Attachment B-1

Aquifer Pumping Tests

Continental Steel Superfund Site Contract 5–Groundwater Aquifer Pumping Tests

PREPARED FOR:	USEPA
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DATE:	November 17, 2001

Introduction

This memorandum serves to document activities associated with the hydrogeological investigation (aquifer pumping tests) for the Continental Steel Superfund Site remedial design project, Contract 5–Groundwater, Work Assignment No. 122-RDRD-05BW/Contract No. 68-W6-0025. Aquifer pumping tests were performed at the Lagoon Area, Markland Avenue Quarry, Main Plant Area, and at an additional site location as part of investigation activities. Work associated with these activities began on August 6, 2001 and was completed on August 24, 2001. This memorandum includes the following:

- A list of personnel involved with associated field activities and the corresponding time frames in which work was performed by each individual;
- A description of the field activities performed;
- Descriptions of any deviations from the *Quality Assurance Project Plan* (QAPP), *Continental Steel Superfund Site, May 2001*;
- Figures identifying field work areas; and
- Summary tables created based on field notes.

Personnel

Field personnel associated with the Contract 5 aquifer pumping tests are listed in Table 1 below.

TABLE 1
Field Personnel

Staff	Staff Role	Duration
Alan Wells/DAY	Field Team Leader	August 6–August 24, 2001
Eric Spande/CHI	Contract 5 Pumping Test Lead	August 6–August 24, 2001
Craig LaCosse/MKE	Contract 5 Pumping Test Assistant	August 6–August 24, 2001

Field Activities

Four aquifer pumping tests were conducted in accordance with ASTM D 4050–96 during the field activities for the site; their locations are shown on Figures 1A, 1B, and 1C. The objective

of the pumping tests was to estimate shallow aquifer hydraulic characteristics. Results of the tests were used to augment the optimal design of the shallow groundwater collection systems and to evaluate the need for trench collection systems or similar remediation designs. Horizontal aquifer characteristics and flow were a focus of the investigations. Pumping test locations, dates, and monitoring wells/piezometers used in the investigation (to measure hydraulic head at a point in the subsurface) are shown on Figures 1A, 1B, and 1C and are listed in Table 2 below. Prior to conducting the pumping tests, a rate test was performed at each location to determine the optimal pumping rate. Rate test information may be found in the project files used for field decisions. For additional detailed information regarding monitoring well and piezometer parameters, including construction and installation information, refer to the Continental Steel Superfund Site Contract 5–Groundwater Monitoring Well and Piezometer Installation technical memorandum.

TABLE 2
Pumping Test Start/Stop Information

Location	Pumping Test Start/Stop Information		
	Start	***Stop***	***Duration***
Lagoon Area	8/7/01 1700	8/10/01 1500	70 hours
	No significant stoppages in pump test.		
	Discharge rate approximately 0.25 gpm.		
	Likely equilibrium reached in pumping test drawdown in pumping and observation wells.		
Markland Avenue Quarry	8/13/01 1801	8/15/01 1402	44 hours
	Pump apparently burned out. Replaced pump and restarted.		
	8/15/01 1448	8/16/01 0410	14 hours
	Second pump having difficulties on 8/16/01 0410. Failed between 0410 and 0441. End test.		
	Discharge rate approximately 0.10 to 0.15 gpm.		
	Likely equilibrium reached in pump test and observation wells.		
Main Plant	8/21/01 1501	8/21/01 1724	2 hours
	Controller error, pump started and restarted at 1528. Pump failed at 1708.		
	8/22/01 1400	8/24/01 1205	42 hours
	Discharge rate approximately 2 gpm.		
North of Main Plant (Ross Supply)	8/20/01 1410	8/22/01 1035	42.5 hours
	Pump failed between 1035 and 1131 on 8/22/01.		
	8/22/01 1223	8/22/01 1521	3 hours
	Hose down hole had become disconnected. Restarted pump and reset the transducer in pump well P-13.		
	8/22/01 1533	8/22/01 1541	8 min
	Controller error. Reset and restarted.		
	8/22/01 1704	8/22/01 1810	1 hour
	Controller error. Failed between 1810 and 1828. Ended pump test.		
	Discharge rate approximately 6 gpm.		
	Likely equilibrium reached in pump test and operation wells.		

Note: Short stops and restarts after only a few minutes are not summarized here.

The Lagoon pumping test was conducted in the southwest corner of the Lagoon Area; the Markland Avenue Quarry pumping test was conducted along the western edge of the quarry north of Markland Avenue; the pumping test north of the Main Plant was conducted north of

Markland Avenue at the Ross Supply Company, and the Main Plant pumping test was conducted along western edge of the Main Plant area. Pumping test locations are shown on Figures 1A, 1B, and 1C.

Procedures

Prior to conducting each test, water level and total depth measurements were taken from nearby monitoring wells and piezometers to establish a pre-pumping trend for water levels. A control well (pumping well) and observation wells or piezometers were utilized for each pumping test. A Grundfos pump, equipped with variable discharge control, was used for pumping, and water level measurements were made with electric tapes and combination pressure transducers and electronic dataloggers. Additional testing information is located in Attachments B-1a and B-1b. All tests were conducted in accordance with the Standard Operating Procedures (SOP-6) located in the QAPP. The pumping tests were anticipated to last 3 days (72 hours) at each location.

Equipment and Materials

Primary field equipment used for the investigation of shallow groundwater characteristics included a field computer, MiniTroll pressure transducers, assorted computer software (WinSitu) provided by the manufacturer, a Grundfos pump and controller, and a gasoline-operated generator. Minitroll pressure transducers were preferred because the transducer cables could be isolated from a central relay box, thus lowering the risk of cables being run over by vehicles in high traffic areas during field operations. Pressure transducers were downloaded approximately every 6 hours, while manual water levels and discharge rate information was collected every hour with increased frequency at the beginning and at the end of the pumping test.

Discharge water was collected into 55-gallon drums located on a mobile containment pad. These investigation-derived wastes were then pumped to a holding tank and disposed of in accordance with the Site Management Plan. Decontamination of the equipment was performed in accordance with SOP-08 of the QAPP.

Deviations

The locations of certain pump well designations listed in the QAPP were changed (note Figures 1A, 1B, and 1C) as a result of the following conditions:

- The pump well at Markland Quarry changed from UA-05 to PU-8 because the compressive cap at UA-05 could not be removed.
- The pump well for the pumping test north of the Main Plant Area (Ross Supply) changed from UA-33 to PU-13 because UA-33 could not be located.
- The pumping well also changed at the Main Plant Area from UA-24 to PU-11 because access to monitoring well required a flush mount tool to remove the lid that was not available at the time of the pumping test.

Actual pump well locations used are found on Figures 2A, 2B, 2C, and 2D.

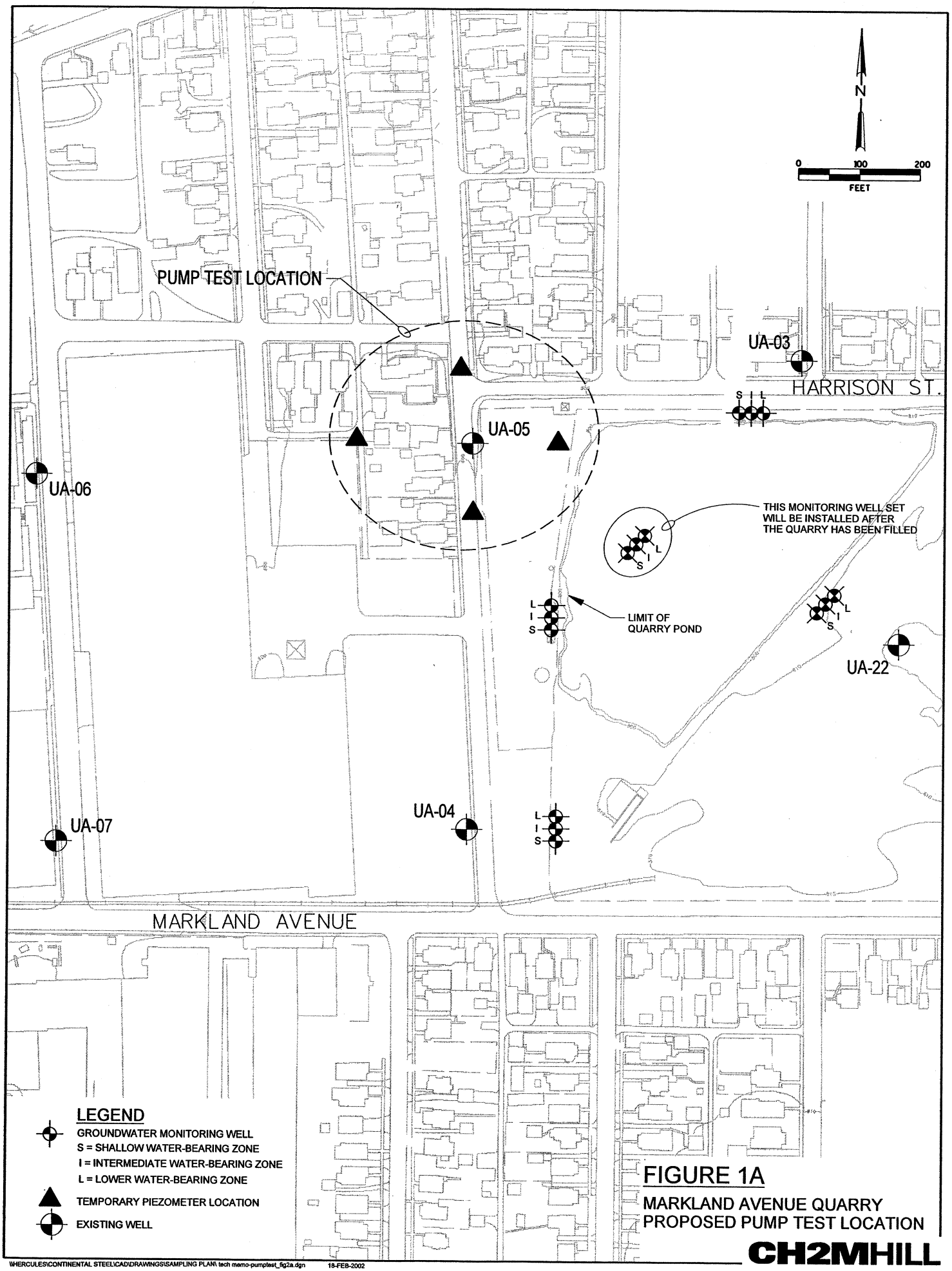

FIGURE 1A

MARKLAND AVENUE QUARRY
PROPOSED PUMP TEST LOCATION

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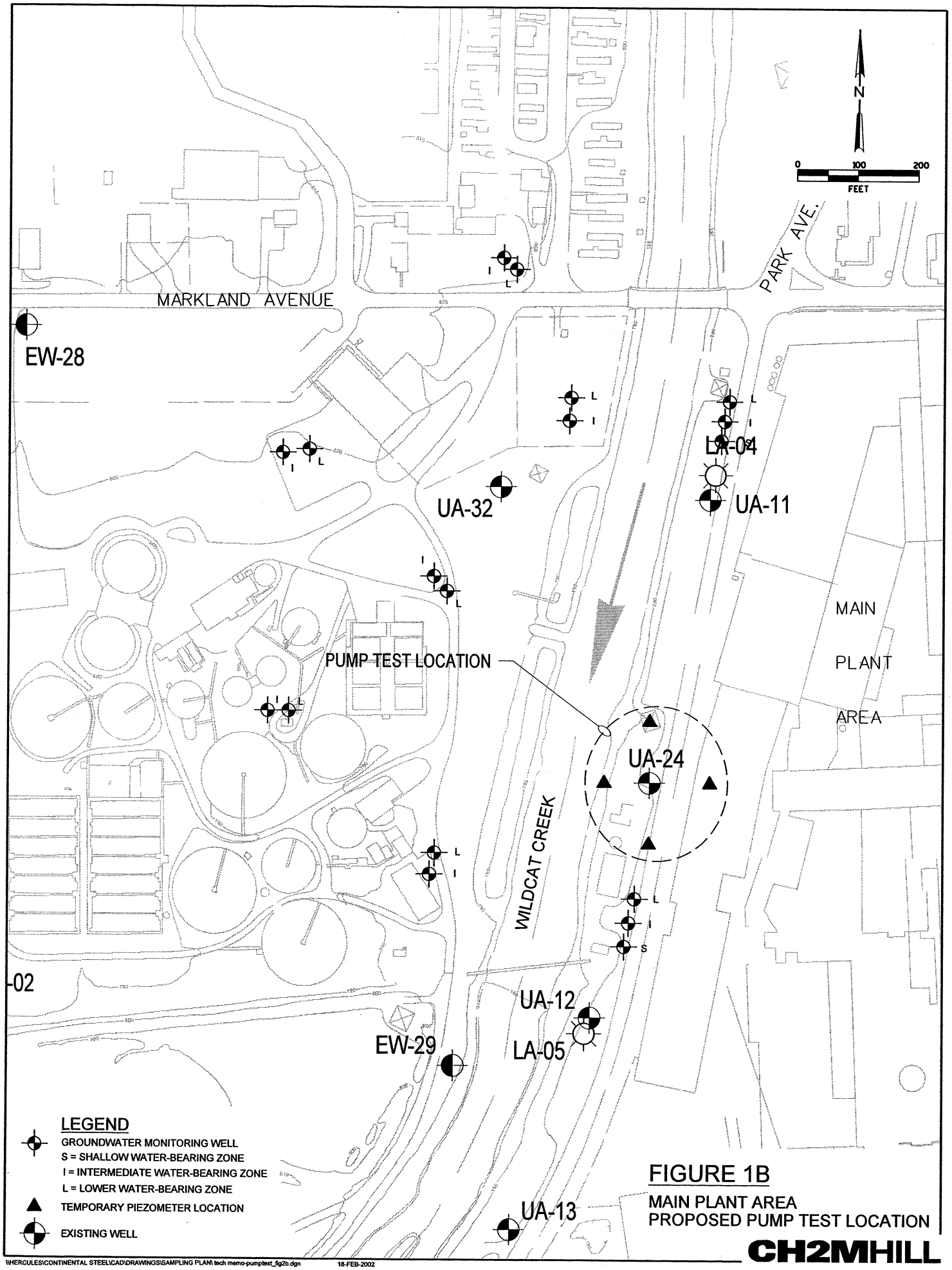

FIGURE 1B

MAIN PLANT AREA
PROPOSED PUMP TEST LOCATION

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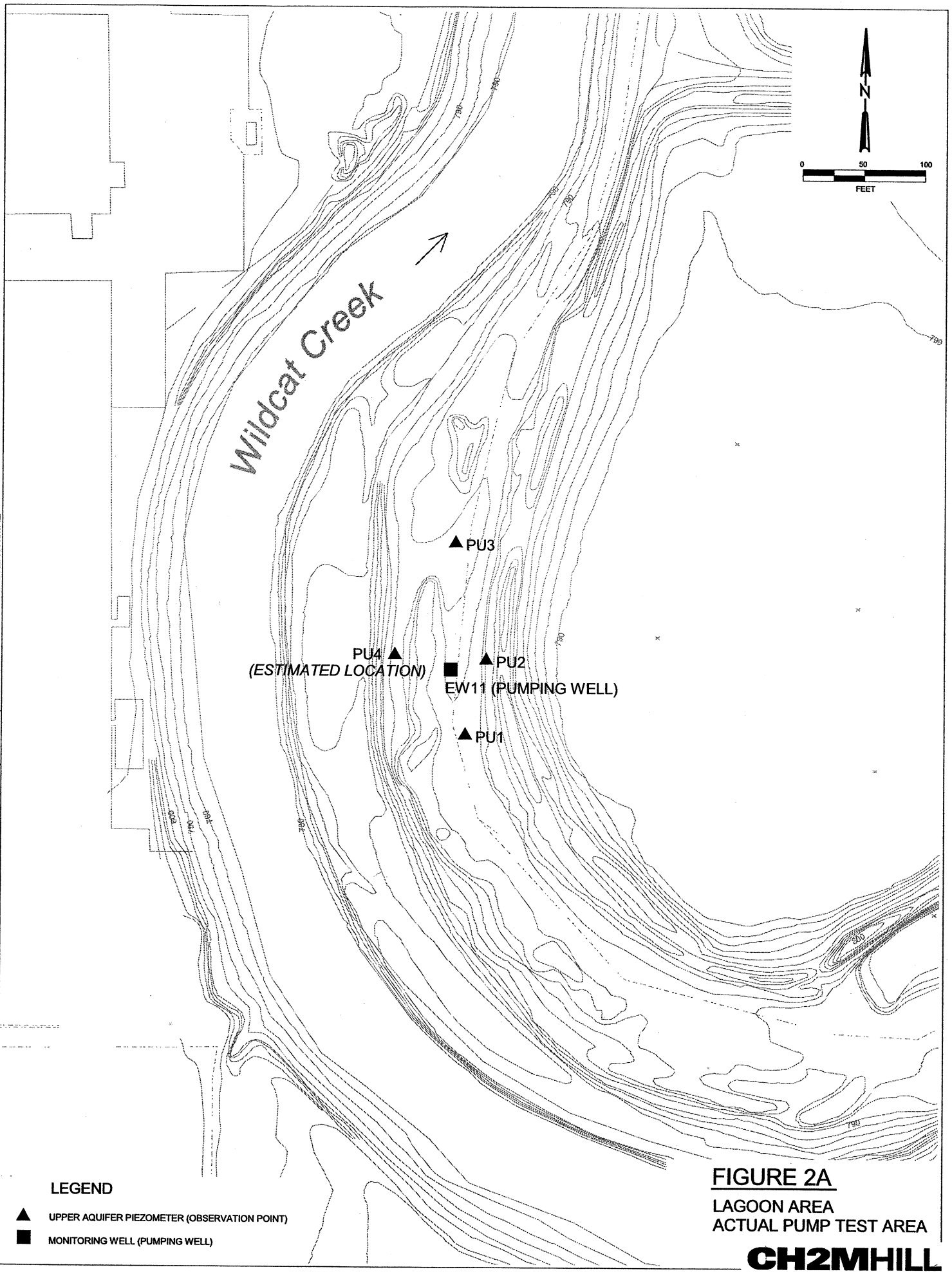

