O'BRIEN & GERE
ENGINEERS, INC.

File 8
RI/FS
Omega Co.

February 20, 1997

Mr. Amarinderjit S. Nagi, P.E.
Division of Hazardous Waste Remediation
New York State Department of Environmental Conservation
50 Wolf Road
Albany, NY 12233-7010

Re: Monitoring Well Abandonment
and Replacement
Former Accurate Die Casting Site
Fayetteville, NY

File: 2488.651 #2

Dear Mr. Nagi:

In accordance with the recommendations presented in the Former Accurate Die Casting Site Ground Water Monitoring Program Annual Report dated February 5, 1997, and correspondence between O'Brien & Gere Engineers, Inc and the New York State Department of Environmental Conservation (NYSDEC) dated October 21, 1996, monitoring wells MW-4 and MW-20 have been abandoned and replaced with two new monitoring wells. Additionally, ground water quality samples were collected from the replacement monitoring wells and submitted for laboratory analysis on January 22, 1997. This letter report presents a summary of the abandonment and replacement activities, and the results of the sampling and analyses.

MW-4 and MW-20 Abandonment/Replacement

As presented in the cited documents, it was recommended that monitoring wells MW-4 and MW-20 be abandoned. The wells were abandoned by first removing the protective casing and concrete pad. The 2-inch casing was subsequently removed and the remaining well hole was tremmied with a Portland cement/bentonite grout mixture.

The two replacement monitoring wells, designated as MW-20 and MW-21, were installed so as to screen the saturated fine sand unit that overlies the unsaturated till in the PCB/PAH/VOC Soils Area, as evidenced by MW-19 and observed in soil borings previously advanced in the area. Well MW-20 is screened from 7 to 12 ft below land surface (bls), and well MW-21 is screened from 4 to 9 ft bls. These wells are screened in the same shallow material as MW-18, which is screened from 5 to 15 ft bls. The well locations are shown on Figure 1. Well construction details and well and ground water elevations are included on the boring/monitoring well construction logs provided in Appendix A and Table 1, respectively.

Well Sampling and Analysis

Subsequent to installation, the two new wells were developed with a bottom-loading stainless steel bailer and sampled. A sample from each well and one trip blank were analyzed for volatile organic compounds (VOCs) using EPA Methods 8010/8020. The results of the analyses detected 5 μg/L of cis-1,2-dichloroethylene (DCE) and 2 μg/L of trichloroethylene (TCE) in MW-20, and 650 μg/L of DCE and 270 μg/L of TCE in MW-21. For comparison, the sample collected from MW-18 on January 16, 1997 exhibited 850 μg/L of TCE, but did not exhibit DCE above the detection limit.

For convenience, the TCE concentrations detected for the January 1997 sampling and analyses event, and the historical TCE concentrations for the Site monitoring wells are presented as Table 2.

Consistent with the NYSDEC-approved Ground Water Monitoring Program Sampling and Analysis Plan dated March 1996, MW-20 and MW-21 will be included in the quarterly monitoring program and next sampled during April, 1997. If you have any questions or comments, please contact either me or Deborah Wright.

Very truly yours,

O'BRIEN & GERE ENGINEERS, INC.

David S. Towers, P.E.
Project Associate

TME:ers/div71/2_corres/25tmeltr

cc: V. Nattanmai, P.E. - NYSDEC
A. English - NYSDEC (3 copies)
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D. Wright, CPG - O'Brien & Gere Engineers, Inc.
A. Farrell, P.E. - O'Brien & Gere Engineers, Inc.

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Table 1
Accurate Die Casting Site
Fayetteville, New York
Ground Water Elevation Summary Table

WELL #	Ground Elevation (ft)	Well Casing Elevation (ft)	Screened Interval Elevation (ft)	Ground Water Elevation (ft) 05/28/92	Ground Water Elevation (ft) 06/26/92	Ground Water Elevation (ft) 08/07/92	Ground Water Elevation (ft) 09/26/94	Ground Water Elevation (ft) 09/27/94	Ground Water Elevation (ft) 10/18/94
MW-01	99.36	101.11	75.4 - 85.4	DRY	DRY	79.69	---	---	DRY
MW-02	91.80	94.68	76.6 - 86.6	83.21	82.81	84.32	83.10	83.28	80.12
MW-03	97.65	99.63	73.7 - 83.7	80.44	80.09	81.63	---	---	---
MW-04	65.62	68.52	46.6 - 56.6	51.08	49.95	50.81	47.22	52.21	46.79
MW-05	88.21	90.42	49.2 - 59.2	60.71	63.76	61.22	59.87	59.91	59.45
MW-06	77.46	79.38	46.4 - 56.4	60.50	60.49	60.46	59.51	59.52	59.05
MW-07 (B)	75.66	78.34	34.3 - 44.3	54.59	54.55	54.47	53.90	53.97	53.55
MW-08	88.21	91.78	53.9 - 63.9	66.38	66.38	66.83	61.59	61.65	60.99
MW-09	102.44	104.03	49.7 - 59.7	60.46	60.51	61.83	59.57	59.59	59.08
MW-10 (B)	97.51	97.27	43.03 - 53.03	61.15	61.99	61.69	---	---	56.02
MW-11 (B)	91.48	93.80	43.1 - 53.1	62.34	63.70	63.66	58.41	58.39	57.47
MW-12	93.62	94.14	51.9 - 61.9	62.24	60.74	62.77	59.77	59.79	59.31
MW-13	98.80	98.70	77.7 - 87.7	DRY	80.62	80.92	---	---	78.70
MW-14	98.76	100.62	74.6 - 84.6	75.11	79.07	81.54	---	---	86.18
MW-15 (B)	96.10	98.90	32.7 - 42.7	NI	NI	NI	---	---	53.47
MW-16 (B)	98.50	100.85	50.8 - 60.8	NI	NI	NI	---	---	61.67
MW-17	66.90	69.24	53.7 - 63.7	NI	NI	NI	54.61	54.61	54.08
MW-18	76.5	78.29	61.5 - 71.5	NI	NI	NI	NI	NI	NI
MW-19	69.5	71.27	46.5 - 56.5	NI	NI	NI	NI	NI	NI
MW-20	71.5	73.34	60.9 - 65.9	NI	NI	NI	NI	NI	NI
MW-21	69.9	71.87	59.5 - 64.5	NI	NI	NI	NI	NI	NI
PZ-01	81.80	83.95	49.8 - 59.8	NI	NI	NI	59.56	59.57	59.10
PZ-02	80.60	83.06	42.8 - 52.8	NI	NI	NI	59.35	59.36	58.89
RW-01	78.40	80.28	29.4-39.4 - 45.4-50.4	NI	NI	NI	56.88	56.89	58.22
RW-02 (B)	91.58	95.18	NA - NA	NI	NI	NI	NI	NI	NI
SUMP	NA	97.93	NA - NA	---	---	---	---	---	---

