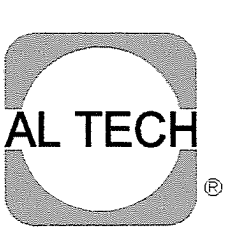


PHASE I
RCRA FACILITY INVESTIGATION REPORT

AL Tech Specialty Steel Corporation
Dunkirk, New York

VOLUME 2 of 6
Appendices A through L

October 22, 1998

ENVIRONMENTAL STRATEGIES CORPORATION

PITTSBURGH, PENNSYLVANIA

ENVIRONMENTAL STRATEGIES CORPORATION
Four Penn Center West ▪ Suite 315 ▪ Pittsburgh, Pennsylvania 15276 ▪ (412) 787-5100 ▪ Fax (412) 787-8065

DRAFT
PHASE I RCRA FACILITY INVESTIGATION

AL TECH SPECIALITY STEEL CORPORATION
DUNKIRK, NEW YORK

APPENDICES A THROUGH L

prepared for

AL Tech Specialty Steel Corporation

OCTOBER 22, 1998

ENVIRONMENTAL STRATEGIES CORPORATION
PITTSBURGH, PENNSYLVANIA

Appendix A

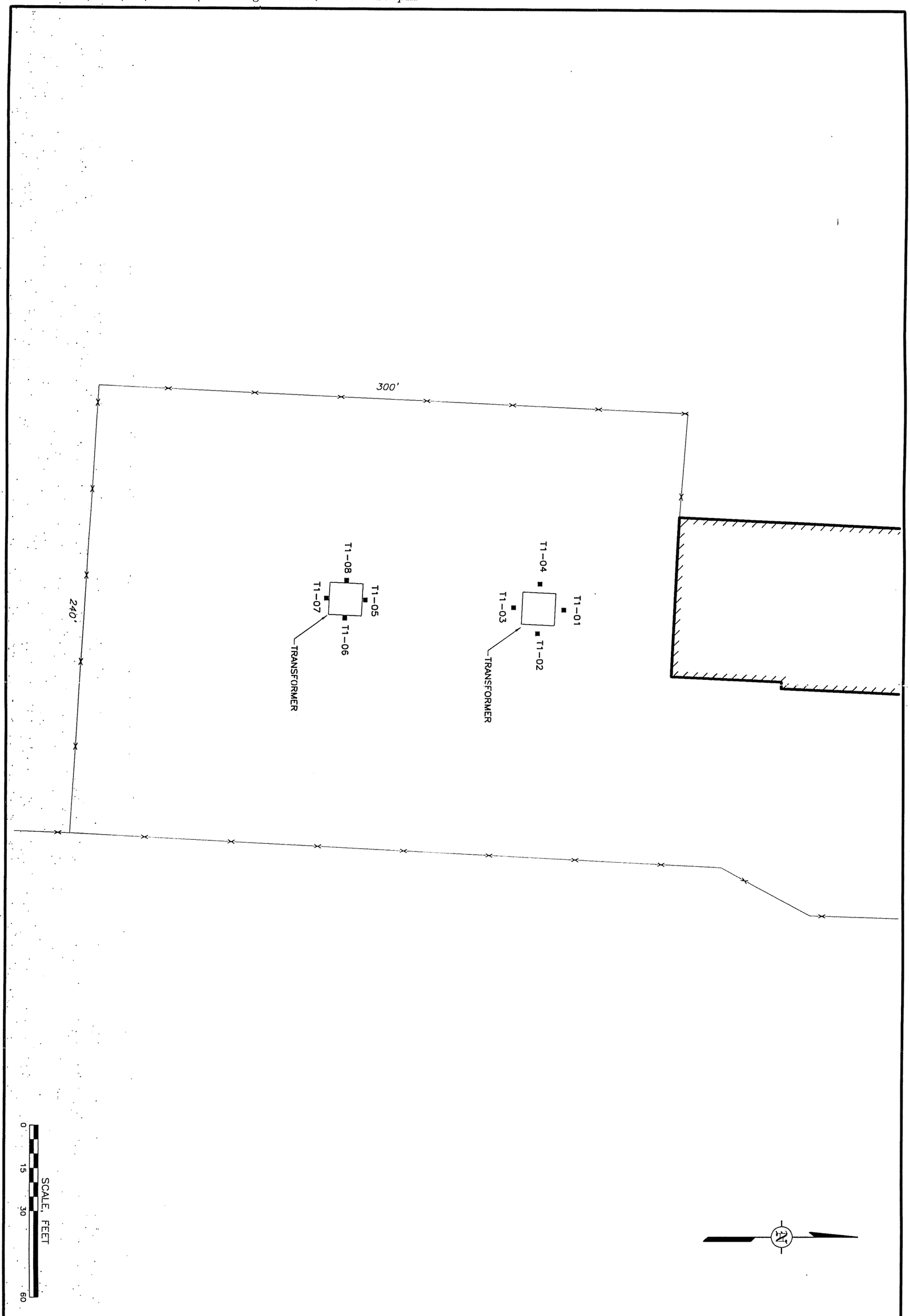
Appendix A

Appendix A – Transformer Area Soil Sample Location Maps and Wipe-Test Data

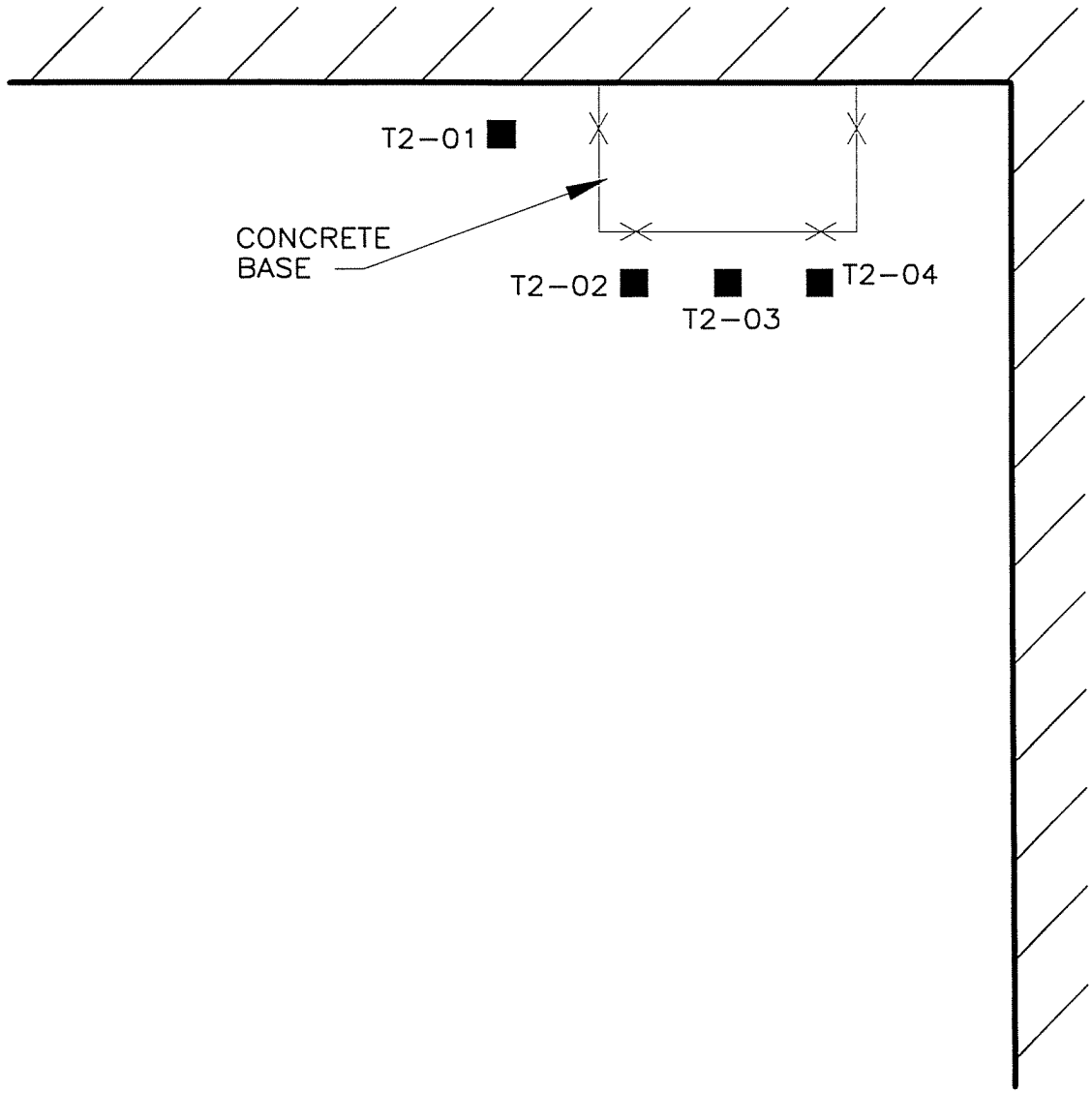
Sample Location Maps and Wipe-Test Data

Soil Sample Location Maps

Zdinak Z:\DWG\48\483803\ B14.dwg :Oct 07, 1998 2:10 pm



ESC ENVIRONMENTAL STRATEGIES CORPORATION Four Penn Center West, Suite 315 Pittsburgh, Pennsylvania 15276 (412) 787-5100	Figure A-1 TRANSFORMER T1 SURFACE SOIL SAMPLE LOCATIONS	AL TECH SPECIALTY STEEL CORPORATION DUNKIRK, NEW YORK PHASE I RFI	Drawn By: TMB 091298 Checked: 10/07/98 Approved: Drawing Number: 483803-B14



SCALE, FEET
0 10 20

ENVIRONMENTAL STRATEGIES CORPORATION Four Penn Center West, Suite 315 Pittsburgh, Pennsylvania 15276 (412) 787-5100	Figure A-2 TRANSFORMER T2 SURFACE SOIL SAMPLE LOCATIONS	AL TECH SPECIALTY STEEL CORPORATION DUNKIRK, NEW YORK PHASE I RFI

Drawing Number: 483803-A5
Checked: Approved: 10/07/98
Drawn By: TMB 10/28/97

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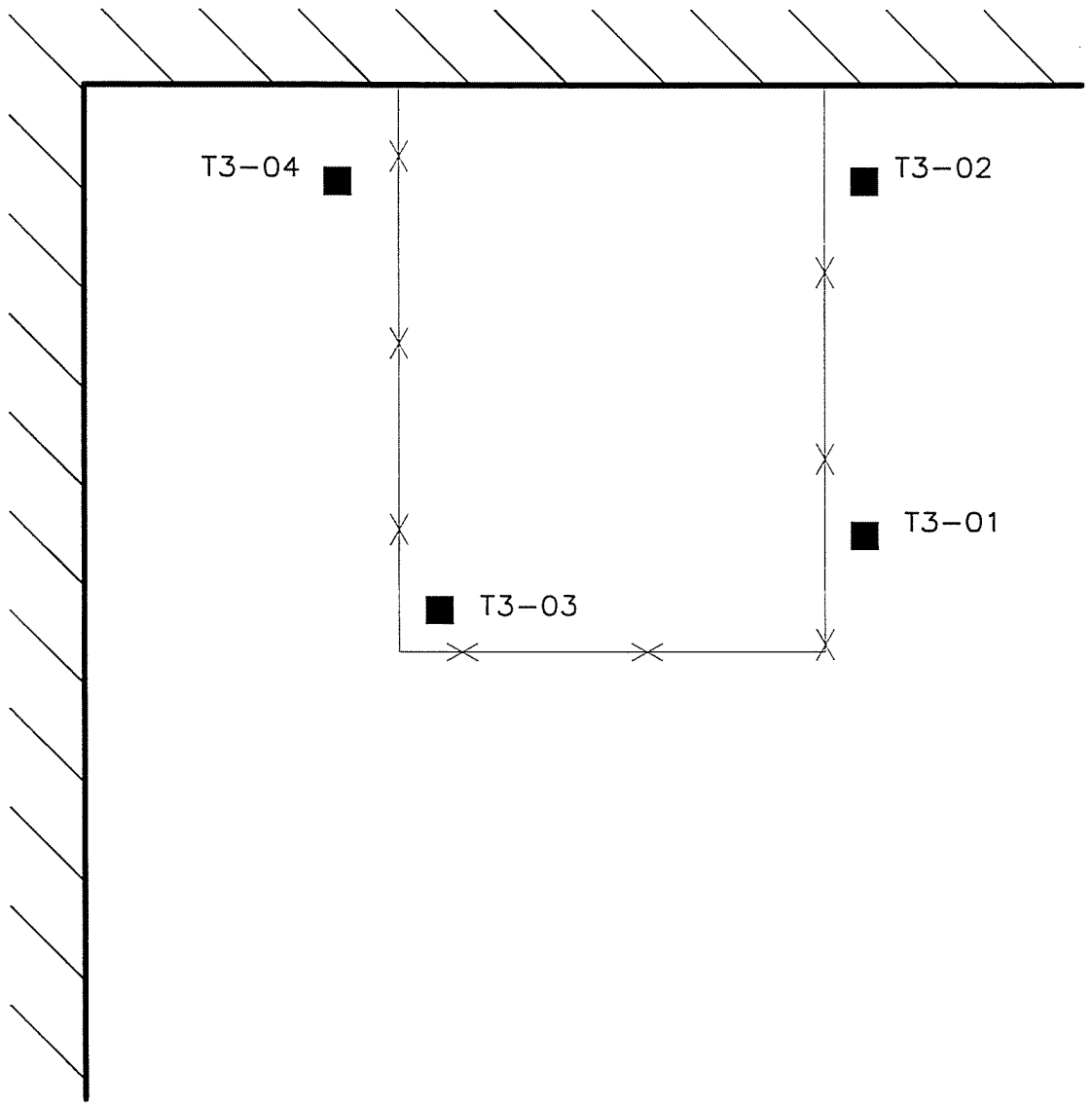

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TMB 10/28/97	Approved:	483803-A6

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ENVIRONMENTAL STRATEGIES CORPORATION
Four Penn Center West, Suite 315
Pittsburgh, Pennsylvania 15276
(412) 787-5100

Figure A-3

TRANSFORMER T3 SURFACE SOIL SAMPLE LOCATIONS

AL TECH SPECIALTY STEEL CORPORATION
DUNKIRK, NEW YORK

PHASE I RFI

Wipe-Test Data

CLIENT: Sterling Environmental Services
SAMPLE ID: HAP TSI #15 12:55pm
COLLECTION METHOD:
COLLECTION DATE(S): 06/10/97
SAMPLE TYPE: Wipe

T4

AES CLIENT ID: STER
AES SAMPLE ID: 728H-3

PROJECT ID: 728H

Analytical Parameters	Analytical Results	Units	Practical Quantifiable Limit	Method
PCB-1016	ND	µg/wipe	100,000	DOH 312-3
PCB-1221	ND	µg/wipe	100,000	DOH 312-3
PCB-1232	ND	µg/wipe	100,000	DOH 312-3
PCB-1242	ND	µg/wipe	100,000	DOH 312-3
PCB-1248	ND	µg/wipe	100,000	DOH 312-3
PCB-1254	740,000D	µg/wipe	100,000	DOH 312-3
PCB-1260	ND	µg/wipe	100,000	DOH 312-3

CLIENT: Sterling Environmental Services
SAMPLE ID: LAP Circuit Break 12:45pm (T5)
COLLECTION METHOD:
COLLECTION DATE(S): 06/10/97
SAMPLE TYPE: Wipe

AES CLIENT ID: STER
AES SAMPLE ID: 728H-2

PROJECT ID: 728H

Analytical Parameters	Analytical Results	Units	Practical Quantifiable Limit	Method
PCB-1016	ND	µg/wipe	2.00	DOH 312-3
PCB-1221	ND	µg/wipe	2.00	DOH 312-3
PCB-1232	ND	µg/wipe	2.00	DOH 312-3
PCB-1242	ND	µg/wipe	2.00	DOH 312-3
PCB-1248	ND	µg/wipe	2.00	DOH 312-3
PCB-1254	19 D	µg/wipe	2.00	DOH 312-3
PCB-1260	ND	µg/wipe	2.00	DOH 312-3

CLIENT: Sterling Environmental Services
SAMPLE ID: BRP #4750216 12:30pm (T6)
COLLECTION METHOD:
COLLECTION DATE(S): 06/10/97
SAMPLE TYPE: Wipe

AES CLIENT ID: STER
AES SAMPLE ID: 728H-1

PROJECT ID: 728H

Analytical Parameters	Analytical Results	Units	Practical Quantifiable Limit	Method
PCB-1016	ND	µg/wipe	1,000	DOH 312-3
PCB-1221	ND	µg/wipe	1,000	DOH 312-3
PCB-1232	ND	µg/wipe	1,000	DOH 312-3
PCB-1242	ND	µg/wipe	1,000	DOH 312-3
PCB-1248	ND	µg/wipe	1,000	DOH 312-3
PCB-1254	3,100 D	µg/wipe	1,000	DOH 312-3
PCB-1260	ND	µg/wipe	1,000	DOH 312-3

Advanced Environmental Services, Inc.
Sample Traceability Report

Project Identification EFM

Sample #	Sample Collection	Group #	Run #	Prep Method	Prep Date	Analyst	Analytical Methodology	Analysis Date	Analyst
728H -1	6/10/97	—	—	DOH 312-3	6/18/97	TCH	DOH 312-3	6/25/97	SMH
-2	"	"	"	"	"	"	"	6/23/97	"
-3	"	"	"	"	"	"	"	6/25/97	"

Please note: Areas marked by a dash indicate that no sample preparation isrequired under the applied methodology.

CHAIN OF CUSTODY RECORD

ENVIRONMENTAL SERVICES, INC.
2186 LIBERTY DRIVE
NIAGARA FALLS, NEW YORK 14304

(716) 283-3120
(800) 791-3120
FAX (716) 283-4727

PROJECT NAME: A1 Tech - PCB Wipes

PROJECT I.D. #: M28H

SAMPLER'S SIGNATURE:

JOB CODE: EFM

DATE	TIME	SAMPLE IDENTIFICATION	GRAB	COMP	SAMPLE TYPE	CONTAINER CLASSIFICATION: UNPRESERVED	HNO3	H2SO4	HCL	NAOH	VIAL (PRES.)	VIAL (UNPRES.)	TOTAL	PARAMETERS/REMARKS
6/10/97	12:30	BRP #4750216			Wipe	X								PCB
↓	12:45	LAP Circuit Break			↓	↓								↓
↓	12:55	HAP-TSI #15			↓	↓								↓

TOTAL NUMBER OF CONTAINERS: 3

NOTE: Please indicate required analysis, and whom we may contact with questions, if you have not yet done so through your customer service representative.

	DATE	TIME	
1. RELINQUISHED BY:	6/10/97	3:50 PM	RECEIVED BY:
2. RELINQUISHED BY:	6/10/97	4:30 PM	RECEIVED BY:
3. RELINQUISHED BY:	DATE	TIME	RECEIVED BY:

STERLING
ENVIRONMENTAL SERVICES, INC.

July 7, 1997

Mr. Michael Guziec
Al Tech Specialty Steel Corporation
P.O. Box 152
Dunkirk, NY 14048-0152

Dear Michael:

This report is for laboratory analysis of the PCB wipe samples taken June 10, 1997. Please note that sample BRP #4750216 was a nonstandard wipe. The surface wiped was not flat so a template could not be used. The area wiped was only an approximation and therefore correlation to 100 sq cm would not be accurate. The other two samples were standard 100 sq cm wipes.

Very truly yours,

STERLING ENVIRONMENTAL SERVICES, INC.

Wayne K. Cameron, CHMM

Enclosures

1372 CLINTON STREET • BUFFALO, NEW YORK 14206 • PHONE (716) 824-2407 • FAX (716) 824-2441

STERLING ENVIRONMENTAL SERVICES

ANALYSIS FOR PCB CONTENT

SAMPLE DATE: JUNE 10, 1997

Prepared By:

ADVANCED ENVIRONMENTAL SERVICES INC.

"A Company Dedicated to Honesty, Quality and Service"

June 25, 1997
REF: EFM728H

QA/QC VERIFICATION FOR PROJECT ID 728H

The following report, as well as the supporting data, have been carefully reviewed for accuracy, adherance to the cited methods, and completeness. All data contained in this report was generated in accordance with the AES Laboratory Quality Assurance/Quality Control Program.

Elizabeth Buck

Organic Chemistry

W. Joseph McDougall

Quality Control

Felicia Nuccari

Project Manager

All 'Total' results on soil matrices are calculated on a dry weight basis, unless otherwise noted.
Analyses noted as 'Performed in the laboratory' require immediate testing and should be performed in the field.

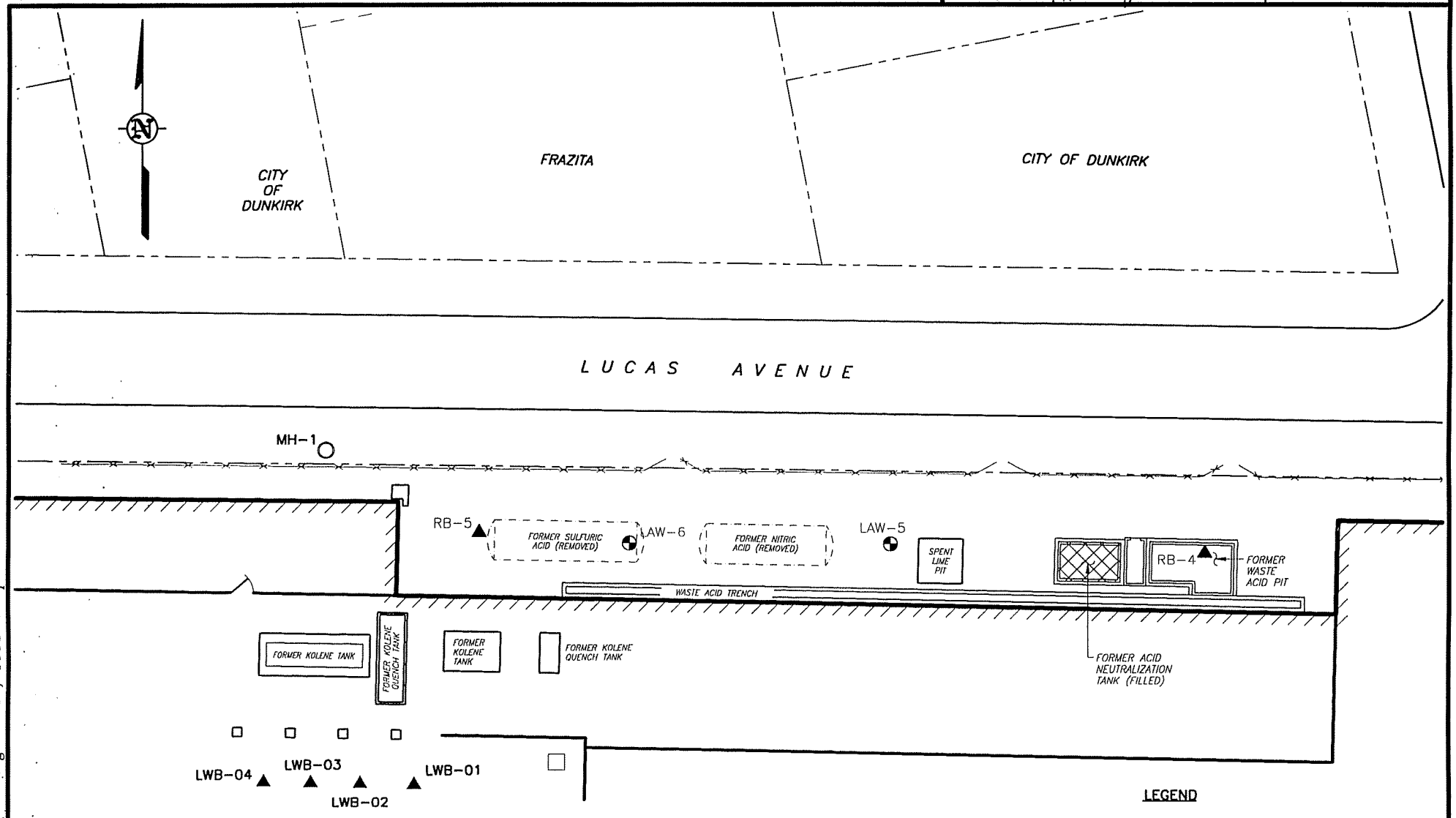
The following are standard abbreviations:

- BQL - Below Quantifiable Limits
- ND - None Detected
- NG - No Growth of Colonies
- NR - Not Requested
- D - Indicates a dilution was required

Appendix B

Appendix B - CAMU Boring and Soil Sample Location Maps

Drawn By:	Checked:	Drawing Number:
TMB 11/11/97	Approved: 10/07/98	483803-A4



ENVIRONMENTAL STRATEGIES CORPORATION
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Pittsburgh, Pennsylvania 15276
(412) 787-5100

Figure B-1

CAMU A
BORING LOCATIONS

AL TECH SPECIALTY STEEL CORPORATION
DUNKIRK, NEW YORK

PHASE I RFI

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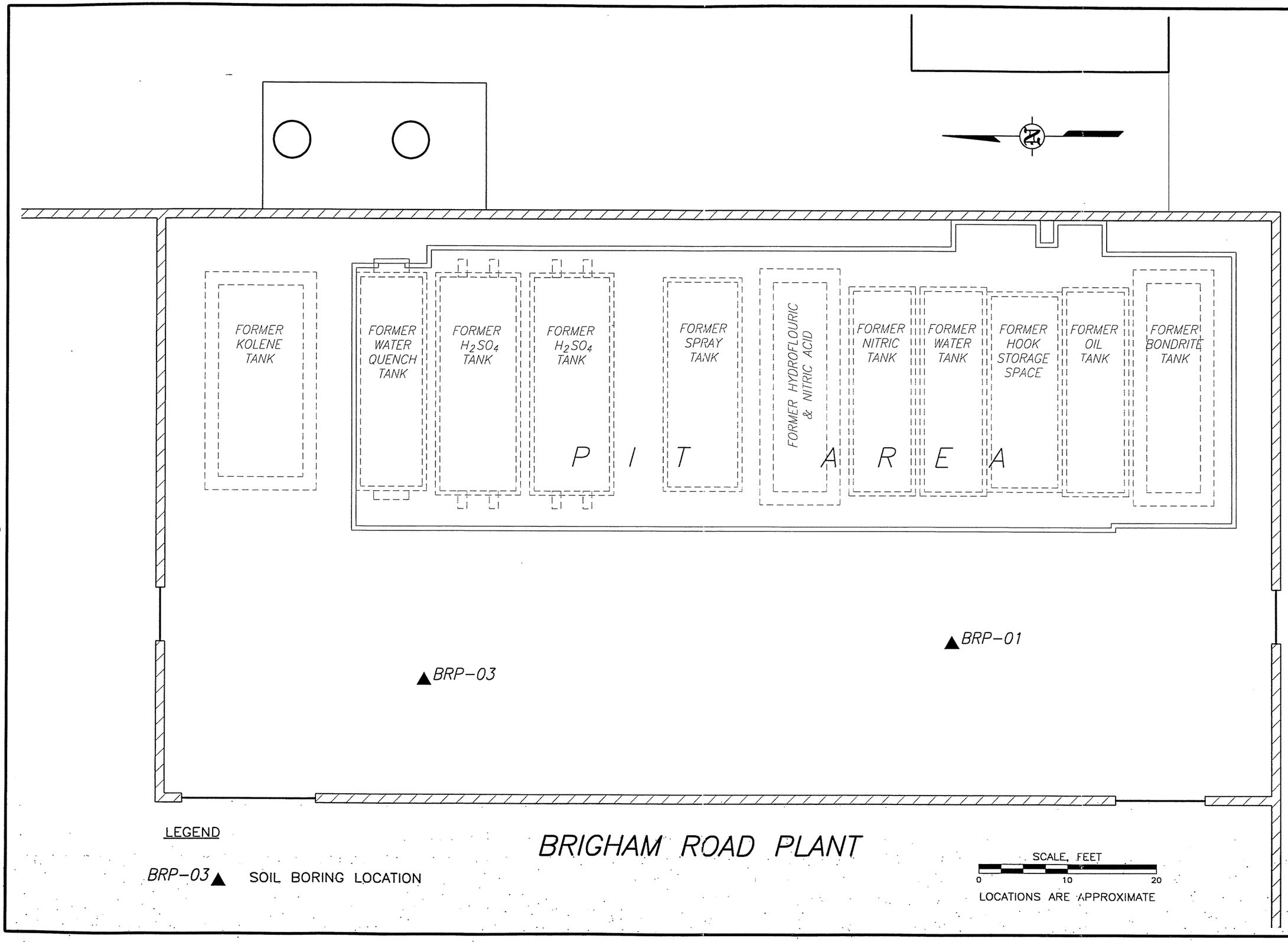

Zdinak Z:\DWG\4B\483803\B05.dwg :Oct 07, 1998 2:24 pm

Drawn By: TMB 10/30/97
Checked: [illegible] 10/07/98
Approved:
Drawing Number: 483803-B5

AL TECH SPECIALTY STEEL CORPORATION
DUNKIRK, NEW YORK
PHASE I RFI

Figure B-2
CAMU B
BORING LOCATIONS

ENVIRONMENTAL STRATEGIES CORPORATION
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(412) 787-5100

LUCAS AVENUE PLANT

PARKING

FORMER 1,1,1-TCA TANK

LEB-03

LEB-02

LEB-01

LAE-4

PENNSYLVANIA RAILROAD

LEGEND

LAE-4 ⊕ MONITORING WELL LOCATION

LEB-01 ▲ SOIL BORING LOCATION

SCALE, FEET

0 20 40

LOCATIONS ARE APPROXIMATE

Drawn By: TMB 10/30/97
Checked: [illegible] 10/07/98
Approved:
Drawing Number: 483803-B6

AL TECH SPECIALTY STEEL CORPORATION
DUNKIRK, NEW YORK
PHASE I RFI

Figure B-3
CAMU D
BORING LOCATIONS

ENVIRONMENTAL STRATEGIES CORPORATION
Four Penn Center West, Suite 315
Pittsburgh, Pennsylvania 15276
(412) 787-5100

Appendix C

Appendix C - Project Status Reports

Project Status Report No. 1

PHASE I RCRA FACILITY INVESTIGATION
PROJECT STATUS REPORT NO. 1

AL Tech Specialty Steel Corporation
Dunkirk, New York Facility

Project Status Report No. 1
Reporting Period - October 1996
AL Tech Specialty Steel Corporation
Dunkirk, New York Facility

Project Work Completed During the Reporting Period (October 1996)

Environmental Strategies Corporation (ESC) and the drilling and excavating subcontractors, Earth Dimensions, Inc. and Geiben Brothers, mobilized to the facility on Monday, October 21, 1996.

Between the period of October 21 and October 31, 1996, the following field activities were implemented and completed in accordance with the New York State Department of Environmental Conservation (NYSDEC)-approved Phase I Resource Conservation and Recovery Act (RCRA) Facility Investigation (RFI) Work Plan (except as noted under Work Scope Changes, below):

- drilling, soil sampling, and installation of 17 monitoring wells (RFI-1 through RFI-17)
- drilling and soil sampling of 7 outdoor soil borings (RB-1 through RB-7)
- drilling and soil sampling of indoor soil borings at the Brigham Road Plant (BRB-series) and Lucas Avenue Plant east and west (LAE- and LAW-series)
- excavation, soil sampling, and backfilling of 11 test pits (TP-1 through TP-11)
- surface soil sampling at
  - monitoring well locations
  - soil boring locations
  - ground surface locations
  - outdoor transformer area locations
  - background locations
- surface water and sediment sampling in the unnamed tributary to Crooked Brook
- documentation of conditions along Crooked Brook, including identification of various outfalls/discharges to the stream, from Howard Avenue to Sixth Street

Development of the newly installed monitoring wells began on Tuesday, October 29, 1996, but had not been completed by October 31, 1996.

Summary of Findings and Laboratory Data

The findings of the investigation are currently limited to field observations.

In general, the subsurface stratigraphy is generally comprised of five zones:

- miscellaneous fill
- medium-stiff brown silt and clay
- very stiff gray clay and silt
- weathered shale bedrock
- competent shale bedrock

The bedrock surface appears to be undulate; depths to the weather bedrock varied across the site from approximately 10 to 18 feet below ground surface.

As anticipated, wet to saturated conditions were limited to the interface of the weathered shale bedrock and overlying gray clay; in several locations, including RFI-6, little to no water was observed during soil boring activities or installation of monitoring wells. Also as anticipated, water levels in the new wells rose following installation to within approximately 5 feet of the ground surface.

Field measurements of water from several of the newly installed wells (RFI-7, RFI-17, and RFI-13) and one existing well (MW-3), located immediately downgradient of the Bar Finishing & Storage (BFS) Area Pickle House, and the former BRP Pickle House, indicate pH values of approximately 7 standard units.

Well development observations suggest that, due to the fine nature of the subsurface materials and despite the use of both a slotted screen size of 0.01-inch machine slot and of fine sand pack, it is unlikely that the turbidity in these wells will decrease sufficiently (to below 50 nephelometric units) and it is anticipated that both total and dissolved groundwater aliquots will be collected during implementation of the groundwater sampling events.

Laboratory data is not yet available.

Summary of Work Scope Changes

During a site walk with representatives of NYSDEC (Scott M. Menrath and Denise Radtke), on Tuesday and Wednesday, October 22 and 23, 1996, the locations of the following environmental media sampling locations were altered from those identified in the approved Work Plan, as follows:

- monitoring wells

  - RFI-4 was moved to a location approximately 140 feet east of that shown in Figure 7 of the Work Plan, to account for potential groundwater flow to the north and east from SWMUs 13B and 14B, Crucible Disposal Area and Waste Disposal facility; the original location based no an assumption that all site groundwater flow to the northwest

  - RFI-5 was moved to a location approximately 140 feet east of that shown in Figure 7, to account for potential groundwater flow to the north of the former east Lucas Avenue Plant (LAP) pickling area and 1,1,1-trichloroethane degreaser tank

  - RFI-7 was moved to a location east of shown in Figure 7, to address potential groundwater flow to the north from the BFS Pickle House, CAMU C; due to the location of underground process lines running east-west immediately north of the fence surrounding the Pickle House yard area, ESC subsequently moved the well to within the fenced area, at the approximate mid-point of the Pickle House building

  - RFI-10 was moved to a location northwest of that shown in Figure 7, due to the continued use of the unit intended for evaluation, SWMU 11, Shark Pit Residual Material Loading Area and the potential for the well to be destroyed or damaged; the new location is on the southeast corner of the facility's wastewater treatment plant building

  - RFI-17 was moved to a location approximately 30 feet north of that shown in Figure 7 and to within the fence surrounding the Pickle House yard, due to the presence of an underground high-pressure natural gas line and process lines in the area originally proposed

- indoor borings

  - former LAP west pickling area borings were moved; due to overhead constraints and the presence of materials potentially containing residuals at the ground surface, the four soil borings to be completed in this area (LWB-1 through LWB-4) were relocated approximately 15 feet south of those originally planned

  - one of the three borings in the former LAP east pickling area (LEB-3) was relocated approximately 80 feet east of that originally planned to a location immediately proximate to the former 1,1,1-trichloroethane degreaser tank to evaluate potential impact from this unit

  - three locations were selected in the former BRP pickling area; along a north-south trending line, parallel to and approximately 20 feet east of the open pit area (BRB-1 through BRB-3); these locations had not previously been identified

- surface water and sediment locations

  - the downstream location originally proposed (S-3 in Figure 7), was relocated approximately 120 feet downstream to an area of deposition to ensure collection of stream sediments

- the mid-stream location originally proposed (S-2 in Figure 7), was relocated to former Location
  S-3

- the upstream location originally proposed (S-1 in Figure 7), was relocated to former Location S-2, due to the absence of sedimentation in the original location, difficult accessibility, and presence of construction debris from the road overpass

Due to the extreme difficulty in collection of the sediment samples from the unnamed tributary, samples of sediment were not collected for grain-size analysis. Evaluation of the grain-size will, therefore, be limited to the field classification of the materials.

Also during the site walk, the condition of the indoor transformers T4, T5, and T6, were evaluated. The floor of T4, appeared to be without staining although fine soil was present. The floor of T5 was stained in several locations, although the concrete was intact and in good condition. The floor of T6 was also intact and in good condition; a limited amount of sorbent material and a small stain were observed on the floor adjacent to the unit. AL Tech and NYSDEC agreed that the floors in all these areas should be cleaned. Subsequently, wipe tests will be performed in T5 and T6 for polychlorinated biphenyls analysis.

Summary of Contacts with the Public and Public Agencies

Pursuant to a request by NYSDEC, ESC prepared a revised Community Relations Plan (Appendix D to the Work Plan) for AL Tech. A Fact Sheet was distribution to property owners or residence immediately proximate to the AL Tech facility which summarized the work to be performed. In addition, AL Tech also prepared a notice for publication in the local newspaper, *The Observer*. The Fact Sheets were mailed to those persons identified in the plan on Wednesday, October 16, 1996; the notice appeared in *The Observer* on Friday, October 18, and Monday, October 21, 1996.

Identified Problems/Solutions

There were no problems identified during the reporting period.

Personnel Changes

There were no changes in project personnel during the reporting period. ESC project personnel include:

- Martha Fleming, Project Manager
- Greg Frisch, Field Team Leader/Geologist
- Patrick Peterson, Health and Safety Officer/Geologist
- Glen Rieger, Engineer
- Blayne Diacont, Geologist
- Marie DeGraef, Geologist

The AL Tech project manager is Dennis L. Zurakowski, P.E.

The laboratory analytical subcontractor is Antech, Ltd., of Export, Pennsylvania; the data validator is Heartland Environmental Services, Inc., of St. Peters, Missouri. Geotechnical testing is to be performed by Geotechnics, Inc., of East Pittsburgh, Pennsylvania.

Project Work to be Completed During the Subsequent Reporting Period (November 1996)

The following activities are scheduled for completion or implementation during the next reporting period:

- completion of well painting, labeling, and repairs to existing site wells (week of November 4, 1996)
- completion of well development (November 4 to 6, 1996)
- implementation of the first groundwater sampling event (November 18 to 22, 1996)
- site survey (November 18 to 22, 1996)

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PHASE I RCRA FACILITY INVESTIGATION
PROJECT STATUS REPORT NO. 2

AL Tech Specialty Steel Corporation
Dunkirk, New York Facility

Project Status Report No. 2
Reporting Period - November 1996
AL Tech Specialty Steel Corporation
Dunkirk, New York Facility

Project Work Completed During the Reporting Period (November 1996)

The drilling and excavating subcontractors, Earth Dimensions, Inc. and Geiben Brothers, demobilized from the facility on Friday, November 1, 1996.

Between the period of November 1 and November 22, 1996, the following field activities were implemented and completed in accordance with the New York State Department of Environmental Conservation (NYSDEC)-approved Phase I Resource Conservation and Recovery Act (RCRA) Facility Investigation (RFI) Work Plan (except as noted under Work Scope Changes, below):

- completion of well painting, labeling, and repair of surface casing (for existing wells) by November 6
- development of the newly installed monitoring wells which began Tuesday, October 19 and was completed on Wednesday, December 6
- collection of groundwater samples from all existing facility wells (excluding MW-2 which could not be located and Wells WP-1 through WP-3 and WP-6 through WP-8 [see Summary of Work Scope Changes]) was completed during the period of November 18 to November 21
- surveying of the locations and elevations of all Phase I RFI soil borings, monitoring wells, test pits, and background locations (excluding the indoor BRB-, LAE-, and LAW-series borings) was completed during the period of November 18 to 21

Summary of Findings and Laboratory Data

During the groundwater sampling event, the following observations were made:

- the purge water contained relatively few fines and the turbidities were generally below 50 nephelometric units; consequently, for most locations, sample aliquots were collected for total but not dissolved metals analysis
- the samples collected from Wells MW-3, LAW-5, and LAW-6 were discolored; water from Wells MW-3 and MW-5 were pale yellow and the water from LAW-6 was brown (see Identified Problems/Solutions)

Summary of Work Scope Changes

Brigham Road Plant Pickle House

During advancement of the southern-most boring completed in the idled BRP Pickle House (BRB-1) the following subsurface conditions were encountered:

- fill was present from the ground surface to an approximate depth of 6 feet
- a concrete foundation was present from approximately 6 to 11 feet below ground surface (ft-bgs)
- dark gray clayey silt was present from approximately 11 to 13 ft-bgs
- dark gray silty clay was present from approximately 13 to 16 ft-bgs
- shale bedrock was encountered at approximately 16 ft-bgs

Subsurface samples were collected for laboratory analysis at depths of 2 to 4 ft-bgs and 15 to 17 ft-bgs.

The concrete foundation was also encountered at a depth of 5 ft-bgs at the location of the northern-most boring to be advanced in this area (BRB-3), despite off-setting the boring to the west in order to avoid the foundation.

Based on the apparent lateral extent and significant thickness of the foundation, and because samples had been successfully retrieved from BRB-1, NYSDEC permitted AL Tech to not complete BRB-3 to the bedrock surface and to omit the third proposed boring to be completed midway between BRB-1 and BRB-3, at this time.

Willowbrook Pond Monitoring Wells

The Phase I RFI Work Plan did not identify specific existing wells, located in the vicinity of Willowbrook Pond, for inclusion in the groundwater sampling and analytical program. The work plan did indicate that only two of the eight wells would be sampled and selection would be largely contingent upon their structural integrity. All of these wells (WP-1 through WP-8) appeared to be of good structural integrity based on the well evaluation completed by ESC. Consequently, ESC personnel, on behalf of AL Tech, requested that NYSDEC identify those wells which were to be sampled; the agency selected Wells WP-4 and WP-5.

Former Surface Impoundment Wells

Many of the site wells were purged dry despite the use of low-flow submersible pumps. Recovery for most of these locations was sufficient to allow for sample collection (in its entirety) shortly after purging was completed. However, Well WT-2, which was purged on Tuesday, November 19, 1996, had only recovered to an approximate maximum height of 0.6 feet by Thursday, November 21, when sample collection for the site was completed.

NYSDEC agreed that it would be permissible to wait an additional period of time to allow for sufficient recovery of the well for collection of the full sample parameter list. Samples from this location were subsequently collected on Monday, November 25, 1996.

AL Tech previously committed to the collection and analysis of groundwater samples from the WT-series wells proximate to the closed surface impoundment (SWMU 17) on an annual basis. During implementation of the first round of groundwater sampling and analysis, completed in November, ESC collected samples from these wells (WT-1A, WT-1B, WT-2, WT-3, and WT-4) and a newly installed well (RFI-9) (located proximate to this unit) for analysis of both the Phase I RFI parameter list and the annual parameter list. The additional (annual) parameter list includes:

- target compound list pesticides
- total organic carbon
- total suspended solids
- carbon oxygen demand

Because metals are of particular interest in this area and despite turbidities of less than 50 NTUs at most locations, ESC collected both total and dissolved metals aliquots for each of these wells. The same analytical program will be performed for the second groundwater sampling event (scheduled for February 1997). The samples were collected by ESC before this action was discussed with NYSDEC personnel.

Summary of Contacts with the Public and Public Agencies

ESC had no contact with the public or public agencies other than the NYSDEC during the reporting period.

Identified Problems/Solutions

Refer to Summary of Work Scope Changes regarding the former BRP Pickle House borings (BRB-series).

Due to the observance of discolored water in Wells MW-3, LAW-5, and LAW-6, ESC requested expedited reporting of the hexavalent chromium data for all site wells and select wet chemistry parameters for these three wells of interest. The preliminary hexavalent chromium data for all site groundwater samples is presented in Attachment 1. As shown in the attachment, hexavalent chromium was only detected in the wells of interest. The information compiled to date for MW-3, LAW-5, and LAW-6 are presented in Tables 1 and 2. As shown in Table 1, hexavalent chromium was detected in the samples from Wells MW-3, LAW-5, and LAW-6 at concentrations of 7,540 ug/l, 5,240 ug/l, and 36,100 ug/l. The preliminary metals data is

Table 1

Preliminary Miscellaneous Groundwater Analytical Data
Wells LAW-5, LAW-6, MW-3, RFI-7, and RFI-17
Phase I RCRA Facility Investigation
AL Tech Specialty Steel Corporation
Dunkirk, New York Facility

Well Location		pH (s.u.) (a)	Specific Conductance (umhos/cm)	Fluoride (mg/l)	Chloride (mg/l)	Nitrate as N (mg/l)	Sulfate (mg/l)	Ammonia as N (mg/l)	Hexavalent Chromium (ug/l)
MW-3	BFS Pickle House	7.27	3250	0.63	250	83	660	<0.10	7540
RFI-7		7.03	4130	0.56	220	61	1477	1.8	10 U
RFI-17		7.26	2440	0.57	410	2.4	359	2.0	10 U
LAW-5	LAP West Pickle House	6.98	3160	0.19	300	14	2300	0.2	5240
LAW-6		8.98	9700	6.27	140	30	1100	2.5	36100

a/ s.u. = standard units
umhos/cm = microhoms per centimeter
mg/l = milligrams per liter
ug/l = micrograms per liter

MEF\JPB1202

Preliminary Metals Groundwater Data for
Wells LAW–5, LAW–6, MW–3, RFI–7, and RFI–17
Phase I RCRA Facility Investigation
AL Tech Specialty Steel Corporation
Dunkirk, New York Facility

	Well Locations								
	LAW–5		LAW–6		MW–3		RFI–7		RFI–17	
Parameter	Total	Dissolved	Total	Dissolved	Total	Dissolved	Total	Dissolved	Total	Dissolved
Aluminum	10 U	NA	550	180	2500	100 U	100 U	NA	380	100 U
Antimony	6 U	NA	6 U	6 U	6 U	6 U	6 U	NA	6 U	6 U
Arsenic	1 U	NA	170	170	1 U	1 U	1 U	NA	1 U	1 U
Barium	29	NA	20	21	43	23	43	NA	81	74
Beryllium	6	NA	2 U	2 U	4	4	9	NA	3	3
Cadmium	5 U	NA	8	5	5 U	5 U	5 U	NA	5 U	5 U
Calcium	240000	NA	13000	13000	180000	180000	420000	NA	130000	150000
Chromium (total)	4100	NA	42000	42000	6400	6200	19	NA	10 U	10 U
Hexavalent Chromium	5240	NA	36100	NA	7540	NA	10 U	NA	10 U	NA
Cobalt	15	NA	26	23	10 U	10 U	11	NA	10 U	10 U
Copper	110	NA	110	110	25	11	39	NA	28	16
Iron	260	NA	1000	130	5300	30 U	390	NA	1100	66
Lead	1 U	NA	1 U	1 U	4	1 U	1 U	NA	1 U	1 U
Magnesium	76000	NA	75000	76000	48000	51000	130000	NA	40000	47000
Manganese	120	NA	10	10 U	240	73	2300	NA	220	220
Mercury	–	NA	–	–	–	–	–	NA	–	–
Molybdenum	400	NA	5900	6000	400	410	1300	NA	410	360
Nickel	140	NA	59	52	40 U	40 U	75	NA	40 U	40 U
Potassium	4800	NA	14000	14000	3700	3200	25000	NA	20000	24000
Selenium	1 U	NA	29	29	1 U	1 U	1 U	NA	1 U	1 U
Silver	10 U	NA	21	15	10 U	10 U	10 U	NA	10 U	10 U
Sodium	320000	NA	2300000	2200000	400000	430000	290000	NA	86000	90000
Thallium	4 U	NA	10	9	4 U	4 U	4 U	NA	4 U	4 U
Vanadium	50 U	NA	210	220	50 U	50 U	50 U	NA	50 U	50 U
Zinc	16	NA	42	15	26	8	23	NA	11	8

MEF\PreLAWGW

Table 2 (continued)

Preliminary Metals Groundwater Data for
Wells LAW-5, LAW-6, MW-3, RFI-7, and RFI-17
Phase I RCRA Facility Investigation
AL Tech Specialty Steel Corporation
Dunkirk, New York Facility

Parameter	NYSDEC TAGM 3028 Groundwater Action Levels (a)	New York State Water Quality Standards for Class GA Waters (b)	NYSDEC Ambient Water Quality Standards and Guidance Values (c)	U.S. EPA Maximum Contaminant Level (d)
Aluminum	– (e)	–	–	–
Antimony	3	–	3	6
Arsenic	25	25	25	–
Barium	1000	1000	1000	2000
Beryllium	3	–	3	4
Cadmium	5	10	10	5
Calcium	–	–	–	–
Chromium (total)	50	50	50	100
Hexavalent Chromium	50	50	–	–
Cobalt	–	–	–	–
Copper	<200	200	200	–
Iron	300 (f)	300 (f)	300	–
Lead	15	–	25	–
Magnesium	35000	–	–	–
Manganese	300 (f)	300 (f)	300	–
Mercury	2	2	2	2
Molybdenum	140	–	–	–
Nickel	700	–	–	100
Potassium	–	–	–	–
Selenium	10	10	10	50
Silver	50	50	50	–
Sodium	<20000	20000	–	–
Thallium	4	–	4	2
Vanadium	2500	–	–	–
Zinc	<300	300	300	–

a/ New York State Department of Environmental Conservation, November 30, 1992, "Contained-In Criteria for Environmental Media," Technical Administrative Guidance Memorandum (TAGM) 3028.

b/ New York Codes, Rules, and Regulations (NYCRR), Title 6, Chapter X, Parts 700 – 705.

c/ New York State Department of Environmental Conservation, October 1991, "Draft Cleanup Policy and Guidelines."

d/ U.S. Environmental Protection Agency Final Maximum Contaminant Levels (MCLs) for drinking water. The values are current.

e/ "–" indicates not established.

f/ The sum total of iron and manganese concentrations shall not be greater than 500 ug/l.

Attachment 1

ACTS TESTING LABS, INC.
3916 Broadway
Buffalo, NY 14227-1104
Tel (716) 684-3300
Fax (716) 684-3303

Technical Report #6B-10738E
Project Name:Al Tech-Dunkirk
Project #483803

Mr. Ed Forrai
ANTECH LTD
One Triangle Drive
Export, PA 15632

SUBJECT:

Analyses of thirty-six (36) water samples received on November 19, 20, 21 and 22, 1996.

RESULTS:

See Pages Two and Three.

EXPERIMENTAL:

The analyses were determined according to "Standard Methods for the Examination of Water and Wastewater," 18th Edition.

ACTS TESTING LABS, INC.
Charles E. Hartke
Charles E. Hartke
Manager, Chemistry Laboratory

ACTS TESTING LABS, INC.
Lisa M. Clerici
Lisa M. Clerici, Supervisor
Wet Chemistry Laboratory

ACTS TESTING LABS, INC.
Elizabeth R. Hausler
Elizabeth R. Hausler, Supervisor
Gas Chromatography Laboratory

cme

ACTS TESTING LABS

Hexavalent Chromium	ACTS #6B-10738E ALT-GW-RFI03-1196 < 0.01	ACTS #6B-10739E ALT-GW-RFI02-1196 < 0.01	ACTS #6B-10740E ALT-GW-B1-1196 < 0.01
Hexavalent Chromium	ACTS #6B-10741E ALT-GW-RFI116-1196 < 0.01	ACTS #6B-10742E ALT-GW-RFI01-1196 < 0.01	ACTS #6B-10743E ALT-GW-RFI11-1196 < 0.01
Hexavalent Chromium	ACTS #6B-10744E ALT-GW-EB01-1118 < 0.01	ACTS #6B-10823E ALT-GW-WT1A-1196 < 0.01	ACTS #6B-10824E ALT-GW-WT1B-1196 < 0.01
Hexavalent Chromium	ACTS #6B-10826E ALT-GW-RFI04-1196 < 0.01	ACTS #6B-10826E ALT-GW-WT3-1196 < 0.01	ACTS #6B-10827E ALT-GW-WT4-1196 < 0.01 (< 0.01)*
Hexavalent Chromium	ACTS #6B-10828E ALT-GW-WT4-1196D < 0.01	ACTS #6B-10829E ALT-GW-RFI09-1196 < 0.01	ACTS #6B-10830E ALT-GW-RFI06-1196 < 0.01
Hexavalent Chromium	ACTS #6B-10831E ALT-GW-RFI10-1196 < 0.01	ACTS #6B-10870E ALT-GW-MW1-1196 < 0.01 (< 0.01)*	ACTS #6B-10871E ALT-GW-MW3-1196 7.54
Hexavalent Chromium	ACTS #6B-10872E ALT-GW-RFI05-1196 < 0.01	ACTS #6B-10873E ALT-GW-RFI08-1196 < 0.01	ACTS #6B-10874E ALT-GW-RFI07-1196 < 0.01
Hexavalent Chromium	ACTS #6B-10875E ALT-GW-RFI17-1196 < 0.01	ACTS #6B-10876E ALT-GW-RFI13-1196 < 0.01	ACTS #6B-10877E ALT-GW-RFI13-1196D < 0.01
Hexavalent Chromium	ACTS #6B-10878E ALT-GW-RFI13-1196MS < 0.01	ACTS #6B-10879E ALT-GW-LAE4-1196 < 0.01	ACTS #6B-10880E ALT-GW-RFI14-1196 < 0.01
Hexavalent Chromium	ACTS #6B-10881E ALT-GW-RFI15-1196 < 0.01	ACTS #6B-10882E ALT-GW-RFI15-1196D < 0.01	ACTS #6B-10883E ALT-GW-RFI15 1196MS < 0.01

Results are reported as milligrams per litor (mg/L).
*=Duplicate results

ACTS TESTING LABS

Hexavalent Chromium	ACTS #6B-10884E ALT-GW-EB02-1196 < 0.01	ACTS #6B-10964E ALT-GW-WP4-1196 < 0.01	ACTS #6B-10965E ALT-GW-WP5-1196 < 0.01
Hexavalent Chromium	ACTS #6B-10966E ALT-GW-LAW5-1196 5.24 (5.24)*	ACTS #6B-10967E ALT-GW-LAW6-1196 36.1	ACTS #6B-10968E ALT-GW-RFI12-1196 < 0.01

Results are reported as milligrams per liter (mg/L).
*=Duplicate result

presented in Table 2. AL Tech is currently developing a plan to address conditions both proximate the BFS Pickle House (MW-3) and the LAP West Pickle House (LAW-5 and LAW-6).

During the construction of Well RFI-12, the augers became lodged. The drilling subcontractor rotated the augers in order to release them. As a consequence, the well screen was damaged. The damage was confirmed by the high level of siltation observed during the well development and purging. Despite this damage, groundwater sample aliquots were successfully collected. Based on the resultant laboratory analytical data and the amount of siltation which occurs in the future, it may be necessary to install a replacement for this well.

Several of the new well pads require additional measures to ensure future well integrity. This is the result of weather conditions at the time of installation (less than 40 degrees Fahrenheit). Such additional work will be completed in the spring of 1997, as appropriate.

Personnel Changes

There were no changes in project personnel during the reporting period.

Project Work to be Completed During the Subsequent Reporting Period (December 1996)

The following activities are scheduled for completion or implementation during the next reporting period:

- receipt of the site survey data
- receipt of initial soil analytical packages
- submittal of these analytical packages to the data validator
- ongoing evaluation of groundwater conditions
- preliminary analysis of site physical data

Appendix D

Appendix D - Soil Boring and Monitoring Well Construction Diagrams

ENVIRONMENTAL STRATEGIES CORPORATION
Four Penn Center West, Suite 315
Pittsburgh, Pennsylvania 15276
(412) 787-5100

Project No.: 483803		Site ID: RB-01	
Project Name: AL TECH - DUNKIRK, NEW YORK			
Site Location: Inside Howard Avenue Mills			
Date(s): 10/31/96 - 10/31/96	Total Depth: 9.00'	Top-Well Casing: NA	Datum: Mean Sea Level
Contractor: Earth Dimensions	Comp. Depth: NA	Conductor Casing: type:	dia: 0.00in fm: 0.00' to: 0.00'
Drilling Method: Hollow Stem Augers	Grnd. Surf. El.: 635.63'	Blank Casing: type:	dia: 0.00in fm: 0.0' to:
Logged By: Greg Frisch	Permit Date: / /	Screens: type: size:	dia: fm: to:
Remarks:		type: size:	dia: fm: to:

Depth (feet)	Blow Count	Recovery (%)	Sample No.	Graphic Log	USCS Code	Material Description	Well Construction
0	8 16 24 28	30			F	GRAVEL, with sand and metal fragments, dark gray, damp, fill; roller bit through concrete from 2 to 5 feet.	
		0					
5	5 7 14 18	70	SB-RB-01-0507		ML	CLAYEY SILT, some shale fragments, medium to dark brown, moist.	
	7 9 9 30	50	SB-RB-01-0709		S	SHALE, weathered, gray, damp.	
10							
15							
20							
25							
30							

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ENVIRONMENTAL STRATEGIES CORPORATION
Four Penn Center West, Suite 315
Pittsburgh, Pennsylvania 15276
(412) 787-5100

Project No.: 483803		Site ID: RB-02	
Project Name: AL TECH - DUNKIRK, NEW YORK			
Site Location: Howard Avenue Mills Storage Area			
Date(s): 10/31/96 - 10/31/96	Total Depth: 18.00'	Top-Well Casing: NA	Datum: Mean Sea Level
Contractor: Earth Dimensions	Comp. Depth: NA	Conductor Casing: type:	dia: 0.00in fm: 0.00' to: 0.00'
Drilling Method: Hollow Stem Augers	Grnd. Surf. El.: 635.06'	Blank Casing: type:	dia: 0.00in fm: 0.0' to:
Logged By: Greg Frisch	Permit Date: / /	Screens: type: size:	dia: fm: to:
Remarks:		type: size:	dia: fm: to:

Depth (feet)	Blow Count	Recovery (%)	Sample No.	Graphic Log	USCS Code	Material Description	Well Construction
0	8 7 10 10	60	SB-RB-02-0002		C	CONCRETE, with gravel base.	
					ML	SILTY CLAY, brown with gray mottling, low plasticity, moist.	
	3 3 5 4	100					
	4 11 7 8	80					
5	2 4 8 10	100			ML	CLAYEY SILT, brown to dark brown, low plasticity, moist.	
	3 6 10 10	100					
10	3 7 8 12	80					
	2 9 25 32	100					
	4 4 3 3	80			CL	SILTY CLAY, dark gray, plastic, damp.	
15	12 18 35 75	70	SB-RB-02-1618		S	SHALE, weathered, gray to dark gray, wet.	
20							
25							
30							

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Project No.: 483803		Site ID: RB-04	
Project Name: AL TECH - DUNKIRK, NEW YORK			
Site Location: Lucas Avenue Plant - CAMU A			
Date(s): 10/30/96 - 10/30/96	Total Depth: 9.00'	Top-Well Casing: NA	Datum: Mean Sea Level
Contractor: Earth Dimensions	Comp. Depth: NA	Conductor Casing: type:	dia: 0.00in fm: 0.00' to: 0.00'
Drilling Method: Hollow Stem Augers	Grnd. Surf. El.: 632.30'	Blank Casing: type:	dia: 0.00in fm: 0.0' to:
Logged By: Pat Peterson	Permit Date: / /	Screens: type: size:	dia: fm: to:
Remarks:		type: size:	dia: fm: to:

Depth (feet)	Blow Count	Recovery (%)	Sample No.	Graphic Log	USCS Code	Material Description	Well Construction
0	2 3 3 5	60	SB-RB-04-0002		F/SC	CLAYEY SAND, fine to medium grain, fill.	
	2 4 2 2	70			F/SM	SAND, fine to medium grain, gray, moist, fill.	
5	5 24 8 16	80	SB-RB-04-0406				
	5 24 32 44	100			ML	CLAYEY SILT, trace fine gravel, light olive brown, low plasticity, mottle, moist.	
	10 99 R/5	30			S	SHALE, weathered, gray, dry.	
10							
15							
20							
25							
30							

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(412) 787-5100

Project No.: 483803	Site ID: RB-05
Project Name: AL TECH - DUNKIRK, NEW YORK	
Site Location: Lucas Avenue Plant - CAMU A	
Date(s): 10/28/96 - 10/28/96	Total Depth: 11.00'
Top-Well Casing: NA	Datum: Mean Sea Level
Contractor: Earth Dimensions	Comp. Depth: NA
Conductor Casing: type:	dia: 0.00in fm: 0.00' to: 0.00'
Drilling Method: Hollow Stem Auger	Grnd. Surf. El.: 632.46'
Blank Casing: type:	dia: 0.00in fm: 0.0' to:
Logged By: Pat Peterson	Permit Date: / /
Remarks:	Screens: type: size: dia: fm: to: type: size: dia: fm: to:

Depth (feet)	Blow Count	Recovery (%)	Sample No.	Graphic Log	USCS Code	Material Description	Well Construction
0					F/CL	GRAVEL, change to gravelly clay at 0.5', fill.	
					CL	CLAY, yellowish brown, some iron staining and mottling, plastic, moist; increase in silt at 4 feet with trace round gravel.	
5					ML	SILT, trace round gravel, light olive brown, dry.	
					GM	GRAVELLY SILT, and gravel, dark yellowish brown, dry to moist.	
10					S	SHALE, weathered, gray, damp.	
15							
20							
25							
30							

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Project No.: 483803		Site ID: RB-06	
Project Name: AL TECH - DUNKIRK, NEW YORK			
Site Location: Northeast of Bar Finishing & Storage			
Date(s): 10/29/96 - 10/29/96	Total Depth: 10.00'	Top-Well Casing: NA	Datum: Mean Sea Level
Contractor: Earth Dimensions	Comp. Depth: NA	Conductor Casing: type:	dia: 0.00in fm: 0.00' to: 0.00'
Drilling Method: Hollow Stem Auger	Grnd. Surf. El.: 635.36'	Blank Casing: type:	dia: 0.00in fm: 0.0' to:
Logged By: Pat Peterson	Permit Date: / /	Screens: type: size:	dia: fm: to:
Remarks:		type: size:	dia: fm: to:

Depth (feet)	Blow Count	Recovery (%)	Sample No.	Graphic Log	USCS Code	Material Description	Well Construction
0	5 19 24 25	10	SB-RB-06-0002		F/CL	SILTY CLAY, and gravel and coal fragments, brown, moist, fill.	
	16 18 24 26	10					
5	8 10 14 18	0	SB-RB-06-0406		CL	SILTY CLAY, brown, medium plasticity, moist, native.	
	4 5 9 11	80	SB-RB-06-0608				
	8 12 14 14	100			S	SHALE, weathered, gray, wet.	
10							
15							
20							
25							
30							

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ENVIRONMENTAL STRATEGIES CORPORATION
Four Penn Center West, Suite 315
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(412) 787-5100

Project No.: 483803		Site ID: RB-07	
Project Name: AL TECH - DUNKIRK, NEW YORK			
Site Location: Northeast Brigham Road Plant			
Date(s): 10/30/96 - 10/30/96	Total Depth: 10.00'	Top-Well Casing: 0.00'	Datum: Mean Sea Level
Contractor: Earth Dimensions	Comp. Depth: 0.00'	Conductor Casing: type:	dia: 0.00in fm: 0.00' to: 0.00'
Drilling Method: Hollow Stem Augers	Grnd. Surf. El.: 629.07'	Blank Casing: type:	dia: 0.00in fm: 0.0' to:
Logged By: Pat Peterson	Permit Date: / /	Screens: type: size:	dia: fm: to:
Remarks:		type: size:	dia: fm: to:

Depth (feet)	Blow Count	Recovery (%)	Sample No.	Graphic Log	USCS Code	Material Description	Well Construction
0					F/CL	CLAYEY SILT, and gravel, dark brown, fill.	
					CL	SILTY CLAY, some fine gravel, medium plastic, mottled olive gray, moist.	
5					ML	SILT, some gravel and shale fragments, non-plastic, moist to dry.	
10					S	SHALE, weathered, gray, dry to moist.	
15							
20							
25							
30							

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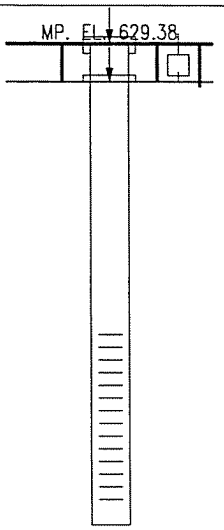
Project No.: 483803	Site ID: MW-01
Project Name: AL TECH - DUNKIRK, NEW YORK	
Site Location: Brigham Road Plant - CAMU B	
Date(s): 08/29/89 - 08/29/89	Total Depth: 23.00'
Top-Well Casing: 629.38'	Datum: Mean Sea Level
Contractor: Northnagle	Comp. Depth: 12.62'
Conductor Casing: type: NAO-Not Applicable; dia: 0.00in fm: 0.00' to: 0.00'	
Drilling Method: Hollow Stem Auger	Grnd. Surf. El.: 629.38'
Logged By: Bryant	Permit Date: / /
Blank Casing: type: PVC dia: 2.00in fm: 0.0' to: 7.62'	
Remarks:	
Screens: type: Slotted size: 0.010in dia: 2.00in fm: 7.62' to: 12.62' type: size: dia: fm: to:	

Depth (feet)	Blow Count	Recovery (%)	Sample No.	Graphic Log	USCS Code	Material Description
0					F/SC	SILTY CLAY, trace gravel and clay, brown, fill.
					F/MH	SILT, some sand, trace gravel and clay, brown, moist.
5						
						SAND, little silt and gravel, brown to grayish brown, moist.
10					F	
						SILT, trace gravel, gray, till.
						SHALE, weathered.
15					ML S	
						SHALE, bedrock.#
20						WATER
					S	5.22'
25						
30						

Well Construction



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(412) 787-5100

Project No.: 483803	Site ID: MW-03
Project Name: AL TECH - DUNKIRK, NEW YORK	
Site Location: BFS- CAMU C	
Date(s): 08/29/89 - 08/29/89	Total Depth: 12.00'
Top-Well Casing: 635.17'	Datum: Mean Sea Level
Contractor: Northgable	Comp. Depth: 11.43'
Conductor Casing: type: na dia: 0.00in fm: 0.00' to: 0.00'	
Drilling Method: Hollow Stem Auger	Grnd. Surf. El.: 635.27'
Logged By: Bryant	Permit Date: / /
Blank Casing: type: pvc dia: 2.00in fm: 0.0' to: 6.43'	
Remarks:	Screens: type: Slotted size: 0.010in dia: 2.00in fm: 6.43' to: 11.43' type: size: dia: fm: to:

Depth (feet)	Blow Count	Recovery (%)	Sample No.	Graphic Log	USCS Code	Material Description	Well Construction
		0	Auger		F/ML	CLAYEY SILT, brown, fill. CLAYEY SILT, trace shale fragments, brown with gray mottling, moist.	MP. EL. 635.17
					ML	GRAVELLY CLAY, some sand, dry, till.	
5	14 38 32 50	90				SHALE, weathered, gray.# WATER 2.80'	
		0	Auger				
					ML		
10	99 R/6	10			S		
15							
20							
25							
30							

ENVIRONMENTAL STRATEGIES CORPORATION
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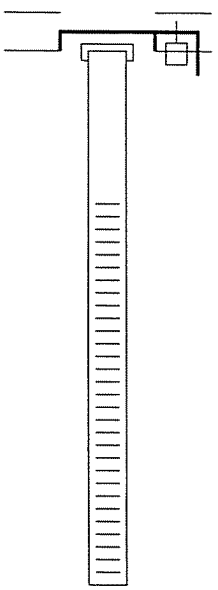
Project No.: 463803		Site ID: WT-1A	
Project Name: AL TECH - DUNKIRK, NEW YORK			
Site Location: Near Aboveground Tank			
Date(s): 10/21/85 - 10/21/85	Total Depth: 15.00'	Top-Well Casing: 635.62'	Datum: Mean Sea Level
Contractor: Earth Dimensions	Comp. Depth: 15.00'	Conductor Casing: type: na dia: 0.00in fm: 0.00' to: 0.00'	
Drilling Method: Hollow Stem Auger	Grnd. Surf. El.: 633.70'	Blank Casing: type: pvc dia: 2.00in fm: 1.0' to: 5.00'	
Logged By:	Permit Date: / /	Screens: type: Slotted size: 0.010in dia: 2.00in fm: 5.00' to: 15.00'; type: size: dia: fm: to:	
Remarks:			

Depth (feet)	Blow Count	Recovery (%)	Sample No.	Graphic Log	USCS Code	Material Description
0	2 4 4 5	100			F/CL	CLAYEY SILT, some cinders and shale fragments, dark brown, fill.
						CLAYEY SILT, some sand and shale gravel, olive brown, moist.
5	23 5 6 10	100			CL/ML	
	35 26 18 25	100				SHALE, weathered, gray, moist.
		100				SHALE, bedrock.
10					S	
					S	
15						
20						
25						
30						

Well Construction

MP. EL. 635.62



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Pittsburgh, Pennsylvania 15276
(412) 787-5100

Project No.: 483803		Site ID: WT-1B	
Project Name: AL TECH - DUNKIRK, NEW YORK			
Site Location:			
Date(s): / / - / /	Total Depth: 15.00'	Top-Well Casing: 634.60'	Datum: Mean Sea Level
Contractor:	Comp. Depth: 13.79'	Conductor Casing: type:	dia: 0.00in fm: 0.00' to: 0.00'
Drilling Method: Hollow Stem Augers	Grnd. Surf. El.: 633.36'	Blank Casing: type:	dia: 0.00in fm: 0.0' to:
Logged By:	Permit Date: / /	Screens: type: size:	dia: fm: to:
Remarks:		type: size:	dia: fm: to:

Depth (feet)	Blow Count	Recovery (%)	Sample No.	Graphic Log	USCS Code	Material Description	Well Construction
0							
5							
10							
15							
20							
25							
30							

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Project No.: 483803	Site ID: WT-02
Project Name: AL TECH - DUNKIRK, NEW YORK	
Site Location: Northeast of Wastewater Treatment Plant	
Date(s): 10/15/81 - 10/15/81	Total Depth: 24.00'
Top-Well Casing: 632.35'	Datum: Mean Sea Level
Contractor: Ehmke Well Drillers	Comp. Depth: 24.00'
Drilling Method: Hollow Stem Auger	Grnd. Surf. El.: 632.12'
Logged By:	Permit Date: / /

Conductor Casing: type: NA dia: 0.00in fm: 0.00' to: 0.00'

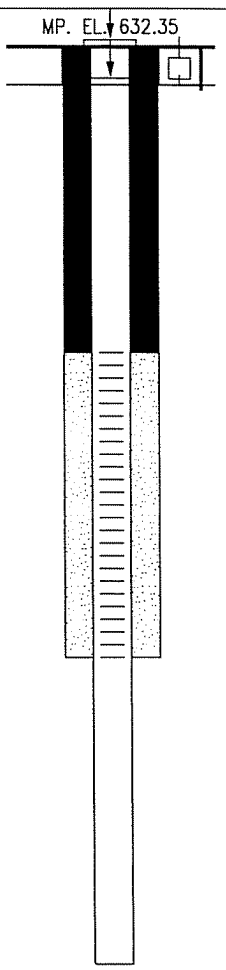
Blank Casing: type: PVC dia: 4.00in fm: 0.0' to: 8.00'

Remarks:

Screens: type: Slotted size: 0.060in dia: 4.00in fm: 8.00' to: 16.00'
type: size: dia: fm: to:

Depth (feet)	Blow Count	Recovery (%)	Sample No.	Graphic Log	USCS Code	Material Description
0					CL	SITLY CLAY, brown.
10					S	SHALE, gray.

Well Construction



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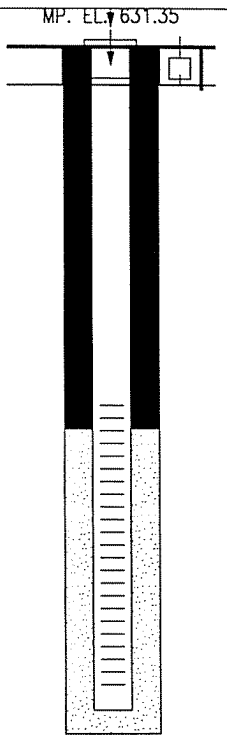
Project No.: 483803		Site ID: WT-03	
Project Name: AL TECH - DUNKIRK, NEW YORK			
Site Location: Northeast Corner of WWTP			
Date(s): 10/15/81 - 10/15/81	Total Depth: 18.00'	Top-Well Casing: 631.35'	Datum: Mean Sea Level
Contractor: Ehmke Well Drillers	Comp. Depth: 17.38'	Conductor Casing: type:	dia: 0.00in fm: 0.00' to: 0.00'
Drilling Method: Hollow Stem Auger	Grnd. Surf. El.: 630.84'	Blank Casing: type: PVC	dia: 4.00in fm: 0.0' to: 9.38'
Logged By:	Permit Date: / /	Screens: type: Slotted	size: 0.060in dia: 4.00in fm: 9.38' to: 17.38'
Remarks:		type:	size: dia: fm: to:

Depth (feet)	Blow Count	Recovery (%)	Sample No.	Graphic Log	USCS Code	Material Description
0					CL	CLAYEY SILT, brown.
10					S	SHALE, gray, bedrock.# WATER

Well Construction



Page 1 of 1

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Project No.: 483803	Site ID: WT-04
Project Name: AL TECH - DUNKIRK, NEW YORK	
Site Location:	
Date(s): 10/15/81 - 10/15/81	Total Depth: 18.00'
Contractor: Ehmke Well Drillers	Comp. Depth: 16.41'
Drilling Method: Hollow Stem Augers	Grnd. Surf. El.: 629.93'
Logged By:	Permit Date: / /
Remarks:	
Top-Well Casing: 630.18'	Datum: Mean Sea Level
Conductor Casing: type: na dia: 0.00in fm: 0.00' to: 0.00'	
Blank Casing: type: PVC dia: 4.00in fm: 0.0' to: 10.00'	
Screens: type: Slotted size: 0.060in dia: 4.00in fm: 10.00' to: 18.00'	
type: size: dia: fm: to:	

Depth (feet)	Blow Count	Recovery (%)	Sample No.	Graphic Log	USCS Code	Material Description	Well Construction
0					CL		MP. EL. 630.18
5							
10					S		
15							
20							
25							
30							

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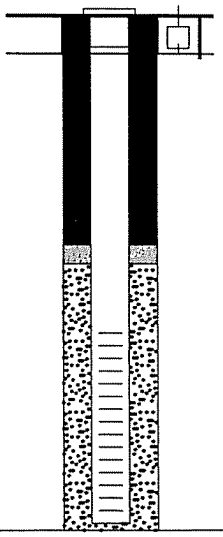
Project No.: 483803		Site ID: RFI-01	
Project Name: AL TECH - DUNKIRK, NEW YORK			
Site Location: Near main office			
Date(s): 10/21/96 - 10/21/96	Total Depth: 13.50'	Top-Well Casing: 640.72'	Datum: Mean Sea Level
Contractor: Earth Dimensions	Comp. Depth: 13.32'	Conductor Casing: type: NAO-Not Applicable; dia: 0.00in fm: 0.00' to: 0.00'	
Drilling Method: Hollow Stem Auger	Grnd. Surf. El.: 640.88'		
Logged By: PTP	Permit Date: 10/21/96	Blank Casing: type: PVC dia: 2.00in fm: 0.0' to: 8.32'	
Remarks: Flush-mount well construction.		Screens: type: Slotted size: 0.010in dia: 2.00in fm: 8.32' to: 13.32' type: size: dia: fm: to:	

Depth (feet)	Blow Count	Recovery (%)	Sample No.	Graphic Log	USCS Code	Material Description
0	2 4 4 4	75			OL/F	TOPSOIL, silty clay, some roots, very dark gray, plastic, moist, fill.
	10 4 12 8	10			CH/F	CLAY, some silt, olive brown, plastic, light olive brown mottling, moist, fill.
	2 5 9 14	100	SB-RFI-001-0406		CL	SILTY CLAY, low plasticity, yellow brown, native.
5	7 11 22 24	100			ML	SILT, light olive brown, laminar bedding, yellow mottling along bedding planes, non-plastic, dry to moist, native.
	8 24 36 25	100			MH	CLAYEY SILT, olive brown, slightly plastic, moist.
10	7 28 26 18	100	SB-RFI-001-1012		GM	GRAVELLY SILT, some sand and cobbles, non-plastic, some odor in gravelly material
	4 27 99 R/5	50			S	SHALE
15						
20						
25						
30						

Well Construction

MP. EL. 640.72



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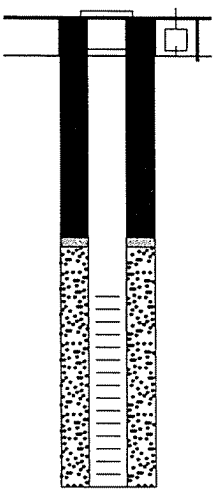
Project No.: 483803		Site ID: RFI-02	
Project Name: AL TECH - DUNKIRK, NEW YORK			
Site Location: Former Acid Lagoon near Main Office			
Date(s): 10/22/96 - 10/22/96	Total Depth: 12.50'	Top-Well Casing: 638.54'	Datum: Mean Sea Level
Contractor: Earth Dimensions	Comp. Depth: 12.30'	Conductor Casing: type: NAO-Not Applicable; dia: 0.00in fm: 0.00' to: 0.00'	
Drilling Method: Hollow Stem Auger	Grnd. Surf. El.: 638.73'	Blank Casing: type: PVC dia: 2.00in fm: 0.0' to: 7.30'	
Logged By: Greg Frish	Permit Date: / /		
Remarks:		Screens: type: Slotted size: 0.010in dia: 2.00in fm: 7.30' to: 12.30'; type: size: dia: fm: to:	

Depth (feet)	Blow Count	Recovery (%)	Sample No.	Graphic Log	USCS Code	Material Description
0	5 11 7 7	50	SB-RFI-002-0002		OL	CLAY, organic, dark gray, moist.
					CL	SILTY CLAY, low plasticity, firm, moist, olive brown, some shale fragments, moist.
	4 3 7 12	100				
5	6 16 20 26	90				
	16 40 50 63	100				
	45 55 50 60	100	SB-RFI-002-0810			
10	12 14 58 28	100	SB-RFI-002-1-12		GC	GRAVELLY CLAY, some silt, shale and limestone fragments, bluish gray, non-plastic, dry; color change to dark gray below 10 feet.
					S	SHALE, weathered, damp to wet, friable.
15						
20						
25						
30						

Well Construction



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Project No.: 483803	Site ID: RFI-03
Project Name: AL TECH - DUNKIRK, NEW YORK	
Site Location: Near API Oil/Water Separator	
Date(s): 10/25/96 - 10/25/96	Total Depth: 10.00'
Contractor: Earth Dimensions	Comp. Depth: 9.92'
Drilling Method: Hollow Stem Auger	Grnd. Surf. El.: 635.94'
Logged By: Greg Frisch	Permit Date: / /
Remarks:	

Top-Well Casing: 635.87' Datum: Mean Sea Level

Conductor Casing: type: NAO-Not Applicable; dia: 0.00in fm: 0.00' to: 0.00'

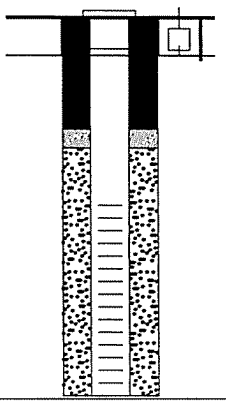
Blank Casing: type: PVC dia: 2.00in fm: 0.0' to: 4.92'

Screens: type: Slotted size: 0.010in dia: 2.00in fm: 4.92' to: 9.92'
type: size: dia: fm: to:

Depth (feet)	Blow Count	Recovery (%)	Sample No.	Graphic Log	USCS Code	Material Description
0	6 12 14 18	70	SB-RFI-003-0002		CL	CLAY and silt with gravel, dark brown, dry, fill.
	4 9 7 5	80				
5	1 2 3 2	30	SB-RFI-003-0406			
	1 1 2 4	30				
	25 9 30 51 R/2	40			ML	CLAYEY SILT, dark gray, wet, plastic.
10					S	SHALE, dark gray, slightly weathered.
15						
20						
25						
30						

Well Construction

MP. EL. 635.87



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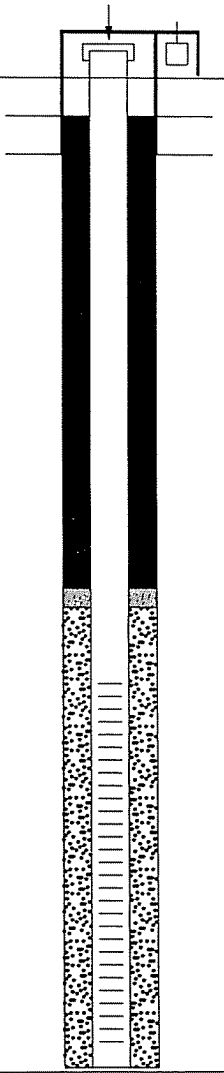
Project No.: 483803		Site ID: RFI-04	
Project Name: AL TECH - DUNKIRK, NEW YORK			
Site Location: South of Howard Avenue Parking Lot			
Date(s): 10/29/96 - 10/29/96	Total Depth: 25.00'	Top-Well Casing: 640.48'	Datum: Mean Sea Level
Contractor: Earth Dimensions	Comp. Depth: 24.88'	Conductor Casing: type: NAO-Not Applicable; dia: 0.00in fm: 0.00' to: 0.00'	
Drilling Method: Hollow Stem Auger	Grnd. Surf. El.: 638.21'	Blank Casing: type: pvc dia: 2.00in fm: -2.7' to: 14.88'	
Logged By: Pat Peterson	Permit Date: / /		
Remarks:		Screens: type: Slotted size: 0.010in dia: 2.00in fm: 14.88' to: 24.88'; type: size: dia: fm: to:	

Depth (feet)	Blow Count	Recovery (%)	Sample No.	Graphic Log	USCS Code	Material Description
0	13 26 8 4	100	SB-RFI-004-0002		OH/GC	TOPSOIL, clayey silt, brown, moist, gravel with fines from 0.5 to 2 feet.
	18 22 7 9	100	SB-RFI-004-0204		SP	SAND, fine to medium grained, dark brown, moist.
	9 12 23 26	100			ML	SILT, brown, non-plastic, some gray mottling, moist to wet, hard. Color change to olive brown at 6 feet.
5	9 14 18 26	100				
	55 99 R/5	5				
10	15 30 17 25	100				
	4 8 8 12	100			CL	GRAVELLY CLAY, some silt, gray, plastic, very stiff, moist, some rounded gravel with depth.
	8 7 9 15	100				
15	22 24 25 26	100			GC	GRAVELLY CLAY, some fine sand and silt, gray, moist.
	12 20 34 40	100			GC	GRAVELLY SILT, with rounded gravel, dark gray, hard, dry to moist.
20	19 25 52 65	100	SB-RFI-004-2022			
	12 20 43 57	100				
	51 R/2	10			S	SHALE, weathered, gray, wet, slight odor.
25						
30						

Well Construction
MP. EL. 640.48



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Project No.: 483803 | Site ID: RFI-05

Project Name: AL TECH - DUNKIRK, NEW YORK

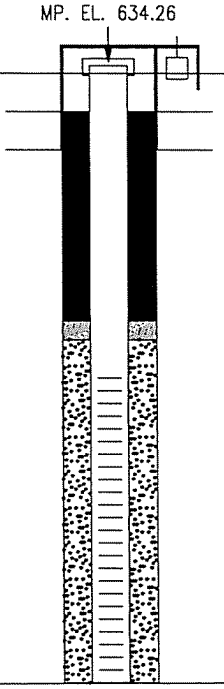
Site Location: Northeast Corner of Lucas Ave. Plant

Date(s): 10/28/96 - 10/28/96	Total Depth: 15.00'	Top-Well Casing: 634.26'	Datum: Mean Sea Level
Contractor: Earth Dimensions	Comp. Depth: 14.98'	Conductor Casing: type: NAO-Not Applicable; dia: 0.00in fm: 0.00' to: 0.00'	
Drilling Method: Hollow Stem Auger	Grnd. Surf. El.: 631.99'	Blank Casing: type: PVC dia: 2.00in fm: -2.2' to: 6.98'	
Logged By: Greg Frisch	Permit Date: / /		
Remarks:		Screens: type: Slotted size: 0.010in dia: 2.00in fm: 6.98' to: 14.98' type: size: dia: fm: to:	

Depth (feet)	Blow Count	Recovery (%)	Sample No.	Graphic Log	USCS Code	Material Description
0	9 14 25 22	70			CL ML	GRAVELLY CLAY, bricks, trace sand, fill. SILT, dark gray, grade to silty clay at 2.5 feet.
	5 7 22 25	80	SB-RFI-005-0204		ML	SILTY CLAY, brown with gray mottling, low plasticity, dry.
5	7 12 18 17	70				
		0	SHELBY TUBE		ML	SILT, medium brown to olive brown, low plasticity, moist.
	10 18 25 27	90			ML	Color change to medium to dark gray.
10	5 13 20 18	100				
	12 18 14 15	80	SB-RFI-005-1214			
15	32 51 R/3	20			S	SHALE, weathered, dark gray, wet.
20						
25						
30						

Well Construction

MP. EL. 634.26



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Four Penn Center West, Suite 315
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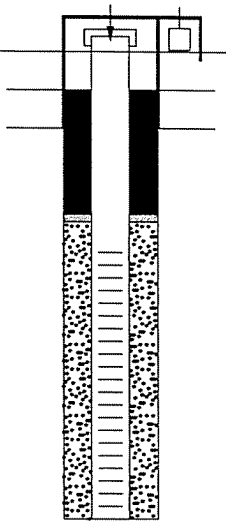
Project No.: 483803	Site ID: RFI-06
Project Name: AL TECH - DUNKIRK, NEW YORK	
Site Location: Howard Avenue Mills near Tunnel	
Date(s): 10/25/96 - 10/25/96	Total Depth: 11.50'
Contractor: Earth Dimensions	Comp. Depth: 11.25'
Drilling Method: Hollow Stem Auger	Grnd. Surf. El.: 631.59'
Logged By: Pat Peterson	Permit Date: / /
Remarks:	
Top-Well Casing: 633.87'	Datum: Mean Sea Level
Conductor Casing: type: NAO-Not Applicable;	dia: 0.00in fm: 0.00' to: 0.00'
Blank Casing: type: PVC	dia: 2.00in fm: -2.4' to: 4.25'
Screens: type: Slotted size: 0.010in	dia: 2.00in fm: 4.25' to: 11.25'
type: size:	dia: fm: to:

Depth (feet)	Blow Count	Recovery (%)	Sample No.	Graphic Log	USCS Code	Material Description
0	3 4 6 5	80			OL/ML	TOPSOIL, clayey silt; gravel and coal to 2.2 feet
					GP	GRAVEL, slag and coal fragments, fill.
	18 20 24 30	100	SB-RFI-005-0204		ML	CLAYEY SILT, olive brown, non-plastic, moist.
					ML	SILT, some clay, olive, non-plastic, moist.
	11 40 51 R/1	70	SB-RFI-005-0406		GC	GRAVELY CLAY, some silt, round gravel, olive, low plasticity, shale fragments, mottled, moist.
5	90 99 R/1	40			S	SHALE, weathered, gray, dry.
	98 99 R/4	20			S	SHALE, gray, bedrock.
10						
15						
20						
25						
30						

Well Construction

MP. EL. 633.87



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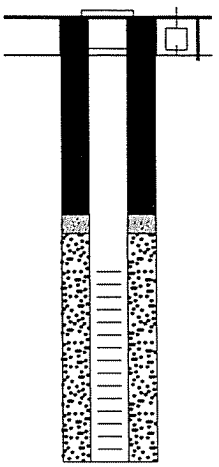
Project No.: 483803		Site ID: RFI-07	
Project Name: AL TECH - DUNKIRK, NEW YORK			
Site Location: Near Outside Bar Finishing Storage Area			
Date(s): 10/28/96 - 10/28/96	Total Depth: 12.06'	Top-Well Casing: 635.12'	Datum: Mean Sea Level
Contractor: Earth Dimensions	Comp. Depth: 11.66'	Conductor Casing: type: NAO-Not Applicable; dia: 0.00in fm: 0.00' to: 0.00'	
Drilling Method: Hollow Stem Auger	Grnd. Surf. El.: 635.53'	Blank Casing: type: PVC dia: 2.00in fm: 0.0' to: 6.66'	
Logged By: Pat Peterson	Permit Date: / /		
Remarks:		Screens: type: Slotted size: 0.010in dia: 2.00in fm: 6.66' to: 11.66'; type: size: dia: fm: to:	

Depth (feet)	Blow Count	Recovery (%)	Sample No.	Graphic Log	USCS Code	Material Description
0	10 51 R/5	20			CL	SILTY CLAY, and gravel, dark brown, fill.
	8 14 10 18	80	SB-RFI-007-0204		CL	SILTY CLAY, brown, gray mottling, low to medium plasticity, moist.
5	4 8 12 19	100				
	6 16 35 56	40	SB-RFI-007-0608		GC	GRAVELLY CLAY, some silt, brown, low plasticity, gray mottling, 30% shale fragments, moist.
	32 99 R/2	40			S	SHALE, weathered, gray to dark gray.
10					S	SHALE, bedrock, dark gray, competent.
15						
20						
25						
30						

Well Construction

MP. EL. 635.12



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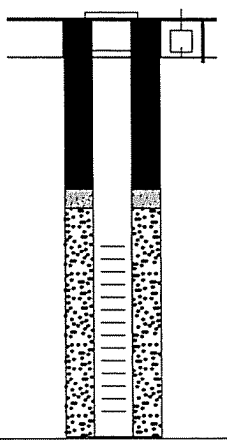
(412) 787-5100

Project No.: 483803		Site ID: RFI-08	
Project Name: AL TECH - DUNKIRK, NEW YORK			
Site Location: NW Storage Area of Lucas Ave. Plant			
Date(s): 10/29/96 - 10/29/96	Total Depth: 11.00'	Top-Well Casing: 631.50'	Datum: Mean Sea Level
Contractor: Earth Dimensions	Comp. Depth: 10.95'	Conductor Casing: type: NAO dia: 0.00in fm: 0.00' to: 0.00'	
Drilling Method: Hollow Stem Auger	Grnd. Surf. El.: 631.80'	Blank Casing: type: PVC dia: 2.00in fm: 0.0' to: 5.95'	
Logged By: Pat Peterson	Permit Date: / /		
Remarks:		Screens: type: Slotted size: 0.010in dia: 2.00in fm: 5.95' to: 10.95' type: size: dia: fm: to:	