FIGURE 2A

LAGOON AREA
ACTUAL PUMP TEST AREA

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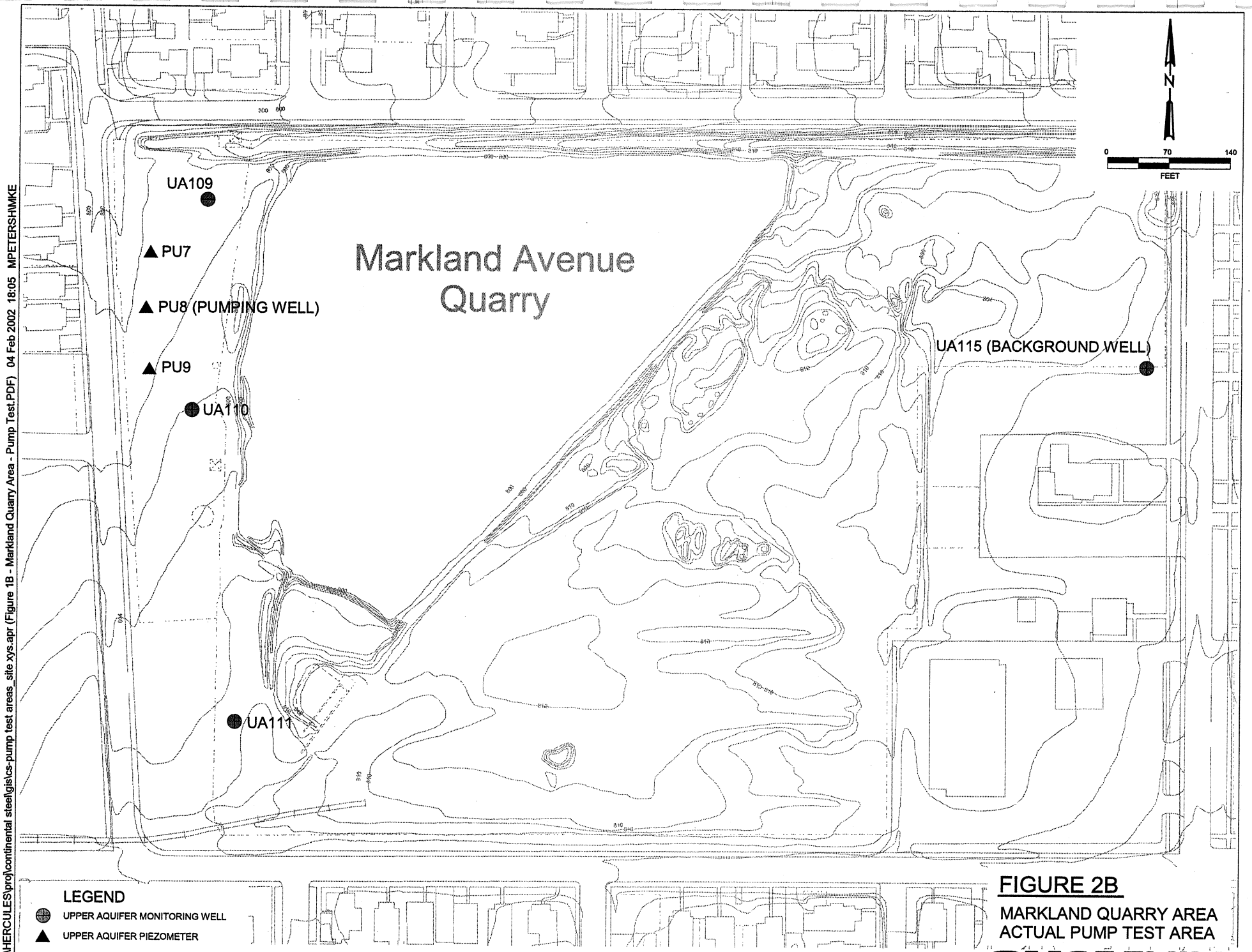

FIGURE 2B

MARKLAND QUARRY AREA
ACTUAL PUMP TEST AREA

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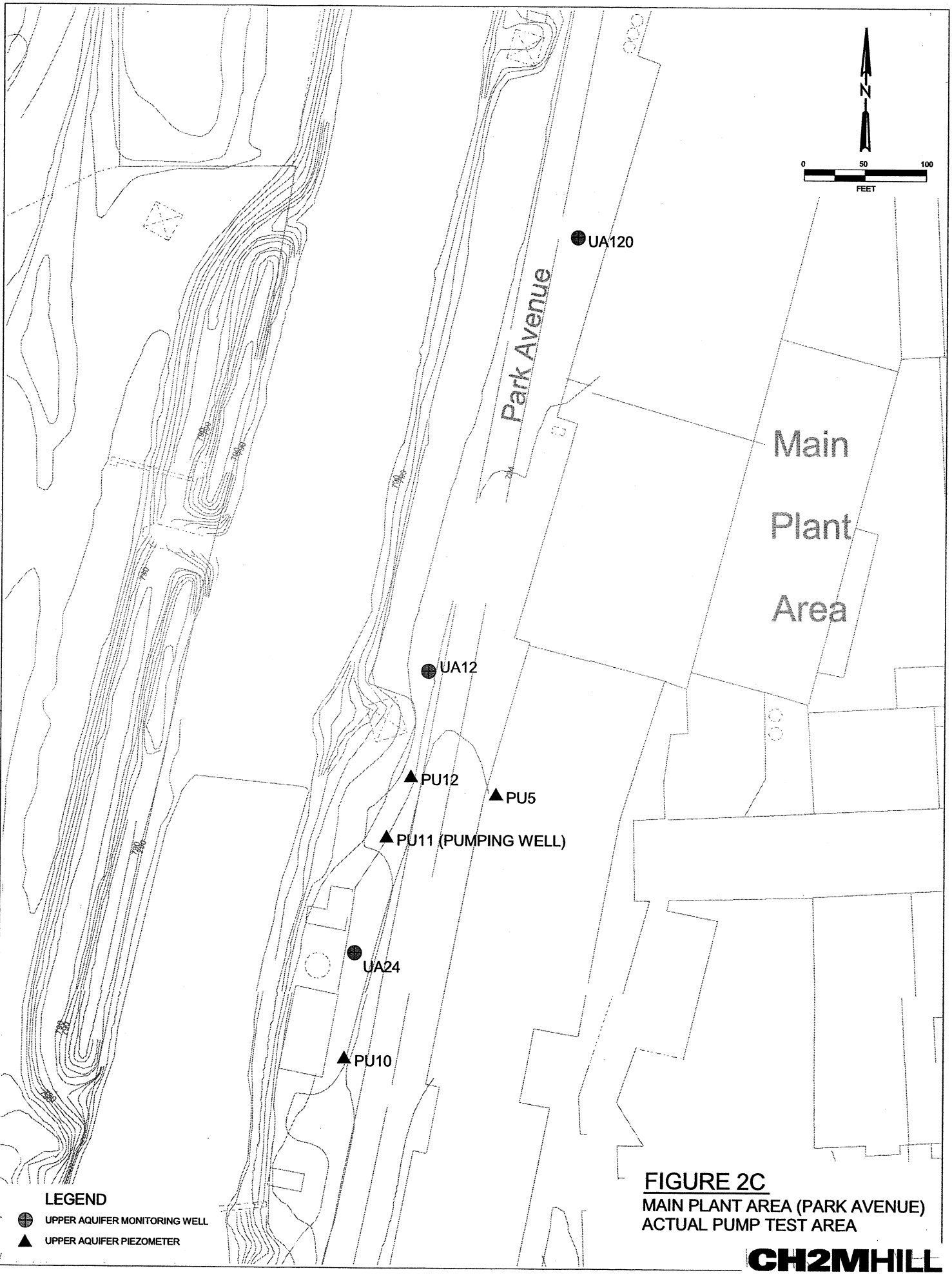

FIGURE 2C
MAIN PLANT AREA (PARK AVENUE)
ACTUAL PUMP TEST AREA

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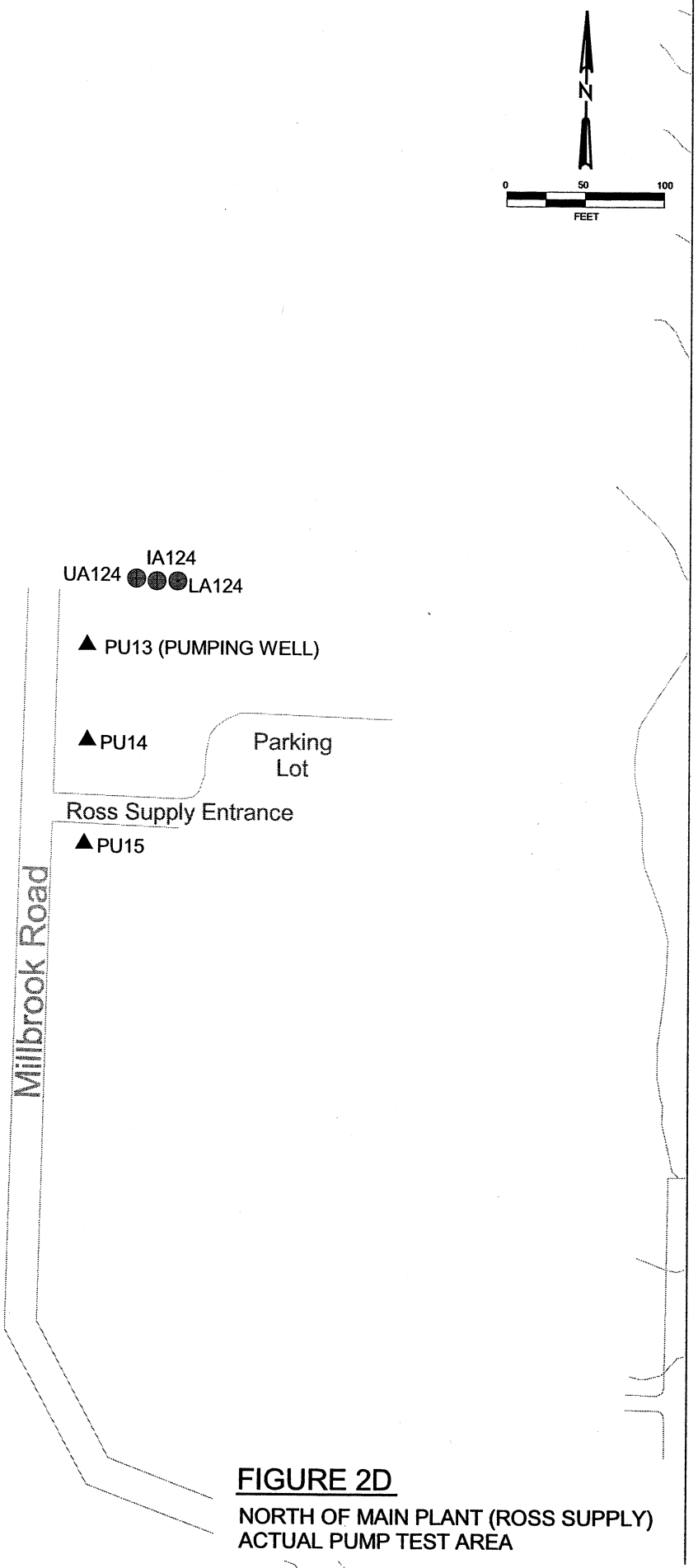

LEGEND

- LOWER AQUIFER MONITORING WELL
- INTERMEDIATE AQUIFER MONITORING WELL
- UPPER AQUIFER MONITORING WELL
- UPPER AQUIFER PIEZOMETER

FIGURE 2D

NORTH OF MAIN PLANT (ROSS SUPPLY)
ACTUAL PUMP TEST AREA

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\\HERCULES\proj\continental steel\gis\cs-pump test areas_site xys.apr (Figure 1D - North of Main Plant (Ross Supply).PDF) 04 Feb 2002 18:13 MPETERSH\MKE

Observations

Discharge rates and water levels were relatively sensitive to changes in the height of the discharge hose outlet. An attempt was made to secure the discharge hose outlet against movement at the time of the pumping test.

Attachment B-1a

Pumping Test Manual Information

ATTACHMENT B-1a

Contract 5 Lagoon Area Pumping Test - Rate of Discharge from Pump Well EW-11 as Observed During Pumping Test

Pre-design Field Investigation

Continental Steel Superfund Site

Date	Time	Minutes	Seconds	Elapsed Time (min)	Volume (gal)	Rate (gpm)	Comments
08/07/2001	1702					1	Pump test start: 8/7/01 1700.
08/07/2001	1706					0.50	Reduced discharge.
08/07/2001	1713	4	45	4.8	1	0.21	Pump frequency 99.6 Hz.
08/07/2001	1718	3	30	3.5	1	0.30	Pump frequency 99.6 Hz.
08/07/2001	1723	13	0	13.0	5	0.40	Overall average 1700-1713.
08/07/2001	1726	7	0	7.0	2	0.29	
08/07/2001	1730	3	53	3.9	1	0.26	
08/07/2001	1734	7	40	7.7	2	0.26	
08/07/2001	1734	34	0	34.0	10	0.29	Overall average 1700-1734.
08/07/2001	1739	3	48	3.8	1	0.26	
08/07/2001	1759	59	0	59.0	15	0.25	Overall average 1700-1759.
08/07/2001	1803	3	32	3.5	1	0.28	
08/07/2001	1808	4	21	4.4	1	0.23	
08/07/2001	1826	16	24	16.4	4	0.24	
08/07/2001	1827	87	0	87.0	20	0.23	Overall average 1700-1827.
08/07/2001	1835	95	0	95.0	25	0.26	Overall average 1700-1835.
08/07/2001	1842	6	57	7.0	2	0.29	
08/07/2001	1850	14	54	14.9	4	0.27	
08/07/2001	1855	115	0	115.0	30	0.26	
08/07/2001	1859	3	37	3.6	1	0.28	
08/07/2001	1915	19	45	19.8	5	0.25	
08/07/2001	1915	135	0	135.0	35	0.26	Overall average 1700-1915.
08/07/2001	1938	21	29	21.5	5	0.23	
08/07/2001	1938	158	0	158.0	40	0.25	Overall average 1700-1938.
08/07/2001	1946	7	29	7.5	2	0.27	
08/07/2001	1957	18	49	18.8	5	0.27	
08/07/2001	2135	5	52	5.9	2	0.34	Reduced discharge.
08/07/2001	2150	4	37	4.6	1	0.21	
08/07/2001	2115	3	53	3.9	1	0.26	
08/07/2001	2245	3	1	3.0	1	0.33	Reduced discharge.
08/07/2001	2251	4	35	4.6	1	0.22	
08/07/2001	2341	3	5	3.1	1	0.32	Reduced discharge.
08/07/2001	2347	4	54	4.9	1	0.20	
08/08/2001	2442	4	4	4.1	1	0.25	
08/08/2001	136	4	36	4.6	1	0.22	
08/08/2001	226	3	55	3.9	1	0.26	
08/08/2001	320	4	30	4.5	1	0.22	
08/08/2001	440	5	17	5.3	1	0.19	
08/08/2001	500	6	56	6.9	1	0.14	
08/08/2001	516	21	11	21.2	3	0.14	
08/08/2001	532	37	55	37.9	5	0.13	
08/08/2001	623	42	25	42.4	5	0.12	
08/08/2001	644	16	57	17.0	2	0.12	
08/08/2001	650						Changed discharge.
08/08/2001	657	6	4	6.1	1	0.16	
08/08/2001	704	12	24	12.4	2	0.16	
08/08/2001	705						Changed discharge.
08/08/2001	712	5	7	5.1	1	0.19	
08/08/2001	724	16	59	17.0	3	0.18	
08/08/2001	730	23	0	23.0	4	0.17	
08/08/2001	737	29	30	29.5	5	0.17	
08/08/2001	759	19	2	19.0	3	0.16	
08/08/2001	800						Increased discharge.

ATTACHMENT B-1a

Contract 5 Lagoon Area Pumping Test - Rate of Discharge from Pump Well EW-11 as Observed During Pumping Test

Pre-design Field Investigation

Continental Steel Superfund Site

Date	Time	Minutes	Seconds	Elapsed Time (min)	Volume (gal)	Rate (gpm)	Comments
08/08/2001	811	9	54	9.9	2	0.20	
08/08/2001	839	10	15	10.3	2	0.20	
08/08/2001	840						Increased discharge.
08/08/2001	842						
08/08/2001	850	5	2	5.0	2	0.40	Decreased discharge.
08/08/2001	854	2	46	2.8	1	0.36	
08/08/2001	858						Decreased discharge.
08/08/2001	906	5	32	5.5	1	0.18	
08/08/2001	911	10	38	10.6	2	0.19	
08/08/2001	927	26	58	27.0	5	0.19	
08/08/2001	936	7	17	7.3	2	0.27	
08/08/2001	941	11	38	11.6	3	0.26	
08/08/2001	946	16	42	16.7	4	0.25	
08/08/2001	951	22	21	22.4	5	0.22	
08/08/2001	1010	7	16	7.3	2	0.28	
08/08/2001	1020	17	29	17.5	4	0.23	
08/08/2001	1054	13	8	13.1	3	0.23	
08/08/2001	1105	24	8	24.1	5	0.21	
08/08/2001	1107						Increased discharge.
08/08/2001	1117	9	30	9.5	2	0.21	
08/08/2001	1135	16	1	16.0	4	0.25	
08/08/2001	1144	3	45	3.8	1	0.27	
08/08/2001	1158	19	4	19.1	4	0.21	
08/08/2001	1253	12	4	12.1	3	0.25	
08/08/2001	1322	15	2	15.0	3	0.20	
08/08/2001	1332	25	57	26.0	5	0.19	
08/08/2001	1334						Increased discharge.
08/08/2001	1341	5	27	5.5	2	0.37	
08/08/2001	1403	19	45	19.8	5	0.25	
08/08/2001	1446	6	29	6.5	2	0.31	
08/08/2001	1448						Reduced discharge.
08/08/2001	1505	16	40	16.7	4	0.24	
08/08/2001	1540	3	1	3.0	1	0.33	Reduced discharge.
08/08/2001	1546	4	17	4.3	1	0.23	
08/08/2001	1636	5	41	5.7	2	0.35	
08/08/2001	1641	4	39	4.7	1	0.21	
08/08/2001	1707	2	56	2.9	1	0.33	
08/08/2001	1709						Decreased discharge.
08/08/2001	1715	4	49	4.8	1	0.21	
08/08/2001	1732	3	7	3.1	1	0.32	
08/08/2001	1743						Reduced discharge.
08/08/2001	1747	3	43	3.7	1	0.27	
08/08/2001	1811	3	35	3.6	1	0.28	
08/08/2001	1826	3	33	3.6	1	0.28	
08/08/2001	1928	4	41	4.7	1	0.21	
08/08/2001	2033	5	38	5.6	1	0.18	
08/08/2001	2038	3	22	3.4	1	0.30	
08/08/2001	2133	4	20	4.3	1	0.23	
08/08/2001	2252	4	1	4.0	1	0.25	
08/08/2001	2324	5	2	5.0	1	0.20	Increased discharge.
08/08/2001	2343	15	58	16.0	3	0.19	
08/09/2001	14	28	22	28.4	5	0.18	Increased discharge.
08/09/2001	36	15	7	15.1	3	0.20	

ATTACHMENT B-1a

Contract 5 Lagoon Area Pumping Test - Rate of Discharge from Pump Well EW-11 as Observed During Pumping Test

Pre-design Field Investigation

Continental Steel Superfund Site

Date	Time	Minutes	Seconds	Elapsed Time (min)	Volume (gal)	Rate (gpm)	Comments
08/09/2001	48	9	31	9.5	2	0.21	
08/09/2001	141	16	37	16.6	3	0.18	Increased discharge.
08/09/2001	153	9	16	9.3	4	0.43	Decreased discharge.
08/09/2001	204	3	29	3.5	1	0.29	
08/09/2001	208	7	21	7.4	2	0.27	
08/09/2001	233	13	13	13.2	4	0.30	Decreased discharge.
08/09/2001	246	6	49	6.8	2	0.29	
08/09/2001	402	5	56	5.9	2	0.34	Decreased discharge.
08/09/2001	408	4	20	4.3	1	0.21	
08/09/2001	419	14	46	14.8	3	0.20	Increased discharge.
08/09/2001	437	15	36	15.6	4	0.26	
08/09/2001	540	15	47	15.8	4	0.25	
08/09/2001	640	11	45	11.8	3	0.26	
08/09/2001	745	7	9	7.2	2	0.28	
08/09/2001	902	4	51	4.9	1	0.21	Increased discharge.
08/09/2001	906	3	32	3.5	1	0.28	
08/09/2001	933	4	32	4.5	1	0.22	
08/09/2001	950	3	35	3.6	1	0.28	
08/09/2001	1038	4	24	4.4	1	0.23	
08/09/2001	1130	4	16	4.3	1	0.23	
08/09/2001	1240	4	41	4.7	1	0.21	
08/09/2001	1331	4	46	4.8	1	0.21	
08/09/2001	1429	5	25	5.4	1	0.18	Increased discharge.
08/09/2001	1435	4	45	4.8	1	0.21	Increased discharge.
08/09/2001	1441	4	50	4.8	1	0.21	Decreased discharge.
08/09/2001	1446	4	43	4.7	1	0.21	
08/09/2001	1452	4	16	4.3	1	0.23	
08/09/2001	1529	4	43	4.7	1	0.21	Increased discharge.
08/09/2001	1531	1	32	1.5	1	0.65	Decreased discharge.
08/09/2001	1533	1	41	1.7	1	0.59	Decreased discharge.
08/09/2001	1537	2	15	2.3	1	0.44	Decreased discharge.
08/09/2001	1541	3	17	3.3	1	0.30	
08/09/2001	1639	2	33	2.6	1	0.39	Decreased discharge.
08/09/2001	1645	4	27	4.5	1	0.22	
08/09/2001	1754	2	21	2.4	1	0.42	Decreased discharge.
08/09/2001	1758	3	23	3.4	1	0.30	Decreased discharge.
08/09/2001	1806	3	36	3.6	1	0.28	
08/09/2001	1836	2	49	2.8	1	0.35	Decreased discharge.
08/09/2001	1841	4	10	4.2	1	0.24	
08/09/2001	1935	3	39	3.7	1	0.27	
08/09/2001	2042	3	25	3.4	1	0.29	
08/09/2001	2135	3	41	3.7	1	0.27	
08/09/2001	2240	4	26	4.4	1	0.23	
08/09/2001	2335	5	57	6.0	1	0.17	Increased discharge.
08/09/2001	2341	5	4	5.1	1	0.20	Increased discharge.
08/09/2001	2345	3	58	4.0	1	0.25	
08/10/2001	139	16	32	16.5	3	0.18	Increased discharge.
08/10/2001	153	10	12	10.2	2	0.20	Increased discharge.
08/10/2001	211	15	44	15.7	3	0.19	Increased discharge.
08/10/2001	221	4	1	4.0	1	0.25	
08/10/2001	244	27	27	27.5	5	0.18	Increased discharge.
08/10/2001	256	8	32	8.5	4	0.47	Decreased discharge.
08/10/2001	330	19	3	19.1	5	0.26	

