Department of Environmental Conservation

Division of Environmental Remediation

AMENDED RECORD OF DECISION

Accurate Die Casting Site
Village of Fayetteville, Onondaga County
Site Number 7-34-052

October 1997

New York State Department of Environmental Conservation
GEORGE E. PATAKI, *Governor* John P. Cahill, *Commissioner*

DECLARATION STATEMENT - AMENDED RECORD OF DECISION

Accurate Die Casting Site
Village of Fayetteville, Onondaga County, New York
Site No. 7-34-052

Statement of Purpose and Basis

This amended Record of Decision (ROD) presents the revised remedial action selected for the **Accurate Die Casting** inactive hazardous waste disposal site. The changes are made in accordance with the New York State Environmental Conservation Law (ECL). The remedial program selected is not inconsistent with the National Oil and Hazardous Substances Pollution Contingency Plan of March 8, 1990 (40 CFR Part 300).

This amended remedy is based upon the documents in the Administrative Record for the **Accurate Die Casting** Site. Exhibit A identifies the documents included in the Administrative Record.

Assessment of the Site

Actual or threatened release of hazardous waste constituents from this site, if not addressed by implementing the response action selected in this amended ROD, presents a current or potential threat to public health and the environment.

Description of Amended Remedy

Based upon the results of the Remedial Investigation/Feasibility Study (RI/FS) and additional studies for the **Accurate Die Casting** site and the criteria identified for the evaluation of alternatives, the NYSDEC has selected an amended remedy for the site consisting of the following major elements:

* The contaminated soil from the oil spill area, also referred to as the PCB/VOC/PAH(polychlorinated biphenyl/volatile organic compound/polyaromatic hydrocarbon)soils area, located on the north-west portion of the site has been excavated and staged. This task was completed in October 1995. Heavily contaminated soils (approximately 90 cu.yds.) and soils contaminated with PAHs (approximately 260 cu.yds.) were removed and disposed of in an off-site landfill in March 1997. The remaining soils (approximately 250 cu.yds.) will be treated on-site and backfilled in the oil spill area.

* The contaminated sludge from the septic tank located outside the northeast portion of the site has been excavated and disposed of in a permitted landfill. This task was completed in June 1995.

* The contaminated bedrock groundwater will be extracted and treated on-site. The treated groundwater will be discharged to Bishop Brook. This task was started in January 1996.

* The remediation of soil contaminated with trichloroethene (TCE) located outside the north-east corner of the building (identified as area 2) was completed as an Interim Remedial Measure (IRM) in June 1994. The IRM also included the remediation of shallow groundwater which was started in February 1996.

* A long-term groundwater monitoring program will be implemented to monitor the effectiveness of the groundwater (shallow and bedrock). The monitoring program is in progress.

Note: Confirmatory soil samples obtained from the saturated zone in the PCB/VOC/PAH soils area show TCE levels above cleanup standards. Groundwater monitoring wells have been installed to monitor groundwater in the PCB/VOC/PAH soils area. Preliminary data indicates that the groundwater is contaminated. More studies are being conducted to obtain additional data. A decision on the remediation of the groundwater will be made in approximately six to nine months based on the additional data.

The differences between the amended remedy and the original December 1994 ROD include:

* The estimated quantity of contaminated soil excavated from the PCB/VOC/PAH soils area has increased from 500 to 600 cu.yds.

* The concentration of TCE and 1,2-DCE (dichloroethene) in the soil from the PCB/VOC/PAH soils area was found to be significantly higher than the concentrations detected during the investigation.

* Some of the contaminated soils from the PCB/VOC/PAH soils area will be treated on-site by mechanical volatilization rather than off-site disposal.

* The total cost of the remedy will be changed (decreased) because of the on-site treatment and disposal.

Corrective Action Management Unit (CAMU)

Based upon the results of the investigations at the Site and to achieve the Remedial Action Objectives, 10,000 sq. ft. of the PCB/VOC/PAH soils area (Area 1) has been designated as a Corrective Action Management Unit (CAMU) for site remediation purposes. The CAMU, where the treated soil will be spread and covered after treatment, will consist of an area located east of the storm water sewer outlet, which exists in the northwest portion of the site, and east of the channel that extends from the outlet north toward Bishop Brook.

New York State Department of Health Acceptance

The New York State Department of Health concurs with the amended remedy selected for this site as being protective of human health.

Declaration

The amended remedy is protective of human health and the environment, complies with State and Federal requirements that are legally applicable or relevant and appropriate to the remedial action to the extent practicable, and is cost effective. This remedy utilizes permanent solutions and alternative treatment or resource recovery technologies, to the maximum extent practicable, and satisfies the preference for remedies that reduce toxicity, mobility, or volume as a principal element.

10/2/97
Date

Michael J. O'Toole, Jr., Director
Division of Environmental Remediation

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SITE I.D. NO. 7-34-052

SECTION 1: INTRODUCTION

In December 1994, the Department selected a remedy for this site which included the excavation of contaminated soils from the PCB/VOC/PAH soils area with disposal in an off-site landfill. The remedy selected in the Record of Decision (ROD) also included the remediation of bedrock groundwater. Prior to the execution of the ROD, Interim Remedial Measures (IRM) were implemented at the site in June 1994 to address the contaminated soil in an area located outside the northeast corner of the manufacturing building and the contaminated shallow groundwater at the site. The December 1994 ROD is the subject of this amendment.

Based on the data available at the time, the 1994 ROD called for the excavation and off-site disposal of all the contaminated soils from the PCB/VOC/PAH soils area. The soil excavation activities in the PCB/VOC/PAH soils area began in September of 1995. Based on the verification sampling conducted prior to and after the excavation, it was found that the volume of the contaminated soil from this area has exceeded the estimated quantity. The original ROD estimate was 500 cu.yds. but the actual volume of contaminated soil excavated from the PCB/VOC/PAH soils area is 600 cu.yds. which is approximately a 20 % volume increase. In addition, the surface soil samples collected during the investigation did not contain significant concentrations of TCE whereas several surface soil samples collected during and prior to the excavation did contain TCE at significant levels.

To address the increased volume of soil cost-effectively, it was proposed to treat some of the contaminated soil (approximately 250 cu.yds.) excavated from the PCB/VOC/PAH soils area by a "mechanical volatilization" process and dispose of the treated soil on-site. Out of the other 350 cu.yds of soil, approximately 90 cu.yds. of soil is significantly contaminated and 260 cu.yds. of soil is contaminated with PAHs above the cleanup goal. These two soil piles (total of 350 cu.yds.) cannot be treated on-site and therefore were removed and disposed off-site.

The mechanical volatilization system (MVS) will include amending the soils with lime, if necessary, to reduce moisture content and improve handling characteristics, screening the soils to remove non-processible materials, actual treatment in a hammermill, staging for confirmatory analyses, and backfill into the excavation. The MVS system was used during the 1994 IRM to remediate the TCE contaminated soils from the area located outside the northeast of the corner of the manufacturing building. The cleanup goal and the other criteria established during the implementation of the IRM will be utilized to treat the soils excavated from the PCB/VOC/PAH soils area. The established TCE cleanup goal in soil for this site is 0.7 ppm. Treated soils meeting the remedial goal will be placed back into the excavation.

Revised cost estimates were done to compare the cost of off-site disposal and on-site treatment. The cost of on-site treatment was found to be more cost effective than off-site disposal. Since the overall protectiveness of the remedy is equivalent to the original remedy, the Department is selecting on-site treatment and backfilling of 250 cu.yds. of soil excavated from the PCB/VOC/PAH soils area. As stated earlier, part of the contaminated soil, approximately 350 cu.yds., which cannot be treated on-site were be disposed off-site. After on-site treatment, any soils which do not meet the cleanup criteria established for the site will be disposed of in an off-site landfill. Based upon this approach, the Department is amending the December 1994 ROD.

Confirmatory soil samples obtained from the saturated zone in the PCB/VOC/PAH soils area have shown TCE above cleanup goals. Once the visually stained soils were excavated from the PCB/VOC/PAH soils area, the excavated areas were backfilled because of a water ponding problem and safety issues. Later, four soil borings were installed in the excavated area to obtain subsurface soil samples. The results of this sampling showed TCE levels from non-detect to 19 ppm in the soil samples obtained at a depth of about 10 feet (approximate depth of groundwater table) below ground surface. The contamination in soil found at a depth of 10 feet will not pose a threat of direct contact with humans or animals but it will pose a threat to the groundwater in that vicinity. The PRP agreed to install monitoring wells in this area to monitor the situation. Monitoring wells have been installed in this area and preliminary data indicates that the groundwater is contaminated. More studies are being conducted to obtain additional data. A decision on the remediation of the groundwater will be made in approximately six to nine months based on the additional data.