Depth (feet)	Blow Count	Recovery (%)	Sample No.	Graphic Log	USCS Code	Material Description
0					C	CONCRETE, underlain with gravel and concrete fill.
	23 50 7 7	80			SP	SAND, fill.
	70 35 15 18	100				
5	16 15 17 20	100	SB-RFI-008-0507		GC	GRAVELLY CLAY, some silt, medium plasticity, olive brown, moist.
	20 40 50 65	10				
10	45 99 R/3	20			S	SHALE, weathered, dark gray, dry.
15						
20						
25						
30						

Well Construction

MP. EL. 631.50



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ENVIRONMENTAL STRATEGIES CORPORATION
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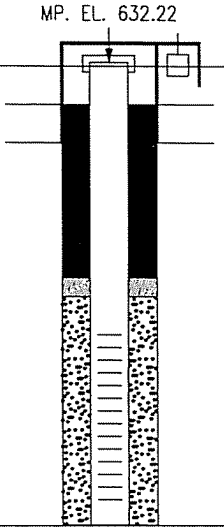
(412) 787-5100

Project No.: 483803		Site ID: RFI-09	
Project Name: AL TECH - DUNKIRK, NEW YORK			
Site Location: North of Wastewater Treatment Plant			
Date(s): 10/29/96 - 10/29/96	Total Depth: 11.05'	Top-Well Casing: 632.22'	Datum: Mean Sea Level
Contractor: Earth Dimensions	Comp. Depth: 11.03'	Conductor Casing: type: NAO-Not Applicable; dia: 0.00in fm: 0.00' to: 0.00'	
Drilling Method: Hollow Stem Auger	Grnd. Surf. El.: 630.14'	Blank Casing: type: PVC dia: 2.00in fm: 0.0' to: 6.03'	
Logged By: Pat Peterson	Permit Date: / /		
Remarks:		Screens: type: Slotted size: 0.010in dia: 2.00in fm: 6.03' to: 11.03'; type: size: dia: fm: to:	

Depth (feet)	Blow Count	Recovery (%)	Sample No.	Graphic Log	USCS Code	Material Description
0	7 9 12 14	95	SB-RFI-009-0002		OL	TOPSOIL, clay, with gravel and iron fillings, fill
					CL	CLAY, fine gravel, dark brown, medium plasticity, moist, fill.
	8 12 16 48	100	SB-RFI-009-0204		CL	CLAY, light olive brown, medium plasticity, some shale fragments at 5.5 feet.
5	7 6 13 15	100	SB-RFI-009-0406		CL	
	8 21 11 46	100	SB-RFI-009-0608		CL	GRAVELLY CLAY, some sand, light brown, low plasticity, stiff, moist.
	25 40 25 40	100	SB-RFI-009-0810		SP	GRAVELLY SAND, medium to fine sand, brown, moist.
					GM	GRAVELLY SILT, some round gravel, dark gray, dry.
10	51 R/3	10			S	SHALE, weathered, light gray, dry.
15						
20						
25						
30						

Well Construction



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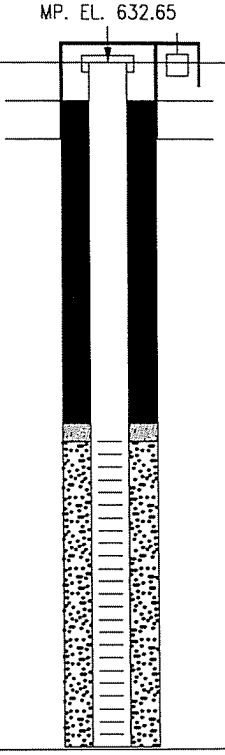
Project No.: 483803		Site ID: RFI-11	
Project Name: AL TECH - DUNKIRK, NEW YORK			
Site Location: West of Wastewater Treatment Plan			
Date(s): 10/24/96 - 10/24/96	Total Depth: 17.00'	Top-Well Casing: 632.65'	Datum: Mean Sea Level
Contractor: Earth Dimensions	Comp. Depth: 16.94'	Conductor Casing: type: nao	dia: 0.00in fm: 0.00' to: 0.00'
Drilling Method: Hollow Stem Auger	Grnd. Surf. El.: 630.64'	Blank Casing: type: pvc	dia: 2.00in fm: -2.0' to: 8.94'
Logged By: Greg Frisch	Permit Date: / /	Screens: type: Slotted size: 0.010in	dia: 2.00in fm: 8.94' to: 16.94'
Remarks:		type: size:	dia: fm: to:

Depth (feet)	Blow Count	Recovery (%)	Sample No.	Graphic Log	USCS Code	Material Description
0	4 5 5 9	60	SB-RFI-011-0002		F/CH	SILTY CLAY, with gravel and coal fragments, dark brown, moist, fill.
	4 6 7 9	40	SB-RFI-011-0204			
	8 8 8 17	90	SB-RFI-011-0406		CL	SILTY CLAY, medium to dark gray, low to medium plasticity, moist.
5	6 20 30 34	70	SB-RFI-001-0608		CL	CLAY, and silt, some fine gravel, brown, gray mottling, medium plasticity, dry.
	24 38 40 35	80	SB-RFI-001-0610		GC	GRAVELLY CLAY, some silt, medium to dark brown, non-plastic, fine rounded gravel, trace shale fragments, moist
10	25 60 52 48	80	SB-RFI-001-1012			
	30 60 63 51 R/4	80	SB-RFI-011-1214		S	SHALE, weathered, damp to wet.
	18 38 99 R/5	70			S	SHALE, gray to dark gray, bedrock, wet.
15						
20						
25						
30						

Well Construction



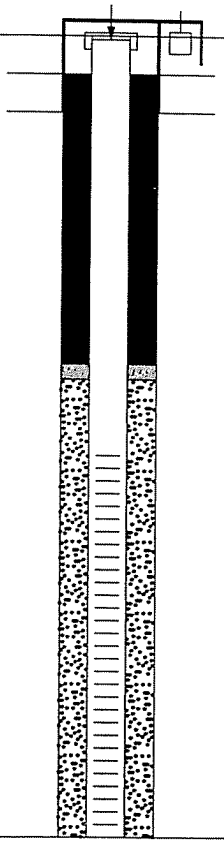
ENVIRONMENTAL STRATEGIES CORPORATION
Four Penn Center West, Suite 315
Pittsburgh, Pennsylvania 15276
(412) 787-5100

Project No.: 483803	Site ID: RFI-12
Project Name: AL TECH - DUNKIRK, NEW YORK	
Site Location: Northwest of Brigham Road Plant	
Date(s): 10/23/96 - 10/23/96	Total Depth: 20.00'
Contractor: Earth Dimensions	Comp. Depth: 20.00'
Drilling Method: Hollow Stem Auger	Grnd. Surf. El.: 628.43'
Logged By: Greg Frisch	Permit Date: / /
Remarks:	
Top-Well Casing: 630.30'	Datum: Mean Sea Level
Conductor Casing: type: nao dia: 0.00in fm: 0.00' to: 0.00'	
Blank Casing: type: pvc dia: 2.00in fm: -1.9' to: 10.00'	
Screens: type: Slotted size: 0.010in dia: 2.00in fm: 10.00' to: 20.00'	
type: size: dia: fm: to:	

Depth (feet)	Blow Count	Recovery (%)	Sample No.	Graphic Log	USCS Code	Material Description
0	6 10 11 15	50			F/CL	GRAVELLY CLAY, grade to dark gray silty clay.
	10 14 13 20	70	SB-RFI-012-0204		CL	CLAY, some silt, brown with gray mottling, medium plasticity, moist.
5	6 22 32 50	100				
	5 28 48 50	100			GC	GRAVELLY CLAY, some silt, dark brown to gray, non-plastic, some shale fragments, moist.
	8 45 76 55	100				
10	4 15 27 45	100			ML	SILT, some clay, gray to dark gray, non-plastic, dry.
	25 24 32 30	100				
	17 25 30 32	100	SB-RFI-012-1416		S	SHALE, weathered, dark gray, damp.
15	25 30 35 42	100				
20					S	SHALE, dark gray, bedrock, wet.
25						
30						

Well Construction

MP. EL. 630.30



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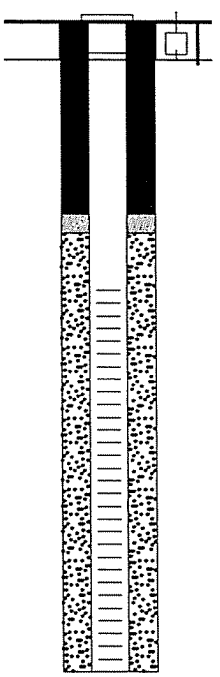
Project No.: 483803		Site ID: RFI-13	
Project Name: AL TECH - DUNKIRK, NEW YORK			
Site Location: Southwest Brigham Road Plan			
Date(s): 10/24/96 - 10/24/96	Total Depth: 18.00'	Top-Well Casing: 622.19'	Datum: Mean Sea Level
Contractor: Earth Dimensions	Comp. Depth: 17.04'	Conductor Casing: type: nao dia: 0.00in fm: 0.00' to: 0.00'	
Drilling Method: Hollow Stem Auger	Grnd. Surf. El.: 622.49'	Blank Casing: type: pvc dia: 2.00in fm: 0.0' to: 7.04'	
Logged By: Greg Frisch	Permit Date: / /		
Remarks:		Screens: type: Slotted size: 0.010in dia: 2.00in fm: 7.04' to: 17.04'; type: size: dia: fm: to:	

Depth (feet)	Blow Count	Recovery (%)	Sample No.	Graphic Log	USCS Code	Material Description
0	15 11 12 11	40			F/CL	SILTY CLAY, with sand and gravel, brown/gray, fill.
	6 7 12 13	70	SB-RFI-013-0204			
5	4 7 12 22	90			CL	SILTY CLAY, trace gravel, dark brown, gray mottling, medium plasticity, moist.
	7 17 56 51 R/2	40				
	5 22 41 50	30			ML	SILT, some clay, trace fine gravel, dark gray, low plasticity, moist.
10	9 21 35 40	100				
	12 12 16 25	100				
	40 52 34 45	10				
15	5 30 34 45	70	SB-RFI-013-1618		S	SHALE, weathered, dark gray, wet.
20						
25						
30						

Well Construction

MP. EL. 622.19



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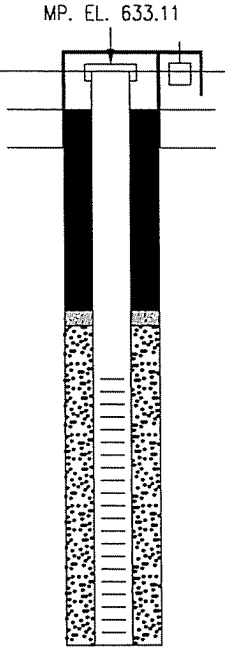
(412) 787-5100

Project No.: 483803	Site ID: RFI-14
Project Name: AL TECH - DUNKIRK, NEW YORK	
Site Location: West of Willowbrook Pond	
Date(s): 10/23/96 - 10/23/96	Total Depth: 14.50'
Contractor: Earth Dimensions	Comp. Depth: 14.07'
Drilling Method: Hollow Stem Auger	Grnd. Surf. EL.: 630.90'
Logged By: Greg Frisch	Permit Date: / /
Remarks:	
Top-Well Casing: 633.11'	Datum: Mean Sea Level
Conductor Casing: type: nao dia: 0.00in fm: 0.00' to: 0.00'	
Blank Casing: type: pvc dia: 2.00in fm: -2.0' to: 7.07'	
Screens: type: Slotted size: 0.010in dia: 2.00in fm: 7.07' to: 14.07' type: size: dia: fm: to:	

Depth (feet)	Blow Count	Recovery (%)	Sample No.	Graphic Log	USCS Code	Material Description
0	2 10 6 10	60			F/OL	SILTY CLAY, some gravel and metal fragments, low plasticity, brown to gray, fill.
	16 6 26 25	70	SB-RFI-014-0204		CL	CLAY, some silt, brown, gray mottling, dry.
5	9 26 58 68	70			ML	CLAYEY SILT, brown, non-plastic, friable, weathered shale fragments below 6 feet, dry.
	29 97 99 R/3	40				
	29 60 69 71	100			GC	GRAVELLY CLAY, some silt, dark gray, non-plastic, friable, limestone and shale fragments.
10	59 99 R/5	50			S	SHALE, weathered, gray.
	84 51 R/3	26	SB-RFI-014-1214			
	99 R/2	0			S	SHALE, bedrock, gray.
15						
20						
25						
30						

Well Construction



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Project No.: 483803	Site ID: RFI-15
Project Name: AL TECH - DUNKIRK, NEW YORK	
Site Location: East of Willbrook Pond	
Date(s): 10/23/96 - 10/23/96	Total Depth: 18.00'
Contractor: Earth Dimensions	Comp. Depth: 17.04'
Drilling Method: Hollow Stem Auger	Grnd. Surf. El.: 640.27'
Logged By: Pat Peterson	Permit Date: / /
Remarks:	

Top-Well Casing: 642.09' Datum: Mean Sea Level

Conductor Casing: type: nao dia: 0.00in fm: 0.00' to: 0.00'

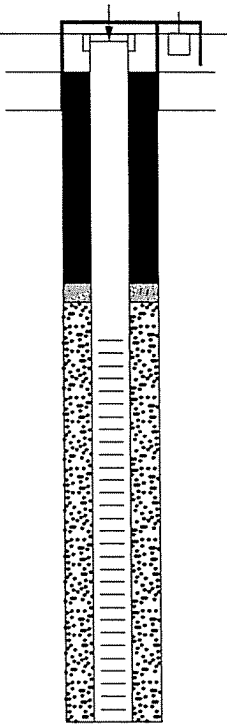
Blank Casing: type: pvc dia: 2.00in fm: -1.8' to: 7.04'

Screens: type: Slotted size: 0.010in dia: 2.00in fm: 7.04' to: 17.04'
type: size: dia: fm: to:

Depth (feet)	Blow Count	Recovery (%)	Sample No.	Graphic Log	USCS Code	Material Description
0	4 5 7 8	100			F/OH	TOPSOIL, silty clay, brown, fill.
					F/CL	CLAY, some fine gravel and rock fragments, yellowish brown, little mottling, fill. Color change to brown at 2 feet.
	4 7 9 9	100				
5	5 17 24 28	100				
	21 30 61 69	100	SB-RFI-015-0608			
	19 49 99 R/6	30			GC	GRAVELLY CLAY, some silt, gray to dark gray, some shale fragments, non-plastic, moist to dry.
10	14 61 87 98	100				
	18 73 57 58	100				
15	39 43 99 R/2	70	SB-RFI-015-1516		S	SHALE, weathered, gray, wet.
20						
25						
30						

Well Construction

MP. EL. 642.09



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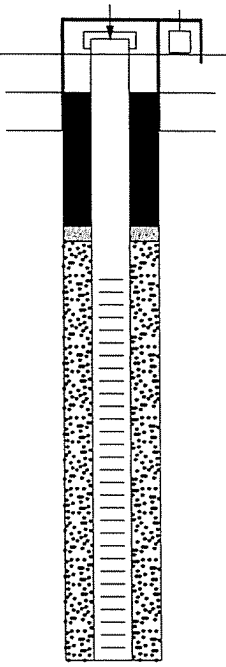
Project No.: 483803	Site ID: RFI-16
Project Name: AL TECH - DUNKIRK, NEW YORK	
Site Location: Northwest of Special Metals, Inc. Bldg.	
Date(s): 10/22/96 - 10/22/96	Total Depth: 15.50'
Top-Well Casing: 641.13'	Datum: Mean Sea Level
Contractor: Earth Dimensions	Comp. Depth: 14.90'
Conductor Casing: type: nao dia: 0.00in fm: 0.00' to: 0.00'	
Drilling Method: Hollow Stem Auger	Grnd. Surf. El.: 638.77'
Blank Casing: type: pvc dia: 2.00in fm: 0.0' to: 4.90'	
Logged By: Pat Peterson	Permit Date: / /
Remarks:	Screens: type: Slotted size: 0.010in dia: 2.00in fm: 4.90' to: 14.90'; type: size: dia: fm: to:

Depth (feet)	Blow Count	Recovery (%)	Sample No.	Graphic Log	USCS Code	Material Description
0	24 8 6 3	40			F/GP	GRAVEL, railroad ballast.
					F/CL	CLAY, dark gray, some gravel, fill.
	8 20 29 40	85			F/ML	CLAYEY SILT, some sand and gravel, olive brown, low plasticity, brown, red/organge mottling, fill
	21 38 47 71	100	SB-RFI-016-0406		ML	SILT, trace clay, olive brown, plastic, moist.
5	22 58 80 15	100			ML	SILT, grayish brown, fine to medium gravel, non-plastic, yellow/red mottling, moist.
	37 60 46 49	100			GC	GRAVELLY CLAY, some silt, dark gray, some round gravel, low plasticity, moist.
10	12 24 39 36	100				
	19 51 R/5	50			S	SHALE, weathered, gray, wet.
15	33 36	40	SB-RFI-016-1415			
20						
25						
30						

Well Construction



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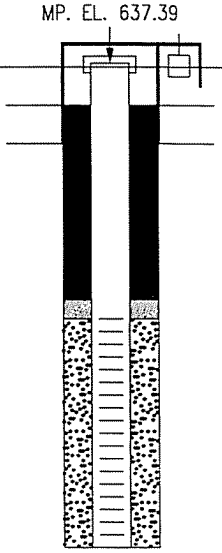
Four Penn Center West, Suite 315
Pittsburgh, Pennsylvania 15276
(412) 787-5100

Project No.: 463803	Site ID: RFI-17
Project Name: AL TECH - DUNKIRK, NEW YORK	
Site Location: North of Bar Finishing & Storage	

Date(s): 10/28/96 - 10/28/96	Total Depth: 15.00'	Top-Well Casing: 637.39'	Datum: Mean Sea Level
Contractor: Earth Dimensions	Comp. Depth: 11.58'	Conductor Casing: type: Not Applicable;	dia: 0.00in fm: 0.00' to: 0.00'
Drilling Method: Hollow Stem Auger	Grnd. Surf. El.: 635.28'	Blank Casing: type: pvc	dia: 2.00in fm: 0.0' to: 5.58'
Logged By: Pat Peterson	Permit Date: / /		
Remarks:		Screens: type: Slotted size: 0.010in	dia: 2.00in fm: 5.58' to: 11.58'
		type: size:	dia: fm: to:

Depth (feet)	Blow Count	Recovery (%)	Sample No.	Graphic Log	USCS Code	Material Description
0	6 13 16 14	100			F/CL	TOPSOIL, silt to clayey silt, brown, fill.
	5 13 15 12	100	SB-RFI-017-0204		ML	CLAYEY SILT, some shale fragments, yellowish brown mottling, moist.
5	3 10 10 15	100				
	17 29 32 99 R/3	75	SB-RFI-017-0608		GC	GRAVELLY CLAY, gray, round gravel.
					S	SHALE, weathered, olive gray, dry.
10						
15						
20						
25						
30						

Well Construction



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Appendix E

Appendix E – Test Pit Logs

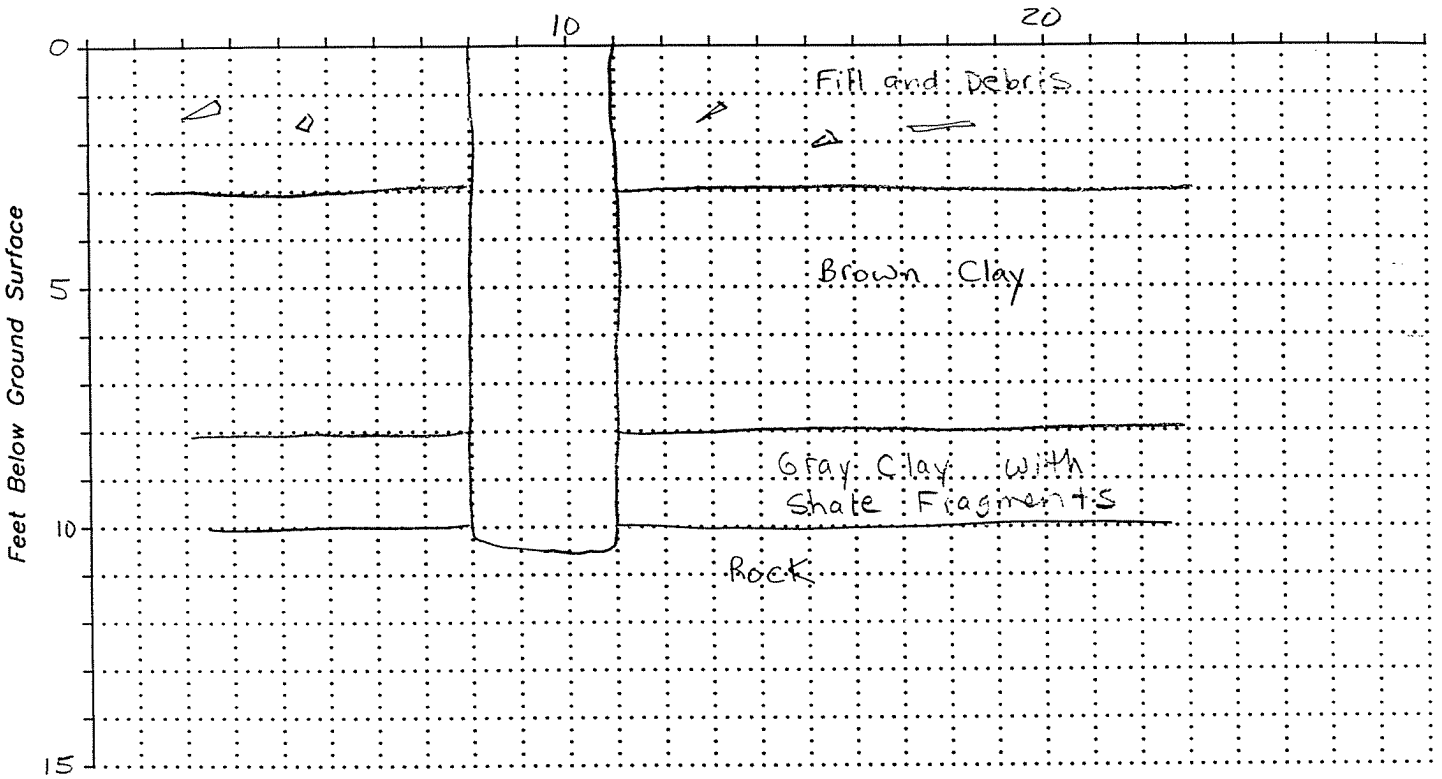
TEST PIT/TRENCH LOG

No.: 01 | Project Name: ALTECH - DUNKIRK | PID Reading: 0

Date: 10-22-96 | Project No.: 483803 / 11 | O_2/LEL Reading: OK

Geol/(Eng): GER | Equip. Subcontractor: Geiben | Equipment: Ford Backhoe 655C

Surface Elev.: | Equipment Operator: Nicholas Geiben



NOTES:
(Include description of soil and rock materials encountered)

0-3' Silt with some debris (brick fragments, metal objects, wood), some root matter, no odor, no staining

3'-8' Light Brown Clay, free of debris, no odor, no staining

8'-10' Light Gray Clay with some shale fragments, free of debris, no odor, no staining

10.5' Top of Competent rock

Static Water Level: No water observed | Photograph/s Taken? yes ✓ no

Sample I.Ds.: SS-TP01-0002, SB-TP01-0304, SB-TP01-0809

Collection Method: Grab | Collection Time:

Chain of Custody: 6683 | Shipment/ Tracking No.:

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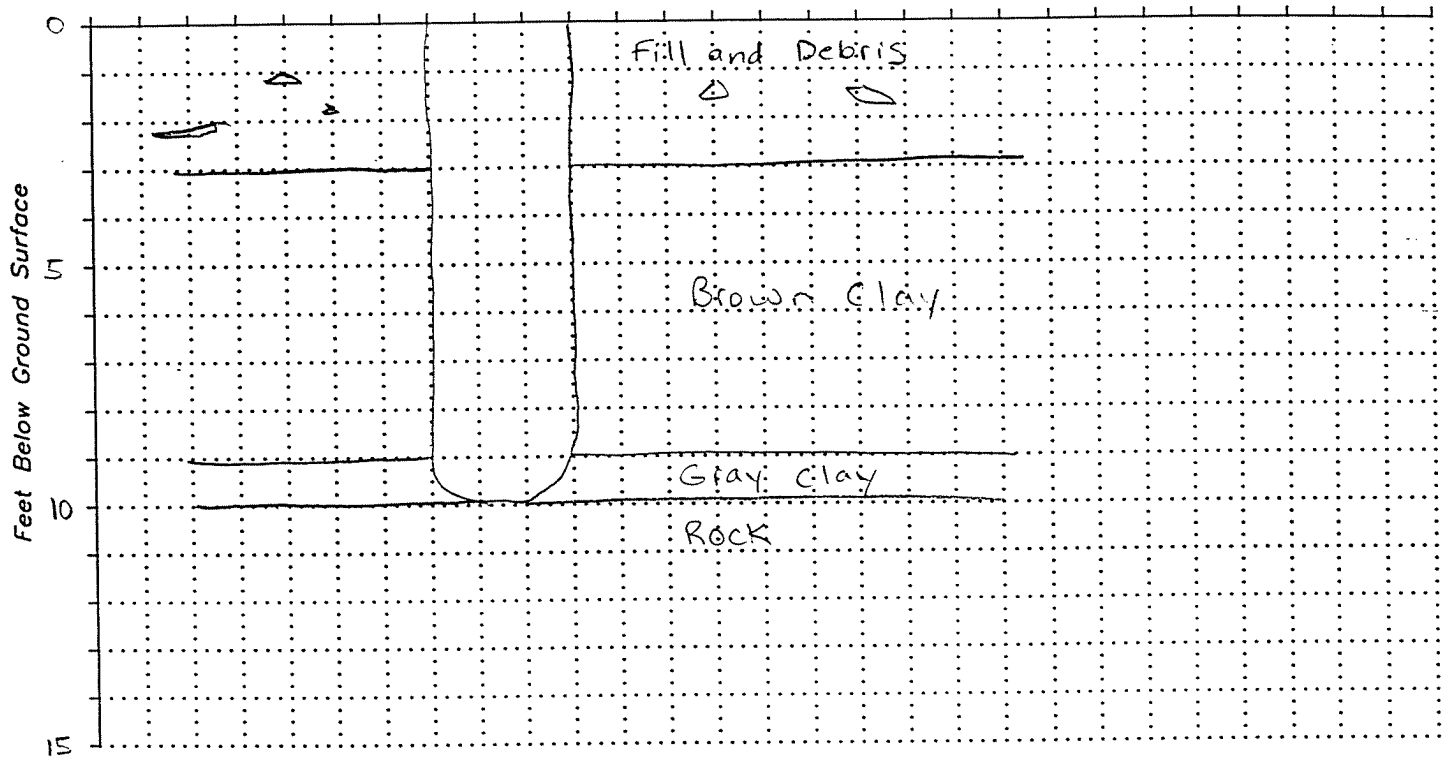
TEST PIT/TRENCH LOG

No.: 02 | Project Name: ALTECH - Dunkirk | PID Reading: 0

Date: 10-22-96 | Project No.: 483803 / 11 | O_2/LEL Reading: OK

Geol./(Eng.): GER | Equip. Subcontractor: Geiben | Equipment: Ford Backhoe 655C

Surface Elev.: | Equipment Operator: Nicholas Geiben



NOTES:
(Include description of soil and rock materials encountered)

0-3' Dark brown silt with much debris (brick fragments, wood pieces, metal objects), abundant angular pebbles and cobbles, appears to be stained, no odor

3'-9' Light brown clay, free of debris, no odor, no staining

9'-10' Light Gray clay

10' Top of Competent rock

Static Water Level: no water observed | Photograph/s Taken? yes ✓ no

Sample I.Ds.: SS-TP02-0002, SB-TP02-0304, SB-TP02-0910

Collection Method: Grab | Collection Time:

Chain of Custody: 6683 | Shipment/ Tracking No.:

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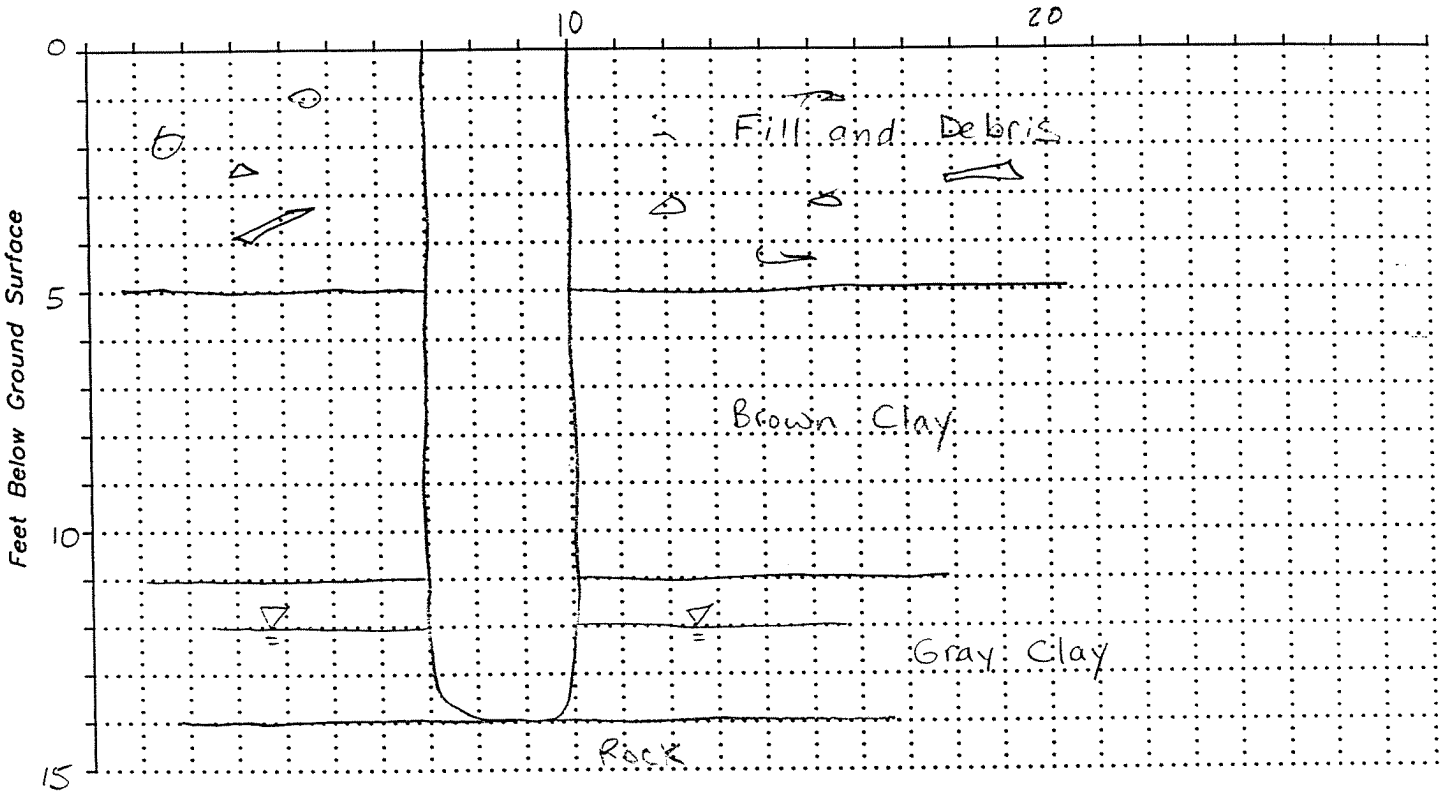
TEST PIT/TRENCH LOG

No.: 03 | Project Name: ALTECH - Dunkirk | PID Reading: 0

Date: 10-22-96 | Project No.: 483803 / 11 | O_2/LEL Reading: OK

Geol./(Eng.): GER | Equip. Subcontractor: Geiben | Equipment: Ford Backhoe 655C

Surface Elev.: | Equipment Operator: Nicholas Geiben



NOTES:
(Include description of soil and rock materials encountered)

0-5'	Dark brown silt with abundant debris (brick fragments, metal objects, wood), no staining, no odor
5'-11'	Brown Clay, free of debris, no odor, no staining
11'-14'	Gray Clay, free of debris, no odor, no staining
14'	Top of Competent Rock

Static Water Level: 12 ft-bgs | Photograph/s Taken? yes ✓ no

Sample I.Ds.: SS-TP03-0002, SB-TP03-0506, SB-TP03-1112

Collection Method: Grab | Collection Time:

Chain of Custody: 6683 | Shipment/ Tracking No.:

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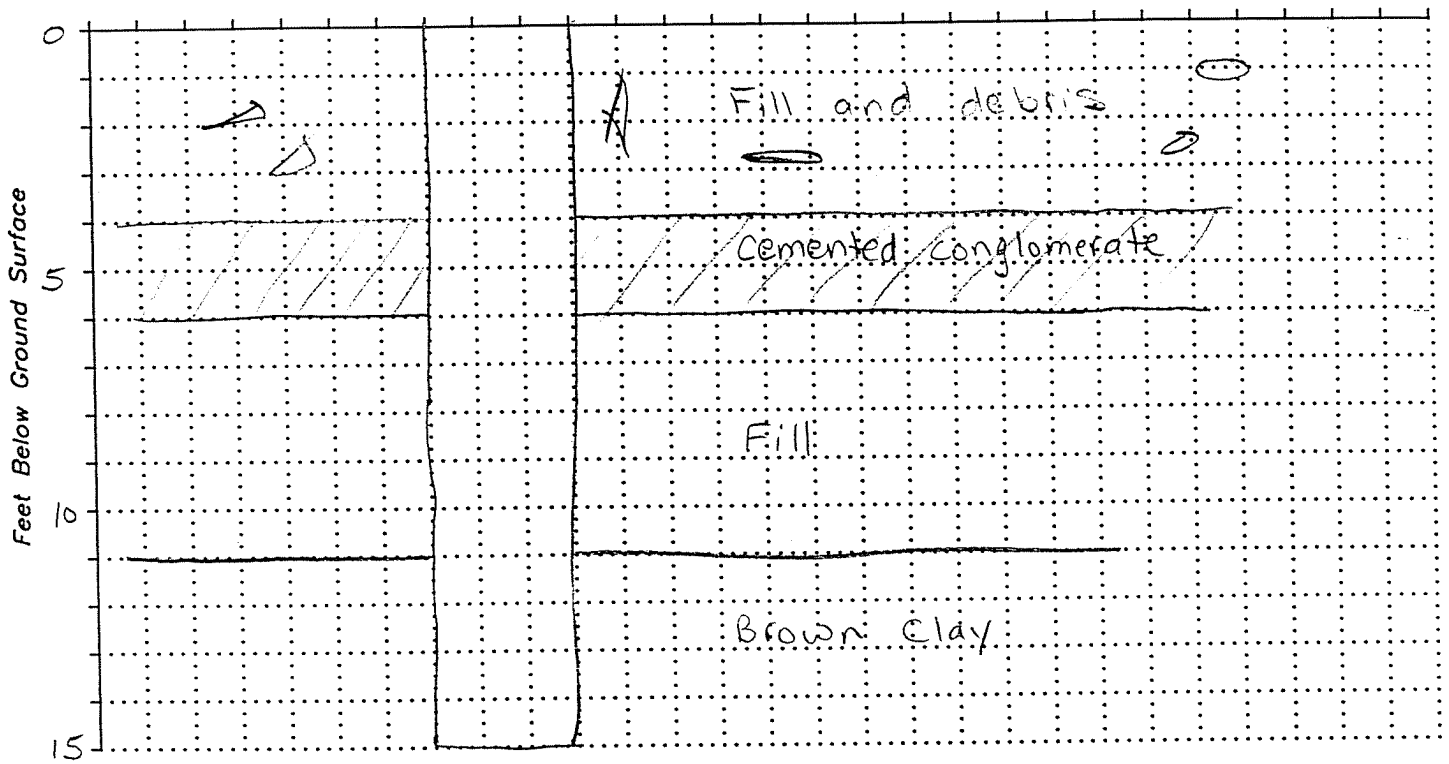
TEST PIT/TRENCH LOG

No.: 04 | Project Name: ALTECH - DUNKIRK | PID Reading: 0

Date: 10-22-96 | Project No.: 483803 / 11 | O_2/LEL Reading: OK

Geol./(Eng.): GER | Equip. Subcontractor: Geiben | Equipment: Ford Backhoe 655C

Surface Elev.: | Equipment Operator: Nicholas Geiben



NOTES:
(Include description of soil and rock materials encountered)

0-4' Dark Silt with abundant debris (plywood, brick, angular rock fragments), root matter, no odor

4'-6' Conglomerate material - "cemented solid", dark gray and black, stone and metal fragments, no odor

6'-11' Dark silt with abundant debris (brick, angular rock fragments), no odor

11'-15' Brown Clay, no debris, no staining, no odor

Static Water Level: No water observed | Photograph/s Taken? yes ✓ no

Sample I.Ds.: SS-TP04-0002, SB-TP04-1112

Collection Method: Grab | Collection Time:

Chain of Custody: 7751 | Shipment/ Tracking No.:

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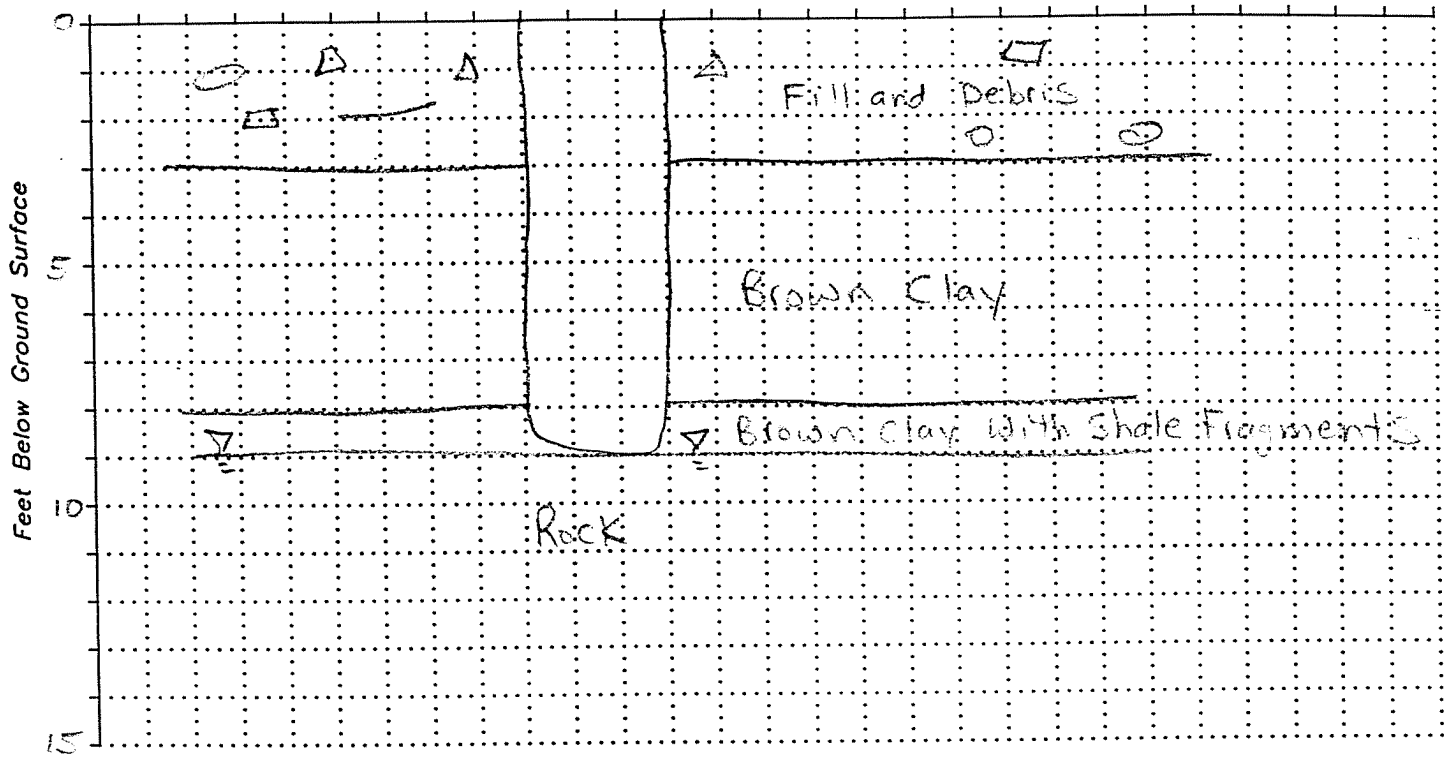
TEST PIT/TRENCH LOG

No.: 05 | Project Name: ALTECH - DUNKIRK | PID Reading: 0

Date: 10-24-96 | Project No.: 483803 / 11 | O_2/LEL Reading: ok

Geol./Eng.: GER | Equip. Subcontractor: Geiben | Equipment: Ford Backhoe 655C

Surface Elev.: | Equipment Operator: Nicholas Geiben



NOTES:
(Include description of soil and rock materials encountered)

0-3' Slaglike material, dark brown, bricks, metallic objects, no staining, no odor

3'-8' Brown clay

8'-9' Brown clay with Shale Fragments

9' Top of Competent Rock

Static Water Level: 9 ft-bgs | Photograph/s Taken? yes ___ no ✓

Sample I.Ds.: SS-TP05-0002, SB-TP05-0203, SB-TP05-0809

Collection Method: Grab | Collection Time:

Chain of Custody: 7755 | Shipment/ Tracking No.:

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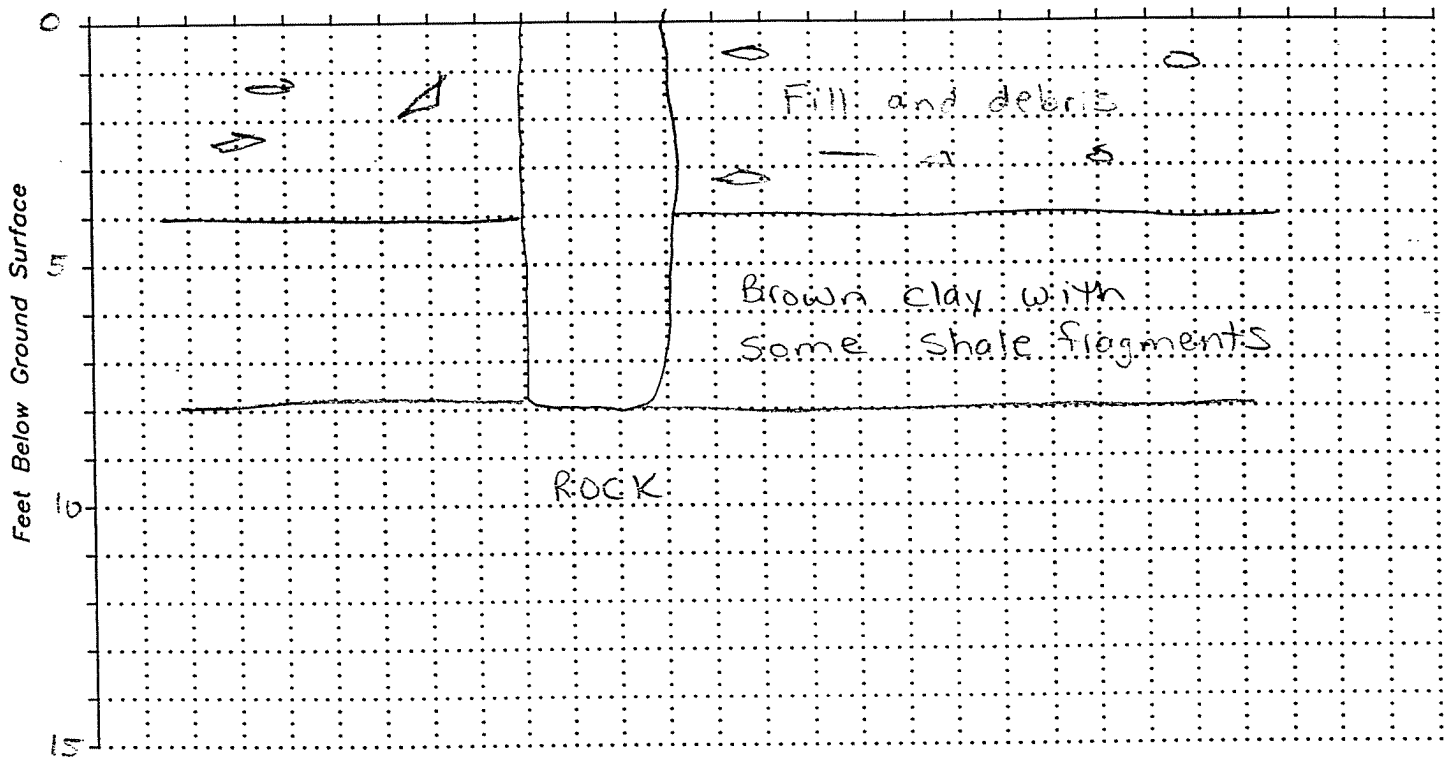
TEST PIT/TRENCH LOG

No.: 06 | Project Name: ALTECH - DUNKIRK | PID Reading: 0

Date: 10-24-96 | Project No.: 483803 / 11 | O_2/LEL Reading: OK

Geol./Eng.: GER | Equip. Subcontractor: Geiben | Equipment: Ford Backhoe 655C

Surface Elev.: | Equipment Operator: Nicholas Geiben



NOTES:
(Include description of soil and rock materials encountered)

0-4' Slaglike material with brick, wood, rock fragments, root matter, dark staining, no odor

4'-8' Brown clay mixed with shale fragments, no staining, no odor appears to have been excavated or disturbed in the past

8' Top of competent rock

atic Water Level: No water observed | Photograph/s Taken? yes ___ no ✓

Sample I.Ds.: SS-TP06-0002, SB-TP06-0304, SB-TP06-0708

Collection Method: Grab | Collection Time:

Chain of Custody: 7755 | Shipment/ Tracking No.:

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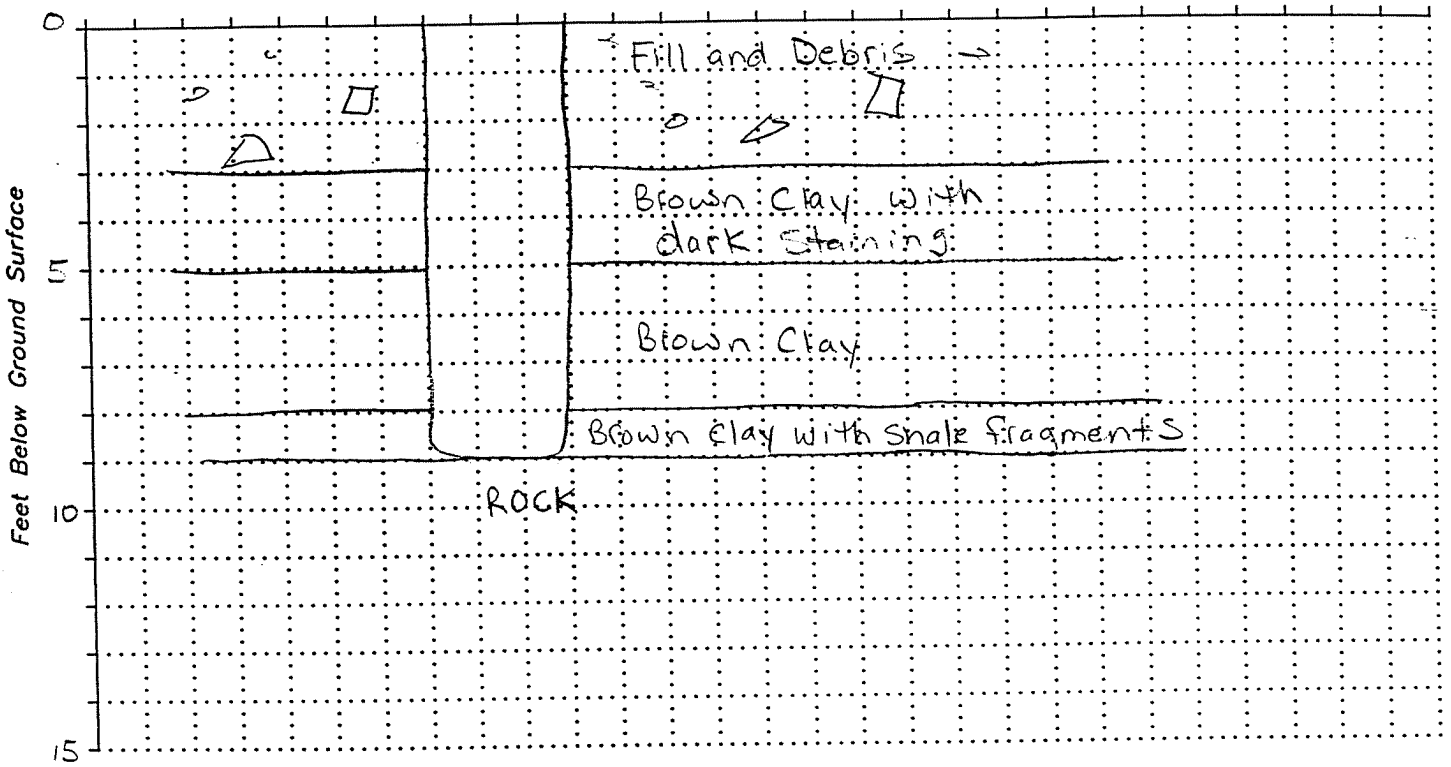
TEST PIT/TRENCH LOG

No.: 07 | Project Name: ALTECH - Dunkirk | PID Reading: 0

Date: 10-24-96 | Project No.: 483803 / 11 | O_2/LEL Reading: OK

Geol./(Eng.): GER | Equip. Subcontractor: Geiben | Equipment: Ford Backhoe 655C

Surface Elev.: | Equipment Operator: Nicholas Geiben



NOTES:
(Include description of soil and rock materials encountered)

0-3' Dark Brown Silt with rubble (glass, rock fragments, brick, concrete) no staining, no odor

3'-5' Brown clay with dark staining, no odor

5'-8' Brown Clay, no staining, no odor

8'-9' Brown clay with shale fragments

9' Top of competent Rock

Static Water Level: No water observed | Photograph/s Taken? yes ___ no ✓

Sample I.Ds.: SS-TP07-0002, SB-TP07-0304, SB-TP07-0809

Collection Method: Grab | Collection Time:

Chain of Custody: 7752 | Shipment/ Tracking No.:

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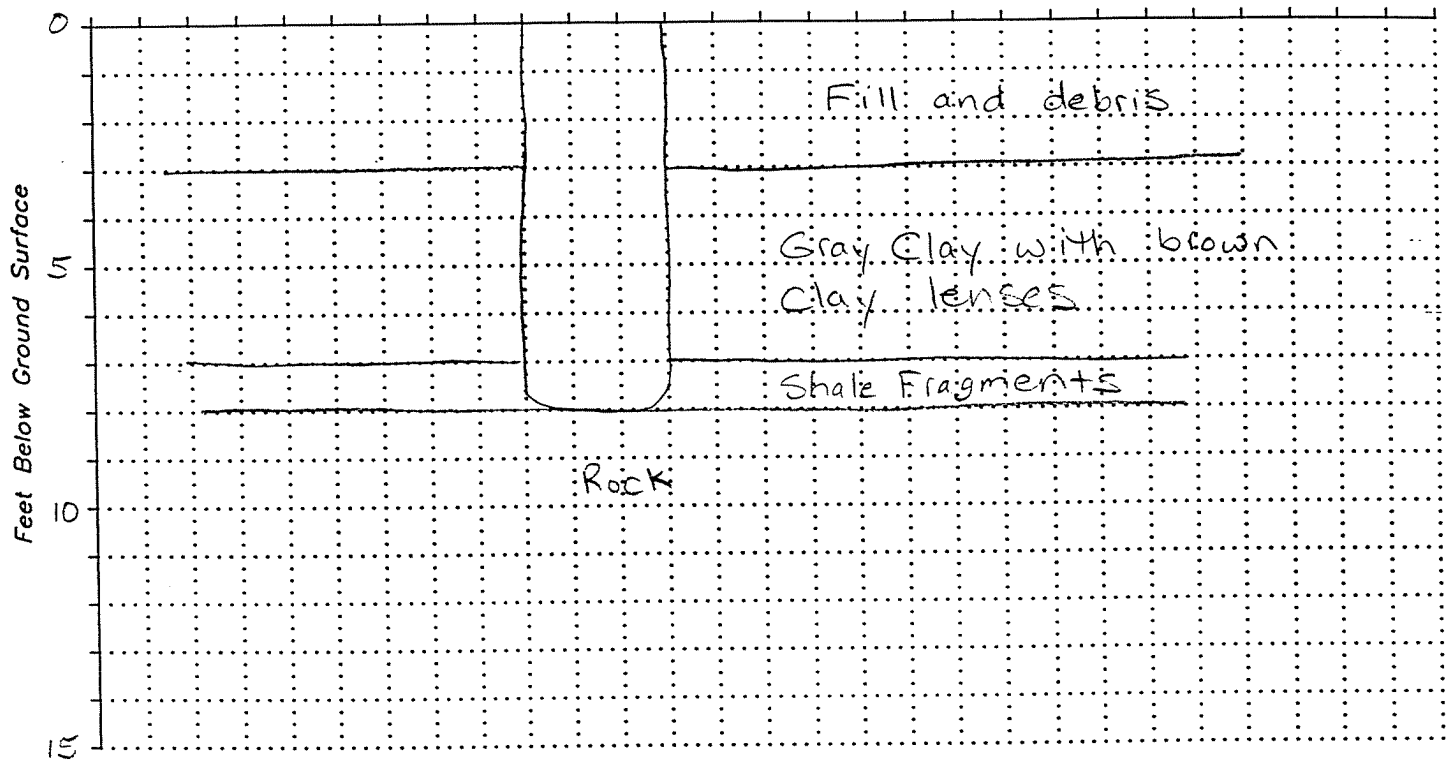
TEST PIT/TRENCH LOG

No.: 08 | Project Name: ALTECH - DUNKIRK | PID Reading: 0

Date: 10-23-96 | Project No.: 483803 / 11 | O_2/LEL Reading: OK

Geol./(Eng.): GER | Equip. Subcontractor: Geiben | Equipment: Ford Backhoe 655C

Surface Elev.: | Equipment Operator: Nicholas Geiben



NOTES:
(Include description of soil and rock materials encountered)

0-3' Dark brown silt with debris (rock fragments, steel objects, root matter, rubber hose, no staining, no odor

3'-7' Gray clay with some brown clay lenses, no staining, no odor

7'-8' Shale Fragments, no staining, no odor

8' Top of competent Rock

atic Water Level: no water observed | Photograph/s Taken? yes ___ no ✓

Sample I.Ds.: SS-TP08-0002, SB-TP08-0304, SB-TP08-0708

Collection Method: Grab | Collection Time:

Chain of Custody: 7749 | Shipment/ Tracking No.:

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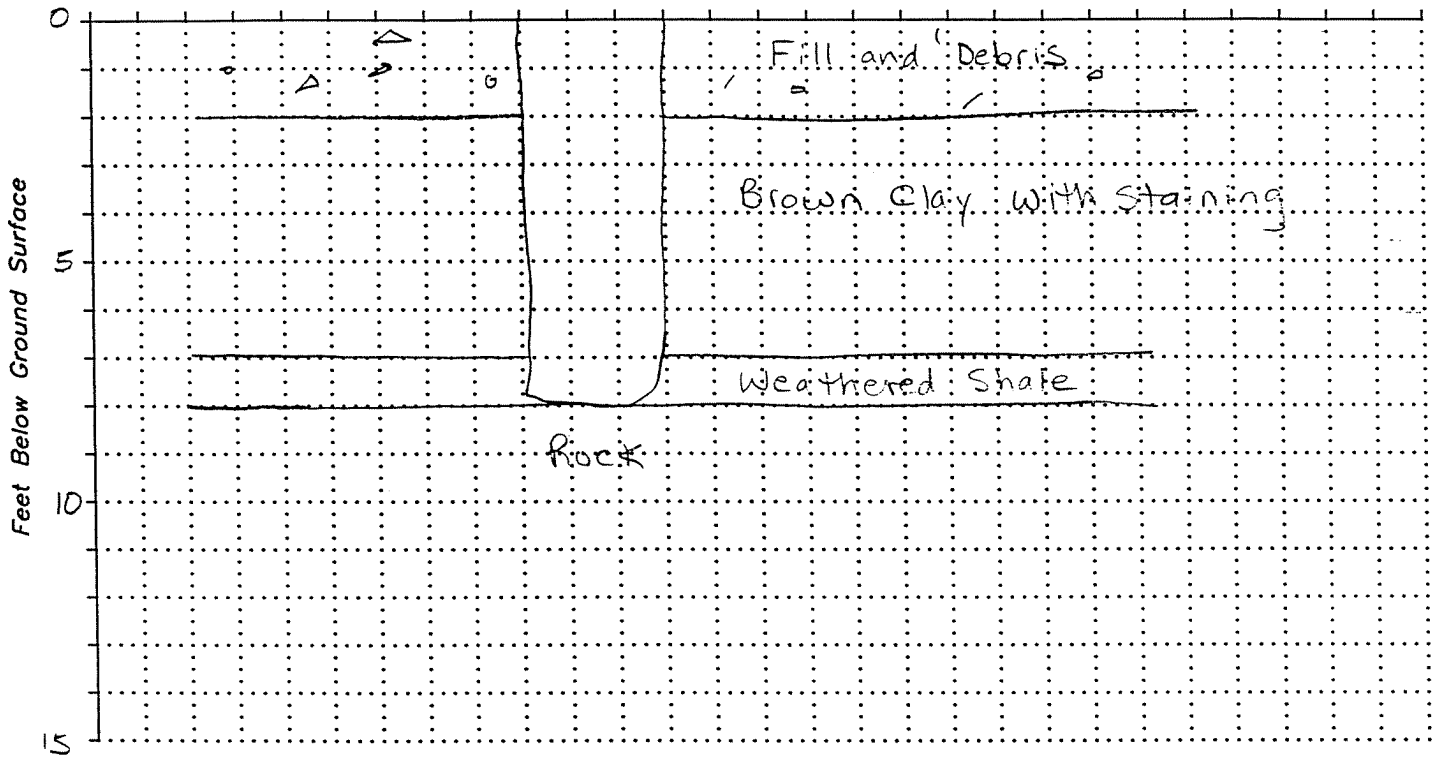
TEST PIT/TRENCH LOG

No.: 09 | Project Name: ALTECH - DUNKIRK | PID Reading: 0

Date: 10-23-96 | Project No.: 483803 / 11 | O_2/LEL Reading: OK

Geol./(Eng.): GER | Equip. Subcontractor: Geiben | Equipment: Ford Backhoe 655C

Surface Elev.: | Equipment Operator: Nicholas Geiben



NOTES:
(Include description of soil and rock materials encountered)

0-2' Cinder-like material with oil-like dark staining, no odor, perched water within this layer

2'-7' Brown Clay with frequent dark staining, no odor

7'-8' Weathered Shale, no staining, no odor

8' Top of Competent

Static Water Level: Perched - 0'-2' | Photograph/s Taken? yes ___ no ✓

Sample I.Ds.: SS-TP09-0002, SB-TP09-0203, SB-TP09-0708

Collection Method: Grab | Collection Time:

Chain of Custody: 7749 | Shipment/ Tracking No.:

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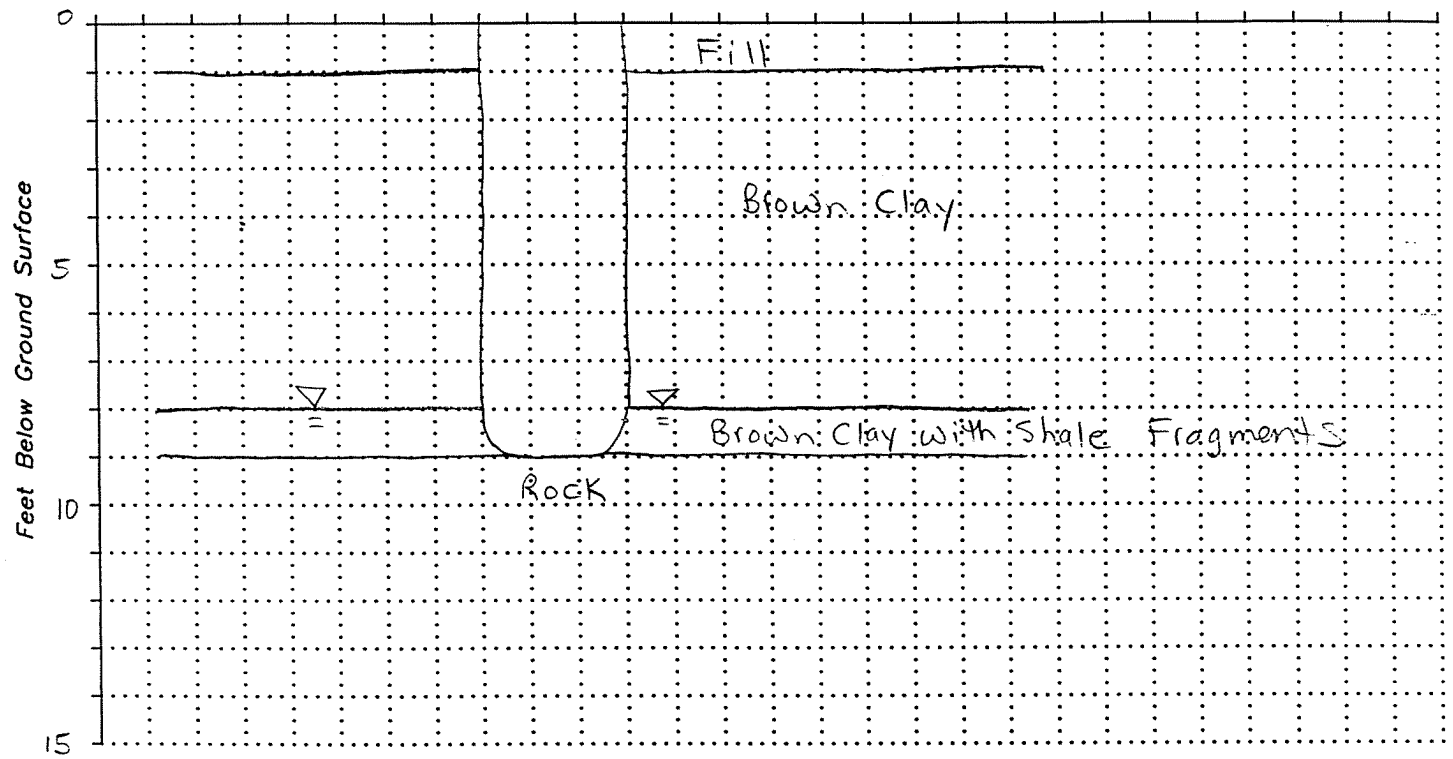
TEST PIT/TRENCH LOG

No.: 10 | Project Name: ALTECH - DUNKIRK | PID Reading: 0

Date: 10-23-96 | Project No.: 483803 / 11 | O_2/LEL Reading: OK

Geol./(Eng.): GER | Equip. Subcontractor: Geiben | Equipment: Ford Backhoe 655C

Surface Elev.: | Equipment Operator: Nicholas Geiben



NOTES:
(Include description of soil and rock materials encountered)

0 - 1' Silt with steel fragments and root matter, no odor, no staining

1' - 8' Brown Clay, no staining, no odor

8' - 9' Brown clay with shale fragments, no staining no odor

9' Top of Competent Rock

Static Water Level: 8 ft-bgs | Photograph/s Taken? yes ✓ no

Sample I.Ds.: SS-TP10-0002, SB-TP10-0809

Collection Method: Grab | Collection Time:

Chain of Custody: 7749 | Shipment/ Tracking No.:

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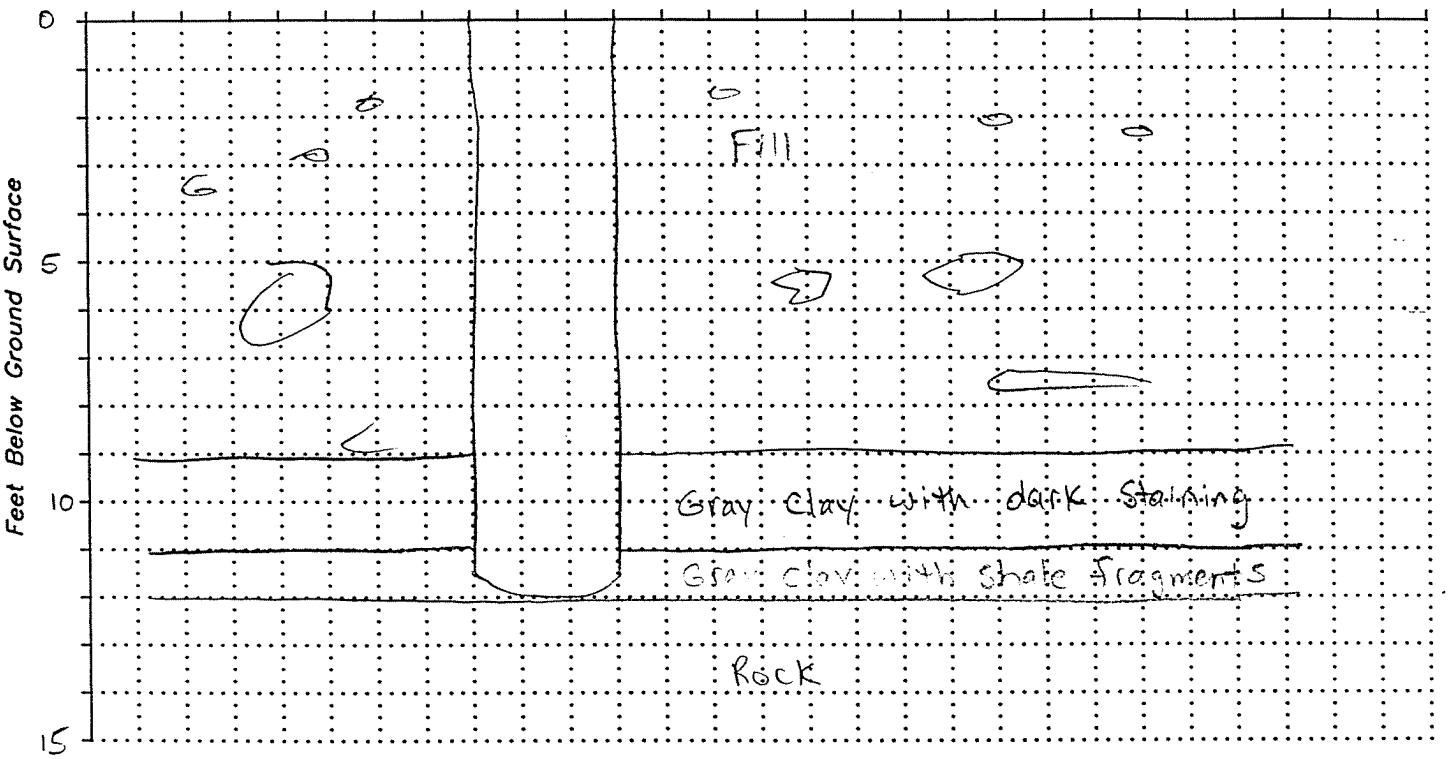
TEST PIT/TRENCH LOG

No.: 11 | Project Name: ALTECH - DUNKIRK | PID Reading: 0

Date: 10-23-96 | Project No.: 483803 / 11 | O_2/LEL Reading: OK

Geol./(Eng.): GER | Equip. Subcontractor: Geiben | Equipment: Ford Backhoe 655C

Surface Elev.: | Equipment Operator: Nicholas Geiben



NOTES:
(Include description of soil and rock materials encountered)

0-9' Cinder-like material, dark oil-like staining, brick, cobbles, slag, no odor

9'-11' Gray clay with dark staining, no odor

11'-12' Gray clay mixed shale fragments

12' Top of competent rock

Static Water Level: | Photograph/s Taken? yes ___ no ✓

Sample I.Ds.: SS-TP11-0002, SB-TP11-1011, SB-TP11-1112

Collection Method: Grab | Collection Time:

Chain of Custody: 7749, 7750 | Shipment/ Tracking No.:

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Appendix F

Appendix F – Groundwater Purge and Sample Forms

Round 1

GROUNDWATER PURGE AND SAMPLE LOG

Well No.: B-1 Project Name: AL Tech - Dunkirk RFI

Date: 11/18/96 Project Number: 483803

Project Team: M. Fleming / B. Diacont / G. Frisch / Sterling Env.

Organic Vapors at Well Head: NA ppm Breathing Zone: NA ppm

Remarks on Well Integrity: _____

Purging

Well Diameter: 4 (inches) Well Depth: 20.12 (feet below TOC)

Water Level: 2.70 (feet below TOC) Water Column: 17.42 (feet)

Purge Volume: 33.97 (gallons)

Well Purged With: submersible pump w/ dedicated tubing

Well purged: ( ) Until Dry (X) Until 4 Well Volumes Were Removed

Time Started: 1130 Time Completed: 1300

Field Parameters

	Pre Purge	11	22	27	33	
Well Volume						
pH	6.65	7.18	7.19	7.14	7.19	
Conductivity	1690	810	803	799	795	
Temperature	13.0	14.6	14.2	14.3	14.0	
Turbidity	10	10	10	10	10	

Well Volume Calculation

Well Diameter	Multiply by
2 inch	Water Column x.16
3 inch	Water Column x.36
4 inch	Water Column x.65
6 inch	Water Column x1.41

Sampling

Sampling I.D.: _____ Sample Description: Very clear, no sheen, slight sulfur odor

Collection Method: submersible pump w/ dedicated tubing

Time Started: _____ Time Completed: _____

Sample Parameters:

See chain-of-custody & attached Master Sample Log

Chain of Custody: _____ Shipment/Tracking No.: N/A

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GROUNDWATER PURGE AND SAMPLE LOG

Well No.: LAE-4 Project Name: AL Tech - Dunkirk RFI

Date: 11/20/96 Project Number: 483803

Project Team: M. Fleming / B. Diacont / G. Frisch / Sterling Env.

Organic Vapors at Well Head: NA ppm Breathing Zone: NA ppm

Remarks on Well Integrity:

Purging

Well Diameter: 2 (inches) Well Depth: 19.87 (feet below TOC)

Water Level: 4.80 (feet below TOC) Water Column: 15.07 (feet)

Purge Volume: 7.23 (gallons)

Well Purged With: submersible pump w/ dedicated tubing

Well purged: ( ) Until Dry (X) Until 3 Well Volumes Were Removed

Time Started: 1230 Time Completed: 1330

Field Parameters

	Pre Purge					
Well Volume		2.4	4.8	7.3		
pH	7.20	7.06	7.01	7.15		
Conductivity	930	910	920	837		
Temperature	10.7	13.7	14.2	13.6		
Turbidity	10	24	10	10		

Well Volume Calculation

Well Diameter	Multiply by
2 inch	Water Column x.16
3 inch	Water Column x.36
4 inch	Water Column x.65
6 inch	Water Column x1.41

Sampling

Sampling I.D.: Sample Description:

Collection Method: submersible pump w/ dedicated tubing

Time Started: Time Completed:

Sample Parameters:

See chain-of-custody
& attached Master Sample Log

Chain of Custody: Shipment/Tracking No.: N/A

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GROUNDWATER PURGE AND SAMPLE LOG

Well No.: LAW-5 Project Name: AL Tech - Dunkirk RFI

Date: 11/21/96 Project Number: 483803

Project Team: M. Fleming / B. Diacont / G. Frisch / Sterling Env.

Organic Vapors at Well Head: NA ppm Breathing Zone: NA ppm

Remarks on Well Integrity: _____

Purging

Well Diameter: 2 (inches) Well Depth: 18.55 (feet below TOC)

Water Level: 9.34 (feet below TOC) Water Column: 9.21 (feet)

Purge Volume: 4.42 (gallons)

Well Purged With: submersible pump w/ dedicated tubing

Well purged: ( ) Until Dry (X) Until 3 Well Volumes Were Removed

Time Started: 0810 Time Completed: 0845

Field Parameters

	Pre Purge	1.5	3.0	4.5		
Well Volume						
pH	6.85	6.87	6.82	6.80		
Conductivity	3320	3146	3030	3200		
Temperature	9.9	13.2	13.7	14.8		
Turbidity	10	10	10	10		

Well Volume Calculation

Well Diameter	Multiply by
2 inch	Water Column x.16
3 inch	Water Column x.36
4 inch	Water Column x.65
6 inch	Water Column x1.41

Sampling

Sampling I.D.: _____ Sample Description: slight yellow tint; no noticable o

Collection Method: submersible pump w/ dedicated tubing

Time Started: _____ Time Completed: _____

Sample Parameters:

See chain-of-custody
& attached Master Sample Log

Chain of Custody: _____ Shipment/Tracking No.: N/A

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GROUNDWATER PURGE AND SAMPLE LOG

Well No.: LAW-6 Project Name: AL Tech - Dunkirk RFI

Date: 11/21/96 Project Number: 483803

Project Team: M.Fleming / B. Diacont / G. Frisch / Sterling Env.

Organic Vapors at Well Head: NA ppm Breathing Zone: NA ppm

Remarks on Well Integrity:

Purging

Well Diameter: 2 (inches) Well Depth: 17.88 (feet below TOC)

Water Level: 5.94 (feet below TOC) Water Column: 11.94 (feet)

Purge Volume: 5.73 (gallons)

Well Purged With: submersible pump w/ dedicated tubing

Well purged: ( ) Until Dry (X) Until 3 Well Volumes Were Removed

Time Started: 0915 Time Completed: 0945

Field Parameters

	Pre Purge	2	4	6		
Well Volume						
pH	8.96	9.01	8.88	9.08		
Conductivity	11,000	10,100	10,600	11,000		
Temperature	10.5	11.7	12.7	13.5		
Turbidity	242	10	10	10		

Well Volume Calculation

Well Diameter	Multiply by
2 inch	Water Column x.16
3 inch	Water Column x.36
4 inch	Water Column x.65
6 inch	Water Column x1.41

Sampling

Sampling I.D.: Sample Description: dark red/brown-gold; no odor

Collection Method: submersible pump w/ dedicated tubing

Time Started: Time Completed:

Sample Parameters:

See chain-of-custody
& attached Master Sample Log

Chain of Custody. Shipment/Tracking No.: N/A

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GROUNDWATER PURGE AND SAMPLE LOG

Well No.: MW-1 Project Name: AL Tech - Dunkirk RFI

Date: 11/20/96 Project Number: 483803

Project Team: M. Fleming / B. Diacont / G. Frisch / Sterling Env.

Organic Vapors at Well Head: NA ppm Breathing Zone: NA ppm

Remarks on Well Integrity:

Purging

Well Diameter: 2 (inches) Well Depth: 22.3 (feet below TOC)

Water Level: 5.27 (feet below TOC) Water Column: 17.03 (feet)

Purge Volume: 8.17 (gallons)

Well Purged With: submersible pump w/ dedicated tubing

Well purged: ( ) Until Dry (X) Until 3 Well Volumes Were Removed

Time Started: 1505 Time Completed: 1545

Field Parameters

	Pre Purge	3	6	8.5		
Well Volume						
pH	7.85	7.96	8.32	8.41		
Conductivity	530	975	1106	1092		
Temperature	46.5	49.6	51.1	49.9		
Turbidity	138	111	50	39		

Well Volume Calculation

Well Diameter	Multiply by
2 inch	Water Column x.16
3 inch	Water Column x.36
4 inch	Water Column x.65
6 inch	Water Column x1.41

Sampling

Sampling I.D.: Sample Description:

Collection Method: submersible pump w/ dedicated tubing

Time Started: Time Completed:

Sample Parameters:

See chain-of-custody
& attached Master Sample Log

Chain of Custody: Shipment/Tracking No.: N/A

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GROUNDWATER PURGE AND SAMPLE LOG

Well No.: MW-3 Project Name: AL Tech - Dunkirk RFI

Date: 11/20/96 Project Number: 483803

Project Team: M. Fleming / B. Diacont / G. Frisch / Sterling Env.

Organic Vapors at Well Head: NA ppm Breathing Zone: NA ppm

Remarks on Well Integrity:

Purging

Well Diameter: 2 (inches) Well Depth: 11.33 (feet below TOC)

Water Level: 3.29 (feet below TOC) Water Column: 8.04 (feet)

Purge Volume: 3.86 (gallons)

Well Purged With: submersible pump w/ dedicated tubing

Well purged: ( ) Until Dry (X) Until 3 Well Volumes Were Removed

Time Started: 0745 Time Completed: 0830

Field Parameters

	Pre Purge					
Well Volume		1.25	2.7	3.84		
pH	7.17	7.12	7.12	7.10		
Conductivity	2980	2880	2980	3150		
Temperature	10.5	13.1	14.2	14.7		
Turbidity	OFF SCALE	596	10	64		

Well Volume Calculation

Well Diameter	Multiply by
2 inch	Water Column x.16
3 inch	Water Column x.36
4 inch	Water Column x.65
6 inch	Water Column x1.41

Sampling

Sampling I.D.: Sample Description: Yellow tint to water

Collection Method: submersible pump w/ dedicated tubing

Time Started: Time Completed:

Sample Parameters:

See chain-of-custody & attached Master Sample Log

Chain of Custody: Shipment/Tracking No.: N/A

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GROUNDWATER PURGE AND SAMPLE LOG

Well No.: WT-1A Project Name: AL Tech - Dunkirk RFI

Date: 11/19/96 Project Number: 483803

Project Team: M. Fleming / B. Diacont / G. Frisch / Sterling Env.

Organic Vapors at Well Head: NA ppm Breathing Zone: NA ppm

Remarks on Well Integrity:

Purging

Well Diameter: 2 (inches) Well Depth: 16.94 (feet below TOC)

Water Level: 3.63 (feet below TOC) Water Column: 13.31 (feet)

Purge Volume: 6.39 (gallons)

Well Purged With: submersible pump w/ dedicated tubing

Well purged: ( ) Until Dry (X) Until 3 Well Volumes Were Removed

Time Started: 0800 Time Completed: 0820

Field Parameters

	Pre Purge					
Well Volume		2.0	4.25	6.5		
pH	6.17	6.71	6.50	6.42		
Conductivity	1180	1135	1148	1140		
Temperature	53.6	53.4	53.2	53.8		
Turbidity	60	24	34	29		

Well Volume Calculation

Well Diameter	Multiply by
2 inch	Water Column x.16
3 inch	Water Column x.36
4 inch	Water Column x.65
6 inch	Water Column x1.41

Sampling

Sampling I.D.: Sample Description:

Collection Method: submersible pump w/ dedicated tubing

Time Started: Time Completed:

Sample Parameters:

See chain-of-custody
& attached Master Sample Log

Chain of Custody. Shipment/Tracking No.: N/A

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GROUNDWATER PURGE AND SAMPLE LOG

Well No.: WT-1B Project Name: AL Tech - Dunkirk RFI

Date: 11/19/96 Project Number: 483803

Project Team: M. Fleming / B. Diacont / G. Frisch / Sterling Env.

Organic Vapors at Well Head: NA ppm Breathing Zone: NA ppm

Remarks on Well Integrity: _____

Purging

Well Diameter: 2 (inches) Well Depth: 15.03 (feet below TOC)

Water Level: 3.67 (feet below TOC) Water Column: 11.36 (feet)

Purge Volume: 5.45 (gallons)

Well Purged With: submersible pump w/ dedicated tubing

Well purged: ( ) Until Dry (X) Until 3 Well Volumes Were Removed

Time Started: 0925 Time Completed: 0940

Field Parameters

	Pre Purge	2	4	6		
Well Volume						
pH	5.89	5.40	5.39	5.44		
Conductivity	860	891	925	938		
Temperature	48.6	50.1	51.4	50.9		
Turbidity	169	68	63	79		

Well Volume Calculation

Well Diameter	Multiply by
2 inch	Water Column x.16
3 inch	Water Column x.36
4 inch	Water Column x.65
6 inch	Water Column x1.41

Sampling

Sampling I.D.: _____ Sample Description: _____

Collection Method: submersible pump w/ dedicated tubing

Time Started: _____ Time Completed: _____

Sample Parameters:

See chain-of-custody
& attached Master Sample Log

Chain of Custody: _____ Shipment/Tracking No.: N/A

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GROUNDWATER PURGE AND SAMPLE LOG

Well No.: WT-2 Project Name: AL Tech - Dunkirk RFI

Date: 11/19/96 Project Number: 483803

Project Team: M. Fleming / B. Diacont / G. Frisch / Sterling Env.

Organic Vapors at Well Head: NA ppm Breathing Zone: NA ppm

Remarks on Well Integrity:

Purging

Well Diameter: 4 (inches) Well Depth: 11.86 (feet below TOC)

Water Level: 3.14 (feet below TOC) Water Column: 8.72 (feet)

Purge Volume: 17.00 (gallons)

Well Purged With: submersible pump w/ dedicated tubing

Well purged: (X) Until Dry ( ) Until ____ Well Volumes Were Removed

Time Started: 1020 Time Completed: 1145

Field Parameters

	Pre Purge						
Well Volume		6					
pH	*12.20	*12.33					
Conductivity	3950	4800					
Temperature	11.3	13.2					
Turbidity	10	45					

*pH readings do not seem to be accurate

Well Volume Calculation

Well Diameter	Multiply by
2 inch	Water Column x.16
3 inch	Water Column x.36
4 inch	Water Column x.65
6 inch	Water Column x1.41

Sampling

Sampling I.D.: Sample Description:

Collection Method: submersible pump w/ dedicated tubing

Time Started: Time Completed:

Sample Parameters:

See chain-of-custody
& attached Master Sample Log

Chain of Custody: Shipment/Tracking No.: N/A

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GROUNDWATER PURGE AND SAMPLE LOG

Well No.: WT-3 Project Name: AL Tech - Dunkirk RFI

Date: 11/19/96 Project Number: 483803

Project Team: M. Fleming / B. Diacont / G. Frisch / Sterling Env.

Organic Vapors at Well Head: NA ppm Breathing Zone: NA ppm

Remarks on Well Integrity:

Purging

Well Diameter: 4 (inches) Well Depth: 17.38 (feet below TOC)

Water Level: 2.27 (feet below TOC) Water Column: 15.11 (feet)

Purge Volume: 29.46 (gallons)

Well Purged With: submersible pump w/ dedicated tubing

Well purged: (X) Until Dry ( ) Until ____ Well Volumes Were Removed

Time Started: 1045 Time Completed: 1125

Field Parameters

	Pre Purge					
Well Volume		9.8	14			
pH	4.95	5.10	5.12			
Conductivity	1345	1408	1452			
Temperature	53.6	54.0	54.2			
Turbidity	168	59	113			

Well Volume Calculation

Well Diameter	Multiply by
2 inch	Water Column x.16
3 inch	Water Column x.36
4 inch	Water Column x.65
6 inch	Water Column x1.41

Sampling

Sampling I.D.: Sample Description:

Collection Method: submersible pump w/ dedicated tubing

Time Started: Time Completed:

Sample Parameters:

See chain-of-custody
& attached Master Sample Log

Chain of Custody: Shipment/Tracking No.: N/A

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GROUNDWATER PURGE AND SAMPLE LOG

Well No.: WT-4 Project Name: AL Tech - Dunkirk RFI

Date: 11/19/96 Project Number: 483803

Project Team: M. Fleming / B. Diacont / G. Frisch / Sterling Env.

Organic Vapors at Well Head: NA ppm Breathing Zone: NA ppm

Remarks on Well Integrity: _____

Purging

Well Diameter: 4 (inches) Well Depth: 16.33 (feet below TOC)

Water Level: 1.02 (feet below TOC) Water Column: 15.31 (feet)

Purge Volume: 29.85 (gallons)

Well Purged With: submersible pump w/ dedicated tubing

Well purged: (X) Until Dry ( ) Until ____ Well Volumes Were Removed

Time Started: 1410 Time Completed: 1510

Field Parameters

	Pre Purge					
Well Volume		10	20			
pH	5.29	5.49	5.46			
Conductivity	1410	1382	1370			
Temperature	51.8	51.5	52.3			
Turbidity	2	7	13			

Well Volume Calculation

Well Diameter	Multiply by
2 inch	Water Column x.16
3 inch	Water Column x.36
4 inch	Water Column x.65
6 inch	Water Column x1.41

Sampling

Sampling I.D.: _____ Sample Description: _____

Collection Method: submersible pump w/ dedicated tubing

Time Started: _____ Time Completed: _____

Sample Parameters:

See chain-of-custody
& attached Master Sample Log

Chain of Custody: _____ Shipment/Tracking No.: N/A

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GROUNDWATER PURGE AND SAMPLE LOG

Well No.: WP-4 Project Name: AL Tech - Dunkirk RFI

Date: 11/21/96 Project Number: 483803

Project Team: M. Fleming / B. Diacont / G. Frisch / Sterling Env.

Organic Vapors at Well Head: NA ppm Breathing Zone: NA ppm

Remarks on Well Integrity: _____

Purging

Well Diameter: 2 (inches) Well Depth: 19.96 (feet below TOC)

Water Level: 9.78 (feet below TOC) Water Column: 10.18 (feet)

Purge Volume: 4.89 (gallons)

Well Purged With: submersible pump w/ dedicated tubing

Well purged: ( ) Until Dry (X) Until 3 Well Volumes Were Removed

Time Started: 0805 Time Completed: 0825

Field Parameters

	Pre Purge	2	4	5		
Well Volume						
pH	8.10	8.18	7.96	7.94		
Conductivity	945	1030	1042	1048		
Temperature	52.3	54.1	54.4	54.2		
Turbidity	36	21	14	12		

Well Volume Calculation

Well Diameter	Multiply by
2 inch	Water Column x.16
3 inch	Water Column x.36
4 inch	Water Column x.65
6 inch	Water Column x1.4

Sampling

Sampling I.D.: _____ Sample Description: _____

Collection Method: submersible pump w/ dedicated tubing

Time Started: _____ Time Completed: _____

Sample Parameters:

See chain-of-custody
& attached Master Sample Log

Chain of Custody: _____ Shipment/Tracking No.: N/A

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GROUNDWATER PURGE AND SAMPLE LOG

Well No.: WP-5 Project Name: AL Tech - Dunkirk RFI

Date: 11/21/96 Project Number: 483803

Project Team: M. Fleming / B. Diacont / G. Frisch / Sterling Env.

Organic Vapors at Well Head: NA ppm Breathing Zone: NA ppm

Remarks on Well Integrity: _____

Purging

Well Diameter: 2 (inches) Well Depth: 17.88 (feet below TOC)

Water Level: 11.11 (feet below TOC) Water Column: 6.77 (feet)

Purge Volume: 3.24 (gallons)

Well Purged With: submersible pump w/ dedicated tubing

Well purged: ( ) Until Dry (X) Until 3 Well Volumes Were Removed

Time Started: 1015 Time Completed: —

Field Parameters

	Pre Purge					
Well Volume		1.08	2.16	3.24		
pH	7.03	6.99	7.02	7.11		
Conductivity	1020	930	738	700		
Temperature	13.0	14.2	15.8	16.1		
Turbidity	999	510	42	10		

Well Volume Calculation

Well Diameter	Multiply by
2 inch	Water Column x.16
3 inch	Water Column x.36
4 inch	Water Column x.65
6 inch	Water Column x1.41

Sampling

Sampling I.D.: _____ Sample Description: _____

Collection Method: submersible pump w/ dedicated tubing

Time Started: _____ Time Completed: _____

Sample Parameters:

See chain-of-custody
& attached Master Sample Log

Chain of Custody: _____ Shipment/Tracking No.: N/A

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GROUNDWATER PURGE AND SAMPLE LOG

Well No.: RFI-1 Project Name: AL Tech - Dunkirk RFI

Date: 11/18/96 Project Number: 483803

Project Team: M.Fleming / B. Diacont / G. Frisch / Sterling Env.

Organic Vapors at Well Head: NA ppm Breathing Zone: NA ppm

Remarks on Well Integrity: _____

Purging

Well Diameter: 2 (inches) Well Depth: 13.32 (feet below TOC)

Water Level: 9.90 (feet below TOC) Water Column: 3.42 (feet)

Purge Volume: 1.64 (gallons)

Well Purged With: submersible pump w/ dedicated tubing

Well purged: ( ) Until Dry (X) Until 3 Well Volumes Were Removed

Time Started: 1430 Time Completed: 1520

Field Parameters

	Pre Purge					
Well Volume		0.52	1.04	1.60		
pH	7.30	7.21	7.17	7.25		
Conductivity	603	696	707	673		
Temperature	13.5	15.7	16.4	17.2		
Turbidity	OFFSCALE	3	9	10		

Well Volume Calculation

Well Diameter	Multiply by
2 inch	Water Column x.16
3 inch	Water Column x.36
4 inch	Water Column x.65
6 inch	Water Column x1.41

Sampling

Sampling I.D.: _____ Sample Description: strng sulfur odor; no sheen; clear

Collection Method: submersible pump w/ dedicated tubing

Time Started: _____ Time Completed: _____

Sample Parameters:

See chain-of-custody & attached Master Sample Log

Chain of Custody: _____ Shipment/Tracking No.: N/A

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GROUNDWATER PURGE AND SAMPLE LOG

Well No.: RFI-02 Project Name: AL Tech - Dunkirk RFI

Date: 11/18/96 Project Number: 483803

Project Team: M. Fleming / B. Diacont / G. Frisch / Sterling Env.

Organic Vapors at Well Head: NA ppm Breathing Zone: NA ppm

Remarks on Well Integrity: _____

Purging

Well Diameter: 2 (inches) Well Depth: 11.86 (feet below TOC)

Water Level: 6.13 (feet below TOC) Water Column: 5.73 (feet)

Purge Volume: 2.75 (gallons)

Well Purged With: submersible pump w/ dedicated tubing

Well purged: ( ) Until Dry (X) Until 3 Well Volumes Were Removed

Time Started: 11:40 Time Completed: 12:00

Field Parameters

	Pre Purge	1	2	3		
Well Volume						
pH	8.20	8.0	7.95	8.02		
Conductivity	1880	1860	1750	1810		
Temperature	52.3	54.6	56.4	56.5		
Turbidity	260	470	321	305		

Well Volume Calculation

Well Diameter	Multiply by
2 inch	Water Column x.16
3 inch	Water Column x.36
4 inch	Water Column x.65
6 inch	Water Column x1.41

Sampling

Sampling I.D.: _____ Sample Description: _____

Collection Method: submersible pump w/ dedicated tubing

Time Started: _____ Time Completed: _____

Sample Parameters:

See chain-of-custody
& attached Master Sample Log

Chain of Custody. _____ Shipment/Tracking No.: N/A

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GROUNDWATER PURGE AND SAMPLE LOG

Well No.: RFI-03 Project Name: AL Tech - Dunkirk RFI

Date: 11/18/96 Project Number: 483803

Project Team: M. Fleming / B. Diacont / G. Frisch / Sterling Env.

