05270.	16.25	58.31	.00
100779	1510	08200.	16.63	57.93	.00
100979	1000	00050.	17.06	57.50	.00
101179	1330	03000.	17.65	56.91	.00
101379	1005	101036.	18.54	56.02	.00
101479	1520	10490.	20.28	54.28	.00
102079	1600	10700.	21.05	53.51	.00
102279	1535	10965.	21.63	52.93	.00
102479	1755	11205.	21.96	52.60	.00
102679	0850	11520.	22.25	52.31	.00
102879	1605	11835.	22.84	51.64	.00
103079	1250	12120.	23.60	50.96	.00
110279	1030	12520.	24.46	50.10	.00
110479	0915	12820.	25.21	49.35	.00
110679	0935	13105.	25.80	48.76	.00
110879	0905	13395.	26.18	48.38	.00
111079	1140	14110.	26.97	47.59	.00
111679	0910	14540.	23.67	50.69	.00
112679	1710	16060.	21.26	53.10	.00
112979	1055	16430.	20.36	54.20	.00
121079	1625	18085.	15.04	59.52	.00

8.4C-102

WELL NO. 08-9
 ELEV (IP MEAS) 77.90
 PL. (E.L. MEAS) 7.50
 STATIC WATER LEVEL (FT) 521030M ' 2764HSE
 START DATE 080779
 START TIME 0830

DATE	TIME PUMPING STARTED (MIN)	DEPTH TO WATER (FT)	WATER LEVEL ELEV (F.T.M.S.L)	WARRANTY (FT)
080679	0000	7.50	70.40	0.00
082079	0004	8.60	69.30	1.10
083179	0008	9.50	68.20	1.90
091479	0000	9.90	68.00	2.40
092879	0000	10.00	67.90	2.50
101279	0000	10.20	67.70	2.70
102679	0000	10.50	67.40	3.00
110979	0000	10.40	67.50	2.90
112679	0000	10.30	67.60	2.80
120779	0000	11.00	66.50	3.90

24C-103

WELL NO. 080819 ELEV (P) NEAR 0000 M. (G.S.) WATER LABEL (S.I.) 10.00
 COORDINATES 551330N 122085E 080779 0830
 STATE MAIL STATE TIME

DATE	MOUP	TIME AETAK	PUMPING STARTED (MIN)	DEPTH TO WATER (FT)	WATER LEVEL ELEV (FT, MSL)	WATER LEVEL ELEV (FT, MSL)	WARRANTY (FT)
080819	0000	11470		9.20	68.60	68.60	0.00
082079	0000	10210		10.20	67.60	67.60	1.00
083179	0000	14050		11.00	67.00	67.00	1.80
091879	0000	58210		11.60	66.40	66.40	2.40
092879	0000	78210		11.30	66.70	66.70	2.10
101279	0000	98530		12.00	66.00	66.00	2.80
102879	0000	118890		12.60	65.40	65.40	3.40
110979	0000	138850		13.00	65.00	65.00	3.80
112879	0000	158330		12.60	65.40	65.40	3.40
120779	0000	175170		10.70	67.30	67.30	1.50

240.164

WELL NO. 08-5 ELEV OF MEAN PL. (FEET) 157.30 STATIC WATER LEVEL (FT) 82.30 COMMUNITIES 551209N 279209E STATE DATE 08/79 STATE TIME 0830

DATE 080679 082079 083179 091879 092879 101279 102679 110979 112679 120779

TIME AFTER PUMPING STARTED (MIN) -1970 16210 38050 54210 78310 94530 114690 134850 159330 175170

DEPTH TO WATER (FT) 82.30 82.80 83.19 83.60 83.90 84.20 84.60 84.90 85.00 85.40

WATER LEVEL ELEV (FT, MSL) 72.99 74.50 74.20 73.70 73.40 73.10 72.70 72.40 72.30 71.90

WARRANTY (FT) .50 .80 1.30 1.60 1.90 2.30 2.60 2.70 3.10

2.4C-105

WELL NO. 154.50
 ELEV. OF HEAD AT DATE 05.00
 STAT. CUMULATIVE DEPTH TO WATER LEVEL (FT) 00.00
 START DATE 08/17/74
 START TIME 0830

DATE	TIME PUMPING STARTED (MIN)	DEPTH TO WATER (FT)	WATER LEVEL ELEVATION (MSL)	DEVIATION (FT)
080674	0000	85.00	72.90	0.00
082079	0000	10210.	66.00	1.20
083179	0000	38050.	71.60	2.00
091879	0000	54210.	70.50	2.40
092879	0000	78470.	70.60	4.40
101279	0000	94530.	69.50	3.40
102679	0000	118630.	69.70	4.10
110979	0000	130850.	68.60	4.10
112679	0000	150130.	69.00	3.90
120779	0000	175170.	69.00	3.90

24C-106

WELL NO. 8M-10
 ELEV OF MEAS. PLACE (FSL) 157.00
 STATIC WATER LEVEL (FSL) 71.90
 COORDINATES 523070N, 277440E
 START DATE 060779
 START LINE 0430

DATE	TIME OF PUMPING	DEPTH TO WATER (FT)	WATER LEVEL ELEVATION (FSL)	DRAWDOWN (FT)
080679	0000	77.90	79.10	1.20
082079	0000	76.60	76.40	0.20
083179	0000	79.10	77.90	1.20
091479	0000	79.60	77.40	2.20
092879	0000	79.90	77.10	2.80
101279	0000	80.20	76.80	3.40
102679	0000	80.70	76.30	4.40
110979	0000	80.70	76.30	4.40
112679	0000	80.80	76.20	4.60
120779	0000	81.70	75.30	6.40

24C-108

WELL NO. ELEV. OF MEAS. PT. (FT., MSL) WATER LEVEL (FT.) STATIC WATER LEVEL (FT.) COORDINATES START DATE START TIME

01-004 42.50 17.70 550245N 216245E 080779 0830 0830

DATE HOUR TIME AFTER PUMPING STARTED (MIN) DEPTH TO WATER (FT) WATER LEVEL ELEV. (FT., MSL) DRAWDOWN (FT)

DATE	HOUR	TIME AFTER PUMPING STARTED (MIN)	DEPTH TO WATER (FT)	WATER LEVEL ELEV. (FT., MSL)	DRAWDOWN (FT)
080679	0000	-1470.	17.70	64.60	4.90
082079	0008	1420.	18.60	63.90	4.90
083179	0000	34050.	19.30	63.20	1.60
091479	0000	54210.	19.90	62.00	2.20
092879	0000	74370.	20.50	62.00	2.80
101279	0000	94530.	21.20	61.50	3.50
102679	0000	114690.	22.30	60.20	4.60
110979	0000	134850.	22.40	60.10	4.70
112679	0000	159330.	22.30	60.20	4.60
120779	0000	175170.	22.60	59.90	4.90

24C-107

WELL NO. 08279
 ELEV HP MEAS PL 181.8813
 STATIC WATER ELEVATION 162.70
 CONFIDENCE 5025ud 2765d0f
 STATE DATE 08/19
 STATE TIME 0830

DATE	HOUR	LINE ABLE PUMPING STARTED(MIN)	DEPTH TO WATER (FT)	WATER LEVEL ELEV (FT,MSL)	URAWDUMM (FT)
08279	0000	11870.	97.80	68.90	0.00
08279	0000	14210.	98.80	63.40	1.00
08339	0000	18050.	98.80	63.40	1.00
091879	0000	54210.	100.20	62.50	2.40
092879	0000	78330.	99.40	63.40	1.00
101279	0000	94530.	100.30	62.40	2.50
102679	0000	118680.	103.50	59.20	5.70
110979	0000	138050.	103.50	59.20	5.70
112879	0000	159330.	103.80	60.40	4.00
120779	0000	175170.	103.10	59.00	5.30

242-109

WELL NO. 04-202 CITY OF MASS. RI. (FT. MSL) 148.00 STATIC WATER LEVEL (FT) 116.90 COMPUTED BY SUTTON 21988E DATE 080779 STAFF TIME 0830

DATE 080679 TIME AFTER PUMPING STARTED (MIN) 0000 MUM 0000 DEPTH TO WATER (FT) 116.90 WATER LEVEL ELEV (FT, MSL) 77.10 DRAWDOWN (FT) .00

082079 10210 0000 0000 117.20 76.00 .30

083178 30050 0000 0000 117.50 76.50 .60

091479 50210 0000 0000 117.90 76.10 1.00

092678 70310 0000 0000 117.00 76.40 1.00

101279 90530 0000 0000 118.00 76.00 1.10

102678 110690 0000 0000 118.50 75.50 1.60

110979 130850 0000 0000 118.50 75.50 1.60

112678 150330 0000 0000 118.50 75.50 1.60

120779 175170 0000 0000 118.20 75.00 1.30

2.H.C-110

WELL NO. 0M-209A ELEV OF HEAD PL. (FT.) 198.20 STATIC WATER LEVEL (FT) 110.00 COORDINATES 549145N 272200E START DATE 0807/9 START TIME 0930

DATE 0808/9 HOUR 0000 TIME AFTER PUMPING STARTED (MIN) 1870.0 DEPTH TO WATER (FT) 110.00 MAIN LEVEL ELEV (FT) 88.20 DRAINAGE (FT) 0.00

DATE	HOUR	TIME AFTER PUMPING STARTED (MIN)	DEPTH TO WATER (FT)	MAIN LEVEL ELEV (FT)	DRAINAGE (FT)
0808/9	0000	1870.0	110.00	88.20	0.00
0820/9	0000	1821.0	109.90	88.30	-0.10
0831/9	0000	1805.0	109.70	88.50	-0.30
0914/9	0000	5210.0	110.00	88.20	0.00
0928/9	0000	7032.0	109.90	88.30	-0.10
1012/9	0000	9453.0	109.80	88.40	-0.20
1026/9	0000	11489.0	109.90	88.30	-0.10
1107/9	0000	13465.0	109.90	88.30	-0.10
1126/9	0000	15933.0	109.90	88.30	-0.10
1207/9	0000	17517.0	110.00	88.20	0.00

2.4C-111

STAFF TIME

STAFF DATE

COORDINATES

STATIC WATER LEVEL (ELEVATION)

ELEV OF MEAS POINT

WELL NO.

