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Report

Groundwater Monitoring Report
Monitoring Period: May 2001
General Semiconductor, Inc.
Sherburne, New York

August 2001

Stearns & Wheler, LLC
ENVIRONMENTAL ENGINEERS & SCIENTISTS

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August 29, 2001

Mr. John Strang, P.E.
NYSDEC DER
Operations & Maintenance Section
Bureau of Hazardous Site Control
625 Broadway – 11th Floor
Albany, NY 12233-7014

Re: General Semiconductor, Inc.
Sherburne, NY
Site # 7-09-010
S&W File No. 60007.5

Dear Mr. Strang:

Enclosed are two copies of the Groundwater Monitoring Report for the General Semiconductor Site in Sherburne, NY. The report summarizes the results of groundwater monitoring activities in May 2001 and compares the analytical results to the results from the past five sampling rounds.

Please feel free to call if you have any questions on the enclosed report.

Very truly yours,

Diane Clark

Diane K. Clark, DE
Senior Engineer

Enclosures

cc: Barbara Curtis, QR Consulting Group (w/enc.)
Gerald Rider, NYSDEC (w/enc.)
Charles Branagh, NYSDEC Region 7 (w/enc.)
Geoffrey Miller, S&W Services, Inc. (w/enc.)

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GROUNDWATER MONITORING REPORT

MONITORING PERIOD: MAY 2001

GENERAL SEMICONDUCTOR, INC.

SHERBURNE, NEW YORK

Prepared for

GENERAL SEMICONDUCTOR, INC.

Prepared by

STEARNS & WHEELER, LLC
Environmental Engineers and Scientists
One Remington Park Drive
Cazenovia, New York 13035

August 2001

Project No. 60007FA

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**GROUNDWATER MONITORING REPORT
MONITORING PERIOD: MAY 2001
SHERBURNE SITE
GENERAL SEMICONDUCTOR, INC.**

SECTION 1 - INTRODUCTION

This report summarizes the results of the biannual groundwater monitoring which took place at the General Semiconductor, Inc. site in Sherburne, NY in the month of May 2001 to evaluate the performance of the permeable reactive barrier (PRB) in situ groundwater treatment system at the site.

SECTION 2 - GROUNDWATER MONITORING ACTIVITIES

Groundwater samples were collected and depth to groundwater was measured on May 30, 2001. Before groundwater samples were collected, the depth to groundwater was measured in each monitoring well, and three volumes of water were purged from each well using a peristaltic pump. The peristaltic pump was also used for collection of inorganic samples because of its ability to slowly collect a sample from the well, thereby minimizing turbidity in the sample. Disposable bailers were used for the collection of samples for volatile organic compound (VOC) analysis. Field parameters were measured and recorded after purging at each well sampled. Table 1 presents the groundwater elevations, and Table 2 presents field parameters after the wells were purged.

SECTION 3 - GROUNDWATER MONITORING RESULTS

Section 3.1 is a discussion of the analytical results. Section 3.2 is a discussion of site hydrogeologic conditions, specifically the groundwater flow patterns. Section 3.3 is an evaluation of the combined data, providing insight into the changes in groundwater chemistry as the groundwater migrates from up to downgradient through the PRB.

3.1 ANALYTICAL RESULTS

Tables 3 thru 5 summarize the analytical results from the May 2001 sampling event. As indicated, the primary contaminants of concern in the West Field continue to be the chlorinated solvents 1,2-dichloroethene (1,2-DCE), trichloroethene (TCE), and vinyl chloride (VC). Concentrations of these compounds in samples collected from monitoring wells located in the West Field upgradient of the PRB ranged from a high of 2,253 ppb total chlorinated VOCs in the sample from P-8, to a low of no detectable concentrations of total chlorinated VOCs in the samples from Wells MW-24 and MW-29. The average concentration of total chlorinated VOCs in samples from West Field upgradient wells was 519 ppb (MW-17, P-8, MW-22, MW-29, and MW-30, using a value of 5 when no compounds were detected), while the average concentration of chlorinated VOCs in samples from the West Field wells located immediately downgradient of the PRB (MW-23, MW-24, and MW-25) was 7 ppb (using replacement values of 5 and 10 ppb for non-detect concentrations). This represents greater than 98 percent removal or destruction efficiency achieved by the PRB.

1,2-DCE was the compound detected in the highest concentrations in samples from upgradient wells P-8, MW-17, and MW-22. MW-23 was the only corresponding immediate downgradient well with a detectable level (6 ppb). The average destruction efficiency for 1,2-DCE (based on average upgradient and downgradient concentrations calculated using the detection limit as a replacement value for non-detectable concentrations) was 98 percent. TCE and vinyl chloride were detected in three of the upgradient wells (MW-17, P-8, and MW-30) and were not detected in the corresponding immediately downgradient wells.

Samples from MW-20 and MW-21 continued to have low but detectable concentrations of chlorinated VOCs. Concentrations of chlorinated VOCs in the samples from MW-20 have increased from 20.4 ppb in December to 35.4 ppb. VOC concentrations in MW-21 have decreased from 123 ppb in December to 91.4 ppb.

MTBE, a gasoline additive, was detected in the sample from MW-22 at 8.2 ppb. Xylene and ethylbenzene were detected in MW-25 at 26 ppb and 19 ppb, respectively. Other VOCs detected during the May sampling event include chloroethane in P-8 (7.6 ppb) and tetrachloroethene in MW-22 (39 ppb). Petroleum contaminants have also been present in groundwater samples from MW-8 and are thought to be associated with the fuel oil spill that occurred on site.

Table 4 presents the results for the inorganic analyses done on samples from the West Field wells. Iron concentrations exceeded New York State groundwater standards in Samples from two upgradient wells (P-8 and MW-22) and three downgradient monitoring wells (MW-23, MW-24, and MW-25).

3.2 HYDROGEOLOGY

Figure 1 illustrates the groundwater flow patterns for the groundwater elevation data collected during the May 2001 groundwater sampling event. Similar to the flow patterns reported with the data from the previous quarterly monitoring rounds, the groundwater continues to flow west-southwest through the PRB toward the Chenango River. Although groundwater elevation fluctuates from season to season, the gradient through the PRB remains reasonably constant. The gradient through the PRB is approximately 0.016 ft/ft at the southern end between MW-29 and MW-23. At the center of the wall, between MW-30 and MW-24, the gradient is approximately 0.026 ft/ft. The chemical data from the May 2001 sampling event continue to indicate that groundwater is flowing through the PRB and is being treated.

3.3 DISCUSSION OF RESULTS

In Section 3.1, the analytical data were compared to NYSDEC groundwater standards. In this section, the analytical results are combined with our understanding of the local hydrogeology to develop a conceptual idea of how the groundwater chemistry is altered as it passes through the native overburden and the PRB. To help in this assessment, the data in Table 6 was used to develop combination analytical concentration isopleths and groundwater contour maps for the May sampling event.

Figures 2, 3, and 4 present computer-generated isopleths for 1,2-DCE, TCE, and VC, respectively. These figures indicate the change in concentration of contaminants of concern as the groundwater flows through the PRB. In addition to the concentration isopleths, groundwater contours and flow lines have been placed on the maps. These maps are scaled based on the coordinates generated during the 1998 December site survey.

Figure 2 illustrates the concentrations of 1,2-DCE in the groundwater samples during May 2000. As stated in previous sections of this report, the highest concentrations of 1,2-DCE were found in the samples collected from P-8 and MW-17. The concentration of 1,2-DCE drops from up to

downgradient, from 1,600 ppb at P-8, to 160 ppb at MW-17, to non-detectable concentrations (less than 10 ppb) at MW-25. This drop is illustrated with the color change from orange to blue. The groundwater flow patterns indicate that the groundwater from the source area migrates through the PRB and toward the Chenango River. It is readily apparent that the concentrations of 1,2-DCE are rapidly reduced as the groundwater moves through the PRB.

Figure 3 is an illustration of the concentrations of TCE in groundwater at the site during May 2001. The concentrations of TCE drop from 610 ppb at P-8 to less than 10 ppb at MW-25. Concentrations at MW-20 (9.4 ppb) are slightly above standard and concentrations at MW-21 (82 ppb) remain elevated. This is likely due to residual concentrations in groundwater that had flowed past the PRB before it was installed.

Figure 4 illustrates VC concentrations in the site groundwater during May 2001. The concentrations of VC dropped from 43 ppb at P-8 to less than 10 ppb at MW-25. It should be noted that MTBE and the other petroleum hydrocarbons (xylene and ethylbenzene) detected in samples from the West Field wells are not treated by the iron PRB. Therefore, the in situ treatment process should not affect concentrations of these VOCs.

A. Comparison of Results to Historic Data. Table 6 is a summary of the organic chemistry data from the May monitoring event and the previous five monitoring events. The historic data were used to summarize concentration changes through time at each well sampled and for each compound of concern (1,2-DCE, TCE, and VC). The data summarized in Table 6 were used to generate bar graphs for ease of interpretation of the analytical data.

Figures 5, 6, and 7 are illustrations of VOC concentration trends at each of the monitoring wells. Analytical results for two monitoring rounds in 1999, three in 2000, and one in 2001 are plotted for each well. In general, the concentrations of VOC contaminants of concern in the three wells located just west of the PRB have remained low or decreased since the August 1999 sampling round. Concentrations of the VOC contaminants of concern in upgradient wells MW-17 and P-8 appeared to have peaked in 1999, and have since decreased.

Figure 5 illustrates concentrations of 1,2-DCE in 11 of the monitoring wells since August 1999. The concentrations in samples from all the downgradient wells have decreased over time to non-detectable or nearly non-detectable concentrations, with the exception of MW-21. This well is located furthest from the PRB and has had a recent minor increase in concentration of 1,2-DCE.

Concentrations of 1,2-DCE in upgradient wells P-8, MW-17, and MW-18 appear to have reached a high concentration in August-December 1999, and have since decreased.

Figure 6 illustrates concentrations of TCE in the same 11 monitoring wells since August 1999. Historically, the highest concentrations of TCE have been detected consistently in upgradient wells P-8 and MW-18. MW-18 has been decommissioned and is no longer sampled, but P-8 continues to have declining elevated concentrations. The other upgradient wells have consistently had low concentrations of TCE. The three immediately downgradient wells have been associated with non-detectable concentrations, while concentrations in samples from MW-20 and MW-21 have consistently declined.

Finally, Figure 7 illustrates concentrations of VC in the 11 monitoring wells since August 1999. Samples from downgradient monitoring wells MW-23, MW-24, MW-25, and MW-20 have no detectable concentrations of VC. VC was detected in the sample from MW-21 for the first time in May 2000, but has since decreased to non-detect. Concentrations of VC previously found at detectable concentrations in upgradient wells MW-17 and P-8 have decreased since the last sampling event.

SECTION 4 – PLANS FOR FUTURE OPERATIONS

Groundwater monitoring and reporting will continue on a biannual schedule. The next round of groundwater sampling will be in late November.

TABLES

TABLE 1
General Semiconductor, Inc. Site (DHWR site No. 7-09-010)
GROUNDWATER ELEVATIONS
May 2001 Monitoring Event

Monitoring WELL ID	Ground Elevation (ft)	Top of PVC Elevation (ft)	Depth to Water (ft)	Groundwater Elevation (ft)	Depth Below Ground (ft)
P-3U	1048.4	1050.72	6.73	1043.99	4.41
P-10U	1048.0	1049.98	5.88	1044.1	3.9
MW-17U	1048.1	1051.20	7.17	1044.03	4.07
P-8U	1049.2	1051.73	7.7	1044.03	5.17
MW-22U*	1048.0	1049.98	6.81	1043.17	4.83
MW-29U	1047.7	1049.72	5.6	1044.12	3.58
MW-30U	1048.1	1050.25	6.19	1044.06	4.04
MW-28W	1048.5	1051.38	7.65	1043.73	4.77
MW-23D	1048.2	1051.18	7.52	1043.66	4.54
MW-24D	1048.3	1051.43	7.79	1043.64	4.66
MW-25D	1048.4	1051.53	7.85	1043.68	4.72
MW-26D	1048.4	1051.38	7.7	1043.68	4.72
MW-27D	1048.4	1051.41	7.76	1043.65	4.75
P-11D	1047.8	1049.92	6.25	1043.67	4.13
MW-21D	1047.8	1050.33	7.4	1042.93	4.87
MW-20D	1046.6	1049.42	6.3	1043.12	3.48

* MW-22U was repaired. Elevations of ground and PVC were surveyed in during May 2001.

TABLE 2
General Semiconductor Inc. Site (DHWR site No. 7-09-010)
GROUNDWATER FIELD PARAMETERS
May 2001 Monitoring Event

Parameter	UPGRADIENT WELLS					
	MW-17U	P-8U	MW-22U	MW-29U	MW-30U	MW-8
Specific Conductance	0.695	0.707	0.668	0.277	0.561	0.830
Turbidity	3	51	128	-9	10	36
Dissolved Oxygen (DO)	4.35	3.02	2.34	1.51	1.55	1.07
pH	7.12	6.44	6.7	6.75	6.73	6.43
Temperature (°C)	10.8	11.2	10.9	10.4	9.9	10.1
Salinity (%)	0.02	0.02	0.02	0.01	0.02	0.03
Eh	89	57	9	53	20	-33
Depth to Groundwater (ft)	7.17	7.7	6.81	5.6	6.19	6.9
Amount water purged (Gal)	6	5	5	5	5	5

Parameter	DOWNGRADIENT WELLS				
	MW-20D	MW-21D	MW-23D	MW-24D	MW-25D
Specific Conductance	0.821	0.721	0.519	0.227	0.322
Turbidity	-6	-3	-5	270	15
Dissolved Oxygen (DO)	1.7	3.06	2.52	3.22	4.21
pH	6.6	6.65	6.43	6.85	6.94
Temperature (°C)	8.3	9.3	9.4	8.7	9.2
Salinity (%)	0.03	0.03	0.02	0.01	0.01
Eh	75	74	4	32	80
Depth to Groundwater (ft)	6.3	7.4	7.52	7.79	7.85
Amount water purged (Gal)	5	5	5	5	5

TABLE 3
General Semiconductor Inc. Site (DHWR site No. 7-09-010)
GROUNDWATER ANALYTICAL RESULTS - TCL VOLATILES
May 2001 Monitoring Event

