O'BRIEN & GERE
ENGINEERS, INC.

March 8, 2000

Mr. David Crosby, P.E.
Bureau of Construction Services - Division of Hazardous Waste Remediation
New York State Department of Environmental Conservation
50 Wolf Road
Albany, New York 12233-7010

Re: Former Accurate Die Casting Site
Fayetteville, New York

File: 2488/23123 #2

Dear Mr. Crosby:

Pursuant to your request, this final engineering report and certification is provided in accordance with the requirements of the Order on Consent #A7-0318-94-10 between ITT Capital Finance (ITT) and the New York State Department of Environmental Conservation (NYSDEC) for the Former Accurate Die Casting site in Fayetteville, New York (Figure 1). The report summarizes the remedial actions completed at the site to address the five areas of the site identified in the December 1994 Record of Decision. This report is also provided as certification that the remedial actions to address the five areas were completed in accordance with the NYSDEC-approved design documents prepared in accordance with the Order on Consent, and NYSDEC-approved modifications to those documents.

1. PROJECT BACKGROUND

Presented below is background information regarding the remedial investigation (RI) for the site, remediation activities completed to date, and information regarding the ground water recovery and treatment system.

Remediation investigation:

As a result of the RI and additional studies conducted for the former Accurate Die Casting site, the NYSDEC identified five areas which could pose an unacceptable risk to human health if not addressed. The five areas identified in the December 1994 Record of Decision (ROD) are as follows:

Area 1 - An area of soils containing polychlorinated biphenyls (PCBs), polycyclic aromatic hydrocarbons (PAHs), and volatile organic compounds (VOCs). This area is also referred to as the PCB/PAH/VOC Soils Area and its location is shown on Figure 2.

Area 2 - Soils containing trichloroethylene (TCE) in an area located outside the northeast corner of the former Accurate Die Casting facility as shown on Figure 2.

Area 3 - Overburden ground water containing TCE above NYSDEC ground water quality standards.

Area 4 - Shallow bedrock ground water containing TCE above NYSDEC ground water quality standards.

Area 5 - An abandoned septic tank, located as shown on Figure 2, containing sludge exhibiting concentrations of zinc above NYSDEC standards.

Remediation activities completed:

Area 1 - In accordance with the NYSDEC-approved Interim Remedial Measure Soil Excavation Work Plan dated December 1994, unsaturated soils exhibiting concentrations of PAHs, PCBs, and VOCs above remedial action objectives (RAOs) in the northwest area of the site were excavated during September and October 1995. After excavating approximately 600 cy of soil, grab samples were collected from the excavations and analyzed for PAHs, VOCs, and PCBs to evaluate if further action was required. Based on the results of the sampling and analyses, it was concluded that the unsaturated soils containing PAHs, PCBs and VOCs above the RAOs had been removed to the extent practicable.

In 1997, approximately 350 cy of the 600 cy of excavated soil was removed from the site and transported to the ESMI facility in Fort Edward, New York for low temperature thermal destruction and subsequent off-site disposal. The remaining 250 cy of soil was mechanically processed on-site to enhance volatilization of VOCs in accordance with the ROD amendment issued in October 1997.

In April 1998, following analyses that indicated that the RAOs had been achieved, the 250 cy of mechanically processed soils were spread on-site in the Corrective Action Management Unit (CAMU) identified in the ROD amendment (Figure 3). In accordance with the NYSDEC requirements, approximately 1 foot of general fill, topsoil, and grass seed was placed on top of the processed soils.

Pursuant to an Explanation of Significant Differences (ESD) Notice dated October 1998, a ground water collection trench was then constructed to intercept ground water containing VOCs present in the sand lenses observed in Area 1. Construction plans for the installation of a ground water interceptor trench in Area 1 were submitted to the NYSDEC for review in August 1998 and approved by a letter dated October 7, 1998. Construction of the trench was completed in July 1999 following the placement of approximately 300 cubic yards of soil, excavated during construction of the interceptor trench, into the CAMU as approved by the NYSDEC by the letter dated July 14, 1999. The location of the collection trench is shown on Figure 3. Collected ground water will be treated at the existing on-site treatment system.

