PACIFIC POWER • UTAH POWER

324 South State
Box 26128
Lake City, Utah 84126-0128

PACIFICORP
ELECTRIC OPERATIONS GROUP

April 18, 1990

HAND DELIVERED

Mr. Steve McNeal 538-6146
State of Utah
Department of Health
Division of Environmental Health
388 North 1460 West
Salt Lake City, Utah 84116

Dear Mr. McNeal:

Submitted herewith is our application for additional discharge points for UPDES No. UT-0023604 for mine water discharge in Deer Creek and Meetinghouse Canyons. Conditions that prevail make it very imperative that the permits to discharge are issued as soon as possible. Therefore, we respectfully request that this application be given the needed attention to expedite its approval.

Should you have any questions or require additional information please contact Mr. Semborski at 653-2318.

We appreciate your cooperation in this matter.

Sincerely,

for David Smaldone
Director of Permitting,
Compliance & Services
Fuel Resources

DS:RCF:bb:6422
Enclosure

Please print or type in the unshaded areas only. | UT-0023604 | Approval expires 7-31-88

FORM 2C NPDES | EPA

U.S. ENVIRONMENTAL PROTECTION AGENCY
APPLICATION FOR PERMIT TO DISCHARGE WASTEWATER
EXISTING MANUFACTURING, COMMERCIAL, MINING AND SILVICULTURAL OPERATIONS
Consolidated Permits Program

I. OUTFALL LOCATION

For each outfall, list the latitude and longitude of its location to the nearest 15 seconds and the name of the receiving water.

A. OUTFALL NUMBER (list)	B. LATITUDE			C. LONGITUDE			D. RECEIVING WATER (name)
	1. DEG.	2. MIN.	3. SEC.	1. DEG.	2. MIN.	3. SEC.	
002	39	21	29	111	06	57	Deer Creek - Huntington
003A	39	21	08	111	07	39	Meetinghouse Canyon @ Portal - Huntington Creek
003B	39	23	16	111	06	52	Meetinghouse Canyon @ Forest Boundary - Huntington Creek

II. FLOWS, SOURCES OF POLLUTION, AND TREATMENT TECHNOLOGIES

A. Attach a line drawing showing the water flow through the facility. Indicate sources of intake water, operations contributing wastewater to the effluent, and treatment units labeled to correspond to the more detailed descriptions in Item B. Construct a water balance on the line drawing by showing average flows between intakes, operations, treatment units, and outfalls. If a water balance cannot be determined *(e.g., for certain mining activities)*, provide a pictorial description of the nature and amount of any sources of water and any collection or treatment measures.

B. For each outfall, provide a description of: (1) All operations contributing wastewater to the effluent, including process wastewater, sanitary wastewater, cooling water, and storm water runoff; (2) The average flow contributed by each operation; and (3) The treatment received by the wastewater. Continue on additional sheets if necessary.

1. OUTFALL NO. (list)	2. OPERATION(S) CONTRIBUTING FLOW		3. TREATMENT		
	a. OPERATION (list)	b. AVERAGE FLOW (include units)	a. DESCRIPTION	b. LIST CODES FROM TABLE 2C-1	
	Deer Creek Coal Mine	1000-7000 GPM	In-Mine Settling Basin	I-U	
002	Deer Creek Portal	Estimated			
	Deer Creek Coal Mine	1000-7000 GPM	In-Mine Settling Basin	I-U	
003A	Meetinghouse Breakout	Estimated			
003B					

OFFICIAL USE ONLY *(effluent guidelines sub-categories)*

CONTINUED FROM THE FRONT

C. Except for storm runoff, leaks, or spills, are any of the discharges described in Items II-A or B intermittent or seasonal?

☐ YES *(complete the following table)* ☒ NO *(go to Section III)*

1. OUTFALL NUMBER *(list)*	2. OPERATION(s) CONTRIBUTING FLOW *(list)*	3. FREQUENCY a. DAYS PER WEEK *(specify average)*	3. FREQUENCY b. MONTHS PER YEAR *(specify average)*	4. FLOW a. FLOW RATE *(in mgd)* 1. LONG TERM AVERAGE	4. FLOW a. FLOW RATE *(in mgd)* 2. MAXIMUM DAILY	4. FLOW b. TOTAL VOLUME *(specify with units)* 1. LONG TERM AVERAGE	4. FLOW b. TOTAL VOLUME *(specify with units)* 2. MAXIMUM DAILY	4. FLOW c. DURATION *(in days)*
						ACRE FT.	ACRE FT.	
002	Deer Creek Coal Mine	7	12	2,000	10,000	6.6	30.9	365
003A or B	Deer Creek Coal Mine	7	12	2,000	10,000	6.6	30.9	365

III. PRODUCTION

A. Does an effluent guideline limitation promulgated by EPA under Section 304 of the Clean Water Act apply to your facility?

☐ YES *(complete Item III-B)* ☒ NO *(to to Section IV)*

B. Are the limitations in the applicable effluent guideline expressed in terms of production *(or other measure of operation)*?

☐ YES *(complete Item III-C)* ☒ NO *(go to Section IV)*

C. If you answered "yes" to Item III-B, list the quantity which represents an actual measurement of your level of production, expressed in the terms and units used in the applicable effluent guideline, and indicate the affected outfalls.

1. AVERAGE DAILY PRODUCTION a. QUANTITY PER DAY	1. AVERAGE DAILY PRODUCTION b. UNITS OF MEASURE	1. AVERAGE DAILY PRODUCTION c. OPERATION, PRODUCT, MATERIAL, ETC. *(specify)*	2. AFFECTED OUTFALLS *(list outfall numbers)*

IV. IMPROVEMENTS

A. Are you now required by any Federal, State or local authority to meet any implementation schedule for the construction, upgrading or operation of wastewater treatment equipment or practices or any other environmental programs which may affect the discharges described in this application? This includes, but is not limited to, permit conditions, administrative or enforcement orders, enforcement compliance schedule letters, stipulations, court orders, and grant or loan conditions.

☐ YES *(complete the following table)* ☒ NO *(go to Item IV-B)*

1. IDENTIFICATION OF CONDITION, AGREEMENT, ETC.	2. AFFECTED OUTFALLS a. NO.	2. AFFECTED OUTFALLS b. SOURCE OF DISCHARGE	3. BRIEF DESCRIPTION OF PROJECT	4. FINAL COMPLIANCE DATE a. REQUIRED	4. FINAL COMPLIANCE DATE b. PROJECTED

B. OPTIONAL: You may attach additional sheets describing any additional water pollution control programs *(or other environmental projects which may affect your discharges)* you now have underway or which you plan. Indicate whether each program is now underway or planned, and indicate your actual or planned schedules for construction. ☐ MARK "X" IF DESCRIPTION OF ADDITIONAL CONTROL PROGRAMS IS ATTACHED

EPA I.D. NUMBER (copy from Item 1 of Form 1)
UT-0023604

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OMB No. 2040-0086
Approval expires 7-31-88

V. INTAKE AND EFFLUENT CHARACTERISTICS

A, B, & C: See instructions before proceeding – Complete one set of tables for each outfall – Annotate the outfall number in the space provided. NOTE: Tables V-A, V-B, and V-C are included on separate sheets numbered V-1 through V-9.

D. Use the space below to list any of the pollutants listed in Table 2c-3 of the instructions, which you know or have reason to believe is discharged or may be discharged from any outfall. For every pollutant you list, briefly describe the reasons you believe it to be present and report any analytical data in your possession.

1. POLLUTANT	2. SOURCE	1. POLLUTANT	2. SOURCE
ALL PARAMETERES BELIEVED TO BE ABSENT			

VI. POTENTIAL DISCHARGES NOT COVERED BY ANALYSIS

Is any pollutant listed in Item V-C a substance or a component of a substance which you currently use or manufacture as an intermediate or final product or byproduct?

☐ YES *(list all such pollutants below)* ☒ NO *(go to Item VI-B)*

PLEASE PRINT OR TYPE IN THE UNSHADED AREAS ONLY. You may report some or all of this information on separate sheets *(use the same format)* instead of completing these pages. SEE INSTRUCTIONS.

EPA I.D. NUMBER *(copy from Item 1 of Form 1)*: UT-0023604

Form Approved. OMB No. 2040-0086 Approval expires 7-31-88

V. INTAKE AND EFFLUENT CHARACTERISTICS *(continued from page 3 of Form 2-C)*

OUTFALL NO: 002/003

PART A - You must provide the results of at least one analysis for every pollutant in this table. Complete one table for each outfall. See instructions for additional details.

1. POLLUTANT	2. EFFLUENT a. MAXIMUM DAILY VALUE (1) CONCENTRATION	2. EFFLUENT a. MAXIMUM DAILY VALUE (2) MASS	2. EFFLUENT b. MAXIMUM 30 DAY VALUE (if available) (1) CONCENTRATION	2. EFFLUENT b. MAXIMUM 30 DAY VALUE (if available) (2) MASS	2. EFFLUENT c. LONG TERM AVRG. VALUE (if available) (1) CONCENTRATION	2. EFFLUENT c. LONG TERM AVRG. VALUE (if available) (2) MASS	2. EFFLUENT d. NO. OF ANALYSES	3. UNITS (specify if blank) a. CONCENTRATION	3. UNITS (specify if blank) b. MASS	4. INTAKE (optional) a. LONG TERM AVERAGE VALUE (1) CONCENTRATION	4. INTAKE (optional) a. LONG TERM AVERAGE VALUE (2) MASS	4. INTAKE (optional) b. NO. OF ANALYSES
a. Biochemical Oxygen Demand *(BOD)*												
b. Chemical Oxygen Demand *(COD)*												
c. Total Organic Carbon *(TOC)*												
d. Total Suspended Solids *(TSS)*												
e. Ammonia *(as N)*												
f. Flow	VALUE 7000 GPM		VALUE 7000 GPM		VALUE 1500 GPM					VALUE		
g. Temperature *(winter)*	VALUE 15.5		VALUE 15.5		VALUE 12.8			°C		VALUE		
h. Temperature *(summer)*	VALUE 15.5		VALUE 15.5		VALUE 12.8			°C		VALUE		
i. pH	MINIMUM 6.8	MAXIMUM 8.15	MINIMUM	MAXIMUM				STANDARD UNITS				

PART B - Mark "X" in column 2-a for each pollutant you know or have reason to believe is present. Mark "X" in column 2-b for each pollutant you believe to be absent. If you mark column 2a for any pollutant which is limited either directly, or indirectly but expressly, in an effluent limitations guideline, you must provide the results of at least one analysis for that pollutant. For other pollutants for which you mark column 2a, you must provide quantitative data or an explanation of their presence in your discharge. Complete one table for each outfall. See the instructions for additional details and requirements.