100.52

39.03

5501109

211031E

080719

08050

DATE	WELL NO.	ELEV OF MEAS POINT	COORDINATES	STAFF DATE	STAFF TIME	WATER LEVEL (ELEVATION)	WATER TEMP (°F)	WELL FLOW (GPM)
080079	1630	1630	40.30	60.22	61	0		
080779	0815	-15	39.84	60.03	60	0		
080779	1000	90	49.54	50.58	9.65	6100		
080779	1200	210	50.31	50.21	10.42	6100		
080779	1400	330	50.60	49.92	10.71	6100		
080779	1600	450	50.84	49.68	10.95	6100		
080779	1800	570	51.00	49.52	11.11	6100		
080779	2000	690	51.15	49.37	11.26	6100		
080779	2200	810	51.32	49.20	11.43	6000		
080779	2400	930	51.53	48.99	11.64	5950		
080779	2600	1050	51.67	48.85	11.78	6000		
080779	2800	1170	51.78	48.74	11.89	6000		
080779	3000	1290	51.86	48.66	11.97	6000		
080779	3200	1410	51.97	48.55	12.08	6000		
080779	3400	1530	52.03	48.49	12.18	6000		
080779	3600	1650	52.08	48.44	12.19	6000		
080779	3800	1770	52.08	48.44	12.19	6000		
080779	4000	1890	52.30	48.22	12.41	7300		
080779	4200	2010	52.34	48.18	12.45	8100		
080779	4400	2130	52.21	48.31	12.52	9400		
080779	4600	2250	52.08	48.38	12.59	9300		
080779	4800	2370	52.08	48.38	12.59	9300		
080779	5000	2490	52.34	48.18	12.45	9300		
080779	5200	2610	52.08	48.38	12.59	9300		
080779	5400	2730	52.08	48.38	12.59	9100		
080779	5600	2850	52.08	48.38	12.59	10200		
080779	5800	2970	52.28	48.28	12.65	10100		
080779	6000	3090	52.41	48.11	12.72	10100		
080779	6200	3210	52.64	48.08	12.79	10100		
080779	6400	3330	52.84	48.08	12.79	10100		
080779	6600	3450	53.01	48.51	12.82	5950		
080779	6800	3570	53.17	48.35	12.88	9100		
080779	7000	3690	53.43	48.09	12.98	8000		
080779	7200	3810	53.53	48.19	12.94	8000		
080779	7400	3930	53.35	48.17	12.96	8000		
080779	7600	4050	53.37	48.15	12.98	8000		
080779	7800	4170	53.40	48.12	12.91	8000		
080779	8000	4290	53.44	48.08	12.95	8000		
080779	8200	4410	53.46	48.06	12.97	8000		
080779	8400	4530	53.03	48.03	12.90	8000		
080779	8600	4650	53.52	48.00	12.83	8000		
080779	8800	4770	53.82	48.70	12.93	9900		
080779	9000	4890	60.03	60.49	20.19	9900		
080779	9200	5010	61.10	59.42	21.21	9800		
080779	9400	5130	60.73	59.79	20.84	9500		
080779	9600	5250	60.50	60.02	20.61	9400		
080779	9800	5370	60.78	59.88	20.75	9400		
081179	0400	5490	60.71	59.81	20.82	9400		
081179	0600	5610	60.77	59.75	20.88	9850		
081179	0800	5730	60.87	59.65	20.98	9850		

20.40-112

WELL NO. 109.52
 ELEV OF MEAS. STATIC WATER LEVEL (FT) 39.89
 CIRCUMFERENCE 550760
 START DATE 08/17/9
 START TIME 0830

DATE	WELL NO.	TIME	WELL FLOW (GPM)	WATER LEVEL (FT)	WATER TEMP (F)	WATER LEVEL (FT)	WATER TEMP (F)	WELL FLOW (GPM)
081179	109.52	1000	5850	61.85	39.47	21.16	60	9950
081179	1200	5970	5970	61.10	39.42	21.21	60	9950
081179	1800	6090	6090	61.32	39.32	21.31	60	9950
081179	1600	6210	6210	61.25	39.27	21.36	60	9950
081179	1800	6330	6330	61.35	39.17	21.46	60	9950
081179	2000	6450	6450	61.70	38.70	21.85	60	9950
081179	2800	6890	6890	61.81	38.71	21.92	60	9950
081279	0400	6910	6910	61.89	38.63	22.00	60	9950
081279	0800	7170	7170	62.14	38.38	22.25	60	9950
081279	1200	7410	7410	62.21	38.31	22.32	60	9950
081279	1600	7650	7650	62.35	38.17	22.46	60	9950
081279	2000	7890	7890	62.53	37.99	22.64	60	9950
081279	2800	8130	8130	62.85	37.67	22.96	60	9950
081379	0600	8490	8490	62.90	37.62	23.01	60	9950
081379	1200	8850	8850	63.06	37.46	23.17	60	9950
081379	1800	9210	9210	63.36	37.16	23.47	60	9950
081379	2400	9570	9570	63.48	37.08	23.58	60	9950
081479	0700	9990	9990	64.15	36.37	24.26	60	9950
081479	1800	10650	10650	64.56	35.96	24.67	60	9950
081579	0600	11170	11170	66.13	34.39	26.24	60	9950
081579	1800	12090	12090	66.98	34.08	26.55	60	9950
081679	0600	12610	12610	67.69	32.83	27.80	60	9950
081679	1800	13530	13530	68.07	32.85	28.18	60	9950
081779	0600	14250	14250	66.70	33.82	28.81	60	9950
081779	1800	15170	15170	66.85	33.87	28.96	60	9950
081879	0600	15690	15690	66.91	33.61	27.02	60	9950
081879	1800	16410	16410	66.89	32.80	28.20	60	9950
081979	0600	17130	17130	66.90	32.12	28.51	60	9950
081979	1800	17850	17850	66.91	31.81	29.02	60	9950
082079	0600	18570	18570	66.93	31.59	29.04	60	9950
082079	1500	19110	19110	66.86	31.64	28.99	60	9950
082179	1300	20430	20430	69.88	30.64	29.99	60	9950
082179	1800	20730	20730	69.89	30.65	30.00	60	9950
082279	0600	21450	21450	70.04	30.48	30.15	60	9950
082279	1800	22170	22170	70.08	30.44	30.19	60	9950
082379	0600	22900	22900	70.15	30.37	30.26	60	9950
082379	1800	23610	23610	70.47	30.56	30.56	60	9950
082479	0600	24330	24330	70.55	29.97	30.64	60	9950
082479	1800	25050	25050	71.19	29.33	31.30	60	9950
082579	1200	26130	26130	69.66	30.86	29.77	60	9950
082579	1800	26850	26850	67.80	32.92	27.71	60	9950
082679	0600	27210	27210	68.02	32.50	28.13	60	9950
082679	1800	27930	27930	68.53	31.99	28.64	60	9950
082779	1800	29370	29370	68.95	31.57	29.06	60	9950
082879	1800	30810	30810	69.36	31.16	29.47	60	9950
082979	1800	32250	32250	69.83	31.09	29.54	60	9950
083079	1800	33690	33690	68.97	31.25	29.88	60	9950
083179	1800	35010	35010	68.39	32.13	28.50	60	9950
090179	1800	36270	36270	68.07	32.45	28.18	60	9950
090279	1800	38010	38010	67.81	32.71	27.92	60	9950

24C-113

WELL NO. 110.52
 STATIC WATER LEVEL
 COORDINATES
 START DATE
 START TIME

WELL NO. 110.52
 39.89
 211837
 000779
 0030

DATE	HOUR	TIME AFTER PUMPING STARTED (MIN)	DEPTH (FT)	WATER LEVEL ELEVATION (MSL)	DISCHARGE (FT)	WATER TEMP (F)	WELL FLOW (GPM)
090379	1800	5950	67.51	33.01	27.62		8500
090479	1806	0000	67.12	33.40	27.23		8700
090579	1800	0230	66.18	34.38	26.25		8200
090779	1700	4510	65.30	35.22	25.41	67	8300
090879	0800	4750	64.00	36.02	26.01	67	8400
091179	0800	5030	65.00	35.52	25.11	67	8300
091379	0900	5310	65.70	34.02	25.81	68	8200
091579	1100	5610	66.68	33.08	26.79	68	8100
091779	1835	5905	67.65	32.07	27.76	68	8000
091979	1150	6210	68.28	32.28	28.39	69	8000
092179	0818	6405	68.50	31.02	28.61	68	8200
092379	1200	6700	68.68	33.64	28.79	68	8100
092579	1165	7015	65.18	35.34	25.29	71	8300
092779	0740	7390	68.65	35.67	24.76	70	8300
092979	1330	7620	68.53	35.99	24.64	71	8400
100179	1255	7965	68.24	36.26	24.35	71	8400
100379	0835	8205	63.60	36.92	23.71	71	7900
100579	1825	8555	63.63	36.89	23.74	71	8200
100779	1205	8855	64.12	36.40	24.23	71	8200
100979	0950	9070	68.90	35.62	25.01	71	8200
101179	1155	9305	65.75	34.77	25.66	71	8200
101379	1600	9630	65.84	34.68	25.95	71	8200
101679	2010	10150	68.08	34.08	26.59	70	8400
101879	1810	10420	69.67	30.85	29.76	70	7900
102079	1840	10630	70.33	30.19	30.88	70	8000
102279	1355	10965	70.11	30.41	30.22	70	7900
102479	1935	11265	70.81	30.31	30.52	70	7900
102679	1215	11525	70.83	29.69	30.94	70	7600
102879	1555	11825	71.82	28.70	31.93	70	7700
103079	0930	12120	72.06	28.06	32.57	70	7700
110279	0940	12535	74.13	28.39	34.24	69	7600
110479	0810	12810	74.88	28.64	34.99	69	7500
110679	0815	131025	75.60	29.71	35.71	68	7400
110879	1030	13400	75.99	29.53	36.10	69	7250
111079	1200	137010	75.78	28.74	35.89	68	7400
111379	1055	141205	74.23	28.29	34.34	68	7400
111679	0805	145415	73.10	27.42	33.21	68	7300
111979	1200	14970	74.13	26.39	34.28	68	7600
112279	1200	152200	73.00	27.52	33.11	68	7600
112679	1735	160385	71.96	28.56	32.07	68	7300
112979	0850	162400	71.55	28.97	31.66	67	7700
120279	1200	168600	70.00	30.52	30.11	68	7500
120579	1200	173010	67.68	32.92	27.71	67	7650
120879	1200	177330	65.68	34.84	25.79	67	7550
121079	1145	180125	65.72	34.80	25.83	67	8200
121379	1810	184600	66.10	34.42	26.21	66	8200
121679	1200	188500	67.78	32.78	27.89	66	8000
121879	2300	192300	68.25	32.27	28.36	66	7600

2.4C-114

WELL NO. 05
 ELEV. OF MEAS. POINT (MSL) 40.50
 STATIC WATER LEVEL (FT) 52.1028 - 272421E
 UTM 779 0M30

DATE	HOUR	TIME AFTER PUMPING STARTED (MIN)	DEPTH TO WATER (FT)	WATER LEVEL ELEVATION (MSL)	UPA WATION (FT)	WATER TEMP (F)	WELL FLOW (GPM)
080879	1320	-1150	40.90	59.67	8.56		0
080879	0730	-60	40.34	60.23	9.00		0
080879	1200	210	49.01	54.26	5.27		6400
080879	1400	330	48.62	53.95	6.28		6300
080879	1600	450	48.94	53.63	6.60		6300
080879	1800	570	47.17	53.40	6.03		6300
080879	2000	690	47.00	53.17	7.06		6200
080879	2200	810	47.57	53.00	7.23		6200
080879	2400	930	47.70	52.87	7.36		6200
080879	0200	1050	47.83	52.74	7.49		6200
080879	0400	1170	47.96	52.61	7.62		6200
080879	0600	1290	48.01	52.56	7.67		6200
080879	0800	1410	48.07	52.50	7.73	65	6200
080879	1000	1530	48.10	52.47	7.76		6200
080879	1200	1650	48.15	52.42	7.81		6200
080879	1400	1770	49.48	51.09	9.14		7600
080879	1600	1890	50.26	50.31	9.92		8100
080879	1800	2010	50.30	50.27	9.96		8700
080879	2000	2130	50.52	50.05	10.10		9100
080879	2200	2250	51.54	48.98	11.25		9800
080879	2400	2370	51.78	48.79	11.44		9800
080879	0200	2490	51.98	48.59	11.64		9800
080879	0400	2610	52.13	48.44	11.79	62	9800
080879	0600	2730	52.25	48.32	11.91		9800
080879	0800	2850	52.58	47.99	12.24	62	10100
080879	1000	2970	52.71	47.86	12.37		10100
080879	1200	3090	52.79	47.76	12.45	65	10100
080879	1400	3210	52.90	47.67	12.56		10100
080879	1600	3330	53.00	47.57	12.66	65	10100
080879	1800	3450	53.30	47.27	12.96		10000
080879	2000	3570	53.37	47.20	13.03	64	10000
080879	2200	3690	52.58	47.99	12.24		9600
080879	2400	3810	52.34	48.23	12.00		9200
081079	0200	3930	48.81	51.76	8.87		8200
081079	0400	4050	52.11	48.46	11.77		9300
081079	0600	4170	52.30	48.27	11.96		9300
081079	0800	4290	52.36	48.21	12.02		9600
081079	1000	4410	52.43	48.14	12.09		9600
081079	1200	4530	52.49	48.08	12.15		9300
081079	1400	4650	52.54	48.03	12.20	64	9300
081079	1600	4770	53.20	47.37	12.86	64	10000
081079	1800	4890	53.30	47.27	12.96		10000
081079	2000	5010	53.41	47.16	13.07	63	9950
081079	2200	5130	53.52	47.05	13.18		9950
081079	2400	5250	53.62	46.95	13.28		9950
081179	0200	5370	53.67	46.90	13.33		10100
081179	0400	5490	53.70	46.87	13.36		9950
081179	0600	5610	53.78	46.79	13.44	62	9950
081179	0800	5730	53.84	46.73	13.50		9900
081179	1000	5850	53.90	46.67	13.56		9800