Organic Vapors at Well Head: NA ppm Breathing Zone: NA ppm

Remarks on Well Integrity:

Purging

Well Diameter: 2 (inches) Well Depth: 9.60 (feet below TOC)

Water Level: 3.26 (feet below TOC) Water Column: 6.34 (feet)

Purge Volume: 3.04 (gallons)

Well Purged With: submersible pump w/ dedicated tubing

Well purged: ( ) Until Dry (X) Until 3 Well Volumes Were Removed

Time Started: 10:15 Time Completed: 10:25

Field Parameters

	Pre Purge					
Well Volume		1.0	2.0	3.1		
pH	7.89	8.01	8.06	8.01		
Conductivity	4500	1650	1480	1470		
Temperature	57.3	60.7	61.0	61.7		
Turbidity	423	96	38	21		

Well Volume Calculation

Well Diameter	Multiply by
2 inch	Water Column x.16
3 inch	Water Column x.36
4 inch	Water Column x.65
6 inch	Water Column x1.41

Sampling

Sampling I.D.: Sample Description:

Collection Method: submersible pump w/ dedicated tubing

Time Started: Time Completed:

Sample Parameters:

See chain-of-custody & attached Master Sample Log

Chain of Custody: Shipment/Tracking No.: N/A

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GROUNDWATER PURGE AND SAMPLE LOG

Well No.: RFI-4 Project Name: AL Tech - Dunkirk RFI

Date: 11/19/96 Project Number: 483803

Project Team: M. Fleming / B. Diacont / G. Frisch / Sterling Env.

Organic Vapors at Well Head: NA ppm Breathing Zone: NA ppm

Remarks on Well Integrity: _____

Purging

Well Diameter: 2 (inches) Well Depth: 27.15 (feet below TOC)

Water Level: 4.96 (feet below TOC) Water Column: 22.19 (feet)

Purge Volume: 10.65 (gallons)

Well Purged With: submersible pump w/ dedicated tubing

Well purged: ( ) Until Dry (X) Until 4 Well Volumes Were Removed

Time Started: 0800 Time Completed: 0900

Field Parameters

	Pre Purge					
Well Volume		3.45	7.0	8.5	10.5	
pH	7.24	7.29	7.27	7.22	7.25	
Conductivity	828	814	833	819	829	
Temperature	10.4	12.9	12.7	12.8	12.8	
Turbidity	OFFSCALE	748	224	6	10	

Well Volume Calculation

Well Diameter	Multiply by
2 inch	Water Column x.16
3 inch	Water Column x.36
4 inch	Water Column x.65
6 inch	Water Column x1.41

Sampling

Sampling I.D.: _____ Sample Description: No odor; clear; no sheen

Collection Method: submersible pump w/ dedicated tubing

Time Started: _____ Time Completed: _____

Sample Parameters:

See chain-of-custody
& attached Master Sample Log

Chain of Custody: _____ Shipment/Tracking No.: N/A

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GROUNDWATER PURGE AND SAMPLE LOG

Well No.: RFI-5 Project Name: AL Tech - Dunkirk RFI

Date: 11/20/96 Project Number: 483803

Project Team: M.Fleming / B. Diacont / G. Frisch / Sterling Env.

Organic Vapors at Well Head: NA ppm Breathing Zone: NA ppm

Remarks on Well Integrity:

Purging

Well Diameter: 2 (inches) Well Depth: 17.03 (feet below TOC)

Water Level: 5.92 (feet below TOC) Water Column: 11.11 (feet)

Purge Volume: 5.33 (gallons)

Well Purged With: submersible pump w/ dedicated tubing

Well purged: ( ) Until Dry (X) Until 3 Well Volumes Were Removed

Time Started: 0750 Time Completed: 0815

Field Parameters

	Pre Purge	2	4	5.5		
Well Volume						
pH	6.68	6.72	6.72	N/A		
Conductivity	720	651	643	669		
Temperature	54.1	52.4	52.3	52.8		
Turbidity	20	14	45	8		

Well Volume Calculation

Well Diameter	Multiply by
2 inch	Water Column x.16
3 inch	Water Column x.36
4 inch	Water Column x.65
6 inch	Water Column x1.41

Sampling

Sampling I.D.: Sample Description:

Collection Method: submersible pump w/ dedicated tubing

Time Started: Time Completed:

Sample Parameters:

See chain-of-custody
& attached Master Sample Log

Chain of Custody: Shipment/Tracking No.: N/A

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GROUNDWATER PURGE AND SAMPLE LOG

Well No.: RFI-b Project Name: AL Tech - Dunkirk RFI

Date: 11/19/96 Project Number: 483803

Project Team: M. Fleming / B. Diacont / G. Frisch / Sterling Env.

Organic Vapors at Well Head: NA ppm Breathing Zone: NA ppm

Remarks on Well Integrity:

Purging

Well Diameter: 2 (inches) Well Depth: 13.53 (feet below TOC)

Water Level: 6.06 (feet below TOC) Water Column: 7.47 (feet)

Purge Volume: 3.59 (gallons)

Well Purged With: submersible pump w/ dedicated tubing

Well purged: ( ) Until Dry (X) Until 3 Well Volumes Were Removed

Time Started: 1530 Time Completed: 1600

Field Parameters

	Pre Purge	1.2	2.4	3.6		
Well Volume						
pH	7.34	7.30	7.40	7.30		
Conductivity	1190	1140	1230	1230		
Temperature	11.4	12.3	13.3	13.3		
Turbidity	63	15	10	20		

Well Volume Calculation

Well Diameter	Multiply by
2 inch	Water Column x.16
3 inch	Water Column x.36
4 inch	Water Column x.65
6 inch	Water Column x1.41

Sampling

Sampling I.D.: Sample Description:

Collection Method: submersible pump w/ dedicated tubing

Time Started: Time Completed:

Sample Parameters:

See chain-of-custody & attached Master Sample Log

Chain of Custody: Shipment/Tracking No.: N/A

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GROUNDWATER PURGE AND SAMPLE LOG

Well No.: RFI-7 Project Name: AL Tech - Dunkirk RFI

Date: 11/20/96 Project Number: 483803

Project Team: M. Fleming / B. Diacont / G. Frisch / Sterling Env.

Organic Vapors at Well Head: NA ppm Breathing Zone: NA ppm

Remarks on Well Integrity: _____

Purging

Well Diameter: 2 (inches) Well Depth: 11.65 (feet below TOC)

Water Level: 4.17 (feet below TOC) Water Column: 7.48 (feet)

Purge Volume: 3.59 (gallons)

Well Purged With: submersible pump w/ dedicated tubing

Well purged: ( ) Until Dry (✓) Until 3 Well Volumes Were Removed

Time Started: 0850 Time Completed: 0930

Field Parameters

	Pre Purge					
Well Volume		1.2	2.4	3.6		
pH	6.63	6.61	6.61	6.67		
Conductivity	4040	3940	4210	4220		
Temperature	12.7	14.9	14.8	16.5		
Turbidity	10	10	10	10		

Well Volume Calculation

Well Diameter	Multiply by
2 inch	Water Column x.16
3 inch	Water Column x.36
4 inch	Water Column x.65
6 inch	Water Column x1.41

Sampling

Sampling I.D.: _____ Sample Description: _____

Collection Method: submersible pump w/ dedicated tubing

Time Started: _____ Time Completed: _____

Sample Parameters:

See chain-of-custody
& attached Master Sample Log

Chain of Custody: _____ Shipment/Tracking No.: N/A

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GROUNDWATER PURGE AND SAMPLE LOG

Well No.: RFI-08 Project Name: AL Tech - Dunkirk RFI

Date: 11/20/96 Project Number: 483803

Project Team: M. Fleming / B. Diacont / G. Frisch / Sterling Env.

Organic Vapors at Well Head: NA ppm Breathing Zone: NA ppm

Remarks on Well Integrity: _____

Purging

Well Diameter: 2 (inches) Well Depth: 10.44 (feet below TOC)

Water Level: 2.35 (feet below TOC) Water Column: 8.09 (feet)

Purge Volume: 3.88 (gallons)

Well Purged With: submersible pump w/ dedicated tubing

Well purged: (X) Until Dry ( ) Until ____ Well Volumes Were Removed

Time Started: 0915 Time Completed: 0945

Field Parameters

	Pre Purge	1.5	3				
Well Volume							
pH	5.38	5.43	5.43				
Conductivity	735	757	762				
Temperature	46.1	49.0	50.6				
Turbidity	14	22	22				

Well Volume Calculation

Well Diameter	Multiply by
2 inch	Water Column x.16
3 inch	Water Column x.36
4 inch	Water Column x.65
6 inch	Water Column x1.41

Sampling

Sampling I.D.: _____ Sample Description: _____

Collection Method: submersible pump w/ dedicated tubing

Time Started: _____ Time Completed: _____

Sample Parameters:

See chain-of-custody
& attached Master Sample Log

Chain of Custody: _____ Shipment/Tracking No.: N/A

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GROUNDWATER PURGE AND SAMPLE LOG

Well No.: CFI-9 Project Name: AL Tech - Dunkirk RFI

Date: 11/19/96 Project Number: 483803

Project Team: M. Fleming / B. Diacont / G. Frisch / Sterling Env.

Organic Vapors at Well Head: NA ppm Breathing Zone: NA ppm

Remarks on Well Integrity:

Purging

Well Diameter: 2 (inches) Well Depth: 13.11 (feet below TOC)

Water Level: 2.68 (feet below TOC) Water Column: 10.43 (feet)

Purge Volume: 5.01 (gallons)

Well Purged With: submersible pump w/ dedicated tubing

Well purged: ( ) Until Dry (X) Until 3 Well Volumes Were Removed

Time Started: 1415 Time Completed: 1445

Field Parameters

	Pre Purge					
Well Volume		1.75	4.00	5.25		
pH	7.20	7.09	6.95	6.94		
Conductivity	1030	1030	1050	1030		
Temperature	10.2	13.3	13.8	13.9		
Turbidity	297	10	10	10		

Well Volume Calculation

Well Diameter	Multiply by
2 inch	Water Column x.16
3 inch	Water Column x.36
4 inch	Water Column x.65
6 inch	Water Column x1.41

Sampling

Sampling I.D.: Sample Description: No odor; no sheen

Collection Method: submersible pump w/ dedicated tubing

Time Started: Time Completed:

Sample Parameters:

See chain-of-custody & attached Master Sample Log

Chain of Custody: Shipment/Tracking No.: N/A

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GROUNDWATER PURGE AND SAMPLE LOG

Well No.: RFI-10 Project Name: AL Tech - Dunkirk RFI

Date: 11/19/96 Project Number: 483803

Project Team: M. Fleming / B. Diacont / G. Frisch / Sterling Env.

Organic Vapors at Well Head: NA ppm Breathing Zone: NA ppm

Remarks on Well Integrity: _____

Purging

Well Diameter: 2 (inches) Well Depth: 15.40 (feet below TOC)

Water Level: 2.66 (feet below TOC) Water Column: 12.74 (feet)

Purge Volume: 6.12 (gallons)

Well Purged With: submersible pump w/ dedicated tubing

Well purged: ( ) Until Dry (X) Until 3 Well Volumes Were Removed

Time Started: 1600 Time Completed: 1635

Field Parameters

Well Volume	Pre Purge	2	4	6		
pH	5.55	5.84	5.63	5.80		
Conductivity	1532	1526	1518	1490		
Temperature	50.2	49.4	51.5	49.6		
Turbidity	22	65	72	23		

Well Volume Calculation

Well Diameter	Multiply by
2 inch	Water Column x.16
3 inch	Water Column x.36
4 inch	Water Column x.65
6 inch	Water Column x1.41

Sampling

Sampling I.D.: _____ Sample Description: _____

Collection Method: submersible pump w/ dedicated tubing

Time Started: _____ Time Completed: _____

Sample Parameters:

See chain-of-custody & attached Master Sample Log

Chain of Custody: _____ Shipment/Tracking No.: N/A

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GROUNDWATER PURGE AND SAMPLE LOG

Well No.: RFI-11 Project Name: AL Tech - Dunkirk RFI

Date: 11/18/96 Project Number: 483803

Project Team: M. Fleming / B. Diacont / G. Frisch / Sterling Env.

Organic Vapors at Well Head: NA ppm Breathing Zone: NA ppm

Remarks on Well Integrity: _____

Purging

Well Diameter: 2 (inches) Well Depth: 17.98 (feet below TOC)

Water Level: 3.69 (feet below TOC) Water Column: 14.29 (feet)

Purge Volume: 6.86 (gallons)

Well Purged With: submersible pump w/ dedicated tubing

Well purged: ( ) Until Dry (X) Until 3 Well Volumes Were Removed

Time Started: 1555 Time Completed: 1630

Field Parameters

	Pre Purge	2.5	4.0	7.5		
Well Volume						
pH	8.81	8.76	8.86	8.79		
Conductivity	864	829	845	850		
Temperature	51.4	51.9	52.2	52.4		
Turbidity	>1000	285	129	156		

Well Volume Calculation

Well Diameter	Multiply by
2 inch	Water Column x.16
3 inch	Water Column x.36
4 inch	Water Column x.65
6 inch	Water Column x1.41

Sampling

Sampling I.D.: _____ Sample Description: _____

Collection Method: submersible pump w/ dedicated tubing

Time Started: _____ Time Completed: _____

Sample Parameters:

See chain-of-custody
& attached Master Sample Log

Chain of Custody: _____ Shipment/Tracking No.: N/A

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GROUNDWATER PURGE AND SAMPLE LOG

Well No.: RFI-12 Project Name: AL Tech - Dunkirk RFI

Date: 11/21/96 Project Number: 483803

Project Team: M. Fleming / B. Diacont / G. Frisch / Sterling Env.

Organic Vapors at Well Head: NA ppm Breathing Zone: NA ppm

Remarks on Well Integrity:

Purging

Well Diameter: 2 (inches) Well Depth: 13.71 (feet below TOC)

Water Level: 7.91 (feet below TOC) Water Column: 5.8 (feet)

Purge Volume: 2.78 (gallons)

Well Purged With: submersible pump w/ dedicated tubing

Well purged: ( ) Until Dry (X) Until 3 Well Volumes Were Removed

Time Started: 0850 Time Completed: 0930

Field Parameters

	Pre Purge	1.0	2.0	3.0		
Well Volume						
pH	7.20	7.03	6.92	6.90		
Conductivity	582	667	678	682		
Temperature	45.7	52.3	53.4	52.7		
Turbidity	36	28	31	33		

Well Volume Calculation

Well Diameter	Multiply by
2 inch	Water Column x.16
3 inch	Water Column x.36
4 inch	Water Column x.65
6 inch	Water Column x1.41

Sampling

Sampling I.D.: Sample Description:

Collection Method: submersible pump w/ dedicated tubing

Time Started: Time Completed:

Sample Parameters:

See chain-of-custody
& attached Master Sample Log

Chain of Custody: Shipment/Tracking No.: N/A

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GROUNDWATER PURGE AND SAMPLE LOG

Well No.: RFI-13 Project Name: AL Tech - Dunkirk RFI

Date: 11/20/96 Project Number: 483803

Project Team: M. Fleming / B. Diacont / G. Frisch / Sterling Env.

Organic Vapors at Well Head: NA ppm Breathing Zone: NA ppm

Remarks on Well Integrity:

Purging

Well Diameter: 2 (inches) Well Depth: 17.23 (feet below TOC)

Water Level: 6.95 (feet below TOC) Water Column: 10.28 (feet)

Purge Volume: 4.93 (gallons)

Well Purged With: submersible pump w/ dedicated tubing

Well purged: ( ) Until Dry (X) Until 3 Well Volumes Were Removed

Time Started: 1045 Time Completed: 1125

Field Parameters

	Pre Purge	2	4	5		
Well Volume						
pH	5.33	5.52	5.62	5.70		
Conductivity	988	1060	1140	1085		
Temperature	46.1	50.5	51.2	51.8		
Turbidity	132	256	92	35		

Well Volume Calculation

Well Diameter	Multiply by
2 inch	Water Column x.16
3 inch	Water Column x.36
4 inch	Water Column x.65
6 inch	Water Column x1.41

Sampling

Sampling I.D.: Sample Description:

Collection Method: submersible pump w/ dedicated tubing

Time Started: Time Completed:

Sample Parameters:

See chain-of-custody
& attached Master Sample Log

Chain of Custody: Shipment/Tracking No.: N/A

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GROUNDWATER PURGE AND SAMPLE LOG

Well No.: RFI-14 Project Name: AL Tech - Dunkirk RFI

Date: 11/20/96 Project Number: 483803

Project Team: M. Fleming / B. Diacont / G. Frisch / Sterling Env.

Organic Vapors at Well Head: NA ppm Breathing Zone: NA ppm

Remarks on Well Integrity: _____

Purging

Well Diameter: 2 (inches) Well Depth: 16.27 (feet below TOC)

Water Level: 4.33 (feet below TOC) Water Column: 11.94 (feet)

Purge Volume: 5.73 (gallons)

Well Purged With: submersible pump w/ dedicated tubing

Well purged: ( ) Until Dry (X) Until 3 Well Volumes Were Removed

Time Started: 1320 Time Completed: 1345

Field Parameters

	Pre Purge	2	4	6		
Well Volume						
pH	8.17	8.38	8.43	8.39		
Conductivity	583	636	597	586		
Temperature	45.9	50.1	51.8	52.1		
Turbidity	354	876	>1000	>1000		

Well Volume Calculation

Well Diameter	Multiply by
2 inch	Water Column x.16
3 inch	Water Column x.36
4 inch	Water Column x.65
6 inch	Water Column x1.41

Sampling

Sampling I.D.: _____ Sample Description: _____

Collection Method: submersible pump w/ dedicated tubing

Time Started: _____ Time Completed: _____

Sample Parameters:

See chain-of-custody & attached Master Sample Log

Chain of Custody: _____ Shipment/Tracking No.: N/A

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GROUNDWATER PURGE AND SAMPLE LOG

Well No.: RFI-15 Project Name: AL Tech - Dunkirk RFI

Date: 11/20/96 Project Number: 483803

Project Team: M. Fleming / B. Diacont / G. Frisch / Sterling Env.

Organic Vapors at Well Head: NA ppm Breathing Zone: NA ppm

Remarks on Well Integrity:

Purging

Well Diameter: 2 (inches) Well Depth: 18.86 (feet below TOC)

Water Level: 11.56 (feet below TOC) Water Column: 7.3 (feet)

Purge Volume: 3.50 (gallons)

Well Purged With: submersible pump w/ dedicated tubing

Well purged: ( ) Until Dry (X) Until 3 Well Volumes Were Removed

Time Started: 1415 Time Completed: 1500

Field Parameters

	Pre Purge	1.2	2.4	3.6		
Well Volume						
pH	7.22	7.15	7.16	7.12		
Conductivity	883	1150	1220	1180		
Temperature	12.7	15.2	16.8	18.6		
Turbidity	999	999	999	952		

Well Volume Calculation

Well Diameter	Multiply by
2 inch	Water Column x.16
3 inch	Water Column x.36
4 inch	Water Column x.65
6 inch	Water Column x1.41

Sampling

Sampling I.D.: Sample Description:

Collection Method: submersible pump w/ dedicated tubing

Time Started: Time Completed:

Sample Parameters:

See chain-of-custody
& attached Master Sample Log

Chain of Custody: Shipment/Tracking No.: N/A

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GROUNDWATER PURGE AND SAMPLE LOG

Well No.: RFI-16 Project Name: AL Tech - Dunkirk RFI

Date: 11/18/96 Project Number: 483803

Project Team: M. Fleming / B. Diacont / G. Frisch / Sterling Env.

Organic Vapors at Well Head: NA ppm Breathing Zone: NA ppm

Remarks on Well Integrity:

Purging

Well Diameter: 2 (inches) Well Depth: 17.50 (feet below TOC)

Water Level: 6.85 (feet below TOC) Water Column: 10.65 (feet)

Purge Volume: 5.11 (gallons)

Well Purged With: submersible pump w/ dedicated tubing

Well purged: ( ) Until Dry (X) Until 3 Well Volumes Were Removed

Time Started: 1435 Time Completed: 1455

Field Parameters

	Pre Purge	2	4	6		
Well Volume						
pH	8.64	8.72	8.73	8.70		
Conductivity	765	752	810	815		
Temperature	49.6	52.7	53.6	53.9		
Turbidity	>1000	442	177	42		

Well Volume Calculation

Well Diameter	Multiply by
2 inch	Water Column x.16
3 inch	Water Column x.36
4 inch	Water Column x.65
6 inch	Water Column x1.41

Sampling

Sampling I.D.: Sample Description:

Collection Method: submersible pump w/ dedicated tubing

Time Started: Time Completed:

Sample Parameters:

See chain-of-custody & attached Master Sample Log

Chain of Custody: Shipment/Tracking No.: N/A

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GROUNDWATER PURGE AND SAMPLE LOG

Well No.: RFI-17 Project Name: AL Tech - Dunkirk RFI

Date: 11/20/96 Project Number: 483803

Project Team: M. Fleming / B. Diacont / G. Frisch / Sterling Env.

Organic Vapors at Well Head: NA ppm Breathing Zone: NA ppm

Remarks on Well Integrity: _____

Purging

Well Diameter: 2 (inches) Well Depth: 13.69 (feet below TOC)

Water Level: 7.60 (feet below TOC) Water Column: 6.09 (feet)

Purge Volume: 3.0 (gallons)

Well Purged With: submersible pump w/ dedicated tubing

Well purged: ( ) Until Dry (X) Until 3 Well Volumes Were Removed

Time Started: 1050 Time Completed: 1115

Field Parameters

	Pre Purge	1	2	3		
Well Volume						
pH	7.26	7.36	7.34	7.28		
Conductivity	2790	1430	1400	1410		
Temperature	12.1	12.4	13.4	13.6		
Turbidity	53	10	10	10		

Well Volume Calculation

Well Diameter	Multiply by
2 inch	Water Column x.16
3 inch	Water Column x.36
4 inch	Water Column x.65
6 inch	Water Column x1.41

Sampling

Sampling I.D.: _____ Sample Description: _____

Collection Method: submersible pump w/ dedicated tubing

Time Started: _____ Time Completed: _____

Sample Parameters:

See chain-of-custody
& attached Master Sample Log

Chain of Custody: _____ Shipment/Tracking No.: N/A

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Round 2

GROUNDWATER PURGE AND SAMPLE LOG

Well No.: B-1 Project Name: AL Tech - Dunkirk RFI

Date: 3/24/97 Project Number: 483803

Project Team: B. Diacont / G. Frisch / Sterling Env.

Organic Vapors at Well Head: NA ppm Breathing Zone: NA ppm

Remarks on Well Integrity: _____

Purging

Well Diameter: 4 (inches) Well Depth: 20.12 (feet below TOC)

Water Level: 3.34 (feet below TOC) Water Column: 16.78 (feet)

Purge Volume: 34.2 (gallons)

Well Purged With: submersible pump w/ dedicated tubing

Well purged: ( ) Until Dry (X) Until 3 Well Volumes Were Removed

Time Started: 1435 Time Completed: 1515

Field Parameters

	Pre Purge					
Well Volume		11.4	22.8	34.2		
pH	6.25	6.59	6.63	6.57		
Conductivity	685	592	581	587		
Temperature	7.9°C	7.6	7.5	7.5		
Turbidity	<10	<10	<10	<10		

Well Volume Calculation

Well Diameter	Multiply by
2 inch	Water Column x.16
3 inch	Water Column x.36
4 inch	Water Column x.65
6 inch	Water Column x1.41

Sampling

Sampling I.D.: _____ Sample Description: _____

Collection Method: submersible pump w/ dedicated tubing

Time Started: _____ Time Completed: _____

Sample Parameters:

See chain-of-custody & attached master sample log

Chain of Custody: _____ Shipment/Tracking No.: N/A

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GROUNDWATER PURGE AND SAMPLE LOG

Well No.: B-1 Project Name: AL Tech - Dunkirk RFI

Date: 3/27/97 Project Number: 483803

Project Team: B. Diacont / G. Frisch / Sterling Env.

Organic Vapors at Well Head: NA ppm Breathing Zone: NA ppm

Remarks on Well Integrity: _____

Purging

Well Diameter: 4 (inches) Well Depth: _____ (feet below TOC)

Water Level: _____ (feet below TOC) Water Column: _____ (feet)

Purge Volume: _____ (gallons)

Well Purged With: submersible pump w/ dedicated tubing

Well purged: ( ) Until Dry (X) Until 3 Well Volumes Were Removed

Time Started: 1350 Time Completed: 1420

Field Parameters

	Pre Purge					
Well Volume		11.4	22.8	34.2		
pH	7.41	7.32	7.37	7.34		
Conductivity	576	554	572	576		
Temperature	9.8	9.0	8.6	8.7		
Turbidity	<10	<10	<10	—		

Well Volume Calculation

Well Diameter	Multiply by
2 inch	Water Column x.16
3 inch	Water Column x.36
4 inch	Water Column x.65
6 inch	Water Column x1.41

Sampling

Sampling I.D.: _____ Sample Description: _____

Collection Method: submersible pump w/ dedicated tubing

Time Started: _____ Time Completed: _____

Sample Parameters:

See chain-of-custody
& attached Master sample log

Chain of Custody: Shipment/Tracking No.: N/A

GROUNDWATER PURGE AND SAMPLE LOG

Well No.: LAE-4 Project Name: AL Tech - Dunkirk RFI

Date: 3/27/97 Project Number: 483803

Project Team: B. Diacont/G. Frisch/Sterling Env.

Organic Vapors at Well Head: NA ppm Breathing Zone: NA ppm

Remarks on Well Integrity: _____

Purging

Well Diameter: 2 (inches) Well Depth: 16.41 (feet below TOC)

Water Level: 2.05 (feet below TOC) Water Column: 14.36 (feet)

Purge Volume: 6.90 (gallons)

Well Purged With: submersible pump w/ dedicated tubing

Well purged: ( ) Until Dry (X) Until 3 Well Volumes Were Removed

Time Started: 1000 Time Completed: 1040

Field Parameters

	Pre Purge					
Well Volume		2.5	5.0	7.2		
pH	7.24	7.21	7.34	7.17		
Conductivity	634	632	644	642		
Temperature	9.0	9.3	10.2	10.3		
Turbidity	326	172	367	>1000		

Well Volume Calculation

Well Diameter	Multiply by
2 inch	Water Column x.16
3 inch	Water Column x.36
4 inch	Water Column x.65
6 inch	Water Column x1.41

Sampling

Sampling I.D.: _____ Sample Description: _____

Collection Method: submersible pump w/ dedicated tubing

Time Started: _____ Time Completed: _____

Sample Parameters:

See chain-of-custody
& attached Master sample log

Chain of Custody: _____ Shipment/Tracking No. N/A

GROUNDWATER PURGE AND SAMPLE LOG

Well No.: LAW-5 Project Name: AL Tech - Dunkirk RFI

Date: 3/26/97 Project Number: 483803

Project Team: B. Diacont / G. Frisch / Sterling Env.

Organic Vapors at Well Head: NA ppm Breathing Zone: NA ppm

Remarks on Well Integrity: _____

Purging

Well Diameter: 2 (inches) Well Depth: 18.55 (feet below TOC)

Water Level: 9.55 (feet below TOC) Water Column: 9.0 (feet)

Purge Volume: 4.32 (gallons)

Well Purged With: submersible pump w/ dedicated tubing

Well purged: ( ) Until Dry (X) Until 3 Well Volumes Were Removed

Time Started: 1515 Time Completed: 1545

Field Parameters

	Pre Purge					
Well Volume		1.45	2.90	4.35		
pH	7.32	7.22	7.27	7.14		
Conductivity	2280	2270	2370	2330		
Temperature	8.4°C	8.7	8.7	9.3		
Turbidity	10	10	10	16		

Well Volume Calculation

Well Diameter	Multiply by
2 inch	Water Column x.16
3 inch	Water Column x.36
4 inch	Water Column x.65
6 inch	Water Column x1.41

Sampling

Sampling I.D.: _____ Sample Description: _____

Collection Method: submersible pump w/ dedicated tubing

Time Started: _____ Time Completed: _____

Sample Parameters:

See chain-of-custody
& attached Master Sample Log

Chain of Custody: Shipment/Tracking No.: N/A

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GROUNDWATER PURGE AND SAMPLE LOG

Well No.: LAW-6 Project Name: AL Tech - Dunkirk RFI

Date: 3/26/97 Project Number: 483803

Project Team: B. Diacont / G. Frisch / Sterling Env.

Organic Vapors at Well Head: NA ppm Breathing Zone: NA ppm

Remarks on Well Integrity:

Purging

Well Diameter: 2 (inches) Well Depth: 17.88 (feet below TOC)

Water Level: 6.05 (feet below TOC) Water Column: 11.83 (feet)

Purge Volume: 5.68 (gallons)

Well Purged With: submersible pump w/ dedicated tubing

Well purged: ( ) Until Dry (X) Until 3 Well Volumes Were Removed

Time Started: 1515 Time Completed: 1550

Field Parameters

	Pre Purge	1.9	3.8	5.7		
Well Volume						
pH	9.02	9.03	9.03	9.06		
Conductivity	7110	7260	7170	7320		
Temperature	5.6	6.9	7.3	7.7		
Turbidity	10	24	10	10		

Well Volume Calculation

Well Diameter	Multiply by
2 inch	Water Column x.16
3 inch	Water Column x.36
4 inch	Water Column x.65
6 inch	Water Column x1.41

Sampling

Sampling I.D.: Sample Description:

Collection Method: submersible pump w/ dedicated tubing

Time Started: Time Completed:

Sample Parameters:

See chain-of-custody
& attached Master Sample Log

Chain of Custody: Shipment/Tracking No.: N/A

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GROUNDWATER PURGE AND SAMPLE LOG

Well No.: MW-1 Project Name: AL Tech - Dunkirk RFI

Date: 3/25/97 Project Number: 483803

Project Team: B. Diacont / G. Frisch / Sterling Env.

Organic Vapors at Well Head: NA ppm Breathing Zone: NA ppm

Remarks on Well Integrity: _____

Purging

Well Diameter: 2 (inches) Well Depth: 12.62 (feet below TOC)

Water Level: 6.10 (feet below TOC) Water Column: 6.52 (feet)

Purge Volume: 3.13 (gallons)

Well Purged With: submersible pump w/ dedicated tubing

Well purged: ( ) Until Dry (X) Until 3 Well Volumes Were Removed

Time Started: 1435 Time Completed: 1455

Field Parameters

	Pre Purge	1.1	2.2	3.2		
Well Volume						
pH	9.35	8.79	8.59	8.47		
Conductivity	255	528	603	621		
Temperature	7.5	8.4	8.5	8.7		
Turbidity	174	>1000	145	<10		

Well Volume Calculation

Well Diameter	Multiply by
2 inch	Water Column x.16
3 inch	Water Column x.36
4 inch	Water Column x.65
6 inch	Water Column x1.41

Sampling

Sampling I.D.: _____ Sample Description: _____

Collection Method: submersible pump w/ dedicated tubing

Time Started: _____ Time Completed: _____

Sample Parameters:

See chain-of-custody & attached master sample log

Chain of Custody: _____ Shipment/Tracking No.: N/A

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GROUNDWATER PURGE AND SAMPLE LOG

Well No.: MW-3 Project Name: AL Tech - Dunkirk RFI

Date: 3/26/97 Project Number: 483803

Project Team: B. Diacont / G. Frisch / Sterling Env.

Organic Vapors at Well Head: NA ppm Breathing Zone: NA ppm

Remarks on Well Integrity: _____

Purging

Well Diameter: 2 (inches) Well Depth: 11.33 (feet below TOC)

Water Level: 3.59 (feet below TOC) Water Column: 7.74 (feet)

Purge Volume: 3.72 (gallons)

Well Purged With: submersible pump w/ dedicated tubing

Well purged: ( ) Until Dry (X) Until 3 Well Volumes Were Removed

Time Started: 1410 Time Completed: 1435

Field Parameters

	Pre Purge					
Well Volume		1.3	2.6	4.0		
pH	7.35	7.30	7.24	7.08		
Conductivity	1690	1430	2360	2670		
Temperature	7.6	7.7	9.5	9.3		
Turbidity	453	219	100	17		

Well Volume Calculation

Well Diameter	Multiply by
2 inch	Water Column x.16
3 inch	Water Column x.36
4 inch	Water Column x.65
6 inch	Water Column x1.41

Sampling

Sampling I.D.: _____ Sample Description: _____

Collection Method: submersible pump w/ dedicated tubing

Time Started: _____ Time Completed: _____

Sample Parameters:

See chain-of-custody
& attached Master Sample Log

Chain of Custody: _____ Shipment/Tracking No.: N/A

GROUNDWATER PURGE AND SAMPLE LOG

Well No.: WT-1A Project Name: AL Tech - Dunkirk RFI

Date: 3/26/97 Project Number: 483803

Project Team: B. Diacont/G. Frisch / Sterling Env.

Organic Vapors at Well Head: NA ppm Breathing Zone: NA ppm

Remarks on Well Integrity: _____

Purging

Well Diameter: 2 (inches) Well Depth: 16.92 (feet below TOC)

Water Level: 5.07 (feet below TOC) Water Column: 11.85 (feet)

Purge Volume: 5.69 (gallons)

Well Purged With: submersible pump w/ dedicated tubing

Well purged: ( ) Until Dry (X) Until 3 Well Volumes Were Removed

Time Started: 0740 Time Completed: 0825

Field Parameters

	Pre Purge	2	4	6		
Well Volume						
pH	8.58	8.33	7.88	7.78		
Conductivity	760	781	812	807		
Temperature	5.5	6.4	6.6	6.5		
Turbidity	130	<10	<10	<10		

Well Volume Calculation

Well Diameter	Multiply by
2 inch	Water Column x.16
3 inch	Water Column x.36
4 inch	Water Column x.65
6 inch	Water Column x1.41

Sampling

Sampling I.D.: _____ Sample Description: _____

Collection Method: submersible pump w/ dedicated tubing

Time Started: _____ Time Completed: _____

Sample Parameters:

See chain-of-custody & attached Master Sample Log

Chain of Custody: _____ Shipment/Tracking No.: N/A

GROUNDWATER PURGE AND SAMPLE LOG

Well No.: WT1-B Project Name: AL Tech - Dunkirk RFI

Date: 3/26/97 Project Number: 483803

Project Team: B. Diacont / G. Frisch / Sterling Env.

Organic Vapors at Well Head: NA ppm Breathing Zone: NA ppm

Remarks on Well Integrity: _____

Purging

Well Diameter: 2 (inches) Well Depth: 15.03 (feet below TOC)

Water Level: 3.65 (feet below TOC) Water Column: 11.38 (feet)

Purge Volume: 5.46 (gallons)

Well Purged With: submersible pump w/ dedicated tubing

Well purged: ( ) Until Dry (X) Until 3 Well Volumes Were Removed

Time Started: 0800 Time Completed: 0830

Field Parameters

	Pre Purge	1.8	3.6	5.4		
Well Volume						
pH	7.61	7.24	7.10	7.09		
Conductivity	657	672	721	778		
Temperature	6.4°C	6.4	7.2	7.0		
Turbidity	144	>10	>10	364		

Well Volume Calculation

Well Diameter	Multiply by
2 inch	Water Column x.16
3 inch	Water Column x.36
4 inch	Water Column x.65
6 inch	Water Column x1.41

Sampling

Sampling I.D.: _____ Sample Description: _____

Collection Method: submersible pump w/ dedicated tubing

Time Started: _____ Time Completed: _____

Sample Parameters:

See chain-of-custody & attached master sample log

Chain of Custody: _____ Shipment/Tracking No.: N/A

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GROUNDWATER PURGE AND SAMPLE LOG

Well No.: WT-2 Project Name: AL Tech - Dunkirk RFI

Date: 3/25/97 Project Number: 483803

Project Team: B. Diacont/G. Frisch / Sterling Env.

Organic Vapors at Well Head: NA ppm Breathing Zone: NA ppm

Remarks on Well Integrity: _____

Purging

Well Diameter: 4 (inches) Well Depth: 11.86 (feet below TOC)

Water Level: 2.96 (feet below TOC) Water Column: 8.9 (feet)

Purge Volume: 17.36 (gallons)

Well Purged With: submersible pump w/ dedicated tubing

Well purged: (X) Until Dry ( ) Until ____ Well Volumes Were Removed

Time Started: 0810 Time Completed: 0830

Field Parameters

	Pre Purge					
Well Volume						
pH	12.61					
Conductivity	3040					
Temperature	6.2 °C					
Turbidity	10					

Well Volume Calculation

Well Diameter	Multiply by
2 inch	Water Column x.16
3 inch	Water Column x.36
4 inch	Water Column x.65
6 inch	Water Column x1.41

Sampling

Sampling I.D.: _____ Sample Description: slight sheen visible

Collection Method: submersible pump w/ dedicated tubing

Time Started: _____ Time Completed: _____

Sample Parameters:

See chain-of-custody
& attached master sample log

Chain of Custody: Shipment/Tracking No.: N/A

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GROUNDWATER PURGE AND SAMPLE LOG

Well No.: WT-3 Project Name: AL Tech - Dunkirk RFI

Date: 3/26/97 Project Number: 483803

Project Team: B. Diacont / G. Frisch / Sterling Env.

Organic Vapors at Well Head: NA ppm Breathing Zone: NA ppm

Remarks on Well Integrity: _____

Purging

Well Diameter: 4 (inches) Well Depth: 17.38 (feet below TOC)

Water Level: 3.40 (feet below TOC) Water Column: 13.98 (feet)

Purge Volume: 27.26 (gallons)

Well Purged With: submersible pump w/ dedicated tubing

Well purged: (X) Until Dry ( ) Until ____ Well Volumes Were Removed

Time Started: 1025 Time Completed: 1100

Field Parameters

	Pre Purge					
Well Volume		9.25				
pH	6.95	6.93				
Conductivity	1460	1440				
Temperature	8.2	8.9				
Turbidity	219	716				

Well Volume Calculation

Well Diameter	Multiply by
2 inch	Water Column x.16
3 inch	Water Column x.36
4 inch	Water Column x.65
6 inch	Water Column x1.41

Sampling

Sampling I.D.: _____ Sample Description: _____

Collection Method: submersible pump w/ dedicated tubing

Time Started: _____ Time Completed: _____

Sample Parameters:

See chain-of-custody
& attached Master sample log

Chain of Custody: Shipment/Tracking No.: N/A

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GROUNDWATER PURGE AND SAMPLE LOG

Well No.: WT-4 Project Name: AL Tech - Dunkirk RFI

Date: 3/26/97 Project Number: 483803

Project Team: B. Diacont / G. Frisch / Sterling Env.

Organic Vapors at Well Head: NA ppm Breathing Zone: NA ppm

Remarks on Well Integrity: _____

Purging

Well Diameter: 4 (inches) Well Depth: 16.41 (feet below TOC)

Water Level: 2.05 (feet below TOC) Water Column: 14.36 (feet)

Purge Volume: 28 (gallons)

Well Purged With: submersible pump w/ dedicated tubing

Well purged: (X) Until Dry ( ) Until ____ Well Volumes Were Removed

Time Started: 0930 Time Completed: 1000

Field Parameters

	Pre Purge					
Well Volume		9.3	18.6			
pH	7.66	7.65	7.67			
Conductivity	1200	1280	1260			
Temperature	9.9	9.8	10.2			
Turbidity	<10	<10	<10			

Well Volume Calculation

Well Diameter	Multiply by
2 inch	Water Column x.16
3 inch	Water Column x.36
4 inch	Water Column x.65
6 inch	Water Column x1.41

Sampling

Sampling I.D.: _____ Sample Description: _____

Collection Method: submersible pump w/ dedicated tubing

Time Started: _____ Time Completed: _____

Sample Parameters:

See chain-of-custody & attached master sample log

Chain of Custody: Shipment/Tracking No.: N/A

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GROUNDWATER PURGE AND SAMPLE LOG

Well No.: WP-1 Project Name: AL Tech - Dunkirk RFI

Date: 3/25/97 Project Number: 483803

Project Team: B. Diacont / G. Frisch / Sterling Env.

Organic Vapors at Well Head: NA ppm Breathing Zone: NA ppm

Remarks on Well Integrity: _____

Purging

Well Diameter: 2 (inches) Well Depth: 18.17 (feet below TOC)

Water Level: 8.0 (feet below TOC) Water Column: 10.17 (feet)

Purge Volume: 4.89 (gallons)

Well Purged With: submersible pump w/ dedicated tubing

Well purged: ( ) Until Dry (X) Until 3 Well Volumes Were Removed

Time Started: 1100 Time Completed: 1130

Field Parameters

	Pre Purge					
Well Volume		1.7	3.4	5.0		
pH	6.92	6.70	6.80	6.88		
Conductivity	963	857	808	795		
Temperature	7.0	6.7	6.7	6.7		
Turbidity	2	<10	<10	<10		

Well Volume Calculation

Well Diameter	Multiply by
2 inch	Water Column x.16
3 inch	Water Column x.36
4 inch	Water Column x.65
6 inch	Water Column x1.41

Sampling

Sampling I.D.: _____ Sample Description: _____

Collection Method: submersible pump w/ dedicated tubing

Time Started: _____ Time Completed: _____

Sample Parameters:

See chain-of-custody
& attached Master sample log

Chain of Custody: Shipment/Tracking No.: N/A

GROUNDWATER PURGE AND SAMPLE LOG

Well No.: WP-2 Project Name: AL Tech - Dunkirk RFI

Date: 3/25/97 Project Number: 483803

Project Team: B. Diacont / G. Frisch / Sterling Env.

Organic Vapors at Well Head: NA ppm Breathing Zone: NA ppm

Remarks on Well Integrity: _____

Purging

Well Diameter: 2 (inches) Well Depth: 20.16 (feet below TOC)

Water Level: 9.97 (feet below TOC) Water Column: 10.19 (feet)

Purge Volume: 4.89 (gallons)

Well Purged With: submersible pump w/ dedicated tubing

Well purged: ( ) Until Dry (X) Until 3 Well Volumes Were Removed

Time Started: 1205 Time Completed: 1230

Field Parameters

	Pre Purge					
Well Volume		1.6	3.2	4.8		
pH	7.01	6.92	6.93	6.88		
Conductivity	1200	920	900	909		
Temperature	6.7°C	8.6	8.3	8.3		
Turbidity	>10	119	>10	>10		

Well Volume Calculation

Well Diameter	Multiply by
2 inch	Water Column x.16
3 inch	Water Column x.36
4 inch	Water Column x.65
6 inch	Water Column x1.41

Sampling

Sampling I.D.: _____ Sample Description: _____

Collection Method: submersible pump w/ dedicated tubing

Time Started: _____ Time Completed: _____

Sample Parameters:

See chain-of-custody
& attached Master sample log

Chain of Custody: Shipment/Tracking No.: N/A

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GROUNDWATER PURGE AND SAMPLE LOG

Well No.: WP-3 Project Name: AL Tech - Dunkirk RFI

Date: 3/25/97 Project Number: 483803

Project Team: B. Diacont / G. Frisch / Sterling Env.

Organic Vapors at Well Head: NA ppm Breathing Zone: NA ppm

Remarks on Well Integrity: _____

Purging

Well Diameter: 2 (inches) Well Depth: 16.52 (feet below TOC)

Water Level: 7.95 (feet below TOC) Water Column: 8.57 (feet)

Purge Volume: 4.11 (gallons)

Well Purged With: submersible pump w/ dedicated tubing

Well purged: ( ) Until Dry (X) Until 3 Well Volumes Were Removed

Time Started: 1120 Time Completed: 1140

Field Parameters

	Pre Purge					
Well Volume		1.4	2.8	4.2		
pH	7.14	7.08	7.17	7.16		
Conductivity	1000	803	740	710		
Temperature	7.9°C	8.7	9.0	9.1		
Turbidity	179	>10	>10	>10		

Well Volume Calculation

Well Diameter	Multiply by
2 inch	Water Column x.16
3 inch	Water Column x.36
4 inch	Water Column x.65
6 inch	Water Column x1.41

Sampling

Sampling I.D.: _____ Sample Description: _____

Collection Method: submersible pump w/ dedicated tubing

Time Started: _____ Time Completed: _____

Sample Parameters:

See chain-of-custody
& attached Master sample log

Chain of Custody: _____ Shipment/Tracking No.: N/A

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GROUNDWATER PURGE AND SAMPLE LOG

Well No.: WP-4 Project Name: AL Tech - Dunkirk RFI

Date: 3/25/97 Project Number: 483803

Project Team: B. Diacont/G. Frisch/Sterling Env.

Organic Vapors at Well Head: NA ppm Breathing Zone: NA ppm

Remarks on Well Integrity: _____

Purging

Well Diameter: 2 (inches) Well Depth: 20.19 (feet below TOC)

Water Level: 10.15 (feet below TOC) Water Column: 10.04 (feet)

Purge Volume: 4.82 (gallons)

Well Purged With: submersible pump w/ dedicated tubing

Well purged: ( ) Until Dry (X) Until 3 Well Volumes Were Removed

Time Started: 0850 Time Completed: 0950

Field Parameters

	Pre Purge					
Well Volume		1.7	3.4	5.0		
pH	8.52	7.80	7.47	7.39		
Conductivity	778	831	874	887		
Temperature	7.2	7.9	8.2	8.3		
Turbidity	8	10	8	7		

Well Volume Calculation

Well Diameter	Multiply by
2 inch	Water Column x.16
3 inch	Water Column x.36
4 inch	Water Column x.65
6 inch	Water Column x1.41

Sampling

Sampling I.D.: _____ Sample Description: _____

Collection Method: submersible pump w/ dedicated tubing

Time Started: _____ Time Completed: _____

Sample Parameters:

See chain-of-custody
& attached Master Sample Log

Chain of Custody: _____ Shipment/Tracking No.: N/A

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GROUNDWATER PURGE AND SAMPLE LOG

Well No.: WP-5 Project Name: AL Tech - Dunkirk RFI

Date: 3/25/97 Project Number: 483803

Project Team: B. Diacont/G. Frisch / Sterling Env.

Organic Vapors at Well Head: NA ppm Breathing Zone: NA ppm

Remarks on Well Integrity: _____

Purging

Well Diameter: 2 (inches) Well Depth: 17.88 (feet below TOC)

Water Level: 11.34 (feet below TOC) Water Column: 6.54 (feet)

Purge Volume: 3.14 (gallons)

Well Purged With: submersible pump w/ dedicated tubing

Well purged: ( ) Until Dry (X) Until 3 Well Volumes Were Removed

Time Started: 1340 Time Completed: 1400

Field Parameters

	Pre Purge	1.1	2.2	3.3		
Well Volume						
pH	7.09	7.06	7.16	7.20		
Conductivity	710	659	565	538		
Temperature	7.3	7.7	8.1	8.1		
Turbidity	933	617	990	137		

Well Volume Calculation

Well Diameter	Multiply by
2 inch	Water Column x.16
3 inch	Water Column x.36
4 inch	Water Column x.65
6 inch	Water Column x1.41

Sampling

Sampling I.D.: _____ Sample Description: _____

Collection Method: submersible pump w/ dedicated tubing

Time Started: _____ Time Completed: _____

Sample Parameters:

See chain-of-custody
& attached Master Sample Log

Chain of Custody: _____ Shipment/Tracking No.: N/A

GROUNDWATER PURGE AND SAMPLE LOG

Well No.: RFI-1 Project Name: AL Tech - Dunkirk RFI

Date: 3/24/97 Project Number: 483803

Project Team: B. Diacont / G. Frisch / Sterling Env.

Organic Vapors at Well Head: NA ppm Breathing Zone: NA ppm

Remarks on Well Integrity: _____

Purging

Well Diameter: 2 (inches) Well Depth: 13.32 (feet below TOC)

Water Level: 10.45 (feet below TOC) Water Column: 2.87 (feet)

Purge Volume: 1.35 (gallons)

Well Purged With: submersible pump w/ dedicated tubing

Well purged: ( ) Until Dry (X) Until 3 Well Volumes Were Removed

Time Started: 1540 Time Completed: 1555

Field Parameters

	Pre Purge	0.45	0.90	1.35		
Well Volume						
pH	6.83	6.84	6.88	6.85		
Conductivity	404	447	478	499		
Temperature	7.5°C	7.8	7.7	7.5		
Turbidity	999	999	999	999		

Well Volume Calculation

Well Diameter	Multiply by
2 inch	Water Column x.16
3 inch	Water Column x.36
4 inch	Water Column x.65
6 inch	Water Column x1.41

Sampling

Sampling I.D.: _____ Sample Description: _____

Collection Method: submersible pump w/ dedicated tubing

Time Started: _____ Time Completed: _____

Sample Parameters:

See chain-of-custody
& attached Master sample log

Chain of Custody: _____ Shipment/Tracking No.: N/A

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GROUNDWATER PURGE AND SAMPLE LOG

Well No.: RFI-2 Project Name: AL Tech - Dunkirk RFI

Date: 3/24/97 Project Number: 483803

Project Team: B. Diacont / G. Frisch / Sterling Env.

Organic Vapors at Well Head: NA ppm Breathing Zone: NA ppm

Remarks on Well Integrity: _____

Purging

Well Diameter: 2 (inches) Well Depth: 12.11 (feet below TOC)

Water Level: 7.00 (feet below TOC) Water Column: 5.11 (feet)

Purge Volume: 2.46 (gallons)

Well Purged With: submersible pump w/ dedicated tubing

Well purged: ( ) Until Dry (X) Until 3 Well Volumes Were Removed

Time Started: 1635 Time Completed: 1655

Field Parameters

	Pre Purge					
Well Volume		0.82	1.64	2.46		
pH	6.77	6.77	6.80	6.84		
Conductivity	1740	1480	1170	1000		
Temperature	5.7	6.2	6.4	6.6		
Turbidity	999	999	999	122		

Well Volume Calculation

Well Diameter	Multiply by
2 inch	Water Column x.16
3 inch	Water Column x.36
4 inch	Water Column x.65
6 inch	Water Column x1.41

Sampling

Sampling I.D.: _____ Sample Description: _____

Collection Method: submersible pump w/ dedicated tubing

Time Started: _____ Time Completed: _____

Sample Parameters:

See chain-of-custody
& attached Master Sample Log

Chain of Custody: Shipment/Tracking No.: N/A

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GROUNDWATER PURGE AND SAMPLE LOG

Well No.: RFI-3 Project Name: AL Tech - Dunkirk RFI

Date: 3/24/97 Project Number: 483803

Project Team: B. Diacont / G. Frisch / Sterling Env.

Organic Vapors at Well Head: NA ppm Breathing Zone: NA ppm

Remarks on Well Integrity: _____

Purging

Well Diameter: 2 (inches) Well Depth: 9.85 (feet below TOC)

Water Level: 3.52 (feet below TOC) Water Column: 6.33 (feet)

Purge Volume: 3.2 (gallons)

Well Purged With: submersible pump w/ dedicated tubing

Well purged: ( ) Until Dry (X) Until 3 Well Volumes Were Removed

Time Started: 1720 Time Completed: 1745

Field Parameters

	Pre Purge	1	2	3		
Well Volume						
pH	7.13	7.11	7.18	7.21		
Conductivity	1080	1090	1090	1090		
Temperature	5.6°C	6.1	7.2	7.1		
Turbidity	0	10	10	10		

Well Volume Calculation

Well Diameter	Multiply by
2 inch	Water Column x.16
3 inch	Water Column x.36
4 inch	Water Column x.65
6 inch	Water Column x1.41

Sampling

Sampling I.D.: _____ Sample Description: _____

Collection Method: submersible pump w/ dedicated tubing

Time Started: _____ Time Completed: _____

Sample Parameters:

See chain-of-custody
& attached master sample log

Chain of Custody: Shipment/Tracking No.: N/A

RIZ_C.DWG 1... 3011 AM 06 09, 1997 4:03p

GROUNDWATER PURGE AND SAMPLE LOG

Well No.: RFI-3 Project Name: AL Tech - Dunkirk RFI

Date: 3/27/97 Project Number: 483803

Project Team: B. Diacont / G. Frisch / Sterling Env.

Organic Vapors at Well Head: NA ppm Breathing Zone: NA ppm

Remarks on Well Integrity: _____

Purging

Well Diameter: 2 (inches) Well Depth: 9.85 (feet below TOC)

Water Level: 3.52 (feet below TOC) Water Column: 6.33 (feet)

Purge Volume: 3.2 (gallons)

Well Purged With: submersible pump w/ dedicated tubing

Well purged: ( ) Until Dry (X) Until 3 Well Volumes Were Removed

Time Started: 1435 Time Completed: 1450

Field Parameters

	Pre Purge	1	2	3		
Well Volume						
pH	7.46	7.42	7.41	7.42		
Conductivity	1080	1090	1070	1070		
Temperature	11.2	11.7	11.7	11.5		
Turbidity	102	76	<10	<10		

Well Volume Calculation

Well Diameter	Multiply by
2 inch	Water Column x.16
3 inch	Water Column x.36
4 inch	Water Column x.65
6 inch	Water Column x1.41

Sampling

Sampling I.D.: _____ Sample Description: _____

Collection Method: submersible pump w/ dedicated tubing

Time Started: _____ Time Completed: _____

Sample Parameters:

See chain-of-custody
& attached master sample log

Chain of Custody: _____ Shipment/Tracking No.: N/A

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GROUNDWATER PURGE AND SAMPLE LOG

Well No.: RFI-4 Project Name: AL Tech - Dunkirk RFI

Date: 3/25/97 Project Number: 483803

Project Team: B. Diacont / G. Frisch / Sterling Env.

Organic Vapors at Well Head: NA ppm Breathing Zone: NA ppm

Remarks on Well Integrity: _____

Purging

Well Diameter: 2 (inches) Well Depth: 27.15 (feet below TOC)

Water Level: 5.30 (feet below TOC) Water Column: 21.85 (feet)

Purge Volume: 10.49 (gallons)

Well Purged With: submersible pump w/ dedicated tubing

Well purged: ( ) Until Dry (X) Until 3 Well Volumes Were Removed

Time Started: 1455 Time Completed: 1515

Field Parameters

	Pre Purge					
Well Volume		3.5	7.0	10.5		
pH	7.4	7.44	7.40	7.39		
Conductivity	916	915	909	906		
Temperature	9.0°C	10.1	10.4	10.2		
Turbidity	999	999	771	488		

Well Volume Calculation

Well Diameter	Multiply by
2 inch	Water Column x.16
3 inch	Water Column x.36
4 inch	Water Column x.65
6 inch	Water Column x1.41

Sampling

Sampling I.D.: _____ Sample Description: _____

Collection Method: submersible pump w/ dedicated tubing

Time Started: _____ Time Completed: _____

Sample Parameters:

See chain-of-custody
& attached Master Sample Log

Chain of Custody: _____ Shipment/Tracking No.: N/A

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GROUNDWATER PURGE AND SAMPLE LOG

Well No.: RFI-5 Project Name: AL Tech - Dunkirk RFI

Date: 3/27/97 Project Number: 483803

Project Team: B. Diacont / G. Frisch / Sterling Env.

Organic Vapors at Well Head: NA ppm Breathing Zone: NA ppm

Remarks on Well Integrity: _____

Purging

Well Diameter: 2 (inches) Well Depth: 17.25 (feet below TOC)

Water Level: 6.54 (feet below TOC) Water Column: 10.71 (feet)

Purge Volume: 5.14 (gallons)

Well Purged With: submersible pump w/ dedicated tubing

Well purged: ( ) Until Dry (X) Until 3 Well Volumes Were Removed

Time Started: 0745 Time Completed: 0815

Field Parameters

	Pre Purge					
Well Volume		1.7	3.4	5.1		
pH	7.91	7.94	7.61	7.42		
Conductivity	466	462	460	464		
Temperature	9.7°C	9.8	9.3	9.9		
Turbidity	>10	>10	>10	>10		

Well Volume Calculation

Well Diameter	Multiply by
2 inch	Water Column x.16
3 inch	Water Column x.36
4 inch	Water Column x.65
6 inch	Water Column x1.41

Sampling

Sampling I.D.: _____ Sample Description: _____

Collection Method: submersible pump w/ dedicated tubing

Time Started: _____ Time Completed: _____

Sample Parameters:

See chain-of-custody
& attached Master sample log

Chain of Custody: Shipment/Tracking No.: N/A

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GROUNDWATER PURGE AND SAMPLE LOG

Well No.: RFI-6 Project Name: AL Tech - Dunkirk RFI

Date: 3/26/97 Project Number: 483803

Project Team: B. Diacont/G. Frisch / Sterling Env.

Organic Vapors at Well Head: NA ppm Breathing Zone: NA ppm

Remarks on Well Integrity: _____

Purging

Well Diameter: 2 (inches) Well Depth: 13.53 (feet below TOC)

Water Level: 6.89 (feet below TOC) Water Column: 6.64 (feet)

Purge Volume: 3.19 (gallons)

Well Purged With: submersible pump w/ dedicated tubing

Well purged: ( ) Until Dry (X) Until 3 Well Volumes Were Removed

Time Started: 1430 Time Completed: 1445

Field Parameters

	Pre Purge	1.1	2.2	3.2		
Well Volume						
pH	7.84	7.64	7.50	7.50		
Conductivity	950	909	920	920		
Temperature	6.2°C	6.1	6.5	6.5		
Turbidity	363	710	4	6		

Well Volume Calculation

Well Diameter	Multiply by
2 inch	Water Column x.16
3 inch	Water Column x.36
4 inch	Water Column x.65
6 inch	Water Column x1.41

Sampling

Sampling I.D.: _____ Sample Description: _____

Collection Method: submersible pump w/ dedicated tubing

Time Started: _____ Time Completed: _____

Sample Parameters:

See chain-of-custody
& attached master sample log

Chain of Custody: _____ Shipment/Tracking No.: N/A

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GROUNDWATER PURGE AND SAMPLE LOG

Well No.: RFI-7 Project Name: AL Tech - Dunkirk RFI

Date: 3/26/97 Project Number: 483803

Project Team: B. Diacont / G. Frisch / Sterling Env.

Organic Vapors at Well Head: NA ppm Breathing Zone: NA ppm

Remarks on Well Integrity: _____

Purging

Well Diameter: 2 (inches) Well Depth: 11.65 (feet below TOC)

Water Level: 4.75 (feet below TOC) Water Column: 6.9 (feet)

Purge Volume: 3.31 (gallons)

Well Purged With: submersible pump w/ dedicated tubing

Well purged: ( ) Until Dry (X) Until 3 Well Volumes Were Removed

Time Started: 1305 Time Completed: 1330

Field Parameters

	Pre Purge	1.1	2.2	3.3		
Well Volume						
pH	7.61	8.22	7.53	7.28		
Conductivity	1520	873	805	1030		
Temperature	6.6°C	7.4	8.3	9.6		
Turbidity	8	999	366	47		

Well Volume Calculation

Well Diameter	Multiply by
2 inch	Water Column x.16
3 inch	Water Column x.36
4 inch	Water Column x.65
6 inch	Water Column x1.41

Sampling

Sampling I.D.: _____ Sample Description: _____

Collection Method: submersible pump w/ dedicated tubing

Time Started: _____ Time Completed: _____

Sample Parameters:

See chain-of-custody & attached master sample log

Chain of Custody: _____ Shipment/Tracking No.: N/A

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GROUNDWATER PURGE AND SAMPLE LOG

Well No.: RFI-8 Project Name: AL Tech - Dunkirk RFI

Date: 3/27/97 Project Number: 483803

Project Team: B. Diacont / G. Frisch / Sterling Env.

Organic Vapors at Well Head: NA ppm Breathing Zone: NA ppm

Remarks on Well Integrity: _____

Purging

Well Diameter: 2 (inches) Well Depth: 10.65 (feet below TOC)

Water Level: 2.95 (feet below TOC) Water Column: 7.7 (feet)

Purge Volume: 3.70 (gallons)

Well Purged With: submersible pump w/ dedicated tubing

Well purged: ( ) Until Dry (X) Until 3 Well Volumes Were Removed

Time Started: 0825 Time Completed: 0845

Field Parameters

	Pre Purge	1.2	2.4	3.6		
Well Volume						
pH	7.61	7.64	7.44	7.39		
Conductivity	585	573	627	622		
Temperature	7.1°C	6.6	7.4	8.0		
Turbidity	>10	>10	>10	>10		

Well Volume Calculation

Well Diameter	Multiply by
2 inch	Water Column x.16
3 inch	Water Column x.36
4 inch	Water Column x.65
6 inch	Water Column x1.41

Sampling

Sampling I.D.: _____ Sample Description: _____

Collection Method: submersible pump w/ dedicated tubing

Time Started: _____ Time Completed: _____

Sample Parameters:

See chain-of-custody & attached master sample log

Chain of Custody: Shipment/Tracking No.: N/A

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GROUNDWATER PURGE AND SAMPLE LOG

Well No.: RFI-09 Project Name: AL Tech - Dunkirk RFI

Date: 3/26/97 Project Number: 483803

Project Team: B. Diacont / G. Frisch / Sterling Env.

Organic Vapors at Well Head: NA ppm Breathing Zone: NA ppm

Remarks on Well Integrity: _____

Purging

Well Diameter: 2 (inches) Well Depth: 13.11 (feet below TOC)

Water Level: 4.3 (feet below TOC) Water Column: 8.81 (feet)

Purge Volume: 4.23 (gallons)

Well Purged With: submersible pump w/ dedicated tubing

Well purged: ( ) Until Dry (X) Until 3 Well Volumes Were Removed

Time Started: 1035 Time Completed: 1115

Field Parameters

	Pre Purge	1.5	3.0	4.5		
Well Volume						
pH	7.91	7.53	7.35	7.34		
Conductivity	791	787	803	808		
Temperature	5.4	5.8	6.3	6.7		
Turbidity	<10	301	155	22		

Well Volume Calculation

Well Diameter	Multiply by
2 inch	Water Column x.16
3 inch	Water Column x.36
4 inch	Water Column x.65
6 inch	Water Column x1.41

Sampling

Sampling I.D.: _____ Sample Description: _____

Collection Method: submersible pump w/ dedicated tubing

Time Started: _____ Time Completed: _____

Sample Parameters:

See chain-of-custody
& attached Master Sample Log

Chain of Custody: _____ Shipment/Tracking No.: N/A

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GROUNDWATER PURGE AND SAMPLE LOG

Well No.: RFI-10 Project Name: AL Tech - Dunkirk RFI

Date: 3/25/97 Project Number: 483803

Project Team: B. Diacont / G. Frisch / Sterling Env.

Organic Vapors at Well Head: NA ppm Breathing Zone: NA ppm

Remarks on Well Integrity: _____

Purging

Well Diameter: 2 (inches) Well Depth: 15.61 (feet below TOC)

Water Level: 3.59 (feet below TOC) Water Column: 12.02 (feet)

Purge Volume: 5.77 (gallons)

Well Purged With: submersible pump w/ dedicated tubing

Well purged: ( ) Until Dry (X) Until 3 Well Volumes Were Removed

Time Started: 1600 Time Completed: 1645

Field Parameters

	Pre Purge	2	4	6		
Well Volume						
pH	7.34	7.29	7.18	7.20		
Conductivity	1370	1380	1390	1410		
Temperature	7.5	8.1	8.3	8.5		
Turbidity	<10	<10	<10	<10		

Well Volume Calculation

Well Diameter	Multiply by
2 inch	Water Column x.16
3 inch	Water Column x.36
4 inch	Water Column x.65
6 inch	Water Column x1.41

Sampling

Sampling I.D.: _____ Sample Description: _____

Collection Method: submersible pump w/ dedicated tubing

Time Started: _____ Time Completed: _____

Sample Parameters:

See chain-of-custody & attached master sample log

Chain of Custody: _____ Shipment/Tracking No.: N/A

GROUNDWATER PURGE AND SAMPLE LOG

Well No.: RFI-11 Project Name: AL Tech - Dunkirk RFI

Date: 3/25/97 Project Number: 483803

Project Team: B. Diacont / G. Frisch / Sterling Env.

Organic Vapors at Well Head: NA ppm Breathing Zone: NA ppm

Remarks on Well Integrity: _____

Purging

Well Diameter: 2 (inches) Well Depth: 18.95 (feet below TOC)

Water Level: 5.18 (feet below TOC) Water Column: 13.77 (feet)

Purge Volume: 6.61 (gallons)

Well Purged With: submersible pump w/ dedicated tubing

Well purged: ( ) Until Dry (X) Until 3 Well Volumes Were Removed

Time Started: 1620 Time Completed: 1700

Field Parameters

	Pre Purge	2.2	4.4	6.6		
Well Volume						
pH	7.59	7.58	7.38	7.39		
Conductivity	986	970	970	938		
Temperature	7.4°C	7.7	10.1	10.0		
Turbidity	550	70	929	10		

Well Volume Calculation

Well Diameter	Multiply by
2 inch	Water Column x.16
3 inch	Water Column x.36
4 inch	Water Column x.65
6 inch	Water Column x1.41

Sampling

Sampling I.D.: _____ Sample Description: _____

Collection Method: submersible pump w/ dedicated tubing

Time Started: _____ Time Completed: _____

Sample Parameters:

See chain-of-custody
& attached Master Sample Log

Chain of Custody: Shipment/Tracking No.: N/A

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GROUNDWATER PURGE AND SAMPLE LOG

Well No.: RFI-12 Project Name: AL Tech - Dunkirk RFI

Date: 3/27/97 Project Number: 483803

Project Team: B. Diacont / G. Frisch / Sterling Env.

Organic Vapors at Well Head: NA ppm Breathing Zone: NA ppm

Remarks on Well Integrity: _____

Purging

Well Diameter: 2 (inches) Well Depth: 13.94 (feet below TOC)

Water Level: 8.70 (feet below TOC) Water Column: 5.24 (feet)

Purge Volume: 2.52 (gallons)

Well Purged With: submersible pump w/ dedicated tubing

Well purged: (X) Until Dry ( ) Until ____ Well Volumes Were Removed

Time Started: 0935 Time Completed: 0945

Field Parameters

	Pre Purge					
Well Volume		0.8	1.6			
pH	7.88	7.78	7.70			
Conductivity	424	434	426			
Temperature	9.1	10.2	11.2			
Turbidity	<10	<10	<10			

Well Volume Calculation

Well Diameter	Multiply by
2 inch	Water Column x.16
3 inch	Water Column x.36
4 inch	Water Column x.65
6 inch	Water Column x1.41

Sampling

Sampling I.D.: _____ Sample Description: _____

Collection Method: submersible pump w/ dedicated tubing

Time Started: _____ Time Completed: _____

Sample Parameters:

See chain-of-custody
& attached Master Sample Log

Chain of Custody: _____ Shipment/Tracking No.: N/A

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GROUNDWATER PURGE AND SAMPLE LOG

Well No.: RFI-13 Project Name: AL Tech - Dunkirk RFI

Date: 3/26/97 Project Number: 483803

Project Team: B. Diacont / G. Frisch / Sterling Env.

Organic Vapors at Well Head: NA ppm Breathing Zone: NA ppm

Remarks on Well Integrity: _____

Purging

Well Diameter: 2 (inches) Well Depth: 17.34 (feet below TOC)

Water Level: 7.63 (feet below TOC) Water Column: 9.71 (feet)

Purge Volume: 4.66 (gallons)

Well Purged With: submersible pump w/ dedicated tubing

Well purged: ( ) Until Dry (X) Until 3 Well Volumes Were Removed

Time Started: 1630 Time Completed: 1700

Field Parameters

	Pre Purge					
Well Volume		1.7	3.4	5		
pH	7.57	7.39	7.35	7.35		
Conductivity	1010	1070	1040	1120		
Temperature	8.0	9.3	8.7	8.8		
Turbidity	<10	>1000	126	21		

Well Volume Calculation

Well Diameter	Multiply by
2 inch	Water Column x.16
3 inch	Water Column x.36
4 inch	Water Column x.65
6 inch	Water Column x1.41

Sampling

Sampling I.D.: _____ Sample Description: _____

Collection Method: submersible pump w/ dedicated tubing

Time Started: _____ Time Completed: _____

Sample Parameters:

See chain-of-custody
& attached Master Sample Log

Chain of Custody: _____ Shipment/Tracking No.: N/A

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GROUNDWATER PURGE AND SAMPLE LOG

Well No.: RFI-14 Project Name: AL Tech - Dunkirk RFI

Date: 3/25/97 Project Number: 483803

Project Team: B. Diacont / G. Frisch / Sterling Env.

Organic Vapors at Well Head: NA ppm Breathing Zone: NA ppm

Remarks on Well Integrity: _____

Purging

Well Diameter: 2 (inches) Well Depth: 16.28 (feet below TOC)

Water Level: 4.67 (feet below TOC) Water Column: 11.61 (feet)

Purge Volume: 5.57 (gallons)

Well Purged With: submersible pump w/ dedicated tubing

Well purged: ( ) Until Dry (X) Until 3 Well Volumes Were Removed

Time Started: 1345 Time Completed: 1420

Field Parameters

	Pre Purge					
Well Volume		1.35	2.70	4.05		
pH	7.41	7.40	7.39	7.43		
Conductivity	814	816	813	830		
Temperature	6.6°C	6.4	7.4	7.1		
Turbidity	999	564	602	544		

Well Volume Calculation

Well Diameter	Multiply by
2 inch	Water Column x.16
3 inch	Water Column x.36
4 inch	Water Column x.65
6 inch	Water Column x1.41

Sampling

Sampling I.D.: _____ Sample Description: _____

Collection Method: submersible pump w/ dedicated tubing

Time Started: _____ Time Completed: _____

Sample Parameters:

See chain-of-custody
& attached Master Sample Log

Chain of Custody: _____ Shipment/Tracking No.: N/A

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GROUNDWATER PURGE AND SAMPLE LOG

Well No.: RFI-15 Project Name: AL Tech - Dunkirk RFI

Date: 3/25/97 Project Number: 483803

Project Team: B. Diacont / G. Frisch / Sterling Env.

Organic Vapors at Well Head: NA ppm Breathing Zone: NA ppm

Remarks on Well Integrity: _____

Purging

Well Diameter: 2 (inches) Well Depth: 18.86 (feet below TOC)

Water Level: 11.15 (feet below TOC) Water Column: 7.71 (feet)

Purge Volume: 3.70 (gallons)

Well Purged With: submersible pump w/ dedicated tubing

Well purged: ( ) Until Dry (X) Until 3 Well Volumes Were Removed

Time Started: 0945 Time Completed: 1005

Field Parameters

	Pre Purge					
Well Volume		1.3	2.6	4.0		
pH	7.23	7.30	7.26	7.24		
Conductivity	630	640	701	706		
Temperature	7.1	8.0	8.4	8.6		
Turbidity	780	>1000	463	395		

Well Volume Calculation

Well Diameter	Multiply by
2 inch	Water Column x.16
3 inch	Water Column x.36
4 inch	Water Column x.65
6 inch	Water Column x1.41

Sampling

Sampling I.D.: _____ Sample Description: _____

Collection Method: submersible pump w/ dedicated tubing

Time Started: _____ Time Completed: _____

Sample Parameters:

See chain-of-custody
& attached Master Sample Log

Chain of Custody: _____ Shipment/Tracking No.: N/A

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GROUNDWATER PURGE AND SAMPLE LOG

Well No.: RFI-16 Project Name: AL Tech - Dunkirk RFI

Date: 3/25/97 Project Number: 483803

Project Team: B. Diacont / G. Frisch / Sterling Env.

Organic Vapors at Well Head: NA ppm Breathing Zone: NA ppm

Remarks on Well Integrity: _____

Purging

Well Diameter: 2 (inches) Well Depth: 17.26 (feet below TOC)

Water Level: 7.53 (feet below TOC) Water Column: 9.73 (feet)

Purge Volume: 4.67 (gallons)

Well Purged With: submersible pump w/ dedicated tubing

Well purged: ( ) Until Dry (X) Until 3 Well Volumes Were Removed

Time Started: 1155 Time Completed: 1210

Field Parameters

	Pre Purge					
Well Volume		1.6	3.2	4.8		
pH	7.31	7.10	7.05	7.08		
Conductivity	863	831	842	846		
Temperature	5.6	6.9	6.8	6.7		
Turbidity	461	567	625	>10		

Well Volume Calculation

Well Diameter	Multiply by
2 inch	Water Column x.16
3 inch	Water Column x.36
4 inch	Water Column x.65
6 inch	Water Column x1.41

Sampling

Sampling I.D.: _____ Sample Description: _____

Collection Method: submersible pump w/ dedicated tubing

Time Started: _____ Time Completed: _____

Sample Parameters:

See chain-of-custody
& attached Master Sample Log

Chain of Custody: _____ Shipment/Tracking No.: N/A

GROUNDWATER PURGE AND SAMPLE LOG

Well No.: RFI-7 Project Name: AL Tech - Dunkirk RFI

Date: 3/26/97 Project Number: 483803

Project Team: B. Diacont / G. Frisch / Sterling Env.

Organic Vapors at Well Head: NA ppm Breathing Zone: NA ppm

Remarks on Well Integrity: _____

Purging

Well Diameter: 2 (inches) Well Depth: 13.69 (feet below TOC)

Water Level: 7.84 (feet below TOC) Water Column: 5.85 (feet)

Purge Volume: 2.81 (gallons)

Well Purged With: submersible pump w/ dedicated tubing

Well purged: ( ) Until Dry (X) Until 3 Well Volumes Were Removed

Time Started: 1310 Time Completed: 1335

Field Parameters

	Pre Purge					
Well Volume		0.95	1.9	2.85		
pH	7.65	7.47	7.37	7.31		
Conductivity	2230	1860	1820	2080		
Temperature	5.5°C	8.6	8.6	9.1		
Turbidity	202	>10	>10	>10		

Well Volume Calculation

Well Diameter	Multiply by
2 inch	Water Column x.16
3 inch	Water Column x.36
4 inch	Water Column x.65
6 inch	Water Column x1.41

Sampling

Sampling I.D.: _____ Sample Description: _____

Collection Method: submersible pump w/ dedicated tubing

Time Started: _____ Time Completed: _____

Sample Parameters:

See chain-of-custody
& attached Master Sample Log

Chain of Custody: Shipment/Tracking No.: N/A

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Appendix G

Appendix G – Project Correspondence

ESC

ENVIRONMENTAL STRATEGIES CORPORATION

Four Penn Center West • Suite 315 • Pittsburgh, Pennsylvania 15276 • (412) 787-5100 • Fax (412) 787-8065

February 14, 1997

Scott M. Menrath, P.E.
Environmental Engineer II
New York State Department of Environmental Conservation
50 Wolf Road
Albany, New York

Re: Groundwater Analytical Parameters, Second Round - Phase I RCRA Facility Investigation
EPA I.D. No. NYD030215529
AL Tech Specialty Steel Corporation, Dunkirk, New York Facility

Dear Mr. Menrath:

Attached are the preliminary analytical results for groundwater samples collected from monitoring wells at the AL Tech Specialty Steel Corporation (AL Tech) facility in Dunkirk, New York. The samples were collected during the first groundwater sampling round performed during the Phase I Resource Conservation and Recovery Act (RCRA) Facility Investigation (RFI). These data are provided only for the purpose of determining the appropriate analytical program for the second sampling round, scheduled for the week of February 24, 1997. Please note that data have not been validated and the metals results are incomplete.

AL Tech has specifically reviewed the Target Compound List (TCL) volatile organic compound (VOC), TCL semi-volatile organic compound (SVOC), and TCL polychlorinated biphenyl (PCB) data. The results of these analyses are presented in Table 1. Table 2 presents the total concentrations reported for VOC and SVOC tentatively identified compounds (TICs). Based on this review, AL Tech believes that, in general, analysis for these compounds is not warranted for groundwater samples collected from site wells during the second sampling round. Specific exceptions are provided below.

During the second groundwater sampling round, AL Tech will collect sample aliquots from each of the site wells consistent with the Phase I RFI Work Plan for analysis of the following parameters or parameter groups:

- Target Analyte List (TAL) metals and molybdenum
- hexavalent chromium
- free and total cyanide
- miscellaneous parameters (excluding phenolics, as discussed below)

Volatile Organic Compounds

TCL VOCs were detected in samples collected from five monitoring wells during the first groundwater sampling round:

Well I.D.	Detected Parameters	Reported Concentrations (µg/l) (a)
RFI-12	acetone	19
RFI-16	trichloroethene	480
	cis-1,2-dichloroethene	130
LAE-4	1,1-dichloroethene	13
	trichloroethene	6,900
	vinyl chloride	97
	trans-1,2-dichloroethene	27
WT-2	acetone	250
	vinyl chloride	18
	cis-1,2-dichloroethene	51
WP-4	trichloroethene	190
	cis-1,2-dichloroethene	130

a/ "µg/l" = micrograms per liter.

The detection limits for these samples and samples from the other site wells were not elevated. VOC TICs were only detected in samples collected from wells RFI-8, LAE-4, and WT-2.

Acetone was detected in the samples collected from RFI-12 and WT-2. This compound is a common laboratory contaminant and is not known to be associated with facility operations. Therefore, AL Tech will not collect a sample aliquot from RFI-12 for TCL VOC analysis during the second groundwater sampling round.

Similar compounds were detected in samples collected from RFI-16 and WP-4. Therefore, AL Tech proposes to collect groundwater samples from these locations for analysis of TCL VOCs during the second groundwater sampling round. The direction of groundwater flow in the southwestern portion of the facility (in which these wells are located) is generally to the southwest. Consequently, during the second sampling round, AL Tech will collect groundwater sample aliquots for TCL VOC and VOC TIC analysis from Wells RFI-15, WP-1, WP-2, WP-3, and WP-5 (only RFI-15 was included in the first sampling round).

\add WP-4

Consistent with historic data, TCL VOCs were detected in the groundwater sample collected from LAE-4 during the first groundwater sampling round. Groundwater flow in this area is believed to be to the north-northeast. Consequently, AL Tech will collect groundwater sample aliquots from LAE-4 and RFI-5 (north of LAE-4) during the second sampling round for analysis of TCL VOCs and VOC TICs.

TCL VOCs were detected in the groundwater sample collected from Well WT-2, immediately northeast of the closed surface impoundment. These constituents were not detected in any of the other wells located proximate to this solid waste management unit (SWMU) (WT-1A, WT-1B, WT-3, WT-4, and RFI-9). However, AL Tech will collect sample aliquots from all of these wells during the second groundwater sampling round for analysis of TCL VOCs and VOC TICs.

Semi-Volatile Organic Compounds

Only two TCL SVOCs were detected in samples collected from the site monitoring wells during the first groundwater sampling round: bis-2(ethylhexyl)phthalate (DEHP) and phenol. Similar to TCL VOCs, the detection limits reported for TCL SVOCs were not elevated for any of the groundwater samples collected during this sampling round. SVOC TICs were reported at low concentrations (less than 1,000 µg/l) in all site groundwater samples, excluding Wells RFI-9, RFI-11, and WT-1A in which no TICs were detected.

DEHP was detected in groundwater samples collected from Wells RFI-1, RFI-4, and RFI-9. DEHP is a common field and laboratory contaminant and is not associated with any known facility operations. Therefore, AL Tech will not collect groundwater sample aliquots from these or wells during the second sampling round for analysis of these compounds.

Phenol was detected in the groundwater sample collected from Well WT-2. Similar to the program for TCL VOCs, AL Tech will collect groundwater samples from this well and Wells WT-1A, WT-1B, WT-3, WT-4, and RFI-9 for analysis of TCL SVOCs and SVOC TICs during the second sampling round.

Analysis for TCL SVOCs in the groundwater sample collected from Well RFI-6 was incomplete, due to laboratory error. Consequently, a sample aliquot will be collected from this location during the second groundwater sampling round for analysis of the SVOC constituents.

Pesticides/Polychlorinated Biphenyls

Analysis for TCL Pesticides was performed consistent with the annual sampling program for the closed surface impoundment and was outside the scope of the Phase I RFI. Sample aliquots for pesticide analysis were only collected from the wells addressed in the annual sampling program (WT-1A, WT-1B, WT-2, WT-3, and WT-4) and RFI-9, which is downgradient from the former impoundment. No TCL Pesticides were detected in these groundwater samples. Based on these factors, AL Tech will not collect samples from these monitoring wells during the second groundwater sampling round for analysis of TCL Pesticides.[1]

TCL PCBs were not detected in any of the groundwater samples collected from the site wells during the first sampling round. The detection limit reported for all samples, and for all Aroclors was 1 microgram per liter (µg/l). Consequently, AL Tech will not collect sample aliquots from the site wells for analysis of TCL PCBs during the second groundwater sampling round.

Phenolics

Phenolics were not detected in groundwater samples collected from any of the site wells, excluding WT-2. The detection limit reported for each of the samples was 0.005 milligrams per liter (mg/l); the concentration reported for the sample collected from WT-2 was 0.054 mg/l. Similar to the program

[1] Similarly, analysis for total organic carbon, chemical oxygen demand, and total suspended solids (which were not addressed in the Phase I RFI Work Plan but are part of the annual monitoring program for the closed surface impoundment) will not be performed for any groundwater samples collected from site wells during the second sampling round.

proposed above for TCL VOCs and SVOCs, AL Tech will collect sample aliquots from WT-1A, WT-1B, WT-2, WT-3, WT-4, and RFI-9 for analysis of phenolics during the second groundwater sampling round.

Closing

It is our understanding that these proposed modifications are acceptable to NYSDEC. If they are not acceptable, please contact me at 412/787-5100 at your earliest convenience.

