2021 Hazardous Waste Scanning Project

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Final Engineering Report/Post-Construction Summary Report

Soil and Ground Water Remediation Project

Scott Aviation
Lancaster, New York

July 1996

O'BRIEN & GERE
ENGINEERS, INC.

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1. Introduction

1.1. General

The purpose of this report is to document compliance with Order on Consent #B9-0377-95-05, which was entered into between Figgie International, Inc. (Figgie International) and the New York State Department of Environmental Conservation (NYSDEC) on or about October 11, 1995, pertaining to the area operated by Scott Aviation (a division of Figgie International), located west of Plant #2, at 25 Walter Winter Drive in Lancaster, New York (Figure 1) (herein referred to as the "Site"). The Order on Consent was issued subsequent to Figgie International's completion of a Remedial Investigation (RI) and Feasibility Study(FS) at the Site under a prior Consent Order, the results of which indicated that soil and ground water contained volatile organic compounds (VOCs) in excess of NYSDEC soil and ground water guidance values. Based on the results of the RI/FS, the NYSDEC prepared a Record of Decision (ROD) requiring that remedial actions be initiated to address soils and ground water on site.

The ROD, dated November 7, 1994, established Remedial Action Objectives (RAOs) for both the soil and ground water at the Site, as follows:

Table 1-1. *Remedial action objectives.*

Media	Parameter	RAO
Soil	Total VOCs	<10 mg/kg
	Each individual VOC	<1 mg/kg
Ground water	Chloroethane	<5 μg/l
	1,1-dichloroethane	<5 μg/l
	1,2-dichloroethene (total)	<5 μg/l
	1,1,1-trichloroethane	<5 μg/l
	Trichloroethene	<5 μg/l

Table 1-1. *Remedial action objectives (Continued).*

Media	Parameter	RAO
Ground water	Vinyl chloride	<5 µg/l
	Ethylbenzene	<5 µg/l
	Toluene	<5 µg/1
	Xylene	<5 µg/l

As required by the terms of the Order on Consent, to achieve these RAOs, Figgie International excavated and processed soils containing VOCs above clean-up objectives, and constructed a ground water collection trench and treatment system, as described in the ROD and RD/RA Work Plan dated September 1995 which was subsequently incorporated into the Order on Consent. Under the Order on Consent, the following remedial action construction documents were completed and submitted for NYSDEC approval:

- Contract Plans and Specifications
- Construction Quality Assurance Plan (CQAP)
- Health and Safety Plan (HASP)

Following NYSDEC approval of these documents by a letter dated September 29, 1995, remedial actions were initiated at the Site in compliance with the ROD, as amended, these documents, and the Order on Consent, as described in this report.

Section II.C of the Order of Consent requires a "Final Engineering Report" to be submitted to the NYSDEC upon the completion of on-site remedial activities. Section 6.5 of the NYSDEC approved Remedial Work Plan, which is Appendix B of the Order on Consent, requires a "Post Construction Summary Report" to be submitted to the NYSDEC at this time. Although the nomenclature is different, the "Final Engineering Report" and the "Post Construction Summary Report" are intended to be one and the same document. This report constitutes both the "Final Engineering Report" and the "Post Construction Summary Report". For ease of reference, the report is sometimes referred to as "Summary Report".

1.2. Report organization

For convenience, the Summary Report is divided into six sections. Section 2 presents a chronology of benchmark events and background information regarding the Site. Section 3 describes the remedial actions completed at the Site as required by the Contract Plans and Specifications, and presents the results of verification sampling conducted pursuant to the requirements of the CQAP. Section 4 describes the HASP monitoring activities that were conducted during the completion of the remedial actions. Section 5 presents the operation and maintenance requirements for the ground water remediation system. Based on these sections, conclusions and recommendations, as well as the required professional engineer certification, are presented in Section 6.

2. Background

2.1. General

This section provides background information pertaining to the Soil and Ground Water Remediation completed west of Plant #2 (Figure 2) at the Scott Aviation Site in Lancaster, New York. Included is a chronology of benchmark events, and data resulting from the RI.

2.2. Benchmark events chronology

Presented below is a chronology of key events, correspondence, and activities that occurred pertaining to the remedial investigation and actions completed at the Site.

Date	Description
4/91	Figgie International decommissioned, removed and disposed the underground storage tank (UST) from which solvents had been released.
7/9/92	Figgie International, at the request of the NYSDEC, entered into an RI/FS Order on Consent with the NYSDEC and initiated an RI at the Site in the area where the former UST was located (Figure 2).
11/93	Figgie International submitted the final RI Report to the NYSDEC for approval.
12/13/93	The NYSDEC approved the RI Report.

3/18/94	Figgie International submitted the final Feasibility Study (FS) Report to the NYSDEC for approval.
8/29/94	The NYSDEC approved the FS Report.
8/94	The NYSDEC issued the Proposed Remedial Action Plan (PRAP) for public review and comment.
9/14/94	The NYSDEC hosted a Public Meeting to review the PRAP and address questions/comments pertaining to the Site.
11/7/94	The NYSDEC finalized a Record of Decision (ROD) indicating that ground water remediation at the Site would be completed by constructing a ground water collection trench and treatment system, and soil remediation would be completed by excavating the soils containing levels of VOCs above the RAOs and treating the soil on-site using an *ex situ* soil vapor extraction system.
12/22/94	Figgie International, via a letter from The Law Offices of Theodore Hadzi-Antich, requested that the NYSDEC assess the feasibility of using a Mechanical Volatilization System (MVS) to treat soils, as proposed by O'Brien & Gere Engineers, Inc., in lieu of an *ex situ* soil vapor vacuum extraction system.
2/17/95	Figgie International submitted the MVS Technology Evaluation Report dated February 1995 to the NYSDEC for review. At the request of the NYSDEC, the Report presented additional information about the MVS process and provided information to supplement the Feasibility Study in an effort to obtain NYSDEC approval of the alternate approach proposed for soil remediation at the Site.
4/19/95	The NYSDEC issued a ROD Amendment allowing the use of the MVS process for soils treatment in lieu of the *ex situ* soil vapor extraction method.
9/7/95	Final submittal of the Remedial Design/Remedial Action (RD/RA) Work Plan to the NYSDEC. The RD/RA Work Plan was subsequently incorporated into the RD/RA Order on Consent #B9-0377-95-05.

9/29/95	NYSDEC approved the Remedial Design.
10/95	Order on Consent #B9-0377-95-05 was executed and became effective requiring Figgie International to initiate and complete remedial actions at the Site in compliance with the ROD, as amended on April 19, 1995, and the RD/RA Work Plan dated September 1995.
10/2/95	On-site excavation associated with the Remedial Action was initiated.
11/21/95	The Buffalo Sewer Authority and Erie County Department of Environment and Planning jointly issued Scott Aviation a Buffalo Pollutant Discharge Elimination System (BPDES) permit to temporarily discharge water removed from the excavation during construction, following treatment using bag filters and granular activated carbon (GAC), to the sanitary sewer (Permit #95-11-TP025).
12/8/95	The results of soil excavation and final soil verification sampling, performed in connection with the soil remediation activities, were submitted to the NYSDEC for review. Based on the data, NYSDEC approval was requested to backfill the excavation.
12/11/95	The NYSDEC provided written approval to backfill the excavation. Backfill of the excavation was completed on December 19, 1995.
12/14/95	The Buffalo Sewer Authority and Erie County Department of Environment and Planning jointly issued Scott Aviation a final BPDES permit to discharge effluent from the air stripper to the sanitary sewer (Permit # 96-01-E4045). This permit became effective on February 15, 1996.
12/22/95	Site restoration activities in the areas where the soil processing equipment and soil stockpiles were located, not including placement of topsoil and seed, was conducted based on Pre-Restoration verification sampling.

3/1/96	Start-up and testing of the Ground Water Recovery and Treatment systems. Pursuant to the CQAP, influent and effluent water streams to the air stripper were sampled and analyzed for VOCs. As required by the permit issued for discharge to the sanitary sewer (Permit # 96-01-E4045), the effluent was also analyzed for pH, Total Extractable Hydrocarbons and Total Suspended Solids.
5/17/96	Substantial completion of on-site remedial actions.
6/14/96	Notice of Completion sent to the NYSDEC.

2.3. Remedial investigation conclusions

In accordance with the requirements of an Administrative Order on Consent entered into by Figgie International and the NYSDEC, a RI was conducted by Versar, Inc. on behalf of Figgie International. The purpose of the RI was to characterize the nature and extent of VOCs in soil and ground water and to identify potential pathways of VOC migration. The field activities of the RI were conducted at the Scott Aviation Site in Lancaster, NY during October and November 1992.

The RI field activities consisted of a soil gas survey, the sampling and analysis of the surface water and stream sediments of the unnamed stream, the installation of two additional ground water monitoring wells, the analysis of ground water samples from a total of six monitoring wells (two rounds), the installation of seven soil borings, the collection of ten subsurface soil samples, the collection of six surface soil samples, a residential well survey, a utilities survey, a habitat based assessment, and an air pathways analysis. Table 1 provides construction details of the monitoring wells and the historic water levels within the wells. The approximate locations of soil borings and monitoring wells installed during the RI field activities are shown on Figure 2.

Field activities, conducted during the RI, confirmed the presence of VOC impacted subsurface soils in the area of the former UST. Soil samples were collected from test boring SB-5 at depths of 0-2 feet, 10-12 feet, 14-16 feet, and 16-18 feet to provide information regarding contaminant migration in the

vertical direction in the vicinity of the former UST. Based on total VOC concentrations detected in the soil samples collected from test boring SB-5, shown on Table 2, soil contamination increased with depth. The subsurface soil contamination extended laterally to MW-4, located west of the former waste storage area near the property boundary. A summary of the results of the analyses performed on soil borings surrounding the former waste storage area is also represented on Table 2. An evaluation of soil partitioning indicated that VOC residues in the subsurface soil were a possible continuing source of ground water impact. Remediation of subsurface soils in the source area was identified as an available mitigation technique for minimizing further ground water degradation.

Based on the RI, VOCs were also detected at levels above NYSDEC ground water quality standards in the ground water in on-site and off-site wells as presented in Table 3. The VOCs detected in the ground water were consistent with those found in the subsurface soil. The hydraulic data revealed that the hydraulic conductivity in the vicinity of M-4, as shown in Table 4, was approximately 6.7×10^{-5} cm/sec indicating that the ground water in the vicinity of MW-4 traveled at approximately 0.18 ft/day in a west-northwesterly direction. Due to the direction and low velocity of ground water travel, and based on the available water quality data, it was concluded during the RI that VOCs in ground water were present in only a limited area.

3. Remedial actions completed

3.1. General

This section describes the remedial actions completed at the Site as required by the Contract Documents and Drawings, and presents the results of verification sampling conducted pursuant to the requirements of the CQAP. For convenience, this section describes the ground water recovery and treatment system and the soil remediation actions separately.

3.2. Ground water recovery and treatment system

In accordance with the ROD, a 200 foot long ground water recovery trench was constructed in the location shown on Figure 3. The bottom of the trench is approximately 25 feet below the ground surface. The top 20 feet of the trench consists of processed soils meeting the RAOs established for the Site. Below the processed soil is five feet of rounded pea gravel from off-site. The pea gravel is surrounded by a geotextile to retard the migration of fine soil particles into the gravel void spaces. At the bottom of the trench is a 6" slotted HDPE pipe into which the ground water flows. The slotted pipe is placed with a slope of approximately .01 ft/ft toward a ground water collection manhole (wet well) located at the north end of the trench. From the manhole, the water is pumped using a submersible sump pump to the ground water treatment building located beside Plant No. 2 (Figure 3).

The ground water treatment system consists of a low-profile shallow tray air stripper housed inside a ground water treatment building. The air stripper is sized for flow rates up to 30 gpm and for an air flow rate of approximately 300 cfm. In addition to the air stripper, two 750 lb vapor phase granular activated carbon (GAC) units for treating exhaust from the air stripper are located inside the treatment building. The treated water from the air stripper is discharged under a BPDES permit to the publicly owned treatment works

(POTW) sanitary sewer located in the Erie Street right-of-way. A ground water recovery and treatment system process schematic is presented on Figure 4.

Construction of the ground water collection and treatment system was completed during the month of February 1996 and startup occurred on March 1, 1996. Upon starting the system, influent and effluent samples were collected and analyzed for VOCs to evaluate operating conditions and treatment efficiency in accordance with Section 4.4 of the CQAP. The effluent was also analyzed for pH, total suspended solids, and oil and grease in compliance with the BPDES permit. The results of start-up influent and effluent water quality analyses are presented in Table 5.

The total VOC concentrations were calculated for the treatment system influent and effluent for the parameters listed on the BPDES discharge permit. Based on these concentrations, the air stripper provides a removal efficiency of greater than 99.3%. Based on these removal efficiencies, the VOC loading to the off-gas GAC filters was calculated at approximately 0.41 lbs/day. Also, the calculated daily discharge loading for each parameter to the sanitary sewer was less than the respective BPDES permit limit for that parameter. The results of the analyses of the effluent for pH, total suspended solids, and oil and grease were also compliant with the BPDES discharge permit.

3.3. Soil remediation actions

Pursuant to the modifications to the ROD dated April 12, 1995, on-site soils containing VOCs were excavated and treated on Site using a mechanical volatilization system (MVS). The MVS consisted of a screening plant and hammermill shredder that mechanically pulverized and aerated soil which was amended with pulverized quick lime as shown on Figure 5. Volatilization of the VOCs from the soils occurred as a result of the sieving and pulverizing actions which increased the surface area of soils exposed to the air, and also as a result of heat generated by the reaction of lime with moisture in the soil. Figure 6 depicts the location of the MVS equipment and soil stockpiles on Site during remediation activities.

