Harding Lawson Associates

July 16, 1999

Ms. Mary Jane Peachey, P.E.
Regional Hazardous Waste Remediation Engineer
New York State Department of Environmental Conservation
Region 8 - Division of Environmental Remediation
6274 East Avon-Lima Road
Avon, NY 14414

Re: VCA Index # B8-0508-97-02
Former Taylor Instrument Facility
June 1999 Progress Report

Dear Ms. Peachey:

In accordance with Section II of the Taylor VCA, attached please find the June 1999 progress report.

Should you have any questions please give me a call.

Sincerely,

HARDING LAWSON ASSOCIATES, INC.

Ricky A. Ryan, P.E.
Principal Project Manager

cc: G. Anders Carlson, NYSDOH
James D. Charles, Esq., NYSDEC

Attachment

Progress Report – June 1999
Voluntary Cleanup of Former Taylor Instruments Facility

I. Introduction

In accordance with Section II of the Voluntary Cleanup Agreement (the Agreement) between Combustion Engineering (CE) and the New York State Department of Environmental Conservation (NYSDEC), Agreement Index Number B8-0508-97-02, CE has prepared this monthly progress report. The progress report is intended to supply information described in Items A.1 through A.5 of Section II of the Agreement.

As the department is aware, ABB and Sybron have reached an agreement through which ABB will take the lead on all on-site investigation and remediation, while Sybron will take the lead on all off-site investigation and remediation.

II. Description of Actions Towards Compliance With Agreement [A.1]

During the reporting period CE undertook a number of actions towards achieving compliance with the Agreement, as follows:

- Issued the On-Site Storm Sewers Remedial Work Plan to NYSDEC and Monroe County Pure Waters (MCPW) on June 3, 1999.
- Met with MCPW on June 10, 1999 to discuss the On-Site Storm Sewers Remedial Work Plan. Written approval of the plan was received from both NYSDEC (dated June 22, 1999) and MCPW (dated June 15, 1999).
- Initiated preparation of a summary report for the results of the Pre-Remedy Monitoring Program baseline event conducted during May 3-7, 1999. Results and interpretations will be attached to the next monthly report.
- Prepared an evaluation report for the results of the Dual Phase Vacuum Extraction (DPVE) Pilot Test conducted during May 17-25, 1999. Results and interpretations are attached to this monthly report.
- Continued efforts to prepare a Remedial Work Plan (RWP) to address trichloroethene (TCE) and mercury contamination.
- Responded to NYSDEC comments on the Final Investigative Report (FIR) and issued text revisions to NYSDEC and MCPW on June 4, 1999.
- Forwarded the FIR and the On-Site Storm Sewers Remedial Work Plan to the Document Repository in the Arnett Branch Library on June 30, 1999.
- Received written approval of the FIR from NYSDEC (dated June 18, 1999) on June 25, 1999.
- Sybron's consultant (Haley and Aldrich of New York) have informed us that, during the reporting period, Sybron undertook a number of actions towards achieving

compliance with the agreement as follows: 1) Continued discussions with MCPW with respect to Sybron's development of a work plan for the cleaning of the Ames Street sewer, and 2) continued development of the off-site groundwater monitoring plan.

III. Summary of Sampling and Testing Results [A.2]

No samples were taken on behalf of CE during this reporting period. Sampling results for the DPVE Pilot Test are included in the Evaluation Report for the DPVE Pilot Test, which is attached to this monthly report.

IV. Required Deliverables Submitted [A.3]

- The FIR text revisions that were prepared in response to NYSDEC comments were submitted on June 4, 1999.
- The On-Site Storm Sewers Remedial Work Plan was submitted on June 3, 1999.
- The DPVE Pilot Test Evaluation Report is attached to this monthly report.

V. Scheduled Future Actions [A.4]

Actions scheduled for the next reporting period (July, 1999) include the following:

- Reporting for the first (baseline) event of the Pre-Remedy Monitoring Program.
- Continue discussions with mercury treatment and disposal facilities/vendors.
- Continue remedy planning and engineering evaluations as part of the Remedial Work Plan preparation.
- Conduct on-site remedial activities related to the first phase of work for remediation of the on-site storm sewers, as outlined in the work plan. Mobilization for field activities is planned for July 12, 1999.

VI. Percentage Completion/Delays [A.5]

The following table summarizes percentage completion, expected delays and mitigative measures for items specified in the Agreement and other major actions.

Item	Status	Delays Anticipated or Encountered	Mitigative Measures, Comments
Final Investigation Report (FIR)	100% complete	Completed.	None.
Remedial Work Plan	25% complete	Mercury treatment technology difficulties.	On-Site Storm Sewers remedy approved by NYSDEC and MCPW. Efforts are ongoing to determine the most viable mercury-contaminated soil treatment/disposal options. VOC remedy planning is ongoing utilizing results from the DPVE Pilot Test.
PreRemedy Monitoring Program Work Plan	100%	Completed.	None.
PreRemedy Monitoring Program Baseline Event Summary Report	90%	Delay in receipt and processing of analytical data.	Report will be attached to next monthly report.
DPVE Pilot Test Work Plan	100%	Completed.	None.
DPVE Pilot Test Evaluation Report	100%	Completed.	Attached to this monthly report.
On-site Sewers Remedial Work Plan	100%	None.	Remedial activities for on-site sewers submitted separately from the remainder of the site remedies to be submitted in the RWP.
Final Engineering Report	0% complete	None.	Remedial construction, etc. cannot be scheduled at this time.

VII. Proposed Investigative/Remedial Work Plan Modifications [A.6]

On-site sewer remedial activities are being conducted separately from the remainder of the on-site remedies (i.e. VOC and mercury). This is to accommodate a request from MCPW to accelerate on-site sewer remedial activities to allow off-site sewer cleaning to proceed this summer.

DPVE PILOT SCALE TEST EVALUATION REPORT
FORMER TAYLOR INSTRUMENTS / AMES STREET SITE
ROCHESTER, NY

Introduction

Harding Lawson Associates (HLA) on behalf of ABB Combustion Engineering completed a pilot scale test for Dual Phase Vacuum Extraction (DPVE) of groundwater and soil vapor at the former Taylor Instruments Site located on Ames Street in Rochester, NY. The pilot scale test provided site specific information that will serve as the basis for design of a full scale remedy. The intent of this report is to summarize pilot scale DPVE test operations activities and results for the test which was conducted from 5/19/99 to 5/24/99.

Description of Test Activities

The DPVE pilot scale test was set up to provide the necessary information about groundwater and soil vapor conditions necessary to design a full scale treatment system. The proposed full scale extraction and treatment equipment is anticipated to be similar to the equipment used during the test. The pilot test was designed to evaluate two subsurface horizons individually, as well as, simultaneously. The first horizon, consists of dense to very dense silty sand Ablation Till, extending from ground surface to approximately 13 feet below ground surface (bgs). The second horizon consists of very dense to extremely dense silty sand Basal Till, extending from approximately 13 feet bgs to 18 feet bgs. Two 4-inch diameter extraction wells were installed within a known source area located on the southern portion of the site, with one well screened in the deep horizon, while the other well was screened within the shallow horizon. Groundwater depth at the site was measured at approximately 7 feet bgs. These extraction wells are identified as EW-01S and EW-01D, shallow and deep wells, respectively. One-inch diameter PVC vapor and groundwater monitoring points were also installed at distances of approximately 10, 18, 34, and 54-feet from the two extraction wells aligned in the northeast (PZ-270S/D, -268S/D, -269S/D) and northwest (PZ-267S/D, -266S/D, -271S/D, -265S/D) directions (Figure 1, Attachment A). At each location, shallow and deep monitoring points were clustered.

To test the reactions of each subsurface zone to DPVE, the test was divided into three phases. The first phase extracted groundwater from the deep horizon only. The second phase extracted both groundwater and soil vapor from both deep and shallow horizons simultaneously, and the third phase from the shallow horizon only. Each phase will be discussed in greater detail in the Results section of this report. Within each phase of the test, two vacuum rates were also used to assess the optimal operational vacuum.

Prior to startup of the extraction system, groundwater samples were collected from the extraction wells to represent baseline contaminant quantities within the two hydrologic horizons. As the extraction activities continued through the three phases, groundwater level and vacuum pressure data were collected from the monitoring probes. Vapor contaminant levels were also measured from the effluent of the vacuum extraction pump and air stripper. Water level data and system operational data are presented as Attachment A. After completing the test, another groundwater sample was collected from the two extraction wells to represent post test contaminant conditions.

Description of Equipment

The DPVE pilot scale test extraction and treatment system used was a mobile, trailer-mounted unit consisting of a liquid ring vacuum extraction pump, an air/water separator, a low profile air stripper, various transfer pumps, and a groundwater storage tank. The unit controls were integrated into a main control panel that contained a programmable logic controller (PLC).

The liquid ring pump was an Atlantic Fluidics Model A75 capable of a maximum vacuum of 28-inches of mercury (Hg) at a sustainable air flow of 45 cubic feet per minute (cfm). The pump also had its own seal water tank, that allows operation of the pump with limited use of fresh water. The low profile air stripper was a Shallowtray, STAT 30 with 6 aeration trays capable of a maximum air/water ratio of 30:1 at a maximum groundwater flow rate of 35 gallons per minute (gpm).

The above extraction system was connected to both extraction wells with 1-inch diameter polyvinyl chloride PVC pipe. In-line ball valves were installed to isolate each well, as needed. The wellhead setup contained a 4-inch diameter Simmons well seal with openings for a 1-inch diameter PVC drop tube and 3/8-inch PVC pipe used for bleed air to provide additional lift. A vacuum gauge was also connected to the well seal to monitor vacuum applied to the well casing.

Extracted and treated groundwater was pumped to a temporary storage tank until confirmatory analytical sample results were obtained. The results were forwarded to Mr. Harry Reiter with Monroe County, Department of Environmental Services, Division of Pure Waters on 5/21/99. Mr. Reiter reviewed the analytical results and approved discharge of the stored water to the local public owned treatment work (POTW).

Pre-Test Groundwater Analytical Results

Prior to startup of the DPVE system, groundwater samples were collected from the two extraction wells and shipped to Columbia Laboratories for analysis. The samples were analyzed for volatile organic compounds (VOCs) using USEPA Method 8260. Analytical results from these wells represent baseline contaminant conditions and can be compared to post-test results. The following table summarizes pre-test groundwater analytical results for samples from EW-01S and EW-01D. Analytical results are provided in Attachment B:

Table 1
Pre-Test Groundwater Analytical Results
Former Taylor Instruments Site - Rochester, NY

Contaminants	EW-01S Results (mg/l)	EW-01D Results (mg/l)
2-Butanone (MEK)	14	ND
cis-1,2 Dichloroethene	ND	48
Trichloroethene	23	710

mg/l = milligrams per liter
ND = Not detected at/or above quantification limit.
Note: 2-butananone, also known as methylethylketone (MEK), is a known laboratory artifact. MEK is also an ingredient of common PVC glues, which were used to connect extraction piping.

Phase I Results

The first phase of the pilot test involved extraction of groundwater by using the deep extraction well only. The test began on May 19, 1999 at 1215 hrs. The liquid ring pump was set to produce a vacuum of 15-inches of Hg for the first stage of this phase. As expected, vacuum readings from the monitoring points were not measurable for this first stage of phase I, which operated for a total of 19 hours. Soil vapor flow was not expected during this phase due to extraction from the deeper zone only, which did not allow for dewatering of both the shallow and deep zones creating avenues for soil vapor flow. The vacuum was then increased to 20-inches of Hg and the system operated for an additional 9 hours. During this time vacuum readings from the monitoring points were still not measurable.

Groundwater extraction rates ranged from 0.15 to 0.23 gallons per minute (gpm) at 15 and 20-inches of Hg, respectively. Groundwater level data for this test phase indicated a radius of influence (R_o) of approximately 40 feet along the Northeast alignment, and approximately 60 feet along the Northwest alignment, see graph in Attachment C, (Figure 2, Attachment A).