Sincerely yours,

Martha E. Fleming, P.G.
Project Director

Enclosure

MEF:plc

cc: J. Black (ESC)
D. Flynn (Phillips, Lytle, Hitchcock, Blaine & Huber)
M. Guziec (AL Tech)
D. Zurakowski (AL Tech)

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Table 1

Preliminary Groundwater Analytical Data
Phase I RCRA Facility Investigation
AL Tech Specialty Steel Corporation
Dunkirk, New York Facility

ESC Sample ID:	ALT-GW-RFI01-1196	ALT-GW-RFI02-1196	ALT-GW-RFI03-1196	ALT-GW-RFI04-1196	ALT-GW-RFI05-1196	ALT-GW-RFI06-1196	ALT-GW-RFI07-1196
Antech Project No.:	96-5507	96-5507	96-5507	96-5528	96-5567	96-5567	96-5567
Sample Location:	RFI-1	RFI-2	RFI-3	RFI-4	RFI-5	RFI-6	RFI-7
Sample Date:	11/18/96	11/18/96	11/18/96	11/19/96	11/20/96	11/19/96	11/20/96
Parameters							
Target Compound List Volatile Organic Compounds (µg/l)							
1,1,1-Trichloroethane	10 U	10 U	10 U	10 U	10 U	10 U	10 U
1,1,2,2-Tetrachloroethane	10 U	10 U	10 U	10 U	10 U	10 U	10 U
1,1,2-Trichloroethane	10 U	10 U	10 U	10 U	10 U	10 U	10 U
1,1-Dichloroethane	10 U	10 U	10 U	10 U	10 U	10 U	10 U
1,1-Dichloroethene	10 U	10 U	10 U	10 U	10 U	10 U	10 U
1,2-Dichloroethane	10 U	10 U	10 U	10 U	10 U	10 U	10 U
1,2-Dichloropropane	10 U	10 U	10 U	10 U	10 U	10 U	10 U
2-Butanone	10 U	10 U	10 U	10 U	10 U	10 U	10 U
2-Hexanone	10 U	10 U	10 U	10 U	10 U	10 U	10 U
4-Methyl-2-pentanone	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Acetone	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Benzene	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Bromodichloromethane	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Bromoform	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Bromomethane	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Carbon disulfide	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Carbon tetrachloride	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Chlorobenzene	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Chlorodibromomethane	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Chloroethane	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Chloroform	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Chloromethane	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Ethylbenzene	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Methylene chloride	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Styrene	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Tetrachloroethene	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Toluene	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Trichloroethene	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Vinyl chloride	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Xylenes (Total)	10 U	10 U	10 U	10 U	10 U	10 U	10 U
cis-1,2-Dichloroethene	10 U	10 U	10 U	10 U	10 U	10 U	10 U
cis-1,3-Dichloropropene	10 U	10 U	10 U	10 U	10 U	10 U	10 U
trans-1,2-Dichloroethene	10 U	10 U	10 U	10 U	10 U	10 U	10 U
trans-1,3-Dichloropropene	10 U	10 U	10 U	10 U	10 U	10 U	10 U

Table 1 (continued)

Preliminary Groundwater Analytical Data
Phase I RCRA Facility Investigation
AL Tech Specialty Steel Corporation
Dunkirk, New York Facility

ESC Sample ID:	ALT-GW-RFI08-1196	ALT-GW-RFI09-1196	ALT-GW-RFI10-1196	ALT-GW-RFI11-1196	ALT-GW-RFI12-1196	ALT-GW-RFI13-1196	ALT-GW-RFI13-1196D
Antech Project No.:	96-5567	96-5528	96-5567	96-5528	96-5586	96-5567	96-5567
Sample Location:	RFI-8	RFI-9	RFI-10	RFI-11	RFI-12	RFI-13	RFI-13
Sample Date:	11/20/96	11/19/96	11/19/96	11/18/96	11/21/96	11/20/96	11/20/96
Parameters							
Target Compound List Volatile Organic Compounds (µg/l)							
1,1,1-Trichloroethane	10 U	10 U	10 U	10 U	10 U	10 U	na
1,1,2,2-Tetrachloroethane	10 U	10 U	10 U	10 U	10 U	10 U	na
1,1,2-Trichloroethane	10 U	10 U	10 U	10 U	10 U	10 U	na
1,1-Dichloroethane	10 U	10 U	10 U	10 U	10 U	10 U	na
1,1-Dichloroethene	10 U	10 U	10 U	10 U	10 U	10 U	na
1,2-Dichloroethane	10 U	10 U	10 U	10 U	10 U	10 U	na
1,2-Dichloropropane	10 U	10 U	10 U	10 U	10 U	10 U	na
2-Butanone	10 U	10 U	10 U	10 U	10 U	10 U	na
2-Hexanone	10 U	10 U	10 U	10 U	10 U	10 U	na
4-Methyl-2-pentanone	10 U	10 U	10 U	10 U	10 U	10 U	na
Acetone	10 U	10 U	10 U	10 U	19	10 U	na
Benzene	10 U	10 U	10 U	10 U	10 U	10 U	na
Bromodichloromethane	10 U	10 U	10 U	10 U	10 U	10 U	na
Bromoform	10 U	10 U	10 U	10 U	10 U	10 U	na
Bromomethane	10 U	10 U	10 U	10 U	10 U	10 U	na
Carbon disulfide	10 U	10 U	10 U	10 U	10 U	10 U	na
Carbon tetrachloride	10 U	10 U	10 U	10 U	10 U	10 U	na
Chlorobenzene	10 U	10 U	10 U	10 U	10 U	10 U	na
Chlorodibromomethane	10 U	10 U	10 U	10 U	10 U	10 U	na
Chloroethane	10 U	10 U	10 U	10 U	10 U	10 U	na
Chloroform	10 U	10 U	10 U	10 U	10 U	10 U	na
Chloromethane	10 U	10 U	10 U	10 U	10 U	10 U	na
Ethylbenzene	10 U	10 U	10 U	10 U	10 U	10 U	na
Methylene chloride	10 U	10 U	10 U	10 U	10 U	10 U	na
Styrene	10 U	10 U	10 U	10 U	10 U	10 U	na
Tetrachloroethene	10 U	10 U	10 U	10 U	10 U	10 U	na
Toluene	10 U	10 U	10 U	10 U	10 U	10 U	na
Trichloroethene	10 U	10 U	10 U	10 U	10 U	10 U	na
Vinyl chloride	10 U	10 U	10 U	10 U	10 U	10 U	na
Xylenes (Total)	10 U	10 U	10 U	10 U	10 U	10 U	na
cis-1,2-Dichloroethene	10 U	10 U	10 U	10 U	10 U	10 U	na
cis-1,3-Dichloropropene	10 U	10 U	10 U	10 U	10 U	10 U	na
trans-1,2-Dichloroethene	10 U	10 U	10 U	10 U	10 U	10 U	na
trans-1,3-Dichloropropene	10 U	10 U	10 U	10 U	10 U	10 U	na

Table 1 (continued)

Preliminary Groundwater Analytical Data
Phase I RCRA Facility Investigation
AL Tech Specialty Steel Corporation
Dunkirk, New York Facility

ESC Sample ID:	ALT-GW-RFI14-1196	ALT-GW-RFI15-1196	ALT-GW-RFI15-1196D	ALT-GW-RFI16-1196	ALT-GW-RFI17-1196	ALT-GW-B1-1196	ALT-GW-MW1-1196
Antech Project No.:	96-5567	96-5567	96-5567	96-5507	96-5567	96-5507	96-5586
Sample Location:	RFI-14	RFI-15	RFI-15	RFI-16	RFI-17	B-1	MW-1
Sample Date:	11/20/96	11/20/96	11/20/96	11/18/96	11/20/96	11/18/96	11/20/96
Parameters							
Target Compound List Volatile Organic Compounds (µg/l)							
1,1,1-Trichloroethane	10 U	10 U	10 U	10 U	10 U	10 U	10 U
1,1,2,2-Tetrachloroethane	10 U	10 U	10 U	10 U	10 U	10 U	10 U
1,1,2-Trichloroethane	10 U	10 U	10 U	10 U	10 U	10 U	10 U
1,1-Dichloroethane	10 U	10 U	10 U	10 U	10 U	10 U	10 U
1,1-Dichloroethene	10 U	10 U	10 U	10 U	10 U	10 U	10 U
1,2-Dichloroethane	10 U	10 U	10 U	10 U	10 U	10 U	10 U
1,2-Dichloropropane	10 U	10 U	10 U	10 U	10 U	10 U	10 U
2-Butanone	10 U	10 U	10 U	10 U	10 U	10 U	10 U
2-Hexanone	10 U	10 U	10 U	10 U	10 U	10 U	10 U
4-Methyl-2-pentanone	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Acetone	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Benzene	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Bromodichloromethane	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Bromoform	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Bromomethane	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Carbon disulfide	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Carbon tetrachloride	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Chlorobenzene	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Chlorodibromomethane	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Chloroethane	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Chloroform	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Chloromethane	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Ethylbenzene	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Methylene chloride	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Styrene	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Tetrachloroethene	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Toluene	10 U	10 U	10 U	480	10 U	10 U	10 U
Trichloroethene	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Vinyl chloride	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Xylenes (Total)	10 U	10 U	10 U	130	10 U	10 U	10 U
cis-1,2-Dichloroethene	10 U	10 U	10 U	10 U	10 U	10 U	10 U
cis-1,3-Dichloropropene	10 U	10 U	10 U	10 U	10 U	10 U	10 U
trans-1,2-Dichloroethene	10 U	10 U	10 U	10 U	10 U	10 U	10 U
trans-1,3-Dichloropropene	10 U	10 U	10 U	10 U	10 U	10 U	10 U

Table 1 (continued)

Preliminary Groundwater Analytical Data
Phase I RCRA Facility Investigation
AL Tech Specialty Steel Corporation
Dunkirk, New York Facility

ESC Sample ID:	ALT-GW-MW3-1196	ALT-GW-LAE4-1196	ALT-GW-LAW5-1196	ALT-GW-LAW6-1196	ALT-GW-WT1A-1196	ALT-GW-WT1B-1196	ALT-GW-WT2-1196
Antech Project No.:	96-5567	96-5567	96-5586	96-5586	96-5528	96-5528	96-5653
Sample Location:	MW-3	LAE-4	LAW-5	LAW-6	WT-1A	WT-1B	WT-2
Sample Date:	11/20/96	11/20/96	11/21/96	11/21/96	11/19/96	11/19/96	11/25/96
Parameters							
Target Compound List							
Volatile Organic Compounds (µg/l)							
1,1,1-Trichloroethane	10 U	10 U	10 U	10 U	10 U	10 U	10 U
1,1,2,2-Tetrachloroethane	10 U	10 U	10 U	10 U	10 U	10 U	10 U
1,1,2-Trichloroethane	10 U	10 U	10 U	10 U	10 U	10 U	10 U
1,1-Dichloroethane	10 U	10 U	10 U	10 U	10 U	10 U	10 U
1,1-Dichloroethene	10 U	**13**	10 U	10 U	10 U	10 U	10 U
1,2-Dichloroethane	10 U	10 U	10 U	10 U	10 U	10 U	10 U
1,2-Dichloropropane	10 U	10 U	10 U	10 U	10 U	10 U	10 U
2-Butanone	10 U	10 U	10 U	10 U	10 U	10 U	10 U
2-Hexanone	10 U	10 U	10 U	10 U	10 U	10 U	10 U
4-Methyl-2-pentanone	10 U	10 U	10 U	10 U	10 U	10 U	**250 D**
Acetone	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Benzene	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Bromodichloromethane	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Bromoform	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Bromomethane	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Carbon disulfide	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Carbon tetrachloride	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Chlorobenzene	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Chlorodibromomethane	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Chloroethane	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Chloroform	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Chloromethane	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Ethylbenzene	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Methylene chloride	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Styrene	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Tetrachloroethene	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Toluene	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Trichloroethene	10 U	**6900**	10 U	10 U	10 U	10 U	**18**
Vinyl chloride	10 U	**97**	10 U	10 U	10 U	10 U	10 U
Xylenes (Total)	10 U	10 U	10 U	10 U	10 U	10 U	**51**
cis-1,2-Dichloroethene	10 U	**1000 U**	10 U	10 U	10 U	10 U	10 U
cis-1,3-Dichloropropene	10 U	10 U	10 U	10 U	10 U	10 U	10 U
trans-1,2-Dichloroethene	10 U	**27**	10 U	10 U	10 U	10 U	10 U
trans-1,3-Dichloropropene	10 U	10 U	10 U	10 U	10 U	10 U	10 U

Table 1 (continued)

Preliminary Groundwater Analytical Data
Phase I RCRA Facility Investigation
AL Tech Specialty Steel Corporation
Dunkirk, New York Facility

ESC Sample ID:	ALT-GW-WT3-1196	ALT-GW-WT4-1196	ALT-GW-WT4-1196D	ALT-GW-WP4-1196	ALT-GW-WP5-1196
Antech Project No.:	96-5528	96-5528	96-5528	96-5586	96-5586
Sample Location:	WT-3	WT-4	WT-4	WP-4	WP-5
Sample Date:	11/19/96	11/19/96	11/19/96	11/21/96	11/21/96
Parameters					
Target Compound List					
Volatile Organic Compounds (µg/l)					
1,1,1-Trichloroethane	10 U	10 U	10 U	10 U	10 U
1,1,2,2-Tetrachloroethane	10 U	10 U	10 U	10 U	10 U
1,1,2-Trichloroethane	10 U	10 U	10 U	10 U	10 U
1,1-Dichloroethane	10 U	10 U	10 U	10 U	10 U
1,1-Dichloroethene	10 U	10 U	10 U	10 U	10 U
1,2-Dichloroethane	10 U	10 U	10 U	10 U	10 U
1,2-Dichloropropane	10 U	10 U	10 U	10 U	10 U
2-Butanone	10 U	10 U	10 U	10 U	10 U
2-Hexanone	10 U	10 U	10 U	10 U	10 U
4-Methyl-2-pentanone	10 U	10 U	10 U	10 U	10 U
Acetone	10 U	10 U	10 U	10 U	10 U
Benzene	10 U	10 U	10 U	10 U	10 U
Bromodichloromethane	10 U	10 U	10 U	10 U	10 U
Bromoform	10 U	10 U	10 U	10 U	10 U
Bromomethane	10 U	10 U	10 U	10 U	10 U
Carbon disulfide	10 U	10 U	10 U	10 U	10 U
Carbon tetrachloride	10 U	10 U	10 U	10 U	10 U
Chlorobenzene	10 U	10 U	10 U	10 U	10 U
Chlorodibromomethane	10 U	10 U	10 U	10 U	10 U
Chloroethane	10 U	10 U	10 U	10 U	10 U
Chloroform	10 U	10 U	10 U	10 U	10 U
Chloromethane	10 U	10 U	10 U	10 U	10 U
Ethylbenzene	10 U	10 U	10 U	10 U	10 U
Methylene chloride	10 U	10 U	10 U	10 U	10 U
Styrene	10 U	10 U	10 U	10 U	10 U
Tetrachloroethene	10 U	10 U	10 U	10 U	10 U
Toluene	10 U	10 U	10 U	190	10 U
Trichloroethene	10 U	10 U	10 U	10 U	10 U
Vinyl chloride	10 U	10 U	10 U	10 U	10 U
Xylenes (Total)	10 U	10 U	10 U	130	10 U
cis-1,2-Dichloroethene	10 U	10 U	10 U	10 U	10 U
cis-1,3-Dichloropropene	10 U	10 U	10 U	10 U	10 U
trans-1,2-Dichloroethene	10 U	10 U	10 U	10 U	10 U
trans-1,3-Dichloropropene	10 U	10 U	10 U	10 U	10 U

Table 1 (continued)

Preliminary Groundwater Analytical Data
Phase I RCRA Facility Investigation
AL Tech Specialty Steel Corporation
Dunkirk, New York Facility

ESC Sample ID:	ALT-GW-RFI01-1196	ALT-GW-RFI02-1196	ALT-GW-RFI03-1196	ALT-GW-RFI04-1196	ALT-GW-RFI05-1196	ALT-GW-RFI06-1196	ALT-GW-RFI07-1196
Antech Project No.:	96-5507	96-5507	96-5507	96-552R	96-5567	96-5567	96-5567
Sample Location:	RFI-1	RFI-2	RFI-3	RFI-4	RFI-5	RFI-6	RFI-7
Sample Date:	11/18/96	11/18/96	11/18/96	11/19/96	11/20/96	11/19/96	11/20/96
Parameters							
Target Compound List Semi-Volatile Organic Compounds (µg/l)							
1,2,4-Trichlorobenzene	11 U	10 U	10 U	11 U	11 U	-	11 U
1,2-Dichlorobenzene	11 U	10 U	10 U	11 U	11 U	11 U	11 U
1,3-Dichlorobenzene	11 U	10 U	10 U	11 U	11 U	11 U	11 U
1,4-Dichlorobenzene	11 U	10 U	10 U	11 U	11 U	-	11 U
2,4,5-Trichlorophenol	28 U	26 U	26 U	28 U	26 U	27 U	27 U
2,4,6-Trichlorophenol	11 U	10 U	10 U	11 U	11 U	11 U	11 U
2,4-Dichlorophenol	11 U	10 U	10 U	11 U	11 U	11 U	11 U
2,4-Dimethylphenol	11 U	10 U	10 U	11 U	11 U	11 U	11 U
2,4-Dinitrophenol	28 U	26 U	26 U	28 U	26 U	27 U	27 U
2,4-Dinitrotoluene	11 U	10 U	10 U	11 U	11 U	-	11 U
2,6-Dinitrotoluene	11 U	10 U	10 U	11 U	11 U	11 U	11 U
2-Chloronaphthalene	11 U	10 U	10 U	11 U	11 U	11 U	11 U
2-Chlorophenol	11 U	10 U	10 U	11 U	11 U	- U	11 U
2-Methylnaphthalene	11 U	10 U	10 U	11 U	11 U	11 U	11 U
2-Nitroaniline	28 U	26 U	26 U	28 U	26 U	27 U	27 U
2-Nitrophenol	11 U	10 U	10 U	11 U	11 U	11 U	11 U
3,3'-Dichlorobenzidine	11 U	10 U	10 U	11 U	11 U	11 U	11 U
3-Nitroaniline	28 U	26 U	26 U	28 U	26 U	27 U	27 U
4,6-Dinitro-o-cresol	28 U	26 U	26 U	28 U	26 U	27 U	27 U
4-Bromophenyl phenyl ether	11 U	10 U	10 U	11 U	11 U	11 U	11 U
4-Chlorophenyl phenyl ether	11 U	10 U	10 U	11 U	11 U	11 U	11 U
4-Nitroaniline	28 U	26 U	26 U	28 U	26 U	27 U	27 U
4-Nitrophenol	28 U	26 U	26 U	28 U	26 U	-	27 U
Acenaphthene	11 U	10 U	10 U	11 U	11 U	-	11 U
Acenaphthylene	11 U	10 U	10 U	11 U	11 U	11 U	11 U
Anthracene	11 U	10 U	10 U	11 U	11 U	11 U	11 U
Benzo(a)anthracene	11 U	10 U	10 U	11 U	11 U	11 U	11 U
Benzo(a)pyrene	11 U	10 U	10 U	11 U	11 U	11 U	11 U
Benzo(b)fluoranthene	11 U	10 U	10 U	11 U	11 U	11 U	11 U
Benzo(ghi)perylene	11 U	10 U	10 U	11 U	11 U	11 U	11 U
Benzo(k)fluoranthene	11 U	10 U	10 U	11 U	11 U	11 U	11 U
Bis(2-chloro-1-methylethyl)ether	11 U	10 U	10 U	11 U	11 U	11 U	11 U
Bis(2-chloroethoxy)methane	11 U	10 U	10 U	11 U	11 U	11 U	11 U
Bis(2-chloroethyl)ether	11 U	10 U	10 U	11 U	11 U	11 U	11 U
Bis(2-ethylhexyl)phthalate	27	10 U	10 U	14	26 U	26 U	27 U
Butyl benzyl phthalate	11 U	10 U	10 U	11 U	11 U	11 U	11 U
Carbazole	11 U	10 U	10 U	11 U	11 U	11 U	11 U
Chrysene	11 U	10 U	10 U	11 U	11 U	11 U	11 U
Di-n-butyl phthalate	11 U	10 U	10 U	11 U	11 U	11 U	11 U
Di-n-octyl phthalate	11 U	10 U	10 U	11 U	11 U	11 U	11 U
Dibenz(a,h)anthracene	11 U	10 U	10 U	11 U	11 U	11 U	11 U
Dibenzofuran	11 U	10 U	10 U	11 U	11 U	11 U	11 U
Diethyl phthalate	11 U	10 U	10 U	11 U	11 U	11 U	11 U
Dimethyl phthalate	11 U	10 U	10 U	11 U	11 U	11 U	11 U
Fluoranthene	11 U	10 U	10 U	11 U	11 U	11 U	11 U
Fluorene	11 U	10 U	10 U	11 U	11 U	11 U	11 U
Hexachlorobenzene	11 U	10 U	10 U	11 U	11 U	11 U	11 U
Hexachlorobutadiene	11 U	10 U	10 U	11 U	11 U	11 U	11 U
Hexachlorocyclopentadiene	11 U	10 U	10 U	11 U	11 U	11 U	11 U
Hexachloroethane	11 U	10 U	10 U	11 U	11 U	11 U	11 U
Indeno(1,2,3-cd)pyrene	11 U	10 U	10 U	11 U	11 U	11 U	11 U
Isophorone	11 U	10 U	10 U	11 U	11 U	11 U	11 U
N-nitroso-di-n-propylamine	11 U	10 U	10 U	11 U	11 U	-	11 U
N-nitrosodiphenylamine	11 U	10 U	10 U	11 U	11 U	11 U	11 U
Naphthalene	11 U	10 U	10 U	11 U	11 U	11 U	11 U
Nitrobenzene	11 U	10 U	10 U	11 U	11 U	11 U	11 U
Pentachlorophenol	28 U	26 U	26 U	28 U	26 U	-	28 U
Phenanthrene	11 U	10 U	10 U	11 U	11 U	11 U	11 U
Phenol	11 U	10 U	10 U	11 U	11 U	-	11 U
Pyrene	11 U	10 U	10 U	11 U	11 U	-	11 U
o-Cresol	11 U	10 U	10 U	11 U	11 U	11 U	11 U
p-Chloro-m-cresol	11 U	10 U	10 U	11 U	11 U	-	11 U
p-Chloroaniline	11 U	10 U	10 U	11 U	11 U	11 U	11 U
p-Cresol	11 U	10 U	10 U	11 U	11 U	11 U	11 U

Table 1 (continued)

Preliminary Groundwater Analytical Data
Phase I RCRA Facility Investigation
AL Tech Specialty Steel Corporation
Dunkirk, New York Facility

ESC Sample ID:	ALT-GW-RFI08-1196	ALT-GW-RFI09-1196	ALT-GW-RFI10-1196	ALT-GW-RFI11-1196	ALT-GW-RFI12-1196	ALT-GW-RFI13-1196	ALT-GW-RFI13-1196D
Antech Project No.:	96-5567	96-5528	96-5567	96-5528	96-5586	96-5567	96-5567
Sample Location:	RFI-8	RFI-9	RFI-10	RFI-11	RFI-12	RFI-13	RFI-13
Sample Date:	11/20/96	11/19/96	11/19/96	11/18/96	11/21/96	11/20/96	11/20/96
Parameters							
Target Compound List Semi-Volatile Organic Compounds (µg/l)							
1,2,4-Trichlorobenzene	11 U	13 U	10 U	10 U	11 U	10 U	na
1,2-Dichlorobenzene	11 U	13 U	10 U	10 U	11 U	10 U	na
1,3-Dichlorobenzene	11 U	13 U	10 U	10 U	11 U	10 U	na
1,4-Dichlorobenzene	11 U	13 U	10 U	10 U	11 U	10 U	na
2,4,5-Trichlorophenol	26 U	31 U	25 U	25 U	28 U	25 U	na
2,4,6-Trichlorophenol	11 U	13 U	10 U	10 U	11 U	10 U	na
2,4-Dichlorophenol	11 U	13 U	10 U	10 U	11 U	10 U	na
2,4-Dimethylphenol	11 U	13 U	10 U	10 U	11 U	10 U	na
2,4-Dinitrophenol	26 U	31 U	25 U	25 U	28 U	25 U	na
2,4-Dinitrotoluene	11 U	13 U	10 U	10 U	11 U	10 U	na
2,6-Dinitrotoluene	11 U	13 U	10 U	10 U	11 U	10 U	na
2-Chloronaphthalene	11 U	13 U	10 U	10 U	11 U	10 U	na
2-Chlorophenol	11 U	13 U	10 U	10 U	11 U	10 U	na
2-Methylnaphthalene	11 U	13 U	10 U	10 U	11 U	10 U	na
2-Nitroaniline	26 U	31 U	25 U	25 U	28 U	25 U	na
2-Nitrophenol	11 U	13 U	10 U	10 U	11 U	10 U	na
3,3'-Dichlorobenzidine	11 U	13 U	10 U	10 U	11 U	10 U	na
3-Nitroaniline	26 U	31 U	25 U	25 U	28 U	25 U	na
4,6-Dinitro-o-cresol	26 U	31 U	25 U	25 U	28 U	25 U	na
4-Bromophenyl phenyl ether	11 U	13 U	10 U	10 U	11 U	10 U	na
4-Chlorophenyl phenyl ether	11 U	13 U	10 U	10 U	11 U	10 U	na
4-Nitroaniline	26 U	31 U	25 U	25 U	28 U	25 U	na
4-Nitrophenol	26 U	31 U	25 U	25 U	28 U	25 U	na
Acenaphthene	11 U	13 U	10 U	10 U	11 U	10 U	na
Acenaphthylene	11 U	13 U	10 U	10 U	11 U	10 U	na
Anthracene	11 U	13 U	10 U	10 U	11 U	10 U	na
Benzo(a)anthracene	11 U	13 U	10 U	10 U	11 U	10 U	na
Benzo(a)pyrene	11 U	13 U	10 U	10 U	11 U	10 U	na
Benzo(b)fluoranthene	11 U	13 U	10 U	10 U	11 U	10 U	na
Benzo(ghi)perylene	11 U	13 U	10 U	10 U	11 U	10 U	na
Benzo(k)fluoranthene	11 U	13 U	10 U	10 U	11 U	10 U	na
Bis(2-chloro-1-methylethyl)ether	11 U	13 U	10 U	10 U	11 U	10 U	na
Bis(2-chloroethoxy)methane	11 U	13 U	10 U	10 U	11 U	10 U	na
Bis(2-chloroethyl)ether	11 U	13 U	10 U	10 U	11 U	10 U	na
Bis(2-ethylhexyl)phthalate	26 U	56	10 U	10 U	28 U	10 U	na
Butyl benzyl phthalate	11 U	13 U	10 U	10 U	11 U	10 U	na
Carbazole	11 U	13 U	10 U	10 U	11 U	10 U	na
Chrysene	11 U	13 U	10 U	10 U	11 U	10 U	na
Di-n-butyl phthalate	11 U	13 U	10 U	10 U	11 U	10 U	na
Di-n-octyl phthalate	11 U	13 U	10 U	10 U	11 U	10 U	na
Dibenz(a,h)anthracene	11 U	13 U	10 U	10 U	11 U	10 U	na
Dibenzofuran	11 U	13 U	10 U	10 U	11 U	10 U	na
Diethyl phthalate	11 U	13 U	10 U	10 U	11 U	10 U	na
Dimethyl phthalate	11 U	13 U	10 U	10 U	11 U	10 U	na
Fluoranthene	11 U	13 U	10 U	10 U	11 U	10 U	na
Fluorene	11 U	13 U	10 U	10 U	11 U	10 U	na
Hexachlorobenzene	11 U	13 U	10 U	10 U	11 U	10 U	na
Hexachlorobutadiene	11 U	13 U	10 U	10 U	11 U	10 U	na
Hexachlorocyclopentadiene	11 U	13 U	10 U	10 U	11 U	10 U	na
Hexachloroethane	11 U	13 U	10 U	10 U	11 U	10 U	na
Indeno(1,2,3-cd)pyrene	11 U	13 U	10 U	10 U	11 U	10 U	na
Isophorone	11 U	13 U	10 U	10 U	11 U	10 U	na
N-nitroso-di-n-propylamine	11 U	13 U	10 U	10 U	11 U	10 U	na
N-nitrosodiphenylamine	11 U	13 U	10 U	10 U	11 U	10 U	na
Naphthalene	11 U	13 U	10 U	10 U	11 U	10 U	na
Nitrobenzene	11 U	13 U	10 U	10 U	11 U	10 U	na
Pentachlorophenol	26 U	31 U	25 U	25 U	28 U	25 U	na
Phenanthrene	11 U	13 U	10 U	10 U	11 U	10 U	na
Phenol	11 U	13 U	10 U	10 U	11 U	10 U	na
Pyrene	11 U	13 U	10 U	10 U	11 U	10 U	na
o-Cresol	11 U	13 U	10 U	10 U	11 U	10 U	na
p-Chloro-m-cresol	11 U	13 U	10 U	10 U	11 U	10 U	na
p-Chloroaniline	11 U	13 U	10 U	10 U	11 U	10 U	na
p-Cresol	11 U	13 U	10 U	10 U	11 U	10 U	na

Table 1 (continued)

Preliminary Groundwater Analytical Data
Phase I RCRA Facility Investigation
AL Tech Specialty Steel Corporation
Dunkirk, New York Facility

ESC Sample ID:	ALT-GW-RFI14-1196	ALT-GW-RFI15-1196	ALT-GW-RFI15-1196D	ALT-GW-RFI16-1196	ALT-GW-RFI17-1196	ALT-GW-B1-1196	ALT-GW-MW1-1196
Antech Project No.:	96-5567	96-5567	96-5567	96-5507	96-5567	96-5507	96-5586
Sample Location:	RFI-14	RFI-15	RFI-15	RFI-16	RFI-17	B-1	MW-1
Sample Date:	11/20/96	11/20/96	11/20/96	11/18/96	11/20/96	11/18/96	11/20/96
Parameters							
Target Compound List							
Semi-Volatile Organic Compounds (µg/l)							
1,2,4-Trichlorobenzene	11 U	10 U	10 U	10 U	11 U	11 U	11 U
1,2-Dichlorobenzene	11 U	10 U	10 U	10 U	11 U	11 U	11 U
1,3-Dichlorobenzene	11 U	10 U	10 U	10 U	11 U	11 U	11 U
1,4-Dichlorobenzene	11 U	10 U	10 U	10 U	11 U	11 U	11 U
2,4,5-Trichlorophenol	26 U	25 U	26 U	26 U	26 U	28 U	28 U
2,4,6-Trichlorophenol	11 U	10 U	10 U	10 U	11 U	11 U	11 U
2,4-Dichlorophenol	11 U	10 U	10 U	10 U	11 U	11 U	11 U
2,4-Dimethylphenol	11 U	10 U	10 U	10 U	11 U	11 U	11 U
2,4-Dinitrophenol	26 U	25 U	26 U	26 U	26 U	28 U	28 U
2,4-Dinitrotoluene	11 U	10 U	10 U	10 U	11 U	11 U	11 U
2,6-Dinitrotoluene	11 U	10 U	10 U	10 U	11 U	11 U	11 U
2-Chloronaphthalene	11 U	10 U	10 U	10 U	11 U	11 U	11 U
2-Chlorophenol	11 U	10 U	10 U	10 U	11 U	11 U	11 U
2-Methylnaphthalene	11 U	10 U	10 U	10 U	11 U	11 U	11 U
2-Nitroaniline	26 U	25 U	26 U	26 U	26 U	28 U	28 U
2-Nitrophenol	11 U	10 U	10 U	10 U	11 U	11 U	11 U
3,3'-Dichlorobenzidine	11 U	10 U	10 U	10 U	11 U	11 U	11 U
3-Nitroaniline	26 U	25 U	26 U	26 U	26 U	28 U	28 U
4,6-Dinitro-o-cresol	26 U	25 U	26 U	26 U	26 U	28 U	28 U
4-Bromophenyl phenyl ether	11 U	10 U	10 U	10 U	11 U	11 U	11 U
4-Chlorophenyl phenyl ether	11 U	10 U	10 U	10 U	11 U	11 U	11 U
4-Nitroaniline	26 U	25 U	26 U	26 U	26 U	28 U	28 U
4-Nitrophenol	26 U	25 U	26 U	26 U	26 U	28 U	28 U
Acenaphthene	11 U	10 U	10 U	10 U	11 U	11 U	11 U
Acenaphthylene	11 U	10 U	10 U	10 U	11 U	11 U	11 U
Anthracene	11 U	10 U	10 U	10 U	11 U	11 U	11 U
Benzo(a)anthracene	11 U	10 U	10 U	10 U	11 U	11 U	11 U
Benzo(a)pyrene	11 U	10 U	10 U	10 U	11 U	11 U	11 U
Benzo(b)fluoranthene	11 U	10 U	10 U	10 U	11 U	11 U	11 U
Benzo(ghi)perylene	11 U	10 U	10 U	10 U	11 U	11 U	11 U
Benzo(k)fluoranthene	11 U	10 U	10 U	10 U	11 U	11 U	11 U
Bis(2-chloro-1-methylethyl)ether	11 U	10 U	10 U	10 U	11 U	11 U	11 U
Bis(2-chloroethoxy)methane	11 U	10 U	10 U	10 U	11 U	11 U	11 U
Bis(2-chloroethyl)ether	11 U	10 U	10 U	10 U	11 U	11 U	11 U
Bis(2-ethylhexyl)phthalate	11 U	10 U	10 U	10 U	11 U	11 U	11 U
Butyl benzyl phthalate	11 U	10 U	10 U	10 U	11 U	11 U	11 U
Carbazole	11 U	10 U	10 U	10 U	11 U	11 U	11 U
Chrysene	11 U	10 U	10 U	10 U	11 U	11 U	11 U
Di-n-butyl phthalate	11 U	10 U	10 U	10 U	11 U	11 U	11 U
Di-n-octyl phthalate	11 U	10 U	10 U	10 U	11 U	11 U	11 U
Dibenz(a,h)anthracene	11 U	10 U	10 U	10 U	11 U	11 U	11 U
Dibenzofuran	11 U	10 U	10 U	10 U	11 U	11 U	11 U
Diethyl phthalate	11 U	10 U	10 U	10 U	11 U	11 U	11 U
Dimethyl phthalate	11 U	10 U	10 U	10 U	11 U	11 U	11 U
Fluoranthene	11 U	10 U	10 U	10 U	11 U	11 U	11 U
Fluorene	11 U	10 U	10 U	10 U	11 U	11 U	11 U
Hexachlorobenzene	11 U	10 U	10 U	10 U	11 U	11 U	11 U
Hexachlorobutadiene	11 U	10 U	10 U	10 U	11 U	11 U	11 U
Hexachlorocyclopentadiene	11 U	10 U	10 U	10 U	11 U	11 U	11 U
Hexachloroethane	11 U	10 U	10 U	10 U	11 U	11 U	11 U
Indeno(1,2,3-cd)pyrene	11 U	10 U	10 U	10 U	11 U	11 U	11 U
Isophorone	11 U	10 U	10 U	10 U	11 U	11 U	11 U
N-nitroso-di-n-propylamine	11 U	10 U	10 U	10 U	11 U	11 U	11 U
N-nitrosodiphenylamine	11 U	10 U	10 U	10 U	11 U	11 U	11 U
Naphthalene	11 U	10 U	10 U	10 U	11 U	11 U	11 U
Nitrobenzene	11 U	10 U	10 U	10 U	11 U	11 U	11 U
Pentachlorophenol	26 U	25 U	26 U	26 U	26 U	28 U	28 U
Phenanthrene	11 U	10 U	10 U	10 U	11 U	11 U	11 U
Phenol	11 U	10 U	10 U	10 U	11 U	11 U	11 U
Pyrene	11 U	10 U	10 U	10 U	11 U	11 U	11 U
o-Cresol	11 U	10 U	10 U	10 U	11 U	11 U	11 U
p-Chloro-m-cresol	11 U	10 U	10 U	10 U	11 U	11 U	11 U
p-Chloroaniline	11 U	10 U	10 U	10 U	11 U	11 U	11 U
p-Cresol	11 U	10 U	10 U	10 U	11 U	11 U	11 U

Table 1 (continued)

Preliminary Groundwater Analytical Data
Phase I RCRA Facility Investigation
AL Tech Specialty Steel Corporation
Dunkirk, New York Facility

ESC Sample ID:	ALT-GW-MW3-1196	ALT-GW-LAE4-1196	ALT-GW-LAW5-1196	ALT-GW-LAW6-1196	ALT-GW-WT1A-1196	ALT-GW-WT1B-1196	ALT-GW-WT2-1196
Antech Project No.:	96-5567	96-5567	96-5586	96-5586	96-5528	96-5528	96-5653
Sample Location:	MW-3	LAE-4	LAW-5	LAW-6	WT-1A	WT-1B	WT-2
Sample Date:	11/20/96	11/20/96	11/21/96	11/21/96	11/19/96	11/19/96	11/25/96
Parameters							
Target Compound List							
Semi-Volatile Organic Compounds (µg/l)							
1,2,4-Trichlorobenzene	11 U	11 U	11 U	11 U	10 U	10 U	10 U
1,2-Dichlorobenzene	11 U	11 U	11 U	11 U	10 U	10 U	10 U
1,3-Dichlorobenzene	11 U	11 U	11 U	11 U	10 U	10 U	10 U
1,4-Dichlorobenzene	11 U	11 U	11 U	11 U	10 U	10 U	10 U
2,4,5-Trichlorophenol	27 U	27 U	28 U	28 U	25 U	25 U	25 U
2,4,6-Trichlorophenol	11 U	11 U	11 U	11 U	10 U	10 U	10 U
2,4-Dichlorophenol	11 U	11 U	11 U	11 U	10 U	10 U	10 U
2,4-Dimethylphenol	11 U	11 U	11 U	11 U	10 U	10 U	10 U
2,4-Dinitrophenol	27 U	27 U	28 U	28 U	25 U	25 U	25 U
2,4-Dinitrotoluene	11 U	11 U	11 U	11 U	10 U	10 U	10 U
2,6-Dinitrotoluene	11 U	11 U	11 U	11 U	10 U	10 U	10 U
2-Chloronaphthalene	11 U	11 U	11 U	11 U	10 U	10 U	10 U
2-Chlorophenol	11 U	11 U	11 U	11 U	10 U	10 U	10 U
2-Methylnaphthalene	11 U	11 U	11 U	11 U	10 U	10 U	10 U
2-Nitroaniline	27 U	27 U	28 U	28 U	25 U	25 U	25 U
2-Nitrophenol	11 U	11 U	11 U	11 U	10 U	10 U	10 U
3,3'-Dichlorobenzidine	11 U	11 U	11 U	11 U	10 U	10 U	10 U
3-Nitroaniline	27 U	27 U	28 U	28 U	25 U	25 U	25 U
4,6-Dinitro-o-cresol	27 U	27 U	28 U	28 U	25 U	25 U	25 U
4-Bromophenyl phenyl ether	11 U	11 U	11 U	11 U	10 U	10 U	10 U
4-Chlorophenyl phenyl ether	11 U	11 U	11 U	11 U	10 U	10 U	10 U
4-Nitroaniline	27 U	27 U	28 U	28 U	25 U	25 U	25 U
4-Nitrophenol	27 U	27 U	28 U	28 U	25 U	25 U	25 U
Acenaphthene	11 U	11 U	11 U	11 U	10 U	10 U	10 U
Acenaphthylene	11 U	11 U	11 U	11 U	10 U	10 U	10 U
Anthracene	11 U	11 U	11 U	11 U	10 U	10 U	10 U
Benzo(a)anthracene	11 U	11 U	11 U	11 U	10 U	10 U	10 U
Benzo(a)pyrene	11 U	11 U	11 U	11 U	10 U	10 U	10 U
Benzo(b)fluoranthene	11 U	11 U	11 U	11 U	10 U	10 U	10 U
Benzo(ghi)perylene	11 U	11 U	11 U	11 U	10 U	10 U	10 U
Benzo(k)fluoranthene	11 U	11 U	11 U	11 U	10 U	10 U	10 U
Bis(2-chloro-1-methylethyl)ether	11 U	11 U	11 U	11 U	10 U	10 U	10 U
Bis(2-chloroethoxy)methane	11 U	11 U	11 U	11 U	10 U	10 U	10 U
Bis(2-chloroethyl)ether	11 U	11 U	11 U	11 U	10 U	10 U	10 U
Bis(2-ethylhexyl)phthalate	11 U	11 U	11 U	11 U	10 U	10 U	10 U
Butyl benzyl phthalate	11 U	11 U	11 U	11 U	10 U	10 U	10 U
Carbazole	11 U	11 U	11 U	11 U	10 U	10 U	10 U
Chrysene	11 U	11 U	11 U	11 U	10 U	10 U	10 U
Di-n-butyl phthalate	11 U	11 U	11 U	11 U	10 U	10 U	10 U
Di-n-octyl phthalate	11 U	11 U	11 U	11 U	10 U	10 U	10 U
Dibenz(a,h)anthracene	11 U	11 U	11 U	11 U	10 U	10 U	10 U
Dibenzofuran	11 U	11 U	11 U	11 U	10 U	10 U	10 U
Diethyl phthalate	11 U	11 U	11 U	11 U	10 U	10 U	10 U
Dimethyl phthalate	11 U	11 U	11 U	11 U	10 U	10 U	10 U
Fluoranthene	11 U	11 U	11 U	11 U	10 U	10 U	10 U
Fluorene	11 U	11 U	11 U	11 U	10 U	10 U	10 U
Hexachlorobenzene	11 U	11 U	11 U	11 U	10 U	10 U	10 U
Hexachlorobutadiene	11 U	11 U	11 U	11 U	10 U	10 U	10 U
Hexachlorocyclopentadiene	11 U	11 U	11 U	11 U	10 U	10 U	10 U
Hexachloroethane	11 U	11 U	11 U	11 U	10 U	10 U	10 U
Indeno(1,2,3-cd)pyrene	11 U	11 U	11 U	11 U	10 U	10 U	10 U
Isophorone	11 U	11 U	11 U	11 U	10 U	10 U	10 U
N-nitroso-di-n-propylamine	11 U	11 U	11 U	11 U	10 U	10 U	10 U
N-nitrosodiphenylamine	11 U	11 U	11 U	11 U	10 U	10 U	10 U
Naphthalene	11 U	11 U	11 U	11 U	10 U	10 U	10 U
Nitrobenzene	11 U	11 U	11 U	11 U	10 U	10 U	10 U
Pentachlorophenol	27 U	27 U	28 U	28 U	25 U	25 U	25 U
Phenanthrene	11 U	11 U	11 U	11 U	10 U	10 U	10 U
Phenol	11 U	11 U	11 U	11 U	10 U	10 U	17
Pyrene	11 U	11 U	11 U	11 U	10 U	10 U	10 U
o-Cresol	11 U	11 U	11 U	11 U	10 U	10 U	10 U
p-Chloro-m-cresol	11 U	11 U	11 U	11 U	10 U	10 U	10 U
p-Chloroaniline	11 U	11 U	11 U	11 U	10 U	10 U	10 U
p-Cresol	11 U	11 U	11 U	11 U	10 U	10 U	10 U

Table 1 (continued)

Preliminary Groundwater Analytical Data
Phase I RCRA Facility Investigation
AL Tech Specialty Steel Corporation
Dunkirk, New York Facility

ESC Sample ID:	ALT-GW-WT3-1196	ALT-GW-WT4-1196	ALT-GW-WT4-1196D	ALT-GW-WP4-1196	ALT-GW-WP5-1196
Antech Project No.:	96-5528	96-5528	96-5528	96-5586	96-5586
Sample Location:	WT-3	WT-4	WT-4	WP-4	WP-5
Sample Date:	11/19/96	11/19/96	11/19/96	11/21/96	11/21/96
Parameters					
Target Compound List					
Semi-Volatile Organic Compounds (µg/l)					
1,2,4-Trichlorobenzene	11 U	10 U	10 U	11 U	11 U
1,2-Dichlorobenzene	11 U	10 U	10 U	11 U	11 U
1,3-Dichlorobenzene	11 U	10 U	10 U	11 U	11 U
1,4-Dichlorobenzene	11 U	10 U	10 U	11 U	11 U
2,4,5-Trichlorophenol	28 U	25 U	25 U	28 U	28 U
2,4,6-Trichlorophenol	11 U	10 U	10 U	11 U	11 U
2,4-Dichlorophenol	11 U	10 U	10 U	11 U	11 U
2,4-Dimethylphenol	11 U	10 U	10 U	11 U	11 U
2,4-Dinitrophenol	28 U	25 U	25 U	28 U	28 U
2,4-Dinitrotoluene	11 U	10 U	10 U	11 U	11 U
2,6-Dinitrotoluene	11 U	10 U	10 U	11 U	11 U
2-Chloronaphthalene	11 U	10 U	10 U	11 U	11 U
2-Chlorophenol	11 U	10 U	10 U	11 U	11 U
2-Methylnaphthalene	11 U	10 U	10 U	11 U	11 U
2-Nitroaniline	28 U	25 U	25 U	28 U	28 U
2-Nitrophenol	11 U	10 U	10 U	11 U	11 U
3,3'-Dichlorobenzidine	11 U	10 U	10 U	11 U	11 U
3-Nitroaniline	28 U	25 U	25 U	28 U	28 U
4,6-Dinitro-o-cresol	28 U	25 U	25 U	28 U	28 U
4-Bromophenyl phenyl ether	11 U	10 U	10 U	11 U	11 U
4-Chlorophenyl phenyl ether	11 U	10 U	10 U	11 U	11 U
4-Nitroaniline	28 U	25 U	25 U	28 U	28 U
4-Nitrophenol	28 U	25 U	25 U	28 U	28 U
Acenaphthene	11 U	10 U	10 U	11 U	11 U
Acenaphthylene	11 U	10 U	10 U	11 U	11 U
Anthracene	11 U	10 U	10 U	11 U	11 U
Benzo(a)anthracene	11 U	10 U	10 U	11 U	11 U
Benzo(a)pyrene	11 U	10 U	10 U	11 U	11 U
Benzo(b)fluoranthene	11 U	10 U	10 U	11 U	11 U
Benzo(ghi)perylene	11 U	10 U	10 U	11 U	11 U
Benzo(k)fluoranthene	11 U	10 U	10 U	11 U	11 U
Bis(2-chloro-1-methylethyl)ether	11 U	10 U	10 U	11 U	11 U
Bis(2-chloroethoxy)methane	11 U	10 U	10 U	11 U	11 U
Bis(2-chloroethyl)ether	11 U	10 U	10 U	11 U	11 U
Bis(2-ethylhexyl)phthalate	11 U	10 U	10 U	11 U	11 U
Butyl benzyl phthalate	11 U	10 U	10 U	11 U	11 U
Carbazole	11 U	10 U	10 U	11 U	11 U
Chrysene	11 U	10 U	10 U	11 U	11 U
Di-n-butyl phthalate	11 U	10 U	10 U	11 U	11 U
Di-n-octyl phthalate	11 U	10 U	10 U	11 U	11 U
Dibenz(a,h)anthracene	11 U	10 U	10 U	11 U	11 U
Dibenzofuran	11 U	10 U	10 U	11 U	11 U
Diethyl phthalate	11 U	10 U	10 U	11 U	11 U
Dimethyl phthalate	11 U	10 U	10 U	11 U	11 U
Fluoranthene	11 U	10 U	10 U	11 U	11 U
Fluorene	11 U	10 U	10 U	11 U	11 U
Hexachlorobenzene	11 U	10 U	10 U	11 U	11 U
Hexachlorobutadiene	11 U	10 U	10 U	11 U	11 U
Hexachlorocyclopentadiene	11 U	10 U	10 U	11 U	11 U
Hexachloroethane	11 U	10 U	10 U	11 U	11 U
Indeno(1,2,3-cd)pyrene	11 U	10 U	10 U	11 U	11 U
Isophorone	11 U	10 U	10 U	11 U	11 U
N-nitroso-di-n-propylamine	11 U	10 U	10 U	11 U	11 U
N-nitrosodiphenylamine	11 U	10 U	10 U	11 U	11 U
Naphthalene	11 U	10 U	10 U	11 U	11 U
Nitrobenzene	11 U	10 U	10 U	11 U	11 U
Pentachlorophenol	28 U	25 U	25 U	28 U	28 U
Phenanthrene	11 U	10 U	10 U	11 U	11 U
Phenol	11 U	10 U	10 U	11 U	11 U
Pyrene	11 U	10 U	10 U	11 U	11 U
o-Cresol	11 U	10 U	10 U	11 U	11 U
p-Chloro-m-cresol	11 U	10 U	10 U	11 U	11 U
p-Chloroaniline	11 U	10 U	10 U	11 U	11 U
p-Cresol	11 U	10 U	10 U	11 U	11 U

Table 1 (continued)

Preliminary Groundwater Analytical Data
Phase I RCRA Facility Investigation
AL Tech Specialty Steel Corporation
Dunkirk, New York Facility

ESC Sample ID:	ALT-GW-RFI01-1196	ALT-GW-RFI02-1196	ALT-GW-RFI03-1196	ALT-GW-RFI04-1196	ALT-GW-RFI05-1196	ALT-GW-RFI06-1196	ALT-GW-RFI07-1196
Antech Project No.:	96-5507	96-5507	96-5507	96-5528	96-5567	96-5567	96-5567
Sample Location:	RFI-1	RFI-2	RFI-3	RFI-4	RFI-5	RFI-6	RFI-7
Sample Date:	11/18/96	11/18/96	11/18/96	11/19/96	11/20/96	11/19/96	11/20/96
Parameters							
Target Compound List Pesticides/PCBs (µg/l)							
4,4'-DDD	na	na	na	na	na	na	na
4,4'-DDE	na	na	na	na	na	na	na
4,4'-DDT	na	na	na	na	na	na	na
Aldrin	na	na	na	na	na	na	na
Dieldrin	na	na	na	na	na	na	na
Endosulfan I (Alpha)	na	na	na	na	na	na	na
Endosulfan II (Beta)	na	na	na	na	na	na	na
Endosulfan Sulfate	na	na	na	na	na	na	na
Endrin	na	na	na	na	na	na	na
Endrin Aldehyde	na	na	na	na	na	na	na
Endrin Ketone	na	na	na	na	na	na	na
Heptachlor	na	na	na	na	na	na	na
Heptachlor Epoxide	na	na	na	na	na	na	na
Methoxychlor	na	na	na	na	na	na	na
Toxaphene	na	na	na	na	na	na	na
alpha-BHC	na	na	na	na	na	na	na
alpha-Chlordane	na	na	na	na	na	na	na
beta-BHC	na	na	na	na	na	na	na
delta-BHC	na	na	na	na	na	na	na
gamma-BHC (Lindane)	na	na	na	na	na	na	na
gamma-Chlordane	na	na	na	na	na	na	na
Aroclor-1016	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Aroclor-1221	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Aroclor-1232	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Aroclor-1242	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Aroclor-1248	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Aroclor-1254	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Aroclor-1260	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Polychlorinated Biphenyls	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U

Table 1 (continued)

Preliminary Groundwater Analytical Data
Phase I RCRA Facility Investigation
AL Tech Specialty Steel Corporation
Dunkirk, New York Facility

ESC Sample ID:	ALT-GW-RFI08-1196	ALT-GW-RFI09-1196	ALT-GW-RFI10-1196	ALT-GW-RFI11-1196	ALT-GW-RFI12-1196	ALT-GW-RFI13-1196	ALT-GW-RFI13-1196D
Antech Project No.:	96-5567	96-5528	96-5567	96-5528	96-5586	96-5567	96-5567
Sample Location:	RFI-8	RFI-9	RFI-10	RFI-11	RFI-12	RFI-13	RFI-13
Sample Date:	11/20/96	11/19/96	11/19/96	11/18/96	11/21/96	11/20/96	11/20/96
Parameters							
Target Compound List Pesticides/PCBs (µg/l)							
4,4'-DDD	na	0.10 U	na	na	na	na	na
4,4'-DDE	na	0.10 U	na	na	na	na	na
4,4'-DDT	na	0.10 U	na	na	na	na	na
Aldrin	na	0.050 U	na	na	na	na	na
Dieldrin	na	0.10 U	na	na	na	na	na
Endosulfan I (Alpha)	na	0.10 U	na	na	na	na	na
Endosulfan II (Beta)	na	0.10 U	na	na	na	na	na
Endosulfan Sulfate	na	0.050 U	na	na	na	na	na
Endrin	na	0.10 U	na	na	na	na	na
Endrin Aldehyde	na	0.10 U	na	na	na	na	na
Endrin Ketone	na	0.10 U	na	na	na	na	na
Heptachlor	na	0.050 U	na	na	na	na	na
Heptachlor Epoxide	na	0.050 U	na	na	na	na	na
Methoxychlor	na	0.50 U	na	na	na	na	na
Toxaphene	na	1.0 U	na	na	na	na	na
alpha-BHC	na	0.050 U	na	na	na	na	na
alpha-Chlordane	na	0.10 U	na	na	na	na	na
beta-BHC	na	0.050 U	na	na	na	na	na
delta-BHC	na	0.050 U	na	na	na	na	na
gamma-BHC (Lindane)	na	0.050 U	na	na	na	na	na
gamma-Chlordane	na	0.10 U	na	na	na	na	na
Arodor-1016	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	na
Arodor-1221	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	na
Arodor-1232	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	na
Arodor-1242	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	na
Arodor-1248	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	na
Arodor-1254	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	na
Arodor-1260	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	na
Polychlorinated Biphenyls	1.0 U	na	1.0 U	1.0 U	1.0 U	1.0 U	na

Table 1 (continued)

Preliminary Groundwater Analytical Data
Phase I RCRA Facility Investigation
AL Tech Specialty Steel Corporation
Dunkirk, New York Facility

ESC Sample ID:	ALT-GW-RFI14-1196	ALT-GW-RFI15-1196	ALT-GW-RFI15-1196D	ALT-GW-RFI16-1196	ALT-GW-RFI17-1196	ALT-GW-B1-1196	ALT-GW-MW1-1196
Antech Project No.:	96-5567	96-5567	96-5567	96-5507	96-5567	96-5507	96-5586
Sample Location:	RFI-14	RFI-15	RFI-15	RFI-16	RFI-17	B-1	MW-1
Sample Date:	11/20/96	11/20/96	11/20/96	11/18/96	11/20/96	11/18/96	11/20/96
Parameters							
Target Compound List Pesticides/PCBs (µg/l)							
4,4'-DDD	na	na	na	na	na	na	na
4,4'-DDE	na	na	na	na	na	na	na
4,4'-DDT	na	na	na	na	na	na	na
Aldrin	na	na	na	na	na	na	na
Dieldrin	na	na	na	na	na	na	na
Endosulfan I (Alpha)	na	na	na	na	na	na	na
Endosulfan II (Beta)	na	na	na	na	na	na	na
Endosulfan Sulfate	na	na	na	na	na	na	na
Endrin	na	na	na	na	na	na	na
Endrin Aldehyde	na	na	na	na	na	na	na
Endrin Ketone	na	na	na	na	na	na	na
Heptachlor	na	na	na	na	na	na	na
Heptachlor Epoxide	na	na	na	na	na	na	na
Methoxychlor	na	na	na	na	na	na	na
Toxaphene	na	na	na	na	na	na	na
alpha-BHC	na	na	na	na	na	na	na
alpha-Chlordane	na	na	na	na	na	na	na
beta-BHC	na	na	na	na	na	na	na
delta-BHC	na	na	na	na	na	na	na
gamma-BHC (Lindane)	na	na	na	na	na	na	na
gamma-Chlordane	na	na	na	na	na	na	na
Aroclor-1016	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Aroclor-1221	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Aroclor-1232	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Aroclor-1242	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Aroclor-1248	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Aroclor-1254	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Aroclor-1260	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Polychlorinated Biphenyls	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U

Table 1 (continued)

Preliminary Groundwater Analytical Data
Phase I RCRA Facility Investigation
AL Tech Specialty Steel Corporation
Dunkirk, New York Facility

ESC Sample ID:	ALT-GW-MW3-1196	ALT-GW-LAE4-1196	ALT-GW-LAW5-1196	ALT-GW-LAW6-1196	ALT-GW-WT1A-1196	ALT-GW-WT1B-1196	ALT-GW-WT2-1196
Antech Project No.:	96-5567	96-5567	96-5586	96-5586	96-5528	96-5528	96-5653
Sample Location:	MW-3	LAE-4	LAW-5	LAW-6	WT-1A	WT-1B	WT-2
Sample Date:	11/20/96	11/20/96	11/21/96	11/21/96	11/19/96	11/19/96	11/25/96
Parameters							
Target Compound List Pesticides/PCBs (µg/l)							
4,4'-DDD	na	na	na	na	0.10 U	0.10 U	0.10 U
4,4'-DDE	na	na	na	na	0.10 U	0.10 U	0.10 U
4,4'-DDT	na	na	na	na	0.10 U	0.10 U	0.10 U
Aldrin	na	na	na	na	0.050 U	0.050 U	0.050 U
Dieldrin	na	na	na	na	0.10 U	0.10 U	0.10 U
Endosulfan I (Alpha)	na	na	na	na	0.10 U	0.10 U	0.10 U
Endosulfan II (Beta)	na	na	na	na	0.10 U	0.10 U	0.10 U
Endosulfan Sulfate	na	na	na	na	0.050 U	0.050 U	0.050 U
Endrin	na	na	na	na	0.10 U	0.10 U	0.10 U
Endrin Aldehyde	na	na	na	na	0.10 U	0.10 U	0.10 U
Endrin Ketone	na	na	na	na	0.10 U	0.10 U	0.10 U
Heptachlor	na	na	na	na	0.050 U	0.050 U	0.050 U
Heptachlor Epoxide	na	na	na	na	0.050 U	0.050 U	0.050 U
Methoxychlor	na	na	na	na	0.50 U	0.50 U	0.50 U
Toxaphene	na	na	na	na	1.0 U	1.0 U	1.0 U
alpha-BHC	na	na	na	na	0.050 U	0.050 U	0.050 U
alpha-Chlordane	na	na	na	na	0.10 U	0.10 U	0.10 U
beta-BHC	na	na	na	na	0.050 U	0.050 U	0.050 U
delta-BHC	na	na	na	na	0.050 U	0.050 U	0.050 U
gamma-BHC (Lindane)	na	na	na	na	0.050 U	0.050 U	0.050 U
gamma-Chlordane	na	na	na	na	0.10 U	0.10 U	0.10 U
Aroclor-1016	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Aroclor-1221	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Aroclor-1232	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Aroclor-1242	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Aroclor-1248	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Aroclor-1254	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Aroclor-1260	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Polychlorinated Biphenyls	1.0 U	1.0 U	1.0 U	1.0 U	na	na	na

Table 1 (continued)

Preliminary Groundwater Analytical Data
Phase I RCRA Facility Investigation
AL Tech Specialty Steel Corporation
Dunkirk, New York Facility

ESC Sample ID:	ALT-GW-WT3-1196	ALT-GW-WT4-1196	ALT-GW-WT4-1196D	ALT-GW-WP4-1196	ALT-GW-WP5-1196
Antech Project No.:	96-5528	96-5528	96-5528	96-5586	96-5586
Sample Location:	WT-3	WT-4	WT-4	WP-4	WP-5
Sample Date:	11/19/96	11/19/96	11/19/96	11/21/96	11/21/96
Parameters					
Target Compound List Pesticides/PCBs (µg/l)					
4,4'-DDD	0.10 U	0.10 U	0.10 U	na	na
4,4'-DDE	0.10 U	0.10 U	0.10 U	na	na
4,4'-DDT	0.10 U	0.10 U	0.10 U	na	na
Aldrin	0.050 U	0.050 U	0.050 U	na	na
Dieldrin	0.10 U	0.10 U	0.10 U	na	na
Endosulfan I (Alpha)	0.10 U	0.10 U	0.10 U	na	na
Endosulfan II (Beta)	0.10 U	0.10 U	0.10 U	na	na
Endosulfan Sulfate	0.050 U	0.050 U	0.050 U	na	na
Endrin	0.10 U	0.10 U	0.10 U	na	na
Endrin Aldehyde	0.10 U	0.10 U	0.10 U	na	na
Endrin Ketone	0.10 U	0.10 U	0.10 U	na	na
Heptachlor	0.050 U	0.050 U	0.050 U	na	na
Heptachlor Epoxide	0.050 U	0.050 U	0.050 U	na	na
Methoxychlor	0.50 U	0.50 U	0.50 U	na	na
Toxaphene	1.0 U	1.0 U	1.0 U	na	na
alpha-BHC	0.050 U	0.050 U	0.050 U	na	na
alpha-Chlordane	0.10 U	0.10 U	0.10 U	na	na
beta-BHC	0.050 U	0.050 U	0.050 U	na	na
delta-BHC	0.050 U	0.050 U	0.050 U	na	na
gamma-BHC (Lindane)	0.050 U	0.050 U	0.050 U	na	na
gamma-Chlordane	0.10 U	0.10 U	0.10 U	na	na
Aroclor-1016	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Aroclor-1221	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Aroclor-1232	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Aroclor-1242	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Aroclor-1248	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Aroclor-1254	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Aroclor-1260	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Polychlorinated Biphenyls	na	na	na	1.0 U	1.0 U

Table 1 (continued)

Preliminary Groundwater Analytical Data
Phase I RCRA Facility Investigation
AL Tech Specialty Steel Corporation
Dunkirk, New York Facility

ESC Sample ID:	ALT-GW-RFI01-1196	ALT-GW-RFI02-1196	ALT-GW-RFI03-1196	ALT-GW-RFI04-1196	ALT-GW-RFI05-1196	ALT-GW-RFI06-1196	ALT-GW-RFI07-1196
Antech Project No.:	96-5507	96-5507	96-5507	96-5528	96-5567	96-5567	96-5567
Sample Location:	RFI-1	RFI-2	RFI-3	RFI-4	RFI-5	RFI-6	RFI-7
Sample Date:	11/18/96	11/18/96	11/18/96	11/19/96	11/20/96	11/19/96	11/20/96
Parameters							
Miscellaneous Parameters							
Total Organic Carbon (mg/l)	na	na	na	na	na	na	na
Alkalinity (Total) (mg/l bicarbonate)	76	170	200	202	160	192	196
Ammonia (mg/l)	0.1 U	0.36	0.34	0.31	0.1 U	1.9	1.8
Chemical Oxygen Demand (mg/l)	na	na	na	na	na	na	na
Chloride (mg/l)	25	8.8	120	18	14	42	220
Fluoride (mg/l)	0.31	0.26	1.9	0.18	0.31	0.34	0.56
Nitrate (mg/l)	0.51	0.1 U	0.1 U	0.1 U	2.5	0.1 U	61
Phenolics (mg/l)	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Specific Conductance @ 25øC (umhos/cm)	720	1060	1410	841	716	1180	4130
Sulfate (mg/l)	71	230	230	110	120	310	1500
Total Suspended Solids (mg/l)	na	na	na	na	na	na	na
pH (standard units)	7.32	7.05	7.44	7.31	7.43	7.44	7.03

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Table 1 (continued)

Preliminary Groundwater Analytical Data
Phase I RCRA Facility Investigation
AL Tech Specialty Steel Corporation
Dunkirk, New York Facility

ESC Sample ID:	ALT-GW-RFI08-1196	ALT-GW-RFI09-1196	ALT-GW-RFI10-1196	ALT-GW-RFI11-1196	ALT-GW-RFI12-1196	ALT-GW-RFI13-1196	ALT-GW-RFI13-1196D
Antech Project No.:	96-5567	96-5528	96-5567	96-5528	96-5586	96-5567	96-5567
Sample Location:	RFI-8	RFI-9	RFI-10	RFI-11	RFI-12	RFI-13	RFI-13
Sample Date:	11/20/96	11/19/96	11/19/96	11/18/96	11/21/96	11/20/96	11/20/96
Parameters							
Miscellaneous Parameters							
Total Organic Carbon (mg/l)	na	3.1	na	na	na	na	na
Alkalinity (Total) (mg/l bicarbonate)	160	49.6	126	200	180	217	238
Ammonia (mg/l)	0.1	0.1 U	0.1 U	0.25	0.15	0.35	0.4
Chemical Oxygen Demand (mg/l)	na	5 U	na	na	na	na	na
Chloride (mg/l)	47	14	250	39	12	67	65
Fluoride (mg/l)	0.32	0.24	0.29	0.46	0.49	0.29	0.31
Nitrate (mg/l)	1.3	0.1 U	1.2	0.1 U	0.67	1.2	1.3
Phenolics (mg/l)	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	na
Specific Conductance @ 25øC (umhos/cm)	919	991	1760	960	764	1160	1170
Sulfate (mg/l)	120	120	1500	99	160	170	180
Total Suspended Solids (mg/l)	na	1 U	na	na	na	na	na
pH (standard units)	7.32	7.01	7.27	7.28	8.03	7.17	6.99

Table 1 (continued)

Preliminary Groundwater Analytical Data
Phase I RCRA Facility Investigation
AL Tech Specialty Steel Corporation
Dunkirk, New York Facility

ESC Sample ID:	ALT-GW-RFI14-1196	ALT-GW-RFI15-1196	ALT-GW-RFI15-1196D	ALT-GW-RFI16-1196	ALT-GW-RFI17-1196	ALT-GW-B1-1196	ALT-GW-MW1-1196
Antech Project No.:	96-5567	96-5567	96-5567	96-5507	96-5567	96-5507	96-5586
Sample Location:	RFI-14	RFI-15	RFI-15	RFI-16	RFI-17	B-1	MW-1
Sample Date:	11/20/96	11/20/96	11/20/96	11/18/96	11/20/96	11/18/96	11/20/96
Parameters							
Miscellaneous Parameters							
Total Organic Carbon (mg/l)	na	na	na	na	na	na	na
Alkalinity (Total) (mg/l bicarbonate)	1620	169	128	220	111	110	216
Ammonia (mg/l)	0.84	0.47	0.39	0.1 U	2	0.73	0.63
Chemical Oxygen Demand (mg/l)	na	na	na	na	na	na	na
Chloride (mg/l)	39	100	110	35	410	6.1	57
Fluoride (mg/l)	0.59	0.29	0.31	0.25	0.57	0.26	0.11
Nitrate (mg/l)	0.11	0.1 U	0.1 U	0.1 U	2.4	0.1 U	0.1 U
Phenolics (mg/l)	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Specific Conductance @ 25øC (umhos/cm)	689	1180	1140	1050	2440	808	1340
Sulfate (mg/l)	80	240	260	130	360	120	350
Total Suspended Solids (mg/l)	na	na	na	na	na	na	na
pH (standard units)	7.78	7.27	7.3	7.16	7.26	7.26	7.51

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Table 1 (continued)

Preliminary Groundwater Analytical Data
Phase I RCRA Facility Investigation
AL Tech Specialty Steel Corporation
Dunkirk, New York Facility

ESC Sample ID:	ALT-GW-MW3-1196	ALT-GW-LAE4-1196	ALT-GW-LAW5-1196	ALT-GW-LAW6-1196	ALT-GW-WT1A-1196	ALT-GW-WT1B-1196	ALT-GW-WT2-1196
Antech Project No.:	96-5567	96-5567	96-5586	96-5586	96-5528	96-5528	96-5653
Sample Location:	MW-3	LAE-4	LAW-5	LAW-6	WT-1A	WT-1B	WT-2
Sample Date:	11/20/96	11/20/96	11/21/96	11/21/96	11/19/96	11/19/96	11/25/96
Parameters							
Miscellaneous Parameters							
Total Organic Carbon (mg/l)	na	na	na	na	9.5	2.3	15
Alkalinity (Total) (mg/l bicarbonate)	192	176	233	3360	256	123	1020
Ammonia (mg/l)	0.1 U	0.79	1.2	2.5	0.1 U	0.59	2.9
Chemical Oxygen Demand (mg/l)	na	na	na	na	23	5 U	46
Chloride (mg/l)	250	18	300	140	120	280	12
Fluoride (mg/l)	0.63	0.31	0.19	6.3	0.74	0.23	0.33
Nitrate (mg/l)	83	0.1 U	14	30	0.38	0.1 U	0.1 U
Phenolics (mg/l)	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.054
Specific Conductance @ 25øC (umhos/cm)	3250	892	3160	9700	1400	1560	4560
Sulfate (mg/l)	660	110	2300	1100	170	170	8.8
Total Suspended Solids (mg/l)	na	na	na	na	113	300	129
pH (standard units)	7.27	7.14	6.98	8.98	7.05	7.1	12.41

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Table 1 (continued)

Preliminary Groundwater Analytical Data
Phase I RCRA Facility Investigation
AL Tech Specialty Steel Corporation
Dunkirk, New York Facility

ESC Sample ID:	ALT-GW-WT3-1196	ALT-GW-WT4-1196	ALT-GW-WT4-1196D	ALT-GW-WP4-1196	ALT-GW-WP5-1196
Antech Project No.:	96-5528	96-5528	96-5528	96-5586	96-5586
Sample Location:	WT-3	WT-4	WT-4	WP-4	WP-5
Sample Date:	11/19/96	11/19/96	11/19/96	11/21/96	11/21/96
Parameters					
Miscellaneous Parameters					
Total Organic Carbon (mg/l)	3.7	3.8	3.9	na	na
Alkalinity (Total) (mg/l bicarbonate)	145	250	249	237	145
Ammonia (mg/l)	1.5	1.7	1.7	2.2	1.4
Chemical Oxygen Demand (mg/l)	5.4	5 U	8.9	na	na
Chloride (mg/l)	26	61	62	84	21
Fluoride (mg/l)	1.8	0.71	0.74	0.31	0.36
Nitrate (mg/l)	0.1 U	0.1 U	0.1 U	0.1 U	0.14
Phenolics (mg/l)	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Specific Conductance @ 25øC (umhos/cm)	1440	1430	1460	1220	673
Sulfate (mg/l)	500	300	300	150	61
Total Suspended Solids (mg/l)	45	11	11	na	na
pH (standard units)	6.82	7.1	7.11	7.3	7.16

Table 1 (continued)

Preliminary Groundwater Analytical Data
Phase I RCRA Facility Investigation
AL Tech Specialty Steel Corporation
Dunkirk, New York Facility

ESC Sample ID:	ALT-GW-RFI01-1196	ALT-GW-RFI02-1196	ALT-GW-RFI03-1196	ALT-GW-RFI04-1196	ALT-GW-RFI05-1196	ALT-GW-RFI06-1196	ALT-GW-RFI07-1196
Antech Project No.:	96-5507	96-5507	96-5507	96-5528	96-5567	96-5567	96-5567
Sample Location:	RFI-1	RFI-2	RFI-3	RFI-4	RFI-5	RFI-6	RFI-7
Sample Date:	11/18/96	11/18/96	11/18/96	11/19/96	11/20/96	11/19/96	11/20/96
Parameters							
Target Analyte List Inorganics (mg/l)							
Aluminum (Dissolved)	na	na	na	na	na	na	na
Aluminum (Total)	0.98	0.29	0.94	0.28	–	–	0.10 U
Antimony (Dissolved)	na	na	na	na	na	na	na
Antimony (Total)	0.0029	0.0016 U	0.016 U	0.0016 U	–	–	0.0060 U
Arsenic (Dissolved)	na	na	na	na	na	na	na
Arsenic (Total)	0.0023	0.0025	0.0019	0.0018 U	–	–	0.0010 U
Barium (Dissolved)	na	na	na	na	na	na	na
Barium (Total)	0.1	0.014 U	0.0064	0.25	–	–	0.043
Beryllium (Dissolved)	na	na	na	na	na	na	na
Beryllium (Total)	0.0012	0.0006 U	0.0006 U	0.0035	–	–	0.0090
Cadmium (Dissolved)	na	na	na	na	na	na	na
Cadmium (Total)	0.0048	0.0022 U	0.0022 U	0.0093	–	–	0.0050 U
Calcium (Dissolved)	na	na	na	na	na	na	na
Calcium (Total)	90	130	150	100	–	–	420
Chromium (Dissolved)	na	na	na	na	na	na	na
Chromium (Total)	0.016	0.0078 U	0.0078 U	0.02	–	–	0.019
Hexavalent Chromium (Total)	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
Cobalt (Dissolved)	na	na	na	na	na	na	na
Cobalt (Total)	0.0056 U	0.0056 U	0.0056 U	0.018	–	–	0.011
Copper (Dissolved)	na	na	na	na	na	na	na
Copper (Total)	0.011	0.0047 U	0.0047 U	0.027	–	–	0.039
Iron (Dissolved)	na	na	na	na	na	na	na
Iron (Total)	1.3	1.8	4	0.68	–	–	0.39
Lead (Dissolved)	na	na	na	na	na	na	na
Lead (Total)	0.0052	0.0025	0.0075	0.0017	–	–	0.0010 U
Magnesium (Dissolved)	na	na	na	na	na	na	na
Magnesium (Total)	29	57	42	50	–	–	130
Manganese (Dissolved)	na	na	na	na	na	na	na
Manganese (Total)	0.11	0.24	0.94	0.056	–	–	2.3
Mercury (Dissolved)	na	na	na	na	na	na	na
Mercury (Total)	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U
Molybdenum (Dissolved)	na	na	na	na	na	na	na
Molybdenum (Total)	0.023	0.01 U	1.3	0.023	–	–	1.3
Nickel (Dissolved)	na	na	na	na	na	na	na
Nickel (Total)	0.019	0.01 U	0.01 U	0.03	–	–	0.075
Potassium (Dissolved)	na	na	na	na	na	na	na
Potassium (Total)	2.2	5.4	3.3	2.5	–	–	25
Selenium (Dissolved)	na	na	na	na	na	na	na
Selenium (Total)	0.0027 U	0.0027 U	0.0027 U	0.0027 U	–	–	0.0010 U
Silver (Dissolved)	na	na	na	na	na	na	na
Silver (Total)	0.0083 U	0.0083 U	0.0083 U	0.016	–	–	0.010 U
Sodium (Dissolved)	na	na	na	na	na	na	na
Sodium (Total)	28	15	95	17	–	–	290
Thallium (Dissolved)	na	na	na	na	na	na	na
Thallium (Total)	0.0054	0.0023 U	0.0023 U	0.0023 U	–	–	0.0040 U
Vanadium (Dissolved)	na	na	na	na	na	na	na
Vanadium (Total)	0.0054 U	0.0054 U	0.0054 U	0.029	–	–	0.050 U
Zinc (Dissolved)	na	na	na	na	na	na	na
Zinc (Total)	0.033	0.029	0.036	0.017	–	–	0.023
Cyanide (Free)	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Cyanide (Total)	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U

Table 1 (continued)

Preliminary Groundwater Analytical Data
Phase I RCRA Facility Investigation
AL Tech Specialty Steel Corporation
Dunkirk, New York Facility

ESC Sample ID:	ALT-GW-RFI08-1196	ALT-GW-RFI09-1196	ALT-GW-RFI10-1196	ALT-GW-RFI11-1196	ALT-GW-RFI12-1196	ALT-GW-RFI13-1196	ALT-GW-RFI13-1196D
Antech Project No.:	96-5567	96-5528	96-5567	96-5528	96-5586	96-5567	96-5567
Sample Location:	RFI-8	RFI-9	RFI-10	RFI-11	RFI-12	RFI-13	RFI-13
Sample Date:	11/20/96	11/19/96	11/19/96	11/18/96	11/21/96	11/20/96	11/20/96
Parameters							
Target Analyte List Inorganics (mg/l)							
Aluminum (Dissolved)	na	0.058 U	na	0.21	na	na	na
Aluminum (Total)	--	0.28	--	0.45	0.058 U	--	--
Antimony (Dissolved)	na	0.0016 U	na	0.0016 U	na	na	na
Antimony (Total)	--	0.0016 U	--	0.0016	0.0023	--	--
Arsenic (Dissolved)	na	0.0018 U	na	0.0018 U	na	na	na
Arsenic (Total)	--	0.0018 U	--	0.0018 U	0.0018 U	--	--
Barium (Dissolved)	na	0.038	na	0.32	na	na	na
Barium (Total)	--	0.047	--	0.43	0.057	--	--
Beryllium (Dissolved)	na	0.0034	na	0.005	na	na	na
Beryllium (Total)	--	0.006	--	0.021	0.0006 U	--	--
Cadmium (Dissolved)	na	0.0028	na	0.011	na	na	na
Cadmium (Total)	--	0.018	--	0.016	0.0022 U	--	--
Calcium (Dissolved)	na	140	na	130	na	na	na
Calcium (Total)	--	140	--	730	83	--	--
Chromium (Dissolved)	na	0.0078 U	na	0.028	na	na	na
Chromium (Total)	--	0.041	--	0.042	0.0078 U	--	--
Hexavalent Chromium (Total)	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
Cobalt (Dissolved)	na	0.0066	na	0.029	na	na	na
Cobalt (Total)	--	0.036	--	0.1	0.0056 U	--	--
Copper (Dissolved)	na	0.017	na	0.04	na	na	na
Copper (Total)	--	0.049	--	0.089	0.0047 U	--	--
Iron (Dissolved)	na	0.053	na	0.11	na	na	na
Iron (Total)	--	0.078	--	0.85	0.27	--	--
Lead (Dissolved)	na	0.0036	na	0.0058	na	na	na
Lead (Total)	--	0.0049	--	0.0027	0.0017 U	--	--
Magnesium (Dissolved)	na	38	na	34	na	na	na
Magnesium (Total)	--	36	--	48	38	--	--
Manganese (Dissolved)	na	0.85	na	0.81	na	na	na
Manganese (Total)	--	0.81	--	5.4	0.18	--	--
Mercury (Dissolved)	na	0.0002 U	na	0.0002 U	na	na	na
Mercury (Total)	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U
Molybdenum (Dissolved)	na	0.42	na	0.059	na	na	na
Molybdenum (Total)	--	0.48	--	0.046	0.095	--	--
Nickel (Dissolved)	na	0.022	na	0.051	na	na	na
Nickel (Total)	--	0.067	--	0.21	0.01 U	--	--
Potassium (Dissolved)	na	1.3	na	9.6	na	na	na
Potassium (Total)	--	1.8	--	16	15	--	--
Selenium (Dissolved)	na	0.0027 U	na	0.0027 U	na	na	na
Selenium (Total)	--	0.0031	--	0.0027 U	0.0027 U	--	--
Silver (Dissolved)	na	0.0083 U	na	0.023	na	na	na
Silver (Total)	--	0.041	--	0.026	0.0083 U	--	--
Sodium (Dissolved)	na	46	na	56	na	na	na
Sodium (Total)	--	42	--	52	29	--	--
Thallium (Dissolved)	na	0.0023 U	na	0.0023 U	na	na	na
Thallium (Total)	--	0.0023 U	--	0.0023 U	0.0023 U	--	--
Vanadium (Dissolved)	na	0.0099	na	0.036	na	na	na
Vanadium (Total)	--	0.055	--	0.056	0.0054 U	--	--
Zinc (Dissolved)	na	0.057	na	0.091	na	na	na
Zinc (Total)	--	0.022	--	0.042	0.32	--	--
Cyanide (Free)	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Cyanide (Total)	0.005	0.14	0.005 U	0.009	0.11	0.005	0.009

Table 1 (continued)

Preliminary Groundwater Analytical Data
Phase I RCRA Facility Investigation
AL Tech Specialty Steel Corporation
Dunkirk, New York Facility

ESC Sample ID:	ALT-GW-RFI14-1196	ALT-GW-RFI15-1196	ALT-GW-RFI15-1196D	ALT-GW-RFI16-1196	ALT-GW-RFI17-1196	ALT-GW-B1-1196	ALT-GW-MW1-1196
Antech Project No.:	96-5567	96-5567	96-5567	96-5507	96-5567	96-5507	96-5586
Sample Location:	RFI-14	RFI-15	RFI-15	RFI-16	RFI-17	B-1	MW-1
Sample Date:	11/20/96	11/20/96	11/20/96	11/18/96	11/20/96	11/18/96	11/20/96
Parameters							
Target Analyte List Inorganics (mg/l)							
Aluminum (Dissolved)	-	-	-	na	0.10 U	na	na
Aluminum (Total)	-	-	-	0.058 U	0.38	0.058 U	0.28
Antimony (Dissolved)	-	-	-	na	0.0060 U	na	na
Antimony (Total)	-	-	-	0.0016 U	0.0060 U	0.0018	0.0016 U
Arsenic (Dissolved)	-	-	-	na	0.0010 U	na	na
Arsenic (Total)	-	-	-	0.0018 U	0.0010 U	0.0018 U	0.0018 U
Barium (Dissolved)	-	-	-	na	0.074	na	na
Barium (Total)	-	-	-	0.034	0.081	0.24	0.0044
Beryllium (Dissolved)	-	-	-	na	0.0030	na	na
Beryllium (Total)	-	-	-	0.0006 U	0.0030	0.0006 U	0.0006 U
Cadmium (Dissolved)	-	-	-	na	0.0050 U	na	na
Cadmium (Total)	-	-	-	0.0022 U	0.0050 U	0.0022 U	0.0022 U
Calcium (Dissolved)	-	-	-	na	150	na	na
Calcium (Total)	-	-	-	110	130	87	77
Chromium (Dissolved)	-	-	-	na	0.010 U	na	na
Chromium (Total)	-	-	-	0.0078 U	0.010 U	0.0078 U	0.0078 U
Hexavalent Chromium (Total)	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
Cobalt (Dissolved)	-	-	-	na	0.010 U	na	na
Cobalt (Total)	-	-	-	0.0056 U	0.010 U	0.0056 U	0.0056 U
Copper (Dissolved)	-	-	-	na	0.016	na	na
Copper (Total)	-	-	-	0.0047 U	0.028	0.0047 U	0.0047 U
Iron (Dissolved)	-	-	-	na	0.066	na	na
Iron (Total)	-	-	-	1	1.1	0.26	1.5
Lead (Dissolved)	-	-	-	na	0.0010 U	na	na
Lead (Total)	-	-	-	0.0033	0.0010 U	0.0029	0.0021
Magnesium (Dissolved)	-	-	-	na	47	na	na
Magnesium (Total)	-	-	-	36	40	40	35
Manganese (Dissolved)	-	-	-	na	0.22	na	na
Manganese (Total)	-	-	-	0.21	0.22	0.031	0.26
Mercury (Dissolved)	0.00020 U	0.00020 U	0.00020 U	na	0.00020 U	na	na
Mercury (Total)	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U
Molybdenum (Dissolved)	-	-	-	na	0.36	na	na
Molybdenum (Total)	-	-	-	0.71	0.41	0.01 U	0.6
Nickel (Dissolved)	-	-	-	na	0.040 U	na	na
Nickel (Total)	-	-	-	0.01 U	0.040 U	0.01 U	0.01 U
Potassium (Dissolved)	-	-	-	na	24	na	na
Potassium (Total)	-	-	-	2.4	20	2.3	3.9
Selenium (Dissolved)	-	-	-	na	0.0010 U	na	na
Selenium (Total)	-	-	-	0.0027 U	0.0010 U	0.0027 U	0.0027 U
Silver (Dissolved)	-	-	-	na	0.010 U	na	na
Silver (Total)	-	-	-	0.0083 U	0.010 U	0.0083 U	0.0083 U
Sodium (Dissolved)	-	-	-	na	90	na	na
Sodium (Total)	-	-	-	75	86	24	180
Thallium (Dissolved)	-	-	-	na	0.0040 U	na	na
Thallium (Total)	-	-	-	0.0023 U	0.0040 U	0.0023 U	0.0023 U
Vanadium (Dissolved)	-	-	-	na	0.050 U	na	na
Vanadium (Total)	-	-	-	0.0054 U	0.050 U	0.0054 U	0.0054 U
Zinc (Dissolved)	-	-	-	na	0.0080	na	na
Zinc (Total)	-	-	-	0.0048	0.011	0.019	0.024
Cyanide (Free)	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Cyanide (Total)	0.027	0.005 U	0.005	0.005 U	0.029	0.005 U	0.009

Table 1 (continued)

Preliminary Groundwater Analytical Data
Phase I RCRA Facility Investigation
AL Tech Specialty Steel Corporation
Dunkirk, New York Facility

ESC Sample ID:	ALT-GW-MW3-1196	ALT-GW-LAE4-1196	ALT-GW-LAW5-1196	ALT-GW-LAW6-1196	ALT-GW-WT1A-1196	ALT-GW-WT1B-1196	ALT-GW-WT2-1196
Antech Project No.:	96-5567	96-5567	96-5586	96-5586	96-5528	96-5528	96-5653
Sample Location:	MW-3	LAE-4	LAW-5	LAW-6	WT-1A	WT-1B	WT-2
Sample Date:	11/20/96	11/20/96	11/21/96	11/21/96	11/19/96	11/19/96	11/25/96
Parameters							
Target Analyte List Inorganics (mg/l)							
Aluminum (Dissolved)	0.10 U	na	na	0.18	0.19	0.19	0.8
Aluminum (Total)	2.5	0.10 U	0.06 U	0.55	0.41	0.35	0.82
Antimony (Dissolved)	0.0060 U	na	na	0.0060 U	0.0016 U	0.0016 U	0.0022
Antimony (Total)	0.0060 U	0.0060 U	0.0093	0.0060 U	0.0016 U	0.0016 U	0.0017 U
Arsenic (Dissolved)	0.0010 U	na	na	0.17	0.0018 U	0.0018 U	0.0018 U
Arsenic (Total)	0.0010 U	0.0010 U	0.0018 U	0.17	0.0067	0.0018 U	0.0018 U
Barium (Dissolved)	0.023	na	na	0.021	0.11	0.083	0.18
Barium (Total)	0.043	0.029	0.014	0.020 U	0.12	0.082	0.17
Beryllium (Dissolved)	0.0040	na	na	0.0020 U	0.0048	0.0044	0.0071
Beryllium (Total)	0.0040	0.0060	0.0021	0.0020	0.004	0.0033	0.007
Cadmium (Dissolved)	0.0050 U	na	na	0.0050	0.011	0.0062	0.012
Cadmium (Total)	0.0050 U	0.0050 U	0.0022 U	0.0080	0.0079	0.0022 U	0.014
Calcium (Dissolved)	180	na	na	13	130	150	230
Calcium (Total)	180	240	280	13	130	150	220
Chromium (Dissolved)	6.2	na	na	42	0.026	0.022	0.03
Chromium (Total)	6.4	4.1	4.8	42	0.023	0.0078 U	0.036
Hexavalent Chromium (Total)	7.54	0.01 U	5.24	36.1	0.01 U	0.01 U	0.01 U
Cobalt (Dissolved)	0.010 U	na	na	0.023	0.032	0.021	0.025
Cobalt (Total)	0.010 U	0.015	0.0056 U	0.026	0.035	0.015	0.028
Copper (Dissolved)	0.011	na	na	0.11	0.037	0.034	0.05
Copper (Total)	0.025	0.11	0.0047 U	0.11	0.03	0.013	0.052
Iron (Dissolved)	0.030 U	na	na	0.13	0.08	0.6	0.19
Iron (Total)	5.3	0.26	0.18	1.0	2.8	0.72	0.081
Lead (Dissolved)	0.0010 U	na	na	0.0010 U	0.0035	0.0035	0.094
Lead (Total)	0.0040	0.0010 U	0.0026	0.0010 U	0.0023	0.0023	0.094
Magnesium (Dissolved)	51	na	na	76	42	42	0.32
Magnesium (Total)	48	76	91	75	43	42	0.32
Manganese (Dissolved)	0.073	na	na	0.010 U	2.2	0.38	0.02
Manganese (Total)	0.24	0.12	0.13	0.010	2.2	0.37	0.015
Mercury (Dissolved)	0.00020 U	na	na	0.00020 U	0.0002 U	0.0002 U	0.0002 U
Mercury (Total)	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U
Molybdenum (Dissolved)	0.41	na	na	6.0	0.32	0.058	0.29
Molybdenum (Total)	0.40	0.40	0.32	5.9	0.34	0.039	0.28
Nickel (Dissolved)	0.040 U	na	na	0.052	0.066	0.03	0.13
Nickel (Total)	0.040 U	0.14	0.075	0.059	0.058	0.01	0.12
Potassium (Dissolved)	3.2	na	na	14	1.8	3	15
Potassium (Total)	3.7	4.8	4.5	14	1.6	2.7	15
Selenium (Dissolved)	0.0010 U	na	na	0.029	0.0027 U	0.0027 U	0.0039
Selenium (Total)	0.0010 U	0.0010 U	0.0027 U	0.029	0.0027 U	0.0027 U	0.0066
Silver (Dissolved)	0.010 U	na	na	0.015	0.022	0.011	0.026
Silver (Total)	0.010 U	0.010 U	0.0083 U	0.021	0.009	0.0083 U	0.032
Sodium (Dissolved)	430	na	na	2200	110	79	30
Sodium (Total)	400	320	410.00	2300	100	78	29
Thallium (Dissolved)	0.0040 U	na	na	0.0090	0.0023 U	0.0023 U	0.0023 U
Thallium (Total)	0.0040 U	0.0040 U	0.0039	0.010	0.0023 U	0.0023 U	0.0023 U
Vanadium (Dissolved)	0.050 U	na	na	0.22	0.036	0.024	0.035
Vanadium (Total)	0.050 U	0.050 U	0.0054 U	0.21	0.024	0.0054 U	0.038
Zinc (Dissolved)	0.0080	na	na	0.015	0.11	0.064	0.014
Zinc (Total)	0.026	0.016	0.0041	0.042	0.06	0.046	0.018
Cyanide (Free)	0.005 U	0.057	0.005 U	0.16	0.005 U	0.005 U	1 U
Cyanide (Total)	0.008	0.007	0.014	0.14	0.005 U	0.005 U	0.005 U

Table 1 (continued)

Preliminary Groundwater Analytical Data
Phase I RCRA Facility Investigation
AL Tech Specialty Steel Corporation
Dunkirk, New York Facility

ESC Sample ID:	ALT-GW-WT3-1196	ALT-GW-WT4-1196	ALT-GW-WT4-1196D	ALT-GW-WP4-1196	ALT-GW-WP5-1196
Antech Project No.:	96-5528	96-5528	96-5528	96-5586	96-5586
Sample Location:	WT-3	WT-4	WT-4	WP-4	WP-5
Sample Date:	11/19/96	11/19/96	11/19/96	11/21/96	11/21/96
Parameters					
Target Analyte List Inorganics (mg/l)					
Aluminum (Dissolved)	0.21	0.096	0.11	na	na
Aluminum (Total)	0.52	0.11	0.19	0.14	0.42
Antimony (Dissolved)	0.0016 U	0.002	0.0016 U	na	na
Antimony (Total)	0.0016 U	0.0023	0.0016 U	0.002	0.0019
Arsenic (Dissolved)	0.0018 U	0.0018 U	0.0018 U	na	na
Arsenic (Total)	0.0018 U	0.0018 U	0.0018 U	0.0018 U	0.0022
Barium (Dissolved)	0.028	0.049	0.044	na	na
Barium (Total)	0.024	0.045	0.052	0.03	0.063
Beryllium (Dissolved)	0.0051	0.0032	0.0029	na	na
Beryllium (Total)	0.0047	0.0029	0.0042	0.003	0.0014
Cadmium (Dissolved)	0.012	0.0065	0.0053	na	na
Cadmium (Total)	0.011	0.0048	0.012	0.0064	0.0034
Calcium (Dissolved)	150	100	97	na	na
Calcium (Total)	140	99	100	140	91
Chromium (Dissolved)	0.032	0.013	0.016	na	na
Chromium (Total)	0.025	0.017	0.03	0.028	0.0078 U
Hexavalent Chromium (Total)	0.01 U	0.01 U	0.01 U	0.01 U	0.01 U
Cobalt (Dissolved)	0.035	0.024	0.021	na	na
Cobalt (Total)	0.034	0.021	0.032	0.03	0.011
Copper (Dissolved)	0.043	0.029	0.019	na	na
Copper (Total)	0.034	0.017	0.04	0.024	0.012
Iron (Dissolved)	1	0.7	0.78	na	na
Iron (Total)	2.4	0.8	0.7	0.44	3.1
Lead (Dissolved)	0.0039	0.004	0.0026	na	na
Lead (Total)	0.0028	0.0017 U	0.0033	0.0036	0.0023
Magnesium (Dissolved)	46	33	31	na	na
Magnesium (Total)	45	32	31	44	24
Manganese (Dissolved)	0.55	0.58	0.55	na	na
Manganese (Total)	0.53	0.57	0.58	0.071	0.3200 U
Mercury (Dissolved)	0.0002 U	0.0002 U	0.0002 U	na	na
Mercury (Total)	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U
Molybdenum (Dissolved)	2.4	0.12	0.13	na	na
Molybdenum (Total)	2.1	0.14	0.13	0.48	0.031
Nickel (Dissolved)	0.049	0.026	0.023	na	na
Nickel (Total)	0.047	0.02	0.046	0.019	0.01 U
Potassium (Dissolved)	9.1	6.9	6.5	na	na
Potassium (Total)	8.8	6.6	6.8	3.1	1.8
Selenium (Dissolved)	0.0029	0.0027 U	0.0027 U	na	na
Selenium (Total)	0.0032	0.0027 U	0.0029	0.0027 U	0.0027 U
Silver (Dissolved)	0.23	0.01	0.0083 U	na	na
Silver (Total)	0.018	0.0083 U	0.025	0.0083 U	0.0083 U
Sodium (Dissolved)	130	170	170	na	na
Sodium (Total)	130	170	170	76	20
Thallium (Dissolved)	0.0023 U	0.0023 U	0.0023 U	na	na
Thallium (Total)	0.0023 U	0.0023 U	0.0023 U	0.0023 U	0.0023 U
Vanadium (Dissolved)	0.037	0.021	0.017	na	na
Vanadium (Total)	0.032	0.016	0.036	0.013	0.0054 U
Zinc (Dissolved)	0.18	0.13	0.11	na	na
Zinc (Total)	0.15	0.11	0.12	0.044	0.0088
Cyanide (Free)	0.005 U	0.005 U	0.005 U	0.13	0.005 U
Cyanide (Total)	0.005 U	0.005 U	0.005 U	0.014	0.005

Appendix H

Appendix H - Geotechnical Testing Report

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LABORATORY TEST REPORT

April 16,1997

Project No.97073-01

Ms. Martha Fleming
Environmental Strategies Corporation
4 Penn Center West
Suite 315
Pittsburgh,PA 15276

RE: Soils Testing - Al Tech Dunkirk 483803

Transmitted herein are the results of the soils testing performed for Environmental Strategies Corporation verified on the Project Verification Form, submitted April 2, 1997.The testing was performed in accordance with the ASTM methods listed on the enclosed data sheets. The remaining sample materials for this project will be retained for a minimum of 90 days as directed by the Geotechnics' Quality Program.

Disclaimer

The test results are believed to be representative of the samples submitted but are indicative only of the specimens which were evaluated. Geotechnics has no direct knowledge of the origin of the samples, implies no position with regard to the disposition of the test results, i.e., pass/fail, and makes no claims as to the suitability of the material for its intended use.

The test data and all associated project information provided shall be held in strict confidence and disclosed to other parties only with authorization of the Client and Geotechnics. The test data submitted herein is considered integral with this report and is not to be reproduced except in whole and only with the authorization of the Client and Geotechnics.

We are pleased to provide these testing services. Should you have any questions or if we may be of further assistance, please do not hesitate to contact our office.

Respectively submitted,

David R. Backstrom
Laboratory Director

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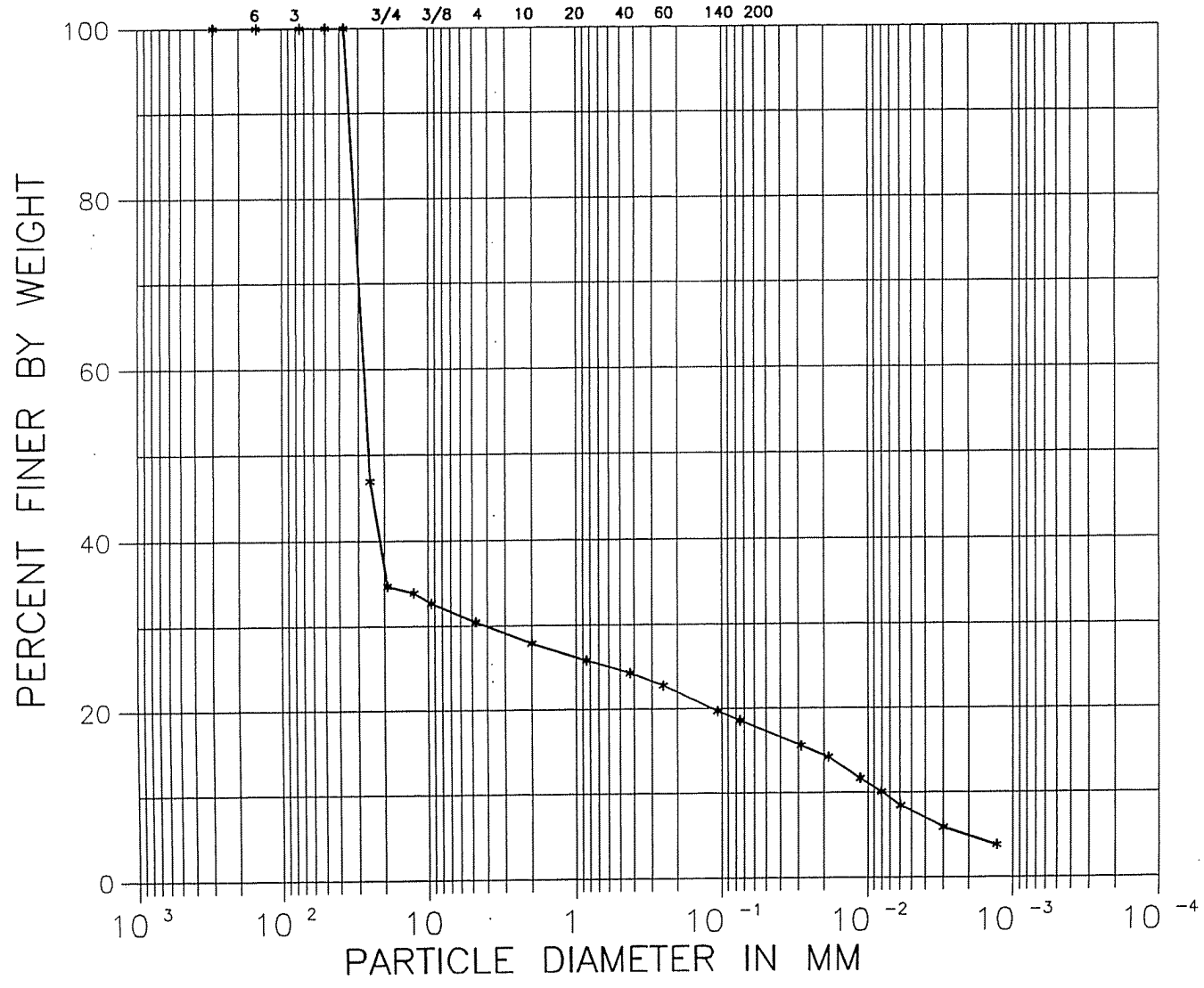
Client ENVIRONMENTAL STRATEGIES
Client Project AL TECH DUNKIRK 483803
Project No. 97073-01
USCS Classification gc
Soil Description BROWN CLAYEY GRAVEL

Boring No. NA
Depth(ft) NA
Sample No. GS 05-03
USDA Classification LOAM

SIEVE ANALYSIS HYDROMETER

USCS	GRAVEL	SAND	SILT AND CLAY FRACTION	
USDA	GRAVEL	SAND	SILT	CLAY



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WASH SIEVE ANALYSIS

Client	ENVIRONMENTAL STRATEGIES	Tested By	BF	Date	04-03-97
Client Project	AL TECH DUNKIRK 483803	Checked By	TM	Date	4-14-97
Project No.	97073-01				
Boring No.	NA				
Depth(ft.)	NA				
Sample No.	GS 05-03				
Soil Description	BROWN CLAYEY GRAVEL				

Wt. of Total Sample(dry) (2)	424.0 gm.	Wt of Grand Total (1)	1221.78
Wt. of +#200 Sample	197.0 gm.		
Wt. of -#200 Sample	227.0 gm.	J Factor	0.3470
		(Percent finer than 3/4")	

Sieve	Sieve Opening (mm)	Wt. of Soil Retained (gm.)		Percent Retained	Accumulate Percent Retained	Percent Finer	**Final Percent Finer (3)**
12"	300.0	0.00		0.00	0.00	100.00	**100.0**
6"	150.0	0.00		0.00	0.00	100.00	**100.0**
3"	75.0	0.00		0.00	0.00	100.00	**100.0**
2"	50.0	0.00		0.00	0.00	100.00	**100.0**
1 1/2"	37.5	0.00	+ 3/4"	0.00	0.00	100.00	**100.0**
1"	25.0	648.30	SIEVE	53.06	53.06	46.94	**46.9**
3/4"	19.0	149.50	ANALYSIS	12.24	65.30	34.70	**34.7**
1/2"	12.5	10.10	- 3/4"	2.38	2.38	97.62	**33.9**
3/8"	9.5	14.78	SIEVE	3.49	5.87	94.13	**32.7**
#4	4.75	27.08	ANALYSIS	6.39	12.26	87.74	**30.4**
#10	2.00	31.18		7.35	19.61	80.39	**27.9**
#20	0.85	25.43		6.00	25.61	74.39	**25.8**
#40	0.425	18.41		4.34	29.95	70.05	**24.3**
#60	0.250	18.70		4.41	34.36	65.64	**22.8**
#140	0.106	37.71		8.89	43.25	56.75	**19.7**
#200	0.075	13.62		3.21	46.47	53.53	**18.6**
Pan	-	226.97		53.53	100.00	-	-

Water Content	
Tare No.	1024
Wgt. Tare + WS.	528.30
Wgt. Tare + DS.	522.80
Wgt. Tare	98.82
Wgt. Of Water	5.50
Wgt. Of DS.	423.98
% Water	1.3

TOTAL WET WGHT. -3/4 SIEVE
429

TOTAL DRY WGHT. -3/4 SIEVE
424

Note: 1) The +3/4" sieve analysis is based on the grand total dry weight of material.
2) The -3/4" sieve analysis is based on the total dry weight of the split portion of sample.
3) The final percent finer combines the two analysis.

