MALCOLM PIRNIE

HANNA FURNACE SITE
CHARACTERIZATION OF THE FORMER RAILROAD YARD

BUFFALO ECONOMIC RENAISSANCE CORPORATION
BUFFALO, NEW YORK

JUNE 1999
REVISED OCTOBER 1999

MALCOLM PIRNIE, INC.

P. O. Box 1938
Buffalo, New York 14219

Printed on Recycled Paper

MALCOLM PIRNIE

HANNA FURNACE SITE
CHARACTERIZATION OF THE FORMER RAILROAD YARD

BUFFALO ECONOMIC RENAISSANCE CORPORATION
BUFFALO, NEW YORK

JUNE 1999
REVISED OCTOBER 1999

MALCOLM PIRNIE, INC.

P. O. Box 1938
Buffalo, New York 14219

MALCOLM PIRNIE

HANNA FURNACE SITE
CHARACTERIZATION OF THE FORMER RAILROAD YARD

TABLE OF CONTENTS

LIST OF TABLES

TABLE OF CONTENTS (Continued)

LIST OF FIGURES

LIST OF APPENDICES

MALCOLM PIRNIE

1.0 INTRODUCTION

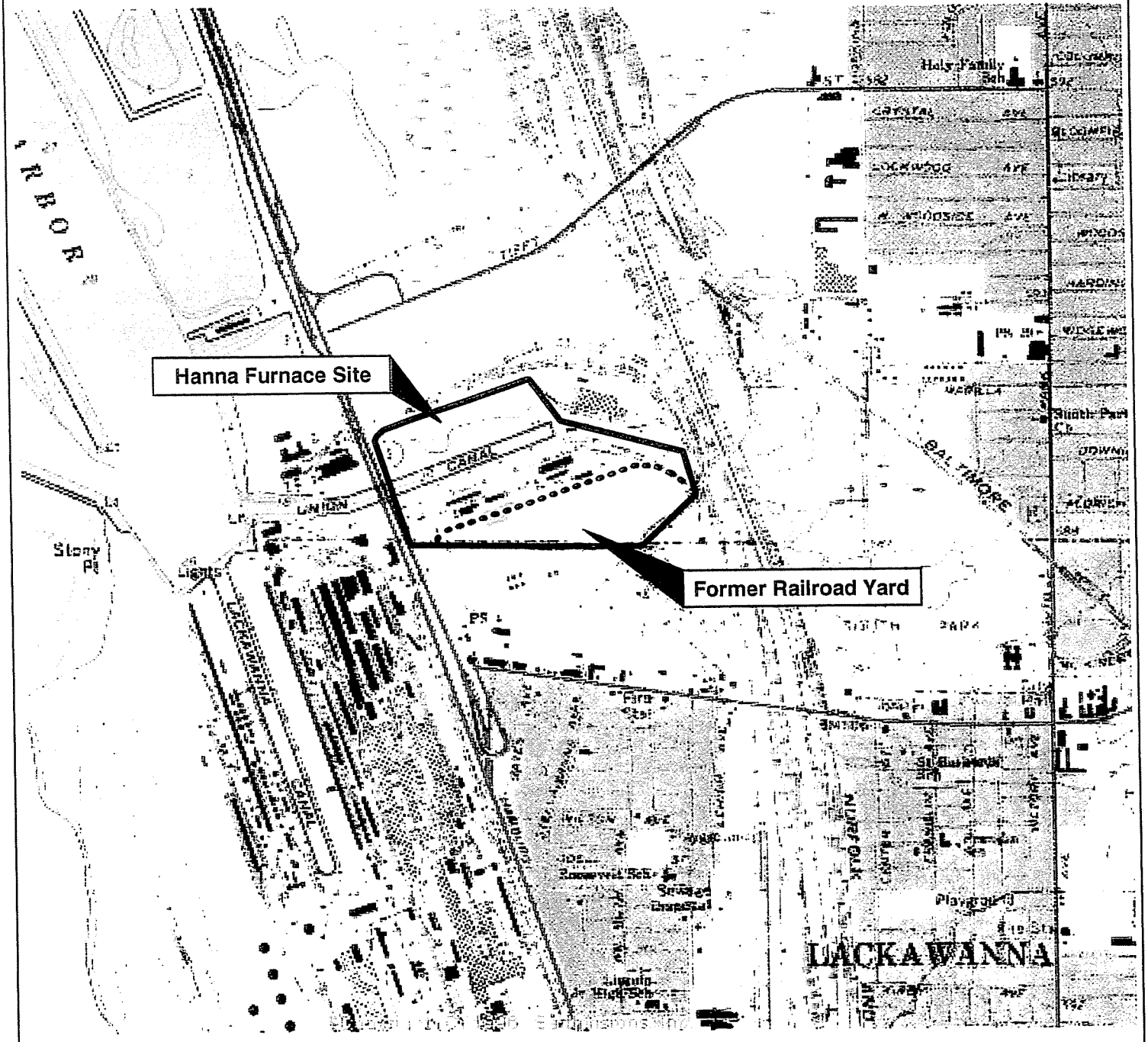
The Hanna Furnace Site in South Buffalo encompasses approximately 131 acres, including the 10-acre Union Ship Canal and the 35-acre former railroad yard. Previous investigations performed by various agencies and consultants have generally characterized the site; however, the former rail yard has been the subject of minimal investigation (see Figure 1). The City of Buffalo is planning to redevelop the former rail yard as a commercial/light industrial park. Prior to redevelopment, the former rail yard must be adequately characterized to verify that public health and the environment are adequately protected. In the fall of 1998 and winter of 1999, Malcolm Pirnie performed a characterization of the former railroad yard.

