ENGINEERING INVESTIGATIONS AT INACTIVE HAZARDOUS WASTE SITES IN THE STATE OF NEW YORK

PRELIMINARY SITE ASSESSMENT
Addendum

Allied Chemical-Elberta Works Site
Site Number 932003
Town of Wilson, Niagara County

November 1995

Prepared for:

New York State Department of Environmental Conservation

50 Wolf Road, Albany, New York 12233

Michael D. Zagata, Commissioner

Division of Hazardous Waste Remediation

Michael J. O' Toole, Jr., P. E., Director

Prepared by:

Ecology and Environment Engineering, P.C.

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ecology and environment
engineering, p.c.
BUFFALO CORPORATE CENTER
368 PLEASANTVIEW DRIVE, LANCASTER, NEW YORK 14086, TEL. 716/684-8060

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1. INTRODUCTION

Ecology and Environment Engineering, P.C. (E & E) under the New York State Department of Environmental Conservation (NYSDEC) Superfund Standby Contract, #D002625-17, conducted supplemental work at the Allied Chemical-Elberta Works site (Allied-Elberta), site I.D. No. 932003. This report summarizes the supplemental work performed at the site and is presented as an addendum to the final Preliminary Site Assessment (PSA) report completed in June 1994. Information on the site's history, disposal of hazardous waste, and analytical results from that investigation can be found in the PSA report.

The Allied-Elberta site is located at 3119 Randall Road in the Town of Wilson, Niagara County, New York. The site is listed on NYSDEC's Registry of inactive hazardous waste Disposal sites as a 1-acre Class 2A site.

To determine the hazardous nature of the high levels of hexachlorobenzene and hexachlorobutadiene that were detected in 1993 during sampling of subsurface soil/waste samples, three test pits were resampled at the Allied Chemical-Elberta Works site in April 1995. The subsurface soil/waste samples were analyzed for Toxicity Characteristic Leaching Procedure (TCLP) base neutral compounds. In addition, three existing groundwater monitoring wells were also sampled. The groundwater samples were analyzed for Target Compound List (TCL) semivolatiles.

2. SAMPLING

2.1 SUBSURFACE SOIL/WASTE SAMPLING

Six test pits (TP1-1, TP2-1, TP2-2, TP3-1, TP4-1, and TP4-2) were excavated and sampled as part of the initial PSA field investigation in November 1993. The test pits were named according to the geophysical grid that was set up as part of the overall PSA field investigation. Three of these test pits (TP2-1, TP2-2, and TP3-1) were selected to be resampled during this supplemental investigation based on the higher analytical results and test pit logs. Test pit locations are shown on Figure 1. The subsurface soil/ waste samples to be collected and reanalyzed included a white ash-like material from test pit TP2-1, a blue-green material from test pit TP2-2, and a black material from test pit TP3-1. The subsurface soil/waste samples were collected as close to the original sample location as possible.

Excavation was accomplished with a backhoe. A steam cleaner was used to decontaminate the backhoe bucket prior to and between each sample location. Upon

collection, all samples were immediately placed in a cooler containing ice. The samples were hand delivered to E & E's Analytical Services Center on the day of collection.

Excavation work was initiated at test pit TP2-1 specifically to resample the white ash-like material originally observed and collected 1.5 feet below ground surface. The excavation took place in the central portion of the former test pit, which was still at grade. This test pit was located along the southern edge of the asphalt parking lot in the northwest corner of the site (see Figure 1). As expected, the white ash-like material was encountered at approximately 1.5 feet below ground surface (BGS), and sample number TP2-1R was collected at that location. Additional sample volumes from the same location were collected for matrix spike/ matrix spike duplicate (MS/MSD) analyses.

The blue-green material that E & E expected to sample in test pit TP2-2 also was encountered in test pit TP2-1 at the same depth. A sample of this material was collected (sample number TP2-1RA) as a precaution, in case this material was not found in TP2-2.

Test pit TP2-2 was excavated along the western edge of the original test pit. This test pit was located north of the wood-frame warehouse allegedly constructed over a drum burial area (see Figure 1). The blue-green material was encountered at 1 foot BGS and sampled (sample number TP2-2R). The original test pit had been excavated through asphalt which was not replaced, but was covered with crushed stone following completion of the work. The gravel surface was intact and still at grade prior to this resampling work. The reexcavation was completed within the originally excavated area, and no additional asphalt was disturbed.

TP3-1 was excavated in the central portion of the original pit to sample the black material previously encountered. This pit was located approximately 20 feet north of the western-most main building, in the lagoon area (see Figure 1). The original test pit was at grade prior to resampling, with the exception of backhoe tire ruts. The entire area was densely overgrown with 7-foot high reeds. The black material was encountered at a depth of 5 feet below ground surface and sampled (sample number TP3-1R).

Upon completion, all of the test pit excavations were backfilled and regraded. In addition, test pit TP2-2 was covered with approximately 3 to 4 inches of blacktop after regrading.

2.2 GROUNDWATER SAMPLING

Three of the four existing monitoring wells (MW-1, MW-3, and MW-4) were purged according to standard procedures as presented in the Quality Assurance Project Plan for this project. E & E used decontaminated Teflon bailers for the sampling because no dedicated

bailers were present. Well MW-2 could not be located because of dense vegetation. All samples were submitted for TCL semivolatiles analyses. It should be noted that these wells were constructed of 4-inch polyvinyl chloride (PVC) without locking protective casings. Table 1 presents a summary of pH, temperature, conductivity, turbidity, and purge volumes that were recorded during the sampling of each well.

MW-3 and MW-4 were bailed dry and exhibited very slow recharge. Samples were collected upon achieving sufficient recharge with the approval of the on-site NYSDEC representative. MW-1 exhibited fairly good recharge and the required purge volume was attained. Following purging of MW-1, the sample was collected along with additional volumes for MS/MSD analyses. During the sampling of MW-1, it was noted that the upper portion of the well casing was loose or broken approximately 2 to 3 feet below the ground surface, thus permitting the seepage of surface water into the well. Because surface soils and surface water in the vicinity of this well were not investigated, the effect of this surface water intrusion on groundwater quality is unknown.

3. ANALYTICAL RESULTS

3.1 SUBSURFACE SOIL/WASTE ANALYTICAL RESULTS

Neither hexachlorobenzene nor hexachlorobutadiene were detected in any of the subsurface soil/waste samples submitted for TCLP base neutral compound analyses. In addition, no other base neutral compounds were detected. Data summary forms and laboratory data are presented in Attachment 1.

