Public Service Company of New Mexico
Person Generating Station
Groundwater Treatment System

Treatment Effectiveness Report
Third Quarter 2000

November 14, 2000

Report Prepared Pursuant to Requirements Contained in:

The Person Generating Station Corrective Action Directive (NMT 360010342)
and
The New Mexico Environment Department Discharge Plan, DP-1006

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Executive Summary

Contour maps of the three primary contaminants of concern, PCE, DCE, and TCA, are shown in Figures 10, 11, and 12, respectively. These contour maps indicate the areal extent of the groundwater plume and the associated contaminant concentrations within the plume. The contour maps are prepared twice per year using data from the spring and fall sampling events.

Figure 10 indicates that the low PCE concentration zone (5 ppb to 20 ppb) has increased in size, but the moderate PCE concentration zone (20 ppb to 100 ppb) has decreased in size since April 2000. Figure 11 indicates that a similar trend for DCE has occurred since April 2000. Due to the low concentrations of TCA in the groundwater, no plume is shown in Figure 12. This is similar to the April 2000 contour map.

Due to the locally declining groundwater table, PSMW-16 was not operated during the third quarter. PSMW-24 was not operated during the third quarter due to operational problems with the pump. Operational problems with the effluent transfer pump resulted in the GTS remaining off-line for part of the third quarter. Operational problems with the sulfuric acid injection pump prevented operation of the east treatment train during the third quarter.

I. Introduction

This report is prepared pursuant to requirements contained in the Person Generating Station Corrective Action Directive (NMT360010342) issued by the New Mexico Environment Department (NMED) Hazardous and Radioactive Materials Bureau, and requirements contained in Discharge Plan DP-1006 issued by the NMED Groundwater Protection and Remediation Bureau.

This report contains information on sampling results and operational activities at the Person Generating Station Groundwater Treatment System (GTS). The GTS is designed to extract volatile organic compound (VOC) contaminated groundwater, treat through an air stripper and granular activated carbon filter, and discharge the treated water to an irrigation pond at the UNM Championship Golf Course.

Figure 1 is a site map of the Person Generating Station vicinity and shows well locations and the location of the pipeline system. Note that Figure 1 does not show the locations of the recently installed extraction wells, EW-2 and EW-3.

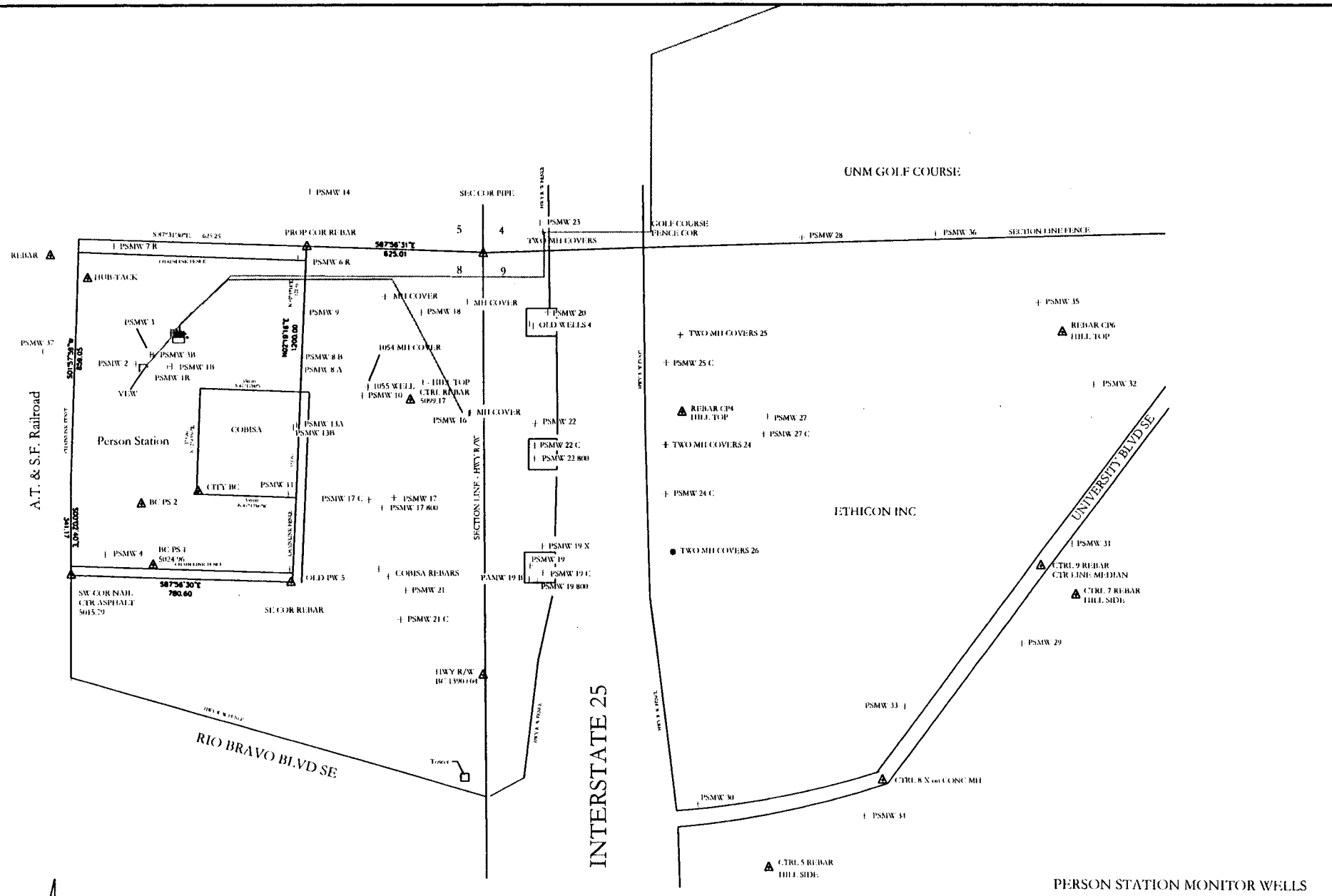

Exhibit A

1" = 500'