24C-115

STAMP
DATE

STAMP
DATE

STAMP
DATE

STAMP
DATE

STAMP
DATE

WELL NO.	ELV OF HEAD PI (G.P.G.S.)	STATIC WATER LEVEL (G.S.)	CUMULATIVE SHUT-IN	STAMP DATE	STAMP DATE	STAMP DATE	STAMP DATE	STAMP DATE	STAMP DATE
WELL NO.	100.57	100.58	55355N 2/2421E	0030	0030	0030	0030	0030	0030
DATE	MIUM	TIME AFTER PUMPING STARTED (MIN)	DEPTH TO WATER (PI)	WATER LEVEL ELEV (F.M.S.L)	UPDOWN (PI)	WATER TEMP (F)	WELL FLOW (GPM)		
081179	1200	5970.	53.98	86.63	13.60	63	9800		
081179	1400	6090.	54.00	86.57	13.60		9800		
081179	1600	6210.	54.05	86.52	13.71	68	9800		
081179	1800	6330.	54.12	86.45	13.78		9800		
081179	2000	6450.	54.22	86.35	13.88	68	9800		
081179	2400	6690.	54.52	86.25	13.98	68	10000		
081279	0800	6830.	54.88	86.13	14.10		10000		
081279	0800	7170.	54.55	86.02	14.21	64	10000		
081279	1200	7410.	54.70	85.87	14.36	68	10000		
081279	1600	7650.	54.82	85.75	14.48	64	9000		
081279	2000	7890.	54.74	85.61	14.60	68	10000		
081279	2400	8130.	53.55	87.02	13.21	64	6500		
081379	0800	8490.	55.15	85.42	14.61	64	9900		
081379	1200	8850.	55.39	85.16	15.05	64	9850		
081379	1600	9210.	55.03	85.54	14.68	64	9800		
081379	2400	9570.	55.33	85.24	14.99	64	9800		
081479	0800	9930.	56.55	86.02	16.21	64	9400		
081479	1600	10650.	55.47	85.10	15.13	64	9100		
081579	1800	11370.	56.04	84.54	15.68	64	9100		
081579	1800	12090.	56.64	83.73	16.50	64	9800		
081679	0800	12810.	57.39	83.18	17.05	64	9800		
081679	1800	13530.	57.85	82.72	17.51	64	9800		
081779	0800	14250.	58.28	82.41	17.82	64	8700		
081779	1700	14970.	58.42	82.15	18.08	64	9700		
081879	0800	15690.	58.70	81.87	18.36	68	9700		
081879	1800	16410.	59.15	81.42	18.81	64	9700		
081979	0800	17130.	59.32	81.25	18.98	64	9800		
081979	1800	17850.	59.73	80.84	19.39	64	9800		
082079	0800	18570.	59.74	80.83	19.40	64	9800		
082079	1800	19290.	59.88	80.59	19.54	64	9800		
082179	0800	20010.	60.18	80.39	19.88	64	9800		
082179	1800	20730.	61.13	79.44	20.79	64	6100		
082279	0800	21450.	60.84	79.73	20.50	64	5800		
082279	1800	22170.	55.25	85.32	14.91	65	5500		
082379	0800	22890.	55.21	85.16	14.87		5500		
082379	1800	23610.	57.60	83.17	17.06	64	9800		
082479	0800	24330.	59.88	80.69	19.58		9800		
082479	1800	25050.	59.75	80.82	19.41	64	9800		
082579	0800	25770.	60.31	79.86	20.57		9800		
082579	1800	26490.	61.44	79.13	21.10	65	8800		
082679	0800	27210.	62.25	78.42	21.91		8700		
082679	1800	27930.	62.77	77.80	22.43	65	8700		
082779	1800	28650.	60.88	79.09	20.58	65	5400		
082879	1800	30610.	61.39	79.16	21.05	66	9800		
082979	1800	32570.	62.20	78.29	21.98	66	9800		
083079	1800	34530.	59.92	80.65	19.58	66	7000		
083179	1800	36490.	55.19	85.18	15.05	67	8800		
090179	0900	38450.	54.84	85.68	14.55	68	4500		
090279	0900	39410.	53.10	87.47	12.76	67	9800		
090379	0900	39410.	52.64	87.88	12.35	67	5000		

2. AC-116

WELL ID: 100.57
 ELEV IN FEAS: 40.30
 PL. (FT, MSL): 221624
 COMPUTATION: 272421L
 START DATE: 08/07/79
 START TIME: 0830

DATE	TIME AFTER PUMPING STARTED (MIN)	DEPTH TO WATER (FT)	WATER LEVEL ELEV. (FT, MSL)	WATER TEMP. (F)	WELL FLOW (GPM)
090479	1200	52.07	40.50	67	4900
090579	1500	52.25	40.52	67	4700
090779	1700	55.66	41.41	66	4400
090979	0800	56.36	41.19	66	4400
091179	0900	53.08	41.49	66	5300
091279	1600	47.14	53.59	66	0
091379	0800	57.49	43.02	66	9300
091579	1300	57.48	42.69	69	7700
091779	1500	60.14	40.43	66	6900
091979	1745	61.99	38.58	68	6700
092179	0830	61.68	38.89	68	6700
092379	1200	59.36	41.21	70	6400
092579	1020	57.21	43.56	70	6700
092779	0730	56.28	44.29	70	4400
092979	1300	56.74	43.73	70	4300
100179	1240	56.36	44.21	70	6000
100379	0920	49.58	51.03	72	4200
100579	1410	53.24	47.53	70	7600
100779	1135	54.63	45.94	70	7600
100979	0835	55.62	44.95	70	7650
101179	1140	56.60	43.97	70	7200
101379	1200	42.57	58.20	70	9100
101679	2005	53.08	47.09	70	4100
101879	1510	61.28	39.29	70	6600
102079	1540	62.37	38.30	69	6700
102279	1500	63.33	37.47	69	6500
102479	1745	63.46	37.11	69	6500
102679	1230	56.59	41.98	69	3600
102879	1625	60.29	40.37	69	5700
103079	1005	56.73	43.64	70	3400
110279	1020	61.64	38.93	69	7650
110479	0855	66.62	33.95	68	6100
110679	0915	65.75	34.62	68	7400
110879	1050	67.61	32.76	69	7600
111079	1200	67.58	32.99	69	7450
111379	1120	66.02	34.55	69	6200
111679	0850	64.90	35.67	69	6300
111979	1200	64.45	36.12	69	6400
112279	1200	63.67	36.70	68	6000
112679	1415	60.87	39.70	68	6900
112979	1040	59.40	41.09	68	6400
120579	1200	57.03	43.54	68	6800
120679	1200	53.51	47.06	68	6950
120779	1200	53.33	47.24	67	7400
121079	1555	52.62	47.92	67	7400
121379	1445	55.35	45.22	66	6450
121679	1200	55.90	44.97	66	6800
121879	2300	57.69	42.68	67	7400

2.46-117

WELL NO.	ELEV OF HEAD PI (FEET, MSL)	STATIC WATER LEVEL (FEET, MSL)	CHANGES	START DATE	START TIME	WELL FLOW (GPM)	WATER TEMP (F)	DEPTH TO WATER (FEET)	WATER LEVEL ELEV (FEET, MSL)	UNSATURATED DEPTH (FEET)
MISSISSIPPI	81.10	53.34	27.76	080719	0830				53.75	00
080274	0000	7230	00	00	53.75	00			57.00	00
080374	0000	5730	00	00	57.00	00			57.00	00
080474	0000	4350	00	00	59.10	00			59.10	00
080574	1100	2630	00	00	60.15	00			60.15	00
080674	1100	1290	00	00	61.10	00			61.10	00
080774	1430	1080	00	00	61.20	00			61.20	00
080874	1700	930	00	00	61.30	00			61.30	00
080974	0240	850	00	00	61.70	00			61.70	00
081074	0935	65	00	00	61.70	00			61.70	00
081174	1100	150	00	00	61.80	00			61.80	00
081274	1200	210	00	00	61.80	00			61.80	00
081374	1330	400	00	00	61.80	00			61.80	00
081474	1530	420	00	00	61.80	00			61.80	00
081574	1600	450	00	00	61.80	00			61.80	00
081674	1700	510	00	00	61.90	00			61.90	00
081774	1800	570	00	00	61.90	00			61.90	00
081874	1900	630	00	00	61.90	00			61.90	00
081974	0500	1230	00	00	62.00	00			62.00	00
082074	0900	1470	00	00	62.00	00			62.00	00
082174	1225	1675	00	00	62.10	00			62.10	00
082274	0400	2610	00	00	62.20	00			62.20	00
082374	0840	2880	00	00	62.20	00			62.20	00
082474	1325	3175	00	00	62.10	00			62.10	00
082574	1625	3355	00	00	62.20	00			62.20	00
082674	1900	3510	00	00	62.20	00			62.20	00
082774	0930	4380	00	00	62.20	00			62.20	00
082874	1225	4555	00	00	62.10	00			62.10	00
082974	1515	4725	00	00	62.00	00			62.00	00
083074	1720	4850	00	00	61.90	00			61.90	00
083174	1955	5005	00	00	61.90	00			61.90	00
083274	0130	5340	00	00	61.90	00			61.90	00
083374	0700	5670	00	00	61.70	00			61.70	00
083474	1150	5960	00	00	61.60	00			61.60	00
083574	1445	6135	00	00	61.50	00			61.50	00
083674	1700	6270	00	00	61.40	00			61.40	00
083774	2005	6455	00	00	61.30	00			61.30	00
083874	0100	6750	00	00	61.25	00			61.25	00
083974	0730	7180	00	00	61.10	00			61.10	00
084074	1300	7470	00	00	60.90	00			60.90	00
084174	1830	7680	00	00	60.70	00			60.70	00
084274	1950	7860	00	00	60.60	00			60.60	00
084374	0100	8190	00	00	60.40	00			60.40	00
084474	0645	8535	00	00	60.20	00			60.20	00
084574	1250	8980	00	00	59.90	00			59.90	00
084674	2010	9300	00	00	59.70	00			59.70	00
084774	2400	9570	00	00	59.50	00			59.50	00
084874	0630	9960	00	00	59.30	00			59.30	00
084974	1245	10395	00	00	59.00	00			59.00	00
085074	0740	11470	00	00	58.50	00			58.50	00

2, VC-118

WELL NO. 61.14

COORDINATES 523924 272349 080774 0850

LINE STATIC WATER LEVEL (FT) START DATE START LINE

WATER LEVEL (FT) WATER TEMP (F) WELL FLOW (GPM)