3.2 GROUNDWATER ANALYTICAL RESULTS

All samples were analyzed for TCL semivolatiles. Data summary forms and laboratory data are presented in Attachment 1. Hexachlorobutadiene was detected in MW-4 at an estimated concentration of 8 micrograms per liter (μg/L), which is above the NYSDEC Class GA groundwater standard (November 1993). The hexachlorobutadiene detected in MW-4 is consistent with the levels detected in soil/waste samples previously collected from the site and is therefore suspected of originating from the site even though the disposal or use of hexachlorobutadiene at this site has not been documented. It is possible that the presence of hexachlorobutadiene in MW-4 may be due to the fact that this monitoring well is located adjacent to a former disposal area for alleged non-hazardous wastes. However, the disposal area is only suspected because the results of this investigation did not identify this area as a source.

Hexachlorobenzene was not detected in any of the samples.

Low levels of tentatively identified compounds (TICs) were detected in all three groundwater samples. However, these TICs are considered attributable to laboratory blank contamination. Likewise, the very low levels of phthalates in MW-3 and MW-4 are most probably because of field/laboratory background and are therefore considered not detected.

4. CONCLUSIONS AND RECOMMENDATIONS

Hazardous substances were detected on site during the initial test pit sampling activities. Resampling of the wastes from the test pits indicates that the semivolatile components of the wastes did not exceed regulatory levels. However, hexachlorobutadiene was detected in one of the on-site monitoring wells above NYSDEC Class GA groundwater water standards. This is of concern because there are, at a minimum, two residences close to the site that use groundwater as a drinking source.

E & E does not recommend any changes to the Classification Worksheet as a result of the additional sampling, and is still recommending the delisting of this site. However, a revised Registry Site Classification Decision Form, reflecting a contravention of groundwater standards, is included with this addendum. Furthermore, the PA score for this site has not been altered due to the lack of primary targets for the groundwater pathway.

Table 1

ALLIED CHEMICAL-ELBERTA WORKS SITE GROUNDWATER FIELD PARAMETERS

Existing Well No.	Volume Purged (gal.)	pH	Temperature (°F)	Conductivity (µS/cm)	Turbidity (NTUs)	Comments
MW-1	0	6.70	54.6	980	256	
	7	7.02	52.1	1100	>1,000	
	12	6.88	50.1	1120	>1,000	
	20	7.10	51.6	1140	>1,000	
	26	7.15	50.0	1170	>1,000	Sample taken
MW-3	0	7.49	53.3	400	9.04	
	7	7.50	49.5	390	852	
	11.5	—	—	—	—	Purged dry
	12.5	7.46	55.1	460	163	Sample taken
MW-4	0	7.51	51.1	1510	>1,000	
	7	5.10	49.2	1510	>1,000	
	11	—	—	—	—	Purged dry
	12	7.12	56.0	1690	>1,000	Sample taken

Note: MW-2 could not be located.

Key:

gal. = gallons.
°F = degrees Fahrenheit.
µS/cm = microSeimens per centimeter.
NTUs = Nephelometric turbidity units.

New York State Department of Environmental Conservation
Division of Hazardous Waste Remediation

REGISTRY SITE CLASSIFICATION DECISION

1. Site Name: Allied Chemical-Elberta Works	2. Site No. 932003	3. Town/City/Village: Wilson	4. County: Niagara
5. Region 9	6. Classification Current: 2a Proposed: Delist Modify:		

7. Location of Site (see Figure 1-1 for site location)
   a. Quadrangle: Wilson and Six Mile Creek b. Site Latitude: 43°15'51" Longitude: 78°52'00" c. Tax Map Number: 049-01-80

8. Briefly Describe the Site (see Figure 3-1 for site plan)

The site consists of approximately 1-acre of fill on a 3-acre parcel located in a rural residential/agricultural area. During disposal the site was a chemical manufacturing facility, primarily producing aluminum chloride. Anhydrous aluminum chloride was disposed of at the site. In that form, it is violently reactive with water, and produces aluminum hydroxide and hydrochloric acid and is considered a hazardous waste. The site is currently used to warehouse pet supplies.

a. Area 1 acre b. EPA ID Number NYD002128544
c. Completed ☒ Phase I ☐ Phase II ☒ PSA ☐ RI/FS ☐ PA/SI ☒ Other (SI)

9. Hazardous Wastes Disposed

Anhydrous aluminum chloride, however, no drums of aluminum chloride were found during test pit excavations as part of the PSA.

10. Analytical Data Available
a. ☐ Air ☒ Groundwater ☐ Surface Water ☒ Soil ☒ Waste ☒ EPTox ☒ TCLP (Sediment)

b. Contravention of Standards or Guidance Values
No standards exceeded (were applicable); however, beryllium, cobalt, copper, lead, and nickel exceeded common ranges. Hexachlorobutadiene in one groundwater sample exceeded standards.

11. JUSTIFICATION FOR CLASSIFICATION DECISION

See No. 9 above.

12. Site Impact Data
a. Nearest surface water: Distance 5,280 ft. Direction east and west Classification C
b. Nearest groundwater: Depth 2.7 ft. Flow Direction north/northwest ☐ Sole Source ☐ Primary ☒ Principal
c. Nearest water supply: Distance 600 ft. Direction east Active? ☒ Yes ☐ No
d. Nearest building: Distance 0 ft. Direction ___ Use: warehouse
e. In State Economic Development Zone? ☐ Yes ☒ No i. Controlled site access? ☒ Yes ☐ No
f. Crops or livestock on site? ☐ Yes ☒ No j. Exposed hazardous waste? ☐ Yes ☒ No
g. Documented fish or wildlife mortality? ☐ Yes ☒ No k. PA Score ____
h. Impact on special status fish or wildlife resource? ☐ Yes ☒ No l. For Class 2: Priority Category ____

13. Site Owner's Name P.R. Fedkiw	Address 3119 Randall Road, Wilson, New York 14131	15. Telephone Number 716/751-6243

16. Preparer	17. Approved
Signature Date	Signature Date
Name, Title, Organization	Name, Title, Organization

YR8S303B

WELL AND SAMPLE COORDINATES	
NORTHING	EASTING
N10,456.80	E10,686.36
N10,100.01	E10,851.80
N10,029.47	E10,612.12
N10,119.03	E10,716.11
N10,303.43	E10,478.90
N10,265.34	E10,501.06
N10,202.80	E10,566.33
N10,353.16	E10,749.42
N10,334.36	E10,867.66

JUNKED V
FARM EQI

TES OF THE TEST PITS ARE BASED
OXIMATE TEST PIT CENTERS.