PERSON STATION MONITOR WELLS
at Person Station and Ethicon

WITHIN SEC. 8 & 9, T.9 N., R.3 E., N.M.P.M.
BERNALILLO COUNTY, NEW MEXICO

PUBLIC SERVICE CO. OF NEW MEXICO
ALBUQUERQUE, NEW MEXICO

DWN BY: J.P.C. DATE: OCTOBER 11, 1999
OKD BY: SCALE SHOWN

Modified by J. Evaskovich 2/4/00

II. Operational History

The GTS was started on Friday, January 27, 1995, with treated effluent being sent to the UNM Championship Golf Course.

During 1995, the GTS encountered periodic minor problems as well as a more serious problem with mineralization of the system components downstream from the air stripper. The GTS was kept off-line for most of the first quarter of 1996 while the mineralization problem was studied. After evaluation of various treatment methods, an acid treatment system was selected as the most feasible solution to the mineralization problem.

Installation of the acid treatment system began in early May 1996. In early April, construction activities were initiated to convert monitor wells PSMW-24, PSMW-25, and PSMW-26 (PSMW-24, 25, and 26) to extraction wells. The GTS resumed regular operation in mid-June 1996.

The Person Generating Station Discharge Plan, DP-1006, was amended and approved by the Groundwater Protection and Remediation Bureau in mid-June 1997. As part of the amended plan, the existing plan requirement for the sulfuric acid treatment system was replaced. Previously, acid addition to the effluent was restricted to 35 mg/l. The new requirement specifies adjustment of the acid treatment system to maintain an effluent pH range of 6.0 to 9.0. A pH probe and chart recorder were installed on the effluent discharge tank for daily monitoring of pH, and effluent samples are collected monthly for total sulfate analysis.

In an effort to enhance the GTS effectiveness by increasing system pumping rates, two new extraction wells were completed during October 1999. The new wells are designated EW-2 and EW-3.

Due to the locally declining groundwater table, PSMW-16 was not operated during the third quarter. PSMW-24 was not operated during the third quarter due to operational problems with the pump. Operational problems with the effluent transfer pump resulted in the GTS remaining off-line for part of the third quarter. Operational problems with the sulfuric acid injection pump prevented operation of the east treatment train during the third quarter.

III. Groundwater Treatment Effectiveness

Figures 2, 3, and 4 show graphs of concentration of total chlorinated VOCs as measured at wells PSMW-16, VEW, and EW-1 over the operational period of the GTS. Figure 5 shows a graph of concentration of total chlorinated VOCs in the combined influent from wells PSMW-24, 25, and 26 over the operational period of these wells. Figures 6 and 7 show graphs of concentration of total chlorinated VOCs over the operational period of EW-3 and EW-2. More detailed data for these wells are shown in Tables 1, 2, 3, 4, 5, and 6.

As noted above PSMW-16 was non-operational during the third quarter. Consequently, no samples were collected from PSMW-16 this quarter. VEW, EW-1, and EW-2 were operated intermittently due to operational problems with the east treatment train acid injection pump and the effluent transfer pump. Consequently, these wells were only sampled once this quarter. Similarly, intermittent operation of EW-3 resulted in only two samples being collected during the third quarter.

Although limited sampling of the extraction wells was conducted this quarter, concentration of total chlorinated VOCs vs. time graphs were still prepared. In the VEW and the combined influent from PSMW-24, 25, and 26, total chlorinated VOCs remained relatively constant during this quarter.

Total chlorinated VOCs continued to decrease at EW-1 and EW-2 this quarter. During the third quarter, total chlorinated VOCs increased at EW-3.

Laboratory reports for this quarter are contained in Appendix A.