1.1 PREVIOUS SAMPLING

The Hanna Furnace Site has had several environmental investigations performed over the last 20 years by various agencies, none of which concluded that remedial action was necessary. The area of investigation at the Hanna Furnace site varies between investigation; therefore, it is important to keep in mind the area of investigation when evaluating and comparing data results and recommendations. Because there is no significant historic evidence of contamination of concern on the former railroad yard, most investigations at the Hanna Furnace site included little or no sampling within the railroad yard. The following is a chronological summary of the significant site investigations performed at the Hanna Furnace site and the results or recommendations of each:

- In 1979 Rupley, Bahler, and Blake, Consulting Engineers prepared a Solid Waste Management Facility Report. This report was limited to evaluation of surface water quality in the Union Ship Canal and an on-site pond. The water samples contained phenols and soluble iron at concentrations above NYSDEC Class GA groundwater standards.

FIGURE 1



Source: USGS Buffalo SE Quadrangle Map

1 ½ 0 1 MILE

1000 0 1000 2000 3000 4000 5000 6000 7000 FEET

1 .5 0 1 KILOMETER

CONTOUR INTERVAL 10 FEET

3587-001-200

MALCOLM PIRNIE

HANNA FURNACE SITE - FORMER RAILROAD YARD
SUPPLEMENTAL INVESTIGATION

SITE LOCATION MAP

SEPTEMBER 1999

- In April 1982, after the cessation of pig iron manufacturing at the site, the Erie County Department of Environmental Protection inspected the site and prepared a report entitled "Inactive Site Profile Report". The report recommended that the NYSDEC downgrade the classification of the site to a "class F" which pertains to a site where no further action is warranted and little to no environmental hazard potential exists.

- In 1983, the NYSDEC, after inspection of the site, prepared an "Inactive Hazardous Waste Disposal Site Report". The on-site inactive landfill was assigned a site number (# 915029).

- Also in 1983, the United States Geological Survey (USGS) drilled and sampled seven test borings on the north side of the Union Ship canal. Samples from these borings were analyzed for a short list of heavy metals. In their report entitled "Draft Report of Preliminary Evaluation of Chemical Migration to the Niagara River from Hazardous Waste Disposal Sites in Erie and Niagara Counties," the USGS concluded that there was potential for lateral migration of contaminants at and away from the site.

- In 1985, a site inspection and Phase I investigation was performed for the NYSDEC by Engineering-Science and Dames & Moore. The Phase I investigation was limited to areas north of the Union Ship Canal and included a records search and scoring the site using the Hazard Ranking Scoring (HRS) system. The study area was assigned a score of 8.73 in the Phase I report. Additional data needs were identified by the Phase I investigation and a Phase II investigation was recommended and outlined.

- In 1988, Recra Environmental, Inc. performed a "Site Characterization and Environmental Assessment" for the New York State Department of Transportation. The characterization and assessment included the entire 131-acre site. The work involved collecting samples of surface and subsurface soil/fill, surface water, sediment and groundwater, performance of a risk assessment and evaluation of remedial alternatives. Five (SS-20 through SS-24) of 15 surface soil/fill samples (.5 to 1.5-feet bgs) were collected from the railroad yard portion of the site (see Figure 2). Analytical results of the surface soils indicated elevated levels of heavy metals and very low (<2 ppm) concentrations of PCBs. Groundwater from the only one of seven wells (MW-4) installed at the site that is within the former railroad yard contained PCB 1242, arsenic, chromium, lead, and cyanide at concentrations above the class "GA" standards. The pH of the groundwater was also above the range of the class "GA" standard. The HRS score of the Hanna Furnace site was recalculated using the data collected from the site characterization. The revised HRS, as scored by Recra, remained rather low at 12.28 which

indicates that the site does not pose an immediate concern to human health and the environment.