AL SURVEY CONTROL REFERENCE	
NORTHING	EASTING
N10,000	E10,000
N10,000	E10,814.22

ALLEGED
CHLORIDE
AREAS

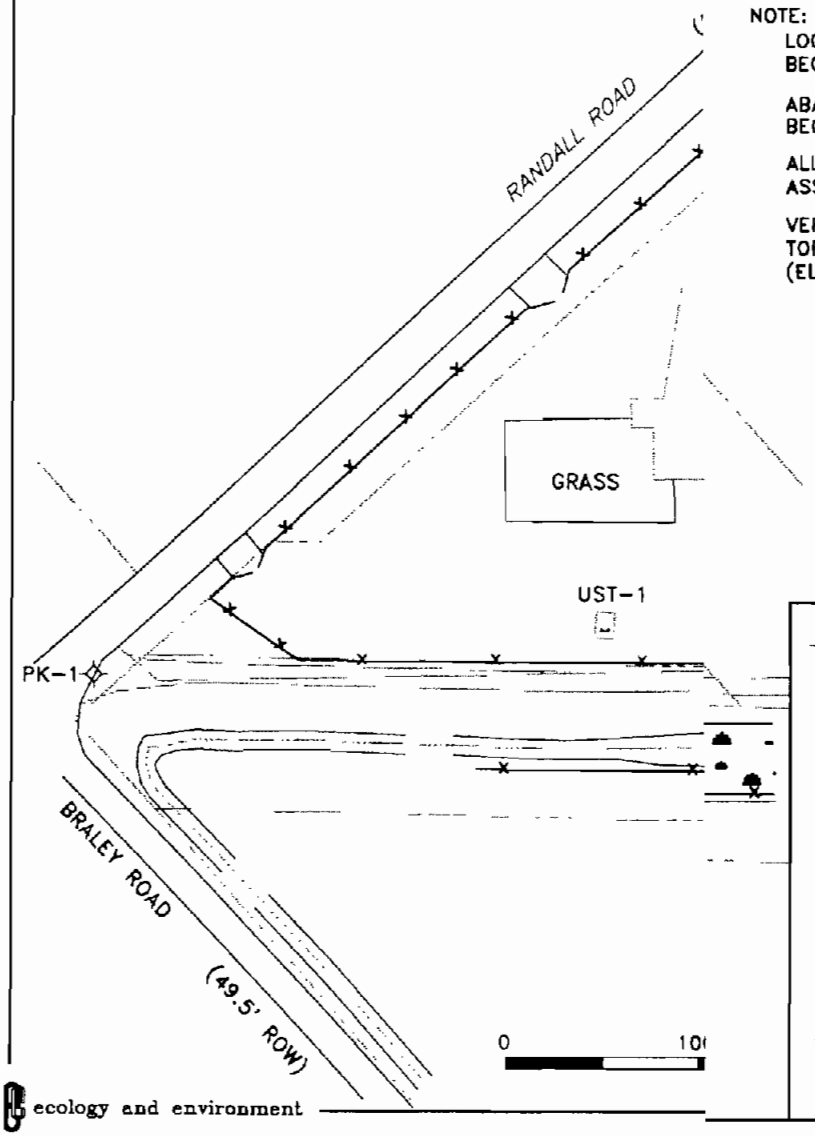
NOTE:

LOCATION OF MW-2 WAS NOT SURVEYED BECAUSE THE WELL COULD NOT BE LOCATED

ABANDONED COOLING PONDS NOT SURVEYED BECAUSE THEIR PRESENCE WAS UNDEFINED.

ALL HORIZONTAL COORDINATES ARE ON AN ASSUMED SYSTEM.

VERTICAL DATUM REFERENCE BENCHMARK TOP PVC PIPE MONITORING WELL MW-4. (ELEV. = 330.17 FT.)



LEGEND

- GW — EXISTING MONITORING WELL AND
- PVC STANDPIPE
- SURVEY CONTROL POINT
- TEST PIT LOCATION
- FENCE
- R.O.W./PROP. LINE
- EDGE PAVEMENT
- DRAINAGE DITCH
- FIRE HYDRANT

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SAMPLE LOCATION MAP
ALLIED CHEMICAL – ELBERTA WORKS

ATTACHMENT 1

REDUCED DATA PACK

DATA SUMMARY FORM: B N A S 2

Site Name: ALLIED - ELBERTA

Job Number: 9500.904 Sampling Date(s): 4/25/95

WATER SAMPLES
(ug/L)

To calculate sample quantitation limit:
(CRQL * Dilution Factor)

CRQL	Compound	Sample Number:	MW-1		MW-3		MW-4		MW-1		MW-1		SBLKW1		MSB		MW1-MS	
		Dilution Factor:	1.0		1.0		1.0						1.0		1.0		1.0	
		Location:							MATRIX SPIKE		MATRIX SPIKE DUPLICATE				Spike Blank		matrix spike	
10	Hexachlorobutadiene						B	J										
10	4-Chloro-3-methylphenol																	
10	2-Methylnaphthalene														46		96	
10	Hexachlorocyclopentadiene																	
10	2,4,6-Trichlorophenol																	
25	2,4,5-Trichlorophenol																	
10	2-Chloronaphthalene																	
25	2-Nitroaniline																	
10	Dimethylphthalate																	
10	Acenaphthylene																	
10	2,6-Dinitrotoluene																	
25	3-Nitroaniline																	
10	Acenaphthene																	
25	2,4-Dinitrophenol														37		73	
25	4-Nitrophenol																	
10	Dibenzofuran														42		83	
10	2,4-Dinitrotoluene																	
10	Diethylphthalate						2	B							31		67	
10	4-Chlorophenyl-phenylether																	
10	Fluorene																	
25	4-Nitroaniline																	
25	4,6-Dinitro-2-methylphenol																	

DATA SUMMARY FORM: B N A S 3

Site Name: ALLIED-ELBERTA

Job Number: 9500.904 Sampling Date(s): 4/25/95

WATER SAMPLES
(µg/L)

To calculate sample quantitation limit:
(CRQL * Dilution Factor)

CRQL	Compound	Sample Number:	MW-1	MW-3	MW-4	MW-1	MW-1	SBLKW1	MSB	MW-1MS
		Dilution Factor:	1.0	1.0	1.0			1.0	1.0	1.0
		Location:				MATRIX SPIKE	MATRIX SPIKE DUPLICATE		spike Blank	matrix spike
10	N-Nitrosodiphenylamine									
10	4-Bromophenyl-phenylether									
10	Hexachlorobenzene									
25	Pentachlorophenol								56	120
10	Phenanthrene									
10	Anthracene									
10	Carbazole									
10	Di-n-butylphthalate			1 B	2 B					
10	Fluoranthene									
10	Pyrene								34	48
10	Butylbenzylphthalate									
10	3,3'-Dichlorobenzidine									
10	Benzo(a)anthracene									
10	Chrysene									
10	bis(2-Ethylhexyl)phthalate									
10	Di-n-octylphthalate									
10	Benzo(b)fluoranthene									
10	Benzo(k)fluoranthene									
10	Benzo(a)pyrene									
10	Indeno(1,2,3-cd)pyrene									
10	Dibenz(a,h)anthracene									
10	Benzo(g,h,i)perylene									

