

TA/16

Los Alamos

NATIONAL LABORATORY

*Los Alamos National Laboratory
Los Alamos, New Mexico 87545*

Date: March 27, 1998
In Reply Refer To: ESH-18/WQ&H:98-0092
Mail Stop: K497
Telephone: (505) 667-7969

Ms. Phyllis Bustamante
Water Resource Specialist
Ground Water Quality Bureau
New Mexico Environment Department
1190 St. Francis Drive, P.O. Box 26110
Santa Fe, New Mexico 87502

**SUBJECT: REQUEST FOR ADDITIONAL INFORMATION, LOS ALAMOS
NATIONAL LABORATORY, HIGH EXPLOSIVES WASTEWATER
TREATMENT FACILITY**

Dear Ms. Bustamante:

In your October 21, 1997, letter (copy attached), you requested additional information on the following: (1) the quality of the influent to Los Alamos National Laboratory's High Explosives Wastewater Treatment Facility (HEWTF), and (2) constituents monitored at NPDES outfalls 05A055 and 05A097. This letter and the enclosed Attachments A, B, and C have been prepared to address these items.

Attachment A includes: (1) Figure 1.0, a schematic of the HEWTF collection and treatment systems; and (2) the analytical results from operational grab samples collected during the treatment of three batches of HEWTF wastewater. Untreated water samples were collected from the transfer manhole (with the exception of TA-16-260 samples which were collected at the sumps) and treated water samples were collected from a sample port after the second granular activated carbon (GAC) filter, inside the HEWTF.

It should be noted that the HEWTF is currently in a testing mode of operation in order to determine waste-specific treatment efficiencies. Under normal operations, the three small batches of wastewater treated on February 4, 5, and 9, 1998, would have been combined in the influent equalization tank and treated in a larger batch (2500 gallons per batch).

No effluent was discharged at the time of treatment and sampling. All effluent generated on February 4, 5, and 9, 1998, was combined in the facility's effluent tank and discharged at NPDES Outfall 05505A on March 3, 1998. NPDES compliance samples were collected on March 3, 1998, and these results will be submitted to your agency as soon as they become available.

Attachment B includes the analytical results from operational grab samples collected at twenty high explosives sumps. As illustrated in Figure 1.0 of Attachment A, these sumps serve as holding tanks for wastewater generated at the Laboratory's high explosives process buildings and



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March 27, 1998

waste minimization systems. Under normal operations, multiple sumps will be combined (sump volumes vary from 300-1000 gallons) and blended in the transfer manhole and the influent equalization tank prior to batch treatment (2500 gallons per batch). Due to the mixing of sumps that occurs prior to treatment, the analytical results presented in Attachment B are not representative of blended influent wastewater to the HEWTF.

Please note the wide variability in the quality of the sump wastewater. Variable sump water quality is consistent with the diversity of materials and processes utilized in the high explosives technology research that is conducted by the Laboratory's Dynamic Experimentation (DX) and Engineering Science & Applications (ESA) Divisions. As a result, the analytical data provided in Attachment's A and B are representative of current research but may not be representative of future research operations.

Attachment C is a copy of the Laboratory's current NPDES Permit. Monitoring requirements for Category 05A outfalls can be found in Part I, page 6. The results of Category 05A outfall monitoring is submitted to the EPA Region 6 and the New Mexico Environment Department's Surface Water Quality Bureau (NMED-SWQB) in the Discharge Monitoring Reports (DMRs).

The Laboratory will continue to provide your agency with influent, and effluent, quality data as it becomes available in accordance with your request. Please contact me at 667-7969 if you have questions regarding the enclosed attachments.

Sincerely,



Steven Rae
Group Leader
Water Quality and Hydrology Group

BB:SR/mv

Attachments: a/s

Cy: G. Saums, NMED-SWQB, Santa Fe, New Mexico, w/att.
D. Hemphill, ESA-WMM, w/att., MS C930
R. Ortiz, ESA-WMM, w/att., MS C936
J. Stine, DX-2, w/att., MS C920
A. Sherrard, ESH/ESH-FM, w/att., MS C924
F. Sisneros, ESH-7, w/att., MS P915
N. Williams, ESH-18, w/att., MS K497
M. Saladen, ESH-18, w/att., MS K497
B. Beers, ESH-18, w/att., MS K497
E. Hyde, ESA-WMM, w/att., MS C930
D. Carathers, ESA-FM, w/att., MS C928
T. Alexander, DX-FM, w/att, MS P915
WQ&H File, w/att., MS K497
CIC-10, w/att., MS A150



GARY E. JOHNSON
GOVERNOR

State of New Mexico
ENVIRONMENT DEPARTMENT
Ground Water Quality Bureau

Harold Runnels Building
1190 St. Francis Drive, P.O. Box 26110
Santa Fe, New Mexico 87502
(505) 827-2918 phone
(505) 827-2965 fax



CERTIFIED MAIL - RETURN RECEIPT REQUESTED

October 21, 1997

Steven Rae, ESH-18 Group Leader
Los Alamos National Laboratory
P.O. Box 1663 Mail Stop K497
Los Alamos, New Mexico 87545

RE: Request for Additional Information, Notice of Intent to Discharge, Changed Conditions at Los Alamos National Laboratories, WQ&H:97-0233

Dear Mr. Rae:

The New Mexico Environment Department (NMED), Ground Water Quality Bureau (GWQB) has received and reviewed the Notice of Intent (NOI) for the changed conditions at Los Alamos National Laboratory (LANL), High Explosives Wastewater Treatment Plant (HEWTP). Prior to determining if a discharge plan will be required for compliance with Water Quality Control Commission (WQCC) Part 3, LANL will need to submit the following:

1. analytical results for all WQCC 3103 constituents and 1101.TT toxic pollutants for all influent wastewater. NMED recognizes that results from all influent may not be currently available. However, please submit all data as it is generated, and
2. a copy of all constituents that are or will be monitored under the NPDES outfalls 05A055 and 05A097.

Thank you for your cooperation. If you have any questions, please call me at 827-0166.

Sincerely,

Phyllis Bustamante

Phyllis Bustamante
Water Resource Specialist
Pollution Prevention Section

ATTACHMENT A

HIGH EXPLOSIVES WASTEWATER TREATMENT FACILITY

Figure 1.0, Schematic of Collection and Treatment Systems

and

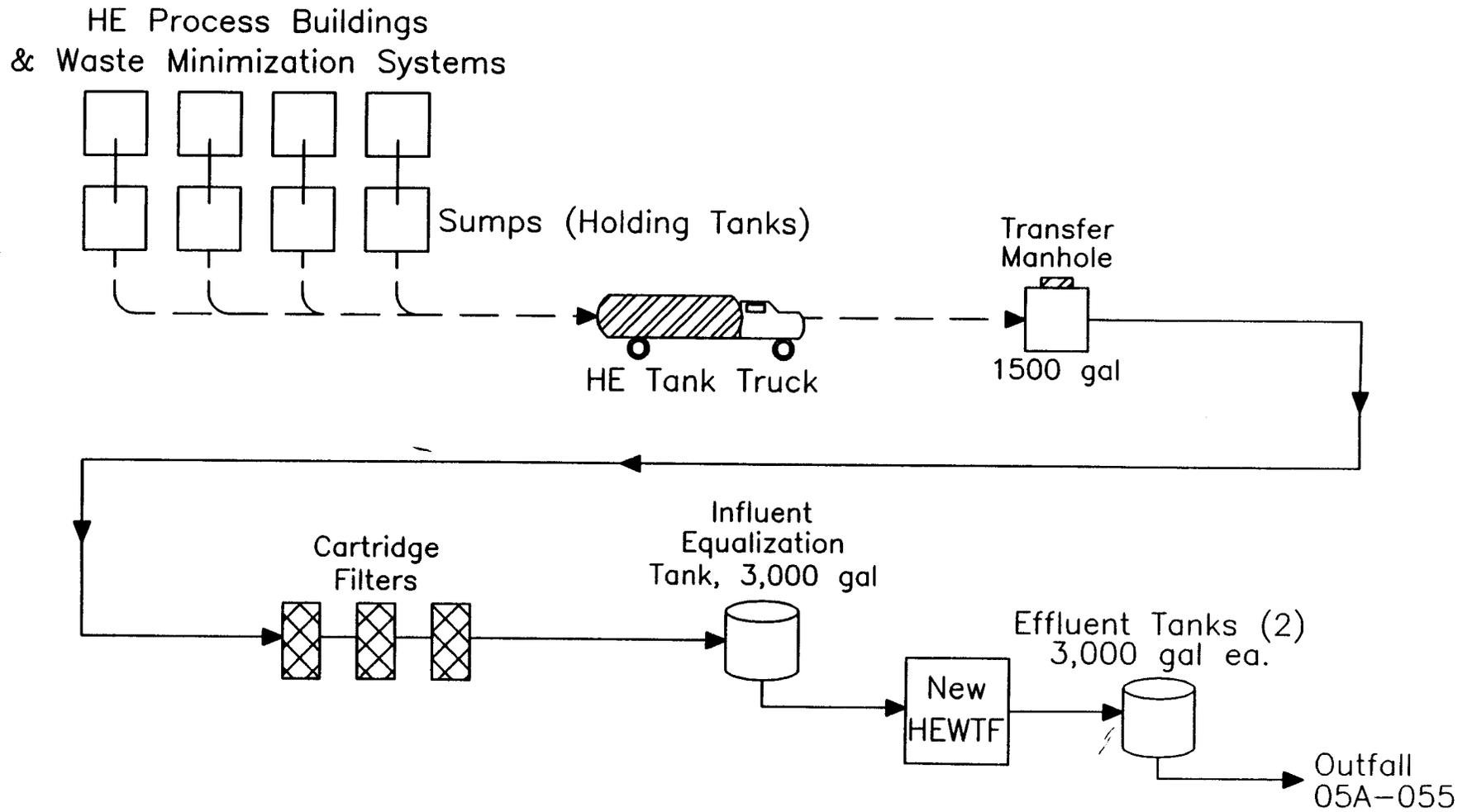
Treated/Untreated Water Quality Data: 2/4/98-2/9/98

Los Alamos National Laboratory

ATTACHMENT A

Figure 1.0. SCHEMATIC:

High Explosives (HE) Wastewater Collection and Treatment Systems



ATTACHMENT A
High Explosives Wastewater Treatment Facility Operational Monitoring
Untreated Water/Treated Water

Sample Type/Source	Sample Date	Sample ID	Total Metals (mg/L)							
			Al	B	Cu	Co	Cr	Se	V	Zn
Untreated/TA-22-93	2/4/98	HEWTF-HPLC-1	0.46	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Treated/TA-22-93	2/4/98	HEWTF-HPLC-2	0.18	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Untreated/TA-9-21 Sump 185	2/5/98	HEWTF-HPLC-3	0.74	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Treated/TA-9-21 Sump 185	2/5/98	HEWTF-HPLC-4	0.31	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Untreated/TA-16-260 Sump 13	2/4/98	16-260-HPLC-10	0.23	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.13
Untreated/TA-16-260 Sump 22	2/4/98	16-260-HPLC-11	0.22	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.13
Untreated/TA-16-260 Sump 25	2/4/98	16-260-HPLC-12	0.19	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Treated/TA-16-260 Sumps 13, 22, 25	2/9/98	HEWTF-HPLC-5	0.64	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1