Soils excavation and processing. As soil was removed from the excavation area, it was staged in approximately 200 cy piles. The soil piles were

numbered one through 28. Two pretreatment samples were collected from each 200 cy soil pile prior to processing and two more samples were collected following each pass through the MVS in accordance with Section 4.2 of the CQAP. The samples were analyzed for VOCs using either EPA methods 8010/8020 as proposed in the CQAP, or EPA Method 8240 as approved by the NYSDEC and confirmed by the letter from O'Brien & Gere to the NYSDEC dated October 9, 1995. The results of the pretreatment and post treatment soil processing results are summarized in Table 6.

Based on the results of the post-treatment sample analyses, it was necessary to reprocess five piles through the MVS at least one additional time, and one of these piles had to be processed a third time to achieve the clean-up objectives in accordance with Section 4.2 of the CQAP. A summary of piles which required additional processing is presented in the following table.

Table 3-1. *Soils processing summary.*

	Amount treated	Processed 1 time	Processed 2nd time	Processed 3rd time	Verified clean
Number of Piles:	28	28	5 (Piles 1, 2, 6, 7 and 14)	1 (Pile 2)	28
Approximate Volume	5,600 CY	5,600 CY	1,000 CY	200 CY	5,600 CY
Percentage of Total	-	100%	18%	4%	100%

Post-excavation sampling. Following completion of the excavation to the limits practicable, verification sampling was conducted in accordance with Section 4.3 of the CQAP and the verification sampling plan established by Contract Drawing Sheet G-6. As required by Contract Drawing Sheet G-6, verification samples were collected at the nodes of a 30 feet square grid within the horizontal limits of the excavation. Additional samples were also collected in other locations as requested by the NYSDEC.

Based on the analytical results of the initial and intermediate rounds of verification sampling excavation was continued, in accordance with Section 4.3 of the CQAP, to the final limits shown on Figure 7 and Figure 8. Final verification results demonstrating achievement of the RAOs, to the extent possible, are also summarized and shown on Figure 7 and in Table 7.

Backfilling. On December 8, 1995 a letter was submitted to the NYSDEC requesting permission to backfill the excavation. The letter presented the

horizontal and vertical limits of the excavation, as shown on Figure 7, and provided the results of the final round of verification sampling and analyses for each post-excavation sample collection point. Based on the data presented, the NYSDEC, on December 11, 1995, provided Figgie International approval to backfill the excavation using soil processed on-site and verified, in accordance with Section 4.2 of the CQAP, as not containing VOCS above the RAOs. Backfilling activities were subsequently initiated and completed on December 19, 1995.

Demobilization. Upon completing the backfilling activities, the surfaces of the MVS equipment staging area and soil stockpile areas were scraped to remove material that may have been in contact with soils containing VOCs above the RAOs. The soils scraped from the surfaces were processed through the MVS with soil pile no. 28.

Afterwards, pre-restoration verification samples were collected from the locations shown on Figure 6, in accordance with the letter from the NYSDEC dated December 6, 1995. The samples were analyzed for VOCs using EPA Method 8010/8020 and the results are summarized in Table 7.

4. Health and safety monitoring

4.1. General

This section presents a discussion of the health and safety monitoring activities which were performed on site during construction, in compliance with the HASP dated September 1995 as revised on September 20, 1995. Based on an evaluation of soil monitoring results prior to construction, the HASP identified VOC compounds which were present at levels representing a potential health hazard to site personnel or the public including 1,1,1-trichloroethane, 1,1-dichloroethane, trichloroethylene, 1,2-dichloroethylene, and vinyl chloride. At the request of the New York Sate Department of Health (NYSDOH), toluene, xylene, and ethylbenzene were also identified as potentially hazardous VOC compounds on site.

As required by the NYSDOH and the HASP, air sampling in both the work space and along the fenceline was performed to monitor exposures to VOCs and dust. The monitoring procedures and results are discussed as follows.

4.2. Work zone monitoring

Although the identified site hazards consisted of the VOCs listed above, real-time air monitoring was conducted for both dust and VOCs. VOC measurements were taken in the breathing zone every 15 minutes during intrusive activities with a photoionization detector (PID). Real-time VOC monitoring indicated that background concentrations in the work area ranged from zero to one ppm in the absence of any site activity.

During excavation and soil processing activities, real-time VOC readings in the work areas generally ranged from 0.6 to 3.5 ppm. VOC readings did increase at certain locations inside trenches, excavations, and manholes and generally ranged from 1.0 to 7.0 ppm requiring site personnel to periodically

don respiratory protection in accordance with the site HASP. Respiratory protection was infrequently required for site personnel and was usually worn for short durations of less than one hour.

Daily dust measurements were taken throughout the work area using a roving miniRam dust monitor. The results of the monitoring are presented in Appendix D. The dust levels measured during excavation and soil processing activities ranged between 0.00 and 9.47 mg/m^3 as noted. Dust levels above the action level of 0.15 mg/m^3 during excavation and soil processing activities occurred due to dust created by lime addition and/or machinery exhaust and did not coincide with elevated VOCs. In addition to monitoring dust levels inside the work zone, measurements were made outside the work zone to establish background levels. Real-time dust measurement for background (upwind) levels ranged widely from 0.00 mg/m^3 to 0.34 mg/m^3. In addition to fluctuating background levels, dust measurements were further complicated by engine exhaust from site equipment and lime dust while lime was being added to enhance soil processing. Real-time dust readings of 0.1 to 0.15 mg/m^3 were obtained from engine exhaust even while no invasive activities were being performed. Lime handling during soil processing also elevated dust measurements.

An oxygen/LEL meter was also used during the execution of the project, when site activities dictated that personnel enter confined spaces, to measure oxygen and explosive vapor levels prior to entry.

4.3. Community air monitoring

Real-time VOC Monitoring. Real-time VOC monitoring indicated that background concentrations along the fenceline ranged from zero to one ppm in the absence of any site activity. During excavation and soil processing, VOC levels along the downwind fenceline continued to remain at this level and were well below the 5 ppm action level established in the HASP. In addition, no reports of excessive fenceline odors were detected by site personnel or were brought to the attention of the O'Brien & Gere Technical Services, Inc. (OBG Tech) Site Safety and Health Coordinator (SSHC).

Air sampling and VOC analyses. Air sampling for the VOCs identified in Section 4.1 was conducted along the downwind fenceline using NIOSH methods 1003, 1007, 1022, 1500, and 1501. Sample locations were changed

daily so that they were positioned downwind of the construction activities. Measurements for VOCs along the fenceline were documented by air sampling data collected between October 5 and 20, 1995 using a PID, and by samples that were analyzed in a laboratory for the eight VOCs listed in Section 4.1. The fenceline air samples did not exhibit detectable levels of VOC except for three incidences (0.07, 0.1, and 0.1 ppm) for 1,1,1-trichloroethane and one incident (0.1 ppm) for trichloroethylene. These sampling results, however, were well below the site action level of 5 ppm, the OSHA Permissible Exposure Limit (PEL) of 350 ppm for 1,1,1-trichloroethane, and the OSHA PEL of 100 ppm for trichloroethylene.

Dust monitoring. Air monitoring for dust was also conducted at the downwind fenceline using a miniRam dust monitor with a datalogger. The results of the dust monitoring are recorded on the log sheets in Appendix D. Dust monitoring at the fenceline did not exhibit levels above the action level of 0.15 mg/m^3 when elevated VOCs were also detected on site or at the fenceline. The occurrence of dust levels above the action level was due to lime addition on windy days.

5. Operation and maintenance requirements

5.1. General

This section presents the operation and maintenance (O&M) requirements for the ground water remediation system and the ground water quality monitoring requirements. There are no O&M requirements in so far as the soils are concerned. The only O&M requirements apply to the ground water recovery and treatment system.

5.2. Ground water recovery and treatment system operations

The purpose of the ground water recovery and treatment system is to minimize the potential for ground water containing VOCs from leaving the Site by recovering and treating it. Proper operation of the ground water recovery and treatment system is described in the Operations and Maintenance Manual, dated March 1996, bound separately.

5.3. Ground water quality monitoring

Ground water quality monitoring shall be performed by Scott Aviation's representative in accordance with BPDES Permit #96-01-E4045. A copy of BPDES Permit #96-01-E4045 is included in Appendix D of the Operations and Maintenance Manual (March 1996).

6. Conclusions and recommendations

6.1. General

This section provides conclusions based on the soil and ground water remedial actions completed at the Site. This section also presents recommendations based on the data presented in Section 3 and the operation and maintenance requirements described in Section 5.

6.2. Conclusions

Based on the results of the remedial action activities, the following conclusions are presented:

- As depicted by Figures 7 and 8, the excavation made during the remedial actions extended both horizontally and vertically, as necessary, to enable removal of the soil exhibiting VOC levels above the RAOs. Based on the results of post-excavation verification sampling and analyses summarized in Figure 7 and Table 7, it is also documented that, to the extent practicable, the soil containing VOCs above the RAOs was removed.

- Remediation of the excavated soils containing VOCs above the RAOs was successfully completed using the MVS treatment system, as verified by the analytical results presented in Table 6.

- Based on the start up sampling and analysis data presented in Table 5, the treatment system is operating as designed to remove VOCs from the ground water to concentrations below BSA effluent limits.

6.3. Recommendations

Based on the conclusions presented, the following recommendations are offered:

- It is recommended that Figgie International operate the ground water recovery and treatment system continuously, in accordance with the Operations and Maintenance (O&M) Manual provided separately, until the level of VOCs present in the ground water monitoring wells are below the RAOs or asymptotic levels are achieved over a reasonable time where further remediation through operation of the system is not effective. As suggested in the ROD, it is anticipated that it may be possible to discontinue operation of the ground water remediation system in between 2 and 5 years, since based on the sampling and analytical results of remedial action activities, the source of VOCs in the subsurface soils has been eliminated to the extent practicable as a result of the soil remediation efforts completed in accordance with the ROD, as amended.

- As required by the NYSDEC approved O&M manual dated March 1996, performance of the ground water treatment system shall be monitored for as long as the system is in operation by collecting air stripper influent and effluent water samples, and ground water monitoring well samples at the frequencies specified, unless the O&M plan is modified with the approval of the NYSDEC. Figgie International, however, reserves the right to collect and analyze ground water quality samples more frequently and at any time in order to establish that ground water remediation has been completed to the extent practicable and/or necessary.

- Pursuant to the O&M manual, Figgie International shall provide the NYSDEC an annual report each year after the April ground water quality sampling event starting in 1997. On at least an annual occasion, subsequent to submitting each annual report, Figgie International should meet with the NYSDEC to discuss the need for continuing operation of the ground water remediation system.

6.4. Certification

Based on the results of the laboratory analyses, field notes, and Record Drawings[1] (included with this Summary Report as a separately bound document), O'Brien & Gere Engineers, Inc. hereby certifies that the Remedial Design and construction activities were completed at the Site in accordance with the NYSDEC approved Remedial Design and the Remedial Work Plan, as set forth herein.

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1 Section II.C of the Order on Consent requires "as-built" drawings to be submitted to NYSDEC, while section 6.4 of the Remedial Work Plan (which is Appendix B of the Order of Consent) requires "Record Drawings" to be submitted. The "Record Drawings" referred to herein were submitted in compliance with both provisions and are one-in-the-same set of documents.

Table 1
Soil & Ground Water Remediation
Project Summary Report
Scott Aviation
Lancaster, New York

Monitoring Well Construction Details and Historic Water Levels

Well	Well Depth From Top of Casing	Elevation TOC	Elevation BOS	Elevation Water Table Nov. 1992	Elevation Water Table Aug. 1993	Elevation Water Table Jan. 1996
MW - 1	27.1 ft	691.85	664.75 (1)	685.31	682.91	684.68
MW - 2	17.3 ft	689.48	672.18	685.85	683.52	684.75
MW - 3	27.7 ft	687.68	659.98 (1)	684.18	680.70	684.52
MW - 4	25.9 ft	687.25	661.35 (1)	684.48	681.12	684.72
MW - 5	23.1 ft	687.74	664.65 (1)	684.43	(Note 2)	(Note 2)
MW - 6	25.0 ft	687.00	658.65 (1)	683.65	680.86	684.33

Notes - (1) Based on information obtained from split spoon sampling, these wells were installed on top of the bedrock surface.
(2) Monitoring well MW-5 could not be located because it has been covered.
(3) TOC - Top of inner wall casing
BOS - Bottom of screen/well

Table 2
Soil & Ground Water Remediation
Project Summary Report
Scott Aviation
Lancaster, New York

Soil Boring Sample Analyses Results (1) Summary

Soil Boring (2)	SB-1A			SB-3A		SB-5			SB-6A				SB-7	SB-9A	
Interval Sampling (3)	10' to 12'	12' to 14'	14' to 16'	14' to 16'	16' to 18'	10' to 12'	14' to 16'	16' to 18'	0' to 2'	2' to 4'	10' to 12'	14' to 16'	16' to 18'	10' to 12'	14' to 16'
Parameter															
trichloroethylene	U	6.3	22	72	100	U	200	120	1.5	0.005	0.003	U	23	0.015	6.9
1,1,1 -trichloroethane	38	52	100	100	110	U	20	2.9	8.5	0.1	0.054	0.039	U	0.016	1.3
dichloroethene	U	U	U	U	U	U	1.5	5.1	U	U	U	U	U	U	U
dichlolroethane	3.8	4.8	4.4	4.7	10	U	3.5	6.7	3.8	0.15	0.015	0.007	U	0.011	U
vinyl chloride	U	U	U	U	U	U	U	U	U	0.034	U	U	U	0.003	U
toluene	1	1.1	4.5	9.7	14	U	12	5	1.8	0.14	0.065	0.013	U	0.02	0.24
ethylbenzene	U	U	U	U	1	U	0.94	U	0.35	0.011	0.014	U	U	0.001	U
xylenes	U	U	7.6	2.7	5.8	U	4.3	U	2.3	0.048	0.059	0.005	U	0.01	U

Notes: 1) All concentrations indicated are expressed as mg/kg (dry weight).
2) Only soil borings exhibiting VOCs are presented in this table.
3) Depth interval refers to depth below ground surface.
4) U = not detected.
5) Refer to Figure 2 for soil boring locations.