DATA SUMMARY FORM: TCLP BASE NUETRAL COMPOUNDS

Site Name: ALLIED - ELBERTA

SOIL SAMPLES
mg/L

Job Number: 9500.904 Sampling Date(s): 4/25/95

To calculate sample quantitation limit:
(CRQL * Dilution Factor) / ([100 - % moisture]/100)

CRQL	Compound	Sample Number:	TP2-1R		TP2-2R		TP3-1R											
		Dilution Factor:																
		% Moisture:																
		Location:																
	HEXACHLOROBENZENE																	
	HEXACHLOROBUTADIENE																	
	HEXACHLOROETHANE																	
	NITROBENZENE																	
	1,4-DICHLOROBENZENE																	
	2,4-DINITROTOLUENE																	
	PYRIDINE																	

CRQL = Contract Required Quantitation Limit.

MEMORANDUM

TO: Barbara Peck

FROM: Gary Hahn

DATE: May 15, 1995

SUBJECT: Allied-Elberta
Project No. YR-8030

RE: 9500.904

CC: Lab File

Attached is the laboratory report of the analyses conducted on samples received at the Analytical Services Center on April 25, 1995. Samples were analyzed for base neutral organic compounds according to Method 91-2 and TCLP base neutral organic compounds according to Method 1311/8270 from the NYSDEC Analytical Services Protocol, September 1989, Revision 12/91.

The chain of custody form provided herein is integral to this report and must be included with the analytical results forms upon transferral to another data user.

All samples on which this report is based will be retained by E & E for a period of 30 days from the date of this report, unless otherwise instructed by the client. If additional storage of samples is requested by the client, a storage fee of $1.00 per sample container per month will be charged for each sample, with such charges accruing until destruction of the samples is authorized by the client.

GH/fal
Enclosure

Case Narrative
Allied-Elberta
Project No. YR-8030
9500.904

The "M" flag on the GC/MS instrument generated quantitation report indicates that a manual integration was performed. Manual integration was required due to peak shape.

Based on the amount of mass spectral information available, the GC/MS computer is not always able to supply three matches for the semi-volatile unknowns.

BASE NEUTRALS

Since both base neutral and acid phenol compounds are extracted together in the liquid-liquid extraction procedure, all BNA target compounds analyzed by Method 91-2 have been reported in this data package.

Elevated quantitation limits have been reported for the MS/MSD analyses of sample MW-1 due to limited extraction volume. Both the MS/MSD exceeded the internal standard area criteria for perylene-d12. No further action is required.

Several TICs were detected in SBLKW1. These TICs do not interfere with the quantitation of any of the target compounds.

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hardcopy data package has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signature.

Caryn Krajtowicz

for Gary Hahn - Manager
Analytical Services Center
May 15, 1995

To be included with all lab data and with each workplan

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

SAMPLE IDENTIFICATION AND ANALYTICAL REQUIREMENT SUMMARY

Customer Sample Code	Laboratory Sample Code	Analytical Requirements					
		*VOA GC/MS Method #	*BNA GC/MS Method #	*VOA GC Method #	*Pest PCBs Method #	*Metals	*Other
TP2-1R(1.5)	25292	8	8270				
TP2-1RA(1.5)	25293						
TP2-2R(1.0)	25294		8270				
TP3-1R(5.0)	25295		"				
MW-1	25296		91-2				
MW-3	25297		"				
MW-4	25298		"				

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

SAMPLE PREPARATION AND ANALYSIS SUMMARY
SEMIVOLATILE (BNA)
ANALYSES

Laboratory Sample ID	Matrix	Date Collected	Date Rec'd at Lab	Date Extracted	Date Analyzed
25296	Water	4-25-95	4-25-95	4-27-95	5-4-95
25297	〃	〃	〃	〃	〃
25298	〃	〃	〃	〃	〃
25292	TCLP ext.			5-4-95	5-9-95
25294	〃	〃	〃		〃
25295	〃	〃	〃	〃	〃

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

SAMPLE PREPARATION AND ANALYSIS SUMMARY
SEMIVOLATILE (BNA)
ANALYSES

Laboratory Sample ID	Matrix	Analytical Protocol	Extraction Method	Auxiliary Cleanup	Dil/Conc Factor
25296	Water	91-2	3520	NA	1
25297	〃	〃	〃	〃	〃
25298	〃	〃	〃	〃	〃
25292	TCLP ext.	8270	1311/3550		
25294	〃	〃	〃	〃	〃
25295	〃	〃	〃	〃	〃

ecology and environment, inc.

Analytical Services Center
4493 Walden Avenue, Lancaster, New York, 14086, Tel 716/685-8080, Fax 716/685-0852
International Specialists in the Environment

CHAIN-OF-CUSTODY RECORD

Page 1 of 1

Project No	Project Name	Project Manager
YR-9030	Allied Chemical - Elberta Works	B-Peck
Samplers (Signatures)		Field Team Leader
		G-Florentino

STATION NUMBER	DATE	TIME	SAMPLE TYPE COMP	SAMPLE TYPE GRAB	SAMPLE TYPE AIR	SAMPLE INFORMATION / EXPECTED COMPOUNDS (Concentration)*	STATION LOCATION	NUMBER OF CONTAINERS	TCLP Base Neutrals	REMARKS
1	4-25-91	0820		X		Hexachlorobenzene/Hexachlorobutadiene (m-H)	TP2-1R (1.5ft)	3	X	MS/MSD
2	↓	0825		X		↓	TP2-1RA (1.5ft)	1		Do Not Analyze - Consult Proj. Mgr.*
3		0835		X			TP2-2R (1.0 ft)	1	X	
4		0845		X			TP3-1R (5.0ft)	1	X	
										* must review single analysis of TP2-2R before analyzing TP2-1RA.

Relinquished By: (Signature)	Date/Time	Received By: (Signature)	Relinquished By: (Signature)	Date/Time	Received By: (Signature)	Ship Via:
						Hand Delivery
Relinquished By: (Signature)	Date/Time	Received By: (Signature)	Relinquished By: (Signature)	Date/Time	Received By: (Signature)	
Relinquished By: (Signature)	Date/Time: 4/25/91 1345	Received For Laboratory By: (Signature)	Relinquished By: (Signature)	Date/Time	Received For Laboratory By: (Signature)	BL/Airbill Number: N/A; Date: 4/25/91

Distribution: Original Accompanies Shipment; Copy to Coordinator Field Files
*See CONCENTRATION RANGE on back of form.