Sample Type/Source	Sample Date	Sample ID†	SW846-8240 Volatiles (µg/L)	
Untreated/TA-22-93	2/4/98	HEWTF-VOA-1		ND
Untreated/TA-22-93	2/4/98	HEWTF-VOA-1A		ND
Treated/TA-22-93	2/5/98	HEWTF-VOA-2		THF**, MIBK†† (500)
Treated/TA-22-93	2/5/98	HEWTF-VOA-2A		THF**
Untreated/TA-16-260-Sump 22	2/4/98	16-260-VOA-1		Acetone* (50)
Untreated/TA-16-260-Sump 22	2/4/98	16-260-VOA-1A		ND
Untreated/TA-16-260-Sump 13	2/4/98	16-260-VOA-2		ND
Untreated/TA-16-260-Sump 13	2/4/98	16-260-VOA-2A		ND
Untreated/TA-16-260-Sump 25	2/4/98	16-260-VOA-3		ND
Untreated/TA-16-260-Sump 25	2/4/98	16-260-VOA-3A		ND
Treated/TA-16-260 Sumps 13, 22,25	2/9/98	HEWTF-VOA-5		ND
Treated/TA-16-260 Sumps 13, 22,25	2/9/98	HEWTF-VOA-5A		THF**
Untreated/TA-9-21 Sump 185	2/5/98	HEWTF-VOA-3		Acetone (825), Toluene (<1.0), THF**
Untreated/TA-9-21 Sump 185	2/5/98	HEWTF-VOA-3A		Acetone (3200), Toluene (<1.0)
Treated/TA-9-16-Sump 185	2/5/98	HEWTF-VOA-4A		THF**
Treated/TA-9-16-Sump 185	2/5/98	HEWTF-VOA-4		ND

ND stands for no detection above detection limit.

† Duplicate samples indicated with an "A".

†† Methyl isobutyl ketone is considered a probable lab contaminant since none detected in the untreated sample.

* Per lab analyst: Acetone probably a carryover from rinse water. Duplicate sample (16-260-VOA-1A) is ND for acetone.

** Tetra hydrofuran is considered a probable lab contaminant since none detected in the untreated sample.

ATTACHMENT A
High Explosives Wastewater Treatment Facility Operational Monitoring
Untreated Water/Treated Water

Sample Type/Source	Sample Date	Sample ID	Total Nitrogen (mg/L)				pH
			NO3-N	NO2-N	NH3-N	TKN	
Untreated/TA-16-260 Sump 13	2/4/98	16-260-COD-16	0.05	0.08	0.02	NA	7.2
Untreated/TA-16-260 Sump 22	2/4/98	16-260-COD-17	27.61	3.93	0.07	NA	7.1
Untreated/TA-16-260 Sump 25	2/4/98	16-260-COD-18	0.54	6.04	0.03	NA	7.3
<i>Treated/TA-16-260</i>	2/9/98	HEWTF-COD-5	ND	0.01	0.02	NA	6.8
Untreated/TA-22-93	2/4/98	HEWTF-COD-1	1.26	0.19	0.02	NA	7.6
<i>Treated/TA-22-93</i>	2/4/98	HEWTF-COD-2	ND	0.02	0.01	NA	7.2
Untreated/TA-9-21 Sump 185	2/4/98	HEWTF-COD-3	6.39	0.62	0.01	NA	7.4
<i>Treated/TA-9-21 Sump 185</i>	2/5/98	HEWTF-COD-4	ND	0.01	0.01	NA	6.8

NA means that no analysis was conducted for this parameter.

Sample Type/Source	Sample Date	Sample ID	Method 8330 (µg/L)					
			HMX	RDX	TNT	4-AMINO	2-AMINO	2,4-DNT
Untreated/TA-22-93	2/4/98	HEWTF-HPLC-1	574	1,211	2,978	42	21	ND
<i>Treated/TA-22-93</i>	2/4/98	HEWTF-HPLC-2	39	ND	ND	ND	ND	ND
Untreated/TA-9-21 Sump 185	2/5/98	HEWTF-HPLC-3	1,120	2,163	9,712	ND	ND	ND
<i>Treated/TA-9-21 Sump 185</i>	2/5/98	HEWTF-HPLC-4	33	ND	ND	ND	ND	ND
Untreated/TA-16-260 Sump 13	2/4/98	16-260-HPLC-10	1,232	8,881	1,837	1,117	858	ND
Untreated/TA-16-260 Sump 22	2/4/98	16-260-HPLC-11	2,097	8,452	51,850	364	432	607
Untreated/TA-16-260 Sump 25	2/4/98	16-260-HPLC-12	1,228	11,240	50,290	443	449	ND
<i>Treated/TA-16-260 Sumps 13, 22, 25</i>	2/9/98	HEWTF-HPLC-5	113	ND	ND	ND	ND	ND

ND stands for no detection above detection limit.

ATTACHMENT B

HIGH EXPLOSIVES WASTEWATER TREATMENT FACILITY

Sump Water Quality Data: 10/29/97-1/13/97

Los Alamos National Laboratory

ATTACHMENT B

High Explosives Wastewater Treatment Facility Operational Monitoring
Sump Data

Sump Location	Sample Date	Sample ID	Total Metals (mg/L)																
			Al	Be	B	Co	Cu	Fe	Mn	Ni	Zn	As	Ba	Cd	Cr	Pb	Se	Ag	Hg
TA-16 Bay 102	12/10/97	97DS817	29.3	ND	ND	ND	0.38	38.7	0.342	ND	0.9	ND	ND	ND	ND	ND	ND	ND	ND
TA-16 Bay 103,104	12/10/97	97DS823	47.2	ND	7.9	ND	1.38	88.2	0.249	0.06	2.0	ND	ND	ND	ND	ND	ND	ND	ND
TA-16 Bay 105	12/10/97	97DS828	1.9	ND	ND	ND	ND	0.8	0.016	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
TA-16 Bay 106,107	12/10/97	97DS834	3.0	ND	ND	ND	0.11	14.4	0.198	ND	0.2	ND	ND	ND	ND	ND	ND	ND	ND
TA-16 Bay 108,109	12/10/97	97DS840	11.5	ND	ND	ND	0.12	10.3	0.041	ND	0.1	ND	ND	ND	ND	ND	ND	ND	ND
TA-16 Bay 110	12/10/97	97DS846	1.0	ND	ND	ND	ND	2.4	0.014	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
TA-16 Sump 17	12/8/97	97DS782	NA	NA	NA	NA	NA	NA	NA	NA	NA	ND	0.50	ND	ND	0.06	ND	ND	ND
TA-16 Sump 25	12/8/97	97DS788	NA	NA	NA	NA	NA	NA	NA	NA	NA	ND	0.50	ND	ND	ND	ND	ND	ND
TA-9-185	10/29/97	97DS729	270	ND	0.1	0.02	3.67	31.2	0.111	0.11	2.9	ND	ND	ND	ND	ND	ND	ND	NA
TA-9-184	10/29/97	97DS731	31.4	ND	ND	0.01	0.57	65.5	0.51	0.06	1.4	ND	ND	ND	ND	ND	ND	ND	NA
TA-9-198	10/29/97	97DS727	ND	ND	2.5	ND	0.06	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA
TA-9-191	12/10/97	97DS852	ND	ND	ND	ND	ND	ND	ND	ND	0.1	ND	ND	ND	ND	ND	ND	ND	ND
TA-9-186	12/10/97	97DS858	3.8	ND	ND	ND	0.06	1.3	0.033	ND	0.3	ND	ND	ND	ND	ND	ND	ND	0.003
TA-9-187	12/10/97	97DS864	ND	ND	ND	ND	ND	ND	0.018	ND	0.4	ND	ND	ND	ND	ND	ND	ND	ND

NMWQCC Section 3103 GW Standards 5 0.75 0.05 1 1 0.2 0.2 10 0.1 1 0.01 0.05 0.05 0.05 0.05 0.002

Sump Location	Sample Date	Sample ID	Total Nitrogen (mg/L)			
			NO3-N	NO2-N	NH3-N	TKN
TA-9-191	12/10/97	97DS854	ND	ND	ND	0.4
TA-9-186	12/10/97	97DS860	0.7	ND	ND	0.4
TA-9-187	12/10/97	97DS866	0.4	ND	0.4	0.9
TA-16-260	9/19/97	260COD11	3.2	42.5	84.3	NA
TA-16-260-Sump 22	11/5/97	260COD12	2.0	8.8	0.3	NA
TA-16-260-Sump 20	11/5/97	260COD13	3.2	17.7	0.3	NA
TA-16-260-Sump 13	11/5/97	260COD14	0.9	1.2	0.01	NA
TA-16-260-Sump 22	11/7/97	260COD15	1.8	9.1	0.3	NA
TA-16-430	9/19/97	430COD1	0.9	1.7	0.2	NA
TA-16-430	9/19/97	430COD2	0.3	3.6	0.5	NA
TA-16-400	1/13/98	400COD1	0.4	0.1	0.1	NA
TA-16 Sump 17†	12/8/97	97DS783	7.8	3.8	55.4	26.9
TA-16 Sump 25	12/8/97	97DS790	3.8	2.8	19.8	98.1

† The NH3-N results are greater than TKN results in this sample due to interference from nitrogenous compounds.

ND stands for no detection above detection limit.

NA means that no analysis was conducted for this parameter.

ATTACHMENT B
High Explosives Wastewater Treatment Facility Operational Monitoring
Sump Data

Sump Location	Sample Date	Sample ID	SW846-8240 Volatiles (µg/L)
TA-16 Bay 102	12/10/97	97DS815	ND
TA-16 Bay 103,104	12/10/97	97DS821	ND
TA-16 Bay 105	12/10/97	97DS826	ND
TA-16 Bay 106,107	12/10/97	97DS832	ND
TA-16 Bay 108,109	12/10/97	97DS838	ND
TA-16 Bay 110	12/10/97	97DS844	ND
TA-16 Sump 17	12/10/97	97DS780	ND
TA-16 Sump 25	12/10/97	97DS786	ND
TA-9-191	12/10/97	97DS850	ND
TA-9-186	12/10/97	97DS856	ND
TA-9-187	12/10/97	97DS862	1,1,1 Trichloroethane (1.9)
TA-9-198	10/29/97	97DS726	ND
TA-9-185	10/29/97	97DS728	ND
TA-9-184	10/29/97	97DS730	Acetone (13,000), Toluene (3.1), Chloroform (2.4), MTBE (4.0)

ND stands for no detection above detection limit.