- In 1995, ABB Environmental Services performed a Preliminary Site Assessment (PSA) for the NYSDEC at the site. The PSA included not only the 131-acre Hanna Furnace site but also the adjacent Chenango Steel site. The purpose of the PSA was to re-score the site using the HRS system and to reclassify the site. Only one soil and one groundwater sample were collected from the former railroad yard during the Hanna Furnace PSA. The soil sample was collected from a soil boring (BS-104) in the south-central portion of the property and the groundwater sample was collected from a monitoring well (MW-104) installed at the same location (see Figure 2). The soil sample was collected from fill material at a depth of 6 to 8 feet below grade, and the well was screened from 5 to 15 feet below grade. Groundwater level measurements from this one well indicated that the water table was present at a depth of approximately 8.7 feet below grade at the time of the PSA. Both the soil and groundwater samples were analyzed for Target Compound List (TCL) volatile organic compounds (VOCs), SVOCs, pesticides/PCBs, and Target Analyte List (TAL) metals and cyanide. Analytical results indicated that the metals aluminum, beryllium, calcium, and magnesium were present in the soil sample at concentrations exceeding, by up to four times, the upper limit of the range found in Eastern United States Background concentrations listed in the TAGM 4046 soil cleanup guidelines. Cyanide was detected at a concentration of 32.1 ppm in the soil sample.

  Analysis of the groundwater sample indicated that only cyanide (240 µg/L) and sodium (26,300 µg/L) were detected at concentrations exceeding the NYSDEC Glass GA Groundwater Quality Standards (100 and 20,000 µg/L, respectively). TCL VOCs, SVOCs, and pesticides/PCBs were not detected in either the soil or groundwater sample. No disposal of listed or characteristic hazardous waste was documented at the site. Also, the site was recommended for delisting from the NYSDEC Registry of Inactive Hazardous Waste Disposal Sites.

- In 1997, Ecology and Environment, Inc., performed an Environmental Site Assessment for the Buffalo Urban Renewal Agency. The objective of the assessment was to summarize all available and pertinent environmental information, to identify variations in current site conditions relative to those defined in earlier investigations, and to identify potential areas of concern. The assessment involved a review of records as well as the performance of three site inspections.

The assessment report presented the findings in order of environmental concern by area. The only environmental concern associated with the railroad yard area was solid waste disposal. Several waste piles of railroad ties, tires, C&D debris, household trash, firebrick and black material were noted in the report. Only those debris piles with black material were considered potential contamination by E & E.