Area 2 - In accordance with the NYSDEC-approved Interim Remedial Measure (IRM) Work Plan dated May 1994, the area outside the northeast corner of the facility was addressed as part of an IRM between May 24 and June 22, 1994. During that period, soils exhibiting TCE above the RAO of 0.7 mg/kg were removed to the extent practicable. Afterwards, the soil was mechanically processed on-site to enhance volatilization of the VOCs until residual levels were documented to be below the RAOs. Following achievement of the RAOs, the soils were used to backfill the excavation. A description of the soil remediation activities completed in this area is provided in the NYSDEC-approved Soil Remediation Activities Summary Report dated October 1994.

Area 3 - In accordance with the NYSDEC-approved IRM Work Plan dated May 1994 and as part of the IRM which addressed the soils outside the northeast corner of the facility, a ground water collection sump was constructed within the excavation (Figure 2). The sump extends to the clay layer that was found to be present at the base of the excavation made during the soil remediation activities. This sump is being utilized as one of the ground water recovery points for the ground water recovery and treatment system constructed at the Site to address the shallow/overburden ground water.

Also, an overburden recovery well designated as RW-1 (Figure 2) was constructed on-site as part of the IRM. A 24-hour aquifer performance test was conducted using this recovery well on September 28 and 29, 1994 to evaluate the overburden aquifer characteristics and to assess the influence of pumping on the overburden aquifer. The results of the performance test are provided in the NYSDEC-approved Basis of Design Report for the System dated December 1994. This recovery well is being utilized to collect ground water containing TCE in the overburden aquifer downgradient of the northeast corner of the facility.

Recovery and treatment of overburden ground water using the sump and RW-1 has been ongoing since February 5, 1996 and is continuing. During 1999, it was observed that the recovery rate of ground water from RW-1 was reduced compared to historic data. To address this, the recovery well was redeveloped with NYSDEC-approval during the week of April 12, 1999. Well efficiency, as measured by specific capacity, increased from 0.68 gpm/ft to 3.8 gpm/ft as a result of this maintenance action.

Area 4 - A second ground water recovery well, designated as RW-2, is being utilized on-site to recover ground water containing VOCs from the shallow bedrock in the vicinity of the northeast corner of the facility (Figure 2). This well was installed between September 5 and 18, 1995, in accordance with the NYSDEC-approved Remedial Design/Remedial Action (RD/RA) Work Plan dated March 1995 and the letter from O=Brien & Gere dated May 26, 1995, as amended on July 17, 1995. An aquifer performance test was conducted using this recovery well

between November 7 and 13, 1995. The results of the performance test were provided to the NYSDEC in a letter report dated January 12, 1996.

Recovery and treatment of shallow bedrock ground water using RW-2 was initiated on February 5, 1996 and is continuing.

Area 5 - During 1995, the septic tank was uncovered and the contents were removed and disposed of at an off-site NYSDEC-approved landfill in accordance with the NYSDEC-approved Remedial Design/Remedial Action Work Plan dated March 1995. Once the contents were removed, the walls of the septic tank were cleaned using a pressure-washer as approved by the NYSDEC. The spent washing liquid was collected and treated on-site using the ground water treatment system. Subsequent to decontaminating the floor and walls of the septic tank, the concrete vault was filled and buried, completing remediation of this area.

***Ground water recovery and treatment system*:**

The ground water recovery and treatment system is currently recovering ground water from the sump, RW-1, and RW-2. Any water collected by the ground water collection trench completed in 1999 will also be treated by the on-site treatment system. Ground water collection and treatment will continue until VOC levels in the ground water are below NYSDEC ground water quality standards, or until such a time that asymptotic levels have been achieved and further reduction in VOC levels in ground water is not practicable.