Sump Location	Sample Date	Sample ID	SW 846-8270 / EPA-625 Semi-volatiles	pH
TA-16 Bay 102	12/10/97	97DS816	ND	7.6
TA-16 Bay 103,104	12/10/97	97DS822	ND	9.0
TA-16 Bay 105	12/10/97	97DS827	ND	8.3
TA-16 Bay 106,107	12/10/97	97DS833	ND	7.5
TA-16 Bay 108,109	12/10/97	97DS839	ND	7.8
TA-16 Bay 110	12/10/97	97DS845	ND	8.0
TA-16 Sump 17	12/10/97	97DS781	ND	NA
TA-16 Sump 25	12/10/97	97DS787	ND	NA
TA-9-191	12/10/97	97DS851	ND	7.9
TA-9-186	12/10/97	97DS857	ND	8.6
TA-9-187	12/10/97	97DS863	ND	7.4

ND stands for no detection above detection limit.

ATTACHMENT B
High Explosives Wastewater Treatment Facility Operational Monitoring
Sump Data

Sump Location	Sample Date	Sample ID	High Explosives Analysis (µg/L)						
			HMX	RDX	TNB	TNT	4-amino	2-amino	2-NT
TA-16-260	11/5/97	HPLC-8*	1154	8731	66	26420	537	561	ND
TA-16-260	11/5/97	HPLC-8	1199	9072	261	27010	527	600	164
TA-16-260	11/5/97	HPLC-9*	1425	9329	ND	5110	422	324	ND
TA-16-430	11/5/97	HPLC-9	1402	9752	ND	5190	422	335	151
TA-16-400	1/13/98	HPLC-1	408	430	NA	U	NA	NA	NA
TA-16-260	9/19/97	HPLC-7D*	3085	10280	ND	49980	ND	ND	NA
TA-16-260	9/19/97	HPLC-7D	2031	9709	194	60410	†	204	NA
TA-16-260	9/19/97	HPLC-7	2052	9284	67	60000	†	1853	NA
TA-16-430	9/19/97	HPLC-1*	1395	9768	ND	6720	ND	2236††	NA
TA-16-430	9/19/97	HPLC-1	1420	9290	26	8182	†	508	NA
TA-16-430	9/19/97	HPLC-2*	1849	20570	ND	37800	ND	1243††	NA
TA-16-430	9/19/97	HPLC-2	1531	20230	39	45430	†	987	NA

*Denotes a duplicate sample.

ND stands for no detection above detection limit.

NA means that no analysis was conducted for this parameter.

† Integration of TNT included 4-amino

†† Includes surrogate 3,4-DNT and may include: 4-amino; 6-DNT; 2-amino; 6-DNT; or 2,4-DNT.

ATTACHMENT C

National Pollutant Discharge Elimination System (NPDES) Permit

for

Los Alamos National Laboratory

Effective Date: August 1, 1994
Expiration Date: October 31, 1998

Los Alamos National Laboratory

Permit No. NM0028355

AUTHORIZATION TO DISCHARGE UNDER THE
NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM

In compliance with the provisions of the Clean Water Act, as amended, (33 U.S.C... 1251 et. seq; the "Act"),

University of California
Management Contractor for Operation
Los Alamos National Laboratory
Los Alamos, New Mexico 87545

and Department of Energy
Los Alamos Area Office
Los Alamos, New Mexico 87544

(See Part II.J.)

is authorized to discharge from a facility located at Los Alamos National Laboratory, Los Alamos, Los Alamos County, New Mexico

to various streams which are tributaries of Segment No. 2-111 and Segment No. 2-118 of the Rio Grande Basin.

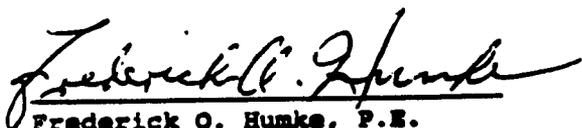
in accordance with effluent limitations, monitoring requirements and other conditions set forth in Parts I (17 pages), II (7 pages), and III (7 pages) hereof.

This permit shall become effective on August 1, 1994

This permit and the authorization to discharge shall expire at midnight, October 31, 1998.

Prepared By:

Signed and issued on June 24, 1994



Frederick O. Humke, P.E.
Environmental Engineer
Industrial Permits Section (6W-PI)



Myron O. Knudson, P.E.
Director
Water Management Division (6W)

PART I
REQUIREMENTS FOR NPDES PERMITS

SECTION A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

OUTFALL 001

During the period beginning the effective date and lasting through the expiration date, the permittee is authorized to discharge from Outfall 001, power plant discharge, including treated sanitary effluent used for cooling water and monitored prior to reuse under Outfall 13S.

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

<u>Effluent Characteristic</u>	<u>Discharge Limitations</u>			
	<u>Mass (lbs/day)</u>		<u>Other Units (Specify)</u>	
	<u>Daily Avg</u>	<u>Daily Max</u>	<u>Daily Avg</u>	<u>Daily Max</u>
Flow (MGD)	N/A	N/A	(*1)	(*1)
Total Suspended Solids	N/A	N/A	30 mg/l	100 mg/l
Free Available Chlorine	N/A	N/A	0.2 mg/l	0.5 mg/l
Water Quality Parameters	N/A	N/A	(*2)	(*2)

<u>Effluent Characteristic</u>	<u>Monitoring Requirements</u>	
	<u>Measurement Frequency</u>	<u>Sample Type</u>
	Flow (MGD)	1/Month
Total Suspended Solids	1/Month	Grab
Free Available Chlorine	1/Month	Grab
Water Quality Parameters	1/Year	Grab

The pH shall not be less than 6.0 standard units nor greater than 9.0 standard units and shall be monitored once per month by grab sample.

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

Samples taken in compliance with the monitoring requirements specified above shall be taken at the following location(s): Following the final treatment, prior to or at the point of discharge from Outfall 001.

- (*1) Report
- (*2) See Part II, Paragraph L.

CATEGORY 02A

During the period beginning the effective date and lasting through the expiration date, the permittee is authorized to discharge from Outfalls 007 and 129 - neutralized demineralizer regeneration brine and boiler blowdown. This category shall be identified as 02A.

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

<u>Effluent Characteristic</u>	<u>Discharge Limitations</u>			
	<u>Mass (lbs/day)</u>		<u>Other Units (Specify)</u>	
	<u>Daily Avg</u>	<u>Daily Max</u>	<u>Daily Avg</u>	<u>Daily Max</u>
Flow (N/A)	N/A	N/A	(*1)	(*1)
Total Suspended Solids	N/A	N/A	30 mg/l	100 mg/l
Total Iron	N/A	N/A	10 mg/l	40 mg/l
Total Copper	N/A	N/A	1.0 mg/l	1.0 mg/l
Total Phosphorus	N/A	N/A	20 mg/l	40 mg/l
Sulfite (as SO ₃)	N/A	N/A	35 mg/l	70 mg/l
Total Chromium	N/A	N/A	1.0 mg/l	1.0 mg/l
Other WQ Parameters	N/A	N/A	(*2)	(*2)

<u>Effluent Characteristic</u>	<u>Monitoring Requirements</u>	
	<u>Measurement Frequency</u>	<u>Sample Type</u>
	Flow (MGD)	1/3 months
Total Suspended Solids	1/3 months	Grab
Total Iron	1/3 months	Grab
Total Copper	1/3 months	Grab
Total Phosphorus	1/3 months	Grab
Sulfite (as SO ₃)	1/3 months	Grab
Total Chromium	1/3 months	Grab
Other WQ Parameters	1/Year	Grab

The pH shall not be less than 6.0 standard units nor greater than 9.0 standard units and shall be monitored once per three months by grab sample.

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

Samples taken in compliance with the monitoring requirements specified above shall be taken at the following location(s): Following the final treatment, prior to or at the point of discharge as shown in Part II.

- (*1) Report
- (*2) See Part II, Paragraph L.

CATEGORY 03A

During the period beginning the effective date and lasting through the expiration date, the permittee is authorized to discharge from Outfalls 009, 020, 021, 022, 023, 024, 025, 027, 028, 031, 032, 034, 035, 036, 037, 038, 040, 042, 043, 045, 047, 048, 049, 060, 098, 113, 114, 124, 125, 130, 136, 145, 146, 148, 158, 160, 180, 181, 184 and 185 - cooling tower blowdown, evaporative coolers, chillers, condensers and air washer blowdown including treated sanitary effluent used for cooling water and monitored prior to reuse under Outfall 13S. This category shall be identified as 03A.

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

Effluent Characteristic

Discharge Limitations

	<u>Mass (lbs/day)</u>		<u>Other Units (Specify)</u>	
	<u>Daily Avg</u>	<u>Daily Max</u>	<u>Daily Avg</u>	<u>Daily Max</u>
Flow (MGD)	N/A	N/A	(*1)	(*1)
Total Suspended Solids	N/A	N/A	30 mg/l	100 mg/l
Free Available Chlorine	N/A	N/A	0.2 mg/l	0.5 mg/l
Total Phosphorus	N/A	N/A	20 mg/l	40 mg/l
Total Arsenic	N/A	N/A	0.04 mg/l	0.04 mg/l
Other WQ Parameters	N/A	N/A	(*2)	(*2)

Effluent Characteristic

Monitoring Requirements

	<u>Measurement Frequency</u>	<u>Sample Type</u>
Flow (MGD)	1/3 months	Estimate
Total Suspended Solids	1/3 months	Grab
Free Available Chlorine	1/3 months	Grab
Total Phosphorus	1/3 months	Grab
Total Arsenic	1/3 months	Grab
Other WQ Parameters	1/Year	Grab

The pH shall not be less than 6.0 standard units nor greater than 9.0 standard units and shall be monitored once per three months by grab sample.

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

Samples taken in compliance with the monitoring requirements specified above shall be taken at the following location(s): Following the final treatment, prior to or at the point of discharge as shown in Part II.

(*1) Report

(*2) See Part II, Paragraph L.

CATEGORY 04A

During the period beginning the effective date and lasting through the expiration date, the permittee is authorized to discharge from Outfalls 013, 014, 016, 018, 070, 083, 091, 092, 094, 101, 115, 117, 118, 126, 127, 131, 135, 137, 139, 140, 141, 142, 143, 147, 151, 152, 153, 155, 156, 157, 161, 163, 164, 165, 166, 171, 172, 173, 174, 175, 176, 177, 182 and 186 - noncontact cooling water, non-destructive testing discharge and water production facilities. This category shall be identified as 04A.