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HYDROMETER ANALYSIS

Client	ENVIRONMENTAL STRATEGIES	Tested By	TO	Date	04-03-97
Client Project	AL TECH DUNKIRK 483803	Checked By	TM	Date	4-14-97
Project No.	97073-01				
Boring No.	NA				
Depth(ft.)	NA				
Sample No.	GS 05-03				

Soil Sample Weight			
Container No.	1624		
Wt. Contain. & Dry Soil	146.31 gm.	K Factor	0.01311
		Composite Correction	6.73
Wt. Contain.	101.49 gm.	a Factor	0.99
Wt. Dispers.	5.00 gm.		
Wt. Dry Soil	39.82 gm.	% Finer Than No. 200	18.58

Temperature C	22.1	Measured
Specific Gravity	2.70	Assumed

Elapsed Time (min.)	R Measured		R Corrected	N (%)	D (mm)	N' (%)
0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
2	40.5	40.5	33.8	84.0	0.0288	15.6
5		37.5	30.8	76.5	0.0187	14.2
15		32.0	25.3	62.8	0.0113	11.7
31		28.5	21.8	54.1	0.0080	10.1
60		25.0	18.3	45.4	0.0059	8.4
250		19.5	12.8	31.8	0.0030	5.9
1440		15.0	8.3	20.6	0.0013	3.8

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Client	ENVIRONMENTAL STRATEGIES
Client Project	AL TECH DUNKIRK 483803
Project No.	97073-01
Boring No.	NA
Depth(ft.)	NA
Sample No.	GS 05-03

DIAMETER (mm)	PERCENT FINER
300.00	100.0
150.00	100.0
75.000	100.0
50.000	100.0
37.500	100.0
25.000	46.9
19.000	34.7
12.500	33.9
9.5000	32.7
4.7500	30.4
2.0000	27.9
0.8500	25.8
0.4250	24.3
0.2500	22.8
0.1060	19.7
0.0750	18.6
0.0288	15.6
0.0187	14.2
0.0113	11.7
0.0080	10.1
0.0059	8.4
0.0030	5.9
0.0013	3.8

SIEVE OPENING (mm)	PERCENT FINER
100.00	100.00
2.00	27.90
0.05	17.31
0.002	4.90

PERCENT OF EACH COMPONENT		CORRECTED PERCENT -2.0 mm MATERIAL FOR USDA DETERMINATION
GRAVEL	72.10	0.00
SAND	10.58	37.93
SILT	12.41	44.49
CLAY	4.90	17.58

USDA CLASSIFICATION LOAM

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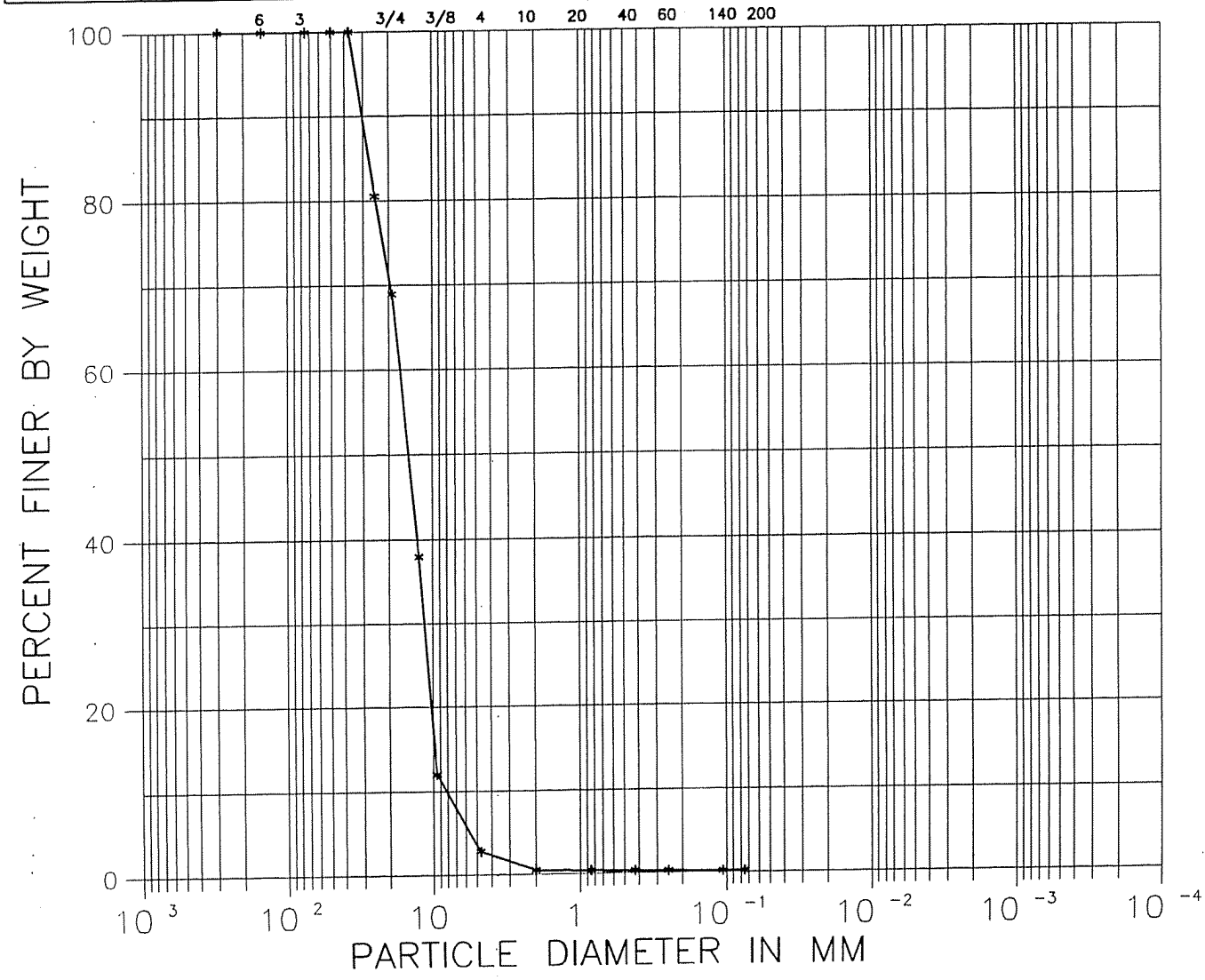
Client ENVIRONMENTAL STRATEGIES
Client Project AL TECH DUNKIRK 483803
Project No. 97073-01
USCS Classification gp
Soil Description GRAY & BROWN POORLY GRADED GRAVEL

Boring No. NA
Depth(ft) NA
Sample No. TI-01-03
USDA Classification NA

SIEVE ANALYSIS HYDROMETER

USCS	GRAVEL	SAND	SILT AND CLAY FRACTION	
USDA	GRAVEL	SAND	SILT	CLAY



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WASH SIEVE ANALYSIS

Client	ENVIRONMENTAL STRATEGIES	Tested By	BS	Date	04-02-97
Client Project	AL TECH DUNKIRK 483803	Checked By	TM	Date	4-10-97
Project No.	97073-01				
Boring No.	NA				
Depth(ft.)	NA				
Sample No.	TI-01-03				
Soil Description	GRAY & BROWN POORLY GRADED GRAVEL				

Wt. of Total Sample(dry) (2)	1117.8 gm.	Wt of Grand Total (1)	1966.81
Wt. of +#200 Sample	1115.1 gm.		
Wt. of -#200 Sample	2.7 gm.	J Factor	0.6894
		(Percent finer than 3/4")	

Sieve	Sieve Opening (mm)	Wt. of Soil Retained (gm.)		Percent Retained	Accumulate Percent Retained	Percent Finer	**Final Percent Finer (3)**
12"	300.0	0.00		0.00	0.00	100.00	**100.0**
6"	150.0	0.00		0.00	0.00	100.00	**100.0**
3"	75.0	0.00		0.00	0.00	100.00	**100.0**
2"	50.0	0.00		0.00	0.00	100.00	**100.0**
1 1/2"	37.5	0.00	+ 3/4"	0.00	0.00	100.00	**100.0**
1"	25.0	383.10	SIEVE	19.48	19.48	80.52	**80.5**
3/4"	19.0	227.80	ANALYSIS	11.58	31.06	68.94	**68.9**
1/2"	12.5	502.30	- 3/4"	44.94	44.94	55.06	**38.0**
3/8"	9.5	420.30	SIEVE	37.60	82.53	17.47	**12.0**
#4	4.75	150.17	ANALYSIS	13.43	95.97	4.03	**2.8**
#10	2.00	36.84		3.30	99.26	0.74	**0.5**
#20	0.85	2.02		0.18	99.45	0.55	**0.4**
#40	0.425	1.21		0.11	99.55	0.45	**0.3**
#60	0.250	0.95		0.08	99.64	0.36	**0.2**
#140	0.106	1.04		0.09	99.73	0.27	**0.2**
#200	0.075	0.27		0.02	99.76	0.24	**0.2**
Pan	-	2.73		0.24	100.00	-	-

Water Content			
Tare No.	4062	TOTAL WET WGHT. -3/4 SIEVE	
Wgt. Tare + WS.	1227.00	1360	
Wgt. Tare + DS.	1223.60		
Wgt. Tare	105.77	TOTAL DRY WGHT. -3/4 SIEVE	
Wgt. Of Water	3.40	1356	
Wgt. Of DS.	1117.83		
% Water	0.3		

Note: 1) The +3/4" sieve analysis is based on the grand total dry weight of material.
2) The -3/4" sieve analysis is based on the total dry weight of the split portion of sample.
3) The final percent finer combines the two analysis.

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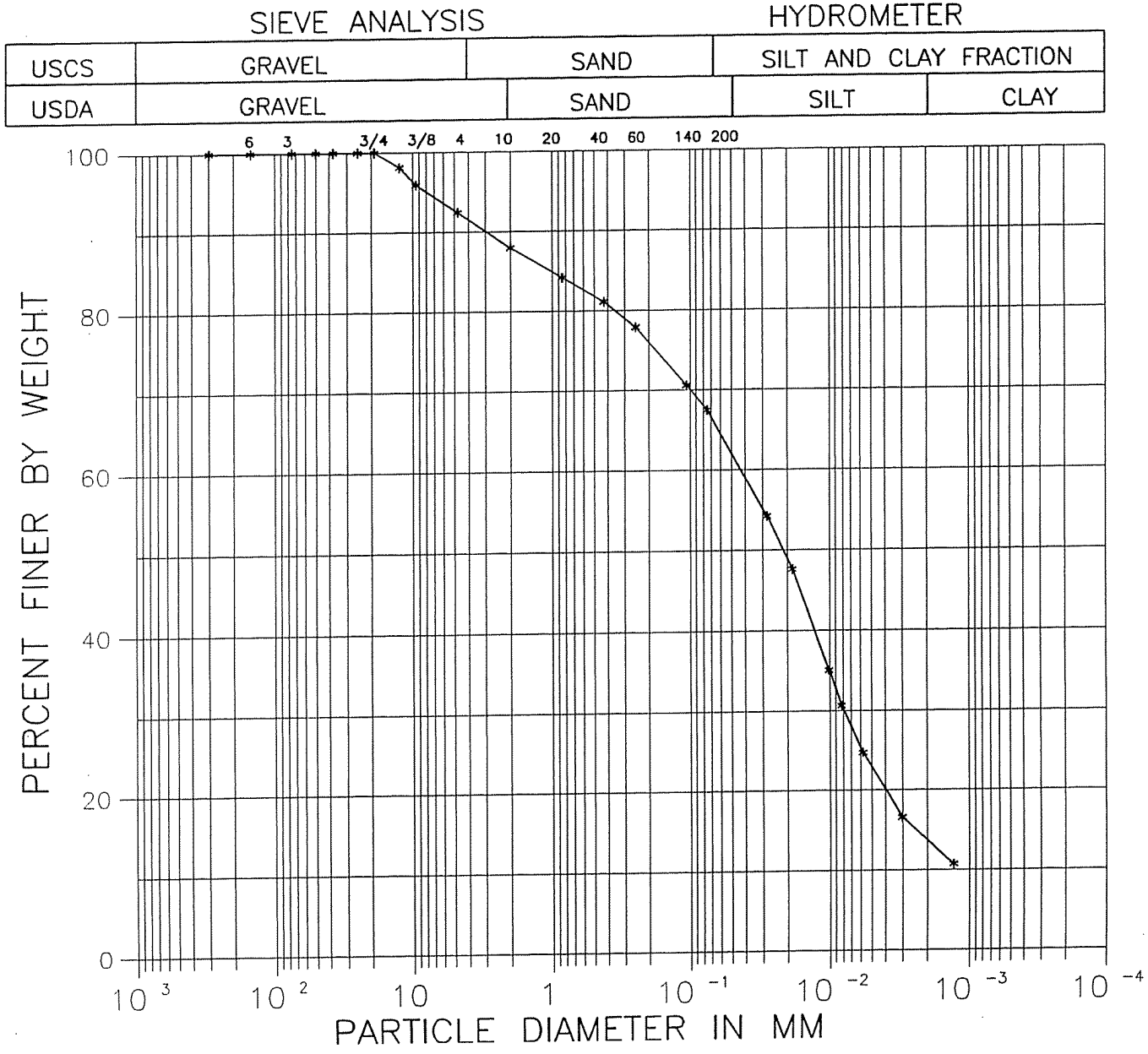
Client ENVIRONMENTAL STRATEGIES
Client Project AL TECH DUNKIRK 483803
Project No. 97073-01
USCS Classification cl
Soil Description BROWN SANDY LEAN CLAY

Boring No. NA
Depth(ft) NA
Sample No. TP01-0506
USDA Classification SILT LOAM



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WASH SIEVE ANALYSIS

Client	ENVIRONMENTAL STRATEGIES	Tested By	BS	Date	04-02-97
Client Project	AL TECH DUNKIRK 483803	Checked By	TM	Date	4-10-97
Project No.	97073-01				
Boring No.	NA				
Depth(ft.)	NA				
Sample No.	TPO1-0506				
Soil Description	BROWN SANDY LEAN CLAY				

Wt. of Total Sample(dry)	871.95 gm.
Wt. of +#200 Sample	283.63 gm.
Wt. of -#200 Sample	588.32 gm.

Sieve	Sieve Opening (mm)	Wt. of Soil Retained (gm.)	Percent Retained	Accumulated Percent Retained	Percent Finer
12"	300.00	0.00	0.0	0.0	100.0
6"	150.00	0.00	0.0	0.0	100.0
3"	75.00	0.00	0.0	0.0	100.0
2"	50.00	0.00	0.0	0.0	100.0
1 1/2"	37.50	0.00	0.0	0.0	100.0
1"	25.00	0.00	0.0	0.0	100.0
3/4"	19.00	0.00	0.0	0.0	100.0
1/2"	12.50	16.39	1.9	1.9	98.1
3/8"	9.50	19.43	2.2	4.1	95.9
#4	4.75	30.26	3.5	7.6	92.4
#10	2.00	38.73	4.4	12.0	88.0
#20	0.85	33.05	3.8	15.8	84.2
#40	0.425	27.01	3.1	18.9	81.1
#60	0.250	28.01	3.2	22.1	77.9
#140	0.106	63.70	7.3	29.4	70.6
#200	0.075	27.05	3.1	32.5	67.5
Pan	-	588.32	67.5	100.0	-

Water Content	
Tare No.	1919
Wgt. Tare + WS.	1118.50
Wgt. Tare + DS.	975.00
Wgt. Tare	103.05
Wgt. Of Water	143.50
Wgt. Of DS.	871.95
% Water	16.5

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HYDROMETER ANALYSIS

Client	ENVIRONMENTAL STRATEGIES	Tested By	TO	Date	04-02-97
Client Project	AL TECH DUNKIRK 483803	Checked By	TM	Date	4-10-97
Project No.	97073-01				
Boring No.	NA				
Depth(ft.)	NA				
Sample No.	TPO1-0506				

Soil Sample Weight			
Container No.	1300		
Wt. Contain. & Dry Soil	151.43 gm.	K Factor	0.01311
		Composite Correction	6.73
Wt. Contain.	101.15 gm.	a Factor	0.99
Wt. Dispers.	5.00 gm.		
Wt. Dry Soil	45.28 gm.	% Finer Than No. 200	67.47

Temperature C	22.1
Specific Gravity	2.70 Assumed

Elapsed Time (min.)	R Measured		R Corrected	N (%)	D (mm)	N' (%)
0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
2	40.5	43.5	36.8	80.4	0.0281	54.2
5		39.0	32.3	70.6	0.0185	47.6
19		30.5	23.8	52.0	0.0101	35.1
30		27.5	20.8	45.4	0.0082	30.6
64		23.5	16.8	36.7	0.0058	24.7
250		18.0	11.3	24.6	0.0030	16.6
1440		14.0	7.3	15.9	0.0013	10.7

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Client	ENVIRONMENTAL STRATEGIES
Client Project	AL TECH DUNKIRK 483803
Project No.	97073-01
Boring No.	NA
Depth(ft.)	NA
Sample No.	TPO1-0506

DIAMETER (mm)	PERCENT FINER
300.00	100.0
150.00	100.0
75.000	100.0
50.000	100.0
37.500	100.0
25.000	100.0
19.000	100.0
12.500	98.1
9.5000	95.9
4.7500	92.4
2.0000	88.0
0.8500	84.2
0.4250	81.1
0.2500	77.9
0.1060	70.6
0.0750	67.5
0.0281	54.2
0.0185	47.6
0.0101	35.1
0.0082	30.6
0.0058	24.7
0.0030	16.6
0.0013	10.7

SIEVE OPENING (mm)	PERCENT FINER
100.00	100.00
2.00	87.98
0.05	62.02
0.002	13.75

PERCENT OF EACH COMPONENT		CORRECTED PERCENT OF -2.0 mm MATERIAL FOR USDA DETERMINATION
GRAVEL	12.02	0.00
SAND	25.96	29.51
SILT	48.26	54.86
CLAY	13.75	15.63

USDA CLASSIFICATION SILT LOAM

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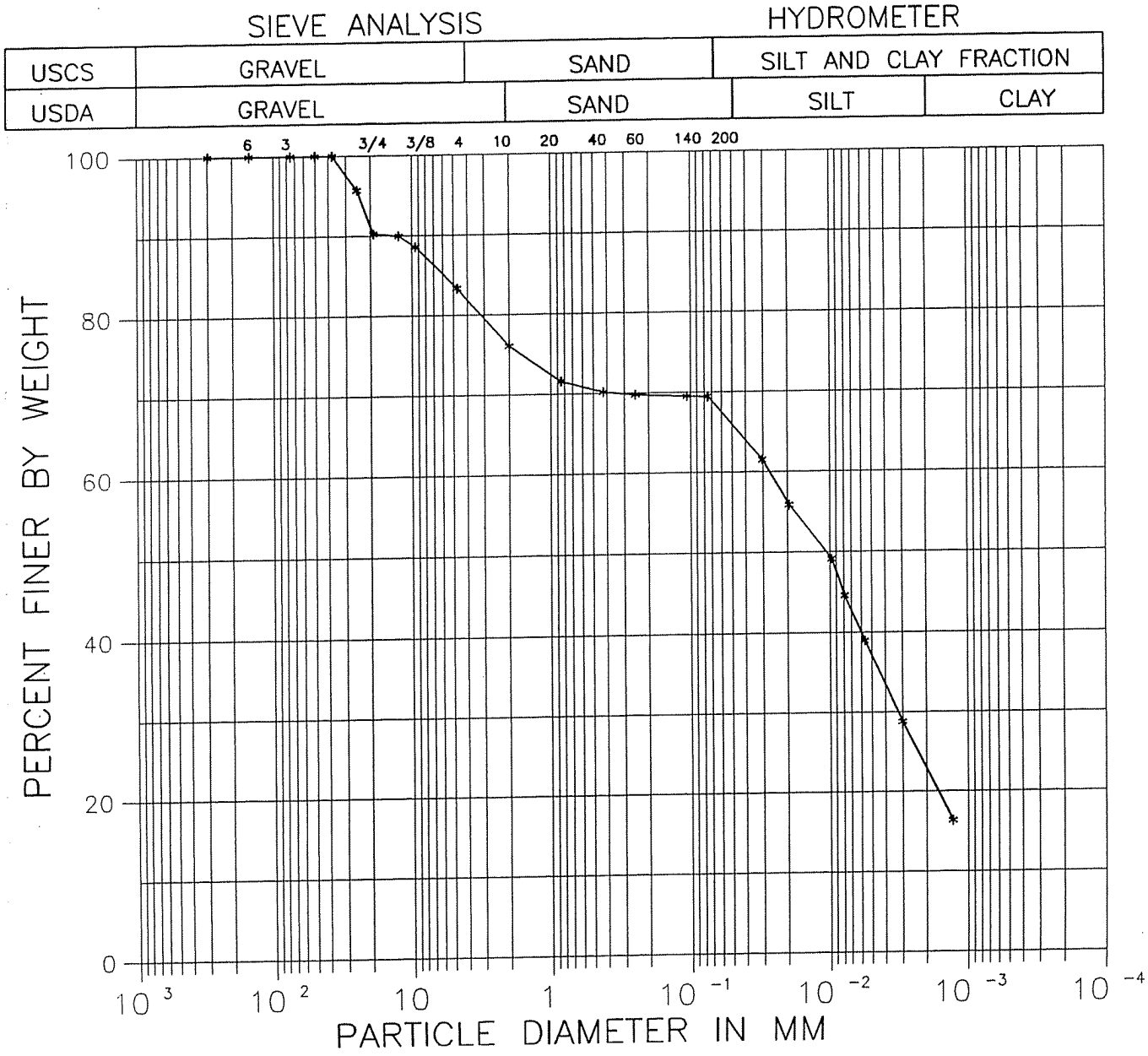
Client ENVIRONMENTAL STRATEGIES
Client Project AL TECH DUNKIRK 483803
Project No. 97073-01
USCS Classification cl
Soil Description GRAY GRAVELLY LEAN CLAY

Boring No. NA
Depth(ft) NA
Sample No. TP01-0809
USDA Classification SILTY CLAY LOAM



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WASH SIEVE ANALYSIS

Client	ENVIRONMENTAL STRATEGIES	Tested By	BS	Date	04-02-97
Client Project	AL TECH DUNKIRK 483803	Checked By	TM	Date	4-10-97
Project No.	97073-01				
Boring No.	NA				
Depth(ft.)	NA				
Sample No.	TPOI-0809				
Soil Description	GRAY GRAVELLY LEAN CLAY				

Wt. of Total Sample(dry) (2)	1235.6 gm.	Wt of Grand Total (1)	2263.76
Wt. of +#200 Sample	285.4 gm.		
Wt. of -#200 Sample	950.2 gm.	J Factor	0.9024
		(Percent finer than 3/4")	

Sieve	Sieve Opening (mm)	Wt. of Soil Retained (gm.)		Percent Retained	Accumulate Percent Retained	Percent Finer	**Final Percent Finer (3)**
12"	300.0	0.00		0.00	0.00	100.00	**100.0**
6"	150.0	0.00		0.00	0.00	100.00	**100.0**
3"	75.0	0.00		0.00	0.00	100.00	**100.0**
2"	50.0	0.00		0.00	0.00	100.00	**100.0**
1 1/2"	37.5	0.00	+ 3/4"	0.00	0.00	100.00	**100.0**
1"	25.0	97.26	SIEVE	4.30	4.30	95.70	**95.7**
3/4"	19.0	123.67	ANALYSIS	5.46	9.76	90.24	**90.2**
1/2"	12.5	4.04	- 3/4"	0.33	0.33	99.67	**89.9**
3/8"	9.5	18.84	SIEVE	1.52	1.85	98.15	**88.6**
#4	4.75	72.01	ANALYSIS	5.83	7.68	92.32	**83.3**
#10	2.00	99.17		8.03	15.71	84.29	**76.1**
#20	0.85	61.67		4.99	20.70	79.30	**71.6**
#40	0.425	19.36		1.57	22.26	77.74	**70.1**
#60	0.250	5.49		0.44	22.71	77.29	**69.7**
#140	0.106	3.64		0.29	23.00	77.00	**69.5**
#200	0.075	1.14		0.09	23.10	76.90	**69.4**
Pan	-	950.23		76.90	100.00	-	-

Water Content			
Tare No.	865	TOTAL WET WGHT. -3/4 SIEVE	
Wgt. Tare + WS.	1423.40	2179	
Wgt. Tare + DS.	1341.10		
Wgt. Tare	105.51	TOTAL DRY WGHT. -3/4 SIEVE	
Wgt. Of Water	82.30	2043	
Wgt. Of DS.	1235.59		
% Water	6.7		

Note: 1) The +3/4" sieve analysis is based on the grand total dry weight of material.
2) The -3/4" sieve analysis is based on the total dry weight of the split portion of sample.
3) The final percent finer combines the two analysis.

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HYDROMETER ANALYSIS

Client	ENVIRONMENTAL STRATEGIES	Tested By	TO	Date	04-02-97
Client Project	AL TECH DUNKIRK 483803	Checked By	TM	Date	4-10-97
Project No.	97073-01				
Boring No.	NA				
Depth(ft.)	NA				
Sample No.	TPOI-0809				

Soil Sample Weight			
Container No.	1317		
Wt. Contain. & Dry Soil	142.22 gm.	K Factor	0.01311
		Composite Correction	6.73
Wt. Contain.	106.75 gm.	a Factor	0.99
Wt. Dispers.	5.00 gm.		
Wt. Dry Soil	30.47 gm.	% Finer Than No. 200	69.40

Temperature C	22.1	Measured
Specific Gravity	2.70	Assumed

Elapsed Time (min.)	R Measured		R Corrected	N (%)	D (mm)	N' (%)
0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
2	34.0	34.0	27.3	88.6	0.0304	61.5
5		31.5	24.8	80.5	0.0196	55.9
21		28.5	21.8	70.7	0.0098	49.1
33		26.5	19.8	64.2	0.0079	44.6
67		24.0	17.3	56.1	0.0056	38.9
250		19.5	12.8	41.5	0.0030	28.8
1440		14.0	7.3	23.6	0.0013	16.4

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Client	ENVIRONMENTAL STRATEGIES
Client Project	AL TECH DUNKIRK 483803
Project No.	97073-01
Boring No.	NA
Depth(ft.)	NA
Sample No.	TPOI-0809

DIAMETER (mm)	PERCENT FINER
300.00	100.0
150.00	100.0
75.000	100.0
50.000	100.0
37.500	100.0
25.000	95.7
19.000	90.2
12.500	89.9
9.5000	88.6
4.7500	83.3
2.0000	76.1
0.8500	71.6
0.4250	70.1
0.2500	69.7
0.1060	69.5
0.0750	69.4
0.0304	61.5
0.0196	55.9
0.0098	49.1
0.0079	44.6
0.0056	38.9
0.0030	28.8
0.0013	16.4

SIEVE OPENING (mm)	PERCENT FINER
100.00	100.00
2.00	76.07
0.05	65.86
0.002	22.82

PERCENT OF EACH COMPONENT		CORRECTED PERCENT -2.0 mm MATERIAL FOR USDA DETERMINATION
GRAVEL	23.93	0.00
SAND	10.21	13.42
SILT	43.03	56.57
CLAY	22.82	30.01

USDA CLASSIFICATION SILTY CLAY LOAM

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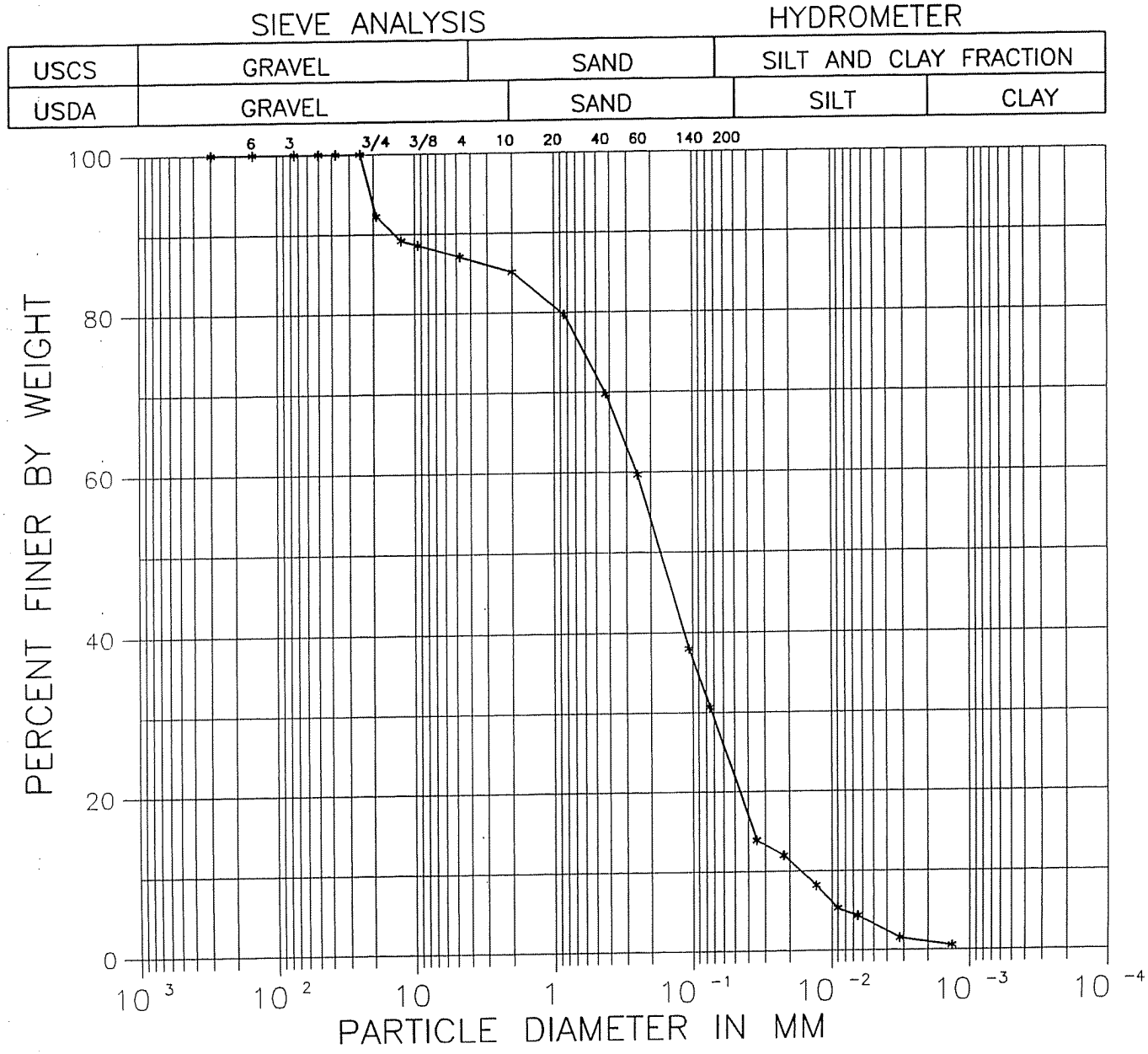
Client ENVIRONMENTAL STRATEGIES
Client Project AL TECH DUNKIRK 483803
Project No. 97073-01
USCS Classification sc
Soil Description BROWN CLAYEY SAND

Boring No. NA
Depth(ft) NA
Sample No. TP02-03
USDA Classification LOAMY SAND



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WASH SIEVE ANALYSIS

Client	ENVIRONMENTAL STRATEGIES	Tested By	BF	Date	04-03-97
Client Project	AL TECH DUNKIRK 483803	Checked By	TM	Date	4-10-97
Project No.	97073-01				
Boring No.	NA				
Depth(ft.)	NA				
Sample No.	TP02-03				
Soil Description	BROWN CLAYEY SAND				

Wt. of Total Sample(dry)	473.30 gm.
Wt. of +#200 Sample	328.19 gm.
Wt. of -#200 Sample	145.11 gm.

Sieve	Sieve Opening (mm)	Wt. of Soil Retained (gm.)	Percent Retained	Accumulated Percent Retained	Percent Finer
12"	300.00	0.00	0.0	0.0	100.0
6"	150.00	0.00	0.0	0.0	100.0
3"	75.00	0.00	0.0	0.0	100.0
2"	50.00	0.00	0.0	0.0	100.0
1 1/2"	37.50	0.00	0.0	0.0	100.0
1"	25.00	0.00	0.0	0.0	100.0
3/4"	19.00	36.76	7.8	7.8	92.2
1/2"	12.50	14.41	3.0	10.8	89.2
3/8"	9.50	2.99	0.6	11.4	88.6
#4	4.75	7.10	1.5	12.9	87.1
#10	2.00	9.33	2.0	14.9	85.1
#20	0.85	25.62	5.4	20.3	79.7
#40	0.425	46.93	9.9	30.2	69.8
#60	0.250	47.78	10.1	40.3	59.7
#140	0.106	102.48	21.7	62.0	38.0
#200	0.075	34.79	7.4	69.3	30.7
Pan	-	145.11	30.7	100.0	-

Water Content	
Tare No.	1139
Wgt. Tare + WS.	672.10
Wgt. Tare + DS.	577.90
Wgt. Tare	104.60
Wgt. Of Water	94.20
Wgt. Of DS.	473.30
% Water	19.9

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HYDROMETER ANALYSIS

Client	ENVIRONMENTAL STRATEGIES	Tested By	TO	Date	04-03-97
Client Project	AL TECH DUNKIRK 483803	Checked By	TM	Date	4-10-97
Project No.	97073-01				
Boring No.	NA				
Depth(ft.)	NA				
Sample No.	TP02-03				

Soil Sample Weight			
Container No.	1341		
Wt. Contain. & Dry Soil	121.88 gm.	K Factor	0.01311
		Composite Correction	6.73
Wt. Contain.	101.06 gm.	a Factor	0.99
Wt. Dispers.	5.00 gm.		
Wt. Dry Soil	15.82 gm.	% Finer Than No. 200	30.66

Temperature C	22.1
Specific Gravity	2.70 Assumed

Elapsed Time (min.)	R Measured		R Corrected	N (%)	D (mm)	N' (%)
0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
2	14.5	14.0	7.3	45.5	0.0347	14.0
5		13.0	6.3	39.3	0.0221	12.0
15		11.0	4.3	26.7	0.0129	8.2
31		9.5	2.8	17.4	0.0090	5.3
60		9.0	2.3	14.2	0.0065	4.4
250		7.5	0.8	4.8	0.0032	1.5
1440		7.0	0.3	1.7	0.0013	0.5

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Client	ENVIRONMENTAL STRATEGIES
Client Project	AL TECH DUNKIRK 483803
Project No.	97073-01
Boring No.	NA
Depth(ft.)	NA
Sample No.	TP02-03

DIAMETER (mm)	PERCENT FINER
300.00	100.0
150.00	100.0
75.000	100.0
50.000	100.0
37.500	100.0
25.000	100.0
19.000	92.2
12.500	89.2
9.5000	88.6
4.7500	87.1
2.0000	85.1
0.8500	79.7
0.4250	69.8
0.2500	59.7
0.1060	38.0
0.0750	30.7
0.0347	14.0
0.0221	12.0
0.0129	8.2
0.0090	5.3
0.0065	4.4
0.0032	1.5
0.0013	0.5

SIEVE OPENING (mm)	PERCENT FINER
100.00	100.00
2.00	85.09
0.05	21.87
0.002	0.96

PERCENT OF EACH COMPONENT		CORRECTED PERCENT OF -2.0 mm MATERIAL FOR USDA DETERMINATION
GRAVEL	14.91	0.00
SAND	63.21	74.29
SILT	20.91	24.58
CLAY	0.96	1.13

USDA CLASSIFICATION: LOAMY SAND

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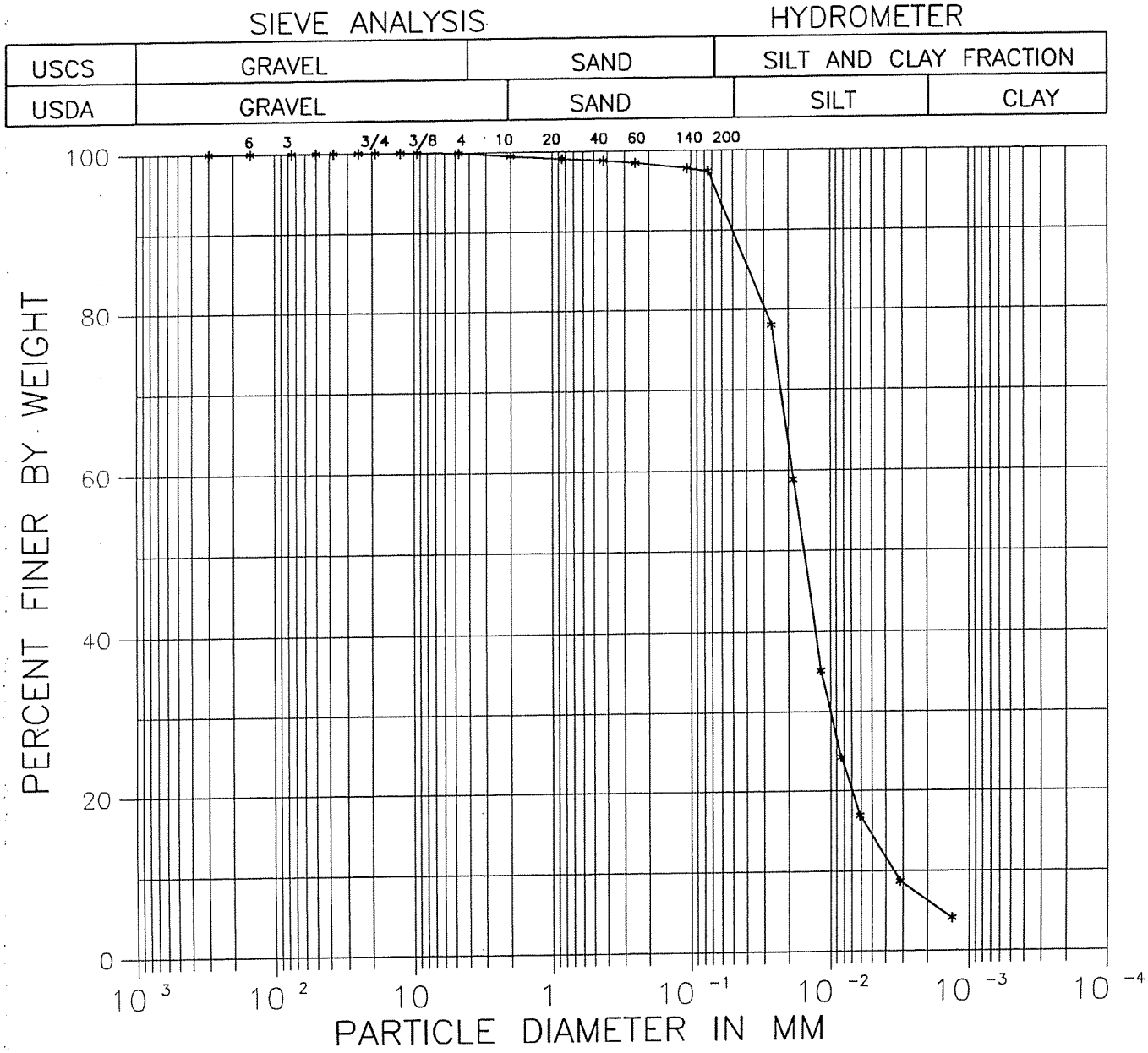
Client ENVIRONMENTAL STRATEGIES
Client Project AL TECH DUNKIRK 483803
Project No. 97073-01
USCS Classification cl
Soil Description BROWN LEAN CLAY

Boring No. NA
Depth(ft) NA
Sample No. TP02-0506
USDA Classification SILT



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WASH SIEVE ANALYSIS

Client	ENVIRONMENTAL STRATEGIES	Tested By	BF	Date	04-03-97
Client Project	AL TECH DUNKIRK 483803	Checked By	TM	Date	4-10-97
Project No.	97073-01				
Boring No.	NA				
Depth(ft.)	NA				
Sample No.	TP02-0506				
Soil Description	BROWN LEAN CLAY				

Wt. of Total Sample(dry)	543.13 gm.
Wt. of +#200 Sample	14.03 gm.
Wt. of -#200 Sample	529.10 gm.

Sieve	Sieve Opening (mm)	Wt. of Soil Retained (gm.)	Percent Retained	Accumulated Percent Retained	Percent Finer
12"	300.00	0.00	0.0	0.0	100.0
6"	150.00	0.00	0.0	0.0	100.0
3"	75.00	0.00	0.0	0.0	100.0
2"	50.00	0.00	0.0	0.0	100.0
1 1/2"	37.50	0.00	0.0	0.0	100.0
1"	25.00	0.00	0.0	0.0	100.0
3/4"	19.00	0.00	0.0	0.0	100.0
1/2"	12.50	0.00	0.0	0.0	100.0
3/8"	9.50	0.00	0.0	0.0	100.0
#4	4.75	0.42	0.1	0.1	99.9
#10	2.00	2.51	0.5	0.5	99.5
#20	0.85	2.05	0.4	0.9	99.1
#40	0.425	1.55	0.3	1.2	98.8
#60	0.250	1.73	0.3	1.5	98.5
#140	0.106	3.85	0.7	2.2	97.8
#200	0.075	1.92	0.4	2.6	97.4
Pan	-	529.10	97.4	100.0	-

Water Content	
Tare No.	1137
Wgt. Tare + WS.	722.10
Wgt. Tare + DS.	647.80
Wgt. Tare	104.67
Wgt. Of Water	74.30
Wgt. Of DS.	543.13
% Water	13.7

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HYDROMETER ANALYSIS

Client	ENVIRONMENTAL STRATEGIES	Tested By	TO	Date	04-03-97
Client Project	AL TECH DUNKIRK 483803	Checked By	TM	Date	4-10-97
Project No.	97073-01				
Boring No.	NA				
Depth(ft.)	NA				
Sample No.	TP02-0506				

Soil Sample Weight			
Container No.	889		
Wt. Contain. & Dry Soil	163.80 gm.	K Factor	0.01311
		Composite Correction	6.73
Wt. Contain.	105.92 gm.	a Factor	0.99
Wt. Dispers.	5.00 gm.		
Wt. Dry Soil	52.88 gm.	% Finer Than No. 200	97.42

Temperature C	22.1
Specific Gravity	2.70 Assumed

Elapsed Time (min.)	R Measured		R Corrected	N (%)	D (mm)	N' (%)
0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
2	49.0	49.5	42.8	80.1	0.0265	78.0
5		39.0	32.3	60.4	0.0185	58.9
15		26.0	19.3	36.1	0.0117	35.2
32		20.0	13.3	24.8	0.0084	24.2
63		16.0	9.3	17.4	0.0061	16.9
250		11.5	4.8	8.9	0.0031	8.7
1440		9.0	2.3	4.3	0.0013	4.1

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Client	ENVIRONMENTAL STRATEGIES
Client Project	AL TECH DUNKIRK 483803
Project No.	97073-01
Boring No.	NA
Depth(ft.)	NA
Sample No.	TP02-0506

DIAMETER (mm)	PERCENT FINER
300.00	100.0
150.00	100.0
75.000	100.0
50.000	100.0
37.500	100.0
25.000	100.0
19.000	100.0
12.500	100.0
9.5000	100.0
4.7500	99.9
2.0000	99.5
0.8500	99.1
0.4250	98.8
0.2500	98.5
0.1060	97.8
0.0750	97.4
0.0265	78.0
0.0185	58.9
0.0117	35.2
0.0084	24.2
0.0061	16.9
0.0031	8.7
0.0013	4.1

SIEVE OPENING (mm)	PERCENT FINER
100.00	100.00
2.00	99.46
0.05	89.85
0.002	6.30

PERCENT OF EACH COMPONENT		CORRECTED PERCENT OF -2.0 mm MATERIAL FOR USDA DETERMINATION
GRAVEL	0.54	0.00
SAND	9.61	9.66
SILT	83.54	84.00
CLAY	6.30	6.34

USDA CLASSIFICATION SILT

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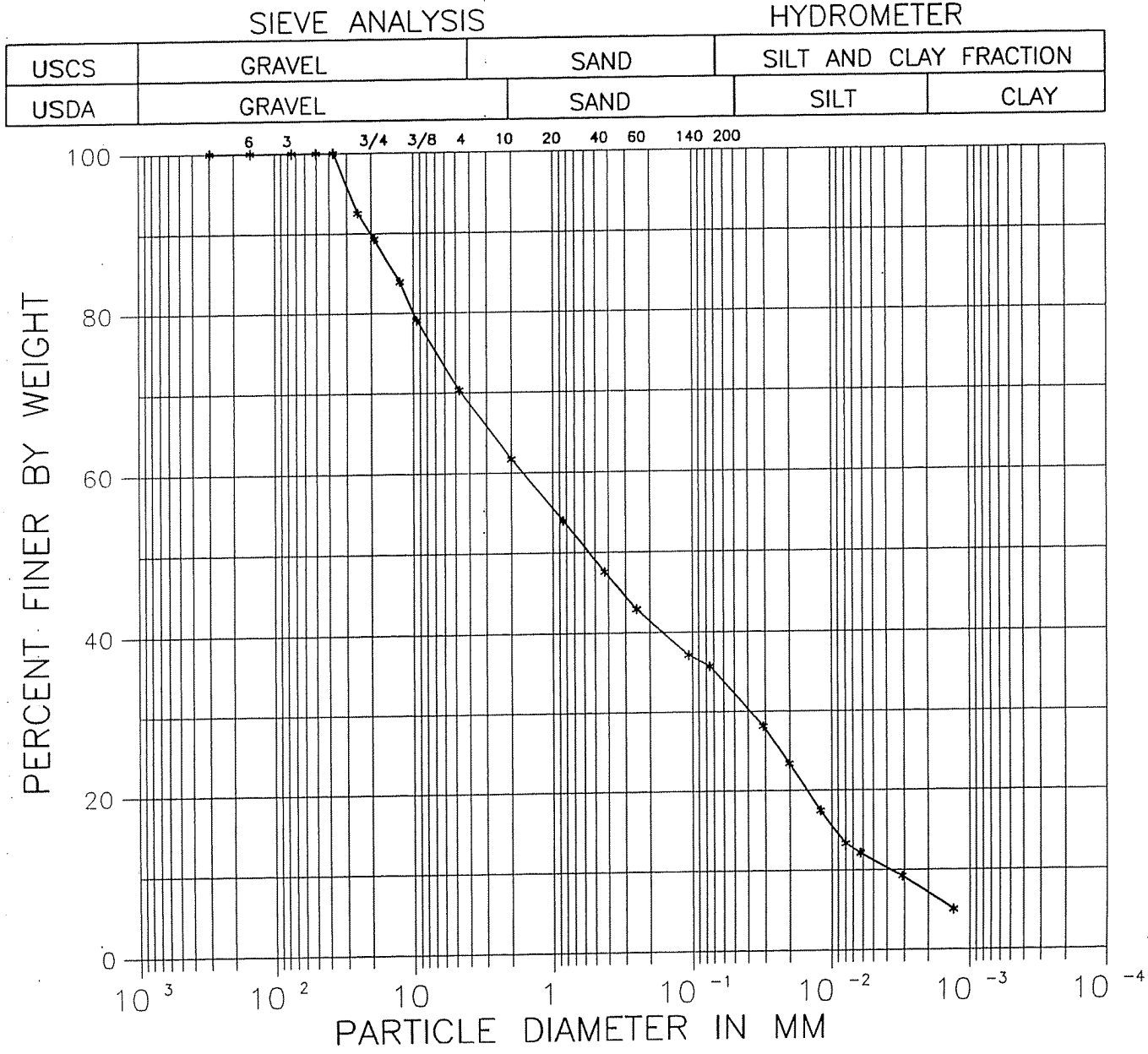
Client ENVIRONMENTAL STRATEGIES
Client Project AL TECH DUNKIRK 483803
Project No. 97073-01
USCS Classification sc
Soil Description BROWN CLAYEY SAND WITH GRAVEL

Boring No. NA
Depth(ft) NA
Sample No. TP03-0102
USDA Classification LOAM



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WASH SIEVE ANALYSIS

Client	ENVIRONMENTAL STRATEGIES	Tested By	GU	Date	04-02-97
Client Project	AL TECH DUNKIRK 483803	Checked By	TM	Date	4-10-97
Project No.	97073-01				
Boring No.	NA				
Depth(ft.)	NA				
Sample No.	TP03-0102				
Soil Description	BROWN CLAYEY SAND WITH GRAVEL				

Wt. of Total Sample(dry) (2)	1041.2 gm.	Wt of Grand Total (1)	2525.94
Wt. of +#200 Sample	624.7 gm.		
Wt. of -#200 Sample	416.4 gm.	J Factor	0.8928
		(Percent finer than 3/4")	

Sieve	Sieve Opening (mm)	Wt. of Soil Retained (gm.)		Percent Retained	Accumulate Percent Retained	Percent Finer	**Final Percent Finer (3)**
12"	300.0	0.00		0.00	0.00	100.00	**100.0**
6"	150.0	0.00		0.00	0.00	100.00	**100.0**
3"	75.0	0.00		0.00	0.00	100.00	**100.0**
2"	50.0	0.00		0.00	0.00	100.00	**100.0**
1 1/2"	37.5	0.00	+ 3/4"	0.00	0.00	100.00	**100.0**
1"	25.0	188.30	SIEVE	7.45	7.45	92.55	**92.5**
3/4"	19.0	82.53	ANALYSIS	3.27	10.72	89.28	**89.3**
1/2"	12.5	62.76	- 3/4"	6.03	6.03	93.97	**83.9**
3/8"	9.5	56.40	SIEVE	5.42	11.45	88.55	**79.1**
#4	4.75	102.01	ANALYSIS	9.80	21.24	78.76	**70.3**
#10	2.00	100.34		9.64	30.88	69.12	**61.7**
#20	0.85	90.25		8.67	39.55	60.45	**54.0**
#40	0.425	74.91		7.19	46.74	53.26	**47.5**
#60	0.250	54.42		5.23	51.97	48.03	**42.9**
#140	0.106	66.85		6.42	58.39	41.61	**37.1**
#200	0.075	16.79		1.61	60.00	40.00	**35.7**
Pan	-	416.42		40.00	100.00	-	-

Water Content			
Tare No.	1065	TOTAL WET WGHT. -3/4 SIEVE	
Wgt. Tare + WS.	1259.00	2499	
Wgt. Tare + DS.	1146.40		
Wgt. Tare	105.25	TOTAL DRY WGHT. -3/4 SIEVE	
Wgt. Of Water	112.60	2255	
Wgt. Of DS.	1041.15		
% Water	10.8		

Note: 1) The +3/4" sieve analysis is based on the grand total dry weight of material.
2) The -3/4" sieve analysis is based on the total dry weight of the split portion of sample.
3) The final percent finer combines the two analysis.

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HYDROMETER ANALYSIS

Client	ENVIRONMENTAL STRATEGIES	Tested By	TO	Date	04-02-97
Client Project	AL TECH DUNKIRK 483803	Checked By	TM	Date	4-10-97
Project No.	97073-01				
Boring No.	NA				
Depth(ft.)	NA				
Sample No.	TP03-0102				

Soil Sample Weight			
Container No.	1303		
Wt. Contain. & Dry Soil	138.92 gm.	K Factor	0.01311
		Composite Correction	6.73
Wt. Contain.	104.04 gm.	a Factor	0.99
Wt. Dispers.	5.00 gm.		
Wt. Dry Soil	29.88 gm.	% Finer Than No. 200	35.71

Temperature C	22.1	Measured
Specific Gravity	2.70	Assumed

Elapsed Time (min.)	R Measured		R Corrected	N (%)	D (mm)	N' (%)
0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
2	30.5	30.5	23.8	78.8	0.0312	28.1
5		26.5	19.8	65.5	0.0203	23.4
15		21.5	14.8	48.9	0.0121	17.5
36		18.0	11.3	37.4	0.0080	13.3
60		17.0	10.3	34.0	0.0062	12.2
250		14.5	7.8	25.8	0.0031	9.2
1440		11.0	4.3	14.2	0.0013	5.1

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Client	ENVIRONMENTAL STRATEGIES
Client Project	AL TECH DUNKIRK 483803
Project No.	97073-01
Boring No.	NA
Depth(ft.)	NA
Sample No.	TPO3-0102

DIAMETER (mm)	PERCENT FINER
300.00	100.0
150.00	100.0
75.000	100.0
50.000	100.0
37.500	100.0
25.000	92.5
19.000	89.3
12.500	83.9
9.5000	79.1
4.7500	70.3
2.0000	61.7
0.8500	54.0
0.4250	47.5
0.2500	42.9
0.1060	37.1
0.0750	35.7
0.0312	28.1
0.0203	23.4
0.0121	17.5
0.0080	13.3
0.0062	12.2
0.0031	9.2
0.0013	5.1

SIEVE OPENING (mm)	PERCENT FINER
100.00	100.00
2.00	61.71
0.05	32.21
0.002	7.08

PERCENT OF EACH COMPONENT		CORRECTED PERCENT -2.0 mm MATERIAL FOR USDA DETERMINATION
GRAVEL	38.29	0.00
SAND	29.50	47.81
SILT	25.12	40.71
CLAY	7.08	11.48

USDA CLASSIFICATION LOAM

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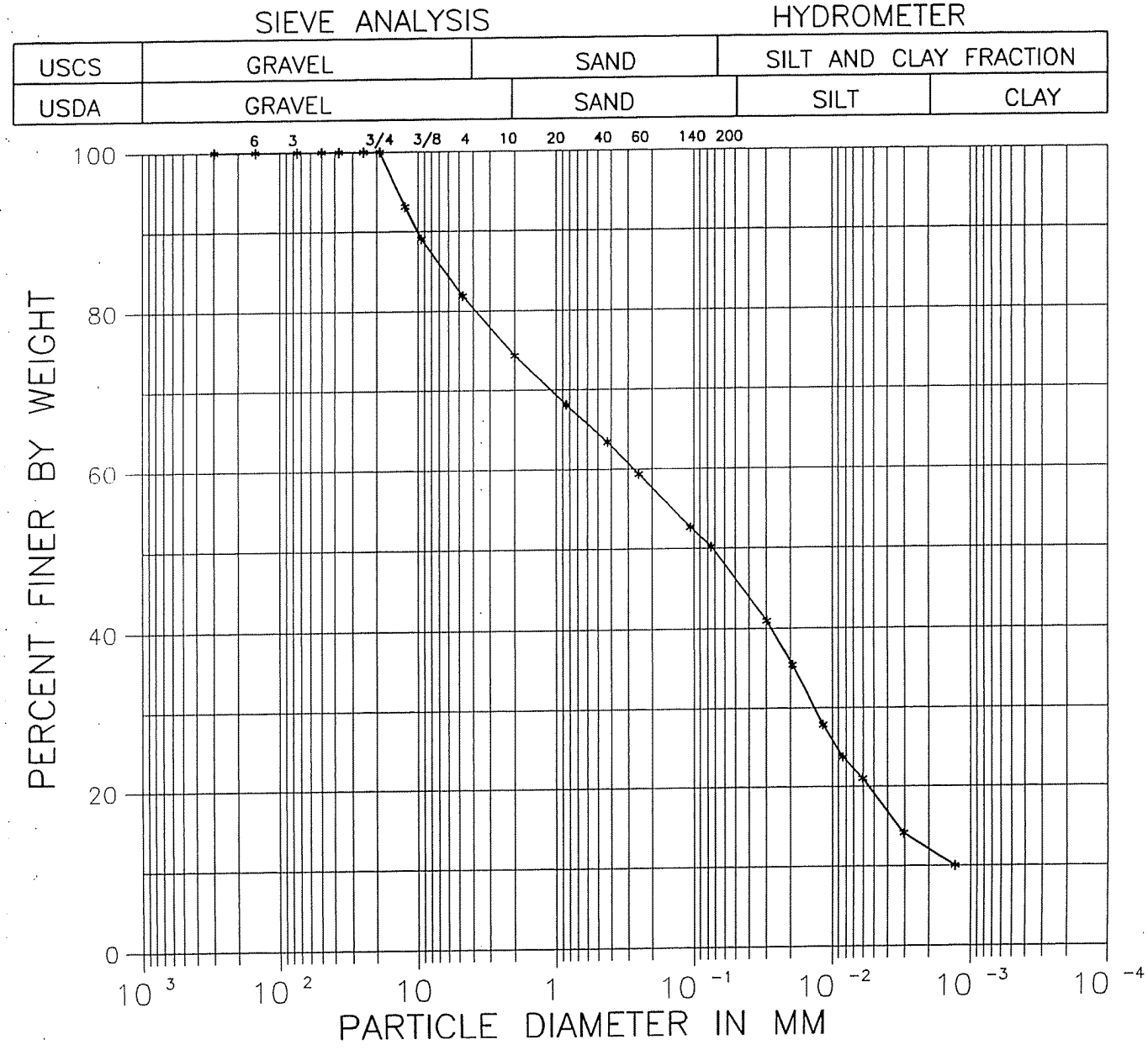
Client ENVIRONMENTAL STRATEGIES
Client Project AL TECH DUNKIRK 483803
Project No. 97073-01
USCS Classification cl
Soil Description BROWN SANDY LEAN CLAY WITH GRAVEL

Boring No. NA
Depth(ft) NA
Sample No. TP04-0809
USDA Classification LOAM



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WASH SIEVE ANALYSIS

Client	ENVIRONMENTAL STRATEGIES	Tested By	BF	Date	04-03-97
Client Project	AL TECH DUNKIRK 483803	Checked By	TM	Date	4-10-97
Project No.	97073-01				
Boring No.	NA				
Depth(ft.)	NA				
Sample No.	TP04-0809				
Soil Description	BROWN SANDY LEAN CLAY WITH GRAVEL				

Wt. of Total Sample(dry)	517.63 gm.
Wt. of +#200 Sample	257.88 gm.
Wt. of -#200 Sample	259.75 gm.

Sieve	Sieve Opening (mm)	Wt. of Soil Retained (gm.)	Percent Retained	Accumulated Percent Retained	Percent Finer
12"	300.00	0.00	0.0	0.0	100.0
6"	150.00	0.00	0.0	0.0	100.0
3"	75.00	0.00	0.0	0.0	100.0
2"	50.00	0.00	0.0	0.0	100.0
1 1/2"	37.50	0.00	0.0	0.0	100.0
1"	25.00	0.00	0.0	0.0	100.0
3/4"	19.00	0.00	0.0	0.0	100.0
1/2"	12.50	35.55	6.9	6.9	93.1
3/8"	9.50	21.13	4.1	10.9	89.1
#4	4.75	36.96	7.1	18.1	81.9
#10	2.00	39.28	7.6	25.7	74.3
#20	0.85	32.20	6.2	31.9	68.1
#40	0.425	24.26	4.7	36.6	63.4
#60	0.250	21.02	4.1	40.6	59.4
#140	0.106	34.68	6.7	47.3	52.7
#200	0.075	12.80	2.5	49.8	50.2
Pan	-	259.75	50.2	100.0	-

Water Content	
Tare No.	1343
Wgt. Tare + WS.	699.70
Wgt. Tare + DS.	619.70
Wgt. Tare	102.07
Wgt. Of Water	80.00
Wgt. Of DS.	517.63
% Water	15.5

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HYDROMETER ANALYSIS

Client	ENVIRONMENTAL STRATEGIES	Tested By	TO	Date	04-03-97
Client Project	AL TECH DUNKIRK 483803	Checked By	TM	Date	4-10-97
Project No.	97073-01				
Boring No.	NA				
Depth(ft.)	NA				
Sample No.	TP04-0809				

Soil Sample Weight			
Container No.	1328		
Wt. Contain. & Dry Soil	144.64 gm.	K Factor	0.01311
		Composite Correction	6.73
Wt. Contain.	103.52 gm.	a Factor	0.99
Wt. Dispers.	5.00 gm.		
Wt. Dry Soil	36.12 gm.	% Finer Than No. 200	50.18

Temperature C	22.1	
Specific Gravity	2.70	
	Assumed	

Elapsed Time (min.)	R Measured		R Corrected	N (%)	D (mm)	N' (%)
0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
2	34.5	36.5	29.8	81.6	0.0298	40.9
5		32.5	25.8	70.6	0.0194	35.4
15		27.0	20.3	55.6	0.0117	27.9
30		24.0	17.3	47.3	0.0084	23.8
60		22.0	15.3	41.9	0.0060	21.0
250		17.0	10.3	28.2	0.0030	14.1
1440		14.0	7.3	19.9	0.0013	10.0

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Client	ENVIRONMENTAL STRATEGIES
Client Project	AL TECH DUNKIRK 483803
Project No.	97073-01
Boring No.	NA
Depth(ft.)	NA
Sample No.	TP04-0809

DIAMETER (mm)	PERCENT FINER
300.00	100.0
150.00	100.0
75.000	100.0
50.000	100.0
37.500	100.0
25.000	100.0
19.000	100.0
12.500	93.1
9.5000	89.1
4.7500	81.9
2.0000	74.3
0.8500	68.1
0.4250	63.4
0.2500	59.4
0.1060	52.7
0.0750	50.2
0.0298	40.9
0.0194	35.4
0.0117	27.9
0.0084	23.8
0.0060	21.0
0.0030	14.1
0.0013	10.0

SIEVE OPENING (mm)	PERCENT FINER	PERCENT OF EACH COMPONENT		CORRECTED PERCENT OF -2.0 mm MATERIAL FOR USDA DETERMINATION
100.00	100.00			
		GRAVEL	25.68	0.00
2.00	74.32			
		SAND	28.19	37.93
0.05	46.13			
		SILT	34.03	45.78
0.002	12.10			
		CLAY	12.10	16.28

USDA CLASSIFICATION LOAM

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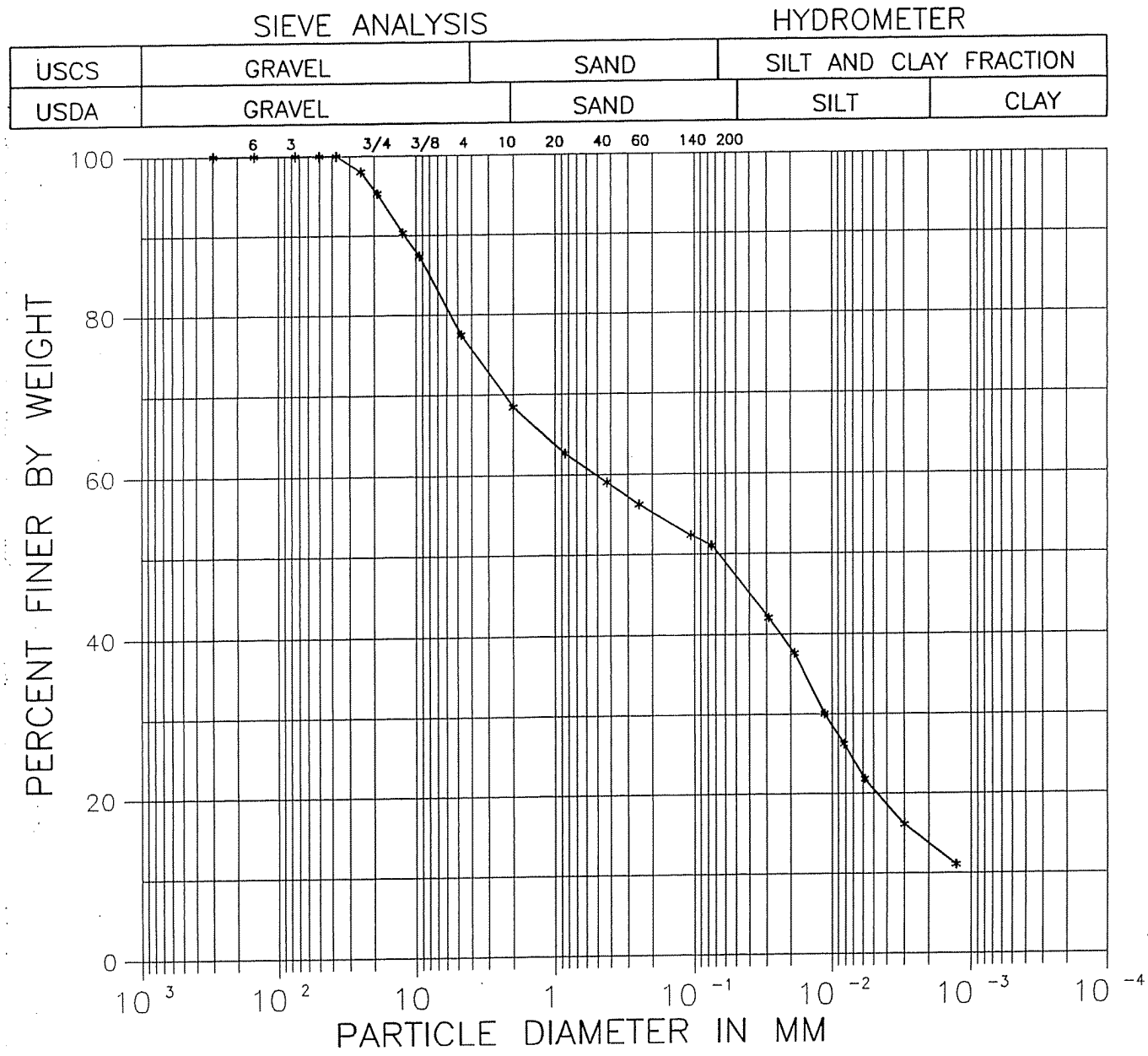
Client ENVIRONMENTAL STRATEGIES
Client Project AL TECH DUNKIRK 483803
Project No. 97073-01
USCS Classification cl
Soil Description BROWN SANDY LEAN CLAY WITH GRAVEL

Boring No. NA
Depth(ft) NA
Sample No. TP05-0304
USDA Classification LOAM



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WASH SIEVE ANALYSIS

Client	ENVIRONMENTAL STRATEGIES	Tested By	GU	Date	04-02-97
Client Project	AL TECH DUNKIRK 483803	Checked By	TM	Date	4-10-97
Project No.	97073-01				
Boring No.	NA				
Depth(ft.)	NA				
Sample No.	TP05-0304				
Soil Description	BROWN SANDY LEAN CLAY WITH GRAVEL				

Wt. of Total Sample(dry) (2)	872.8 gm.	Wt of Grand Total (1)	1960.90
Wt. of +#200 Sample	405.4 gm.		
Wt. of -#200 Sample	467.4 gm.	J Factor	0.9532
		(Percent finer than 3/4")	

Sieve	Sieve Opening (mm)	Wt. of Soil Retained (gm.)		Percent Retained	Accumulate Percent Retained	Percent Finer	**Final Percent Finer (3)**
12"	300.0	0.00		0.00	0.00	100.00	**100.0**
6"	150.0	0.00		0.00	0.00	100.00	**100.0**
3"	75.0	0.00		0.00	0.00	100.00	**100.0**
2"	50.0	0.00		0.00	0.00	100.00	**100.0**
1 1/2"	37.5	0.00	+ 3/4"	0.00	0.00	100.00	**100.0**
1"	25.0	38.47	SIEVE	1.96	1.96	98.04	**98.0**
3/4"	19.0	53.31	ANALYSIS	2.72	4.68	95.32	**95.3**
1/2"	12.5	45.60	- 3/4"	5.22	5.22	94.78	**90.3**
3/8"	9.5	26.97	SIEVE	3.09	8.31	91.69	**87.4**
#4	4.75	90.52	ANALYSIS	10.37	18.69	81.31	**77.5**
#10	2.00	82.99		9.51	28.19	71.81	**68.4**
#20	0.85	52.87		6.06	34.25	65.75	**62.7**
#40	0.425	33.36		3.82	38.07	61.93	**59.0**
#60	0.250	25.52		2.92	41.00	59.00	**56.2**
#140	0.106	35.69		4.09	45.09	54.91	**52.3**
#200	0.075	11.86		1.36	46.45	53.55	**51.0**
Pan	-	467.42		53.55	100.00	-	-

Water Content			
Tare No.	1315	TOTAL WET WGHT. -3/4 SIEVE	
Wgt. Tare + WS.	1072.60	2067	
Wgt. Tare + DS.	980.20		
Wgt. Tare	107.40	TOTAL DRY WGHT. -3/4 SIEVE	
Wgt. Of Water	92.40	1869	
Wgt. Of DS.	872.80		
% Water	10.6		

Note: 1) The +3/4" sieve analysis is based on the grand total dry weight of material.
2) The -3/4" sieve analysis is based on the total dry weight of the split portion of sample.
3) The final percent finer combines the two analysis.

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HYDROMETER ANALYSIS

Client	ENVIRONMENTAL STRATEGIES	Tested By	TO	Date	04-02-97
Client Project	AL TECH DUNKIRK 483803	Checked By	TM	Date	4-10-97
Project No.	97073-01				
Boring No.	NA				
Depth(ft.)	NA				
Sample No.	TP05-0304				

Soil Sample Weight

Container No.	1314		
Wt. Contain. & Dry Soil	145.40 gm.	K Factor	0.01311
		Composite Correction	6.73
Wt. Contain.	100.41 gm.	a Factor	0.99
Wt. Dispers.	5.00 gm.		
Wt. Dry Soil	39.99 gm.	% Finer Than No. 200	51.05

Temperature C	22.1	Measured
Specific Gravity	2.70	Assumed

Elapsed Time (min.)	R Measured		R Corrected	N (%)	D (mm)	N' (%)
0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
2	39.5	40.0	33.3	82.4	0.0289	42.0
5		36.5	29.8	73.7	0.0188	37.6
15		30.5	23.8	58.9	0.0114	30.0
30		27.5	20.8	51.4	0.0082	26.3
63		24.0	17.3	42.8	0.0058	21.8
250		19.5	12.8	31.6	0.0030	16.1
1440		15.5	8.8	21.7	0.0013	11.1

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Client	ENVIRONMENTAL STRATEGIES
Client Project	AL TECH DUNKIRK 483803
Project No.	97073-01
Boring No.	NA
Depth(ft.)	NA
Sample No.	TP05-0304

DIAMETER (mm)	PERCENT FINER
300.00	100.0
150.00	100.0
75.000	100.0
50.000	100.0
37.500	100.0
25.000	98.0
19.000	95.3
12.500	90.3
9.5000	87.4
4.7500	77.5
2.0000	68.4
0.8500	62.7
0.4250	59.0
0.2500	56.2
0.1060	52.3
0.0750	51.0
0.0289	42.0
0.0188	37.6
0.0114	30.0
0.0082	26.3
0.0058	21.8
0.0030	16.1
0.0013	11.1

SIEVE OPENING (mm)	PERCENT FINER
100.00	100.00
2.00	68.44
0.05	47.22
0.002	13.73

PERCENT OF EACH COMPONENT		CORRECTED PERCENT -2.0 mm MATERIAL FOR USDA DETERMINATION
GRAVEL	31.56	0.00
SAND	21.23	31.01
SILT	33.49	48.92
CLAY	13.73	20.06

USDA CLASSIFICATION LOAM

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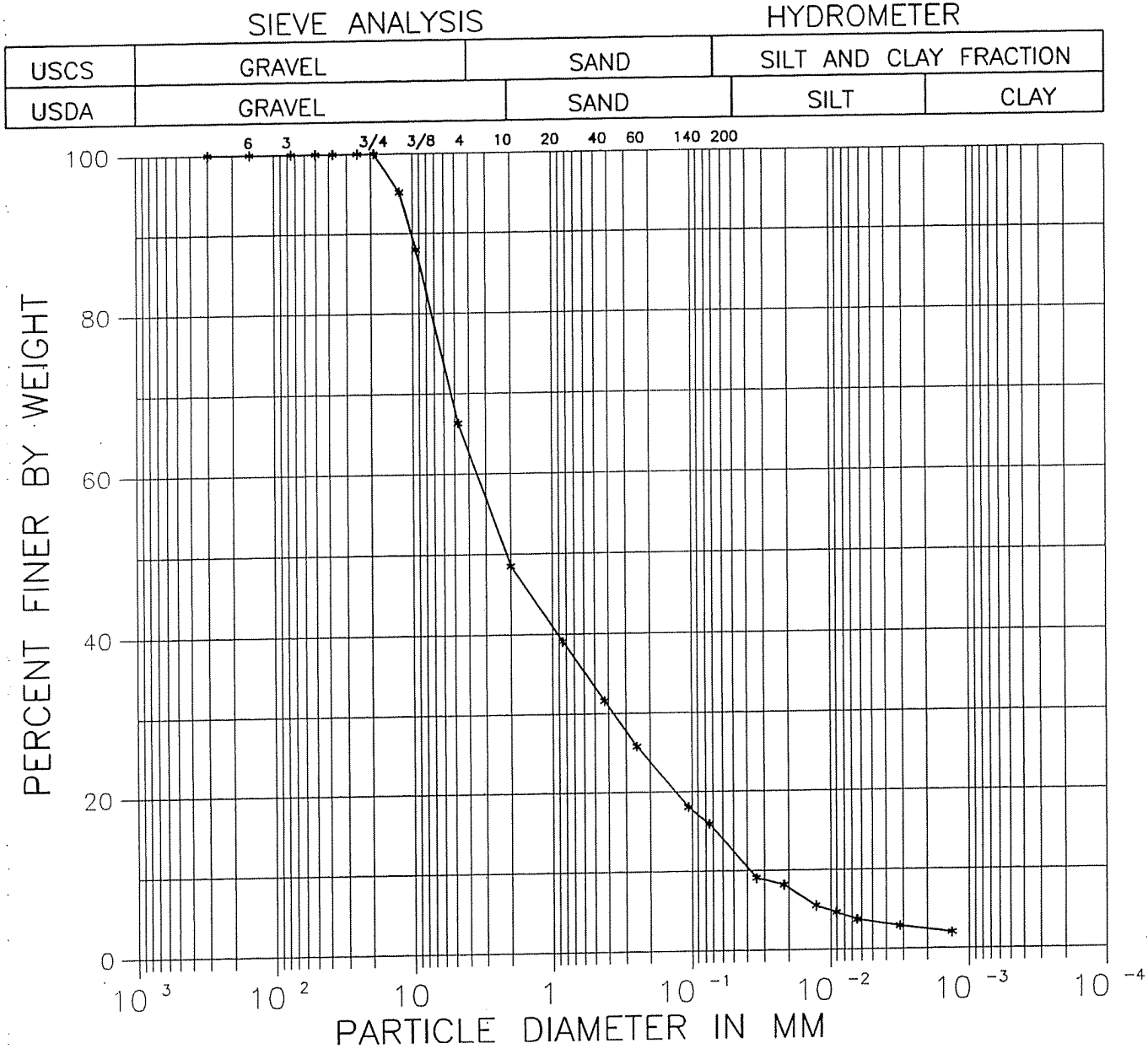
Client ENVIRONMENTAL STRATEGIES
Client Project AL TECH DUNKIRK 483803
Project No. 97073-01
USCS Classification sc
Soil Description BROWN CLAYEY SAND WITH GRAVEL

Boring No. NA
Depth(ft) NA
Sample No. TP11-03
USDA Classification SANDY LOAM



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WASH SIEVE ANALYSIS

Client	ENVIRONMENTAL STRATEGIES	Tested By	BS	Date	04-03-97
Client Project	AL TECH DUNKIRK 483803	Checked By	TM	Date	4-10-97
Project No.	97073-01				
Boring No.	NA				
Depth(ft.)	NA				
Sample No.	TP11-03				
Soil Description	BROWN CLAYEY SAND WITH GRAVEL				

Wt. of Total Sample(dry)	700.47 gm.
Wt. of +#200 Sample	588.62 gm.
Wt. of -#200 Sample	111.85 gm.

Sieve	Sieve Opening (mm)	Wt. of Soil Retained (gm.)	Percent Retained	Accumulated Percent Retained	Percent Finer
12"	300.00	0.00	0.0	0.0	100.0
6"	150.00	0.00	0.0	0.0	100.0
3"	75.00	0.00	0.0	0.0	100.0
2"	50.00	0.00	0.0	0.0	100.0
1 1/2"	37.50	0.00	0.0	0.0	100.0
1"	25.00	0.00	0.0	0.0	100.0
3/4"	19.00	0.00	0.0	0.0	100.0
1/2"	12.50	33.92	4.8	4.8	95.2
3/8"	9.50	50.43	7.2	12.0	88.0
#4	4.75	151.54	21.6	33.7	66.3
#10	2.00	124.92	17.8	51.5	48.5
#20	0.85	66.02	9.4	60.9	39.1
#40	0.425	52.64	7.5	68.4	31.6
#60	0.250	39.97	5.7	74.2	25.8
#140	0.106	54.35	7.8	81.9	18.1
#200	0.075	14.83	2.1	84.0	16.0
Pan	-	111.85	16.0	100.0	-

Water Content	
Tare No.	1623
Wgt. Tare + WS.	848.90
Wgt. Tare + DS.	803.10
Wgt. Tare	102.63
Wgt. Of Water	45.80
Wgt. Of DS.	700.47
% Water	6.5

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HYDROMETER ANALYSIS

Client	ENVIRONMENTAL STRATEGIES	Tested By	TO	Date	04-03-97
Client Project	AL TECH DUNKIRK 483803	Checked By	TM	Date	4-10-97
Project No.	97073-01				
Boring No.	NA				
Depth(ft.)	NA				
Sample No.	TP11-03				

Soil Sample Weight			
Container No.	1084		
Wt. Contain. & Dry Soil	125.52 gm.	K Factor	0.01311
		Composite Correction	6.73
Wt. Contain.	102.60 gm.	a Factor	0.99
Wt. Dispers.	5.00 gm.		
Wt. Dry Soil	17.92 gm.	% Finer Than No. 200	15.97

Temperature C	22.1
Specific Gravity	2.70 Assumed

Elapsed Time (min.)	R Measured		R Corrected	N (%)	D (mm)	N' (%)
0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
2	17.0	17.0	10.3	56.8	0.0341	9.1
5		16.0	9.3	51.2	0.0217	8.2
15		13.0	6.3	34.7	0.0127	5.5
30		12.0	5.3	29.1	0.0091	4.7
60		11.0	4.3	23.6	0.0064	3.8
250		10.0	3.3	18.1	0.0032	2.9
1440		9.0	2.3	12.6	0.0013	2.0

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Geotechnics

Client	ENVIRONMENTAL STRATEGIES
Client Project	AL TECH DUNKIRK 483803
Project No.	97073-01
Boring No.	NA
Depth(ft.)	NA
Sample No.	TP11-03

DIAMETER (mm)	PERCENT FINER
300.00	100.0
150.00	100.0
75.000	100.0
50.000	100.0
37.500	100.0
25.000	100.0
19.000	100.0
12.500	95.2
9.5000	88.0
4.7500	66.3
2.0000	48.5
0.8500	39.1
0.4250	31.6
0.2500	25.8
0.1060	18.1
0.0750	16.0
0.0341	9.1
0.0217	8.2
0.0127	5.5
0.0091	4.7
0.0064	3.8
0.0032	2.9
0.0013	2.0

SIEVE OPENING (mm)	PERCENT FINER
100.00	100.00
2.00	48.49
0.05	12.42
0.002	2.42

PERCENT OF EACH COMPONENT		CORRECTED PERCENT OF -2.0 mm MATERIAL FOR USDA DETERMINATION
GRAVEL	51.51	0.00
SAND	36.07	74.39
SILT	10.00	20.62
CLAY	2.42	4.99

USDA CLASSIFICATION SANDY LOAM

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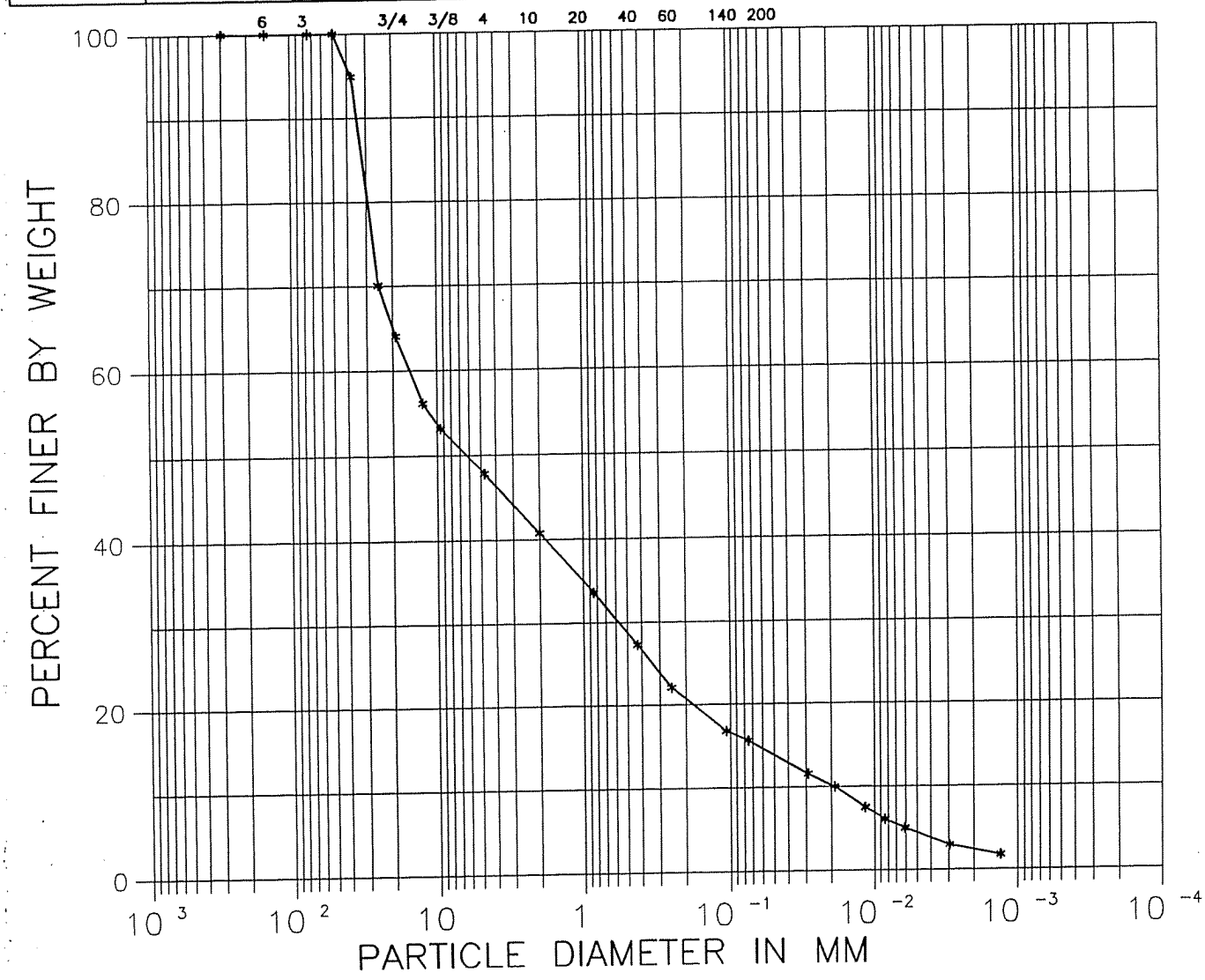
Client ENVIRONMENTAL STRATEGIES
Client Project AL TECH DUNKIRK 483803
Project No. 97073-01
USCS Classification gc
Soil Description BROWN CLAYEY GRAVEL WITH SAND

Boring No. NA
Depth(ft) NA
Sample No. RB-07-03
USDA Classification SANDY LOAM

	SIEVE ANALYSIS		HYDROMETER	
USCS	GRAVEL	SAND	SILT AND CLAY FRACTION	
USDA	GRAVEL	SAND	SILT	CLAY



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WASH SIEVE ANALYSIS

Client	ENVIRONMENTAL STRATEGIES	Tested By	BF	Date	04-03-97
Client Project	AL TECH DUNKIRK 483803	Checked By	TM	Date	4-14-97
Project No.	97073-01				
Boring No.	NA				
Depth(ft.)	NA				
Sample No.	RB-07-03				
Soil Description	BROWN CLAYEY GRAVEL WITH SAND				

Wt. of Total Sample(dry) (2)	1030.0 gm.	Wt of Grand Total (1)	1607.82
Wt. of +#200 Sample	778.4 gm.		
Wt. of -#200 Sample	251.6 gm.	J Factor	0.6406
		(Percent finer than 3/4")	

Sieve	Sieve Opening (mm)	Wt. of Soil Retained (gm.)		Percent Retained	Accumulate Percent Retained	Percent Finer	**Final Percent Finer (3)**
12"	300.0	0.00		0.00	0.00	100.00	**100.0**
6"	150.0	0.00		0.00	0.00	100.00	**100.0**
3"	75.0	0.00		0.00	0.00	100.00	**100.0**
2"	50.0	0.00		0.00	0.00	100.00	**100.0**
1 1/2"	37.5	82.39	+ 3/4"	5.12	5.12	94.88	**94.9**
1"	25.0	398.40	SIEVE	24.78	29.90	70.10	**70.1**
3/4"	19.0	96.99	ANALYSIS	6.03	35.94	64.06	**64.1**
1/2"	12.5	127.33	- 3/4"	12.36	12.36	87.64	**56.1**
3/8"	9.5	48.12	SIEVE	4.67	17.03	82.97	**53.2**
#4	4.75	86.00	ANALYSIS	8.35	25.38	74.62	**47.8**
#10	2.00	113.12		10.98	36.36	63.64	**40.8**
#20	0.85	115.70		11.23	47.60	52.40	**33.6**
#40	0.425	100.79		9.79	57.38	42.62	**27.3**
#60	0.250	83.92		8.15	65.53	34.47	**22.1**
#140	0.106	84.44		8.20	73.73	26.27	**16.8**
#200	0.075	18.98		1.84	75.57	24.43	**15.7**
Pan	-	251.64		24.43	100.00	-	-

Water Content			
Tare No.	680	TOTAL WET WGHT. -3/4 SIEVE	
Wgt. Tare + WS.	1199.60	1095	
Wgt. Tare + DS.	1134.80		
Wgt. Tare	104.76	TOTAL DRY WGHT. -3/4 SIEVE	
Wgt. Of Water	64.80	1030	
Wgt. Of DS.	1030.04		
% Water	6.3		

Note: 1) The +3/4" sieve analysis is based on the grand total dry weight of material.
2) The -3/4" sieve analysis is based on the total dry weight of the split portion of sample.
3) The final percent finer combines the two analysis.