Compound (ug/l) ¹	GW Std. (ug/l)	UPGRADIENT WELLS					DOWNGRADIENT WELLS					Duplicate MW-21
		MW-17U	P-8U	MW-22U	MW-29U	MW-30U	MW-20D	MW-21D	MW-23D	MW-24D	MW-25D	
Acetone	5	<10	<10	<10	<10	<10	<10	<10	<10	<10	<20	
Benzene	1	<5	<5	<5	<5	<5	<5	<5	<5	<5	<10	<1
Carbon Tetrachloride	5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<10	<1
Chlorobenzene	5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<10	<1
Chloroethane	5	<5	7.6	<5	<5	<5	<5	<5	<5	<5	<10	<1
Chloroform	7	<5	<5	<5	<5	<5	<5	<5	<5	<5	<10	<1
Chloromethane	NS	<5	<5	<5	<5	<5	<5	<5	<5	<5	<10	<1
1,1-Dichloroethane	5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<10	2.6
1,2-Dichloroethane	0.6	<5	<5	<5	<5	<5	<5	<5	<5	<5	<10	<1
1,1-Dichloroethene	5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<10	<1
1,2-Dichloroethene (total)	5*	160	1600	130	<5	<5	26	82	6	<5	<10	75
1,2-Dichloropropane	1	<5	<5	<5	<5	<5	<5	<5	<5	<5	<10	<1
cis-1,3- Dichloropropene	0.4	<5	<5	<5	<5	<5	<5	<5	<5	<5	<10	<1
trans-1,3-Dichloropropene	0.4	<5	<5	<5	<5	<5	<5	<5	<5	<5	<10	<1
Ethylbenzene	5	<5	<5	<5	<5	<5	<5	<5	<5	<5	19	<1
1,1,2,2-Tetrachloroethane	5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<10	<1
Tetrachloroethene	5	<5	<5	39	<5	<5	<5	<5	<5	<5	<10	<1
Toluene	5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<10	<1
1,1,1-Trichloroethane	5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<10	4.5
1,1,2-Trichloroethane	1	<5	<5	<5	<5	<5	<5	<5	<5	<5	<10	<1
Trichloroethene	5	15	610	<5	<5	8.1	9.4	57	<5	<5	<10	54
Vinyl chloride	2	23	43	<5	<5	<5	<5	<5	<5	<5	<10	<1
Xylenes (total)	5*	<5	<5	<5	<5	<5	<5	<5	<5	<5	26	<1
MTBE	NS	<5	<5	8.2	<5	<5	<5	<5	<5	<5	<10	<1
Naphthalene	10G	<5	<5	<5	<5	<5	<5	<5	<5	<5	<10	<1

Standards based on Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations (NYSDEC June 1998)

Bold face indicates locations of concentrations above standards

NS: No Standard

G: Guidance Value

*Per isomer

TABLE 4
General Semiconductor Inc. Site (DHWR site No. 7-09-010)
GROUNDWATER ANALYTICAL RESULTS - INORGANICS
 May 2001 Monitoring Event

Compound (mg/l) ¹	GW Std. (mg/l)	UPGRADIENT WELLS				DOWNGRADIENT WELLS		
		P-8U	MW-22U	MW-29U	MW-30U	MW-23D	MW-24D	MW-25D
Alkalinity	NS	300	240	110	230	200	120	78
Chloride	250	46	40	6.6	26	28	12	30
Sulfate	250	12	18	17	14	16	20	2.7
Iron	0.5	0.57	3.8	<.05	0.1	1.3	28	0.95
Calcium	NS	100	90	42	78	71	120	23
Magnesium	35 G	16	15	5.6	12	11	34	5.1
Sodium	20	27	25	5.2	20	20	14	20
Potassium	NS	1.7	5.2	1.3	1.8	6.2	2.6	<1

¹ For December monitoring samples are only analalyzed for Alkalinity, calcium, iron, and magnesium.

Standards based on TOGS 1.1.1 Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations (NYSDEC June 1998)

Bold face indicates locations of concentrations above standards

NS: No Standard

G: Guidance Value

TABLE 5
General Semiconductor, Inc. Site (DHWR site No. 7-09-010)
MW - 8 ANALYTICAL RESULTS
May 2001 Monitoring Event

Volatile Organic Compounds (ug/l)		
Analyte	GW std	Result
benzene	1	<10
bromobenzene	5	<10
bromochloromethane	5	<10
bromomethane	5	<10
sec-butylbenzene	5	<10
n-butylbenzene	5	<10
tert-butylbenzene	5	<10
carbon tetrachloride	5	<10
chlorobenzene	5	<10
chloroethane	5	<10
chloromethane		<10
2-chlorotoluene	5	<10
4-chlorotoluene	5	<10
dibromomethane	5	<10
1,2-dichlorobenzene	3	<10
1,3-dichlorobenzene	3	<10
1,4-dichlorobenzene	3	<10
dichlorodifluoromethane	5	<10
1,1-dichloroethane	5	<10
1,2-dichloroethane	0.6	<10
cis-1,2-dichloroethene	5	87
1,1-dichloroethene	5	<10
trans-1,2-dichloroethene	5	<10
1,2-dichloropropane	1	<10
1,3-dichloropropane	5	<10
2,2-dichloropropane	5	<10
1,1-dichloropropene	5	<10
cis-1,3-dichloropropene	*	<10
trans-1,3-dichloropropene	*	<10
ethyl benzene	5	<10
hexachlorobutadiene	0.5	<10
isopropylbenzene (cumene)	5	<10
4-isopropyl toluene (cymene)	5	<10
methylene chloride	5	<10
n-propylbenzene	5	<10
styrene	5	<10
1,1,1,2-tetrachloroethane	5	<10
1,1,2,2-terachloroethane	5	<10
tetrachloroethene	5	<10
toluene	5	<10
1,2,3-trichlorobenzene	5	<10
1,2,4-trichlorobenzene	5	<10
1,1,1-trichloroethane	5	<10

Semi-volatile Organic Compounds (ug/l)		
Analyte	GW std	Result
acenaphthene		<5
acenaphthylene		<5
anthracene	50g	<5
benzo(a)anthracene	.002g	<5
benzo(b)fluoranthene	.002g	<5
benzo(k)fluoranthene	.002g	<5
benzo(ghi)perylene		<5
benzo(a)pyrene	ND	<5
4-bromophenyl-phenylether		<5
butylbenzylphthalate	50g	<5
carbazole		<5
4-chloroaniline	5	<5
bis(2-chloroethoxy)methane	5	<5
bis(2-chloroethyl)ether	1	<5
bis(2-chloroisopropyl)ether		<5
4-chloro-3-methylphenol		<5
2-chloronaphthalene		<5
2-chlorophenol		<5
4-chlorophenyl-phenylether		<5
chrysene	.002g	<5
dibenz(a,h)anthracene		<5
dibenzofuran		<5
di-n-butylphthalate	50	<5
1,2-dichlorobenzene	3	<5
1,3-dichlorobenzene	3	<5
1,4-dichlorobenzene	3	<5
3,3'-dichlorobenzidine	5	<10
2,4-dichlorophenol	5	<5
diethylphthalate	50g	<5
2,4-dimethylphenol	50g	<5
dimethylphthalate	50g	<5
2,4-dinitrophenol	10g	<5
2,4-dinitrotoluene	5	<5
2,6-dinitrotoluene	5	<5
di-n-octylphthalate	50g	<5
bis(2-ethylhexyl)phthalate	5	<5
fluoranthene	50g	<5
fluorene	50g	<5
hexachlorobenzene	0.04	<5
hexachlorocyclopentadiene	5	<5
hexachloroethane	5	<5
ideno(1,2,3-c,d)pyrene	.002g	<5
isophorone	50g	<5

TABLE 5
General Semiconductor, Inc. Site (DHWR site No. 7-09-010)
MW - 8 ANALYTICAL RESULTS
May 2001 Monitoring Event

Volatile Organic Compounds Continued		
Analyte	GW std	Result
1,1,2-trichloroethane	1	<10
trichloroethene	5	63
trichlorofluoromethane (freon 11)	5	<10
1,2,3-trichloropropane	0.04	<10
1,2,4-trimethylbenzene	5	<10
1,3,5-trimethylbenzene	5	<10
bromodichloromethane	50g	<10
bromoform	50g	<10
chloroform	7	<10
o-xylene	5	<10
m-xylene	5	<10
p-xylene	5	<10
dibromochloromethane	50g	<10

ND = Non-detect

* = sum of .4ug/l for cis and trans-1,3-dichloropropene

g = Guidance Value

GW std = NYSDEC Groundwater Quality Standards

Semi-volatile Organic Compounds Continued		
Analyte	GW std	Result
2-methyl-4,6-dinitrophenol		<11
2-methylnaphthalene		11
2-methylphenol (o-cresol)		<5
4-methylphenol (p-cresol)		<5
naphthalene		5.8
2-nitroaniline	5	<5
3-nitroaniline	5	<5
4-nitroaniline	5	<10
nitrobenzene	0.4	<5
2-nitrophenol (o-nitrophenol)		<5
4-nitrophenol		<5
n-nitrosodiphenylamine	50g	<5
n-nitroso-di-n-propylamine		<5
pentachlorophenol		<10
phenanthrene	50g	<5
phenol		<5
pyrene	50g	<5
1,2,4-trichlorobenzene	5	<5
2,4,5-trichlorophenol		<5
2,4,6-trichlorophenol		<5

TABLE 6
General Semiconductor Inc. Site (DHWR site No. 7-09-010)
HISTORIC GROUNDWATER ANALYTICAL RESULTS
(TARGET COMPOUND LIST)

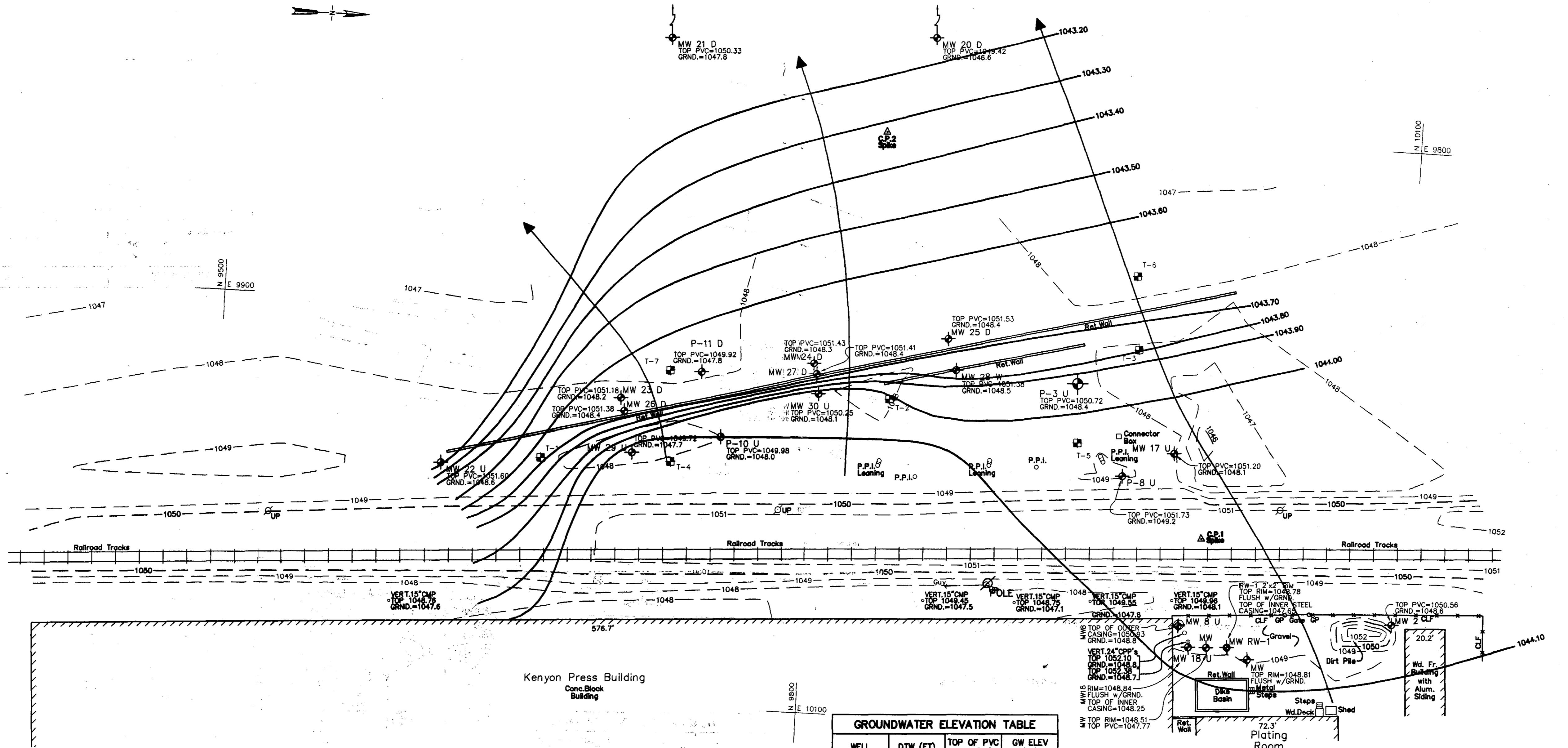
Compound (ug/l)	Sample ID											
	P-8U	MW-17U	MW-20D	MW-21D	MW-22U	MW-23D	MW-24D	MW-25D	MW-29U	MW-30U	MW-8U	MW-18U
1,2-Dichloroethene (total) 8-99	3,000	1,600	<5	35	220	22	<5	<5	22	18	<20	3,720
Trichloroethene 8-99	1,400	47	17	92	59	7.9	<5	<5	<5	8.1	<20	<20
Vinyl chloride 8-99	210	420	<5	<5	<5	<5	<5	<5	<5	<5	<20	2,500
Total VOCs	4,610	2,067	17	127	279	29.9			22	31.1		6,220
Depth to Water 8/99	9.34	8.8	7.67	9.85	9.23	9.04	9.31	9.37	7.3	7.86	8.42	5.99
Compound (ug/l) 11/99	P-8U	MW-17U	MW-20D	MW-21D	MW-22U	MW-23D	MW-24D	MW-25D	MW-29U	MW-30U	MW-8U	MW-18U
1,2-Dichloroethene (total) 11-99	3,700	1,500	6.7	30	*	28	11	<5	29	8.3		
Trichloroethene 11-99	370	37	12	44	*	<5	<5	<5	<5	5		
Vinyl chloride 11-99	1,100	580	<5	<5	*	<5	<5	<5	<5	<5		
Total VOCs	5170.0	2117.0	18.7	74.0	0.0	28.0	11.0	0.0	29.0	13.3		
Depth to Water 11-99	8.37	7.83	6.67	7.74	*	8.04	8.31	8.37	6.34	6.88		
Compound (ug/l) 2/00	P-8U	MW-17U	MW-20D	MW-21D	MW-22U	MW-23D	MW-24D	MW-25D	MW-29U	MW-30U	MW-8U	MW-18U
1,2-Dichloroethene (total) 2-00	3,500	540	9.3	38	*	13	<5	<5	<5	<5	<5	<5
Trichloroethene 2-00	620	21	14	45	*	<5	<5	<5	<5	5	2.1	5200
Vinyl chloride 2-00	72	<5	<5	<5	*	<5	<5	<5	<5	<5	<5	2,200
Total VOCs	4,192	561	23	83	0	13	0	0	0	5	2	7,400
Depth to Water 2-00	8.37	7.83	6.67	7.74	*	8.04	8.31	8.37	6.34	6.88	7.46	4.43
Compound (ug/l) 5/00	P-8U	MW-17U	MW-20D	MW-21D	P-10*	MW-23D	MW-24D	MW-25D	MW-29U	MW-30U	MW-8U	MW-18U
1,2-Dichloroethene (total) 5-00	2800	120	13	90	5.6	<5	<5	<5	<5	9.8		
Trichloroethene 5-00	1100	39	10	88	<5	<5	<5	<5	<5	<5		
Vinyl chloride 5-00	160	82	<5	19	<5	<5	<5	<5	<5	<5		
Total VOCs	4060	241	23	197	5.6	0	0	0	0	9.8		
Depth to Water 5-00	5.75	5.23	4.17	5.36	3.93	5.45	5.75	5.81	3.66	4.25	4.41	4.41
Compound (ug/l) 12/00	P-8U	MW-17U	MW-20D	MW-21D	MW-22U	MW-23D	MW-24D	MW-25D	MW-29U	MW-30U	MW-8U	MW-18U*
1,2-Dichloroethene (total) 12-00	2100	550	8.4	78	140	5.4	<5	13	<5	17		-
Trichloroethene 12-00	210	20	12	45	48	<5	<5	<5	<5	8.1	2.4	-
Vinyl chloride 12-00	520	45	<5	<5	<5	<5	<5	10	<5	<5	<1	-
Total VOCs	2830	615	20.4	123	188	5.4	0	23	0	25.1	2.4	-
Depth to Water 12-00	7.42	6.89	5.79	6.95	6.49	4.11	7.41	7.48	5.31	5.92	6.5	-
Compound (ug/l) 5/01	P-8U	MW-17U	MW-20D	MW-21D	MW-22U	MW-23D	MW-24D	MW-25D	MW-29U	MW-30U	MW-8U	MW-18U*
1,2-Dichloroethene (total) 5-01	1600	160	26	82	130	6	<5	<10	<5	<5	87	
Trichloroethene 5-01	610	15	9.4	9.4	<5	<5	<5	<10	<5	8.1	63	
Vinyl chloride 5-01	43	23	<5	<5	<5	<5	<5	<10	<5	<5	<10	
Total VOCs	2253	198	35.4	91.4	130	6	<5	<10	<5	8.1	150	
Depth to Water 5-01	7.7	7.17	6.14	7.4	6.81	7.52	7.79	7.85	5.6	6.19	6.9	

