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Albuquerque Operations Office
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RED LANL TA-16 '99

Benito Garcia, Chief
Hazardous and Radioactive Materials Bureau
New Mexico Environment Department
2044 Galisteo Street, Building A
P. O. Box 26110
Santa Fe, NM 87505

Dear Mr. Garcia:

Subject: High Explosives Wastewater Treatment Facility (HEWTF) Response to HRMB's December 10, 1998 Letter

The purpose of this letter is to respond to your letter of December 10, 1998, in which you requested additional information concerning the HEWTF. Shortly after receipt of that letter, a monthly meeting was held between representatives of the Department of Energy (DOE/LAAO), the University of California (UC), and members of the New Mexico Environment Department's (NMED) Hazardous and Radioactive Materials Bureau (HRMB). In that meeting it was decided that the best approach to resolving the HEWTF issue was to set up a tour for members of HRMB's permitting and enforcement staffs as well as members from the NMED's Oversight Bureau.

The tour was conducted on January 5, 1999. On concluding the tour, further discussions occurred to allow DOE/UC staff to address any remaining questions NMED staff may have had. Michael Chacon and Mark Coffman of your staff commented at the conclusion of this tour and discussions that followed that they believed the issue had been adequately addressed, but an additional letter might be needed from UC/DOE for closure of the issue. In a phone conversation following the tour, John Kieling of your staff suggested that prior to developing a response to HRMB's letter requesting further information, we needed to meet and discuss this issue and the outcome of the tour. An extension to the deadline in the December 10, 1998 HRMB letter was requested to accommodate this and was subsequently granted by HRMB.

At the January Monthly Meeting this issue was discussed and DOE/UC presented additional documentation concerning the operations of the HEWTF. During that meeting UC staff members (Alex Puglisi and Mike Saladen) were asked for some information they had in their possession. This information was informally presented to HRMB at that time and is included with this response as Attachments A and B. Mr. Chacon was not

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able to attend the meeting, so no decision was reached during this meeting. Within the week John Kieling called and informed us that HRMB had decided, however, that the HEWTF was not covered under the New Mexico Hazardous Waste Management Regulations. He suggested that to complete the file on this issue, LANL should send a response to the December 10, 1998 letter issued by HRMB.

UC/DOE's position has always been that the HEWTF was covered by the Clean Water Act exemption of 20 NMAC Subpart II, 40 CFR 261.3 and 261.4. This unit, therefore, is exempt and was not requested to be permitted in the TA-16 Chapter of the LANL permit application.

We appreciate HRMB's willingness to review this issue. Although this was a contentious issue at times, staff from all parties involved were able to work in a professional manner to resolve the issue. If you should have any questions concerning this issue, please feel free to contact me at (505) 665-5042 or Jack Ellvinger at (505) 667-0633.

Sincerely,

H. L. "Jody" Plum
Office of Environment

LAAME:6JP-117

Attachments A and B

cc w/attachments:
Robert S. Dinwiddie, Ph.D., Manager
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John Kieling
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ATTACHMENT A