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HYDROMETER ANALYSIS

Client	ENVIRONMENTAL STRATEGIES	Tested By	TO	Date	04-03-97
Client Project	AL TECH DUNKIRK 483803	Checked By	TM	Date	4-14-97
Project No.	97073-01				
Boring No.	NA				
Depth(ft.)	NA				
Sample No.	RB-07-03				

Soil Sample Weight			
Container No.	1644		
Wt. Contain. & Dry Soil	152.33 gm.	K Factor	0.01311
		Composite Correction	6.73
Wt. Contain.	103.52 gm.	a Factor	0.99
Wt. Dispers.	5.00 gm.		
Wt. Dry Soil	43.81 gm.	% Finer Than No. 200	15.65

Temperature C	22.1	Measured
Specific Gravity	2.70	Assumed

Elapsed Time (min.)	R Measured		R Corrected	N (%)	D (mm)	N' (%)
0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
2	40.0	39.5	32.8	74.1	0.0291	11.6
5		35.0	28.3	63.9	0.0191	10.0
15		28.0	21.3	48.1	0.0116	7.5
30		24.0	17.3	39.0	0.0084	6.1
60		21.0	14.3	32.3	0.0061	5.0
270		15.0	8.3	18.7	0.0030	2.9
1440		11.5	4.8	10.8	0.0013	1.7

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Client	ENVIRONMENTAL STRATEGIES
Client Project	AL TECH DUNKIRK 483803
Project No.	97073-01
Boring No.	NA
Depth(ft.)	NA
Sample No.	RB-07-03

DIAMETER (mm)	PERCENT FINER
300.00	100.0
150.00	100.0
75.000	100.0
50.000	100.0
37.500	94.9
25.000	70.1
19.000	64.1
12.500	56.1
9.5000	53.2
4.7500	47.8
2.0000	40.8
0.8500	33.6
0.4250	27.3
0.2500	22.1
0.1060	16.8
0.0750	15.7
0.0291	11.6
0.0191	10.0
0.0116	7.5
0.0084	6.1
0.0061	5.0
0.0030	2.9
0.0013	1.7

SIEVE OPENING (mm)	PERCENT FINER
100.00	100.00
2.00	40.77
0.05	13.92
0.002	2.33

PERCENT OF EACH COMPONENT		CORRECTED PERCENT -2.0 mm MATERIAL FOR USDA DETERMINATION
GRAVEL	59.23	0.00
SAND	26.85	65.87
SILT	11.59	28.42
CLAY	2.33	5.71

USDA CLASSIFICATION SANDY LOAM

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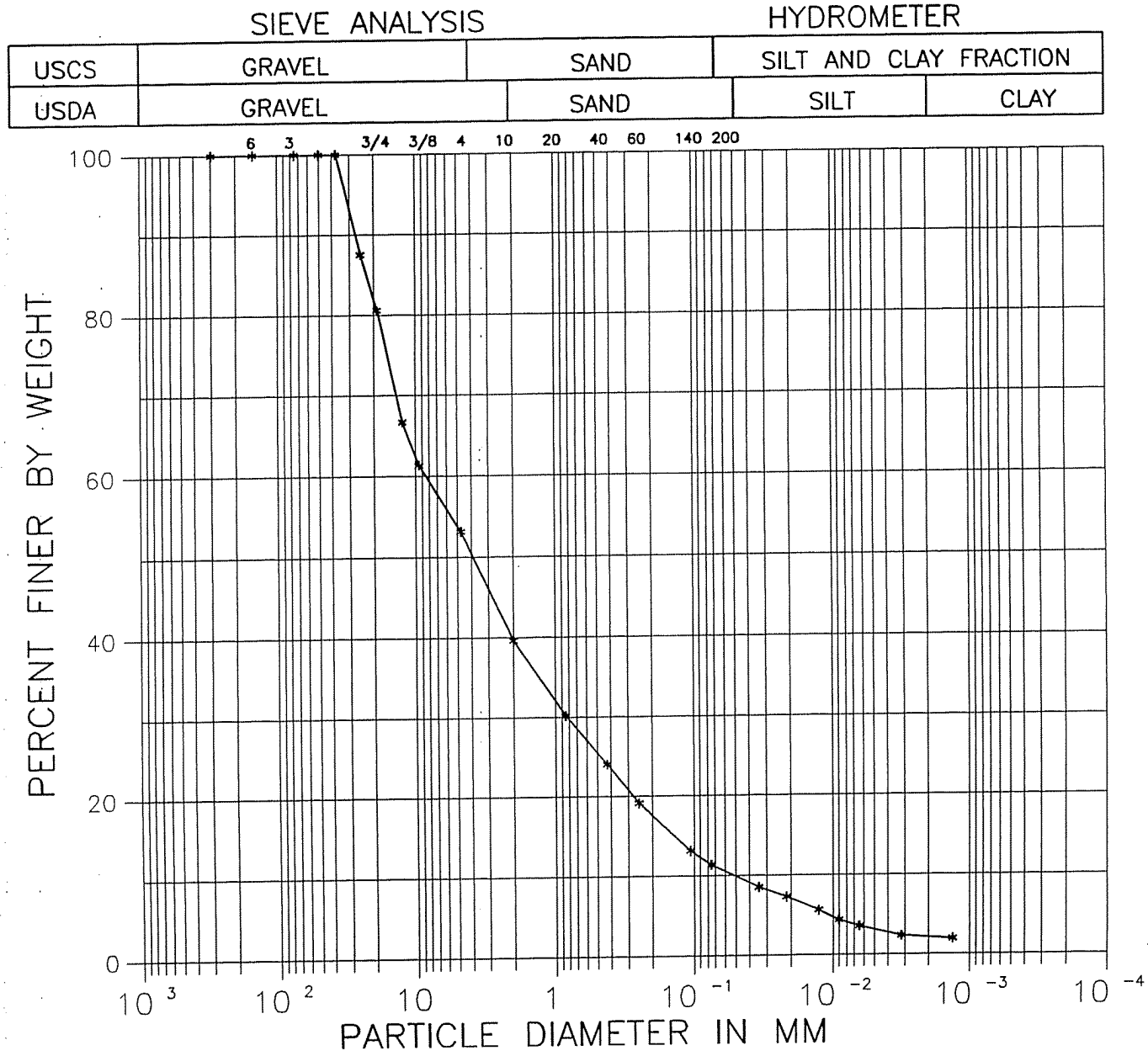
Client ENVIRONMENTAL STRATEGIES
Client Project AL TECH DUNKIRK 483803
Project No. 97073-01
USCS Classification gp-gc
Soil Description BROWN POORLY GRADED GRAVEL WITH CLAY AND SAND

Boring No. NA
Depth(ft) NA
Sample No. RFI 03-03
USDA Classification SANDY LOAM



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WASH SIEVE ANALYSIS

Client	ENVIRONMENTAL STRATEGIES	Tested By	BF	Date	04-03-97
Client Project	AL TECH DUNKIRK 483803	Checked By	TM	Date	4-14-97
Project No.	97073-01				
Boring No.	NA				
Depth(ft.)	NA				
Sample No.	RFI 03-03				
Soil Description	BROWN POORLY GRADED GRAVEL WITH CLAY AND SAND				

Wt. of Total Sample(dry) (2)	990.2 gm.	Wt of Grand Total (1)	1567.71
Wt. of +#200 Sample	850.7 gm.		
Wt. of -#200 Sample	139.5 gm.	J Factor	0.8060
		(Percent finer than 3/4")	

Sieve	Sieve Opening (mm)	Wt. of Soil Retained (gm.)		Percent Retained	Accumulate Percent Retained	Percent Finer	**Final Percent Finer (3)**
12"	300.0	0.00		0.00	0.00	100.00	**100.0**
6"	150.0	0.00		0.00	0.00	100.00	**100.0**
3"	75.0	0.00		0.00	0.00	100.00	**100.0**
2"	50.0	0.00		0.00	0.00	100.00	**100.0**
1 1/2"	37.5	0.00	+ 3/4"	0.00	0.00	100.00	**100.0**
1"	25.0	194.94	SIEVE	12.43	12.43	87.57	**87.6**
3/4"	19.0	109.13	ANALYSIS	6.96	19.40	80.60	**80.6**
1/2"	12.5	171.01	- 3/4"	17.27	17.27	82.73	**66.7**
3/8"	9.5	65.70	SIEVE	6.63	23.90	76.10	**61.3**
#4	4.75	100.80	ANALYSIS	10.18	34.08	65.92	**53.1**
#10	2.00	166.15		16.78	50.86	49.14	**39.6**
#20	0.85	115.86		11.70	62.56	37.44	**30.2**
#40	0.425	75.30		7.60	70.17	29.83	**24.0**
#60	0.250	60.51		6.11	76.28	23.72	**19.1**
#140	0.106	73.59		7.43	83.71	16.29	**13.1**
#200	0.075	21.81		2.20	85.91	14.09	**11.4**
Pan	-	139.51		14.09	100.00	-	-

Water Content			
Tare No.	1003	TOTAL WET WGHT. -3/4 SIEVE	
Wgt. Tare + WS.	1218.10	1420	
Wgt. Tare + DS.	1095.30		
Wgt. Tare	105.06	TOTAL DRY WGHT. -3/4 SIEVE	
Wgt. Of Water	122.80	1264	
Wgt. Of DS.	990.24		
% Water	12.4		

Note: 1) The +3/4" sieve analysis is based on the grand total dry weight of material.
2) The -3/4" sieve analysis is based on the total dry weight of the split portion of sample.
3) The final percent finer combines the two analysis.

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HYDROMETER ANALYSIS

Client	ENVIRONMENTAL STRATEGIES	Tested By	TO	Date	04-03-97
Client Project	AL TECH DUNKIRK 483803	Checked By	TM	Date	4-14-97
Project No.	97073-01				
Boring No.	NA				
Depth(ft.)	NA				
Sample No.	RFI 03-03				

Soil Sample Weight			
Container No.	1679		
Wt. Contain. & Dry Soil	121.07 gm.	K Factor	0.01311
		Composite Correction	6.73
Wt. Contain.	102.48 gm.	a Factor	0.99
Wt. Dispers.	5.00 gm.		
Wt. Dry Soil	13.59 gm.	% Finer Than No. 200	11.36

Temperature C	22.1	Measured
Specific Gravity	2.70	Assumed

Elapsed Time (min.)	R Measured		R Corrected	N (%)	D (mm)	N' (%)
0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
2	16.5	17.0	10.3	74.8	0.0341	8.5
5		15.5	8.8	63.9	0.0217	7.3
15		13.5	6.8	49.3	0.0127	5.6
30		12.0	5.3	38.4	0.0091	4.4
60		11.0	4.3	31.1	0.0064	3.5
250		9.5	2.8	20.2	0.0032	2.3
1440		9.0	2.3	16.6	0.0013	1.9

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Client	ENVIRONMENTAL STRATEGIES
Client Project	AL TECH DUNKIRK 483803
Project No.	97073-01
Boring No.	NA
Depth(ft.)	NA
Sample No.	RFI 03-03

DIAMETER (mm)	PERCENT FINER
300.00	100.0
150.00	100.0
75.000	100.0
50.000	100.0
37.500	100.0
25.000	87.6
19.000	80.6
12.500	66.7
9.5000	61.3
4.7500	53.1
2.0000	39.6
0.8500	30.2
0.4250	24.0
0.2500	19.1
0.1060	13.1
0.0750	11.4
0.0341	8.5
0.0217	7.3
0.0127	5.6
0.0091	4.4
0.0064	3.5
0.0032	2.3
0.0013	1.9

SIEVE OPENING (mm)	PERCENT FINER
100.00	100.00
2.00	39.61
0.05	9.89
0.002	2.07

PERCENT OF EACH COMPONENT		CORRECTED PERCENT -2.0 mm MATERIAL FOR USDA DETERMINATION
GRAVEL	60.39	0.00
SAND	29.72	75.04
SILT	7.81	19.73
CLAY	2.07	5.24

USDA CLASSIFICATION SANDY LOAM

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SHELBY TUBE UNIT WEIGHT

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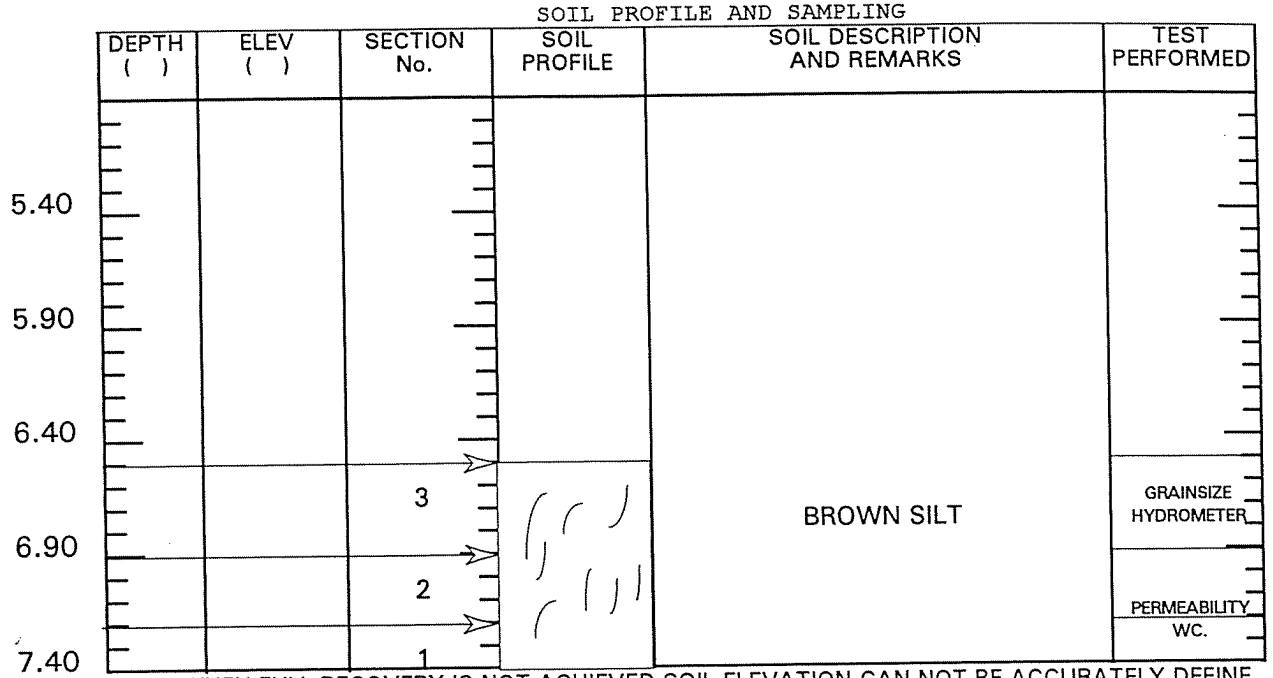
Client	ENVIRONMENTAL STRATEGIES	Tested By	JCM 4-4-97
Client Project	AL TECH DUNKIRK 483803	Checked By	TM 4-15-97
Project No.	97073-01		
Boring No.	NA	Tube Recovery	NA
Depth Pushed	6.0-7.4		
Shelby Tube No.	RFI 05-0674		

SOIL PROFILE AND SAMPLING



NOTE:WHEN FULL RECOVERY IS NOT ACHIEVED,SOIL ELEVATION CAN NOT BE ACCURATELY DEFINE
INDICATE EACH CUT OF THE TUBE WITH AN ARROW
INDICATE DIVIDING LINE BETWEEN SOIL TYPES BY A SOLID LINE
INDICATE WAX BY CROSS-HATCHING
INDICATE SOIL TYPES BY STANDARD SYMBOLS

MOISTURE CONTENT					
Section Number	1	2	3	4	5
Tare Number	1871		1706		
Wt. Tare & WS(gm.)	244.79		736.10		
Wt. Tare & DS(gm.)	204.52		604.70		
Wt. Tare(gm.)	39.67		83.20		
Moisture Content(%)	24.4		25.2		

UNIT WEIGHT	
Wt. Tube & WS.(gms.)	1104.20
Wt. Of Tube(gms.)	288.15
Wt. Of WS.(gms.)	816.05
Length 1 (in.)	4.985
Length 2 (in.)	4.990
Length 3 (in.)	4.001
Top Diameter (in.)	2.869
Middle Diameter (in.)	2.884
Bottom Diameter (in.)	2.878
Sample Volume (cc)	496.29
Moisture Content(%)	24.43
Unit Wet Wt.(gms/cc)	1.64
Unit Wet Wt.(pcf.)	102.6
Unit Dry Wt.(pcf.)	82.5
Unit Dry Wt.(gms/cc)	1.32

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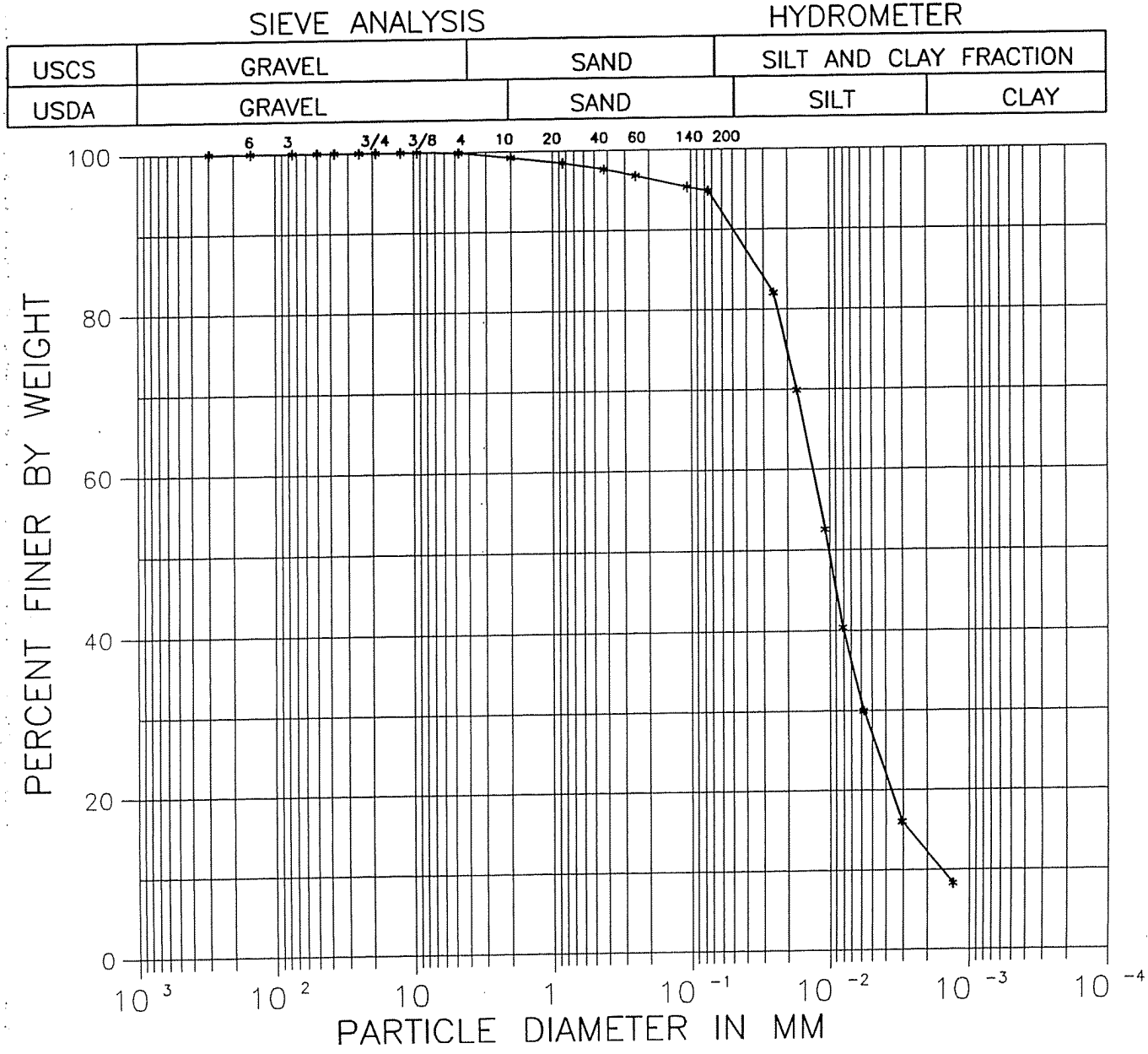
Client ENVIRONMENTAL STRATEGIES
Client Project AL TECH DUNKIRK 483803
Project No. 97073-01
USCS Classification ml
Soil Description BROWN SILT

Boring No. NA
Depth(ft) 6.5-6.9
Sample No. RFI 05-0674
USDA Classification SILT LOAM



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WASH SIEVE ANALYSIS

Client	ENVIRONMENTAL STRATEGIES	Tested By	JCM	Date	04-04-97
Client Project	AL TECH DUNKIRK 483803	Checked By	TM	Date	4-14-97
Project No.	97073-01				
Boring No.	NA				
Depth(ft.)	6.5-6.9				
Sample No.	RFI 05-0674				
Soil Description	BROWN SILT				

Wt. of Total Sample(dry)	521.50 gm.
Wt. of +#200 Sample	26.94 gm.
Wt. of -#200 Sample	494.56 gm.

Sieve	Sieve Opening (mm)	Wt. of Soil Retained (gm.)	Percent Retained	Accumulated Percent Retained	Percent Finer
12"	300.00	0.00	0.0	0.0	100.0
6"	150.00	0.00	0.0	0.0	100.0
3"	75.00	0.00	0.0	0.0	100.0
2"	50.00	0.00	0.0	0.0	100.0
1 1/2"	37.50	0.00	0.0	0.0	100.0
1"	25.00	0.00	0.0	0.0	100.0
3/4"	19.00	0.00	0.0	0.0	100.0
1/2"	12.50	0.00	0.0	0.0	100.0
3/8"	9.50	0.00	0.0	0.0	100.0
#4	4.75	0.54	0.1	0.1	99.9
#10	2.00	3.50	0.7	0.8	99.2
#20	0.85	3.97	0.8	1.5	98.5
#40	0.425	4.19	0.8	2.3	97.7
#60	0.250	4.51	0.9	3.2	96.8
#140	0.106	7.61	1.5	4.7	95.3
#200	0.075	2.62	0.5	5.2	94.8
Pan	-	494.56	94.8	100.0	-

Water Content	
Tare No.	1706
Wgt. Tare + WS.	736.10
Wgt. Tare + DS.	604.70
Wgt. Tare	83.20
Wgt. Of Water	131.40
Wgt. Of DS.	521.50
% Water	25.2

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HYDROMETER ANALYSIS

Client	ENVIRONMENTAL STRATEGIES	Tested By	TO	Date	04-04-97
Client Project	AL TECH DUNKIRK 483803	Checked By	TM	Date	4-14-97
Project No.	97073-01				
Boring No.	NA				
Depth(ft.)	6.5-6.9				
Sample No.	RFI 05-0674				

Soil Sample Weight			
Container No.	1092		
Wt. Contain. & Dry Soil	164.18 gm.	K Factor	0.01311
		Composite Correction	6.73
Wt. Contain.	105.08 gm.	a Factor	0.99
Wt. Dispers.	5.00 gm.		
Wt. Dry Soil	54.10 gm.	% Finer Than No. 200	94.83

Temperature C	22.1
Specific Gravity	2.70 Assumed

Elapsed Time (min.)	R Measured		R Corrected	N (%)	D (mm)	N' (%)
0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
2	54.0	54.0	47.3	86.5	0.0253	82.0
5		47.0	40.3	73.7	0.0172	69.9
15		37.0	30.3	55.4	0.0108	52.5
30		30.0	23.3	42.6	0.0081	40.4
64		24.0	17.3	31.6	0.0058	30.0
250		16.0	9.3	17.0	0.0031	16.1
1440		11.5	4.8	8.7	0.0013	8.3

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Client	ENVIRONMENTAL STRATEGIES
Client Project	AL TECH DUNKIRK 483803
Project No.	97073-01
Boring No.	NA
Depth(ft.)	6.5-6.9
Sample No.	RFI 05-0674

DIAMETER (mm)	PERCENT FINER
300.00	100.0
150.00	100.0
75.000	100.0
50.000	100.0
37.500	100.0
25.000	100.0
19.000	100.0
12.500	100.0
9.5000	100.0
4.7500	99.9
2.0000	99.2
0.8500	98.5
0.4250	97.7
0.2500	96.8
0.1060	95.3
0.0750	94.8
0.0253	82.0
0.0172	69.9
0.0108	52.5
0.0081	40.4
0.0058	30.0
0.0031	16.1
0.0013	8.3

SIEVE OPENING (mm)	PERCENT FINER
100.00	100.00
2.00	99.23
0.05	90.06
0.002	12.16

PERCENT OF EACH COMPONENT		CORRECTED PERCENT OF -2.0 mm MATERIAL FOR USDA DETERMINATION
GRAVEL	0.77	0.00
SAND	9.16	9.24
SILT	77.90	78.51
CLAY	12.16	12.26

USDA CLASSIFICATION: SILT LOAM

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PERMEABILITY TEST

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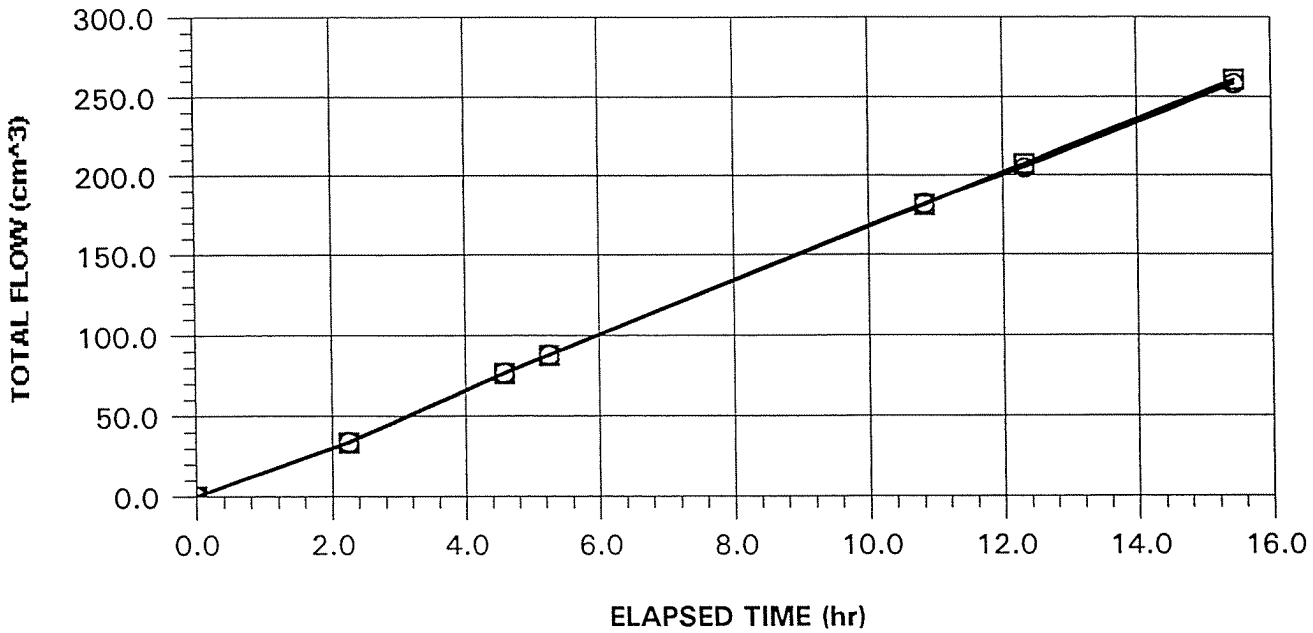
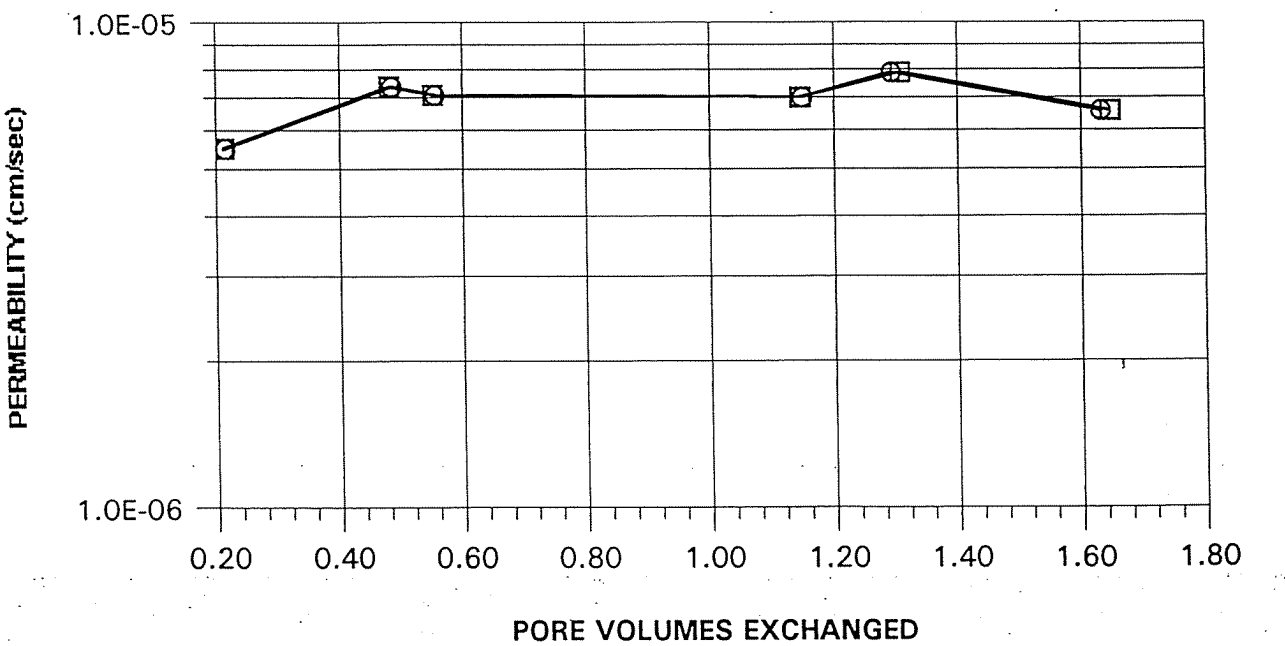
Client	ENVIRONMENTAL STRATEGIES	Boring No.	NA
Client Project	AL TECH DUNKIRK 483803	Depth(ft.)	6.9-7.2
Project No.	97073-01	Sample No.	RFI 05-0674

AVERAGE PERMEABILITY = 7.1E-06 cm/sec @ 20°C
AVERAGE PERMEABILITY = 7.1E-08 m/sec @ 20°C

TOTAL FLOW vs. ELAPSED TIME



PORE VOLUMES EXCHANGED vs. PERMEABILITY



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PERMEABILITY TEST

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Geotechnics

Client	ENVIRONMENTAL STRATEGIES	Tested By	JCM	Date	04-04-97
Client Project	AL TECH DUNKIRK 483803	Checked By	TM	Date	4-10-97
Project No.	97073-01				
Boring No.	NA	Specific Gravity	2.70 ASSUMED		
Depth(ft.)	6.9-7.2	Sample Condition	UNDISTURBED		
Sample No.	RFI 05-0674				

Visual Description BROWN SILT

MOISTURE CONTENT	BEFORE TEST	AFTER TEST
Tare Number	1871	1131A
Wt. Tare & WS(gm.)	244.79	495.40
Wt. Tare & DS(gm.)	204.52	407.80
Wt. Water(gm.)	40.27	87.60
Wt. Tare(gm.)	39.67	84.63
Wt. DS(gm.)	164.85	323.17
Moisture Content(%)	24.4	27.1
UNIT WEIGHT		
Wt. Tube & WS.(gms.)	1104.20	NA
Wt. Of Tube(gms.)	288.15	NA
Wt. Of WS.(gms.)	816.05	833.6
Length 1 (in.)	3.985	4.091
Length 2 (in.)	3.990	4.019
Length 3 (in.)	4.001	3.995
Top Diameter (in.)	2.869	2.750
Middle Diameter (in.)	2.884	2.797
Bottom Diameter (in.)	2.878	2.792
Average Length (in)	3.99	4.04
Average Area (in^2)	6.50	6.07
Sample Volume(cc.)	425.27	401.25
Unit Wet Wt.(gms/cc)	1.92	2.08
Unit Wet Wt.(pcf.)	119.7	129.6
Unit Dry Wt.(pcf.)	96.2	102.0
Unit Dry Wt.(gms/cc)	1.54	1.63
Void Ratio,e	0.75	0.65
Porosity, n	0.43	0.39
Pore Volume(cm^3)	182.4	158.4

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PERMEABILITY TEST

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Client	ENVIRONMENTAL STRATEGIES	Tested By	JCM	Date	04-04-97
Client Project	AL TECH DUNKIRK 483803	Checked By	TM	Date	4-10-97
Project No.	97073-01				
Boring No.	NA				
Depth(ft.)	6.9-7.2				
Sample No.	RFI 05-0674				
Visual Description	BROWN SILT				

Pressure Heads (Constant)	
Top Cap (psi)	27.5
Bottom Cap (psi)	30.0
Cell (psi)	35.0
Total Pressure Head (cm)	175.8

Final Sample Dimensions	
Sample Length (cm.), L	10.25
Sample Diameter (cm.)	7.06
Sample Area (cm.^2), A	39.15
Inflow Burette Area, (cm.^2), a-in	4.93
Outflow Burette Area, (cm.^2), a-out	4.66
B Parameter	100%

AVERAGE PERMEABILITY = 7.1E-06 cm/sec @ 20°C
AVERAGE PERMEABILITY = 7.1E-08 m/sec @ 20°C

DATE	TIME		ELAPSED TIME (t)	TOTAL INFLOW	TOTAL OUTFLOW	TOTAL HEAD (h)	FLOW 0 FLOW 1 STOP	TEMP	INCREMENTAL PERMEABILITY @ 20°C
mon-dy-yr	hr	min	hr	cm^3	cm^3	cm		°C	cm/sec
04-04-97	14	35	0.0	0.0	0.0	200.4	0	21.0	NA
04-04-97	16	50	2.2	33.9	33.6	186.3	1	21.0	5.5E-06
04-07-97	15	30	2.2	33.9	33.6	188.0	0	20.5	NA
04-07-97	17	50	4.6	76.9	76.3	170.1	0	20.5	7.4E-06
04-07-97	18	30	5.2	88.0	87.5	165.4	1	21.0	7.1E-06
04-08-97	8	5	5.2	88.0	87.5	197.0	0	19.5	NA
04-08-97	13	40	10.8	182.0	181.4	157.8	0	19.5	7.0E-06
04-08-97	15	9	12.3	204.8	207.0	147.7	1	19.5	7.9E-06
04-08-97	15	12	12.3	204.8	207.0	200.9	0	19.5	NA
04-08-97	18	20	15.5	258.4	260.9	178.5	1	20.0	6.6E-06

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SHELBY TUBE UNIT WEIGHT

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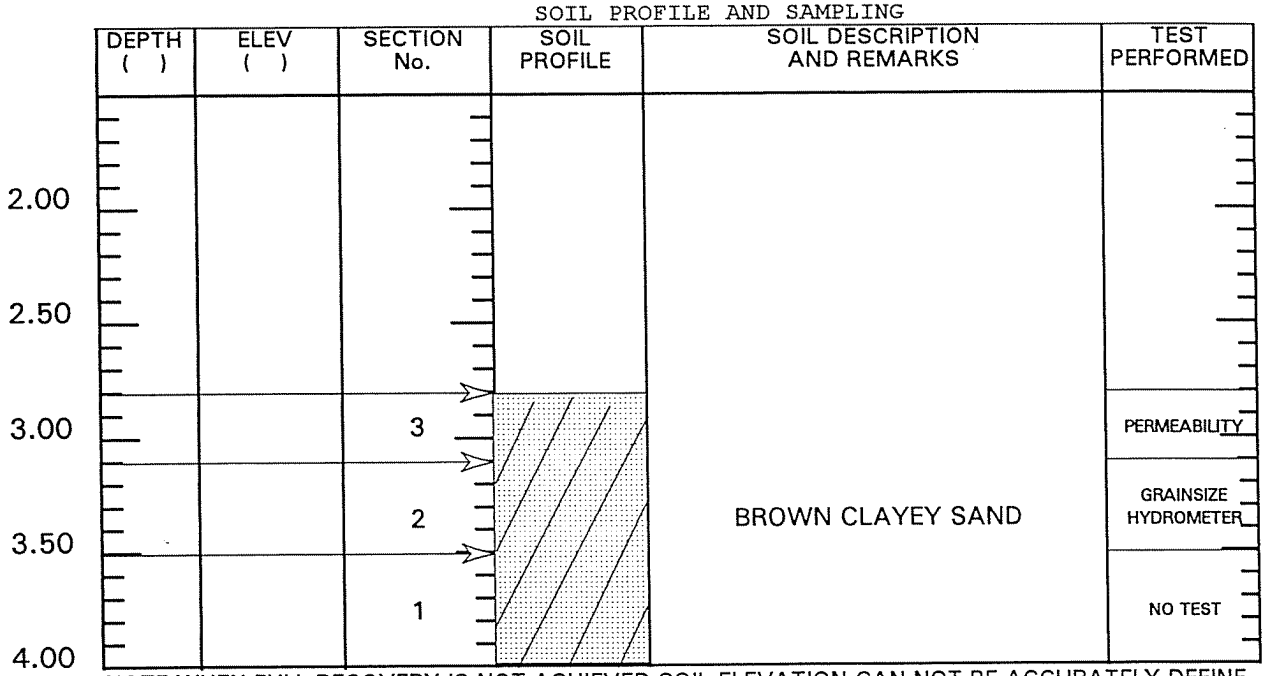
Client	ENVIRONMENTAL STRATEGIES	Tested By	JCM 4-4-97
Client Project	AL TECH DUNKIRK 483803	Checked By	TM 4-15-97
Project No.	97073-01		
Boring No.	NA	Tube Recovery	NA
Depth Pushed	2-4		
Shelby Tube No.	RFI 10-0406		

SOIL PROFILE AND SAMPLING



NOTE:WHEN FULL RECOVERY IS NOT ACHIEVED,SOIL ELEVATION CAN NOT BE ACCURATELY DEFINE
INDICATE EACH CUT OF THE TUBE WITH AN ARROW
INDICATE DIVIDING LINE BETWEEN SOIL TYPES BY A SOLID LINE
INDICATE WAX BY CROSS-HATCHING
INDICATE SOIL TYPES BY STANDARD SYMBOLS

MOISTURE CONTENT					
Section Number	1	2	3	4	5
Tare Number	1307	731			
Wt. Tare & WS(gm.)	297.30	633.60			
Wt. Tare & DS(gm.)	277.56	576.90			
Wt. Tare(gm.)	102.79	85.08			
Moisture Content(%)	11.3	11.5			

UNIT WEIGHT	
Wt. Tube & WS.(gms.)	1110.40
Wt. Of Tube(gms.)	289.82
Wt. Of WS.(gms.)	820.58
Length 1 (in.)	4.076
Length 2 (in.)	4.064
Length 3 (in.)	4.049
Top Diameter (in.)	2.865
Middle Diameter (in.)	2.881
Bottom Diameter (in.)	2.865
Sample Volume (cc)	430.83
Moisture Content(%)	11.53
Unit Wet Wt.(gms/cc)	1.90
Unit Wet Wt.(pcf.)	118.9
Unit Dry Wt.(pcf.)	106.6
Unit Dry Wt.(gms/cc)	1.71

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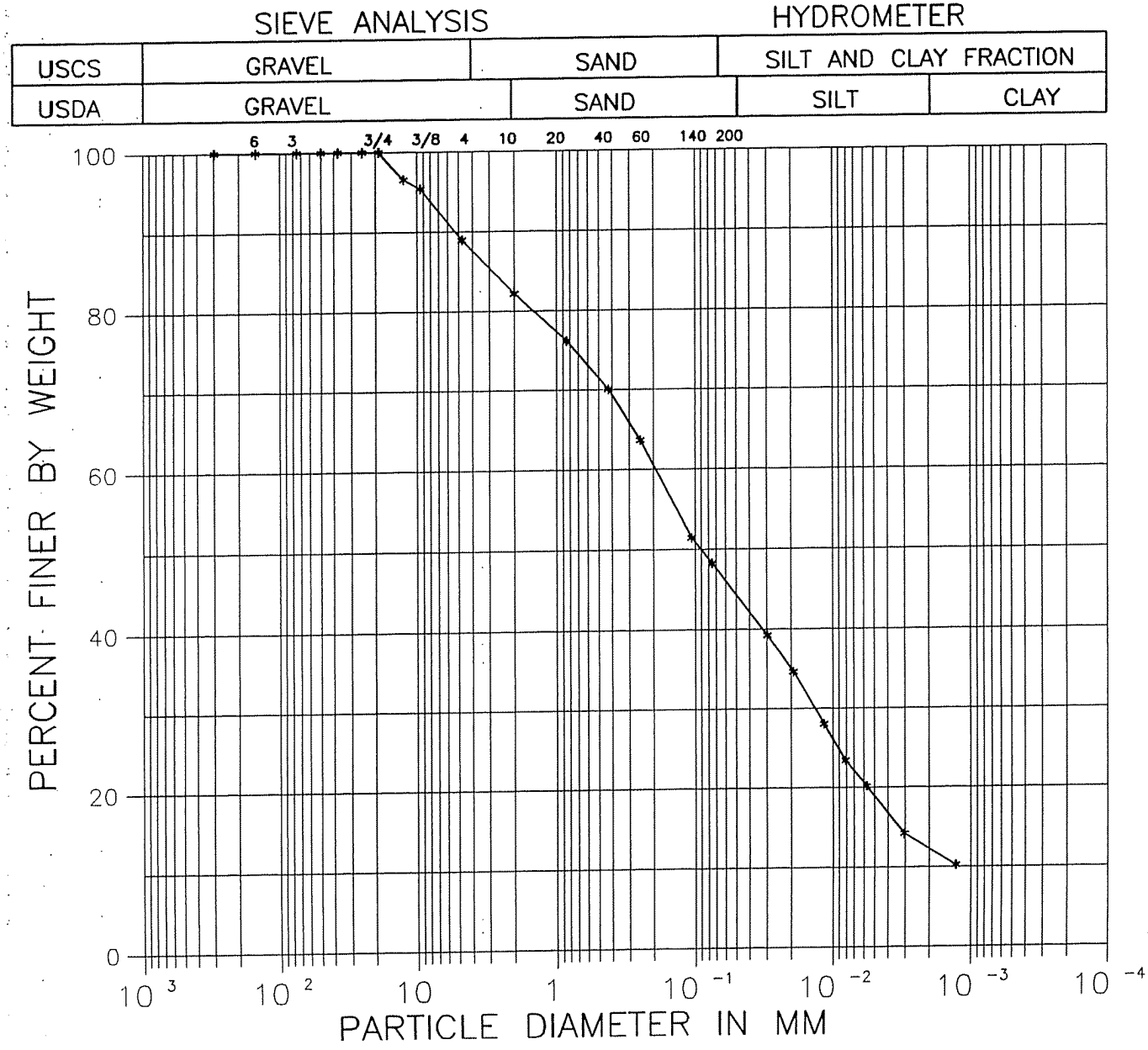
Client ENVIRONMENTAL STRATEGIES
Client Project AL TECH DUNKIRK 483803
Project No. 97073-01
USCS Classification sc
Soil Description BROWN CLAYEY SAND

Boring No. NA
Depth(ft) 3.1-3.5
Sample No. RFI 10-0406
USDA Classification LOAM



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WASH SIEVE ANALYSIS

Client	ENVIRONMENTAL STRATEGIES	Tested By	JCM	Date	04-04-97
Client Project	AL TECH DUNKIRK 483803	Checked By	TM	Date	4-14-97
Project No.	97073-01				
Boring No.	NA				
Depth(ft.)	3.1-3.5				
Sample No.	RFI 10-0406				
Soil Description	BROWN CLAYEY SAND				

Wt. of Total Sample(dry)	491.82 gm.
Wt. of +#200 Sample	254.68 gm.
Wt. of -#200 Sample	237.14 gm.

Sieve	Sieve Opening (mm)	Wt. of Soil Retained (gm.)	Percent Retained	Accumulated Percent Retained	Percent Finer
12"	300.00	0.00	0.0	0.0	100.0
6"	150.00	0.00	0.0	0.0	100.0
3"	75.00	0.00	0.0	0.0	100.0
2"	50.00	0.00	0.0	0.0	100.0
1 1/2"	37.50	0.00	0.0	0.0	100.0
1"	25.00	0.00	0.0	0.0	100.0
3/4"	19.00	0.00	0.0	0.0	100.0
1/2"	12.50	17.02	3.5	3.5	96.5
3/8"	9.50	5.72	1.2	4.6	95.4
#4	4.75	31.52	6.4	11.0	89.0
#10	2.00	33.49	6.8	17.8	82.2
#20	0.85	29.42	6.0	23.8	76.2
#40	0.425	30.12	6.1	29.9	70.1
#60	0.250	31.49	6.4	36.4	63.6
#140	0.106	59.94	12.2	48.5	51.5
#200	0.075	15.96	3.2	51.8	48.2
Pan	-	237.14	48.2	100.0	-

Water Content	
Tare No.	731
Wgt. Tare + WS.	633.60
Wgt. Tare + DS.	576.90
Wgt. Tare	85.08
Wgt. Of Water	56.70
Wgt. Of DS.	491.82
% Water	11.5

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HYDROMETER ANALYSIS

Client	ENVIRONMENTAL STRATEGIES	Tested By	TO	Date	04-04-97
Client Project	AL TECH DUNKIRK 483803	Checked By	TM	Date	4-14-97
Project No.	97073-01				
Boring No.	NA				
Depth(ft.)	3.1-3.5				
Sample No.	RFI 10-0406				

Soil Sample Weight			
Container No.	841		
Wt. Contain. & Dry Soil	133.94 gm.	K Factor	0.01311
Wt. Contain.	92.73 gm.	Composite Correction	6.73
Wt. Dispers.	5.00 gm.	a Factor	0.99
Wt. Dry Soil	36.21 gm.	% Finer Than No. 200	48.22
Temperature C	22.1		
Specific Gravity	2.70 Assumed		

Elapsed Time (min.)	R Measured		R Corrected	N (%)	D (mm)	N' (%)
0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
2	35.5	36.5	29.8	81.4	0.0298	39.2
5		33.0	26.3	71.8	0.0193	34.6
15		28.0	21.3	58.2	0.0116	28.0
32		24.5	17.8	48.6	0.0081	23.4
67		22.0	15.3	41.8	0.0057	20.1
250		17.5	10.8	29.5	0.0030	14.2
1440		14.5	7.8	21.3	0.0013	10.2

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Client	ENVIRONMENTAL STRATEGIES
Client Project	AL TECH DUNKIRK 483803
Project No.	97073-01
Boring No.	NA
Depth(ft.)	3.1-3.5
Sample No.	RFI 10-0406

DIAMETER (mm)	PERCENT FINER
300.00	100.0
150.00	100.0
75.000	100.0
50.000	100.0
37.500	100.0
25.000	100.0
19.000	100.0
12.500	96.5
9.5000	95.4
4.7500	89.0
2.0000	82.2
0.8500	76.2
0.4250	70.1
0.2500	63.6
0.1060	51.5
0.0750	48.2
0.0298	39.2
0.0193	34.6
0.0116	28.0
0.0081	23.4
0.0057	20.1
0.0030	14.2
0.0013	10.2

SIEVE OPENING (mm)	PERCENT FINER
100.00	100.00
2.00	82.16
0.05	44.28
0.002	12.27

PERCENT OF EACH COMPONENT		CORRECTED PERCENT OF -2.0 mm MATERIAL FOR USDA DETERMINATION
GRAVEL	17.84	0.00
SAND	37.88	46.10
SILT	32.01	38.96
CLAY	12.27	14.94

USDA CLASSIFICATION LOAM

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PERMEABILITY TEST

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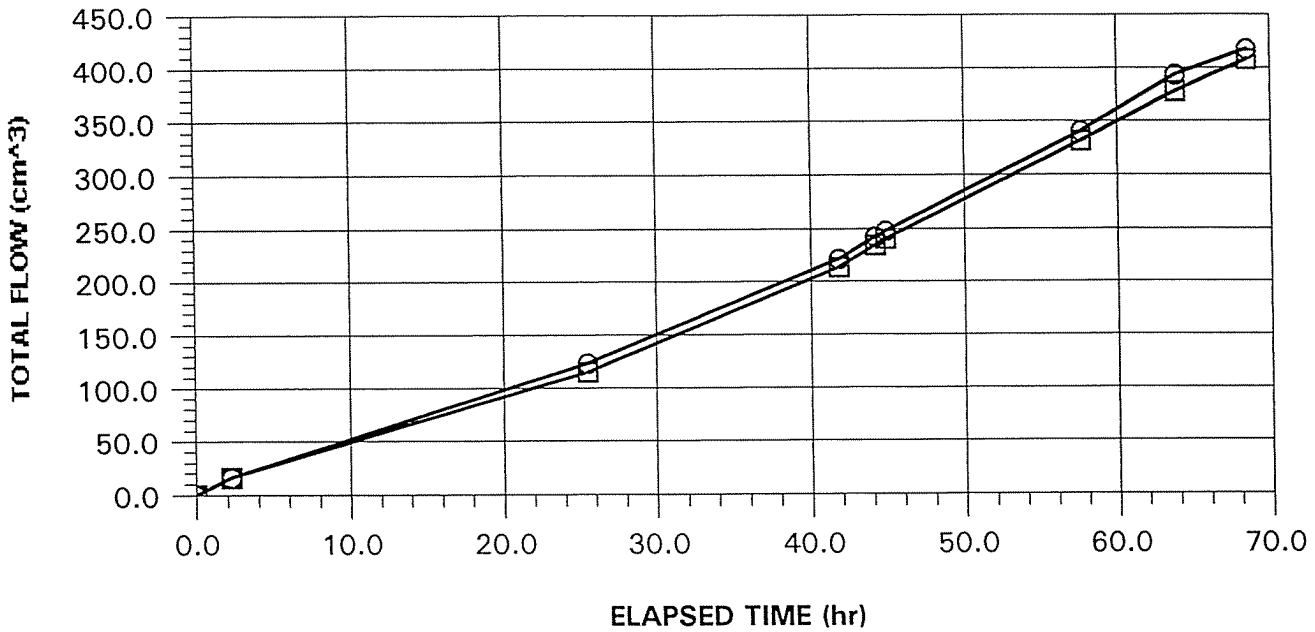
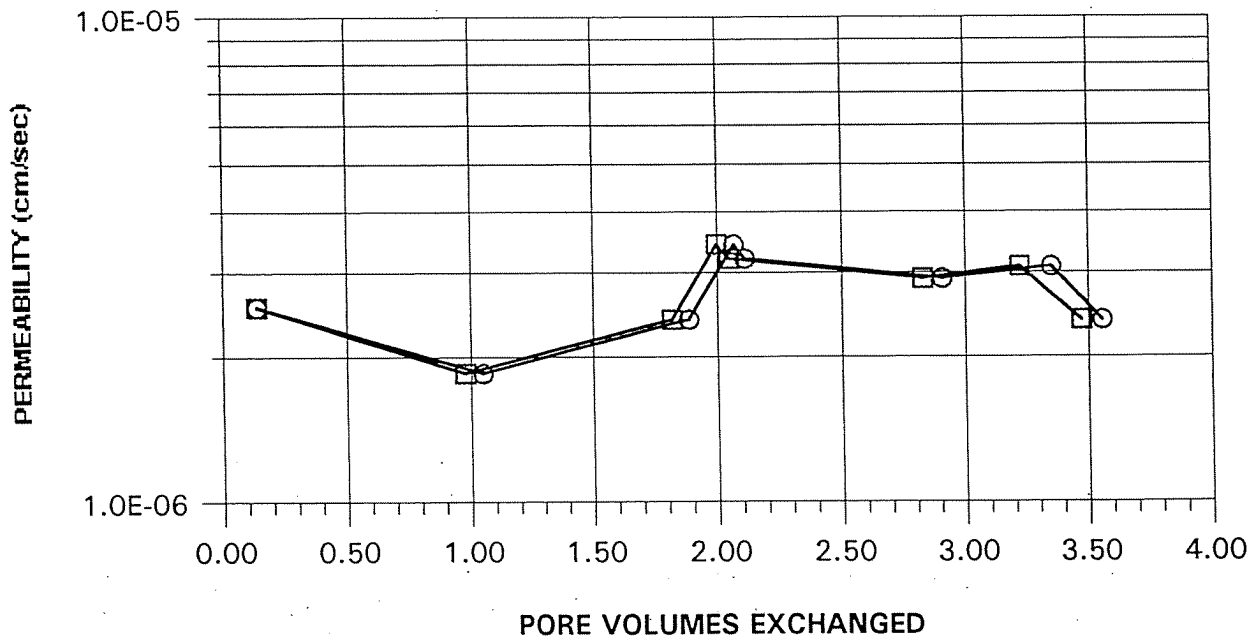
Client	ENVIRONMENTAL STRATEGIES	Boring No.	NA
Client Project	AL TECH DUNKIRK 483803	Depth(ft.)	2.8-3.1
Project No.	97073-01	Sample No.	RFI-10-0406

AVERAGE PERMEABILITY = 2.9E-06 cm/sec @ 20°C
AVERAGE PERMEABILITY = 2.9E-08 m/sec @ 20°C

TOTAL FLOW vs. ELAPSED TIME



PORE VOLUMES EXCHANGED vs. PERMEABILITY



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PERMEABILITY TEST

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Client	ENVIRONMENTAL STRATEGIES	Tested By	JCM	Date	04-04-97
Client Project	AL TECH DUNKIRK 483803	Checked By	TM	Date	4-11-97
Project No.	97073-01				
Boring No.	NA	Specific Gravity		2.70 ASSUMED	
Depth(ft.)	2.8-3.1	Sample Condition		UNDISTURBED	
Sample No.	RFI-10-0406				

Visual Description BROWN CLAY

MOISTURE CONTENT	BEFORE TEST	AFTER TEST
Tare Number	731	Z10
Wt. Tare & WS(gm.)	633.60	568.40
Wt. Tare & DS(gm.)	576.90	502.80
Wt. Water(gm.)	56.70	65.60
Wt. Tare(gm.)	85.08	85.92
Wt. DS(gm.)	491.82	416.88
Moisture Content(%)	11.5	15.7
UNIT WEIGHT		
Wt. Tube & WS.(gms.)	1110.40	NA
Wt. Of Tube(gms.)	289.82	NA
Wt. Of WS.(gms.)	820.58	851.5
Length 1 (in.)	4.076	3.919
Length 2 (in.)	4.064	4.034
Length 3 (in.)	4.049	3.979
Top Diameter (in.)	2.865	2.656
Middle Diameter (in.)	2.881	2.786
Bottom Diameter (in.)	2.865	2.836
Average Length (in)	4.06	3.98
Average Area (in^2)	6.47	5.98
Sample Volume(cc.)	430.83	389.75
Unit Wet Wt.(gms/cc)	1.90	2.18
Unit Wet Wt.(pcf.)	118.9	136.3
Unit Dry Wt.(pcf.)	106.6	117.8
Unit Dry Wt.(gms/cc)	1.71	1.89
Void Ratio,e	0.58	0.43
Porosity, n	0.37	0.30
Pore Volume(cm^3)	158.3	117.3

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PERMEABILITY TEST

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Client	ENVIRONMENTAL STRATEGIES	Tested By	JCM	Date	04-04-97
Client Project	AL TECH DUNKIRK 483803	Checked By	TM	Date	4-11-97
Project No.	97073-01				
Boring No.	NA				
Depth(ft.)	2.8-3.1				
Sample No.	RFI-10-0406				
Visual Description	BROWN CLAY				

Pressure Heads (Constant)	
Top Cap (psi)	27.5
Bottom Cap (psi)	30.0
Cell (psi)	35.0
Total Pressure Head (cm)	175.8

Final Sample Dimensions	
Sample Length (cm.), L	10.10
Sample Diameter (cm.)	7.01
Sample Area (cm.^2), A	38.58
Inflow Burette Area, (cm.^2), a-in	4.80
Outflow Burette Area, (cm.^2), a-out	4.76
B Parameter	100%

AVERAGE PERMEABILITY = 2.9E-06 **cm/sec @ 20°C**
AVERAGE PERMEABILITY = 2.9E-08 **m/sec @ 20°C**

DATE	TIME		ELAPSED TIME (t)	TOTAL INFLOW	TOTAL OUTFLOW	TOTAL HEAD (h)	FLOW TEMP 0 FLOW 1 STOP		INCREMENTAL PERMEABILITY @ 20°C
mon-dy-yr	hr	min	hr	cm^3	cm^3	cm		°C	cm/sec
04-04-97	14	35	0.0	0.0	0.0	200.8	0	21.0	NA
04-04-97	16	50	2.2	16.0	15.8	194.2	0	21.0	2.5E-06
04-05-97	16	5	25.5	123.0	114.7	151.1	1	20.5	1.9E-06
04-05-97	16	10	25.5	123.0	114.7	201.7	0	20.5	NA
04-06-97	8	30	41.8	221.0	213.0	160.7	1	20.5	2.4E-06
04-07-97	15	30	41.8	221.0	213.0	194.8	0	20.5	NA
04-07-97	17	50	44.2	242.3	234.1	186.0	0	20.5	3.4E-06
04-07-97	18	30	44.8	247.6	239.9	183.7	1	21.0	3.2E-06
04-07-97	18	35	44.8	247.6	239.9	202.3	0	21.0	NA
04-08-97	7	25	57.7	340.8	331.4	163.7	1	19.5	2.9E-06
04-08-97	7	30	57.7	340.8	331.4	201.0	0	19.5	NA
04-08-97	13	40	63.8	393.0	377.7	180.5	0	19.5	3.1E-06
04-08-97	18	20	68.5	416.9	407.1	169.3	1	20.0	2.4E-06

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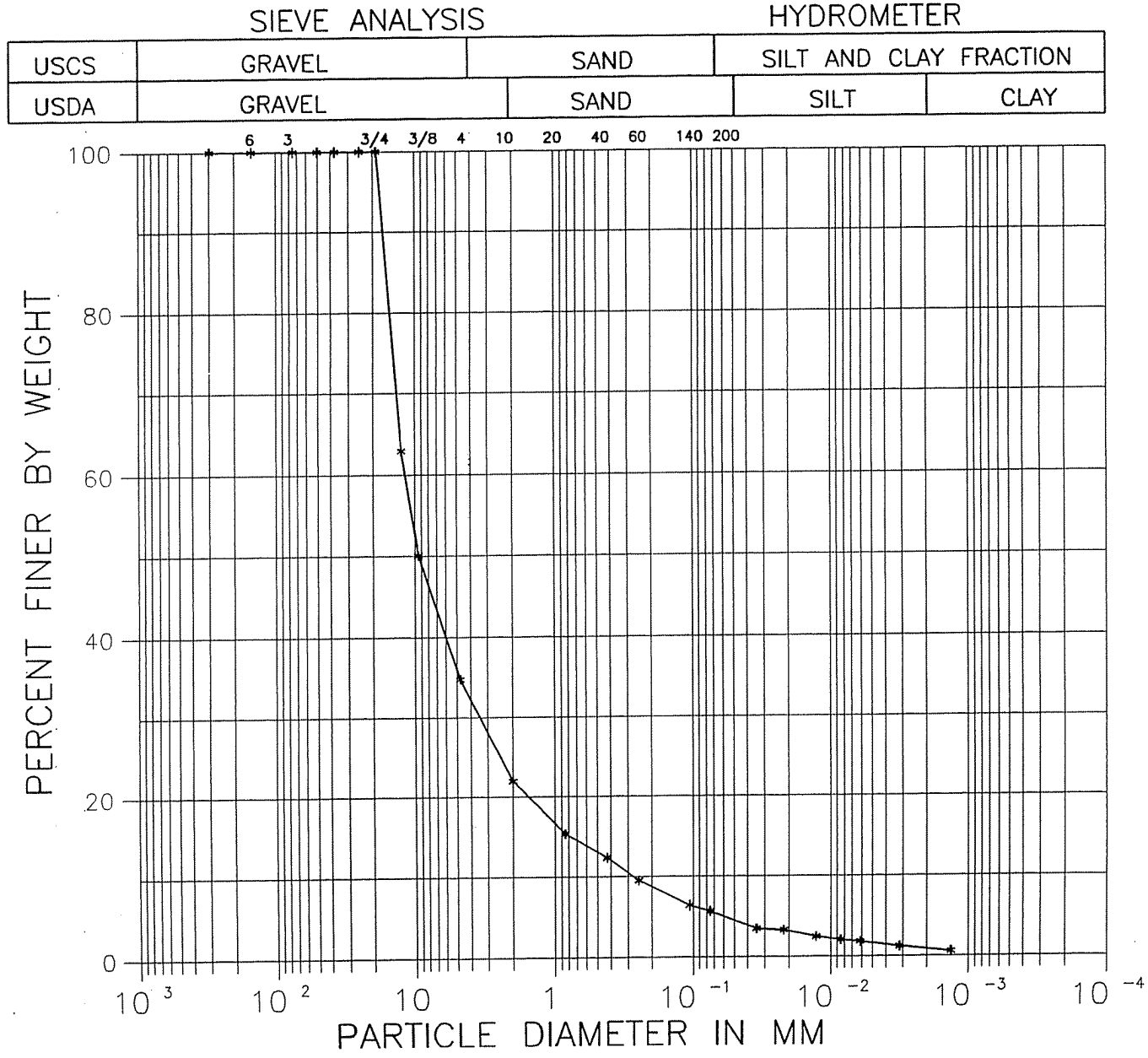
Client ENVIRONMENTAL STRATEGIES
Client Project AL TECH DUNKIRK 483803
Project No. 97073-01
USCS Classification gp-gc
Soil Description BROWN POORLY GRADED GRAVEL WITH CLAY AND SAND

Boring No. NA
Depth(ft) NA
Sample No. RFI12-03
USDA Classification LOAMY SAND



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WASH SIEVE ANALYSIS

Client	ENVIRONMENTAL STRATEGIES	Tested By	BF	Date	04-03-97
Client Project	AL TECH DUNKIRK 483803	Checked By	TM	Date	4-10-97
Project No.	97073-01				
Boring No.	NA				
Depth(ft.)	NA				
Sample No.	RFI12-03				
Soil Description	BROWN POORLY GRADED GRAVEL WITH CLAY AND SAND				

Wt. of Total Sample(dry)	476.80 gm.
Wt. of +#200 Sample	449.69 gm.
Wt. of -#200 Sample	27.11 gm.

Sieve	Sieve Opening (mm)	Wt. of Soil Retained (gm.)	Percent Retained	Accumulated Percent Retained	Percent Finer
12"	300.00	0.00	0.0	0.0	100.0
6"	150.00	0.00	0.0	0.0	100.0
3"	75.00	0.00	0.0	0.0	100.0
2"	50.00	0.00	0.0	0.0	100.0
1 1/2"	37.50	0.00	0.0	0.0	100.0
1"	25.00	0.00	0.0	0.0	100.0
3/4"	19.00	0.00	0.0	0.0	100.0
1/2"	12.50	176.82	37.1	37.1	62.9
3/8"	9.50	61.29	12.9	49.9	50.1
#4	4.75	73.06	15.3	65.3	34.7
#10	2.00	60.80	12.8	78.0	22.0
#20	0.85	31.63	6.6	84.6	15.4
#40	0.425	14.25	3.0	87.6	12.4
#60	0.250	13.69	2.9	90.5	9.5
#140	0.106	14.74	3.1	93.6	6.4
#200	0.075	3.41	0.7	94.3	5.7
Pan	-	27.11	5.7	100.0	-

Water Content	
Tare No.	1134
Wgt. Tare + WS.	612.00
Wgt. Tare + DS.	582.20
Wgt. Tare	105.40
Wgt. Of Water	29.80
Wgt. Of DS.	476.80
% Water	6.2

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HYDROMETER ANALYSIS

Client	ENVIRONMENTAL STRATEGIES	Tested By	TO	Date	04-03-97
Client Project	AL TECH DUNKIRK 483803	Checked By	TM	Date	4-10-97
Project No.	97073-01				
Boring No.	NA				
Depth(ft.)	NA				
Sample No.	RFI12-03				

Soil Sample Weight			
Container No.	1664		
Wt. Contain. & Dry Soil	119.04 gm.	K Factor	0.01311
		Composite Correction	6.73
Wt. Contain.	100.75 gm.	a Factor	0.99
Wt. Dispers.	5.00 gm.		
Wt. Dry Soil	13.29 gm.	% Finer Than No. 200	5.69
Temperature C	22.1		
Specific Gravity	2.70 Assumed		

Elapsed Time (min.)	R Measured		R Corrected	N (%)	D (mm)	N' (%)
0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
2	15.5	15.0	8.3	61.6	0.0345	3.5
5		14.5	7.8	57.9	0.0219	3.3
15		12.5	5.8	43.0	0.0128	2.4
34		11.5	4.8	35.6	0.0085	2.0
66		11.0	4.3	31.8	0.0061	1.8
250		9.5	2.8	20.7	0.0032	1.2
1440		8.0	1.3	9.5	0.0013	0.5

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Geotechnics

Client	ENVIRONMENTAL STRATEGIES
Client Project	AL TECH DUNKIRK 483803
Project No.	97073-01
Boring No.	NA
Depth(ft.)	NA
Sample No.	RFI12-03

DIAMETER (mm)	PERCENT FINER
300.00	100.0
150.00	100.0
75.000	100.0
50.000	100.0
37.500	100.0
25.000	100.0
19.000	100.0
12.500	62.9
9.5000	50.1
4.7500	34.7
2.0000	22.0
0.8500	15.4
0.4250	12.4
0.2500	9.5
0.1060	6.4
0.0750	5.7
0.0345	3.5
0.0219	3.3
0.0128	2.4
0.0085	2.0
0.0061	1.8
0.0032	1.2
0.0013	0.5

SIEVE OPENING (mm)	PERCENT FINER
100.00	100.00
2.00	21.99
0.05	4.55
0.002	0.83

PERCENT OF EACH COMPONENT		CORRECTED PERCENT OF -2.0 mm MATERIAL FOR USDA DETERMINATION
GRAVEL	78.01	0.00
SAND	17.44	79.32
SILT	3.71	16.89
CLAY	0.83	3.79

USDA CLASSIFICATION: LOAMY SAND

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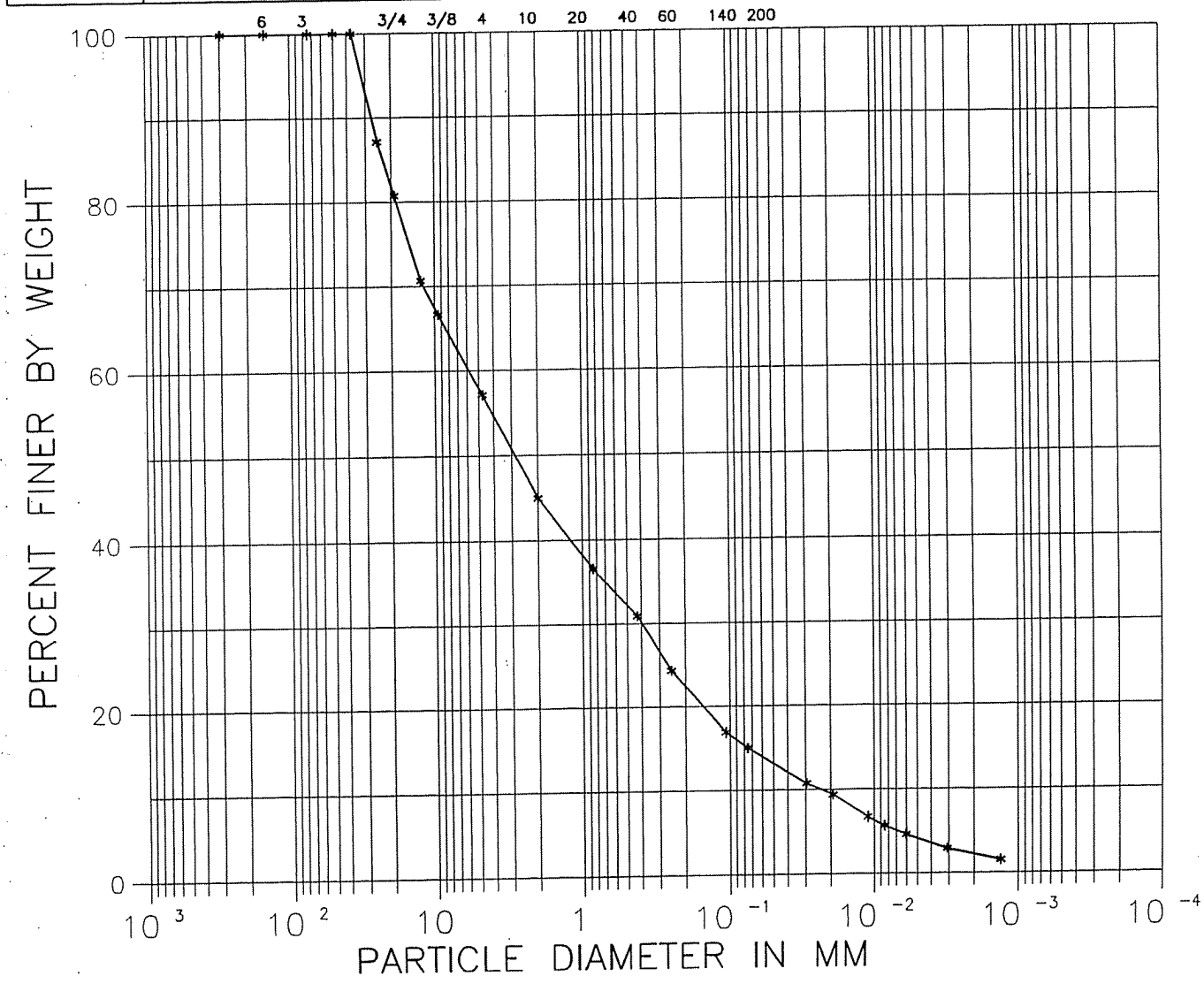
Client ENVIRONMENTAL STRATEGIES
Client Project AL TECH DUNKIRK 483803
Project No. 97073-01
USCS Classification gc
Soil Description BROWN CLAYEY GRAVEL WITH SAND

Boring No. NA
Depth(ft) NA
Sample No. RFI13-03
USDA Classification SANDY LOAM

	SIEVE ANALYSIS		HYDROMETER	
USCS	GRAVEL	SAND	SILT AND CLAY FRACTION	
USDA	GRAVEL	SAND	SILT	CLAY



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WASH SIEVE ANALYSIS

Client	ENVIRONMENTAL STRATEGIES	Tested By	GU	Date	04-02-97
Client Project	AL TECH DUNKIRK 483803	Checked By	TM	Date	4-10-97
Project No.	97073-01				
Boring No.	NA				
Depth(ft.)	NA				
Sample No.	RFI13-03				
Soil Description	BROWN CLAYEY GRAVEL WITH SAND				

Wt. of Total Sample(dry) (2)	657.6 gm.	Wt of Grand Total (1)	814.77
Wt. of +#200 Sample	535.1 gm.		
Wt. of -#200 Sample	122.6 gm.	J Factor	0.8077
		(Percent finer than 3/4")	

Sieve	Sieve Opening (mm)	Wt. of Soil Retained (gm.)		Percent Retained	Accumulate Percent Retained	Percent Finer	**Final Percent Finer (3)**
12"	300.0	0.00		0.00	0.00	100.00	**100.0**
6"	150.0	0.00		0.00	0.00	100.00	**100.0**
3"	75.0	0.00		0.00	0.00	100.00	**100.0**
2"	50.0	0.00		0.00	0.00	100.00	**100.0**
1 1/2"	37.5	0.00	+ 3/4"	0.00	0.00	100.00	**100.0**
1"	25.0	104.68	SIEVE	12.85	12.85	87.15	**87.2**
3/4"	19.0	52.02	ANALYSIS	6.38	19.23	80.77	**80.8**
1/2"	12.5	82.14	- 3/4"	12.49	12.49	87.51	**70.7**
3/8"	9.5	32.79	SIEVE	4.99	17.48	82.52	**66.7**
#4	4.75	77.64	ANALYSIS	11.81	29.28	70.72	**57.1**
#10	2.00	99.00		15.05	44.34	55.66	**45.0**
#20	0.85	68.47		10.41	54.75	45.25	**36.5**
#40	0.425	46.06		7.00	61.75	38.25	**30.9**
#60	0.250	53.15		8.08	69.83	30.17	**24.4**
#140	0.106	60.41		9.19	79.02	20.98	**16.9**
#200	0.075	15.41		2.34	81.36	18.64	**15.1**
Pan	-	122.57		18.64	100.00	-	-

Water Content			
Tare No.	1655	TOTAL WET WGHT. -3/4 SIEVE	
Wgt. Tare + WS.	805.80		708
Wgt. Tare + DS.	755.80		
Wgt. Tare	98.16	TOTAL DRY WGHT. -3/4 SIEVE	
Wgt. Of Water	50.00		658
Wgt. Of DS.	657.64		
% Water	7.6		

Note: 1) The +3/4" sieve analysis is based on the grand total dry weight of material.
2) The -3/4" sieve analysis is based on the total dry weight of the split portion of sample.
3) The final percent finer combines the two analysis.

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HYDROMETER ANALYSIS

Client	ENVIRONMENTAL STRATEGIES	Tested By	TO	Date	04-02-97
Client Project	AL TECH DUNKIRK 483803	Checked By	TM	Date	4-10-97
Project No.	97073-01				
Boring No.	NA				
Depth(ft.)	NA				
Sample No.	RFI13-03				

Soil Sample Weight

Container No.	1640		
Wt. Contain. & Dry Soil	148.90 gm.	K Factor	0.01311
Wt. Contain.	101.30 gm.	Composite Correction	6.73
Wt. Dispers.	5.00 gm.	a Factor	0.99
Wt. Dry Soil	42.60 gm.	% Finer Than No. 200	15.05

Temperature C	22.1	Measured
Specific Gravity	2.70	Assumed

Elapsed Time (min.)	R Measured		R Corrected	N (%)	D (mm)	N' (%)
0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
2	35.5	37.5	30.8	71.5	0.0295	10.8
5		33.5	26.8	62.2	0.0193	9.4
17		26.0	19.3	44.8	0.0110	6.7
30		23.0	16.3	37.8	0.0085	5.7
62		20.0	13.3	30.8	0.0060	4.6
250		15.0	8.3	19.2	0.0031	2.9
1440		11.0	4.3	9.9	0.0013	1.5

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Client	ENVIRONMENTAL STRATEGIES
Client Project	AL TECH DUNKIRK 483803
Project No.	97073-01
Boring No.	NA
Depth(ft.)	NA
Sample No.	RFI13-03

DIAMETER (mm)	PERCENT FINER
300.00	100.0
150.00	100.0
75.000	100.0
50.000	100.0
37.500	100.0
25.000	87.2
19.000	80.8
12.500	70.7
9.5000	66.7
4.7500	57.1
2.0000	45.0
0.8500	36.5
0.4250	30.9
0.2500	24.4
0.1060	16.9
0.0750	15.1
0.0295	10.8
0.0193	9.4
0.0110	6.7
0.0085	5.7
0.0060	4.6
0.0031	2.9
0.0013	1.5

SIEVE OPENING (mm)	PERCENT FINER
100.00	100.00
2.00	44.96
0.05	13.19
0.002	2.18

PERCENT OF EACH COMPONENT		CORRECTED PERCENT -2.0 mm MATERIAL FOR USDA DETERMINATION
GRAVEL	55.04	0.00
SAND	31.77	70.67
SILT	11.00	24.48
CLAY	2.18	4.86

USDA CLASSIFICATION SANDY LOAM

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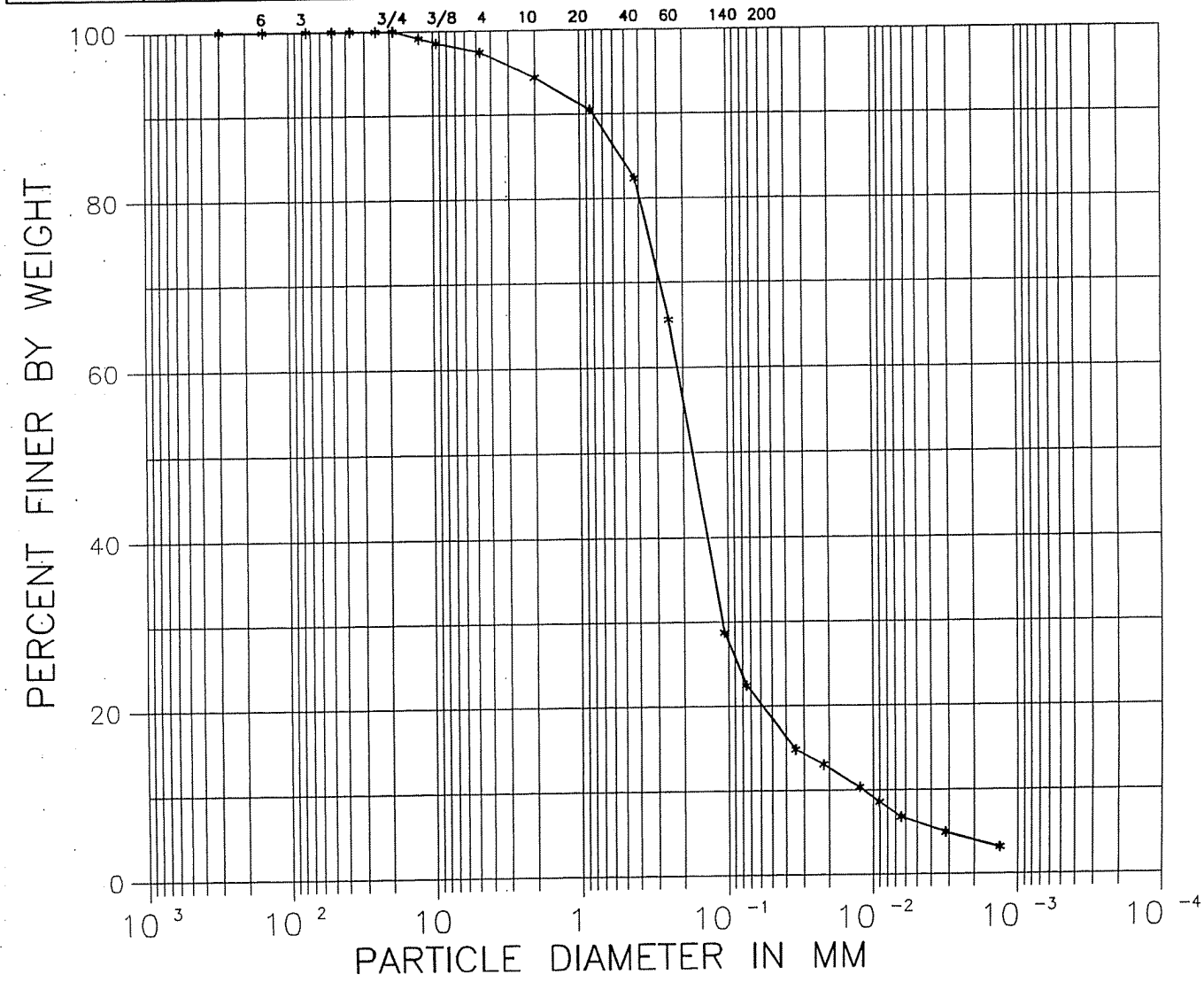
Client ENVIRONMENTAL STRATEGIES
Client Project AL TECH DUNKIRK 483803
Project No. 97073-01
USCS Classification sc
Soil Description BROWN CLAYEY SAND

Boring No. NA
Depth(ft) NA
Sample No. RFI 14-03
USDA Classification LOAMY SAND

SIEVE ANALYSIS HYDROMETER

USCS	GRAVEL	SAND	SILT AND CLAY FRACTION	
USDA	GRAVEL	SAND	SILT	CLAY



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WASH SIEVE ANALYSIS

Client	ENVIRONMENTAL STRATEGIES	Tested By	BF	Date	04-03-97
Client Project	AL TECH DUNKIRK 483803	Checked By	TM	Date	4-14-97
Project No.	97073-01				
Boring No.	NA				
Depth(ft.)	NA				
Sample No.	RFI 14-03				
Soil Description	BROWN CLAYEY SAND				

Wt. of Total Sample(dry)	424.28 gm.
Wt. of +#200 Sample	328.96 gm.
Wt. of -#200 Sample	95.32 gm.

Sieve	Sieve Opening (mm)	Wt. of Soil Retained (gm.)	Percent Retained	Accumulated Percent Retained	Percent Finer
12"	300.00	0.00	0.0	0.0	100.0
6"	150.00	0.00	0.0	0.0	100.0
3"	75.00	0.00	0.0	0.0	100.0
2"	50.00	0.00	0.0	0.0	100.0
1 1/2"	37.50	0.00	0.0	0.0	100.0
1"	25.00	0.00	0.0	0.0	100.0
3/4"	19.00	0.00	0.0	0.0	100.0
1/2"	12.50	3.68	0.9	0.9	99.1
3/8"	9.50	2.47	0.6	1.4	98.6
#4	4.75	4.75	1.1	2.6	97.4
#10	2.00	12.97	3.1	5.6	94.4
#20	0.85	16.47	3.9	9.5	90.5
#40	0.425	34.49	8.1	17.6	82.4
#60	0.250	71.16	16.8	34.4	65.6
#140	0.106	156.26	36.8	71.2	28.8
#200	0.075	26.71	6.3	77.5	22.5
Pan	-	95.32	22.5	100.0	-

Water Content	
Tare No.	1656
Wgt. Tare + WS.	606.00
Wgt. Tare + DS.	527.70
Wgt. Tare	103.42
Wgt. Of Water	78.30
Wgt. Of DS.	424.28
% Water	18.5

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HYDROMETER ANALYSIS

Client	ENVIRONMENTAL STRATEGIES	Tested By	TO	Date	04-03-97
Client Project	AL TECH DUNKIRK 483803	Checked By	TM	Date	4-14-97
Project No.	97073-01				
Boring No.	NA				
Depth(ft.)	NA				
Sample No.	RFI 14-03				

Soil Sample Weight			
Container No.	1614		
Wt. Contain. & Dry Soil	117.35 gm.	K Factor	0.01311
		Composite Correction	6.73
Wt. Contain.	99.96 gm.	a Factor	0.99
Wt. Dispers.	5.00 gm.		
Wt. Dry Soil	12.39 gm.	% Finer Than No. 200	22.47
Temperature C	22.1		
Specific Gravity	2.70 Assumed		

Elapsed Time (min.)	R Measured		R Corrected	N (%)	D (mm)	N' (%)
0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
2	14.5	15.0	8.3	66.1	0.0345	14.9
5		14.0	7.3	58.1	0.0219	13.1
16		12.5	5.8	46.1	0.0124	10.4
30		11.5	4.8	38.1	0.0091	8.6
60		10.5	3.8	30.1	0.0065	6.8
250		9.5	2.8	22.2	0.0032	5.0
1440		8.5	1.8	14.2	0.0013	3.2

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Client	ENVIRONMENTAL STRATEGIES
Client Project	AL TECH DUNKIRK 483803
Project No.	97073-01
Boring No.	NA
Depth(ft.)	NA
Sample No.	RFI 14-03

DIAMETER (mm)	PERCENT FINER
300.00	100.0
150.00	100.0
75.000	100.0
50.000	100.0
37.500	100.0
25.000	100.0
19.000	100.0
12.500	99.1
9.5000	98.6
4.7500	97.4
2.0000	94.4
0.8500	90.5
0.4250	82.4
0.2500	65.6
0.1060	28.8
0.0750	22.5
0.0345	14.9
0.0219	13.1
0.0124	10.4
0.0091	8.6
0.0065	6.8
0.0032	5.0
0.0013	3.2

SIEVE OPENING (mm)	PERCENT FINER
100.00	100.00
2.00	94.37
0.05	18.49
0.002	4.02

PERCENT OF EACH COMPONENT		CORRECTED PERCENT OF -2.0 mm MATERIAL FOR USDA DETERMINATION
GRAVEL	5.63	0.00
SAND	75.88	80.41
SILT	14.47	15.34
CLAY	4.02	4.26

USDA CLASSIFICATION: LOAMY SAND

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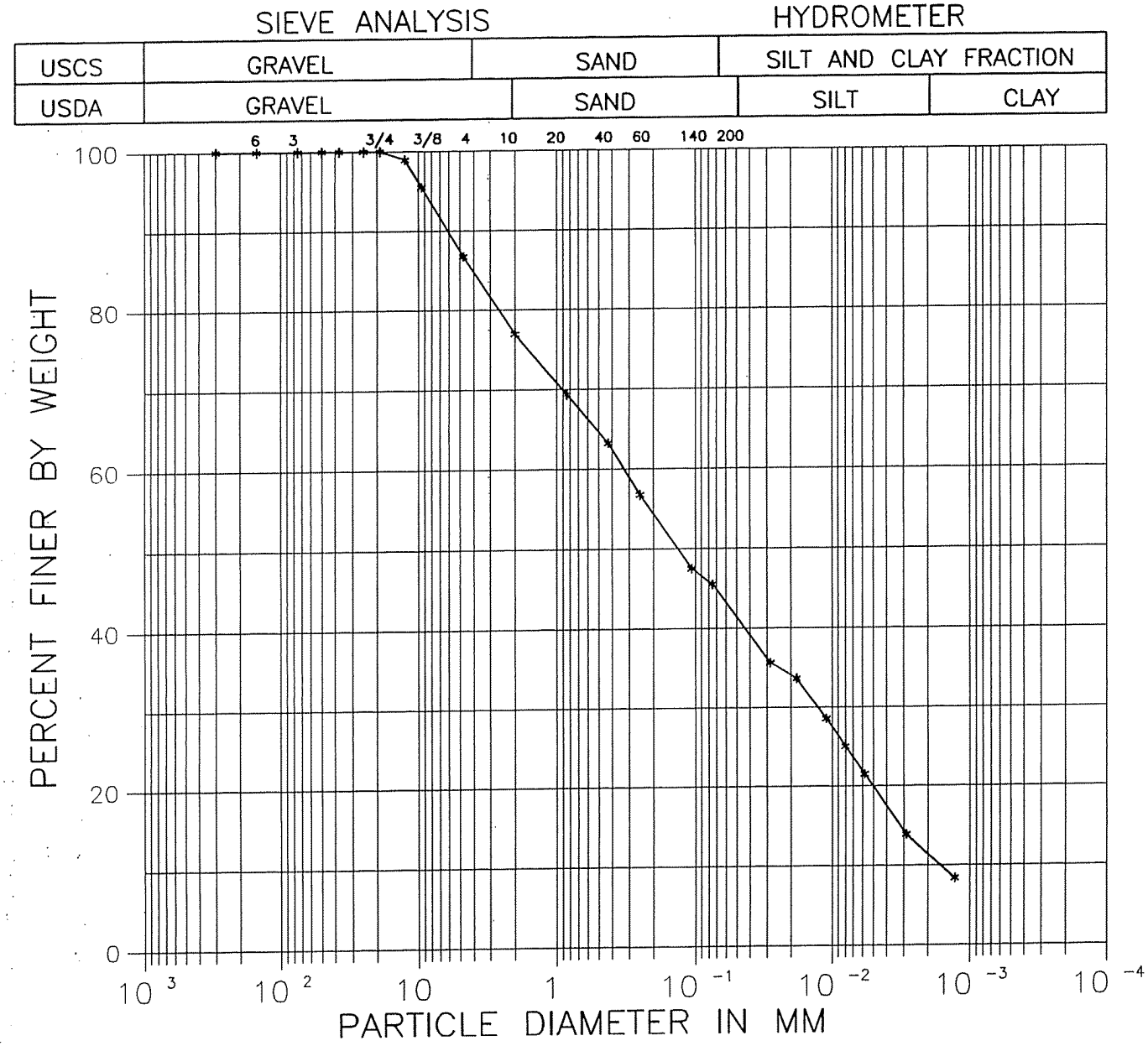
Client ENVIRONMENTAL STRATEGIES
Client Project AL TECH DUNKIRK 483803
Project No. 97073-01
USCS Classification sc
Soil Description BROWN CLAYEY SAND

Boring No. NA
Depth(ft) NA
Sample No. RFI 15-03
USDA Classification LOAM



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WASH SIEVE ANALYSIS

Client	ENVIRONMENTAL STRATEGIES	Tested By	BF	Date	04-03-97
Client Project	AL TECH DUNKIRK 483803	Checked By	TM	Date	4-14-97
Project No.	97073-01				
Boring No.	NA				
Depth(ft.)	NA				
Sample No.	RFI 15-03				
Soil Description	BROWN CLAYEY SAND				

Wt. of Total Sample(dry)	646.67 gm.
Wt. of +#200 Sample	352.26 gm.
Wt. of -#200 Sample	294.41 gm.