Locations with a concentration of 5 ppb are those with the detection limit set at 5 ppb.

* MW-18U has been decommissioned.

Open cells indicate dates where wells are not sampled

FIGURES

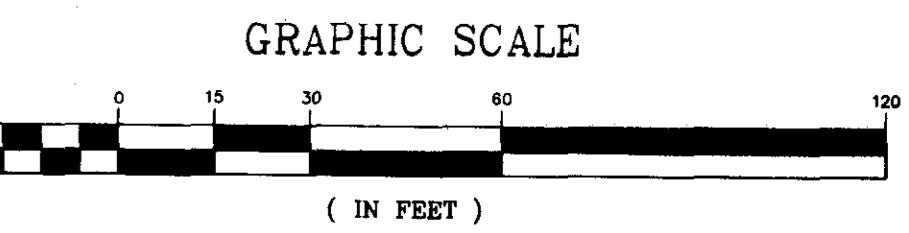


LEGEND		ABBREVIATIONS	
	BUILDING LINE	ALUM.	ALUMINUM
	ONE FOOT INTERVAL GROUND CONTOUR	BLK.	BLOCK
	SPOT ELEVATION	CMP.	CORRUGATED METAL PIPE
	△ C.P. 4 SURVEY CONTROL POINT	Conc.	CONCRETE
	— CLF. CHAIN LINK FENCE	CPP.	CORRUGATED PLASTIC PIPE
	○ GP. GATE POST	Fr.	FRAME
	○ UP. UTILITY POLE	GRND.	GROUND
	— GUY WIRE & ANCHOR	PVC.	POLY-VINYL CHLORIDE
	○ MW 1 MONITORING WELL/PIEZOMETER	Ret.Wall	RETAINING WALL
	□ T-5 PRESSURE TRANSDUCERS	VERT.	VERTICAL
	→ GROUNDWATER FLOW DIRECTION	Wd.	WOOD
	○ P.P.I. PETROLEUM PRODUCT INTERCEPTION SYSTEM		

NOTES:

- ELEVATIONS SHOWN ARE BASED ON THE TOP OF PVC CASING AT MONITORING WELL MW 17. Elev. 1051.20
- HORIZONTAL GRID IS ASSUMED.
- THE LOCATION OF UNDERGROUND UTILITIES ARE OBTAINED BY FIELD MEASUREMENT WHERE PRACTICABLE; OTHERWISE FROM VARIOUS SOURCES AND ARE APPROXIMATE ONLY. THERE MAY BE OTHERS, THE LOCATIONS OF WHICH ARE UNKNOWN.

NOTE:
MONITORING LOCATION DESIGNATIONS
AREA AS FOLLOWS
MW-224 WAS DAMAGED AND NOT ABLE TO OBTAIN WATER LEVEL OR SAMPLE
U = UPGRADIENT
D = DOWNGRADIENT
W = WITHIN WALL



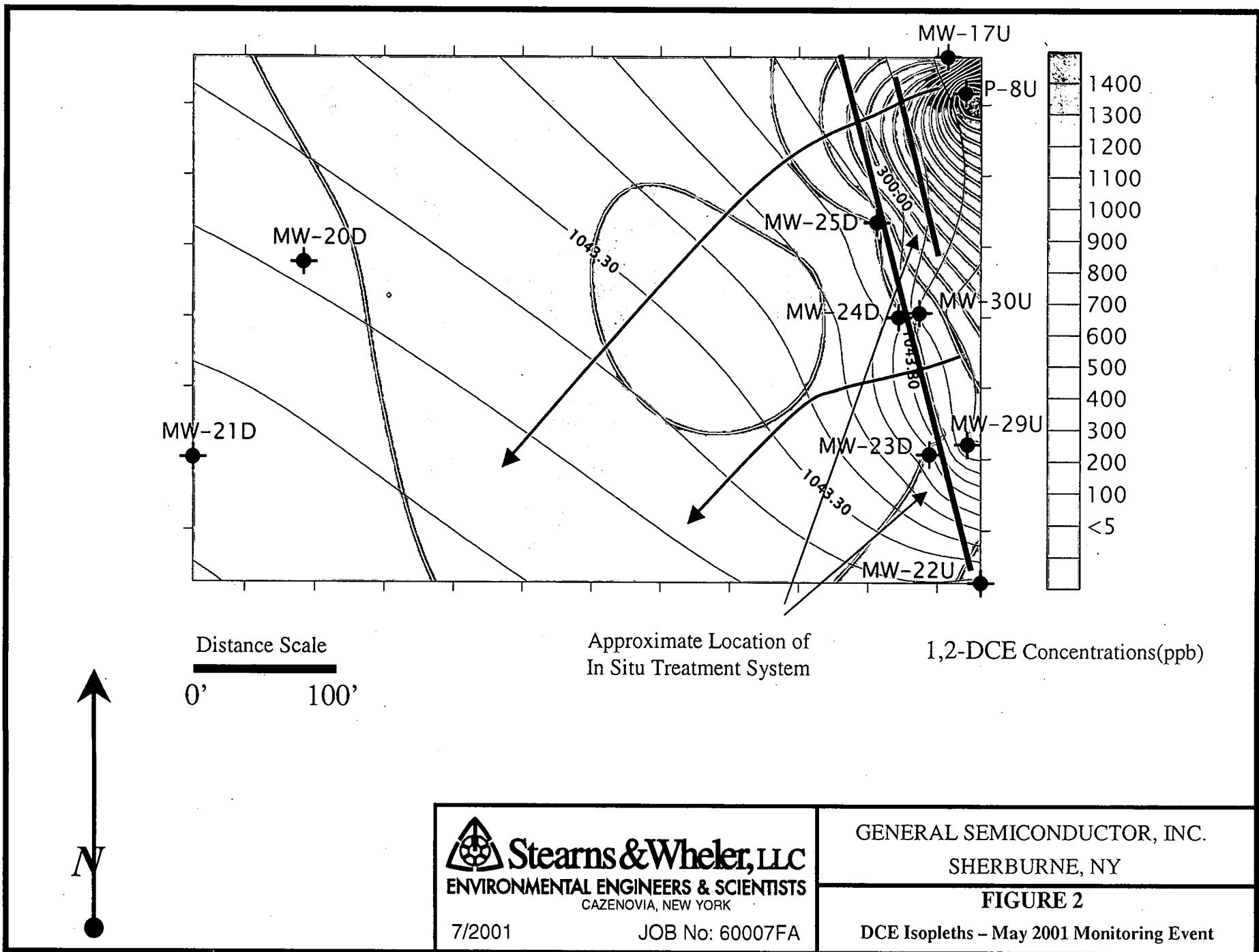
NOTES:
Underground facilities, structures, and utilities have been plotted from available surveys and records, and therefore their locations must be considered approximate only. There may be others, the existence of which is presently not known.

It is a violation of New York State Education Law for any person, unless acting under the direction of a licensed professional engineer, to alter an item on this drawing in any way. If an item is altered, the altering engineer shall affix to the item his/her seal and the notation "altered by" followed by his/her signature and the date of such alteration, and a specific description of the alteration.

2												
	PME	07/01	JLK									
1	FOR APPROVAL											
1	CITY SURVEYORS/CO.											
PROJECT SUPERVISOR		DEPARTMENT SUPERVISOR										
RELE NO.	DRAWN	DATE	CHECKED	DESIGNER	APPROVED	DATE						

Stearns & Wheler, LLC
ENVIRONMENTAL ENGINEERS & SCIENTISTS
CAZENOVIA, NEW YORK

GENERAL INSTRUMENT CORPORATION
SHEBURN, NEW YORK
GROUNDWATER CONTOURS
PERMEABLE REACTION WALL
MAY, 2001
JOB NO. 60007FA CONTRACT 1 SHEET FIGURE 1



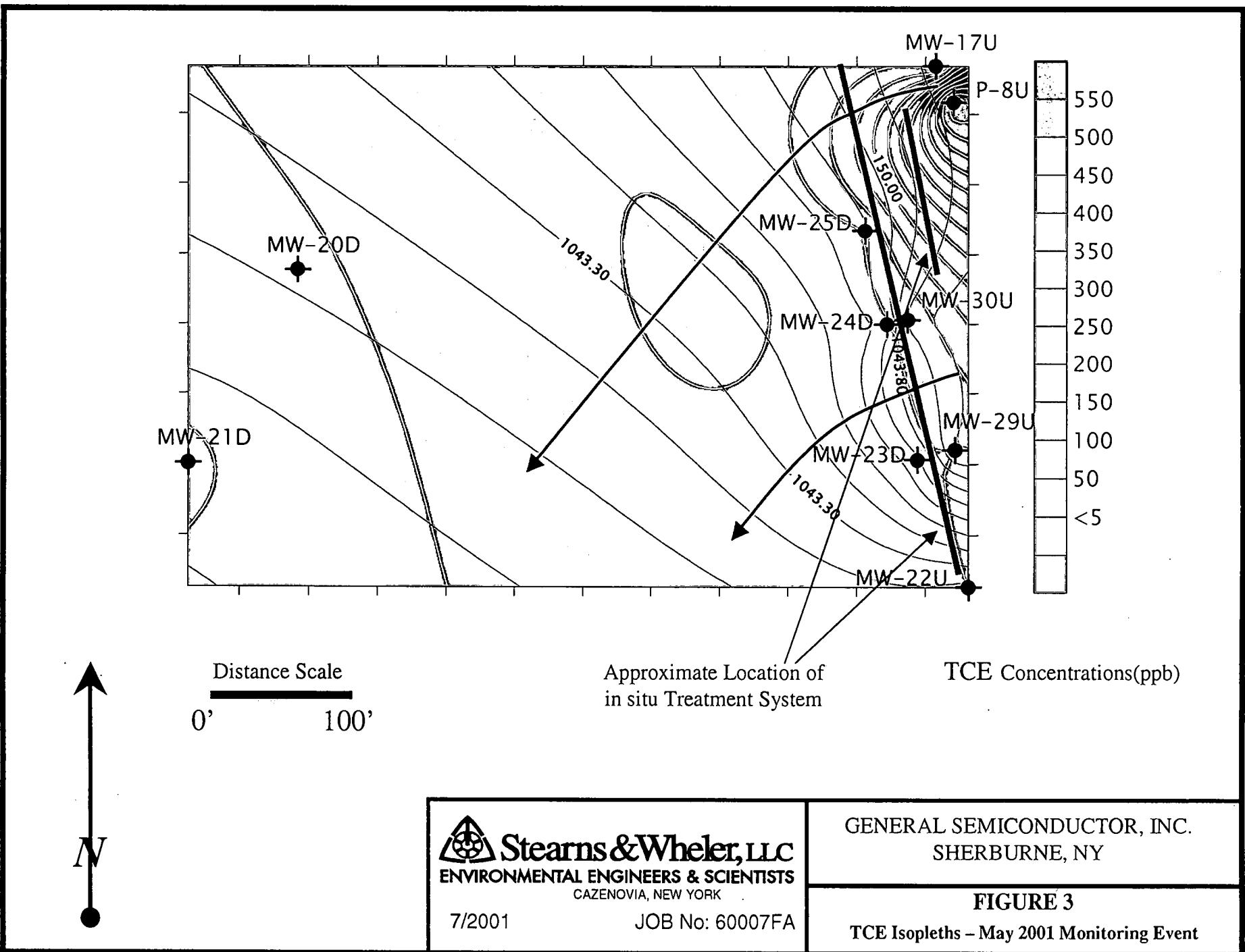
 Stearns & Wheler, LLC
ENVIRONMENTAL ENGINEERS & SCIENTISTS
CAZENOVIA, NEW YORK