NOTES: Elevations based on assumed datum. MW-01 through MW-16 installed during Remedial Investigation (Stearns & Wheler).
MW-03 was removed as part of the TCE Soils Interim Remedial Measure (IRM) completed in September 1994.
System start-up 02/06/96; System shutdown 02/15/96; System restored 02/20/96, MW-13 casing elev. changed 06/06/96, MW-20 casing elev. changed 01/27/97
--- Water level not monitored, (B) Bedrock ground water monitoring well, NI Well not installed at time of monitoring, NA Data not available

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Table 1
Accurate Die Casting Site
Fayetteville, New York
Ground Water Elevation Summary Table

WELL #	Ground Water Elevation (ft) 11/02/94	Ground Water Elevation (ft) 11/17/94	Ground Water Elevation (ft) 11/30/94	Ground Water Elevation (ft) 12/15/94	Ground Water Elevation (ft) 12/27/94	Ground Water Elevation (ft) 01/13/95	Ground Water Elevation (ft) 01/25/95	Ground Water Elevation (ft) 02/09/95	Ground Water Elevation (ft) 02/23/95
MW-01	---	---	---	---	---	---	---	---	---
MW-02	---	---	---	---	---	---	---	---	---
MW-03	---	---	---	---	---	---	---	---	---
MW-04	---	---	---	---	---	---	---	---	---
MW-05	---	---	---	---	---	---	---	---	---
MW-06	---	---	---	---	---	---	---	---	---
MW-07 (B)	---	---	---	---	---	---	---	---	---
MW-08	---	---	---	---	---	---	---	---	---
MW-09	---	---	---	---	---	---	---	---	---
MW-10 (B)	55.07	55.19	54.94	55.19	55.02	54.94	54.95	54.52	54.36
MW-11 (B)	50.01	56.68	55.59	56.63	56.55	55.63	55.63	56.13	55.63
MW-12	---	---	---	---	---	---	---	---	---
MW-13	82.92	78.21	78.21	80.92	78.34	78.25	77.83	77.84	77.75
MW-14	80.12	80.54	80.54	80.20	80.54	80.62	80.45	78.95	79.54
MW-15 (B)	---	---	---	---	---	---	---	---	---
MW-16 (B)	---	---	---	---	---	---	---	---	---
MW-17	---	---	---	---	---	---	---	---	---
MW-18	NI	NI	NI	NI	NI	NI	NI	NI	NI
MW-19	NI	NI	NI	NI	NI	NI	NI	NI	NI
MW-20	NI	NI	NI	NI	NI	NI	NI	NI	NI
MW-21	NI	NI	NI	NI	NI	NI	NI	NI	NI
PZ-01	---	---	---	---	---	---	---	---	---
PZ-02	---	---	---	---	---	---	---	---	---
RW-01	---	---	---	---	---	---	---	---	---
RW-02 (B)	NI	NI	NI	NI	NI	NI	NI	NI	NI
SUMP	76.04	74.83	75.00	75.17	74.83	75.00	75.00	74.88	75.00

NOTES: Elevations based on assumed datum. MW-01 through MW-16 installed during Remedial Investigation (Stearns & Wheler).
MW-03 was removed as part of the TCE Soils Interim Remedial Measure (IRM) completed in September 1994.
System start-up 02/06/96; System shutdown 02/15/96; System restored 02/20/96, MW-13 casing elev. changed 06/06/96, MW-20 casing elev. changed 01/27/97
--- Water level not monitored, (B) Bedrock ground water monitoring well, NI Well not installed at time of monitoring, NA Data not available

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Table 1
Accurate Die Casting Site
Fayetteville, New York
Ground Water Elevation Summary Table

WELL #	Ground Water Elevation (ft) 03/09/95	Ground Water Elevation (ft) 04/26/95	Ground Water Elevation (ft) 07/25/95	Ground Water Elevation (ft) 10/17/95	Ground Water Elevation (ft) 02/05/96	Ground Water Elevation (ft) 02/07/96	Ground Water Elevation (ft) 02/15/96	Ground Water Elevation (ft) 02/16/96	Ground Water Elevation (ft) 02/20/96
MW-01	---	DRY	DRY	DRY	77.06	76.64	75.30	DRY	DRY
MW-02	---	83.28	82.42	84.22	84.04	83.87	83.41	83.34	83.15
MW-03	---	---	---	---	---	---	---	---	---
MW-04	---	51.44	45.94	50.05	53.60	52.06	55.39	54.43	52.46
MW-05	---	60.34	58.78	---	61.26	61.01	60.80	60.73	60.50
MW-06	---	60.02	58.52	58.10	60.86	60.44	60.41	60.11	59.80
MW-07 (B)	---	54.51	53.27	52.71	55.16	54.67	55.03	54.52	54.45
MW-08	---	63.41	59.82	60.76	66.61	66.40	65.93	65.84	65.47
MW-09	---	60.10	58.56	58.16	60.95	60.70	60.48	60.35	60.07
MW-10 (B)	55.02	57.49	54.60	54.61	62.00	59.88	62.11	60.42	59.96
MW-11 (B)	56.55	58.86	55.72	55.31	62.63	60.37	62.67	60.88	60.35
MW-12	---	60.30	58.76	58.35	61.11	60.83	60.65	60.50	60.21
MW-13	77.67	DRY	DRY	DRY	80.00	79.98	79.91	79.90	79.88
MW-14	80.12	80.61	80.61	80.72	79.91	80.02	80.28	80.29	80.35
MW-15 (B)	---	54.71	51.60	50.47	59.24	59.37	59.79	59.63	59.56
MW-16 (B)	---	63.86	59.41	58.06	67.14	67.17	66.90	66.79	66.57
MW-17	---	59.02	57.71	DRY	60.29	60.17	59.75	59.70	59.52
MW-18	NI	NI	NI	NI	NI	NI	NI	NI	NI
MW-19	NI	NI	NI	NI	NI	NI	NI	NI	NI
MW-20	NI	NI	NI	NI	NI	NI	NI	NI	NI
MW-21	NI	NI	NI	NI	NI	NI	NI	NI	NI
PZ-01	---	60.08	58.58	58.16	60.92	60.61	60.46	60.28	59.99
PZ-02	---	59.88	58.37	57.97	60.70	60.30	60.26	59.97	59.66
RW-01	---	59.14	57.60	57.11	59.64	55.04	59.22	54.71	54.40
RW-02 (B)	NI	NI	NI	56.05	63.80	59.98	63.83	60.67	60.09
SUMP	78.00	75.09	75.25	76.94	74.67	74.68	74.64	74.63	74.63