Sieve	Sieve Opening (mm)	Wt. of Soil Retained (gm.)	Percent Retained	Accumulated Percent Retained	Percent Finer
12"	300.00	0.00	0.0	0.0	100.0
6"	150.00	0.00	0.0	0.0	100.0
3"	75.00	0.00	0.0	0.0	100.0
2"	50.00	0.00	0.0	0.0	100.0
1 1/2"	37.50	0.00	0.0	0.0	100.0
1"	25.00	0.00	0.0	0.0	100.0
3/4"	19.00	0.00	0.0	0.0	100.0
1/2"	12.50	6.90	1.1	1.1	98.9
3/8"	9.50	22.07	3.4	4.5	95.5
#4	4.75	56.46	8.7	13.2	86.8
#10	2.00	63.64	9.8	23.1	76.9
#20	0.85	49.14	7.6	30.7	69.3
#40	0.425	39.58	6.1	36.8	63.2
#60	0.250	41.90	6.5	43.3	56.7
#140	0.106	59.69	9.2	52.5	47.5
#200	0.075	12.88	2.0	54.5	45.5
Pan	-	294.41	45.5	100.0	-

Water Content	
Tare No.	1622
Wgt. Tare + WS.	887.90
Wgt. Tare + DS.	748.70
Wgt. Tare	102.03
Wgt. Of Water	139.20
Wgt. Of DS.	646.67
% Water	21.5

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HYDROMETER ANALYSIS

Client	ENVIRONMENTAL STRATEGIES	Tested By	TO	Date	04-03-97
Client Project	AL TECH DUNKIRK 483803	Checked By	TM	Date	4-14-97
Project No.	97073-01				
Boring No.	NA				
Depth(ft.)	NA				
Sample No.	RFI 15-03				

Soil Sample Weight			
Container No.	684		
Wt. Contain. & Dry Soil	154.14 gm.	K Factor	0.01311
		Composite Correction	6.73
Wt. Contain.	104.53 gm.	a Factor	0.99
Wt. Dispers.	5.00 gm.		
Wt. Dry Soil	44.61 gm.	% Finer Than No. 200	45.53
Temperature C	22.1		
Specific Gravity	2.70 Assumed		

Elapsed Time (min.)	R Measured		R Corrected	N (%)	D (mm)	N' (%)
0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
2	41.5	42.0	35.3	78.3	0.0284	35.6
5		40.0	33.3	73.8	0.0183	33.6
15		35.0	28.3	62.7	0.0110	28.6
30		31.5	24.8	55.0	0.0080	25.0
60		28.0	21.3	47.2	0.0058	21.5
267		20.5	13.8	30.6	0.0029	13.9
1440		15.0	8.3	18.4	0.0013	8.4

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Client	ENVIRONMENTAL STRATEGIES
Client Project	AL TECH DUNKIRK 483803
Project No.	97073-01
Boring No.	NA
Depth(ft.)	NA
Sample No.	RFI 15-03

DIAMETER (mm)	PERCENT FINER
300.00	100.0
150.00	100.0
75.000	100.0
50.000	100.0
37.500	100.0
25.000	100.0
19.000	100.0
12.500	98.9
9.5000	95.5
4.7500	86.8
2.0000	76.9
0.8500	69.3
0.4250	63.2
0.2500	56.7
0.1060	47.5
0.0750	45.5
0.0284	35.6
0.0183	33.6
0.0110	28.6
0.0080	25.0
0.0058	21.5
0.0029	13.9
0.0013	8.4

SIEVE OPENING (mm)	PERCENT FINER	PERCENT OF EACH COMPONENT		CORRECTED PERCENT OF -2.0 mm MATERIAL FOR USDA DETERMINATION
100.00	100.00			
		GRAVEL	23.05	0.00
2.00	76.95			
		SAND	35.56	46.21
0.05	41.39			
		SILT	30.00	38.98
0.002	11.40			
		CLAY	11.40	14.81

USDA CLASSIFICATION LOAM

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Appendix I

Appendix I – Velocity Calculations and In Situ Hydraulic Conductivity Test Data

ENVIRONMENTAL STRATEGIES CORPORATION

Subject GROUND WATER FLOW VELOCITY - ALTECH - DUNKIRK

By JSC Date 10/8/97 Checked By Pat Date 10/12/98

Proj. Name ALTECH - DUNKIRK Proj. No. 48380-11 Sheet No. 1 of 1

GROUND WATER FLOW VELOCITY AT THE ALTECH - DUNKIRK FACILITY

11/96 ESTIMATED VELOCITY

$V_s = Ki/n_e$

V_s IS VELOCITY

K IS THE HYDRAULIC CONDUCTIVITY (3.509 Ft/day)

i IS HORIZONTAL HYDRAULIC GRADIENT

n_e IS EFFECTIVE POROSITY (.12)

$V_s = 3.509$ Ft/day $\cdot$ .00429 / .12

$V_s = .13$ Ft/day

3/97 ESTIMATED VELOCITY

$V_s = Ki/n_e$

$V_s = 3.509$ Ft/day $\cdot$ .00583 / .12

$V_s = .17$ ft/day

FOR THE SOUTHWESTERN PORTION OF SITE

11/96

$V_s = Ki/n_e$

$V_s = 3.509$ ft/day $\cdot$ .0514 / .12

$V_s = 1.5$ ft/day

3/97

$V_s = Ki/n_e$

$V_s = 3.509$ ft/day $\cdot$ .0514 / .12

$V_s = 1.5$ ft/day

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ENVIRONMENTAL STRATEGIES CORPORATION

Subject: HYDRAULIC GRADIENTS - ALTECH DUNKIRK

By: JSC Date: 10/7/98 Checked By: _____ Date: _____

Proj. Name: ALTECH-DUNKIRK Proj. No.: 483803-M Sheet No.: 1 of 2

HYDRAULIC GRADIENTS AT SITE

- NORTHERN
- NORTHWESTERN
- SOUTHERN
- SOUTHWESTERN

GRADIENTS WERE CALCULATED ALONG FLOW DIRECTION ARROWS, WHERE POINT 1 IS THE LOCATION WHERE THE FLOW ARROW FIRST CROSSES A POTENTIOMETRIC LINE, AND POINT 2 IS THE LOCATION WHERE THE FLOW ARROW LAST CROSSES A POTENTIOMETRIC LINE.

NORTHWESTERN	11/96 GW ELEV.	3/97 GW ELEV.
POINT 1	634	633
POINT 2	629	628
Δh:	5'	5'
Δl:	1267	973'
GRADIENT: ($\Delta h / \Delta l$)	.00395	.00514

NORTHERN	11/96 GW ELEV.	3/97 GW ELEV.
POINT 1	633	632
POINT 2	630	627
Δh:	3'	5'
Δl:	840'	600'
GRADIENT: ($\Delta h / \Delta l$)	.00357	.00833

SOUTHERN	11/96 GW ELEV	3/97 GW ELEV.
POINT 1	633	632
POINT 2	631	630
Δh:	2'	2'
Δl:	373'	507'
GRADIENT: ($\Delta h / \Delta l$)	.00536	.00394

SOUTHWESTERN	11/96 GW ELEV.	3/97 GW ELEV.
POINT 1	629	628
POINT 2	616	615
Δh:	13'	13'
Δl:	253'	253'
GRADIENT:	.0514	.0514

ENVIRONMENTAL STRATEGIES CORPORATION

Subject HYDRAULIC GRADIENTS - ALTECH - DUNKIRK

By JSC Date 10/7/98 Checked By _____ Date _____

Proj. Name ALTECH - DUNKIRK Proj. No. 483803-M Sheet No. 2 of 2

11/96 AVERAGE HYDRAULIC GRADIENT FOR NORTHERN, NORTHWESTERN AND SOUTHERN FLOW DIRECTIONS:

AVE GRADIENT .00429

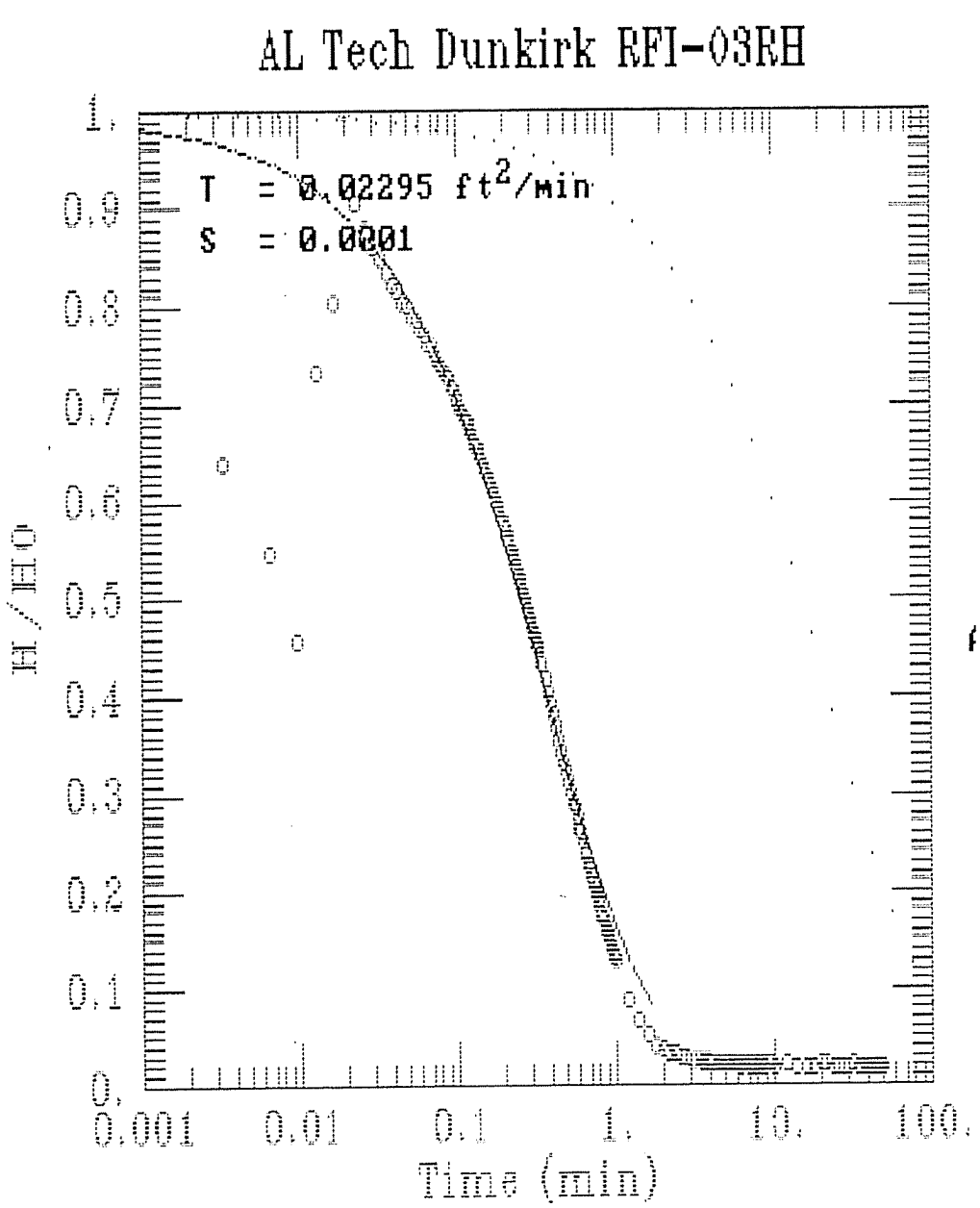
3/97 AVERAGE HYDRAULIC GRADIENT FOR NORTHERN, NORTHWESTERN AND SOUTHERN FLOW DIRECTIONS:

AVE GRADIENT .00580

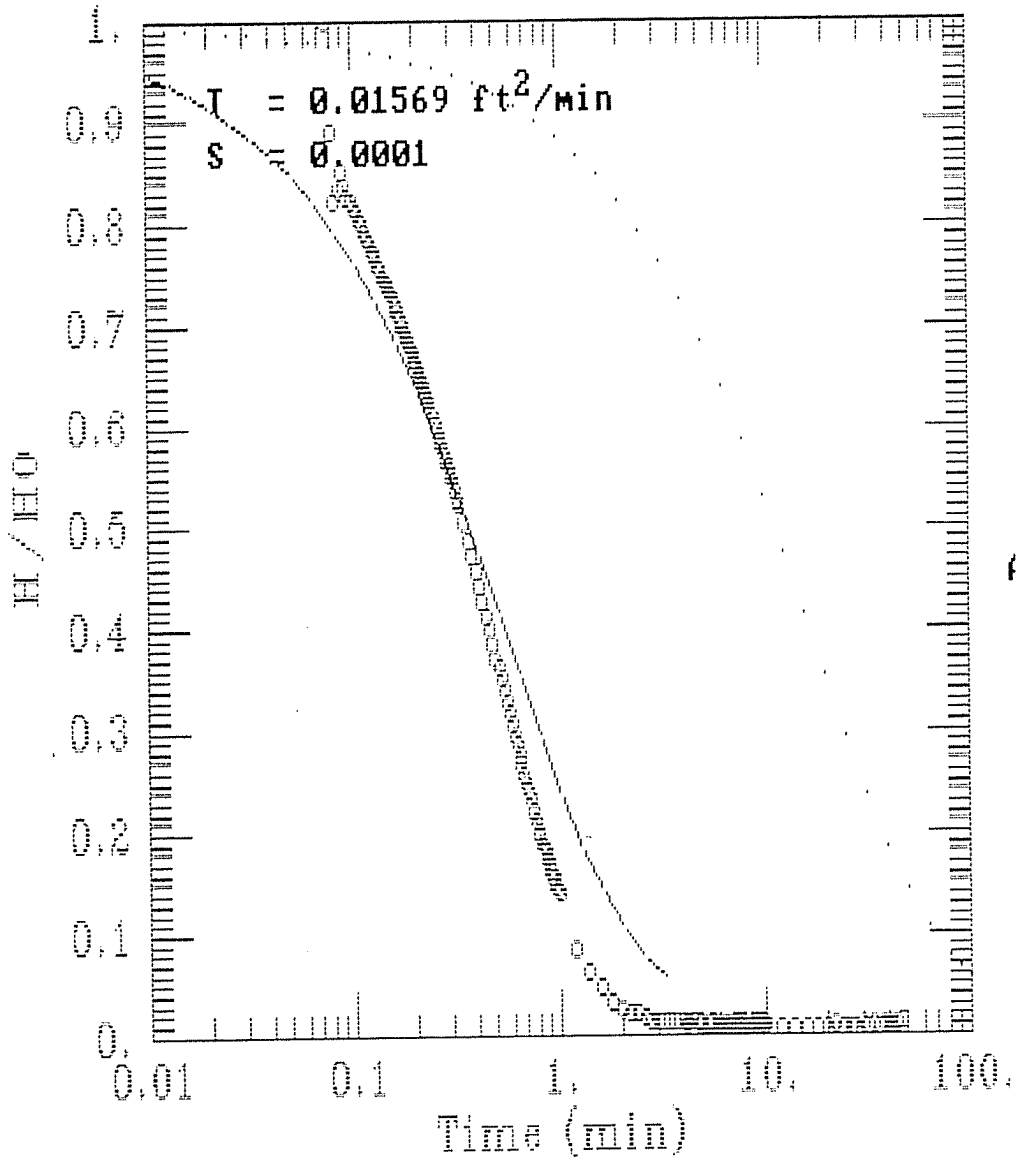
In Situ Hydraulic Conductivity Test Results
Phase I RFI
AL Tech Specialty Steel Corporation
Dunkirk, New York Facility

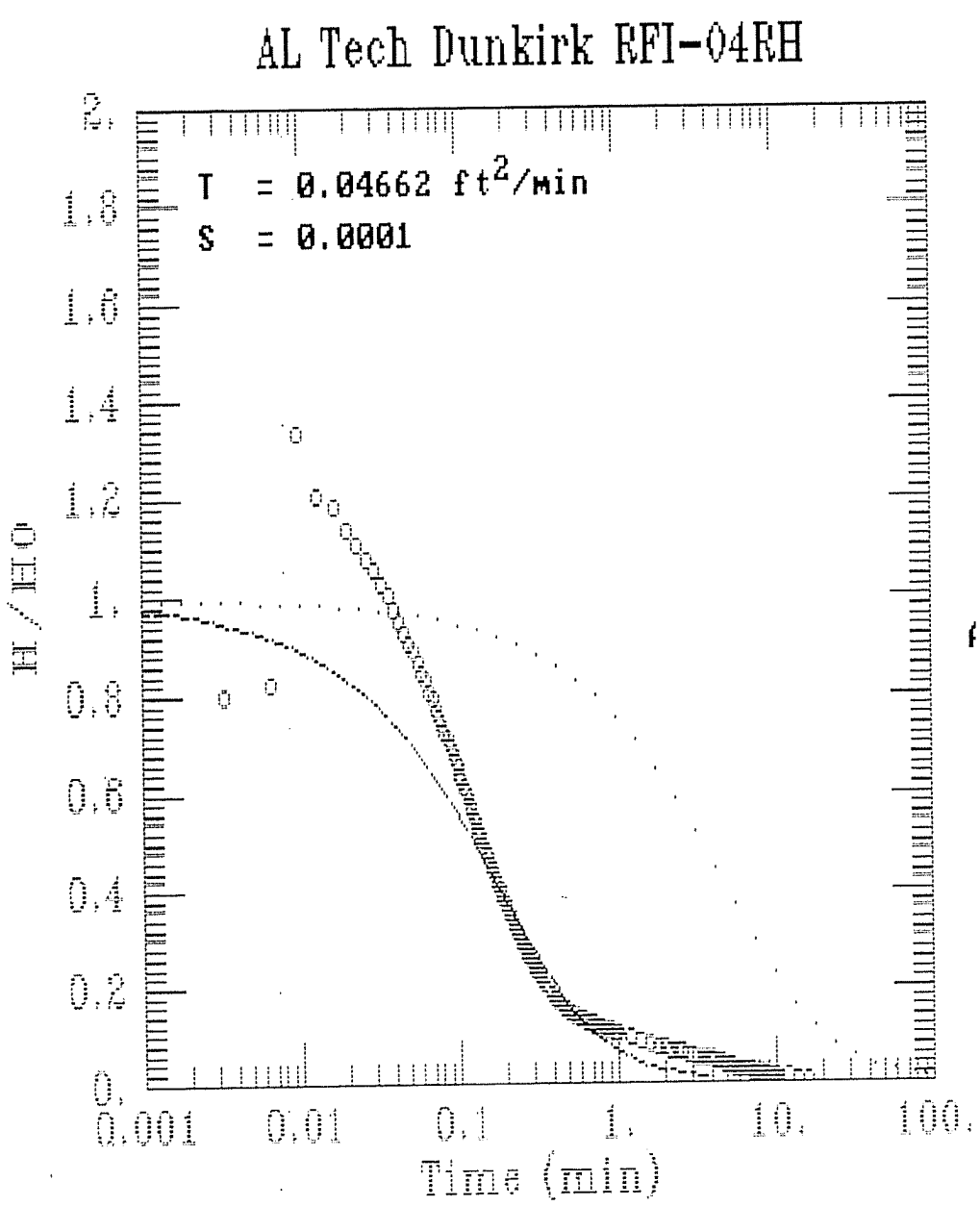
Well No.	Test (a)	Water Column (ft) (b)	Saturated Thickness (ft)	Initial Drawdown (ft)	Screen Length (ft)	Casing Radius (ft)	Effective Radius (ft)	Transmissivity (ft2/min)	Storativity	Hydraulic Conductivity (K) (ft/day)	Hydraulic Conductivity (K) (ft/year)
RFI-03	RH	6.31	4.0	1.98	5	0.08333	0.875	2.30E-02	1E-04	8.262	3015.63
	FH	6.31	4.0	1.60	5	0.08333	0.875	1.57E-02	1E-04	5.648	2061.67
RFI-04	RH	22.0	6.0	1.48	10	0.08333	0.875	4.66E-02	1E-04	11.189	4083.91
	FH	22.0	6.0	1.55	10	0.08333	0.875	3.44E-02	1E-04	8.261	3015.19
RFI-05	RH	11.17	2.5	1.55	8	0.08333	0.875	4.48E-04	1E-04	0.258	94.21
	FH	11.17	2.5	1.80	8	0.08333	0.875	3.63E-03	1E-04	2.090	762.96
RFI-06	RH	6.84	2.0	1.36	7	0.08333	0.875	9.99E-03	1E-04	7.192	2625.11
	FH	6.84	2.0	1.50	7	0.08333	0.875	1.01E-04	1E-04	0.072	26.44
RFI-10	RH	12.24	1.5	1.41	8	0.08333	0.875	5.53E-04	1E-04	0.531	193.84
	FH	12.24	1.5	1.81	8	0.08333	0.875	9.06E-04	1E-04	0.869	317.36
RFI-14	RH	11.13	2.0	1.71	7	0.08333	0.875	7.50E-05	1E-04	0.054	19.71
	FH	11.13	2.0	1.77	7	0.08333	0.875	6.28E-03	1E-04	4.518	1649.07
RFI-17	RH	5.91	3.5	1.30	5	0.08333	0.875	1.17E-04	1E-04	0.048	17.49
	FH	5.91	3.5	1.48	5	0.08333	0.875	3.24E-04	1E-04	0.133	48.58
								Average K		**3.509**	**1280.80**

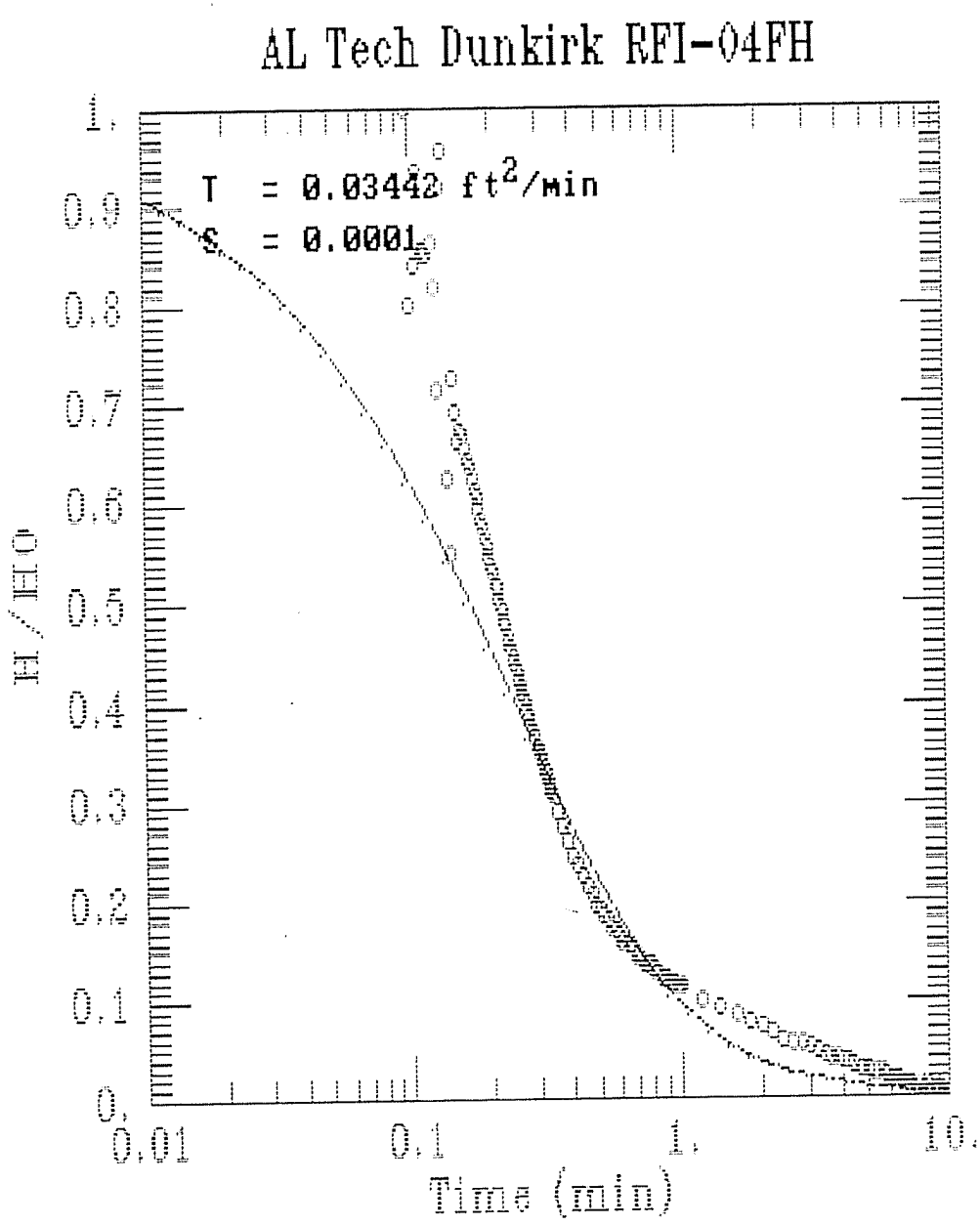
a/ RH = rising-head test; FH = falling-head test.
b/ ft = feet; ft2/min = square-feet per minute; ft/min = feet per minute; ft/day = feet per day.

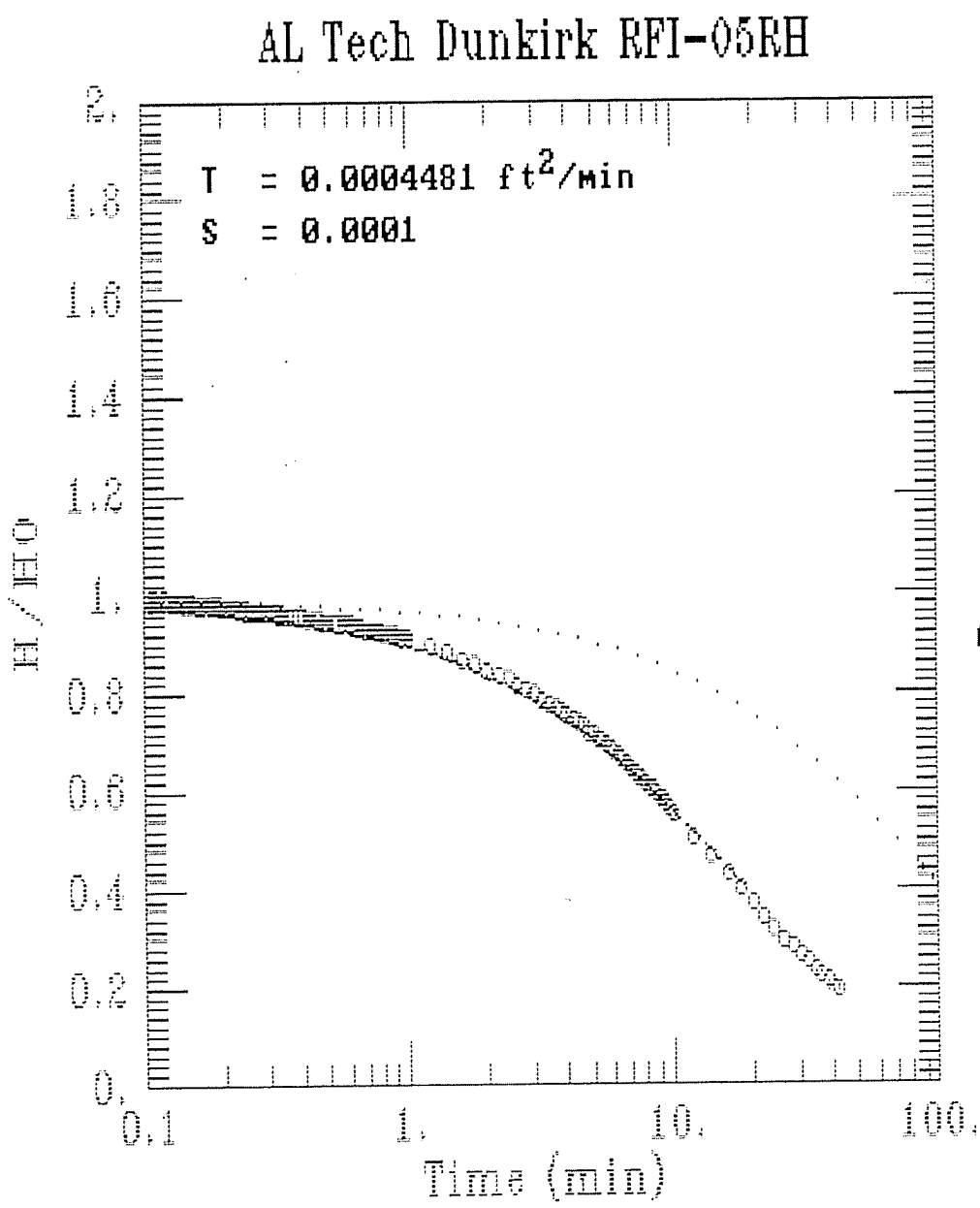

AL Tech Dunkirk RFI-03RH
T = 0.02295 ft²/min
S = 0.0001
H / H0
1.
0.9
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0.
0.001
0.01
0.1
1.
10.
100.
Time (min)

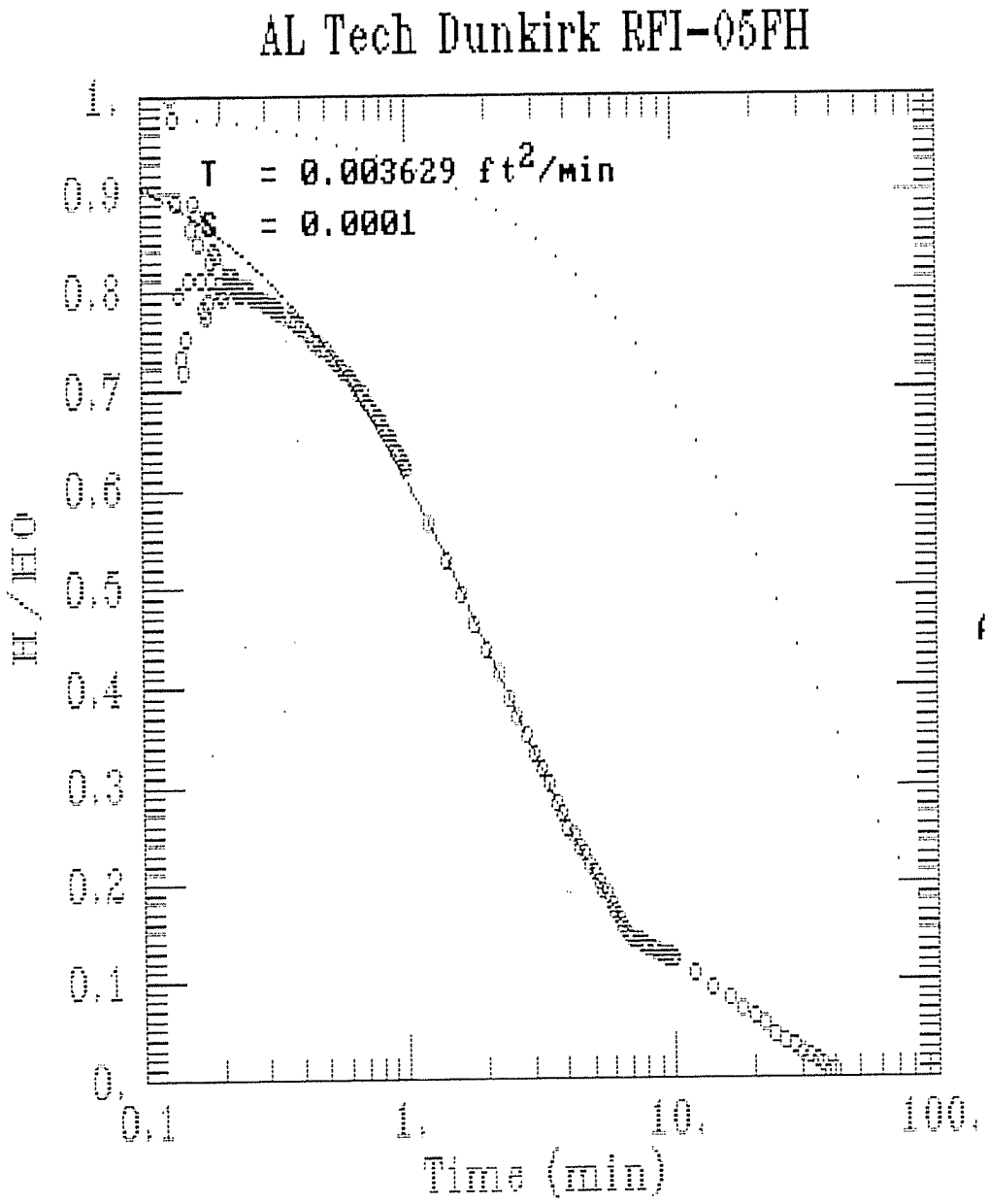
AL Tech Dunkirk RFI-03FH

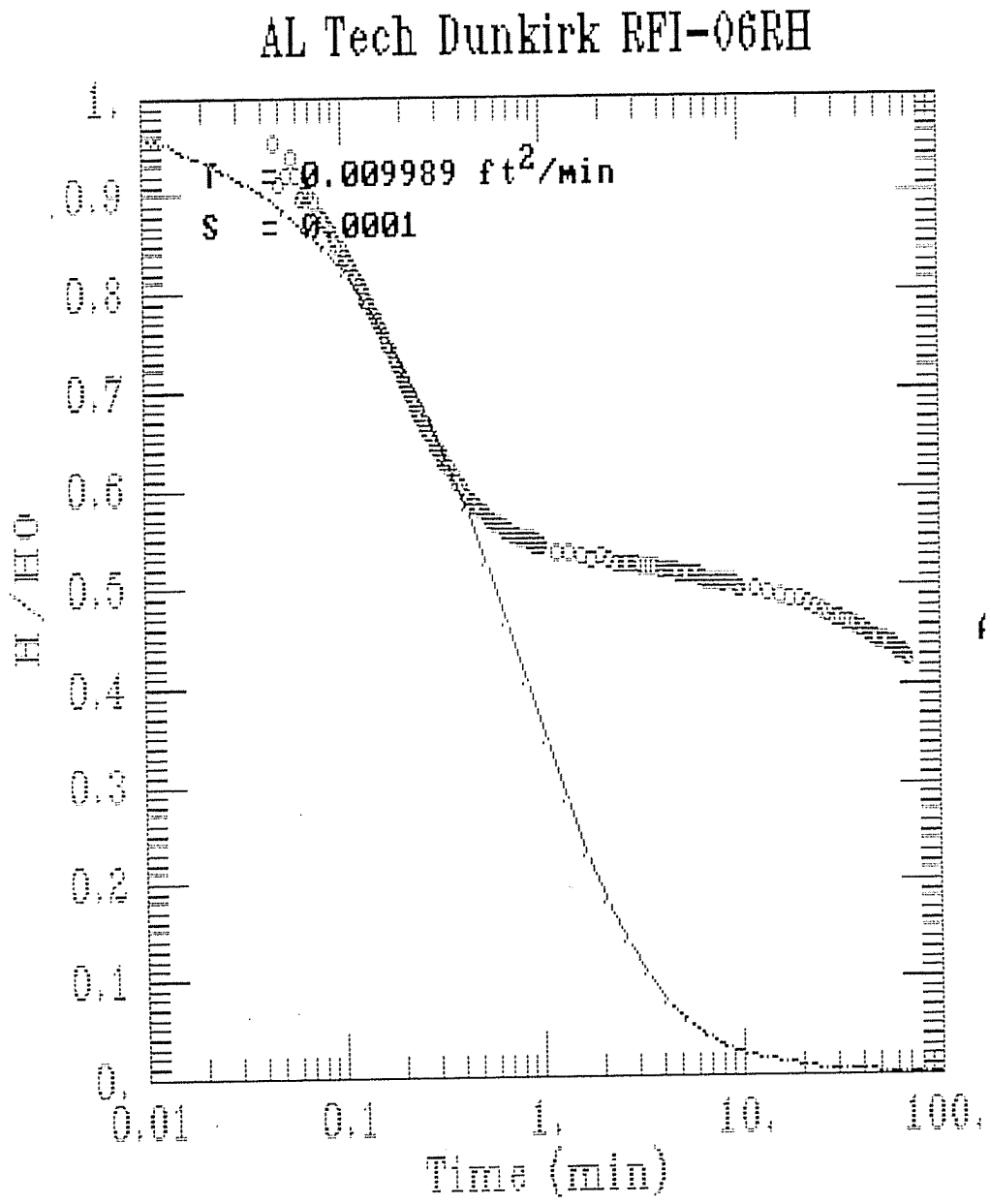


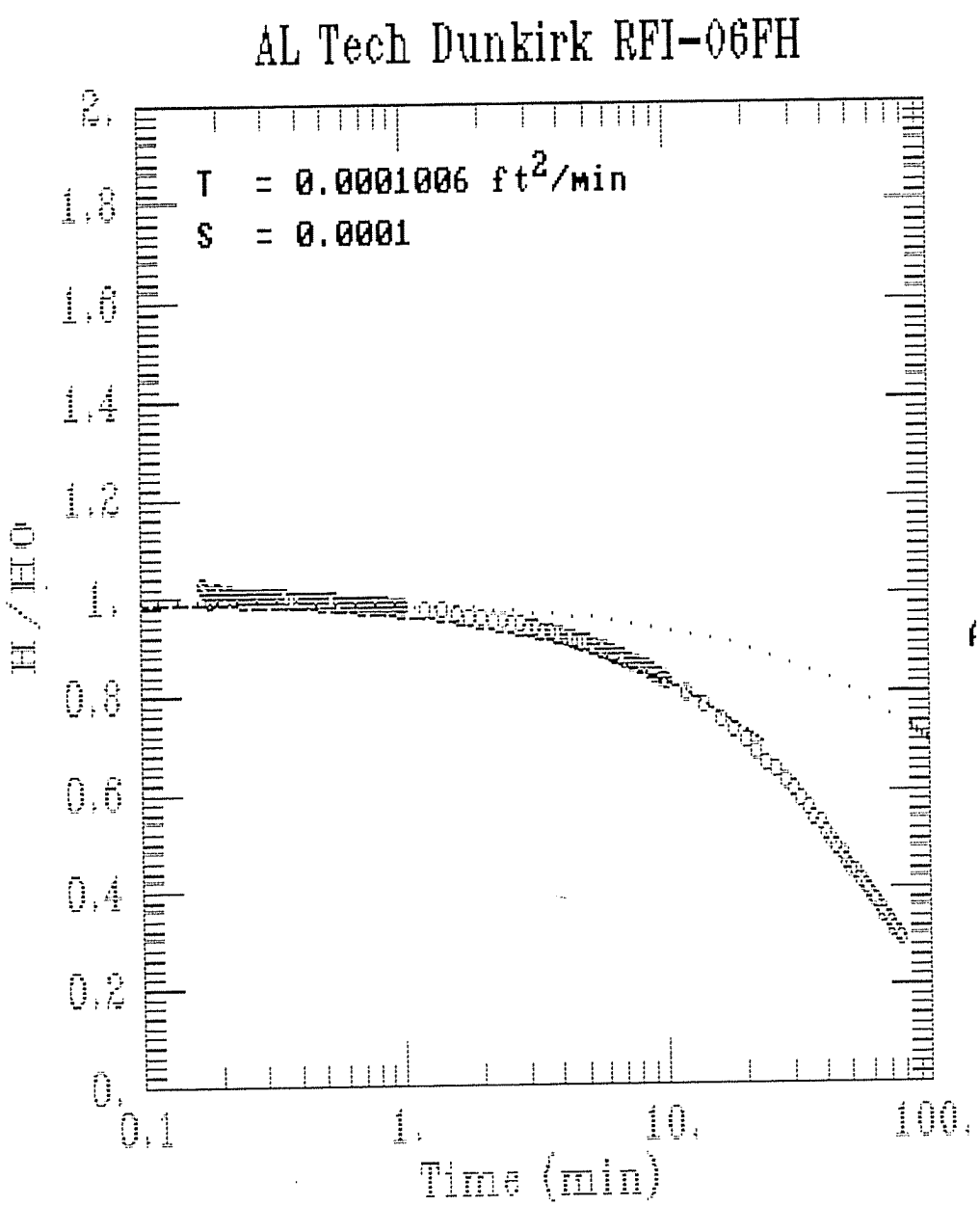

AL Tech Dunkirk RFI-04RH
T = 0.04662 ft²/min
S = 0.0001
H / H0
2.
1.8
1.6
1.4
1.2
1.
0.8
0.6
0.4
0.2
0.
0.001
0.01
0.1
1.
10.
100.
Time (min)

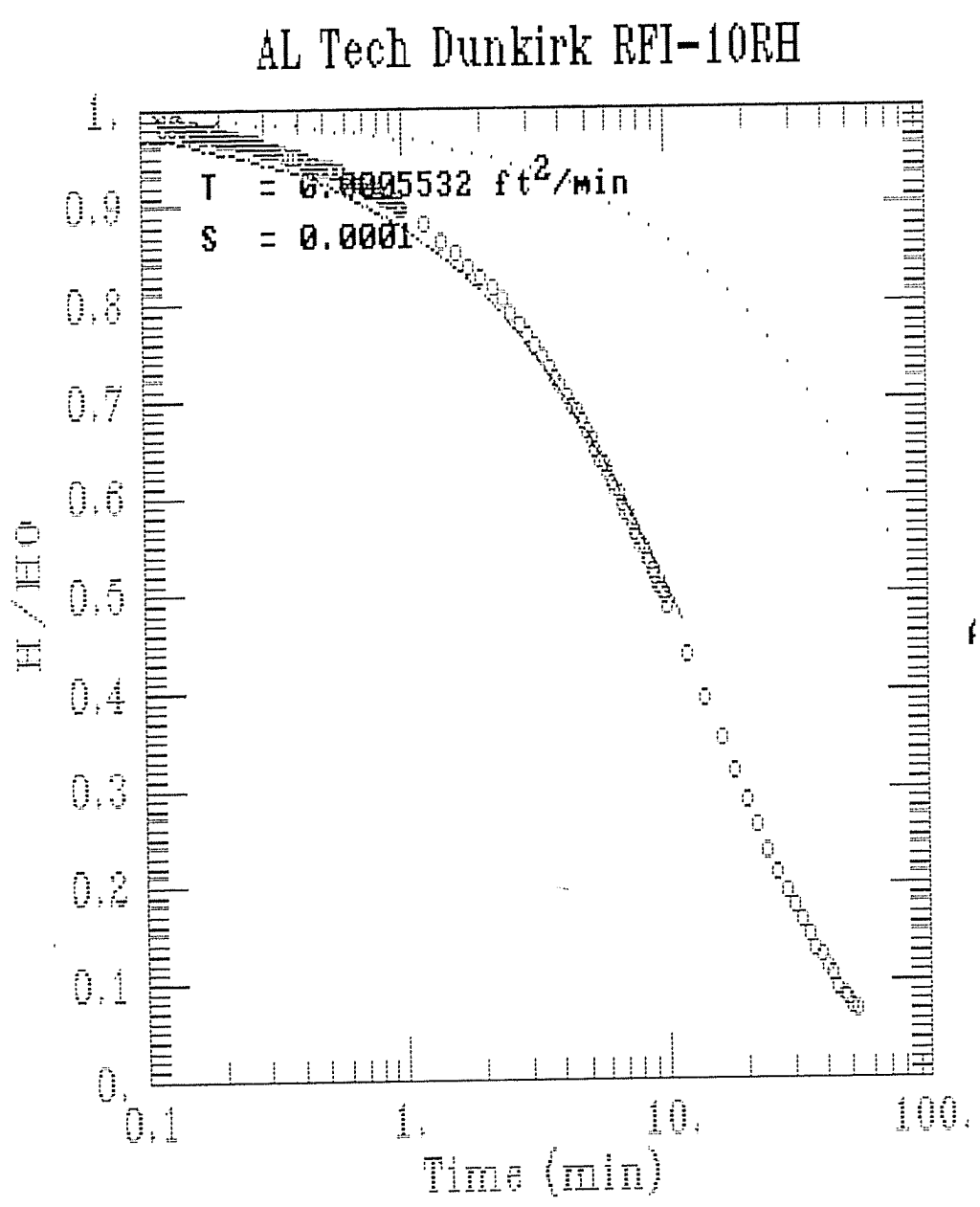

AL Tech Dunkirk RFI-04FH
T = 0.03442 ft²/min
S = 0.0001
H / H0
1.
0.9
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0.
0.01
0.1
1.
10.
Time (min)

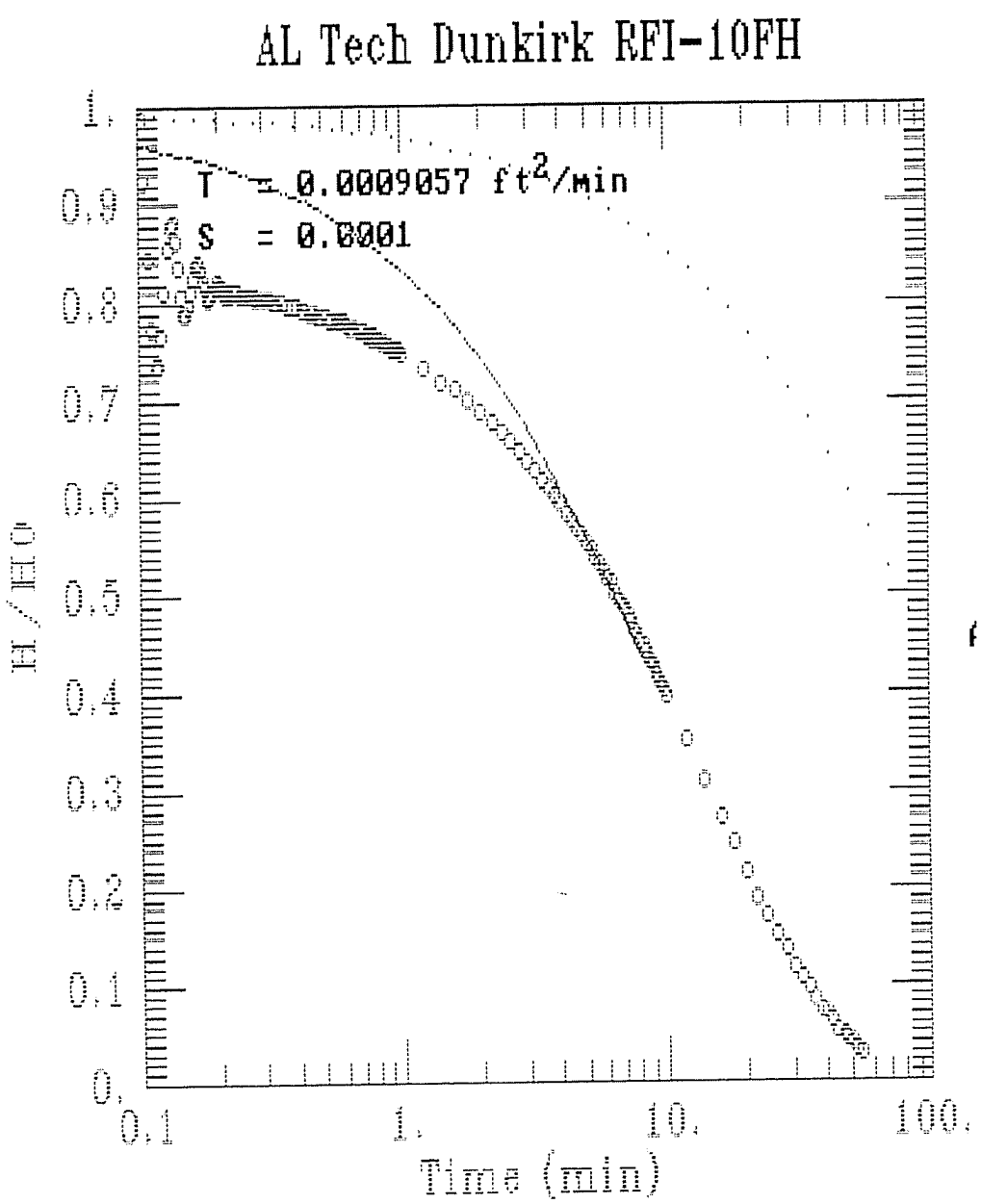

AL Tech Dunkirk RFI-05RH
T = 0.0004481 ft²/min
S = 0.0001
H/H0
2.
1.8
1.6
1.4
1.2
1.
0.8
0.6
0.4
0.2
0.
0.1
1.
10.
100.
Time (min)

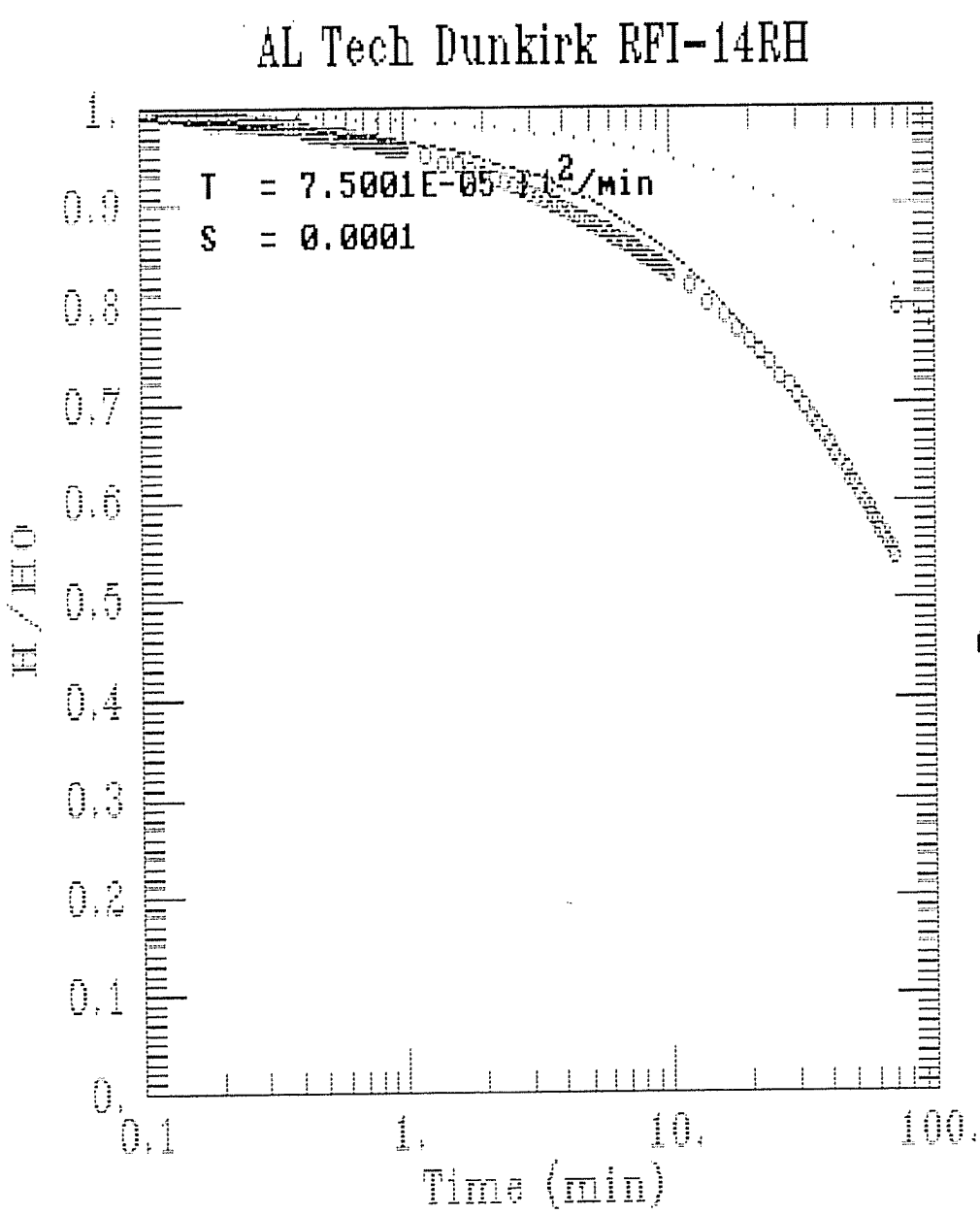

AL Tech Dunkirk RFI-05FH
T = 0.003629 ft²/min
S = 0.0001
H / H0
1.
0.9
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0.
0.1
1.
10.
100.
Time (min)


AL Tech Dunkirk RFI-06RH
T = 0.009989 ft²/min
S = 0.0001
H / H0
1.
0.9
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0.
0.01
0.1
1.
10.
100.
Time (min)

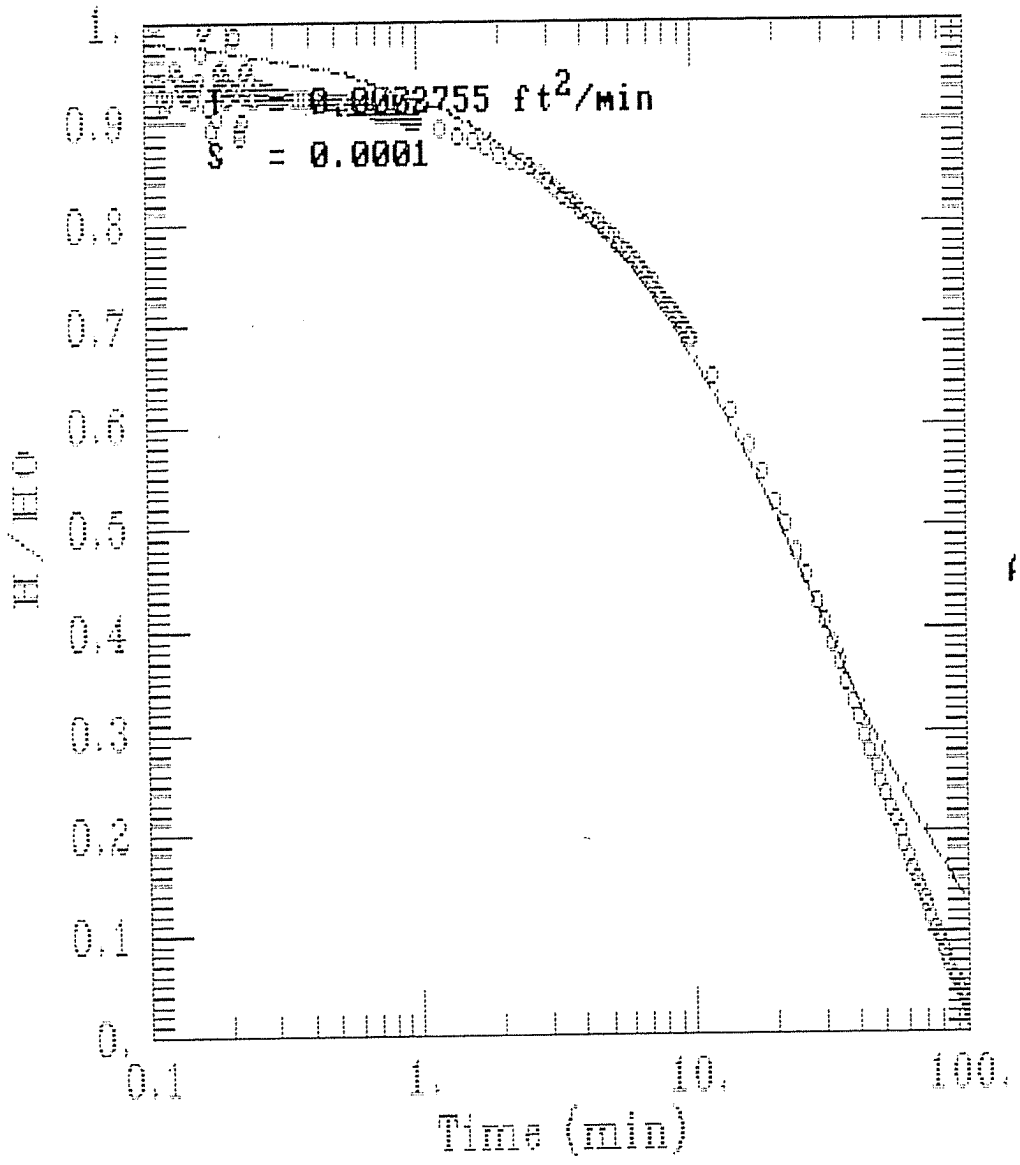

AL Tech Dunkirk RFI-06FH
T = 0.0001006 ft²/min
S = 0.0001
H / H0
2.
1.8
1.6
1.4
1.2
1.
0.8
0.6
0.4
0.2
0.
0.1
1.
10.
100.
Time (min)

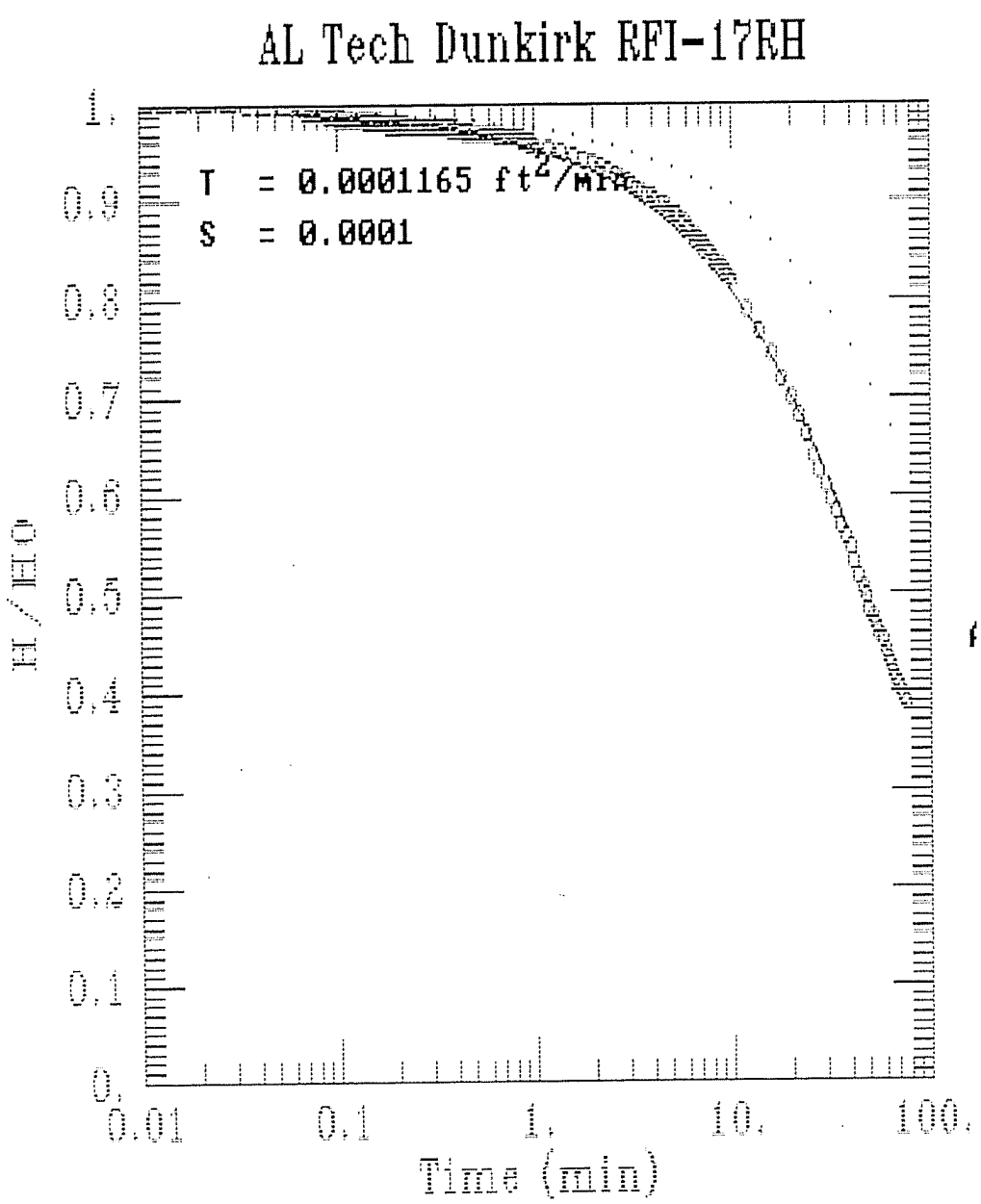

AL Tech Dunkirk RFI-10RH
T = 0.0005532 ft²/min
S = 0.0001
H/H0
1.
0.9
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0.
0.1
1.
10.
100.
Time (min)

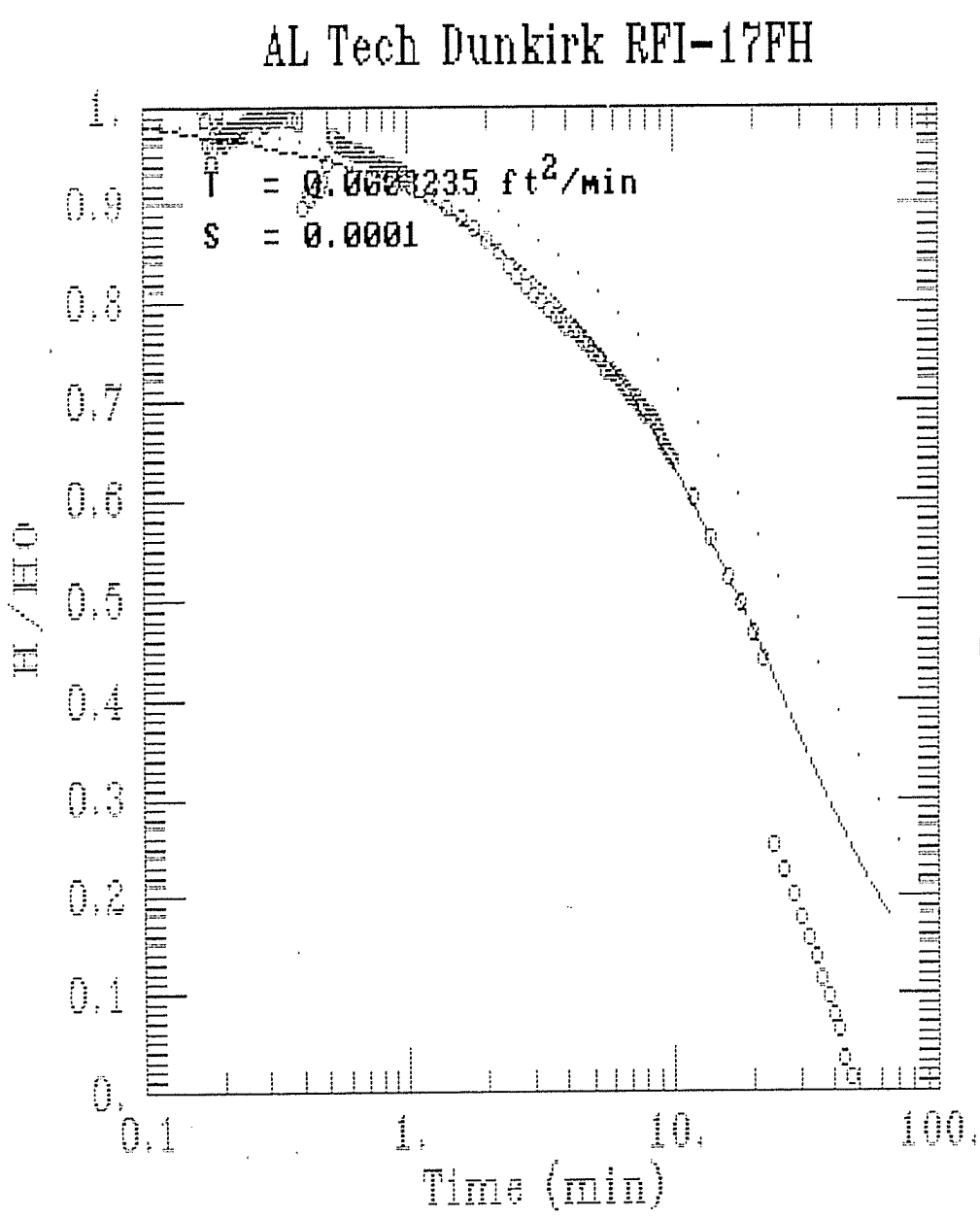

AL Tech Dunkirk RFI-10FH
T = 0.0009057 ft²/min
S = 0.0001
H / H0
1.
0.9
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0.
0.1
1.
10.
100.
Time (min)


AL Tech Dunkirk RFI-14RH
T = 7.5001E-05 ft²/min
S = 0.0001
H/Ho
Time (min)
1.
0.9
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0.
0.1
1.
10.
100.

AL Tech Dunkirk RFI-14FH

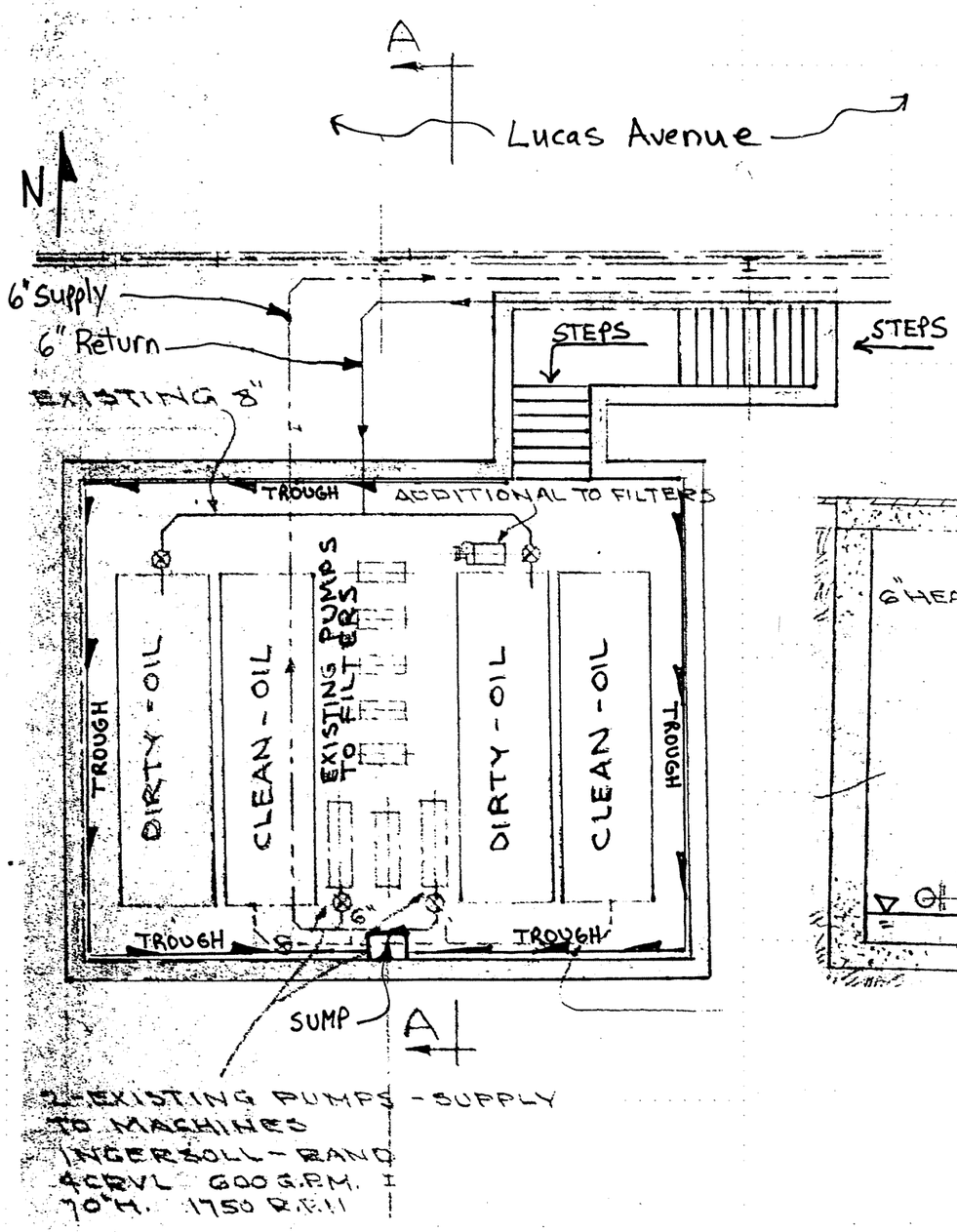



AL Tech Dunkirk RFI-17RH
T = 0.0001165 ft²/min
S = 0.0001
H/H0
1.
0.9
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0.
0.01
0.1
1.
10.
100.
Time (min)


AL Tech Dunkirk RFI-17FH
T = 0.0001235 ft²/min
S = 0.0001
H/H0
Time (min)
1.
0.9
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0.
0.1
1.
10.
100.

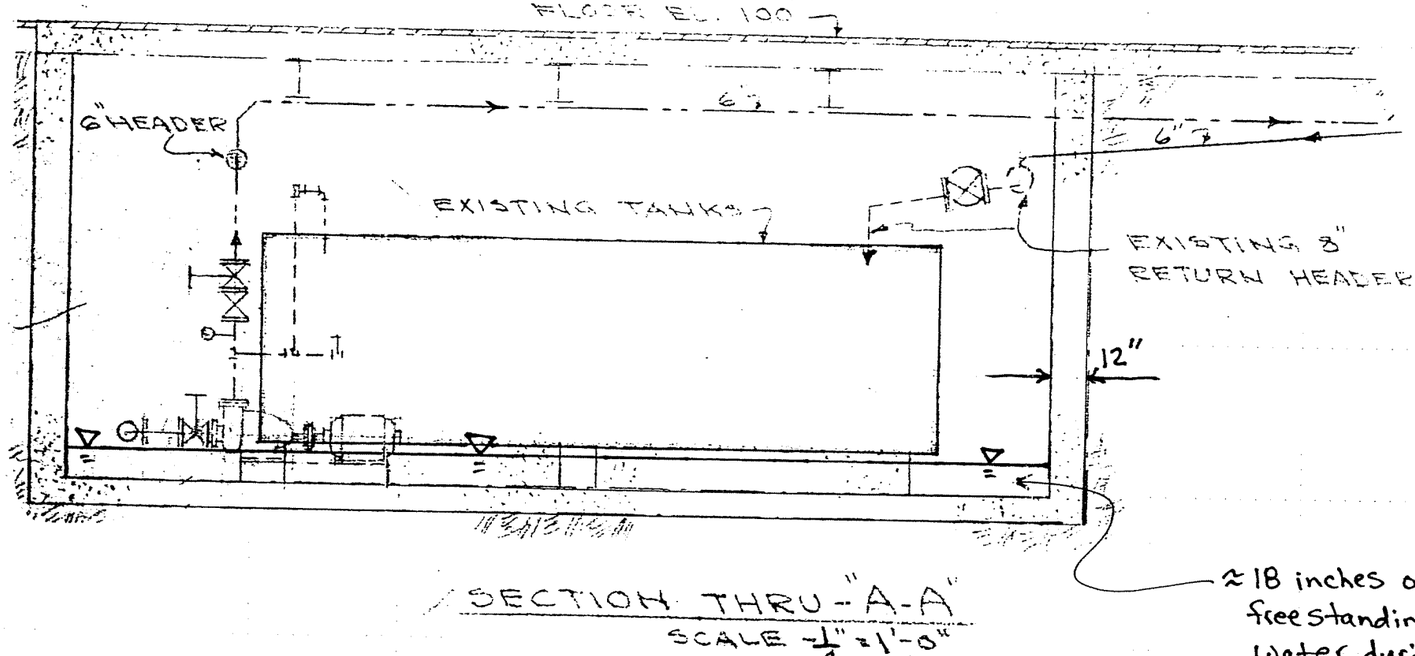
Appendix J

Appendix J - Process Pit Plan Maps and Photographs



Scale 1/8" = 1'

Note: Floor is covered with oily sludge.



SECTION THRU - "A-A"
SCALE - 1/4" = 1'-0"

≈ 18 inches of free standing water during periods of pump shut down.

Figure J-1

Drawn By: GER
Checked:
Approved:

Title: West Drawing Oil Storage Room
Topic: Pit Inspections - Dunkirk RFI
Prepared For: AL Tech Specialty Steel

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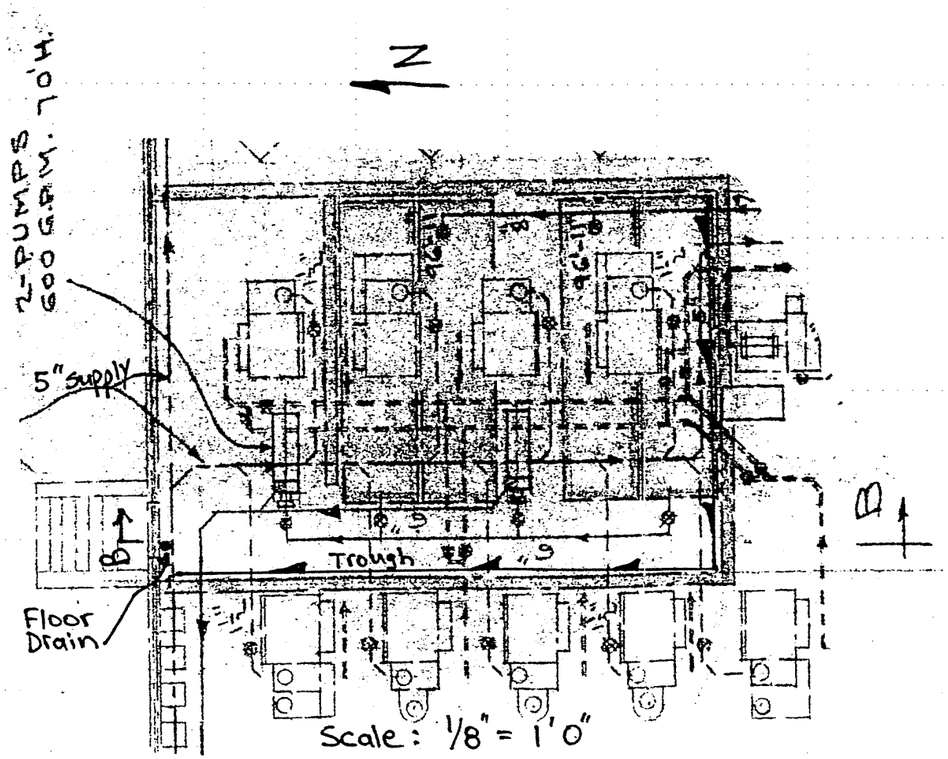
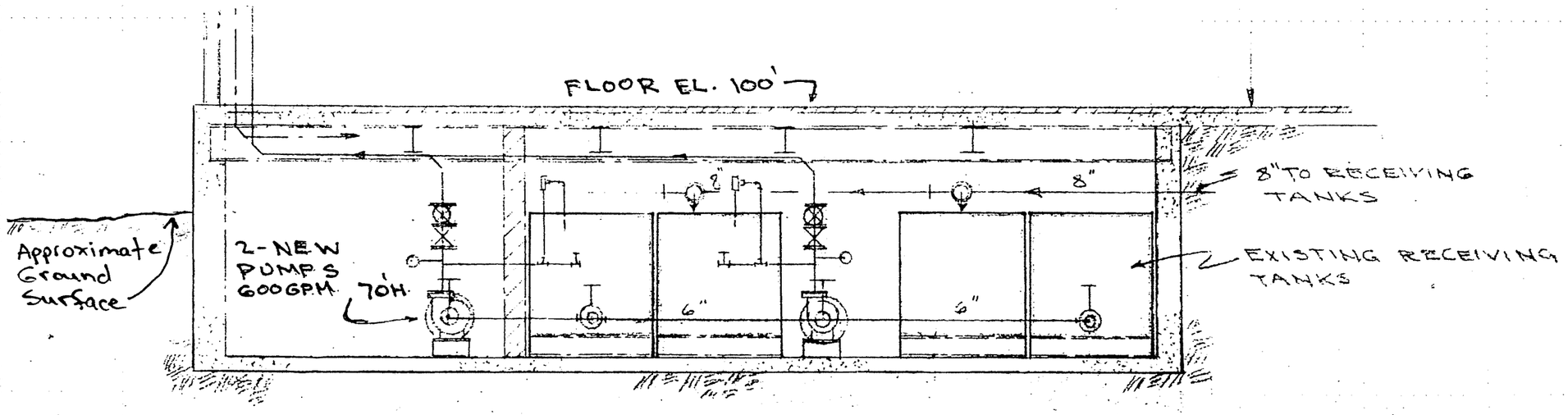


Note: Floor Covered with Oily Sludge.



SECTION THRU - B-B'
SCALE - 1/4" = 1'-0"

Figure J-2

Drawn By: GER
Checked:
Approved:

Title: East Drawing Oil Storage Room
Topic: Pit Inspections - Dunkirk RFI
Prepared For: AL Tech Specialty Steel

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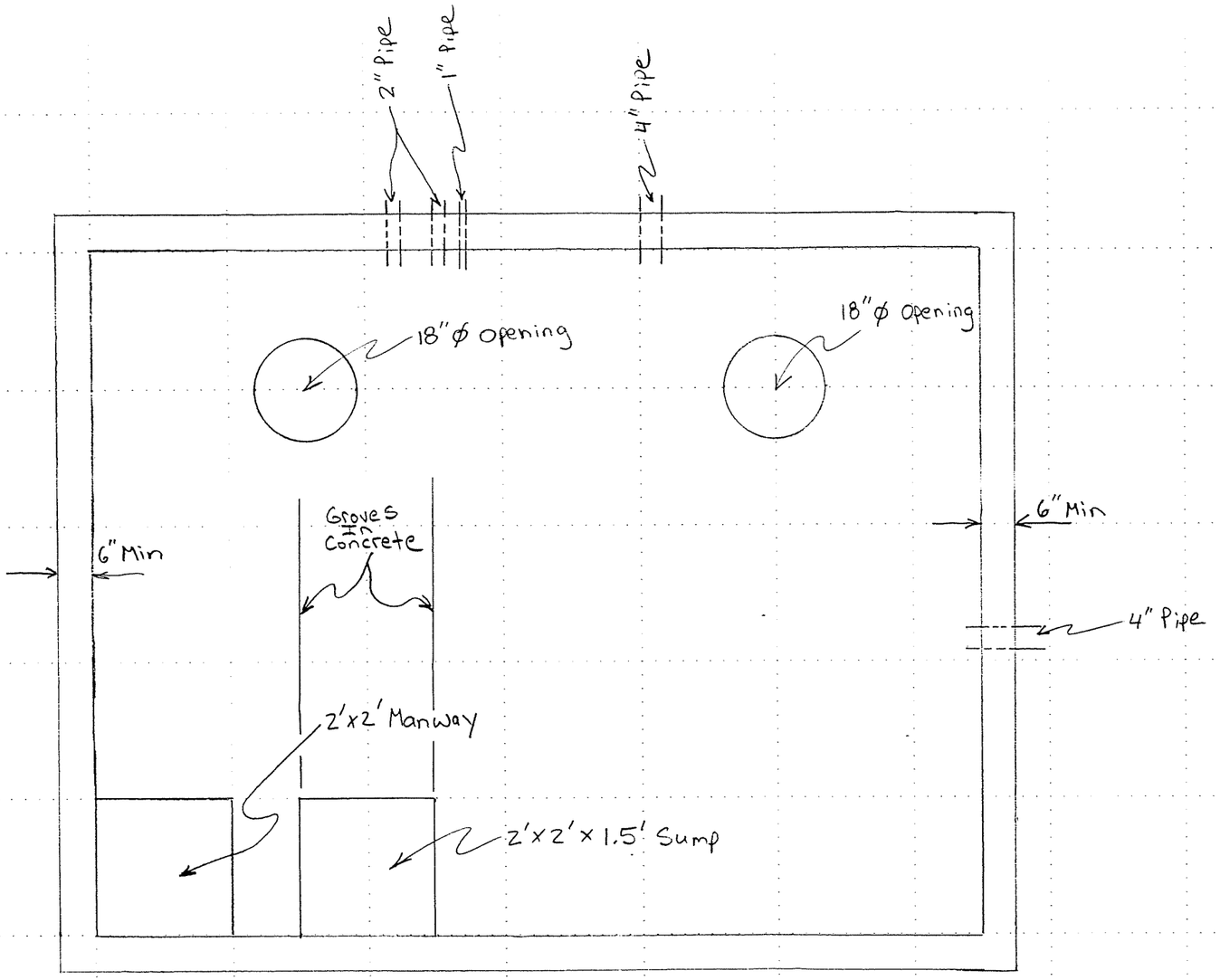
N



PLAN VIEW

Depth ≈ 10 feet

Note: Locations of Pipes are approximate.

Approximate Scale 1" = 2'

Figure J-3

Drawn By: GER
Checked:
Approved:

Title: Melt Cooling Water Pit
Topic: Pit Inspections - DunKirK RFI
Prepared For: AL Tech Specialty Steel

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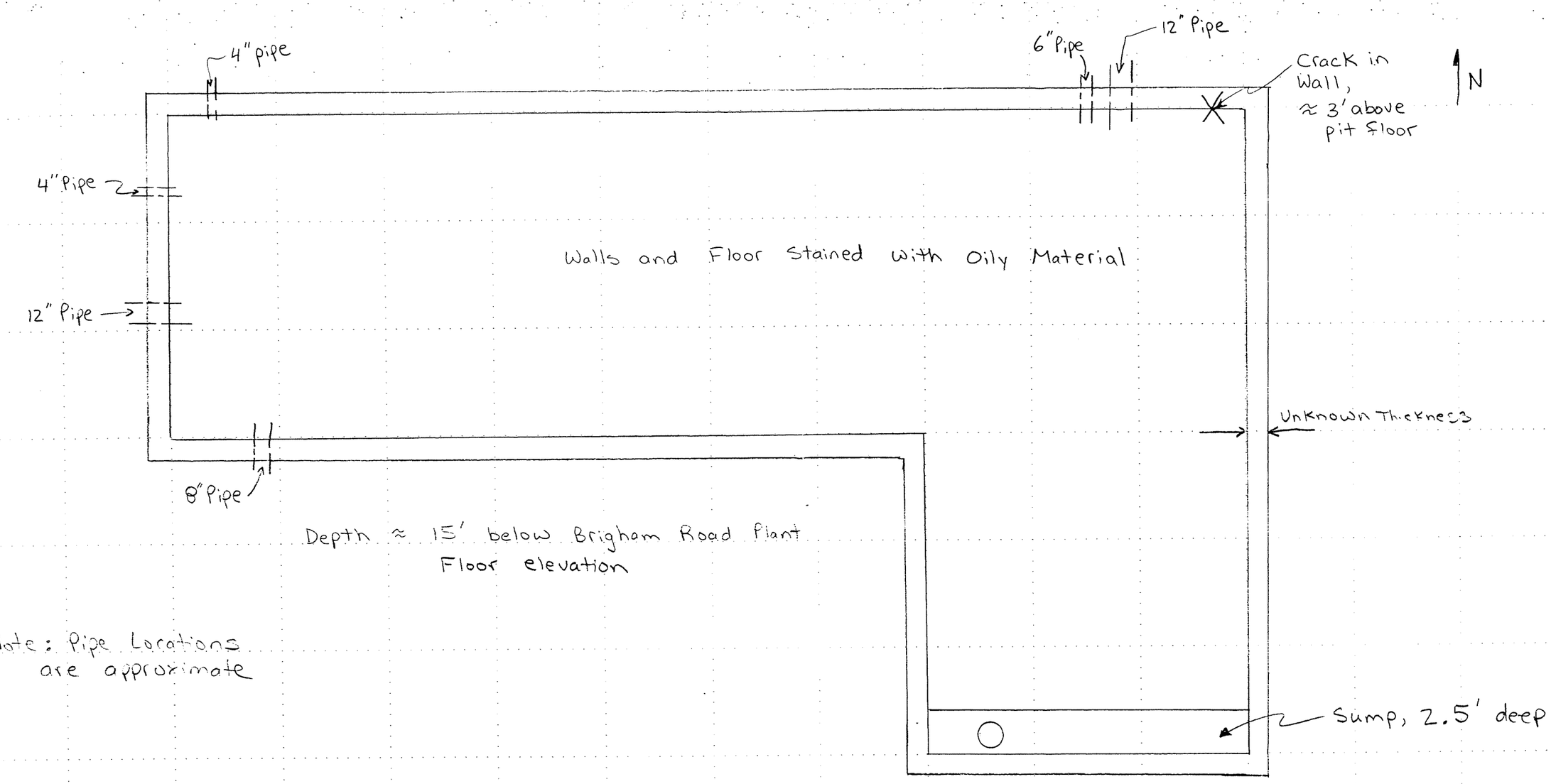

Note: Pipe Locations are approximate

Approximate Scale 1" = 5'

Figure J-4

Drawn By: GER
Checked:
Approved:

Title: Shark Pit
Topic: Pit Inspections - Dunkirk RFI
Prepared For: AL Tech

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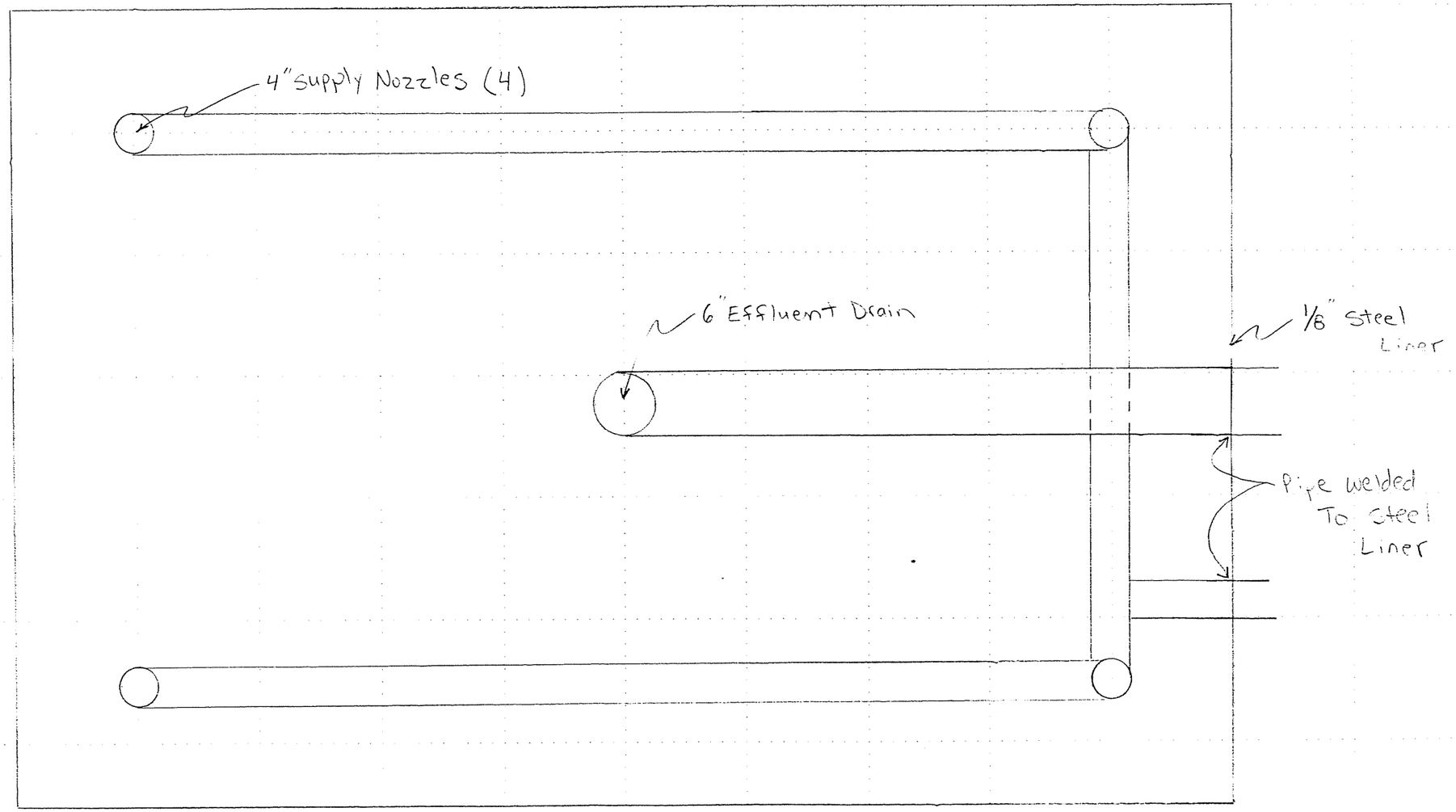
N

Depth ≈ 4.5 Feet



Note: Pipe Locations are approximate.