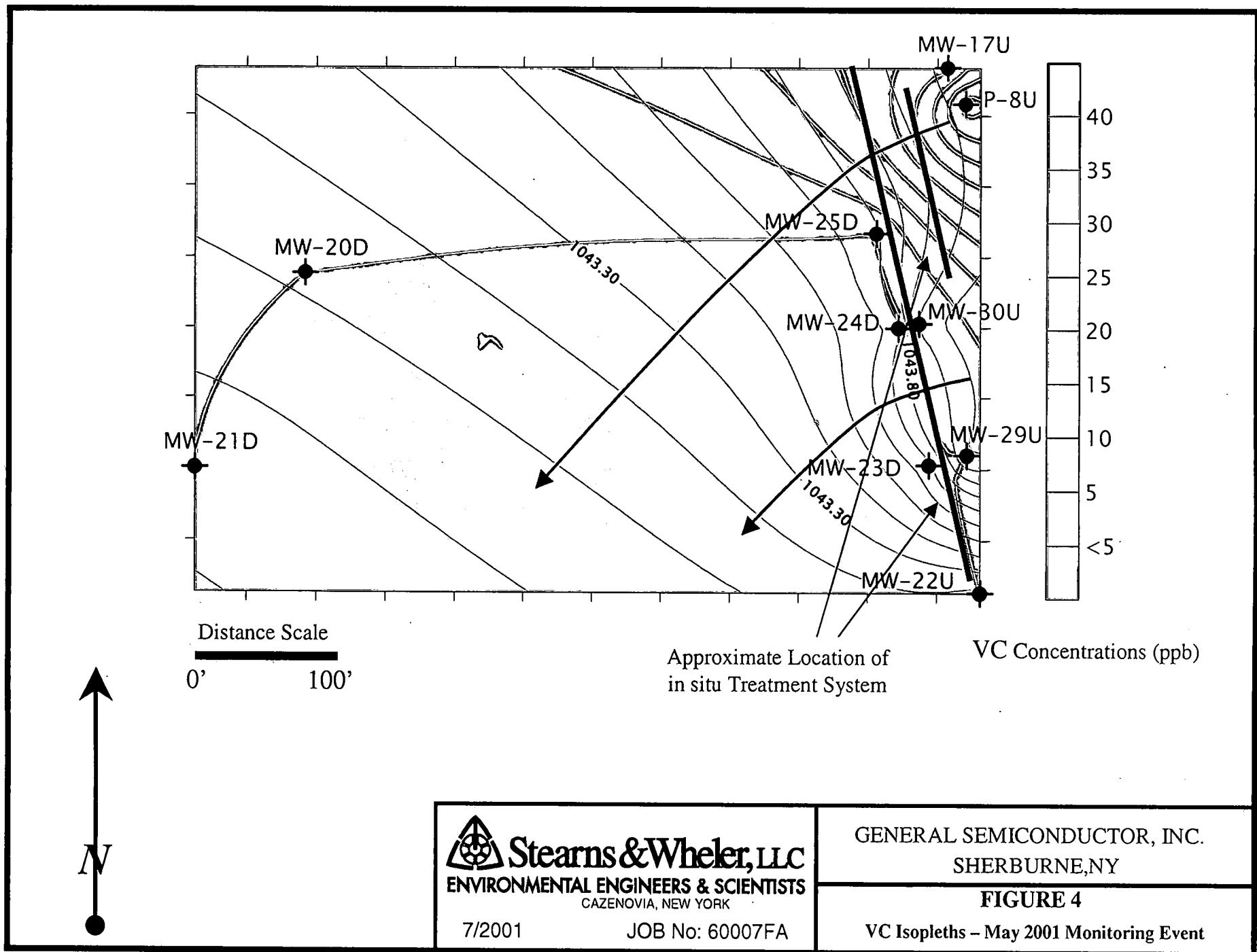
7/2001

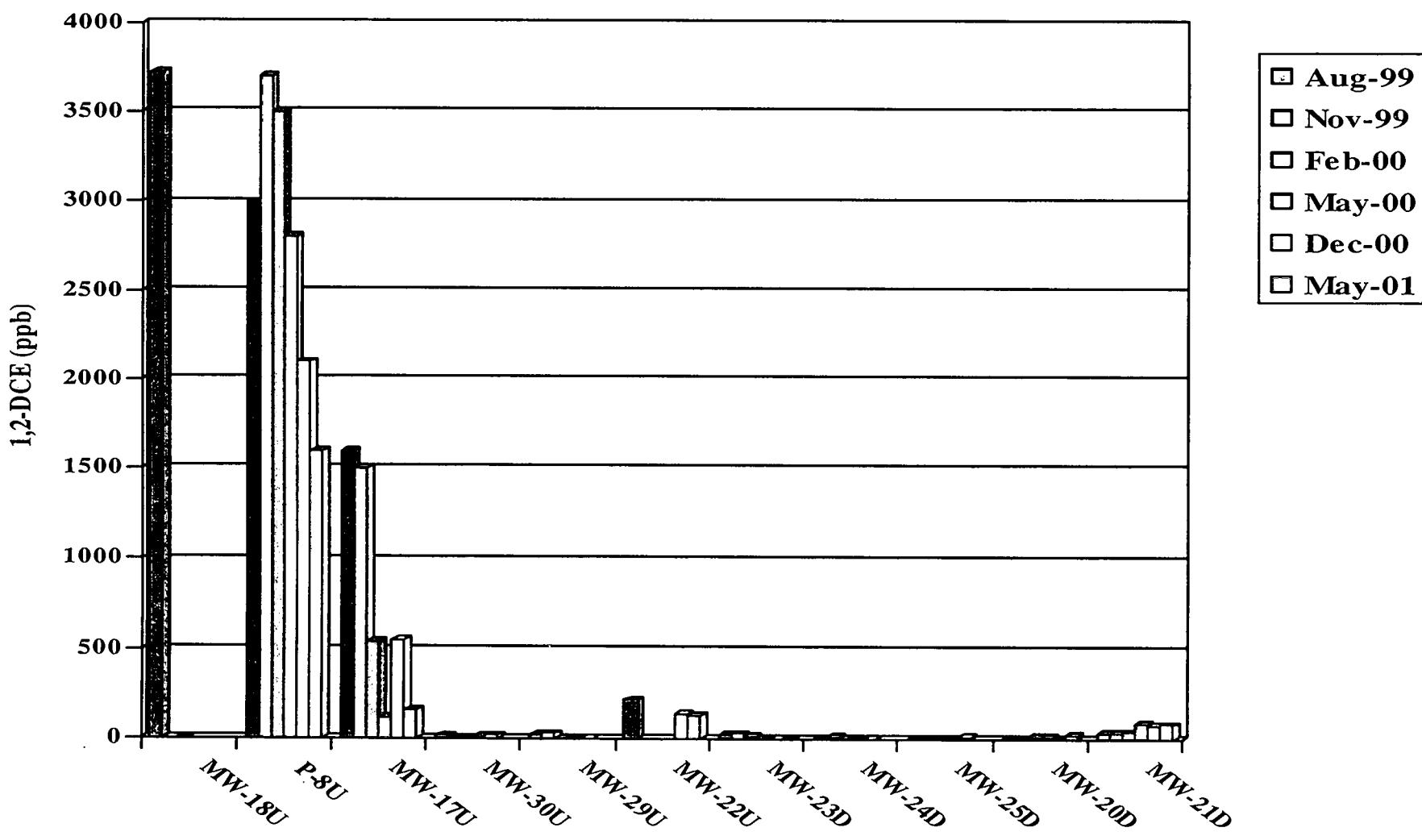
JOB No: 60007FA

GENERAL SEMICONDUCTOR, INC.
SHERBURNE, NY

FIGURE 2
DCE Isopleths – May 2001 Monitoring Event



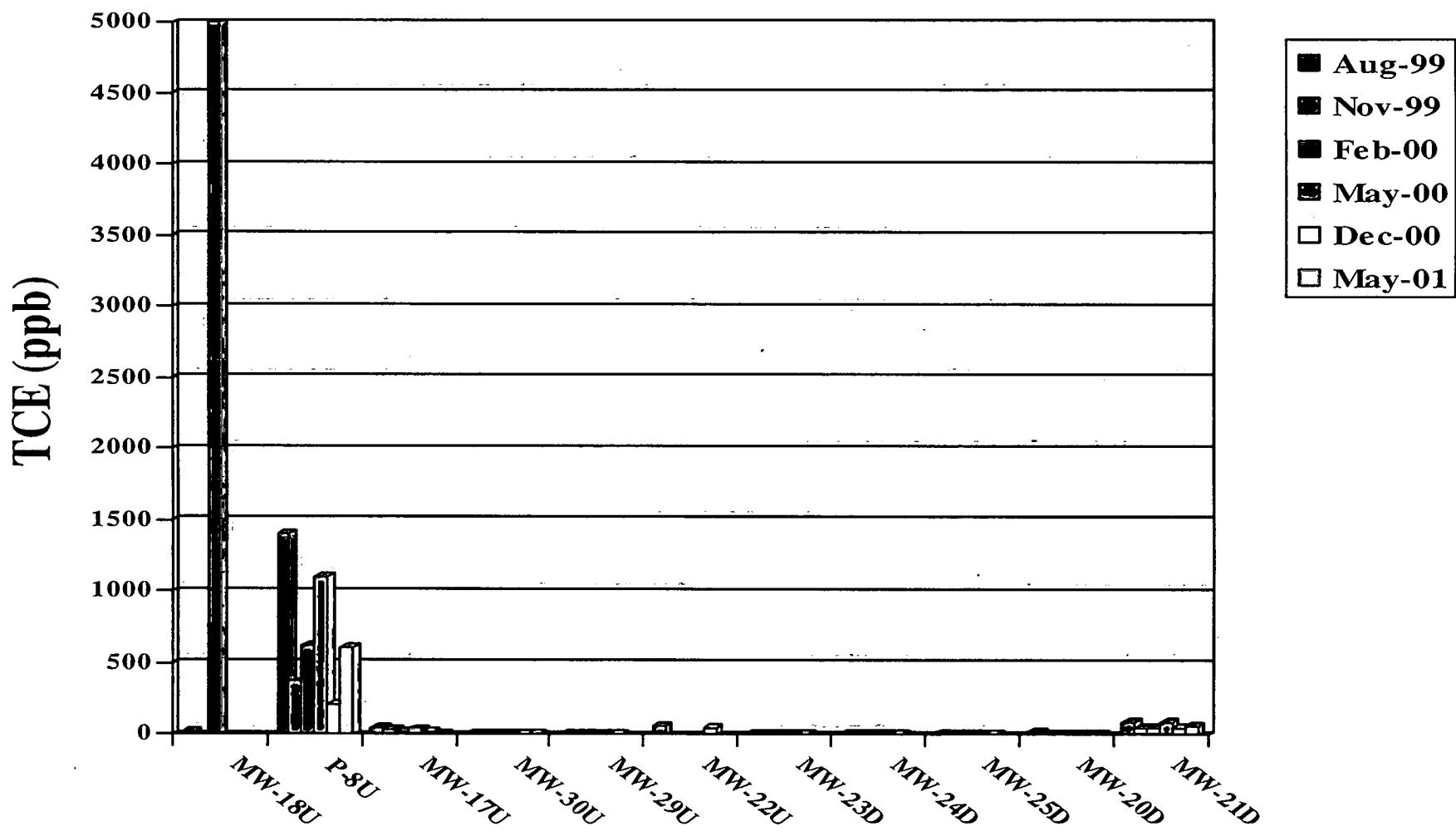




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ENVIRONMENTAL ENGINEERS & SCIENTISTS
CAZENOVIA, NEW YORK
DATE: 7/01 JOB No.: 60007FA

GENERAL SEMICONDUCTOR, INC
SHERBURNE, NY

FIGURE 5
Historic 1,2-DCE Concentration Trends



 Stearns & Wheler, LLC
ENVIRONMENTAL ENGINEERS & SCIENTISTS

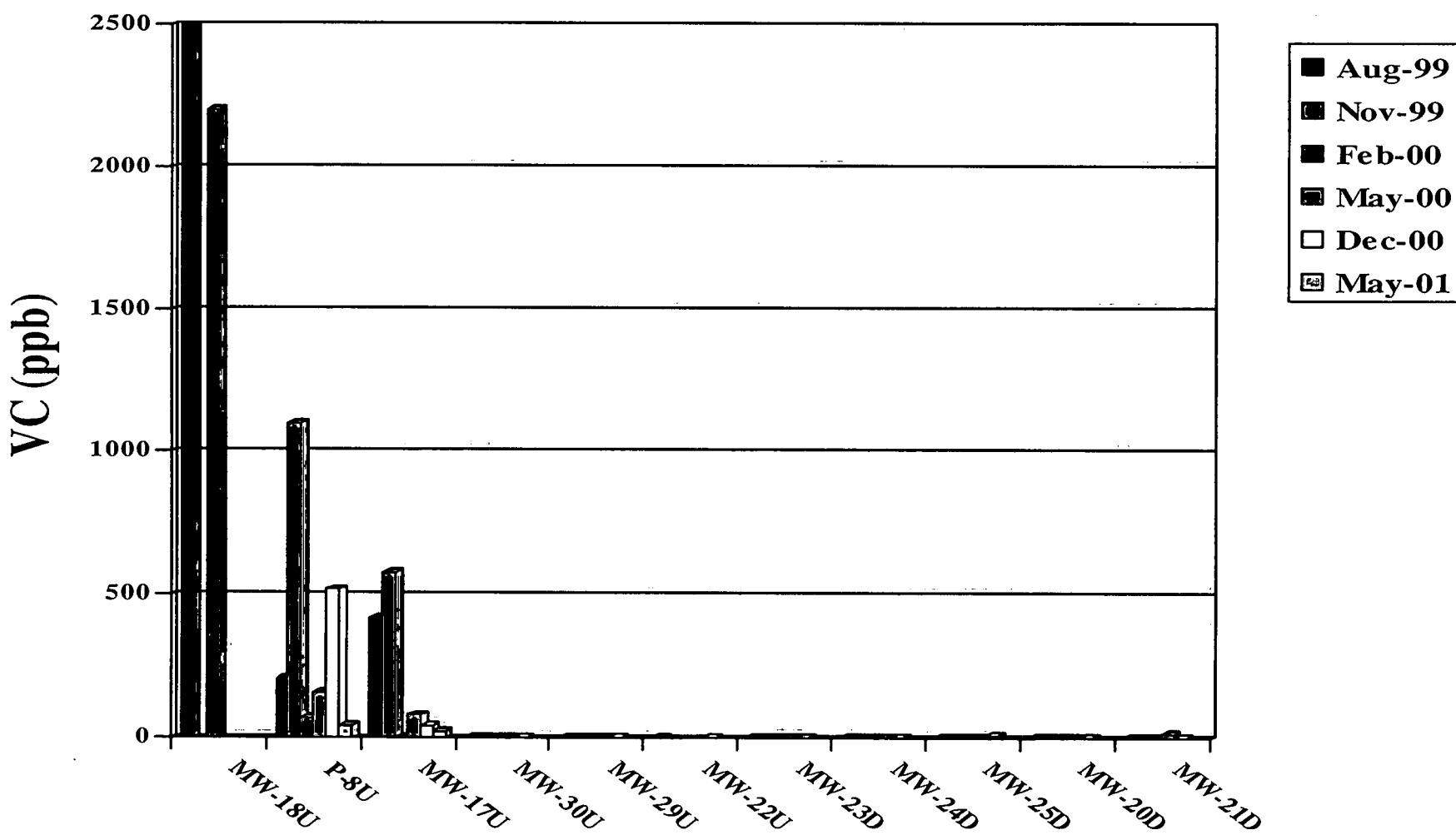
CAZENOVIA, NEW YORK

DATE: 7/01

JOB No.: 60007FA

GENERAL SEMICONDUCTOR, INC
SHERBURNE, NY

FIGURE 6
Historic TCE Concentration Trends



 Stearns & Wheler, LLC
ENVIRONMENTAL ENGINEERS & SCIENTISTS
CAZENOVIA, NEW YORK
DATE: 7/01 JOB No.: 60007FA

GENERAL SEMICONDUCTOR, INC
SHERBURNE, NY

FIGURE 7
Historic VC Concentration Trends

LABORATORY REPORTS

LSL

Jeff Kiggins
Stearns & Wheler Engineering
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Cazenovia, NY 13035

Phone: (315) 655-8161
FAX: (315) 655-4180

Laboratory Analysis Report For Stearns & Wheler Engineering

Project Number: R60007.10.1700

LSL Project Number: 0105854

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NYS DOH ELAP #10900

This report was reviewed by: Diane Leganice QC Date: 6-19-01
Life Science Laboratories, Inc.