NOTES: Elevations based on assumed datum. MW-01 through MW-16 installed during Remedial Investigation (Stearns & Wheler).
MW-03 was removed as part of the TCE Soils Interim Remedial Measure (IRM) completed in September 1994.
System start-up 02/06/96; System shutdown 02/15/96; System restored 02/20/96, MW-13 casing elev. changed 06/06/96, MW-20 casing elev. changed 01/27/97
--- Water level not monitored, (B) Bedrock ground water monitoring well, NI Well not installed at time of monitoring, NA Data not available

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Table 1
Accurate Die Casting Site
Fayetteville, New York
Ground Water Elevation Summary Table

WELL #	Ground Water Elevation (ft) 02/22/96	Ground Water Elevation (ft) 02/29/96	Ground Water Elevation (ft) 03/07/96	Ground Water Elevation (ft) 03/21/96	Ground Water Elevation (ft) 04/04/96	Ground Water Elevation (ft) 04/10/96	Ground Water Elevation (ft) 04/18/96	Ground Water Elevation (ft) 05/02/96	Ground Water Elevation (ft) 06/06/96
MW-01	DRY	75.36	75.17	77.34	DRY	DRY	DRY	77.73	DRY
MW-02	83.32	83.67	83.50	84.24	83.68	83.68	84.86	85.35	83.17
MW-03	---	---	---	---	---	---	---	---	---
MW-04	60.37	58.14	55.10	59.26	52.66	54.43	60.28	59.70	51.63
MW-05	60.40	60.14	59.73	58.85	58.32	58.14	58.20	58.71	60.54
MW-06	59.75	59.45	58.96	58.02	57.48	57.28	57.41	58.17	59.91
MW-07 (B)	54.58	54.46	54.32	54.29	54.17	54.15	54.32	54.75	55.02
MW-08	65.42	65.12	64.68	64.76	64.10	63.83	64.08	65.43	67.07
MW-09	60.02	59.71	59.22	58.30	57.78	57.59	57.73	58.46	60.18
MW-10 (B)	59.91	59.64	59.43	59.07	58.81	58.72	58.61	59.72	62.25
MW-11 (B)	60.29	59.99	59.78	59.38	59.10	59.01	58.94	60.35	62.68
MW-12	60.16	59.86	59.37	58.44	57.93	57.74	57.86	58.59	60.33
MW-13	79.87	79.86	79.77	79.68	79.60	79.57	79.52	79.44	79.28
MW-14	80.38	80.44	80.45	80.49	80.52	80.55	78.14	79.29	80.56
MW-15 (B)	59.56	59.46	59.40	59.14	59.07	59.04	58.84	59.87	62.62
MW-16 (B)	66.52	66.39	66.17	65.99	65.99	65.90	65.84	67.02	68.40
MW-17	59.64	59.42	59.28	59.30	59.27	59.14	59.30	59.95	59.22
MW-18	NI	NI	NI	NI	NI	NI	NI	NI	72.95
MW-19	NI	NI	NI	NI	NI	NI	NI	NI	DRY
MW-20	NI	NI	NI	NI	NI	NI	NI	NI	DRY
MW-21	NI	NI	NI	NI	NI	NI	NI	NI	NI
PZ-01	59.93	59.63	59.14	58.21	57.67	57.47	57.60	58.34	60.09
PZ-02	59.61	59.33	58.83	57.90	57.39	57.19	57.30	58.04	59.77
RW-01	54.35	54.05	53.58	52.76	52.24	52.03	52.11	52.69	53.82
RW-02 (B)	59.97	59.63	59.41	58.95	58.63	58.52	58.41	59.63	62.56
SUMP	75.30	74.90	74.65	74.87	74.69	74.99	75.89	75.76	74.73

NOTES: Elevations based on assumed datum. MW-01 through MW-16 installed during Remedial Investigation (Stearns & Wheler).
MW-03 was removed as part of the TCE Soils Interim Remedial Measure (IRM) completed in September 1994.
System start-up 02/06/96; System shutdown 02/15/96; System restored 02/20/96, MW-13 casing elev. changed 06/06/96, MW-20 casing elev. changed 01/27/97
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Table 1
Accurate Die Casting Site
Fayetteville, New York
Ground Water Elevation Summary Table