DATE	HOUR	LINE	STATIC WATER LEVEL (FT)	DEPTH TO WATER (FT)	WATER LEVEL ELEV (FT, MSL)	WATER TEMP (F)	WELL FLOW (GPM)
081379	1845	12135	50.50	0.00	50.50	65	
081679	0825	12955	57.80	0.00	57.80	63	
081879	1930	13620	57.10	0.00	57.10	64	
081779	0610	14260	50.80	0.00	50.80	65	
081779	1830	15000	50.40	0.00	50.40	64	
081879	0710	15760	50.25	0.00	50.25	65	
081879	1835	16895	50.15	0.00	50.15	65	
081979	1010	17340	50.10	0.00	50.10	66	
081979	1800	17650	50.05	0.00	50.05	65	
082079	0700	18630	55.85	0.00	55.85	65	
082079	2000	19810	55.80	0.00	55.80	64	
082179	0800	20130	55.80	0.00	55.80	62	
082179	2020	20870	55.20	0.00	55.20	63	
082279	1755	22165	59.80	0.00	59.80	64	
082379	1755	23605	52.50	0.00	52.50	61	
082479	1800	25050	51.30	0.00	51.30	62	
082579	1800	26890	50.90	0.00	50.90	63	
082679	1800	27930	57.30	0.00	57.30	65	
082779	1805	29375	57.20	0.00	57.20	66	
082879	1810	30820	57.90	0.00	57.90	65	
082979	1805	32255	58.50	0.00	58.50	63	
083079	1755	33695	58.50	0.00	58.50	65	
083179	1500	34990	59.00	0.00	59.00	65	
090179	0930	36060	61.30	0.00	61.30	73	
090279	0930	37500	60.85	0.00	60.85	73	
090379	0845	38695	60.10	0.00	60.10	74	
090879	1200	40530	60.85	0.00	60.85	71	
090579	1510	42160	61.30	0.00	61.30	73	
090779	1645	45135	60.90	0.00	60.90	70	
090979	0820	47510	62.20	0.00	62.20	66	
091179	0920	50950	62.80	0.00	62.80	76	
091379	0800	53250	60.30	0.00	60.30	60	
091579	1210	56390	60.10	0.00	60.10	76	
091779	1505	59435	60.85	0.00	60.85	60	
091979	1310	62200	60.85	0.00	60.85	77	
092179	0820	64790	61.30	0.00	61.30	76	
092379	1445	70695	60.90	0.00	60.90	74	
092779	1020	73550	60.30	0.00	60.30	74	
092979	1535	76785	60.10	0.00	60.10	73	
100179	1645	79575	60.85	0.00	60.85	75	
100379	1100	82230	60.85	0.00	60.85	77	
100579	1330	85260	61.30	0.00	61.30	73	
100779	1445	88215	60.90	0.00	60.90	73	
100979	1030	90840	60.30	0.00	60.30	71	
101179	1365	93895	59.00	0.00	59.00	70	
101679	1900	101430	57.60	0.00	57.60	70	
101879	1500	104070	53.90	0.00	53.90	66	
102079	1550	107000	53.00	0.00	53.00	66	
102279	1610	109860	52.50	0.00	52.50	69	
102479	1740	112670	52.80	0.00	52.80	69	

24C-119

WELL NO. 110
 ELEV. OF MEAS. POINT 5530928
 STATIC WATER LEVEL 523096
 COMPUTEDS WATER LEVEL 523096
 STATE DATA UN07/9 UN30

DATE	HOUP	TIME AT PUMPING START (MIN)	DEPTH IN WATER (FT)	WATER LEVEL ELEV (FT)	WATER TEMP (F)	WELL FLUM (GPM)
102679	1250	115000	.00	52.25	.00	.00
102679	1635	118565	.00	50.20	.00	.00
103024	0830	120960	.00	49.20	.00	.00
110174	0830	123000	.00	48.10	.00	.00
110420	0900	125410	.00	.00	.00	.00
110479	0900	126190	.00	.00	.00	.00
110524	0920	129520	.00	47.40	.00	.00
110674	0920	131090	.00	47.40	.00	.00
110824	0855	133005	.00	47.00	.00	.00
111379	1130	141300	.00	53.90	.00	.00
111624	1415	144600	.00	55.20	.00	.00
111674	0855	145465	.00	55.40	.00	.00
112624	1820	160430	.00	58.50	.00	.00
112679	1300	162490	.00	58.00	.00	.00
112820	1705	164625	.00	58.95	.00	.00
113074	1330	165400	.00	59.80	.00	.00
121020	1600	180450	.00	65.20	.00	.00
121174	0915	181485	.00	65.80	.00	.00
121420	1450	184200	.00	64.10	.00	.00
121474	1115	185925	.00	63.10	.00	.00

WELL ELEV OF MEAS STATION COORDINATES STATION STATION
 NO. PL. ELEV. (MSL) PAIR LEVEL (FT) DATE DATE DATE
 MAP NAME 00 549553N 273450E 080719 0850

2.4c.100

DATE HOUR TIME AFTER PUMPING STATION (MIN) DEPTH (FT) WATER LEVEL (FT) WATER LEVEL (FT) STATION (FT)

DATE	HOUR	TIME AFTER PUMPING STATION (MIN)	DEPTH (FT)	WATER LEVEL (FT)	WATER LEVEL (FT)	STATION (FT)
080519	1310	-2600	00	59.25	00	00
080619	1350	-1120	00	61.00	00	00
080719	0730	-50	00	61.80	00	00
080719	0942	72	00	61.80	00	00
080719	1038	128	00	61.80	00	00
080719	1205	215	00	61.80	00	00
080719	1408	338	00	61.85	00	00
080719	1616	466	00	61.70	00	00
080719	1809	579	00	61.75	00	00
080819	0430	1200	00	61.90	00	00
080819	0745	1395	00	62.00	00	00
080819	1310	1720	00	62.00	00	00
080819	2235	2285	00	62.10	00	00
080919	0230	2520	00	62.10	00	00
080919	0800	2850	00	62.10	00	00
080919	1305	3155	00	62.10	00	00
080919	1840	3800	00	62.10	00	00
081019	0005	3815	00	62.10	00	00
081019	0645	4215	00	62.05	00	00
081019	1315	4805	00	62.00	00	00
081019	1500	4710	00	61.95	00	00
081019	1930	4980	00	61.90	00	00
081019	2800	5250	00	61.80	00	00
081119	0600	5610	00	61.80	00	00
081119	1435	6125	00	61.80	00	00
081119	1925	6815	00	61.50	00	00
081219	0015	6795	00	61.40	00	00
081219	0615	7065	00	61.10	00	00
081219	1225	7435	00	61.00	00	00
081219	1520	7610	00	60.90	00	00
081219	1930	7660	00	60.80	00	00
081219	2345	8115	00	60.80	00	00
081319	0615	8505	00	60.50	00	00
081319	1420	8990	00	60.30	00	00
081319	1950	9320	00	60.10	00	00
081319	2345	9555	00	60.00	00	00
081419	0415	9428	00	59.80	00	00
081419	1410	10660	00	59.60	00	00
081519	0717	11447	00	59.30	00	00
081519	1750	12080	00	59.50	00	00
081619	0740	12670	00	58.80	00	00
081619	1410	13540	00	58.50	00	00
081719	0630	14280	00	58.30	00	00
081719	1410	14940	00	58.25	00	00
081819	0640	15730	00	58.15	00	00
081819	1410	16420	00	58.10	00	00
081919	1030	17400	00	58.05	00	00
081919	1830	17880	00	58.00	00	00
082019	0055	18625	00	58.00	00	00
082019	1840	19330	00	58.00	00	00

2.4C-121

WELL NO. 1157 OF MEAS. STATION 213450E 080179 0830

WELL NO. 1157 OF MEAS. STATION 213450E 080179 0830

DATE HIGH PUMPING STATIC WATER LEVEL (FT) DEPTH TO WATER LEVEL (FT) WATER LEVEL ELEVATION (MSL) (FT) MINIMUM (FT)

DATE	HIGH	PUMPING	STATIC	DEPTH TO	WATER LEVEL	WATER LEVEL	MINIMUM
				WATER LEVEL	ELEVATION (MSL)	ELEVATION (MSL)	(FT)
082174	0655	20085		0.00	58.00		0.00
082174	1855	21785		0.00	58.00		0.00
082274	1330	22180		0.00	58.00		0.00
082374	1735	23585		0.00	58.00		0.00
082474	1740	26000		0.00	58.00		0.00
082574	1820	26510		0.00	58.00		0.00
082674	1710	27880		0.00	58.00		0.00
082774	1735	29385		0.00	57.95		0.00
082874	1740	30790		0.00	57.95		0.00
082974	1740	32230		0.00	57.95		0.00
083074	1740	33660		0.00	57.90		0.00
083174	1520	34470		0.00	57.85		0.00
083274	0900	34030		0.00	57.90		0.00
083374	0900	37470		0.00	58.00		0.00
083474	0820	38870		0.00	58.00		0.00
083574	1530	40740		0.00	58.10		0.00
083674	1405	42135		0.00	58.20		0.00
083774	1545	45075		0.00	59.70		0.00
083874	0745	47475		0.00	59.70		0.00
083974	1000	50490		0.00	59.00		0.00
084074	0900	53210		0.00	58.20		0.00
084174	1245	56415		0.00	57.90		0.00
084274	1545	59085		0.00	57.80		0.00
084374	1005	62015		0.00	57.90		0.00
084474	0750	64760		0.00	58.60		0.00
084574	0905	70595		0.00	60.15		0.00
084674	1115	73605		0.00	60.20		0.00
084774	1600	76770		0.00	60.10		0.00
084874	1525	79635		0.00	60.90		0.00
084974	1125	82255		0.00	61.25		0.00
085074	1400	85290		0.00	60.90		0.00
085174	1540	88270		0.00	59.85		0.00
085274	1120	90690		0.00	59.00		0.00
085374	1400	93930		0.00	58.30		0.00
085474	1340	101070		0.00	58.20		0.00
085574	1610	104140		0.00	58.15		0.00
085674	1630	107080		0.00	58.15		0.00
085774	1610	109400		0.00	58.15		0.00
085874	1345	112915		0.00	58.15		0.00
085974	1340	118600		0.00	58.10		0.00
086074	1320	121250		0.00	58.35		0.00
086174	0940	125885		0.00	58.50		0.00
086274	0940	128230		0.00	58.45		0.00
086374	1120	131210		0.00	58.45		0.00
086474	0935	133985		0.00	58.45		0.00
086574	0940	141410		0.00	58.50		0.00
086674	0940	145510		0.00	58.50		0.00
086774	1725	160375		0.00	59.25		0.00
086874	1130	169340		0.00	59.20		0.00

2.4C-122

WELL NO. 121379
 ELEV. OF PIPES PL. 121.00
 STATIC WATER LEVEL (FT) 213450
 COORDINATES 080719 0830
 START DATE 0830
 START LINE

DATE 121379
 HOUR 1535
 TIME OF FILM 100402
 PUMPING STARTED (min) 100745
 DEPTH TO WATER (FT) 00
 WATER (FT) 00
 RAIL LEVEL ELEV (FT, MSL) 64.20
 RAIL LEVEL ELEV (FT, MSL) 64.10
 UTM QUAD 0830
 UTM LINE

121379 100402 00 64.20 00
 121379 100745 00 64.10 00

24C-123

WELL NO. ELEV. OF M.F.A.S. STATIC WATER LEVEL (F.T.) START DATE START TIME

GIM LAKE 555229H 2/5/91 080719 0830

DATE TIME ALTER PUMPING STARTED (P.M.) DEPTH TO WATER (F.T.) WATER LEVEL ELEV. (F.T.) MSL) UPANLUMN (F.T.)

