OK 3549

Helen? Who asked?

Fansteel Metals
number ten tantalum place muskogee, oklahoma 74401

RECEIVED
EPA REGION VI
1985 JAN 14 AM 11:03
SUPERFUND BRANCH

January 8, 1985

Ms. Martha McKee (6AW-SC)
U. S. Environmental Protection Agency
1201 Elm Street
Dallas, Texas 75270

Re: EPA Memo of December 6, 1984

Dear Ms. McKee:

Attached is the latest Fansteel plant map showing the various inspection wells. Not all wells have been utilized for monitoring wells, but rather as piezometers. We first installed piezometers beginning in 1975 to facilitate the design and construction of waste storage ponds. The elevation of the water in the wells was recorded at various intermittent times as recorded in Table I. It is noted that there is some fluctuation of water level depending on the wet or dry season of the year.

It is necessary to point out that these wells were constructed by drilling into the shale (bed rock) about 6-12 inches and installing a steel casing with slots near the bottom, extending up four to six feet off the bottom.

Beginning in 1983, the Oklahoma Water Resources Board requested data be submitted on water samples taken from these walls. A copy of that data is included. To date there has been no pumping of these wells prior to sampling; the sample is taken by bailing.

The map identifies wells near Pond 3. Pond 3 has a liner with the bottom located within two feet of the impervious shale layer. Around Pond 3 at the shale level is a French drain that opens to Well #6. The French drain is designed to take away the hydrostatic pressure from the under side of the liner and collects waters from the plant site at a rate of about 8 gpm. This water is pumped continuously to the waste treatment system. Wells #9, 10, 21, 22 and 24 serve as piezometers for Pond 3 and data is monitored by the Nuclear Regulatory Commission.

195865

All documents and data pertaining to Fansteel Metals plant at Muskogee are under the jurisdiction of the Muskogee Plant Manager. All information contained in this letter is "Company Confidential" and its release to others could cause much competitive harm.

Very truly yours,

FANSTEEL/METALS

James A. Pierret

JAMES A. PIERRET
Muskogee Plant Manager

JAP:np

Enclosures: Table I
Monitor Well Report for January, 1984
Monitor Well Report for April, 1984
Monitor Well Report for July, 1984
Monitor Well Report for October, 1984
Map Showing Inspection Wells

TABLE I

11	12	13	14	15	16	17	18	19	20
34'10"	30'0"	35'7"	32'8"	32'10"					
34'10"	30'0"	35'7"	32'8"	32'10"					
34'3"	30'5"				15'6"	17'5"	17'0"	15'0"	18'6"
34'0"	28'7"	34'6"	32'0"	33'0"	14'7"	17'5"	16'10"	8'0"	19'0"
33'8"	27'4"	33'5"	31'2"	31'9"	14'0"	15'4"	14'7"	10'0"	18'2"
33'6"	24'6"	33'9"			14'3"	17'2"	15'4"	12'0"	18'11"
		33'8"				16'8"		11'8"	
33'5"	28'6"	34'3"	32'0"	32'3"	15'3"	17'4"	16'0"	13'3"	19'2"
33'11"	28'7"	34'7"	32'0"	32'6"	16'0"	17'9"	15'4"	15'2"	19'5"
33'11"	29'0"	34'7"	32'0"	32'5"	16'1"	17'5"	15'11"	17'2"	19'7"
33'9"	28'7"	34'3"	32'2"	32'5"	15'3"	16'10"	15'6"	15'8"	19'4"
33'10"	28'2"	33'9"	32'11"	32'4"	14'7"	16'10"	15'2"	14'5"	19'3"
33'11"	27'11"	33'7"	31'11"	32'3"	13'11"	16'2"	15'4"	12'5"	18'5"
33'10"		32'2"			14'2"	16'7"	15'6"		