Background information on the site is presented below to aid in the understanding of the changes to the amended remedy. More detailed background information can be found in the December 1994 ROD and in other documents listed in the Administrative Record.

SECTION 2: SITE LOCATION AND DESCRIPTION

The Accurate Die Casting site is located on a 32-acre parcel at 547 East Genesee Street in the Village of Fayetteville, New York (Figure 1). The topography is generally flat on the south end of the site and slopes to the north on the north half of the site. At the northern edge of the site, there is a steep embankment adjacent to Bishop Brook, which flows from east to west. Figure 2 shows the details of the site, sampling locations and identifies the contaminated areas. Bordering properties include abandoned farmland to the north, residential areas to the east and west, and commercial properties to the south along East Genesee Street.

The primary use of the site has been for die casting. ITT Commercial Finance Corporation (ITT) is the current owner of the site. Accurate Die Casting Corporation together with various other owners at different times, had conducted industrial activities at the site. The groundwater in the vicinity of the site is not used for potable purposes. Bishop Brook empties into Limestone Creek approximately 5 miles west of the site.

The site was grouped into five areas during the investigation for the purpose of characterizing the contamination at the site (Figure 2). Area 1, PCB/VOC/PAH soils area, contains soils contaminated with polycyclic aromatic hydrocarbons (PAHs), polychlorinated biphenyls (PCBs) and volatile organic compounds (VOCs). Some of the individual PAHs and VOCs found in the PCB/VOC/PAH soils area exceed the guidance levels for protection of human health and groundwater. Area 2 contained soils contaminated with TCE. The septic tank (area 5) shown in Figure 3 contained sludge contaminated with zinc. The shallow groundwater (area 3) and bedrock groundwater (area 4) is contaminated with trichloroethene (TCE). The groundwater contamination would pose an unacceptable risk to human health if it were to be used as a source of potable water in the future. Additionally, contaminated groundwater threatens the water quality of Bishop Brook. In mid-1994, an Interim Remedial Measure (IRM) was implemented to remediate the TCE contaminated soils in area 2 and shallow groundwater contaminated with TCE.

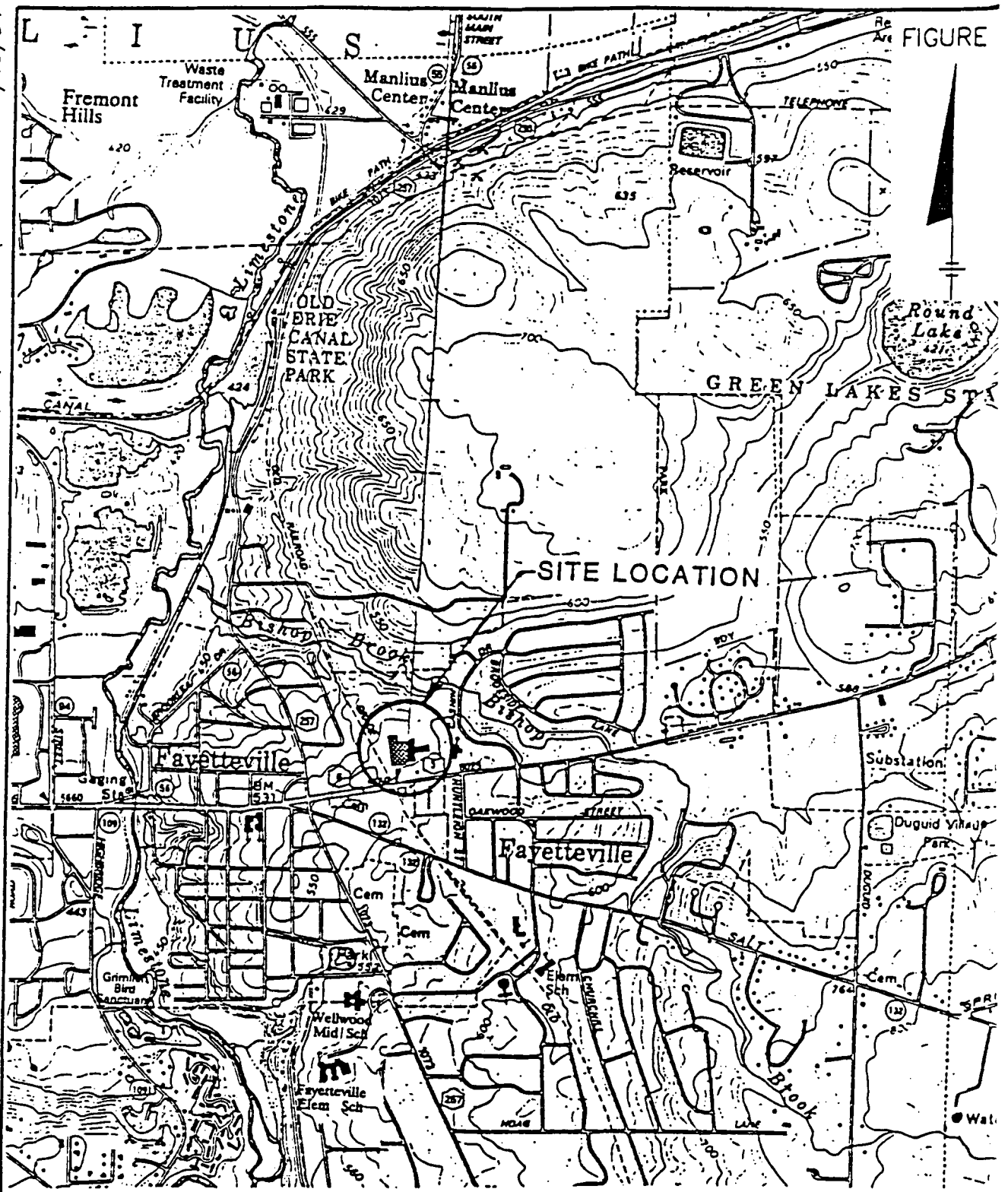
SECTION 3: SITE HISTORY AND CONTAMINATION

3.1: SITE HISTORY

The facility was constructed in early 1950 as a die casting facility. In mid-1987, NYSDEC responded to a reported release of waste oil at the facility. The release occurred in the northwest area of the site. Allwash of Syracuse, Inc. was retained by the NYSDEC to contain the spill and removed approximately 120

MHB H:\DIVISION\71\ACCURATE\SITE SF=1 04/15/94

FIGURE



ACCURATE DIE CASTING
FAYETTEVILLE, NEW YORK

SITE MAP

SCALE: 1" = 2,000 FT.