WELL NO.	ELEV. OF M.F.A.S.	STATIC WATER LEVEL (F.T.)	START DATE	START TIME	UPANLUMN (F.T.)
080579	1300	22010	00	01.00	00
080674	1060	-1350	00	61.00	00
080719	0722	000	00	61.00	00
080774	1142	192	00	61.05	00
080819	1628	030	00	61.10	00
080774	1415	585	00	61.15	00
080819	0800	1170	00	61.40	00
080874	0730	1380	00	61.45	00
080874	1300	1710	00	61.60	00
080874	1900	2070	00	61.70	00
080874	0200	2600	00	61.80	00
080974	0800	2650	00	61.80	00
080874	1315	3165	00	61.90	00
080974	1850	3500	00	62.00	00
081074	0010	3820	00	62.10	00
081074	0630	4200	00	62.00	00
081074	1320	4610	00	62.00	00
081074	1510	4720	00	61.95	00
081074	1940	4890	00	61.90	00
081074	2800	5250	00	61.80	00
081174	1440	6130	00	61.60	00
081174	1830	6420	00	61.50	00
081174	2800	6690	00	61.45	00
081274	0615	7065	00	61.30	00
081274	1215	7425	00	61.25	00
081274	1525	7815	00	61.20	00
081274	1940	7870	00	61.10	00
081274	2305	8115	00	61.00	00
081374	0615	8505	00	60.90	00
081374	1430	9000	00	60.80	00
081374	1945	9315	00	60.70	00
081374	2305	9555	00	60.60	00
081474	0600	9930	00	60.50	00
081474	1400	10650	00	60.40	00
081574	0711	11441	00	60.30	00
081574	1755	12045	00	60.30	00
081674	0655	12665	00	60.10	00
081674	1400	13530	00	60.10	00
081774	0620	14270	00	60.10	00
081774	1400	14920	00	60.05	00
081874	0630	15720	00	60.05	00
081874	1400	16410	00	60.05	00
081974	1040	17410	00	60.00	00
081974	1950	17860	00	60.00	00
082074	0810	18700	00	60.00	00
082074	1045	19405	00	60.00	00
082174	0635	20045	00	60.00	00
082174	1850	20780	00	59.95	00
082274	1725	27135	00	59.95	00

7.40-124

WELL NO. 555324M '275197E 080779 0830

WELL NO.	ELEV OF MFSR PL. (FT., MSL)	STATIC WATER LEVEL (FT.)	CHANGES	STAGE DATE	STAGE TIME
WELL NO.	555324M	'275197E	080779	0830	
DATE	TIME AFTER PUMPING STARTED (MIN)	DEPTH IN WATER (FT.)	WATER LEVEL ELEV (FT., MSL)	DRAG (FT.)	
082379	1730	23580.	59.95	00	00
082479	1705	2490.	59.95	00	00
082579	1825	26515.	59.95	00	00
082679	1705	27675.	59.90	00	00
082779	1730	29380.	59.90	00	00
082879	1725	30775.	59.90	00	00
082979	1735	32225.	59.80	00	00
083079	1725	33655.	59.80	00	00
083179	1515	34965.	59.80	00	00
080179	0900	36030.	59.80	00	00
080279	0850	37480.	59.80	00	00
080379	0610	38860.	59.90	00	00
080479	1200	40530.	59.90	00	00
080579	1525	42175.	59.90	00	00
080679	1535	45085.	59.80	00	00
080779	0735	47465.	59.80	00	00
081179	1005	50895.	59.70	00	00
081379	0715	53205.	59.70	00	00
081579	1255	56825.	59.70	00	00
081779	1600	59490.	59.60	00	00
081979	1360	62230.	59.60	00	00
082179	1015	64905.	61.10	00	00
082379	0850	70880.	60.75	00	00
082579	1125	73615.	60.00	00	00
082779	1610	74180.	60.30	00	00
082979	1930	79620.	60.70	00	00
083179	1130	82280.	60.80	00	00
100579	1405	85295.	60.90	00	00
100779	1505	88275.	60.80	00	00
100979	1125	90695.	60.75	00	00
101179	1405	93935.	60.70	00	00
101379	1945	101475.	60.55	00	00
101579	1620	104130.	60.50	00	00
102079	1640	107030.	60.50	00	00
102279	1615	109305.	60.85	00	00
102479	1630	112920.	60.40	00	00
102679	1330	115280.	60.35	00	00
102879	1710	118600.	60.35	00	00
103079	1325	121630.	60.50	00	00
110779	1120	125450.	60.60	00	00
110979	0950	128280.	60.55	00	00
110979	1125	131215.	60.50	00	00
110979	0940	133970.	60.50	00	00
111379	1525	141415.	60.55	00	00
111679	0930	145520.	60.25	00	00
112679	1755	160405.	61.40	00	00
112879	1135	163185.	61.45	00	00
121079	1630	180480.	60.30	00	00
121179	1300	189780.	60.25	00	00

340.22 Based on current water quality of the service water makeup from
(3.6, the radial collector wells update tables 3.6.3, 5.3.3 through
5.3) 5.3.6, and sections 3.6.1, 3.6.2, 5.1.4.5.3, 5.3.2.2, 5.3.2.3,
and 5.3.3.

Response

The three attached tables contain the plant effluent data necessary for updating the aforementioned ER Tables and for performing the chemical plume analysis using the current water quality data for makeup water from the radial collector wells. Tables 1 and 2 contain the water quantity and quality data for the plant effluent for 1 and 2 unit operation, respectively. These tables summarize the plant effluent characteristics for operation with 2, 3 or 5 cycles of concentration in the cooling tower and with a 100% load factor. It can be seen in these tables that for 2 unit operation, the effluent discharge is double that for 1 unit operation, while temperature and chemicals concentration are independent of the number of units operating. Table 3 summarizes the effluent chemical characteristics to be used for the chemical plume analysis for both 1 and 2 unit operation for the various cycles of concentration. A winter case (January) and summer case (July) were chosen to perform the dispersion of the chemical plume as discussed in the ER.

Inspection of Tables 1 and 2 indicates that the chloride concentration is below the Miss./La. Water Quality criteria of 75 mg/l (see ER Table 5.3.1) for all times and modes of operation.

Comparison of Table 3 and ER Table 5.3.3 indicates that the expected concentrations of TDS and sulfates for 2 and 3 cycle cases are relatively higher than the ones reported earlier.

The preliminary chemical plume analysis for 2 unit operation with 2 and 3 cycles of concentration was performed using the current water quality parameters of Table 3 and the corresponding discharges. The 1980 Mississippi River hydrographic survey taken by the U.S. Army Corps of Engineers (Figure 1) was used in estimating the hydraulic characteristics of the river in the vicinity of the site for the dispersion analysis. The modeling techniques and river flow and water level data were identical to those described in the ER Section 5.3.2.1. The results of this preliminary analysis were compared to those given in ER Tables 5.3.4 through 5.3.6. For the mean river flow cases (Table 5.3.4), the new plume lengths and areas are slightly longer. For the 7-day-10-year low river flow cases, the plumes are slightly smaller than those presented in ER Table 5.3.5, and for the lowest flow of record cases (Mississippi River at elevation 28 feet MSL), the plumes are smaller than those presented in Table 5.3.6. This can be attributed mainly to the channel improvements and bank stabilization performed by the U.S. Army Corps of Engineers in the vicinity of the site.

Since the largest plumes were governed by the lowest flow of record cases (Table 5.3.6), it can be concluded that the change in makeup water quality does not result in an increase in the controlling plume areas given in the ER. Plumes for 1 unit operation will, of course, be smaller due to the reduction in the plant effluent discharge.

The results of the revised chemical plume analysis for 2, 3 and 5 cycles and 1 and 2 unit operation will be submitted in the next ER Amendment.

GRAND GULF NUCLEAR PLANT

TABLE 1 - PLANT EFFLUENT WATER QUANTITY AND QUALITY (1 UNIT OPERATION)

MONTH	2-CYCLE						3-CYCLE						3-CYCLE						
	FLOW gpm	TEMP ° F	TDS mg/l	SULFATE mg/l	CHLORIDE mg/l	FLOW gpm	TEMP ° F	TDS mg/l	SULFATE mg/l	CHLORIDE mg/l	FLOW gpm	TEMP ° F	TDS mg/l	SULFATE mg/l	CHLORIDE mg/l	TEMP ° F	TDS mg/l	SULFATE mg/l	CHLORIDE mg/l
JAN	11750	75.3	752	446	38	9083	83.3	861	492	44	9083	90.7	861	479	44				
FEB	11900	76.4	752	446	38	8933	83.6	876	507	44	8933	90.8	876	492	44				
MAR	12300	79.0	752	446	38	8533	86.3	917	545	46	8533	91.1	917	529	46				
APR	12400	82.8	752	446	38	8433	86.8	929	556	47	8433	92.4	929	537	47				
MAY	13200	87.5	752	446	38	7613	88.9	1030	650	52	7613	93.4	1030	631	52				
JUN	13550	91.2	752	446	38	7283	91.7	1075	694	54	7283	94.8	1075	674	54				
JUL	13610	92.5	752	446	38	7223	92.8	1083	703	55	7223	95.4	1083	682	55				
AUG	13650	92.0	752	446	38	7183	92.3	1090	708	55	7183	95.1	1090	688	55				
SEP	13400	89.3	752	446	38	7433	90.2	1053	674	53	7433	94.1	1053	654	53				
OCT	12900	84.4	752	446	38	7933	86.9	989	611	50	7933	92.5	989	593	50				
NOV	12250	78.7	752	446	38	8583	84.2	914	540	46	8583	91.1	916	525	46				
DEC	11850	75.7	752	446	38	8983	83.3	872	502	44	8983	90.6	872	488	44				
AVG	12730	83.7	752	446	38	8101	87.4	974	599	49	8101	92.7	974	581	49				

NOTE: Number of cycles refer to the cycles of concentration in the cooling tower loop.

GRAND GULF NUCLEAR PLANT

TABLE 2 - PLANT EFFLUENT WATER QUANTITY AND QUALITY (2 UNIT OPERATION)

MONTH	2-CYCLE				3-CYCLE				5-CYCLE						
	FLOW gpm	TEMP ° F	TDS mg/l	SULFATE mg/l	CHLORIDE mg/l	FLOW gpm	TEMP ° F	TDS mg/l	SULFATE mg/l	CHLORIDE mg/l	FLOW gpm	TEMP ° F	TDS mg/l	SULFATE mg/l	CHLORIDE mg/l
JAN	23500	75.3	752	446	38	18166	83.3	861	492	44	18166	90.7	861	479	44
FEB	23800	76.4	752	446	38	17866	83.6	876	507	44	17866	90.8	876	492	44
MAR	24600	79.0	752	446	38	17066	86.3	917	545	46	17066	91.1	917	529	46
APR	24800	82.8	752	446	38	16866	86.8	929	556	47	16866	92.4	929	537	47
MAY	26400	87.5	752	446	38	15226	88.9	1030	650	52	15226	93.4	1030	631	52
JUN	27100	91.2	752	446	38	14566	91.7	1075	694	54	14566	94.8	1075	674	54
JUL	27220	92.5	752	446	38	14446	92.8	1083	703	55	14446	95.4	1083	682	55
AUG	27300	92.0	752	446	38	14366	92.3	1090	708	55	14366	95.1	1090	688	55
SEP	26800	89.3	752	446	38	14866	90.2	1053	674	53	14866	94.1	1053	654	53
OCT	25800	84.4	752	446	38	15866	86.9	989	611	50	15866	92.5	989	593	50
NOV	24500	78.7	752	446	38	17166	84.2	914	540	46	17166	91.1	914	525	46
DEC	23700	75.7	752	446	38	17966	83.3	872	502	44	17966	90.6	872	488	44
AVG	25460	83.7	752	446	38	16202	87.4	974	599	49	16202	92.7	974	581	49

NOTE: Number of cycles refer to the cycles of concentration in the cooling tower loop.