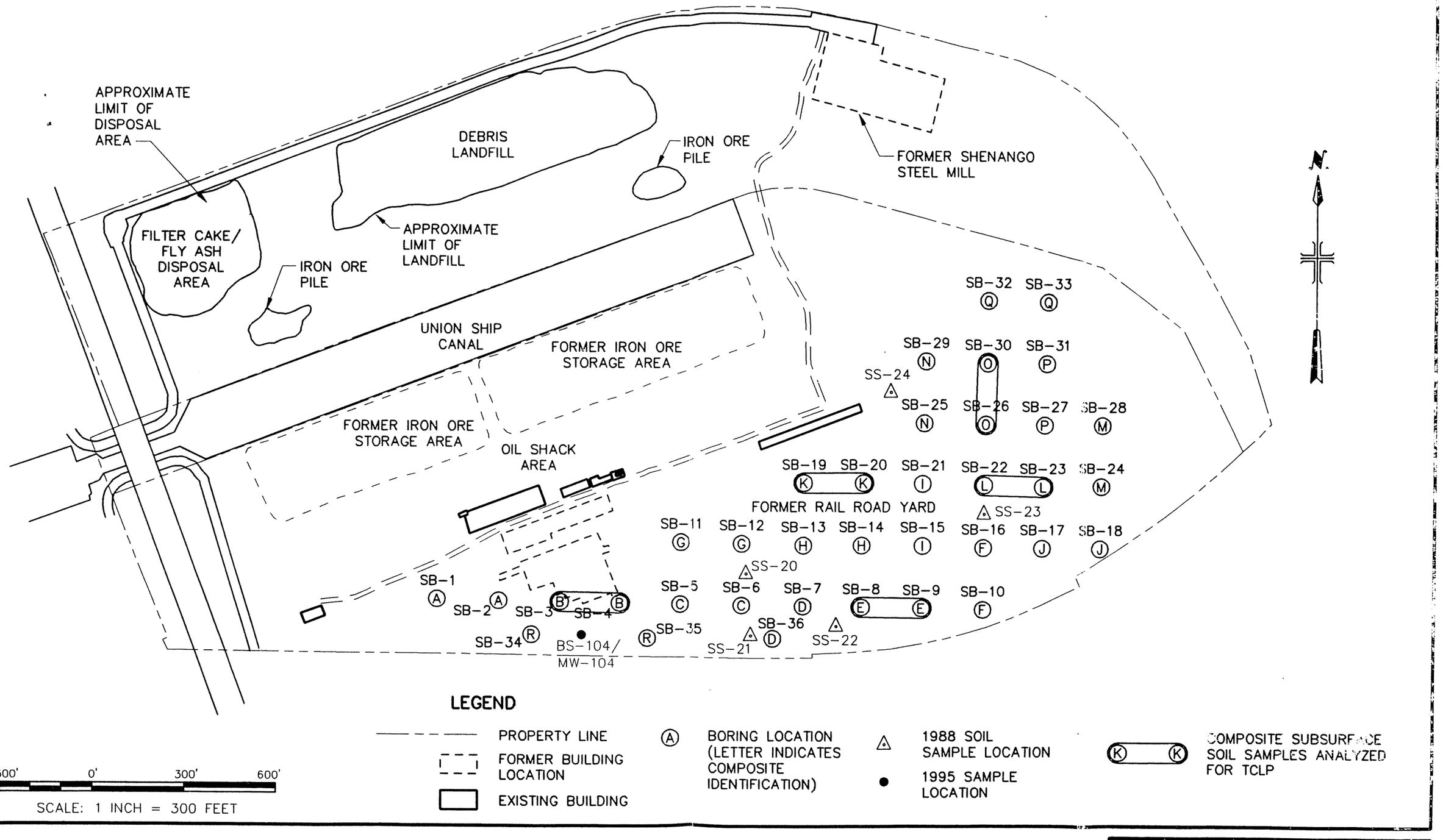
Based on the historical use of the site as a rail yard and historical analytical results of sampling in and near the rail yard, Malcolm Pirnie developed an investigation scope to more thoroughly characterize the former rail yard commensurate with the property's proposed intended end use. The field investigation was performed in six days between December 22, 1998 and January 29, 1999, and included the surveying and marking of the proposed sampling locations and the collection of surface and subsurface samples (see Figure 2).

MALCOLM PIRNIE

Table 1
Buffalo Economic Renaissance Corporation
Hanna Furnace Site
Summary of Composite Sample Locations

Sample Numbers	Borings in Composite
A1, A2	SB-1 and SB-2
B1, B2	SB-3 and SB-4
C1, C2	SB-5 and SB-6
D1, D2	SB-7 and SB-36
E1, E2	SB-8 and SB-9
F1, F2	SB-10 and SB-16
G1, G2	SB-11 and SB-12
H1, H2	SB-13 and SB-14
I1, I2	SB-15 and SB-21
J1, J2	SB-17 and SB-18
K1, K2	SB-19 and SB-20
L1, L2	SB-22 and SB-23
M1, M2	SB-24 and SB-28
N1, N2	SB-25 and SB-29
O1, O2	SB-26 and SB-30
P1, P2	SB-27 and SB-31
Q1, Q2	SB-32 and SB-33
R1, R2	SB-34 and SB-35

Note: Sample numbers A1 through R1 are surface soil samples collected from the 0 to 2 feet depth interval. Samples A2 through R2 are subsurface soil samples collected from the 2-feet to base of fill interval.



LEGEND

- PROPERTY LINE
- FORMER BUILDING LOCATION
- EXISTING BUILDING
- (A) BORING LOCATION (LETTER INDICATES COMPOSITE IDENTIFICATION)
- △ 1988 SOIL SAMPLE LOCATION
- ● 1995 SAMPLE LOCATION
- (K) (K) COMPOSITE SUBSURFACE SOIL SAMPLES ANALYZED FOR TCLP

MALCOLM PIRNIE

3587GFG1

HANNA FURNACE SITE
FORMER RAIL YARD CHARACTERIZATION

BORING LOCATION MAP

BUFFALO ECONOMIC RENAISSANCE CORPORATION

FEBRUARY 1999

2.0 SCOPE OF WORK

2.1 SURVEYING

The surveying firm TVGA divided the site into increments approximately one (1) acre in size using standard surveying methods on December 22 and 23, 1998. To denote each acre, stakes and flags were placed at 200-foot intervals. The borings were completed at 200-foot spacing or as close as possible to each stake.