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Analytical Services Center
4493 Walden Avenue, Lancaster, New York, 14086, Tel 716/685-8080, Fax 716/685-0852
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CHAIN-OF-CUSTODY RECORD

Project No: IR-5030
Project Name: Allied Chemical - Elberta Works
Project Manager: B. Peck
Samplers (Signatures): G. Florentino
Field Team Leader: G. Florentino

STATION NUMBER	DATE	TIME	SAMPLE TYPE COMP	SAMPLE TYPE GRAB	SAMPLE TYPE AIR	SAMPLE INFORMATION — EXPECTED COMPOUNDS (Concentration)*	STATION LOCATION	NUMBER OF CONTAINERS	TAL Buck Neufeld	REMARKS
1	4/25/95	1120		X		Hexachlorobenzene / Hexachlorobutadiene (L-M)	MW-1	3	X	MS/MSD
2	↓	1142		X		↓	MW-3	1	X	
3	↓	1135		X		↓	MW-4	1	X	

Relinquished By: (Signature)	Date/Time:	Received By: (Signature)	Relinquished By (Signature)	Date/Time:	Received By: (Signature)	Ship Via
						Hand Delivered
Relinquished By: (Signature)	Date/Time	Received By: (Signature)	Relinquished By (Signature)	Date/Time	Received By (Signature)	
Relinquished By (Signature)	Date/Time 4-25-95 1345	Received For Laboratory By: (Signature)	Relinquished By: (Signature)	Date/Time	Received For Laboratory By (Signature)	BL/Airbill Number: N/A
						Date: 4-25-95

Distribution: Original Accompanies Shipment; Copy to Coordinator Field Files
*See CONCENTRATION RANGE on back of form.

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1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

DEC SAMPLE NO.

MW-1

Lab Name: E & E INC. Contract:

Lab Code: EANDE Case No.: 904 SAS No.: SDG No.: MW-1

Matrix: (soil/water) WATER Lab Sample ID: 25296

Sample wt/vol: 1000 (g/mL) ML Lab File ID: E2007

Level: (low/med) LOW Date Received: 04/25/95

% Moisture: decanted: (Y/N) Date Extracted: 04/27/95

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 05/04/95

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH:

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
108-95-2	Phenol	10	U
111-44-4	bis(2-Chloroethyl)Ether	10	U
95-57-8	2-Chlorophenol	10	U
541-73-1	1,3-Dichlorobenzene	10	U
106-46-7	1,4-Dichlorobenzene	10	U
95-50-1	1,2-Dichlorobenzene	10	U
95-48-7	2-Methylphenol	10	U
108-60-1	2,2'-oxybis(1-Chloropropane)	10	U
106-44-5	4-Methylphenol	10	U
621-64-7	N-Nitroso-Di-n-Propylamine	10	U
67-72-1	Hexachloroethane	10	U
98-95-3	Nitrobenzene	10	U
78-59-1	Isophorone	10	U
88-75-5	2-Nitrophenol	10	U
105-67-9	2,4-Dimethylphenol	10	U
111-91-1	bis(2-Chloroethoxy)Methane	10	U
120-83-2	2,4-Dichlorophenol	10	U
120-82-1	1,2,4-Trichlorobenzene	10	U
91-20-3	Naphthalene	10	U
106-47-8	4-Chloroaniline	10	U
87-68-3	Hexachlorobutadiene	10	U
59-50-7	4-Chloro-3-Methylphenol	10	U
91-57-6	2-Methylnaphthalene	10	U
77-47-4	Hexachlorocyclopentadiene	10	U
88-06-2	2,4,6-Trichlorophenol	10	U
95-95-4	2,4,5-Trichlorophenol	25	U
91-58-7	2-Chloronaphthalene	10	U
88-74-4	2-Nitroaniline	25	U
131-11-3	Dimethylphthalate	10	U
208-96-8	Acenaphthylene	10	U
606-20-2	2,6-Dinitrotoluene	10	U
99-09-2	3-Nitroaniline	25	U
83-32-9	Acenaphthene	10	U

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

DEC SAMPLE NO.

MW-1

Lab Name: E & E INC. Contract:

Lab Code: EANDE Case No.: 904 SAS No. SDG No.: MW-1

Matrix: (soil/water) WATER Lab Sample ID: 25296

Sample wt/vol: 1000 (g/mL) ML Lab File ID: E2007

Level: (low/med) LOW Date Received: 04/25/95

% Moisture: decanted: (Y/N) Date Extracted: 04/27/95

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 05/04/95

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH:

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
51-28-5	2,4-Dinitrophenol	25	U
100-02-7	4-Nitrophenol	25	U
132-64-9	Dibenzofuran	10	U
121-14-2	2,4-Dinitrotoluene	10	U
84-66-2	Diethylphthalate	10	U
7005-72-3	4-Chlorophenyl-phenylether	10	U
86-73-7	Fluorene	10	U
100-01-6	4-Nitroaniline	25	U
534-52-1	4,6-Dinitro-2-methylphenol	25	U
86-30-6	N-Nitrosodiphenylamine (1)	10	U
101-55-3	4-Bromophenyl-phenylether	10	U
118-74-1	Hexachlorobenzene	10	U
87-86-5	Pentachlorophenol	25	U
85-01-8	Phenanthrene	10	U
120-12-7	Anthracene	10	U
86-74-8	Carbazole	10	U
84-74-2	Di-n-Butylphthalate	10	U
206-44-0	Fluoranthene	10	U
129-00-0	Pyrene	10	U
85-68-7	Butylbenzylphthalate	10	U
91-94-1	3,3'-Dichlorobenzidine	10	U
56-55-3	Benzo(a)Anthracene	10	U
218-01-9	Chrysene	10	U
117-81-7	bis(2-Ethylhexyl)Phthalate	10	U
117-84-0	Di-n-Octyl Phthalate	10	U
205-99-2	Benzo(b)Fluoranthene	10	U
207-08-9	Benzo(k)Fluoranthene	10	U
50-32-8	Benzo(a)Pyrene	10	U
193-39-5	Indeno(1,2,3-cd)Pyrene	10	U
53-70-3	Dibenz(a,h)Anthracene	10	U
191-24-2	Benzo(g,h,i)Perylene	10	U

(1) - Cannot be separated from Diphenylamine

FORM I SV-2 3/90

1F

DEC SAMPLE NO.