GRAND GULF NUCLEAR PLANT

TABLE 3

PLANT EFFLUENT WATER QUALITY FOR
CHEMICAL PLUME ANALYSIS

CONSTITUENTS	CONCENTRATION, mg/l					
	2 CYCLES		3 CYCLES		5 CYCLES	
	WINTER ⁺	SUMMER ⁺⁺	WINTER	SUMMER	WINTER	SUMMER
SULFATES	446	446	492	703	479	682
CHLORIDE*	38	38	44	55	44	55
TDS	752	752	861	1083	861	1083

* For all cases the chlorides are below the State Water Quality Criteria of 75 mg/l.

+ Month of January

++ Month of July

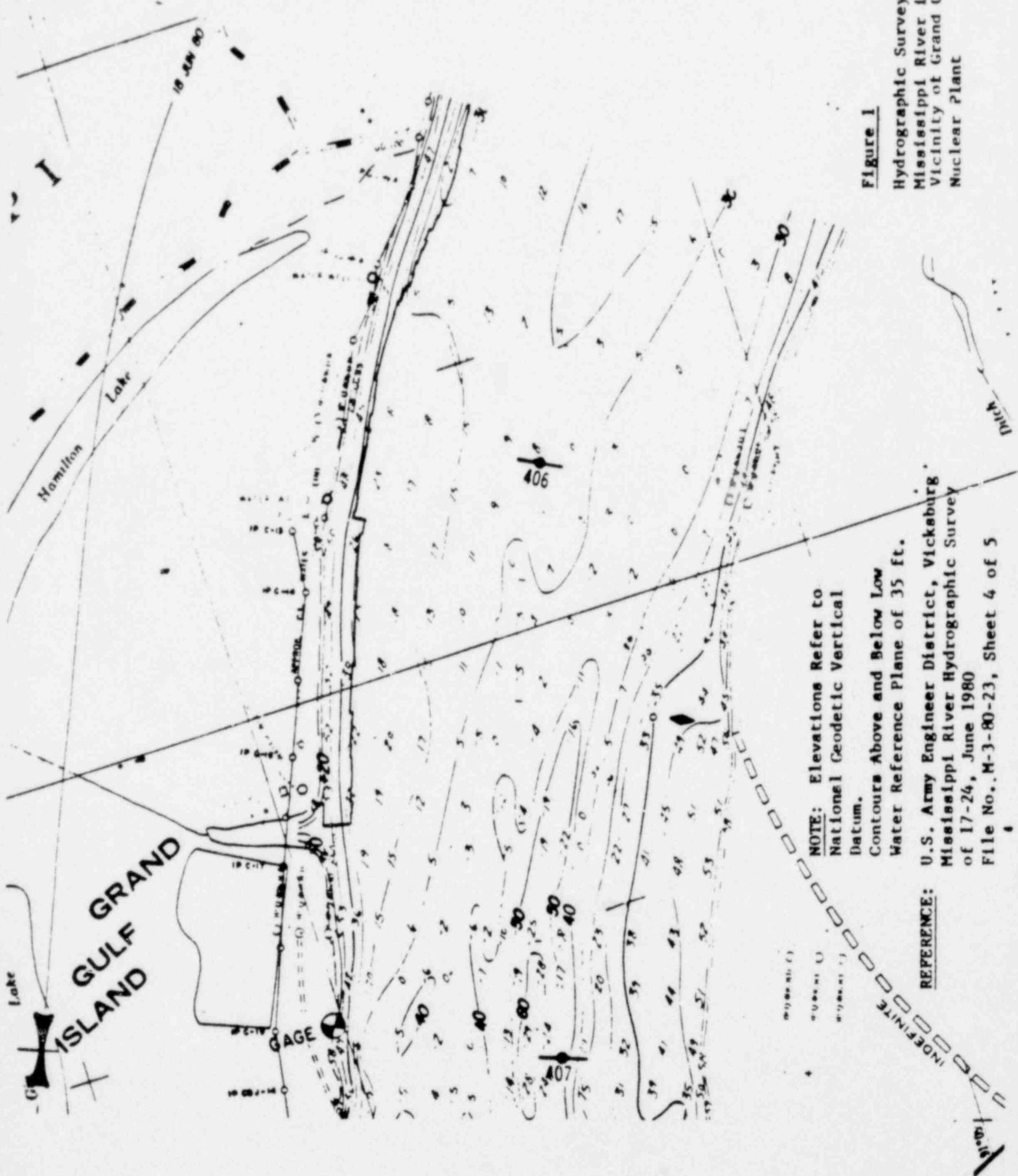


Figure 1

Hydrographic Survey of
Mississippi River in the
Vicinity of Grand Gulf
Nuclear Plant

NOTE: Elevations Refer to
National Geodetic Vertical
Datum.

Contours Above and Below Low
Water Reference Plane of 35 ft.

REFERENCE: U.S. Army Engineer District, Vicksburg
Mississippi River Hydrographic Survey
of 17-24, June 1980
File No. M-3-80-23, Sheet 4 of 5

INDEFINITE

340.23 Provide a copy of the current NPDES permit for the Grand Gulf site. Also provide a short narrative of the current status of the NPDES renewal activities.

Response

The present NPDES permit MS0029521 for the Grand Gulf Nuclear Station expires on June 30, 1981. Samples of all outfalls have been taken and analysis is proceeding at this time in order to insure that the revised permit application will be completed by December 31, 1980. A copy of the present permit (MS0029521) has been enclosed.



State of Mississippi Water Pollution Control PERMIT

TO DISCHARGE WASTEWATER IN ACCORDANCE WITH THE
NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM

THIS CERTIFIES THAT

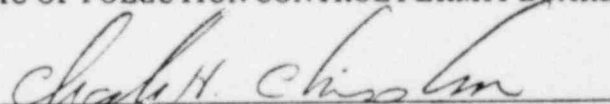
Mississippi Power and Light Company
Grand Gulf Nuclear Station
Port Gibson, Mississippi

has been granted permission to discharge wastewater into the Mississippi
River and Hamilton Lake.

in accordance with effluent limitations, monitoring requirements and other conditions set forth in Parts I, II, and III hereof. This permit is issued in accordance with the provisions of the Mississippi Air and Water Pollution Control Law (Section 49-17-1 et seq., Mississippi Code of 1972), and the regulations and standards adopted and promulgated thereunder, and under authority granted pursuant to Section 402 (b) of the Federal Water Pollution Control Act.

Issued this 11th day of February, 19 80.

MISSISSIPPI DEPARTMENT OF NATURAL RESOURCES
BUREAU OF POLLUTION CONTROL PERMIT BOARD



Charles H. Chisolm, P. E., Director

Expires 30th day of June, 19 81.

Permit No. MS0029521

Application No. MS0029521

PART I

Permit No. MS0029521

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

1. During the period beginning **February 1, 1980**, and lasting until **June 30, 1981**, the permittee is authorized to discharge from **Outfall Serial Number 001 - Discharge Basin**. Such discharges shall be limited and monitored by the permittee as specified below:

Effluent Characteristic	Discharge Limitations				Monitoring Requirements	
	kg/day Daily Avg.	(lbs/day) Daily Max	Other Units (Specify) Daily Avg. Daily Max.		Measurement Frequency	Sample Type
Flow - M ³ Day (MGD)	-	-	-	-	Continuous	Recorder
Temperature*	-	-	-	-	Continuous	Recorder

*Discharge temperature shall not exceed the lowest temperature of the recirculating cooling water prior to the addition of make-up.

2. The pH shall not be less than **6.0** standard units nor greater than **9.0** standard units and shall be monitored **weekly with a grab sample**.
3. There shall be no discharge of floating solids or visible foam in other than trace amounts.
4. Samples taken in compliance with the monitoring requirements specified above shall be taken at the following location(s): **at the plant discharge basin (following consolidation of Outfall Serial Numbers 002 - 008), but prior to entry into the Mississippi River**.

PART I

Permit No. MS0029521

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

1. During the period beginning February 1, 1980, and lasting until June 30, 1981, the permittee is authorized to discharge from Outfall Serial Number 002 (Unit A) and 003 (Unit B) - Cooling Tower Blowdown. Such discharges shall be limited and monitored by the permittee as specified below:

Effluent Characteristic	Discharge Limitations			Monitoring Requirements		
	kg/day Daily Avg.	(lbs/day) Daily Max	Chlorination Period Avg. Instan. Max.		Measurement Frequency	Sample Type
Flow - M ³ Day (MGD)	-	-	-	-	3/Week	Instantaneous
Total Residual Chlorine	-	-	-	-	**	Multiple Grabs***
Free Available Chlorine	-	-	0.2 mg/l	0.5 mg/l	**	Multiple Grabs***
Time of Chlorine Discharge*	-	-	-	120 min.	**	Observation

*Neither free available chlorine nor total residual chlorine may be discharged from any unit for more than two hours in any one day and not more than one unit may discharge free available or total residual chlorine at any one time. The exact time of discharge of free available or total residual chlorine shall be recorded for each unit and reported as required in Part I.C.2.

**During the first year of substantially full power operation of each unit, monitoring shall follow each application of chlorine to the condenser cooling water system for 3 days/week until sufficient operating experience has been obtained to assure conformance with limitations and then monitoring frequency may be reduced to one day/week. Start-up of blowdown shall not occur until a series of multiple grab samples indicate that the discharge is in conformance with the permit limitations.

2. The pH shall not be less than N/A standard units nor greater than N/A standard units and shall be monitored
3. There shall be no discharge of floating solids or visible foam in other than trace amounts.
4. Samples taken in compliance with the monitoring requirements specified above shall be taken at the following location(s): at each cooling tower blowdown point prior to mixing with any other waste streams.

***Multiple grab samples shall consist of a series of grab samples taken every 30 minutes following start-up of blowdown after chlorine addition until no total residual chlorine is detectable.

PART I

Permit No. MS0029521

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

1. During the period beginning **February 1, 1980**, and lasting until June 30, 1981, the permittee is authorized to discharge from **Outfall Serial Number 004 (Unit A) and 005 (Unit B). Standby Service Cooling Tower Blowdown.**

Such discharges shall be limited and monitored by the permittee as specified below:

Effluent Characteristic	Discharge Limitations				Monitoring Requirements	
	kg/day	(lbs/day)	Chlorination Period		Measurement Frequency	Sample Type
	Daily Avg.	Daily Max	Avg.	Instan. Max.		
Flow - M ³ Day (MGD)	-	-	-	-	3/Week	Instantaneous
Total Residual Chlorine	-	-	-	-	**	Multiple Grabs***
Free Available Chlorine	-	-	0.2 mg/l	0.5 mg/l	**	Multiple Grabs***
Time of Chlorine Discharge*	-	-	-	120 min.	**	Observation

*Neither free available chlorine nor total residual chlorine may be discharged from any unit for more than two hours in any one day and not more than one unit may discharge free available or total residual chlorine at any one time. The exact time of discharge of free available or total residual chlorine shall be recorded for each unit and reported as required in Part I.C.2.

**During the first year of substantially full power operation of each unit, monitoring shall follow each application of chlorine to the condenser cooling water system for 3 days/week until sufficient operating experience has been obtained to assure conformance with limitations and then monitoring frequency may be reduced to one day/week. Start-up of blowdown shall not occur until a series of multiple grab samples indicate that the discharge is in conformance with the permit limitations.

2. The pH shall not be less than **N/A** standard units nor greater than **N/A** standard units and shall be monitored
3. There shall be no discharge of floating solids or visible foam in other than trace amounts.
4. Samples taken in compliance with the monitoring requirements specified above shall be taken at the following location(s): **at each cooling tower blowdown point prior to mixing with any other waste streams.**

***Multiple grab samples shall consist of a series of grab samples taken every 30 minutes following start-up of blowdown after chlorine addition until no total residual chlorine is detectable.