WELL #	Ground Water Elevation (ft) 07/16/96	Ground Water Elevation (ft) 09/05/96	Ground Water Elevation (ft) 10/21/96	Ground Water Elevation (ft) 11/19/96	Ground Water Elevation (ft) 01/16/97	Ground Water Elevation (ft) 02/04/97
MW-01	DRY	DRY	DRY	76.60	75.15	---
MW-02	83.32	82.57	83.18	84.22	83.56	---
MW-03	---	---	---	---	---	---
MW-04	52.45	DRY	55.91	55.91	53.12	---
MW-05	58.98	56.33	55.40	56.49	59.15	---
MW-06	58.13	54.95	53.71	55.61	58.39	---
MW-07 (B)	53.95	52.44	51.22	52.68	54.28	---
MW-08	64.50	59.05	59.56	63.61	64.67	---
MW-09	58.38	55.38	54.24	56.64	58.65	---
MW-10 (B)	59.11	53.88	51.06	54.95	59.61	---
MW-11 (B)	59.53	54.72	52.88	55.85	60.15	---
MW-12	58.54	55.48	54.30	56.18	58.81	---
MW-13	79.35	79.15	79.07	80.68	80.49	---
MW-14	80.66	80.59	80.61	80.08	80.59	---
MW-15 (B)	59.24	54.83	51.58	51.99	58.83	---
MW-16 (B)	65.57	63.31	60.09	61.06	66.13	---
MW-17	58.46	57.89	55.96	58.02	59.33	---
MW-18	72.32	70.81	70.77	73.04	73.31	72.78
MW-19	DRY	DRY	DRY	DRY	DRY	DRY
MW-20	50.26	DRY	DRY	DRY	DRY	67.86
MW-21	NI	NI	NI	NI	NI	63.69
PZ-01	58.31	55.13	53.90	55.83	58.57	---
PZ-02	57.97	54.90	53.53	55.25	58.23	---
RW-01	51.94	48.05	41.80	47.33	50.74	---
RW-02 (B)	59.14	51.01	42.02	55.39	60.03	---
SUMP	74.78	74.56	74.85	74.77	74.71	---

NOTES: Elevations based on assumed datum. MW-01 through MW-16 installed during Remedial Investigation (Stearns & Wheler).
MW-03 was removed as part of the TCE Soils Interim Remedial Measure (IRM) completed in September 1994.
System start-up 02/06/96; System shutdown 02/15/96; System restored 02/20/96, MW-13 casing elev. changed 06/06/96, MW-20 casing elev. changed 01/27/97
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Table 2
Accurate Die Casting Site
Fayetteville, New York
Ground Water Trichloroethylene Concentrations

Date Sampled: / WELL #	08/30/89 TCE ug/L	12/04/89 TCE ug/L	05/20/90 TCE ug/L	05/28/92 TCE ug/L	07/22/94 TCE ug/L	10/18/94 TCE ug/L	02/03/95 TCE ug/L	04/26/95 TCE ug/L	07/25/95 TCE ug/L
MW-01	112	ND	2	ND	---	---	---	---	---
MW-02	ND	ND	1	ND	---	ND	ND	ND	ND
MW-03	Product	>55000	440000	340000	Removed	---	---	---	---
MW-04	---	7	43	6	270	23	13	16	---
MW-05	---	340	344	110	330	410	290	280	---
MW-06	---	700	454	510	390	360	330	280	270
MW-07 (B)	---	ND	ND	ND	ND	ND	ND	ND	ND
MW-08	---	ND	ND	ND	---	ND	ND	ND	ND
MW-09	---	109	106	60	72	74	74	84	75
MW-10 (B)	---	---	---	4500	1600	1300	1400	1200	900
MW-11 (B)	---	---	---	5200	5500	5300	4300	3900	4000
MW-12	---	---	---	36	44	35	33	30	25
MW-13	---	---	---	110	740	510	---	---	---
MW-14	---	---	---	67	150	120	79	95	140
MW-15 (B)	---	---	---	---	---	14	11	10	17
MW-16 (B)	---	---	---	---	---	6	17	7	18
MW-17	---	---	---	---	260	140	200	130	160
MW-18	---	---	---	---	---	---	---	---	---
MW-20	---	---	---	---	---	---	---	---	---
MW-21	---	---	---	---	---	---	---	---	---
PZ-01	---	---	---	---	---	---	---	---	120
PZ-02	---	---	---	---	---	---	---	490	400
SUMP	---	---	---	---	---	---	---	---	---

NOTES: ND Not detected above method detection limit, --- Well not sampled or installed, MW-01 through MW-16 installed during Remedial Investigation (Stearns & Wheler). MW-03 removed as part of TCE Soils Interim Remedial Measure (IRM) completed in September 1994. Data was collected by Stearns & Wheler prior to 07/22/94. MW-20 had cis-1,2DCE detected 05/24/96. MW-17 had PCE detected on 02/03/95, 04/10/96, 10/22/96, 01/16/97 and cis-1,2DCE on 10/22/96. MW-04 & MW-18 had cis-1,2DCE detected on 10/22/96. MW-20 & MW-21 had cis-1,2DCE detected on 01/21/97.

Printed: 02/10/97 15:43:07

File Number : 2488 651

O'BRIEN & GERE
ENGINEERS, INC.

Table 2
Accurate Die Casting Site
Fayetteville, New York
Ground Water Trichloroethylene Concentrations

Date Sampled: / WELL #	10/17/95 TCE ug/L	01/17/96 TCE ug/L	04/10/96 TCE ug/L	05/24/96 TCE ug/L	05/29/96 TCE ug/L	07/16/96 TCE ug/L	10/21/96 TCE ug/L	10/22/96 TCE ug/L	10/24/96 TCE ug/L
MW-01	---	---	---	---	---	---	---	---	---
MW-02	ND	---	---	---	---	---	---	---	---
MW-03	---	---	---	---	---	---	---	---	---
MW-04	15	---	---	---	---	---	---	---	---
MW-05	---	---	---	---	---	---	---	62	---
MW-06	180	170	110	---	---	98	180	---	---
MW-07 (B)	ND	---	---	---	---	---	---	71	---
MW-08	ND	---	---	---	---	---	---	---	---
MW-09	68	100	64	---	---	65	50	---	---
MW-10 (B)	890	900	820	---	---	960	---	1700	---
MW-11 (B)	2600	2500	1500	---	---	1400	---	1600	---
MW-12	29	---	---	---	---	---	17	---	---
MW-13	---	---	---	---	---	---	---	---	370
MW-14	78	84	250	---	---	230	---	170	---
MW-15 (B)	7	---	---	---	---	---	---	20	---
MW-16 (B)	20	---	---	---	---	---	---	11	---
MW-17	---	180	350	---	---	460	---	300	---
MW-18	---	---	---	---	1200	---	---	2900	---
MW-20	---	---	---	70	---	---	---	---	---
MW-21	---	---	---	---	---	---	---	---	---
PZ-01	---	---	---	---	---	---	32	---	---
PZ-02	---	---	---	---	---	---	540	---	---
SUMP	---	170	180	---	---	1000	---	---	---

NOTES: ND Not detected above method detection limit, --- Well not sampled or installed, MW-01 through MW-16 installed during Remedial Investigation (Stearns & Wheler). MW-03 removed as part of TCE Soils Interim Remedial Measure (IRM) completed in September 1994. Data was collected by Stearns & Wheler prior to 07/22/94. MW-20 had cis-1,2DCE detected 05/24/96. MW-17 had PCE detected on 02/03/95, 04/10/96, 10/22/96, 01/16/97 and cis-1,2DCE on 10/22/96. MW-04 & MW-18 had cis-1,2DCE detected on 10/22/96. MW-20 & MW-21 had cis-1,2DCE detected on 01/21/97.