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

<u>Effluent Characteristic</u>	<u>Discharge Limitations</u>			
	<u>Mass (lbs/day)</u>		<u>Other Units (Specify)</u>	
	<u>Daily Avg</u>	<u>Daily Max</u>	<u>Daily Avg</u>	<u>Daily Max</u>
Flow (MGD)	N/A	N/A	(*1)	(*1)
Total Residual Chlorine	N/A	N/A	(*1) mg/l	(*1)mg/l
Water Quality Parameters	N/A	N/A	(*2)	(*2)

<u>Effluent Characteristic</u>	<u>Monitoring Requirements</u>	
	<u>Measurement Frequency</u>	<u>Sample Type</u>
Flow (MGD)	1/3 months	Estimate
Total Residual Chlorine	1/3 months	Grab
Water Quality Parameters	1/Year	Grab

The pH shall not be less than 6.0 standard units nor greater than 9.0 standard units and shall be monitored once per three months by grab sample.

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

Samples taken in compliance with the monitoring requirements specified above shall be taken at the following location(s): Following the final treatment, prior to or at the point of discharge as shown in Part II.

- (*1) Report
- (*2) See Part II, Paragraph L.

CATEGORY 05A

During the period beginning the effective date and lasting through the expiration date, the permittee is authorized to discharge from Outfalls 053, 054, 055, 056, 058, 061, 062, 063, 066, 067, 068, 069, 071, 072, 096, 097, 154 and 159 - high explosive waste discharges. This category shall be identified as 05A.

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

<u>Effluent Characteristic</u>	<u>Discharge Limitations</u>			
	Mass (lbs/day)		Other Units (Specify)	
	<u>Daily Avg</u>	<u>Daily Max</u>	<u>Daily Avg</u>	<u>Daily Max</u>
Flow (MGD)	N/A	N/A	(*1)	(*1)
Chemical Oxygen Demand	N/A	N/A	125 mg/l	125 mg/l
Total Suspended Solids	N/A	N/A	30 mg/l	45 mg/l
Oil and Grease	N/A	N/A	15 mg/l	15 mg/l
Water Quality Parameters	N/A	N/A	(*2)	(*2)

<u>Effluent Characteristic</u>	<u>Monitoring Requirements</u>	
	<u>Measurement</u>	<u>Sample</u>
	<u>Frequency</u>	<u>Type</u>
Flow (MGD)	1/3 months	Estimate
Chemical Oxygen Demand	1/3 months	Grab
Total Suspended Solids	1/3 months	Grab
Oil and Grease	1/3 months	Grab
Water Quality Parameters	1/Year	Grab

The pH shall not be less than 6.0 standard units nor greater than 9.0 standard units and shall be monitored once per three months by grab sample.

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

Samples taken in compliance with the monitoring requirements specified above shall be taken at the following location(s): Following the final treatment, prior to or at the point of discharge as shown in Part II.

- (*1) Report
- (*2) See Part II, Paragraph L.

CATEGORY 06A

During the period beginning the effective date and lasting through the expiration date, the permittee is authorized to discharge from Outfalls 073, 074, 075, 078, 079, 080, 081, 082, 099, 100, 106, 123, 132 and 183 - Photo waste discharges. This category shall be identified as 06A.

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

<u>Effluent Characteristic</u>	<u>Discharge Limitations</u>			
	<u>Mass (lbs/day)</u>		<u>Other Units (Specify)</u>	
	<u>Daily Avg</u>	<u>Daily Max</u>	<u>Daily Avg</u>	<u>Daily Max</u>
Flow (MGD)	N/A	N/A	(*1)	(*1)
Total Silver	N/A	N/A	0.5 mg/l	1.0 mg/l
Water Quality Parameters	N/A	N/A	(*2)	(*2)

<u>Effluent Characteristic</u>	<u>Monitoring Requirements</u>	
	<u>Measurement Frequency</u>	<u>Sample Type</u>
Flow (MGD)	1/3 months	Estimate
Total Silver	1/3 months	Grab
Water Quality Parameters	1/Year	Grab

The pH shall not be less than 6.0 standard units nor greater than 9.0 standard units and shall be monitored once per three months by grab sample.

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

Samples taken in compliance with the monitoring requirements specified above shall be taken at the following location(s): Following the final treatment, prior to or at the point of discharge as shown in Part II.

- (*1) Report
- (*2) See Part II, Paragraph L.

CATEGORY 07A

During the period beginning the effective date and lasting through September 30, 1994, the permittee is authorized to discharge from Outfall 109, asphalt batch plants non-process wastewater (scrubber air wash). This category shall be identified as 07A.

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

<u>Effluent Characteristic</u>	<u>Discharge Limitations</u>			
	Mass (lbs/day)		Other Units (Specify)	
	<u>Daily Avg</u>	<u>Daily Max</u>	<u>Daily Avg</u>	<u>Daily Max</u>
Flow (MGD)	N/A	N/A	(*1)	(*1)
Chemical Oxygen Demand	N/A	N/A	(*1) mg/l	(*1) mg/l
Total Suspended Solids	N/A	N/A	(*1) mg/l	(*1) mg/l
Oil and Grease	N/A	N/A	15 mg/l	15 mg/l
Water Quality Parameters	N/A	N/A	(*2)	(*2)

<u>Effluent Characteristic</u>	<u>Monitoring Requirements</u>	
	<u>Measurement Frequency</u>	<u>Sample Type</u>
	Flow (MGD)	1/3 months
Chemical Oxygen Demand	1/3 months	Grab
Total Suspended Solids	1/3 months	Grab
Oil and Grease	1/3 months	Grab
Water Quality Parameters	1/Year	Grab

The pH shall not be less than 6.0 standard units nor greater than 9.0 standard units and shall be monitored once per three months by grab sample.

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

Samples taken in compliance with the monitoring requirements specified above shall be taken at the following location(s): Following the final treatment, prior to or at the point of discharge as shown in Part II.

- (*1) Report
- (*2) See Part II, Paragraph L.

CATEGORY 07A

During the period beginning October 1, 1994, and lasting through the expiration date, the permittee is authorized to discharge from Outfall 109, asphalt batch plants non-process wastewater (scrubber air wash). This category shall be identified as 07A.

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

<u>Effluent Characteristic</u>	<u>Discharge Limitations</u>			
	<u>Mass (lbs/day)</u>		<u>Other Units (Specify)</u>	
	<u>Daily Avg</u>	<u>Daily Max</u>	<u>Daily Avg</u>	<u>Daily Max</u>
Flow (MGD)	N/A	N/A	(*1)	(*1)
Chemical Oxygen Demand	N/A	N/A	125 mg/l	125 mg/l
Total Suspended Solids	N/A	N/A	100 mg/l	100 mg/l
Oil and Grease	N/A	N/A	15 mg/l	15 mg/l
Water Quality Parameters	N/A	N/A	(*2)	(*2)

<u>Effluent Characteristic</u>	<u>Monitoring Requirements</u>	
	<u>Measurement</u>	<u>Sample</u>
	<u>Frequency</u>	<u>Type</u>
Flow (MGD)	1/3 months	Estimate
Chemical Oxygen Demand	1/3 months	Grab
Total Suspended Solids	1/3 months	Grab
Oil and Grease	1/3 months	Grab
Water Quality Parameters	1/Year	Grab

The pH shall not be less than 6.0 standard units nor greater than 9.0 standard units and shall be monitored once per three months by grab sample.

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

Samples taken in compliance with the monitoring requirements specified above shall be taken at the following location(s): Following the final treatment, prior to or at the point of discharge as shown in Part II.

- (*1) Report
- (*2) See Part II, Paragraph L.

OUTFALL 051

During the period beginning the effective date and lasting through the expiration date, the permittee is authorized to discharge from Outfall 051 - industrial waste treatment plant discharge.

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

<u>Effluent Characteristic</u>	<u>Discharge Limitations</u>			
	<u>Mass (lbs/day)</u>		<u>Other Units (Specify)</u>	
	<u>Daily Avg</u>	<u>Daily Max</u>	<u>Daily Avg</u>	<u>Daily Max</u>
Flow (MGD)	N/A	N/A	(*1)	(*1)
Ammonia (as N)	N/A	N/A	(*1) mg/l	(*1) mg/l
Chemical Oxygen Demand	94	156	125 mg/l	125 mg/l
Total Suspended Solids	18.8	62.6	N/A	N/A
Total Cadmium	0.06	0.30	(*3) mg/l	(*3) mg/l
Total Chromium	0.19	0.38	(*3) mg/l	(*3) mg/l
Total Copper	0.63	0.63	(*3) mg/l	(*3) mg/l
Total Iron	1.0	2.0	N/A	N/A
Total Lead	0.06	0.15	(*3) mg/l	(*3) mg/l
Total Mercury	0.003	0.09	(*3) mg/l	(*3) mg/l
Total Nickel	N/A	N/A	(*1) mg/l	(*1) mg/l
Total Nitrogen	N/A	N/A	(*1) mg/l	(*1) mg/l
Nitrate-Nitrite (as N)	N/A	N/A	(*1) mg/l	(*1) mg/l
Total Zinc	0.62	1.83	(*3) mg/l	(*3) mg/l
Total Toxic Organics (*2)	N/A	N/A	1.0 mg/l	1.0 mg/l
Radium-226 + Radium-228	N/A	N/A	30.0 pCi/l	30.0 pCi/l
Other WQ Parameters	N/A	N/A	(*3)	(*3)

Effluent Characteristic

	<u>Monitoring Requirements</u>	
	<u>Measurement</u>	<u>Sample</u>
	<u>Frequency</u>	<u>Type</u>
Flow (MGD)	Continuous	Record
Ammonia (as N)	1/Month	Grab
Chemical Oxygen Demand	1/Week	Grab
Total Suspended Solids	1/Week	Grab
Total Cadmium	1/Week	Grab
Total Chromium	1/Week	Grab
Total Copper	1/Week	Grab
Total Iron	1/Week	Grab
Total Lead	1/Week	Grab
Total Mercury	1/Week	Grab
Total Nickel	1/Week	Grab
Total Nitrogen	1/month	Grab
Nitrate-Nitrite (as N)	1/month	Grab
Total Zinc	1/Week	Grab
Total Toxic Organics (*2)	1/Month	Grab
Radium-226 + Radium-228	1/Month	Grab
Other WQ Parameters	1/Year	Grab

OUTFALL 151

The pH shall not be less than 6.0 standard units nor greater than 9.0 standard units and shall be monitored continuously, record.

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

Samples taken in compliance with the monitoring requirements specified above shall be taken at the following location(s): Following the final treatment, prior to or at the point of discharge from TA-50-1 Treatment Plant (Latitude 35°51'58.3" and Longitude 106°17'48.5") to Mortandad Canyon.

- (*1) Report
- (*2) As defined in 40 CFR 433.11(e).
- (*3) See Part II, Paragraph 2.

OUTFALL 128

During the period beginning the effective date and lasting through September 30, 1994, the permittee is authorized to discharge from Outfall 128 - process wastewater from printed circuit board manufacturing using photo-etching techniques.