PART I

Permit No. MS0029521

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

1. During the period beginning **February 1, 1980**, and lasting until **June 30, 1981**, the permittee is authorized to discharge from **Outfall Serial Number 006 - Demineralizer Regeneration Waste**.
Such discharges shall be limited and monitored by the permittee as specified below:

Effluent Characteristic	Discharge Limitations				Monitoring Requirements	
	kg/day Daily Avg.	(lbs/day) Daily Max	Other Units (Specify) Daily Avg. Daily Max.		Measurement Frequency	Sample Type
Flow - M ³ Day (MGD)	-	-	-	-	1/Week	*
Oil and Grease	4.5(10.0)	18.2(40.0)	15 mg/l	20 mg/l	1/Week	Grab
Total Suspended Solids	9.1(20.0)	91(200)	30 mg/l	100 mg/l	1/Week	Grab

*Weir reading, pump logs, or calculation for batch discharge. The flow reported shall be the total volume discharged in a 24-hour period.

2. The pH shall not be less than **N/A** standard units nor greater than **N/A** standard units and shall be monitored **N/A**
3. There shall be no discharge of floating solids or visible foam in other than trace amounts.
4. Samples taken in compliance with the monitoring requirements specified above shall be taken at the following location(s): **Discharge from the treatment facility prior to mixing with any other water or wastewater.**

PART I

Permit No. MSG029523

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

1. During the period beginning **February 1, 1980**, and lasting until **June 30, 1981**, the permittee is authorized to discharge from **Outfall Serial Number 007 - Water Treatment Building and Diesel Generator Drain**. Such discharges shall be limited and monitored by the permittee as specified below:

Effluent Characteristic	Discharge Limitations				Monitoring Requirements	
	kg/day Daily Avg.	(lbs/day) Daily Max	Other Units (Specify) Daily Avg. Daily Max.		Measurement Frequency	Sample Type
Flow - M ³ Day (MGD)	-	-	-	-	1/Week	*
Oil and Grease	32.8(72.1)	43.7(96.1)	15 mg/l	20 mg/l	1/Week	Grab
Total Suspended Solids	65.5(144.1)	218.4 (480.4)	30 mg/l	100 mg/l	1/Week	Grab

*Weir reading, pump logs, or calculation for batch discharge. The flow reported shall be the total volume discharged in a 24-hour period.

2. The pH shall not be less than **N/A** standard units nor greater than **N/A** standard units and shall be monitored **N/A**
3. There shall be no discharge of floating solids or visible foam in other than trace amounts.
4. Samples taken in compliance with the monitoring requirements specified above shall be taken at the following location(s): **discharge from the oil separator treatment unit prior to mixing with any other water or wastewater.**

PART I

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

1. During the period beginning February 1, 1980, and lasting until June 30, 1981, the permittee is authorized to discharge from **Outfall Serial Number 008 - Fire Water Pump House Oily Waste Sump.** Such discharges shall be limited and monitored by the permittee as specified below:

Effluent Characteristic	Discharge Limitations				Monitoring Requirements	
	kg/day Daily Avg.	(lbs/day) Daily Max	Other Units (Specify) Daily Avg. Daily Max.		Measurement Frequency	Sample Type
Flow - M ³ Day (MGD)	-	-	-	-	1/Week	*
Oil and Grease	16.4(36.0)	21.8(48.0)	15 mg/l	20 mg/l	1/Week	Grab
Total Suspended Solids	30.8(72.1)	109.2(240.2)	30 mg/l	100 mg/l	1/Week	Grab

*Weir reading, pump logs, or calculation for batch discharge. The flow reported shall be the total volume discharged in a 24-hour period.

2. The pH shall not be less than **N/A** standard units nor greater than **N/A** standard units and shall be monitored **N/A**
3. There shall be no discharge of floating solids or visible foam in other than trace amounts.
4. Samples taken in compliance with the monitoring requirements specified above shall be taken at the following location(s): **discharge from the oil separator treatment unit prior to mixing with any other water or wastewater.**

PART I

Permit No. MS0029521

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

1. During the period beginning **February 1, 1980**, and lasting until **June 30, 1981**, the permittee is authorized to discharge from **Outfall Serial Number 009 - Administrative Building Floor Drains**. Such discharges shall be limited and monitored by the permittee as specified below:

Effluent Characteristic	Discharge Limitations				Monitoring Requirements	
	kg/day Daily Avg.	(lbs/day) Daily Max	Other Units (Specify) Daily Avg. Daily Max.		Measurement Frequency	Sample Type
Flow - M ³ Day (MGD)	-	-	-	-	1/Week	*
Oil and Grease	4.1(9.0)	5.5(12.0)	15 mg/l	20 mg/l	1/Week	Grab
Total Suspended Solids	8.2(18.0)	27.3(60.0)	30 mg/l	100 mg/l	1/Week	Grab

*Weir reading, pump logs, or calculation for batch discharge. The flow reported shall be the total volume discharged in a 24-hour period.

2. The pH shall not be less than **N/A** standard units nor greater than **N/A** standard units and shall be monitored **N/A**
3. There shall be no discharge of floating solids or visible foam in other than trace amounts.
4. Samples taken in compliance with the monitoring requirements specified above shall be taken at the following location(s): **discharge from the oil separator treatment unit prior to mixing with any other water or wastewater.**

PART I

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

1. During the period beginning **February 1, 1980**, and lasting until **June 30, 1981**, the permittee is authorized to discharge from **Outfall Serial Number 010 - Sewage Treatment Plant Effluent**. Such discharges shall be limited and monitored by the permittee as specified below:

Effluent Characteristic	Discharge Limitations				Monitoring Requirements	
	kg/day Daily Avg.	(lbs/day) Daily Max	Other Units (Specify) Daily Avg. Daily Max.		Measurement Frequency	Sample Type
Flow - M ³ Day (MGD)	-	-	171(0.045)	-	2/Week	Instantaneous
BOD ₅	5.1(11.3)	7.7(16.9)	30 mg/l	45 mg/l	1/Quarter	24-Hour Composite
Total Suspended Solids	5.1(11.3)	7.7(16.9)	30 mg/l	45 mg/l	1/Quarter	24-Hour Composite

2. The pH shall not be less than **6.0** standard units nor greater than **9.0** standard units and shall be monitored **2/week with a grab sample**.
3. There shall be no discharge of floating solids or visible foam in other than trace amounts.
4. Samples taken in compliance with the monitoring requirements specified above shall be taken at the following location(s): **discharge from the combined effluent of the three sewage treatment units prior to mixing with any other water or wastewater.**
5. Influent and effluent pH, dissolved oxygen in the aeration basin, and 30-minute sludge settleability shall be monitored 2 days per week with a grab sample, for each of the three units.
6. Upon issuance of this permit, NPDES Permits MS0027031 and MS0029173 shall be void.

PART I

Permit No. MS0029521

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

1. During the period beginning February 1, 1980, and lasting until June 30, 1981, the permittee is authorized to discharge from Outfall Serial Number 011 - Liquid Radwaste System. Such discharges shall be limited and monitored by the permittee as specified below:

Effluent Characteristic	Discharge Limitations				Monitoring Requirements	
	kg/day Daily Avg.	(lbs/day) Daily Max	Other Units (Specify) Daily Avg. Daily Max.		Measurement Frequency	Sample Type
Flow - M ³ Day (MGD)	-	-	-	-	*	*
Total Suspended Solids	-	-	-	30 mg/l	*	Grab

*Measurements shall be taken daily whenever a batch is discharged. The flow reported shall be the total volume discharged in a 24-hour period.

2. The pH shall not be less than N/A standard units nor greater than N/A standard units and shall be monitored N/A
3. There shall be no discharge of floating solids or visible foam in other than trace amounts.
4. Samples taken in compliance with the monitoring requirements specified above shall be taken at the following location(s): discharge from the radwaste treatment system prior to mixing with any other water or wastewater.

PART I

Permit No. MS0029521

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

1. During the period beginning February 1, 1980, and lasting until June 30, 1981, the permittee is authorized to discharge from Outfall Serial Number 012 - Preoperational Flushing and Metal Cleaning Wastes. Such discharges shall be limited and monitored by the permittee as specified below:

Effluent Characteristic	Discharge Limitations				Monitoring Requirements	
	kg/day Daily Avg.	(lbs/day) Daily Max	Other Units (Specify) Daily Avg. Daily Max.		Measurement Frequency	Sample Type
Flow - M ³ Day (MGD)	-	-	-	-	**	Pump Logs or Batch Calculation
Total Suspended Solids	*	*	30 mg/l	100 mg/l	**	Composite***
Total Copper	-	*	-	1.0 mg/l	**	Composite***
Total Iron	-	*	-	1.0 mg/l	**	Composite***
Total Phosphorus (as P)	-	*	-	2.0 mg/l	**	Composite***
Oil and Grease	*	*	15 mg/l	20 mg/l	**	Grab

"Preoperational Flushing and Metal Cleaning Wastes" shall mean any cleaning compounds, rinse waters, or any other waterborne residues derived from cleaning any metal process equipment including, but not limited to, boiler tube cleaning, boiler fireside cleaning and air preheater cleaning. This definition shall specifically exclude any water used for the sole purpose of hydrostatic testing, or flushing operations not involving the use of chemicals.

*The quantity of pollutants specified above shall not exceed the quantity (Kg/day or lbs/day) determined by multiplying the flow of the wastewater times the concentrations shown above.

**1/Day whenever a discharge occurs from any flushing or cleaning operation.

2. There shall be no discharge of floating solids or visible foam in other than trace amounts.

3. Samples taken in compliance with the monitoring requirements specified above shall be taken at the following location(s):

***A composite shall consist of 3 grab samples taken at the beginning of discharge, at the end of discharge, and a third taken at approximately equal time lapse between the beginning and end.

PART I

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

1. During the period beginning **February 1, 1980**, and lasting until **June 30, 1981**, the permittee is authorized to discharge from **Outfall Serial Numbers 013 - 014 (Construction Runoff) (Basins A and B, respectively)**. Such discharges shall be limited and monitored by the permittee as specified below:

Effluent Characteristic	Discharge Limitations				Monitoring Requirements	
	kg/day Daily Avg.	(lbs/day) Daily Max	Other Units (Specify) Daily Avg. Daily Max.		Measurement Frequency	Sample Type
Flow - M ³ Day (MGD)	-	-	-	-	1/Month*	Instantaneous
Total Suspended Solids	-	-	-	-	1/Month*	Grab

*Sampling shall be done during periods of actual discharge.

2. The pH shall not be less than **6.0** standard units nor greater than **9.0** standard units and shall be monitored **1/month with a grab sample.**
3. There shall be no discharge of floating solids or visible foam in other than trace amounts.
4. Samples taken in compliance with the monitoring requirements specified above shall be taken at the following location(s): **discharge point prior to mixing with any other water or wastewater.**
5. **Construction practices and control of site runoff shall be consistent with sound engineering practices. Ponds utilized for control of construction runoff shall be capable of containing a 10-year, 24-hour rainfall event.**

B. SCHEDULE OF COMPLIANCE

1. The permittee shall achieve compliance with the effluent limitations specified for discharges in accordance with the following schedule:

a. Blowdown Minimization Report
(See Page 22, Part III.A.e.)

1. Study Plan - 90 days prior to Unit 1 fuel loading.
2. Initial Report - 15 months after commercial operation date of Unit 1.
3. Subsequent Reports - Annually after initial report.

b. Chlorine Minimization Report
(See Page 21, Part III.A.1.)

1. Study Plan - 90 days prior to Unit 1 fuel loading.
2. Report - 15 months after start-up of Unit 1 & 2.

2. No later than 10 calendar days following a date identified in the above schedule of compliance, the permittee shall submit either a report of progress or, in the case of specific actions being required by identified dates, a written notice of compliance or noncompliance. In the latter case, the notice shall include the cause of noncompliance, any remedial actions taken, and the probability of meeting the next scheduled requirement.

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C. MONITORING AND REPORTING

1. Representative Sampling

Samples and measurements taken as required herein shall be representative of the volume and nature of the monitored discharge.