Figure 2
Total VOCs at PSMW-16

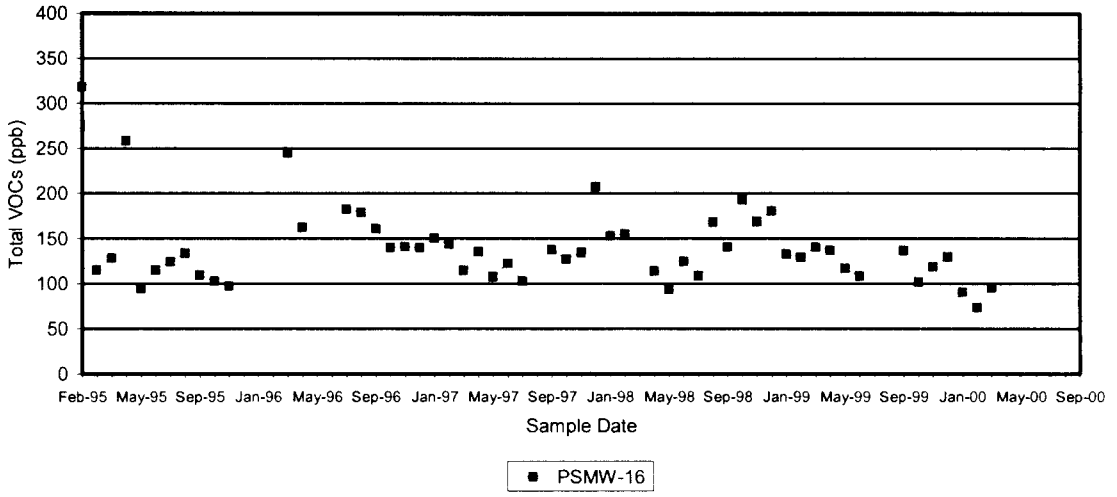

Figure 3
Total VOCs at VEW

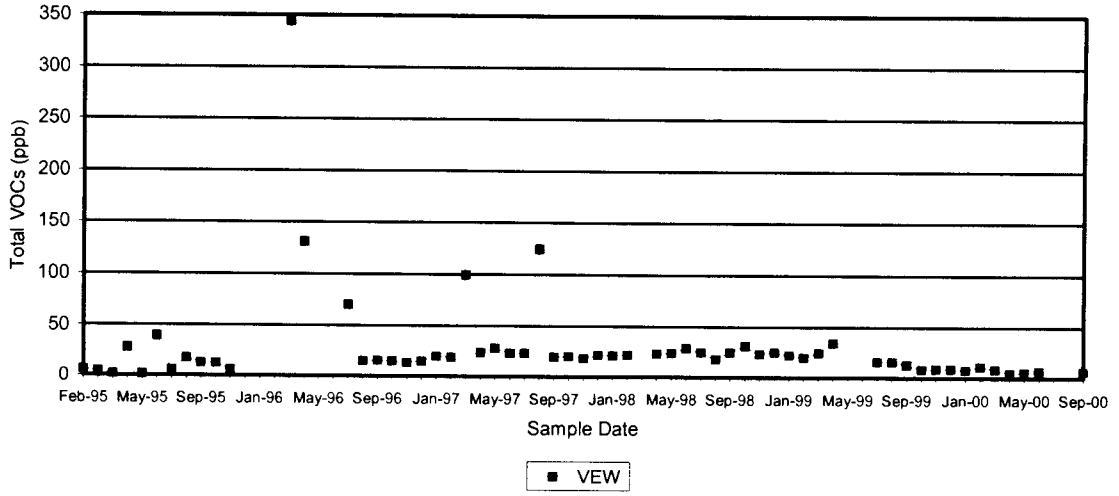

Figure 4
Total VOCs at EW-1

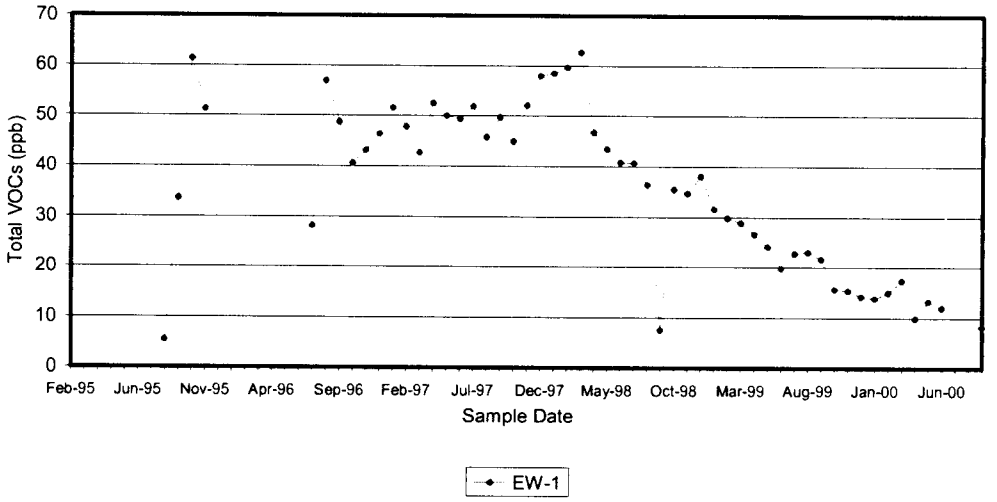

Figure 5
Total VOCs at PSMW-24,25,26

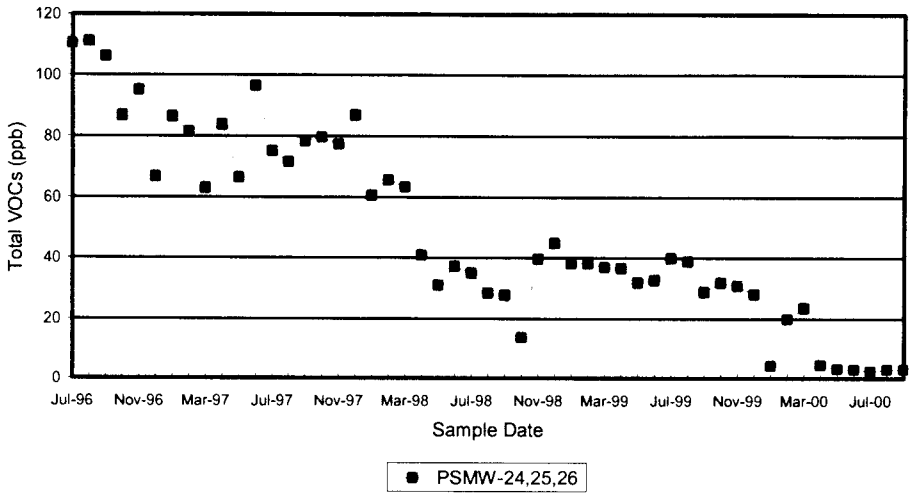

Figure 6
Total VOCs at EW-3

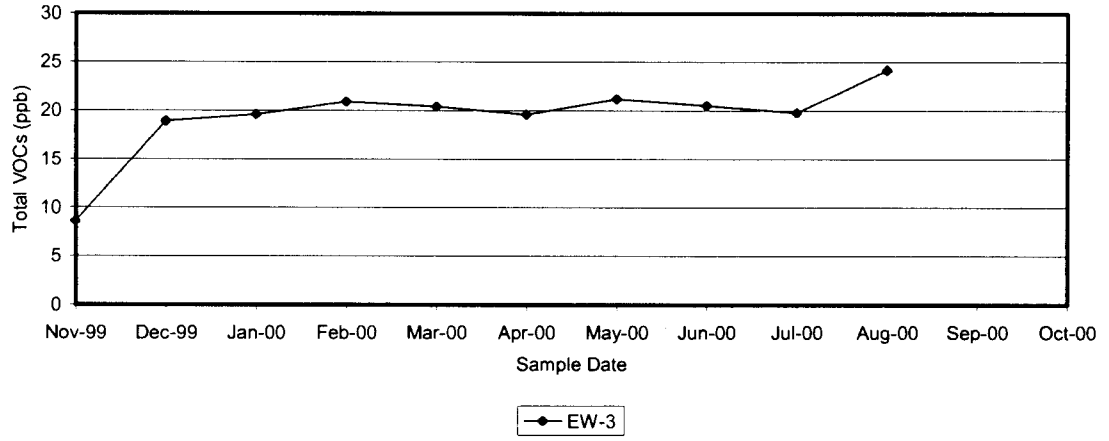

Figure 7
Total VOCs at EW-2

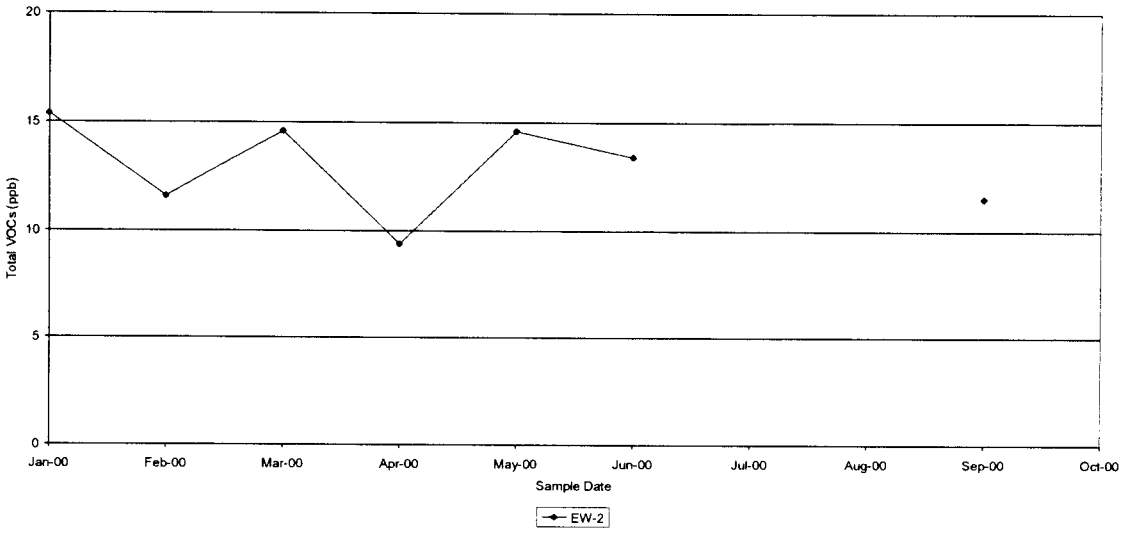

Table 1
Influent Concentrations at PSMW-16

Date	Laboratory Report No.	PCE (ppb)	DCE (ppb)	Total VOCs (ppb)
2/1/95	502304	200	110	318.4
2/15/95	502376	69	39	115.0
3/8/95	503317	78	46	128.3
4/10/95	504341	170	81	258.6
5/18/95	505371	62	30	94.6
6/21/95	506396	76	36	114.8
7/12/95	507327	75	41	124.3
8/17/95	508405	83	45	134.0
9/13/95	509339	69	35	109.2
10/11/95	510335	66	32	102.8
11/22/95	511367	58	35	97.5
3/20/96	603347	180	63	245.3
4/17/96	604367	110	46	162.5
7/18/96	607334	120	54	182.9
8/15/96	608331	120	51	179.1
9/18/96	609338	110	43	160.9
10/16/96	610361	97	37	140.0
11/19/96	611331	94	42	141.0