1. POLLUTANT AND CAS NO. *(if available)*	2. MARK 'X' a. BELIEVED PRESENT	2. MARK 'X' b. BELIEVED ABSENT	3. EFFLUENT a. MAXIMUM DAILY VALUE (1) CONCENTRATION	3. EFFLUENT a. MAXIMUM DAILY VALUE (2) MASS	3. EFFLUENT b. MAXIMUM 30 DAY VALUE (if available) (1) CONCENTRATION	3. EFFLUENT b. MAXIMUM 30 DAY VALUE (if available) (2) MASS	3. EFFLUENT c. LONG TERM AVRG. VALUE (if available) (1) CONCENTRATION	3. EFFLUENT c. LONG TERM AVRG. VALUE (if available) (2) MASS	3. EFFLUENT d. NO. OF ANALYSES	4. UNITS a. CONCENTRATION	4. UNITS b. MASS	5. INTAKE (optional) a. LONG TERM AVERAGE VALUE (1) CONCENTRATION	5. INTAKE (optional) a. LONG TERM AVERAGE VALUE (2) MASS	5. INTAKE (optional) b. NO. OF ANALYSES
a. Bromide (24959-67-9)		X												
b. Chlorine, Total Residual		X												
c. Color		X												
d. Fecal Coliform		X												
e. Fluoride (16984-48-8)	X						0.25 mg/l		11					
f. Nitrate–Nitrite *(as N)*	X						0.20 mg/l		4					

ITEM V-B CONTINUED FROM FRONT

1. POLLUTANT AND CAS NO. (if available)	2. MARK 'X' a. BELIEVED PRESENT	2. MARK 'X' b. BELIEVED ABSENT	3. EFFLUENT a. MAXIMUM DAILY VALUE (1) CONCENTRATION	3. EFFLUENT a. MAXIMUM DAILY VALUE (2) MASS	3. EFFLUENT b. MAXIMUM 30 DAY VALUE (if available) (1) CONCENTRATION	3. EFFLUENT b. MAXIMUM 30 DAY VALUE (if available) (2) MASS	3. EFFLUENT c. LONG TERM AVRG. VALUE (if available) (1) CONCENTRATION	3. EFFLUENT c. LONG TERM AVRG. VALUE (if available) (2) MASS	3. EFFLUENT d. NO. OF ANALYSES	4. UNITS a. CONCENTRATION	4. UNITS b. MASS	5. INTAKE (optional) a. LONG TERM AVERAGE VALUE (1) CONCENTRATION	5. INTAKE (optional) a. LONG TERM AVERAGE VALUE (2) MASS	5. INTAKE (optional) b. NO. OF ANALYSES
g. Nitrogen, Total Organic (as N)		X												
h. Oil and Grease	X						3.9 mg/l		140					
i. Phosphorus (as P), Total (7723-14-0)	X						0.06 mg/l		6					
j. Radioactivity														
(1) Alpha, Total		X												
(2) Beta, Total		X												
(3) Radium, Total		X												
(4) Radium 226, Total		X												
k. Sulfate (as SO_4) (14808-79-8)	X						232.7 mg/l		147					
l. Sulfide (as S)		X												
m. Sulfite (as SO_3) (14265-45-3)		X												
n. Surfactants		X												
o. Aluminum, Total (7429-90-5)		X												
p. Barium, Total (7440-39-3)	X						0.11 mg/l		3					
q. Boron, Total (7440-42-8)	X						0.22 mg/l		2					
r. Cobalt, Total (7440-48-4)		X												
s. Iron, Total (7439-89-6)	X						0.64 mg/l		144					
t. Magnesium, Total (7439-95-4)	X						58.9 mg/l		63					
u. Molybdenum, Total (7439-98-7)		X												
v. Manganese, Total (7439-96-5)	X						0.03 mg/l		97					
w. Tin, Total (7440-31-5)		X												
x. Titanium, Total (7440-32-6)		X												

CONTINUED FRO IE FRONT

1. POLLUTANT AND CAS NUMBER (if available)	2. MARK 'X' a. TESTING REQUIRED	2. MARK 'X' b. BELIEVED PRESENT	2. MARK 'X' c. BELIEVED ABSENT	3. EFFLUENT a. MAXIMUM DAILY VALUE (1) CONCENTRATION	3. EFFLUENT a. MAXIMUM DAILY VALUE (2) MASS	3. EFFLUENT b. MAXIMUM 30 DAY VALUE (if available) (1) CONCENTRATION	3. EFFLUENT b. MAXIMUM 30 DAY VALUE (if available) (2) MASS	3. EFFLUENT c. LONG TERM AVRG. VALUE (if available) (1) CONCENTRATION	3. EFFLUENT c. LONG TERM AVRG. VALUE (if available) (2) MASS	3. EFFLUENT d. NO. OF ANALYSES	4. UNITS a. CONCENTRATION	4. UNITS b. MASS	5. INTAKE (optional) a. LONG TERM AVERAGE VALUE (1) CONCENTRATION	5. INTAKE (optional) a. LONG TERM AVERAGE VALUE (2) MASS	5. INTAKE (optional) b. NO. OF ANALYSES
GC/MS FRACTION – VOLATILE COMPOUNDS															
1V. Acrolein (107-02-8)			X												
2V. Acrylonitrile (107-13-1)			X												
3V. Benzene (71-43-2)			X												
4V. Bis *(Chloromethyl)* Ether (542-88-1)			X												
5V. Bromoform (75-25-2)			X												
6V. Carbon Tetrachloride (56-23-5)			X												
7V. Chlorobenzene (108-90-7)			X												
8V. Chlorodibromomethane (124-48-1)			X												
9V. Chloroethane (75-00-3)			X												
10V. 2-Chloroethylvinyl Ether (110-75-8)			X												
11V. Chloroform (67-66-3)			X												
12V. Dichlorobromomethane (75-27-4)			X												
13V. Dichlorodifluoromethane (75-71-8)			X												
14V. 1,1-Dichloroethane (75-34-3)			X												
15V. 1,2-Dichloroethane (107-06-2)			X												
16V. 1,1-Dichloroethylene (75-35-4)			X												
17V. 1,2-Dichloropropane (78-87-5)			X												
18V. 1,3-Dichloropropylene (542-75-6)			X												
19V. Ethylbenzene (100-41-4)			X												
20V. Methyl Bromide (74-83-9)			X												
21V. Methyl Chloride (74-87-3)			X												

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CONTINUED FROM PAGE 3 OF FORM 2-C

PART C - If you are a primary industry and this outfall contains process wastewater, refer to Table 2c-2 in the instructions to determine which of the GC/MS fractions you must test for. Mark "X" in column 2-a for all such GC/MS fractions that apply to your industry and for ALL toxic metals, cyanides, and total phenols. If you are not required to mark column 2-a *(secondary industries, nonprocess wastewater outfalls, and nonrequired GC/MS fractions)*, mark "X" in column 2-b for each pollutant you know or have reason to believe is present. Mark "X" in column 2-c for each pollutant you believe is absent. If you mark column 2a for any pollutant, you must provide the results of at least one analysis for that pollutant. If you mark column 2b for any pollutant, you must provide the results of at least one analysis for each of these pollutants which you know or have reason to believe that you discharge in concentrations of 10 ppb or greater. If you mark column 2b for acrolein, acrylonitrile, 2,4 dinitrophenol, or 2-methyl-4, 6 dinitrophenol, you must provide the results of at least one analysis for each of these pollutants which you know or have reason to believe that you discharge in concentrations of 100 ppb or greater. Otherwise, for pollutants for which you mark column 2b, you must either submit at least one analysis or briefly describe the reasons the pollutant is expected to be discharged. Note that there are 7 pages to this part; please review each carefully. Complete one table *(all 7 pages)* for each outfall. See instructions for additional details and requirements.

1. POLLUTANT AND CAS NUMBER (if available)	2. MARK 'X'			3. EFFLUENT						4. UNITS		5. INTAKE (optional)		
	a. TESTING REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE (1) CONCENTRATION	a. MAXIMUM DAILY VALUE (2) MASS	b. MAXIMUM 30 DAY VALUE (if available) (1) CONCENTRATION	b. MAXIMUM 30 DAY VALUE (if available) (2) MASS	c. LONG TERM AVRG. VALUE (if available) (1) CONCENTRATION	c. LONG TERM AVRG. VALUE (if available) (2) MASS	d. NO. OF ANALYSES	a. CONCENTRATION	b. MASS	a. LONG TERM AVERAGE VALUE (1) CONCENTRATION	a. LONG TERM AVERAGE VALUE (2) MASS	b. NO. ANALYSES
METALS, CYANIDE, AND TOTAL PHENOLS														
1M. Antimony, Total (7440-36-0)			X											
2M. Arsenic, Total (7440-38-2)		X						< 0.001 mg/l		11				
3M. Beryllium, Total, 7440-41-7)			X											
4M. Cadmium, Total (7440-43-9)		X						0.003 mg/l		12				
5M. Chromium, Total (7440-47-3)		X						0.01 mg/l		1				
6M. Copper, Total (7440-50-8)		X						0.02 mg/l		2				
7M. Lead, Total (7439-92-1)		X						0.02 mg/l		12				
8M. Mercury, Total (7439-97-6)			X											
9M. Nickel, Total (7440-02-0)			X											
10M. Selenium, Total (7782-49-2)		X						0.004 mg/l		11				
11M. Silver, Total (7440-22-4)		X						< 0.01 mg/l		1				
12M. Thallium, Total (7440-28-0)			X											
13M. Zinc, Total (7440-66-6)		X						0.02 mg/l		12				
14M. Cyanide, Total (57-12-5)			X											
15M. Phenols, Total			X											
DIOXIN														
2,3,7,8-Tetrachlorodibenzo-P-Dioxin (1764-01-6)			X	DESCRIBE RESULTS										