2. Reporting

Monitoring results obtained during the previous 3 months shall be summarized for each month and reported on a Discharge Monitoring Report Form (EPA No. 3320-1), postmarked no later than the 28th day of the month following the completed reporting period. The first report is due on April 28, 1980. Signed copies of these, and all other reports required herein, shall be submitted to the Mississippi Air and Water Pollution Control Permit Board at the following address:

State of Mississippi
Air and Water Pollution Control Permit Board
P. O. Box 827
Jackson, Mississippi 39205

3. Definitions

- a. The "daily average" discharge means the total discharge by weight during a calendar month divided by the number of days in the month that the production or commercial facility was operating. Where less than daily sampling is required by this permit, the daily average discharge shall be determined by the summation of all the measured daily discharges by weight divided by the number of days during the calendar month when the measurements were made.
- b. The "daily maximum" discharge means the total discharge by weight during any 24-hour period.

4. Test Procedures

Test procedures for the analysis of pollutants shall conform to regulation published pursuant to Section 304(g) of the Federal Water Pollution Control Act, as amended.

5. Recording of Results

For each measurement or sample taken pursuant to the requirements of this permit, the permittee shall record the following information:

- a. The exact place, date, and time of sampling;
- b. The dates the analyses were performed;

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- c. The person(s) who performed the analyses;
- d. The analytical techniques or methods used; and
- e. The results of all required analyses.

6. Records Retention

All records and information resulting from the monitoring activities required by this permit including all records of analyses performed and calibration and maintenance of instrumentation and recordings from continuous monitoring instrumentation shall be retained for a maximum of three (3) years, or longer if requested by the Permit Board.

PART II

A. MANAGEMENT REQUIREMENTS

1. Change in Discharge

All discharges authorized herein shall be consistent with the terms and conditions of this permit. The discharge of any pollutant identified in this permit more frequently than or at a level in excess of that authorized shall constitute a violation of the permit. Any anticipated facility expansions or treatment modifications which will result in new, different, or increased discharges of pollutants must be reported by submission of a new NPDES application, or if such changes will not violate the effluent limitations specified in this permit, by notice to the Mississippi Air and Water Pollution Control Permit Board of such notice, the permit may be modified to specify and limit any pollutants not previously limited.

2. Noncompliance Notification

If, for any reason, the permittee does not comply with or will be unable to comply with any effluent limitation specified in this permit, the permittee shall provide the Mississippi Air and Water Pollution Control Permit Board with the following information, in writing, within five (5) days of becoming aware of such conditions:

- a. A description of the discharge and cause of noncompliance; and
- b. The period of noncompliance, including exact dates and times; or if not corrected, the anticipated time the noncompliance is expected to continue, and steps being taken to reduce, eliminate and prevent recurrence of the noncomplying discharge.

3. Facilities Operation

The permittee shall at all times maintain in good working order and operate as efficiently as possible all treatment or control facilities or systems installed or used by the permittee to achieve compliance with the terms and conditions of this permit.

4. Adverse Impact

- The permittee shall take all reasonable steps to minimize any adverse impact to State waters resulting from noncompliance with any effluent limitations specified in this permit, including such accelerated or additional monitoring as necessary to determine the nature and impact of the noncomplying discharge.

5. Bypassing

Any diversion from or bypass of wastewater collection and treatment facilities is prohibited, except (i) where unavoidable to prevent loss of life or severe

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property damage, or (ii) where excessive storm drainage or runoff would damage any facilities necessary for compliance with the effluent limitations and prohibitions of this permit. The permittee shall notify the Mississippi Air and Water Pollution Control Permit Board in writing of each such diversion or bypass within 72 hours of the diversion or bypass and shall submit a plan to prevent recurrence of the bypass diversion within 30 days of the date of the incident.

6. Removed Substances

Solids, sludges, filter backwash, or other pollutants removed in the course of treatment or control of wastewaters shall be disposed of in a manner such as to prevent any pollutant from such materials from entering State waters.

7. Power Failures

In order to maintain compliance with the effluent limitations and prohibitions of this permit, the permittee shall either:

a. In accordance with the Schedule of Compliance contained in Part I, provide an alternate power source sufficient to operate the wastewater collection and treatment facilities;

or, if such alternate power source is not in existence, and no date for its implementation appears in Part I,

b. Provide a method whereby the effluent limitations contained in Part I shall be met upon the reduction, loss, or failure of the primary source of power to the wastewater collection and treatment facilities.

B. RESPONSIBILITIES

1. Right of Entry

The permittee shall allow the Mississippi Air and Water Pollution Control Commission and the Regional Administrator of the U. S. Environmental Protection Agency and or their authorized representatives, upon the presentation of credentials:

a. To enter upon the permittee's premises where an effluent source is located or in which any records are required to be kept under the terms and conditions of this permit; and

b. At reasonable times to have access to and copy any records required to be kept under the terms and conditions of this permit; to inspect any monitoring equipment or monitoring method required in this permit; and to sample any discharge of pollutants.

2. Transfer of Ownership or Control

In the event of any change in control or ownership of facilities from which

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the authorized discharges emanate, the permittee shall notify the succeeding owner or controller of the existence of this permit by letter, a copy of which shall be forwarded to the Mississippi Air and Water Pollution Control Permit Board.

3. Availability of Records

Except for data determined to be confidential under the Mississippi Air and Water Pollution Control Law, all reports prepared in accordance with the terms of this permit shall be available for public inspection at the office of the Mississippi Air and Water Pollution Control Commission.

4. Permit Modification

After notice and opportunity for a hearing, this permit may be modified, suspended, or revoked in whole or in part during its term for cause including, but not limited to:

- a. Violation of any terms or conditions of this permit;
- b. Obtaining this permit by misrepresentation or failure to disclose fully all relevant facts; or
- c. A change in any condition that required either a temporary or permanent reduction or elimination of the authorized discharge.

5. Toxic Pollutants

Notwithstanding Part II, B-4 above, if a toxic effluent standard or prohibition (including any schedule of compliance specified in such effluent standard or prohibition) is established under Section 307(a) of the Federal Water Pollution Control Act for a toxic pollutant which is present in the discharge and such standard or prohibition is more stringent than any limitation for such pollutant in this permit, this permit shall be revised or modified in accordance with the toxic effluent standard or prohibition and the permittee so notified.

6. Civil and Criminal Liability

Except as provided in permit conditions on "Bypassing" (Part II, A-5), nothing in this permit shall be construed to relieve the permittee from civil or criminal penalties for noncompliance.

7. Oil and Hazardous Substance Liability

Nothing in this permit shall be construed to preclude the institution of any legal action or relieve the permittee from any responsibilities, liabilities, or penalties to which the permittee is or may be subject under Section 311 of the Federal Water Pollution Control Act and applicable provisions of the Mississippi Air and Water Pollution Control Law pertaining to spills of oil and hazardous materials.

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8. Property Rights

The issuance of this permit does not convey any property rights in either real or personal property, or any exclusive privileges, nor does it authorize any injury to private property or any invasion of personal rights, nor any infringement of Federal, State, or local laws or regulations.

9. Severability

The provisions of this permit are severable, and if any provision of this permit, or the application of any provision of this permit to any circumstance, is held invalid, the application of such provision to other circumstance, and the remainder of this permit, shall not be affected thereby.

10. Expiration of Permit

Permittee shall not discharge after the expiration date. In order to receive authorization to discharge beyond the expiration date, the permittee shall submit such information, forms, and fees as are required by the agency authorized to issue permits no later than 180 days prior to the expiration date.

PART III

A. OTHER REQUIREMENTS

- a. This permit shall be modified, or alternatively, revoked and reissued, to comply with any applicable effluent standard or limitation issued or approved under sections 301(b)(2)(C), and (D), 304(b)(2), and 307(a)(2) of the Clean Water Act, if the effluent standard or limitation so issued or approved:

- (1) Contains different conditions or is otherwise more stringent than any effluent limitation in the permit; or
- (2) Controls any pollutant not limited in the permit.

The permit as modified or reissued under this paragraph shall also contain any other requirements of the Act then applicable.

- b. If the permittee, after monitoring for at least 12 months, determines that he is consistently meeting the effluent limits contained herein, the permittee may request of the Permit Board that the monitoring requirements be reduced to a lesser frequency or be eliminated.
- c. There shall be no discharge of polychlorinated biphenyl compounds such as those commonly used for transformer fluid. In the event that PCB containing equipment is used on site, administrative procedures shall be instituted to (1) maintain a detailed inventory of PCB use, (2) assure engineering design and construction to preclude release of PCB's to the environment, and (3) effectively detect the loss of PCB's from equipment. Detail of such procedures shall be submitted within sixty (60) days following the effective date of this permit.
- d. Blowdown shall contain no detectable amount of materials added for corrosion inhibition including, but not limited to, zinc, chromium and phosphorus. The company shall notify the Permit Board in writing not later than sixty (60) days prior to instituting use of any additional biocide or chemical used in cooling systems, other than chlorine, which may be toxic to aquatic life other than those previously reported to the Environmental Protection Agency. Such notification shall include:
1. name and general composition of biocide or chemical,
 2. 96-hour median tolerance limit data for organisms representative of the biota of the waterway into which the discharge shall occur,
 3. quantities to be used,
 4. frequencies of use,
 5. proposed discharge concentrations, and
 6. EPA registration number, if applicable.

OTHER REQUIREMENTS (Continued)

- e. Discharge of blowdown from the cooling system shall be limited to the minimum discharge of recirculating water necessary for the purpose of discharging materials contained in the process, the further build-up of which would cause concentrations or amounts exceeding limits established by best engineering practice. Discharge temperature shall not exceed the lowest temperature of the recirculating cooling water prior to the addition of make-up. A study of blowdown minimization including the minimization of the make-up bypass shall be implemented by the commercial operation date of Unit 1. A study plan, including detailed operational control procedures, shall be submitted for approval by the Permit Board no later than 90 days prior to fuel loading. Annual reports of operations experience shall be submitted starting 15 months after commercial operation date of Unit 1 and shall include data from Unit 2 when placed in commercial operation.
- f. The receiving water shall not exceed a maximum water temperature change of 2.8°C (5.0°F) relative to the intake temperature, outside a mixing zone which shall not exceed a maximum width of 60 feet from the river edge and a maximum length of 6,000 feet downstream from the point of discharge, as measured at a depth of 5 feet. The maximum water temperature shall not exceed 32.2°C (90°F) outside the same mixing zone, except when ambient temperatures approach or exceed this value. Intake water temperature shall be monitored weekly and reported as required in Part I.C.2. The permittee shall monitor the Mississippi River within and surrounding the mixing area to document conformance with the thermal requirements of this paragraph. Such monitoring shall be conducted semiannually (once in winter and once in summer) during substantially full power production and shall be submitted to the Permit Board as required in Part I.C.2 of this permit.
- g. Copies of any and all routine liquid effluent and water quality monitoring reports submitted to the Nuclear Regulatory Commission (NRC) shall be simultaneously submitted to the Mississippi Air and Water Pollution Control Permit Board and EPA. Copies of all routine and non-routine reports submitted to the Permit Board and EPA shall also be submitted to the NRC.
- h. Discharge of uncontaminated wastes including fire protection water, condensate from air conditioning equipment, cooling tower make-up bypasses, and yard drains to the yard drainage system is permitted without limitation or monitoring requirements.
- i. A study shall be instituted to evaluate practicable methods to reduce total residual chlorine levels, including, but not limited to (1) minimization of chlorine addition commensurate with control requirements and (2) discontinuation of blowdown during chlorination and subsequent periods of high concentration. Results of this study including facilities and/or methods proposed to reduce total chlorine residual shall be submitted no later than 15 months after the start-up dates of Units 1 and 2 respectively.