MONITOR WELLS

Date	Well No.	Depth	Spec. Cond.	pH	NH_3 mg/l	F mg/l	TDS	Cd ppm	Cr ppm	Cu ppm
10-18-8	2	16'5"	1700	6.9	131	6	380	--	--	--
12-7	2	16'6"	1700	6.9	142	9	664	--	--	--
10-28	3	24'9"	1500	8.3	20	17	920	--	--	--
12-7	3	25'0"	1600	7.8	21	30	964	--	--	--
10-28	4	17'3"	1200	6.0	88	155	254	.1⁻	.1⁻	.1⁻
12-7	4	19'0"	1200	4.0	97	152	354	.1⁻	.1⁻	.1⁻
10-28	5	16'9"	310	6.6	21	17	114	--	--	--
12-7	5	16'8"	670	6.0	58	38	258	--	--	--
10-28	7	9'6"	500	5.0	10⁻	51	286	.1⁻	.1⁻	.1⁻
12-7	7	9'5"	660	6.9	10⁻	13	588	--	--	--
10-28	8	27'9"	560	4.6	14	38	560	.1⁻	.1⁻	.1⁻
12-7	8	28'0"	1100	3.6	25	58	964	.1⁻	.1⁻	.1⁻
10-28	11	34'2"	510	5.2	11	23	242	--	--	--
12-7	11	34'2"	480	6.0	10⁻	37	484	--	--	--
10-28	12	28'10"	71	5.0	10⁻	3	54	.1⁻	.1⁻	.1⁻
12-7	12	28'10"	120	5.5	10⁻	15	258	.1⁻	.1⁻	.1⁻
10-28	13	34'3"	290	8.0	40	4	190	--	--	--
12-7	13	34'3"	360	6.5	10⁻	7	250	--	--	--
10-28	15	32'4"	280	6.0	10⁻	3	170	--	--	--
12-7	15	32'6"	320	5.5	13	10	146	.1⁻	.1⁻	.1⁻
10-28	16	15'7"	580	6.3	10⁻	3	374	--	--	--
12-7	16	15'7"	730	6.5	10⁻	6.4	480	--	--	--
10-28	18	17'1"	1200	7.8	35	8	686	--	--	--
12-7	18	16'7"	1500	6.8	36	3	736	--	--	--
10-28	19	16'9"	380	6.5	10⁻	6	270	--	--	--
12-7	19	17'0"	420	6.1	10⁻	3	258	--	--	--
10-28	20	19'7"	120	6.9	10⁻	8	48	--	--	--
12-7	20	19'7"	180	6.0	10⁻	3	120	--	--	--

New Well

12-7	1	15'10"	No Water

Reported January, 1984

MONITOR WELLS

Date	Well No.	Depth	Spec. Cond.	pH	NH_3 Mg/ℓ	F Mg/ℓ	TDS	Cd ppm	Cr ppm	Cu ppm
1-6	1	15'10"				No Water				
2-22	1	15'4"				No Water				
4-5*	1	15'4"				No Water				
1-6	2	16'4"	1900	7.5	183	25	300			
2-22	2	16'6"	1900	7.7	119	<10	560			
4-5	2	15'10"	1800	6.0	112	<10	636			
1-6	3	24'9"	4100	7.5	40	29	1100			
2-22	3	24'11"	2300	7.2	42	32	1260			
4-5	3	24'6"	2400	7.1	39	24				
1-6	4	19'2"	3300	4.9	283	134	2580	<.1	<.1	<.1
2-22	4	19'11"	3300	4.3	222	362	1540	<.1	<.1	<.1
4-5	4	18'8"	4800	4.4	290	423	1970	<.1	<.1	<.1
1-6	5	16'6"	760	6.5	75	63	240			
2-22	5	16'7"	770	6.8	68	76	200			
4-5	5	15'10"	660	6.5	44	61				
1-6	7	9'9"	710	5.7	<10	83	640	<.1	<.1	<.1
2-22	7	9'8"	880	6.0	<10	66	660	<.1	<.1	<.1
4-5	7	8'6"	830	5.7	10	71	650	<.1	<.1	<.1
1-6	8	27'5"	1200	4.9	26	75	740	<.1	<.1	<.1
2-22	8	27'8"	2300	4.5	67	106	1160	<.1	<.1	<.1
4-5	8	27'3"	2300	4.5	76	71		<.1	<.1	<.1
1-6	11	34'5"	440	6.3	<10	27	300			
2-22	11	34'9"	610	6.0	<10	10	220			
4-5	11	34'0"	590	6.3	10	35	220			
1-6	12	29'3"	160	6.7	<10	10	180			
2-22	12	28'7"	200	6.0	<10	47	140			
4-5	12	28'4"	120	6.4	<10	<10				
1-6	13	34'8"	380	7.8	<10	6	360			
2-22	13	34'5"	540	7.2	<10	12	300			
4-5	13	34'10"	470	7.0	<10	<10				
1-6	15	32'8"	340	6.8	16	6	280			
2-22	15	32'9"	440	6.7	16	<10	180			
4-5	15	32'4"	360	7.0	<10	<10	142			
1-6	16	15'10"	360	7.2	<10	8	750			
2-22	16	15'7"				No Sample				
4-5	16	14'11"	1300	6.9	20	<10	840			
1-6	18	16'4"	3900	7.6	228	12	2200			
2-22	18	17'1"	4000	6.9	170	19	1720			
4-5	18	16'3"	3600	6.8	188	13				
1-6	19	17'5"	420	7.3	<10	7	400			
2-22	19	17'8"	420	7.0	<10	12	240			
4-5	19	12'7"	460	7.4	<10	<10	230			
1-6	20	19'7"	1500	7.2	<10	7	300			
2-22	20	19'6"	230	6.9	<10	<10	160			
4-5	20	18'11"	200	7.2	10	<10				