ATTACHMENT B-1a

Contract 5 Lagoon Area Pumping Test - Rate of Discharge from Pump Well EW-11 as Observed During Pumping Test

Pre-design Field Investigation

Continental Steel Superfund Site

Date	Time	Minutes	Seconds	Elapsed Time (min)	Volume (gal)	Rate (gpm)	Comments
08/10/2001	419	5	48	5.8	2	0.34	Decreased discharge.
08/10/2001	435	14	16	14.3	3	0.21	
08/10/2001	445	24	23	24.4	5	0.21	
08/10/2001	535	15	48	15.8	4	0.25	
08/10/2001	639	16	14	16.2	4	0.25	
08/10/2001	732	13	9	13.2	3	0.23	
08/10/2001	819	15	6	15.1	3	0.20	
08/10/2001	832	27	41	27.7	5	0.18	Increased discharge.
08/10/2001	845	9	4	9.1	2	0.22	
08/10/2001	902	9	51	9.9	2	0.20	Increased discharge.
08/10/2001	909	4	5	4.1	1	0.25	
08/10/2001	914	9	16	9.3	2	0.22	
08/10/2001	919	14	32	14.5	3	0.21	Increased discharge.
08/10/2001	935	13	34	13.6	3	0.22	
08/10/2001	946	4	3	4.1	1	0.25	
08/10/2001	1023	26	49	26.8	5	0.19	Increased discharge.
08/10/2001	1034	9	39	9.7	2	0.21	Increased discharge.
08/10/2001	1036	2	5	2.1	1	0.48	Decreased discharge.
08/10/2001	1043	2	38	2.6	1	0.38	Decreased discharge.
08/10/2001	1101	16	43	16.7	4	0.24	
08/10/2001	1207	13	55	13.9	4	0.29	
08/10/2001	1221	11	21	11.4	3	0.26	
08/10/2001	1247	10	4	10.1	3	0.30	Decreased discharge.
08/10/2001	1304	13	46	13.8	3	0.22	
08/10/2001	1315	24	37	24.6	5	0.20	Increased discharge.
08/10/2001	1328	11	20	11.3	3	0.26	
08/10/2001	1333	16	9	16.2	4	0.25	
08/10/2001	1441	2	53	2.9	1	0.35	
08/10/2001	1446	4	35	4.6	1	0.22	
		END OF RECORD					

Notes:

min = minutes

sec = seconds

gpm = gallons per minute

Hz = hertz = oscillation per second ($1s^{-1}$)

ATTACHMENT B-1a

Contract 5 Lagoon Area Pumping Test - EW-11 Manual Water Level Information

Pre-design Field Investigation

Continental Steel Superfund Site

Date	Water Level (feet Below Top of Casing)	Head Above Transducer (feet)	Comments
08/01/2001 15:28	15.49		
08/02/2001 7:50	15.55		
08/03/2001 8:08	15.48		
08/03/2001 13:17	15.52		
08/07/2001 10:45	16.51		
08/07/2001 15:55	16.37		
08/07/2001 16:17	16.35		
08/07/2001 17:05	20.98		Pump test start: 8/7/01 1700.
08/07/2001 17:06	21.03		
08/07/2001 17:06	21.08		
08/07/2001 17:06	21.13		
08/07/2001 17:09	21.00		
08/07/2001 17:12	20.75		
08/07/2001 17:14	20.64		
08/07/2001 17:17	20.57		
08/07/2001 17:21	20.63		
08/07/2001 17:24	21.80		
08/07/2001 17:27	20.76		
08/07/2001 17:35	20.68		
08/07/2001 17:57	20.51		
08/07/2001 18:10	20.51		
08/07/2001 18:28	20.34		
08/07/2001 18:37	20.39		
08/07/2001 18:49	20.55		
08/07/2001 19:20	20.38		
08/07/2001 20:31	19.40		
08/07/2001 21:21	19.56		
08/07/2001 22:34	18.96		
08/07/2001 23:37	18.80		
08/08/2001 0:37	18.56		
08/08/2001 1:31	18.32		
08/08/2001 2:21	18.02		
08/08/2001 3:16	18.21		
08/08/2001 4:32	17.84		
08/08/2001 5:28	18.27		
08/08/2001 6:20	17.91		
08/08/2001 7:20	19.00		
08/08/2001 8:18	19.20		
08/08/2001 9:26	19.41		
08/08/2001 10:30	18.84		
08/08/2001 11:33	20.20		
08/08/2001 12:35	19.37		
08/08/2001 13:34	19.17		
08/08/2001 14:39	20.19		
08/08/2001 15:37	19.41		
08/08/2001 16:29	18.55		

ATTACHMENT B-1a

Contract 5 Lagoon Area Pumping Test - EW-11 Manual Water Level Information

Pre-design Field Investigation

Continental Steel Superfund Site

Date	Water Level (feet Below Top of Casing)	Head Above Transducer (feet)	Comments
08/08/2001 17:28	18.83		
08/08/2001 18:21	18.50		
08/08/2001 19:23	18.12		
08/08/2001 20:26	18.15		
08/08/2001 21:27	18.72		
08/08/2001 22:46	17.92		
08/08/2001 23:39	18.98		
08/09/2001 0:34	19.05		
08/09/2001 1:39	18.84		
08/09/2001 2:32	20.72		
08/09/2001 3:55	19.32		
08/09/2001 4:35	20.01		
08/09/2001 5:34	19.93		
08/09/2001 6:39	19.32		
08/09/2001 7:35	18.68		
08/09/2001 8:57	18.97		
08/09/2001 9:28	19.29		
08/09/2001 10:33	19.05		
08/09/2001 11:25	18.52		
08/09/2001 12:35	18.20		
08/09/2001 13:25	18.02		
08/09/2001 14:23	17.70		
08/09/2001 15:23	18.74		
08/09/2001 16:36	20.65		
08/09/2001 17:51	19.31		
08/09/2001 18:33	19.15		
08/09/2001 19:31	18.54		
08/09/2001 20:37	18.18		
08/09/2001 21:31	18.02		
08/09/2001 22:28	17.93		
08/09/2001 23:28	18.55		
08/10/2001 1:48	18.84		
08/10/2001 2:40	18.96		
08/10/2001 3:43	20.22		
08/10/2001 4:34	19.94		
08/10/2001 5:34	20.02		
08/10/2001 6:35	19.81		
08/10/2001 7:31	19.43		
08/10/2001 8:31	18.92		
08/10/2001 9:34	19.56		
08/10/2001 10:55	20.61		
08/10/2001 11:48	19.24		
08/10/2001 12:34	19.54		
08/10/2001 13:26	20.11		
08/10/2001 14:39	19.25		Pump off at 1500 on 8/10/01.
08/10/2001 15:38	16.63		

ATTACHMENT B-1a

Contract 5 Lagoon Area Pumping Test - EW-11 Manual Water Level Information

Pre-design Field Investigation

Continental Steel Superfund Site

Date	Water Level (feet Below Top of Casing)	Head Above Transducer (feet)	Comments
08/10/2001 17:53	16.49		
08/14/2001 11:57	16.51		
	END OF RECORD		

Notes:

PID reading of 0.3 ppm on 8/7/2001.

Total depth of monitoring well/piezometer as recorded on 8/7/01 = 30.49' btoc.

ATTACHMENT B-1a

Contract 5 Lagoon Area Pumping Test - PU-1 Manual Water Level Information

Pre-design Field Investigation

Continental Steel Superfund Site

Date	Water Level (feet Below Top of Casing)	Head Above Transducer (feet)	Comments
08/01/2001 15:30	15.31		
08/02/2001 7:52	15.34		
08/03/2001 8:10	15.27		
08/03/2001 13:22	15.28		
08/07/2001 10:51	15.78		
08/07/2001 15:52	15.76		
08/07/2001 16:06	15.78		
08/07/2001 17:47	15.76		Pump test start: 8/7/01 1700.
08/07/2001 18:45	15.82		
08/07/2001 19:21	15.84		
08/07/2001 20:22	15.85	4.83	
08/07/2001 21:25	15.88		
08/07/2001 22:41	15.85		
08/07/2001 23:34	15.86	4.81	
08/08/2001 0:36	15.86		
08/08/2001 1:28	15.86		
08/08/2001 2:20	15.86		
08/08/2001 3:12	15.85	4.82	
08/08/2001 4:26	15.86		
08/08/2001 5:18	15.86		
08/08/2001 6:19	15.87		
08/08/2001 7:16	15.88		
08/08/2001 8:17	15.9		
08/08/2001 9:15	15.91		
08/08/2001 10:27	15.91	7.78	
08/08/2001 11:22	15.92		
08/08/2001 12:34	15.92		
08/08/2001 13:35	15.92		
08/08/2001 14:36	15.93		
08/08/2001 15:34	15.93		
08/08/2001 16:25	15.92	4.77	
08/08/2001 17:25	15.93	4.77	
08/08/2001 18:18	15.92		
08/08/2001 19:21	15.92		
08/08/2001 20:21	15.92		
08/08/2001 21:23	15.95		
08/08/2001 22:40	15.94		
08/08/2001 23:29	15.93		
08/08/2001 23:57		4.74	
08/09/2001 0:26	15.93		
08/09/2001 1:26	15.93		
08/09/2001 2:24	15.95		
08/09/2001 3:34	15.91		
08/09/2001 4:27	15.91		
08/09/2001 5:25	15.95		
08/09/2001 6:25	15.9	4.71	

ATTACHMENT B-1a

Contract 5 Lagoon Area Pumping Test - PU-1 Manual Water Level Information

Pre-design Field Investigation

Continental Steel Superfund Site

Date	Water Level (feet Below Top of Casing)	Head Above Transducer (feet)	Comments
08/09/2001 7:25	15.91		
08/09/2001 8:50	15.91		
08/09/2001 9:26	15.92	4.7	
08/09/2001 10:27	15.92		
08/09/2001 11:23	15.92		
08/09/2001 12:30	15.92	4.71	
08/09/2001 13:22	15.98		Changed to oil-water probe.
08/09/2001 14:18	15.98		
08/09/2001 15:21	15.99		
08/09/2001 16:31	16		
08/09/2001 17:48	16		
08/09/2001 18:29	16	4.68	
08/09/2001 19:29	16		
08/09/2001 20:32	16.02		
08/09/2001 21:28	16.03		
08/09/2001 22:22	16.02		
08/09/2001 23:25	16.03		
08/10/2001 1:31	16.03		
08/10/2001 2:28	16.04		
08/10/2001 3:35	16.05		
08/10/2001 4:31	16.07		
08/10/2001 5:32	16.07		
08/10/2001 6:24	16.07		
08/10/2001 7:27	16.08		
08/10/2001 8:25	16.09		
08/10/2001 9:30	16.09		
08/10/2001 10:48	16.11		
08/10/2001 11:42	16.11		
08/10/2001 12:33	16.11		
08/10/2001 13:18	16.11		
08/10/2001 14:29	16.11		
08/10/2001 15:39	16.09		
08/10/2001 17:54	16.09		
08/14/2001 12:00	16.23		
	END OF RECORD		

Notes:

PID reading of 278 ppm on 8/7/2001.

Manual data sheets recorded data for PU-1 as PU-3. This record is correct.

Total depth of monitoring well/piezometer as recorded on 8/7/01 = 21.46' btoc.

ATTACHMENT B-1a

Contract 5 Lagoon Area Pumping Test - PU-2 Manual Water Level Information

Pre-design Field Investigation

Continental Steel Superfund Site

Date	Water Level (feet Below Top of Casing)	Head Above Transducer (feet)	Comments
08/01/2001 15:32	14.98		
08/02/2001 7:53	15.04		
08/03/2001 8:10	14.99		
08/03/2001 13:21	15.01		
08/07/2001 10:56	15.63		
08/07/2001 15:51	15.6		
08/07/2001 16:03	15.61		
08/07/2001 17:44	15.65		Pump test start: 8/7/01 1700.
08/07/2001 18:39	15.72		
08/07/2001 19:24	15.76		
08/07/2001 20:13	15.79	4.7	
08/07/2001 21:27	15.82		
08/07/2001 22:39	15.83		
08/07/2001 23:36	15.82	4.66	
08/08/2001 0:34	15.83		
08/08/2001 1:30	15.83		
08/08/2001 2:17	15.81		
08/08/2001 3:15	15.75	4.68	
08/08/2001 4:22	15.8		
08/08/2001 5:21	15.81		
08/08/2001 6:17	15.83		
08/08/2001 7:18	15.85		
08/08/2001 8:15	15.87		
08/08/2001 9:16	15.90		
08/08/2001 10:24	15.9	4.58	
08/08/2001 11:25	15.91		
08/08/2001 12:27	15.92		
08/08/2001 13:27	15.92		
08/08/2001 14:32	15.95		
08/08/2001 15:36	15.93		
08/08/2001 16:23	15.92	4.57	
08/08/2001 17:27	15.92	4.58	
08/08/2001 18:16	16.91		
08/08/2001 19:22	15.9		
08/08/2001 20:19	15.91		
08/08/2001 21:26	15.95		
08/08/2001 22:38	15.92		
08/08/2001 23:32	15.93		
08/08/2001 23:53		4.55	
08/09/2001 0:24	15.93		
08/09/2001 1:29	15.93		
08/09/2001 2:21	15.96		
08/09/2001 3:40	15.92		
08/09/2001 4:24	15.92		
08/09/2001 5:27	15.92		
08/09/2001 6:18	15.92	4.5	

ATTACHMENT B-1a

Contract 5 Lagoon Area Pumping Test - PU-2 Manual Water Level Information

Pre-design Field Investigation

Continental Steel Superfund Site

Date	Water Level (feet Below Top of Casing)	Head Above Transducer (feet)	Comments
08/09/2001 7:34	15.94		
08/09/2001 8:23	15.95		
08/09/2001 9:27	15.95	4.48	
08/09/2001 10:25	15.95		
08/09/2001 11:24	15.95		
08/09/2001 12:27	15.95	4.5	
08/09/2001 13:24	15.98		Changed to oil-water probe.
08/09/2001 14:17	15.98		
08/09/2001 15:22	16.01		
08/09/2001 16:30	16.04		
08/09/2001 17:50	16.04		
08/09/2001 18:27	16.04	4.48	
08/09/2001 19:30	16.02		
08/09/2001 20:31	16.04		
08/09/2001 21:30	16.05		
08/09/2001 22:20	16.05		
08/09/2001 23:27	16.05		
08/10/2001 1:27	16.06		
08/10/2001 2:25	16.09		
08/10/2001 3:32	16.12		
08/10/2001 4:29	16.14		
08/10/2001 5:29	16.15		
08/10/2001 6:27	16.15		
08/10/2001 7:30	16.16		
08/10/2001 8:23	16.16		
08/10/2001 9:32	16.18		
08/10/2001 10:46	16.2		
08/10/2001 11:40	16.2		
08/10/2001 12:30	16.22		
08/10/2001 13:25	16.22		
08/10/2001 14:28	16.21		
08/10/2001 15:40	16.15		
08/10/2001 17:55	16.12		
08/14/2001 12:01	16.24		
	END OF RECORD		

Notes:

PID reading of 0.0 ppm on 8/7/2001.

Manual data sheets recorded data for PU-2 as PU-4. This record is correct.

Total depth of monitoring well/piezometer as recorded on 8/7/01 = 21.32' btoc.

ATTACHMENT B-1a

Contract 5 Lagoon Area Pumping Test - PU-3 Manual Water Level Information

Pre-design Field Investigation

Continental Steel Superfund Site

Date	Water Level (feet Below Top of Casing)	Head Above Transducer (feet)	Comments
08/01/2001 15:34	13.21		
08/02/2001 7:55	13.24		
08/03/2001 8:11	13.18		
08/03/2001 13:20	13.2		
08/07/2001 10:34	13.74		
08/07/2001 15:54	13.75		
08/07/2001 16:14	13.72		
08/07/2001 17:54	13.72		Pump test start: 8/7/01 1700.
08/07/2001 18:47	13.72		
08/07/2001 19:26	13.73		
08/07/2001 20:01	13.73	9.44	
08/07/2001 21:24	13.77		
08/07/2001 22:38	13.78		
08/07/2001 23:31	13.79	9.41	
08/08/2001 0:32	13.79		
08/08/2001 1:25	13.78		
08/08/2001 2:16	13.78		
08/08/2001 3:09	13.8	9.4	
08/08/2001 4:30	13.77		
08/08/2001 5:25	13.77		
08/08/2001 6:25	13.78		
08/08/2001 7:23	13.79		
08/08/2001 8:22	13.8		
08/08/2001 9:23	13.8		
08/08/2001 10:32	13.81	9.36	
08/08/2001 11:31	13.81		
08/08/2001 12:29	13.82		
08/08/2001 13:31	13.81		
08/08/2001 14:31	13.8		
08/08/2001 15:31	13.8		
08/08/2001 16:22	13.8	9.37	
08/08/2001 17:21	13.79	9.38	
08/08/2001 18:15	13.8		
08/08/2001 19:16	13.8		
08/08/2001 20:18	13.8		
08/08/2001 21:18	13.82		
08/08/2001 22:43	13.82		
08/08/2001 23:37	13.82		
08/09/2001 0:07		9.36	
08/09/2001 0:28	13.81		
08/09/2001 1:35	13.81		
08/09/2001 2:27	13.82		
08/09/2001 3:53	13.83		
08/09/2001 4:29	13.83		
08/09/2001 5:32	13.83		
08/09/2001 6:29	13.84	9.34	

ATTACHMENT B-1a

Contract 5 Lagoon Area Pumping Test - PU-3 Manual Water Level Information

Pre-design Field Investigation

Continental Steel Superfund Site

Date	Water Level (feet Below Top of Casing)	Head Above Transducer (feet)	Comments
08/09/2001 7:28	13.85		
08/09/2001 8:55	13.83		
08/09/2001 9:21	13.84	9.32	
08/09/2001 10:32	13.83		
08/09/2001 11:19	13.84		
08/09/2001 12:34	13.83	9.32	
08/09/2001 13:19	13.85		Changed to oil-water probe.
08/09/2001 14:22	13.85		
08/09/2001 15:17	13.85		
08/09/2001 16:35	13.85		
08/09/2001 17:45	13.85		
08/09/2001 18:32	13.85	9.33	
08/09/2001 19:26	13.85		
08/09/2001 20:36	13.87		
08/09/2001 21:22	13.88		
08/09/2001 22:27	13.88		
08/09/2001 23:20	13.89		
08/10/2001 1:45	13.9		
08/10/2001 2:36	13.9		
08/10/2001 3:41	13.89		
08/10/2001 4:24	13.91		
08/10/2001 5:26	13.92		
08/10/2001 6:32	13.94		
08/10/2001 7:22	13.94		
08/10/2001 8:30	13.95		
08/10/2001 9:24	13.95		
08/10/2001 10:54	13.97		
08/10/2001 11:34	13.98		
08/10/2001 12:28	13.98		
08/10/2001 13:23	13.98		
08/10/2001 14:34	13.98		
08/10/2001 15:41	13.99		
08/10/2001 17:50	14		
08/14/2001 23:58	14.24		
	END OF RECORD		

Notes:

PID reading of 2.0 ppm on 8/7/2001.