2.2 SITE WALKOVER

Malcolm Pirnie performed a site walkover on September 11, 1998 in order to assess present site conditions. A significant amount of material was observed in the former rail yard in mounds generally 3 to 5 feet in height. Reportedly, demolition contractors dumped the mounds without a City permit. The mounds reportedly contain demolition debris from projects in Buffalo, New York and possible West Seneca, New York. Debris, including tires, scrap metal, wood, and appliances, was observed throughout the site. Railroad ties were observed in piles as well as in place in the former rail yard.

2.3 SURFACE SOIL SAMPLING

Surface and subsurface soil samples were collected at two foot intervals using split-spoon samples advanced by a drilling rig owned and operated by Maxim Technologies. A total of 36 locations generally spaced 200 feet apart were sampled. Samples were composited from two adjacent locations per sample for a total of 18 composite surface soil and 18 composite subsurface soil samples for submission to the laboratory for analyses.

To characterize the surface soil conditions in the former rail yard, 18 surface soil samples (A1 through R1) were collected as one composite from every two soil boring

locations. The sampling locations are shown on Figure 1, and the locations from which each composite sample was collected are shown in Table 1. The samples were collected from depths of 0 to 2 feet below grade. The composite surface soil samples were analyzed for polycyclic aromatic compounds (PAHs), phenols, cyanide, and TAL metals.

Upon opening each split spoon, a portion of each soil sample was immediately placed in a bottle supplied by the laboratory for analysis of VOCs, and a portion of the sample was placed in a plastic bag for VOC screening. The VOC headspace screening was completed with a photo-ionization detector (PID) on each bagged sample after allowing a minimum of 30 minutes for volatilization. The three surface soil samples with the highest recorded PID measurements were submitted to the laboratory for analysis of TCL VOCs.

The individual surface soil samples were also analyzed for PCBs using DTECH immunoassay test kits. The test kits use antibodies that preferentially bind to the target compounds (in this case, PCBs), and the amount of target compound present is indicated by varying degrees of color change in the antibodies. The test kits determine PCB presence or absence in concentration ranges of 0 to 25 ppm. The test kit results have been considered accurate for establishing the presence or absence of PCBs in those ranges by the New York State Department of Conservation (NYSDEC). For QA/QC purposes and acceptance of the results by the New York State Department of Health (NYSDOH) as protective of public health, five surface soil samples were selected for submittal to the laboratory for analysis of PCBs to confirm the results of the immunoassay test kits. The laboratory analytical results are included in Appendix B.

2.4 SUBSURFACE SOIL SAMPLING

A total of 36 borings (designated SB-1 through SB-36) were completed at the site. One boring was completed at each stake using standard hollow stem auger techniques. The boring locations are shown on Figure 2. Soil samples were collected at 2-foot intervals continuously using decontaminated split spoons two feet in length. The borings

were advanced until native material was encountered, typically 8 to 10 feet bgs. The split spoon samples were described on boring logs by a Malcolm Pirnie geologist and the boring logs are presented in Appendix B. A portion of each split spoon sample was immediately placed in a bottle supplied by the laboratory for analysis of VOCs, and a portion of the sample was placed in a plastic bag for VOC screening. The three subsurface soil samples with the highest recorded PID measurements were submitted to the laboratory for analysis of TCL VOCs. Composite samples were created by mixing the entire vertical column of fill material from each of two adjacent borings, and the resulting samples (A2 through R2) were analyzed for PAHs, phenols, cyanide, and TAL metals. Five composite samples (B2, E2, K2, L2 and O2) were submitted to the laboratory for full TCLP analysis to determine if onsite fill material constitutes a hazardous waste. Table 1 and Figure 2 show which borings were used in each of the composite samples.

Because blue colored fill material was encountered in most of the borings and a blue color is often an indication of the presence of cyanide, one sample was collected of the blue material in boring SB-20 at the 7- to 10-foot depth. The sample was analyzed for total cyanide and reactive cyanide.

3.0 SITE CHARACTERIZATION RESULTS

As described in the boring logs, fill material up to 12 feet thick covers the site. The fill material is generally comprised of tan to brown silty sand with gravel (often slag). At depths of 6 to 10 feet below grade, a blue angular coarse sand size material was generally observed throughout the site in layers 0.5 to 4 feet thick. A layer of peat 6 to 12 inches thick underlay this blue material. Immediately beneath the native peat layer was a dark gray clay and silt.

The discussion of the surface and subsurface soil sample analytical results is based on the Recommended Soil Cleanup Guidelines in the NYSDEC January 1994 Technical Administrative Guideline Memorandum (TAGM) 4046. Where no cleanup guideline for an inorganic analyte is included in TAGM 4046, the highest value of the Eastern United States of America Background Concentrations listed in TAGM 4046 is used for comparison for that analyte. Because the NYSDEC does not have soil cleanup guidelines for lead and cyanide, the USEPA Region III Soil Screening Levels of 400 and 1,600 mg/kg, respectively, were used for comparison. The United States Environmental Protection Agency's Maximum Concentrations for Toxicity Characteristics are used for the Toxicity Characteristic Leaching Procedure results.