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

<u>Effluent Characteristic</u>	<u>Discharge Limitations</u>			
	<u>Mass (lbs/day)</u>		<u>Other Units (Specify)</u>	
	<u>Daily Avg</u>	<u>Daily Max</u>	<u>Daily Avg</u>	<u>Daily Max</u>
Flow (MGD)	N/A	N/A	(*1)	(*1)
Chemical Oxygen Demand	N/A	N/A	125 mg/l	125 mg/l
Total Suspended Solids	1.25	2.5	N/A	N/A
Total Iron	0.05	0.10	N/A	N/A
Total Copper	(*1)	(*1)	(*1) mg/l	(*1) mg/l
Total Silver	N/A	N/A	(*1) mg/l	(*1) mg/l
Other WQ Parameters	N/A	N/A	(*2)	(*2)

<u>Effluent Characteristic</u>	<u>Monitoring Requirements</u>	
	<u>Measurement Frequency</u>	<u>Sample Type</u>
	Flow (MGD)	Continuous
Chemical Oxygen Demand	1/week	Grab
Total Suspended Solids	1/Week	Grab
Total Iron	1/Week	Grab
Total Copper	1/Week	Grab
Total Silver	1/Week	Grab
Other WQ Parameters	1/Year	Grab

The pH shall not be less than 6.0 standard units nor greater than 9.0 standard units and shall be monitored once per week by grab sample.

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

Samples taken in compliance with the monitoring requirements specified above shall be taken at the following location(s): Following the final treatment, prior to or at the point of discharge from the TA-22-91 Treatment Facilities (Latitude 35°51'41" and Longitude 106°19'57.9") to Two Mile Canyon.

(*1) Report

(*2) See Part II, Paragraph L.

OUTFALL 128

During the period beginning October 1, 1994, and lasting through the expiration date, the permittee is authorized to discharge from Outfall 128 - process wastewater from printed circuit board manufacturing using photo-etching techniques.

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

<u>Effluent Characteristic</u>	<u>Discharge Limitations</u>			
	<u>Mass (lbs/day)</u>		<u>Other Units (Specify)</u>	
	<u>Daily Avg</u>	<u>Daily Max</u>	<u>Daily Avg</u>	<u>Daily Max</u>
Flow (MGD)	N/A	N/A	(*1)	(*1)
Chemical Oxygen Demand	N/A	N/A	125 mg/l	125 mg/l
Total Suspended Solids	1.25	2.5	N/A	N/A
Total Iron	0.05	0.10	N/A	N/A
Total Copper	0.05	0.10	1.0 mg/l	1.0 mg/l
Total Silver	N/A	N/A	0.02 mg/l	0.02 mg/l
Other WQ Parameters	N/A	N/A	(*2)	(*2)

<u>Effluent Characteristic</u>	<u>Monitoring Requirements</u>	
	<u>Measurement</u>	<u>Sample</u>
	<u>Frequency</u>	<u>Type</u>
Flow (MGD)	Continuous	Record
Chemical Oxygen Demand	1/week	Grab
Total Suspended Solids	1/Week	Grab
Total Iron	1/Week	Grab
Total Copper	1/Week	Grab
Total Silver	1/Week	Grab
Other WQ Parameters	1/Year	Grab

The pH shall not be less than 6.0 standard units nor greater than 9.0 standard units and shall be monitored once per week by grab sample.

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

Samples taken in compliance with the monitoring requirements specified above shall be taken at the following location(s): Following the final treatment, prior to or at the point of discharge from the TA-22-91 Treatment Facilities (Latitude 35°51'41" and Longitude 106°19'57.9") to Two Mile Canyon.

(*1) Report

(*2) See Part II, Paragraph L.

OUTFALL 05S

During the period beginning the effective date and lasting through the expiration date, the permittee is authorized to discharge from Outfall 05S - treated sanitary sewage effluents (*4).

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

<u>Effluent Characteristic</u>	<u>Discharge Limitations</u>			
	<u>Mass (lbs/day)</u>		<u>Other Units (Specify)</u>	
	<u>Daily Avg</u>	<u>Daily Max</u>	<u>Daily Avg</u>	<u>Daily Max</u>
Flow (MGD)	N/A	N/A	(*1)	(*1)
Biochemical Oxygen Demand (5-Day)	0.5	N/A	30 mg/l	45 mg/l
Chemical Oxygen Demand	2.1	N/A	125 mg/l	125 mg/l
Total Suspended Solids	0.5	N/A	30 mg/l	45mg/l(*2)
Fecal Coliform Bacteria/100 ml	N/A	N/A	500 (*3)	500
Water Quality Parameters	N/A	N/A	(*5)	(*5)

<u>Effluent Characteristic</u>	<u>Monitoring Requirements</u>	
	<u>Measurement Frequency</u>	<u>Sample Type</u>
Flow (MGD)	Continuous	Totalized Record
Biochemical Oxygen Demand (5-Day)	1/3 Months	Composite(*2)
Chemical Oxygen Demand	1/3 Months	Composite(*2)
Total Suspended Solids	1/3 Months	Composite(*2)
Fecal Coliform Bacteria/100 ml	1/3 months	Grab
Water Quality Parameters	1/Year	Composite(*2)

The pH shall not be less than 6.0 standard units nor greater than 9.0 standard units and shall be monitored 1/3 months by grab sample.

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

Samples taken in compliance with the monitoring requirements specified above shall be taken at the following location(s): Following the final treatment prior to or at the point of discharge from the TA-21 Treatment Plant (Latitude 35°52'31.1" and Longitude 106°16'0.5") to Los Alamos Canyon.

- (*1) Report
- (*2) See Part II, Paragraph A.
- (*3) Logarithmic Mean
- (*4) See Part II, Paragraph K.
- (*5) See Part II, Paragraph L.

OUTFALL 13S

During the period beginning operation of the facility and lasting through the expiration date, the permittee is authorized to discharge from Outfall 13S - treated sanitary sewage effluents (*4).

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

<u>Effluent Characteristic</u>	<u>Discharge Limitations</u>			
	<u>Mass (lbs/day)</u>		<u>Other Units (Specify)</u>	
	<u>Daily Avg</u>	<u>Daily Max</u>	<u>Daily Avg</u>	<u>Daily Max</u>
Flow (MGD)	N/A	N/A	(*1)	(*1)
Biochemical Oxygen Demand (5-Day)	100	N/A	30 mg/l	45 mg/l
Total Suspended Solids	100	N/A	30 mg/l	45 mg/l
Fecal Coliform Bacteria/100 ml	N/A	N/A	500(*3)	500
Water Quality Parameters	N/A	N/A	(*5)	(*5)

<u>Effluent Characteristic</u>	<u>Monitoring Requirements</u>	
	<u>Measurement Frequency</u>	<u>Sample Type</u>
Flow (MGD)	Continuous	Totalized Record
Biochemical Oxygen Demand (5-Day)	3/Month	Composite(*1)
Total Suspended Solids	3/Month	Composite(*2)
Fecal Coliform Bacteria/100 ml	3/Month	Grab
Water Quality Parameters	1/Year	Composite(*2)

The pH shall not be less than 6.0 standard units nor greater than 9.0 standard units and shall be monitored 1/week by grab sample.

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

Samples taken in compliance with the monitoring requirements specified above shall be taken at the following location(s): Following the final treatment, prior to the point of discharge from the TA-46 SWSC Plant by gravity flow to Canada del Buey (Latitude 35°51'7" and Longitude 106°16'27"); and prior to the point of discharge from the TA-46 SWSC Plant into the effluent reuse line to Sandia Canyon (Latitude 35°52'29" and Longitude 106°18'38"); and to outfalls utilizing treated effluent as specified in Outfall 001 and Category 03A (*6).

- (*1) Report
- (*2) See Part II, Paragraph A.
- (*3) Logarithmic mean
- (*4) See Part II, Paragraph K.
- (*5) See Part II, Paragraph L.
- (*6) Treated effluent from the SWSC plant shall be controlled utilizing Best Management Practices in such a manner as to enhance and maintain wetland areas in Sandia Canyon and Canada del Buey, and to minimize movement of effluent off site.

SECTION B. SCHEDULE OF COMPLIANCE

Outfall 07A-109, Outfall 128

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

Progress Report
Achieve Compliance

Quarterly from the effective date
October 1, 1994

SECTION C. REPORTING OF MONITORING RESULTS

Monitoring results shall be reported in accordance with the provisions of Part III.D.4 of the permit. Monitoring results obtained during the previous month shall be summarized and reported on a Discharge Monitoring Report form postmarked no later than the 28th day of the month following the completed reporting period.

The first report is due on September 15th, 1994.

PART II
OTHER CONDITIONS

A. "Composite sample" means a sample consisting of a minimum of three (3) grab samples of effluent collection at regular intervals over a normal operating day and combined proportional to flow or a sample continuously collected proportional to flow over a normal operating day.

B. "Grab Sample" means an individual sample collected in less than 15 minutes.

C. NEUTRALIZED DEMINERALIZER REGENERATION BRINE AND BOILER BLOWDOWN - Category 02A

<u>OUTFALL NUMBER</u>	<u>DISCHARGE LOCATION</u>
119	TA-21-357
007	TA-16-540

D. COOLING TOWER BLOWDOWN, EVAPORATIVE COOLERS, CHILLERS, CONDENSERS AND AIR WASHER BLOWDOWN - Category 03A

<u>OUTFALL NUMBER</u>	<u>DISCHARGE LOCATION</u>
009	TA-3-102
020	TA-2-49
021	TA-3-29
022	TA-3-127
023	TA-3-156
024	TA-3-187
025	TA-3-208
027	TA-3-285
028	TA-15-202
031	TA-21-143
032	TA-21-150
034	TA-21-166
035	TA-21-210
036	TA-21-220
037	TA-21-314
038	TA-33-114
040	TA-43-1
042	TA-46-1
043	TA-46-31
045	TA-48-1
047	TA-53-60
048	TA-53-62
049	TA-53-64

060	TA-16-430
098	TA-59-1
113	TA-53-293, 365, 1032
114	TA-53-2
124	TA-46-169
125	TA-53-28
130	TA-11-30
136	TA-46-200
145	TA-53-6
146	TA-53-14
148	TA-3-1837
158	TA-21-209
160	TA-35-124
180	TA-43-44
181	TA-55-6
184	TA-53-17
185	TA-15-202

E. NON-CONTACT COOLING WATER, NON-DESTRUCTIVE TESTING DISCHARGE, AND WATER PRODUCTION FACILITIES - Category 04A

OUTFALL NUMBER**DISCHARGE LOCATION**

013	TA-46-30
014	TA-46-88
016	TA-48-1
018	TA-46-24, 59, 76
070	TA-16-220
083	TA-16-202
091	TA-16-450
092	TA-16-370
094	TA-3-170
101	TA-40-9
115	TA-8-70
117	TA-46-41
118	Pajarito Well #4
126	TA-48-8
127	TA-35-213
131	TA-48-1
135	TA-53-18
137	TA-48-46
139	TA-15-184
140	TA-3-141
141	TA-39-69
142	TA-21-149
143	TA-15-306
147	TA-33-86
151	TA-3-22
152	TA-48-28
153	TA-48-1
155	TA-9-50
156	TA-39-89