Manual data sheets recorded data for PU-3 as PU-1. This record is correct.

Total depth of monitoring well/piezometer as recorded on 8/7/01 = 24.22' btoc.

ATTACHMENT B-1a

Contract 5 Lagoon Area Pumping Test - PU-4 Manual Water Level Information

Pre-design Field Investigation

Continental Steel Superfund Site

Date	Water Level (feet Below Top of Casing)	Head Above Transducer (feet)	Comments
08/01/2001 15:37	13.54		
08/02/2001 7:56	13.59		
08/03/2001 8:13	13.58		
08/03/2001 13:19	13.59		
08/07/2001 10:39	14.04		
08/07/2001 15:53	14.04		
08/07/2001 16:11	14.05		
08/07/2001 17:51	14.03		Pump test start: 8/7/01 1700.
08/07/2001 18:48	14.04		
08/07/2001 19:27	14.05		
08/07/2001 20:26	14.07	5.66	
08/07/2001 21:22	14.08		
08/07/2001 22:36	14.07		
08/07/2001 23:33	14.05	5.66	
08/08/2001 0:30	14		
08/08/2001 1:26	14.05		
08/08/2001 2:15	14.05		
08/08/2001 3:10	14.05	5.67	
08/08/2001 4:28	14.05		
08/08/2001 5:23	14.06		
08/08/2001 6:23	14.06		
08/08/2001 7:21	14.07		
08/08/2001 8:20	14.08		
08/08/2001 9:19	14.08		
08/08/2001 10:36	14.14	5.63	
08/08/2001 11:28	14.15		
08/08/2001 12:31	14.15		
08/08/2001 13:29	14.16		
08/08/2001 14:38	14.15		
08/08/2001 15:32	14.14		
08/08/2001 16:27	14.14	5.62	
08/08/2001 17:22	14.15	5.62	
08/08/2001 18:20	14.14		
08/08/2001 19:18	14.15		
08/08/2001 20:25	14.15		
08/08/2001 21:21	14.16		
08/08/2001 22:45	14.16		
08/08/2001 23:34	14.16		
08/09/2001 0:02		5.61	
08/09/2001 0:32	14.16		
08/09/2001 1:31	14.16		
08/09/2001 2:30	14.18		
08/09/2001 3:46	14.18		
08/09/2001 4:33	14.19		
08/09/2001 5:29	14.18		
08/09/2001 6:36	14.19	5.59	

ATTACHMENT B-1a

Contract 5 Lagoon Area Pumping Test - PU-4 Manual Water Level Information

Pre-design Field Investigation

Continental Steel Superfund Site

Date	Water Level (feet Below Top of Casing)	Head Above Transducer (feet)	Comments
08/09/2001 7:23	14.2		
08/09/2001 8:53	14.17		
08/09/2001 9:24	14.17	5.58	
08/09/2001 10:29	14.17		
08/09/2001 11:21	14.17		
08/09/2001 12:32	14.17	5.59	
08/09/2001 13:20	14.18		Changed to oil-water probe.
08/09/2001 14:20	14.18		
08/09/2001 15:19	14.19		
08/09/2001 16:33	14.21		
08/09/2001 17:47	14.21		
08/09/2001 18:30	14.21	5.57	
08/09/2001 19:27	14.2		
08/09/2001 20:34	14.23		
08/09/2001 21:25	14.23		
08/09/2001 22:25	14.22		
08/09/2001 23:21	14.22		
08/10/2001 1:38	14.22		
08/10/2001 2:33	14.22		
08/10/2001 3:38	14.23		
08/10/2001 4:32	14.25		
08/10/2001 5:23	14.25		
08/10/2001 6:30	14.25		
08/10/2001 7:25	14.26		
08/10/2001 8:28	14.26		
08/10/2001 9:27	14.26		
08/10/2001 10:51	14.28		
08/10/2001 11:45	14.27		
08/10/2001 12:24	14.28		
08/10/2001 13:21	14.27		
08/10/2001 14:32	14.27		
08/10/2001 15:42	14.25		
08/10/2001 17:51	14.26		
08/14/2001 23:59	14.38		
	END OF RECORD		

Notes:

PID reading of 78.0 ppm on 8/7/2001.

Manual data sheets recorded data for PU-4 as PU-2. This record is correct.

Total depth of monitoring well/piezometer as recorded on 8/7/01 = 20.66' btoc.

ATTACHMENT B-1a

Contract 5 Lagoon Area Pumping Test - UA-115 (Observation Well at Southeastern Side of Markland Avenue Quarry) Manual Water Level In

Pre-design Field Investigation

Continental Steel Superfund Site

Date	Water Level (feet Below Top of Casing)	Head Above Transducer (feet)	Comments
08/01/2001 15:52	13.2		
08/02/2001 8:08	13.11		
08/03/2001 7:56	13.07		
08/03/2001 13:04	13.13		
	END OF RECORD		

Notes:

Pump test start: 8/7/01 1700.

Total depth of monitoring well/piezometer as recorded on 8/1/01 = 38.07' btoc.

ATTACHMENT B-1a

Contract 5 Markland Avenue Quarry Pumping Test - Rate of Discharge from Pump Well PU-8 as Observed During Pumping Test

Pre-design Field Investigation

Continental Steel Superfund Site

Date	Time	Minutes	Seconds	Elapsed Time (min)	Volume (gal)	Rate (gpm)	Comments
08/13/2001	1801	Start					Pump test start: 8/13/01 1801.
08/13/2001	1802	1	2	1.0	1	0.97	Decreased discharge.
08/13/2001	1807	2	21	2.4	1	0.85	Decreased discharge.
08/13/2001	1811	3	45	3.8	1	0.27	Decreased discharge.
08/13/2001	1819	4	33	4.6	1	0.22	
08/13/2001	1826	5	48	5.8	1	0.17	
08/13/2001	1837	7	55	7.9	1	0.13	
08/13/2001	1849	9	40	9.7	1	0.10	Increased discharge.
08/13/2001	1947	6	36	6.6	1	0.15	
08/13/2001	1959	8	40	8.7	1	0.12	
08/13/2001	2102	7	8	7.1	1	0.14	
08/13/2001	2143	7	25	7.4	1	0.13	
08/13/2001	2244	5	51	5.9	1	0.17	
08/13/2001	2348	5	45	5.8	1	0.17	
08/14/2001	2450	5	45	5.8	1	0.17	
08/14/2001	142	5	47	5.8	1	0.17	
08/14/2001	246	7	46	7.8	1	0.13	
08/14/2001	346	5	40	5.7	1	0.18	
08/14/2001	453	27	44	27.7	3	0.11	
08/14/2001	608	39	3	39.1	4	0.10	Increased discharge.
08/14/2001	627	6	51	6.9	1	0.15	
08/14/2001	706	17	18	17.3	2	0.12	
08/14/2001	729	39	29	39.5	4	0.10	Increased discharge.
08/14/2001	750	5	32	5.5	1	0.18	
08/14/2001	853	17	41	17.7	2	0.11	Increased discharge.
08/14/2001	906	6	33	6.6	1	0.15	
08/14/2001	941	6	16	6.3	1	0.16	
08/14/2001	1002	28	15	28.3	3	0.11	Increased discharge.
08/14/2001	1048	6	31	6.5	1	0.15	
08/14/2001	1326	6	33	6.6	1	0.15	
08/14/2001	1423	6	36	6.6	1	0.15	
08/14/2001	1516	6	25	6.4	1	0.16	
08/14/2001	1611	10	15	10.3	1	0.10	
08/14/2001	1645	11	3	11.1	1	0.09	
08/14/2001	1655	8	55	8.9	1	0.11	
08/14/2001	1728	6	16	6.3	1	0.16	
08/14/2001	1741	12	10	12.2	1	0.08	
08/14/2001	1826	22	29	22.5	2	0.09	
08/14/2001	1920	10	33	10.6	1	0.09	Raised bucket top to equal elevation as barrel to get comparable flow discharge. Lowering the bucket increased the discharge and drawdown in the pumping well PU-8 due to less head resistance.
08/14/2001	2014	9	3	9.1	1	0.11	
08/14/2001	2129	8	57	9.0	1	0.11	
08/14/2001	2224	9	48	9.8	1	0.10	
08/14/2001	2326	9	27	9.5	1	0.11	
08/15/2001	20	9	40	9.7	1	0.11	
08/15/2001	226	22	51	22.9	2	0.09	
08/15/2001	338	49	17	49.3	4	0.08	
08/15/2001	453	49	57	50.0	4	0.08	
08/15/2001	555	49	32	49.5	4	0.08	Increased discharge.
08/15/2001	639	9	59	10.0	1	0.10	
08/15/2001	652	23	6	23.1	2	0.09	
08/15/2001	805	10	0	10.0	1	0.10	
08/15/2001	825	11	57	12.0	1	0.08	
08/15/2001	838	25	44	25.7	2	0.08	Increased discharge.
08/15/2001	853	10	13	10.2	1	0.10	
08/15/2001	1015	26	27	26.5	2	0.08	Increased discharge.

ATTACHMENT B-1a

Contract 5 Markland Avenue Quarry Pumping Test - Rate of Discharge from Pump Well PU-8 as Observed During Pumping Test

Pre-design Field Investigation

Continental Steel Superfund Site

Date	Time	Minutes	Seconds	Elapsed Time (min)	Volume (gal)	Rate (gpm)	Comments
08/15/2001	1219	64	20	64.3	5	0.08	Increased discharge.
08/15/2001	1251	>30			2		Increased discharge.
08/15/2001	1344	32	31	32.5	2	0.06	Increased discharge.
08/15/2001	1456	5	30	5.5	1	0.18	Decreased discharge.
08/15/2001	1503	6	40	6.7	1	0.15	
08/15/2001	1513	7	40	7.7	1	0.13	
08/15/2001	1600	9	52	9.9	1	0.10	
08/15/2001	1652	10	10	10.2	1	0.10	
08/15/2001	1751	11	3	11.1	1	0.09	
08/15/2001	1853	24	6	24.1	2	0.08	
08/15/2001	1939	9	11	9.2	1	0.11	Increased discharge.
08/15/2001	2105	10	16	10.3	1	0.10	
08/15/2001	2156	9	4	9.1	1	0.11	
08/15/2001	2250	10	24	10.4	1	0.10	
08/15/2001	2357	9	42	9.7	1	0.10	
08/16/2001	2450	9	18	9.3	1	0.11	
08/16/2001	150	9	55	9.9	1	0.10	
08/16/2001	250	11	36	11.6	1	0.09	
08/16/2001	359	12	4	12.1	1	0.08	Originally not flowing after transfer of bucket.

END OF RECORD

Notes:

min = minutes

sec = seconds

gpm = gallons per minute

ATTACHMENT B-1a

Contract 5 Markland Avenue Quarry Pumping Test - UA-109 Manual Water Level Information

Pre-design Field Investigation

Continental Steel Superfund Site

Date	Water Level (feet Below Top of Casing)	Head Above Transducer (feet)	Comments
08/09/2001 10:11	9.58		
08/13/2001 13:18	9.8		
08/13/2001 16:26	9.78	2.12	
08/13/2001 19:19	9.8		Pump test start: 8/13/01 1801.
08/13/2001 20:40	9.8		
08/13/2001 21:27	9.8	2.08	
08/13/2001 22:27	9.8		
08/13/2001 23:34	9.8		
08/14/2001 0:41	9.8	2.06	
08/14/2001 1:29	9.81		
08/14/2001 2:34	9.81		
08/14/2001 3:30	9.82		
08/14/2001 4:33	9.81		
08/14/2001 5:42	9.82	2.04	
08/14/2001 6:41	9.82		
08/14/2001 7:35	9.82		
08/14/2001 8:46	9.82		
08/14/2001 9:38	9.83		
08/14/2001 10:37	9.83		
08/14/2001 13:05	9.85	2.04	Downloaded transducer data at UA-109, PU-7, PU-9, UA-110.
08/14/2001 14:14	9.85		
08/14/2001 15:02	9.85		
08/14/2001 16:07	9.84		
08/14/2001 17:08	9.84		
08/14/2001 18:01	9.85	2.03	Downloaded transducer data at UA-109, PU-7, PU-9, UA-110.
08/14/2001 19:02	9.86		
08/14/2001 20:03	9.86		
08/14/2001 21:13	9.86		
08/14/2001 22:12	9.86		
08/14/2001 23:08	9.86		
08/15/2001 0:08	9.86	2.02	Downloaded transducer data at UA-109, PU-7, PU-9, UA-110.
08/15/2001 1:10	9.87		
08/15/2001 2:12	9.86		
08/15/2001 3:11	9.87		
08/15/2001 4:10	9.86		
08/15/2001 5:06	9.87		
08/15/2001 6:16	9.87		
08/15/2001 7:47	9.87		
08/15/2001 8:22	9.87		
08/15/2001 9:05	9.88		
08/15/2001 9:58	9.87		
08/15/2001 11:00	9.89		
08/15/2001 12:01	9.89	2	
08/15/2001 13:12	9.89		
08/15/2001 14:37	9.89		Pump off at 1402. Pump off at 14:28.
08/15/2001 15:38	9.89		Pump on at 14:48.
08/15/2001 16:28	9.9		
08/15/2001 17:33	9.9		
08/15/2001 18:21	9.9	1.99	Downloaded transducer data at UA-109, PU-7, PU-9, UA-110.
08/15/2001 19:22	9.9		
08/15/2001 20:46	9.9		
08/15/2001 21:31	9.9		
08/15/2001 22:29	9.9		

ATTACHMENT B-1a

Contract 5 Markland Avenue Quarry Pumping Test - UA-109 Manual Water Level Information

Pre-design Field Investigation

Continental Steel Superfund Site

Date	Water Level (feet Below Top of Casing)	Head Above Transducer (feet)	Comments
08/15/2001 23:43	9.91		
08/16/2001 0:31	9.9	1.98	
08/16/2001 1:32	9.91		
08/16/2001 2:29	9.91		
08/16/2001 3:29	9.91		
08/16/2001 4:12	9.9		Pump failed between 0410 and 0441.
08/16/2001 5:49	9.9		
08/16/2001 6:26	9.9	1.98	
08/16/2001 8:37	9.91		
08/16/2001 9:27	9.91		
08/16/2001 10:40	9.91		
08/16/2001 12:50	9.92		
08/16/2001 15:12	9.93		
08/17/2001 10:28	9.98	1.93	Downloaded transducer data at UA-109, PU-7, PU-9, UA-110.
08/20/2001 16:29	10.08	1.81	
	END OF RECORD		

Notes:

PID reading of 33.0 ppm.

Total depth of monitoring well/piezometer as recorded on 8/9/01 = 12.44' btoc.

ATTACHMENT B-1a

Contract 5 Markland Avenue Quarry Pumping Test - UA-110 Manual Water Level Information

Pre-design Field Investigation

Continental Steel Superfund Site

Date	Water Level (feet Below Top of Casing)	Head Above Transducer (feet)	Comments
08/09/2001 9:47	10.19		
08/13/2001 13:00	10.27		
08/13/2001 16:31	10.26	1.93	
08/13/2001 19:24	10.26		Pump test start: 8/13/01 1801.
08/13/2001 20:47	10.27		
08/13/2001 21:30	10.27	1.93	
08/13/2001 22:34	10.27		
08/13/2001 23:37	10.26		
08/14/2001 0:40	10.26	1.94	
08/14/2001 1:31	10.26		
08/14/2001 2:32	10.26		
08/14/2001 3:32	10.26		
08/14/2001 4:37	10.25		
08/14/2001 5:53	10.25	1.94	
08/14/2001 6:37	10.25		
08/14/2001 7:39	10.25		
08/14/2001 8:37	10.25		
08/14/2001 9:32	10.26		
08/14/2001 10:33	10.25		
08/14/2001 13:14	10.26	1.94	Downloaded transducer data at UA-109, PU-7, PU-9, UA-110.
08/14/2001 14:11	10.26		
08/14/2001 15:05	10.27		
08/14/2001 16:02	10.25		
08/14/2001 17:04	10.24		
08/14/2001 17:58	10.26	1.94	Downloaded transducer data at UA-109, PU-7, PU-9, UA-110.
08/14/2001 19:05	10.27		
08/14/2001 19:57	10.28		
08/14/2001 21:15	10.27		
08/14/2001 22:06	10.28		
08/14/2001 23:12	10.27		
08/15/2001 0:04	10.27	1.94	Downloaded transducer data at UA-109, PU-7, PU-9, UA-110.
08/15/2001 1:17	10.27		
08/15/2001 2:08	10.26		
08/15/2001 3:15	10.27		
08/15/2001 4:05	10.27		
08/15/2001 5:10	10.27		
08/15/2001 6:04	10.27	1.94	
08/15/2001 7:50	10.25		
08/15/2001 8:18	10.27		
08/15/2001 9:07	10.27		
08/15/2001 10:07	10.28		
08/15/2001 11:05	10.28		
08/15/2001 11:54	10.28	1.93	
08/15/2001 13:06	10.28		
08/15/2001 14:40	10.27		Pump off at 1402. Pump off at 14:28.
08/15/2001 14:42	10.27		
08/15/2001 15:43	10.29		Pump on at 14:48.
08/15/2001 16:31	10.28		
08/15/2001 17:36	10.29		
08/15/2001 18:23	10.28	1.93	Downloaded transducer data at UA-109, PU-7, PU-9, UA-110.
08/15/2001 19:23	10.29		
08/15/2001 20:50	10.29		
08/15/2001 21:32	10.29		
08/15/2001 22:33	10.29		
08/15/2001 23:33	10.29		

ATTACHMENT B-1a

Contract 5 Markland Avenue Quarry Pumping Test - UA-110 Manual Water Level Information

Pre-design Field Investigation

Continental Steel Superfund Site

Date	Water Level (feet Below Top of Casing)	Head Above Transducer (feet)	Comments
08/15/2001 0:36	10.29	1.93	
08/16/2001 1:34	10.28		
08/16/2001 2:34	10.28		
08/16/2001 3:31	10.28		
08/16/2001 4:23	10.28		Pump failed between 0410 and 0441.
08/16/2001 5:53	10.28		
08/16/2001 6:28	10.27	1.93	
08/16/2001 8:30	10.28		
08/16/2001 9:37	10.28		
08/16/2001 10:32	10.28		
08/16/2001 12:55	10.28		
08/16/2001 15:04	10.28		
08/17/2001 10:38	10.32	1.91	Downloaded transducer data at UA-109, PU-7, PU-9, UA-110.
08/20/2001 17:00	10.34	1.88	
	END OF RECORD		

Notes:

PID reading of 169.0 ppm.

Total depth of monitoring well/piezometer as recorded on 8/9/01 = 12.89' btoc.