Because no vacuum response was measured from monitoring points and sufficient groundwater drawdown data had been collected, it was decided to move into phase II after operating phase I for a total of 28 hours.

Phase II Results

The second phase of the pilot test involved extraction of groundwater and potential soil vapors by using both the shallow and deep extraction wells. The test began immediately after the phase I test was completed. The liquid ring pump was readjusted to 15-inch of Hg. Immediate soil vapor responses were observed along both the northeast and northwest monitoring point alignments. Responses along the northeast alignment were measured a distance of approximately 20-feet from the extraction wells, and approximately 30-feet along the northwest alignment (Figure 3, Attachment A).

The vacuum pump was adjusted to 20-inches of Hg after operating for 16.5 hours at 15-inches of Hg. Vapor influence measurements increased at each monitoring point. The magnitude of the increase was greater at the monitoring points located closest to the extraction wells. However, the soil vapor R_o did not change from the 20-feet and 30-feet along the northeast and northwest legs, respectively.

Groundwater extraction rates were doubled from the phase I sequence to 0.51 and 0.52 gpm at 15-inches and 20-inches of Hg, respectively. Groundwater level data for this test phase indicated a R_o of approximately 60-feet, see graph in Attachment C, for both the northeast and northwest alignments (Figure 2, Attachment A). This phase of the pilot study was operated for a total of 47.25 hours before beginning phase III.

Phase III Results

The third phase of the pilot test involved extracting groundwater and soil vapors from the shallow extraction well only. The test began immediately after completion of phase II. The liquid ring pump was readjusted to 15-inches of Hg to begin. Vacuum pressures were measured at distances

consistent with phase II along both alignments (Figure 3, Attachment A). This stage was operated for 17 hours before increasing the vacuum pump to 20-inches of Hg. Similar vacuum pressures were measured during this stage of phase III which was operated for 11 hours.

Groundwater extraction rates ranged from 0.34 to 0.38 gpm at 15-inches and 20-inches of Hg, respectively. Groundwater level data for this phase indicated a R_o of 70-feet for the northeast alignment and 60-feet for the northwest alignment, see graph in Attachment C, (Figure 2, Attachment A). This phase was operated for a total of 28 hours.

The entire pilot test was operated for 103 hours. After completing phase III activities, the DPVE system was shutdown and final measurements of water levels and vacuum pressures were collected. This concluded the pilot test operations.

Post-Test Groundwater Analytical Results

Immediately following shut down of the pilot test equipment, groundwater samples were collected from the two extraction wells. This data was compared with results of samples collected before the pilot test commenced. The following table summarizes the analytical results for EW-01S and EW-01D. Analytical results are provided in Attachment B:

Table 2
Post-Test Groundwater Analytical Results
Former Taylor Instruments Site - Rochester, NY

Contaminants	EW-01S Results (mg/l)	EW-01D Results (mg/l)
2-Butanone (MEK)	ND	ND
cis-1,2 Dichloroethene	7.8	48
Trichloroethene	600	640

mg/l = milligrams per liter
ND = Not detectable at/or above quantification limit.
Note: 2-butananone, also known as methylethylketone (MEK), is a known laboratory artifact. MEK is also an ingredient of common PVC glues, which were used to connect extraction piping.

An additional groundwater sample will be collected from each extraction well in September 1999 to further evaluate the effects of the DPVE on contaminants within the groundwater. The results will be used to determine increasing of decreasing trends of groundwater contaminant levels which would give indications of contaminant movement and removal.

Summary of Results

The following table summarizes critical pilot study results by phase. These results include vapor R_o, groundwater R_o for each monitoring point alignment and stage of pumping and soil vapor vacuum and groundwater extraction rates. System operational data and groundwater level data are provided in Attachment D.

Table 3
Summary of DPVE Pilot Test Results
Fomer Taylor Instruments Site - Rochester, NY

Test Phase	Pump Vac. inches of Hg	Vapor R_o NE (feet)	Vapor R_o NW (feet)	GW Flow (gpm)	GW R_o NE (feet)	GW R_o NW (feet)
I	15	0	0	0.15	40	60
I	20	0	0	0.23	40	60
II	15	20	30	0.51	50	60
II	20	20	30	0.52	50	60
III	15	20	30	0.34	70	60
III	20	20	30	0.38	70	60

inches of Hg = inches of Mercury
NE = Northeast alignment
NW = Northwest alignment
GW = Groundwater
R_o = Radius of Influence
gpm = gallons per minute
Phase I = Extraction from deep horizon
Phase II = Extraction from deep and shallow horizons
Phase III = Extraction from shallow horizon

A summary of pre-test and post-test groundwater samples collected from the two extraction wells is provided in the following table:

Table 4
Summary of Groundwater Analytical Results
Former Taylor Instruments Site - Rochester, NY

Contaminant	EW-01S Pre-Test (mg/l)	EW-01S Post-Test (mg/l)	EW-01D Pre-Test (mg/)	EW-01D Post-Test (mg/l)
2-Butanone (MEK)	14	ND	ND	ND
cis-1,2 Dichloroethene	ND	7.8	48	48
Trichloroethene	23	600	710	640

mg/l = milligrams per liter
ND = Not detectable at/or above quantification limit.
EW-01S = Extraction Well (Shallow)
EW-01D = Extraction Well (Deep)
Note: 2-Butananone (MEK) is a known laboratory artifact. It is also an ingrediant of common PVC glues, which were used to connect extraction piping.

Contaminant extraction quantities were calculated using vapor contaminant field measurements collected from the liquid ring pump and air stripper effluents as well as groundwater contaminant levels collected from the extraction wells and the treatment system groundwater effluent. Although laboratory analytical samples were not obtained from vapor stream locations, periodic PID measurements of VOCs in the removed vapor throughout all phases of the test was done to

allow an estimate to be made of the quantity of VOCs removed in the vapor phase. However, because VOCs were likely stripped from the removed groundwater within the well casing and transferred to the vapor stream, the total quantity of VOC removed is expected to have been less than the sum of the VOCs in the groundwater and the vapor. Contaminant extraction quantities were estimated at 15 to 20 lbs. of VOCs removed during the test.

Conclusions

The pilot test indicates that DPVE is a viable technology for removing contaminants from subsurface soils and groundwater at the site. The test provided site specific information that will serve as the basis of design of a full scale system. A full scale extraction and treatment system designed to remediate VOC contamination in groundwater and subsurface soils can now proceed. The following conclusions are based on previously discussed results.

Soil vapor influence

- Vacuum pressures ranged from a maximum of 12-inches to 0.10-inches of Hg at distances of 8-feet to 30-feet, respectively, from the extraction wells.
- There was a relatively homogeneous response along both the northwest and northeast alignments.
- Soil vapor R_o was observed to be approximately 20-feet along the northeast alignment and approximately 30-feet along the northwest alignment.
- Vapor response from the fully saturated deep horizon was not observed because the extraction system was unable to dewater both the shallow and deep zones sufficiently to create vapor flow avenues.
- Vapor flow rates, collected from the liquid ring pump effluent, were measured between 5 and 40 cubic feet per minute (CFM).

Groundwater Influence

- The ultimate hydraulic response observed was similar to a conventional groundwater extraction system.
- Observed drawdowns were 12-feet below static groundwater levels at a distance of 8-feet from the extraction wells, and 1-foot at distances of 50-feet.
- R_o is approximately 60 to 70-feet, based on the distance versus drawdown plotted for each phase of this DPVE pilot test.
- Groundwater extraction rates are expected to be between 0.30 and 0.55 gpm for each extraction well, but multiple wells may decrease this estimate slightly. Variations in permeability throughout the site may also alter these flow rates.

Contaminant Removal

- An estimated 15 to 20 lbs. of contaminants were removed from the subsurface during the pilot scale test activities. These estimates are based on vapor flow rates combined with the field vapor contaminant levels reported from the vacuum pump and air stripper effluents as well as groundwater flow rates and measured VOCs in the extraction wells at the beginning and end of the pilot test.
- An increase in TCE concentrations within the shallow horizon is attributed to the effectiveness of the extraction system at drawing the contaminants from residual source areas into the active extraction treatment zone.

- Observations of system operation show that contaminants were successfully stripped from groundwater within the vacuum extraction stage prior to entering the air stripper. This information will be considered during treatment system selection and sizing.

ATTACHMENT A

FIGURES

N

HAGUE STREET

WEST AVENUE

AMES STREET

LEGEND

- W, TW, OB– OVERBURDEN MONITORING WELL
- BR– BEDROCK MONITORING WELL
- EW– OVERBURDEN EXTRACTION WELL (1999 PILOT TEST)
- PZ– OVERBURDEN PIEZOMETER PAIRS (1999 PILOT TEST)

BR-6
W-2
W-4
BR-7
TW-69
TW-13
W-0-0
W-3
BR-5
OB-5
W-5
W-6
PZ-266S/D
PZ-267S/D
PZ-265S/D
BR-4
OB-4
EW-1S
EW-1D
PZ-271S/D
PZ-268S/D
PZ-270S/D
PZ-269S/D
BR-1
TW-17
TW-74
W-1
TW-01
BR-3
TW-04
TW-07
BR-2
TW-09
TW-20

NEW YORK CENTRAL RAILROAD
N/F
RAILROAD TRACKS
DAVENPORT MACHINE
METAL BUILDING
BRICK BUILDING
CORRUGATED GUIDE RAIL
CONC. SLAB
CONC. STAIRS
RESIDENCE

0 40 80 160 FEET

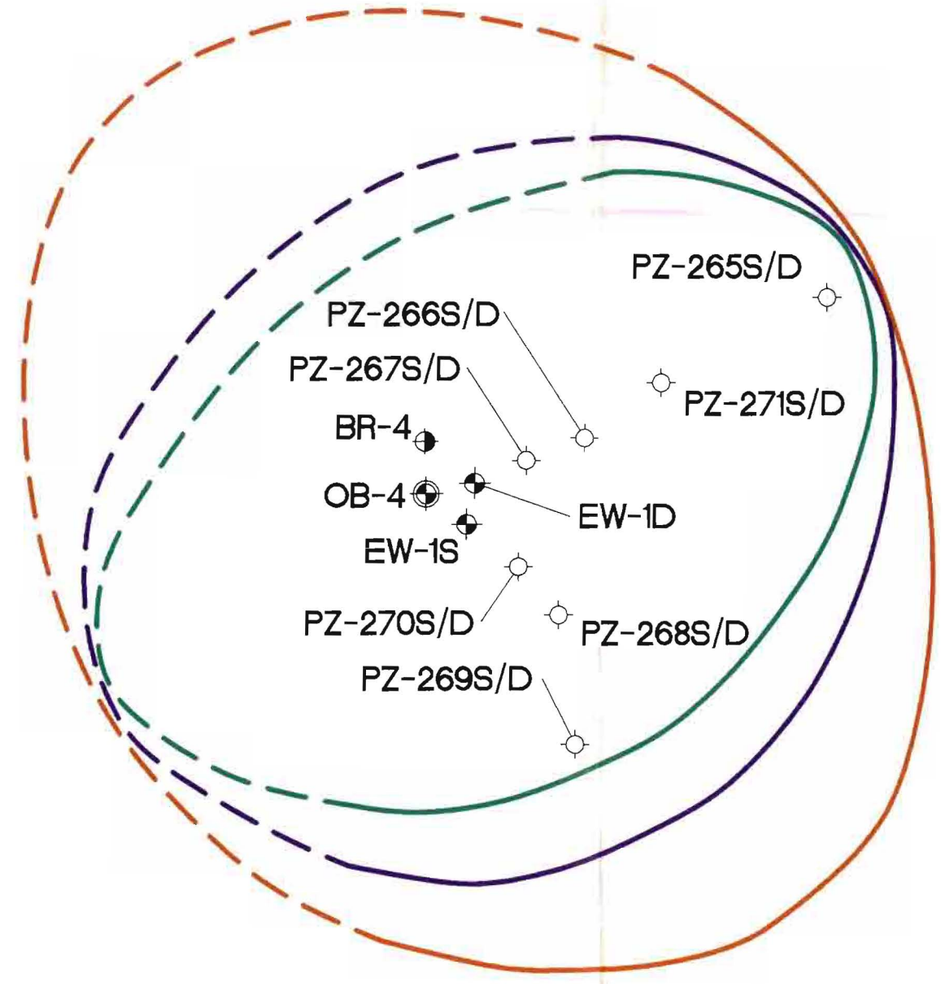
SCALE: 1"=80'