USGS TOPOGRAPHIC 7.5 MIN. QUAD
SYRACUSE EAST, N.Y. QUADRANGLE

FILE NO. 2488.396-

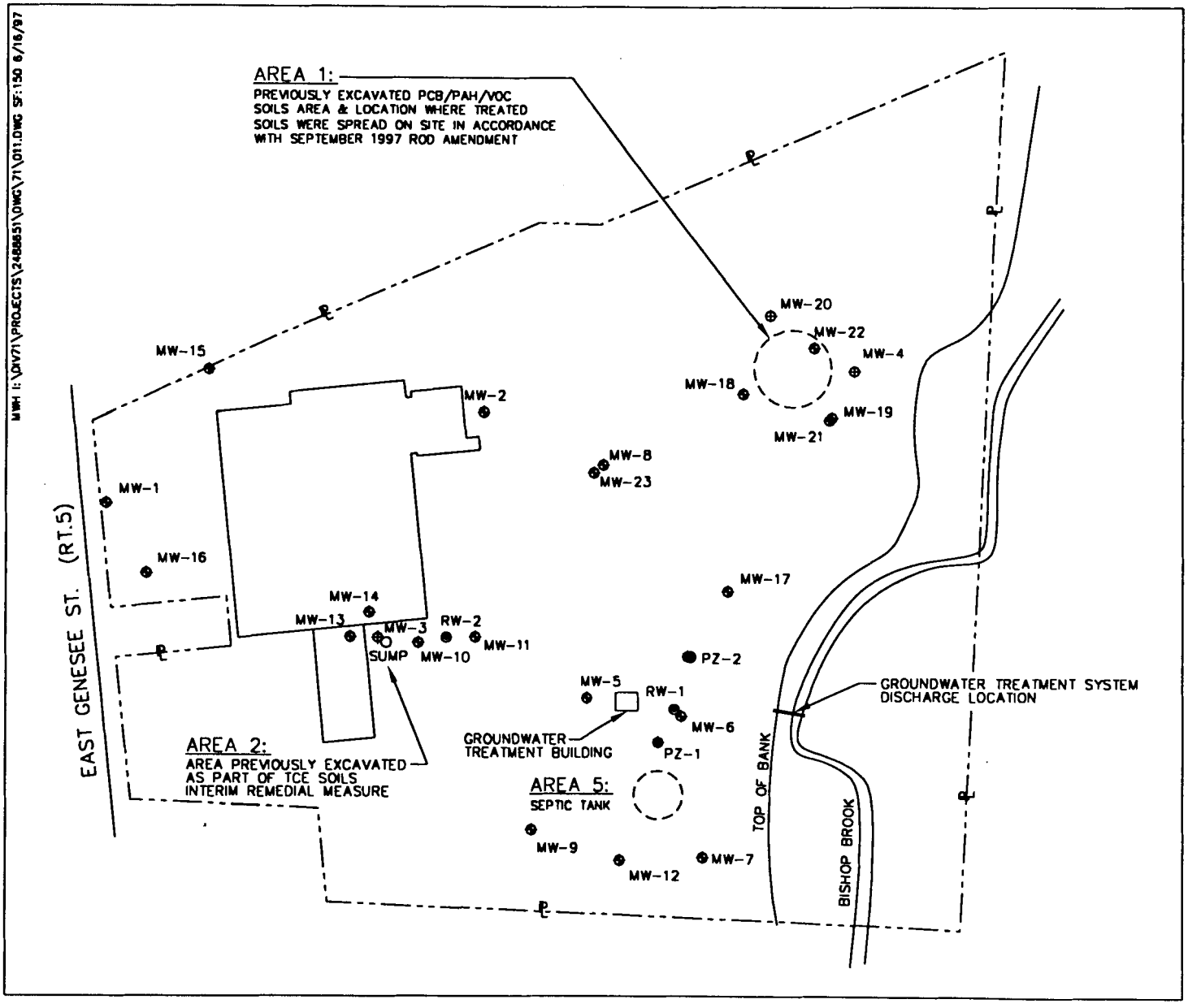


FIGURE 2

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.

tons of contaminated soil. As a result of this waste oil release, the site was identified for detailed investigations by NYSDEC.

In mid-1988, die casting operations were terminated at the site. Investigations conducted since have revealed the presence of VOCs, PAHs and PCBs in the soil and groundwater in the northwest area of the site. Soil and groundwater samples collected and analyzed by the NYSDEC in December 1988 also indicated the presence of TCE and perchloroethene (PCE) elsewhere on site. In January 1990, the facility was included in the NYSDEC's Registry of Inactive Hazardous Waste sites as a Class 2 site. This indicated that the site constitutes a significant threat to human health or the environment and that action is required to investigate and, if necessary, remediate the site.

An area of soil contamination was also located outside the northeast corner of the building, proximate to a degreasing system located inside the building which was used to degrease the castings. A former employee for Accurate Die Casting has testified during a deposition in a Federal Court proceeding that spent TCE from the degreaser system was dumped periodically outside the northeast corner of the manufacturing building. This type of disposal practice has resulted in the contamination of the soil and groundwater at the site. There are no records available to verify the quantity and/or the duration of the TCE disposal from the degreasing system.

3.2: SITE GEOLOGY

The land surface at the site slopes generally northward with a steep embankment at Bishop Brook, which forms the northern boundary of the site. Based on subsurface studies, the overburden consists of a dense layer that ranges in composition from red clay to silt with sand, gravel and cobbles. This layer has been interpreted to be glacial till which seems to have somewhat limited the migration of contaminants to the bedrock. The till is overlain by coarser sand and gravel deposits. The highly fractured bedrock slopes northward down into the Bishop Brook ravine.

The groundwater in the overburden unit flows to the north towards Bishop Brook. Based on available data on the bedrock unit, it is assumed that the groundwater flow in this unit is also towards the north. Bishop Brook flows east to west and empties into Limestone Creek several miles west of the site.

3.3: CONTAMINANTS OF CONCERN

The results of the RI showed that the groundwater and soil samples obtained from the site contain contamination that is site-related. The primary contaminant in soil and groundwater was found to be TCE. The soil samples collected in the PCB/VOC/PAH soils area contained polycyclic aromatic hydrocarbons (PAHs), polychlorinated biphenyls (PCBs), and volatile organics (VOCs). Zinc was detected in the septic tank sludge and chromium was detected in groundwater samples.

The highest concentration of TCE [340,000 parts per billion (ppb)] in groundwater was detected in the shallow portion of the aquifer outside the north-east corner of the building. The highest concentration of TCE in the groundwater that was detected in the bedrock portion of the aquifer was 5200 ppb. All but one upgradient groundwater sample contained TCE above the groundwater standard, which is 5 ppb. Chromium (430 ppb) was the only inorganic that was detected above the groundwater standard in the groundwater sample collected from MW-9. The groundwater standard for chromium is 50 ppb. Table 1 shows the concentration of TCE in groundwater samples collected since 1989.

A groundwater seep in the steep bank of Bishop Brook was sampled before it emerges to the surface and was found to contain 700 ppb of TCE. The seep was also sampled after it emerges and found to contain 67 to 78 ppb of TCE.

The maximum concentration of TCE detected in the surface water samples was 3 ppb. The stream bed sediments were found to be unimpacted by site contamination except for one sample which contained TCE at 0.8 ppb. The surface water standard for TCE is 11 ppb. The sediment criterion for TCE is 1.0 ppb (assuming 0.5% total organic carbon).

Prior to the 1994 IRM, the highest concentration of TCE in the subsurface soil was found outside the north-east corner of the building. The concentration of TCE in the subsurface soil samples ranged from non-detect to 7500 parts per million (ppm). TCE concentrations in the subsurface soil decreased with increasing distance from the north-east corner of the building. The depth of the soil samples collected was between 3 and 30 feet. The concentration of TCE was between non-detect to 9.7 ppm up to a depth of approximately 20 feet. Higher concentrations of TCE were found between 20 and 30 feet. In accordance with NYSDEC guidance, the clean-up goal for TCE is 0.7 ppm based on the leachability of the contaminant to groundwater. These soils were removed during the 1994 IRM.

An elevated level of zinc (644 ppm) was detected in a septic tank sludge sample. The septic tank was located in the northern portion of the site and was connected to a drainage system from the manufacturing building (Figure 2). The remediation of this area was completed in 1995.

Additional surface soil sampling was conducted in the PCB/VOC/PAH soils area described in Section 3.1, to determine if residue from the oil spill is present. The soil samples obtained from this area detected PAHs (semi-volatiles) ranging from non-detect to 49 ppm, PCBs ranging from non-detect to 2.3 ppm and dichloroethene (volatile) ranging from 19 ppm to 190 ppm. Table 2 shows the concentrations of PAHs detected in the surface soil samples obtained from the PCB/VOC/PAH soils area .

SECTION 4: WORK ALREADY COMPLETED

In 1989, a Phase I environmental assessment was done by Stearns & Wheler for ITT, a potentially responsible party (PRP). Based on available information, a report was prepared which identified potential areas of contamination and investigative efforts to characterize the site. In early 1990, during the Phase II environmental assessment, three contaminated areas were identified and remediated as an IRM during the year. IRMs are intended to address both emergency and non-emergency site conditions, and can be undertaken without extensive investigation and evaluation, to prevent, mitigate, or remedy environmental damage attributable to a site. The following IRMs were completed at the site - 1) approximately 70 drums of waste found at the site after foreclosure and located inside the building were characterized and disposed, 2) the sludge from the TCE degreasing system was removed and the system was decontaminated, 3) the TCE free product pool which was discovered above the water table adjacent to and outside the northeast corner of the building was pumped and the contents disposed of until no TCE free product was found in samples.

In August 1990, transformers containing PCB fluids were removed and disposed off-site. The soil in the transformer area was sampled and soils exhibiting levels above guidance values were removed and disposed off-site. In September 1990, a Phase II environmental assessment was completed. During this period, groundwater, surface water, sediment, and soil samples were collected and analyzed. Based on the results, a report was prepared which concluded that TCE contamination existed in soil, groundwater, and surface water. A soil vapor survey was also conducted during this period.