ATTACHMENT B-1a

Contract 5 Markland Avenue Quarry Pumping Test - UA-111 Manual Water Level Information

Pre-design Field Investigation

Continental Steel Superfund Site

Date	Water Level (feet Below Top of Casing)	Head Above Transducer (feet)	Comments
08/09/2001 9:37	8.65		
08/13/2001 12:52	8.97		
08/13/2001 16:34	8.98		
08/13/2001 19:34	8.99		Pump test start: 8/13/01 1801.
08/13/2001 20:43	8.99		
08/13/2001 21:33	8.99		
08/13/2001 22:32	8.99		
08/13/2001 23:40	9.01		
08/14/2001 0:35	9.01		
08/14/2001 1:34	9.01		
08/14/2001 2:29	9.02		
08/14/2001 3:35	9.02		
08/14/2001 4:40	9.01		
08/14/2001 5:57	9.02		
08/14/2001 6:34	9.02		
08/14/2001 7:41	9.03		
08/14/2001 8:43	9.04		
08/14/2001 9:24	9.04		
08/14/2001 10:31	9.04		
08/14/2001 13:18	9.04		Downloaded transducer data at UA-109, PU-7, PU-9, UA-110.
08/14/2001 14:09	9.04		
08/14/2001 15:07	9.05		
08/14/2001 16:17	9.03		
08/14/2001 17:11	9.04		
08/14/2001 17:56	9.05		Downloaded transducer data at UA-109, PU-7, PU-9, UA-110.
08/14/2001 19:07	9.05		
08/14/2001 19:59	9.06		
08/14/2001 21:17	9.06		
08/14/2001 22:08	9.06		
08/14/2001 23:14	9.06		
08/15/2001 0:02	9.06		Downloaded transducer data at UA-109, PU-7, PU-9, UA-110.
08/15/2001 1:20	9.07		
08/15/2001 2:06	9.08		
08/15/2001 3:17	9.08		
08/15/2001 4:03	9.08		
08/15/2001 5:13	9.08		
08/15/2001 6:00	9.08		
08/15/2001 7:52	9.08		
08/15/2001 8:26	9.09		
08/15/2001 9:14	9.1		
08/15/2001 10:03	9.1		
08/15/2001 11:08	9.1		
08/15/2001 12:15	9.11		
08/15/2001 13:02	9.1		Pump off at 1402. Pump off at 14:28.
08/15/2001 15:46	9.11		Pump on at 14:48.
08/15/2001 16:35	9.11		
08/15/2001 17:38	9.12		
08/15/2001 18:27	9.11		Downloaded transducer data at UA-109, PU-7, PU-9, UA-110.
08/15/2001 19:28	9.12		
08/15/2001 20:52	9.12		
08/15/2001 21:36	9.11		
08/15/2001 22:35	9.12		
08/15/2001 23:35	9.12		
08/15/2001 0:38	9.12		

ATTACHMENT B-1a

Contract 5 Markland Avenue Quarry Pumping Test - UA-111 Manual Water Level Information

Pre-design Field Investigation

Continental Steel Superfund Site

Date	Water Level (feet Below Top of Casing)	Head Above Transducer (feet)	Comments
08/16/2001 1:36	9.12		
08/16/2001 2:36	9.12		
08/16/2001 3:33	9.12		
08/16/2001 4:26	9.12		Pump failed between 0410 and 0441.
08/16/2001 5:56	9.12		
08/16/2001 6:40	9.11		
08/16/2001 8:24	9.12		
08/16/2001 9:39	9.13		
08/16/2001 10:30	9.14		
08/16/2001 12:57	9.15		
08/16/2001 15:02	9.16		
08/17/2001 10:42	9.3		Downloaded transducer data at UA-109, PU-7, PU-9, UA-110.
08/20/2001 17:20	9.51		
	END OF RECORD		

Notes:

PID reading of 0.5 ppm.

Total depth of monitoring well as recorded on 8/9/01 = 10.61' btoc.

ATTACHMENT B-1a

Contract 5 Markland Avenue Quarry Pumping Test - UA-115 (Observation Well at Southeast Corner of Quarry) Manual Water Level Information

Pre-design Field Investigation

Continental Steel Superfund Site

Date	Water Level (feet Below Top of Casing)	Head Above Transducer (feet)	Comments
08/14/2001 16:22	13.18		
08/14/2001 17:17	13.24		
08/14/2001 19:26	13.29		
08/14/2001 21:40	13.26		
08/15/2001 4:25	13.27		
08/15/2001 7:59	13.25		
08/15/2001 8:32	13.26		
08/15/2001 9:19	13.27		
08/15/2001 11:17	13.27		
08/15/2001 13:18	13.27		Pump off at 1402. Pump off at 14:28.
08/15/2001 15:44	13.28		Pump on at 14:48.
08/15/2001 19:00	13.28		
08/15/2001 22:58	13.28		
08/16/2001 4:36	13.28		Pump failed between 0410 and 0441.
08/16/2001 6:51	13.28		
08/16/2001 8:43	13.28		
08/16/2001 15:21	13.28		
08/17/2001 10:49	13.33		
08/20/2001 17:27	13.31		
	END OF RECORD		

Notes:

Pump test start: 8/13/01 1801.

ATTACHMENT B-1a

Contract 5 Markland Avenue Quarry Pumping Test - PU-7 Manual Water Level Information

Pre-design Field Investigation

Continental Steel Superfund Site

Date	Water Level (feet Below Top of Casing)	Head Above Transducer (feet)	Comments
08/09/2001 10:06	14.8		
08/13/2001 13:14	15.26		
08/13/2001 16:28	15.27	7.4	
08/13/2001 19:17	15.29		Pump test start: 8/13/01 1801.
08/13/2001	15.3		
08/13/2001 21:26	15.3	7.34	
08/13/2001 22:36	15.31		
08/13/2001 23:33	15.3		
08/14/2001 0:43	15.31	7.34	
08/14/2001 1:27	15.3		
08/14/2001 2:36	15.31		
08/14/2001 3:28	15.31		
08/14/2001 4:45	15.31		
08/14/2001 5:36	15.31	7.33	
08/14/2001 6:44	15.32		
08/14/2001 7:33	15.32		
08/14/2001 8:48	15.32		
08/14/2001 9:35	15.33		
08/14/2001 10:39	15.33		
08/14/2001 13:01	15.34	7.31	Downloaded transducer data at UA-109, PU-7, PU-9, UA-110.
08/14/2001 14:15	15.34		
08/14/2001 15:01	15.34		
08/14/2001 16:09	15.33		
08/14/2001 17:02	15.34		
08/14/2001 18:03	15.34	7.3	Downloaded transducer data at UA-109, PU-7, PU-9, UA-110.
08/14/2001 19:01	15.35		
08/14/2001 20:04	15.35		
08/14/2001 21:11	15.36		
08/14/2001 22:14	15.36		
08/14/2001 23:07	15.35		
08/15/2001 0:09	15.37	7.28	Downloaded transducer data at UA-109, PU-7, PU-9, UA-110.
08/15/2001 1:08	15.37		
08/15/2001 2:15	15.37		
08/15/2001 3:08	15.37		
08/15/2001 4:12	15.37		
08/15/2001 5:04	15.37		
08/15/2001 6:22	15.38	7.26	
08/15/2001 7:45	15.38		
08/15/2001 8:23	15.38		
08/15/2001 9:03	15.39		
08/15/2001 10:00	15.39		
08/15/2001 10:58	15.39		
08/15/2001 12:09	15.39	7.25	
08/15/2001 13:10	15.39		
08/15/2001 14:34	15.38		Pump off at 1402. Pump off at 14:28.
08/15/2001 14:40	15.39		Pump on at 14:48.
08/15/2001 15:36	15.39		
08/15/2001 16:30	15.4		
08/15/2001 17:31	15.41		
08/15/2001 18:22	15.42	7.23	Downloaded transducer data at UA-109, PU-7, PU-9, UA-110.
08/15/2001 19:21	15.41		
08/15/2001 20:48	15.42		
08/15/2001 21:29	15.41		
08/15/2001 22:30	15.42		
08/15/2001 23:42	15.43		

ATTACHMENT B-1a

Contract 5 Markland Avenue Quarry Pumping Test - PU-7 Manual Water Level Information

Pre-design Field Investigation

Continental Steel Superfund Site

Date	Water Level (feet Below Top of Casing)	Head Above Transducer (feet)	Comments
08/15/2001 0:33	15.42	7.22	
08/16/2001 1:30	15.42		
08/16/2001 2:31	15.42		
08/16/2001 3:27	15.42		
08/16/2001 4:18	15.41		Pump failed between 0410 and 0441.
08/16/2001 5:47	15.41		
08/16/2001 6:35	15.41	7.23	
08/16/2001 8:34	15.4		
08/16/2001 9:30	15.4		
08/16/2001 10:36	15.41		
08/16/2001 12:52	15.41		
08/16/2001 15:10	15.42		
08/17/2001 10:30	15.51	7.16	Downloaded transducer data at UA-109, PU-7, PU-9, UA-110.
08/20/2001 16:35	15.34	7.32	
	END OF RECORD		

Notes:

PID reading of 0.8 ppm.

Total depth of monitoring well/piezometer as recorded on 8/9/01 = 23.24' btoc.

ATTACHMENT B-1a

Contract 5 Markland Avenue Quarry Pumping Test - PU-8 Manual Water Level Information

Pre-design Field Investigation

Continental Steel Superfund Site

Date	Water Level (feet Below Top of Casing)	Head Above Transducer (feet)	Comments
08/09/2001 10:00	14.51		
08/13/2001 13:09	14.93		
08/13/2001 16:14	14.93		
08/13/2001 18:00	15.41		
08/13/2001 18:01	16.11		Pump test start: 8/13/01 1801.
08/13/2001 18:01	16.41		
08/13/2001 18:01	16.53		
08/13/2001 18:01	16.79		
08/13/2001 18:02	16.96		
08/13/2001 18:02	17.21		
08/13/2001 18:02	17.28		
08/13/2001 18:03	17.31		
08/13/2001 18:03	17.57		
08/13/2001 18:03	17.81		
08/13/2001 18:04	18.18		
08/13/2001 18:05	18.29		
08/13/2001 18:05	18.38		
08/13/2001 18:06	18.82		
08/13/2001 18:07	19.06		
08/13/2001 18:07	18.87		
08/13/2001 18:08	18.80		
08/13/2001 18:08	18.76		
08/13/2001 18:09	18.79		
08/13/2001 18:10	18.90		
08/13/2001 18:11	18.96		
08/13/2001 18:12	18.93		
08/13/2001 18:12	18.66		
08/13/2001 18:12	18.47		
08/13/2001 18:13	18.41		
08/13/2001 18:14	18.40		
08/13/2001 18:14	18.65		
08/13/2001 18:15	18.97		
08/13/2001 18:15	19.12		
08/13/2001 18:16	19.16		
08/13/2001 18:16	19.06		
08/13/2001 18:17	18.96		
08/13/2001 18:17	18.93		
08/13/2001 18:18	18.90		
08/13/2001 18:18	18.89		
08/13/2001 18:19	18.91		~.22 gpm.
08/13/2001 18:19	18.90		
08/13/2001 18:20	18.91		
08/13/2001 18:20	18.92		
08/13/2001 18:21	18.94		
08/13/2001 18:22	18.98		
08/13/2001 18:23	19.02		

ATTACHMENT B-1a

Contract 5 Markland Avenue Quarry Pumping Test - PU-8 Manual Water Level Information

Pre-design Field Investigation

Continental Steel Superfund Site

Date	Water Level (feet Below Top of Casing)	Head Above Transducer (feet)	Comments
08/13/2001 18:24	19.08		
08/13/2001 18:24	19.11		
08/13/2001 18:25	19.13		
08/13/2001 18:25	19.15		
08/13/2001 18:26	19.20		
08/13/2001 18:28	19.24		
08/13/2001 18:29	19.26		
08/13/2001 18:30	19.27		
08/13/2001 18:30	19.29		
08/13/2001 18:31	19.32		
08/13/2001 18:32	19.34		
08/13/2001 18:34	19.37		
08/13/2001 18:34	19.36		
08/13/2001 18:36	19.38		
08/13/2001 18:37	19.38		~.17 gpm.
08/13/2001 18:37	19.39		
08/13/2001 18:38	19.40		
08/13/2001 18:40	19.38		
08/13/2001 18:41	19.41		
08/13/2001 18:42	19.42		
08/13/2001 18:43	19.44		
08/13/2001 18:44	19.44		
08/13/2001 18:45	19.44		
08/13/2001 18:47	19.49		
08/13/2001 18:48	19.48		
08/13/2001 18:49	19.43		~.13 gpm.
08/13/2001 18:50	19.43		
08/13/2001 18:50	19.42		
08/13/2001 18:51	19.41		
08/13/2001 18:52	19.42		
08/13/2001 18:53	19.42		
08/13/2001 18:55	19.43		
08/13/2001 18:55	19.44		
08/13/2001 18:57	19.43		
08/13/2001 18:59	19.43		
08/13/2001 19:00	19.34		
08/13/2001 19:01	19.38		
08/13/2001 19:02	19.42		
08/13/2001 19:03	19.43		
08/13/2001 19:04	19.46		
08/13/2001 19:05	19.46		
08/13/2001 19:06	19.48		
08/13/2001 19:07	19.48		
08/13/2001 19:07	19.47		~.10 gpm.
08/13/2001 19:09	19.48		
08/13/2001 19:11	19.48		

ATTACHMENT B-1a

Contract 5 Markland Avenue Quarry Pumping Test - PU-8 Manual Water Level Information

Pre-design Field Investigation

Continental Steel Superfund Site

Date	Water Level (feet Below Top of Casing)	Head Above Transducer (feet)	Comments
08/13/2001 19:37	18.16		
08/13/2001 20:51	18.42		
08/13/2001 21:35	18.58		
08/13/2001 22:37	18.35		
08/13/2001 23:42	18.34		
08/14/2001 0:44	18.48		
08/14/2001 1:36	18.44		
08/14/2001 2:37	18.65		
08/14/2001 3:37	18.61		
08/14/2001 4:43	20.09		
08/14/2001 5:29	18.61		
08/14/2001 6:45	18.9		
08/14/2001 7:44	19.2		
08/14/2001 8:35	19.16		
08/14/2001 9:34	19.36		
08/14/2001 10:40	19.56		
08/14/2001 12:59	19.61		Downloaded transducer data at UA-109, PU-7, PU-9, UA-110.
08/14/2001 14:16	19.3		
08/14/2001 15:09	19.48		
08/14/2001 15:59	19.53		
08/14/2001 17:22	19.95		
08/14/2001 18:04	19.47		Downloaded transducer data at UA-109, PU-7, PU-9, UA-110.
08/14/2001 19:10	19.67		
08/14/2001 20:06	19.38		
08/14/2001 21:19	19.15		
08/14/2001 22:15	19.57		
08/14/2001 23:17	19.53		
08/15/2001 0:10	19.49		Downloaded transducer data at UA-109, PU-7, PU-9, UA-110.
08/15/2001 1:23	19.45		
08/15/2001 2:02	19.41		
08/15/2001 3:05	19.34		
08/15/2001 4:14	19.3		
08/15/2001 5:02	19.32		
08/15/2001 6:25	19.56		
08/15/2001 7:43	19.34		
08/15/2001 8:17	19.14		
08/15/2001 9:23	19.29		
08/15/2001 10:12	19.13		
08/15/2001 11:12	19.64		
08/15/2001 12:11	19.52		
08/15/2001 12:58	18.49		Pump off at 1402. Pump off at 14:28.
08/15/2001 15:49	19.61		Pump on at 14:48.
08/15/2001 16:37	19.89		

ATTACHMENT B-1a

Contract 5 Markland Avenue Quarry Pumping Test - PU-8 Manual Water Level Information

Pre-design Field Investigation

Continental Steel Superfund Site

Date	Water Level (feet Below Top of Casing)	Head Above Transducer (feet)	Comments
08/15/2001 17:40	19.74		
08/15/2001 18:29	19.76		Downloaded transducer data at UA-109, PU-7, PU-9, UA-110.
08/15/2001 19:31	19.71		
08/15/2001 20:53	19.56		
08/15/2001 21:38	19.72		
08/15/2001 22:41	20.15		
08/15/2001 23:44	20.07		
08/15/2001 0:41	19.98		
08/16/2001 1:40	19.72		
08/16/2001 2:38	20.3		
08/16/2001 3:37	19.13		
08/16/2001 4:29	17.83		Pump failed between 0410 and 0441.
08/16/2001 5:24	20.86		
08/16/2001 5:25	20.32		
08/16/2001 5:25	19.89		
08/16/2001 5:25	19.65		
08/16/2001 5:26	19.35		
08/16/2001 5:27	19		
08/16/2001 5:27	18.85		
08/16/2001 5:27	18.65		
08/16/2001 5:28	18.55		
08/16/2001 5:28	18.45		
08/16/2001 5:28	18.35		
08/16/2001 5:28	18.25		
08/16/2001 5:29	18.15		
08/16/2001 5:29	18.05		
08/16/2001 5:29	17.95		
08/16/2001 5:30	17.85		
08/16/2001 5:31	16.92		
08/16/2001 5:31	16.9		
08/16/2001 5:32	16.89		
08/16/2001 5:32	16.88		
08/16/2001 5:34	16.86		
08/16/2001 5:35	16.85		
08/16/2001 5:35	16.84		
08/16/2001 5:36	16.82		
08/16/2001 5:37	16.82		
08/16/2001 5:38	16.81		
08/16/2001 5:38	16.8		
08/16/2001 5:44	16.77		
08/16/2001 5:58	16.64		
08/16/2001 6:00	16.63		
08/16/2001 6:01	16.61		
08/16/2001 6:12	16.49		
08/16/2001 6:18	16.4		

ATTACHMENT B-1a

Contract 5 Markland Avenue Quarry Pumping Test - PU-8 Manual Water Level Information

Pre-design Field Investigation

Continental Steel Superfund Site

Date	Water Level (feet Below Top of Casing)	Head Above Transducer (feet)	Comments
08/16/2001 6:27	16.31		
08/16/2001 6:37	16.21		
08/16/2001 6:43	16.15		
08/16/2001 6:56	16.01		
08/16/2001 8:38	15.42		
08/16/2001 9:31	15.3		
08/16/2001 10:26	15.18		
08/16/2001 12:49	15.11		
08/16/2001 14:58	15.1		
08/17/2001 10:34	15.14		Downloaded transducer data at UA-109, PU-7, PU-9, UA-110.
08/20/2001 16:38	14.96		
	END OF RECORD		

Notes:

PID reading of 0.6 ppm.

Total depth of monitoring well/piezometer as recorded on 8/9/01 = 22.84' btoc.

ATTACHMENT B-1a

Contract 5 Markland Avenue Quarry Pumping Test - PU-9 Manual Water Level Information

Pre-design Field Investigation

Continental Steel Superfund Site

Date	Water Level (feet Below Top of Casing)	Head Above Transducer (feet)	Comments
08/09/2001 9:53	13.76		
08/13/2001 13:05	14.21		
08/13/2001 16:30	14.21	8.22	
08/13/2001 19:22	14.22		Pump test start: 8/13/01 1801.
08/13/2001 20:49	14.22		
08/13/2001 21:28	14.23	8.19	
08/13/2001 22:29	14.23		
08/13/2001 23:36	14.23		
08/14/2001 0:33	14.23		
08/14/2001 1:30	14.23		
08/14/2001 2:33	14.23		
08/14/2001 3:31	14.24		
08/14/2001 4:35	14.23		
08/14/2001 5:46	14.24	8.18	
08/14/2001 6:39	14.24		
08/14/2001 7:36	14.24		
08/14/2001 8:40	14.25		
08/14/2001 9:29	14.25		
08/14/2001 10:35	14.25		
08/14/2001 13:09	14.26	8.15	Downloaded transducer data at UA-109, PU-7, PU-9, UA-110.
08/14/2001 14:12	14.76		
08/14/2001 15:04	14.26		
08/14/2001 16:04	14.24		
08/14/2001 17:03	14.25		
08/14/2001 17:59	14.27	8.15	Downloaded transducer data at UA-109, PU-7, PU-9, UA-110.
08/14/2001 19:03	14.27		
08/14/2001 20:01	14.28		
08/14/2001 21:14	14.28		
08/14/2001 22:11	14.29		
08/14/2001 23:10	14.29		
08/15/2001 0:06	14.29	8.13	Downloaded transducer data at UA-109, PU-7, PU-9, UA-110.
08/15/2001 1:11	14.29		
08/15/2001 2:10	14.29		
08/15/2001 3:12	14.29		
08/15/2001 4:08	14.3		
08/15/2001 5:08	14.3		
08/15/2001 6:11	14.3	8.11	
08/15/2001 7:48	14.3		
08/15/2001 8:20	14.29		
08/15/2001 9:09	14.31		
08/15/2001 10:10	14.31		
08/15/2001 11:02	14.32		
08/15/2001 11:47	14.32	8.1	
08/15/2001 13:08	14.32		

ATTACHMENT B-1a

Contract 5 Markland Avenue Quarry Pumping Test - PU-9 Manual Water Level Information

Pre-design Field Investigation

Continental Steel Superfund Site

Date	Water Level (feet Below Top of Casing)	Head Above Transducer (feet)	Comments
08/15/2001 14:38	14.31		Pump off at 1402. Pump off at 14:28.
08/15/2001 14:41	14.31		Pump on at 14:48.
08/15/2001 15:40	14.33		
08/15/2001 16:32	14.33		
08/15/2001 17:34	14.34		
08/15/2001 18:25	14.34	8.08	Downloaded transducer data at UA-109, PU-7, PU-9, UA-110.
08/15/2001 19:26	14.35		
08/15/2001 20:49	14.35		
08/15/2001 21:34	14.35		
08/15/2001 22:31	14.35		
08/15/2001 23:39	14.36		
08/16/2001 0:34	14.36	8.06	
08/16/2001 1:39	14.36		
08/16/2001 2:32	14.36		
08/16/2001 3:35	14.37		
08/16/2001 4:20	14.36		Pump failed between 0410 and 0441.
08/16/2001 5:52	14.37		
08/16/2001 6:30	14.35	8.05	
08/16/2001 8:26	14.36		
08/16/2001 9:34	14.36		
08/16/2001 10:35	14.37		
08/16/2001 12:54	14.36		
08/16/2001 15:07	14.38		
08/17/2001 10:36	14.43	7.99	Downloaded transducer data at UA-109, PU-7, PU-9, UA-110.
08/20/2001 16:44	14.3	8.12	
	END OF RECORD		

Notes:

PID reading of 1.4 ppm.