JN:7196-39\7196f027.DWG 07-13-99 EJL

FIGURE 1
GROUNDWATER MONITORING WELL LOCATIONS
DPVE PILOT SCALE TEST
TAYLOR INSTRUMENTS SITE, ROCHESTER, NEW YORK
Harding Lawson Associates

N

W-6



LEGEND

- W, TW, OB– OVERBURDEN MONITORING WELL
- BR– BEDROCK MONITORING WELL
- EW– OVERBURDEN EXTRACTION WELL (1999 PILOT TEST)
- PZ– OVERBURDEN PIEZOMETER PAIRS (1999 PILOT TEST)
- PHASE I OBSERVED GROUNDWATER RADIUS OF INFLUENCE
- PHASE II OBSERVED GROUNDWATER RADIUS OF INFLUENCE
- PHASE III OBSERVED GROUNDWATER RADIUS OF INFLUENCE
- INTERPRETED RADIUS OF INFLUENCE

0 10 20 40 FEET

SCALE: 1"=20'

J:\7198-39\7198f025.DWG 07-13-99 EJL

FIGURE 2
OBSERVED GROUNDWATER RADIUS OF INFLUENCE
DPVE PILOT SCALE TEST
TAYLOR INSTRUMENTS SITE, ROCHESTER, NEW YORK
Harding Lawson Associates

N

W-6

PZ-265S/D

PZ-266S/D

PZ-271S/D

PZ-267S/D

BR-4

OB-4

EW-1D

EW-1S

PZ-270S/D

PZ-268S/D

PZ-269S/D

LEGEND

- W, TW, OB– OVERBURDEN MONITORING WELL
- BR– BEDROCK MONITORING WELL
- EW– OVERBURDEN EXTRACTION WELL (1999 PILOT TEST)
- PZ– OVERBURDEN PIEZOMETER PAIRS (1999 PILOT TEST)
- OBSERVED SOIL VAPOR RADIUS OF INFLUENCE TEST FOR EACH PHASE OF TEST
- INTERPRETED RADIUS OF INFLUENCE TEST

0 10 20 40 FEET

SCALE: 1"=20'

FIGURE 3
OBSERVED SOIL VAPOR RADIUS OF INFLUENCE
DPVE PILOT SCALE TEST
TAYLOR INSTRUMENTS SITE, ROCHESTER, NEW YORK

Harding Lawson Associates

ATTACHMENT B

LABORATORY ANALYTICAL RESULT SHEETS

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B TCL
Reported: 06/09/99

Harding Lawson Associates
Project Reference: ABB AMES ST.
Client Sample ID : EW-1S

Date Sampled : 05/19/99 Order #: 293857 Sample Matrix: WATER
Date Received: 05/20/99 Submission #: 9905000310 Analytical Run 38957

DATE ANALYZED : 06/02/99
ANALYTICAL DILUTION: 200.00

ANALYTE	PQL	RESULT	UNITS
ACETONE	20	4000 U	UG/L
BENZENE	5.0	1000 U	UG/L
BROMODICHLOROMETHANE	5.0	1000 U	UG/L
BROMOFORM	5.0	1000 U	UG/L
BROMOMETHANE	5.0	1000 U	UG/L
2-BUTANONE (MEK)	10	14000	UG/L
CARBON DISULFIDE	10	2000 U	UG/L
CARBON TETRACHLORIDE	5.0	1000 U	UG/L
CHLOROBENZENE	5.0	1000 U	UG/L
CHLOROETHANE	5.0	1000 U	UG/L
CHLOROFORM	5.0	1000 U	UG/L
CHLOROMETHANE	5.0	1000 U	UG/L
DIBROMOCHLOROMETHANE	5.0	1000 U	UG/L
1,1-DICHLOROETHANE	5.0	1000 U	UG/L
1,2-DICHLOROETHANE	5.0	1000 U	UG/L
1,1-DICHLOROETHENE	5.0	1000 U	UG/L
CIS-1,2-DICHLOROETHENE	5.0	1000 U	UG/L
TRANS-1,2-DICHLOROETHENE	5.0	1000 U	UG/L
1,2-DICHLOROPROPANE	5.0	1000 U	UG/L
CIS-1,3-DICHLOROPROPENE	5.0	1000 U	UG/L
TRANS-1,3-DICHLOROPROPENE	5.0	1000 U	UG/L
ETHYLBENZENE	5.0	1000 U	UG/L
2-HEXANONE	10	2000 U	UG/L
METHYLENE CHLORIDE	5.0	1000 U	UG/L
4-METHYL-2-PENTANONE (MIBK)	10	2000 U	UG/L
STYRENE	5.0	1000 U	UG/L
1,1,2,2-TETRACHLOROETHANE	5.0	1000 U	UG/L
TETRACHLOROETHENE	5.0	1000 U	UG/L
TOLUENE	5.0	1000 U	UG/L
1,1,1-TRICHLOROETHANE	5.0	1000 U	UG/L
1,1,2-TRICHLOROETHANE	5.0	1000 U	UG/L
TRICHLOROETHENE	5.0	23000	UG/L
VINYL CHLORIDE	5.0	1000 U	UG/L
O-XYLENE	5.0	1000 U	UG/L
M+P-XYLENE	5.0	1000 U	UG/L

SURROGATE RECOVERIES	QC LIMITS		
4-BROMOFLUOROBENZENE	(86 - 115 %)	98	%
TOLUENE-D8	(88 - 110 %)	101	%
DIBROMOFLUOROMETHANE	(86 - 118 %)	102	%

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B TCL
Reported: 06/09/99

Harding Lawson Associates
Project Reference: ABB AMES ST.
Client Sample ID : EW-1D

Date Sampled : 05/19/99 **Order #:** 293858 **Sample Matrix:** WATER
Date Received: 05/20/99 **Submission #:** 9905000310 **Analytical Run** 38957

DATE ANALYZED : 06/02/99
ANALYTICAL DILUTION: 500.00

ANALYTE	PQL	RESULT	UNITS
ACETONE	20	10000 U	UG/L
BENZENE	5.0	2500 U	UG/L
BROMODICHLOROMETHANE	5.0	2500 U	UG/L
BROMOFORM	5.0	2500 U	UG/L
BROMOMETHANE	5.0	2500 U	UG/L
2-BUTANONE (MEK)	10	5000 U	UG/L
CARBON DISULFIDE	10	5000 U	UG/L
CARBON TETRACHLORIDE	5.0	2500 U	UG/L
CHLOROBENZENE	5.0	2500 U	UG/L
CHLOROETHANE	5.0	2500 U	UG/L
CHLOROFORM	5.0	2500 U	UG/L
CHLOROMETHANE	5.0	2500 U	UG/L
DIBROMOCHLOROMETHANE	5.0	2500 U	UG/L
1,1-DICHLOROETHANE	5.0	2500 U	UG/L
1,2-DICHLOROETHANE	5.0	2500 U	UG/L
1,1-DICHLOROETHENE	5.0	2500 U	UG/L
CIS-1,2-DICHLOROETHENE	5.0	48000	UG/L
TRANS-1,2-DICHLOROETHENE	5.0	2500 U	UG/L
1,2-DICHLOROPROPANE	5.0	2500 U	UG/L
CIS-1,3-DICHLOROPROPENE	5.0	2500 U	UG/L
TRANS-1,3-DICHLOROPROPENE	5.0	2500 U	UG/L
ETHYLBENZENE	5.0	2500 U	UG/L
2-HEXANONE	10	5000 U	UG/L
METHYLENE CHLORIDE	5.0	2500 U	UG/L
4-METHYL-2-PENTANONE (MIBK)	10	5000 U	UG/L
STYRENE	5.0	2500 U	UG/L
1,1,2,2-TETRACHLOROETHANE	5.0	2500 U	UG/L
TETRACHLOROETHENE	5.0	2500 U	UG/L
TOLUENE	5.0	2500 U	UG/L
1,1,1-TRICHLOROETHANE	5.0	2500 U	UG/L
1,1,2-TRICHLOROETHANE	5.0	2500 U	UG/L
TRICHLOROETHENE	5.0	570000 E	UG/L
VINYL CHLORIDE	5.0	2500 U	UG/L
O-XYLENE	5.0	2500 U	UG/L
M+P-XYLENE	5.0	2500 U	UG/L

SURROGATE RECOVERIES	QC LIMITS		
4-BROMOFLUOROBENZENE	(86 - 115 %)	98	%
TOLUENE-D8	(88 - 110 %)	100	%
DIBROMOFLUOROMETHANE	(86 - 118 %)	106	%

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B TCL
Reported: 06/09/99

Harding Lawson Associates
Project Reference: ABB AMES ST.
Client Sample ID : EW-1D

Date Sampled : 05/19/99 **Order #:** 293858 **Sample Matrix:** WATER
Date Received: 05/20/99 **Submission #:** 9905000310 **Analytical Run** 38957

DATE ANALYZED : 06/03/99
ANALYTICAL DILUTION: 5000.00

ANALYTE	PQL	RESULT	UNITS
ACETONE	20	100000 U	UG/L
BENZENE	5.0	25000 U	UG/L
BROMODICHLOROMETHANE	5.0	25000 U	UG/L
BROMOFORM	5.0	25000 U	UG/L
BROMOMETHANE	5.0	25000 U	UG/L
2-BUTANONE (MEK)	10	50000 U	UG/L
CARBON DISULFIDE	10	50000 U	UG/L
CARBON TETRACHLORIDE	5.0	25000 U	UG/L
CHLOROBENZENE	5.0	25000 U	UG/L
CHLOROETHANE	5.0	25000 U	UG/L
CHLOROFORM	5.0	25000 U	UG/L
CHLOROMETHANE	5.0	25000 U	UG/L
DIBROMOCHLOROMETHANE	5.0	25000 U	UG/L
1,1-DICHLOROETHANE	5.0	25000 U	UG/L
1,2-DICHLOROETHANE	5.0	25000 U	UG/L
1,1-DICHLOROETHENE	5.0	25000 U	UG/L
CIS-1,2-DICHLOROETHENE	5.0	39000	UG/L
TRANS-1,2-DICHLOROETHENE	5.0	25000 U	UG/L
1,2-DICHLOROPROPANE	5.0	25000 U	UG/L
CIS-1,3-DICHLOROPROPENE	5.0	25000 U	UG/L
TRANS-1,3-DICHLOROPROPENE	5.0	25000 U	UG/L
ETHYLBENZENE	5.0	25000 U	UG/L
2-HEXANONE	10	50000 U	UG/L
METHYLENE CHLORIDE	5.0	25000 U	UG/L
4-METHYL-2-PENTANONE (MIBK)	10	50000 U	UG/L
STYRENE	5.0	25000 U	UG/L
1,1,2,2-TETRACHLOROETHANE	5.0	25000 U	UG/L
TETRACHLOROETHENE	5.0	25000 U	UG/L
TOLUENE	5.0	25000 U	UG/L
1,1,1-TRICHLOROETHANE	5.0	25000 U	UG/L
1,1,2-TRICHLOROETHANE	5.0	25000 U	UG/L
TRICHLOROETHENE	5.0	710000	UG/L
VINYL CHLORIDE	5.0	25000 U	UG/L
O-XYLENE	5.0	25000 U	UG/L
M+P-XYLENE	5.0	25000 U	UG/L

SURROGATE RECOVERIES	QC LIMITS		
4-BROMOFLUOROBENZENE	(86 - 115 %)	95	%
TOLUENE-D8	(88 - 110 %)	98	%
DIBROMOFLUOROMETHANE	(86 - 118 %)	92	%