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1. POLLUTANT AND CAS NUMBER (if available)	2. MARK 'X' a. TESTING REQUIRED	2. MARK 'X' b. BELIEVED PRESENT	2. MARK 'X' c. BELIEVED ABSENT	3. EFFLUENT a. MAXIMUM DAILY VALUE (1) CONCENTRATION	3. EFFLUENT a. MAXIMUM DAILY VALUE (2) MASS	3. EFFLUENT b. MAXIMUM 30 DAY VALUE (if available) (1) CONCENTRATION	3. EFFLUENT b. MAXIMUM 30 DAY VALUE (if available) (2) MASS	3. EFFLUENT c. LONG TERM AVRG. VALUE (if available) (1) CONCENTRATION	3. EFFLUENT c. LONG TERM AVRG. VALUE (if available) (2) MASS	3. EFFLUENT d. NO. OF ANALYSES	4. UNITS a. CONCENTRATION	4. UNITS b. MASS	5. INTAKE (optional) a. LONG TERM AVERAGE VALUE (1) CONCENTRATION	5. INTAKE (optional) a. LONG TERM AVERAGE VALUE (2) MASS	5. INTAKE (optional) b. NO. OF ANALYSES
GC/MS FRACTION – VOLATILE COMPOUNDS *(continued)*															
22V. Methylene Chloride (75-09-2)			X												
23V. 1,1,2,2-Tetrachloroethane (79-34-5)			X												
24V. Tetrachloroethylene (127-18-4)			X												
25V. Toluene (108-88-3)			X												
26V. 1,2-Trans-Dichloroethylene (156-60-5)			X												
27V. 1,1,1-Trichloroethane (71-55-6)			X												
28V. 1,1,2-Trichloroethane (79-00-5)			X												
29V. Trichloroethylene (79-01-6)			X												
30V. Trichlorofluoromethane (75-69-4)			X												
31V. Vinyl Chloride (75-01-4)			X												
GC/MS FRACTION – ACID COMPOUNDS															
1A. 2-Chlorophenol (95-57-8)			X												
2A. 2,4-Dichlorophenol (120-83-2)			X												
3A. 2,4-Dimethylphenol (105-67-9)			X												
4A. 4,6-Dinitro-O-Cresol (534-52-1)			X												
5A. 2,4-Dinitrophenol (51-28-5)			X												
6A. 2-Nitrophenol (88-75-5)			X												
7A. 4-Nitrophenol (100-02-7)			X												
8A. P-Chloro-M-Cresol (59-50-7)			X												
9A. Pentachlorophenol (87-86-5)			X												
10A. Phenol (108-95-2)			X												
11A. 2,4,6-Trichlorophenol (88-06-2)			X												

CONTINUED FROM THE FRONT

1. POLLUTANT AND CAS NUMBER (if available)	2. MARK 'X'			3. EFFLUENT							4. UNITS		5. INTAKE (optional)		
	a. TESTING REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE (1) CONCENTRATION	a. MAXIMUM DAILY VALUE (2) MASS	b. MAXIMUM 30 DAY VALUE (if available) (1) CONCENTRATION	b. MAXIMUM 30 DAY VALUE (if available) (2) MASS	c. LONG TERM AVRG. VALUE (if available) (1) CONCENTRATION	c. LONG TERM AVRG. VALUE (if available) (2) MASS	d. NO. OF ANALYSES	a. CONCENTRATION	b. MASS	a. LONG TERM AVERAGE VALUE (1) CONCENTRATION	a. LONG TERM AVERAGE VALUE (2) MASS	b. NO. OF ANALYSES
GC/MS FRACTION – BASE/NEUTRAL COMPOUNDS															
1B. Acenaphthene (83-32-9)			X												
2B. Acenaphtylene (208-96-8)			X												
3B. Anthracene (120-12-7)			X												
4B. Benzidine (92-87-5)			X												
5B. Benzo *(a)* Anthracene (56-55-3)			X												
6B. Benzo *(a)* Pyrene (50-32-8)			X												
7B. 3,4-Benzo-fluoranthene (205-99-2)			X												
8B. Benzo *(ghi)* Perylene (191-24-2)			X												
9B. Benzo *(k)* Fluoranthene (207-08-9)			X												
10B. Bis *(2-Chloro-ethoxy)* Methane (111-91-1)			X												
11B. Bis *(2-Chloro-ethyl)* Ether (111-44-4)			X												
12B. Bis *(2-Chloroiso-propyl)* Ether (102-60-1)			X												
13B. Bis *(2-Ethyl-hexyl)* Phthalate (117-81-7)			X												
14B. 4-Bromo-phenyl Phenyl Ether (101-55-3)			X												
15B. Butyl Benzyl Phthalate (85-68-7)			X												
16B. 2-Chloro-naphthalene (91-58-7)			X												
17B. 4-Chloro-phenyl Phenyl Ether (7005-72-3)			X												
18B. Chrysene (218-01-9)			X												
19B. Dibenzo *(a,h)* Anthracene (53-70-3)			X												
20B. 1,2-Dichloro-benzene (95-50-1)			X												
21B. 1,3-Dichloro-benzene (541-73-1)			X												

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OMB No. 2040-0086
Approval expires 7-31-88

1. POLLUTANT AND CAS NUMBER (if available)	2. MARK 'X' a. TESTING REQUIRED	2. MARK 'X' b. BELIEVED PRESENT	2. MARK 'X' c. BELIEVED ABSENT	3. EFFLUENT a. MAXIMUM DAILY VALUE (1) CONCENTRATION	3. EFFLUENT a. MAXIMUM DAILY VALUE (2) MASS	3. EFFLUENT b. MAXIMUM 30 DAY VALUE (if available) (1) CONCENTRATION	3. EFFLUENT b. MAXIMUM 30 DAY VALUE (if available) (2) MASS	3. EFFLUENT c. LONG TERM AVRG. VALUE (if available) (1) CONCENTRATION	3. EFFLUENT c. LONG TERM AVRG. VALUE (if available) (2) MASS	3. EFFLUENT d. NO. OF ANALYSES	4. UNITS a. CONCENTRATION	4. UNITS b. MASS	5. INTAKE (optional) a. LONG TERM AVERAGE VALUE (1) CONCENTRATION	5. INTAKE (optional) a. LONG TERM AVERAGE VALUE (2) MASS	5. INTAKE (optional) b. NO. OF ANALYSES
GC/MS FRACTION – BASE/NEUTRAL COMPOUNDS (continued)															
22B. 1,4-Dichlorobenzene (106-46-7)			X												
23B. 3,3'-Dichlorobenzidine (91-94-1)			X												
24B. Diethyl Phthalate (84-66-2)			X												
25B. Dimethyl Phthalate (131-11-3)			X												
26B. Di-N-Butyl Phthalate (84-74-2)			X												
27B. 2,4-Dinitrotoluene (121-14-2)			X												
28B. 2,6-Dinitrotoluene (606-20-2)			X												
29B. Di-N-Octyl Phthalate (117-84-0)			X												
30B. 1,2-Diphenylhydrazine (as Azobenzene) (122-66-7)			X												
31B. Fluoranthene (206-44-0)			X												
32B. Fluorene (86-73-7)			X												
33B. Hexachlorobenzene (118-74-1)			X												
34B. Hexachlorobutadiene (87-68-3)			X												
35B. Hexachlorocyclopentadiene (77-47-4)			X												
36B. Hexachloroethane (67-72-1)			X												
37B. Indeno (1,2,3-cd) Pyrene (193-39-5)			X												
38B. Isophorone (78-59-1)			X												
39B. Naphthalene (91-20-3)			X												
40B. Nitrobenzene (98-95-3)			X												
41B. N-Nitrosodimethylamine (62-75-9)			X												
42B. N-Nitrosodi-N Propylamine (621 64-7)			X												

CONTINUED FROM THE FRONT

1. POLLUTANT AND CAS NUMBER (if available)	2. MARK 'X' a. TESTING REQUIRED	2. MARK 'X' b. BELIEVED PRESENT	2. MARK 'X' c. BELIEVED ABSENT	3. EFFLUENT a. MAXIMUM DAILY VALUE (1) CONCENTRATION	3. EFFLUENT a. MAXIMUM DAILY VALUE (2) MASS	3. EFFLUENT b. MAXIMUM 30 DAY VALUE (if available) (1) CONCENTRATION	3. EFFLUENT b. MAXIMUM 30 DAY VALUE (if available) (2) MASS	3. EFFLUENT c. LONG TERM AVRG. VALUE (if available) (1) CONCENTRATION	3. EFFLUENT c. LONG TERM AVRG. VALUE (if available) (2) MASS	3. EFFLUENT d. NO. OF ANALYSES	4. UNITS a. CONCENTRATION	4. UNITS b. MASS	5. INTAKE (optional) a. LONG TERM AVERAGE VALUE (1) CONCENTRATION	5. INTAKE (optional) a. LONG TERM AVERAGE VALUE (2) MASS	5. INTAKE (optional) b. NO. OF ANALYSES
GC/MS FRACTION – BASE/NEUTRAL COMPOUNDS *(continued)*															
43B. N-Nitrosodiphenylamine (86-30-6)			X												
44B. Phenanthrene (85-01-8)			X												
45B. Pyrene (129-00-0)			X												
46B. 1,2,4 - Trichlorobenzene (120-82-1)			X												
GC/MS FRACTION – PESTICIDES															
1P. Aldrin (309-00-2)			X												
2P. α-BHC (319-84-6)			X												
3P. β-BHC (319-85-7)			X												
4P. γ-BHC (58-89-9)			X												
5P. δ-BHC (319-86-8)			X												
6P. Chlordane (57-74-9)			X												
7P. 4,4'-DDT (50-29-3)			X												
8P. 4,4'-DDE (72-55-9)			X												
9P. 4,4'-DDD (72-54-8)			X												
10P. Dieldrin (60-57-1)			X												
11P. α-Endosulfan (115-29-7)			X												
12P. β-Endosulfan (115-29-7)			X												
13P. Endosulfan Sulfate (1031-07-8)			X												
14P. Endrin (72-20-8)			X												
15P. Endrin Aldehyde (7421-93-4)			X												
16P. Heptachlor (76-44-8)			X												