157	TA-16-460
161	TAO Otowi Well #1
163	Pajarito Well #1
164	Pajarito Well #2
165	Pajarito Well #3
166	Pajarito Well #5
171	Guaje Well #1
172	Guaje Well #1A
173	Guaje Well #2
174	Guaje Well #4
175	Guaje Well #5
176	Guaje Well #6
177	Guaje Booster #1
182	TA-21-1003
186	Otowi Well #4

F. HIGH EXPLOSIVE WASTES DISCHARGES - Category 05A

OUTFALL NUMBER

DISCHARGE LOCATION

053	TA-16-410
054	TA-16-340
055	TA-16-401, 406
056	TA-16-260
058	TA-16-300 thru 307
061	TA-16-280
062	TA-16-342
063	TA-16-400
066	TA-9-A; 21, 28, 29, 32-35, 37, 38, 40
067	TA-9-B; 41, 42, 43, 45, 46
068	TA-9-48
069	TA-11-50
071	TA-16-430
072	TA-16-460
096	TA-11-51
097	TA-11-52
154	TA-40-41

G. PHOTO WASTES DISCHARGES - Category 06A

<u>OUTFALL NUMBER</u>	<u>DISCHARGE LOCATION</u>
073	TA-16-222
074	TA-8-22
075	TA-8-21
078	TA-22-34
079	TA-40-4
080	TA-40-5
081	TA-40-8
082	TA-40-12
099	TA-40-23
100	TA-40-15
106	TA-36-1
123	TA-15-R183
132	TA-35-87
183	TA-3-510

H. ASPHALT BATCH PLANT NON-PROCESS WASTEWATER (SCRUBBER AIR WASH) - Category 07A

<u>OUTFALL NUMBER</u>	<u>DISCHARGE LOCATION</u>
109	TA-3-73

I. Upon receipt of analytical results, any effluent limited parameter found to be out of compliance with this permit shall be resampled for that noncompliant parameter within seven (7) days. This resampling schedule for a noncompliant effluent limit shall be repeated until analytical results indicate the limited parameter is in compliance with this permit.

J. The University of California (UC) and the U.S. Department of Energy (DOE) are co-permittees for the Los Alamos National Laboratory (LANL) NPDES permit.

EPA may take enforcement actions as appropriate against either UC or DOE or both.

K. SEWAGE SLUDGE REQUIREMENTS

a. The permittee shall use only those sewage sludge disposal practices that comply with the federal regulations for landfills and solid waste disposal established at 40 CFR 257.

b. The permittee shall handle and dispose of sewage sludge in accordance with all applicable state and federal regulations to protect public health and the environment from any reasonably anticipated adverse effects due to any toxic pollutants which may be present.

c. If an applicable "acceptable management practice" or numerical limitation for pollutants in sewage sludge promulgated at Section 405(d)(2) of the Clean Water Act, which includes the proposed 40 CFR Part 503 regulations, is more stringent than the sludge pollutant limit or acceptable management practice in this permit, or controls a pollutant not listed in this permit, this permit may be modified or revoked and reissued to conform to the requirements promulgated at Section 405(d)(2). In accordance with 40 CFR 122.41, one year following promulgation of the technical standards for sludge use and disposal, the facility must be in compliance with all requirements regardless of whether the permit is modified to incorporate these standards.

d. Sewage Sludge Management Practices

1. Sewage sludge, if land applied, shall not be spread when soil is saturated, frozen or covered with ice, or during rain or when precipitation is imminent.
2. Disposal of sewage sludge shall not cause discharge to waters of the United States or cause non-point source pollution of waters of the United States.
3. Disposal of sewage sludge shall not cause any underground drinking water source to exceed the limitations in 40 CFR 257, Appendix I.
4. Disposal of sewage sludge shall not cause or contribute to the taking of any endangered or threatened species of plant, fish, or wildlife.
5. Disposal of sewage sludge shall not result in the destruction or adverse modification of the critical habitat of endangered or threatened species.
6. Disposal of sewage sludge in a floodplain shall not restrict the flow of the base flood, reduce the temporary storage capacity of the floodplain, or result in a washout of solid waste, so as to pose a hazard to human life, wildlife or land and water uses.

e. The permittee shall give 120 days prior notice to the Director of any change planned in the sewage sludge disposal practice. Any change shall include any planned physical alterations or additions to the permitted treatment works, changes in the permittee's sludge use or disposal practice, and also alterations, additions, or deletions of disposal sites. These changes may justify the application of permit conditions that are different from or absent in the existing permit, including notification of additional disposal sites not reported during the permit application process or absent in the existing permit. Change in the sludge use or disposal practice may be cause for modification of the permit in accordance with 40 CFR 122.62(a)(1).

f. Pathogen Control (If Land Applied)

1. Sewage sludge or septic tank pumpings that are applied to the land surface or incorporated into the soil shall be treated by a Process to Significantly Reduce Pathogens (PSRP) or a Process to Further Reduce Pathogens (PFRP) prior to application. Processes to significantly reduce pathogens include aerobic digestion, air drying, anaerobic digestion, composting, lime stabilization and other approved methods, as defined at 40 CFR 257, Appendix II. Processes to further reduce pathogens include composting, heat drying, heat treatment, thermophilic aerobic digestion and other approved methods, as defined at 40 CFR 257, Appendix II. If PSRP is conducted, public access to the facility shall be controlled for at least 12 months, and grazing by animals whose products are consumed by humans shall be prevented for at least one month.

2. The permittee shall report annually on the Discharge Monitoring Report in the month the permit is effective the level of disinfection attained (i.e., PSRP or PFRP) if land applied.

3. A detailed description of all treatment processes including information such as residence time, temperature, and volatile solids reduction used to achieve PSRP and/or PFRP, or any other data which is necessary to demonstrate the pathogen reduction level of sludge, must be kept on site for purposes of inspection.

L.

WQS EFFLUENT LIMITS

The following daily average and daily maximum WQS effluent limits apply.

Total Aluminum	5.0 mg/l
Total Arsenic	0.04 mg/l
Total Boron	5.0 mg/l
Total Cadmium	0.2 mg/l
Total Chromium	5.1 mg/l
Total Cobalt	1.0 mg/l
Total Copper	1.6 mg/l
Total Lead	0.4 mg/l

Total Mercury	0.01 mg/l
Total Selenium	0.05 mg/l
Total Vanadium	0.10 mg/l
Total Zinc	95.4 mg/l
Radium-226 + radium-228	30.0 pCi/l
Tritium(*1)	3,000,000 pCi/l

(*1) When accelerator produced.

M. MINIMUM QUANTIFICATION LEVELS (MQL)

If any individual analytical test result is less than the MQL, a value of zero (0) may be reported for that individual result for the Discharge Monitoring Report (DMR) calculations and reporting requirements.

<u>PARAMETER</u>	<u>MQL</u>
Total Arsenic	0.01 mg/l
Total Cadmium	0.001 mg/l
Total Chromium	0.01 mg/l
Total Copper	0.01 mg/l
Total Lead	0.005 mg/l
Total Mercury	0.0002 mg/l
Total Selenium	0.005 mg/l
Total Zinc	0.02 mg/l
Total Nickel	0.04 mg/l
Total Silver	0.002 mg/l
Total Residual Chlorine	0.011 mg/l

This permit may be reopened to revise these MQLs if changes occur during the term of the permit.

N. REOPENER CLAUSE

This permit may be reopened for modification under the following circumstances:

- (A) to reflect any applicable changes to the New Mexico Water Quality Standards;
- (B) to impose new or additional limitations as allowed by law or regulation that arise as a result of the information obtained from the study required under the settlement agreement between the permittee and the NMED, dated April 20, 1993; and
- (C) as provided by law. For this purpose, Petitioners will provide NMED with copies of its annual environmental surveillance reports, the addition and deletion of new outfalls, its waste stream characterization final studies, and its NPDES discharge monitoring reports.

PART III
STANDARD CONDITIONS FOR NPDES PERMITS

SECTION A. GENERAL CONDITIONS

1. Introduction
In accordance with the provisions of 40 CFR Part 122.41, et. seq., this permit incorporates by reference ALL conditions and requirements applicable to NPDES Permits set forth in the Clean Water Act, as amended, (hereinafter known as the "Act") as well as ALL applicable regulations.
2. Duty to Comply
The permittee must comply with all conditions of this permit. Any permit noncompliance constitutes a violation of the Act and is grounds for enforcement action; for permit termination, revocation and reissuance, or modification; or for denial of a permit renewal application.
3. Toxic Pollutants
 - a. Notwithstanding Part III.A.5, if any toxic effluent standard or prohibition (including any schedule of compliance specified in such effluent standard or prohibition) is promulgated under Section 307(a) of the Act for a toxic pollutant which is present in the discharge and that standard or prohibition is more stringent than any limitation on the pollutant in this permit, this permit shall be modified or revoked and reissued to conform to the toxic effluent standard or prohibition.
 - b. The permittee shall comply with effluent standards or prohibitions established under Section 307(a) of the Act for toxic pollutants within the time provided in the regulations that established those standards or prohibitions, even if the permit has not yet been modified to incorporate the requirement.
4. Duty to Reapply
If the permittee wishes to continue an activity regulated by this permit after the expiration date of this permit, the permittee must apply for and obtain a new permit. The application shall be submitted at least 180 days before the expiration date of this permit. The Director may grant permission to submit an application less than 180 days in advance but no later than the permit expiration date. Continuation of expiring permits shall be governed by regulations promulgated at 40 CFR Part 122.6 and any subsequent amendments.
5. Permit Flexibility
This permit may be modified, revoked and reissued, or terminated for cause in accordance with 40 CFR 122.62-64. The filing of a request for a permit modification, revocation and reissuance, or termination, or a notification of planned changes or anticipated noncompliance, by any permit condition.
6. Property Rights
This permit does not convey any property rights of any sort, or any exclusive privilege.
7. Duty to Provide Information
The permittee shall furnish to the Director, within a reasonable time, any information which the Director may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit, or

to determine compliance with this permit. The permittee shall also furnish to the Director, upon request, copies of records required to be kept by this permit.

8. Criminal and Civil Liability
Except as provided in permit conditions on "Bypassing" and "Upsets", nothing in this permit shall be construed to relieve the permittee from civil or criminal penalties for noncompliance. Any false or materially misleading representation or concealment of information required to be reported by the provisions of the permit, the Act, or applicable regulations, which avoids or effectively defeats the regulatory purpose of the Permit may subject the Permittee to criminal enforcement pursuant to 18 U.S.C. Section 1001.
9. 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 Act.
10. State Law
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 established pursuant to any applicable State law or regulation under authority preserved by Section 510 of the Act.
11. 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 circumstances, and the remainder of this permit, shall not be affected thereby.