Table 1
Accurate Die Casting Site
Ground Water Trichloroethylene (TCE) Concentrations

Date Sampled:	08/89	12/89	5/90	5/92	7/94
Well # MW-01	112	ND	2	ND	—
MW-02	ND	ND	1	ND	—
MW-03	Product	>55000	440000	340000	Removed

NOTE:

MW-03 was removed as part of the IRM in 1994. A sump was installed in that location and is being sampled periodically. MW-01 and 02 were non-detect for TCE in later sampling.

Date Sampled:	12/89	5/90	5/92	7/94	10/94	2/95	04/95	07/95	10/95	01/96	04/96	07/76	10/96	01/97
Well # MW-04	7	43	6	270	23	13	16	--	15	--	--	--	68	--
MW-05	340	344	110	330	410	290	280	--	--	--	--	--	180	--
MW-06	700	454	510	390	360	330	280	270	180	170	110	98	71	75
MW-07(B)	ND	ND	ND	ND	ND	ND	ND	ND	ND	--	--	--	--	--
MW-08	ND	ND	ND	--	ND	ND	ND	ND	ND	--	--	--	--	--
MW-09	109	106	60	72	74	74	84	75	68	100	64	65	50	95
MW-10(B)	--	--	4500	1600	1300	1400	1200	900	890	900	820	960	1700	1900
MW-11(B)	--	--	5200	5500	5300	4300	3900	4000	2600	2500	1500	1400	1600	1500
MW-12	--	--	36	44	35	33	30	25	29	--	--	--	17	--
MW-13	--	--	110	740	510	--	--	--	--	--	--	--	370	--
MW-14	--	--	67	150	120	79	95	140	78	84	250	230	170	390

Date Sampled:	7/94	10/94	2/95	04/95	07/95	10/95	01/96	04/96	05/96	07/76	10/96	01/97
Well # MW-15(B)	--	14	.11	10	17	7	--	--	--	--	20	--
MW-16 (B)	--	6	17	7	18	20	--	--	--	--	11	--
MW-17	260	140	200	130	160	--	180	350	--	460	300	450
MW-18	--	--	--	--	--	--	--	--	1200	--	2900	850
MW-20	--	--	--	--	--	--	--	--	70	--	--	2
MW-21	--	--	--	--	--	--	--	--	--	--	--	270
PZ-01	--	--	--	--	120	--	--	--	--	--	32	--
PZ-02	--	--	--	490	400	--	--	--	--	--	540	--
SUMP	--	--	--	--	--	--	170	180	--	1000	--	320

ND - Non-Detect

Table 2
Surface Soil Sample Analytical Data

Former Accurate Die Casting Site
Fayetteville, New York

Parameter	S-1	S-2	S-3	S-4	S-5	S-5s	S-6	S-8	S-9	S-10	S-11	S-12	S-13	S-13s	S-14	S-14s	S-15	S-16	S-17	S-18
Naphthalene						N/A								N/A		N/A				1.3
Acenaphthylene						N/A								N/A		N/A				
Acenaphtene		0.12				N/A						2	3.5	N/A	2.8	N/A		0.18		3.6
Fluorene		0.11				N/A								N/A	2.6	N/A		0.15		3.3
Phenanthrene	0.19	1.6		1.7		N/A	3.8	0.27	0.82	6.1	0.27	15	10	N/A	24	N/A	1.7	1.8	0.92	25
Anthracene	0.19	0.19				N/A	1.2		0.79	4.8		6		N/A	3.3	N/A	1.3	0.31	0.13	4.4
Fluoranthene	0.16	1.7			0.82	N/A	3.2	0.26	0.68	7.3		17	9.3	N/A	20	N/A	1.3	1.9	1.3	24
Pyrene	0.43	1.1	0.044	1.5	0.89	N/A	3.5	0.68	0.78	7.3	0.22	11	7.7	N/A	13	N/A	1.4	4.2	1.3	15
Benzo(a)anthracene		0.38				N/A	2.1	0.1	0.74	7.1		13	7.4	N/A	12	N/A	2.5	0.71	0.34	5.7
Chrysene	0.11	0.66			4.8	N/A	5.1	0.16	1.2	14		17	16	N/A	17	N/A	10	1.2	0.66	8.4
Benzo(b)fluoranthene		0.46				N/A				6.4		8.9	5.7	N/A	7.7	N/A		0.73	0.47	4.6
Benzo(k)fluoranthene		0.47				N/A			0.27	5.4		8.4	5.1	N/A	6.7	N/A		0.74	0.51	5.1
Benzo(a)pyrene		0.38			1.7	N/A				6.2		9.6	5.4	N/A	7.7	N/A	1.3	0.81	0.49	5.3
Indeno(1,2,3-cd)pyrene						N/A								N/A		N/A		0.61		3.1
Dibenzo(a,h)anthracene						N/A								N/A		N/A				
Benzo(g,h,i)perylene						N/A								N/A		N/A				3
Total PAH compounds	1.08	7.17	0.044	3.2	8.21	N/A	18.9	1.47	5.28	64.6	0.49	107.9	70.1	N/A	116.8	N/A	19.5	13.34	6.12	111.8
Total PCBs				0.32	1.9	N/A	0.7		0.37	2.6	0.24	1.7	1.43	N/A	1.5	N/A	1.5			
Methylene chloride	N/A	N/A	N/A	N/A	N/A	0.052B	N/A	N/A	N/A	N/A	N/A	N/A	N/A		N/A		N/A	N/A	N/A	N/A
Dichloroethylene	N/A	N/A	N/A	N/A	N/A	0.018B	N/A	N/A	N/A	N/A	N/A	N/A	N/A	190	N/A	19	N/A	N/A	N/A	N/A
Trichloroethylene	N/A	N/A	N/A	N/A	N/A		N/A	N/A	N/A	N/A	N/A	N/A	N/A		N/A		N/A	N/A	N/A	N/A

a\pahtab1

Notes:
(1) Data collected in August 1993 by Stearns & Wheler.
(2) All units in mg/kg dry weight.
(3) Blank spaces indicate that the analyte was not detected.
(4) Samples designated with an "s" represent split sampling data performed by the NYSDEC in July 1993.
(5) N/A indicates that the analyte was not analyzed for.
(6) Sample locations shown on Figure 3.

The Remedial Investigation (RI) was conducted in two phases. The purpose of the RI was to define the nature and extent of any contamination resulting from previous activities at the site. The first phase was conducted between May 1992 and February 1993 and the second phase between July 1993 and February 1994. Reports entitled "Phase I RI Report, January 1993" and "Final RI Report, February 1994" have been prepared describing the field activities and findings of the RI in detail. The RI activities included the collection of soil, groundwater, surface water and sediments samples and analyzing for the site-related contaminants.

In June 1994, another IRM was implemented. The 1994 IRM included the 1) excavation of contaminated soil located at the northeast corner of the building, on-site treatment, and replacement in the excavated areas and 2) extraction of contaminated groundwater from the shallow aquifer, on-site treatment, and discharge to Bishop Brook.

As required by the December 1994 ROD, the extraction and treatment of contaminated bedrock groundwater has been initiated. The contaminated soils from the PCB/VOC/PAH soils area have been excavated and a portion of the excavated soils were disposed off-site. As stated in this ROD amendment, the remainder of the soils excavated from the PCB/VOC/PAH soils area will be treated on-site and backfilled on site after treatment.

SECTION 5: SUMMARY OF NEW INFORMATION

Several soil borings were installed during the remedial design at the PCB/VOC/PAH soils area to define the horizontal and vertical excavation limits. Figure 3 shows the locations of the soil borings installed during the pre-excavation soil sampling. The results (summarized in Table 3) showed that the contamination was more widespread in the surface and subsurface than was predicted during the investigation. PCBs, PAHs and VOCs, particularly TCE and 1,2-DCE were detected above established background levels at several sampling locations. An area significantly contaminated with TCE was identified at the center of this area. Based on the results of this sampling event, the vertical extent of excavation was increased when compared to the estimated depth of excavation in the ROD.

The estimated volume of contaminated soils to be excavated from the PCB/VOC/PAH soils area was 500 cu.yds. but the actual volume was found to be 600 cu.yds.. Because TCE was present in the soils, it was proposed to treat the soils excavated from this area by "Mechanical Volatilization process (MVP)" to remove the volatiles. This process was utilized at the site and found to be successful in remediating the TCE contaminated soil from the area located at the northeast corner of the manufacturing building.