*Weather and ground conditions interferred with March Sampling.

LEACHATE OBSERVATION PIPE

Pond 8 - Jan. - Dry
Feb. - Dry
Mar. - Dry

Pond 9 - Jan. - Dry
Feb. - Dry
Mar. - Dry

Reported April, 1984

MONITOR WELLS

Date	Well No.	Depth	Sp. Cond.	pH	NH_3 Mg/l	F Mg/l	TDS	Cd ppm	Cr ppm	Cu ppm
4/5	2	15'10"	1800	7.5	112	<10	636			
5/15	2	15'10"	2600	7.3	120	<10	728			
6/28	2	16'6"	1900	7.8	331	<10				
4/5	3	24'6"	2400	7.1	39	24	1262			
5/15	3	24'5"	1800	6.5	10	24	1356			
6/28	3	24'9"	2700	7.8	<10	39				
4/5	4	18'8"	4800	4.4	290	423	1970	<.1	<.1	<.1
5/15	4	18'6"	4000	4.5	254	321	2078	<.1	<.1	<.1
6/28	4	16'2"	4400	4.9	460	402	1970	<.1	<.1	<.1
4/5	5	15'10"	660	6.5	44	61	150			
5/15	5	16'3"	600	6.5	60	45	424			
6/28	5	18'8"	580	6.7	18	53	1056			
4/5	7	8'6"	830	5.7	<10	71	626	<.1	<.1	<.1
5/15	7	8'3"	820	7.4	10	5	502			
6/28	7	9'3"	940	5.5	10	56	1160	<.1	<.1	<.1
4/5	8	27'3"	2300	4.5	76	71	1350	<.1	<.1	<.1
5/15	8	27'6"	2300	4.3	50	62	960	<.1	<.1	<.1
6/28	8	27'10"	2200	5.7	60	72	1252	<.1	<.1	<.1
4/5	11	34'0"	590	6.3	10	35	220			
5/5	11	33'8"	520	7.3	<10	19	404			
6/28	11	33'8"	480	6.9	10	18	228			
4/5	12	28'4"	120	6.4	<10	<10	120			
5/15	12	28'5"	140	6.0	<10	<10	272			
6/28	12	29'0"	160	6.7	<10	<10	68			
4/5	13	34'10"	470	7.0	<10	<10	154			
5/15	13	34'1"	450	7.1	<10	<10	262			
6/28	13	34'4"	400	7.2	<10	<10	215			
4/5	15	32'4"	360	7.0	<10	<10	142			
5/15	15	32'2"	460	6.8	20	<10	360			
6/28	15	32'0"	400	7.3	<10	74	141			
4/5	16	14'11"	1300	7.2	20	<10	840			
5/15	16	14'10"	1200	6.7	15	10	588			
6/28	16	15'0"	1400	7.3	10	10	917			
4/5	18	16'4"	3600	6.8	188	13	1762			
5/15	18	16'4"	4000	6.6	260	15	1930			
6/28	18	17'0"	3700	8.7	<10	39	2049			
4/5	19	12'7"	460	7.4	<10	<10	230			
5/15	19	11'4"	500	6.1	20	35	220			
6/28	19	12'8"	350	7.4	19	46	200			
4/5	20	18'11"	200	7.2	<10	<10	140			
5/15	20	18'8"	200	6.2	<10	<10	160			
6/28	20	18'7"	170	7.3	21	54	340			