3.1 ANALYTICAL RESULTS - VOCs

The PID screening indicated that VOCs were detected at low concentrations in 8 of the 36 borings. The screening results indicated the presence of VOCs at concentrations of up to 4.5 ppm in the borings, and the highest VOC screening concentration was detected in the 2 to 4 foot interval of boring SB-14.

The three surface samples and the three subsurface samples with the highest PID measurements were submitted to the laboratory for analysis of TCL VOCs. No VOCs were detected in the six soil samples.

3.2 ANALYTICAL RESULTS - PCBs

The results of the DTECH PCB test kit analysis indicate that PCBs are sometimes present at very low concentrations in the surface soils at some locations throughout the site. The PCB concentrations detected by the DTECH kits ranged from less than 0.5 to 4.0 parts per million (ppm). The NYSDEC recommended soil cleanup objective (TAGM 4046) for PCBs is 1.0 ppm in surface soil and 10 ppm in subsurface samples. Table 2 summarizes the results of the DTECH PCB analysis.

Five surface soil samples were submitted to the laboratory for PCB analysis to confirm the DTECH test kit results. Sample SB-22 was collected from an interval with DTECH results of less than 0.5 ppm to confirm the low concentrations. Samples SB-16 and SB-27 were collected from intervals with DTECH results of 0.5 to 1.0 ppm to confirm that concentrations in these samples do not exceed the soil cleanup guidelines. Samples SB-15 and SB-33 was collected from the interval with the highest measured DTECH results of 1 to 4 ppm to assess the performance of the kits at higher concentrations. PCBs were not detected in the 5 samples submitted to the laboratory for PCB analysis. Laboratory analysis of all 5 surface samples for PCBs indicates that the DTECH test kits provided false positive results of the PCB concentrations in these samples.

3.3 ANALYTICAL RESULTS - PAHs/PHENOLIC COMPOUNDS

The PAH and phenolic compound analyses indicate that phenolic compounds were not detected, and that some PAHs were detected at concentrations above the soil cleanup guidelines. Table 3 presents the analytical results for the composite surface soil samples, and Table 4 presents the analytical results for the composite subsurface soil samples. The elevated PAH concentrations in the surface soils are consistent with previous sampling performed at the Hanna Furnace Site.

The PAH concentrations detected in the subsurface soil samples were significantly lower than those in the surface soil composite samples. The soil cleanup

Table 2
South Buffalo Redevelopment Plan
Hanna Furnace Site - Former Rail Yard Characterization
DTECH PCB Immunoassay Kits - Analytical Results

Location	Date of Collection	Visual Measure (in ppm)	Meter Measure* (in percent)	Meter Concentration (in ppm)	Lab Confirmation Results (in ug/kg)
SB-1	1/25/99	< 1	LOW	< 0.5	-
SB-2	1/25/99	< 1	6	< 0.5	-
SB-3	1/25/99	< 1	12	0.5 - 1.0	-
SB-4	1/25/99	< 1	LOW	< 0.5	-
SB-5	1/25/99	< 1	LOW	< 0.5	-
SB-6	1/25/99	1	23	1.1 - 4.0	-
SB-7	1/26/99	< 1	3	< 0.5	-
SB-8	1/27/99	4	29	1.1 - 4.0	-
SB-9	1/27/99	1	17	0.5 - 1.0	-
SB-10	1/27/99	< 1	3	< 0.5	-
SB-11	1/26/99	< 1	LOW	< 0.5	-
SB-12	1/28/99	4	31	1.1 - 4.0	-
SB-13	1/28/99	< 1	10	0.5 - 1.0	-
SB-14	1/28/99	4	20	0.5 - 1.0	-
SB-15	1/28/99	4	31	1.1 - 4.0	ND
SB-16	1/26/99	< 1	12	0.5 - 1.0	ND
SB-17	1/26/99	< 1	LOW	< 0.5	-
SB-18	1/26/99	< 1	LOW	< 0.5	-
SB-19	1/26/99	1	10	0.5 - 1.0	-
SB-20	1/26/99	< 1	4	< 0.5	-
SB-21	1/28/99	1	26	1.1 - 4.0	-
SB-22	1/28/99	< 1	LOW	< 0.5	ND
SB-23	1/28/99	< 1	4	< 0.5	-
SB-24	1/27/99	< 1	10	0.5 - 1.0	-
SB-25	1/26/99	< 1	LOW	< 0.5	-
SB-26	1/29/99	< 1	LOW	< 0.5	-
SB-27	1/27/99	1	10	0.5 - 1.0	ND
SB-28	1/27/99	< 1	7	< 0.5	-
SB-29	1/29/99	< 1	LOW	< 0.5	-
SB-30	1/29/99	< 1	LOW	< 0.5	-
SB-31	1/29/99	1	20	0.5 - 1.0	-
SB-32	1/27/99	< 1	8	< 0.5	-
SB-33	1/29/99	4	38	1.1 - 4.0	ND
SB-34	1/28/99	< 1	16	0.5 - 1.0	-
SB-35	1/27/99	< 1	10	0.5 - 1.0	-
SB-36	1/27/99	< 1	5	< 0.5	-