CONTINUED FROM PAGE V-8

1. POLLUTANT AND CAS NUMBER (if available)	2. MARK 'X'			3. EFFLUENT							4. UNITS		5. INTAKE (optional)		
	a. TESTING REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE (1) CONCENTRATION	a. MAXIMUM DAILY VALUE (2) MASS	b. MAXIMUM 30 DAY VALUE (if available) (1) CONCENTRATION	b. MAXIMUM 30 DAY VALUE (if available) (2) MASS	c. LONG TERM AVRG. VALUE (if available) (1) CONCENTRATION	c. LONG TERM AVRG. VALUE (if available) (2) MASS	d. NO. OF ANALYSES	a. CONCENTRATION	b. MASS	a. LONG TERM AVERAGE VALUE (1) CONCENTRATION	a. LONG TERM AVERAGE VALUE (2) MASS	b. NO. OF ANALYSES
GC/MS FRACTION – PESTICIDES *(continued)*															
17P. Heptachlor Epoxide (1024-57-3)			X												
18P. PCB-1242 (53469-21-9)			X												
19P. PCB-1254 (11097-69-1)			X												
20P. PCB-1221 (11104-28-2)			X												
21P. PCB-1232 (11141-16-5)			X												
22P. PCB-1248 (12672-29-6)			X												
23P. PCB-1260 (11096-82-5)			X												
24P. PCB-1016 (12674-11-2)			X												
25P. Toxaphene (8001-35-2)			X												

BACKGROUND DATA
DEER CREEK UPDES PERMIT APPLICATION

Underground coal mines in the Wasatch Plateau Coal Field typically intersect groundwater from strata surrounding the coal seam. In the Deer Creek Mine groundwater has been encountered throughout the period mining has occurred; however, recently the quantity of water intersected has increased significantly. All water encountered in the mine that is not used in the mining process is transported to and used at the Huntington Power Plant. The quantity of water now being intersected and the projections for the future suggest that the quantity of water will exceed that which can be used by the plant; therefore, it will be necessary to discharge the excess water into the Huntington Creek Drainage System.

In early 1980 the mine was discharging approximately 220 thousand gallons per day. By the end of 1989 discharge had increased to over 2,200 thousand gallons per day (see Figure 1). It is anticipated that the increase will continue well into the 1990's. The increase in water production is due to two factors; mining is progressing into a structural low area that has trapped water, and a fault system that acts as a major water entrapment zone has been intersected. The water encountered in the mine is from a groundwater system that has a vast storage quantity; but the recharge into the system is low, indicating that the water flow will diminish in time -- but not for several years into the future.

The groundwater flow reaching the mine is depicted on Map 1. Water from snow melt and precipitation in the higher reaches of East Mountain to the northwest of the current mine workings infiltrates the soil and migrates down vertical fractures in the Flagstaff Limestone and the North Horn formations. The water then migrates down dip in a southeast direction where it intersects the land surface to form springs or to the Roans Canyon Fault Graben. A lesser amount flows further down vertical fractures into the sandstone units within

the Blackhawk Formation which contains the coal seam being mined. Because the fault graben consists of at least four normal faults having up to thirty (30) feet of fault gouge on the fault plains, it acts as a partial barrier to further southward migration of water. Some water does flow across the fault and then either flows to the base of the Straight Canyon Syncline on the western portion of the property or toward Meetinghouse Canyon on the eastern portion of the property where mining is now occurring (see Map No. 1). UP&L has been monitoring the springs which overlie the area in the mine now producing water and has not detected a change in spring discharge attributable to mining. Because of limited communication between the North Horn and Blackhawk formations it is not anticipated that the springs will be affected by the mining.

UP&L has been sampling the quality of the water intersected by the mine workings and water that is discharged to the power plant for over twelve (12) years. The samples collected indicate that the water is of good quality. Table 1 summarizes the historical data (both data sets) collected from the mine since 1977. The intercepted water shows a slight difference with in-mine water discharge due to the fact that intercepted water is sampled at accessible points in the mine where inflow occurs and mine water discharge includes a significant quantity of water flowing from inaccessible areas in the mine (sealed abandoned workings).

In anticipation of the need to discharge water from the Deer Creek Mine to the receiving stream, UP&L has conducted six (6) acute replacement toxicity tests of water intercepted by the mine (3 samples) and of water discharged to the Huntington Power Plant (3 samples). These tests were performed using the current guidelines, "Methods for Measuring the Acute Toxicity of Effluent to Freshwater and Marine Organisms," EPA-600/4-85-013 (Rev. March 1985). Each test included a 48-hour static toxicity test using Ceriodaphnia sp.

and an acute 96-hour static replacement toxicity test using fathead minnows five (5) days (2 days) of age. All tests passed in all concentrations of the effluent. Laboratory reports of the tests are attached hereto.

The conditions in the mine indicate that it will be necessary to discharge water from Deer Creek Canyon and the North Fork of Meetinghouse Canyon. These two discharge points are shown on Map 2. The application for a UPDES permit to allow such discharge at the two points (Deer Creek and Meetinghouse Canyon) is attached hereto. Both sites are located within the National Forest Boundary; however, the Deer Creek site is on fee land. An anti-degradation policy, which restricts the discharge of waters within the National Forest, is in force; therefore, UP&L is submitting the discharge plan with two options for the Meetinghouse Canyon discharge (Map 3). The first option is to discharge from the Meetinghouse Portal directly into the receiving stream within the National Forest Boundary (outfall 003a). The second option will provide for the installation of a pipeline to transport the water from the portal to a point on the receiving stream outside the National Forest Boundary (outfall 003b).

The increase in water being intercepted by the Deer Creek Mine is primarily connate. Therefore, this additional water should be considered as new water available to the surface system. The portion of this water that is discharged into North Fork of Meetinghouse Canyon will be placed in the canyon which is normally dry other than during storm events. The discharge water will then reach the South Fork of Meetinghouse Canyon which is ephermeral. Access to this canyon is only through locked gates controlled by UP&L's Huntington Power Plant. Because of this the land use is limited to natural wildlife.

A map is included which shows the areas that will be mined in the next five (5) years (1990-1995) (Map 4). The discharge locations have been selected to allow the

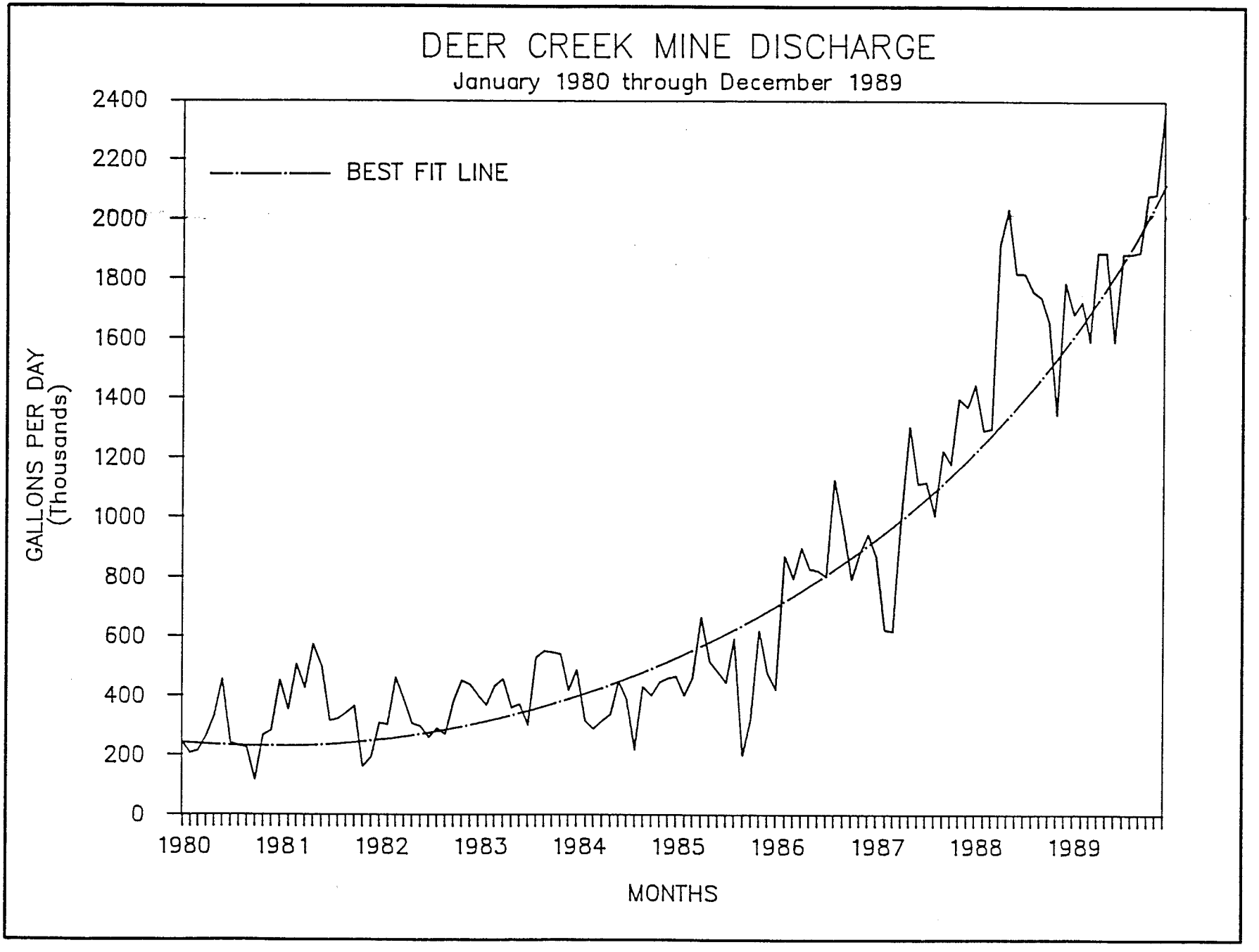
discharge to occur in close proximity to the point where the water is intersected in the mine and close to the natural groundwater flow trends (Map 1).