Table 3
Soil & Ground Water Remediation
Project Summary Report
Scott Aviation
Lancaster, New York

Historic Ground Water Quality Data
(Volatile Organic Compounds)

Parameter / Monitoring Well / Date Sampled:	MW-1		MW-2			MW-3				
	10/30/92	11/17/92	10/30/92	11/17/92	1/22/96	10/30/92	11/17/92	8/31/93	8/16/95	1/22/96
Acetone	19	15	21	16	NA	16 JB	15	U	NA	NA
Chloromethane	NA	NA	NA	NA	<10	NA	NA	NA	<10	<10
Bromomethane	NA	NA	NA	NA	<10	NA	NA	NA	<10	<10
Dichlorodifluoromethane	NA	NA	NA	NA	< 10	NA	NA	NA	*	<10
Vinyl Chloride	U	U	U	U	<1	U	25	26	9 *	18
Chloroethane	U	U	U	U	<1	28	28	87	30	64
Dichloromethane	4 JB	3 JB	4 JB	3 JB	<1	3 JB	4 JB	U	<1	<1
Trichlorofluoromethane	NA	NA	NA	NA	<1	NA	NA	NA	<1	<1
1,1-Dichloroethene	NA	NA	NA	NA	<1	NA	NA	NA	<1	<1
1,1-Dichloroethane	U	U	U	U	5	U	3 J	U	3	14
1,2-Dichloroethene (total)	U	U	U	U	5	U	U	U	2	9
Chloroform	NA	NA	NA	NA	<1	NA	NA	NA	<1	<1
1,2-Dichloroethane	NA	NA	NA	NA	<1	NA	NA	NA	<1	3
1,1,1-Trichloroethane	U	U	U	U	9	U	U	U	<1	<1
Carbon tetrachloride	NA	NA	NA	NA	<1	NA	NA	NA	<1	<1
Bromodichloromethane	NA	NA	NA	NA	<1	NA	NA	NA	<1	<1
1,2-Dichloropropane	NA	NA	NA	NA	<1	NA	NA	NA	<1	<1
cis-1,3-Dichloropropene	NA	NA	NA	NA	<1	NA	NA	NA	<1	<1
Trichloroethene	U	U	U	U	2	U	U	U	<1	<1
Benzene	NA	NA	NA	NA	<1	NA	NA	NA	<1	<1
Dibromochloromethane	NA	NA	NA	NA	<1	NA	NA	NA	<1	<1
1,1,2-Trichloroethane	NA	NA	NA	NA	<1	NA	NA	NA	<1	<1
trans-1,3-Dichloropropene	NA	NA	NA	NA	<1	NA	NA	NA	<1	<1
2-Chloroethylvinyl ether	NA	NA	NA	NA	<10	NA	NA	NA	<10	<10
Bromoform	NA	NA	NA	NA	<10	NA	NA	NA	<10	<10
1,1,2,2-Tetrachloroethane	NA	NA	NA	NA	<1	NA	NA	NA	<1	<1
Tetrachloroethene	NA	NA	NA	NA	<1	NA	NA	NA	<1	<1
Toluene	U	U	U	U	<1	U	U	U	<1	<1
Chlorobenzene	NA	NA	NA	NA	<1	NA	NA	NA	<1	<1
Ethylbenzene	NA	NA	NA	NA	<1	NA	NA	NA	<1	<1
Xylene (total)	NA	NA	NA	NA	<3	NA	NA	NA	<3	<3
1,2-Dichlorobenzene	NA	NA	NA	NA	<5	NA	NA	NA	<5	<5
1,3-Dichlorobenzene	NA	NA	NA	NA	<5	NA	NA	NA	<5	<5
1,4-Dichlorobenzene	NA	NA	NA	NA	<5	NA	NA	NA	<5	<5

NOTES: (1) All units are in ug/l (parts per billion) unless otherwise noted.
(2) U - Not Detected
(3) B - Reading was less than the Contract Required Detection Limit (CRDL) but greater than or equal to the Instrument Detectiion Limit (IDL).
(4) J - Estimated value
(5) NA - Not Applicable
(6) * The value reported for vinyl chloride may represent vinyl chloride, dichlorodofluoromethane, or any combination of the two compounds.

Table 3
Soil & Ground Water Remediation
Project Summary Report
Scott Aviation
Lancaster, New York

Historic Ground Water Quality Data
(Volatile Organic Compounds)

Parameter	Monitoring Well / Date Sampled:	MW-4					MW-4A DUP.	MW-5		MW-6				MW-6 DUP.
		10/30/92	11/17/92	8/31/93	8/24/95	1/22/96	11/17/92	10/30/92	11/17/92	10/30/92	11/17/92	8/31/93	1/22/96	8/31/93
Acetone		U	U	U	NA	NA	U	U	U	U	7 J	U	NA	U
Chloromethane		NA	NA	NA	<1000	<1000	NA	NA	NA	NA	NA	NA	<10	NA
Bromomethane		NA	NA	NA	<1000	<1000	NA	NA	NA	NA	NA	NA	<10	NA
Dichlorodifluoromethane		NA	NA	NA		<1000	NA	NA	NA	NA	NA	NA	<10	NA
Vinyl Chloride		U	240 J	300 J	150	<100	280 J	U	U	U	U	U	<1	U
Chloroethane		U	U	300 J	<100	<100	U	U	U	U	U	U	<1	U
Dichloromethane		270 J	180 JB	U	<100	<100	220 JB	6 JB	5 JB	6 JB	5 JB	U	<1	U
Trichlorofluoromethane		NA	NA	NA	<100	<100	NA	NA	NA	NA	NA	NA	<1	NA
1,1-Dichloroethene		NA	NA	NA	<100	<100	NA	NA	NA	NA	NA	NA	<1	NA
1,1-Dichloroethane		250 J	270	U	480	<100	340	U	U	U	U	U	<1	U
1,2-Dichloroethene (total)		5900	5100	9400	7600	2700	6100	U	U	4 J	U	U	<1	U
Chloroform		NA	NA	NA	<100	<100	NA	NA	NA	NA	NA	NA	<1	NA
1,2-Dichloroethane		NA	NA	NA	<100	<100	NA	NA	NA	NA	NA	NA	<1	NA
1,1,1-Trichloroethane		U	U	170 J	<100	<100	U	U	U	U	U	U	<1	U
Carbon tetrachloride		NA	NA	NA	<100	<100	NA	NA	NA	NA	NA	NA	<1	NA
Bromodichloromethane		NA	NA	NA	<100	<100	NA	NA	NA	NA	NA	NA	<1	NA
1,2-Dichloropropane		NA	NA	NA	<100	<100	NA	NA	NA	NA	NA	NA	<1	NA
cis-1,3-Dichloropropene		NA	NA	NA	<100	<100	NA	NA	NA	NA	NA	NA	<1	NA
Trichloroethene		1500	2800	6900	10000	4200	3400	U	U	U	U	U	<1	U
Benzene		NA	NA	NA	<100	<100	NA	NA	NA	NA	NA	NA	<1	NA
Dibromochloromethane		NA	NA	NA	<100	<100	NA	NA	NA	NA	NA	NA	<1	NA
1,1,2-Trichloroethane		NA	NA	NA	<100	<100	NA	NA	NA	NA	NA	NA	<1	NA
trans-1,3-Dichloropropene		NA	NA	NA	<100	<100	NA	NA	NA	NA	NA	NA	<1	NA
2-Chloroethylvinyl ether		NA	NA	NA	<1000	<1000	NA	NA	NA	NA	NA	NA	<10	NA
Bromoform		NA	NA	NA	<1000	<1000	NA	NA	NA	NA	NA	NA	<10	NA
1,1,2,2-Tetrachloroethane		NA	NA	NA	<100	<100	NA	NA	NA	NA	NA	NA	<1	NA
Tetrachloroethene		NA	NA	NA	<100	<100	NA	NA	NA	NA	NA	NA	<1	NA
Toluene		U	U	U	<100	<100	U	U	U	U	U	U	<1	U
Chlorobenzene		NA	NA	NA	<100	<100	NA	NA	NA	NA	NA	NA	<1	NA
Ethylbenzene		NA	NA	NA	<100	<100	NA	NA	NA	NA	NA	NA	<1	NA
Xylene (total)		NA	NA	NA	<300	<300	NA	NA	NA	NA	NA	NA	<3	NA
1,2-Dichlorobenzene		NA	NA	NA	<500	<500	NA	NA	NA	NA	NA	NA	<5	NA
1,3-Dichlorobenzene		NA	NA	NA	<500	<500	NA	NA	NA	NA	NA	NA	<5	NA
1,4-Dichlorobenzene		NA	NA	NA	<500	<500	NA	NA	NA	NA	NA	NA	<5	NA

NOTES: (1) All units are in ug/l (parts per billion) unless otherwise noted.
(2) U - Not Detected
(3) B - Reading was less than the Contract Required Detection Limit (CRDL) but greater than or equal to the Instrument Detectiion Limit (IDL).
(4) J - Estimated value
(5) NA - Not Applicable
(6) * The value reported for vinyl chloride may represent vinyl chloride, dichlorodofluoromethane, or any combination of the two compounds.

Table 4
Soil and Ground Water Remediation
Project Summary Report
Scott Aviation Site
Lancaster, New York

Hydraulic Conductivities in Site Monitoring Wells

Monitoring Well ID Number	Mean Hydraulic Conductivity
MW-1	3.8×10^{-3} cm/sec (10.6 ft/day)
MW-2	1.7×10^{-4} cm/sec (0.48 ft/day)
MW-3	1.6×10^{-4} cm/sec (0.45 ft/day)
MW-4	6.7×10^{-5} cm/sec (0.18 ft/day)
MW-5	3.4×10^{-3} cm/sec (9.5 ft/day)
MW-6	1.4×10^{-4} cm/sec (.39 ft/day)

Table 5
Soil and Ground Water Remediation
Project Summary Report
Scott Aviation
Lancaster, New York

Influent and Effluent Water Quality Analyses Results

Startup, sampling and analysis occurred on March 1, 1996			
	Water Quality		
Parameter	Influent Concentration	Effluent Concentration	Percent Removal (1)
Methylene Chloride	< 50 ug/l	< 1ug/l	> 98 %
1,1,1-TCA	670 ug/l	2 ug/l	99.7 %
TCE	230 ug/l	< 1 ug/l	> 99.6 %
1,2-DCE	3000 ug/l	20 ug/l	99.3 %
1,1-DCA	220 ug/l	< 1 ug/l	> 99.5 %
Chloroethane	160 ug/l	< 1 ug/l	> 99.4 %
Toluene	< 50 ug/l	< 1 ug/l	> 98 %

Notes: (1) Percent removal calculated using the formula:

$$\frac{\text{(influent conc. - effluent conc.)}}{\text{influent conc.}} \times 100$$

Table 6
Soil & Ground Water Remediation
Project Summary Report
Scott Aviation Site
Lancaster, New York

Treatment Verification Sampling & Analyses Results Summary (1)

Sample ID:		Soil Pile # 1						Soil Pile # 2							
		X1308	X1309	X1413	X1414	X1880	X1881	X1310	X1311	X1415	X1416	X1779	X1780	X2058	X2059
Parameter	RAO	A-Pre treatment	B-Pre treatment	A-Post treatment	B-Post treatment	A-Re treatment	B-Re treatment	A-Pre treatment	B-Pre treatment	A-Post treatment	B-Post treatment	A-Re treatment	B-Re treatment	A-2nd Re treatment	B-2nd Re treatment
chloroethane	1	< 0.12	< 0.12	< 0.12	< 0.12	< 0.059	< 0.057	< 0.12	< 0.12	< 0.12	< 0.12	< 0.12	< 0.12	< 0.012	< 0.024
1,1-dichloroethane	1	0.15	0.24	< 0.12	< 0.12	< 0.029	< 0.029	0.52	0.95	0.13	0.18	0.32	0.31	0.007	< 0.012
1,2-dichloroethylene (total)	1	0.12	0.15	< 0.12	< 0.12	< 0.029	< 0.029	0.78	2.30	0.25	0.36	0.49	0.53	0.03	0.037
ethylbenzene	1	0.37	0.57	0.16	0.14	0.03	0.03	0.84	0.96	0.34	0.32	0.28	0.52	0.052	0.054
toluene	1	1.90	1.90	1.00	0.71	0.17	0.16	4.00	4.50	1.90	1.70	1.10	1.30	0.17	0.21
1,1,1-trichloroethane	1	4.80	6.00	4.30	3.20	0.38	0.37	8.60	11.00	6.00	6.90	4.00	4.20	0.15	0.18
trichloroethylene	1	4.50	5.40	2.80	2.60	0.34	0.35	7.00	1.80	6.70	4.60	3.10	3.20	0.2	0.25
vinyl chloride	1	< 0.12	< 0.12	< 0.12	< 0.12	< 0.059	< 0.057	< 0.12	< 0.12	< 0.12	< 0.12	< 0.12	< 0.12	< 0.012	< 0.024
xylenes (total)	1	2.20	1.80	1.30	0.95	0.18	0.17	4.40	4.70	2.30	2.30	1.60	1.90	0.32	0.34
Total VOCs (2)	**10**	**14.28**	**16.30**	**10.04**	**8.08**	**1.28**	**1.25**	**26.38**	**26.45**	**17.86**	**16.60**	**11.13**	**12.20**	**0.95**	**1.13**

Notes: 1) Table presents the results in mg/kg (dry weight) for the nine volatile organic compounds (VOCs) specifically listed in the Record of Decision dated November 7, 1994.
2) The total presented is the sum for the nine VOCs listed. In cases where a VOC was not detected, the detection limit value was added to the total.
3) RAO - Remedial Action Objective
4) NS - Not sampled

Table 6
Soil & Ground Water Remediation
Project Summary Report
Scott Aviation Site
Lancaster, New York

Treatment Verification Sampling & Analyses Results Summary (1)