Notes:
* All meter values were measured when reference color was in the appropriate reference range.
- Sample not analyzed by laboratory.
ND; Not detected. (Quantitation Limits for all PCBs is 0.1 mg/kg except PCB 1221 which is 0.2 mg/kg.)

Table 4
Buffalo Economic Renaissance Corporation
Hanna Furnace Site
Summary of Analytical Results
Composite Samples - Subsurface Soil

Sample Location	A-2	B-2	C-2	D-2	E-2	F-2	G-2	H-2	I-2	J-2	K-2	L-2	M-2	N-2	O-2	P-2	Q-2	R-2	TAGM	Background
Collection Date	1/25/99	1/25/99	1/25/99	1/27/99	1/27/99	1/27/99	1/28/99	1/28/99	1/28/99	1/26/99	1/26/99	1/28/99	1/27/99	1/29/99	1/29/99	1/29/99	1/29/99	1/28/99	4046	Concentrations[1]
PAHs/Phenolic Compounds (ug/kg)																				
Naphthalene		140 J	79 J		150 J														13000	NA
2-Methylnaphthalene		230 J	120 J		96 J														36400	NA
Acenaphthene					170 J														50000	NA
Phenanthrene	450 J	180 J			1400						380 J						470		50000	NA
Anthracene					360						110 J						150 J		50000	NA
Fluoranthene	710	170 J			980	96 J					630						530		50000	NA
Pyrene	900	170 J			1100						570						380		50000	NA
Benzo(a)anthracene	410 J	110 J			450						320 J						240 J		224	NA
Chrysene	500 J	160 J			460						320 J						210 J		400	NA
Benzo(b)fluoranthene	650	220 J			390						400 J						250 J		1100	NA
Benzo(k)fluoranthene					150 J														1100	NA
Benzo(a)pyrene	470 J	160 J			330						310 J						180 J		61	NA
Indeno(1,2,3-cd)pyrene	330 J										220 J								3200	NA
Benzo(g,h,i)perylene	410 J	99 J			210 J						220 J						89 J		50000	
Metals (mg/kg)																				
Aluminum	40800	28800	27600	38900	28500	38000	43200	27400	31200	33300	50300	54000	17700	46200	40900	23900	12200	43100	SB	33000
Antimony				11	11.4	10.6	10.3	13.5	13.2				16.6	11.2		11.9			SB	NA
Arsenic								20.4					35.6						7.5 or SB	3 - 12
Barium	226	289	274	286	260	215	389	226	305	356	408	240	202	416	310	344	89.3	264	300 or SB	15 - 600
Beryllium	6.4	4.91	4.63	6.73	5.05	4.19	7.6	4.52	5.09	5.82	8.57	8.38	3.42	9.61	7.65	6.6	0.73	6.17	.016 or SB	0 - 1.75
Cadmium				8.1						4.7	1.05		7.8						1 or SB	0.1-1
Calcium	196000	154000	156000	233000	166000	169000	255000	102000	162000	148000	201000	221000	85000	296000	236000	188000	37400	193000	SB	130-35000
Chromium	5.89	4.36	14.4	12	30.5	27.4	20.2	27.7	28.6	23	20.4	5.18	35.2	9.05	13.2	12.5	25.9	4.7	10 or SB	1.5 - 40
Cobalt		3.08	3.34		7.61	7.85	4.93	10.6	11.3	4.26	5.03	4.4	11.2	4.97	3.69	9.91	14	4.56	30 or SB	2.5 - 60
Copper	9.58	10.7	26.5	21.9	20.2	20.1	13.8	9.18	21.4	13.4	42.2	12.7	5.53	12.3	11.6	14.9	30.7	8.49	25 or SB	1 - 50
Cyanide, Total	8.04	17.4	20.1	33.2	5.79	5.02	32.7	7.65	11.9	6.35	3.23	4.23	18.5	3.25	0.99	26	1.05	20.9	1600[2]	NA
Iron	4250	20600	32800	37100	115000	137000	25400	177000	200000	78200	209000	19500	200000	18000	8610	105000	34700	29900	2000 or SB	2000 - 55000
Lead		9.78	62.7	56.2	85.1	175	24.4	66.5	77.1	50	166	16.2	65.4			34.1	35.9	15.3	400[2]	4 - 500
Magnesium	13100	12600	13400	19000	11700	7960	26800	9080	7950	16600	25000	14100	5320	16900	15700	8200	14900	14000	SB	100 - 5000
Manganese	2630	2030	2440		2010	2950	5150	2540	2670	3210	3690	2460	2660	2730	3670	2100	671	2480	SB	50 - 5000
Mercury					0.057	0.034			0.028				0.022				0.097		0.1	0.001 - 0.2
Nickel	9.92	8.71	17.8	11.5	16.7	32	23.8	27.8	25.6	20.9	23.4	11.8	27.2	11.4	16.6	16.1	33.5	13.7	13 or SB	0.5 - 25
Potassium	1200	1140	1830	1590	1460	2210	2970	2410	1080	1960	2510	1440	1490	2240	1700	1280	1940	1420	SB	8500 - 43000
Sodium	467	521	562	713	328	420	746	356	279	680	610	458	201	568	558	391	189	443	SB	6000 - 8000
Vanadium	8.4	11.2	17	17.8	57.8	46.5	24.8	78	68.7	42.8	25.1	17.3	104	17.2	21.2	34.5	25.7	19.3	150 or SB	1 - 300
Zinc	9.05	40.2	182	107	197	1040	37	1670	1030	331	445	90.3	683		11.1	263	101	475	20 or SB	9 - 50