The ground water recovered from the sump, two recovery wells, and ground water collection trench is being treated through two 1,500-lb granular activated carbon (GAC) vessels, connected in series, in accordance with the Basis of Design Report dated December 1994. Prior to being pumped through the GAC filters, the ground water from each of the individual recovery points is combined in a 2,000-gallon flow equalization tank and pumped through two 10-micron bag filters connected in parallel.

A flow meter for each of the four recovery points is provided on the influent lines to the equalization tank. The tank is also equipped to be used as an aeration tank to pretreat the recovered ground water for VOCs prior to GAC filtration, if necessary.

Following treatment by the GAC, the treated ground water is discharged to the bank of Bishop Brook, as shown on Figure 2, to increase dissolved oxygen levels of the effluent prior to entering the brook. Discharge of treated ground water to Bishop Brook is monitored for compliance with the conditions of the SPDES Permit as discussed in the Operation and Maintenance (O&M) Manual dated August 1996.

2. CERTIFICATION

O'Brien & Gere certifies that the remedial actions proposed in design documents prepared by us, and approved by the NYSDEC, to address the five areas were completed in accordance with those documents and NYSDEC-approved modifications thereto. The remedial actions completed in accordance with the Order on Consent between ITT and NYSDEC were described above. As

indicated, operation of the ground water collection and treatment systems constructed at the site is continuing.

If you have any questions or comments regarding this submittal, please do not hesitate to call me or Al Farrell at (315) 437-6100.

Very truly yours,

O'BRIEN & GERE ENGINEERS, INC.

James R. Heckathorne, P.E.
Vice President

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cc: V. Nattanmai, P.E. – NYSDEC
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T. Male – NYSDEC
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B. Branagh, P.E. – NYSDEC Region 7
Director, Bureau of Environmental Exposure Investigation – NYSDOH (2 copies)
H. Hamel – NYSDOH
M. Peters, Esq – LeBoeuf, Lamb, Greene & MacRae

FIGURE 2

AREA 1:
PREVIOUSLY EXCAVATED
PCB/PAH/VOC SOILS AREA

GROUND WATER
COLLECTION TRENCH

MW-15
MW-1
MW-16
MW-2
MW-3
(ABANDONED)
MW-14
MW-13
RW-2
MW-11
SUMP
MW-10
MW-8
MW-23
MW-20 (ABANDONED)
MW-22
MW-4
(ABANDONED)
MW-18
MW-19
MW-21
MW-24
MW-17
PZ-2
MW-5
RW-1
MW-6
PZ-1
MW-9
MW-12
MW-7

EAST GENESEE ST. (RT.5)