12/17/96	612331	96	39	140.0
1/16/97	701336	99	46	150.7
2/13/97	702332	100	40	143.7
3/19/97	703344	88	23	114.6
4/17/97	704355	93	38	135.8
5/15/97	705347	71	32	107.6
6/18/97	706353	83	36	122.6
7/23/97	707360	67	34	103.1
9/15/97	709332	100	34	137.9
10/15/97	710358	92	31	127.2
11/19/97	711335	95	34	134.5
12/16/97	712318	140	68	208
1/15/98	801334	110	37	153.1
2/11/98	802336	110	38	155.3
NS	-	-	-	-
4/8/98	804337	78	30	114.4
5/20/98	805379	67	23	93.4
6/16/98	806353	89	30	124.6
7/1/98	807300	76	29	108.8
8/13/98	808040	120	41	168.5
9/16/98	809042	110	26	140.7
10/7/98	810021	120	68	193.4
11/17/98	811049	100	64	169
12/9/98	812045	110	66	180.7
1/7/99	901010	100	28	132.8
2/4/99	902014	100	26	129.3
3/3/99	903010	100	36	140.5
4/21/99	904091	100	32	137.0
5/14/99	905048	87	25	116.7
6/9/99	906040	79	25	108.3
NS	-	-	-	-
NS	-	-	-	-
9/2/99	909005	99	32	136.8
10/11/99	910036	75	23	102
11/10/99	911035	80	33	118.6
12/8/99	912027	87	36	129.5
1/12/00	001021	64	20	90.5
2/10/00	002042	54	13	73.6
3/7/00	003023	62	26	95.1
NS	-	-	-	-
NS	-	-	-	-
NS	-	-	-	-