Approximate Scale 1" = 1'

Figure J-5

Drawn By: GER
Checked:
Approved:

Title: Olson Quench Pit
Topic: Pit Inspections - Dunkirk RFI
Prepared For: AL Tech Specialty Steel

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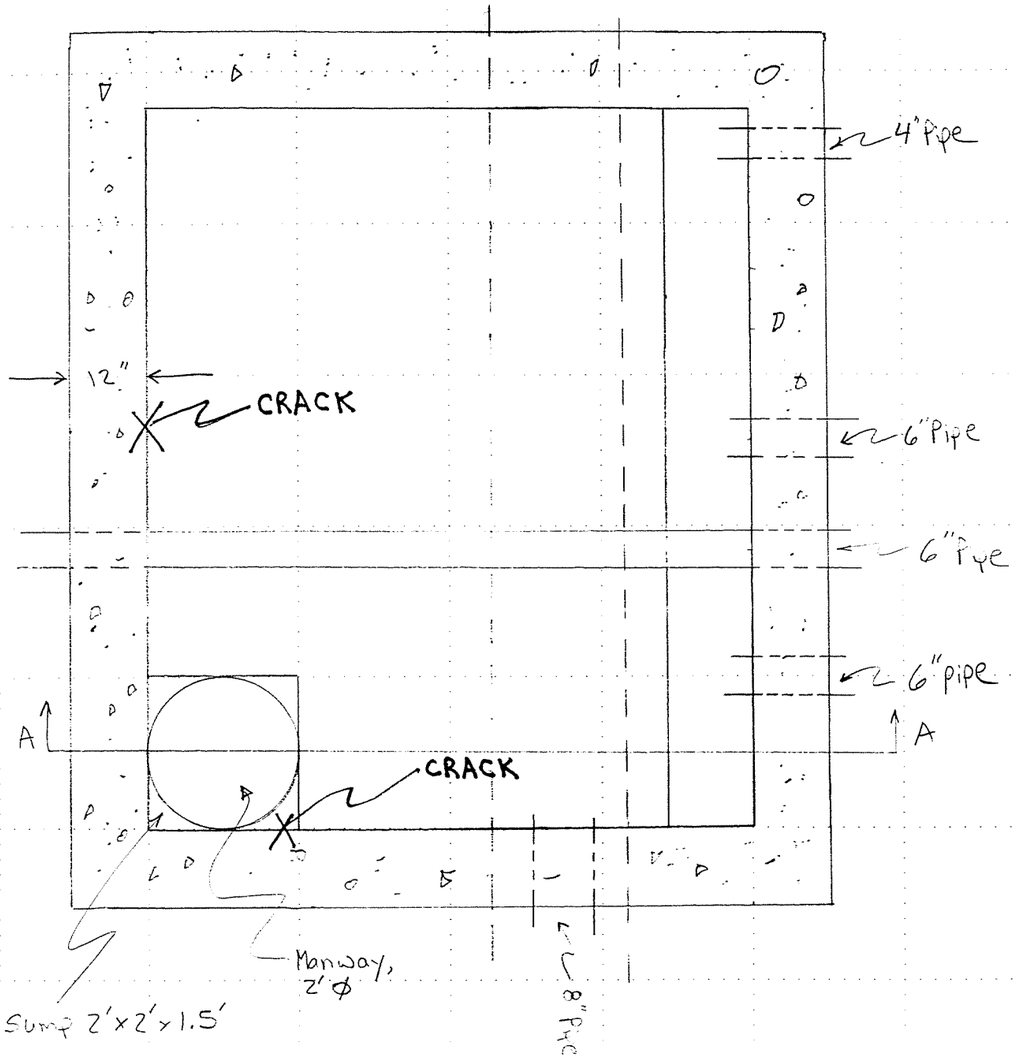

PLAN
Approximate Scale
1" = 2'

Section A-A
Approximate Scale
1" = 2'

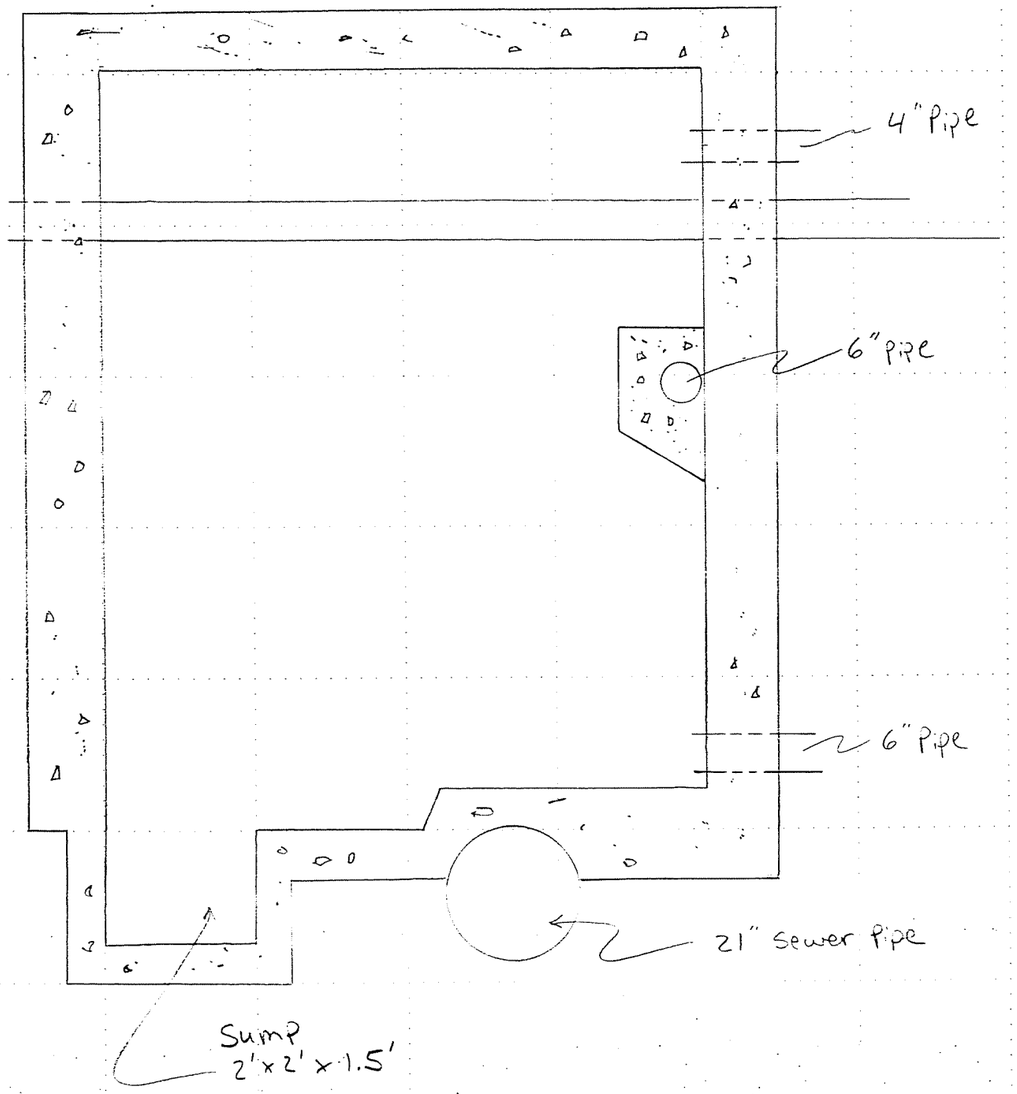

Figure J-6

Drawn By: GER
Checked:
Approved:

Title: Olson Pump Pit
Topic: Pit Inspections - Dunkirk RFI
Prepared For: AL Tech Specialty Steel)

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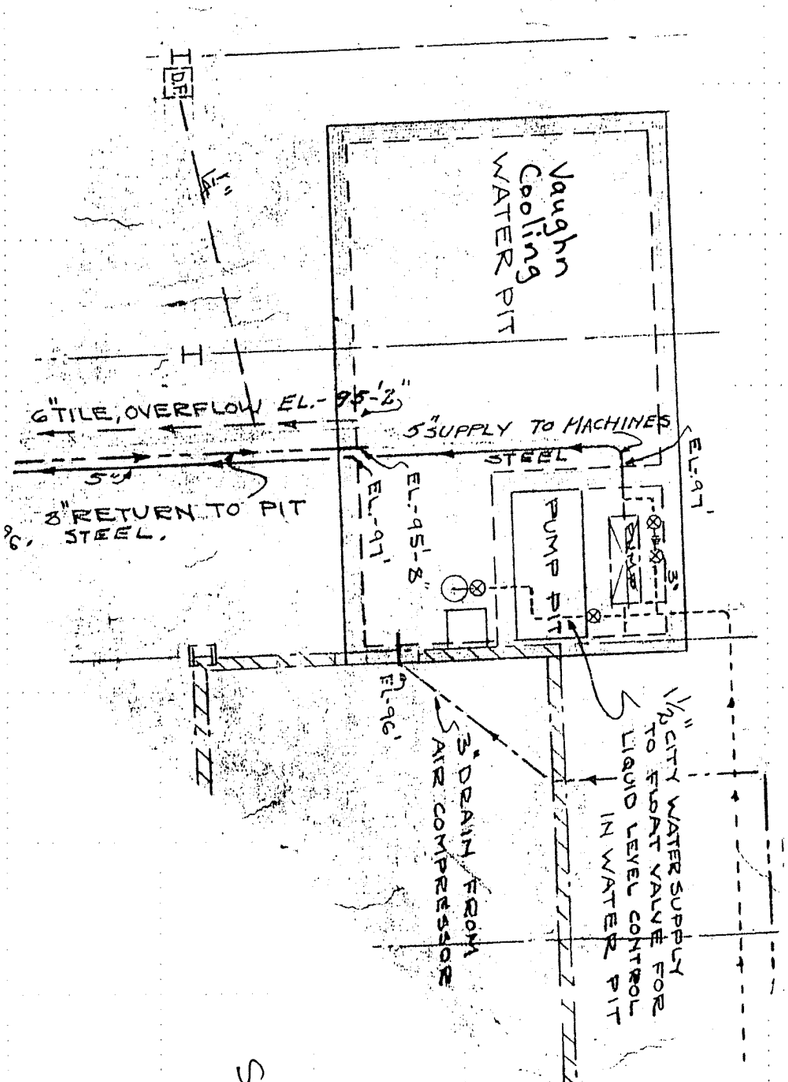
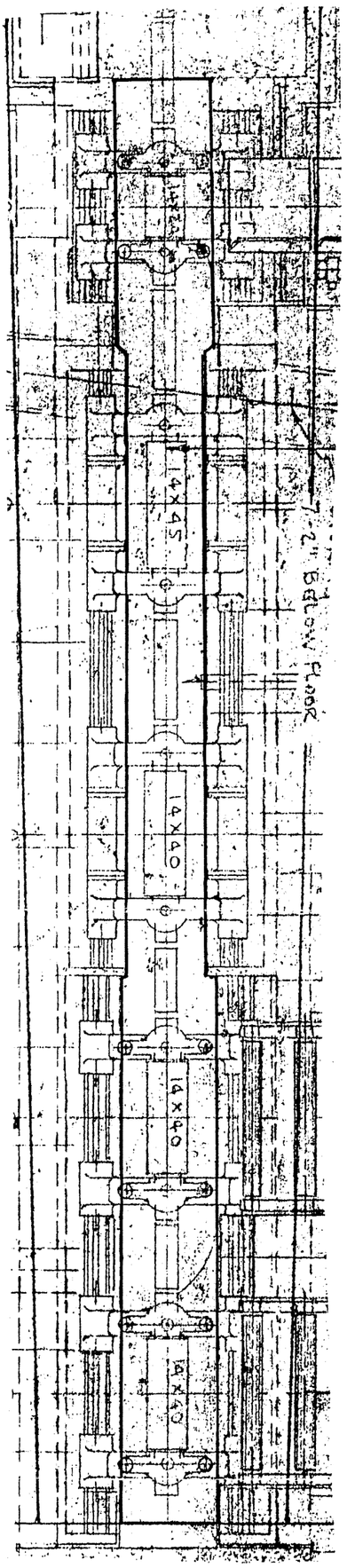


Scale 1/8" = 1'

No cracks observed

Figure J-7

ESC Environmental Strategies Corporation Four Penn Center West, Suite 315 Pittsburgh, Pennsylvania 15276 (412) 787-5100	Title: Vaughn Cooling Water Pit Topic: Pit Inspections - Dunkirk RFI Prepared For: AL Tech Specialty Steel	Drawn By: GER Checked: Approved:



NOT TO SCALE

Figure J-8

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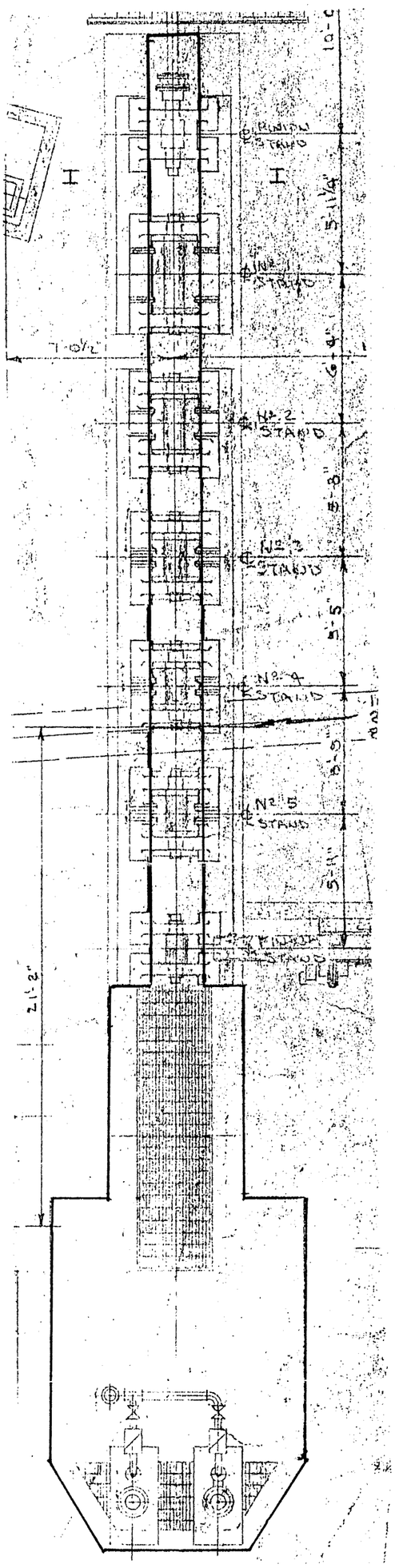
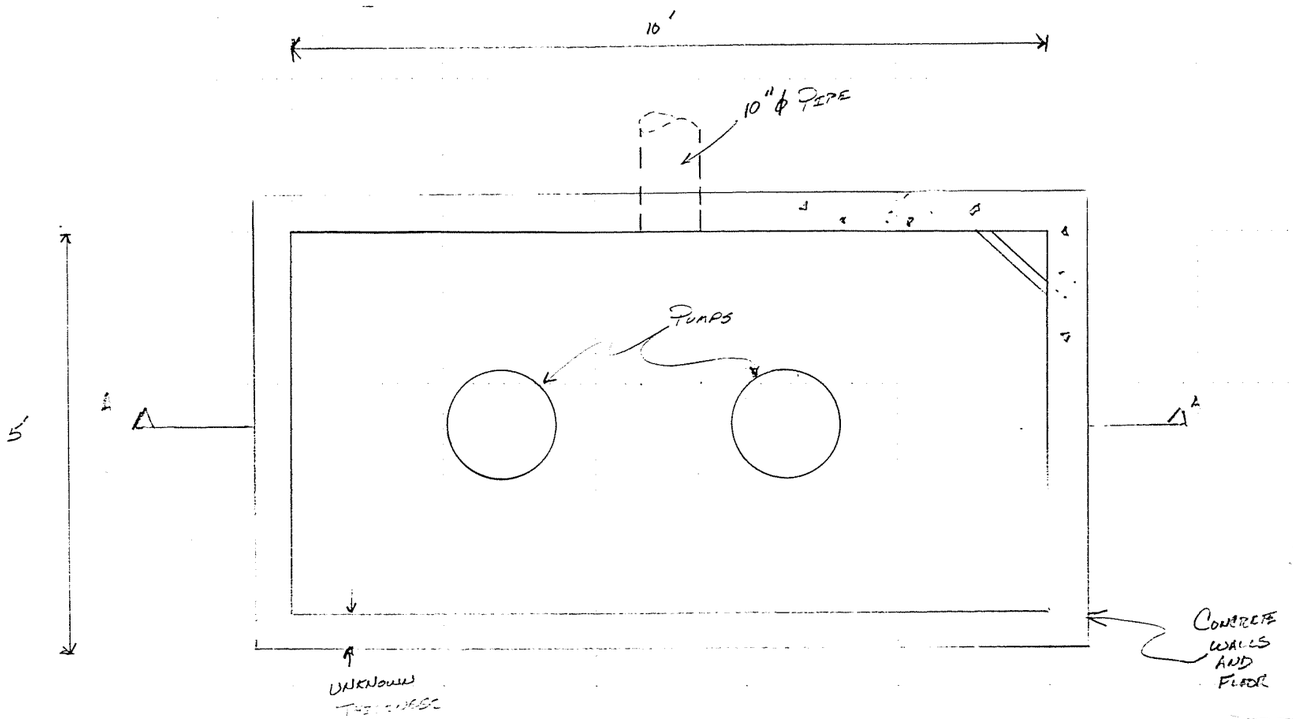
Title: SHAPE - MILL PIT	Drawn By: TES
Topic: PIT INSPECTION - DUNKIRK RFI	Checked:
Prepared For: ALTECH SPECIALTY STEEL	Approved:



Not To Scale

Figure J-9

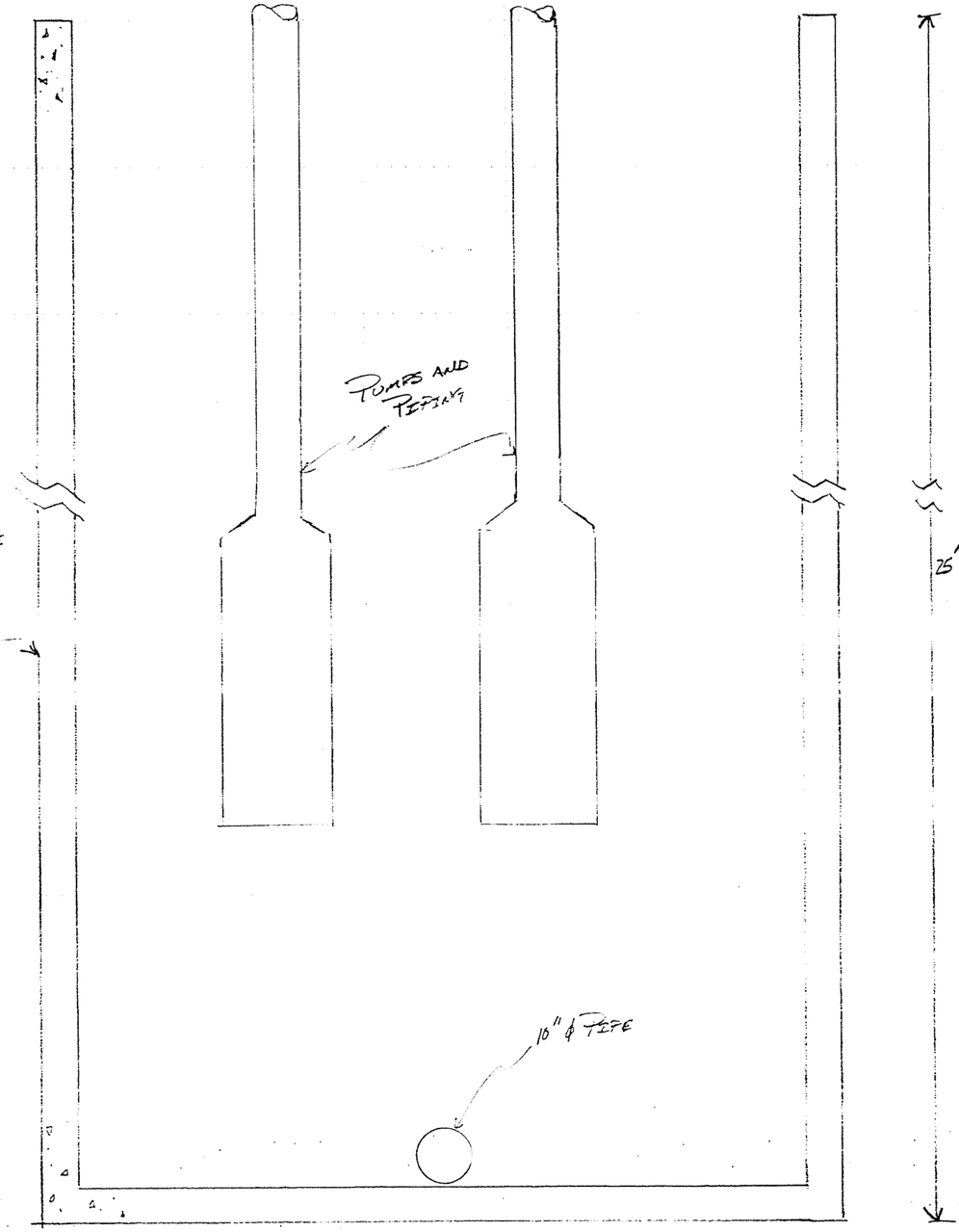
ENVIRONMENTAL STRATEGIES CORPORATION Four Penn Center West, Suite 315 Pittsburgh, Pennsylvania 15276 (412) 787-5100	Title: MINI-MILL PIT Topic: PIT INSPECTION - DUNKIRK RFI Prepared For: ALTECH SPECIALTY STEEL	Drawn By: TES Checked: Approved:



HAP TUMP PIT

PLAN VIEW

1" = 2'



NOT TO SCALE

Figure J-10a

Drawn By: TES
Checked:
Approved:

Title: HAP Pump Pit
Topic: Pit Inspection
Prepared For: Alteon Steel

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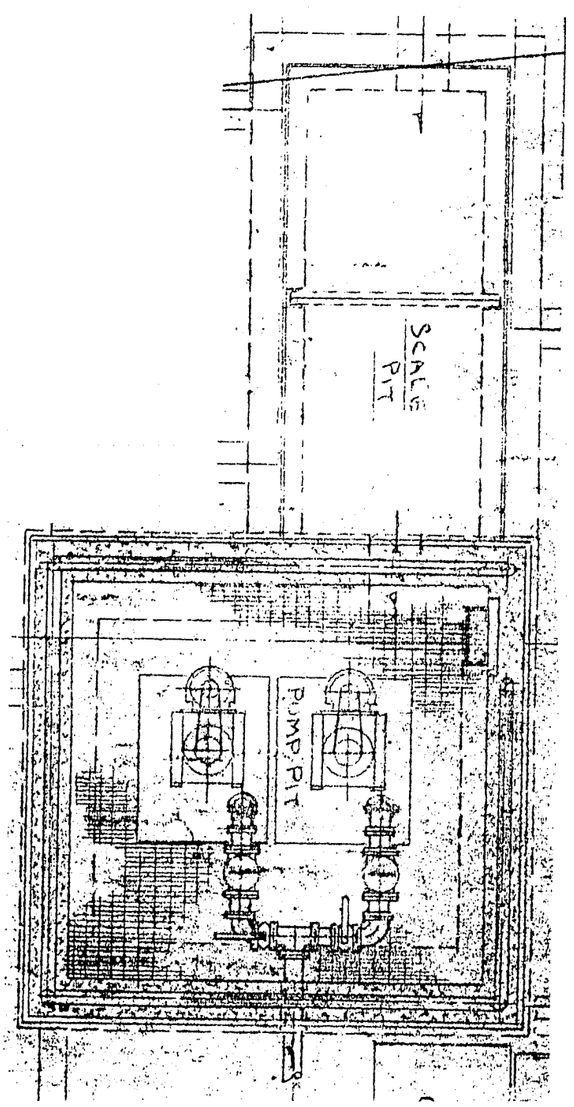

Not To Scale

Figure J-10b

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Title: SCALE PIT
Topic: PIT INSPECTION - DUNKIRK RFI
Prepared For: ALTECH SPECIALTY STEEL

Drawn By: TES
Checked:
Approved:

N

Clarifier Dimensions:

25' x 25' x 17'

WWTP

Sludge Thickener

Not To Scale

Figure J-11a

Drawn By: GER	
Checked:	
Approved:	
Title: Clarifier Plan	
Topic: Pit Inspections - Dunkirk RFI	
Prepared For: AL Tech Specialty Steel	

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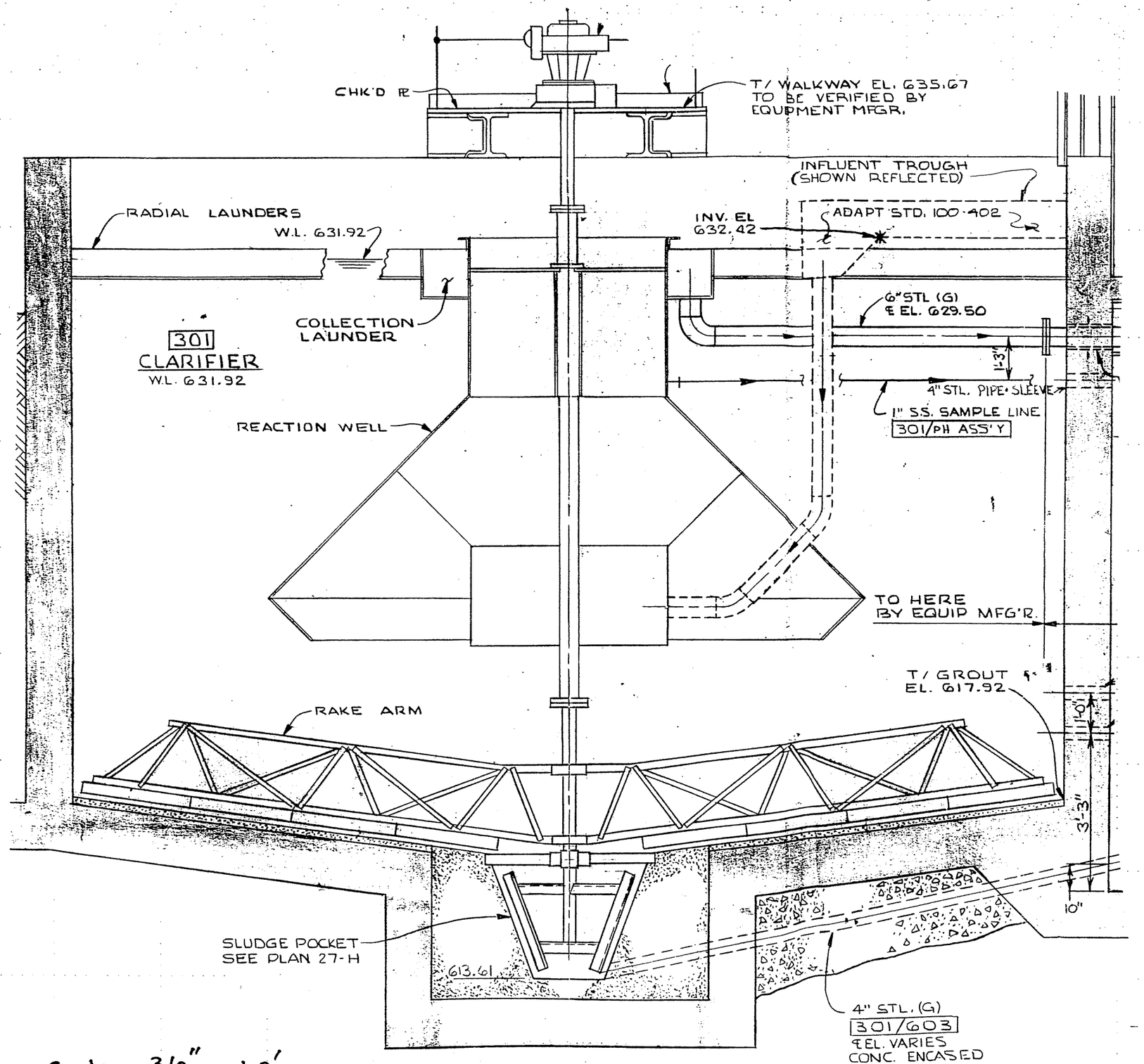

Scale = 3/8" = 1.0'

Figure J-11b

Drawn By: GER
Checked:
Approved:

Title: Clarifier Cross Section
Topic: Pit Inspections - Dunkirk RFI
Prepared For: AL Tech Specialty Steel

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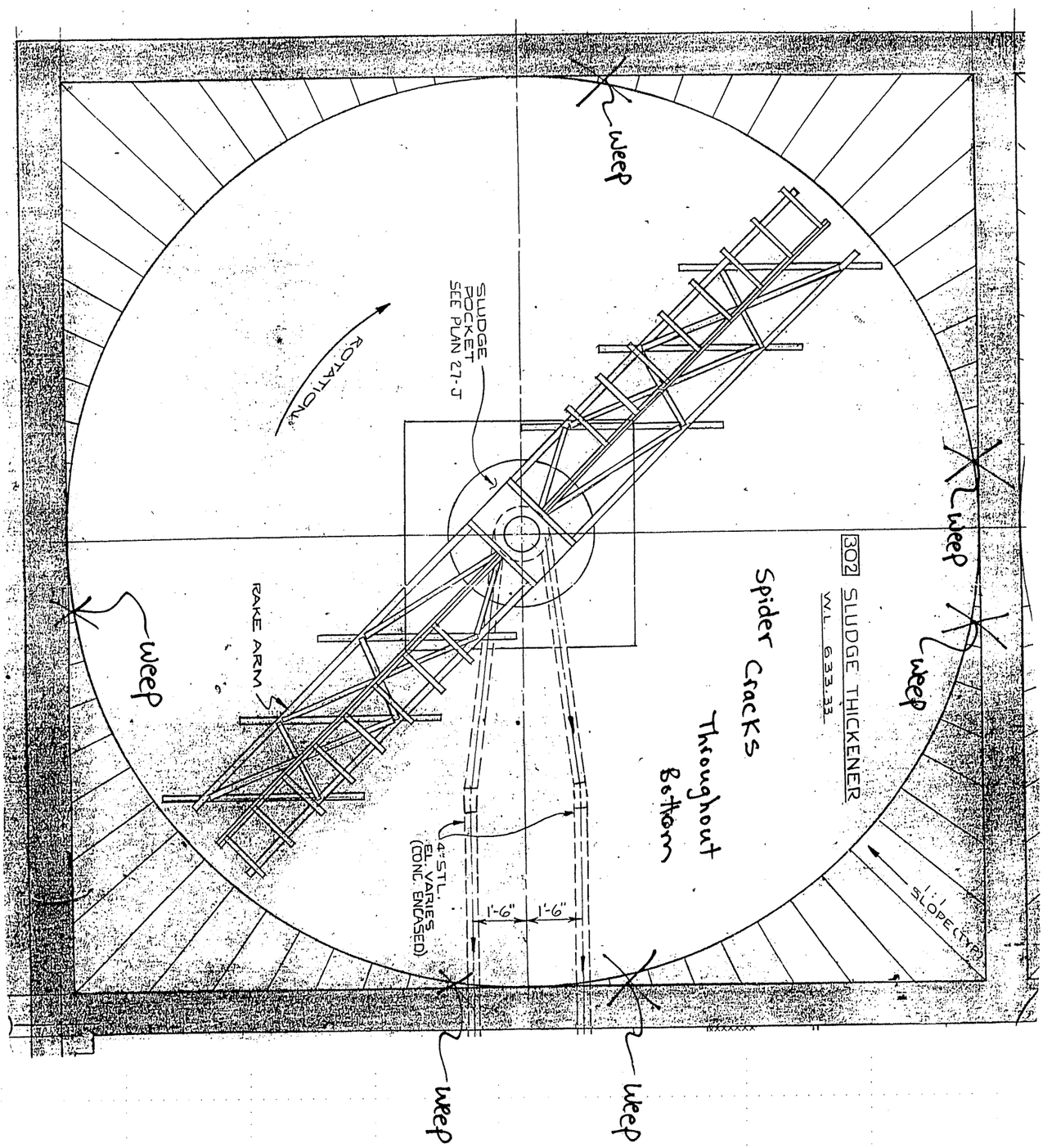
Sludge Thickener Dimensions:
25' x 25' x 17'

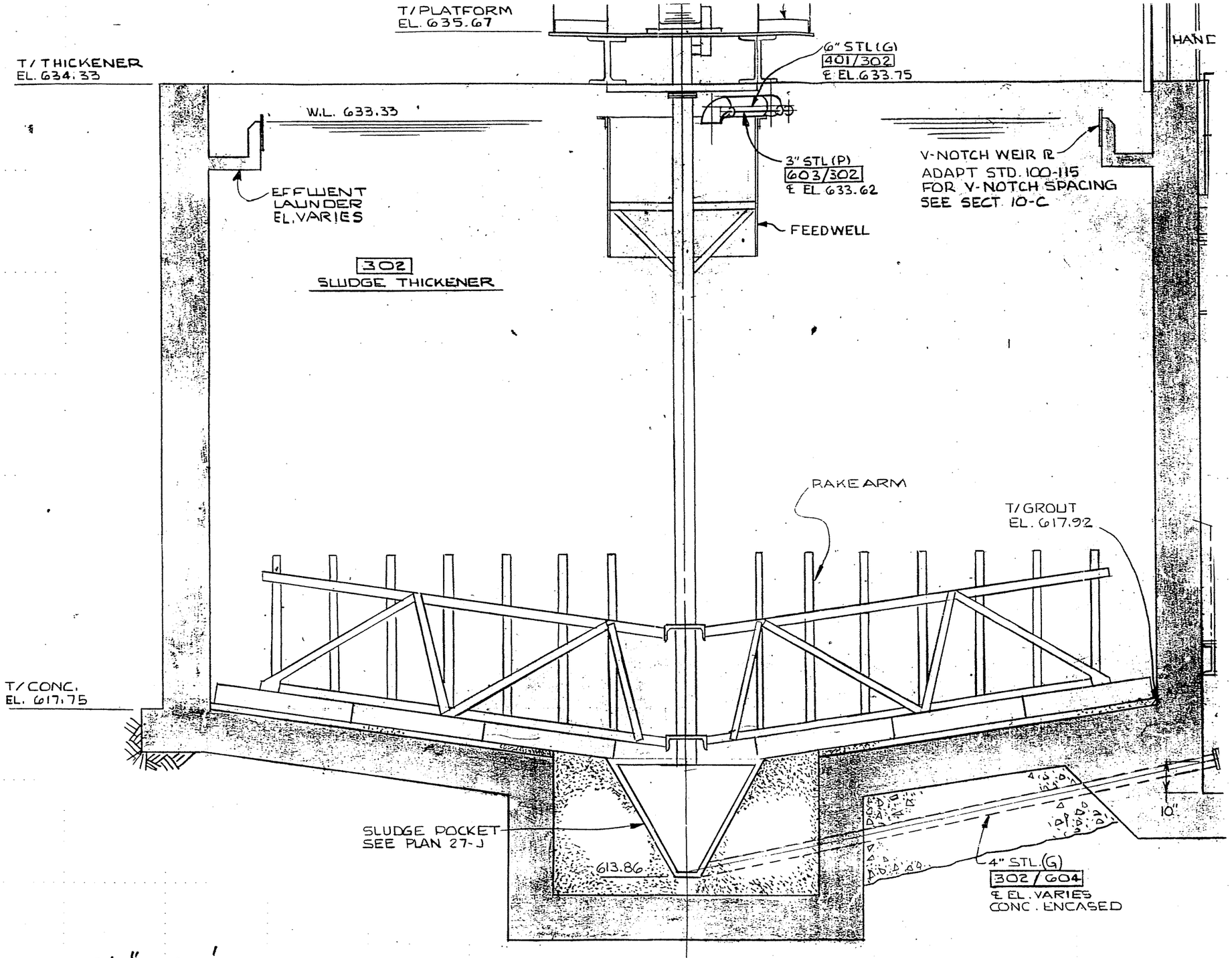
N



Not To Scale

Figure J-12a

ESC Environmental Strategies Corporation, Four Penn Center West, Suite 315, Pittsburgh, Pennsylvania 15276, (412) 787-5100	Title: Sludge Thickener Plan	Drawn By: GER
	Topic: Pit Inspections - Dunkirk RFI	Checked:
	Prepared For: AL Tech Specialty Steel	Approved:



Scale 3/8" = 1.0'

Figure J-12b

Drawn By: GER
Checked:
Approved:

Title: Sludge Thickener Cross Section
Topic: Pit Inspections - Dunkirk RFI
Prepared For: AL Tech Specialty Steel

ENVIRONMENTAL STRATEGIES CORPORATION
Four Penn Center West, Suite 315
Pittsburgh, Pennsylvania 15276
(412) 787-5100
ESC

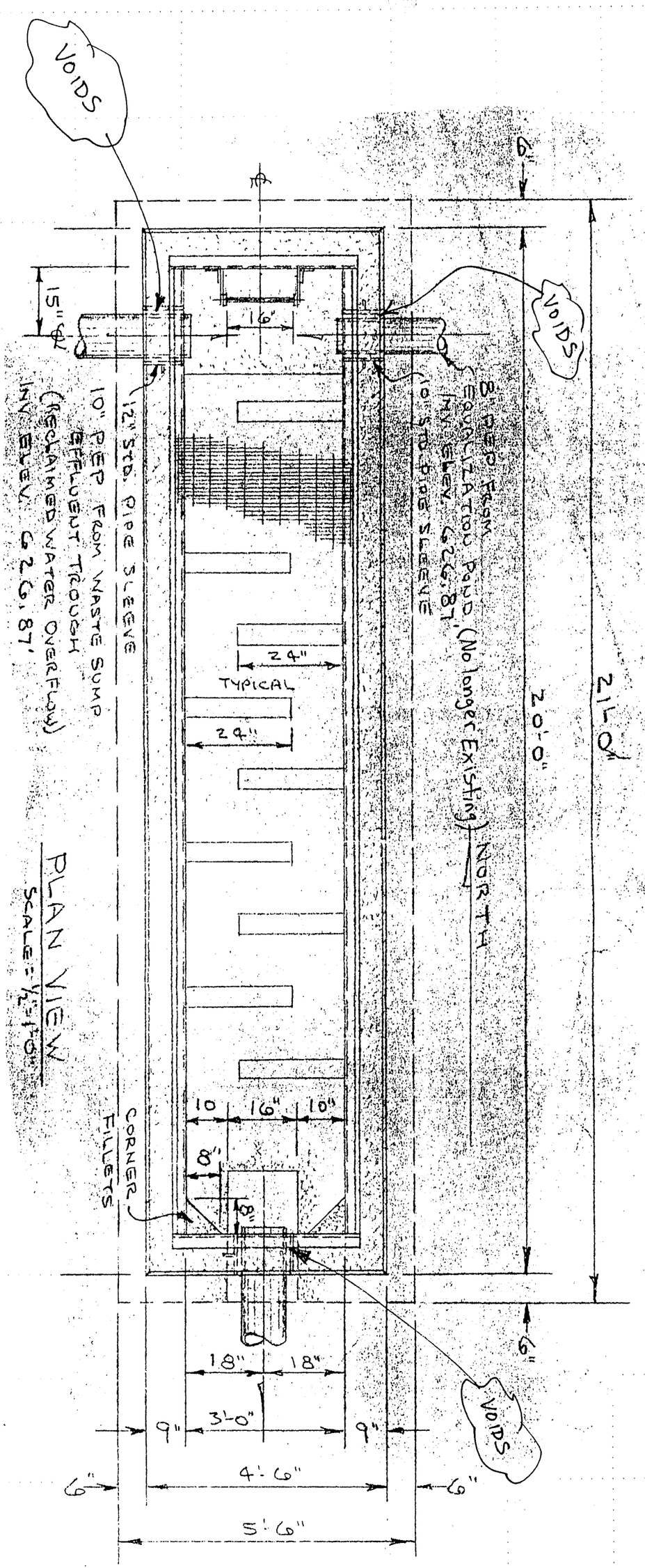
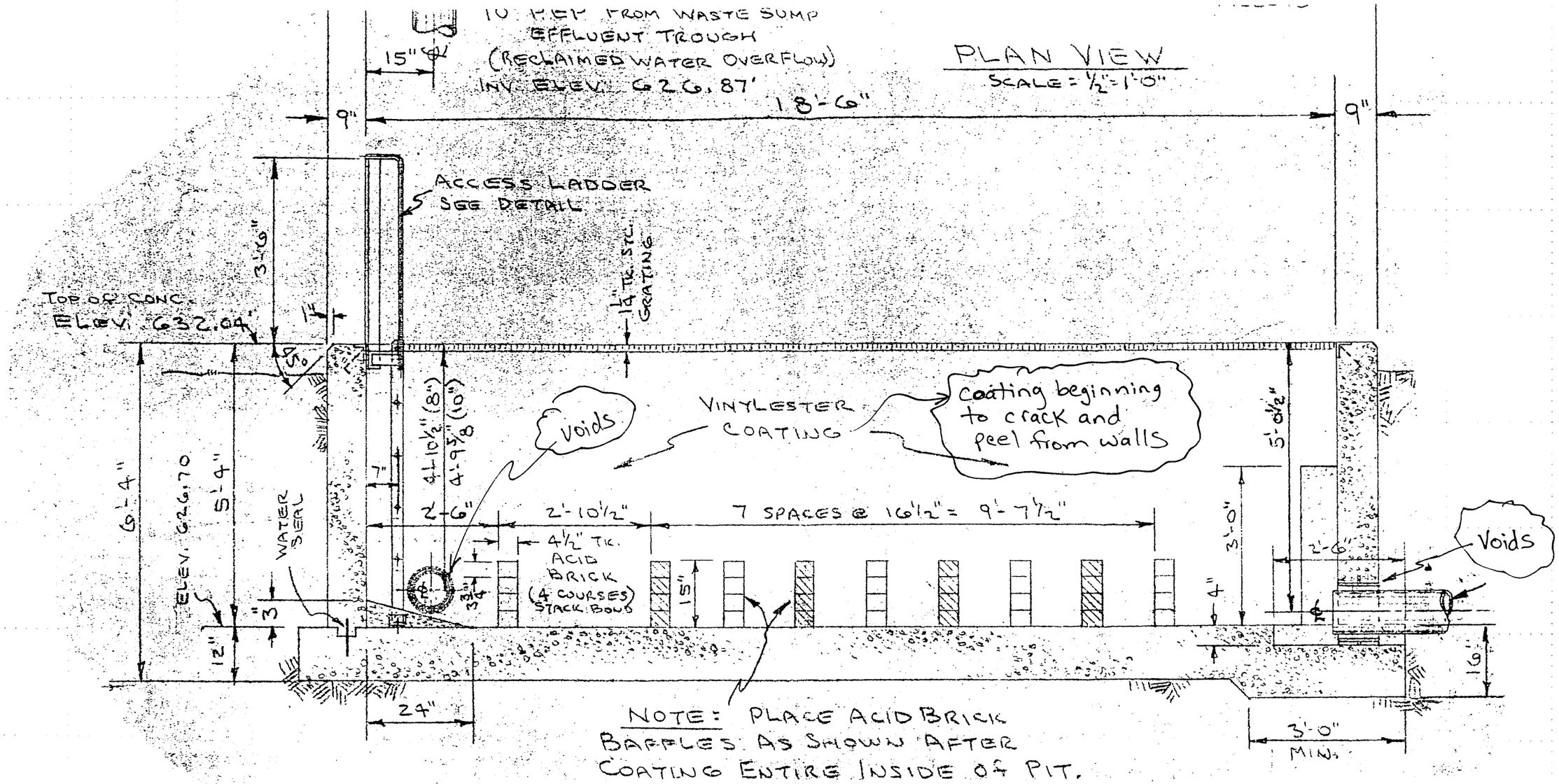


Figure J-13a

ESC Environmental Strategies Corporation Four Penn Center West, Suite 315 Pittsburgh, Pennsylvania 15276 (412) 787-5100	Title: Serpentine Outfall Plan Topic: Pit Inspections - Dunkirk RFI Prepared For: AL Tech Specialty Steel	Drawn By: GER Checked: Approved:



NOTE: PLACE ACID BRICK BAFFLES AS SHOWN AFTER COATING ENTIRE INSIDE OF PIT. USE ACID PROOF MORTAR

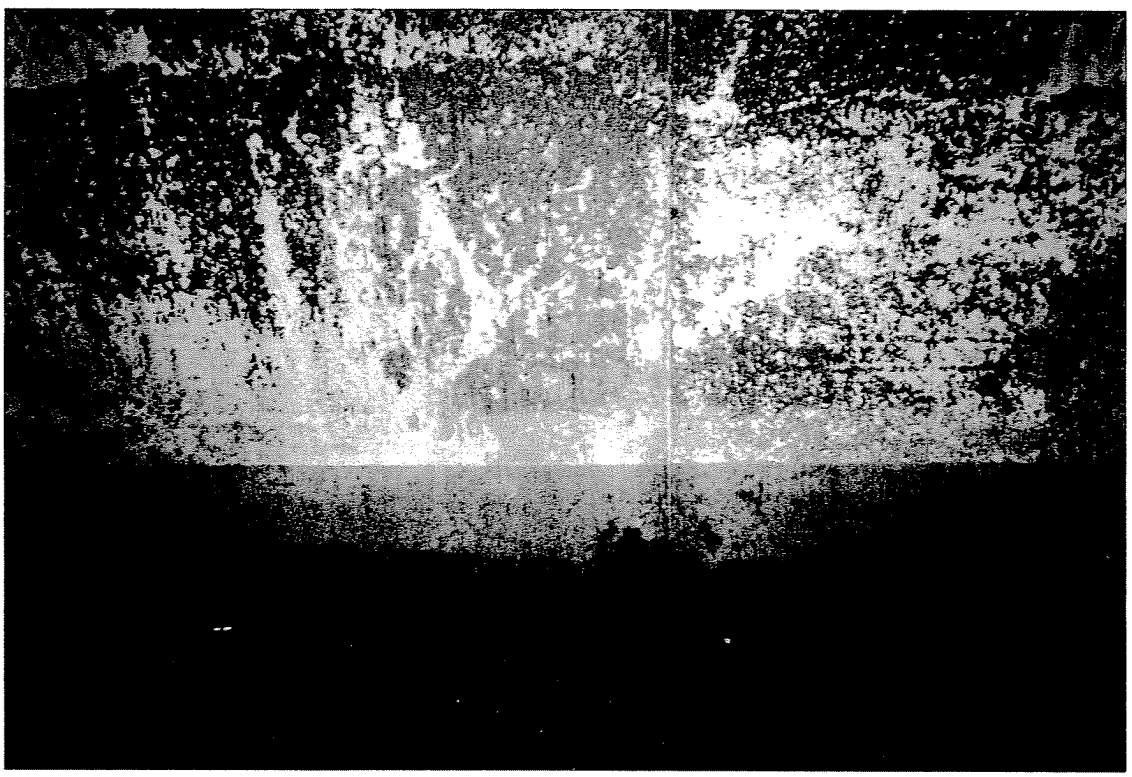
Figure J-13b

Drawn By: GER
Checked:
Approved:

Title: Outfall Cross Section
Topic: Pit Inspections - Dunkirk RFI
Prepared For: AL Tech Specialty Steel

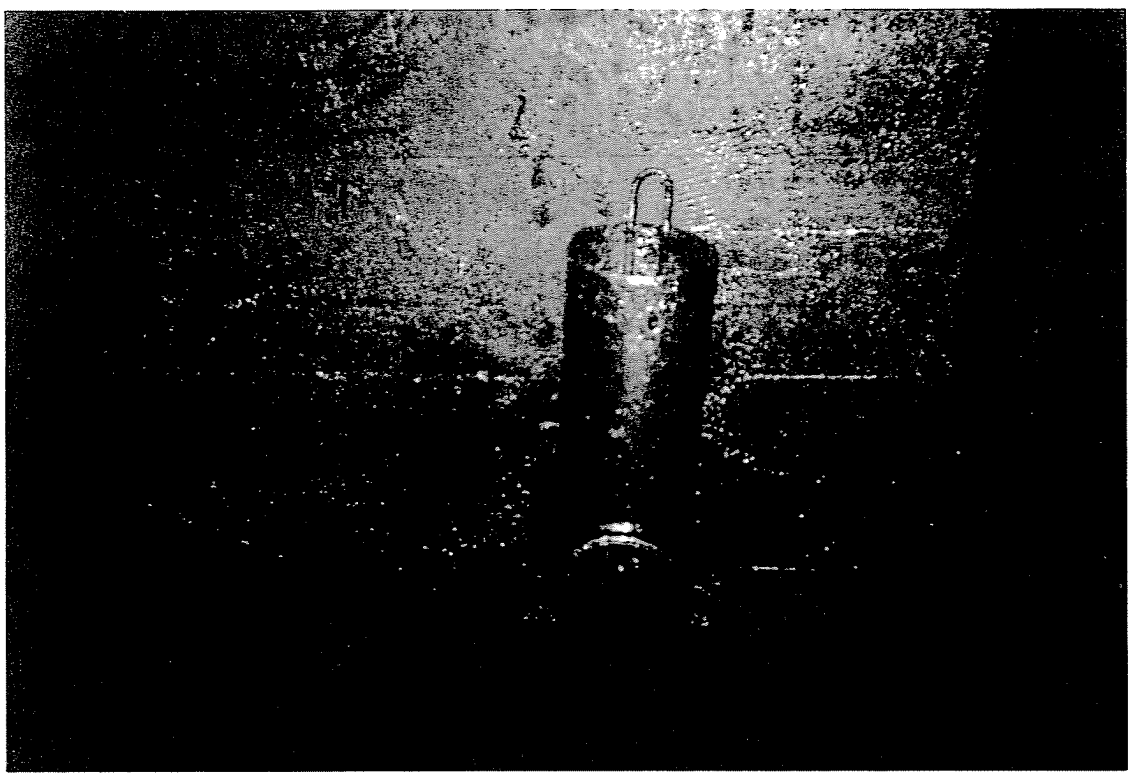
ENVIRONMENTAL STRATEGIES CORPORATION
Four Penn Center West, Suite 315
Pittsburgh, Pennsylvania 15276
(412) 787-5100
ESC

Photograph 1 - Oil and grease observed in the West Oil Drawing Storage Room (Pit No. 3).

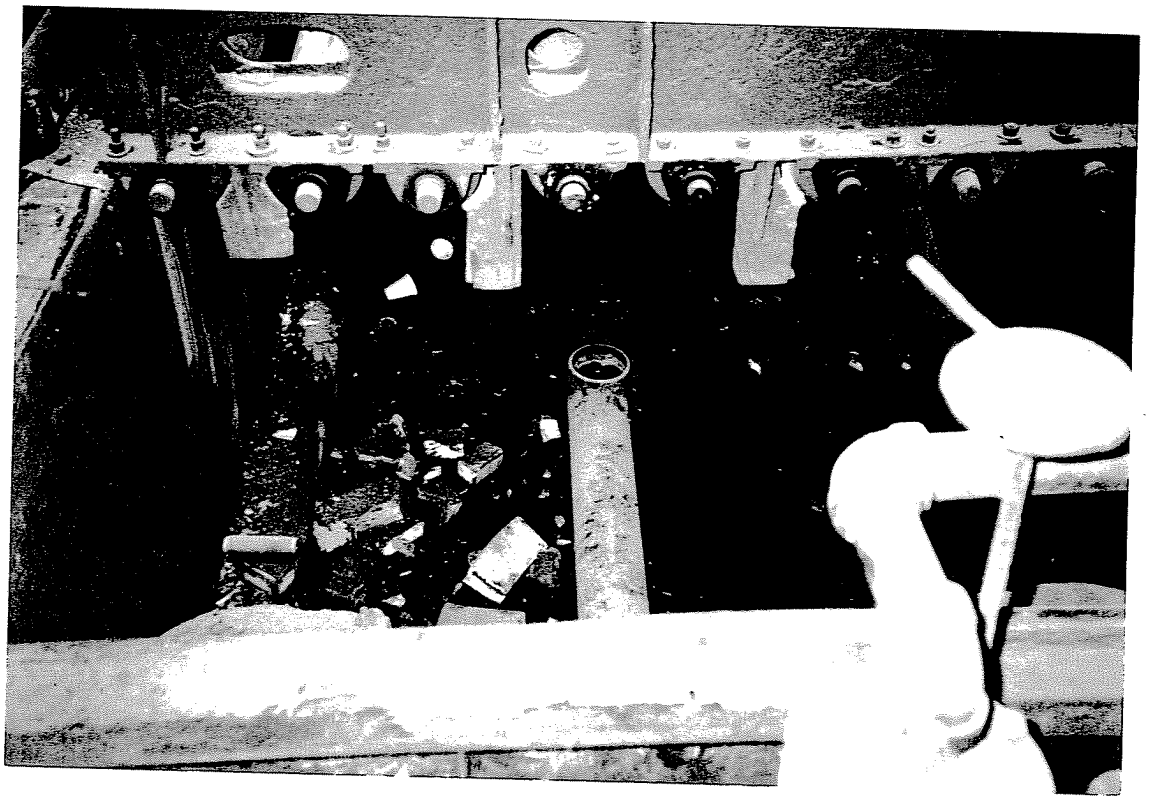


Photograph 2 - View of the sump located in the Melt Cooling Water Pit (Pit No. 6).

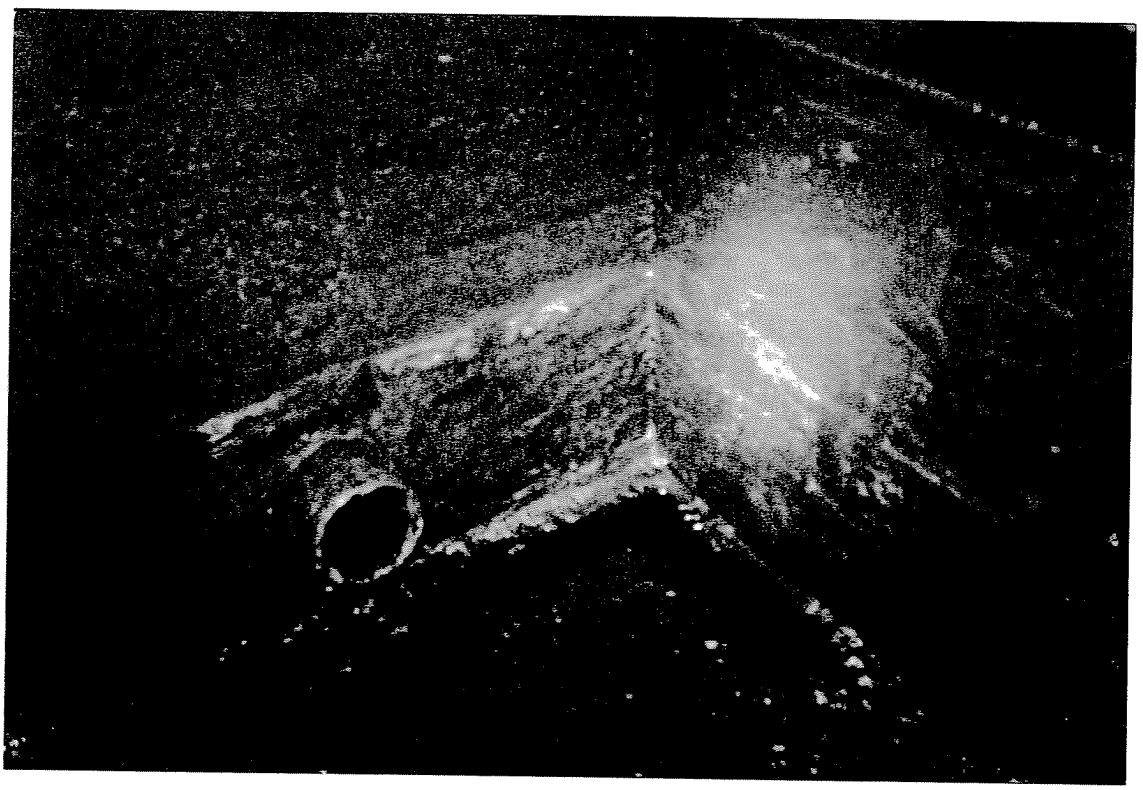
Photograph 3 - Walls and floor of the Shark Pit (Pit No. 8) coated with oil and grease. Also, groundwater infiltrating through several cracks.



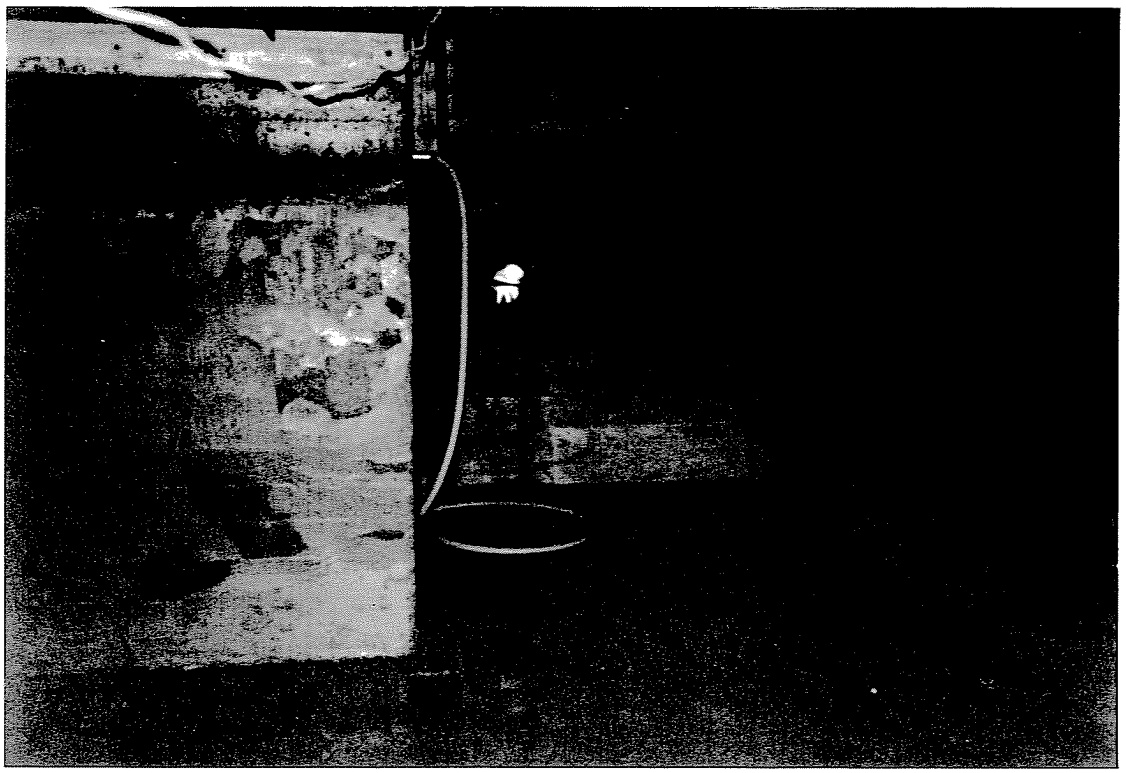
Photograph 4 - Oil and grease coated walls and floor of the Shark Pit (Pit No. 8).



Photograph 5 - Inside view of Olson Quench Pit (Pit No. 10).

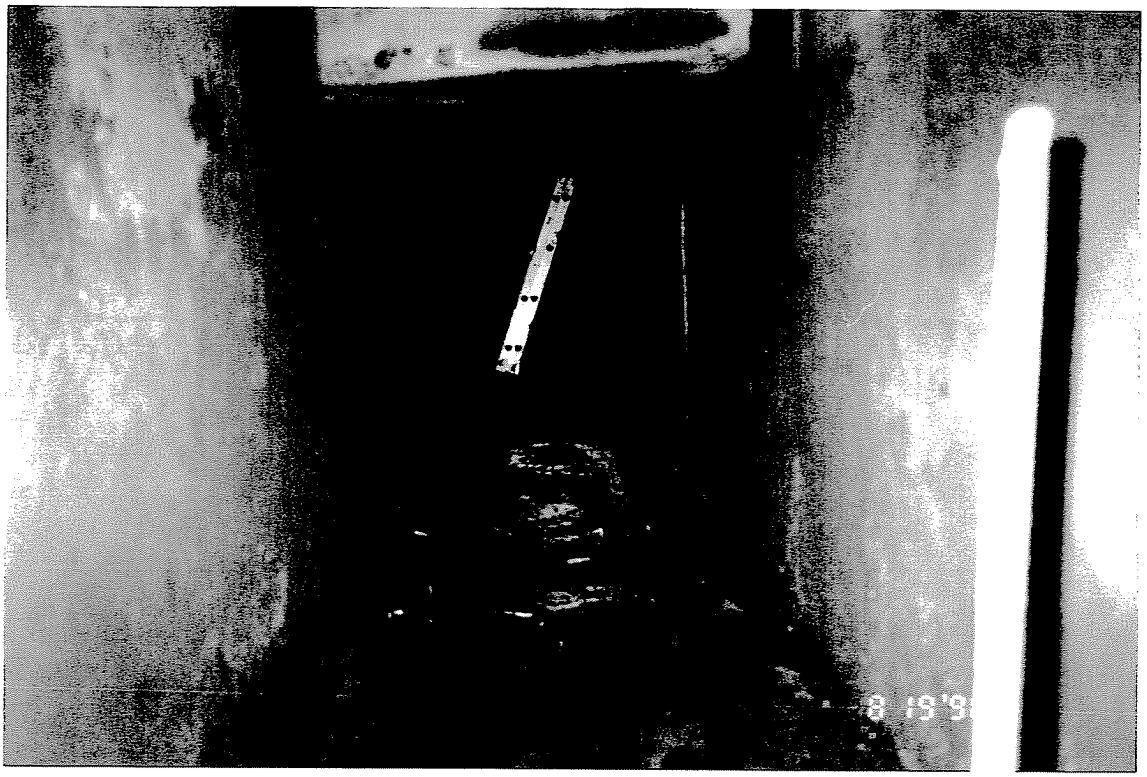


Photograph 6 - Groundwater infiltrating through several cracks located near the floor and wall interface of the Olson Pump Pit (Pit No. 11).

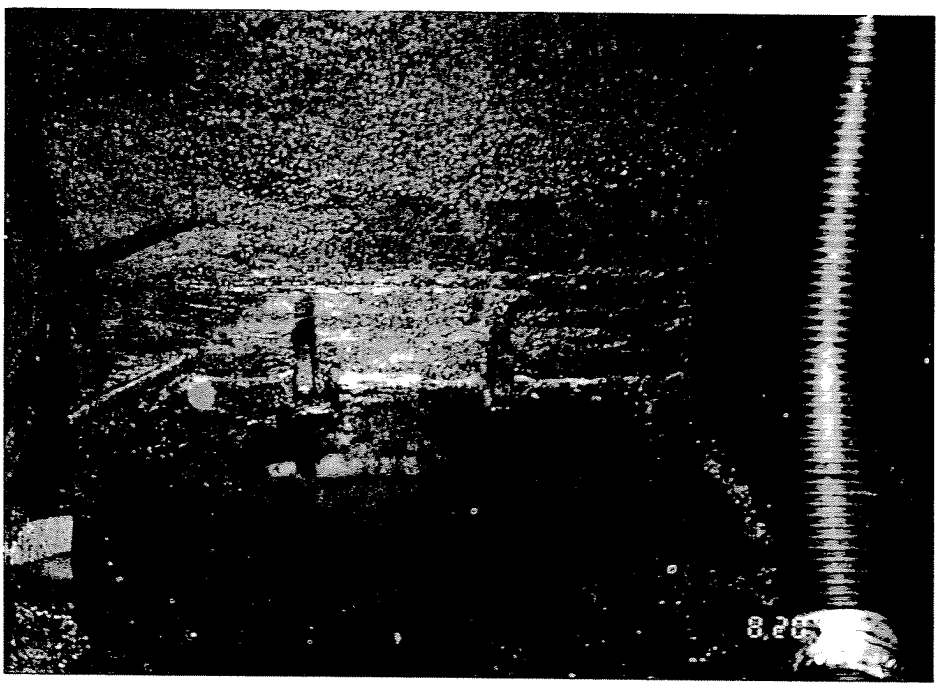


Photograph 7 - Slight peeling of tar-like coating of the wall in the Vaughn Cooling Water Pit (Pit No. 14).

Photograph 8 - Inside view of Shape-Mill Pit (Pit No. 16) with some residue on floor.



Photograph 9 - Inside view of Mini-Mill Pit (Pit No. 16) with some oil on floor.



Photograph 10 - Oil coated walls and floor of HAP Pump Pit (Pit No. 17).

Photograph 11 – Clarifier Pit (Pit No. 26) for facility's WWTP.

Photograph 12 – Liquid draining from between the clarifier walls and grout chamfered walls and grout chamfered corners (Pit No. 26)

Photograph 13 - View of the Serpentine Outfall (Pit No. 29) which discharges to the POTW sewer line.

Appendix K

Appendix K – WWTP Effluent Data

CLIENT: Sterling Environmental Services
SAMPLE ID: 05A Outfall
COLLECTION METHOD: Composite
COLLECTION DATE(S): 10/08/96 - 10/09/96
SAMPLE TYPE: Water

WTP

AES CLIENT ID: STER
AES SAMPLE ID: 639R-1

PROJECT ID: 639R

Analytical Parameters	Analytical Results	Units	Practical Quantifiable Limit	Method
Total Arsenic	ND *	mg/L	0.005	EPA 206.2
Total Barium	ND	mg/L	0.005	EPA 200.7
Total Cadmium	0.017	mg/L	0.005	EPA 200.7
Total Hexavalent Chromium	ND	mg/L	0.04	SW 846 7196
Total Copper	0.05	mg/L	0.01	EPA 200.7
Total Mercury	ND	mg/L	0.0004	EPA 245.1
Total Selenium	ND *	mg/L	0.005	EPA 270.2
Total Silver	0.019	mg/L	0.005	EPA 200.7
Total Cyanide, Manually Distilled	ND	mg/L	0.04	SM 412B/EPA 335.2
Total Recoverable Phenolics	0.008	mg/L	0.004	EPA 420.2

* THESE ANALYSES WERE SUBCONTRACTED TO WASTE STREAM TECHNOLOGY, INC.

CLIENT: Sterling Environmental Services
SAMPLE ID: 07A Outfall
COLLECTION METHOD: Composite
COLLECTION DATE(S): 10/08/96 - 10/09/96
SAMPLE TYPE: Water

Pond

AES CLIENT ID: STER
AES SAMPLE ID: 639R-2

PROJECT ID: 639R

Analytical Parameters	Analytical Results	Units	Practical Quantifiable Limit	Method
PCB-1016	ND	µg/L	1.0	SW 846 8080
PCB-1221	ND	µg/L	1.0	SW 846 8080
PCB-1232	ND	µg/L	1.0	SW 846 8080
PCB-1242	ND	µg/L	1.0	SW 846 8080
PCB-1248	ND	µg/L	1.0	SW 846 8080
PCB-1254	ND	µg/L	1.0	SW 846 8080
PCB-1260	ND	µg/L	1.0	SW 846 8080

TABLE 1A

ANALYTICAL RESULTS

DECEMBER 1995

5A OUTFALL

WTP

Total Arsenic (mg/L)	0.06
Total Barium (mg/L)	ND
Total Cadmium (mg/L)	ND
Total Chromium (mg/L)	0.03
Total Copper (mg/L)	0.11
Total Lead (mg/L)	ND
Total Mercury (mg/L)	ND
Total Nickel (mg/L)	0.17
Total Selenium (mg/L)	ND
Total Silver (mg/L)	ND
Total Zinc (mg/L)	ND
Total Hexavalent Chromium (mg/L)	ND
Total Cyanide, Manually Distilled (mg/L)	0.02
Total Recoverable Phenolics (mg/L)	0.002

CLIENT: Sterling Environmental Services
SAMPLE ID: 5A
COLLECTION METHOD: COMPOSITE
COLLECTION DATE(S): 11/10/94 - 11/11/94
SAMPLE TYPE: LIQUID

WTP

AES CLIENT ID: STER
AES SAMPLE ID: 43LU-1

PROJECT ID: 43LU

Analytical Parameters	Analytical Results	Units	Method Detection Limits	Practical Quantifiable Limit	Method
Total BOD (5 Day)	8.0	mg/L	2.0	8.0	EPA 405.1
Chemical Oxygen Demand	28	mg/L	1.00	4.00	Hach Appendix A
Total Suspended Solids	12	mg/L	1.0	4.0	EPA 160.2
Total Antimony	ND	mg/L	0.05	0.20	EPA 200.7
Total Arsenic	ND	mg/L	0.05	0.20	EPA 200.7
Total Barium	0.009*	mg/L	0.005	0.02	EPA 200.7
Total Boron	0.31	mg/L	0.02	0.08	EPA 200.7
Total Cadmium	ND	mg/L	0.005	0.02	EPA 200.7
Total Chromium	ND	mg/L	0.01	0.04	EPA 200.7
Total Cobalt	ND	mg/L	0.01	0.04	EPA 200.7
Total Copper	0.25	mg/L	0.01	0.04	EPA 200.7
Total Cyanide, Manually Distilled	ND	mg/L	0.010	0.040	SM 412B/EPA 335.3
Total Fluoride (Manually Distilled)	8.2	mg/L	0.10	0.40	EPA 340.2
Total Iron	0.05*	mg/L	0.05	0.20	EPA 200.7
Total Lead	ND	mg/L	0.05	0.20	EPA 200.7
Total Magnesium	15	mg/L	0.05	0.20	EPA 200.7
Total Manganese	0.09	mg/L	0.005	0.02	EPA 200.7
Total Mercury	ND	mg/L	0.0005	0.001	EPA 245.1
Total Nickel	0.03*	mg/L	0.02	0.08	EPA 200.7
PCB-1016	ND	µg/L	0.5	1.0	SW 846 8080
PCB-1221	ND	µg/L	0.5	1.0	SW 846 8080
PCB-1232	ND	µg/L	0.5	1.0	SW 846 8080
PCB-1242	ND	µg/L	0.5	1.0	SW 846 8080
PCB-1248	ND	µg/L	0.5	1.0	SW 846 8080
PCB-1254	ND	µg/L	0.5	1.0	SW 846 8080
PCB-1260	ND	µg/L	0.5	1.0	SW 846 8080
Total Recoverable Phenolics	ND	mg/L	0.002	0.008	EPA 420.2
Total Phosphorus	ND	mg/L	0.1	0.4	EPA 365.4

* Estimated result, above detection limit but not quantifiable.

CLIENT: Sterling Environmental Services
SAMPLE ID: 5A
COLLECTION METHOD: COMPOSITE
COLLECTION DATE(S): 11/10/94 - 11/11/94
SAMPLE TYPE: LIQUID

WTP

AES CLIENT ID: STER
AES SAMPLE ID: 43LU-1

PROJECT ID: 43LU

Analytical Parameters	Analytical Results	Units	Method Detection Limits	Practical Quantifiable Limit	Method
Total Selenium	ND	mg/L	0.075	0.30	EPA 200.7
Total Silver	ND	mg/L	0.005	0.02	EPA 200.7
Total Strontium	0.46*	mg/L	0.20	1.0	SM 326A
Total Tin	ND	mg/L	10.0	40.0	EPA 282.1
Total Titanium	ND	mg/L	0.05	0.20	EPA 200.7
Total Zinc	ND	mg/L	0.02	0.08	EPA 200.7
Total Kjeldahl Nitrogen	6.5	mg/L	0.1	0.4	EPA 351.2
Ammonia	6.1	mg/L	0.05	0.25	EPA 350.1
Oil and Grease, Gravimetric	3.0	mg/L	1.0	---	SM 5520B
Total Dissolved Solids	9500	mg/L	1.0	4.0	EPA 160.1
TCH Scan	ND	µg/L	1.0	5.0	DOH 310-17
Surfactants (MBAS)	0.07*	mg/L	0.06	0.24	EPA 425.1

* Estimated result, above detection limit but not quantifiable.

CLIENT: Sterling Environmental Services
SAMPLE ID: #7
COLLECTION METHOD: COMPOSITE
COLLECTION DATE(S): 11/10/94 - 11/11/94
SAMPLE TYPE: LIQUID

Willowbrook Pond

AES CLIENT ID: STER
AES SAMPLE ID: 43LU-3

PROJECT ID: 43LU

Analytical Parameters	Analytical Results	Units	Method Detection Limits	Practical Quantifiable Limit	Method
Total BOD (5 Day)	16	mg/L	2.0	8.0	EPA 405.1
Chemical Oxygen Demand	170	mg/L	1.00	4.00	Hach Appendix A
Total Suspended Solids	10	mg/L	1.0	4.0	EPA 160.2
Total Antimony	ND	mg/L	0.05	0.20	EPA 200.7
Total Arsenic	ND	mg/L	0.05	0.20	EPA 200.7
Total Barium	0.02	mg/L	0.005	0.02	EPA 200.7
Total Boron	0.24	mg/L	0.02	0.08	EPA 200.7
Total Cadmium	ND	mg/L	0.005	0.02	EPA 200.7
Total Chromium	0.08	mg/L	0.01	0.04	EPA 200.7
Total Cobalt	ND	mg/L	0.01	0.04	EPA 200.7
Total Copper	ND	mg/L	0.01	0.04	EPA 200.7
Total Cyanide, Manually Distilled	ND	mg/L	0.010	0.040	SM 412B/EPA 335.3
Total Fluoride (Manually Distilled)	0.34 *	mg/L	0.10	0.40	EPA 340.2
Total Iron	2.0	mg/L	0.05	0.20	EPA 200.7
Total Lead	ND	mg/L	0.05	0.20	EPA 200.7
Total Magnesium	11	mg/L	0.05	0.20	EPA 200.7
Total Manganese	0.42	mg/L	0.005	0.02	EPA 200.7
Total Mercury	ND	mg/L	0.0005	0.001	EPA 245.1
Total Nickel	0.41	mg/L	0.02	0.08	EPA 200.7
PCB-1016	ND	µg/L	0.5	1.0	SW 846 8080
PCB-1221	ND	µg/L	0.5	1.0	SW 846 8080
PCB-1232	ND	µg/L	0.5	1.0	SW 846 8080
PCB-1242	0.52 *	µg/L	0.5	1.0	SW 846 8080
PCB-1248	ND	µg/L	0.5	1.0	SW 846 8080
PCB-1254	ND	µg/L	0.5	1.0	SW 846 8080
PCB-1260	ND	µg/L	0.5	1.0	SW 846 8080
Total Recoverable Phenolics	0.004 *	mg/L	0.002	0.008	EPA 420.2
Total Phosphorus	ND	mg/L	0.1	0.4	EPA 365.4

* Estimated result, above detection limit but not quantifiable.

CLIENT: Sterling Environmental Services
SAMPLE ID: #7
COLLECTION METHOD: COMPOSITE
COLLECTION DATE(S): 11/10/94 - 11/11/94
SAMPLE TYPE: LIQUID

AES CLIENT ID: STER
AES SAMPLE ID: 43LU-3

PROJECT ID: 43LU

Analytical Parameters	Analytical Results	Units	Method Detection Limits	Practical Quantifiable Limit	Method
Total Selenium	ND	mg/L	0.075	0.30	EPA 200.7
Total Silver	ND	mg/L	0.005	0.02	EPA 200.7
Total Strontium	ND	mg/L	0.20	1.0	SM 326A
Total Tin	ND	mg/L	10.0	40.0	EPA 282.1
Total Titanium	ND	mg/L	0.05	0.20	EPA 200.7
Total Zinc	ND	mg/L	0.02	0.08	EPA 200.7
Total Kjeldahl Nitrogen	1.8	mg/L	0.1	0.4	EPA 351.2
Ammonia	0.36	mg/L	0.05	0.25	EPA 350.1
Oil and Grease, Gravimetric	4.0	mg/L	1.0	---	SM 5520B
Total Dissolved Solids	310	mg/L	1.0	4.0	EPA 160.1
TCH Scan	ND	µg/L	1.0	5.0	DOH 310-17
Surfactants (MBAS)	ND	mg/L	0.06	0.24	EPA 425.1

MARCH 1997 OUTFALL MONITORING SUMMARY

OUTFALL 5A	Zinc	Lead	Chromium	Nickle	Nitrate	Nitrite	NO3 Lb's/day	pH	Ammonia	Oil & Grease	TSS	FLOW
02-Mar-97					400		0.00					0
03-Mar-97					150		0.00					0
04-Mar-97					180		0.00					0
10-Mar-97					88		158.97	7.60				216600
11-Mar-97	ND	ND	0.03	0.76	120	4.00	90.95		2.40	ND	10	90880

	Zinc	Lead	Chromium	Nickel	Nitrate
ppm/Day	0.00	0.00	0.03	0.76	188
Avg.Flow	61496	61496	61496	61496	61496
lbs/Day	0.00	0.00	0.02	0.39	96

5 Day Avg. Flow = 61496

OUTFALL 5B (grab)

	OIL/GREEASE	pH	TEMP
12-Mar-97	ND	6.7	4

OUTFALL 7 (grab)

	OIL/GREASE	pH	TEMP
12-Mar-97	ND	6.6	4.5

KEY TO ABBREVIATIONS
BQL - Below Quantifiable Levels
ND - None Detected

FEBRUARY 1997 OUTFALL MONITORING SUMMARY

OUTFALL 5A	Zinc	Lead	Chromium	Nickle	Nitrate	Nitrite	NO3 Lb's/day	pH	Ammonia	Oil & Grease	TSS	FLOW
02-Feb-97					170		150.91	6.53				106440
03-Feb-97					160		102.22					76600
04-Feb-97					160		191.15					143250
05-Feb-97					140		163.45					139990
06-Feb-97					180		195.71					130370
09-Feb-97	0.03	ND	0.02	0.17		3.70			2.19	ND	6	
10-Feb-97												

	Zinc	Lead	Chromium	Nickel	Nitrate
ppm/Day	0.03	0.00	0.02	0.17	162
Avg.Flow	119330	119330	119330	119330	119330
lbs/Day	0.03	0.00	0.02	0.17	161

5 Day Avg. Flow = 119330

OUTFALL 5B (grab)

	OIL/GREEASE	pH	TEMP
10-Feb-97	ND	6.8	7.7

OUTFALL 7 (grab)

	OIL/GREASE	pH	TEMP
10-Feb-97	ND	6.6	4.5

KEY TO ABBREVIATIONS
BQL - Below Quantifiable Levels
ND - None Detected

JANUARY 1997 OUTFALL MONITORING SUMMARY

OUTFALL 5A	Zinc	Lead	Chromium	Nickle	Nitrate	Nitrite	NO3 Lb's/day	pH	Ammonia	Oil & Grease	TSS	FLOW
06-Jan-97					73		63.93	8.00				105010
07-Jan-97					96		72.42					90450
08-Jan-97					84		63.18					90180
09-Jan-97					119		96.21					96940
13-Jan-97	ND	ND	0.02	1.60	130	1.10	80.82		3.22	ND	9.3	74540

5 Day Avg. Flow = 91424

	Zinc	Lead	Chromium	Nickel	Nitrate
ppm/Day	0.00	0.00	0.02	1.60	100
Avg.Flow	91424	91424	91424	91424	91424
lbs/Day	0.00	0.00	0.02	1.22	77

OUTFALL 5B (grab)

	OIL/GREEASE	pH	TEMP
14-Jan-97	ND	6.5	3.6

OUTFALL 7 (grab)

	OIL/GREASE	pH	TEMP
14-Jan-97	ND	6.4	2.5

KEY TO ABBREVIATIONS
BQL - Below Quantifiable Levels
ND - None Detected

ANALYTICAL RESULTS

December 1996

	05A					05B	07A
	DATE of SAMPLE						
PARAMETER	12/02	12/03	12/04	12/06	12/09	12/10	12/10
Nitrate/Nitrite	145	115	95	105	100	NR	NR
Nitrite	NR	NR	NR	NR	2.8	NR	NR
Ammonia	NR	NR	NR	NR	1.6	NR	NR
TSS	NR	NR	NR	NR	19	NR	NR
Total Chromium	NR	NR	NR	NR	0.02	NR	NR
Total Lead	NR	NR	NR	NR	ND	NR	NR
Total Nickel	NR	NR	NR	NR	1.3	NR	NR
Total Zinc	NR	NR	NR	NR	ND	NR	NR
Oil and Grease	NR	NR	NR	NR	ND	ND	ND

ND - Not Detected
NR - Not Required

Appendix L

Appendix L – Reportable Release History

AL Tech Specialty Steel Corporation
Reportable Release History

03/26/79 Sulfuric Acid

On 03/26/79 the LAP west pickling personnel were transferring sulfuric acid from the sulfuric acid CBS tank to the process tanks. The tanks was pressurized with air when a gasket failed allowing the release of ~360 gallons of 72% sulfuric acid to the ground, in the immediate area. The released material was contained on site and neutralized with lime. Impacted soil was removed and disposed of at the Chautauqua County Industrial Waste Landfill. The NYSDEC was notified.

04/03/80 Furnace Fuel Oil

On 04/10/80 at 10:30 am an oil release was discovered near the LAP tunnel. The oil was released from an underground fuel oil supply line that had lost its integrity. The cleanup and disposal of impacted soil and residual oil was done in a manner acceptable to the NYSDEC representatives that visited the site.

09/02/82 Caustic

On 09/02/82 the caustic quench discharge manhole at the LAP west Pickle House was overflowed with ~20 gallons of spent caustic quench water. The released material entered the storm sewer drainage ditch on the south side of the LAP west Pickle House, where it was contained. An outside contractor with a high pressure cleaning unit was hired to remove the obstruction from the manhole drain and clean the ditch and impacted soil. The local NYSDEC agent was notified and approved the cleanup effort.

04/18/83 Sulfuric Acid

On 04/12/83 at ~1:30 pm an AL Tech employee discovered that the virgin sulfuric acid CBS tank was being overtopped by a PVS Chemical supply tanker truck. The driver who was in the cab of the truck could not see the release from his point of view, was alarmed by the AL tech employee. Once aware of the release the drive stopped flow the CBS tank. Approximately 200 - 600 gallons of 72% sulfuric acid was released. An unknown quantity entered the storm sewer line leading to the ditch northeast of the WTP. This ditch was diked in order to contain the released material to AL Tech Property. The impacted soil, stormwater drainage line and ditch was flushed with large amounts of water while being neutralized with soda ash. The resulting rinse water was collected at the diked ditch and pumped to the WTP for processing. Flushing continued for 2 days until the pH of the rinsewater was between 7-8. The local DEC agent was on hand and approved of the cleanup efforts, as well as the disposal of neutralized soil at the County Landfill, after analytical result were received.

05/02/83 Furnace Fuel Oil

On 05/02/83 at ~9:30 am AL Tech Personnel discovered a leak in an underground fuel oil line to the north of the Shop Hospital. The local County Environmental Agent was notified, shortly afterward. The amount of oil released is not know, but cleanup and soil removal lasted several days.

08/28/84 Nitric Acid

On 08/28/98 at ~5:30 pm an AL Tech employee discovered the 3/4"sample port valve on the nitric acid CBS tank leaking nitric acid. The leak was properly repaired and the 150 gallons of 68% nitric acid was neutralized and cleaned up. A NYSDEC officer was present at the time of clean up and was satisfied with the cleanup efforts.

10/22/85 Nitric/HF Acid

On 10/22/85 it was found that the ~5,000 gallon nitric/hydrofluoric acid pickling tank inside the BRP Pickle House has sprung a leak. The leaking nitric/HF pickle liquor had corroded the floor beneath the leaking tank to the point that it created a hole. The nitric/HF pickle liquor was then released to an abandoned sewer line connected to the spent acid pit east of the BRP pickling facility. The released material was contained on AL Tech property. The exact amount of material released is not known.

01/14/86 Spent Pickle Liquor.

on 01/14/86 at ~10:30 am the manhole east of the old WTP equalization impoundment was discovered to be overflowing with spent pickle liquor. The cause of the release was a piece of debris lodged in the outflow pipe of the manhole. Approximately 100 gallons of spent pickle liquor reached the storm sewer and was finally contained to AL Tech property at the ditch west of the WTP. Neutralization of the impacted soil and water immediately took place. The neutralized waste water was then vacuumed up with a vac truck and transferred to the WTP for processing. The local DEC agent was notified, witnessed and approved the cleanup procedures.

02/28/86 Spent Pickle Liquor

On 02/26/86 at ~11:00 am a wet spot was discovered near the WTP. It was found to be a release of spent pickle liquor from the ruptured 6" polyethylene line transferring wastewater from the BRP Pickle House to the octapus. It was estimated that ~50 gallons of spent pickle liquor was released. Neutralization and cleanup was observed by the local DEC agent and approved.

03/10/87 Sulfuric Acid

On 03/10/87 at ~1:30 pm the manhole south east of the old WTP equalization surface impoundment was overflowing spent sulfuric pickle liquor. Approximately 10 gallons of material was released and ran down the ditch on the south side of the

road. The material never entered the storm sewer. The released material was neutralized with soda ash and removed for proper disposal, along with a small amount of impacted soils.

02/11/88 Sulfuric Acid

On 02/11/88 at ~8:00 am a City Technician discovered the spent acid pit outside the LAP west Pickle House overflowing to the City sanitary sewer system. Remediation of the release was to transfer the spent acid in the spent acid pit to the WTP. Next any acidic water in the manholes leading to the City sanitary sewer system was pumped to the spent acid pit. Once pumped down the manholes were neutralized with soda ash. Finally, the sewer line leading to the City sanitary sewer was plugged off. The local NYSDEC agent was notified and present for the cleanup source investigation and remediation.

This release to the City sanitary sewer system created an upset at the City POTW, which put the POTW out of compliance with its SPDES discharge permit.

03/06/91 Nitric Acid Release # 9012592

On 03/06/91 it was discovered that ~750 gallons of nitric pickle liquor had breached the BRP Pickle House containment. The NYSDEC was notified and present for the remediation of the site. A two part remediation plan was agreed to and carried out. Part 1 involved the excavation and removal of all impacted soil based on pH readings. Part 2 of the remediation was the decontamination of the Pickle House containment from the point of origin.

05/19/92: Release # 9202013: Sulfuric Acid

A blockage of the spent sulfuric polyethylene line leading from the BFS Pickle House to the WTP spent sulfuric pit, caused a coupling in the line to rupture just north of the octapus. The rupture released an undetermined amount of spent sulfuric pickle liquor (10-12% sulfuric acid). The released material migrated on the road west toward the WTP, and entered the stormwater drainage system. The release was contained to the small open ditch north of the WTP by AL Tech Haz-Mat Team personnel. The released material was neutralized and transferred to the WTP for treatment. Impacted soils were removed and properly disposed of.

11/06/92 Report; # 200-92; Diesel Fuel

On 11/06/92 at ~ 7:45 pm an outside commercial tractor trailer ruptured its fuel tank while backing into the LAP shipping docks. The released material was contained on the north side of Lucas Avenue. Residual fuel and impacted soils were removed and properly disposed of.

04/29/93 Nitrate Wastewater

On 04/29/93 the float switch on a commercial vac truck failed near the WTP releasing ~400 gallons of nitrate bearing wastewater. The released material entered the storm sewer behind the WTP where it was contained to AL Tech property and recovered. The recovered material was transferred back to the WTP for processing.

09/22/94 Caustic Sludge

On 09/22/94 at ~12:00 pm a commercial vac truck unloading caustic sludge from cleaning in the BFS Pickle House, overflowed the WTP "pad". The released caustic material entered the 5a outfall leading to the City sanitary sewer. The WTP effluent flow was immediately halted and the outfall was decontaminated using the vac truck.

01/25/95 Sulfuric Pickle Liquor Release # 9414230

On 01/25/95 at ~8:30 am it was discovered that a failed spent sulfuric line at the BFS Pickle House had released ~ 50 gallons of spent sulfuric pickle liquor. The released material entered the parking area north of the Tank Farm. The stormwater catch basin in the parking area caught some of the material and lead it to the ditch behind the WTP where the released material was contained. The impacted soil along with the stormwater drainage system were neutralized. Recovered wastewater was routed to the WTP for processing and solids were transferred to a lined 20 yard roll-off box, which was disposed of at Envotech Management Services, located in Bellville, MI.

01/02/96 Nitric/Hydrochloric Etch Bath

On 01/02/96 at ~3:00 am a fire was discovered in the Met Lab Etch Room. The fire damaged the etch bath resulting in the release of ~20 gallons of nitric/hydrochloric pickle liquor. The majority of the released material was captured by the floor drains, which lead to the WTP. The remainder of the released material was contained within the building, neutralized, recovered and transferred to the WTP for processing. The local NYSDEC agent was notified and onsite to approve the cleanup effort.

02/03/96 Spent Sulfuric; Release # 9514025

On 02/03/96 at ~8:30 am AL Tech personnel discovered a failed aboveground flange on the spent sulfuric line. The line had released ~100 gallons of spent sulfuric pickle liquor containing between 10-15% sulfuric acid. The released material was contained to the immediate area, neutralized and removed for disposal in a lined 20 yard roll-off box, which was shipped to Envotech Management Services, located in Bellville, MI. The local NYSDEC agent was notified and was present to approve and observe the cleanup activity.

04/22/96 Pickling Residue Contaminated Wastewater; Release # 9601068

On 04/22/96, at 11:30 am AL Tech Personnel were pumping hex chrome contaminated wastewater from the old BRP waste acid pit to the WTP, when an aboveground coupling on the transfer line failed. The line failure resulted in a release of ~50 gallons of hex chrome contaminated wastewater. The released material was contained to the immediate area and absorbed with sand. The impacted soil and sand was then transferred to a lined 20 yard roll-off box, that eventually was disposed of at Envotech Management Services, located in Bellville, MI. The local NYSDEC agent was notified and present for the cleanup activity.

07/14/96 Nitric Pickle Liquor; Release # 9603601

On 07/14/96 at ~11:30 am a commercial vac truck loaded with spent nitric/hydrofluoric pickle liquor lost vacuum near the WTP, prior to transferring the load to the WTP for processing. The loss of vacuum caused the seals to fail, resulting in a ~150 gallon release to the stormwater drainage system near the WTP. The released material was contained to the ditch behind the WTP and did not leave AL Tech property. The impacted soil and the stormwater drainage system was neutralized and thoroughly rinsed with a large amount of water. The rinse water was contained and transferred to the WTP for processing. The local NYSDEC agent was notified and present for the approval of cleanup activities.

07/09/96 Spent Sulfuric Pickle Liquor: Release # 9604581

On 07/09/96 at 5:45 pm AL Tech personnel discovered a flooding problem in the Met Lab Etch Room. The floor drains in the Etch Room at the time of the flooding were tied into the BFS Pickle House process tank overflows. The cause of the flooding was a downstream plug in the line leading to the WTP "octapus". The CLEANOX process bath overflow was reached; due to the blockage down stream in the line the sulfuric/hydrofluoric acid pickle liquor followed the line back to the Met Lab Etch Room floor drains. The result was a release of ~100 gallons of sulfuric/hydrofluoric acid pickle liquor to the floor of the Etch Room. The Release migrated under the door of the Etch Room and into a nearby stormwater receiver. The stormwater system conveyed the released material to the ditch behind the WTP, where it was contained to AL Tech property. A high pressure water blaster was hired to remove the blockage from the plugged spent acid line, the stormwater system was neutralized and thoroughly flushed with water. The rinse water was transferred to the WTP for processing, and any impacted soil was transferred to a lined 20 yard roll-off box for later disposal at Envotech Management Services, located in Bellville, MI. The local NYSDEC agent was notified and present to approve the cleanup activities.

08/20/96 Sulfuric/Hydrofluoric Spent Pickle Liquor; Release # 9606488

On 08/20/96 at 10:45 am AL Tech personnel discovered that a temporary spent sulfuric /hydrofluoric pickle liquor holding tank had been overtopped. The result was a release of ~50 gallons of spent sulfuric/hydrofluoric pickle liquor. The

released material was promptly contained and neutralized with soda ash. The impacted soils and absorbent material was transferred to a lined 20 yard roll-off box, which was later shipped to Envotech Management Services, located in Bellville, MI. The local NYSDEC agent was notified and present for the approval of the cleanup activities.

01/06/97 Spent Pickle Rinse Water; Release #9612027

On 01/06/97 at ~9:45 am AL Tech personnel discovered a ruptured underground spent rinsewater line conveying spent pickling rinsewater from the BFS Pickle House to the WTP "octapus". The rupture resulted in the release of ~500 gallons of spent acidic rinse water that was contained to a stormwater ditch northwest of the BFS Pickle House. The released material was neutralized and transferred to the WTP for processing. The impacted soil was removed from the ditch and transferred to a lined 20 yard roll-off box the would later be shipped to Envotech Management Services, located in Bellville, MI. The local NYSDEC agent was notified and present to approve the cleanup activities.

01/20/97 Spent Pickle Rinse Water; Release #9612483

On 01/20/97 at 11:00 am AL Tech personnel discovered a ruptured underground spent rinsewater line conveying spent pickling rinsewater from the BFS Pickle House to the WTP "octapus". The rupture resulted in the release of ~100 gallons of spent acidic rinse water to the immediate area, northwest of the BFS Pickle House. The released material and impacted soil was neutralized, and transferred to a lined 20 yard roll-off box the would later be shipped to Envotech Management Services, located in Bellville, MI. The local NYSDEC agent was notified and present to approve the cleanup activities

01/25/97 Spent Pickle Rinse Water; Release #9612714

On 01/25/97 at 9:30 pm AL Tech personnel discovered a ruptured underground spent rinsewater line conveying spent pickling rinsewater from the BFS Pickle House to the WTP "octapus". The rupture resulted in the release of ~1,200 gallons of spent acidic rinse water to the stormwater drainage system near the WTP. The release followed the stormwater drainage system to the northwest corner of AL Tech property, where it entered an open culvert on City property along Brigham Road. The released material was contained to this culvert, and not allowed to enter the City storm sewer system. The released material, along with impacted standing surface water and soil was neutralized with soda ash solution The stormwater drainage system was thoroughly rinsed with water until the pH was 7, and all of the liquid waste and rinse water was transferred to the WTP for processing. Impacted soil was transferred to a lined 20 yard roll-off box the would later be shipped to Envotech Management Services, located in Bellville, MI. The local NYSDEC agent, as well as the regional representative, were notified and present to approve the cleanup activities

03/14/97 Spent Sulfuric/Hydrofluoric Acid Pickle Liquor; Release # 9614502

On 03/14/97 at ~3:20 pm AL Tech personnel discovered the WTP Grit Chamber overflowing Pickle House effluent. The strainer on the Grit Chamber discharge was plugged by a tyvek suit, resulting in the rise in level to the point of overflow. The release involved ~1,500 gallons of spent sulfuric/hydrofluoric acid pickle liquor, which entered the stormwater drainage system, near the WTP. The Stormwater drainage system conveyed the released material to the ditch, located in the northwest corner of AL Tech property, where it was contained on site. The soil near the Grit Chamber and the stormwater drainage system was neutralized soda ash solution and thoroughly flushed with water. The rinse water and released material was transferred to the WTP for processing. Any impacted soil was transferred to a lined 20 yard roll-off box for later disposal at Envotech Management Services, located in Bellville, MI. The local NYSDEC agent was notified and present to approve the cleanup activities.