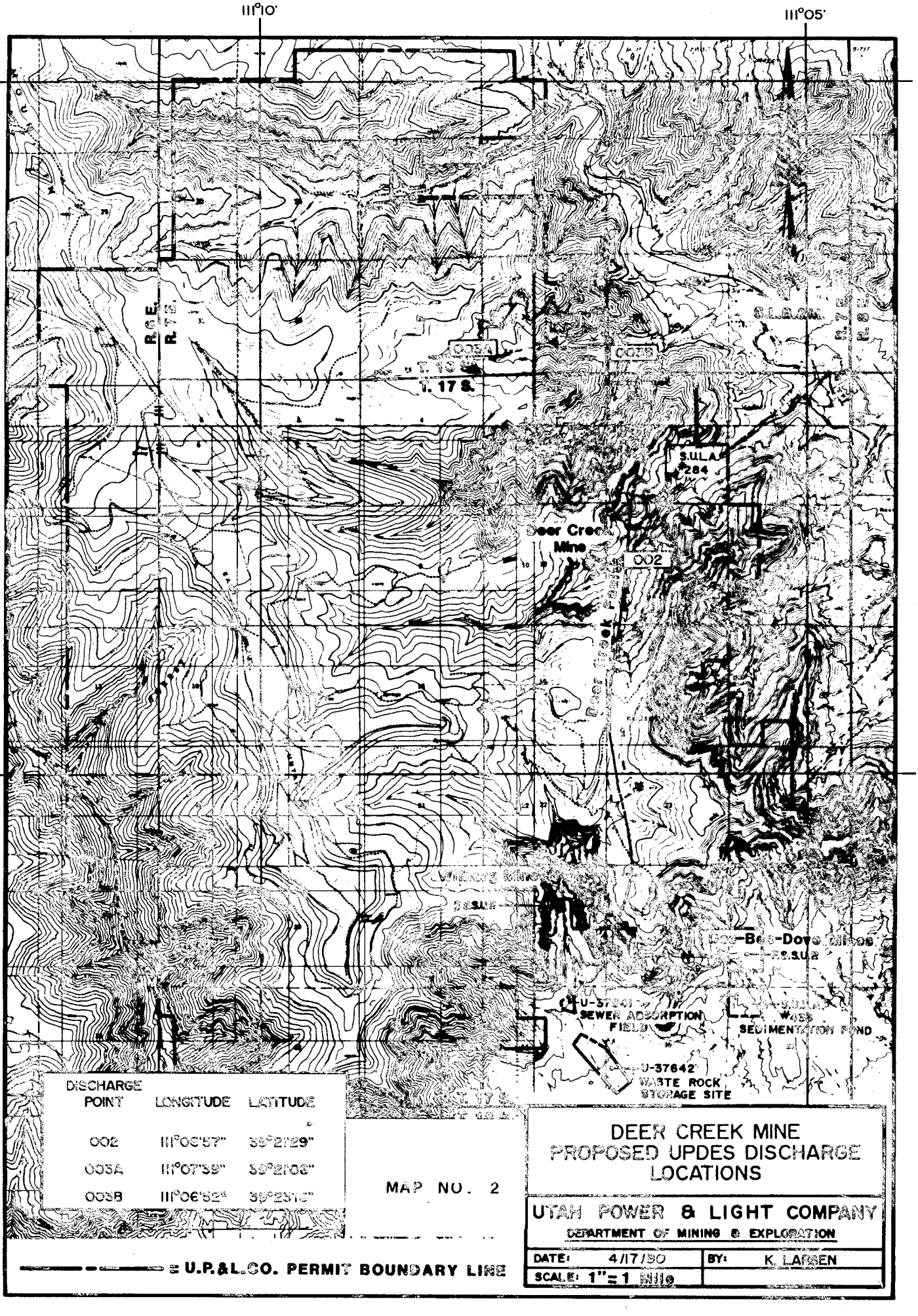
Present data indicate that it will be necessary for UP&L to start discharging water from the Deer Creek and Meetinghouse portals of the Deer Creek Mine as early as June 1990. UP&L will allow transport of the water to central collection points within the mine in 4th South and 3rd North to sumps where the water will be retained for a total of at least twenty-four (24) hours to allow for the removal of settleable solids. The water will then be pumped to the discharge points at locations 002 and 003a or 003b.

TABLE 1: DEER CREEK WATER QUALITY
HISTORICAL (1977-1989)

	IN-MINE INTERCEPTED GROUNDWATER		MINE WATER DISCHARGE TO POWER PLANT	
PARAMETER	AVERAGE	NO. OF ANALYSES	AVERAGE	NO. OF ANALYSES
Bicarbonate	433	38	340.5	62
Calcium	103.9	69	120.5	62
Carbonate	<1.0	31	<1.0	43
Chloride	10.5	76	60.7	142
Conductivity	855	75	1150	140
Hardness	422	40	494	54
Iron, Dissolved	0.13	28	0.27	40
Magnesium	46.91	70	58.9	63
Manganese	0.02	46	0.03	97
pH	7.27	91	7.57	145
Potassium	3.43	69	6.53	63
Sodium	20.69	69	58.9	63
Sulfate	140.6	83	232.6	147
TDS	513	91	708	145

FIGURE 1


DEER CREEK MINE DISCHARGE
January 1980 through December 1989
BEST FIT LINE
GALLONS PER DAY
(Thousands)
2400
2200
2000
1800
1600
1400
1200
1000
800
600
400
200
0
1980
1981
1982
1983
1984
1985
1986
1987
1988
1989
MONTHS



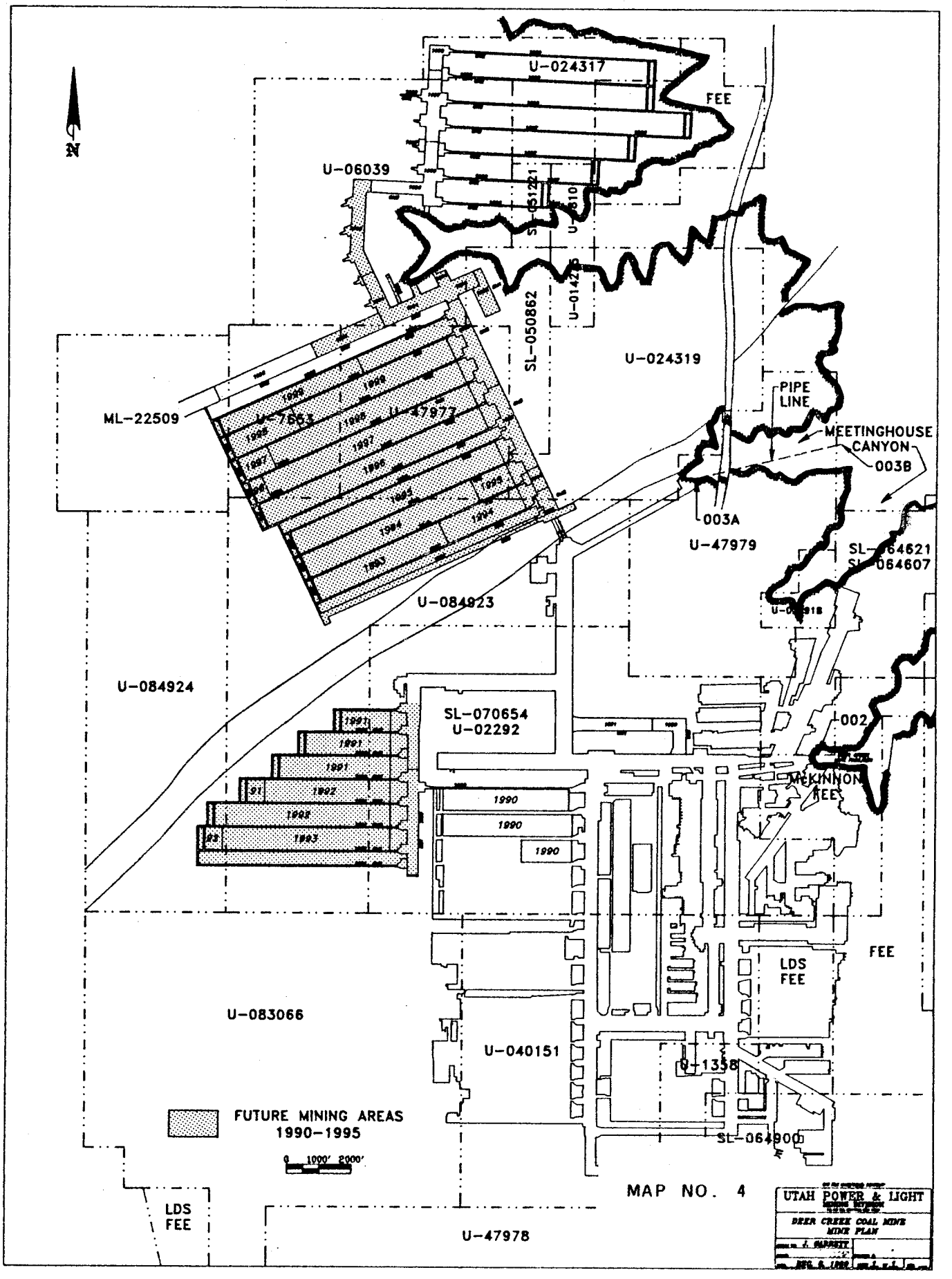
DISCHARGE POINT	LONGITUDE	LATITUDE
002	111°06'57"	39°21'29"
002A	111°07'39"	39°21'08"
002B	111°06'52"	39°21'1[illegible]"

MAP NO. 2

DEER CREEK MINE
PROPOSED UPDES DISCHARGE LOCATIONS

UTAH POWER & LIGHT COMPANY
DEPARTMENT OF MINING & EXPLORATION

DATE: 4/17/90	BY: K. LARSEN
SCALE: 1"= 1 Mile	


N
U-024317
FEE
U-06039
SL-051221
U-810
U-01426
SL-050862
U-024319
PIPE LINE
MEETINGHOUSE CANYON
003B
ML-22509
U-7663
U-47977
003A
U-47979
SL-064621
SL-064607
U-084923
U-084924
SL-070654
U-02292
002
McKINNON FEE
1990
LDS FEE
FEE
U-083066
U-040151
U-1358
SL-064900
FUTURE MINING AREAS 1990-1995
0 1000' 2000'
LDS FEE
U-47978
MAP NO. 4
UTAH POWER & LIGHT
DEER CREEK COAL MINE
MINE PLAN