O'BRIEN & GERE
ENGINEERS, INC.

Table 2
Accurate Die Casting Site
Fayetteville, New York
Ground Water Trichloroethylene Concentrations

WELL #	Date Sampled: 01/16/97 TCE ug/L	01/21/97 TCE ug/L
MW-01	---	---
MW-02	—	—
MW-03	---	---
MW-04	—	—
MW-05	---	---
MW-06	75	—
MW-07 (B)	---	---
MW-08	—	—
MW-09	95	—
MW-10 (B)	1900	—
MW-11 (B)	1500	—
MW-12	—	—
MW-13	---	---
MW-14	390	—
MW-15 (B)	---	---
MW-16 (B)	—	—
MW-17	450	—
MW-18	850	—
MW-20	---	2
MW-21	—	270
PZ-01	---	---
PZ-02	—	—
SUMP	320	—

NOTES: ND Not detected above method detection limit, — Well not sampled or installed, MW-01 through MW-16 installed during Remedial Investigation (Stearns & Wheler). MW-03 removed as part of TCE Soils Interim Remedial Measure (IRM) completed in September 1994. Data was collected by Stearns & Wheler prior to 07/22/94. MW-20 had cis-1,2DCE detected 05/24/96. MW-17 had PCE detected on 02/03/95, 04/10/96, 10/22/96, 01/16/97 and cis-1,2DCE on 10/22/96. MW-04 & MW-18 had cis-1,2DCE detected on 10/22/96. MW-20 & MW-21 had cis-1,2DCE detected on 01/21/97.

Printed: 02/10/97 15:43:07

File Number : 2488 651

O'BRIEN & GERE ENGINEERS, INC.

TEST BORING LOG

REPORT OF BORING MW-20

Client: Former Accurate Die Facility
Proj. Loc: Fayetteville, NY
File No.: 2488.651

Sampler: 2-inch Split Spoon
Hammer: 140 lbs
Fall: 30 inches

Page 1 of 1
Location:
Start Date: 5/6/96
End Date: 1/20/97

Boring Company: OP-Tech Environmental Services
Foreman: Todd Burnham
OBG Geologist: Chawn O'Dell

Screen = Riser | Grout | Sand Pack | Bentonite

Depth Below Grade	No.	Depth (feet)	Blows /6"	Penetr/ Recovery	"N" Value	Sample Description	Stratum Change General Descript	Equip. Installed	Field Testing HNU (ppm)
0	1	0-2	1-1	2/2	3	Dark yellowish brown (10 YR 4/2), moist, very loose, fine to medium SAND, little fine sand to silt			0.0
			2-3						
1									
2	2	2-4	3-2	2/2	4	Pale brown (5 YR 5/2), saturated, loose, SILT, some fine angular gravel, little clay, trace fine to coarse sand			0.0
			2-4						
3									
4	3	4-6	10-12	2/1.6	27	Grayish red (10 YR 4/2), moist, hard, CLAY, some silt, little subrounded to subangular, fine to medium gravel, trace fine to coarse sand			0.0
			15-14						
5									
6	4	6-8	14-12	2/1.4	24	Grayish red (10 YR 4/2), wet, medium, dense, medium SAND some fine subrounded to subangular, gravel, little clay, little silt, trace fine to medium sand			0.2
			12-12						
7									
8	5	8-10	6-6	2/1.3	14	Grayish red (10 YR 4/2), wet, medium dense, fine to medium SAND, some clay, little sub-rounded to subangular fine gravel, trace coarse sand			0.1
			8-9						
9									
10	6	10-12	7-7	2/1.5	16	Grayish red (10 YR 4/2) saturated medium dense fine to medium SAND, some CLAY, little fine subangular to angular gravel, trace coarse sand to 11 ft; then grayish red (10 YR 4/2), hard, damp, CLAY, some silt, little fine to medium, subrounded to sub-angular gravel, trace fine to coarse sand			0.0
			9-8						
11									
12									
13									
14									
15	7	15-17	17-50/	0.7/0.0	50(+)	No recovery			NA
			0.2						
16									
17									
18									
19									
20	8	20-22	22-11	1.8/1.1	21	Olive gray (5 Y 4/1) damp, medium dense, fine angular, GRAVEL, some silt, little medium angular gravel, trace fine to coarse sand (weathered bedrock)			0.0
			10-50/						
21			0.3						

Monitor well installation: 0.010 inch slotted PVC screen: 12 to 7 ft; PVC Riser 7 to 0 ft; Sand Pack 12 to 5 ft; Bentonite seal 5 to 3 ft; Grout to surface. Finished as a stickup well.

Note: Original MW-20 abandoned and replaced on 1/20/97.