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B TCL
Reported: 06/09/99

Project Reference:
Client Sample ID : METHOD BLANK

Date Sampled : **Order #:** 297813 **Sample Matrix:** WATER
Date Received: **Submission #:** **Analytical Run** 38957

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 06/02/99			
ANALYTICAL DILUTION: 1.00			
ACETONE	20	20 U	UG/L
BENZENE	5.0	5.0 U	UG/L
BROMODICHLOROMETHANE	5.0	5.0 U	UG/L
BROMOFORM	5.0	5.0 U	UG/L
BROMOMETHANE	5.0	5.0 U	UG/L
2-BUTANONE (MEK)	10	10 U	UG/L
CARBON DISULFIDE	10	10 U	UG/L
CARBON TETRACHLORIDE	5.0	5.0 U	UG/L
CHLOROBENZENE	5.0	5.0 U	UG/L
CHLOROETHANE	5.0	5.0 U	UG/L
CHLOROFORM	5.0	5.0 U	UG/L
CHLOROMETHANE	5.0	5.0 U	UG/L
DIBROMOCHLOROMETHANE	5.0	5.0 U	UG/L
1,1-DICHLOROETHANE	5.0	5.0 U	UG/L
1,2-DICHLOROETHANE	5.0	5.0 U	UG/L
1,1-DICHLOROETHENE	5.0	5.0 U	UG/L
CIS-1,2-DICHLOROETHENE	5.0	5.0 U	UG/L
TRANS-1,2-DICHLOROETHENE	5.0	5.0 U	UG/L
1,2-DICHLOROPROPANE	5.0	5.0 U	UG/L
CIS-1,3-DICHLOROPROPENE	5.0	5.0 U	UG/L
TRANS-1,3-DICHLOROPROPENE	5.0	5.0 U	UG/L
ETHYLBENZENE	5.0	5.0 U	UG/L
2-HEXANONE	10	10 U	UG/L
METHYLENE CHLORIDE	5.0	5.0 U	UG/L
4-METHYL-2-PENTANONE (MIBK)	10	10 U	UG/L
STYRENE	5.0	5.0 U	UG/L
1,1,2,2-TETRACHLOROETHANE	5.0	5.0 U	UG/L
TETRACHLOROETHENE	5.0	5.0 U	UG/L
TOLUENE	5.0	5.0 U	UG/L
1,1,1-TRICHLOROETHANE	5.0	5.0 U	UG/L
1,1,2-TRICHLOROETHANE	5.0	5.0 U	UG/L
TRICHLOROETHENE	5.0	5.0 U	UG/L
VINYL CHLORIDE	5.0	5.0 U	UG/L
O-XYLENE	5.0	5.0 U	UG/L
M+P-XYLENE	5.0	5.0 U	UG/L

SURROGATE RECOVERIES	QC LIMITS		
4-BROMOFLUOROBENZENE	(86 - 115 %)	97	%
TOLUENE-D8	(88 - 110 %)	100	%
DIBROMOFLUOROMETHANE	(86 - 118 %)	102	%

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B TCL
Reported: 06/09/99

Project Reference:
Client Sample ID : METHOD BLANK

Date Sampled :
Date Received:
Order #: 297814
Submission #:
Sample Matrix: WATER
Analytical Run 38957

DATE ANALYZED : 06/03/99
ANALYTICAL DILUTION: 1.00

ANALYTE	PQL	RESULT	UNITS
ACETONE	20	20 U	UG/L
BENZENE	5.0	5.0 U	UG/L
BROMODICHLOROMETHANE	5.0	5.0 U	UG/L
BROMOFORM	5.0	5.0 U	UG/L
BROMOMETHANE	5.0	5.0 U	UG/L
2-BUTANONE (MEK)	10	10 U	UG/L
CARBON DISULFIDE	10	10 U	UG/L
CARBON TETRACHLORIDE	5.0	5.0 U	UG/L
CHLOROBENZENE	5.0	5.0 U	UG/L
CHLOROETHANE	5.0	5.0 U	UG/L
CHLOROFORM	5.0	5.0 U	UG/L
CHLOROMETHANE	5.0	5.0 U	UG/L
DIBROMOCHLOROMETHANE	5.0	5.0 U	UG/L
1,1-DICHLOROETHANE	5.0	5.0 U	UG/L
1,2-DICHLOROETHANE	5.0	5.0 U	UG/L
1,1-DICHLOROETHENE	5.0	5.0 U	UG/L
CIS-1,2-DICHLOROETHENE	5.0	5.0 U	UG/L
TRANS-1,2-DICHLOROETHENE	5.0	5.0 U	UG/L
1,2-DICHLOROPROPANE	5.0	5.0 U	UG/L
CIS-1,3-DICHLOROPROPENE	5.0	5.0 U	UG/L
TRANS-1,3-DICHLOROPROPENE	5.0	5.0 U	UG/L
ETHYLBENZENE	5.0	5.0 U	UG/L
2-HEXANONE	10	10 U	UG/L
METHYLENE CHLORIDE	5.0	5.0 U	UG/L
4-METHYL-2-PENTANONE (MIBK)	10	10 U	UG/L
STYRENE	5.0	5.0 U	UG/L
1,1,2,2-TETRACHLOROETHANE	5.0	5.0 U	UG/L
TETRACHLOROETHENE	5.0	5.0 U	UG/L
TOLUENE	5.0	5.0 U	UG/L
1,1,1-TRICHLOROETHANE	5.0	5.0 U	UG/L
1,1,2-TRICHLOROETHANE	5.0	5.0 U	UG/L
TRICHLOROETHENE	5.0	5.0 U	UG/L
VINYL CHLORIDE	5.0	5.0 U	UG/L
O-XYLENE	5.0	5.0 U	UG/L
M+P-XYLENE	5.0	5.0 U	UG/L

SURROGATE RECOVERIES	QC LIMITS		
4-BROMOFLUOROBENZENE	(86 - 115 %)	94	%
TOLUENE-D8	(88 - 110 %)	101	%
DIBROMOFLUOROMETHANE	(86 - 118 %)	93	%

Columbia Analytical Services, Inc.
Mustard St., Suite 250, Rochester, NY 14609-69245
(716) 288-5380 • FAX (716) 288-8475

CHAIN OF CUSTODY/LABORATORY ANALYSIS REQUEST FOR...

DATE 5/20/99 PAGE 1 OF 1

PROJECT NAME ABB AMES STREET
PROJECT MANAGER/CONTACT Rick Ryan
COMPANY/ADDRESS 1400 Centerpoint Blvd, Ste 158
Knoxville, TN 37777
TEL (423) 531-1922 FAX (423) 531-8226
SAMPLER'S SIGNATURE M. Louis Barrenchea III

ANALYSIS REQUESTED

SAMPLE I.D.	DATE	TIME	FOR OFFICE USE ONLY LAB I.D.	SAMPLE MATRIX	# OF CONTAINERS	GC/MS VOA's ☒ 8260 ☐ 624 ☐ 95-1	GC/MS SVOA's ☐ 8270 ☐ 625 ☐ 95-2	GC VOA's ☐ 8021 ☐ 601/602	PESTICIDES/PCB's ☐ 8081 ☐ 608 ☐ 95-3	STAR'S LIST 8021 VOA's ☐ TOTAL ☐ TCLP	STAR'S LIST 8270 SVOA's ☐ TOTAL ☐ TCLP	TCLP ☐ METALS ☐ VOA's ☐ SVOA's ☐ H/P	WASTE CHARACTERIZATION ☐ React ☐ Corros. ☐ Ignit.	METALS, TOTAL (LIST BELOW) Mercury	METALS, DISSOLVED (LIST BELOW)	PRESERVATION pH < 2.0	PRESERVATION pH > 12	PRESERVATION Other
EW-1S	5/19/99	11:15	293857	Water	3	X												
EW-1D	5/19/99	11:30	293858	Water	3	X												
Effluent	5/20/99	10:00	293859	Water	5	X								X				

RELINQUISHED BY:
M. Louis Barrenchea III
Signature
M. Louis Barrenchea III
Printed Name
HLA
Firm
5/20/99 10:30
Date/Time

RECEIVED BY:
Tom Hastings
Signature
Tom Hastings
Printed Name
ESA
Firm
5/20/99 10:30
Date/Time

RELINQUISHED BY:
Signature
Printed Name
Firm
Date/Time

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Printed Name
Firm
Date/Time

RECEIVED BY:
Signature
Printed Name
Firm
Date/Time

TURNAROUND REQUIREMENTS
__ 24 hr. __ 48 hr. __ 5 day
__ Standard (10-15 working days)
__ Provide Verbal Preliminary Results
__ Provide FAX Preliminary Results
Requested Report Date _____

REPORT REQUIREMENTS
__ 1. Routine Report
__ 2. Routine Rep. w/CASE Narrative
__ 3. EPA Level III Validatable Package
__ 4. N.J. Reduced Deliverables Level IV
__ 5. NY ASP/CLP Deliverables
__ 6. Site specific QC.

INVOICE INFORMATION:
P.O. #:
Bill To:

SAMPLE RECEIPT:
Shipping Via: CAS
Shipping #:
Temperature: 6.0
Submission No: 99-5-310

SPECIAL INSTRUCTIONS/COMMENTS:
METALS Mercury 7470A/245.1
ORGANICS: ☐ TCL ☐ PPL ☐ AE Only ☐ BN Only ☐ Special List
24 Hr. Turn on both Effluent samples only. Normal turn on remaining samples

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B TCL
Reported: 06/09/99

Harding Lawson Associates
Project Reference: ABB/ TAYLOR INSTRUMENTS
Client Sample ID : EW-1S2

Date Sampled : 05/24/99 **Order #:** 294930 **Sample Matrix:** WATER
Date Received: 05/24/99 **Submission #:** 9905000360 **Analytical Run** 38957

ANALYTE	PQL	RESULT	UNITS
DATE ANALYZED : 06/02/99			
ANALYTICAL DILUTION: 200.00			
ACETONE	20	4000 U	UG/L
BENZENE	5.0	1000 U	UG/L
BROMODICHLOROMETHANE	5.0	1000 U	UG/L
BROMOFORM	5.0	1000 U	UG/L
BROMOMETHANE	5.0	1000 U	UG/L
2-BUTANONE (MEK)	10	2000 U	UG/L
CARBON DISULFIDE	10	2000 U	UG/L
CARBON TETRACHLORIDE	5.0	1000 U	UG/L
CHLOROBENZENE	5.0	1000 U	UG/L
CHLOROETHANE	5.0	1000 U	UG/L
CHLOROFORM	5.0	1000 U	UG/L
CHLOROMETHANE	5.0	1000 U	UG/L
DIBROMOCHLOROMETHANE	5.0	1000 U	UG/L
1,1-DICHLOROETHANE	5.0	1000 U	UG/L
1,2-DICHLOROETHANE	5.0	1000 U	UG/L
1,1-DICHLOROETHENE	5.0	1000 U	UG/L
CIS-1,2-DICHLOROETHENE	5.0	7800	UG/L
TRANS-1,2-DICHLOROETHENE	5.0	1000 U	UG/L
1,2-DICHLOROPROPANE	5.0	1000 U	UG/L
CIS-1,3-DICHLOROPROPENE	5.0	1000 U	UG/L
TRANS-1,3-DICHLOROPROPENE	5.0	1000 U	UG/L
ETHYLBENZENE	5.0	1000 U	UG/L
2-HEXANONE	10	2000 U	UG/L
METHYLENE CHLORIDE	5.0	1000 U	UG/L
4-METHYL-2-PENTANONE (MIBK)	10	2000 U	UG/L
STYRENE	5.0	1000 U	UG/L
1,1,2,2-TETRACHLOROETHANE	5.0	1000 U	UG/L
TETRACHLOROETHENE	5.0	1000 U	UG/L
TOLUENE	5.0	1000 U	UG/L
1,1,1-TRICHLOROETHANE	5.0	1000 U	UG/L
1,1,2-TRICHLOROETHANE	5.0	1000 U	UG/L
TRICHLOROETHENE	5.0	340000 E	UG/L
VINYL CHLORIDE	5.0	1000 U	UG/L
O-XYLENE	5.0	1000 U	UG/L
M+P-XYLENE	5.0	1000 U	UG/L