-- LABORATORY ANALYSIS REPORT --

Stearns & Wheler Engineering

Project No.: R60007.10.1700

Authorization:

Jeff Kiggins

Phone Number: (315) 655-8161

LSL Project No.: 0105854

Report Date: 6/13/01

Sample ID: MW 30

Source: GSI Sherburne

Sample Matrix: NPW

LSL Sample ID: 0105854-001

Date Sampled: 5/30/2001

Parameter(s)	Results	Units	Analysis Date and Time
(1) EPA 200.7 Total Metals			
Iron	0.10	mg/l	6/1/01
Calcium	78	mg/l	6/1/01
Magnesium	12	mg/l	6/1/01
Sodium	20	mg/l	6/1/01
Potassium	1.8	mg/l	6/1/01
(1) EPA 8260B TCL Volatiles			
Acetone	<10	ug/l	6/9/01
Benzene	<5	ug/l	6/9/01
Bromodichloromethane	<5	ug/l	6/9/01
Bromoform	<5	ug/l	6/9/01
Bromomethane	<5	ug/l	6/9/01
2-Butanone (MEK)	<10	ug/l	6/9/01
Carbon disulfide	<5	ug/l	6/9/01
Carbon tetrachloride	<5	ug/l	6/9/01
Chlorobenzene	<5	ug/l	6/9/01
Chloroethane	<5	ug/l	6/9/01
Chloroform	<5	ug/l	6/9/01
Chloromethane	<5	ug/l	6/9/01
Dibromochloromethane	<5	ug/l	6/9/01
1,1-Dichloroethane	<5	ug/l	6/9/01
1,2-Dichloroethane	<5	ug/l	6/9/01
1,1-Dichloroethene	<5	ug/l	6/9/01
1,2-Dichloroethene, Total	<5	ug/l	6/9/01
1,2-Dichloropropane	<5	ug/l	6/9/01
cis-1,3-Dichloropropene	<5	ug/l	6/9/01
trans-1,3-Dichloropropene	<5	ug/l	6/9/01
Ethyl benzene	<5	ug/l	6/9/01
2-Hexanone	<10	ug/l	6/9/01
Methylene chloride	<10	ug/l	6/9/01
4-Methyl-2-pentanone (MIBK)	<10	ug/l	6/9/01
Styrene	<5	ug/l	6/9/01
1,1,2,2-Tetrachloroethane	<5	ug/l	6/9/01
Tetrachloroethene	<5	ug/l	6/9/01
Toluene	<5	ug/l	6/9/01

-- LABORATORY ANALYSIS REPORT --

Stearns & Wheler Engineering

Project No.: R60007.10.1700

Authorization:

Jeff Kiggins

Phone Number: (315) 655-8161

LSL Project No.: 0105854

Report Date: 6/13/01

1,1,1-Trichloroethane	<5 ug/l	6/9/01
1,1,2-Trichloroethane	<5 ug/l	6/9/01
Trichloroethene	<5 ug/l	6/9/01
Vinyl chloride	<5 ug/l	6/9/01
Xylenes (Total)	<5 ug/l	6/9/01
Surrogate (4-BFB)	90 %R	6/9/01
Surrogate (Tol-d8)	101 %R	6/9/01
Surrogate (1,2-DCA-d4)	110 %R	6/9/01
MTBE	<5 ug/l	6/9/01
Naphthalene	<5 ug/l	6/9/01
(1) EPA Method 300.0 A		
Chloride	26 mg/l	6/4/01
Sulfate	14 mg/l	6/4/01
(1) SM 18 2320B, Alkalinity as CaCO3		
Alkalinity	230 mg/l	6/4/01

Sample ID: P 8

Source: GSI Sherburne

Sample Matrix: NPW

LSL Sample ID: 0105854-002

Date Sampled: 5/30/2001

Parameter(s)	Results	Units	Analysis Date and Time
(1) EPA 200.7 Total Metals			
Iron	0.57	mg/l	6/1/01
Calcium	100	mg/l	6/1/01
Magnesium	16	mg/l	6/1/01
Sodium	27	mg/l	6/1/01
Potassium	1.7	mg/l	6/1/01
(1) EPA 8260B TCL Volatiles			
Acetone	<10	ug/l	6/9/01
Benzene	<5	ug/l	6/9/01
Bromodichloromethane	<5	ug/l	6/9/01
Bromoform	<5	ug/l	6/9/01
Bromomethane	<5	ug/l	6/9/01
2-Butanone (MEK)	<10	ug/l	6/9/01
Carbon disulfide	<5	ug/l	6/9/01
Carbon tetrachloride	<5	ug/l	6/9/01
Chlorobenzene	<5	ug/l	6/9/01
Chloroethane	<5	ug/l	6/9/01
Chloroform	<5	ug/l	6/9/01
Chloromethane	<5	ug/l	6/9/01
Dibromochloromethane	<5	ug/l	6/9/01

-- LABORATORY ANALYSIS REPORT --

Stearns & Wheler Engineering

Project No.: R60007.10.1700

Authorization:

Jeff Kiggins

Phone Number: (315) 655-8161

LSL Project No.: 0105854

Report Date: 6/13/01

1,1-Dichloroethane	<5 ug/l	6/9/01
1,2-Dichloroethane	<5 ug/l	6/9/01
1,1-Dichloroethene	<5 ug/l	6/9/01
1,2-Dichloroethene, Total	1600 ug/l	6/9/01
1,2-Dichloropropane	<5 ug/l	6/9/01
cis-1,3-Dichloropropene	<5 ug/l	6/9/01
trans-1,3-Dichloropropene	<5 ug/l	6/9/01
Ethyl benzene	<5 ug/l	6/9/01
2-Hexanone	<10 ug/l	6/9/01
Methylene chloride	<10 ug/l	6/9/01
4-Methyl-2-pentanone (MIBK)	<10 ug/l	6/9/01
Styrene	<5 ug/l	6/9/01
1,1,2,2-Tetrachloroethane	<5 ug/l	6/9/01
Tetrachloroethene	<5 ug/l	6/9/01
Toluene	<5 ug/l	6/9/01
1,1,1-Trichloroethane	<5 ug/l	6/9/01
1,1,2-Trichloroethane	<5 ug/l	6/9/01
Trichloroethene	610 ug/l	6/9/01
Vinyl chloride	43 ug/l	6/9/01
Xylenes (Total)	<5 ug/l	6/9/01
Surrogate (4-BFB)	94 %R	6/9/01
Surrogate (Tol-d8)	100 %R	6/9/01
Surrogate (1,2-DCA-d4)	108 %R	6/9/01
MTBE	<5 ug/l	6/9/01
Naphthalene	<5 ug/l	6/9/01
(1) EPA Method 300.0 A		
Chloride	46 mg/l	6/4/01
Sulfate	12 mg/l	6/4/01
(1) SM 18 2320B, Alkalinity as CaCO3		
Alkalinity	300 mg/l	6/4/01

Sample ID: MW 25

Source: GSI Sherburne

Sample Matrix: NPW

LSL Sample ID: 0105854-003

Date Sampled: 5/30/2001

<i>Parameter(s)</i>	<i>Results</i>	<i>Units</i>	<i>Analysis Date and Time</i>
(1) EPA 200.7 Total Metals			
Iron	0.95	mg/l	6/1/01
Calcium	23	mg/l	6/1/01
Magnesium	5.1	mg/l	6/1/01
Sodium	20	mg/l	6/1/01

Life Science Laboratories, Inc.

Page 4 of 21

Analysis performed at NYS DOH ELAP Number: (1) 10248, (2) 10900, (3) 11667

-- LABORATORY ANALYSIS REPORT --

Stearns & Wheler Engineering

Jeff Kiggins

Project No.: R60007.10.1700

Phone Number: (315) 655-8161

Authorization:

LSL Project No.: 0105854

Report Date: 6/13/01

Potassium	<1 mg/l	6/1/01
(1) EPA 8260B TCL Volatiles		
Acetone	<20 ug/l	6/9/01
Benzene	<10 ug/l	6/9/01
Bromodichloromethane	<10 ug/l	6/9/01
Bromoform	<10 ug/l	6/9/01
Bromomethane	<10 ug/l	6/9/01
2-Butanone (MEK)	<20 ug/l	6/9/01
Carbon disulfide	<10 ug/l	6/9/01
Carbon tetrachloride	<10 ug/l	6/9/01
Chlorobenzene	<10 ug/l	6/9/01
Chloroethane	<10 ug/l	6/9/01
Chloroform	<10 ug/l	6/9/01
Chloromethane	<10 ug/l	6/9/01
Dibromochloromethane	<10 ug/l	6/9/01
1,1-Dichloroethane	<10 ug/l	6/9/01
1,2-Dichloroethane	<10 ug/l	6/9/01
1,1-Dichloroethene	<10 ug/l	6/9/01
1,2-Dichloroethene, Total	<10 ug/l	6/9/01
1,2-Dichloropropane	<10 ug/l	6/9/01
cis-1,3-Dichloropropene	<10 ug/l	6/9/01
trans-1,3-Dichloropropene	<10 ug/l	6/9/01
Ethyl benzene	19 ug/l	6/9/01
2-Hexanone	<20 ug/l	6/9/01
Methylene chloride	<20 ug/l	6/9/01
4-Methyl-2-pentanone (MIBK)	<20 ug/l	6/9/01
Styrene	<10 ug/l	6/9/01
1,1,2,2-Tetrachloroethane	<10 ug/l	6/9/01
Tetrachloroethene	<10 ug/l	6/9/01
Toluene	<10 ug/l	6/9/01
1,1,1-Trichloroethane	<10 ug/l	6/9/01
1,1,2-Trichloroethane	<10 ug/l	6/9/01
Trichloroethene	<10 ug/l	6/9/01
Vinyl chloride	<10 ug/l	6/9/01
Xylenes (Total)	26 ug/l	6/9/01
Surrogate (4-BFB)	90 %R	6/9/01
Surrogate (Tol-d8)	100 %R	6/9/01
Surrogate (1,2-DCA-d4)	113 %R	6/9/01
MTBE	<10 ug/l	6/9/01

-- LABORATORY ANALYSIS REPORT --

Stearns & Wheler Engineering

Jeff Kiggins

Phone Number: (315) 655-8161

LSL Project No.: 0105854

Report Date: 6/13/01

Project No.: R60007.10.1700

Authorization:

2-Hexanone	<10 ug/l	6/9/01
Methylene chloride	<10 ug/l	6/9/01
4-Methyl-2-pentanone (MIBK)	<10 ug/l	6/9/01
Styrene	<5 ug/l	6/9/01
1,1,2,2-Tetrachloroethane	<5 ug/l	6/9/01
Tetrachloroethene	<5 ug/l	6/9/01
Toluene	<5 ug/l	6/9/01
1,1,1-Trichloroethane	<5 ug/l	6/9/01
1,1,2-Trichloroethane	<5 ug/l	6/9/01
Trichloroethene	<5 ug/l	6/9/01
Vinyl chloride	<5 ug/l	6/9/01
Xylenes (Total)	<5 ug/l	6/9/01
Surrogate (4-BFB)	93 %R	6/9/01
Surrogate (Tol-d8)	103 %R	6/9/01
Surrogate (1,2-DCA-d4)	108 %R	6/9/01
MTBE	<5 ug/l	6/9/01
Naphthalene	<5 ug/l	6/9/01
(1) EPA Method 300.0 A		
Chloride	12 mg/l	6/4/01
Sulfate	20 mg/l	6/4/01
(1) SM 18 2320B, Alkalinity as CaCO3		
Alkalinity	120 mg/l	6/4/01

Sample ID: MW 23

LSL Sample ID: 0105854-005

Source: GSI Sherburne

Date Sampled: 5/30/2001

Sample Matrix: NPW

	<i>Parameter(s)</i>	<i>Results</i>	<i>Units</i>	<i>Analysis Date and Time</i>
(1)	EPA 200.7 Total Metals			
	Iron	1.3	mg/l	6/1/01
	Calcium	71	mg/l	6/1/01
	Magnesium	11	mg/l	6/1/01
	Sodium	20	mg/l	6/1/01
	Potassium	6.2	mg/l	6/1/01
(1)	EPA 8260B TCL Volatiles			
	Acetone	<10	ug/l	6/9/01
	Benzene	<5	ug/l	6/9/01
	Bromodichloromethane	<5	ug/l	6/9/01
	Bromoform	<5	ug/l	6/9/01
	Bromomethane	<5	ug/l	6/9/01
	2-Butanone (MEK)	<10	ug/l	6/9/01

-- LABORATORY ANALYSIS REPORT --

Stearns & Wheler Engineering

Project No.: R60007.10.1700

Authorization:

Jeff Kiggins

Phone Number: (315) 655-8161

LSL Project No.: 0105854

Report Date: 6/13/01

Carbon disulfide	<5 ug/l	6/9/01
Carbon tetrachloride	<5 ug/l	6/9/01
Chlorobenzene	<5 ug/l	6/9/01
Chloroethane	<5 ug/l	6/9/01
Chloroform	<5 ug/l	6/9/01
Chloromethane	<5 ug/l	6/9/01
Dibromochloromethane	<5 ug/l	6/9/01
1,1-Dichloroethane	<5 ug/l	6/9/01
1,2-Dichloroethane	<5 ug/l	6/9/01
1,1-Dichloroethene	<5 ug/l	6/9/01
1,2-Dichloroethene, Total	6.0 ug/l	6/9/01
1,2-Dichloropropane	<5 ug/l	6/9/01
cis-1,3-Dichloropropene	<5 ug/l	6/9/01
trans-1,3-Dichloropropene	<5 ug/l	6/9/01
Ethyl benzene	<5 ug/l	6/9/01
2-Hexanone	<10 ug/l	6/9/01
Methylene chloride	<10 ug/l	6/9/01
4-Methyl-2-pentanone (MIBK)	<10 ug/l	6/9/01
Styrene	<5 ug/l	6/9/01
1,1,2,2-Tetrachloroethane	<5 ug/l	6/9/01
Tetrachloroethene	<5 ug/l	6/9/01
Toluene	<5 ug/l	6/9/01
1,1,1-Trichloroethane	<5 ug/l	6/9/01
1,1,2-Trichloroethane	<5 ug/l	6/9/01
Trichloroethene	<5 ug/l	6/9/01
Vinyl chloride	<5 ug/l	6/9/01
Xylenes (Total)	<5 ug/l	6/9/01
Surrogate (4-BFB)	91 %R	6/9/01
Surrogate (Tol-d8)	101 %R	6/9/01
Surrogate (1,2-DCA-d4)	110 %R	6/9/01
MTBE	<5 ug/l	6/9/01
Naphthalene	<5 ug/l	6/9/01
(1) EPA Method 300.0 A		
Chloride	28 mg/l	6/4/01
Sulfate	16 mg/l	6/4/01
(1) SM 18 2320B, Alkalinity as CaCO₃		
Alkalinity	200 mg/l	6/4/01