The sampling done after the completion of excavation showed that a portion of the soil was contaminated with PAHs and TCE above cleanup goals and another portion had PAH contamination above cleanup goals. These two soil portions cannot be treated by MVP and therefore were disposed off-site. The remainder of the soils can be treated by MVP. The total cost of the project will be changed (decreased) because of the on-site treatment of some of the soils excavated from the PCB/VOC/PAH soils area compared to the cost estimated in the original ROD.

USEPA guidance states that a ROD amendment shall be done if there is fundamental change in the original remedy. The original ROD stated that all the soils excavated from the PCB/VOC/PAH soils area (approximately 500 cu.yds.) would be disposed off-site, whereas now only 350 cu.yds. were disposed off-site and 250 cu.yds. would be processed on-site by MVP. Although the Department does not consider the resulting volume or cost changes to represent a "fundamental" change in the original remedy, the change from off-site disposal to on-site treatment in general would be a fundamental change. In this case, a limited number

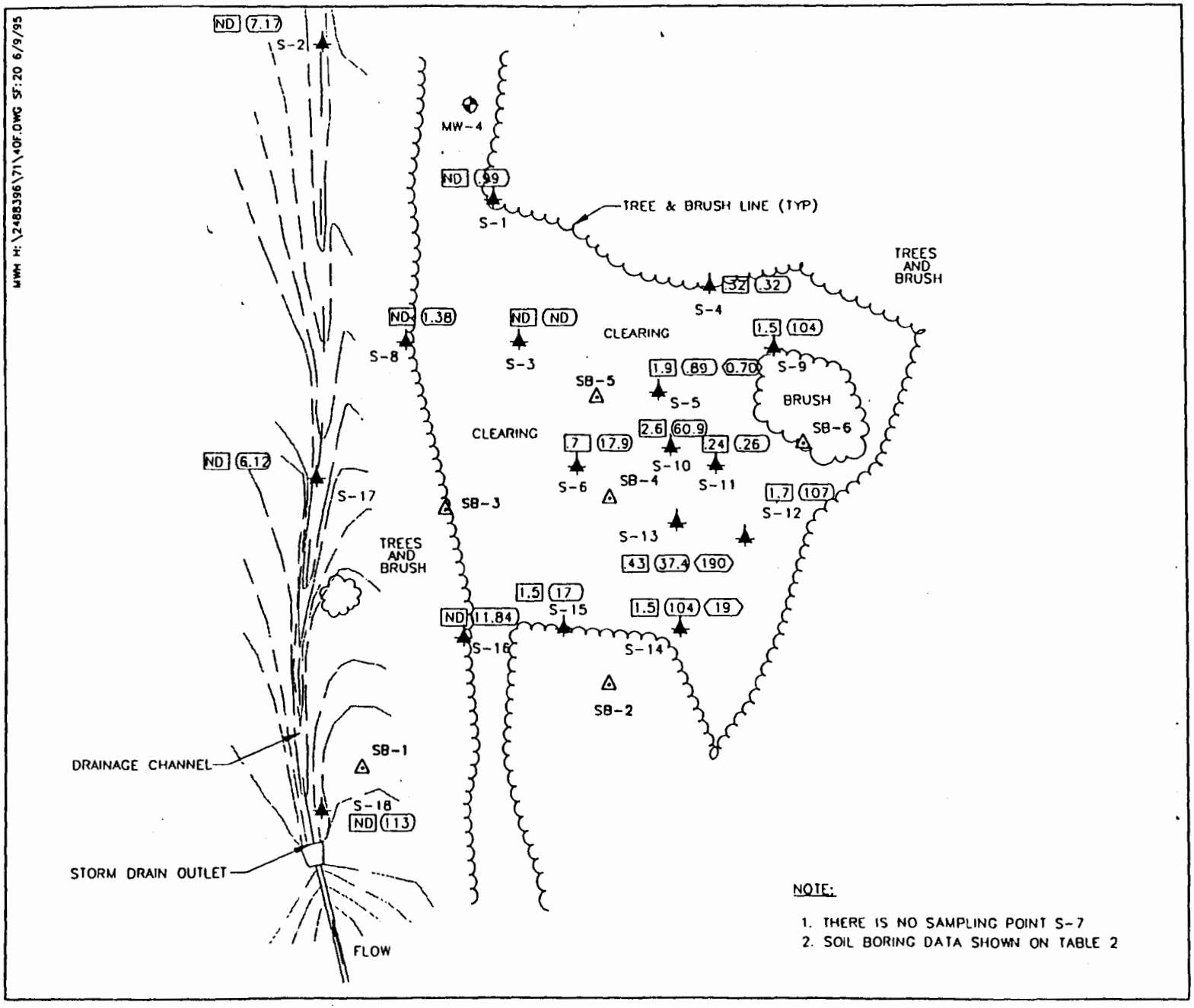


FIGURE 3

LEGEND

- (0.70) TOTAL VOC CONCENTRATION mg/kg (PPM)
- [1.9] PCB CONCENTRATION mg/kg (PPM)
- (.89) PAH CONCENTRATION mg/kg (PPM)
- S-1 APPROX. SOIL SAMPLING POINT
- SB-3 SOIL BORING LOCATION
- MW-4 MONITORING WELL

ACCURATE DIE CASTING
FAYETTEVILLE, NEW YORK
PCB/PAH/VOC SOILS AREA
EXCAVATION PLAN

SOIL BORING AND SURFACE SOIL SAMPLE LOCATIONS

20 0 20

APPROX. SCALE IN FEET

2488.396-40F

O'BRIEN & GERE ENGINEERS INC.

Table 3
Soil Boring Analytical Data
Delineation Sampling of March 27, 1995

Former Accurate Die Casting Site
Fayetteville, New York

Parameter (1)	Boring designation: / Sampled Interval(3): / RAO(2)	SB-1 0'-2'	SB-1 4'-6'	SB-2 0'-2'	SB-2 4'-6'	SB-3 0'-2'	SB-3 4'-6'	SB-4 0'-2'	SB-4 4'-6'	SB-5 0'-2'	SB-5 6'-8'	SB-6 0'-2'	SB-6 4'-6'
Total Polychlorinated biphenyls (PCBs)	<1 surface	*1.3*	<1	0.43	<1	<1	<1	<1	<1	<1	<1	<1	<1
	<10 subsurface												
Volatile Organic Compounds (VOCs):													
1,2-dichloroethene	<1	<.001	<.001	0.004	0.012	<.001	0.017	0.009	0.028	<.001	*1.8*	0.018	0.47
dichloromethane	<1	<.001	0.001	0.003	0.01	<.001	0.002	<.001	0.002	0.001	<1.1	<.001	<.12
toluene	<1	<.001	<.001	<.001	<.006	<.001	<.001	<.001	<.001	<.001	<1.1	<.001	<.12
trichloroethylene	<1	0.003	0.009	0.034	0.17	<.001	0.014	0.025	0.02	0.009	*54*	0.03	0.38
Total VOCs	<10	0.003	0.01	0.041	0.192	<.001	0.033	0.034	0.05	0.01	*55.8*	0.048	0.85
Polycyclic Aromatic Hydrocarbons (PAHs):													
phenanthrene	–	*24*	<.36	<.44	<.41	<.39	<.37	<.44	<.37	<.37	<.37	<.43	<.40
anthracene	–	*4.5*	<.36	<.44	<.41	<.39	<.37	<.44	<.37	<.37	<.37	<.43	<.40
fluoranthene	–	*29*	<.36	<.44	<.41	<.39	<.37	<.44	<.37	<.37	<.37	<.43	<.40
pyrene	–	*33*	<.36	<.44	<.41	<.39	<.37	<.44	<.37	<.37	<.37	<.43	<.40
benzo(a)anthracene	–	*6.4*	<.36	<.44	<.41	<.39	<.37	<.44	<.37	<.37	<.37	<.43	<.40
chrysene	–	*15*	<.36	<.44	<.41	<.39	<.37	<.44	<.37	<.37	<.37	<.43	<.40
benzo(b)fluoranthene	–	*35*	<.36	<.44	<.41	<.39	<.37	<.44	<.37	<.37	<.37	<.43	<.40
benzo(k)fluoranthene	–	*13*	<.36	<.44	<.41	<.39	<.37	<.44	<.37	<.37	<.37	<.43	<.40
benzo(a)pyrene	–	*11*	<.36	<.44	<.41	<.39	<.37	<.44	<.37	<.37	<.37	<.43	<.40
indeno(1,2,3-cd)pyrene	–	*5.5*	<.36	<.44	<.41	<.39	<.37	<.44	<.37	<.37	<.37	<.43	<.40
benzo(g,h,i)perylene	–	*6.8*	<.36	<.44	<.41	<.39	<.37	<.44	<.37	<.37	<.37	<.43	<.40
Total PAHs	Background	*183.2*	<.36	<.44	<.41	<.39	<.37	<.44	<.37	<.37	<.37	<.43	<.40

b|s:BRIAN\ACC_DIE\TAB2SOIL

Notes: (1) PCB analysis was performed using EPA Method 8080, VOC analysis using EPA Method 8010/8020, and PAH analysis using EPA Method 8270.