Sample ID:		Soil Pile # 3				Soil Pile # 4				Soil Pile # 5			
		X1417	X1418	X1777	X1778	X1882	X1883	X2056	X2057	X1884	X1885	X2060	X2061
Parameter	RAO	A-Pre treatment	B-Pre treatment	A-Post treatment	B-Post treatment	A-Pre treatment	B-Pre treatment	A-Post treatment	B-Post treatment	A-Pre treatment	B-Pre treatment	A-Post treatment	B-Post treatment
chloroethane	1	< 0.12	< 0.12	< 0.006	< 0.006	< 0.059	< 0.058	< 0.012	< 0.012	< 0.057	< 0.057	< 0.012	< 0.012
1,1-dichloroethane	1	0.20	0.15	0.015	0.014	< 0.029	< 0.029	< 0.006	< 0.006	< 0.028	< 0.028	< 0.006	0.006
1,2-dichloroethylene (total)	1	1.10	0.54	0.075	0.074	< 0.029	< 0.029	0.023	0.030	0.036	0.031	0.018	0.031
ethylbenzene	1	0.26	0.16	0.016	0.015	< 0.029	< 0.029	< 0.006	0.022	< 0.028	< 0.028	0.006	0.010
toluene	1	1.40	0.82	0.049	0.054	< 0.029	< 0.029	0.022	0.085	0.074	0.059	0.045	0.070
1,1,1-trichloroethane	1	4.50	3.30	0.087	0.110	< 0.029	< 0.029	0.027	0.077	0.093	0.100	0.050	0.120
trichloroethylene	1	1.90	0.95	0.140	0.130	0.10	0.08	0.100	0.160	0.380	0.340	0.190	0.310
vinyl chloride	1	< 0.12	< 0.12	< 0.006	< 0.006	< 0.059	< 0.058	< 0.012	< 0.012	< 0.057	< 0.057	< 0.012	< 0.012
xylenes (total)	1	1.90	1.20	0.097	0.099	< 0.029	< 0.029	0.025	0.140	< 0.028	< 0.028	0.035	0.061
Total VOCs (2)	**10**	**11.50**	**7.36**	**0.49**	**0.51**	**0.39**	**0.37**	**0.23**	**0.54**	**0.78**	**0.73**	**0.37**	**0.63**

Notes: 1) Table presents the results in mg/kg (dry weight) for the nine volatile organic compounds (VOCs) specifically listed in the Record of Decision dated November 7, 1994.
2) The total presented is the sum for the nine VOCs listed. In cases where a VOC was not detected, the detection limit value was added to the total.
3) RAO - Remedial Action Objective
4) NS - Not sampled

Table 6
Soil & Ground Water Remediation
Project Summary Report
Scott Aviation Site
Lancaster, New York

Treatment Verification Sampling & Analyses Results Summary (1)

Sample ID:		Soil Pile #6						Soil Pile #7					
		X2660	X2661	X2662	X2663	X3388	X3389	X2664	X2665	X2666	X2667	X3707	X3708
Parameter	RAO	A-Pre treatment	B-Pre treatment	A-Post treatment	B-Post treatment	A-Re treatment	B-Re treatment	A-Pre treatment	B-Pre treatment	A-Post treatment	B-Post treatment	A-Re treatment	B-Re treatment
chloroethane	1	<0.12	<0.12	<0.12	<0.13	<0.12	<0.11	<0.12	<0.11	<0.12	<0.12	<0.11	<0.11
1,1-dichloroethane	1	<0.12	<0.12	<0.12	<0.13	<0.12	<0.11	<0.12	<0.11	<0.12	<0.12	<0.11	<0.11
1,2-dichloroethylene (total)	1	<0.12	<0.12	<0.12	<0.13	<0.12	<0.11	<0.12	<0.11	<0.12	<0.12	<0.11	<0.11
ethylbenzene	1	<0.12	<0.12	<0.12	<0.13	<0.12	<0.11	<0.12	<0.11	<0.12	<0.12	<0.11	<0.11
toluene	1	0.13	<0.12	0.15	0.15	<0.12	<0.11	<0.12	0.13	0.14	0.16	<0.11	<0.11
1,1,1-trichloroethane	1	0.23	0.15	0.19	0.22	0.14	0.11	0.16	0.16	0.24	0.22	<0.11	<0.11
trichloroethylene	1	1.10	0.85	1.20	1.10	0.61	0.58	0.49	0.55	1.10	1.40	0.26	0.46
vinyl chloride	1	<0.12	<0.12	<0.12	<0.13	<0.12	<0.11	<0.12	<0.11	<0.12	<0.12	<0.11	<0.11
xylenes (total)	1	<0.36	<0.35	<0.35	<0.39	<0.35	<0.34	<0.35	<0.34	<0.35	<0.35	<0.33	<0.33
Total VOCs (2)	**10**	**2.42**	**2.07**	**2.49**	**2.51**	**1.82**	**1.69**	**1.72**	**1.73**	**2.43**	**2.73**	**1.36**	**1.56**

Notes: 1) Table presents the results in mg/kg (dry weight) for the nine volatile organic compounds (VOCs) specifically listed in the Record of Decision dated November 7, 1994.
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3) RAO - Remedial Action Objective
4) NS - Not sampled

Table 6
Soil & Ground Water Remediation
Project Summary Report
Scott Aviation Site
Lancaster, New York

Treatment Verification Sampling & Analyses Results Summary (1)

Sample ID:		Soil Pile #8				Soil Pile #9			
		X2668	X2669	X2670	X2671	X2672	X2673	X4074	X4075
Parameter	RAO	A-Pre treatment	B-Pre treatment	A-Post treatment	B-Post treatment	A-Pre treatment	B-Pre treatment	A-Post treatment	B-Post treatment
chloroethane	1	<0.12	<0.12	<0.12	<0.12	<0.12	<0.12	<0.12	<0.12
1,1-dichloroethane	1	<0.12	<0.12	<0.12	<0.12	<0.12	<0.12	<0.12	<0.12
1,2-dichloroethylene (total)	1	<0.12	<0.12	<0.12	<0.12	<0.12	<0.12	<0.12	<0.12
ethylbenzene	1	<0.12	<0.12	<0.12	<0.12	<0.12	<0.12	<0.12	<0.12
toluene	1	0.11	0.14	0.13	0.16	<0.12	0.14	<0.12	<0.12
1,1,1-trichloroethane	1	0.13	<0.12	0.27	0.29	0.15	0.18	0.13	<0.12
trichloroethylene	1	0.34	0.21	0.78	0.99	0.60	0.70	0.19	0.18
vinyl chloride	1	<0.12	<0.12	<0.12	<0.12	<0.12	<0.12	<0.12	<0.12
xylenes (total)	1	<0.36	<0.36	<0.35	<0.35	<0.35	<0.35	<0.35	<0.36
Total VOCs (2)	**10**	**1.54**	**1.43**	**2.13**	**2.39**	**1.82**	**1.97**	**1.85**	**1.38**

Notes: 1) Table presents the results in mg/kg (dry weight) for the nine volatile organic compounds (VOCs) specifically listed in the Record of Decision dated November 7, 1994.
2) The total presented is the sum for the nine VOCs listed. In cases where a VOC was not detected, the detection limit value was added to the total.
3) RAO - Remedial Action Objective
4) NS - Not sampled

Table 6
Soil & Ground Water Remediation
Project Summary Report
Scott Aviation Site
Lancaster, New York

Treatment Verification Sampling & Analyses Results Summary (1)

Sample ID:		Soil Pile #10				Soil Pile # 11			
		X2674	X2675	X4209	X4210	X3382	X3383	X4319	X4320
Parameter	RAO	A-Pre treatment	B-Pre treatment	A-Post treatment	B-Post treatment	A-Pre treatment	B-Pre treatment	A-Post treatment	B-Post treatment
chloroethane	1	<0.12	<0.11	<0.12	<0.12	<0.12	<0.12	<0.11	<0.12
1,1-dichloroethane	1	<0.12	<0.11	<0.12	<0.12	<0.12	<0.12	<0.11	<0.12
1,2-dichloroethylene (total)	1	0.13	<0.11	<0.12	<0.12	<0.12	<0.12	<0.11	<0.12
ethylbenzene	1	<0.12	<0.11	<0.12	<0.12	<0.12	<0.12	<0.11	<0.12
toluene	1	0.16	0.13	0.18	0.13	0.49	0.27	<0.11	<0.12
1,1,1-trichloroethane	1	0.28	0.27	0.17	0.15	4.00	5.10	<0.11	<0.12
trichloroethylene	1	0.99	0.74	0.80	0.73	2.00	1.60	0.13	<0.12
vinyl chloride	1	<0.12	<0.11	<0.12	<0.12	<0.12	<0.12	<0.11	<0.12
xylenes (total)	1	<0.35	<0.34	<0.36	<0.36	0.64	<0.36	<0.34	<0.35
Total VOCs (2)	**10**	**2.39**	**2.03**	**2.11**	**1.97**	**7.73**	**7.93**	**1.24**	**1.31**

Notes: 1) Table presents the results in mg/kg (dry weight) for the nine volatile organic compounds (VOCs) specifically listed in the Record of Decision dated November 7, 1994.
2) The total presented is the sum for the nine VOCs listed. In cases where a VOC was not detected, the detection limit value was added to the total.
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Table 6
Soil & Ground Water Remediation
Project Summary Report
Scott Aviation Site
Lancaster, New York

Treatment Verification Sampling & Analyses Results Summary (1)

Sample ID:		Soil Pile # 12				Soil Pile # 13				Soil Pile # 14					
		X3384	X3385	X4317	X4318	X3386	X3387	X4315	X4316	X4321	X4322	X4771	X4772	X5088	X5089
Parameter	RAO	A-Pre treatment	B-Pre treatment	A-Post treatment	B-Post treatment	A-Pre treatment	B-Pre treatment	A-Post treatment	B-Post treatment	A-Pre treatment	B-Pre treatment	A-Post treatment	B-Post treatment	A-Re treatment	B-Re treatment
chloroethane	1	< 0.12	< 0.12	< 0.11	< 0.11	< 0.12	< 0.12	< 0.11	< 0.11	< 0.11	< 0.11	< 0.12	< 0.12	< 0.11	< 0.11
1,1-dichloroethane	1	< 0.12	< 0.12	< 0.11	< 0.11	< 0.12	< 0.12	< 0.11	< 0.11	< 0.11	< 0.11	< 0.12	< 0.12	< 0.11	< 0.11
1,2-dichloroethylene (total)	1	< 0.12	< 0.12	< 0.11	< 0.11	< 0.12	< 0.12	< 0.11	< 0.11	< 0.11	< 0.11	< 0.12	< 0.12	< 0.11	< 0.11
ethylbenzene	1	< 0.12	< 0.12	< 0.11	< 0.11	< 0.12	< 0.12	< 0.11	< 0.11	< 0.11	< 0.11	< 0.12	0.41	< 0.11	< 0.11
toluene	1	0.20	0.53	< 0.11	< 0.11	0.40	0.27	< 0.11	< 0.11	< 0.11	0.16	< 0.12	1.6	< 0.11	< 0.11
1,1,1-trichloroethane	1	1.20	4.50	< 0.11	< 0.11	2.50	1.90	< 0.11	< 0.11	0.43	2.50	< 0.12	1.4	< 0.11	< 0.11
trichloroethylene	1	0.90	2.60	< 0.11	< 0.11	1.90	1.20	< 0.11	< 0.11	0.11	0.82	0.18	2.9	< 0.11	< 0.11
vinyl chloride	1	< 0.12	< 0.12	< 0.11	< 0.11	< 0.12	< 0.12	< 0.11	< 0.11	< 0.11	< 0.11	< 0.12	< 0.12	< 0.11	< 0.11
xylenes (total)	1	< 0.36	< 0.68	< 0.34	< 0.34	0.52	0.37	< 0.34	< 0.34	< 0.32	< 0.32	< 0.36	2.7	< 0.33	< 0.33
Total VOCs (2)	**10**	**3.26**	**8.91**	**1.22**	**1.22**	**5.92**	**4.34**	**1.22**	**1.22**	**1.52**	**4.35**	**1.38**	**9.49**	**1.21**	**1.21**

Notes: 1) Table presents the results in mg/kg (dry weight) for the nine volatile organic compounds (VOCs) specifically listed in the Record of Decision dated November 7, 1994.
2) The total presented is the sum for the nine VOCs listed. In cases where a VOC was not detected, the detection limit value was added to the total.
3) RAO - Remedial Action Objective
4) NS - Not sampled

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Treatment Verification Sampling & Analyses Results Summary (1)

Sample ID:		Soil Pile # 15				Soil Pile # 16				Soil Pile # 17			
		X4323	X4324	X4773	X4774	X4765	X4766	X4775	X4776	X4767	X4768	X5090	X5091
Parameter	RAO	A-Pre treatment	B-Pre treatment	A-Post treatment	B-Post treatment	A-Pre treatment	B-Pre treatment	A-Post treatment	B-Post treatment	A-Pre treatment	B-Pre treatment	A-Post treatment	B-Post treatment
chloroethane	1	< 0.11	< 0.11	< 0.12	< 0.12	< 0.13	< 0.12	< 0.12	< 0.12	< 0.12	< 0.13	< 0.12	< 0.12
1,1-dichloroethane	1	< 0.11	< 0.11	< 0.12	< 0.12	< 0.13	< 0.12	< 0.12	< 0.12	< 0.12	< 0.13	< 0.12	< 0.12
1,2-dichloroethylene (total)	1	< 0.11	< 0.11	< 0.12	< 0.12	< 0.13	< 0.12	< 0.12	< 0.12	< 0.12	0.21	< 0.12	< 0.12
ethylbenzene	1	< 0.11	< 0.11	< 0.12	< 0.12	0.17	< 0.12	< 0.12	< 0.12	< 0.12	< 0.13	< 0.12	< 0.12
toluene	1	< 0.11	< 0.11	< 0.12	< 0.12	1.4	0.14	< 0.12	< 0.12	0.25	0.62	< 0.12	< 0.12
1,1,1-trichloroethane	1	0.37	0.54	< 0.12	< 0.12	3.8	0.37	< 0.12	< 0.12	1.4	2.1	< 0.12	< 0.12
trichloroethylene	1	< 0.11	0.14	< 0.12	0.16	7.7	1.8	< 0.12	< 0.12	1.8	3.1	< 0.12	< 0.12
vinyl chloride	1	< 0.11	< 0.11	< 0.12	< 0.12	< 0.13	< 0.12	< 0.12	< 0.12	< 0.12	< 0.13	< 0.12	< 0.12
xylenes (total)	1	< 0.33	< 0.32	< 0.37	< 0.36	0.96	< 0.37	< 0.35	< 0.35	< 0.36	0.68	< 0.36	< 0.36
Total VOCs (2)	**10**	**1.47**	**1.66**	**1.33**	**1.36**	**14.55**	**3.28**	**1.31**	**1.31**	**4.41**	**7.23**	**1.32**	**1.32**