Total depth of monitoring well/piezometer as recorded on 8/9/01 = 23.01' btoc.

ATTACHMENT B-1a

Contract 5 Park Avenue Pumping Test - Rate of Discharge from Pump Well PU-11 as Observed During Pumping Test

Pre-design Field Investigation

Continental Steel Superfund Site

Date	Time	Minutes	Seconds	Elapsed Time (min)	Volume (gal)	Rate (gpm)	Comments
08/21/2001	1504	0	53	0.9	2	2.26	Pump test start: 8/21/01 1501.
08/21/2001	1507	2	17	2.3	5	2.19	
08/21/2001	1509	0	56	0.9	2	2.14	
08/21/2001	1510	2	19	2.3	5	2.16	
08/21/2001	1512	0	55	0.9	2	2.18	
08/21/2001	1514	2	21	2.4	5	2.13	
08/21/2001	1516	0	56	0.9	2	2.14	
08/21/2001	1517	2	21	2.4	5	2.13	
08/21/2001	1519	0	55	0.9	2	2.18	
08/21/2001	1520	2	20	2.3	5	2.14	
08/21/2001	1522	0	54	0.9	2	2.22	
08/21/2001	1524	2	19	2.3	5	2.16	
08/21/2001	1534	0	55	0.9	2	2.18	Pump cut-out periodically between 15:28 and 14:32.
08/21/2001	1535	2	20	2.3	5	2.14	
08/21/2001	1538	0	53	0.9	2	2.26	
08/21/2001	1540	2	19	2.3	5	2.16	
08/21/2001	1542	0	56	0.9	2	2.14	
08/21/2001	1545	3	9	3.2	5	1.59	Pump cut-out between 15:42 and 14:45.
08/21/2001	1548	0	56	0.9	2	2.14	
08/21/2001	1550	2	20	2.3	5	2.14	
08/21/2001	1644	2	26	2.4	5	2.05	Pumping ceased from about 18:00 on 8/21/2001 until 14:00 on 8-22-2001.
08/22/2001	1401	0	53	0.9	2	2.26	
08/22/2001	1403	2	20	2.3	5	2.14	
08/22/2001	1405	0	55	0.9	2	2.18	
08/22/2001	1406	2	21	2.4	5	2.13	
08/22/2001	1408	0	54	0.9	2	2.22	
08/22/2001	1409	2	20	2.3	5	2.14	
08/22/2001	1411	0	54	0.9	2	2.22	
08/22/2001	1412	2	20	2.3	5	2.14	
08/22/2001	1414	0	53	0.9	2	2.26	
08/22/2001	1416	2	20	2.3	5	2.14	
08/22/2001	1419	0	54	0.9	2	2.22	
08/22/2001	1420	2	20	2.3	5	2.14	
08/22/2001	1424	2	20	2.3	5	2.14	
08/22/2001	1426	0	54	0.9	2	2.22	
08/22/2001	1427	2	20	2.3	5	2.14	
08/22/2001	1429						Pump off.
08/22/2001	1430						Pump on.
08/22/2001	1432	0	53	0.9	2	2.26	
08/22/2001	1433	2	21	2.4	5	2.13	
08/22/2001	1435	0	54	0.9	2	2.22	
08/22/2001	1437	2	20	2.3	5	2.14	
08/22/2001	1439	0	55	0.9	2	2.18	
08/22/2001	1440	2	20	2.3	5	2.14	
08/22/2001	1442	0	54	0.9	2	2.22	
08/22/2001	1444	2	20	2.3	5	2.14	
08/22/2001	1508	0	53	0.9	2	2.26	
08/22/2001	1510	2	20	2.3	5	2.14	
08/22/2001	1802	2	20	2.3	5	2.14	
08/22/2001	1924	2	24	2.4	5	2.08	
08/22/2001	2038	2	21	2.4	5	2.13	
08/22/2001	2126	2	25	2.4	5	2.07	
08/22/2001	2304	2	24	2.4	5	2.08	
08/23/2001	2454	2	20	2.3	5	2.14	
08/23/2001	202	2	17	2.3	5	2.19	
08/23/2001	303	2	18	2.3	5	2.17	
08/23/2001	418	2	19	2.3	5	2.16	
08/23/2001	517	2	20	2.3	5	2.14	
08/23/2001	620	2	18	2.3	5	2.17	
08/23/2001	713	2	19	2.3	5	2.16	
08/23/2001	817	2	20	2.3	5	2.14	
08/23/2001	920	2	19	2.3	5	2.16	
08/23/2001	1130	2	19	2.3	5	2.16	
08/23/2001	1213	2	19	2.3	5	2.16	
08/23/2001	1313	2	20	2.3	5	2.14	
08/23/2001	1409	2	19	2.3	5	2.16	

ATTACHMENT B-1a

Contract 5 Park Avenue Pumping Test - Rate of Discharge from Pump Well PU-11 as Observed During Pumping Test

Pre-design Field Investigation

Continental Steel Superfund Site

Date	Time	Minutes	Seconds	Elapsed Time (min)	Volume (gal)	Rate (gpm)	Comments
08/23/2001	1516	2	21	2.4	5	2.13	
08/23/2001	1653	2	23	2.4	5	2.10	
08/23/2001	1822	2	22	2.4	5	2.11	
08/23/2001	1945	2	18	2.3	5	2.17	
08/23/2001	2014	2	16	2.3	5	2.21	
08/23/2001	2112	2	17	2.3	5	2.19	
08/23/2001	2213	2	19	2.3	5	2.16	
08/23/2001	2318	2	18	2.3	5	2.17	
08/24/2001	2415	2	17	2.3	5	2.19	
08/24/2001	121	2	17	2.3	5	2.19	
08/24/2001	215	2	17	2.3	5	2.19	
08/24/2001	317	2	20	2.3	5	2.14	
08/24/2001	427	1	49	1.8	4	2.20	
08/24/2001	524	2	19	2.3	5	2.16	
08/24/2001	649	2	20	2.3	5	2.14	
08/24/2001	719	2	21	2.4	5	2.13	
08/24/2001	816	2	19	2.3	5	2.16	
08/24/2001	917	2	21	2.4	5	2.13	
08/24/2001	1023	2	20	2.3	5	2.14	
08/24/2001	1116	2	22	2.4	5	2.11	Pump test ended at 12:05.
	END OF RECORD						

Notes:

min = minutes

sec = seconds

gpm = gallons per minute

Hz = hertz = oscillation per second (1s-1)

ATTACHMENT B-1a

Contract 5 Park Avenue Pumping Test - PU-11 Manual Water Level Information

Pre-design Field Investigation

Continental Steel Superfund Site

Date	Water Level (feet Below Top of Casing)	Head Above Transducer (feet)	Comments
08/06/2001 17:12	11.79		
08/15/2001 11:32	13.32		
08/16/2001 18:28	13.07		
08/17/2001 9:14	13.05		
08/20/2001 10:35	13.02		
08/21/2001 10:54	13.08		
08/21/2001 15:00	13.07		
08/21/2001 15:01	18.62		Pump test start: 8/21/01 1501.
08/21/2001 15:01	19.48		
08/21/2001 15:01	20.02		
08/21/2001 15:02	20.18		
08/21/2001 15:02	20.25		
08/21/2001 15:02	20.22		
08/21/2001 15:02	20.85		
08/21/2001 15:02	20.49		
08/21/2001 15:03	20.59		
08/21/2001 15:03	20.70		
08/21/2001 15:03	20.83		
08/21/2001 15:04	21.05		
08/21/2001 15:04	21.12		
08/21/2001 15:04	21.17		
08/21/2001 15:04	21.23		
08/21/2001 15:04	21.29		
08/21/2001 15:05	21.34		
08/21/2001 15:05	21.36		
08/21/2001 15:05	21.39		
08/21/2001 15:05	21.48		
08/21/2001 15:05	21.44		
08/21/2001 15:06	21.45		
08/21/2001 15:06	21.47		
08/21/2001 15:06	21.49		
08/21/2001 15:07	21.49		
08/21/2001 15:07	21.54		
08/21/2001 15:07	21.59		
08/21/2001 15:08	21.62		
08/21/2001 15:08	21.64		
08/21/2001 15:08	21.65		
08/21/2001 15:08	21.65		
08/21/2001 15:08	21.65		
08/21/2001 15:09	21.65		
08/21/2001 15:09	21.64		
08/21/2001 15:10	21.64		
08/21/2001 15:10	21.63		
08/21/2001 15:10	21.62		
08/21/2001 15:10	21.61		
08/21/2001 15:11	21.69		
08/21/2001 15:10	21.73		

ATTACHMENT B-1a

Contract 5 Park Avenue Pumping Test - PU-11 Manual Water Level Information

Pre-design Field Investigation

Continental Steel Superfund Site

Date	Water Level (feet Below Top of Casing)	Head Above Transducer (feet)	Comments
08/21/2001 15:11	21.76		
08/21/2001 15:12	21.74		
08/21/2001 15:12	21.73		
08/21/2001 15:12	21.72		
08/21/2001 15:12	21.71		
08/21/2001 15:12	21.71		
08/21/2001 15:13	21.70		
08/21/2001 15:13	21.68		
08/21/2001 15:13	21.68		
08/21/2001 15:13	21.66		
08/21/2001 15:14	21.66		
08/21/2001 15:14	21.65		
08/21/2001 15:14	21.78		
08/21/2001 15:15	21.80		
08/21/2001 15:15	21.77		
08/21/2001 15:15	21.76		
08/21/2001 15:15	21.75		
08/21/2001 15:16	21.74		
08/21/2001 15:16	21.73		
08/21/2001 15:16	21.72		
08/21/2001 15:17	21.72		
08/21/2001 15:17	21.71		
08/21/2001 15:17	21.70		
08/21/2001 15:17	21.68		
08/21/2001 15:17	21.75		
08/21/2001 15:18	21.79		
08/21/2001 15:18	21.80		
08/21/2001 15:19	21.77		
08/21/2001 15:19	21.76		
08/21/2001 15:19	21.75		
08/21/2001 15:19	21.73		
08/21/2001 15:20	21.71		
08/21/2001 15:20	21.71		
08/21/2001 15:20	21.69		
08/21/2001 15:21	21.78		
08/21/2001 15:21	21.82		
08/21/2001 15:21	21.82		
08/21/2001 15:21	21.80		
08/21/2001 15:28			Pump stopped. Restarted.
08/21/2001 15:21	21.55		
08/21/2001 15:21	21.59		Pump cut out periodically between 15:28 and 14:32. Controller error, pump started and restarted at 1528.
08/21/2001 16:13	21.75		Pump cut out between 15:42 and 14:45.
08/21/2001 17:24			Pump off. Pump failed at 1708.
08/21/2001 18:41	13.1		Pumping ceased from about 18:00 on 8/21/2001 until 14:00 on 8-22-2001.
08/21/2001 19:58	13.1		

ATTACHMENT B-1a

Contract 5 Park Avenue Pumping Test - PU-11 Manual Water Level Information

Pre-design Field Investigation

Continental Steel Superfund Site

Date	Water Level (feet Below Top of Casing)	Head Above Transducer (feet)	Comments
08/21/2001 20:59	13.1		
08/22/2001 0:20	13.11		Downloaded transducer data.
08/22/2001 6:55	13.13		
08/22/2001 11:19	13.17		
08/22/2001 13:01	13.15		Downloaded transducer data.
08/22/2001 13:54	13.15		
08/22/2001 13:59	13.13		
08/22/2001 14:00			Pump started.
08/22/2001 14:00	16.44		
08/22/2001 14:00	16.92		
08/22/2001 14:00	17.23		
08/22/2001 14:00	17.54		
08/22/2001 14:00	18.21		
08/22/2001 14:00	18.61		
08/22/2001 14:00	18.88		
08/22/2001 14:01	18.06		
08/22/2001 14:01	19.32		
08/22/2001 14:01	19.59		
08/22/2001 14:01	19.78		
08/22/2001 14:01	19.92		
08/22/2001 14:01	19.95		
08/22/2001 14:01	19.96		
08/22/2001 14:01	19.98		
08/22/2001 14:02	20.07		
08/22/2001 14:02	20.18		
08/22/2001 14:02	20.23		
08/22/2001 14:02	20.29		
08/22/2001 14:02	20.36		
08/22/2001 14:02	20.4		
08/22/2001 14:02	20.46		
08/22/2001 14:03	20.51		
08/22/2001 14:03	20.56		
08/22/2001 14:03	20.68		
08/22/2001 14:03	20.74		
08/22/2001 14:03	20.79		
08/22/2001 14:04	20.84		
08/22/2001 14:04	20.85		
08/22/2001 14:04	20.88		
08/22/2001 14:04	20.91		
08/22/2001 14:04	20.93		
08/22/2001 14:05	20.94		
08/22/2001 14:05	20.95		
08/22/2001 14:05	20.96		
08/22/2001 14:05	20.99		
08/22/2001 14:05	21		
08/22/2001 14:06	21.02		
08/22/2001 14:06	21.01		

ATTACHMENT B-1a

Contract 5 Park Avenue Pumping Test - PU-11 Manual Water Level Information

Pre-design Field Investigation

Continental Steel Superfund Site

Date	Water Level (feet Below Top of Casing)	Head Above Transducer (feet)	Comments
08/22/2001 14:06	21.02		
08/22/2001 14:06	21.03		
08/22/2001 14:07	21.04		
08/22/2001 14:07	21.05		
08/22/2001 14:07	21.06		
08/22/2001 14:07	21.06		
08/22/2001 14:07	21.06		
08/22/2001 14:07	21.07		
08/22/2001 14:08	21.08		
08/22/2001 14:08	21.08		
08/22/2001 14:08	21.09		
08/22/2001 14:08	21.09		
08/22/2001 14:08	21.1		
08/22/2001 14:09	21.1		
08/22/2001 14:09	21.1		
08/22/2001 14:09	21.1		
08/22/2001 14:09	21.1		
08/22/2001 14:10	21.11		
08/22/2001 14:10	21.12		
08/22/2001 14:10	21.12		
08/22/2001 14:10	21.12		
08/22/2001 14:10	21.13		
08/22/2001 14:11	21.14		
08/22/2001 14:11	21.14		
08/22/2001 14:11	21.14		
08/22/2001 14:11	21.15		
08/22/2001 14:12	21.14		
08/22/2001 14:12	21.14		
08/22/2001 14:12	21.14		
08/22/2001 14:19	21.19		
08/22/2001 14:19	21.19		
08/22/2001 14:23	21.23		
08/22/2001 14:29			Pump off.
08/22/2001 14:30			Pump on.
08/22/2001 14:35	21.22		
08/22/2001 14:42	21.31		
08/22/2001 14:50	21.42		Pump off @ 1429. Pump on @ 1430.
08/22/2001 15:07	21.45		
08/22/2001 15:20	21.5		
08/22/2001 15:34	21.51		
08/22/2001 16:17	21.55		
08/22/2001 17:44	21.6		
08/22/2001 19:14	21.51		
08/22/2001 20:24	21.61		Downloaded transducer data.
08/22/2001 21:23	21.65		

ATTACHMENT B-1a

Contract 5 Park Avenue Pumping Test - PU-11 Manual Water Level Information

Pre-design Field Investigation

Continental Steel Superfund Site

Date	Water Level (feet Below Top of Casing)	Head Above Transducer (feet)	Comments
08/22/2001 22:58	12.55		Surface water flowing into well. Can not close due to transducer. Some water flowing into well. Closed with sealing cap.
08/23/2001 0:25	21.52		
08/23/2001 1:59	21.48		
08/23/2001 2:59	21.46		
08/23/2001 3:58	21.46		
08/23/2001 4:59	21.48		
08/23/2001 6:03	21.51		
08/23/2001 6:54	21.5		
08/23/2001 8:00	21.54		
08/23/2001 8:58	21.55		Downloaded transducer data.
08/23/2001 11:02	21.57		
08/23/2001 11:55	21.52		
08/23/2001 12:57	21.51		
08/23/2001 13:56	21.5		
08/23/2001 15:12	21.5		Downloaded transducer data.
08/23/2001 16:46	21.53		
08/23/2001 18:18	21.56		
08/23/2001 19:16	21.58		
08/23/2001 20:11	21.6		
08/23/2001 21:09	21.51		
08/23/2001 22:10	21.53		
08/23/2001 23:15	21.53		
08/24/2001 0:12	21.58		Downloaded transducer data.
08/24/2001 1:18	21.55		
08/24/2001 2:12	21.6		
08/24/2001 3:14	21.53		
08/24/2001 4:06	21.54		
08/24/2001 5:03	21.54		
08/24/2001 6:12	21.55		
08/24/2001 7:01	21.55		
08/24/2001 7:58	21.55		
08/24/2001 9:01	21.55		
08/24/2001 9:59	21.55		
08/24/2001 10:56	21.55		
08/24/2001 13:02	12.9		Pump off at 12:05. Downloaded transducers.
	END OF RECORD		

Notes:

Total depth of monitoring well/piezometer as recorded on 8/6/01 = 29.86' btoc.