CPO:ers/div71/notes/mw20-REV1

O'BRIEN & GERE ENGINEERS, INC.	TEST BORING LOG	REPORT OF BORING MW-21
Client: Former Accurate Die	Sampler: 2-inch Split Barrel Sampler	Page 1 of 1
Proj. Loc: Fayetteville, NY	Hammer: 140 lbs	Location:
File No.: 2488.651	Fall: 30 inches	Start Date: 1/20/97
Boring Company: Parratt-Wolff		End Date: 1/20/97
Foreman: Arnold Chappel		Screen / Riser / Grout / Sand Pack / Bentonite
OBG Geologist: Chawn O'Dell		

Depth Below Grade	No.	Depth (feet)	Blows /6"	Penetr/ Recovery	"N" Value	Sample Description	Stratum Change General Descript	Equip. Installed	Field Testing PID (ppm)
1						See MW-19 boring log for additional geologic description			
2									
3									
4									
5									
6									
7	1	7-9	12-15	2'/2'	38	Pale brown (5YR 5/2), saturated, dense, medium to coarse SAND, some fine sand, little silt to approximately 8 ft; then pale brown (5YR 5/2), damp, hard clay, some silt, little fine to medium subangular gravel, trace subangular to subrounded coarse sand.			
			23-27						
8									
9									
10									

Monitor well installation: 0.010 inch slotted PVC screen: 9 to 4 ft; PVC Riser 4 to 0 ft; Sand Pack 9 to 2.5 ft; Bentonite seal 2.5 to 1.5 ft; Grout to surface. Finished as a stickup well.

CPO:ers/div71/MW-21

O'Brien & Gere Laboratories, Inc.

Analytical Results Method: 8010/8020

Client: O'Brien & Gere Engineers, Inc.
Project: Accurate Die Casting
Proj. Desc: Fayetteville, New York

Job No.: 3435.021.517
Certification NY No.: 10155

Sample: E1138
Samp. Description: MW-20
Primary column: Y
Units: ug/L
Column: DB VRX 75m X .45mm ID
Dilution: 1 Instrument: 9001

Collected: 01/21/97
Received: 01/22/97
Prepared:
Analyzed: 01/23/97

Matrix: Water
QC Batch: 012397W1
%Solids:
Purge volume: 5 mL

Number of analytes: 37

Parameter	Result	Col	Surrog Limits	Notes
Benzene	<1.	1		
Bromodichloromethane	<1.	1		
Bromoform	<10.	1		
Bromomethane	<10.	1		
Carbon tetrachloride	<1.	1		
Chlorobenzene	<1.	1		
Chloroethane	<1.	1		
2-Chloroethylvinyl ether	<10.	1		
Chloroform	<1.	1		
Chloromethane	<10.	1		
Dibromochloromethane	<1.	1		
1,2-Dichlorobenzene	<5.	1		
1,3-Dichlorobenzene	<5.	1		
1,4-Dichlorobenzene	<5.	1		
Dichlorodifluoromethane	<10.	1		
1,1-Dichloroethane	<1.	1		
1,2-Dichloroethane	<1.	1		
1,1-Dichloroethylene	<1.	1		
cis-1,2-Dichloroethylene	5.	1		
trans-1,2-Dichloroethylene	<1.	1		
Dichloromethane	<1.	1		
1,2-Dichloropropane	<1.	1		
cis-1,3-Dichloropropylene	<1.	1		
trans-1,3-Dichloropropylene	<1.	1		
Ethylbenzene	<1.	1		
1,1,2,2-Tetrachloroethane	<1.	1		
Tetrachloroethylene	<1.	1		

- Outside control limits J-Estimated value

Authorized: Monika Santucci
Date: January 24,1997 Monika Santucci

5000 Brittonfield Parkway / Suite 300, Box 4942 / Syracuse, NY 13221 / (315) 437-0200

O'Brien & Gere Laboratories,Inc.

Analytical Results Method: 8010/8020

Client: O'Brien & Gere Engineers, Inc.
Project: Accurate Die Casting
Proj. Desc: Fayetteville, New York

Job No.: 3435.021.517
Certification NY No.: 10155

Sample: E1138
Samp. Description: MW-20
Primary column: Y
Units: ug/L
Column: DB VRX 75m X .45mm ID
Dilution: 1 Instrument: 9001

Collected: 01/21/97
Received: 01/22/97
Prepared:
Analyzed: 01/23/97

Matrix: Water
QC Batch: 012397W1
%Solids:
Purge volume: 5 mL

Number of analytes: 37

Parameter	Result	Col	Surrog Limits	Notes
Toluene	<1.	1		
1,1,1-Trichloroethane	<1.	1		
1,1,2-Trichloroethane	<1.	1		
Trichloroethylene	2.	1		
Trichlorofluoromethane	<1.	1		
Vinyl Chloride	<1.	1		
Xylenes (total)	<3.	1		
Bromochloromethane (surrogate)	99.%	1	65-122	
1,4-Difluorobenzene (surrogate)	94.%	1	65-111	
Trifluorotoluene (surrogate)	90.%	1	64-115	

Notes:

- Outside control limits J-Estimated value

Authorized: Monika Santucci
Date: January 24,1997 Monika Santucci

5000 Brittonfield Parkway / Suite 300, Box 4942 / Syracuse, NY 13221 / (315) 437-0200

O'Brien & Gere Laboratories, Inc.

Analytical Results Method: 8010/8020

Client: O'Brien & Gere Engineers, Inc.
Project: Accurate Die Casting
Proj. Desc: Fayetteville, New York

Job No.: 3435.021.517
Certification NY No.: 10155

Sample: E1139
Samp. Description: MW-21
Primary column: Y
Units: ug/L
Column: DB VRX 75m X .45mm ID
Dilution: 100 Instrument: 9001

Collected: 01/21/97
Received: 01/22/97
Prepared:
Analyzed: 01/23/97

Matrix: Water
QC Batch: 012397W1
%Solids:
Purge volume: 5 mL

Number of analytes: 37

Parameter	Result	Col	Surrog Limits	Notes
Benzene	<100.	1		
Bromodichloromethane	<100.	1		
Bromoform	<1000.	1		
Bromomethane	<1000.	1		
Carbon tetrachloride	<100.	1		
Chlorobenzene	<100.	1		
Chloroethane	<100.	1		
2-Chloroethylvinyl ether	<1000.	1		
Chloroform	<100.	1		
Chloromethane	<1000.	1		
Dibromochloromethane	<100.	1		
1,2-Dichlorobenzene	<500.	1		
1,3-Dichlorobenzene	<500.	1		
1,4-Dichlorobenzene	<500.	1		
Dichlorodifluoromethane	<1000.	1		
1,1-Dichloroethane	<100.	1		
1,2-Dichloroethane	<100.	1		
1,1-Dichloroethylene	<100.	1		
cis-1,2-Dichloroethylene	650.	1		
trans-1,2-Dichloroethylene	<100.	1		
Dichloromethane	<100.	1		
1,2-Dichloropropane	<100.	1		
cis-1,3-Dichloropropylene	<100.	1		
trans-1,3-Dichloropropylene	<100.	1		
Ethylbenzene	<100.	1		
1,1,2,2-Tetrachloroethane	<100.	1		
Tetrachloroethylene	<100.	1		

- Outside control limits J-Estimated value

Authorized: Monika Santucci
Date: January 24,1997 Monika Santucci

5000 Brittonfield Parkway / Suite 300, Box 4942 / Syracuse, NY 13221 / (315) 437-0200

O'Brien & Gere Laboratories, Inc.