COMMERCIAL TESTING & ENGINEERING CO.
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SINCE 1908
Member of the SGS Group (Société Générale de Surveillance)

omonitoring
10327

DEER CREEK MINE DISCHARGE
@ MINE PORTAL
TEMP. 56°

PLEASE ADDRESS ALL CORRESPONDENCE TO:
P.O. BOX 1020, HUNTINGTON, UT 84528
TELEPHONE: (801) 653-2311

REGION VIII GUIDANCE FOR ACUTE WHOLE EFFLUENT REPORTING

PERMITTEE NAME UTAH POWER AND LIGHT CO. **NPDES No** UT-0024896

20% MORTALITY TEST: X **pass** ___ **fail** **LC50** N/A % **OUTFALL NO** ___

TEST ANIMAL & AGE Fathead 4d **SAMPLE TIME & DATE** 09:30 3/26/90

Analysis Time & Date: Begin 3/27/90 14:00 End 3/31/90 14:00

Receiving Water Hardness 173 Reconstituted Water Hardness (if used) ___

Measurements	Dilutions (% Effluent)*						
	0%	6%	12.5%	25%	50%	75%	100%
No @ Start of Test	20		20	20	20	20	20
No live after 24 hrs	20		20	20	20	20	20
No live after 48 hrs	20		20	20	20	20	20
No live after 72 hrs	20		20	20	20	20	20
No live after 96 hrs	20		20	20	20	20	20
Initial DO: mg/l	8.1		7.7	7.5	7.4	7.3	7.2
DO; 24 hrs: old/new	6.6/7.1	/	6.5 / 6.5	7.1/6.3	6.2/6.9	6.5/7.0	6.3/6.8
DO; 48 hrs: old/new	5.8/7.8	/	6.0 / 7.0	5.5/7.3	5.8/7.0	5.5/6.7	5.4/5.9
DO; 72 hrs: old/new	6.6/5.7	/	6.3 / 5.7	6.2/5.8	5.9/5.6	5.6/5.4	5.2/5.3
DO; 96 hrs:	6.8		6.4	6.2	6.2	6.5	6.3
Initial temp: °C	20		20	20	20	20	20
Temp; 24 hrs: old/new	21 /21	/	21 / 21	21 / 21	21/ 21	21 / 21	21 /21
Temp; 48 hrs: old/new	20 /20	/	20 / 20	20 / 20	20/ 20	20 / 20	20 /20
Temp; 72 hrs: old/new	20 /20	/	20 / 20	20 / 20	20/ 20	20 / 20	20 /20
Temp; 96 hrs:	20		20	20	20	20	20

Initial alkal. 0% 225 100% 371 Initial Effluent Hardness 431

Initial NH_3 as N 0% 0.60 100% 0.51 Initial pH 0% 8.1 100% 7.7

Final pH 0% 8.3 100% 8.3 **ANALYST'S NAME** David Councill

LABORATORY CTE-HUNTINGTON **SIGNATURE/DATE** 4/9/90

* normally, a minimum of five plus control (0%) 6/28/88

RECEIVED
APR - 9 1990
DIVISION OF OIL, GAS & MINING

COMMERCIAL TESTING & ENGINEERING CO.
GENERAL OFFICES: 1919 SOUTH HIGHLAND AVE., SUITE 210-B, LOMBARD, ILLINOIS 60148 • (312) 953-9300

SINCE 1908
Member of the SGS Group (Société Générale de Surveillance)

Biomonitoring
10327

DEER CREEK MINE DISCHARGE
@ MINE PORTAL

PLEASE ADDRESS ALL CORRESPONDENCE TO:
P.O. BOX 1020, HUNTINGTON, UT 84528
TELEPHONE: (801) 653-2311

REGION VIII GUIDANCE FOR ACUTE WHOLE EFFLUENT REPORTING

PERMITTEE NAME UTAH POWER & LIGHT CO. **NPDES No** UT-0024896

20% MORTALITY TEST: X **pass** ___ **fail** **LC50** N/A % **OUTFALL NO** ___

TEST ANIMAL & AGE Ceriodaphnia 24hr **SAMPLE TIME & DATE** 09:30 3/26/90

Analysis Time & Date: Begin 3/28/90 09:00 **End** 3/30/90 09:00

Receiving Water Hardness 173 **Reconstituted Water Hardness (if used)** ___

Measurements	Dilutions (% Effluent)*						
	0%	6%	12.5%	25%	50%	75%	100%
No @ Start of Test	20		20	20	20	20	020
No live after 24 hrs	20		20	20	20	20	20
No live after 48 hrs	20		20	20	20	20	20
No live after 72 hrs							
No live after 96 hrs							
Initial DO: mg/l	7.1		6.5	6.3	6.9	7.0	6.8
DO; 24 hrs: old/new	6.0/7.8	/	6.1/7.0	6.0/7.3	6.1/7.0	5.8/6.7	6.4/5.9
DO; 48 hrs: old/new	6.2/	/	6.2/	6.3/	6.5/	6.2/	6.2/
DO; 72 hrs: old/new	/	/	/	/	/	/	/
DO; 96 hrs:							
Initial temp: °C	21		21	21	21	21	21
Temp; 24 hrs: old/new	20/20	/	20/20	20/20	20/20	20/20	20/20
Temp; 48 hrs: old/new	20/	/	20/	20/	20/	20/	20/
Temp; 72 hrs: old/new	/	/	/	/	/	/	/
Temp; 96 hrs:							

Initial alkal. 0% 225 100% 371 Initial Effluent Hardness 431

Initial NH_3 as N 0% 0.60 100% 0.51 Initial pH 0% 8.1 100% 7.7

Final pH 0% 8.4 100% 8.4 **ANALYST'S NAME** David Councill

LABORATORY CTE-HUNTINGTON **SIGNATURE/DATE** [signature] 4/9/90

* normally, a minimum of five plus control (0%) APR - 9 1990 6/28/88

COMMERCIAL TESTING & ENGINEERING CO.
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DEER CREEK MINE DISCHARGE

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TELEPHONE: (801) 653-2311

REGION VIII GUIDANCE FOR ACUTE WHOLE EFFLUENT REPORTING

PERMITTEE NAME UTAH POWER & LIGHT CO. **NPDES No** UT-0024896

20% MORTALITY TEST: X **pass** ___ **fail** **LC50** N/A % **OUTFALL NO** ___

TEST ANIMAL & AGE Pimephales 4d **SAMPLE TIME & DATE** 09:40 4/3/90

Analysis Time & Date: Begin 4/3/90 14:00 **End** 4/7/90 14:00

Receiving Water Hardness 223 **Reconstituted Water Hardness (if used)** ___

Measurements	Dilutions (% Effluent)*						
	0%	6%	12.5%	25%	50%	75%	100%
No @ Start of Test	20		20	20	20	20	20
No live after 24 hrs	20		20	20	19	20	20
No live after 48 hrs	19		20	20	19	20	20
No live after 72 hrs	19		20	20	19	20	20
No live after 96 hrs	19		20	20	19	20	20
Initial DO: mg/l	7.9		7.6	7.5	7.7	7.9	8.1
DO; 24 hrs: old/new	5.9/8.0	/	5.6/7.8	5.5/7.6	5.4/7.5	6.1/7.5	5.9/7.7
DO; 48 hrs: old/new	6.2/7.2	/	6.2/7.2	6.1/7.6	6.6/7.5	6.3/7.4	6.5/7.2
DO; 72 hrs: old/new	6.7/7.1	/	6.7/7.1	6.8/7.2	6.7/7.1	6.7/6.9	6.5/6.7
DO; 96 hrs:	6.3		6.7	6.8	6.6	6.5	6.3
Initial temp: °C	21		21	21	21	21	21
Temp; 24 hrs: old/new	21/21	/	21/21	21/21	21/21	21/21	21/21
Temp; 48 hrs: old/new	21/21	/	21/21	21/21	21/21	21/21	21/21
Temp; 72 hrs: old/new	21/21	/	21/21	21/21	21/21	21/21	21/21
Temp; 96 hrs:	20		20	20	20	20	20

Initial alkal. 0% 198 100% 354 Initial Effluent Hardness 555

Initial NH_3 as N 0% 0.37 100% 0.38 Initial pH 0% 8.30 100% 7.60

Final pH 0% 8.20 100% 8.30 **ANALYST'S NAME** David Councill

LABORATORY CTE-HUNTINGTON **SIGNATURE/DATE** 4/11/90

* normally, a minimum of five plus control (0%)

6/28/88

COMMERCIAL TESTING & ENGINEERING CO.
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DEER CREEK MINE DISCHARGE

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P.O. BOX 1020, HUNTINGTON, UT 84528
TELEPHONE: (801) 653-2311

REGION VIII GUIDANCE FOR ACUTE WHOLE EFFLUENT REPORTING

PERMITTEE NAME UTAH POWER & LIGHT CO. **NPDES No** UT-0024896

20% MORTALITY TEST: X **pass** ___ **fail** **LC50** N/A % **OUTFALL NO** ___

TEST ANIMAL & AGE Ceriodaphnia<24hr **SAMPLE TIME & DATE** 4/6/90 09:00

Analysis Time & Date: Begin 4/4/90 09:00 **End** 4/6/90 09:00

Receiving Water Hardness 223 **Reconstituted Water Hardness (if used)** ___

Measurements	Dilutions (% Effluent)*						
	0%	6%	12.5%	25%	50%	75%	100%
No @ Start of Test	20		20	20	20	20	20
No live after 24 hrs	20		20	20	20	20	20
No live after 48 hrs	20		20	20	20	20	20
No live after 72 hrs							
No live after 96 hrs							
Initial DO: mg/l	8.0		7.8	7.6	7.5	7.5	7.7
DO; 24 hrs: old/new	7.0/7.2	/	6.9/7.2	6.6/7.6	6.6/7.5	6.5/7.4	7.0/7.2
DO; 48 hrs: old/new	7.2/	/	7.0/	6.7/	6.6/	6.8/	6.8/
DO; 72 hrs: old/new	/	/	/	/	/	/	/
DO; 96 hrs:							
Initial temp: °C	21		21	21	21	21	21
Temp; 24 hrs: old/new	21/21	/	21/21	21/21	21/21	21/21	21/21
Temp; 48 hrs: old/new	21/	/	21/	21/	21/	21/	21/
Temp; 72 hrs: old/new	/	/	/	/	/	/	/
Temp; 96 hrs:							