ATTACHMENT B-1a

Contract 5 Park Avenue Pumping Test - UA-120 Manual Water Level Information

Pre-design Field Investigation

Continental Steel Superfund Site

Date	Water Level (feet Below Top of Casing)	Head Above Transducer (feet)	Comments
08/06/2001 18:10	10.81		
08/15/2001 11:03	11.37		
08/16/2001 18:20	11.46		
08/17/2001 9:08	11.5		
08/20/2001 10:41	11.5		
08/21/2001 10:58	11.56		
08/21/2001 16:18	11.57		Pump test start: 8/21/01 1501. Pump cut out periodically between 15:28 and 15:32.
08/21/2001 18:37	11.55		Pump cut out between 15:42 and 14:45. Pump off. Pump failed at 1708. Pumping ceased from about 18:00 on 8/21/2001 until 14:00 on 8-22-2001.
08/21/2001 19:54	11.57		
08/21/2001 20:55	11.58		
08/22/2001 0:16	11.59		Downloaded transducer data.
08/22/2001 6:49	11.59		
08/22/2001 13:06	11.61		Downloaded transducer data.
08/22/2001 14:47	11.61		Pump off @ 1429. Pump on @ 1430.
08/22/2001 16:29	11.61		
08/22/2001 17:48	11.6		
08/22/2001 19:11	11.6		
08/22/2001 20:20	11.61		Downloaded transducer data.
08/22/2001 21:20	11.64		
08/22/2001 22:53	11.4		Surface water flowing into well. Can not close due to transducer. Some water flowing into well. Closed with sealing cap.
08/23/2001 0:40	11.29		
08/23/2001 1:55	11.2		
08/23/2001 2:55	11.18		
08/23/2001 3:52	11.13		
08/23/2001 4:52	11.11		
08/23/2001 5:57	11.1		
08/23/2001 7:02	11.09		
08/23/2001 7:48	11.08		
08/23/2001 8:49	11.09		Downloaded transducer data.
08/23/2001 10:55	11.11		
08/23/2001 11:50	11.11		
08/23/2001 12:52	11.1		
08/23/2001 13:49	11.1		
08/23/2001 15:09	11.07		Downloaded transducer data.
08/23/2001 16:47	11.1		
08/23/2001 18:15	11.1		
08/23/2001 19:13	11.1		
08/23/2001 20:08	11.1		
08/23/2001 21:05	11.1		
08/23/2001 22:07	11.1		
08/23/2001 23:11	11.1		
08/24/2001 0:09	11.1		Downloaded transducer data.
08/24/2001 1:14	11.1		
08/24/2001 2:08	11.09		
08/24/2001 3:10	11.1		
08/24/2001 4:01	11.09		
08/24/2001 4:58	11.09		
08/24/2001 6:03	11.09		
08/24/2001 6:56	11.09		
08/24/2001 7:54	11.1		
08/24/2001 8:57	11.08		

ATTACHMENT B-1a

Contract 5 Park Avenue Pumping Test - UA-120 Manual Water Level Information

Pre-design Field Investigation

Continental Steel Superfund Site

Date	Water Level (feet Below Top of Casing)	Head Above Transducer (feet)	Comments
08/24/2001 9:55	11.08		
08/24/2001 10:52	11.08		
08/24/2001 12:52	11.07		Pump off at 12:05. Downloaded transducers.
	END OF RECORD		

Notes:

Total depth of monitoring well/piezometer as recorded on 8/6/01 = 26.27' btoc.

ATTACHMENT B-1a

Contract 5 Park Avenue Pumping Test - PU-12 Manual Water Level Information

Pre-design Field Investigation

Continental Steel Superfund Site

Date	Water Level (feet below top of casing)	Head above transducer (feet)	Comments
08/06/2001 17:54	10.95		
08/15/2001 11:29	12.1		
08/16/2001 18:24	12.03		
08/17/2001 9:12	12.04		
08/20/2001 10:34	12.08		
08/21/2001 10:52	12.15		
08/21/2001 14:12		16.87	Pump test start: 8/21/01 1501. Pump cut-out periodically between 15:28 and 14:32.
08/21/2001 16:11	12.41	16.6	Pump cut-out between 15:42 and 14:45. Pump off. Pump fails at 1708. Pumping ceased from about 18:00 on 8/21/2001 until 14:00 on 8-22-2001.
08/21/2001 18:40	12.15		
08/21/2001 19:57	12.16		Pumping ceased from about 18:00 on 8/21/2001 until 14:00 on 8-22-2001.
08/21/2001 20:58	12.15		
08/22/2001 0:19	12.17		Download transducer data.
08/22/2001 6:53	12.2		
08/22/2001 13:03	12.22	16.79	Download transducer data.
08/22/2001 14:50	12.48		Pump off @ 1429. Pump on @ 1430.
08/22/2001 16:15	12.49		
08/22/2001 17:45	12.48		
08/22/2001 19:13	12.5		
08/22/2001 20:23	12.51		Download transducer data.
08/22/2001 21:22	12.52		
08/22/2001 22:57	12.43		Surface water flowing into well. Can not close due to transducer. Some water flowing into well. Closed with sealing cap.
08/23/2001 0:43	12.34		
08/23/2001 1:57	12.3		
08/23/2001 2:58	12.29		
08/23/2001 3:56	12.27		
08/23/2001 4:56	12.26		
08/23/2001 6:00	12.24		
08/23/2001 6:53	12.24		
08/23/2001 7:58	12.22		
08/23/2001 8:56	12.21		Download transducer data.
08/23/2001 11:00	12.21		
08/23/2001 11:53	12.2		
08/23/2001 12:55	12.19		
08/23/2001 13:53	12.19		
08/23/2001 15:12	12.18	16.84	Download transducer data.
08/23/2001 16:49	12.19		
08/23/2001 18:18	12.18		
08/23/2001 19:15	12.19		
08/23/2001 20:10	12.19		
08/23/2001 21:08	12.2		
08/23/2001 22:09	12.2		
08/23/2001 23:14	12.2		
08/24/2001 0:11	12.2	16.84	Download transducer data.
08/24/2001 1:17	12.2		
08/24/2001 2:11	12.2		
08/24/2001 3:13	12.2		
08/24/2001 4:04	12.19		
08/24/2001 5:01	12.18		
08/24/2001 6:11	12.18		

ATTACHMENT B-1a

Contract 5 Park Avenue Pumping Test - PU-12 Manual Water Level Information

Pre-design Field Investigation

Continental Steel Superfund Site

Date	Water Level (feet below top of casing)	Head above transducer (feet)	Comments
08/24/2001 6:59	12.18		
08/24/2001 7:57	12.18		
08/24/2001 9:00	12.18		
08/24/2001 9:58	12.18		
08/24/2001 10:55	12.18		
08/24/2001 12:58	11.92	17.1	Pump off at 12:05. Download transducers.
	END OF RECORD		

Notes:

Total depth of monitoring well as recorded on 8/6/01 = 29.82' btoc.

ATTACHMENT B-1a

Contract 5 Park Avenue Pumping Test - UA-24 Manual Water Level Information

Pre-design Field Investigation

Continental Steel Superfund Site

Date	Water Level (feet below top of casing)	Head above transducer (feet)	Comments
08/06/2001 17:28	11.92		
08/15/2001 11:38	13.87		
08/16/2001 18:32	13.44		
08/17/2001 9:17	13.4		
08/20/2001 10:37	13.32		
08/21/2001 10:55	12.36		
08/21/2001 14:09		8.26	Pump test start: 8/21/01 1501. Pump cut-out periodically between 15:28 and 14:32.
08/21/2001 16:14	13.69	8	Pump cut-out between 15:42 and 14:45. Pump off. Pump fails at 1708. Pumping ceased from about 18:00 on 8/21/2001 until 14:00 on 8-22-2001.
08/21/2001 18:42	13.41		
08/21/2001 19:59	13.43		Pumping ceased from about 18:00 on 8/21/2001 until 14:00 on 8-22-2001.
08/21/2001 21:01	13.41		Download transducer data.
08/22/2001 0:21	13.41		
08/22/2001 6:57	13.42		
08/22/2001 12:59	13.44	8.25	Download transducer data.
08/22/2001 14:51	13.72		Pump off @ 1429. Pump on @ 1430.
08/22/2001 16:19	13.73		
08/22/2001 17:43	13.74		
08/22/2001 19:15	13.76		
08/22/2001 20:25	13.77		Download transducer data.
08/22/2001 21:28	13.79		
08/22/2001 23:00	9.18		Surface water flowing into well. Can not close due to transducer. Some water flowing into well. Closed with sealing cap.
08/23/2001 12:53	11.29		
08/23/2001 2:03	13.38		
08/23/2001 3:03	13.35		
08/23/2001 4:00	13.35		
08/23/2001 5:01	13.36		
08/23/2001 6:04	13.37		
08/23/2001 6:57	13.37		
08/23/2001 8:05	13.37		
08/23/2001 9:02	13.36	8.33	Download transducer data.
08/23/2001 11:03	13.37		
08/23/2001 11:56	13.38		
08/23/2001 12:59	13.38		
08/23/2001 13:58	13.38		
08/23/2001 15:17	13.39	8.32	Download transducer data.
08/23/2001 16:52	13.39		
08/23/2001 18:21	13.41		
08/23/2001 19:18	13.41		
08/23/2001 20:13	13.42		
08/23/2001 21:11	13.42		
08/23/2001 22:14	13.42		
08/23/2001 23:17	13.43		
08/24/2001 0:14	13.43	8.91	Download transducer data.
08/24/2001 1:14	13.43		
08/24/2001 2:13	13.44		
08/24/2001 3:15	13.45		
08/24/2001 4:08	13.43		
08/24/2001 5:05	13.44		
08/24/2001 6:17	13.44	8.26	
08/24/2001 7:03	13.44		

ATTACHMENT B-1a

Contract 5 Park Avenue Pumping Test - UA-24 Manual Water Level Information

Pre-design Field Investigation

Continental Steel Superfund Site

Date	Water Level (feet below top of casing)	Head above transducer (feet)	Comments
08/24/2001 8:00	13.44		
08/24/2001 9:03	13.44		
08/24/2001 10:01	13.44		
08/24/2001 10:58	13.44		
08/24/2001 13:04	13.21	8.49	Pump off at 12:05. Download transducers.
	END OF RECORD		

Notes:

Total depth of monitoring well as recorded on 8/6/01 = 22.70' btoc.

ATTACHMENT B-1a

Contract 5 Park Avenue Pumping Test - PU-10 Manual Water Level Information

Pre-design Field Investigation

Continental Steel Superfund Site

Date	Water Level (feet below top of casing)	Head above transducer (feet)	Comments
8/6/2001 ~17:12:00	12.12		
08/15/2001 12:04	14.81		
08/16/2001 18:34	14.2		
08/17/2001 9:20	14.11		
08/20/2001 10:39	14.01		
08/21/2001 10:56	14.06		
08/21/2001 14:04	14.04		
08/21/2001 16:16	14.14		Pump test start: 8/21/01 1501. Pump cut-out periodically between 15:28 and 14:32. Pump cut-out between 15:42 and 14:45. Pump off. Pump fails at 1708. Pumping ceased from about 18:00 on 8/21/2001 until 14:00 on 8-22-2001.
08/21/2001 18:44	14.1		
08/21/2001 20:01	14.11		Pumping ceased from about 18:00 on 8/21/2001 until 14:00 on 8-22-2001.
08/21/2001 21:02	14.11		Download transducer data.
08/22/2001 0:23	14.11	14.73	
08/22/2001 7:00	14.11		
08/22/2001 12:56	14.15	14.7	Download transducer data.
08/22/2001 14:52	14.21		Pump off @ 1429. Pump on @ 1430.
08/22/2001 16:21	14.22		
08/22/2001 17:41	14.23		
08/22/2001 19:17	14.25		
08/22/2001 20:27	14.27	14.59	Download transducer data.
08/22/2001 21:29	14.28		
08/22/2001 23:06	14.22		Surface water flowing into well. Can not close due to transducer. Some water flowing into well. Closed with sealing cap.
08/23/2001 0:56	14.25		
08/23/2001 2:05	14.1		
08/23/2001 3:05	14.1		
08/23/2001 4:03	14.06		
08/23/2001 5:04	14.05		
08/23/2001 6:07	14.06		
08/23/2001 6:59	14.06		
08/23/2001 8:07	14.05		
08/23/2001 9:08	14.05	14.8	Download transducer data.
08/23/2001 11:06	14.04		
08/23/2001 11:58	14.05		
08/23/2001 13:02	14.05		
08/23/2001 14:00	14.04		
08/23/2001 15:19	14.04	14.81	Download transducer data.
08/23/2001 16:54	14.04		
08/23/2001 18:23	14.05		
08/23/2001 19:21	14.05		
08/23/2001 20:16	14.05		
08/23/2001 21:14	14.05		
08/23/2001 22:16	14.06		
08/23/2001 23:21	14.06		
08/24/2001 0:18	14.06	14.8	Download transducer data.
08/24/2001 1:23	14.07		
08/24/2001 2:17	14.06		
08/24/2001 3:19	14.07		

ATTACHMENT B-1a

Contract 5 Park Avenue Pumping Test - PU-10 Manual Water Level Information

Pre-design Field Investigation

Continental Steel Superfund Site

Date	Water Level (feet below top of casing)	Head above transducer (feet)	Comments
08/24/2001 4:11	14.07		
08/24/2001 5:08	14.06		
08/24/2001 6:21	14.07	14.79	
08/24/2001 7:05	14.07		
08/24/2001 8:02	14.06		
08/24/2001 9:05	14.06		
08/24/2001 10:03	14.07		
08/24/2001 11:00	14.07		
08/24/2001 13:07	14	14.85	Pump off at 12:05. Download transducers.
	END OF RECORD		

Notes:

Total depth of monitoring well as recorded on 8/6/01 = 29.78' btoc.

ATTACHMENT B-1a

Contract 5 Park Avenue Pumping Test - UA-133 Manual Water Level Information

Pre-design Field Investigation

Continental Steel Superfund Site

Date	Water Level (feet below top of casing)	Head above transducer (feet)	Comments
08/06/2001 17:12	12.04		
08/15/2001 12:10	15.41		
08/16/2001 18:37	14.75		
08/17/2001 9:22	14.69		
08/20/2001 10:41	14.6		
08/21/2001 10:58	14.63		
08/21/2001 16:18	14.67		Pump test start: 8/21/01 15:01. Pump cut-out periodically between 15:28 and 14:32.
08/21/2001 18:46	14.65		Pump cut-out between 15:42 and 14:45. Pump off. Pump fails at 17:08. Pumping ceased from about 18:00 on 8/21/2001 until 14:00 on 8-22-2001.
08/21/2001 20:03	14.66		
08/21/2001 21:04	14.66		Pumping ceased from about 18:00 on 8/21/2001 until 14:00 on 8-22-2001.
08/22/2001 0:24	14.68		Download transducer data.
08/22/2001 7:02	14.68		
08/22/2001 12:53	14.73		
08/22/2001 14:54	14.75		Download transducer data. Pump off @ 1429. Pump on @ 1430.
08/22/2001 16:23	14.75		
08/22/2001 17:38	14.75		
08/22/2001 19:18	14.77		
08/22/2001 20:28	14.78		
08/22/2001 21:31	14.8		Download transducer data.
08/22/2001 23:08	14.68		Surface water flowing into well. Can not close due to transducer. Some water flowing into well. Closed with sealing cap.
08/23/2001 8:10	14.5		
08/23/2001 9:11	14.5		Download transducer data.
08/23/2001 11:14	14.51		
08/23/2001 12:00	14.51		
08/23/2001 13:04	14.51		
08/23/2001 14:02	14.5		
08/23/2001 15:20	14.5		Download transducer data.
08/23/2001 16:55	14.5		
08/23/2001 18:25	14.51		
08/23/2001 19:22	14.5		
08/23/2001 20:17	14.51		
08/23/2001 21:15	14.5		
08/23/2001 22:17	14.51		
08/23/2001 23:22	14.51		
08/24/2001 0:19	14.51		Download transducer data.
08/24/2001 1:24	14.51		
08/24/2001 2:18	14.51		
08/24/2001 3:20	14.51		
08/24/2001 4:14	14.51		
08/24/2001 5:10	14.52		
08/24/2001 6:25	14.52		
08/24/2001 7:08	14.52		
08/24/2001 8:04	14.52		
08/24/2001 9:06	14.52		
08/24/2001 10:05	14.52		
08/24/2001 11:01	14.52		
08/24/2001 13:09	14.49		Pump off at 12:05. Download transducers.
	END OF RECORD		

Notes:

Total depth of monitoring well as recorded on 8/6/01 = 29.23' btoc.

ATTACHMENT B-1a

Contract 5 Park Avenue Pumping Test. PU-5 Manual Water Level Information

Pre-design Field Investigation

Continental Steel Superfund Site

Date	Water Level (feet below top of casing)	Head above transducer (feet)	Comments
08/06/2001 18:28	14.8		
08/15/2001 12:09	15.08		
08/16/2001 18:40	15.09		
08/20/2001 10:49	15.11		
08/21/2001 11:06	15.14		
08/21/2001 14:16		2.3	
08/21/2001 16:50	15.16		Pump test start: 8/21/01 1501. Pump cut-out periodically between 15:28 and 14:32.
08/21/2001 18:51	15.16		Pump cut-out between 15:42 and 14:45. Pump off. Pump fails at 1708. Pumping ceased from about 18:00 on 8/21/2001 until 14:00 on 8-22-2001.
08/21/2001 20:08	15.16		
08/21/2001 21:10	15.16		Pumping ceased from about 18:00 on 8/21/2001 until 14:00 on 8-22-2001.
08/22/2001 0:39	15.16	2.28	Download transducer data.
08/22/2001 7:08	15.17		
08/22/2001 13:12	15.19	2.26	Download transducer data.
08/22/2001 15:01	15.17		Pump off @ 1429. Pump on @ 1430.
08/22/2001 16:35	15.19		
08/22/2001 17:55	15.19		
08/22/2001 19:27	15.2		
08/22/2001 20:36	15.2		Download transducer data.
08/22/2001 21:36	15.21		
08/22/2001 23:11	15.03		Surface water flowing into well. Can not close due to transducer. Some water flowing into well. Closed with sealing cap.
08/23/2001 1:01	14.44		
08/23/2001 2:12	14.25		
08/23/2001 3:11	14.23		
08/23/2001 4:11	14.27		
08/23/2001 5:08	14.31		
08/23/2001 6:12	14.37		
08/23/2001 7:08	14.4		
08/23/2001 8:13	14.44		
08/23/2001 9:17	14.48	2.96	Download transducer data.
08/23/2001 11:17	14.55		
08/23/2001 12:05	14.58		
08/23/2001 13:07	14.61		
08/23/2001 14:06	14.63		
08/23/2001 15:32	14.66	2.78	Download transducer data.
08/23/2001 17:01	14.69		
08/23/2001 18:30	14.72		
08/23/2001 19:26	14.74		
08/23/2001 20:23	14.76		
08/23/2001 21:20	14.78		
08/23/2001 22:22	14.79		
08/23/2001 23:28	14.8		
08/24/2001 0:33	14.82	2.63	Download transducer data.
08/24/2001 1:30	14.82		
08/24/2001 2:25	14.83		
08/24/2001 3:26	14.85		
08/24/2001 4:19	14.85		
08/24/2001 5:15	14.86		
08/24/2001 6:33	14.88		
08/24/2001 7:13	14.88		
08/24/2001 8:09	14.88		
08/24/2001 9:10	14.89		
08/24/2001 10:10	14.89		

ATTACHMENT B-1a

Contract 5 Park Avenue Pumping Test. PU-5 Manual Water Level Information

Pre-design Field Investigation

Continental Steel Superfund Site

Date	Water Level (feet below top of casing)	Head above transducer (feet)	Comments
08/24/2001 11:09	14.89		
08/24/2001 13:15	14.89	2.55	Pump off at 12:05. Download transducers.
	END OF RECORD		

Notes:

Total depth of monitoring well as recorded on 8/6/01 = 18.31' btoc.