SURROGATE RECOVERIES	QC LIMITS		
4-BROMOFLUOROBENZENE	(86 - 115 %)	96	%
TOLUENE-D8	(88 - 110 %)	99	%
DIBROMOFLUOROMETHANE	(86 - 118 %)	97	%

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B TCL
Reported: 06/09/99

Harding Lawson Associates
Project Reference: ABB/ TAYLOR INSTRUMENTS
Client Sample ID : EW-1S2

Date Sampled : 05/24/99 **Order #:** 294930 **Sample Matrix:** WATER
Date Received: 05/24/99 **Submission #:** 9905000360 **Analytical Run** 38957

DATE ANALYZED : 06/04/99
ANALYTICAL DILUTION: 5000.00

ANALYTE	PQL	RESULT	UNITS
ACETONE	20	100000 U	UG/L
BENZENE	5.0	25000 U	UG/L
BROMODICHLOROMETHANE	5.0	25000 U	UG/L
BROMOFORM	5.0	25000 U	UG/L
BROMOMETHANE	5.0	25000 U	UG/L
2-BUTANONE (MEK)	10	50000 U	UG/L
CARBON DISULFIDE	10	50000 U	UG/L
CARBON TETRACHLORIDE	5.0	25000 U	UG/L
CHLOROBENZENE	5.0	25000 U	UG/L
CHLOROETHANE	5.0	25000 U	UG/L
CHLOROFORM	5.0	25000 U	UG/L
CHLOROMETHANE	5.0	25000 U	UG/L
DIBROMOCHLOROMETHANE	5.0	25000 U	UG/L
1,1-DICHLOROETHANE	5.0	25000 U	UG/L
1,2-DICHLOROETHANE	5.0	25000 U	UG/L
1,1-DICHLOROETHENE	5.0	25000 U	UG/L
CIS-1,2-DICHLOROETHENE	5.0	25000 U	UG/L
TRANS-1,2-DICHLOROETHENE	5.0	25000 U	UG/L
1,2-DICHLOROPROPANE	5.0	25000 U	UG/L
CIS-1,3-DICHLOROPROPENE	5.0	25000 U	UG/L
TRANS-1,3-DICHLOROPROPENE	5.0	25000 U	UG/L
ETHYLBENZENE	5.0	25000 U	UG/L
2-HEXANONE	10	50000 U	UG/L
METHYLENE CHLORIDE	5.0	25000 U	UG/L
4-METHYL-2-PENTANONE (MIBK)	10	50000 U	UG/L
STYRENE	5.0	25000 U	UG/L
1,1,2,2-TETRACHLOROETHANE	5.0	25000 U	UG/L
TETRACHLOROETHENE	5.0	25000 U	UG/L
TOLUENE	5.0	25000 U	UG/L
1,1,1-TRICHLOROETHANE	5.0	25000 U	UG/L
1,1,2-TRICHLOROETHANE	5.0	25000 U	UG/L
TRICHLOROETHENE	5.0	600000	UG/L
VINYL CHLORIDE	5.0	25000 U	UG/L
O-XYLENE	5.0	25000 U	UG/L
M+P-XYLENE	5.0	25000 U	UG/L

SURROGATE RECOVERIES	QC LIMITS		
4-BROMOFLUOROBENZENE	(86 - 115 %)	102	%
TOLUENE-D8	(88 - 110 %)	103	%
DIBROMOFLUOROMETHANE	(86 - 118 %)	106	%

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B TCL
Reported: 06/09/99

Harding Lawson Associates
Project Reference: ABB/ TAYLOR INSTRUMENTS
Client Sample ID : EW-1D2

Date Sampled : 05/24/99 **Order #:** 294931 **Sample Matrix:** WATER
Date Received: 05/24/99 **Submission #:** 9905000360 **Analytical Run** 38957

DATE ANALYZED : 06/02/99
ANALYTICAL DILUTION: 500.00

ANALYTE	PQL	RESULT	UNITS
ACETONE	20	10000 U	UG/L
BENZENE	5.0	2500 U	UG/L
BROMODICHLOROMETHANE	5.0	2500 U	UG/L
BROMOFORM	5.0	2500 U	UG/L
BROMOMETHANE	5.0	2500 U	UG/L
2-BUTANONE (MEK)	10	5000 U	UG/L
CARBON DISULFIDE	10	5000 U	UG/L
CARBON TETRACHLORIDE	5.0	2500 U	UG/L
CHLOROBENZENE	5.0	2500 U	UG/L
CHLOROETHANE	5.0	2500 U	UG/L
CHLOROFORM	5.0	2500 U	UG/L
CHLOROMETHANE	5.0	2500 U	UG/L
DIBROMOCHLOROMETHANE	5.0	2500 U	UG/L
1,1-DICHLOROETHANE	5.0	2500 U	UG/L
1,2-DICHLOROETHANE	5.0	2500 U	UG/L
1,1-DICHLOROETHENE	5.0	2500 U	UG/L
CIS-1,2-DICHLOROETHENE	5.0	48000	UG/L
TRANS-1,2-DICHLOROETHENE	5.0	2500 U	UG/L
1,2-DICHLOROPROPANE	5.0	2500 U	UG/L
CIS-1,3-DICHLOROPROPENE	5.0	2500 U	UG/L
TRANS-1,3-DICHLOROPROPENE	5.0	2500 U	UG/L
ETHYLBENZENE	5.0	2500 U	UG/L
2-HEXANONE	10	5000 U	UG/L
METHYLENE CHLORIDE	5.0	2500 U	UG/L
4-METHYL-2-PENTANONE (MIBK)	10	5000 U	UG/L
STYRENE	5.0	2500 U	UG/L
1,1,2,2-TETRACHLOROETHANE	5.0	2500 U	UG/L
TETRACHLOROETHENE	5.0	2500 U	UG/L
TOLUENE	5.0	2500 U	UG/L
1,1,1-TRICHLOROETHANE	5.0	2500 U	UG/L
1,1,2-TRICHLOROETHANE	5.0	2500 U	UG/L
TRICHLOROETHENE	5.0	450000 E	UG/L
VINYL CHLORIDE	5.0	2500 U	UG/L
O-XYLENE	5.0	2500 U	UG/L
M+P-XYLENE	5.0	2500 U	UG/L

SURROGATE RECOVERIES	QC LIMITS		
4-BROMOFLUOROBENZENE	(86 - 115 %)	96	%
TOLUENE-D8	(88 - 110 %)	99	%
DIBROMOFLUOROMETHANE	(86 - 118 %)	96	%

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B TCL
Reported: 06/09/99

Harding Lawson Associates
Project Reference: ABB/ TAYLOR INSTRUMENTS
Client Sample ID : EW-1D2

Date Sampled : 05/24/99 **Order #:** 294931 **Sample Matrix:** WATER
Date Received: 05/24/99 **Submission #:** 9905000360 **Analytical Run** 38957

DATE ANALYZED : 06/04/99
ANALYTICAL DILUTION: 5000.00

ANALYTE	PQL	RESULT	UNITS
ACETONE	20	100000 U	UG/L
BENZENE	5.0	25000 U	UG/L
BROMODICHLOROMETHANE	5.0	25000 U	UG/L
BROMOFORM	5.0	25000 U	UG/L
BROMOMETHANE	5.0	25000 U	UG/L
2-BUTANONE (MEK)	10	50000 U	UG/L
CARBON DISULFIDE	10	50000 U	UG/L
CARBON TETRACHLORIDE	5.0	25000 U	UG/L
CHLOROBENZENE	5.0	25000 U	UG/L
CHLOROETHANE	5.0	25000 U	UG/L
CHLOROFORM	5.0	25000 U	UG/L
CHLOROMETHANE	5.0	25000 U	UG/L
DIBROMOCHLOROMETHANE	5.0	25000 U	UG/L
1,1-DICHLOROETHANE	5.0	25000 U	UG/L
1,2-DICHLOROETHANE	5.0	25000 U	UG/L
1,1-DICHLOROETHENE	5.0	25000 U	UG/L
CIS-1,2-DICHLOROETHENE	5.0	51000	UG/L
TRANS-1,2-DICHLOROETHENE	5.0	25000 U	UG/L
1,2-DICHLOROPROPANE	5.0	25000 U	UG/L
CIS-1,3-DICHLOROPROPENE	5.0	25000 U	UG/L
TRANS-1,3-DICHLOROPROPENE	5.0	25000 U	UG/L
ETHYLBENZENE	5.0	25000 U	UG/L
2-HEXANONE	10	50000 U	UG/L
METHYLENE CHLORIDE	5.0	25000 U	UG/L
4-METHYL-2-PENTANONE (MIBK)	10	50000 U	UG/L
STYRENE	5.0	25000 U	UG/L
1,1,2,2-TETRACHLOROETHANE	5.0	25000 U	UG/L
TETRACHLOROETHENE	5.0	25000 U	UG/L
TOLUENE	5.0	25000 U	UG/L
1,1,1-TRICHLOROETHANE	5.0	25000 U	UG/L
1,1,2-TRICHLOROETHANE	5.0	25000 U	UG/L
TRICHLOROETHENE	5.0	640000	UG/L
VINYL CHLORIDE	5.0	25000 U	UG/L
O-XYLENE	5.0	25000 U	UG/L
M+P-XYLENE	5.0	25000 U	UG/L

SURROGATE RECOVERIES	QC LIMITS		
4-BROMOFLUOROBENZENE	(86 - 115 %)	108	%
TOLUENE-D8	(88 - 110 %)	103	%
DIBROMOFLUOROMETHANE	(86 - 118 %)	106	%

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B TCL
Reported: 06/09/99

Project Reference:
Client Sample ID : METHOD BLANK

Date Sampled : **Order #:** 297813 **Sample Matrix:** WATER
Date Received: **Submission #:** **Analytical Run** 38957

DATE ANALYZED : 06/02/99
ANALYTICAL DILUTION: 1.00

ANALYTE	PQL	RESULT	UNITS
ACETONE	20	20 U	UG/L
BENZENE	5.0	5.0 U	UG/L
BROMODICHLOROMETHANE	5.0	5.0 U	UG/L
BROMOFORM	5.0	5.0 U	UG/L
BROMOMETHANE	5.0	5.0 U	UG/L
2-BUTANONE (MEK)	10	10 U	UG/L
CARBON DISULFIDE	10	10 U	UG/L
CARBON TETRACHLORIDE	5.0	5.0 U	UG/L
CHLOROBENZENE	5.0	5.0 U	UG/L
CHLOROETHANE	5.0	5.0 U	UG/L
CHLOROFORM	5.0	5.0 U	UG/L
CHLOROMETHANE	5.0	5.0 U	UG/L
DIBROMOCHLOROMETHANE	5.0	5.0 U	UG/L
1,1-DICHLOROETHANE	5.0	5.0 U	UG/L
1,2-DICHLOROETHANE	5.0	5.0 U	UG/L
1,1-DICHLOROETHENE	5.0	5.0 U	UG/L
CIS-1,2-DICHLOROETHENE	5.0	5.0 U	UG/L
TRANS-1,2-DICHLOROETHENE	5.0	5.0 U	UG/L
1,2-DICHLOROPROPANE	5.0	5.0 U	UG/L
CIS-1,3-DICHLOROPROPENE	5.0	5.0 U	UG/L
TRANS-1,3-DICHLOROPROPENE	5.0	5.0 U	UG/L
ETHYLBENZENE	5.0	5.0 U	UG/L
2-HEXANONE	10	10 U	UG/L
METHYLENE CHLORIDE	5.0	5.0 U	UG/L
4-METHYL-2-PENTANONE (MIBK)	10	10 U	UG/L
STYRENE	5.0	5.0 U	UG/L
1,1,2,2-TETRACHLOROETHANE	5.0	5.0 U	UG/L
TETRACHLOROETHENE	5.0	5.0 U	UG/L
TOLUENE	5.0	5.0 U	UG/L
1,1,1-TRICHLOROETHANE	5.0	5.0 U	UG/L
1,1,2-TRICHLOROETHANE	5.0	5.0 U	UG/L
TRICHLOROETHENE	5.0	5.0 U	UG/L
VINYL CHLORIDE	5.0	5.0 U	UG/L
O-XYLENE	5.0	5.0 U	UG/L
M+P-XYLENE	5.0	5.0 U	UG/L