Notes: 1) Table presents the results in mg/kg (dry weight) for the nine volatile organic compounds (VOCs) specifically listed in the Record of Decision dated November 7, 1994.
2) The total presented is the sum for the nine VOCs listed. In cases where a VOC was not detected, the detection limit value was added to the total.
3) RAO - Remedial Action Objective
4) NS - Not sampled

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Sample ID:		Soil Pile # 18				Soil Pile # 19				Soil Pile # 20			
		X5335	X5336	X5341	X5342	X5337	X5338	X5343	X5344	X5339	X5340	X5345	X5346
Parameter	RAO	A-Pre treatment	B-Pre treatment	A-Post treatment	B-Post treatment	A-Pre treatment	B-Pre treatment	A-Post treatment	B-Post treatment	A-Pre treatment	B-Pre treatment	A-Post treatment	B-Post treatment
chloroethane	1	< 0.13	< 0.13	< 0.12	< 0.12	< 0.13	< 0.12	< 0.12	< 0.12	< 0.13	< 0.13	< 0.12	< 0.12
1,1-dichloroethane	1	0.15	< 0.13	< 0.12	< 0.12	< 0.13	0.20	< 0.12	< 0.12	< 0.13	< 0.13	< 0.12	< 0.12
1,2-dichloroethylene (total)	1	< 0.13	< 0.13	< 0.12	< 0.12	< 0.13	< 0.12	< 0.12	< 0.12	< 0.13	< 0.13	< 0.12	< 0.12
ethylbenzene	1	< 0.13	< 0.13	< 0.12	< 0.12	< 0.13	< 0.12	< 0.12	< 0.12	< 0.13	< 0.13	< 0.12	< 0.12
toluene	1	0.24	0.24	< 0.12	< 0.12	0.24	0.28	< 0.12	< 0.12	0.22	0.18	< 0.12	< 0.12
1,1,1-trichloroethane	1	2.70	1.90	< 0.12	< 0.12	1.50	3.20	< 0.12	< 0.12	1.10	1.00	< 0.12	< 0.12
trichloroethylene	1	1.90	1.20	0.29	0.22	1.30	1.30	< 0.12	0.15	0.85	1.10	0.22	0.15
vinyl chloride	1	< 0.13	< 0.13	< 0.12	< 0.12	< 0.13	< 0.12	< 0.12	< 0.12	< 0.13	< 0.13	< 0.12	< 0.12
xylenes (total)	1	< 0.38	< 0.38	< 0.37	< 0.37	< 0.38	< 0.37	< 0.36	< 0.36	< 0.38	< 0.39	< 0.36	< 0.37
Total VOCs (2)	**10**	**5.89**	**4.37**	**1.50**	**1.43**	**4.07**	**5.83**	**1.32**	**1.35**	**3.20**	**3.32**	**1.42**	**1.36**

Notes: 1) Table presents the results in mg/kg (dry weight) for the nine volatile organic compounds (VOCs) specifically listed in the Record of Decision dated November 7, 1994.
2) The total presented is the sum for the nine VOCs listed. In cases where a VOC was not detected, the detection limit value was added to the total.
3) RAO - Remedial Action Objective
4) NS - Not sampled

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Sample ID:		Soil Pile # 21				Soil Pile # 22				Soil Pile # 23			
		X5347	X5348	X5351	X5352	X5349	X5350	X5353	X5354	X5619	X5620	X5623	X5624
Parameter	RAO	A-Pre treatment	B-Pre treatment	A-Post treatment	B-Post treatment	A-Pre treatment	B-Pre treatment	A-Post treatment	B-Post treatment	A-Pre treatment	B-Pre treatment	A-Post treatment	B-Post treatment
chloroethane	1	< 0.12	< 0.13	< 0.12	< 0.12	< 0.13	< 0.13	< 0.12	< 0.12	< 0.13	< 0.12	< 0.11	< 0.12
1,1-dichloroethane	1	0.40	1.10	< 0.12	< 0.12	0.15	1.50	< 0.12	< 0.12	1.70	2.50	< 0.11	< 0.12
1,2-dichloroethylene (total)	1	< 0.12	< 0.13	< 0.12	< 0.12	< 0.13	0.14	< 0.12	< 0.12	0.19	0.23	< 0.11	< 0.12
ethylbenzene	1	< 0.12	< 0.13	< 0.12	< 0.12	< 0.13	< 0.13	< 0.12	< 0.12	< 0.13	< 0.12	< 0.11	< 0.12
toluene	1	0.61	0.20	0.12	< 0.12	0.24	0.73	< 0.12	< 0.12	0.17	0.31	< 0.11	< 0.12
1,1,1-trichloroethane	1	4.40	3.50	< 0.12	0.16	3.20	9.80	0.15	0.27	1.60	8.00	< 0.11	< 0.12
trichloroethylene	1	3.70	1.20	0.24	0.28	1.50	3.10	0.27	0.41	0.52	1.40	0.12	0.12
vinyl chloride	1	< 0.12	< 0.13	< 0.12	< 0.12	< 0.13	< 0.13	< 0.12	< 0.12	< 0.13	< 0.12	< 0.11	< 0.12
xylenes (total)	1	0.43	< 0.38	< 0.36	< 0.36	< 0.39	< 0.39	< 0.36	< 0.36	< 0.38	< 0.37	< 0.34	< 0.35
Total VOCs (2)	**10**	**10.02**	**6.90**	**1.44**	**1.52**	**6.00**	**16.05**	**1.50**	**1.76**	**4.95**	**13.17**	**1.23**	**1.31**

Notes: 1) Table presents the results in mg/kg (dry weight) for the nine volatile organic compounds (VOCs) specifically listed in the Record of Decision dated November 7, 1994.
2) The total presented is the sum for the nine VOCs listed. In cases where a VOC was not detected, the detection limit value was added to the total.
3) RAO - Remedial Action Objective
4) NS - Not sampled

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Treatment Verification Sampling & Analyses Results Summary (1)

Sample ID:		Soil Pile # 24				Soil Pile # 25				Soil Pile # 26			
		X6585	X6586	X6593	X6594	X6587	X6588	X6595	X6596	X6589	X6590	X6597	X6598
Parameter	RAO	A-Pre treatment	B-Pre treatment	A-Post treatment	B-Post treatment	A-Pre treatment	B-Pre treatment	A-Post treatment	B-Post treatment	A-Pre treatment	B-Pre treatment	A-Post treatment	B-Post treatment
chloroethane	1	<.13	<.13	<.12	<.12	<.13	<.13	<.12	<.12	<.13	<.13	<.12	<.12
1,1-dichloroethane	1	0.15	<.13	<.12	<.12	<.13	<.13	<.12	<.12	<.13	<.13	<.12	<.12
1,2-dichloroethylene (total)	1	<.13	<.13	<.12	<.12	<.13	<.13	<.12	<.12	<.13	<.13	<.12	<.12
ethylbenzene	1	<.13	<.13	<.12	<.12	<.13	<.13	<.12	<.12	<.13	<.13	<.12	<.12
toluene	1	0.18	0.19	<.12	<.12	<.13	<.13	<.12	<.12	<.13	<.13	<.12	<.12
1,1,1-trichloroethane	1	0.39	0.36	0.14	0.18	<.13	<.13	0.20	0.17	<.13	<.13	0.18	0.19
trichloroethylene	1	1.10	1.40	0.35	0.30	0.16	<.13	0.48	0.45	<.13	0.17	0.38	0.31
vinyl chloride	1	<.13	<.13	<.12	<.12	<.13	<.13	<.12	<.12	<.13	<.13	<.12	<.12
xylenes (total)	1	<.38	<.39	<.37	<.37	<.38	<.39	<.36	<.36	<.4	<.4	<.36	<.36
Total VOCs (2)	**10**	**2.72**	**2.99**	**1.58**	**1.57**	**1.45**	**1.43**	**1.76**	**1.70**	**1.44**	**1.48**	**1.64**	**1.58**

Notes: 1) Table presents the results in mg/kg (dry weight) for the nine volatile organic compounds (VOCs) specifically listed in the Record of Decision dated November 7, 1994.
2) The total presented is the sum for the nine VOCs listed. In cases where a VOC was not detected, the detection limit value was added to the total.
3) RAO - Remedial Action Objective
4) NS - Not sampled

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Treatment Verification Sampling & Analyses Results Summary (1)

Sample ID:		Soil Pile # 27				Soil Pile #28			
		X6591	X6592	X6599	X6600			X8071	X8072
Parameter	RAO	A-Pre treatment	B-Pre treatment	A-Post treatment	B-Post treatment	A-Pre treatment	B-Pre treatment	A-Post treatment	B-Post treatment
chloroethane	1	0.14	<.13	<.12	<.12	NS	NS	<.12	<.12
1,1-dichloroethane	1	<.13	<.13	<.12	<.12	NS	NS	<.12	<.12
1,2-dichloroethylene (total)	1	<.13	<.13	<.12	<.12	NS	NS	<.12	<.12
ethylbenzene	1	<.13	<.13	<.12	<.12	NS	NS	<.12	<.12
toluene	1	<.13	<.13	<.12	<.12	NS	NS	<.12	<.12
1,1,1-trichloroethane	1	<.13	0.20	0.15	0.13	NS	NS	<.12	<.12
trichloroethylene	1	0.14	0.53	0.33	0.31	NS	NS	<.12	<.12
vinyl chloride	1	<.13	<.13	<.12	<.12	NS	NS	<.12	<.12
xylenes (total)	1	<.39	<.4	<.36	<.36	NS	NS	<.36	<.36
Total VOCs (2)	**10**	**1.45**	**1.91**	**1.56**	**1.52**			**1.32**	**1.32**

Notes: 1) Table presents the results in mg/kg (dry weight) for the nine volatile organic compounds (VOCs) specifically listed in the Record of Decision dated November 7, 1994.
2) The total presented is the sum for the nine VOCs listed. In cases where a VOC was not detected, the detection limit value was added to the total.
3) RAO - Remedial Action Objective
4) NS - Not sampled

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Excavation Cleanup Verification Sampling & Analyses Results Summary (1)

Coordinate (2):		135S - 30w	130S - 40W	100S - 10W					
Depth Below Original Ground Surface:		4'	5'	15'	16'	17'	18'	19'	20'
Sample ID:		X5092	X4770	X4778	X5004	X5009	X5013	X5357	(Note 6)
Parameter	RAO								
chloroethane	1	<.12	<.12	<.12	<.12	<.12	<.12	<.13	NS
1,1-dichloroethane	1	<.12	<.12	<.12	2.1	11	1.1	1.5	NS
1,2-dichloroethylene (total)	1	0.31	<.12	0.19	0.190	0.36	<.12	0.3	NS
ethylbenzene	1	<.12	<.12	<.12	<.12	<.12	<.12	<.13	NS
toluene	1	<.12	<.12	0.82	0.46	<.12	<.12	0.6	NS
1,1,1-trichloroethane	1	0.24	<.12	6.6	0.24	<.12	<.12	7.9	NS
trichloroethylene	1	0.21	<.12	4.9	7.6	0.6	<.12	3.3	NS
vinyl chloride	1	<.12	<.12	<.12	<.12	<.12	<.12	<.13	NS
xylenes (total)	1	<.37	<.35	0.6	<.35	<.37	<.35	<.38	NS
Total VOCs (2)	10	1.73	1.31	13.59	11.3	12.93	2.29	14.37	NS

Notes:
1) Table presents the results in mg/kg (dry weight) for the nine volatile organic compounds (VOCs) specifically listed in the Record of Decision dated November 7, 1994.
2) Coordinates are measured relative to the position of MW-2. Locations are depicted on Figure 7.
3) The total presented is the sum for the nine VOCs listed. In cases where a VOC was not detected, the detection limit value was added to the total.
4) RAO - Remedial Action Objective
5) NS - Not sampled since excavation extended to bedrock.
6) Shaded columns present results at final limits of excavation for each coordinate location.
7) Additional excavation could not be performed due to proximity of existing structure as indicated in the letter to the NYSDEC from Mr. Lindemann dated November 30, 1995.