NS: Not Sampled

Table 2
Influent Concentrations at VEW

Date	Laboratory Report No.	PCE (ppb)	DCE (ppb)	Total VOCs (ppb)
2/1/95	502304	5.3	0.8	6.1
2/15/95	502376	4	0.5	4.5
3/8/95	503317	1.5	0.3	1.8
4/10/95	504341	21	5.8	28.1
5/18/95	505371	1.4	<0.2	1.4
6/21/95	506396	25	9.4	39.8
7/12/95	507327	3.5	1.0	5.8
8/17/95	508405	6.4	1.1	17.7
9/13/95	509405	9.7	1.9	12.9
10/11/95	510335	9.3	1.8	12.5
11/22/95	511367	4.6	1.1	6.0
3/20/96	603347	270	72	344.3
4/17/96	604367	94	24	131.2
7/18/96	607334	47	14	70.6
8/15/96	608331	5.0	2.1	15.2
9/18/96	609338	3.1	2.1	15.8
10/16/96	610361	3.2	2.1	15.3
11/19/96	611331	0.8	1.8	13.6
12/17/96	612331	<0.5	2.0	15.0
1/16/97	701336	0.9	3.2	20.2
2/13/97	702332	1.0	2.4	19.2
3/19/97	703344	68	17	99.5
4/17/97	704355	2.8	3.4	24.4
5/15/97	705347	6.1	5.3	28.5
6/18/97	706353	3.8	4.2	23.5
7/23/97	707360	2.9	4.0	23.6
8/13/97	708339	57	50	124.8
9/15/97	709332	1.7	3.4	19.8
10/15/97	710358	3.2	3.1	20.5
11/19/97	711335	1.3	3.2	18.7
12/16/97	712318	1	4.8	21.7
1/15/98	801334	2.5	3.6	21.3
2/11/98	802336	2.9	3.7	22
NS	-	-	-	-
4/8/98	804337	6.4	5.0	23.7
5/20/98	805379	8.4	5.4	24.3
6/16/98	806353	11	6.2	29.1
7/1/98	807300	7.6	4.6	25.0
8/13/98	808040	5.6	3.8	18.2
9/16/98	809042	8.9	5.6	25.3
10/7/98	810021	10	9.4	31.7
11/17/98	811049	6.9	5.2	23.7
12/9/98	812045	7.9	5.6	25.4
1/7/99	901010	7.7	4.3	22.5
2/4/99	902014	7.0	4.0	20.0
3/3/99	903010	7.9	6.2	24.7
4/21/99	904091	17.0	8.9	34.8
NS	-	-	-	-
NS	-	-	-	-
7/6/99	907015	5.5	3.0	16.3
8/5/99	908021	5.4	3.2	16.3
9/2/99	909005	2.5	2.6	13.0
10/11/99	910036	0.7	0.9	8.3
11/10/99	911035	< 0.5	1	8.7
12/8/99	912027	0.8	1.1	8.8
1/12/00	001021	0.9	1.1	7.6
2/10/00	002042	3.7	1.3	11.1
3/7/00	003023	1.1	1.3	8.3
4/12/00	004041	1.2	1.2	4.5
5/3/00	005014	< 0.5	0.9	5.6
6/8/00	006035	< 0.5	0.8	6.7
NS	-	-	-	-
NS	-	-	-	-
9/19/00	009101	0.7	< 0.5	6.0

NS: Not Sampled

Table 3
Influent Concentrations at EW-1

Date	Laboratory Report No.	PCE (ppb)	DCE(ppb)	Total VOCs (ppb)
8/17/95	508405	3.5	0.9	5.4
9/13/95	509339	25	6.1	33.6
10/11/95	510335	49	8.8	61.4
11/22/95	511367	38	9.5	51.3
7/18/96	607334	20	5.7	28.2
8/15/96	608331	45	8.4	57.0
9/18/96	609338	37	7.8	48.8
10/16/96	610361	29	7.3	40.6
11/19/96	611331	32	7.0	43.2
12/17/96	612331	33	7.7	46.4
1/16/97	701336	36	9.2	51.6
2/13/97	702332	32	7.7	47.9
3/19/97	703344	29	5.7	42.7
4/17/97	704355	31	8.4	52.5
5/15/97	705347	27	9.7	50
6/18/97	706353	23	8.6	49.4
7/23/97	707360	25	9.5	51.9
8/13/97	708339	20	6.8	45.8
9/15/97	709332	21	8.5	49.7
10/15/97	710358	18	6.5	45
11/19/97	711335	20	9.7	52.1
12/16/97	712318	21	12	58
1/15/98	801334	20	11	58.5
2/11/98	802336	21	11	59.7
3/11/98	803324	20	16	62.7
4/8/98	804337	16	9.7	46.8
5/20/98	805379	16	9	43.5
6/16/98	806353	13	7.9	40.8
7/1/98	807300	12	7.7	40.7
8/13/98	808040	8.5	7	36.4
9/16/98	809042	3.2	2.7	7.4
10/7/98	810021	9.5	7.7	35.5
11/17/98	811049	10	7.5	34.6
12/9/98	812045	12	8.4	38.1
1/7/99	901010	10	5.8	31.6
2/4/99	902014	10	5.7	29.8
3/3/99	903010	8.2	6.9	28.9
4/21/99	904091	8.3	5.5	26.6
5/14/99	905048	7.1	4.6	24.1
6/9/99	906040	5.5	3.5	19.7
7/6/99	907015	6.1	4.1	22.7
8/5/99	908021	6.2	4.3	23.0
9/2/99	909005	5.5	4.6	21.6
10/11/99	910036	5	2.3	15.5
11/10/99	911035	4	2.4	15.3
12/8/99	912027	3.7	2.5	14.1
1/12/00	001021	4.7	2.5	13.8
2/10/00	002042	4.3	3.2	14.9
3/7/00	003023	5.2	3.2	17.3
4/12/00	004041	3.7	2.6	9.8
5/3/00	005014	4	2.6	13.2
6/8/00	006035	3.3	2.3	11.9
NS	-	-	-	-
NS	-	-	-	-
9/19/00	009101	1.7	0.6	8.1