SURROGATE RECOVERIES	QC LIMITS		
4-BROMOFLUOROBENZENE	(86 - 115 %)	97	%
TOLUENE-D8	(88 - 110 %)	100	%
DIBROMOFLUOROMETHANE	(86 - 118 %)	102	%

COLUMBIA ANALYTICAL SERVICES

VOLATILE ORGANICS
METHOD 8260B TCL
Reported: 06/09/99

Project Reference:
Client Sample ID : METHOD BLANK

Date Sampled : **Order #:** 297836 **Sample Matrix:** WATER
Date Received: **Submission #:** **Analytical Run** 38957

DATE ANALYZED : 06/04/99
ANALYTICAL DILUTION: 1.00

ANALYTE	PQL	RESULT	UNITS
ACETONE	20	20 U	UG/L
BENZENE	5.0	5.0 U	UG/L
BROMODICHLOROMETHANE	5.0	5.0 U	UG/L
BROMOFORM	5.0	5.0 U	UG/L
BROMOMETHANE	5.0	5.0 U	UG/L
2-BUTANONE (MEK)	10	10 U	UG/L
CARBON DISULFIDE	10	10 U	UG/L
CARBON TETRACHLORIDE	5.0	5.0 U	UG/L
CHLOROBENZENE	5.0	5.0 U	UG/L
CHLOROETHANE	5.0	5.0 U	UG/L
CHLOROFORM	5.0	5.0 U	UG/L
CHLOROMETHANE	5.0	5.0 U	UG/L
DIBROMOCHLOROMETHANE	5.0	5.0 U	UG/L
1,1-DICHLOROETHANE	5.0	5.0 U	UG/L
1,2-DICHLOROETHANE	5.0	5.0 U	UG/L
1,1-DICHLOROETHENE	5.0	5.0 U	UG/L
CIS-1,2-DICHLOROETHENE	5.0	5.0 U	UG/L
TRANS-1,2-DICHLOROETHENE	5.0	5.0 U	UG/L
1,2-DICHLOROPROPANE	5.0	5.0 U	UG/L
CIS-1,3-DICHLOROPROPENE	5.0	5.0 U	UG/L
TRANS-1,3-DICHLOROPROPENE	5.0	5.0 U	UG/L
ETHYLBENZENE	5.0	5.0 U	UG/L
2-HEXANONE	10	10 U	UG/L
METHYLENE CHLORIDE	5.0	5.0 U	UG/L
4-METHYL-2-PENTANONE (MIBK)	10	10 U	UG/L
STYRENE	5.0	5.0 U	UG/L
1,1,2,2-TETRACHLOROETHANE	5.0	5.0 U	UG/L
TETRACHLOROETHENE	5.0	5.0 U	UG/L
TOLUENE	5.0	5.0 U	UG/L
1,1,1-TRICHLOROETHANE	5.0	5.0 U	UG/L
1,1,2-TRICHLOROETHANE	5.0	5.0 U	UG/L
TRICHLOROETHENE	5.0	5.0 U	UG/L
VINYL CHLORIDE	5.0	5.0 U	UG/L
O-XYLENE	5.0	5.0 U	UG/L
M+P-XYLENE	5.0	5.0 U	UG/L

SURROGATE RECOVERIES	QC LIMITS		
4-BROMOFLUOROBENZENE	(86 - 115 %)	93	%
TOLUENE-D8	(88 - 110 %)	99	%
DIBROMOFLUOROMETHANE	(86 - 118 %)	95	%

Analytical Services, Inc.
An Eriez Magnetics Company

(716) 288-5380 • FAX (716) 288-8475

DATE _____ PAGE _____ OF _____

PROJECT NAME ABB / Taylor Instruments

PROJECT MANAGER/CONTACT Rick Ryan

COMPANY/ADDRESS 1400 Centerpoint Blvd., #158
Knoxville, TN 37932

TEL (423) 531-1922 FAX (423) 531-8226

SAMPLER'S SIGNATURE _____

ANALYSIS REQUESTED

SAMPLE I.D.	DATE	TIME	FOR OFFICE USE ONLY LAB I.D.	SAMPLE MATRIX	# OF CONTAINERS	GC/MS VOA's ☐ 8260 ☐ 624 ☐ 95-1	GC/MS SVOA's ☐ 8270 ☐ 625 ☐ 95-2	GC VOA's ☐ 8021 ☐ 601/602	PESTICIDES/PCB's ☐ 8081 ☐ 608 ☐ 95-3	STAR'S LIST 8021 VOA's ☐ TOTAL ☐ TCLP	STAR'S LIST 8270 SVOA's ☐ TOTAL ☐ TCLP	TCLP ☐ METALS ☐ VOA's ☐ SVOA's ☐ H/P	WASTE CHARACTERIZATION ☐ React ☐ Corros. ☐ Ignit.	METALS, TOTAL (LIST BELOW)	METALS, DISSOLVED (LIST BELOW)	PRESERVATION pH < 2.0	pH > 12	Other
EW-1S2	5/24/99	12:35		Water	3	X												
EW-1D2	5/24/99	12:45		Water	3	X												

RELINQUISHED BY:
Signature: Lon Lott
Printed Name: Lon Smith
Firm: HLA
Date/Time: 5-24-99 / 1605

RECEIVED BY:
Signature: Tom Hastings
Printed Name: Tom Hastings
Firm: ESI
Date/Time: 5/24/99 16:05

RELINQUISHED BY:
Signature
Printed Name
Firm
Date/Time

RECEIVED BY:
Signature
Printed Name
Firm
Date/Time

RELINQUISHED BY:
Signature
Printed Name
Firm
Date/Time

RECEIVED BY:
Signature
Printed Name
Firm
Date/Time

TURNAROUND REQUIREMENTS
__ 24 hr. __ 48 hr. __ 5 day
__ Standard (10-15 working days)
__ Provide Verbal Preliminary Results
__ Provide FAX Preliminary Results
Requested Report Date _____

REPORT REQUIREMENTS
__ 1. Routine Report
__ 2. Routine Rep. w/CASE Narrative
__ 3. EPA Level III Validatable Package
__ 4. N.J. Reduced Deliverables Level IV
__ 5. NY ASP/CLP Deliverables
__ 6. Site specific QC.

INVOICE INFORMATION:
P.O. #:
Bill To:

SAMPLE RECEIPT:
Shipping Via: Client
Shipping #:
Temperature: 5.5°
Submission No: 5-360

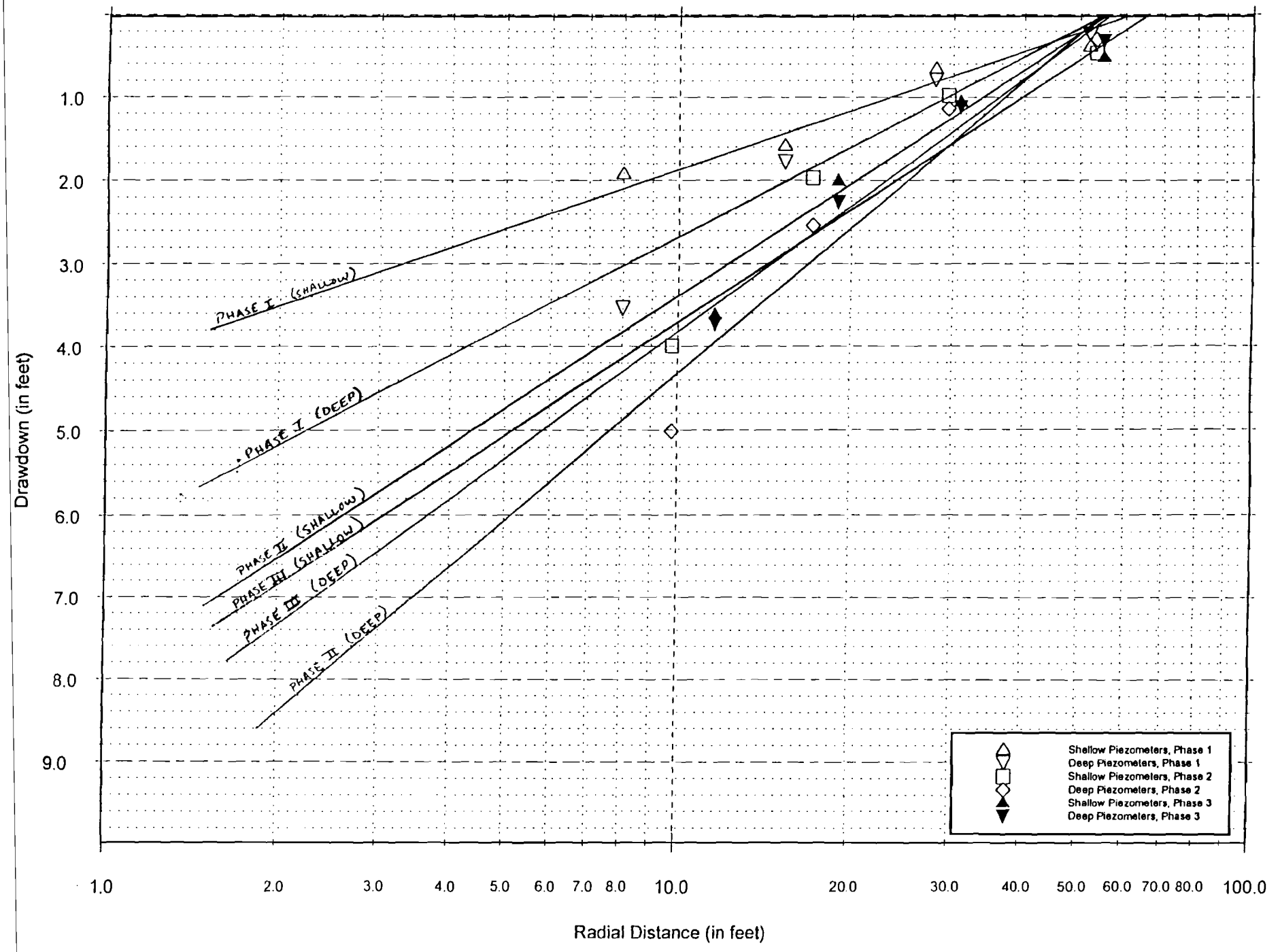
SPECIAL INSTRUCTIONS/COMMENTS:
METALS
ORGANICS: ☐ TCL ☐ PPL ☐ AE Only ☐ BN Only ☐ Special List
Normal turnaround.