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Excavation Cleanup Verification Sampling & Analyses Results Summary (1)

Coordinate (2):		100S - 40W					70S - 10W			
Depth Below Original Ground Surface:		3'	3'	4'	5'	6'	16'	17'	18'	19'
Sample ID:		X3390	X4779	X5003	X5008	X5012	X4780	X5007	X5011	X5015
Parameter	RAO									
chloroethane	1	<.12	<.12	<1.2	<.12	<110	<.12	<1.2	<1.2	<12
1,1-dichloroethane	1	<.12	<.12	11	1.1	0.23	<.12	31	1.4	<12
1,2-dichloroethylene (total)	1	0.17	<.12	60	0.14	<11	<.12	<1.2	<1.2	<12
ethylbenzene	1	<.12	<.12	<1.2	<.12	<11	<.12	<1.2	<1.2	<12
toluene	1	0.54	0.21	5.5	<.12	<11	0.16	<1.2	<1.2	<12
1,1,1-trichloroethane	1	0.7	2.9	<1.2	<.12	<12	1.2	1.7	21	<12
trichloroethylene	1	1.8	1.2	2.3	<.12	<11	0.82	<1.2	<1.2	<12
vinyl chloride	1	<.12	<.12	<1.2	<.12	<11	<.12	<1.2	<1.2	<12
xylenes (total)	1	0.45	<.35	<3.6	<.37	<34	<.35	<3.7	<3.6	<36
Total VOCs (2)	10	4.14	5.26	87.2	2.33	1.35	3.13	43.6	33.2	1.32

Notes: 1) Table presents the results in mg/kg (dry weight) for the nine volatile organic compounds (VOCs) specifically listed in the Record of Decision dated November 7, 1994.
2) Coordinates are measured relative to the position of MW-2. Locations are depicted on Figure 7.
3) The total presented is the sum for the nine VOCs listed. In cases where a VOC was not detected, the detection limit value was added to the total.
4) RAO - Remedial Action Objective
5) NS - Not sampled since excavation extended to bedrock.
6) Shaded columns present results at final limits of excavation for each coordinate location.
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Excavation Cleanup Verification Sampling & Analyses Results Summary (1)

Coordinate (2):		70S - 40W				40S - 40 W				
Depth Below Original Ground Surface:		1'	2'	3'	4'	0'	1'	2'	3'	4'
Sample ID:		X4781	X5006	X5010	X5014	X4783	X5019	X5021	X5023	X5356
Parameter	RAO									
chloroethane	1	<.12	<.13	<.12	<.12	<.12	<.13	<.12	<.12	<.12
1,1-dichloroethane	1	<.12	2.4	<.12	<.12	<.12	5.4	<.12	0.18	<.12
1,2-dichloroethylene (total)	1	0.33	2.6	<.12	<.12	0.25	5.1	<.12	0.14	<.12
ethylbenzene	1	<.12	<.13	<.12	<.12	<.12	<.13	<.12	<.12	<.12
toluene	1	0.3	0.31	<.12	<.12	0.39	0.26	<.12	<.12	<.12
1,1,1-trichloroethane	1	2.9	0.23	0.18	0.35	3.5	0.19	<.12	1.2	<.12
trichloroethylene	1	2.1	0.22	0.16	0.13	2.3	<.13	<.12	0.89	<.12
vinyl chloride	1	<.12	<.13	<.12	<.12	<.12	<.13	<.12	<.12	<.12
xylenes (total)	1	<.35	<.39	<.37	<.37	<.35	<.38	<.36	<.35	<.36
Total VOCs (2)	10	6.46	6.54	1.69	1.57	7.27	11.85	1.32	3.24	1.32

Notes:
1) Table presents the results in mg/kg (dry weight) for the nine volatile organic compounds (VOCs) specifically listed in the Record of Decision dated November 7, 1994.
2) Coordinates are measured relative to the position of MW-2. Locations are depicted on Figure 7.
3) The total presented is the sum for the nine VOCs listed. In cases where a VOC was not detected, the detection limit value was added to the total.
4) RAO - Remedial Action Objective
5) NS - Not sampled since excavation extended to bedrock.
6) Shaded columns present results at final limits of excavation for each coordinate location.
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Excavation Cleanup Verification Sampling & Analyses Results Summary (1)

Coordinate (2):		35S - 25W	40S - 0W	40S -10W					100S - 20E
Depth Below Original Ground Surface:		3'	3'	1'	2'	3'	4'	5'	10'
Sample ID:		X5621	X5622	X4782	X5018	X5020	X5022	X5355	X4769
Parameter	RAO								
chloroethane	1	<.12	<.13	<.12	<1.2	<1.2	<.12	<.12	<.12
1,1-dichloroethane	1	<.12	<.13	<.12	30	21	12	<.12	<.12
1,2-dichloroethylene (total)	1	<.12	<.13	0.59	2	<1.2	1.1	<.12	<.12
ethylbenzene	1	<.12	<.13	<.12	<1.2	<1.2	<.12	<.12	<.12
toluene	1	<.12	<.13	0.48	1.9	<1.2	<.12	<.12	<.12
1,1,1-trichloroethane	1	0.31	0.14	8.8	78	<1.2	0.4	<.12	<.12
trichloroethylene	1	0.18	0.31	5.3	14	<1.2	1.1	<.12	<.12
vinyl chloride	1	<.12	<.13	<.12	<1.2	<1.2	<.12	<.12	<.12
xylenes (total)	1	<.35	<.39	<.35	<3.7	<3.6	<.36	<.36	<.36
Total VOCs (2)	10	1.56	1.62	16	133.2	33	15.44	1.32	1.32

Notes:
1) Table presents the results in mg/kg (dry weight) for the nine volatile organic compounds (VOCs) specifically listed in the Record of Decision dated November 7, 1994.
2) Coordinates are measured relative to the position of MW-2. Locations are depicted on Figure 7.
3) The total presented is the sum for the nine VOCs listed. In cases where a VOC was not detected, the detection limit value was added to the total.
4) RAO - Remedial Action Objective
5) NS - Not sampled since excavation extended to bedrock.
6) Shaded columns present results at final limits of excavation for each coordinate location.
7) Additional excavation could not be performed due to proximity of existing structure as indicated in the letter to the NYSDEC from Mr. Lindemann dated November 30, 1995.

Table 7
Soil & Ground Water Remediation
Project Summary Report
Scott Aviation
Lancaster, New York

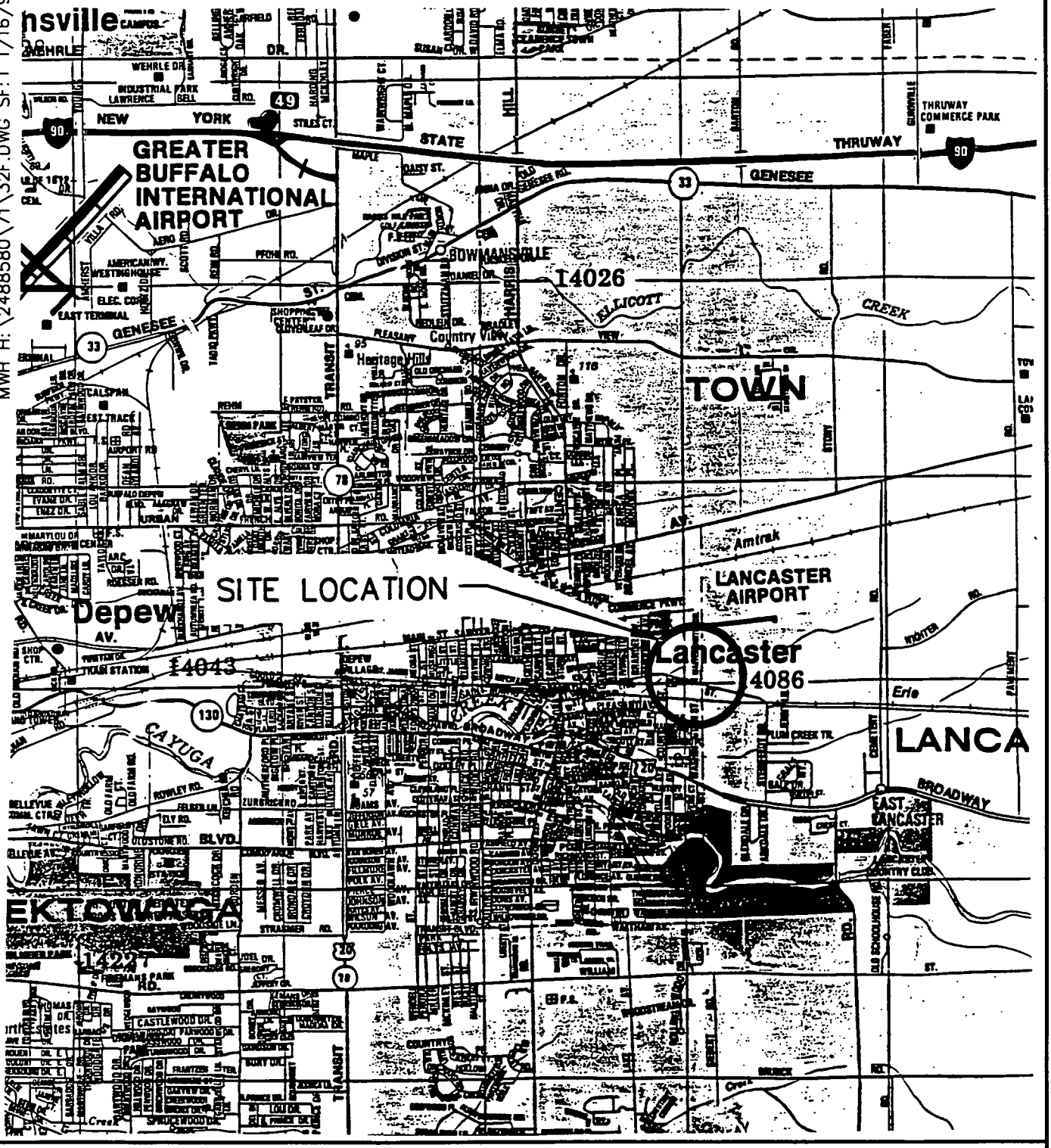
Excavation Cleanup Verification Sampling & Analyses Results Summary (1)

Coordinate (2):		115S - 28E	130S - 20E	135S - 10E	135S - 10W	150S - 17W	130S - 10W			
Depth Below Original Ground Surface:		4'	5'	1'	2'	2'	1'	2'	3'	4'
Sample ID:		X2269	X2268	X5094	X5093	X7408	X4777	X5005	X5016	X5017
Parameter	RAO									
chloroethane	1	<.12	<.12	<.13	<.12	<.12	<.24	<1.2	<.12	<.13
1,1-dichloroethane	1	1.4	0.27	<.13	<.12	<.12	<.24	5.4	<.12	<.13
1,2-dichloroethylene (total)	1	0.48	0.36	0.24	0.21	<.12	<.24	<1.2	<.12	<.13
ethylbenzene	1	<.12	0.24	<.13	<.12	<.12	<.24	<1.2	<.12	<.13
toluene	1	0.54	1.3	<.13	<.12	0.29	1.8	2	<.12	<.13
1,1,1-trichloroethane	1	1.3	6.1	0.2	0.3	<.12	16	<1.2	<.12	0.5
trichloroethylene	1	13	9.3	0.22	0.16	<.12	11	45	<.12	0.27
vinyl chloride	1	<.12	<.12	<.13	<.12	<.12	<.24	<1.2	<.12	<.13
xylenes (total)	1	<.36	0.96	<.38	<.36	<.36	0.97	<3.7	<.36	<.38
Total VOCs (2)	10	17.44 (Note 7)	18.77 (Note 7)	1.69	1.63	1.49	30.97	62.1	1.32	1.93

Notes: 1) Table presents the results in mg/kg (dry weight) for the nine volatile organic compounds (VOCs) specifically listed in the Record of Decision dated November 7, 1994.
2) Coordinates are measured relative to the position of MW-2. Locations are depicted on Figure 7.
3) The total presented is the sum for the nine VOCs listed. In cases where a VOC was not detected, the detection limit value was added to the total.
4) RAO - Remedial Action Objective
5) NS - Not sampled since excavation extended to bedrock.
6) Shaded columns present results at final limits of excavation for each coordinate location.
7) Additional excavation could not be performed due to proximity of existing structure as indicated in the letter to the NYSDEC from Mr. Lindemann dated November 30, 1995.

FIGURE 1

MWH H:\2488580\71\32F.DWG SF:1 1/16/96



NEW YORK

SCOTT AVIATION
LANCASTER, NEW YORK
SOIL & GROUND WATER REMEDIATION PROJECT
SUMMARY REPORT

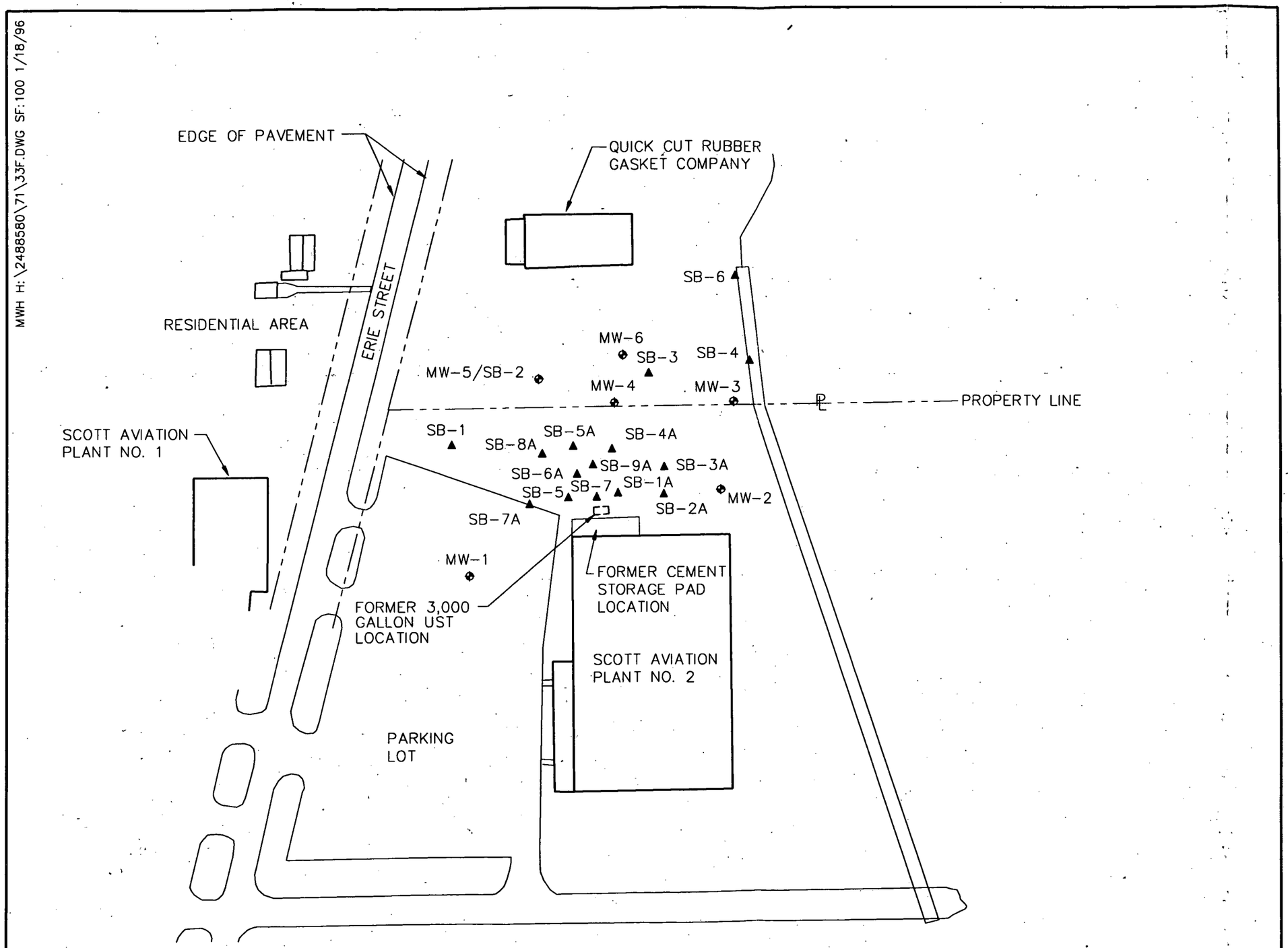
SITE LOCATION MAP

NOT TO SCALE

FILE NO. 2488.580-32F

O'BRIEN & GERE ENGINEERS INC.