Analytical Results Method: 8010/8020

Client: O'Brien & Gere Engineers, Inc.
Project: Accurate Die Casting
Proj. Desc: Fayetteville, New York

Job No.: 3435.021.517
Certification NY No.: 10155

Sample: E1139
Samp. Description: MW-21
Primary column: Y
Units: ug/L
Column: DB VRX 75m X .45mm ID
Dilution: 100 Instrument: 9001

Collected: 01/21/97
Received: 01/22/97
Prepared:
Analyzed: 01/23/97

Matrix: Water
QC Batch: 012397W1
%Solids:
Purge volume: 5 mL

Number of analytes: 37

Parameter	Result	Col	Surrog Limits	Notes
Toluene	<100.	1		
1,1,1-Trichloroethane	<100.	1		
1,1,2-Trichloroethane	<100.	1		
Trichloroethylene	270.	1		
Trichlorofluoromethane	<100.	1		
Vinyl Chloride	<100.	1		
Xylenes (total)	<300.	1		
Bromochloromethane (surrogate)	94.%	1	65-122	
1,4-Difluorobenzene (surrogate)	90.%	1	65-111	
Trifluorotoluene (surrogate)	87.%	1	64-115	

Notes:

- Outside control limits J-Estimated value

Authorized: Monika Santucci
Date: January 24, 1997 Monika Santucci

5000 Brittonfield Parkway / Suite 300, Box 4942 / Syracuse, NY 13221 / (315) 437-0200

O'Brien & Gere Laboratories, Inc.

Analytical Results Method: 8010/8020

Client: O'Brien & Gere Engineers, Inc.
Project: Accurate Die Casting
Proj. Desc: Fayetteville, New York

Job No.: 3435.021.517
Certification NY No.: 10155

Sample: E1140
Samp. Description: QC Trip Blank
Primary column: Y
Units: ug/L
Column: DB VRX 75m X .45mm ID
Dilution: 1 Instrument: 9001

Collected:
Received: 01/22/97
Prepared:
Analyzed: 01/23/97

Matrix: Water
QC Batch: 012397W1
%Solids:
Purge volume: 5 mL

Number of analytes: 37

Parameter	Result	Col	Surrog Limits	Notes
Benzene	<1.	1		
Bromodichloromethane	<1.	1		
Bromoform	<10.	1		
Bromomethane	<10.	1		
Carbon tetrachloride	<1.	1		
Chlorobenzene	<1.	1		
Chloroethane	<1.	1		
2-Chloroethylvinyl ether	<10.	1		
Chloroform	<1.	1		
Chloromethane	<10.	1		
Dibromochloromethane	<1.	1		
1,2-Dichlorobenzene	<5.	1		
1,3-Dichlorobenzene	<5.	1		
1,4-Dichlorobenzene	<5.	1		
Dichlorodifluoromethane	<10.	1		
1,1-Dichloroethane	<1.	1		
1,2-Dichloroethane	<1.	1		
1,1-Dichloroethylene	<1.	1		
cis-1,2-Dichloroethylene	<1.	1		
trans-1,2-Dichloroethylene	<1.	1		
Dichloromethane	<1.	1		
1,2-Dichloropropane	<1.	1		
cis-1,3-Dichloropropylene	<1.	1		
trans-1,3-Dichloropropylene	<1.	1		
Ethylbenzene	<1.	1		
1,1,2,2-Tetrachloroethane	<1.	1		
Tetrachloroethylene	<1.	1		

- Outside control limits J-Estimated value

Authorized: Monika Santucci
Date: January 24,1997 Monika Santucci

5000 Brittonfield Parkway / Suite 300, Box 4942 / Syracuse, NY 13221 / (315) 437-0200

O'Brien & Gere Laboratories,Inc.

Analytical Results Method: 8010/8020

Client: O'Brien & Gere Engineers, Inc.
Project: Accurate Die Casting
Proj. Desc: Fayetteville, New York

Job No.: 3435.021.517
Certification NY No.: 10155

Sample: E1140
Samp. Description: QC Trip Blank
Primary column: Y
Units: ug/L
Column: DB VRX 75m X .45mm ID
Dilution: 1 Instrument: 9001

Collected:
Received: 01/22/97
Prepared:
Analyzed: 01/23/97

Matrix: Water
QC Batch: 012397W1
%Solids:
Purge volume: 5 mL

Number of analytes: 37

Parameter	Result	Col	Surrog Limits	Notes
Toluene	<1.	1		
1,1,1-Trichloroethane	<1.	1		
1,1,2-Trichloroethane	<1.	1		
Trichloroethylene	<1.	1		
Trichlorofluoromethane	<1.	1		
Vinyl Chloride	<1.	1		
Xylenes (total)	<3.	1		
Bromochloromethane (surrogate)	85.%	1	65-122	
1,4-Difluorobenzene (surrogate)	94.%	1	65-111	
Trifluorotoluene (surrogate)	93.%	1	64-115	

Notes:

- Outside control limits J-Estimated value

Authorized: Monika Santucci
Date: January 24,1997 Monika Santucci

5000 Brittonfield Parkway / Suite 300, Box 4942 / Syracuse, NY 13221 / (315) 437-0200

O'BRIEN & GERE ENGINEERS, INC.