LEACHATE OBSERVATION PIPE

Pond 8 - April - Dry
May - Dry
June - Dry

Pond 9 - April - Dry
May - Dry
June - Dry

Reported July, 1984

MONITOR WELLS

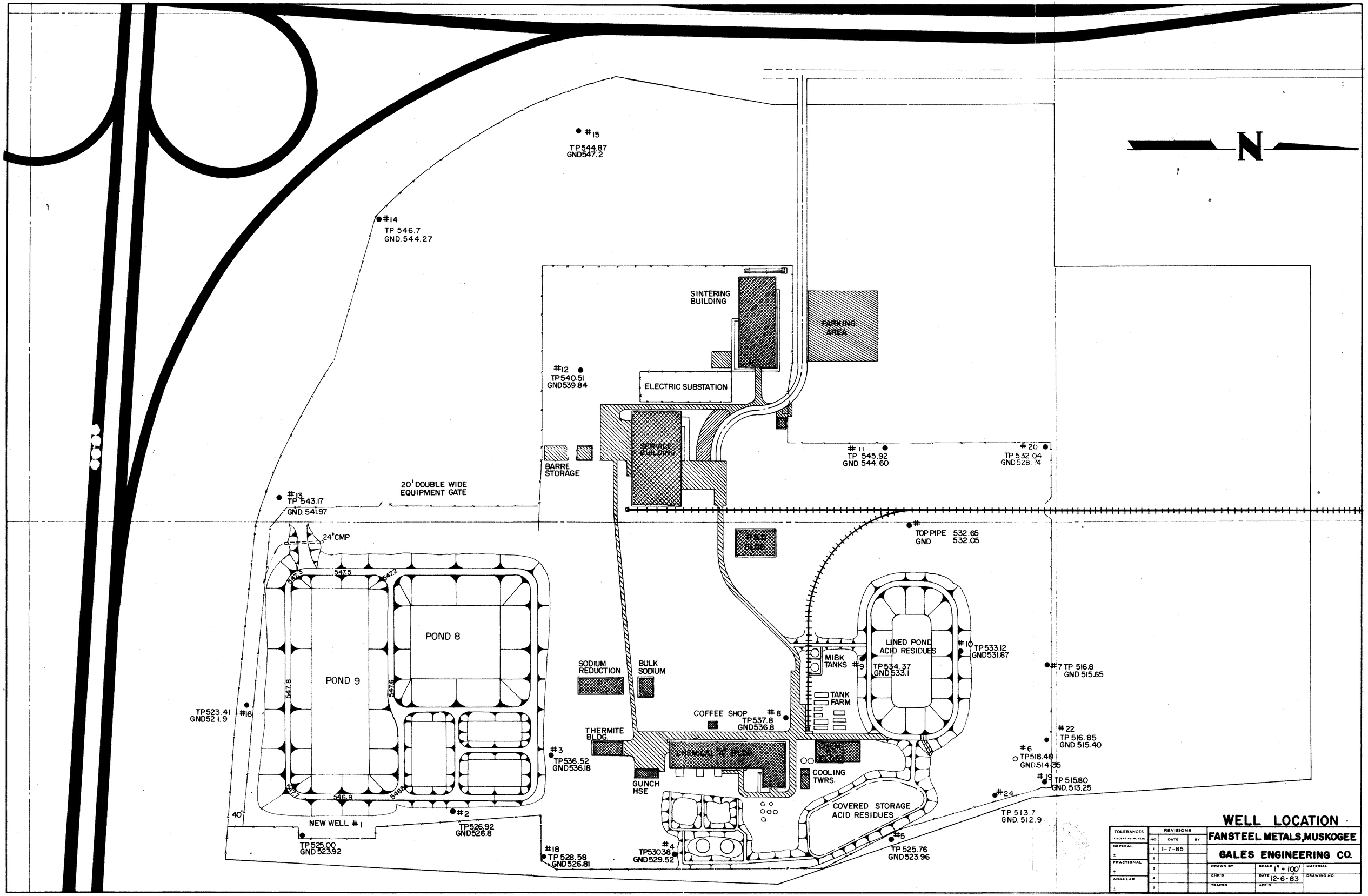
Date	Well No.	Depth	Spec. Cond.	pH	NH_3 Mg/l	F Mg/l	TDS	Cd ppm	Cr ppm	Cu ppm
7	1	15'4"								
8	1	15'4"								
9	1	15'4"								
7/27	2	16'6"	2000	7.5	207	< 10	547			
8/31	2	16'5"	2050	7.0	104	< 10	1440			
9/28	2	17'0"	2000	7.3	166	< 10	504			
7/27	3	24'10"	2600	7.8	15	31	1298			
8/15	3	25'0"	2600	6.4	33	28	1440			
9/31	3	25'3"	2700	7.4	26	34	1369			
7/27	4	17'10"	4800	5.0	464	334	3950	< .1	< .1	< .1
8/31	4	19'0"	4450	4.6	347	383	3160	< .1	< .1	< .1
9/28	4	19'3"	4500	4.6	460	365	3677	< .1	< .1	< .1
7/27	5	16'10"	620	6.3	< 10	68	112			
8/31	5	16'9"	560	6.4	40	33	160			
9/28	5	16'8"	545	6.4	67	38	141			
7/27	7	9'2"	760	7.9	< 10	12	317			
8/31	7	9'6"	690	7.9	< 10	< 10	300			
9/28	7	9'7"	690	7.9	10	56	1160			
7/27	8	27'9"	3050	4.9	169	67	1731	< .1	< .1	< .1
8/31	8	27'9"	3500	4.1	95	73	2160	< .1	< .1	< .1
9/28	8	27'11"	3300	4.8	126	84	1690	< .1	< .1	< .1