Initial alkal. 0% 198 100% 354 **Initial Effluent Hardness** 555

Initial NH_3 as N 0% 0.37 100% 0.38 **Initial pH** 0% 8.3 100% 7.6

Final pH 0% 8.2 100% 8.3 **ANALYST'S NAME** David Councill

LABORATORY CTE-HUNTINGTON **SIGNATURE/DATE** 4/11/90

* normally, a minimum of five plus control (0%)

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10346
Biomonitoring

DEER CREEK DISCHARGE

PLEASE ADDRESS ALL CORRESPONDENCE TO:
P.O. BOX 1020, HUNTINGTON, UT 84528
TELEPHONE: (801) 653-2311

REGION VIII GUIDANCE FOR ACUTE WHOLE EFFLUENT REPORTING

PERMITTEE NAME UTAH POWER & LIGHT CO. **NPDES No** UT-0024896

20% MORTALITY TEST: X **pass** ___ **fail** **LC50** N/A % **OUTFALL NO** ___

TEST ANIMAL & AGE Pimephales 4d. **SAMPLE TIME & DATE** 4/10/90 10:30

Analysis Time & Date: Begin 4/10/90 14:00 **End** 4/14/90 14:00

Receiving Water Hardness 297 **Reconstituted Water Hardness (if used)** ___

Measurements	Dilutions (% Effluent)*						
	0%	6%	12.5%	25%	50%	75%	100%
No @ Start of Test	20		20	20	20	20	20
No live after 24 hrs	18		20	20	20	20	19
No live after 48 hrs	18		20	20	20	20	19
No live after 72 hrs	18		20	18	20	20	19
No live after 96 hrs	18		20	18	20	20	18
Initial DO: mg/l	7.8		7.1	6.9	6.8	6.6	5.9
DO; 24 hrs: old/new	6.7/8.0	/	7.0/8.0	7.1/7.9	7.1/7.5	6.9/7.2	6.6/7.0
DO; 48 hrs: old/new	7.6/6.6	/	6.4/6.7	6.2/7.2	6.8/6.8	6.7/6.8	6.4/6.0
DO; 72 hrs: old/new	7.0/7.1	/	7.0/7.1	6.9/7.3	7.0/6.9	6.7/6.6	6.8/5.6
DO; 96 hrs:	6.5		7.0	7.3	6.9	7.2	7.1
Initial temp: °C	20		20	20	20	20	20
Temp; 24 hrs: old/new	20 / 20	/	20/20	20 /20	20 /20	20 / 20	20/ 20
Temp; 48 hrs: old/new	20 / 20	/	20/20	20 /20	20 /20	20 / 20	20/ 20
Temp; 72 hrs: old/new	20 / 20	/	20/20	20 /20	20 /20	20 / 20	20/ 20
Temp; 96 hrs:	20		20	20	20	20	20

Initial alkal. 0% 292 100% 309 **Initial Effluent Hardness** 479

Initial NH_3 as N 0% .20 100% 8.3 **Initial pH** 0% 8.3 100% 7.8

Final pH 0% 8.3 100% 7.9 **ANALYST'S NAME** David Councill

LABORATORY ___ **SIGNATURE/DATE** [signature] APR 17 1990

* normally, a minimum of five plus control (0%)

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DEER CREEK DISCHARGE

REGION VIII GUIDANCE FOR ACUTE WHOLE EFFLUENT REPORTING

PERMITTEE NAME Utah Power & Light Co. **NPDES No** UT-0024896

20% MORTALITY TEST: X **pass** ___ **fail** **LC50** ___ % **OUTFALL NO** ___

TEST ANIMAL & AGE Ceriodaphnia 24h **SAMPLE TIME & DATE** 4/10/90 10:30

Analysis Time & Date: Begin 4/11/90 10:00 End 4/13/90 10:00

Receiving Water Hardness 297 Reconstituted Water Hardness (if used) ___

Measurements	Dilutions (% Effluent)*						
	0%	6%	12.5%	25%	50%	75%	100%
No @ Start of Test	20		20	20	20	20	20
No live after 24 hrs	20		20	20	20	20	20
No live after 48 hrs	20		20	20	20	20	20
No live after 72 hrs							
No live after 96 hrs							
Initial DO: mg/l	8.0		8.0	7.9	7.5	7.2	7.0
DO; 24 hrs: old/new	7.2/6.6	/	7.1/ 6.7	7.3/7.2	6.9/ 6.8	7.0/ 6.8	6.76.0
DO; 48 hrs: old/new	7.0/	/	7.1/	7.2/	7.0/	7.0/	7.4/
DO; 72 hrs: old/new	/	/	/	/	/	/	/
DO; 96 hrs:							
Initial temp: °C	20		20	20	20	20	20
Temp; 24 hrs: old/new	20/ 20	/	20 / 20	20/20	20/20	20 / 20	20/20
Temp; 48 hrs: old/new	20/	/	20 /	20/	20/	20 /	20/
Temp; 72 hrs: old/new	/	/	/	/	/	/	/
Temp; 96 hrs:							

Initial alkal. 0% 292 100% 309 Initial Effluent Hardness 479

Initial NH_3 as N 0% .20 100% .06 Initial pH 0% 8.3 100% 7.8

Final pH 0% 8.4 100% 8.3 **ANALYST'S NAME** David Councill

LABORATORY CTE-HUNTINGTON **SIGNATURE/DATE** ___

* normally, a minimum of five plus control (0%)

6/28/88

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DEER CREEK MINE
1st Right Fault Zone

REGION VIII GUIDANCE FOR ACUTE WHOLE EFFLUENT REPORTING

PERMITTEE NAME UTAH POWER & LIGHT CO. **NPDES No** UT-0024896

20% MORTALITY TEST: X **pass** ___ **fail** **LC50** N/A % **OUTFALL NO** ___

TEST ANIMAL & AGE Ceriodaphnia 24hr **SAMPLE TIME & DATE** 08:55 3/26/90

Analysis Time & Date: Begin 3/28/90 10:00 **End** 3/30/90 10:00

Receiving Water Hardness 173 **Reconstituted Water Hardness (if used)** ___

Measurements	Dilutions (% Effluent)*						
	0%	6%	12.5%	25%	50%	75%	100%
No @ Start of Test	20		20	20	20	20	20
No live after 24 hrs	20		20	20	20	20	20
No live after 48 hrs	20		20	20	20	20	20
No live after 72 hrs							
No live after 96 hrs							
Initial DO: mg/l	7.1		7.0	6.9	6.4	6.1	5.4
DO; 24 hrs: old/new	6.8/7.8	/	6.8/7.0	6.5/6.9	6.2/6.7	6.1/6.3	6.0/5.6
DO; 48 hrs: old/new	6.2/	/	6.4/	6.5/	6.3/	6.1/	6.6/
DO; 72 hrs: old/new	/	/	/	/	/	/	/
DO; 96 hrs:							
Initial temp: °C	21		21	21	21	21	21
Temp; 24 hrs: old/new	20/20	/	20/20	20/20	20/20	20/20	20/20
Temp; 48 hrs: old/new	20/	/	20/	20/	20/	20/	20/
Temp; 72 hrs: old/new	/	/	/	/	/	/	/
Temp; 96 hrs:							

Initial alkal. 0% 225 100% 441 Initial Effluent Hardness 467

Initial NH_3 as N 0% 0.60 100% 0.47 Initial pH 0% 8.1 100% 7.0

Final pH 0% 8.4 100% 8.4 **ANALYST'S NAME** Donna Tyson

LABORATORY CTE-HUNTINGTON **SIGNATURE/DATE** [signature] 4/9/90

* normally, a minimum of five plus control (0%)

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DEER CREEK MINE
1st Right Fault Zone

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REGION VIII GUIDANCE FOR ACUTE WHOLE EFFLUENT REPORTING

PERMITTEE NAME UTAH POWER & LIGHT CO. **NPDES No** UT-0024896

20% MORTALITY TEST: X **pass** ___ **fail** **LC50** N/A % **OUTFALL NO** ___

TEST ANIMAL & AGE Fathead 4d **SAMPLE TIME & DATE** 08:55 3-26-90

Analysis Time & Date: Begin 3-27-90 13:00 End 3-31-90 13:00

Receiving Water Hardness 173 Reconstituted Water Hardness (if used) ___

Measurements	Dilutions (% Effluent)*						
	0%	6%	12.5%	25%	50%	75%	100%
No @ Start of Test	20		20	20	20	20	20
No live after 24 hrs	20		20	20	19	20	19
No live after 48 hrs	20		20	20	18	20	19
No live after 72 hrs	20		20	20	18	20	19
No live after 96 hrs	20		20	19	18	20	19
Initial DO: mg/l	8.1		7.3	7.1	6.5	5.6	4.2
DO; 24 hrs: old/new	6.6/7.1	/	6.3/7.0	6.2/6.9	5.8/6.4	6.5/6.1	/5.4
DO; 48 hrs: old/new	5.8/7.8	/	5.7/7.0	5.7/6.9	5.9/6.7	5.8/6.3	5.5/5.6
DO; 72 hrs: old/new	5.7/6.6	/	6.0/6.6	6.1/6.5	6.1/6.2	6.1/6.1	6.1/5.8
DO; 96 hrs:	6.8		6.7	6.6	6.6	6.5	6.2
Initial temp: °C	20		20	20	20	20	20
Temp; 24 hrs: old/new	21/21	/	21/21	21/21	21/21	21/21	21/21
Temp; 48 hrs: old/new	20/20	/	20/20	20/20	20/20	20/20	20/20
Temp; 72 hrs: old/new	20/20	/	20/20	20/20	20/20	20/20	20/20
Temp; 96 hrs:	20		20	20	20	20	20

Initial alkal. 0% 225 100% 441 Initial Effluent Hardness 467

Initial NH_3 as N 0% 0.60 100% 0.47 Initial pH 0% 8.10 100% 7.00

Final pH 0% 8.3 100% 8.2 **ANALYST'S NAME** David Councill

LABORATORY CTE-HUNTINGTON **SIGNATURE/DATE** 4-9-90

* normally, a minimum of five plus control (0%)