ATTACHMENT B-1a

Contract 5 Ross Supply Pumping Test - Rate of Discharge (gpm) from Pump Well PU-13 as Observed During Pumping Test

Pre-design Field Investigation

Continental Steel Superfund Site

Date	Time	Minutes	Seconds	Elapsed Time (min)	Volume (gal)	Rate (gpm)	Comments
08/20/2001	1411	0	51	0.9	5	5.88	Pump test start: 8/20/01 1410.
08/20/2001	1413	0	49	0.8	5	6.12	
08/20/2001	1414	0	51	0.9	5	5.88	
08/20/2001	1415	0	51	0.9	5	5.88	
08/20/2001	1426	9	14	9.2	55	5.96	
08/20/2001	1429	0	51	0.9	5	5.88	
08/20/2001	1443	9	8	9.1	55	6.02	
08/20/2001	1446	0	51	0.9	5	5.88	
08/20/2001	1450	0	51	0.9	5	5.88	
08/20/2001	1500	9	5	9.1	55	6.06	
08/20/2001	1503	0	53	0.9	5	5.66	
08/20/2001	1505	0	51	0.9	5	5.88	
08/20/2001	1507	0	51	0.9	5	5.88	
08/20/2001	1508	0	52	0.9	5	5.77	
08/20/2001	1519	9	1	9.0	55	6.10	
08/20/2001	1635	0	51	0.9	5	5.88	
08/20/2001	1636	0	50	0.8	5	6.00	
08/20/2001	1637	0	51	0.9	5	5.88	
08/20/2001	1639	0	50	0.8	5	6.00	
08/20/2001	1648	9	5	9.1	55	6.06	
08/20/2001	1718	0	51	0.9	5	5.88	
08/20/2001	1719	0	50	0.8	5	6.00	
08/20/2001	1720	0	50	0.8	5	6.00	
08/20/2001	1721	0	52	0.9	5	5.77	
08/20/2001	1731	9	2	9.0	55	6.09	
08/20/2001	1905	0	50	0.8	5	6.00	
08/20/2001	1907	0	50	0.8	5	6.00	
08/20/2001	1909	0	51	0.9	5	5.88	
08/20/2001	1910	0	49	0.8	5	6.12	
08/20/2001	1919	9	1	9.0	55	6.10	
08/20/2001	2045	0	51	0.9	5	5.88	
08/20/2001	2143	0	50	0.8	5	6.00	
08/20/2001	2242	0	49	0.8	5	6.12	
08/20/2001	2344	0	51	0.9	5	5.88	
08/21/2001	2449	0	50	0.8	5	6.00	
08/21/2001	153	0	49	0.8	5	6.12	
08/21/2001	240	0	50	0.8	5	6.00	
08/21/2001	341	0	52	0.9	5	5.77	
08/21/2001	440	0	49	0.8	5	6.12	
08/21/2001	539	0	49	0.8	5	6.12	
08/21/2001	642	0	50	0.8	5	6.00	
08/21/2001	800	0	49	0.8	5	6.12	
08/21/2001	802	0	49	0.8	5	6.12	
08/21/2001	805	0	51	0.9	5	5.88	
08/21/2001	808	0	50	0.8	5	6.00	
08/21/2001	818	8	56	8.9	55	6.16	
08/21/2001	935	0	49	0.8	5	6.12	
08/21/2001	1035	0	50	0.8	5	6.00	
08/21/2001	1135	0	49	0.8	5	6.12	
08/21/2001	1247	8	53	8.9	55	6.19	
08/21/2001	1648	0	50	0.8	5	6.00	
08/21/2001	1731	0	51	0.9	5	5.88	
08/21/2001	1908	0	52	0.9	5	5.77	
08/21/2001	2035	0	51	0.9	5	5.88	
08/21/2001	2146	0	51	0.9	5	5.88	
08/21/2001	2238	0	50	0.8	5	6.00	
08/21/2001	2346	0	50	0.8	5	6.00	
08/22/2001	103	0	50	0.8	5	6.00	
08/22/2001	248	0	51	0.9	5	5.88	
08/22/2001	334	0	50	0.8	5	6.00	
08/22/2001	441	0	50	0.8	5	6.00	
08/22/2001	540	0	49	0.8	5	6.12	
08/22/2001	636	0	50	0.8	5	6.00	
08/22/2001	751	0	50	0.8	5	6.00	

ATTACHMENT B-1a

Contract 5 Ross Supply Pumping Test - Rate of Discharge (gpm) from Pump Well PU-13 as Observed During Pumping Test

Pre-design Field Investigation

Continental Steel Superfund Site

Date	Time	Minutes	Seconds	Elapsed Time (min)	Volume (gal)	Rate (gpm)	Comments
08/22/2001	832	0	50	0.8	5	6.00	
08/22/2001	935	0	49	0.8	5	6.12	
08/22/2001	944	8	48	8.8	55	6.25	
08/22/2001	1035	0	51	0.9	5	5.88	Pump killed between 1035 and 1131. Pump off @ 11:31.
08/22/2001	1223	0	48	0.8	5	6.25	Pump on @ 12:23. Restart pump test.
08/22/2001	1238	0	49	0.8	5	6.12	
08/22/2001	1343	0	50	0.8	5	6.00	Pump not working properly from 1521 to 1533 and 1541 to
08/22/2001	1706	0	49	0.8	5	6.12	Pump not working properly from 1521 to 1533 and 1541 to 1704. Pump off. Pump on @ 17:04. Controller error 8/22/01 1704 to 8/22/01 1810. Pump off @ 17:35.

END OF RECORD

Notes:

min = minutes

sec = seconds

gpm = gallons per minute

Hz = hertz = oscillation per second (1s-1)

ATTACHMENT B-1a

Contract 5 Ross Supply Pumping Test - UA-124 Manual Water Level Information

Pre-design Field Investigation

Continental Steel Superfund Site

Date	Water Level (feet below top of casing)	Head above transducer (feet)	Comments
08/09/2001 11:22	31.2		
08/15/2001 10:23	31.33		
08/16/2001 18:57	31.30		
08/17/2001 9:53	31.27		
08/20/2001 8:21	31.3		
08/20/2001 12:59	31.28	17.81	
08/20/2001 14:26	31.44		Pump test start: 8/20/01 1410. Data for PU-14 transducer slipped before 1431. Data not reliable. Reset at 1428-1431.
08/20/2001 15:36	31.49		
08/20/2001 16:34	31.51		
08/20/2001 17:23	31.64		
08/20/2001 18:40	31.55		
08/20/2001 19:30	31.54	17.55	Download transducer data.
08/20/2001 20:36	31.55		
08/20/2001 21:37	31.55		
08/20/2001 22:33	31.55		
08/20/2001 23:36	31.55		
08/21/2001 0:34	31.56		
08/21/2001 1:32	31.56	17.54	Download transducer data.
08/21/2001 2:35	31.56		
08/21/2001 3:35	31.57		
08/21/2001 4:38	31.56		
08/21/2001 5:36	31.57		
08/21/2001 6:38	31.58		
08/21/2001 7:31	31.58	17.51	
08/21/2001 8:30	31.58		
08/21/2001 9:32	31.59		
08/21/2001 10:32	31.58		
08/21/2001 11:33	31.58		
08/21/2001 12:39	31.58		
08/21/2001 13:41	31.57	17.53	
08/21/2001 14:41	31.57		
08/21/2001 15:36	31.57		
08/21/2001 16:36	31.57		
08/21/2001 17:28	31.57		
08/21/2001 18:58	31.59		
08/21/2001 20:31	31.6	17.53	Download transducer data.
08/21/2001 21:37	31.65		
08/21/2001 22:35	31.61		
08/21/2001 23:34	31.62		
08/22/2001 0:58	31.6		
08/22/2001 2:03	31.6	17.53	
08/22/2001 2:46	31.59		
08/22/2001 3:26	31.6		
08/22/2001 4:39	31.57		
08/22/2001 5:31	31.6		
08/22/2001 6:33	31.64		
08/22/2001 7:45	31.65	17.47	
08/22/2001 8:24	31.65		
08/22/2001 9:32	31.75		
08/22/2001 10:30	31.82		Pump killed between 1035 and 1131. Pump off @ 11:31.
08/22/2001 11:27	31.87		Pump on @ 12:23. Restart pump test.
08/22/2001 12:36	31.69		
08/22/2001 13:32	31.68		
08/22/2001 15:19		17.52	Pump not working properly from 1521 to 1533 and 1541 to 1704. Pump off. Download transducer data.

ATTACHMENT B-1a

Contract 5 Ross Supply Pumping Test - UA-124 Manual Water Level Information

Pre-design Field Investigation

Continental Steel Superfund Site

Date	Water Level (feet below top of casing)	Head above transducer (feet)	Comments
08/22/2001 15:41	31.65		Pump on @ 17:04.
08/22/2001 17:24	31.62		Controller error 8/22/01 1704 to 8/22/01 1810. Pump off @ 17:35.
08/22/2001 19:38	31.45	17.74	
08/23/2001 9:48	31.28	17.91	Download transducer data.
08/23/2001 14:46	31.26	17.95	
08/23/2001 17:06	31.26	17.96	
	END OF RECORD		

Notes:

PID reading of 0.9 ppm.

Total depth of monitoring well/piezometer as recorded on 8/9/01 = 49.70' btoc.

ATTACHMENT B-1a

Contract 5 Ross Supply Pumping Test - PU-13 Manual Water Level Information

Pre-design Field Investigation

Continental Steel Superfund Site

Date	Water Level (feet below top of casing)	Head above transducer (feet)	Comments
08/09/2001 11:16	29.67		
08/15/2001 10:27	29.81		
08/16/2001 18:56	29.78		
08/17/2001 9:56	29.75		
08/20/2001 8:26	29.79		
08/20/2001 13:05	29.77	19.61	
08/20/2001 14:02	29.83		
08/20/2001 14:03	29.83		
08/20/2001 14:10	30.12		Pump test start: 8/20/01 1410. Max Controller @ 400 Hz.
08/20/2001 14:11	30.13		
08/20/2001 14:11	30.14		
08/20/2001 14:11	30.15		
08/20/2001 14:11	30.15		
08/20/2001 14:11	30.15		
08/20/2001 14:12	30.15		
08/20/2001 14:12	30.16		
08/20/2001 14:12	30.17		
08/20/2001 14:13	30.17		
08/20/2001 14:13	30.18		
08/20/2001 14:13	30.18		
08/20/2001 14:13	30.18		
08/20/2001 14:14	30.18		
08/20/2001 14:14	30.18		
08/20/2001 14:14	30.19		
08/20/2001 14:15	30.19		
08/20/2001 14:15	30.19		
08/20/2001 14:15	30.19		
08/20/2001 14:16	30.19		
08/20/2001 14:16	30.2		
08/20/2001 14:16	30.2		
08/20/2001 14:16	30.2		
08/20/2001 14:17	30.2		
08/20/2001 14:17	30.2		
08/20/2001 14:17	30.2		
08/20/2001 14:18	30.2		
08/20/2001 14:18	30.21		
08/20/2001 14:19	30.21		
08/20/2001 14:19	30.21		
08/20/2001 14:19	30.21		
08/20/2001 14:20	30.21		
08/20/2001 14:20	30.21		
08/20/2001 14:21	30.21		
08/20/2001 14:21	30.21		
08/20/2001 14:22	30.22		
08/20/2001 14:22	30.22		
08/20/2001 14:23	30.22		
08/20/2001 14:23	30.22		
08/20/2001 14:24	30.22		
08/20/2001 14:24	30.22		
08/20/2001 14:36	30.24		Data for PU-14 transducer slipped before 1431. Data not reliable. Rest at 1428-1431.
08/20/2001 15:10	30.26		
08/20/2001 16:33	30.29		
08/20/2001 17:23	30.41		
08/20/2001 18:39	30.33		
08/20/2001 19:26	30.32	19.02	Download transducer data.
08/20/2001 20:35	30.33		
08/20/2001 21:36	30.34		
08/20/2001 22:33	30.34		
08/20/2001 23:35	30.34		

ATTACHMENT B-1a

Contract 5 Ross Supply Pumping Test - PU-13 Manual Water Level Information

Pre-design Field Investigation

Continental Steel Superfund Site

Date	Water Level (feet below top of casing)	Head above transducer (feet)	Comments
08/21/2001 0:33	30.35		
08/21/2001 1:32	30.35		Download transducer data.
08/21/2001 2:34	30.35		
08/21/2001 3:34	30.36		
08/21/2001 4:36	30.35		
08/21/2001 5:36	30.36		
08/21/2001 6:37	30.37		
08/21/2001 7:30	30.37	19.01	
08/21/2001 8:31	30.36		
08/21/2001 9:31	30.38		
08/21/2001 10:31	30.37		
08/21/2001 11:31	30.37		
08/21/2001 12:37	30.37		
08/21/2001 13:37	30.36	19.03	
08/21/2001 14:39	30.36		
08/21/2001 15:34	30.36		
08/21/2001 16:38	30.36		
08/21/2001 17:26	30.36		
08/21/2001 19:01	30.39		
08/21/2001 20:30	30.39	19.01	Download transducer data.
08/21/2001 21:39	30.44		
08/21/2001 22:34	30.4		
08/21/2001 23:36	30.41		
08/22/2001 0:56	30.38		
08/22/2001 2:04	30.39	19.01	
08/22/2001 2:44	30.39		
08/22/2001 3:27	30.39		
08/22/2001 4:37	30.37		
08/22/2001 5:32	30.4		
08/22/2001 6:31	30.42		
08/22/2001 7:42	30.44	18.95	
08/22/2001 8:25	30.44		
08/22/2001 9:31	30.54		
08/22/2001 10:29	30.59		Pump killed between 1035 and 1131. Pump off @ 11:31
08/22/2001 12:31	30.46		Pump on @ 12:23. Restart pump test.
08/22/2001 13:34	30.47		
08/22/2001 15:16		17.71	
08/22/2001 15:47	30.38		Pump not working properly from 1521 to 1533 and 1541 to 1704. Pump off. Download transducer data.
08/22/2001 17:23	30.4		Controller error 8/22/01 1704 to 8/22/01 1810. Pump off @ 17:35.
08/22/2001 19:39	29.92	18.24	
08/23/2001 9:54	29.76	18.47	Download transducer data.
08/23/2001 14:47	29.74	18.5	
08/23/2001 17:05	29.74	18.5	
	END OF RECORD		

Notes:

PID reading of 1.2 ppm.

Total depth of monitoring well/piezometer as recorded on 8/9/01 = 50.53' btoc.

ATTACHMENT B-1a

Contract 5 Ross Supply Pumping Test - PU-14 Manual Water Level Information

Pre-design Field Investigation

Continental Steel Superfund Site

Date	Water Level (feet below top of casing)	Head above transducer (feet)	Comments
08/09/2001 11:09	30.02		
08/15/2001 10:31	30.16		
08/16/2001 18:52	30.14		
08/17/2001	30.11		
08/20/2001 8:28	30.14		
08/20/2001 13:10	30.11	18.23	
08/20/2001 14:31	30.26		Pump test start: 8/20/01 1410. Data for PU-14 transducer slipped before 1431. Data not reliable. Reset at 1428-1431.
08/20/2001 15:34	30.3		
08/20/2001 16:35	30.32		
08/20/2001 17:27	30.42		
08/20/2001 18:41	30.38		
08/20/2001 19:24	30.36	17.65	Download transducer data.
08/20/2001 20:35	30.36		
08/20/2001 21:35	30.37		
08/20/2001 22:31	30.37		
08/20/2001 23:34	30.37		
08/21/2001 0:28	30.38		
08/21/2001 1:31	30.38		Download transducer data.
08/21/2001 2:33	30.38		
08/21/2001 3:33	30.38		
08/21/2001 4:35	30.38		
08/21/2001 5:34	30.39		
08/21/2001 6:36	30.4		
08/21/2001 7:29	30.4	17.6	
08/21/2001 8:32	30.39		
08/21/2001 9:30	30.41		
08/21/2001 10:30	30.4		
08/21/2001 11:27	30.39		
08/21/2001 12:36	30.38		
08/21/2001 13:26	30.38	17.62	
08/21/2001 14:43	30.37		
08/21/2001 15:32	30.37		
08/21/2001 16:39	30.38		
08/21/2001 17:25	30.38		
08/21/2001 19:03	30.4		
08/21/2001 20:28	30.4	17.6	Download transducer data.
08/21/2001 21:40	30.46		
08/21/2001 22:33	30.41		
08/21/2001 23:37	30.43		
08/22/2001 0:55	30.4		
08/22/2001 2:06	30.41	17.6	
08/22/2001 2:42	30.4		
08/22/2001 3:29	30.41		
08/22/2001 4:35	30.39		
08/22/2001 5:34	30.42		
08/22/2001 6:30	30.44		
08/22/2001 7:39	30.46	17.54	
08/22/2001 8:27	30.46		
08/22/2001 9:29	30.56		
08/22/2001 10:25	30.6		Pump killed between 1035 and 1131. Pump off @ 11:31.
08/22/2001 12:34	30.5		Pump on @ 12:23. Restart pump test.
08/22/2001 13:35	30.48		
08/22/2001 15:12		17.53	
08/22/2001 15:49	30.34		Pump not working properly from 1521 to 1533 and 1541 to 1704. Pump off. Download transducer data.
08/22/2001 17:21	30.43		Controller error 8/22/01 1704 to 8/22/01 1810. Pump off @ 17:35.
08/22/2001 19:40	30.28	17.71	

ATTACHMENT B-1a

Contract 5 Ross Supply Pumping Test - PU-14 Manual Water Level Information

Pre-design Field Investigation

Continental Steel Superfund Site

Date	Water Level (feet below top of casing)	Head above transducer (feet)	Comments
08/23/2001 9:37	30.13	17.87	Download transducer data.
08/23/2001 14:48	30.11	17.9	
08/23/2001 17:04	30.1	17.9	
	END OF RECORD		

Notes:

PID reading of 0.6 ppm.

Total depth of monitoring well/piezometer as recorded on 8/9/01 = 48.90' btoc.

ATTACHMENT B-1a

Contract 5 Ross Supply Pumping Test - PU-15 Manual Water Level Information

Pre-design Field Investigation

Continental Steel Superfund Site

Date	Water Level (feet below top of casing)	Head above transducer (feet)	Comments
08/09/2001 11:00	30.11		
08/15/2001 10:35	30.23		
08/16/2001 18:54	30.21		
08/17/2001	30.18		
08/20/2001 8:30	30.22		
08/20/2001 13:12	30.19	19.54	
08/20/2001 14:34	30.3		Pump test start: 8/20/01 1410. Data for PU-14 transducer slipped before 1431. Data not reliable. Reset at 1428-1431.
08/20/2001 15:33	30.34		
08/20/2001 16:43	30.47		
08/20/2001 17:25	30.47		
08/20/2001 18:42	30.4		
08/20/2001 19:19	30.4	19.72	Download transducer data.
08/20/2001 20:34	30.4		
08/20/2001 21:34	30.41		
08/20/2001 22:31	30.41		
08/20/2001 23:34	30.41		
08/21/2001 0:27	30.41		
08/21/2001 1:30	30.41	19.71	Download transducer data.
08/21/2001 2:32	30.41		
08/21/2001 3:31	30.42		
08/21/2001 4:34	30.42		
08/21/2001 5:33	30.43		
08/21/2001 6:35	30.44		
08/21/2001 7:28	30.44	19.68	
08/21/2001 8:33	30.42		
08/21/2001 9:28	30.44		
08/21/2001 10:26	30.43		
08/21/2001 11:29	30.43		
08/21/2001 12:34	30.42		
08/21/2001 13:31	30.42	19.7	
08/21/2001 14:45	30.42		
08/21/2001 15:29	30.42		
08/21/2001 16:42	30.43		
08/21/2001 17:23	30.43		
08/21/2001 19:04	30.45		
08/21/2001 20:27	30.45	19.68	Download transducer data.
08/21/2001 21:42	30.52		
08/21/2001 22:31	30.46		
08/21/2001 23:39	30.49		
08/22/2001 0:53	30.45		
08/22/2001 2:07	30.45	19.7	
08/22/2001 2:40	30.44		
08/22/2001 3:31	30.46		
08/22/2001 4:32	30.44		
08/22/2001 5:36	30.46		
08/22/2001 6:28	30.48		
08/22/2001 7:33	30.51	19.64	
08/22/2001 8:29	30.51		
08/22/2001 9:26	30.61		
08/22/2001 10:27	30.64		Pump killed between 1035 and 1131. Pump off @ 11:31.
08/22/2001 12:33	30.54		Pump on @ 12:23. Restart pump test.
08/22/2001 13:37	30.53		
08/22/2001 15:09		19.62	
08/22/2001 15:52	30.41		Pump not working properly from 1521 to 1533 and 1541 to 1704. Pump off. Download transducer data.
08/22/2001 17:20	30.47		Controller error 8/22/01 1704 to 8/22/01 1810. Pump off @ 17:35.
08/22/2001 19:41	30.35	19.81	
08/23/2001 9:32	30.22	19.95	Download transducer data.

ATTACHMENT B-1a

Contract 5 Ross Supply Pumping Test - PU-15 Manual Water Level Information

Pre-design Field Investigation

Continental Steel Superfund Site

Date	Water Level (feet below top of casing)	Head above transducer (feet)	Comments
08/23/2001 14:49	30.19	19.98	
08/23/2001 17:03	30.18	19.98	
	END OF RECORD		

Notes:

PID reading of 0.3 ppm.

Total depth of monitoring well/piezometer as recorded on 8/9/01 = 50.46' btoc.