-- LABORATORY ANALYSIS REPORT --

Stearns & Wheler Engineering

Jeff Kiggins

Project No.: R60007.10.1700

Phone Number: (315) 655-8161

Authorization:

LSL Project No.: 0105854

Report Date: 6/13/01

Sample ID: MW 29

Source: GSI Sherburne

LSL Sample ID: 0105854-006

Sample Matrix: NPW

Date Sampled: 5/30/2001

Parameter(s)	Results	Units	Analysis Date and Time
(1) EPA 200.7 Total Metals			
Iron	<0.05	mg/l	6/1/01
Calcium	42	mg/l	6/1/01
Magnesium	5.6	mg/l	6/1/01
Sodium	5.2	mg/l	6/1/01
Potassium	1.3	mg/l	6/1/01
(1) EPA 8260B TCL Volatiles			
Acetone	<10	ug/l	6/9/01
Benzene	<5	ug/l	6/9/01
Bromodichloromethane	<5	ug/l	6/9/01
Bromoform	<5	ug/l	6/9/01
Bromomethane	<5	ug/l	6/9/01
2-Butanone (MEK)	<10	ug/l	6/9/01
Carbon disulfide	<5	ug/l	6/9/01
Carbon tetrachloride	<5	ug/l	6/9/01
Chlorobenzene	<5	ug/l	6/9/01
Chloroethane	<5	ug/l	6/9/01
Chloroform	<5	ug/l	6/9/01
Chloromethane	<5	ug/l	6/9/01
Dibromochloromethane	<5	ug/l	6/9/01
1,1-Dichloroethane	<5	ug/l	6/9/01
1,2-Dichloroethane	<5	ug/l	6/9/01
1,1-Dichloroethene	<5	ug/l	6/9/01
1,2-Dichloroethene, Total	<5	ug/l	6/9/01
1,2-Dichloropropane	<5	ug/l	6/9/01
cis-1,3-Dichloropropene	<5	ug/l	6/9/01
trans-1,3-Dichloropropene	<5	ug/l	6/9/01
Ethyl benzene	<5	ug/l	6/9/01
2-Hexanone	<10	ug/l	6/9/01
Methylene chloride	<10	ug/l	6/9/01
4-Methyl-2-pentanone (MIBK)	<10	ug/l	6/9/01
Styrene	<5	ug/l	6/9/01
1,1,2,2-Tetrachloroethane	<5	ug/l	6/9/01
Tetrachloroethene	<5	ug/l	6/9/01
Toluene	<5	ug/l	6/9/01

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LSL Project No.: 0105854

Report Date: 6/13/01

1,1,1-Trichloroethane	<5 ug/l	6/9/01
1,1,2-Trichloroethane	<5 ug/l	6/9/01
Trichloroethene	<5 ug/l	6/9/01
Vinyl chloride	<5 ug/l	6/9/01
Xylenes (Total)	<5 ug/l	6/9/01
Surrogate (4-BFB)	93 %R	6/9/01
Surrogate (Tol-d8)	100 %R	6/9/01
Surrogate (1,2-DCA-d4)	113 %R	6/9/01
MTBE	<5 ug/l	6/9/01
Naphthalene	<5 ug/l	6/9/01
(1) EPA Method 300.0 A		
Chloride	6.6 mg/l	6/4/01
Sulfate	17 mg/l	6/4/01
(1) SM 18 2320B, Alkalinity as CaCO3		
Alkalinity	110 mg/l	6/4/01

Sample ID: MW 22

Source: GSI Sherburne

Sample Matrix: NPW

LSL Sample ID: 0105854-007

Date Sampled: 5/30/2001

Parameter(s)	Results	Units	Analysis Date and Time
(1) EPA 200.7 Total Metals			
Iron	3.8 mg/l		6/1/01
Calcium	90 mg/l		6/1/01
Magnesium	15 mg/l		6/1/01
Sodium	25 mg/l		6/1/01
Potassium	5.2 mg/l		6/1/01
(1) EPA 8260B TCL Volatiles			
Acetone	<10 ug/l		6/9/01
Benzene	<5 ug/l		6/9/01
Bromodichloromethane	<5 ug/l		6/9/01
Bromoform	<5 ug/l		6/9/01
Bromomethane	<5 ug/l		6/9/01
2-Butanone (MEK)	<10 ug/l		6/9/01
Carbon disulfide	<5 ug/l		6/9/01
Carbon tetrachloride	<5 ug/l		6/9/01
Chlorobenzene	<5 ug/l		6/9/01
Chloroethane	<5 ug/l		6/9/01
Chloroform	<5 ug/l		6/9/01
Chloromethane	<5 ug/l		6/9/01
Dibromochloromethane	<5 ug/l		6/9/01

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LSL Project No.: 0105854

Report Date: 6/13/01

1,1-Dichloroethane	<5 ug/l	6/9/01
1,2-Dichloroethane	<5 ug/l	6/9/01
1,1-Dichloroethene	<5 ug/l	6/9/01
1,2-Dichloroethene, Total	130 ug/l	6/9/01
1,2-Dichloropropane	<5 ug/l	6/9/01
cis-1,3-Dichloropropene	<5 ug/l	6/9/01
trans-1,3-Dichloropropene	<5 ug/l	6/9/01
Ethyl benzene	<5 ug/l	6/9/01
2-Hexanone	<10 ug/l	6/9/01
Methylene chloride	<10 ug/l	6/9/01
4-Methyl-2-pentanone (MIBK)	<10 ug/l	6/9/01
Styrene	<5 ug/l	6/9/01
1,1,2,2-Tetrachloroethane	<5 ug/l	6/9/01
Tetrachloroethene	<5 ug/l	6/9/01
Toluene	<5 ug/l	6/9/01
1,1,1-Trichloroethane	<5 ug/l	6/9/01
1,1,2-Trichloroethane	<5 ug/l	6/9/01
Trichloroethene	39 ug/l	6/9/01
Vinyl chloride	<5 ug/l	6/9/01
Xylenes (Total)	<5 ug/l	6/9/01
Surrogate (4-BFB)	91 %R	6/9/01
Surrogate (Tol-d8)	100 %R	6/9/01
Surrogate (1,2-DCA-d4)	112 %R	6/9/01
MTBE	<5 ug/l	6/9/01
Naphthalene	<5 ug/l	6/9/01
(1) EPA Method 300.0 A		
Chloride	40 mg/l	6/4/01
Sulfate	18 mg/l	6/4/01
(1) SM 18 2320B, Alkalinity as CaCO3		
Alkalinity	240 mg/l	6/4/01

Sample ID: MW 20

Source: GSI Sherburne

Sample Matrix: NPW

LSL Sample ID: 0105854-008

Date Sampled: 5/30/2001

Parameter(s)	Results	Units	Analysis Date and Time
(1) EPA 8260B TCL Volatiles			
Acetone	<10 ug/l	6/9/01	
Benzene	<5 ug/l	6/9/01	
Bromodichloromethane	<5 ug/l	6/9/01	
Bromoform	<5 ug/l	6/9/01	

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Authorization:

LSL Project No.: 0105854

Report Date: 6/13/01

Bromomethane	<5 ug/l	6/9/01
2-Butanone (MEK)	<10 ug/l	6/9/01
Carbon disulfide	<5 ug/l	6/9/01
Carbon tetrachloride	<5 ug/l	6/9/01
Chlorobenzene	<5 ug/l	6/9/01
Chloroethane	<5 ug/l	6/9/01
Chloroform	<5 ug/l	6/9/01
Chloromethane	<5 ug/l	6/9/01
Dibromochloromethane	<5 ug/l	6/9/01
1,1-Dichloroethane	<5 ug/l	6/9/01
1,2-Dichloroethane	<5 ug/l	6/9/01
1,1-Dichloroethene	<5 ug/l	6/9/01
1,2-Dichloroethene, Total	26 ug/l	6/9/01
1,2-Dichloropropane	<5 ug/l	6/9/01
cis-1,3-Dichloropropene	<5 ug/l	6/9/01
trans-1,3-Dichloropropene	<5 ug/l	6/9/01
Ethyl benzene	<5 ug/l	6/9/01
2-Hexanone	<10 ug/l	6/9/01
Methylene chloride	<10 ug/l	6/9/01
4-Methyl-2-pentanone (MIBK)	<10 ug/l	6/9/01
Styrene	<5 ug/l	6/9/01
1,1,2,2-Tetrachloroethane	<5 ug/l	6/9/01
Tetrachloroethene	<5 ug/l	6/9/01
Toluene	<5 ug/l	6/9/01
1,1,1-Trichloroethane	<5 ug/l	6/9/01
1,1,2-Trichloroethane	<5 ug/l	6/9/01
Trichloroethene	9.4 ug/l	6/9/01
Vinyl chloride	<5 ug/l	6/9/01
Xylenes (Total)	<5 ug/l	6/9/01
Surrogate (4-BFB)	93 %R	6/9/01
Surrogate (Tol-d8)	100 %R	6/9/01
Surrogate (1,2-DCA-d4)	108 %R	6/9/01
MTBE	<5 ug/l	6/9/01
Naphthalene	<5 ug/l	6/9/01

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Authorization:

LSL Project No.: 0105854

Report Date: 6/13/01

Sample ID: MW 21

Source: GSI Sherburne

LSL Sample ID: 0105854-009

Sample Matrix: NPW

Date Sampled: 5/30/2001

Parameter(s)	Results	Units	Analysis Date and Time
(1) EPA 8260B TCL Volatiles			
Acetone	<10	ug/l	6/9/01
Benzene	<5	ug/l	6/9/01
Bromodichloromethane	<5	ug/l	6/9/01
Bromoform	<5	ug/l	6/9/01
Bromomethane	<5	ug/l	6/9/01
2-Butanone (MEK)	<10	ug/l	6/9/01
Carbon disulfide	<5	ug/l	6/9/01
Carbon tetrachloride	<5	ug/l	6/9/01
Chlorobenzene	<5	ug/l	6/9/01
Chloroethane	<5	ug/l	6/9/01
Chloroform	<5	ug/l	6/9/01
Chloromethane	<5	ug/l	6/9/01
Dibromochloromethane	<5	ug/l	6/9/01
1,1-Dichloroethane	<5	ug/l	6/9/01
1,2-Dichloroethane	<5	ug/l	6/9/01
1,1-Dichloroethene	<5	ug/l	6/9/01
1,2-Dichloroethene, Total	82	ug/l	6/9/01
1,2-Dichloropropane	<5	ug/l	6/9/01
cis-1,3-Dichloropropene	<5	ug/l	6/9/01
trans-1,3-Dichloropropene	<5	ug/l	6/9/01
Ethyl benzene	<5	ug/l	6/9/01
2-Hexanone	<10	ug/l	6/9/01
Methylene chloride	<10	ug/l	6/9/01
4-Methyl-2-pentanone (MIBK)	<10	ug/l	6/9/01
Styrene	<5	ug/l	6/9/01
1,1,2,2-Tetrachloroethane	<5	ug/l	6/9/01
Tetrachloroethene	<5	ug/l	6/9/01
Toluene	<5	ug/l	6/9/01
1,1,1-Trichloroethane	<5	ug/l	6/9/01
1,1,2-Trichloroethane	<5	ug/l	6/9/01
Trichloroethene	57	ug/l	6/9/01
Vinyl chloride	<5	ug/l	6/9/01
Xylenes (Total)	<5	ug/l	6/9/01
Surrogate (4-BFB)	93	%R	6/9/01

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Surrogate (Tol-d8)	102	%R	6/9/01
Surrogate (1,2-DCA-d4)	104	%R	6/9/01
MTBE	<5	ug/l	6/9/01
Naphthalene	<5	ug/l	6/9/01

Sample ID: MW 8

Source: GSI Sherburne

LSL Sample ID: 0105854-010

Sample Matrix: NPW

Date Sampled: 5/30/2001

<i>Parameter(s)</i>	<i>Results</i>	<i>Units</i>	<i>Analysis Date and Time</i>
(1) EPA 524.2 Volatile Organic Chemicals			
Benzene	<10	ug/l	6/9/01
Bromobenzene	<10	ug/l	6/9/01
Bromochloromethane	<10	ug/l	6/9/01
Bromomethane	<10	ug/l	6/9/01
sec-Butylbenzene	<10	ug/l	6/9/01
n-Butylbenzene	<10	ug/l	6/9/01
tert-Butylbenzene	<10	ug/l	6/9/01
Carbon tetrachloride	<10	ug/l	6/9/01
Chlorobenzene	<10	ug/l	6/9/01
Chloroethane	<10	ug/l	6/9/01
Chloromethane	<10	ug/l	6/9/01
2-Chlorotoluene	<10	ug/l	6/9/01
4-Chlorotoluene	<10	ug/l	6/9/01
Dibromomethane	<10	ug/l	6/9/01
1,2-Dichlorobenzene	<10	ug/l	6/9/01
1,3-Dichlorobenzene	<10	ug/l	6/9/01
1,4-Dichlorobenzene	<10	ug/l	6/9/01
Dichlorodifluoromethane	<10	ug/l	6/9/01
1,1-Dichloroethane	<10	ug/l	6/9/01
1,2-Dichloroethane	<10	ug/l	6/9/01
cis-1,2-Dichloroethene	87	ug/l	6/9/01
1,1-Dichloroethene	<10	ug/l	6/9/01
trans-1,2-Dichloroethene	<10	ug/l	6/9/01
1,2-Dichloropropane	<10	ug/l	6/9/01
1,3-Dichloropropane	<10	ug/l	6/9/01
2,2-Dichloropropane	<10	ug/l	6/9/01
1,1-Dichloropropene	<10	ug/l	6/9/01
cis-1,3-Dichloropropene	<10	ug/l	6/9/01
trans-1,3-Dichloropropene	<10	ug/l	6/9/01
Ethyl benzene	<10	ug/l	6/9/01

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Authorization:

Hexachlorobutadiene	<10 ug/l	6/9/01
Isopropylbenzene (Cumene)	<10 ug/l	6/9/01
4-Isopropyl toluene (Cymene)	<10 ug/l	6/9/01
Methylene chloride	<10 ug/l	6/9/01
N-Propylbenzene	<10 ug/l	6/9/01
Styrene	<10 ug/l	6/9/01
1,1,1,2-Tetrachloroethane	<10 ug/l	6/9/01
1,1,2,2-Tetrachloroethane	<10 ug/l	6/9/01
Tetrachloroethene	<10 ug/l	6/9/01
Toluene	<10 ug/l	6/9/01
1,2,3-Trichlorobenzene	<10 ug/l	6/9/01
1,2,4-Trichlorobenzene	<10 ug/l	6/9/01
1,1,1-Trichloroethane	<10 ug/l	6/9/01
1,1,2-Trichloroethane	<10 ug/l	6/9/01
Trichloroethene	63 ug/l	6/9/01
Trichlorofluoromethane (Freon 11)	<10 ug/l	6/9/01
1,2,3-Trichloropropane	<10 ug/l	6/9/01
1,2,4-Trimethylbenzene	<10 ug/l	6/9/01
1,3,5-Trimethylbenzene	<10 ug/l	6/9/01
Vinyl chloride	<10 ug/l	6/9/01
Bromodichloromethane	<10 ug/l	6/9/01
Bromoform	<10 ug/l	6/9/01
Chloroform	<10 ug/l	6/9/01
o-Xylene	<10 ug/l	6/9/01
m-Xylene	<10 ug/l	6/9/01
p-Xylene	<10 ug/l	6/9/01
(#) Dibromochloromethane	<10 ug/l	6/9/01

(#) Elevated detection limits due to the presence of a petroleum hydrocarbon pattern in the sample.