ATTACHMENT C

GROUNDWATER DRAWDOWN GRAPHS

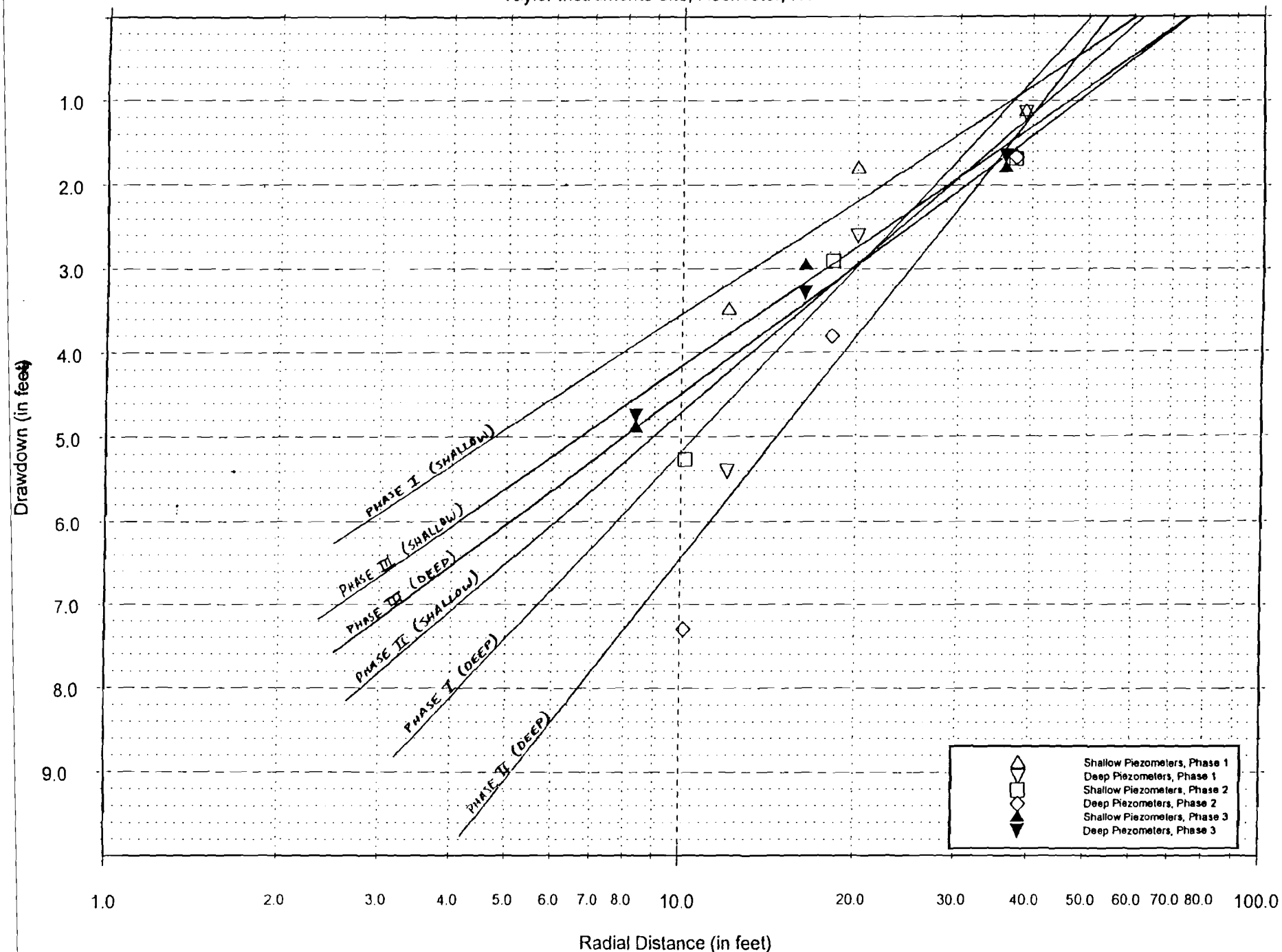
DPVE Pilot Test, Northwest Piezometers

Taylor Instruments Site, Rochester, NY



DPVE Pilot Test, Northeast Piezometers

Taylor Instruments Site, Rochester, NY



ATTACHMENT D

GROUNDWATER LEVEL DATA AND SYSTEM OPERATIONAL DATA

DPE SYSTEM DATA
FORMER ABB KENT TAYLOR FACILITY
ROCHESTER, NY

Date/Time	Vacuum Readings (in. Hg)		Well Flow	Effluent Discharge	Pump Effluent	PID Reading (ppm)		Vacuum Readings at Vapor Probes (in. H_2O)												
	Well Head	Pump	gpm	gallons	CFM	Pump	Stripper	PZ-267S	PZ-267D	PZ-266S	PZ-266D	PZ-271S	PZ-271D	PZ-265S	PZ-265D	PZ-270S	PZ-270D	PZ-268S	PZ-268D	PZ-269S	PZ-269D
	Begin Phase I																				
5/19/99 1215	10	15		0.00	NR	NR	NR	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5/19/99 1247	10	15		<25.00	NR	NR	NR	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5/19/99 1320	10	15		<25.00	NR	NR	NR	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5/19/99 1350	10	15		25.00	NR	118.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5/19/99 1420	9.5	15		25.00	NR	158.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5/19/99 1450	10	15	0.15	25.00	NR	NR	NR	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5/19/99 1520	9.5	15		25.00	NR	NR	NR	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5/19/99 1550	9.5	15		25.00	NR	NR	NR	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5/19/99 1620	10	15		50.00	NR	NR	NR	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5/19/99 1720	11.5	15		50.00	NR	226.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5/19/99 2100	11	15.5		75.00	NR	NR	NR	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5/20/99 715	9.5	15		175.00	26.00	NR	NR	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Increased Pump Vac to 20" Hg																				
5/20/99 815	15	19		175.00	5.00	123.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5/20/99 915	15	19	0.23	200.00	1.00	NR	NR	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5/20/99 1115	15	19		225.00	5.00	NR	NR	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5/20/99 1515	14.5	19		250.00	5.00	NR	NR	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5/20/99 1615	Phase II Start @ 15" Hg																				
5/20/99 1630	11	15		287.50	30.00	NR	NR	0.80	0.00	1.50	0.00	0.10	0.00	0.00	0.00	>6	0.00	0.60	0.00	0.00	0.00
5/20/99 1700	11	15		306.25	30.00	NR	NR	1.30	0.00	1.50	0.00	0.10	0.00	0.00	0.00	>6	0.00	0.60	0.00	0.00	0.00
5/20/99 1730	11	14.5		331.25	30.00	153.0	0.0	1.30	0.00	1.25	0.00	0.00	0.00	0.00	0.00	10.00	0.00	0.65	0.00	0.00	0.00
5/20/99 1800	11	14.5	0.51	345.00	30.00	NR	NR	1.45	0.00	1.20	0.00	0.00	0.00	0.00	0.00	10.00	0.00	0.60	0.00	0.00	0.00
5/20/99 1830	10.5	14.5		365.00	30.00	190.0	0.0	1.55	0.00	1.10	0.00	0.00	0.00	0.00	0.00	10.00	0.00	0.60	0.00	0.00	0.00
5/20/99 1900	10.5	14.5		377.50	30.00	NR	NR	1.65	0.00	1.10	0.00	0.00	0.00	0.00	0.00	10.00	0.00	0.65	0.00	0.00	0.00
5/20/99 1930	10.5	14.5		392.50	30.00	NR	NR	1.85	0.00	1.10	0.00	0.05	0.00	0.00	0.00	10.00	0.00	0.65	0.00	0.00	0.00
5/21/99 800	10	14		745.00	31.00	NR	NR	3.40	0.00	0.85	0.00	0.05	0.00	0.00	0.00	9.00	0.00	1.05	0.00	0.00	0.00
5/21/99 830	Increased Pump Vac to 20" Hg																				
5/21/99 930	15	19.5		800.00	5.00	NR	NR	5.60	0.00	1.20	0.00	0.15	0.00	0.00	0.00	12.00	0.00	0.70	0.00	0.00	0.00
5/21/99 1030	15	19		832.50	10.00	NR	NR	5.40	0.00	1.20	0.00	0.15	0.00	0.00	0.00	12.00	0.00	0.65	0.00	0.00	0.00
5/21/99 1130	15	19		868.75	10.00	NR	NR	5.60	0.00	1.15	0.00	0.10	0.00	0.00	0.00	12.00	0.00	0.60	0.00	0.00	0.00
5/21/99 1330	15	19	0.52	931.25	10.00	NR	NR	6.00	0.00	1.20	0.00	0.15	0.00	0+	0.00	12.00	0+	1.80	0.00	0.00	0.00
5/21/99 1530	15	19		993.75	10.00	NR	NR	8.00	0.00	1.50	0.00	0.25	0.00	0+	0.00	14.00	0.00	2.60	0.00	0.00	0.00
5/22/99 730	14	19		1481.25	10.00	NR	NR	8.00	0.00	1.40	0.00	0.35	0.00	0+	0.00	12.00	0+	2.40	0.00	0.00	0.00
5/22/99 830	14	19		1512.50	10.00	NR	NR	8.00	0.00	1.70	0.00	0.35	0.00	0+	0.00	12.00	0.00	2.25	0.00	0.00	0.00
5/22/99 1130	15.0	19.0		1606.25	15.00	NR	NR	8.00	0.00	1.70	0.00	0.35	0.00	0+	0.00	12.00	0.00	2.30	0.00	0.00	0.00
5/22/99 1530	Began Phase III @ 15" Hg																				
5/22/99 1600	12.5	15.5		1722.50	31.00	NR	NR	6.50	0.00	1.16	0.00	0.25	0.00	0+	0.00	10.00	0+	2.40	0.00	0.00	0.00
5/22/99 1630	13.5	15.5		1733.75	31.00	NR	NR	7.00	0.00	1.16	0.00	0.25	0.00	0+	0.00	10.00	0.00	1.93	0.00	0.00	0.00
5/22/99 1700	13	16.5	0.34	1745.00	31.00	NR	NR	6.50	0.00	1.30	0.00	0.25	0.00	0.00	0.00	10.00	0.00	2.20	0.00	0.00	0.00
5/22/99 1730	13	16.5		1755.00	31.00	NR	NR	6.50	0.00	1.30	0.00	0.25	0.00	0+	0.00	10.00	0.00	2.20	0.00	0.00	0.00
5/22/99 1809	12.5	16		1768.75	31.00	NR	NR	6.50	0.00	1.15	0.00	0.15	0.00	0+	0.00	10.00	0.00	2.20	0.00	0.00	0.00
5/23/99 0810	12	16		2056.25	31.00	NR	NR	6.00	0.00	1.15	0.00	0.15	0.00	0.00	0.00	10.00	0.00	2.00	0.00	0.00	0.00
5/23/99 0830	Increased vacuum to 19.5 " Hg (max																				
5/23/99 0900	15.4	19.5		2080.00	16.00	NR	NR	8.00	0.00	1.40	0.00	0.20	0.00	0.00	0.00	12.00	0.00	2.45	0.00	0.00	0.00
5/23/99 0930	15.5	19.5		2091.25	16.00	NR	NR	8.00	0.00	1.35	0.00	0.25	0.00	0.00	0.00	12.00	0.00	2.60	0.00	0.00	0.00
5/23/99 1000	15.5	19.2		2103.75	16.00	NR	NR	8.00	0.00	1.35	0.00	0.25	0.00	0.00	0.00	12.00	0.00	2.50	0.00	0.00	0.00
5/23/99 1030	15.4	19.1	0.38	2116.25	12.50	NR	NR	8.00	0.00	1.45	0.00	0.30	0.00	0.00	0.00	12.00	0.00	2.40	0.00	0.00	0.00
5/23/99 1330	15.1	19		2185.00	15.00	NR	NR	8.00	0.00	1.35	0.00	0.10	0.00	0.00	0.00	11.00	0.00	2.30	0.00	0.00	0.00
5/23/99 1630	15.5	19		2253.75	15.00	340	21.7	7.00	0.00	1.35	0.00	0.30	0.00	0.00	0.00	12.00	0.00	2.40	0.00	0.00	0.00
5/23/99 1930	14.5	18.6		2322.50	16.00	NR	NR	8.00	0.00	1.35	0.00	0.25	0.00	0.00	0.00	12.00	0.00	2.50	0.00	0.00	0.00

WATER LEVEL DATA
ABB FACILITY
ROCHESTER, NY
Water Level (Feet BTOC)