NS: Not Sampled

Table 4
Combined Influent Concentrations at PSMW-24, 25, and 26

Date	Laboratory Report No.	PCE (ppb)	DCE (ppb)	Total VOCs (ppb)
7/18/96	607334	49	55	110.6
8/15/96	608331	47	50	111.3
9/18/96	609338	58	44	106.3
10/16/96	610361	41	40	86.8
11/19/96	611331	46	44	95.2
12/17/96	612331	33	30	66.7
1/16/97	701336	41	41	86.5
2/13/97	702332	41	37	81.5
3/19/97	703344	37	23	63.0
4/17/97	704355	42	37	83.8
5/15/97	705347	33	30	66.4
6/18/97	706353	39	55	96.6
7/23/97	707360	37	36	75.2
8/13/97	708339	39	30	71.5
9/15/97	709332	42	34	78.4
10/15/97	710358	48	29	79.8
11/19/97	711335	41	34	77.5
12/16/97	712318	40	47	87
1/15/98	801334	33	25	60.6
2/11/98	802336	36	27	65.7
3/11/98	803324	30	31	63.4
4/8/98	804337	21	18	41
5/20/98	805379	18	12	31.1
6/16/98	806353	21	15	37.3
7/1/98	807300	18	16	35.2
8/13/98	808040	14	13	28.6
9/16/98	809042	6.5	4.4	27.9
10/7/98	810021	5	7.3	13.9
11/17/98	811049	22	17	39.7
12/9/98	812045	25	19	45
1/7/99	901010	22	15	38.2
2/4/99	902014	23	14	38.2
3/3/99	903010	20	16	37.1
4/21/99	904091	20	15	36.8
5/14/99	905048	18	14	32
6/9/99	906040	18	14	32.8
7/6/99	907015	22	18	40
8/5/99	908021	22	17	39
9/2/99	909005	17	12	29
10/11/99	910036	19	13	32
11/10/99	911035	18	13	31
12/8/99	912027	16	12	28.3
1/12/00	001021	2.7	1.5	4.2
2/10/00	002042	10	0.2	20
3/7/00	003023	13	10	23.7
4/12/00	004041	2.5	2	4.5
5/3/00	005014	1.9	1.3	3.2
6/8/00	006035	1.8	1.2	3
7/24/00	007056	1.6	0.8	2.4
8/16/00	008062	2.1	0.9	3
9/19/00	009101	2.4	0.7	3.1

NS: Not Sampled

Table 5
Influent Concentrations at EW-2

Date	Laboratory Report No.	PCE (ppb)	DCE (ppb)	Total VOCs (ppb)
1/12/00	001021	2.7	4.3	15.4
2/10/00	002042	1.5	2.7	11.6
3/7/00	003023	2.7	4.3	14.6
4/12/00	004041	0.9	4.2	9.4
5/3/00	005014	1.9	4.4	14.6
6/8/00	006035	1	3.9	13.4
NS	-	-	-	-
NS	-	-	-	-
9/19/00	009101	0.9	2.2	11.5

NS: Not Sampled

Table 6
Influent Concentrations at EW-3

Date	Laboratory Report No.	PCE (ppb)	DCE (ppb)	Total VOCs (ppb)
11/10/99	911035	5.1	2.9	8.6
12/8/99	912027	12	6.3	18.9
1/12/00	001021	13	5.7	19.6
2/10/00	002042	12	7.7	20.9
3/7/00	003023	12	7.3	20.4
4/12/00	004041	11	8	19.6
5/3/00	005014	12	8	21.2
6/8/00	006035	11	7.9	20.5
7/24/00	007056	12	6.3	19.8
8/16/00	008062	13	9.1	24.2
NS	-	-	-	-

NS: Not Sampled

IV. Operational Activities

Operational activities during the third quarter included maintenance repairs to the effluent transfer pump, inspection of the east treatment train sulfuric acid injection pump, and removal and inspection of the PSMW-24 pump.

Inspection of the sulfuric acid injection pump found it to be not repairable. A new pump was installed in October 2000. Inspection of the PSMW-24 pump indicated that it had been damaged beyond repair by sand. Sand may have been drawn into the pump through a suspected hole in the well casing.

V. Influent and Effluent Flow Volumes

Flow totalizing meters are present on each influent well line and on the effluent flow line. Table 7 below details flow volumes from each influent well and the effluent line. Differences between total influent and total effluent volumes may be attributed to water loss (evaporation) out the stack in the air stripper system and to differences, inaccuracies, and operational problems with the flow meters.

A new flow meter was installed on the effluent line to the golf course in August 2000. Due to a factory calibration error, the meter had been incorrectly recording the discharge rate to the golf course. The meter has been re-calibrated and is now recording correctly. Consequently, some of the volumetric data in Table 7 is unavailable.