AREA 2:
AREA PREVIOUSLY EXCAVATED
AS PART OF TCE SOILS
INTERIM REMEDIAL MEASURE

GROUNDWATER
TREATMENT BUILDING

GROUNDWATER TREATMENT SYSTEM
DISCHARGE LOCATION

TOP OF BANK

BISHOP BROOK

AREA 5:
APPROX. LOCATION OF SEPTIC TANK
EMPTIED, DECONTAMINATED, AND
SUBSEQUENTLY ABANDONED IN PLACE

REV DATE: 12/21/99

LEGEND

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

NOTE: MW-24 LOCATION IS APPROXIMATE

ACCURATE DIE CASTING
FAYETTEVILLE, NEW YORK

SITE PLAN

0 150 300
SCALE IN FEET

DATE: FEBRUARY 2000

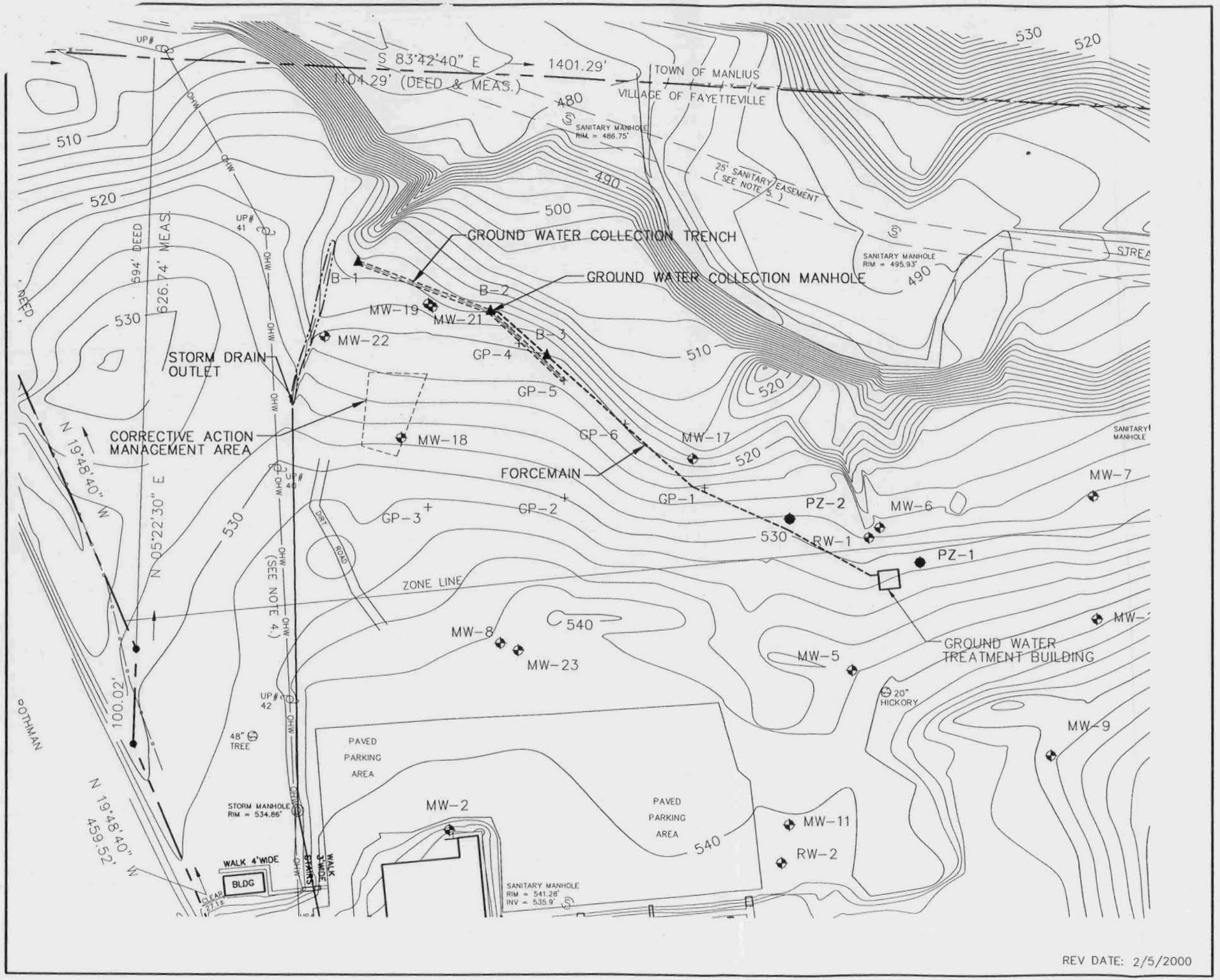
FILE NO. 2488.23123.002

O'BRIEN & GERE
ENGINEERS INC.

MWH I:\DIV71\PROJECTS\2488\23123\DWG\71\002.DWG SF:150

PLOT DATE:

FIGURE 3



REV DATE: 2/5/2000

PLOT DATE:

MWH I: \DIV7\PROJECTS\2488\23123\DWG\

ACCURATE DIE CASTING
FAYETTEVILLE, NEW YORK

PARTIAL SITE PLAN

0 100 200
SCALE IN FEET
DATE: FEBRUARY 2000
FILE NO. 2488.23123.004

O'BRIEN & GERE