7/27	11	33'10"	670	6.6	10	40	228			
8/31	11	34'1"	515	6.9	11	36	240			
9/28	11	34'4"	585	7.9	10	19	202			
7/27	12	28'9"	155	6.7	< 10	< 10	34			
8/31	12	29'1"	135	6.7	< 10	< 10	80			
9/28	12	29'4"	180	6.9	< 10	< 10	36			
7/27	13	34'6"	520	7.0	12	< 10	71			
8/31	13	34'9"	1650	7.0	< 10	< 10	1000			
9/28	13	34'9"	2150	6.6	51	< 10	1473			
7/27	15	32'9"	500	7.0	< 10	< 10	93			
8/31	15	32'9"	520	6.7	33	< 10	240			
9/28	15	32'9"	465	7.8	34	< 10	109			
7/27	16	15'5"	1400	7.3	12	< 10	692			
8/31	16	15'8"	1250	7.2	27	< 10	680			
9/28	16	15'10"	1150	7.7	36	10	562			
7/27	18	17'0"	7000	6.0	150	14	3823			
8/31	18	17'5"	6800	6.3	370	15	4120			
9/28	18	17'6"	9400	6.7	663	26	6200			
7/27	19	13'5"	500	6.2	< 10	36	26			
8/31	19	17'7"	670	6.5	< 10	22	400			
9/28	19	16'8"	1100	6.9	25	27	932			
7/27	20	19'2"	615	4.1	< 10	53	476	< .1	< .1	< .1
8/31	20	19'6"	180	6.3	< 10	< 10	120			
9/28	20	19'9"	545	5.1	17	64	682			

LEACHATE OBSERVATION PIPE

Pond 8 - July - Dry
Aug. - Dry
Sept. - Dry

Pond 9 - July - Dry
Aug. - Dry
Sept. - Dry

Reported October, 1984



TELEDYNE POST 18AE-20E - 24 x 36