SECTION B. PROPER OPERATION AND MAINTENANCE

1. Need to Halt or Reduce not a Defense
It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit. The permittee is responsible for maintaining adequate safeguards to prevent the discharge of untreated or inadequately treated wastes during electrical power failure either by means of alternate power sources, standby generators or retention of inadequately treated effluent.
2. Duty to Mitigate
The permittee shall take all reasonable steps to minimize or prevent any discharge in violation of this permit which has a reasonable likelihood of adversely affecting human health or the environment.
3. Proper Operation and Maintenance
 - a. The permittee shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by permittee as efficiently as possible and in a manner which will minimize upsets and discharges of excessive pollutants and will achieve compliance with the conditions of this permit. Proper operation and maintenance also includes adequate laboratory

controls and appropriate quality assurance procedures. This provision requires the operation of backup or auxiliary facilities or similar systems which are installed by a permittee only when the operation is necessary to achieve compliance with the conditions of this permit.

- b. The permittee shall provide an adequate operating staff which is duly qualified to carry out operation, maintenance and testing functions required to insure compliance with the conditions of this permit.

4. Bypass of Treatment Facilities

- a. Bypass not exceeding limitations. The permittee may allow any bypass to occur which does not cause effluent limitations to be exceeded, but only if it also is for essential maintenance to assure efficient operation. These bypasses are not subject to the provisions of Parts III.8.4.b. and 4.c.

b. Notice

- (1) Anticipated bypass. If the permittee knows in advance of the need for a bypass, it shall submit prior notice, if possible at least ten days before the date of the bypass.
- (2) Unanticipated bypass. The permittee shall, within 24 hours, submit notice of an unanticipated bypass as required in Part III.8.7.

c. Prohibition of bypass

- (1) Bypass is prohibited, and the Director may take enforcement action against a permittee for bypass, unless:
- (a) Bypass was unavoidable to prevent loss of life, personal injury, or severe property damage;
- (b) There were no feasible alternatives to the bypass, such as the use of auxiliary treatment facilities, retention of untreated wastes, or maintenance during normal periods of equipment downtime. This condition is not satisfied if adequate back-up equipment should have been installed in the exercise of reasonable engineering judgment to prevent a bypass which occurred during normal periods of equipment downtime or preventive maintenance; and,
- (c) The permittee submitted notices as required by Part III.8.4.b.
- (2) The Director may allow an anticipated bypass after considering its adverse effects, if the Director determines that it will meet the three conditions listed at Part III.8.4.c(1).

5. Upset Conditions

- a. Effect of an upset. An upset constitutes an affirmative defense to an action brought for noncompliance with such technology-based permit effluent limitations if the requirements of Part III.8.5.b.

are met. No determination made during administrative review of claims that noncompliance was caused by upset, and before an action for noncompliance, final administrative action subject to judicial review.

- b. Conditions necessary for a demonstration of upset. A permittee who wishes to establish the affirmative defense of upset shall demonstrate, through properly signed, contemporaneous operating logs, or other relevant evidence that:

- (1) An upset occurred and that the permittee identify the cause(s) of the upset;
- (2) The permitted facility was at the time it properly operated;
- (3) The permittee submitted notice of the upset required by Part III.8.7; and,
- (4) The permittee complied with any remedial measures required by Part III.8.2.

- c. Burden of proof. In any enforcement proceeding the permittee seeking to establish the occurrence of an upset has the burden of proof.

6. Removed Substances

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

7. Percent Removal

For publicly owned treatment works, the 30-day average percent removal for Biochemical Oxygen Demand and Suspended Solids shall not be less than 85 percent unless otherwise authorized by the permitting authority in accordance with 40 CFR 133.103.

SECTION C. MONITORING AND RECORDS

1. Inspection and Entry

The permittee shall allow the Director, or an authorized representative, upon the presentation of credentials and other documents as may be required by the law to:

- a. Enter upon the permittee's premises where regulated facility or activity is located, conducted, or where records must be kept under the conditions of this permit;
- b. Have access to and copy, at reasonable times, records that must be kept under the conditions of this permit;
- c. Inspect at reasonable times any facilities, equipment (including monitoring and control equipment) practices or operations regulated under the conditions of this permit; and
- d. Sample or monitor at reasonable times, for the purpose of assuring permit compliance or otherwise authorized by the Act, any substance or parameters at any location.

2. Representative Sampling
 Samples and measurements taken for the purpose of monitoring shall be representative of the monitored activity.

3. Retention of Records
 The permittee shall retain records of all monitoring information, including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation, copies of all reports required by this permit, and records of all data used to complete the application for this permit, for a period of at least 3 years from the date of the sample, measurement, report, or application. This period may be extended by request of the Director at any time.

4. Record Contents
 Records of monitoring information shall include:

- The date, exact place, and time of sampling or measurements;
- The individual(s) who performed the sampling or measurements;
- The date(s) and time(s) analyses were performed;
- The individual(s) who performed the analyses;
- The analytical techniques or methods used; and
- The results of such analyses.

5. Monitoring Procedures

- Monitoring must be conducted according to test procedures approved under 40 CFR Part 136, unless other test procedures have been specified in this permit or approved by the Regional Administrator.
- The permittee shall calibrate and perform maintenance procedures on all monitoring and analytical instruments at intervals frequent enough to insure accuracy of measurements and shall maintain appropriate records of such activities.
- An adequate analytical quality control program, including the analyses of sufficient standards, spikes, and duplicate samples to insure the accuracy of all required analytical results shall be maintained by the permittee or designated commercial laboratory.

6. Flow Measurements
 Appropriate flow measurement devices and methods consistent with accepted scientific practices shall be selected and used to ensure the accuracy and reliability of measurements of the volume of monitored discharges. The devices shall be installed, calibrated, and maintained to insure that the accuracy of the measurements is consistent with the accepted capability of that type of device. Devices selected shall be capable of measuring flows with a maximum deviation of less than 10% from true discharge rates throughout the range of expected discharge volumes.

SECTION D. REPORTING REQUIREMENTS

1. Planned Changes

- Industrial Permits
 The permittee shall give notice to the Director as soon as possible of any planned physical alterations or additions to the permitted facility. Notice is required only when:

(1) The alteration or addition to a permitted facility may meet one of the criteria for determining whether a facility is a new source in 40 CFR Part 122.29(b); or,

(2) The alteration or addition could significantly change the nature or increase the quantity of pollutants discharged. This notification applies to pollutants which are subject neither to effluent limitations in the permit, nor to notification requirements listed at Part III.D.10.a.

b. Municipal Permits
 Any change in the facility discharge (including the introduction of any new source or significant discharge or significant changes in the quantity or quality of existing discharges of pollutants) must be reported to the permitting authority. In no case are any new connections, increased flows, or significant changes in influent quality permitted that will cause violation of the effluent limitations specified herein.

2. Anticipated Noncompliance
 The permittee shall give advance notice to the Director of any planned changes in the permitted facility or activity which may result in noncompliance with permit requirements

3. Transfers
 This permit is not transferable to any person except after notice to the Director. The Director may require modification or revocation and reissuance of the permit to change the name of the permittee and incorporate such other requirements as may be necessary under the Act.

4. Discharge Monitoring Reports and Other Reports
 Monitoring results must be reported on Discharge Monitoring Report (DMR) Form EPA No. 3320-1 in accordance with the "General Instructions" provided on the form. The permittee shall submit the original DMR signed and certified as required by Part III.D.11 and all other reports required by Part III.D. to the EPA at the address below. Duplicate copies of DMR's and all other reports shall be submitted to the appropriate State agency(ies) at the following address(es):

EPA:
 Water Management Division
 Enforcement Branch (6W-E)
 U.S. Environmental Protection
 Agency, Region 6
 1445 Ross Avenue
 Dallas, TX 75202-2733

New Mexico:
 Program Manager
 Surface Water Quality Bureau
 New Mexico Environment Department
 1190 Saint Francis Drive
 Santa Fe, NM 87501-4182

Oklahoma (Industrial Permits Only):
 Director
 Oklahoma Water Resources Board
 P.O. Box 150
 Oklahoma City, OK 73101-0150

Louisiana:

Assistant Secretary for Water
Water Pollution Control Division
Louisiana Department of
Environmental Quality
P.O. Box 82215
Baton Rouge, LA 70884-2215

5. Additional Monitoring by the Permittee

If the permittee monitors any pollutant more frequently than required by this permit, using test procedures approved under 40 CFR Part 136 or as specified in this permit, the results of this monitoring shall be included in the calculation and reporting of the data submitted in the Discharge Monitoring Report (DMR). Such increased monitoring frequency shall also be indicated on the DMR.

6. Averaging of Measurements

Calculations for all limitations which require averaging of measurements shall utilize an arithmetic mean unless otherwise specified by the Director in the permit.

7. Twenty-Four Hour Reporting

- a. The permittee shall report any noncompliance which may endanger health or the environment. Any information shall be provided orally within 24 hours from the time the permittee becomes aware of the circumstances. A written submission shall be provided within 5 days of the time the permittee becomes aware of the circumstances. The report shall contain the following information:

- (1) A description of the noncompliance and its cause;
- (2) The period of noncompliance including exact dates and times, and if the noncompliance has not been corrected, the anticipated time it is expected to continue; and,
- (3) Steps being taken to reduce, eliminate, and prevent recurrence of the noncomplying discharge.

- b. The following shall be included as information which must be reported within 24 hours:

- (1) Any unanticipated bypass which exceeds any effluent limitation in the permit;
- (2) Any upset which exceeds any effluent limitation in the permit; and,
- (3) Violation of a maximum daily discharge limitation for any of the pollutants listed by the Director in Part II (industrial permits only) of the permit to be reported within 24 hours.

- c. The Director may waive the written report on a case-by-case basis if the oral report has been received within 24 hours.

8. Other Noncompliance

The permittee shall report all instances of noncompliance not reported under Parts III.D.4 and D.7 and Part I.B (for industrial permits only) at the time monitoring reports are submitted. The reports shall contain the information listed at Part III.D.7.

9. Other Information

Where the permittee becomes aware that it failed to submit any relevant facts in a permit application, or submitted incorrect information in a permit application or in any report to the Director, it shall promptly submit such facts or information.

10. Changes in Discharges of Toxic Substances

All existing manufacturing, commercial, mining, and silvicultural permittees shall notify the Director as soon as it knows or has reason to believe:

- a. That any activity has occurred or will occur which would result in the discharge, on a routine or frequent basis, of any toxic pollutant listed at 40 CFR Part 122, Appendix D, Tables II and III (excluding Total Phenols) which is not limited in the permit, if that discharge will exceed the highest of the following "notification levels":

- (1) One hundred micrograms per liter (100 µg/L);
- (2) Two hundred micrograms per liter (200 µg/L) for acrolein and acrylonitrile; five hundred micrograms per liter (500 µg/L) for 2,4-dinitrophenol and for 2-methyl-4,6-dinitrophenol; and one milligram per liter (1 mg/L) for antimony;
- (3) Five (5) times the maximum concentration value reported for that pollutant in the permit application; or
- (4) The level established by the Director.