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

MW-1

Lab Name: E & E INC. Contract:

Lab Code: EANDE Case No.: 904 SAS No.: SDG No.: MW-1

Matrix: (soil/water) WATER Lab Sample ID: 25296

Sample wt/vol: 1000 (g/mL) ML Lab File ID: E2007

Level: (low/med) LOW Date Received: 04/25/95

% Moisture: decanted: (Y/N) Date Extracted: 04/27/95

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 05/04/95

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH:

Number TICs found: 4 CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	123-42-2	Aldol Condensation Product	4.96	20	ABJN
2.		UNKNOWN	5.35	3	BJ
3.		UNKNOWN	12.35	6	BJ
4.		UNKNOWN	14.76	55	J

FORM I SV-TIC 3/90

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

DEC SAMPLE NO.

MW-3

Lab Name: E & E INC. Contract:

Lab Code: EANDE Case No.: 904 SAS No.: SDG No.: MW-1

Matrix: (soil/water) WATER Lab Sample ID: 25297

Sample wt/vol: 1000 (g/mL) ML Lab File ID: E2008

Level: (low/med) LOW Date Received: 04/25/95

% Moisture: decanted: (Y/N) Date Extracted: 04/27/95

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 05/04/95

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH:

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
108-95-2	Phenol	10	U
111-44-4	bis(2-Chloroethyl)Ether	10	U
95-57-8	2-Chlorophenol	10	U
541-73-1	1,3-Dichlorobenzene	10	U
106-46-7	1,4-Dichlorobenzene	10	U
95-50-1	1,2-Dichlorobenzene	10	U
95-48-7	2-Methylphenol	10	U
108-60-1	2,2'-oxybis(1-Chloropropane)	10	U
106-44-5	4-Methylphenol	10	U
621-64-7	N-Nitroso-Di-n-Propylamine	10	U
67-72-1	Hexachloroethane	10	U
98-95-3	Nitrobenzene	10	U
78-59-1	Isophorone	10	U
88-75-5	2-Nitrophenol	10	U
105-67-9	2,4-Dimethylphenol	10	U
111-91-1	bis(2-Chloroethoxy)Methane	10	U
120-83-2	2,4-Dichlorophenol	10	U
120-82-1	1,2,4-Trichlorobenzene	10	U
91-20-3	Naphthalene	10	U
106-47-8	4-Chloroaniline	10	U
87-68-3	Hexachlorobutadiene	10	U
59-50-7	4-Chloro-3-Methylphenol	10	U
91-57-6	2-Methylnaphthalene	10	U
77-47-4	Hexachlorocyclopentadiene	10	U
88-06-2	2,4,6-Trichlorophenol	10	U
95-95-4	2,4,5-Trichlorophenol	25	U
91-58-7	2-Chloronaphthalene	10	U
88-74-4	2-Nitroaniline	25	U
131-11-3	Dimethylphthalate	10	U
208-96-8	Acenaphthylene	10	U
606-20-2	2,6-Dinitrotoluene	10	U
99-09-2	3-Nitroaniline	25	U
83-32-9	Acenaphthene	10	U

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

DEC SAMPLE NO.

MW-3

Lab Name: E & E INC. Contract:

Lab Code: EANDE Case No.: 904 SAS No.: SDG No.: MW-1

Matrix: (soil/water) WATER Lab Sample ID: 25297

Sample wt/vol: 1000 (g/mL) ML Lab File ID: E2008

Level: (low/med) LOW Date Received: 04/25/95

% Moisture: decanted: (Y/N) Date Extracted: 04/27/95

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 05/04/95

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH:

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
51-28-5	2,4-Dinitrophenol	25	U
100-02-7	4-Nitrophenol	25	U
132-64-9	Dibenzofuran	10	U
121-14-2	2,4-Dinitrotoluene	10	U
84-66-2	Diethylphthalate	10	U
7005-72-3	4-Chlorophenyl-phenylether	10	U
86-73-7	Fluorene	10	U
100-01-6	4-Nitroaniline	25	U
534-52-1	4,6-Dinitro-2-methylphenol	25	U
86-30-6	N-Nitrosodiphenylamine (1)	10	U
101-55-3	4-Bromophenyl-phenylether	10	U
118-74-1	Hexachlorobenzene	10	U
87-86-5	Pentachlorophenol	25	U
85-01-8	Phenanthrene	10	U
120-12-7	Anthracene	10	U
86-74-8	Carbazole	10	U
84-74-2	Di-n-Butylphthalate	1	J
206-44-0	Fluoranthene	10	U
129-00-0	Pyrene	10	U
85-68-7	Butylbenzylphthalate	10	U
91-94-1	3,3'-Dichlorobenzidine	10	U
56-55-3	Benzo(a)Anthracene	10	U
218-01-9	Chrysene	10	U
117-81-7	bis(2-Ethylhexyl)Phthalate	10	U
117-84-0	Di-n-Octyl Phthalate	10	U
205-99-2	Benzo(b)Fluoranthene	10	U
207-08-9	Benzo(k)Fluoranthene	10	U
50-32-8	Benzo(a)Pyrene	10	U
193-39-5	Indeno(1,2,3-cd)Pyrene	10	U
53-70-3	Dibenz(a,h)Anthracene	10	U
191-24-2	Benzo(g,h,i)Perylene	10	U

(1) - Cannot be separated from Diphenylamine

FORM I SV-2 3/90

1F

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

DEC SAMPLE NO.

MW-3

Lab Name: E & E INC. Contract:

Lab Code: EANDE Case No.: 904 SAS No.: SDG No.: MW-1

Matrix: (soil/water) WATER Lab Sample ID: 25297

Sample wt/vol: 1000 (g/mL) ML Lab File ID: E2008

Level: (low/med) LOW Date Received: 04/25/95

% Moisture: decanted: (Y/N) Date Extracted: 04/27/95

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 05/04/95

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH:

Number TICs found: 5 CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	123-42-2	Aldol Condensation Product	4.96	11	ABJN
2.		UNKNOWN	5.36	3	BJ
3.		UNKNOWN	12.36	2	BJ
4.		UNKNOWN	15.00	200	J
5.		UNKNOWN	29.46	2	J

FORM I SV-TIC 3/90

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

DEC SAMPLE NO.