Table 7
Influent and Effluent Flow Volumes

Source	Meter Number	Start Reading	End Reading	Volume (Gallons)
Flow Volumes for July 2000:				
Influent (VEW)	Badger Meter No. 94976130	5,184,963	5,269,883	84,920
Influent (PSMW-16)	Hayes Meter No. 29408700	7,143,037	7,143,037	0
Influent (EW-1)	Hayes Meter No. 29408732	7,166,850	7,227,071	60,221
Influent (EW-2)	Badger Meter No. 15796506	1,550,891	1,652,651	101,760
Influent (EW-3)	Badger Meter No. 15796517	9,071,384	11,153,013	2,081,629
Influent (PSMW-24)	Fisher Porter Meter No. 960307112	6,731,260	6,731,260	0
Influent (PSMW-25)	Fisher Porter Meter No. 960307112	2,458,390	2,480,990	22,600
Influent (PSMW-26)	Fisher Porter Meter No. 960307112	2,800,450	2,821,790	21,340
Monitor Well Sample Purge				0
Effluent (to Golf Course)	Fisher Porter Meter No. 960307112	198,250	2,512,479	2,314,229
Flow Volumes August 2000:				
Influent (VEW)	Badger Meter No. 94976130	5,269,883	5,269,883	0
Influent (PSMW-16)	Hayes Meter No. 29408700	7,143,078	7,143,078	0
Influent (EW-1)	Hayes Meter No. 29408732	7,227,071	7,227,071	0
Influent (EW-2)	Badger Meter No. 15796506	1,652,651	1,652,651	0
Influent (EW-3)	Badger Meter No. 15796517	11,153,013	11,695,013	542,294
Influent (PSMW-24)	Fisher Porter Meter No. 960307112	6,731,260	6,731,260	0
Influent (PSMW-25)	Fisher Porter Meter No. 960307112	2,480,990	2,486,420	5,430
Influent (PSMW-26)	Fisher Porter Meter No. 960307112	2,821,790	2,835,650	13,860
Effluent (to Golf Course)	Fisher Porter Meter No. 960307112	NA	NA	NA
Flow Volumes for September 2000:				
Influent (VEW)	Badger Meter No. 94976130	5,269,883	5,386,992	117,109
Influent (PSMW-16)	Hayes Meter No. 29408700	7,143,037	7,143,037	0
Influent (EW-1)	Hayes Meter No. 29408732	7,227,071	7,283,759	56,688
Influent (EW-2)	Badger Meter No. 15796506	1,652,651	1,751,004	98,353
Influent (EW-3)	Badger Meter No. 15796517	11,695,013	11,960,840	265,827
Influent (PSMW-24)	Fisher Porter Meter No. 960307112	6,731,260	6,731,260	0
Influent (PSMW-25)	Fisher Porter Meter No. 960307112	2,486,420	2,498,770	12,350
Influent (PSMW-26)	Fisher Porter Meter No. 960307112	2,835,650	2,839,780	4,130
Monitor Well Sample Purge				233
Effluent (to Golf Course)	Fisher Porter Meter No.960307112	3,468,519	3,850,246	381,727
Quarterly Total for Influent (VEW+PSMW-16+EW-1+EW-2+EW-3+PSMW-24+PSMW-25+PSMW-26+Monitor Well Sample Purge)				3,488,744
Quarterly Total for Effluent:				NA
Annual Totals				
Annual Cumulative Influent Total for 2000:				16,352,471
Annual Cumulative Effluent Total for 2000:				NA

NA: Not Available

VI. Laboratory Analysis

A. Influent and Effluent Sampling for Chlorinated VOCs (8021 Analysis)

During the third quarter, influent and effluent sampling was conducted pursuant to the routine schedule outlined in DP-1006, i.e., once each month. Chlorinated VOC analysis of GTS influent and effluent (after GAC units) is shown graphically in Figures 8 and 9. More detailed data are shown in Table 8 below.

As noted in the first quarter treatment effectiveness report, the addition of EW-2 and EW-3 required the operation of both treatment trains (east and west) to handle the increased influent flow rate. However, due to operational difficulties with the sulfuric acid injection pump, the east treatment train has been out of service during this quarter.

Figure 9 indicates a spike in the concentration of total chlorinated VOCs in the GTS west treatment train influent. This spike can be attributed to the increased influent flow rate to the west treatment train while the east treatment train has been out of service.

Laboratory analytical data reports are contained in Appendix A. Influent and effluent sampling results indicate that the GTS has consistently removed chlorinated VOC contaminants in the 20 to 200 ppb range to levels below laboratory detection limits in the effluent sent to the golf course. Laboratory analysis of the water at a point after the air stripper and before the granular activated carbon treatment also show that at these influent concentrations and a flow rate of approximately 50 gpm, the air stripper alone is capable of treating the groundwater to concentrations consistently below or near laboratory detection limits for chlorinated VOCs.