HIGH EXPLOSIVES WASTEWATER TREATMENT FACILITY

Figure 1.0, Schematic of Collection and Treatment Systems

and

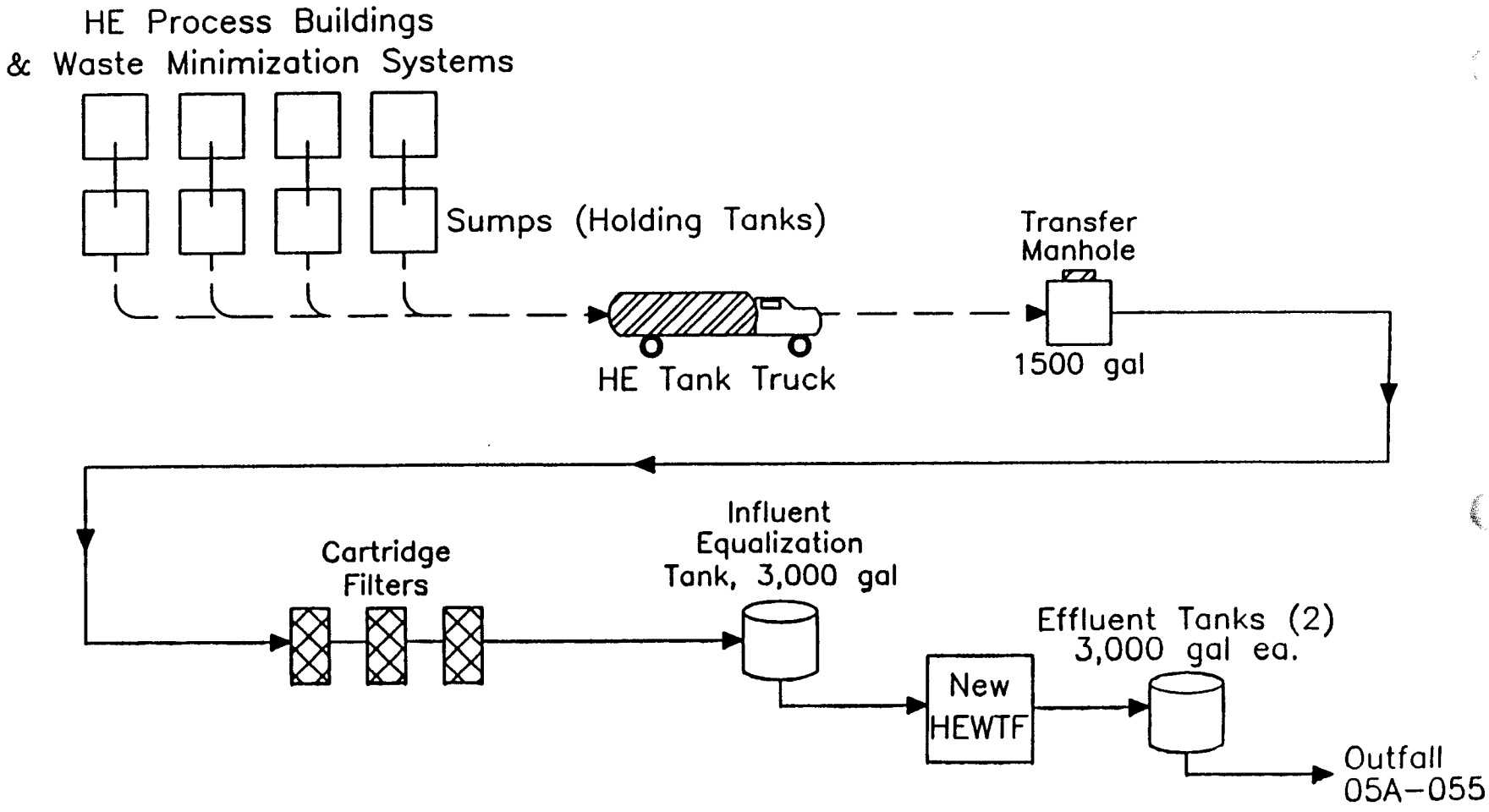
Treated/Untreated Water Quality Data: 2/4/98-2/9/98

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**
Unteated/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) NO3-N	NO2-N	NH3-N	TKN	pH
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
Treated/TA-16-260	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
Treated/TA-22-93	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
Treated/TA-9-21 Sump 185	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
Treated/TA-22-93	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
Treated/TA-9-21 Sump 185	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
Treated/TA-16-260 Sumps 13, 22, 25	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

			Total Metals (mg/L)																
Sump Location	Sample Date	Sample ID	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	
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**

			Total Nitrogen (mg/L)			
Sump Location	Sample Date	Sample ID	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.