(1) EPA 8270 TCL Semi-Volatiles*

Acenaphthene	<5 ug/l	6/5/01
Acenaphthylene	<5 ug/l	6/5/01
Anthracene	<5 ug/l	6/5/01
Benzo(a)anthracene	<5 ug/l	6/5/01
Benzo(b)fluoranthene	<5 ug/l	6/5/01
Benzo(k)fluoranthene	<5 ug/l	6/5/01
Benzo(ghi)perylene	<5 ug/l	6/5/01
Benzo(a)pyrene	<5 ug/l	6/5/01
4-Bromophenyl-phenylether	<5 ug/l	6/5/01
Butylbenzylphthalate	<5 ug/l	6/5/01
Carbazole	<5 ug/l	6/5/01

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4-Chloroaniline	<5 ug/l	6/5/01
bis(2-Chloroethoxy)methane	<5 ug/l	6/5/01
bis(2-Chloroethyl)ether	<5 ug/l	6/5/01
bis(2-Chloroisopropyl)ether	<5 ug/l	6/5/01
4-Chloro-3-methylphenol	<5 ug/l	6/5/01
2-Chloronaphthalene	<5 ug/l	6/5/01
2-Chlorophenol	<5 ug/l	6/5/01
4-Chlorophenyl-phenylether	<5 ug/l	6/5/01
Chrysene	<5 ug/l	6/5/01
Dibenz(a,h)anthracene	<5 ug/l	6/5/01
Dibenzofuran	<5 ug/l	6/5/01
Di-n-butylphthalate	<5 ug/l	6/5/01
1,2-Dichlorobenzene	<5 ug/l	6/5/01
1,3-Dichlorobenzene	<5 ug/l	6/5/01
1,4-Dichlorobenzene	<5 ug/l	6/5/01
3,3'-Dichlorobenzidine	<10 ug/l	6/5/01
2,4-Dichlorophenol	<5 ug/l	6/5/01
Diethylphthalate	<5 ug/l	6/5/01
2,4-Dimethylphenol	<5 ug/l	6/5/01
Dimethylphthalate	<5 ug/l	6/5/01
2,4-Dinitrophenol	<5 ug/l	6/5/01
2,4-Dinitrotoluene	<5 ug/l	6/5/01
2,6-Dinitrotoluene	<5 ug/l	6/5/01
Di-n-octylphthalate	<5 ug/l	6/5/01
bis(2-Ethylhexyl)phthalate	<5 ug/l	6/5/01
Fluoranthene	<5 ug/l	6/5/01
Fluorene	<5 ug/l	6/5/01
Hexachlorobenzene	<5 ug/l	6/5/01
Hexachlorobutadiene	<5 ug/l	6/5/01
Hexachlorocyclopentadiene	<5 ug/l	6/5/01
Hexachloroethane	<5 ug/l	6/5/01
Indeno(1,2,3-c,d)pyrene	<5 ug/l	6/5/01
Isophorone	<5 ug/l	6/5/01
2-Methyl-4,6-dinitrophenol	<10 ug/l	6/5/01
2-Methylnaphthalene	11 ug/l	6/5/01
2-Methylphenol (o-Cresol)	<5 ug/l	6/5/01
4-Methylphenol (p-Cresol)	<5 ug/l	6/5/01
Naphthalene	5.8 ug/l	6/5/01
2-Nitroaniline	<10 ug/l	6/5/01
3-Nitroaniline	<10 ug/l	6/5/01

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4-Nitroaniline	<10 ug/l	6/5/01
Nitrobenzene	<5 ug/l	6/5/01
2-Nitrophenol (o-Nitrophenol)	<5 ug/l	6/5/01
4-Nitrophenol	<5 ug/l	6/5/01
N-Nitrosodiphenylamine	<5 ug/l	6/5/01
N-Nitroso-di-n-propylamine	<5 ug/l	6/5/01
Pentachlorophenol	<10 ug/l	6/5/01
Phenanthrene	<5 ug/l	6/5/01
Phenol	<5 ug/l	6/5/01
Pyrene	<5 ug/l	6/5/01
1,2,4-Trichlorobenzene	<5 ug/l	6/5/01
2,4,5-Trichlorophenol	<5 ug/l	6/5/01
2,4,6-Trichlorophenol	<5 ug/l	6/5/01

*A pattern resembling Fuel Oil#2 is present at an estimated amount of 9.9mg/l.

Sample ID: Duplicate

Source: GSI Sherburne

Sample Matrix: NPW

LSL Sample ID: 0105854-011

Date Sampled: 5/30/2001

Parameter(s)	Results	Units	Analysis Date and Time
(1) EPA 524.2 Volatile Organic Chemicals			
Benzene	<1	ug/l	6/9/01
Bromobenzene	<1	ug/l	6/9/01
Bromochloromethane	<1	ug/l	6/9/01
Bromomethane	<1	ug/l	6/9/01
sec-Butylbenzene	<1	ug/l	6/9/01
n-Butylbenzene	<1	ug/l	6/9/01
tert-Butylbenzene	<1	ug/l	6/9/01
Carbon tetrachloride	<1	ug/l	6/9/01
Chlorobenzene	<1	ug/l	6/9/01
Chloroethane	<1	ug/l	6/9/01
Chloromethane	<1	ug/l	6/9/01
2-Chlorotoluene	<1	ug/l	6/9/01
4-Chlorotoluene	<1	ug/l	6/9/01
Dibromomethane	<1	ug/l	6/9/01
1,2-Dichlorobenzene	<1	ug/l	6/9/01
1,3-Dichlorobenzene	<1	ug/l	6/9/01
1,4-Dichlorobenzene	<1	ug/l	6/9/01
Dichlorodifluoromethane	<1	ug/l	6/9/01
1,1-Dichloroethane	2.6	ug/l	6/9/01
1,2-Dichloroethane	<1	ug/l	6/9/01

-- LABORATORY ANALYSIS REPORT --

Stearns & Wheler Engineering

Project No.: R60007.10.1700

Authorization:

Jeff Kiggins

Phone Number: (315) 655-8161

LSL Project No.: 0105854

Report Date: 6/13/01

cis-1,2-Dichloroethene	75 ug/l	6/9/01
1,1-Dichloroethene	<1 ug/l	6/9/01
trans-1,2-Dichloroethene	<1 ug/l	6/9/01
1,2-Dichloropropane	<1 ug/l	6/9/01
1,3-Dichloropropane	<1 ug/l	6/9/01
2,2-Dichloropropane	<1 ug/l	6/9/01
1,1-Dichloropropene	<1 ug/l	6/9/01
cis-1,3-Dichloropropene	<1 ug/l	6/9/01
trans-1,3-Dichloropropene	<1 ug/l	6/9/01
Ethyl benzene	<1 ug/l	6/9/01
Hexachlorobutadiene	<1 ug/l	6/9/01
Isopropylbenzene (Cumene)	<1 ug/l	6/9/01
4-Isopropyl toluene (Cymene)	<1 ug/l	6/9/01
Methylene chloride	<1 ug/l	6/9/01
N-Propylbenzene	<1 ug/l	6/9/01
Styrene	<1 ug/l	6/9/01
1,1,1,2-Tetrachloroethane	<1 ug/l	6/9/01
1,1,2,2-Tetrachloroethane	<1 ug/l	6/9/01
Tetrachloroethene	<1 ug/l	6/9/01
Toluene	<1 ug/l	6/9/01
1,2,3-Trichlorobenzene	<1 ug/l	6/9/01
1,2,4-Trichlorobenzene	<1 ug/l	6/9/01
1,1,1-Trichloroethane	4.5 ug/l	6/9/01
1,1,2-Trichloroethane	<1 ug/l	6/9/01
Trichloroethene	54 ug/l	6/9/01
Trichlorofluoromethane (Freon 11)	<1 ug/l	6/9/01
1,2,3-Trichloropropane	<1 ug/l	6/9/01
1,2,4-Trimethylbenzene	<1 ug/l	6/9/01
1,3,5-Trimethylbenzene	<1 ug/l	6/9/01
Vinyl chloride	<1 ug/l	6/9/01
Bromodichloromethane	<1 ug/l	6/9/01
Bromoform	<1 ug/l	6/9/01
Chloroform	<1 ug/l	6/9/01
o-Xylene	<1 ug/l	6/9/01
m-Xylene	<1 ug/l	6/9/01
p-Xylene	<1 ug/l	6/9/01
Dibromochloromethane	<1 ug/l	6/9/01

-- LABORATORY ANALYSIS REPORT --

Stearns & Wheler Engineering

Jeff Kiggins

Project No.: R60007.10.1700

Phone Number: (315) 655-8161

Authorization:

LSL Project No.: 0105854

Report Date: 6/13/01

Sample ID: Trip Blank

Source: GSI Sherburne

LSL Sample ID: 0105854-012

Sample Matrix: TB

Date Sampled: 5/30/2001

Parameter(s)	Results	Units	Analysis Date and Time
(1) EPA 524.2 Volatile Organic Chemicals			
Benzene	<1	ug/l	6/9/01
Bromobenzene	<1	ug/l	6/9/01
Bromochloromethane	<1	ug/l	6/9/01
Bromomethane	<1	ug/l	6/9/01
sec-Butylbenzene	<1	ug/l	6/9/01
n-Butylbenzene	<1	ug/l	6/9/01
tert-Butylbenzene	<1	ug/l	6/9/01
Carbon tetrachloride	<1	ug/l	6/9/01
Chlorobenzene	<1	ug/l	6/9/01
Chloroethane	<1	ug/l	6/9/01
Chloromethane	<1	ug/l	6/9/01
2-Chlorotoluene	<1	ug/l	6/9/01
4-Chlorotoluene	<1	ug/l	6/9/01
Dibromomethane	<1	ug/l	6/9/01
1,2-Dichlorobenzene	<1	ug/l	6/9/01
1,3-Dichlorobenzene	<1	ug/l	6/9/01
1,4-Dichlorobenzene	<1	ug/l	6/9/01
Dichlorodifluoromethane	<1	ug/l	6/9/01
1,1-Dichloroethane	<1	ug/l	6/9/01
1,2-Dichloroethane	<1	ug/l	6/9/01
cis-1,2-Dichloroethene	<1	ug/l	6/9/01
1,1-Dichloroethene	<1	ug/l	6/9/01
trans-1,2-Dichloroethene	<1	ug/l	6/9/01
1,2-Dichloropropane	<1	ug/l	6/9/01
1,3-Dichloropropane	<1	ug/l	6/9/01
2,2-Dichloropropane	<1	ug/l	6/9/01
1,1-Dichloropropene	<1	ug/l	6/9/01
cis-1,3-Dichloropropene	<1	ug/l	6/9/01
trans-1,3-Dichloropropene	<1	ug/l	6/9/01
Ethyl benzene	<1	ug/l	6/9/01
Hexachlorobutadiene	<1	ug/l	6/9/01
Isopropylbenzene (Cumene)	<1	ug/l	6/9/01
4-Isopropyl toluene (Cymene)	<1	ug/l	6/9/01
Methylene chloride	<1	ug/l	6/9/01

-- LABORATORY ANALYSIS REPORT --

Stearns & Wheler Engineering

Project No.: R60007.10.1700

Authorization:

Jeff Kiggins

Phone Number: (315) 655-8161

LSL Project No.: 0105854

Report Date: 6/13/01

N-Propylbenzene	<1 ug/l	6/9/01
Styrene	<1 ug/l	6/9/01
1,1,1,2-Tetrachloroethane	<1 ug/l	6/9/01
1,1,2,2-Tetrachloroethane	<1 ug/l	6/9/01
Tetrachloroethene	<1 ug/l	6/9/01
Toluene	<1 ug/l	6/9/01
1,2,3-Trichlorobenzene	<1 ug/l	6/9/01
1,2,4-Trichlorobenzene	<1 ug/l	6/9/01
1,1,1-Trichloroethane	<1 ug/l	6/9/01
1,1,2-Trichloroethane	<1 ug/l	6/9/01
Trichloroethene	<1 ug/l	6/9/01
Trichlorofluoromethane (Freon 11)	<1 ug/l	6/9/01
1,2,3-Trichloropropane	<1 ug/l	6/9/01
1,2,4-Trimethylbenzene	<1 ug/l	6/9/01
1,3,5-Trimethylbenzene	<1 ug/l	6/9/01
Vinyl chloride	<1 ug/l	6/9/01
Bromodichloromethane	<1 ug/l	6/9/01
Bromoform	<1 ug/l	6/9/01
Chloroform	<1 ug/l	6/9/01
o-Xylene	<1 ug/l	6/9/01
m-Xylene	<1 ug/l	6/9/01
p-Xylene	<1 ug/l	6/9/01
Dibromochloromethane	<1 ug/l	6/9/01
(1) EPA 8260B TCL Volatiles		
Acetone	<10 ug/l	6/9/01
Benzene	<5 ug/l	6/9/01
Bromodichloromethane	<5 ug/l	6/9/01
Bromoform	<5 ug/l	6/9/01
Bromomethane	<5 ug/l	6/9/01
2-Butanone (MEK)	<10 ug/l	6/9/01
Carbon disulfide	<5 ug/l	6/9/01
Carbon tetrachloride	<5 ug/l	6/9/01
Chlorobenzene	<5 ug/l	6/9/01
Chloroethane	<5 ug/l	6/9/01
Chloroform	<5 ug/l	6/9/01
Chloromethane	<5 ug/l	6/9/01
Dibromochloromethane	<5 ug/l	6/9/01
1,1-Dichloroethane	<5 ug/l	6/9/01
1,2-Dichloroethane	<5 ug/l	6/9/01
1,1-Dichloroethene	<5 ug/l	6/9/01

-- LABORATORY ANALYSIS REPORT --

Stearns & Wheler Engineering

Project No.: R60007.10.1700

Authorization:

Jeff Kiggins

Phone Number: (315) 655-8161

LSL Project No.: 0105854

Report Date: 6/13/01

1,2-Dichloroethene, Total	<5 ug/l	6/9/01
1,2-Dichloropropane	<5 ug/l	6/9/01
cis-1,3-Dichloropropene	<5 ug/l	6/9/01
trans-1,3-Dichloropropene	<5 ug/l	6/9/01
Ethyl benzene	<5 ug/l	6/9/01
2-Hexanone	<10 ug/l	6/9/01
Methylene chloride	<10 ug/l	6/9/01
4-Methyl-2-pentanone (MIBK)	<10 ug/l	6/9/01
Styrene	<5 ug/l	6/9/01
1,1,2,2-Tetrachloroethane	<5 ug/l	6/9/01
Tetrachloroethene	<5 ug/l	6/9/01
Toluene	<5 ug/l	6/9/01
1,1,1-Trichloroethane	<5 ug/l	6/9/01
1,1,2-Trichloroethane	<5 ug/l	6/9/01
Trichloroethene	<5 ug/l	6/9/01
Vinyl chloride	<5 ug/l	6/9/01
Xylenes (Total)	<5 ug/l	6/9/01
Surrogate (4-BFB)	95 %R	6/9/01
Surrogate (Tol-d8)	103 %R	6/9/01
Surrogate (1,2-DCA-d4)	94 %R	6/9/01
MTBE	<5 ug/l	6/9/01
Naphthalene	<5 ug/l	6/9/01

174

Life Science Laboratories, Inc.