Date/Time	Elapsed Time (Hrs)	PZ-267	PZ-267 dd	PZ-267D	PZ-267 dd	PZ-266	PZ-266 dd	PZ-266	PZ-266 dd	PZ-271	PZ-271 dd	PZ-271	PZ-271 dd	PZ-265	PZ-265 dd	PZ-265	PZ-265 dd	PZ-270	PZ-270 dd	PZ-270	PZ-270 dd
5/19/99 820	Initial	7.01		7.21		7.20		7.21		7.45		7.41		7.11		7.32		7.04		7.67	
5/19/99 12:15	0	Phase I Start																			
5/19/99 1247	0.5	7.17	-0.16	7.58	-0.37	7.30	-0.10	7.26	-0.05	7.46	-0.01	7.42	-0.01	7.20	-0.09	7.35	-0.03	7.11	-0.07	8.30	-0.63
5/19/99 1320	1.08	7.25	-0.24	7.86	-0.65	7.36	-0.16	7.37	-0.16	7.48	-0.03	7.44	-0.03	7.20	-0.09	7.32	0.00	7.20	-0.16	8.67	-1.00
5/19/99 1350	1.6	7.30	-0.29	8.02	-0.81	7.41	-0.21	7.46	-0.25	7.48	-0.03	7.46	-0.05	7.20	-0.09	7.33	-0.01	7.24	-0.20	8.90	-1.23
5/19/99 1420	2.08	7.33	-0.32	8.21	-1.00	7.46	-0.26	7.55	-0.34	7.51	-0.06	7.47	-0.06	7.20	-0.09	7.35	-0.03	7.28	-0.24	9.15	-1.48
5/19/99 1450	2.6	7.37	-0.36	8.36	-1.15	7.49	-0.29	7.60	-0.39	7.51	-0.06	7.51	-0.10	7.21	-0.10	7.35	-0.03	7.32	-0.28	9.40	-1.73
5/19/99 1520	3.08	7.41	-0.40	8.50	-1.29	7.51	-0.31	7.65	-0.44	7.52	-0.07	7.52	-0.11	7.21	-0.10	7.35	-0.03	7.35	-0.31	9.61	-1.94
5/19/99 1550	3.6	7.42	-0.41	8.55	-1.34	7.55	-0.35	7.68	-0.47	7.52	-0.07	7.52	-0.11	7.21	-0.10	7.35	-0.03	7.36	-0.32	9.73	-2.06
5/19/99 1620	4.08	7.42	-0.41	8.62	-1.41	7.55	-0.35	7.71	-0.50	7.55	-0.10	7.55	-0.14	7.21	-0.10	7.35	-0.03	7.38	-0.34	9.86	-2.19
5/19/99 1720	4.6	7.51	-0.50	8.86	-1.65	7.61	-0.41	7.80	-0.59	7.57	-0.12	7.57	-0.16	7.21	-0.10	7.35	-0.03	7.45	-0.41	10.25	-2.58
5/19/99 2100	8.75	7.62	-0.61	9.16	-1.95	7.73	-0.53	7.93	-0.72	7.65	-0.20	7.67	-0.26	7.25	-0.14	7.40	-0.08	7.55	-0.51	10.85	-3.18
5/20/99 715	19	7.71	-0.70	9.14	-1.93	7.83	-0.63	8.01	-0.80	7.76	-0.31	7.80	-0.39	7.39	-0.28	7.48	-0.16	7.67	-0.63	10.90	-3.23
5/20/99 815	20	7.75	-0.74	9.20	-1.99	7.85	-0.65	8.04	-0.83	7.77	-0.32	7.80	-0.39	7.4	-0.29	7.48	-0.16	7.7	-0.66	10.95	-3.28
5/20/99 915	21	7.78	-0.77	9.37	-2.16	7.88	-0.68	8.11	-0.90	7.79	-0.34	7.81	-0.40	7.41	-0.30	7.49	-0.17	7.72	-0.68	11.20	-3.53
5/20/99 1115	23	7.81	-0.80	9.48	-2.27	7.91	-0.71	8.15	-0.94	7.8	-0.35	7.82	-0.41	7.42	-0.31	7.50	-0.18	7.75	-0.71	11.37	-3.70
5/20/99 1515	27	7.83	-0.82	9.56	-2.35	7.93	-0.73	8.17	-0.96	7.81	-0.36	7.85	-0.44	7.40	-0.29	7.46	-0.14	7.79	-0.75	11.56	-3.89
5/20/99 1615	28	Phase II Start @ 15" Hg																			
5/20/99 1630	28.25	8.02	-1.01	9.60	-2.39	8.05	-0.85	8.19	-0.98	7.83	-0.38	7.85	-0.44	7.39	-0.28	7.46	-0.14	7.92	-0.88	11.61	-3.94
5/20/99 1700	28.75	8.23	-1.22	9.72	-2.51	8.2	-1.00	8.27	-1.06	7.85	-0.40	7.85	-0.44	7.4	-0.29	7.46	-0.14	8.11	-1.07	11.75	-4.08
5/20/99 1730	29.25	8.35	-1.34	9.88	-2.67	8.31	-1.11	8.39	-1.18	7.87	-0.42	7.87	-0.46	7.38	-0.27	7.46	-0.14	8.26	-1.22	11.95	-4.28
5/20/99 1800	29.75	8.4	-1.39	9.98	-2.77	8.37	-1.17	8.47	-1.26	7.88	-0.43	7.91	-0.50	7.38	-0.27	7.47	-0.15	8.31	-1.27	12.10	-4.43
5/20/99 1830	30.25	8.47	-1.46	10.10	-2.89	8.41	-1.21	8.55	-1.34	7.91	-0.46	7.92	-0.51	7.4	-0.29	7.45	-0.13	8.35	-1.31	12.22	-4.55
5/20/99 1900	30.75	8.50	-1.49	10.17	-2.96	8.45	-1.25	8.60	-1.39	7.91	-0.46	7.94	-0.53	7.40	-0.29	7.46	-0.14	8.41	-1.37	12.31	-4.64
5/20/99 1930	31.25	8.53	-1.52	10.23	-3.02	8.48	-1.28	8.65	-1.44	7.92	-0.47	7.96	-0.55	7.40	-0.29	7.47	-0.15	8.50	-1.46	12.40	-4.73
5/21/99 800	43.75	8.94	-1.93	10.75	-3.54	8.79	-1.59	8.99	-1.78	8.11	-0.66	8.20	-0.79	7.50	-0.39	7.56	-0.24	10.53	-3.49	13.08	-5.41
5/21/99 830	44.25	Increased pump vac to 20" Hg																			
5/21/99 930	45.25	9.10	-2.09	11.04	-3.83	8.85	-1.65	9.13	-1.92	8.14	-0.69	8.24	-0.83	7.51	-0.40	7.56	-0.24	11.02	-3.98	13.49	-5.82
5/21/99 1030	46.25	9.17	-2.16	11.23	-4.02	8.87	-1.67	9.20	-1.99	8.15	-0.70	8.25	-0.84	7.51	-0.40	8.56	-1.24	11.20	-4.16	13.76	-6.09
5/21/99 1130	47.25	9.21	-2.20	11.34	-4.13	8.90	-1.70	9.25	-2.04	8.16	-0.71	8.27	-0.86	7.51	-0.40	8.55	-1.23	11.26	-4.22	13.92	-6.25
5/21/99 1330	49.25	9.31	-2.30	11.42	-4.21	8.93	-1.73	9.27	-2.06	8.19	-0.74	8.29	-0.88	7.49	-0.38	8.53	-1.21	11.34	-4.30	14.07	-6.40
5/21/99 1530	51.25	9.61	-2.60	11.62	-4.41	9.01	-1.81	9.39	-2.18	8.24	-0.79	8.31	-0.90	7.47	-0.36	8.54	-1.22	11.53	-4.49	14.32	-6.65
5/22/99 730	67.25	10.87	-3.86	12.11	-4.90	9.15	-1.95	9.69	-2.48	8.40	-0.95	8.47	-1.06	7.55	-0.44	7.60	-0.28	12.20	-5.16	14.86	-7.19
5/22/99 830	68.25	10.91	-3.90	12.12	-4.91	9.16	-1.96	9.70	-2.49	8.41	-0.96	8.50	-1.09	7.56	-0.45	7.61	-0.29	12.22	-5.18	14.90	-7.23
5/22/99 1130	71.25	11.01	-4.00	12.23	-5.02	9.17	-1.97	9.75	-2.54	8.43	-0.98	8.55	-1.14	7.58	-0.47	7.62	-0.30	12.31	-5.27	14.97	-7.30
5/22/99 1530	75.25	Began Phase III @ 15" Hg																			
5/22/99 1600	75.75	10.85	-3.84	12.13	-4.92	9.20	-2.00	9.71	-2.50	8.45	-1.00	8.55	-1.14	7.55	-0.44	7.60	-0.28	12.23	-5.19	14.75	-7.08
5/22/99 1630	76.25	10.63	-3.62	11.94	-4.73	9.19	-1.99	9.64	-2.43	9.44	-1.99	8.55	-1.14	7.57	-0.46	7.62	-0.30	12.15	-5.11	14.42	-6.75
5/22/99 1700	76.75	10.57	-3.56	11.75	-4.54	9.16	-1.96	9.60	-2.39	8.44	-0.99	8.55	-1.14	7.60	-0.49	7.63	-0.31	12.09	-5.05	14.16	-6.49
5/22/99 1730	77.25	10.54	-3.53	11.63	-4.42	9.17	-1.97	9.56	-2.35	8.45	-1.00	8.54	-1.13	7.57	-0.46	7.63	-0.31	12.03	-4.99	13.96	-6.29
5/22/99 18:09	77.9	10.51	-3.50	11.47	-4.26	9.16	-1.96	9.52	-2.31	8.45	-1.00	8.53	-1.12	7.58	-0.47	7.62	-0.30	11.98	-4.94	13.7	-6.03
5/23/99 0810	92.05	10.35	-3.34	10.71	-3.50	9.16	-1.96	9.35	-2.14	8.49	-1.04	8.5	-1.09	7.65	-0.54	7.65	-0.33	11.61	-4.57	12.2	-4.53
5/23/99 8:30	92.38	Increase vacuum at wellhead to 15 in. Hg.																			
5/23/99 0900	92.9	10.47	-3.46	10.73	-3.52	9.17	-1.97	9.37	-2.16	8.49	-1.04	8.49	-1.08	7.63	-0.52	7.66	-0.34	11.67	-4.63	12.25	-4.58
5/23/99 0930	93.4	10.49	-3.48	10.77	-3.56	9.19	-1.99	9.37	-2.16	8.49	-1.04	8.49	-1.08	7.65	-0.54	7.65	-0.33	11.73	-4.69	12.3	-4.63
5/23/99 1000	93.9	10.55	-3.54	10.79	-3.58	9.17	-1.97	9.4	-2.19	8.49	-1.04	8.51	-1.10	7.65	-0.54	7.67	-0.35	11.77	-4.73	12.34	-4.67
5/23/99 1030	94.4	10.55	-3.54	10.81	-3.60	9.19	-1.99	9.42	-2.21	8.5	-1.05	8.51	-1.10	7.64	-0.53	7.65	-0.33	11.79	-4.75	12.36	-4.69
5/23/99 1330	97.4	10.6	-3.59	10.9	-3.69	9.19	-1.99	9.45	-2.24	8.51	-1.06	8.54	-1.13	7.66	-0.55	7.68	-0.36	11.9	-4.86	12.44	-4.77
5/23/99 1630	100.4	10.6	-3.59	10.91	-3.70	9.22	-2.02	9.48	-2.27	8.5	-1.05	8.51	-1.10	7.62	-0.51	7.63	-0.31	11.95	-4.91	12.43	-4.76
5/23/99 1930	103.4	10.63	-3.62	10.94	-3.73	9.21	-2.01	9.47	-2.26	8.51	-1.06	8.53	-1.12	7.63	-0.52	7.64	-0.32	11.94	-4.90	12.43	-4.76
5/24/99 1030	Final	8.7	-1.69	8.86	-1.65	8.65	-1.45	8.43	-1.22	8.32	-0.87	8.14	-0.73	7.52	-0.41	7.54	-0.22	8.76	-1.72	9.15	-1.48