Figure 8
Total VOCs GTS Influent vs. Effluent - East

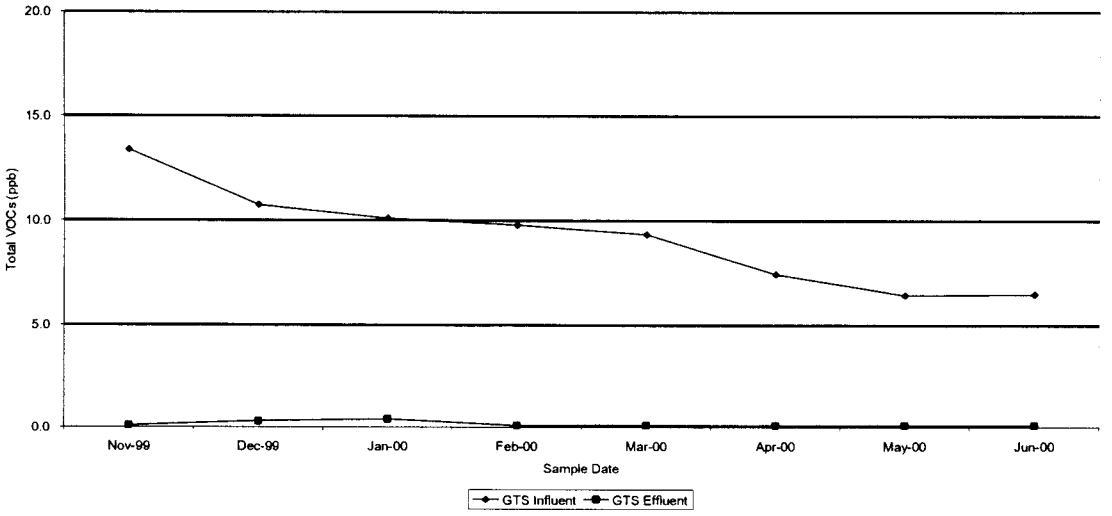

Figure 9
Total VOCs GTS Influent vs. Effluent - West

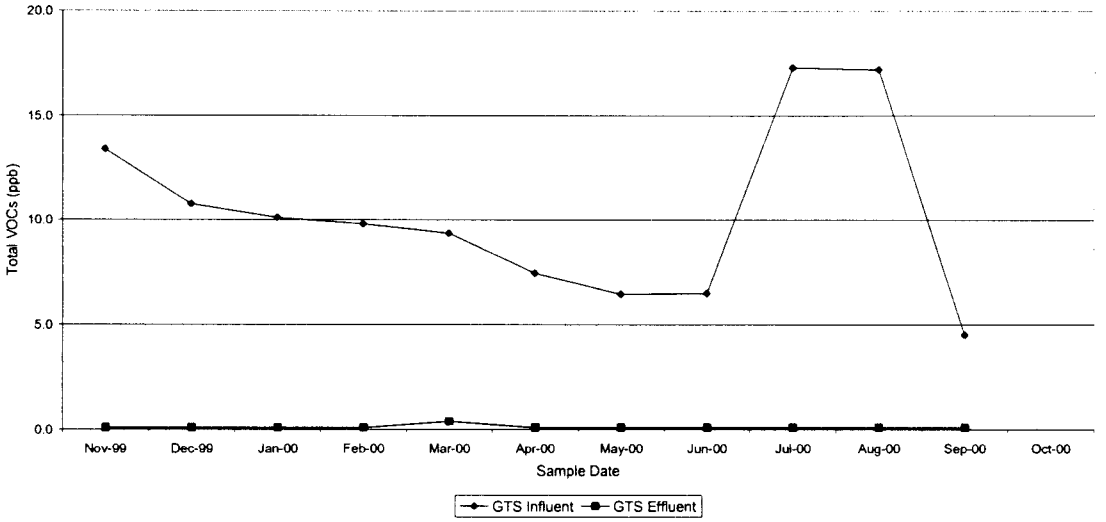

Table 8
Influent and Effluent VOC Concentrations

Sampling Date: 7/24/00	Lab Report Number: 007056				
VOC Compound	Influent (ppb)	Effluent After East Air Stripper (ppb)	Effluent After West Air Stripper (ppb)	Effluent After East GAC Unit (ppb)	Effluent After West GAC Unit (ppb)
1,1-Dichloroethane	1.5	NA	< 0.3	NA	< 0.3
1,1-Dichloroethene	5.8	NA	< 0.2	NA	< 0.2
Tetrachloroethene	10	NA	< 0.5	NA	< 0.5
TOTAL VOC'S	17.3	NA	BDL	NA	BDL

Sampling Date: 8/16/00	Lab Report Number: 008062				
VOC Compound	Influent (ppb)	Effluent After East Air Stripper (ppb)	Effluent After West Air Stripper (ppb)	Effluent After East GAC Unit (ppb)	Effluent After West GAC Unit (ppb)
1,1-Dichloroethane	1.7	NA	< 0.3	NA	< 0.3
1,1-Dichloroethene	6.0	NA	< 0.2	NA	< 0.2
Tetrachloroethene	9.5	NA	< 0.5	NA	< 0.5
TOTAL VOC'S	17.2	NA	BDL	NA	BDL

Sampling Date: 9/19/00	Lab Report Number: 009101				
VOC Compound	Influent (ppb)	Effluent After East Air Stripper (ppb)	Effluent After West Air Stripper (ppb)	Effluent After East GAC Unit (ppb)	Effluent After West GAC Unit (ppb)
1,1-Dichloroethane	3.4	NA	< 0.3	NA	< 0.3
1,1-Dichloroethene	0.4	NA	< 0.5	NA	< 0.2
Tetrachloroethene	0.7	NA	< 0.5	NA	< 0.5
TOTAL VOC'S	4.5	NA	BDL	NA	BDL

B. Effluent Sulfate Analysis and pH Monitoring

The June 1997 amendment to DP-1006 requires monthly sulfate analysis and daily pH monitoring of the GTS effluent. Table 9 presents the results of the third quarter sulfate analysis using EPA Method 375.4. The elevated sulfate concentration in the sample collected on 7/24/00 is due to the operational difficulties with the east treatment train sulfuric acid injection pump. The monthly minimum, maximum, and average pH readings for this quarter are shown in Table 10.

Table 9
GTS Effluent Sulfate Concentrations

Date	Lab Report Number	Sulfate (Mg/l)
7/24/00	007056	643
8/16/00	008062	579
9/19/00	009101	520

Table 10
Monthly pH Readings

Date	Minimum pH	Maximum pH	Average pH
7/00	6.4	7.1	6.9
8/00	6.2	7.6	7.0
9/00	6.3	7.1	6.9

C. Golf Course Pond Sampling

DP-1006 requires monthly sampling of the east and west ponds for 8021 (Halo) analysis during each month of operation. During the third quarter, the ponds were sampled three times pursuant to this requirement. No EPA Method 8021 (Halo) parameters were detected in the samples. Copies of the laboratory reports are contained in Appendix A.

VII. Groundwater Sampling

Under the RCRA permit, a network of groundwater monitoring wells are sampled on a twice per year schedule (normally in the spring and fall). Once sampling is complete and analytical results have been received, contour maps showing the areal extent and concentration of the contaminants in the groundwater are prepared. Contour maps for PCE, DCE, and TCA for the 2000 fall sampling event are shown in Figures 10, 11, and 12, respectively.