(2) RAO - Remedial Action Objective established by the Record of Decision dated December 1994.

(3) Refer to Figure 3 for boring locations.

(4) Results are presented in mg/kg dry weight (ppm).

(5) Sample intervals selected based on field screening results as described in the RD/RA Work Plan and represent depths below ground surface.

(6) Table only lists those compounds detected. Except for the analyses performed for VOCs on the sample collected from SB-5 (6'-8'), the detection limits achieved were less than the RAO.

(7) Italics highlight the values in excess of the RAOs.

of pre-characterization samples collected from the soil pile (250 cu.yds.) have tentatively shown contaminant levels to be below the clean up goal established for the site. However, the extent of pre-characterization sampling and analyses were not sufficient to allow determination by the Department that the soils require no further treatment and would be permitted to be spread on site. Therefore, the soils will be processed by MVP and samples will be collected after the completion of the treatment to confirm that the remedial goals have been met.

The ROD amendment was sought because the potential exists that these soils may contain some VOCs not previously detected by the pre-characterization sampling conducted to date. The Department proceeded with the process of formally amending the original ROD to maximize opportunities for public involvement.

SECTION 6: CHANGES TO THE SELECTED REMEDY

6.1: SUMMARY OF THE ORIGINAL REMEDY

The remedy selected in the December 1994 ROD included the following components:

1. The contaminated soil (approximately 500 cu.yds.) from the PCB/VOC/PAH soils area located on the north-west portion of the site will be excavated and disposed of in a permitted landfill.

2. The contaminated sludge from the septic tank located on the north-east portion of the site will be excavated and disposed of in a permitted landfill.

3. The contaminated bedrock groundwater will be extracted and treated on-site. The treated groundwater will be discharged to Bishop Brook.

4. The remediation of soil contaminated with TCE located outside the north-east corner of the building was completed as an IRM. The IRM also included the remediation of shallow groundwater remediation by extraction, on-site treatment and discharge to Bishop Brook.

5. A long-term groundwater monitoring program will be implemented to monitor the effectiveness of the groundwater (shallow and bedrock) and soil remediation program.

6.2: CHANGES TO THE ORIGINAL REMEDY

The change to the December 1994 ROD is the on-site treatment of some of the soil (approximately 250 cu.yds.) excavated from the PCB/VOC/PAH soils area rather than off-site disposal. This soil excavated from the PCB/VOC/PAH soils area will be treated on-site by MVP and the treated soil will be backfilled in the excavated areas. A topsoil cover will be placed in this area to support vegetative growth. The contaminated soils (approximately 350 cu.yds.) excavated from this area were disposed off-site in 1997.

The soils were excavated from the PCB/VOC/PAH soils area and staged into three separate covered piles. The "south" pile contained soils excavated from the surface layer and areas exhibiting PAHs above the RAOs; the "stained soils" pile contained visible stained soils; and the "north" pile contained soils from the deeper parts of the excavation that exhibited VOCs based on field screening efforts and previous soil boring investigations. A preliminary characterization of the soil piles indicated that the PAH concentration in the "south" and "stained soils" piles exceeded the cleanup goals. The three grab samples collected from the "north" pile, however, did not exhibit any contaminant above the cleanup goals. However, because the soils from the

"north" pile (250 cu.yds.) will be backfilled in the PCB/VOC/PAH soils area, it is proposed to remove any residual volatiles from these soils as much as possible by MVP. Prior to backfilling the 250 cu.yds. of soil, it will be treated by MVP. Analytical samples will be obtained after the completion of this on-site treatment to confirm the level of PCB/VOC/PAH present in the soil.

Groundwater monitoring wells have been installed to monitor the groundwater at the PCB/VOC/PAH soils area. Preliminary data indicates that the groundwater is contaminated. More studies are being conducted to obtain additional data. A decision on the remediation of the groundwater will be made in approximately six to nine months based on the additional data.

6.3 EVALUATION OF CHANGES

As required, the proposed changes to the December 1994 ROD have been evaluated against the criteria used to select remedial actions. The changes have been compared to the original remedy. The results of the evaluation are summarized below:

The first two evaluation criteria are considered "threshold criteria" and must be satisfied in order for an alternative to be considered for selection.

1. Protection of Human Health and the Environment. This criterion is an overall evaluation of the health and environmental impacts to assess whether each alternative is protective. It incorporates several of the criteria listed below with an emphasis on achieving the remediation goals described above.

The amended remedy will eliminate the risks to human health such as direct contact and inhalation of dust from contaminated soil by a combination of off-site disposal and on-site treatment of soils. The amended remedy will protect the environment by minimizing the release of contaminants from the soil into the groundwater. The contaminated groundwater at the PCB/VOC/PAH soils area will be addressed, if necessary.

The amended remedy will have the equivalent protection level of human health and the environment as stated for the original remedy.

2. Compliance with New York State Standards, Criteria, and Guidance (SCGs). Compliance with SCGs addresses whether a remedy will meet applicable environmental laws, regulations, standards, and guidance.

The implementation of the amended remedy should result in substantial compliance with all SCGs applicable for this site. The primary SCGs associated with this site are the guidance regarding soil cleanup goals, 6 NYCRR Part 372 for off-site disposal, NYSDEC's Air Guide 1 for air emissions, and the groundwater quality standards promulgated in 6 NYCRR Part 703. Part of the soil (approximately 350 cu.yds.) excavated from the PCB/VOC/PAH soils area will be disposed off-site and the remaining excavated soil will be treated on-site to achieve the established cleanup goals. If the groundwater needs to be remediated, appropriate remedial efforts will be implemented. The groundwater at the site including the PCB/VOC/PAH soils area will not achieve the groundwater standards immediately but the contaminant concentration will be reduced over time by the on-site groundwater treatment and/or natural attenuation. The standards will be achieved to the extent practicable after the completion of the treatment and/or natural attenuation of the contaminated groundwater.

The next five "primary balancing criteria" are used to compare the positive and negative aspects of each of the remedial strategies.

3. Short-term Effectiveness. The potential short-term adverse impacts of the remedial action upon the community, the workers, and the environment during construction and operation are evaluated. The length of time needed to achieve the remedial objectives is also estimated and compared with the other alternatives.

Although workers involved in the construction of the amended remedy may be exposed to contaminated media, standard precautions can mitigate exposure concerns. Dust suppression techniques will be used to prevent wind borne contaminants from leaving the site. Since groundwater in the area of the site is not used, there are no short-term impacts. The short-term effectiveness of groundwater remediation, if implemented, will be minimal because it will take several years or longer for the RAOs to be achieved.

The amended remedy will take more time to complete when compared to the original remedy but the additional time required is not significant.

4. Long-term Effectiveness and Permanence. This criterion evaluates the long-term effectiveness of alternatives after implementation of the response actions. If wastes or treated residuals remain on site after the selected remedy has been implemented, the following items are evaluated: 1) the magnitude of the remaining risks, 2) the adequacy of the controls intended to limit the risk, and 3) the reliability of these controls.

The amended remedy will treat all the contaminated soils from the site which in turn will bring the concentration of contaminants below the cleanup goal. The amended remedy is considered a permanent remedy because it will remove the contaminants from the soil and will be effective on a long-term basis.

5. Reduction of Toxicity, Mobility or Volume. Preference is given to alternatives that permanently and significantly reduce the toxicity, mobility or volume of the wastes at the site.

The amended remedy will effectively reduce the mobility and volume of the contaminants by treating the soil on-site. The mobility of the contaminants in the soil and volume of the soil will be reduced by disposing the soils off-site as stated in the original remedy. The mobility of the contaminated groundwater in the PCB/VOC/PAH soils area will be controlled by appropriate measures, if necessary.

6. Implementability. The technical and administrative feasibility of implementing each alternative is evaluated. Technically, this includes the difficulties associated with the construction, the reliability of the technology, and the ability to monitor the effectiveness of the remedy. Administratively, the availability of the necessary personnel and equipment is evaluated along with potential difficulties in obtaining specific operating approvals, access for construction, etc.