LSL

5854 Butternut Dr., East Syracuse, New York 13057
 Phone # (315) 445-1105 Fax # (315) 445-1301

Report Address:
 Name: JEFF KEGGINS
 Company: STEARNS + WHEELER
 Street: 1 REMINGTON PARK DRIVE
 City/State: Cazenovia, NY Zip: 13035
 Phone #: (315) 655-8161 Fax #: (315) 655-4180

Email:
 Client Project Name or Source:

GSI SHERBURNE

Client Project Number:
R60007.10.1700

Chain of Custody Record

Invoice Address (if different):

Turnaround Time Requested: 14-Day STD
 NEXT DAY • 72-Hr RUSH* additional charges may apply
 2 DAY • 7-day RUSH*

Date Needed or Special Instructions:

Authorization or PO# :

Contact Person and

phone # (in case the lab has questions):

JEFF KEGGINS 655 8161 ext 247

LSL Project Number:
105854

Sample Num	Client's Sample Identifications	Sample	Sample	Type	Preserv.	Containers	# size/type	Requested Analyses	LGL Preserv. Check
		Date	Time	grab comp.					
✓ 001A	MW 30	5/30/01	11:00	X	GW	2	VIALS	VOC'S + MTBE + NAPHTHALENE (8260)	
✓ 002A	P 8		10:10			1			
✓ 003A	MW 25		10:45			1			
✓ 004A	MW 24		11:10						
✓ 005A	MW 23		11:30						
✓ 006A	MW 29		11:25						
✓ 007A	MW 22		11:35						
✓ 008A	MW 20		12:50						
✓ 009A	MW 21		12:35			1			
✓ 010A	MW 8		1:15			1		VOC'S (502.2)	

Custody Transfers		Date	Time
Sampled By:	JEFF KEGGINS	Received By:	5/30/01
Relinquished By:	Jeffrey J. Keggin	Received By:	5/30/01 4:35
Relinquished By:		Rec'd for Lab By:	EJ 05-30-01 16:37 PCVD

Containers received this c-o-c

Shipment Method: Received Intact: Y N Sample Receipt Temp: 9.2 °C
 *** All areas of this Chain of Custody Record MUST Be filled out in order to process samples in a timely manner***

2/4

LSL

Life Science Laboratories, Inc.

5854 Butternut Dr., East Syracuse, New York 13057

Phone # (315) 445-1105 Fax # (315) 445-1301

Report Address:

Name: JEFF KIGGINS

Company: STEPHEN & WHEELER

Street: 1 REMINGTON PARK DRIVE

City/State: Cazenovia, NY Zip: 13035

Phone #: (315) 655-8161 Fax #: (315) 655-4180

Email:

Client Project Name or Source:

GSI SHERBURNE

Client Project Number:

B60007.10.1700

Chain of Custody Record

Turnaround Time Requested:		14-Day STD
NEXT DAY	72-Hr RUSH*	*Additional charges may apply
2 DAY	7-day RUSH*	

Date Needed or Special Instructions:

Invoice Address (if different):

Authorization or PO# :

Contact Person and

phone # (in case the lab has questions):

JEFF KIGGINS 655 8161 ext 247

LSL Project Number:

105854

LSL	Client's Sample	Sample	Sample	Type	Preserv.	Containers	#	size/type	Requested Analyses	LSL	Preserv. Check
				Date							
✓n05B	MW 23	5/30/01	11:30	X	GW	1	1/2 ptnt		ALKALINITY (310.1)		
✓n04B	MW 24		11:10								
✓n03B	MW 25		10:45								
✓n06B	MW 29		11:25								
✓n01B	MW 30		11:00								
✓n02B	P 8		10:10								
✓n07B	MW 22		11:35								
✓n07C	MW 22		11:35						CHLORIDE		
✓n05C	MW 23		11:30								
✓n04C	MW 24	✓	11:10	✓	✓	✓	✓	✓			

LSL Use Only:	Custody Transfers						Date	Time		
	Sampled By:			Received By:						
	Relinquished By:			Received By:						
	Relinquished By:			Rec'd for Lab By:						
	Shipment Method:		Received Intact: Y N		Sample Receipt Temp. °C		05-30-01 16:37 PGVD			

Containers received this c-o-c

*** All areas of this Chain of Custody Record MUST Be filled out in order to process samples in a timely manner***

3/4

Life Science Laboratories, Inc.

5854 Butternut Dr., East Syracuse, New York 13057

Phone # (315) 445-1105 Fax # (315) 445-1301

Report Address:
 Name: JEFF KIGGINS
 Company: STEARNS & WHEELER
 Street: 1 REMINGTON PARK DRIVE
 City/State: Cazenovia, NY Zip: 13035
 Phone #: (315) 655-8161 Fax #: (315) 655-4180

Email:
 Client Project Name or Source: GSI SHERBURN Client Project Number: R60007.10.1700

LSL	Client's Sample	Sample Date	Sample Time	Type	Preserv.	Containers	Requested Analyses	LSL
Sample Num	Identifications	Date	Time	grab comp.	Matrix	#	size/type	Preserv. Check
✓n03 C	MW 25	5/30/01	10:45	X	(GW)	1	1/2 PSUF	CHLORIDE
✓n06 C	MW 26		11:25			1)	
✓n01 C	MW 30		11:00					
✓n02 C	P 8		10:10			1	✓	
✓n02 D	P 8		10:10			1	PSUF METALS Fe,Cu, Mg, Na, K (200)	
✓n07 D	MW 22		11:35					
✓n05 D	MW 23		11:30					
✓n04 D	MW 24		11:10					
✓n03 D	MW 25		10:45					
✓n06 D	MW 26	V	11:25	V		1	✓	

Custody Transfers		Date	Time
Sampled By:	<u>JEFF KIGGINS</u>	Received By:	5/30/01
Relinquished By:	<u>Jeffrey L Kiggins</u>	Received By:	5/30/01 4:35
Relinquished By:		Rec'd for Lab By:	05-30-01 16:37 RCVD

Containers received this c-o-c Shipment Method: Received Intact: Y N Sample Receipt Temp. °C
 *** All areas of this Chain of Custody Record MUST Be filled out in order to process samples in a timely manner***

4/4

LSL

Life Science Laboratories, Inc.

5854 Butternut Dr., East Syracuse, New York 13057

Phone # (315) 445-1105 Fax # (315) 445-1301

Report Address:

Name: JEFF KIGGINS

Company: STEARNS & WHEELER

Street: 1 REMINGTON PARK DRIVE

City/State: Cazenovia, NY zip: 13035

Phone #: (315) 655-8161 Fax #: (315) 655-4186

Email:

Client Project Name or Source:

GSI SHERBURN

Client Project Number: R60007.10.1700

Chain of Custody Record

Turnaround Time Requested:		14-Day STD
NEXT DAY	72-Hr RUSH*	*Additional charges may apply
2 DAY	7-day RUSH*	

Date Needed or Special Instructions:

Invoice Address (if different):

Authorization or PO# :

Contact Person and

phone # (in case the lab has questions):

JEFF KIGGINS 655 8161 ext 247

LSL Project Number:

105854

Sample Num	Client's Sample Identifications	Sample Date	Sample Time	Type	Preserv.	Containers	Requested Analyses		LSL Preserv. Check
							#	size/type	
✓n1 D	MW30	5/30/01	11:00	X	GW	1	P	SURF Metals Fe, Cu, Mg, Na, K (200)	
✓n1 E	MW30		11:02			1	P	SURF SO ₄ ⁻² Sulfate	
✓n6 E	MW29		11:25						
✓n3 E	MW25		10:45						
✓n4 E	MW24		11:10						
✓n5 E	MW23		11:30						
✓n7 E	MW22		11:35						
✓n2 E	P 8		10:10			V	V		
✓n8 B	MW8	V	1:15	V	V	1	1 liter	SVOC's (8270)	

LSL Use Only:

* Ca per client (JK)
6-14-01

Custody Transfers			
Sampled By:	Received By:	Date	Time
Sampled By: JEFF KIGGINS	Received By:	5/30/01	
Relinquished By: JEFF KIGGINS	Received By:	5/30/01	4:35
Relinquished By:	Rec'd for Lab By: C7	05-30-01	16:37 R.C.V.D.

Containers received this c-o-c

Shipment Method:

Received Intact: Y N

Sample Receipt Temp.

°C

*** All areas of this Chain of Custody Record MUST Be filled out in order to process samples in a timely manner***



LSL

Jeff Kiggins
Stearns & Wheler Engineering
1 Remington Park Drive
Cazenovia, NY 13035

Phone: (315) 655-8161
FAX: (315) 655-4180

Laboratory Analysis Report For Stearns & Wheler Engineering

LSL Project Number: 0105935

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Life Science Laboratories, Inc.

LSL Central Lab
5854 Butternut Drive
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LSL North Lab
131 St. Lawrence Avenue
Waddington, NY 13694
Tel. (315) 388-4476
Fax (315) 388-4061
NYS DOH ELAP #10900

This report was reviewed by: Dawn Segarica QC Date: 6-13-01
Life Science Laboratories, Inc.

-- LABORATORY ANALYSIS REPORT --

Stearns & Wheler Engineering

Jeff Kiggins

Phone: (315) 655-8161

Sample ID: MW17

Project No.:

Source:

LSL Sample ID: 0105935-001

Sample Matrix: NPW

Authorization:

LSL Project No.: 0105935

Date Sampled: 6/1/01

Report Date: 6/13/01

Parameter(s)	Results	Units	Analysis Date & Time
(I) EPA 8260B TCL Volatiles			
Acetone	<10	ug/l	6/9/01
Benzene	<5	ug/l	6/9/01
Bromodichloromethane	<5	ug/l	6/9/01
Bromoform	<5	ug/l	6/9/01
Bromomethane	<5	ug/l	6/9/01
2-Butanone (MEK)	<10	ug/l	6/9/01
Carbon disulfide	<5	ug/l	6/9/01
Carbon tetrachloride	<5	ug/l	6/9/01
Chlorobenzene	<5	ug/l	6/9/01
Chloroethane	<5	ug/l	6/9/01
Chloroform	<5	ug/l	6/9/01
Chloromethane	<5	ug/l	6/9/01
Dibromochloromethane	<5	ug/l	6/9/01
1,1-Dichloroethane	<5	ug/l	6/9/01
1,2-Dichloroethane	<5	ug/l	6/9/01
1,1-Dichloroethene	<5	ug/l	6/9/01
1,2-Dichloroethene, Total	160	ug/l	6/9/01
1,2-Dichloropropane	<5	ug/l	6/9/01
cis-1,3-Dichloropropene	<5	ug/l	6/9/01
trans-1,3-Dichloropropene	<5	ug/l	6/9/01
Ethyl benzene	<5	ug/l	6/9/01
2-Hexanone	<10	ug/l	6/9/01
Methylene chloride	<10	ug/l	6/9/01
4-Methyl-2-pentanone (MIBK)	<10	ug/l	6/9/01
Styrene	<5	ug/l	6/9/01
1,1,2,2-Tetrachloroethane	<5	ug/l	6/9/01
Tetrachloroethene	<5	ug/l	6/9/01
Toluene	<5	ug/l	6/9/01
1,1,1-Trichloroethane	<5	ug/l	6/9/01
1,1,2-Trichloroethane	<5	ug/l	6/9/01
Trichloroethene	15	ug/l	6/9/01
Vinyl chloride	23	ug/l	6/9/01
Xylenes (Total)	<5	ug/l	6/9/01
Surrogate (4-BFB)	92	%R	6/9/01
Surrogate (Tol-d8)	102	%R	6/9/01

-- LABORATORY ANALYSIS REPORT --

Stearns & Wheler Engineering

Jeff Kiggins

Phone: (315) 655-8161

Sample ID: MW17

Project No.:

Source:

LSL Sample ID: 0105935-001

Sample Matrix: NPW

Authorization:

LSL Project No.: 0105935

Date Sampled: 6/1/01

Report Date: 6/13/01

Parameter(s)	Results	Units	Analysis Date & Time
Surrogate (1,2-DCA-d4)	109	%R	6/9/01
MTBE	<5	ug/l	6/9/01
Naphthalene	<5	ug/l	6/9/01



Life Science Laboratories, Inc.

5854 Butternut Dr., East Syracuse, New York 13057
Phone # (315) 445-1105 Fax # (315) 445-1301

Report Address:
Name: JEFF KIGGINS
Company: ST GARNIS & WHITELER
Street: 1 READINGTON PARK DR
City/State: CARLISLE, NY zip: 13035
Phone #: (315) 655 8161 Fax #: 655 5118

Email: _____ Client Project Name or Source: _____ Client Project Number: _____

Chain of Custody Record

Turnaround Time Requested: 14-Day STD
NEXT DAY • 72-Hr RUSH • Additional charges may apply
2 DAY • 7-day RUSH •

Date Needed or Special Instructions:

Invoice Address (if different):

Authorization of PO#

Contact Person and
phone # (in case the lab has questions)

LSL Project Number:

105935

Custody Transfers		Date	Time
Sampled By: <u>JEFF KEEGANS</u>	Received By:	<u>6/1/01</u>	
Relinquished By: <u>Officer T. Ringer</u>	Received By:		
Relinquished By:	Rec'd for Lab By:	<u>17</u>	06-01-01 13:36 RCV

Containers received this c-o-c

Containers received this c-o-c Shipment Method: Received Intact: Y N Sample Receipt Temp. C °C

*** All areas of this Chain of Custody Record MUST Be filled out in order to process samples in a timely manner ***

Karen, Mauritius