FIGURE 2



LEGEND

SB-6 ▲ APPROX. LOCATIONS OF SOIL BORINGS PREVIOUSLY ADVANCED

MW-1 ◆ APPROX. LOCATIONS OF EXISTING MONITORING WELLS

SCOTT AVIATION
LANCASTER, NEW YORK
SOIL & GROUND WATER
REMEDIATION PROJECT
SUMMARY REPORT

PREVIOUS SITE PLAN

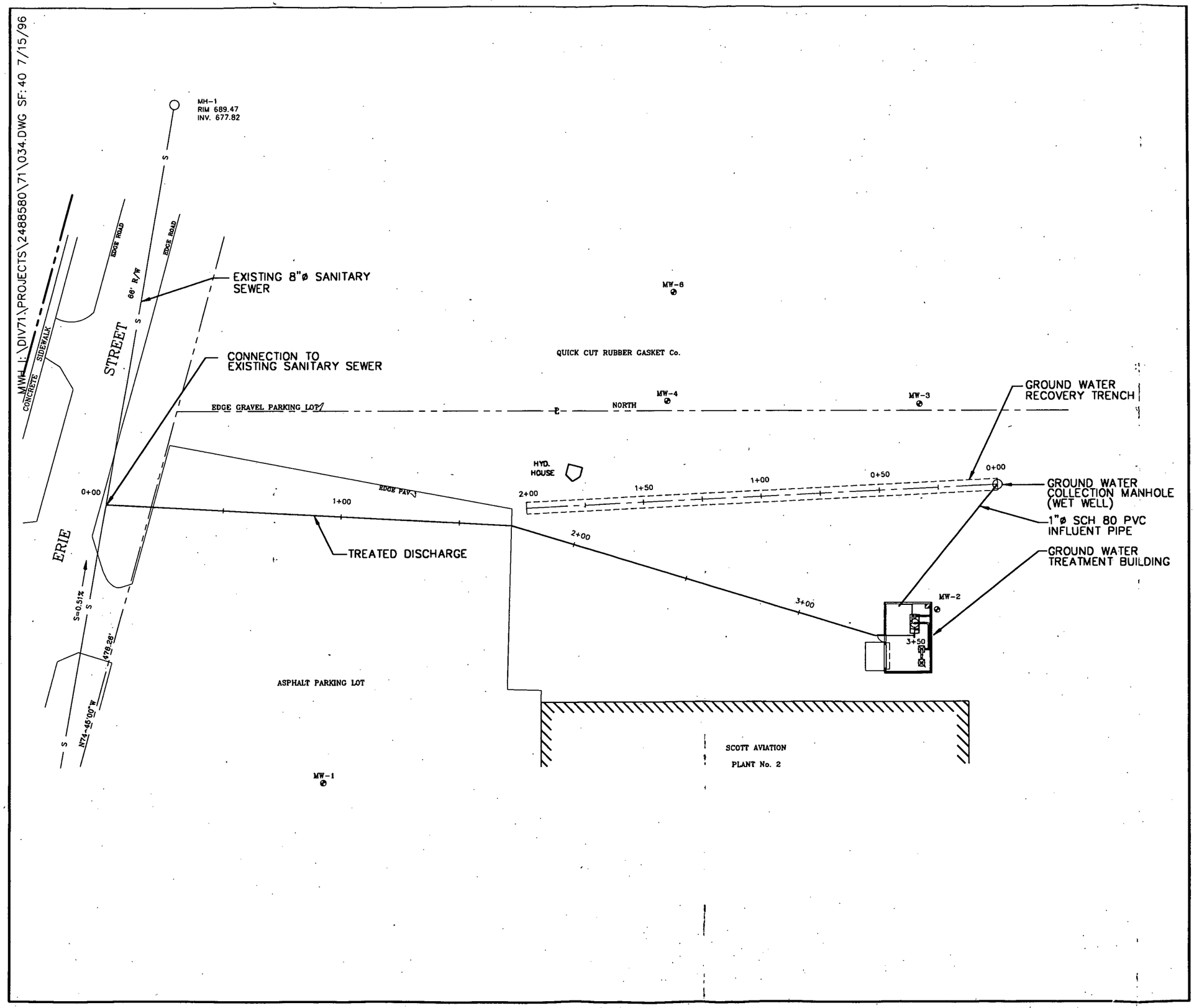
0 100 200

APPROX. SCALE IN FEET

FILE NO. 2488.580-33F

O'BRIEN & GERE ENGINEERS INC.

FIGURE 3



LEGEND

PROPERTY LINE

MW-1 EXIST. MONITORING WELL

SCOTT AVIATION
LANCASTER, NEW YORK
SOIL & GROUND WATER
REMEDIATION PROJECT
SUMMARY REPORT

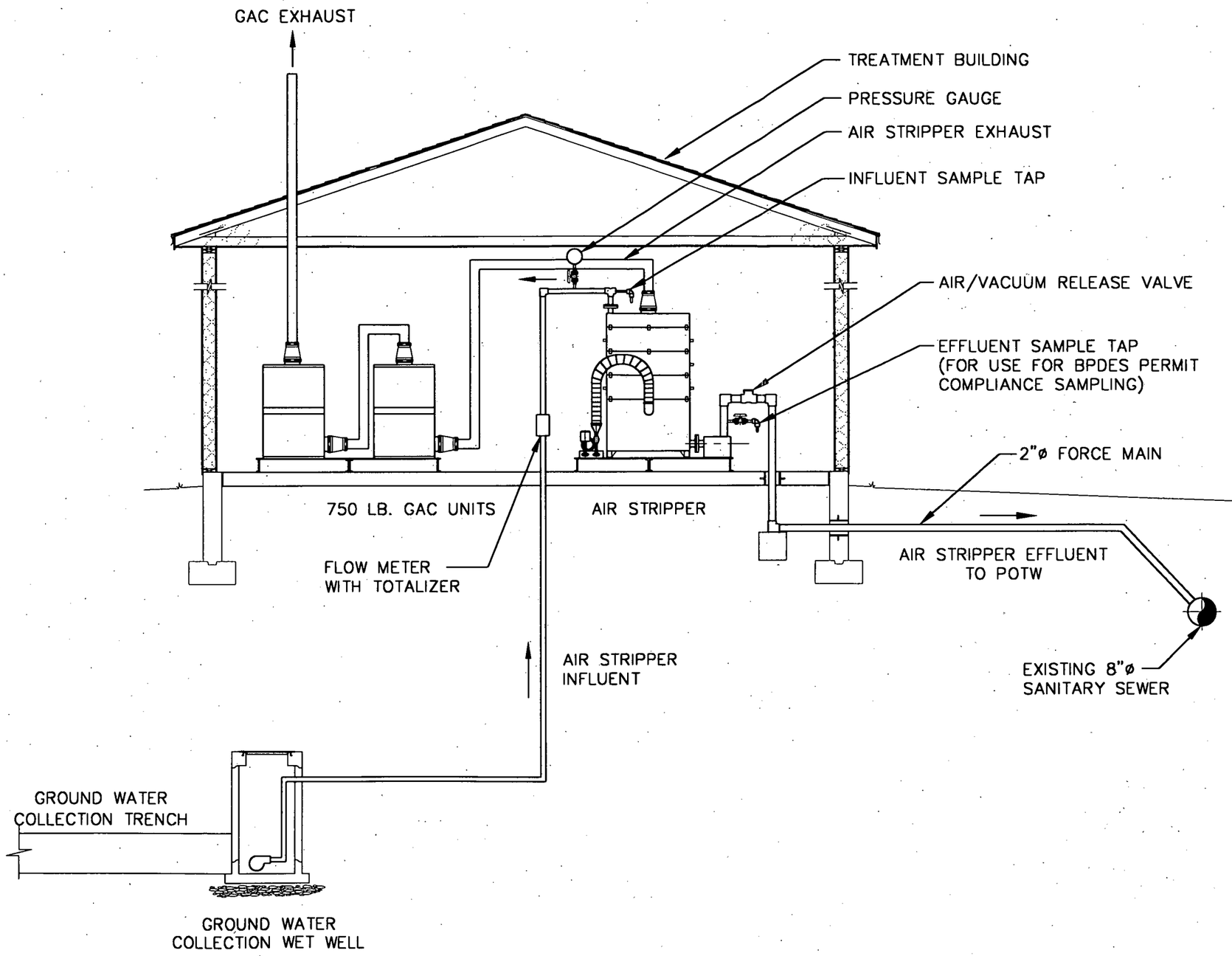
CURRENT SITE PLAN

0 40 80

SCALE IN FEET

FILE NO. 2488.580-034

O'BRIEN & GERE ENGINEERS INC.



SCOTT AVIATION
LANCASTER, NEW YORK
SOIL & GROUND WATER
REMEDIATION SYSTEM
SUMMARY REPORT

GROUND WATER REMEDIATION SYSTEM PROCESS

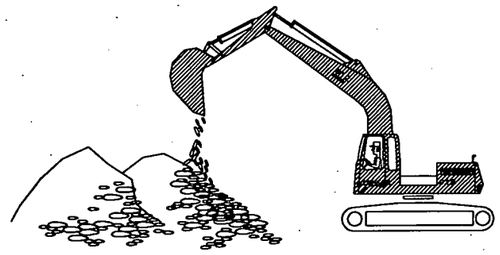
NOT TO SCALE

FILE NO. 2488.580-035

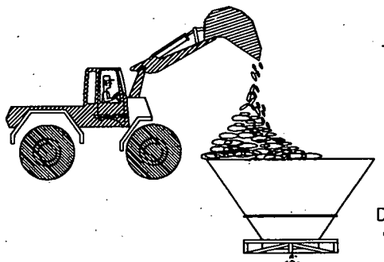
O'BRIEN & GERE
ENGINEERS INC.

FIGURE 5

MWH H:\2488580\71\36F.DWG SF:1 1/16/96



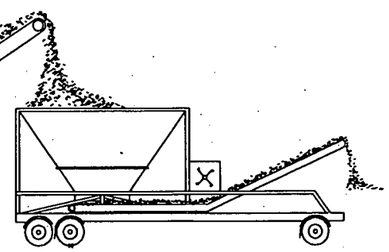
EXCAVATION



LIME ADDITION (TO DRY SOIL)

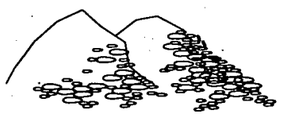
DRY SOILS

CRUDE SCREENING



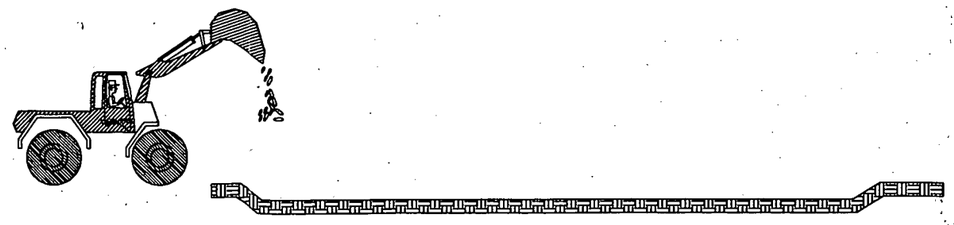
HAMMERMILL

TO PROPOSED SOILS STOCK PILES PENDING POST-PROCESSING CHARACTERIZATION



DEBRIS PILE

PROCESSED SOILS STOCK PILES AREA
(ACHIEVEMENT OF RAO'S VERIFIED BY LABORATORY ANALYSES PRIOR TO BACKFILLING)



BACKFILL & COMPACTION
(ACHIEVEMENT OF RAO'S VERIFIED BY POST-EXCAVATION SAMPLING AND LABORATORY ANALYSES PRIOR TO BACKFILLING)