No significant obstacles are envisioned for implementing the amended remedy. Mechanical volatilization was used at the site to remediate the TCE contaminated soils located at the northeast corner of the manufacturing building and was found to be successful.

7. Cost. Capital and operation and maintenance costs are estimated for each alternative and compared on a present worth basis. Although cost is the last balancing criterion evaluated, where two or more alternatives have met the requirements of the remaining criteria, cost effectiveness can be used as the basis for the final decision.

The costs presented below are based on revised volumes of soil to be excavated from the PCB/VOC/PAH soils area.

Soil estimated for excavation in original remedy	- 500 cubic yards
Actual Volume of Soil excavated (amended remedy)	- 600 cubic yards

The estimated total costs for the entire project, including the IRMs and other remedial efforts completed at the site under the original remedy, and amended remedy are presented below. These estimates include the costs for design, administration and contingencies. The estimate in the original ROD took into account only 500 cu.yds. of soil from the PCB/VOC/PAH soils area and therefore, a re-estimate of the original ROD was made using the same calculations for 600 cu.yds. of soil from the PCB/VOC/PAH soils area. The current estimate is based on the recently obtained costs for off-site disposal and on-site treatment.

ROD estimate of the **CAPITAL COST**	**-$1,850,000**
(including 500 cu.yds. of soil - off-site disposal)	
Re-estimate of the ROD **CAPITAL COST**	**-$1,916,700**
(including 600 cu.yds. of soil - off-site disposal)	
Current Estimate of the **CAPITAL COST**	**-$1,654,250**
(Combination of off-site disposal and on-site treatment)	
(350 cu.yds. for off-site disposal and 250 cu.yds. for on-site treatment)	

This final criterion is considered a modifying criterion and is considered after evaluating those above. It is focused upon after public comments on the proposed ROD amendment have been received.

8. Community Acceptance - A public meeting was held on September 9, 1997 to present the Amended Record of Decision. No one from the public attended this meeting and the Department did not receive any written comments during the comment period which ended on September 24, 1997.

SECTION 7: COMPONENTS OF THE AMENDED REMEDY

The estimated present worth cost to carry out the amended remedy is $3,637,153. The estimated present worth to complete the original remedy was $3,832,903. The cost to construct the amended remedy is estimated to be $1,654,250 and the estimated average annual operation and maintenance cost for 30 years is $76,250.

Designation of a Corrective Action Management Unit (CAMU)

In order to complete the amended remedial action, it will be necessary to designate a portion of the Site as a Corrective Action Management Unit (CAMU). A CAMU is an area at the facility that is approved by the NYSDEC for the purpose of managing and implementing the treatment requirements of the chosen remedial action. A CAMU is based upon federal regulations and promotes the use of on-site treatment of contaminated soil. Without the use of this mechanism, the treated soil could not be placed back into the ground on-site even after contaminants are removed. Use of a CAMU promotes on-site remediation and reduces off-site disposal. It avoids the large cost disincentive that drives responsible parties towards leaving contaminates in the ground to escape incurring large remedial costs. Therefore, based upon the results of the remedial investigation, the Feasibility Study and achievement of the Remedial Action Objectives, 10,000 sq. ft. of the PCB/PAH/VOC soils area (Area 1) has been designated as a CAMU for site remediation purposes. It will consist of an area, where the treated soil will be spread and covered after treatment, located east of the storm

water sewer outlet, which exists in the northwest portion of the site, and east of the channel that extends from the outlet north toward the Bishop Brook. Figure 2 shows the area (CAMU) where the treated soil will be placed.

The elements of the amended remedy are as follows:

1. A remedial design program to verify the components of the conceptual design and provide the details necessary for the construction, operation and maintenance, and monitoring of the remedial program.

2. The contaminated soil from the PCB/VOC/PAH soils area located on the northwest portion of the site have been excavated and staged. This task was completed in October 1995. Visibly stained soils (approximately 90 cu.yds.) and soils contaminated with PAHs (approximately 260 cu.yds.) were removed and disposed of in an off-site landfill in March 1997. The remaining soils (approximately 250 cu.yds.) will be treated on-site and backfilled in this area.

3. The contaminated sludge from the septic tank located on the north-east portion of the site has been excavated and disposed of in a permitted landfill. This task was completed in June 1995.

4. The contaminated bedrock groundwater will be extracted and treated on-site. The treated groundwater will be discharged to Bishop Brook. This task was started in January 1996.

5. The remediation of soil contaminated with TCE located outside the northeast corner of the building (area 2) was completed as an IRM in June 1994. The IRM also included the remediation of shallow groundwater which was started in February 1996.

6. A long-term groundwater monitoring program will be implemented to monitor the effectiveness of the groundwater (shallow and bedrock). The monitoring program is in progress.

Note: Confirmatory soil samples obtained from the saturated zone in the PCB/VOC/PAH soils area show TCE levels above cleanup standards. Groundwater monitoring wells have been installed to monitor groundwater in the PCB/VOC/PAH soils area. Preliminary data indicates that the groundwater is contaminated. More studies are conducted to obtain additional data. A decision on the remediation of the groundwater will be made in approximately six to nine months based on the results of the additional data.

SECTION 8: HIGHLIGHTS OF COMMUNITY PARTICIPATION

A Citizen Participation Plan was prepared for this site in December 1993 detailing the citizen participation activities that have been carried out during the course of this project. A mailing list was established for this site. The Village of Fayetteville Clerk's office was established as the site's document repository along with NYSDEC offices in Syracuse and Albany. All the copies of the site related reports and documents were placed in the document repository for public review.

A public notice inviting public comment on the IRMs to be implemented was mailed in April 1994 to the residents of the mailing list and a public meeting was held on April 26, 1994 to present the details of the IRM and to receive public comment. The public comment period established for the IRM ended on May 6, 1994. A responsiveness summary and a Decision Document was prepared for the IRM which are available at the document repository for review. The Decision Document was executed by NYSDEC in May 1994. This document contained the details of the 1994 IRM, the evaluation of the remedial technologies and the

rationale for the selection of remedial alternative to address the IRM issues. A copy of this document is included in the Administrative Record of this site.

A public notice inviting public comment on the Proposed Remedial Action Plan was mailed in **September 1994,** and a public meeting was held on **September 26, 1994** to present the details of the Proposed Remedial Action Plan and to receive public comment. A 30 day comment period was in effect from September 12, 1994 thru October 14, 1994. The ROD was signed in December 1994.

A public notice inviting public comment on the Proposed ROD amendment was mailed in **August 1997** to the residents on the mailing list. This public notice provided the details of the site, investigations done to date and the details of the amendment to the original 1994 ROD.

A public meeting was held on **September 9, 1997** to present the details of the amended remedy and to receive public comment. The 30-day public comment period established for this ROD amendment ended on September 24, 1997. No one from the public attended this meeting and the Department did not receive any written comments during the comment period. The Amended ROD was executed by NYSDEC in September 1997. This document contains the details of the amendment, the evaluation of the remedial technologies and the rationale for amending the 1994 ROD. A copy of this document is included in the Administrative Record of this site.

APPENDIX A

RESPONSIVENESS SUMMARY

ACCURATE DIE CASTING INACTIVE HAZARDOUS WASTE SITE

AMENDED RECORD OF DECISION

SEPTEMBER 1997

RESPONSIVENESS SUMMARY
ACCURATE DIE CASTING SITE

The Accurate Die Casting site is located on a 32-acre parcel at 547 East Genesee Street in the Village of Fayetteville, New York. The site includes parking areas adjacent to the main building, a wooded area to the north, scrub growth to the east, and a lawn to the south. At the northern edge of the site, there is a steep embankment adjacent to Bishop Brook, which flows from east to west. Bordering properties include residential areas to the east and west and commercial properties to the south along East Genesee Street.

A series of investigations conducted at the site showed contamination in groundwater and soil. The primary contaminant found is trichloroethylene (TCE), a volatile organic compound. Based on the findings of preliminary investigations, three Interim Remedial Measures (IRM) were implemented at the site. They were: 1) approximately 70 drums found at the site after foreclosure and located inside the building had their contents identified and were then disposed, 2) the sludge from the TCE degreaser system was removed and the system was decontaminated, 3) the TCE free product pool which was discovered above the water table outside the northeast corner of the building was pumped until no free product was found in samples and the TCE was disposed.