- b. That any activity has occurred or will occur which would result in any discharge, on a non-routine or infrequent basis, of a toxic pollutant which is not limited in the permit, if that discharge will exceed the highest of the following "notification levels":

- (1) Five hundred micrograms per liter (500 µg/L);
- (2) One milligram per liter (1 mg/L) for antimony;
- (3) Ten (10) times the maximum concentration value reported for that pollutant in the permit application; or
- (4) The level established by the Director.

11. Signatory Requirements

All applications, reports, or information submitted to the Director shall be signed and certified.

- a. All permit applications shall be signed as follows:

- (1) For a corporation - by a responsible corporate officer. For the purpose of this section, a responsible corporate officer means:
 - (a) A president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy or decision making functions for the corporation; or,
 - (b) The manager of one or more production, or operating facilities employing more than 250 persons or having gross annual sales or expenditures exceeding \$25 million (in second-quarter 1980 dollars), if authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures.

(2) For a partnership or sole proprietorship - by a general partner or the proprietor, respectively.

(3) For a municipality, state, federal, or other public agency - by either a principal executive officer or ranking elected official. For purposes of this section, a principal executive officer of a Federal agency includes:

(a) The chief executive officer of the agency, or

(b) A senior executive officer having responsibility for the overall operations of a principal geographic unit of the agency.

b. All reports required by the permit and other information requested by the Director shall be signed by a person described above or by a duly authorized representative of that person. A person is a duly authorized representative only if:

(1) The authorization is made in writing by a person described above;

(2) The authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility or activity, such as the position of plant manager, operator of a well or a well field, superintendent, or position of equivalent responsibility, or an individual or position having overall responsibility for environmental matters for the company. A duly authorized representative may thus be either a named individual or an individual occupying a named position; and,

(3) The written authorization is submitted to the Director.

c. Certification. Any person signing a document under this section shall make the following certification:

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

12. Availability of Reports

Except for applications, effluent data, permits, and as specified in 40 CFR 122.7, any information submitted pursuant to this permit may be claimed as confidential by the submitter. If no claim is made at the time of submission, information may be made available to the public without further notice.

13. Archeological and Historical Sites (Texas Permits Only)

If during the life of this permit, new construction or land acquisition or any construction related activity where previously undisturbed ground is proposed for

disturbance by the permittee, the permittee shall send the following items to the Texas State Historic Preservation Officer (SHPO): (1) a description of the new construction and the potential impact that this activity may have upon the ground (including sludge application methods, if applicable), and (2) a copy of a USGS topographic map outlining the location of the project and associated sludge disposal areas or other ancillary impact areas. The address of the Texas SHPO is:

Texas State Historic Preservation Officer
Department of Antiquities Protection
Texas Historical Commission
P.O. Box 12276
Austin, Texas 78711

This information will be used by the Texas SHPO and EPA to consult according to the requirements of 36 CFR Part 800.4-800.6 on methods to minimize harm to historical properties. The applicant will be contacted within 30 days about further actions that may be needed to meet the requirements of 36 CFR Part 800.

SECTION E. PENALTIES FOR VIOLATIONS OF PERMIT CONDITIONS

1. Criminal

a. Negligent Violations

The Act provides that any person who negligently violates permit conditions implementing Section 301, 302, 306, 307, 308, 318, or 405 of the Act is subject to a fine of not less than \$2,500 nor more than \$25,000 per day of violation, or by imprisonment for not more than 1 year, or both.

b. Knowing Violations

The Act provides that any person who knowingly violates permit conditions implementing Sections 301, 302, 306, 307, 308, 318, or 405 of the Act is subject to a fine of not less than \$5,000 nor more than \$50,000 per day of violation, or by imprisonment for not more than 3 years, or both.

c. Knowing Endangerment

The Act provides that any person who knowingly violates permit conditions implementing Sections 301, 302, 303, 306, 307, 308, 318, or 405 of the Act and who knows at that time that he is placing another person in imminent danger of death or serious bodily injury is subject to a fine of not more than \$250,000, or by imprisonment for not more than 15 years, or both.

d. False Statements

The Act provides that any person who knowingly makes any false material statement, representation, or certification in any application, record, report, plan, or other document filed or required to be maintained under the Act or who knowingly falsifies, tampers with, or renders inaccurate, any monitoring device or method required to be maintained under the Act, shall upon conviction, be punished by a fine of not more than \$10,000, or by imprisonment for not more than 2 years, or by both. If a conviction of a person is for a violation committed after a first conviction of such person under this paragraph, punishment shall be by a fine of not more than \$20,000 per day of violation, or by imprisonment of not more than 4 years, or by both. (See Section 309.e.4 of the Clean Water Act)

2. Civil Penalties

The Act provides that any person who violates a permit condition implementing Sections 301, 302, 306, 307, 308, 318, or 405 of the Act is subject to a civil penalty not to exceed \$25,000 per day for each violation.

3. Administrative Penalties

The Act provides that any person who violates a permit condition implementing Sections 301, 302, 306, 307, 308, 318, or 405 of the Act is subject to an administrative penalty, as follows:

a. Class I Penalty

Not to exceed \$10,000 per violation nor shall the maximum amount exceed \$25,000.

b. Class II Penalty

Not to exceed \$10,000 per day for each day during which the violation continues nor shall the maximum amount exceed \$125,000.

SECTION F. DEFINITIONS

All definitions contained in Section 502 of the Act shall apply to this permit and are incorporated herein by reference. Unless otherwise specified in this permit, additional definitions of words or phrases used in this permit are as follows:

1. "Act" means the Clean Water Act (33 U.S.C. 1251 et. seq.), as amended.
2. "Administrator" means the Administrator of the U.S. Environmental Protection Agency.
3. "Applicable effluent standards and limitations" means all state and Federal effluent standards and limitations to which a discharge is subject under the Act, including, but not limited to, effluent limitations, standards or performance, toxic effluent standards and prohibitions, and pretreatment standards.
4. "Applicable water quality standards" means all water quality standards to which a discharge is subject under the Act.
5. "Bypass" means the intentional diversion of waste streams from any portion of a treatment facility.
6. "Daily Discharge" means the discharge of a pollutant measured during a calendar day or any 24-hour period that reasonably represents the calendar day for purposes of sampling. For pollutants with limitations expressed in terms of mass, the "daily discharge" is calculated as the total mass of the pollutant discharged over the sampling day. For pollutants with limitations expressed in other units of measurement, the "daily discharge" is calculated as the average measurement of the pollutant over the sampling day. "Daily discharge" determination of concentration made using a composite sample shall be the concentration of the composite sample. When grab samples are used, the "daily discharge" determination of concentration shall be arithmetic average (weighted by flow value) of all samples collected during that sampling day.
7. "Daily Average" (also known as monthly average) discharge limitations means the highest allowable average of "daily discharge(s)" over a calendar month, calculated as the sum of all "daily discharge(s)" measured during a calendar month divided by the number of "daily discharge(s)" measured during that month.

When the permit establishes daily average concentration effluent limitations or conditions, the daily average concentration means the arithmetic average (weighted flow) of all "daily discharge(s)" of concentration determined during the calendar month where C = da concentration, F = daily flow and n = number of da samples; daily average discharge =

$$\frac{C_1F_1 + C_2F_2 + \dots + C_nF_n}{F_1 + F_2 + \dots + F_n}$$

8. "Daily Maximum" discharge limitation means the high allowable "daily discharge" during the calendar month.
9. "Director" means the U.S. Environmental Protection Agency Regional Administrator or an authorized representative.
10. "Environmental Protection Agency" means the U.S. Environmental Protection Agency.
11. "Grab sample" means an individual sample collected less than 15 minutes.
12. "Industrial user" means a nondomestic discharger, identified in 40 CFR 403, introducing pollutants into publicly owned treatment works.
13. "National Pollutant Discharge Elimination System" means the national program for issuing, modifying, revoking and reissuing, terminating, monitoring and enforcing permits, and imposing and enforcing pretreatment requirements, under Sections 307, 318, 402, and 403 of the Act.
14. "Severe property damage" means substantial physical damage to property, damage to the treatment facility which causes them to become inoperable, or substantial and permanent loss of natural resources which reasonably be expected to occur in the absence of a bypass. Severe property damage does not mean economic loss caused by delays in production.
15. "Sewage sludge" means the solids, residues, precipitates separated from or created in sewage treatment unit processes of a publicly owned treatment works. Sewage as used in this definition means any wastes including wastes from humans, households, commercial establishments, industries, and storm water runoff, which are discharged to or otherwise enter a publicly owned treatment works.
16. "Treatment works" means any devices and systems used for the storage, treatment, recycling and reclamation of municipal sewage and industrial wastes of a limited nature to implement Section 201 of the Act, or necessary to recycle or reuse water at the most economical over the estimated life of the works, including intercepting sewers, sewage collection systems, pumps, power and other equipment, and any other structural extension, improvement, reworking, modifications, alterations thereof.
17. "Upset" means an exceptional incident in which the unintentional and temporary noncompliance with technology-based permit effluent limitations because of factors beyond the reasonable control of the permittee. An upset does not include noncompliance to the extent caused by operational error, improperly designed

treatment facilities, inadequate treatment facilities, lack of preventive maintenance, or careless or improper operation.

18. For fecal coliform bacteria, a sample consists of one effluent grab portion collected during a 24-hour period at peak loads.
19. The term "MGD" shall mean million gallons per day.
20. The term "mg/L" shall mean milligrams per liter or parts per million (ppm).
21. The term "µg/L" shall mean micrograms per liter or parts per billion (ppb).
22. Municipal Terms:
 - a. "7-day average", other than for fecal coliform bacteria, is the arithmetic mean of the daily values for all effluent samples collected during a calendar week, calculated as the sum of all daily discharges measured during a calendar week divided by the number of daily discharges measured during that week. The 7-day average for fecal coliform bacteria is the geometric mean of the values for all effluent samples collected during a calendar week.
 - b. "30-day average", other than for fecal coliform bacteria, is the arithmetic mean of the daily values for all effluent samples collected during a calendar month, calculated as the sum of all daily discharges measured during a calendar month divided by the number of daily discharges measured during that month. The 30-day average for fecal coliform bacteria is the geometric mean of the values for all effluent samples collected during a calendar month.
 - c. "24-hour composite sample" consists of a minimum of 12 effluent portions collected at equal time intervals over the 24-hour period and combined proportional to flow or a sample collected at frequent intervals proportional to flow over the 24-hour period.
 - d. "12-hour composite sample" consists of 12 effluent portions collected no closer together than one hour and composited according to flow. The daily sampling intervals shall include the highest flow periods.
 - e. "6-hour composite sample" consists of six effluent portions collected no closer together than one hour (with the first portion collected no earlier than 10:00 a.m.) and composited according to flow.
 - f. "3-hour composite sample" consists of three effluent portions collected no closer together than one hour (with the first portion collected no earlier than 10:00 a.m.) and composited according to flow.