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DEER CREEK MINE
2nd R XC-17

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TELEPHONE: (801) 653-2311

REGION VIII GUIDANCE FOR ACUTE WHOLE EFFLUENT REPORTING

PERMITTEE NAME Utah Power & Light Co. **NPDES No** UT-0024896

20% MORTALITY TEST: X **pass** ___ **fail** **LC50** ___ % **OUTFALL NO** ___

TEST ANIMAL & AGE Pimephales 4d. **SAMPLE TIME & DATE** 4/10/90 10:00

Analysis Time & Date: Begin 4/10/90 15:00 **End** 4/14/90 15:00

Receiving Water Hardness 297 **Reconstituted Water Hardness (if used)** ___

Measurements	Dilutions (% Effluent)*						
	0%	6%	12.5%	25%	50%	75%	100%
No @ Start of Test	20		20	20	20	20	20
No live after 24 hrs	18		20	19	20	19	20
No live after 48 hrs	18		20	18	20	19	20
No live after 72 hrs	18		20	18	20	19	20
No live after 96 hrs	18		20	18	20	19	20
Initial DO: mg/l	7.8		7.7	7.7	6.9	6.2	5.9
DO; 24 hrs: old/new	6.7/8.0	/	7.0/7.9	7.4/7.8	7.1/6.8	6.2/7.2	6.5/6.8
DO; 48 hrs: old/new	7.6/6.6	/	7.0/6.9	5.5/7.2	6.7/7.0	5.8/6.9	5.8/6.7
DO; 72 hrs: old/new	7.0/7.1	/	7.0/6.5	7.5/6.6	6.9/7.3	6.6/7.4	6.7/6.8
DO; 96 hrs:	6.5		6.9	6.8	6.4	6.6	6.2
Initial temp: °C	20		20	20	20	20	20
Temp; 24 hrs: old/new	20/20	/	20/20	20/20	20/20	20/20	20/20
Temp; 48 hrs: old/new	20/20	/	20/20	20/20	20/20	20/20	20/20
Temp; 72 hrs: old/new	20/20	/	20/20	20/20	20/20	20/20	20/20
Temp; 96 hrs:	20		20	20	20	20	20

Initial alkal. 0% 292 100% 339 **Initial Effluent Hardness** 381

Initial NH_3 as N 0% 2.0 100% 0.7 **Initial pH** 0% 8.3 100% 7.65

Final pH 0% 8.3 100% 8.3 **ANALYST'S NAME** David Councill

LABORATORY CTE-HUNTINGTON **SIGNATURE/DATE** [signature] APR 14 1990

* normally, a minimum of five plus control (0%)

6/28/88

DIVISION OF OIL GAS & MINING

COMMERCIAL TESTING & ENGINEERING CO.
GENERAL OFFICES: 1919 SOUTH HIGHLAND AVE., SUITE 210-B, LOMBARD, ILLINOIS 60148 • (312) 953-9300

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DEER CREEK MINE
2nd R XC-17

PLEASE ADDRESS ALL CORRESPONDENCE TO:
P.O. BOX 1020, HUNTINGTON, UT 84528
TELEPHONE: (801) 653-2311

REGION VIII GUIDANCE FOR ACUTE WHOLE EFFLUENT REPORTING

PERMITTEE NAME Utah Power & Light Co. **NPDES No** UT-0024896

20% MORTALITY TEST: X **pass** ___ **fail** **LC50** ___ % **OUTFALL NO** ___

TEST ANIMAL & AGE Ceriodaphnia 24h **SAMPLE TIME & DATE** 4/10/90 10:00

Analysis Time & Date: Begin 4/11/90 09:00 **End** 4/13/90 09:00

Receiving Water Hardness 297 **Reconstituted Water Hardness (if used)** ___

Measurements	Dilutions (% Effluent)*						
	0%	6%	12.5%	25%	50%	75%	100%
No @ Start of Test	20		20	20	20	20	20
No live after 24 hrs	20		20	20	20	20	20
No live after 48 hrs	20		20	20	20	20	20
No live after 72 hrs							
No live after 96 hrs							
Initial DO: mg/l	8.0		7.9	7.8	6.8	7.2	6.8
DO; 24 hrs: old/new	7.2/6.6	/	7.2/6.9	7.4/7.2	7.0/7.0	6.9/6.9	6.6/6.7
DO; 48 hrs: old/new	7.0/	/	6.9/	6.8/	7.0/	7.1/	7.1/
DO; 72 hrs: old/new	/	/	/	/	/	/	/
DO; 96 hrs:							
Initial temp: °C	20		20	20	20	20	20
Temp; 24 hrs: old/new	20/20	/	20/20	20/20	20/20	20/20	20/20
Temp; 48 hrs: old/new	20/	/	20/	20/	20/	20/	20/
Temp; 72 hrs: old/new	/	/	/	/	/	/	/
Temp; 96 hrs:							

Initial alkal. 0% 292 100% 339 **Initial Effluent Hardness** 381

Initial NH_3 as N 0% .20 100% .07 **Initial pH** 0% 8.3 100% 7.65

Final pH 0% 8.4 100% 8.5 **ANALYST'S NAME** David Councill

LABORATORY CTE-HUNTINGTON **SIGNATURE/DATE** ___

* normally, a minimum of five plus control (0%)

APR 17 1990
6/28/88

COMMERCIAL TESTING & ENGINEERING CO.
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DEER CREEK MINE
3rd North XC-65
#3 Slope

PLEASE ADDRESS ALL CORRESPONDENCE TO:
P.O. BOX 1020, HUNTINGTON, UT 84528
TELEPHONE: (801) 653-2311

REGION VIII GUIDANCE FOR ACUTE WHOLE EFFLUENT REPORTING

PERMITTEE NAME UTAH POWER & LIGHT CO. **NPDES No** UT-0024896

20% MORTALITY TEST: X **pass** ___ **fail** **LC50** N/A % **OUTFALL NO** ___

TEST ANIMAL & AGE Pimephales 4d **SAMPLE TIME & DATE** 09:15 4/3/90

Analysis Time & Date: Begin 4/3/90 13:00 End 4/7/90 13:00

Receiving Water Hardness 223 Reconstituted Water Hardness (if used) ___

Measurements	Dilutions (% Effluent)*						
	0%	6%	12.5%	25%	50%	75%	100%
No @ Start of Test	20		20	20	20	20	20
No live after 24 hrs	20		20	20	20	19	19
No live after 48 hrs	19		20	20	20	19	19
No live after 72 hrs	19		20	20	20	19	19
No live after 96 hrs	19		20	20	20	19	19
Initial DO: mg/l	7.9		7.9	7.8	7.8	7.4	7.5
DO; 24 hrs: old/new	5.9/8.0	/	5.7/7.9	5.6/7.8	5.4/7.9	5.4/8.0	5.1/7.8
DO; 48 hrs: old/new	6.1/7.2	/	6.3/7.1	6.5/7.1	6.4/7.1	6.3/7.2	6.4/7.1
DO; 72 hrs: old/new	6.7/7.1	/	/7.2	6.3/7.4	6.5/7.2	6.6/7.3	6.6/6.9
DO; 96 hrs:	6.3		6.2	6.2	6.0	6.0	5.6
Initial temp: °C	21		21	21	21	21	20
Temp; 24 hrs: old/new	20/20	/	20/20	20/20	20/20	20/20	20/20
Temp; 48 hrs: old/new	20/20	/	20/20	20/20	20/20	20/20	20/20
Temp; 72 hrs: old/new	20/20	/	20/20	20/20	20/20	20/20	20/20
Temp; 96 hrs:	20		20	20	20	20	20

Initial alkal. 0% 198 100% 308 Initial Effluent Hardness 334

Initial NH_3 as N 0% 0.37 100% 0.41 Initial pH 0% 8.3 100% 7.8

Final pH 0% 8.20 100% 8.25 **ANALYST'S NAME** David Councill

LABORATORY CTE-HUNTINGTON **SIGNATURE/DATE** 4/11/90

* normally, a minimum of five plus control (0%)

APR 16/28/88

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COMMERCIAL TESTING & ENGINEERING CO.
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Biomonitoring

DEER CREEK MINE
3rd North XC-65
#3 Slope

PLEASE ADDRESS ALL CORRESPONDENCE TO:
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TELEPHONE: (801) 653-2311

REGION VIII GUIDANCE FOR ACUTE WHOLE EFFLUENT REPORTING

PERMITTEE NAME UTAH POWER & LIGHT CO. **NPDES No** UT-0024896

20% MORTALITY TEST: X **pass** ___ **fail** **LC50** N/A % **OUTFALL NO** ___

TEST ANIMAL & AGE Ceriodaphnia<24hr **SAMPLE TIME & DATE** 09:15 4/3/90

Analysis Time & Date: Begin 4/4/90 10:00 **End** 4/6/90 10:00

Receiving Water Hardness 223 **Reconstituted Water Hardness (if used)** ___

Measurements	Dilutions (% Effluent)*						
	0%	6%	12.5%	25%	50%	75%	100%
No @ Start of Test	20		20	20	20	20	20
No live after 24 hrs	20		20	20	20	20	20
No live after 48 hrs	20		20	20	20	20	20
No live after 72 hrs							
No live after 96 hrs							
Initial DO: mg/l	8.0		7.9	7.8	7.9	8.0	7.8
DO; 24 hrs: old/new	7.2/7.2	/	7.0/7.1	6.9/7.1	7.0/7.1	7.2/7.2	7.2/7.1
DO; 48 hrs: old/new	7.2/	/	7.1/	7.0/	7.0	7.2/	7.0/
DO; 72 hrs: old/new	/	/	/	/	/	/	/
DO; 96 hrs:							
Initial temp: °C	20		20	20	20	20	20
Temp; 24 hrs: old/new	20/20	/	20/20	20/20	20/20	20/20	20/20
Temp; 48 hrs: old/new	20/	/	20/	20/	20/	20/	20/
Temp; 72 hrs: old/new	/	/	/	/	/	/	/
Temp; 96 hrs:							

Initial alkal. 0% 198 100% 308 **Initial Effluent Hardness** 334

Initial NH_3 as N 0% 0.37 100% 0.41 **Initial pH** 0% 8.3 100% 7.8

Final pH 0% 8.3 100% 8.4 **ANALYST'S NAME** David Councill

LABORATORY CTE-HUNTINGTON **SIGNATURE/DATE** 4/11/90

* normally, a minimum of five plus control (0%) 6/28/88