Based on the results of the detailed investigations, an additional IRM was implemented at the site. The components of the IRM are: 1) remediation of soil contaminated with TCE and 2) remediation of shallow groundwater contaminated with TCE. A public meeting was held on April 26, 1994 to present the details of the IRM and the public comment period established for the IRM ended on May 6, 1994. A responsiveness summary and a decision document was prepared for the IRM which are available at the document repository for review.

A public meeting was held on September 26, 1994 to present the details of the Proposed Remedial Action Plan and to receive public comment. The 30 day comment period ended on October 14, 1994. The ROD was signed in December 1994. The selected remedy in the ROD for the site involves the excavation of the contaminated soil from area 1 (Figure 2) and sludge from the septic tank for off-site disposal. The excavated areas will be filled with clean soil. The bedrock groundwater will be extracted and treated on-site. The treated groundwater will be discharged to Bishop Brook.

The 1994 ROD called for the excavation and off-site disposal of all contaminated soils from the PCB/VOC/PAH soils area. The soil excavation in this area was completed in October 1995. The actual volume of contaminated soil excavated from this area is 600 cubic yards (cu.yds.) compared to 500 cu.yds. estimated in the ROD. This is approximately a 20 % volume increase. To address the increased volume of soil cost-effectively, it was proposed to treat some of the contaminated soil (approximately 250 cu.yds.) excavated from this area by a "mechanical volatilization" process and dispose of the treated soil on-site. The remaining 350 cu.yds of soil could not be treated on-site and was be disposed off-site in 1997 as called for in the 1994 ROD. The Department amended the 1994 ROD because some of the contaminated soils from the PCB/VOC/PAH soils area will be treated on-site rather than off-site disposal and to maximize opportunities for public involvement.

A public meeting was held on September 9, 1997 to present the details of the amended remedy and to receive public comment. The 30-day public comment period established for this ROD amendment ended on September 24, 1997. No one from the public attended this meeting and the Department did not receive any written comments during the comment period. The Amended ROD was executed by NYSDEC in September 1997. This document contains the details of the amendment and the rationale for amending the 1994 ROD. A copy of this document is included in the Administrative Record of this site.

APPENDIX B

ADMINISTRATIVE RECORD

ACCURATE DIE CASTING INACTIVE HAZARDOUS WASTE SITE

AMENDED RECORD OF DECISION

SEPTEMBER 1997

Reports:

Summary Report, Phase II Environmental Assessment and Remediation Efforts, Stearns & Wheler, September 1990.

Volume I - Report, Volume II - Appendix A
Volume III - Appendix B-G (Appendix B is the Phase I report)

Summary Report, TCE Free Product Recovery, Stearns & Wheler, April 1991.

Summary Report, Investigation and Characterization of Sub-Slab Systems, Stearns & Wheler, August 1991.

Remedial Investigation/Feasibility Study Work Plan, Stearns & Wheler, May 1992.

Draft Remedial Investigation Report, Stearns & Wheler, January 1993.

Citizen Participation Plan, NYSDEC, December 1993.

Final Remedial Investigation Report, Stearns & Wheler, February 1994.

IRM Work Plan, O'Brien & Gere, May 1994.

IRM Decision Document, NYSDEC, May 1994.

Feasibility Study Report, O'Brien & Gere, August 1994.

Proposed Remedial Action Plan, NYSDEC, September 1994.

Record of Decision, NYSDEC, November 1994.

Consent Orders:

Consent Order Agreement between NYSDEC and ITT Commercial Corporation to implement the IRMs at the site, September 1990.

Consent Order Agreement between NYSDEC and ITT Commercial Corporation to implement the RI/FS at the site. August 19, 1991.

Amendment to the RI/FS Consent Order Agreement between NYSDEC and ITT Commercial Corporation to implement the 1994 IRMs at the site. June 6, 1994.

Correspondence:

REMEDIAL INVESTIGATION AND FEASIBILITY STUDY

Comment letter from V. Nattanmai (DEC) to N. Wood (ITT) on the Phase II Environmental Assessment Report. November 6, 1990.

Work Plan (Scope of Work) prepared by NYSDEC for the full-scale RI/FS.

Letter from V. Nattanmai (DEC) to N. Wood (ITT) to implement the RI/FS. March 4, 1991.

Comment letter from V. Nattanmai (DEC) to T. Hineline (Stearns & Wheler - SW) on RI/FS Work Plan. November 15, 1991.

Response letter from T. Hineline (SW) to V. Nattanmai (DEC) on RI/FS Work Plan. December 17, 1991.

Comment letter from V. Nattanmai (DEC) to T. Hineline (SW) on draft RI report. March 30, 1993.

Response letter from T. Hineline (SW) to V. Nattanmai (DEC) on draft RI report. May 7, 1993.

Comment letter from V. Nattanmai (DEC) to T. Hineline (SW) on responses to the DEC's comments on the draft RI report. June 7, 1993.

Letter from T. Hineline (SW) to V. Nattanmai (DEC) on additional field work for the RI. June 30, 1993.

Comment letter from V. Nattanmai (DEC) to T. Hineline (SW) on final RI report. January 12, 1994.

Response letter from T. Hineline (SW) to V. Nattanmai (DEC) on final RI report. February 25, 1994.

Comment letter from V. Nattanmai (DEC) to T. Hineline (SW) on draft FS report. April 26, 1994.

Response letter from J. Heckathorne (O'Brien & Gere - OBG) to V. Nattanmai (DEC) on draft FS report. May 4, 1994.

Letter from J. Heckathorne (OBG) to V. Nattanmai (DEC) on the revisions to be done in the draft FS report. May 27, 1994.

Comment letter to J. Heckathorne (OBG) from A. English (DEC) on the final FS report. July 6, 1994.

Response letter from D. Towers (OBG) to V. Nattanmai (DEC) on the revisions to be done in the final FS report. August 11, 1994.

1994 INTERIM REMEDIAL MEASURES

Comment letter from V. Nattanmai (DEC) to T. Brown (OBG) on the IRM Work Plan. August 20, 1993.

Comment (additional comments) letter from V. Nattanmai (DEC) to T. Brown (OBG) on the IRM Work Plan. November 5, 1993.

Letter from J. Heckathorne (OBG) to V. Nattanmai (DEC) to clarify some of the issues of the IRM work Plan. November 22, 1993.

Response letter from V. Nattanmai (DEC) to J. Heckathorne (OBG) to November 22 letter on the IRM Work Plan. December 8, 1993.

Letter from J. Heckathorne (OBG) to V. Nattanmai (DEC) on the revisions to be done on the IRM work Plan. January 14, 1994.

Comment letter from V. Nattanmai (DEC) to J. Heckathorne (OBG) on the first round of revisions to the IRM Work Plan. February 9, 1994.

Letter from J. Heckathorne (OBG) to V. Nattanmai (DEC) on additional revisions to be done on the IRM work Plan. March 2, 1994.

Memorandum from S. Mitchell (DEC) to V. Nattanmai (DEC) on wastewater discharge limits. December 2, 1993.

Letter from J. Heckathorne (OBG) to V. Nattanmai (DEC) on wastewater discharge limits. March 28, 1994.

Letter from V. Nattanmai (DEC) to J. Heckathorne (OBG) requesting for additional information on the IRM Work Plan. March 24, 1994.

Memorandum from S. Mitchell (DEC) to V. Nattanmai (DEC) on revised wastewater discharge limits. March 28, 1994.

Response letter from J. Heckathorne (OBG) to V. Nattanmai (DEC) on the additional information for the IRM Work Plan. March 28, 1994.

Letter from V. Nattanmai (DEC) to J. Heckathorne (OBG) IRM issues discussed during the April 7, 1994 meeting. April 14, 1994.

Response letter from J. Heckathorne (OBG) to V. Nattanmai (DEC) on the IRM issues discussed during the April 7, 1994 meeting. April 26, 1994.

Letter from V. Nattanmai (DEC) to J. Heckathorne (OBG) on the responses towards the IRM issues discussed during the April 7, 1994 meeting. May 3, 1994.

Letter from V. Nattanmai (DEC) to J. Heckathorne (OBG) on the final revisions to the IRM Work Plan. May 23, 1994.

1997 ROD AMENDMENT

Results of the subsurface soil samples collected from the PCB/VOC/PAH soils area and the figure showing the locations of the samples.

Results of the soil samples collected from the three soil piles (north, south and highly contaminated) excavated from the PCB/VOC/PAH soils area.

Letter from Terry L. Brown, OBG Tech. to A.S. Nagi, NYSDEC requesting the Department to amend the 1994 ROD.