Job No. 2488.651

Sheet 1 of 1

Office: SYRACUSE, N.Y.
Address: 5000 BRITTONFIELD PKWY
Phone: (315) 437-6100

CHAIN OF CUSTODY

2603

CLIENT: FORMER ACCURATE DIE
LOCATION: FAYETTEVILLE, N.Y.

COLLECTED BY: CHAWN ODELL
(Signature) Chawn Odell

SAMPLE DESCRIPTION	Date	Time	Sample Matrix[1]	Sample Type[2]	No. of Containers	ANALYSIS REQUESTED
MW-20	1/21/97	1545	WATER	GRAB	2	8010/8020
MW-21	1/21/97	1630	WATER	GRAB	2	8010/8020
TRIP BLANK	1/21/97	—	WATER	GRAB	1	8010/8020

[1] Matrix = water, wastewater, air, sludge, sediment, etc.
[2] Type = grab, composite

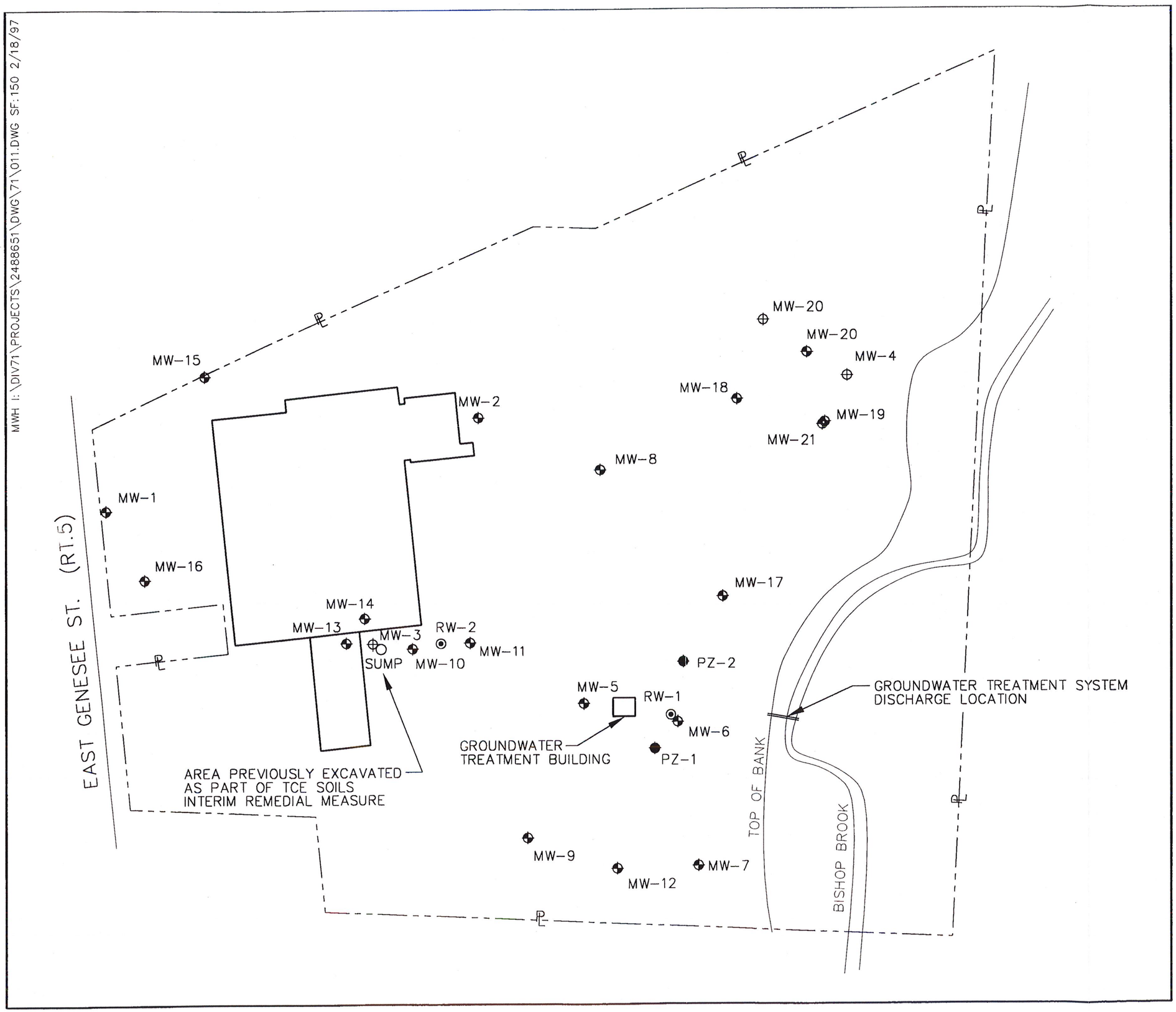
Relinquished by: Chawn Odell of: OBrien & Gere Engineers, Inc.	Date: 1/22/97	Time: 0815	Received by: _____ of: _____	Date:	Time:
Relinquished by: _____ of: _____	Date:	Time:	Received by: _____ of: _____	Date:	Time:
Relinquished by: _____ of: _____	Date:	Time:	Received by: _____ of: _____	Date:	Time:
Use this space if shipped via courier (e.g., Fed Ex) Relinquished by: _____ of: _____	Date:	Time:	Courier Name: _____ *Attach delivery/courier receipt to Chain of Custody	Date:	Time:
Relinquished by: _____ of:	Date:	Time:	Received by: Mabel F. Jackson of: OBrien + Gere	Date: 01/22/97	Time: 08:15

djb/wpC

Cooler Temp 4°C

September 17, 1990

FIGURE 1



LEGEND

— ℄ —	PROPERTY LINE
MW-4 ⊕	MONITORING WELL LOCATION
MW-3 ⊕	FORMER MONITORING WELL LOCATION
RW-1 ◉	OVERBURDEN AQUIFER RECOVERY WELL
RW-2 ◉	BEDROCK GROUND WATER RECOVERY WELL
PZ-1 ●	PIEZOMETER LOCATION

ACCURATE DIE CASTING
FAYETTEVILLE, NEW YORK

SITE PLAN

0 150 300
SCALE IN FEET

FILE NO. 2488.651-011

O'BRIEN & GERE
ENGINEERS INC.