MW-4

Lab Name: E & E INC. Contract:

Lab Code: EANDE Case No.: 904 SAS No.: SDG No.: MW-1

Matrix: (soil/water) WATER Lab Sample ID: 25298

Sample wt/vol: 1000 (g/mL) ML Lab File ID: E2009

Level: (low/med) LOW Date Received: 04/25/95

% Moisture: decanted: (Y/N) Date Extracted: 04/27/95

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 05/04/95

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH:

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
108-95-2	Phenol	10	U
111-44-4	bis(2-Chloroethyl)Ether	10	U
95-57-8	2-Chlorophenol	10	U
541-73-1	1,3-Dichlorobenzene	10	U
106-46-7	1,4-Dichlorobenzene	10	U
95-50-1	1,2-Dichlorobenzene	10	U
95-48-7	2-Methylphenol	10	U
108-60-1	2,2'-oxybis(1-Chloropropane)	10	U
106-44-5	4-Methylphenol	10	U
621-64-7	N-Nitroso-Di-n-Propylamine	10	U
67-72-1	Hexachloroethane	10	U
98-95-3	Nitrobenzene	10	U
78-59-1	Isophorone	10	U
88-75-5	2-Nitrophenol	10	U
105-67-9	2,4-Dimethylphenol	10	U
111-91-1	bis(2-Chloroethoxy)Methane	10	U
120-83-2	2,4-Dichlorophenol	10	U
120-82-1	1,2,4-Trichlorobenzene	10	U
91-20-3	Naphthalene	10	U
106-47-8	4-Chloroaniline	8	J
87-68-3	Hexachlorobutadiene	10	U
59-50-7	4-Chloro-3-Methylphenol	10	U
91-57-6	2-Methylnaphthalene	10	U
77-47-4	Hexachlorocyclopentadiene	10	U
88-06-2	2,4,6-Trichlorophenol	25	U
95-95-4	2,4,5-Trichlorophenol	10	U
91-58-7	2-Chloronaphthalene	25	U
88-74-4	2-Nitroaniline	10	U
131-11-3	Dimethylphthalate	10	U
208-96-8	Acenaphthylene	10	U
606-20-2	2,6-Dinitrotoluene	25	U
99-09-2	3-Nitroaniline	10	U
83-32-9	Acenaphthene		

1C

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

DEC SAMPLE NO.

MW-4

Lab Name: E & E INC. Contract:

Lab Code: EANDE Case No.: 904 SAS No.: SDG No.: MW-1

Matrix: (soil/water) WATER Lab Sample ID: 25298

Sample wt/vol: 1000 (g/mL) ML Lab File ID: E2009

Le : (low/med) LOW Date Received: 04/25/95

% Moisture: decanted: (Y/N) Date Extracted: 04/27/95

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 05/04/95

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH:

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
51-28-5	2,4-Dinitrophenol	25	U
100-02-7	4-Nitrophenol	25	U
132-64-9	Dibenzofuran	10	U
121-14-2	2,4-Dinitrotoluene	10	U
84-66-2	Diethylphthalate	2	J
7005-72-3	4-Chlorophenyl-phenylether	10	U
86-73-7	Fluorene	10	U
100-01-6	4-Nitroaniline	25	U
534-52-1	4,6-Dinitro-2-methylphenol	25	U
86-30-6	N-Nitrosodiphenylamine (1)	10	U
101-55-3	4-Bromophenyl-phenylether	10	U
118-74-1	Hexachlorobenzene	10	U
87-86-5	Pentachlorophenol	25	U
85-01-8	Phenanthrene	10	U
120-12-7	Anthracene	10	U
86-74-8	Carbazole	10	U
84-74-2	Di-n-Butylphthalate	2	J
206-44-0	Fluoranthene	10	U
129-00-0	Pyrene	10	U
85-68-7	Butylbenzylphthalate	10	U
91-94-1	3,3'-Dichlorobenzidine	10	U
56-55-3	Benzo(a)Anthracene	10	U
218-01-9	Chrysene	10	U
117-81-7	bis(2-Ethylhexyl)Phthalate	10	U
117-84-0	Di-n-Octyl Phthalate	10	U
205-99-2	Benzo(b)Fluoranthene	10	U
207-08-9	Benzo(k)Fluoranthene	10	U
50-32-8	Benzo(a)Pyrene	10	U
193-39-5	Indeno(1,2,3-cd)Pyrene	10	U
53-70-3	Dibenz(a,h)Anthracene	10	U
191-24-2	Benzo(g,h,i)Perylene	10	U

(1) - Cannot be separated from Diphenylamine

FORM I SV-2 3/90

1F

DEC SAMPLE NO.

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

MW-4

Lab Name: E & E INC. Contract:

Lab Code: EANDE Case No.: 904 SAS No.: SDG No.: MW-1

Matrix: (soil/water) WATER Lab Sample ID: 25298

Sample wt/vol: 1000 (g/mL) ML Lab File ID: E2009

Level: (low/med) LOW Date Received: 04/25/95

% Moisture: decanted: (Y/N) Date Extracted: 04/27/95

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 05/04/95

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH:

Number TICs found: 6 CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	123-42-2	Aldol Condensation Product	5.01	28	ABJN
2.		UNKNOWN	5.40	2	BJ
3.		UNKNOWN	6.04	5	J
4.		UNKNOWN CARBOXYLIC ACID	14.42	4	J
5.		UNKNOWN	15.12	340	J
6.		UNKNOWN	29.47	4	J

FORM I SV-TIC 3/90

Results of Analysis of TCLP Extracts Job Number :9500.904
ELAP ID : 10486

Ecology and Environment, Inc.
Analytical Services Center

CLIENT : YR8000 ALLIED - ELBERTA
SAMPLE ID LAB :EE-95-25292 MATRIX: SOLID
SAMPLE ID CLIENT: TP2-1R(1.5) UNITS : MG/L

PARAMETER	RESULTS	Q	QUANTITATION LIMIT	REGULATORY LEVEL
Hexachlorobenzene	ND		0.10	0.13
Hexachlorobutadiene	ND		0.10	0.50
Hexachloroethane	ND		0.10	3.0
Nitrobenzene	ND		0.10	2.0
1,4-Dichlorobenzene	ND		0.10	7.5
2,4-Dinitrotoluene	ND		0.10	0.13
Pyridine	ND		1.0	5.0

QUALIFIERS: C = COMMENT ND = NOT DETECTED
J = ESTIMATED VALUE

Results of Analysis of TCLP Extracts Job Number :9500.904
ELAP ID : 10486

Ecology and Environment, Inc.
Analytical Services Center

CLIENT : YR8000 ALLIED - ELBERTA
SAMPLE ID LAB :EE-95-25294 MATRIX: SOLID
SAMPLE ID CLIENT: TP2-2R(1.0) UNITS : MG/L

PARAMETER	RESULTS	Q	QUANTITATION LIMIT	REGULATORY LEVEL
Hexachlorobenzene	ND		0.10	0.13
Hexachlorobutadiene	ND		0.10	0.50
Hexachloroethane	ND		0.10	3.0
Nitrobenzene	ND		0.10	2.0
1,4-Dichlorobenzene	ND		0.10	7.5
2,4-Dinitrotoluene	ND		0.10	0.13
Pyridine	ND		1.0	5.0