SCOTT AVIATION
LANCASTER, NEW YORK
SOIL & GROUND WATER
REMEDIATION PROJECT
SUMMARY REPORT

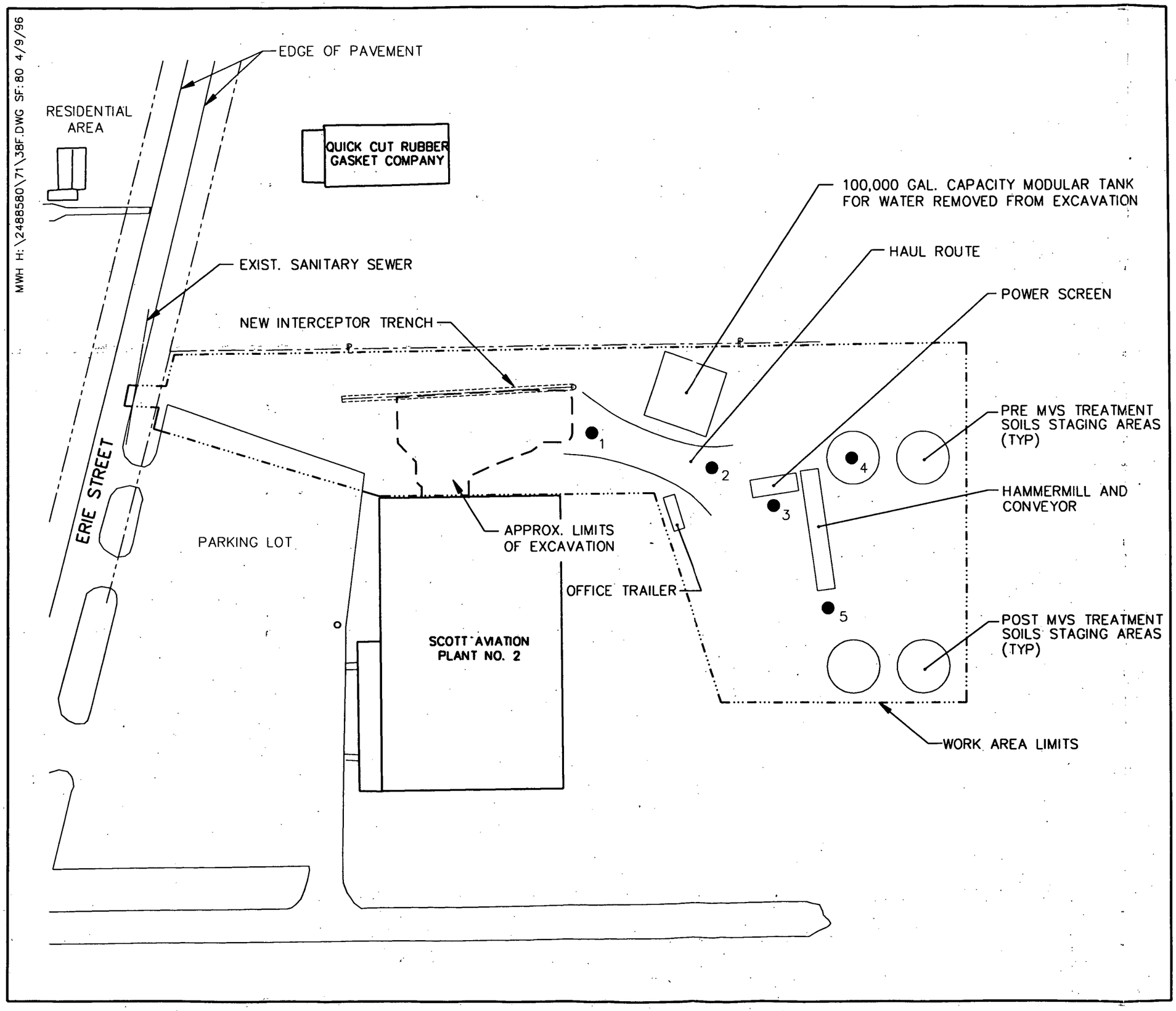
MVS PROCESS SCHEMATIC

NOT TO SCALE

FILE NO. 2488.580-36F

O'BRIEN & GERE ENGINEERS INC.

FIGURE 6



LEGEND

● 1 PRE-RESTORARTION SURFACE SOIL SAMPLE LOCATION

SCOTT AVIATION
LANCASTER, NEW YORK
SOIL & GROUND WATER
REMEDIATION PROJECT
SUMMARY REPORT

PRE-RESTORATION SURFACE SOIL SAMPLING PROGRAM

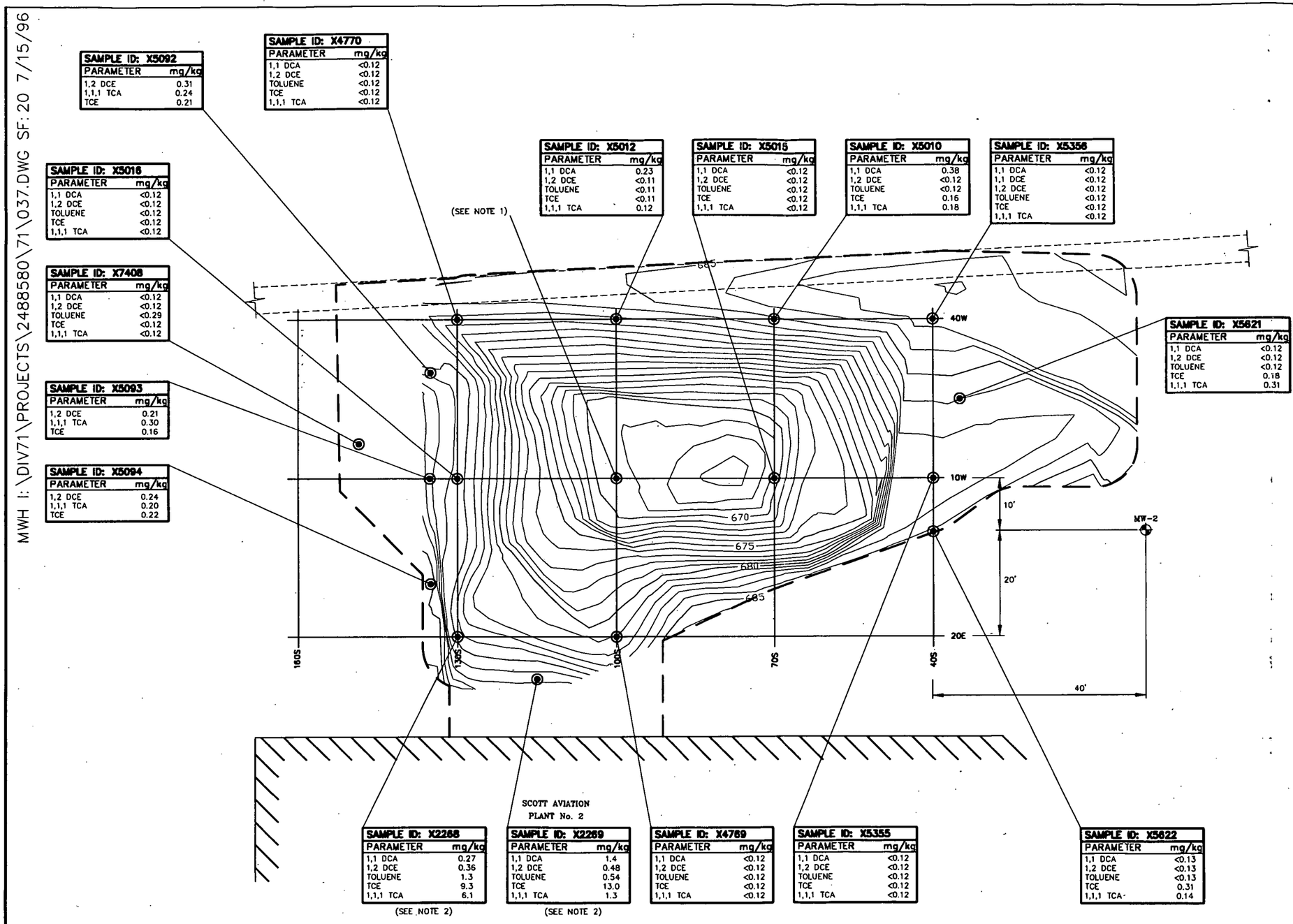
0 80 160

APPROX. SCALE IN FEET

FILE NO. 2488.580-38F

O'BRIEN & GERE ENGINEERS INC.

FIGURE 7



NOTES:

1. THE BOTTOM OF THE EXCAVATION SURROUNDING THIS COORDINATE WAS ADVANCED TO THE BEDROCK. SINCE THE EXCAVATION WAS ADVANCED TO THE BEDROCK, A SOIL SAMPLE COULD NOT BE OBTAINED FROM THIS LOCATION TO VERIFY FINAL VOC LEVELS. THIS SATISFIES THE REMEDIAL ACTION OBJECTIVES (RAOS), BECAUSE ALL POTENTIALLY IMPACTED SOILS WERE REMOVED FROM THIS AREA.

2. AS INDICATED IN THE LETTER DATED NOVEMBER 30, 1995 FROM GLEN LINDEMANN TO THE NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION, THE EXCAVATION PROXIMAL TO THESE TWO SAMPLE LOCATIONS WAS MADE TO THE EXTENT PRACTICABLE WITHOUT CAUSING DAMAGE TO THE EXISTING BUILDING. COMPLIANCE WITH RAO'S WILL BE ACHIEVED THROUGH PUMPING THE GROUND WATER UNTIL APPROPRIATE GROUND WATER CONCENTRATIONS ARE ATTAINED. NYSDEC APPROVAL TO BACKFILL THE EXCAVATION WAS PROVIDED BY THE LETTER DATED DECEMBER 11, 1995 TO MR. LINDEMANN OF SCOTT AVIATION.

LEGEND

- HORIZONTAL LIMITS OF EXCAVATION
- VERIFICATION SAMPLE LOCATION
- MW-2 MONITORING WELL LOCATION
- INTERCEPTOR TRENCH

SCOTT AVIATION
LANCASTER, NEW YORK
SOIL & GROUND WATER
REMEDIATION PROJECT
SUMMARY REPORT

FINAL VERIFICATION SAMPLE LOCATIONS & RESULTS

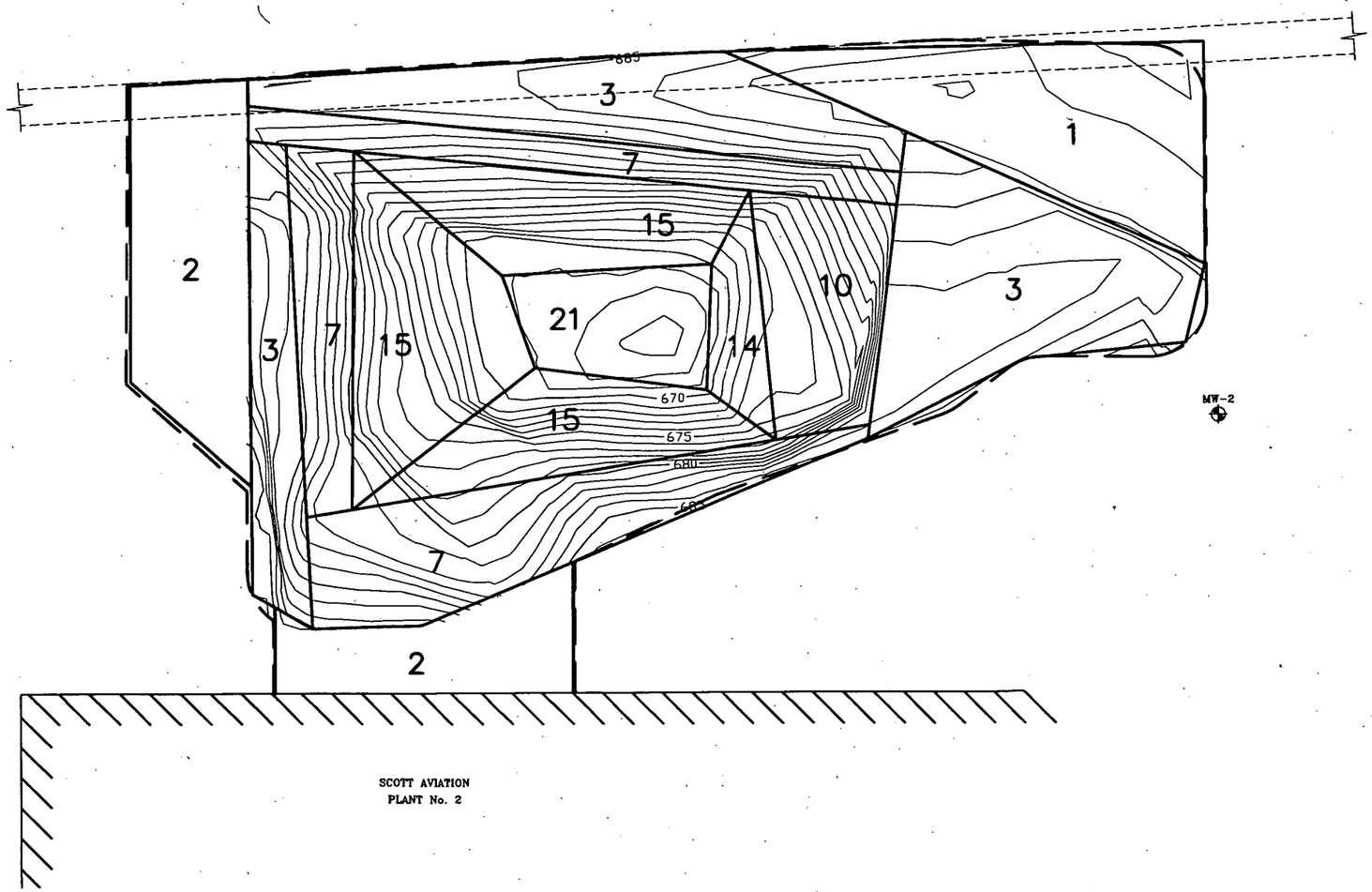
0 20 40

SCALE IN FEET

FILE NO. 2488.580-037

O'BRIEN & GERE ENGINEERS INC.

FIGURE 8



LEGEND

- HORIZONTAL LIMITS OF EXCAVATION
- MW-2 — MONITORING WELL LOCATION
- INTERCEPTOR TRENCH
- 2 — APPROXIMATE DEPTH BELOW ORIGINAL GROUND SURFACE (FT)

SCOTT AVIATION
LANCASTER, NEW YORK
SOIL & GROUND WATER
REMEDIATION PROJECT
SUMMARY REPORT

EXCAVATION DEPTHS

0 20 40

SCALE IN FEET

FILE NO. 2488.580-039

O'BRIEN & GERE ENGINEERS INC.