QUALIFIERS: C = COMMENT ND = NOT DETECTED
J = ESTIMATED VALUE

Results of Analysis of TCLP Extracts Job Number :9500.904
ELAP ID : 10486

Ecology and Environment, Inc.
Analytical Services Center

CLIENT : YR8000 ALLIED - ELBERTA
SAMPLE ID LAB :EE-95-25295 MATRIX: SOLID
SAMPLE ID CLIENT: TP3-1R(5.0) UNITS : MG/L

PARAMETER	RESULTS	Q	QUANTITATION LIMIT	REGULATORY LEVEL
Hexachlorobenzene	ND		0.10	0.13
Hexachlorobutadiene	ND		0.10	0.50
Hexachloroethane	ND		0.10	3.0
Nitrobenzene	ND		0.10	2.0
1,4-Dichlorobenzene	ND		0.10	7.5
2,4-Dinitrotoluene	ND		0.10	0.13
Pyridine	ND		1.0	5.0

QUALIFIERS: C = COMMENT ND = NOT DETECTED
J = ESTIMATED VALUE

YR8S3036

MONITOR WELL AND SAMPLE COORDINATES		
	NORTHING	EASTING
MW-1	N10,456.80	E10,686.36
MW-3	N10,100.01	E10,851.80
MW-4	N10,029.47	E10,612.12
TP1-1[a]	N10,119.03	E10,716.11
TP2-1[a]	N10,303.43	E10,478.90
TP2-2[a]	N10,265.34	E10,501.06
TP3-1[a]	N10,202.80	E10,566.33
TP4-1[a]	N10,353.16	E10,749.42
TP4-2[a]	N10,334.36	E10,867.66

[a] COORDINATES OF THE TEST PITS ARE BASED ON APPROXIMATE TEST PIT CENTERS.

HORIZONTAL SURVEY CONTROL REFERENCE		
	NORTHING	EASTING
PK-1	N10,000	E10,000
PK-2	N10,000	E10,814.22

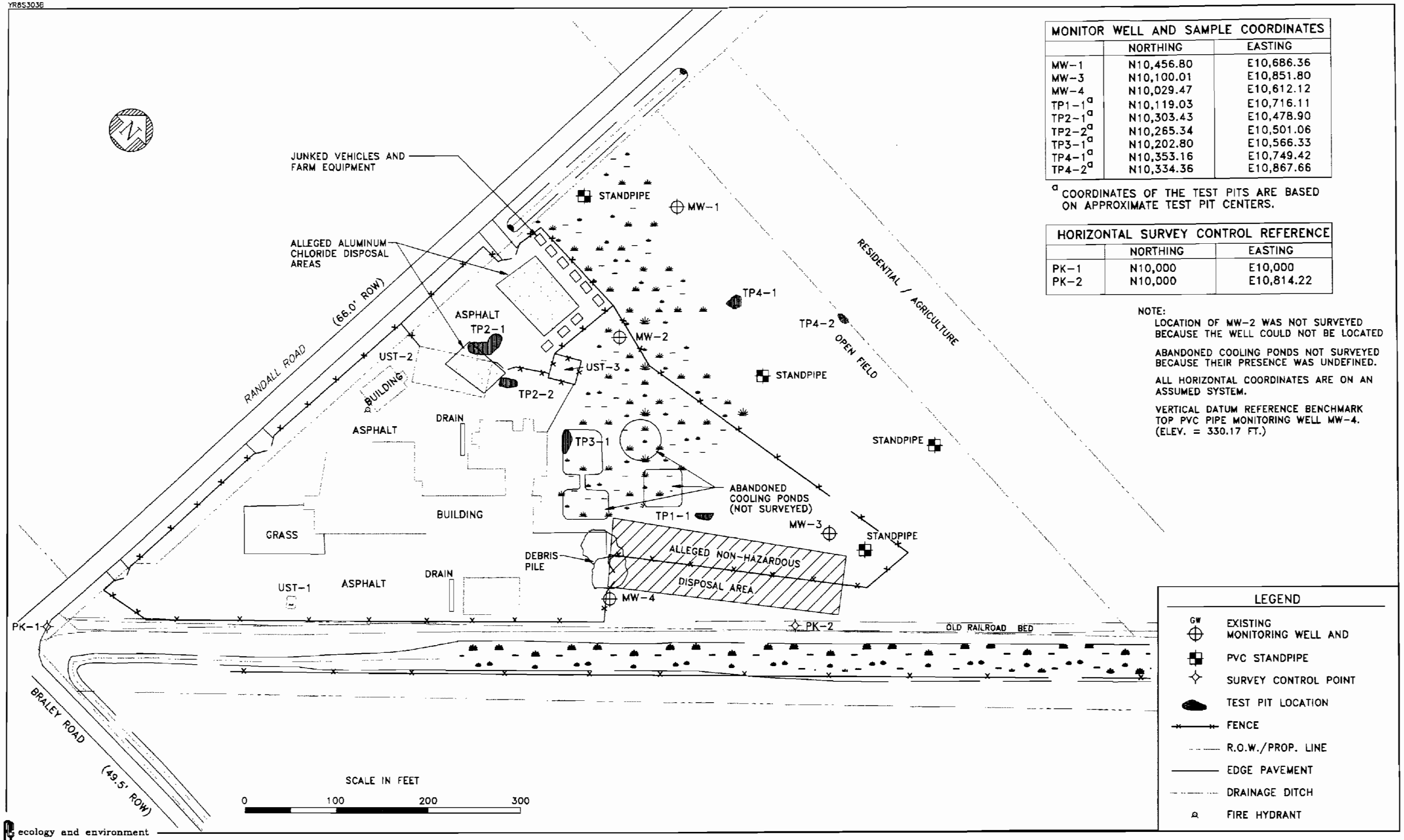
NOTE:

LOCATION OF MW-2 WAS NOT SURVEYED BECAUSE THE WELL COULD NOT BE LOCATED

ABANDONED COOLING PONDS NOT SURVEYED BECAUSE THEIR PRESENCE WAS UNDEFINED.

ALL HORIZONTAL COORDINATES ARE ON AN ASSUMED SYSTEM.

VERTICAL DATUM REFERENCE BENCHMARK TOP PVC PIPE MONITORING WELL MW-4. (ELEV. = 330.17 FT.)



ecology and environment

Figure 1 SAMPLE LOCATION MAP
ALLIED CHEMICAL – ELBERTA WORKS