Notes:
PAHS - Polycyclic Aromatic Hydrocarbons.
Blank space denotes analyte was not detected.
Only compounds detected in at least one sample included in table.
NA - No NYSDEC TAGM 4046 Soil Background Concentration.
SB - Site Background.
J - Estimated concentrations.
1 - Background concentrations from NYSDEC TAGM 4046.
2 - USEPA Region 3 Soil Screening Levels (SSLs).
Shading indicates that concentration exceeds Guidance Value, and the background range is used when there is no Guidance Value.

Table 3
Buffalo Economic Renaissance Corporation
Hanna Furnace Site
Summary of Analytical Results
Composite Samples - Surface Soil

Sample Location	A-1	B-1	C-1	D-1	E-1	F-1	G-1	H-1	I-1	J-1	K-1	L-1	M-1	N-1	O-1	P-1	Q-1	R-1	TAGM	Background
Collection Date	1/25/99	1/25/99	1/25/99	1/27/99	1/27/99	1/27/99	1/28/99	1/28/99	1/28/99	1/26/99	1/26/99	1/28/99	1/27/99	1/29/99	1/29/99	1/29/99	1/29/99	1/28/99	4046	Concentrations[1]
PAHs/Phenolic Compounds (ug/kg)																				
Naphthalene	120 J	100 J	130 J							89 J	76 J						65 J		13000	NA
2-Methylnaphthalene	91 J	96 J	210 J	65 J						94 J	80 J								36400	NA
Acenaphthylene	200 J																	130 J	41000	NA
Acenaphthene	400	140 J								74 J	100 J						130 J		50000	NA
Phenanthrene	1500	560	460 J	160 J	730		78 J		99 J	240 J	1100	310 J			160 J		120J	310	50000	NA
Anthracene	530	170 J			180 J					79 J	330	78 J					34C	110 J	50000	NA
Fluoranthene	200 J	470	630	290 J	680		220 J	83 J	110 J	660	1600	590	120 J	110 J	280 J	120 J	170J	2000	50000	NA
Pyrene	5200	680	820	350	590		270 J	120 J	110 J	710	1500	460	130 J		310		160J	2200	50000	NA
Benzo(a)anthracene	3700	250 J	390 J	230 J	320 J		180 J	75 J		520	880	270 J	95 J	93 J	170 J	78 J	98C	1400	224	NA
Chrysene	3300	410	530 J	290 J	280 J		240 J	84 J	88 J	700	880	290 J	100 J	120 J	190 J	82 J	99C	1400	400	NA
Benzo(b)fluoranthene	6400	700	930 J	510	340 J		410	150 J	120 J	1300	1300	400	170 J	260 J	260 J	150 J	140J	1800	1100	NA
Benzo(k)fluoranthene	1900	250 J	560 J	260 J						450	350						52C	660	1100	NA
Benzo(a)pyrene	5100	430	480 J	470	260 J		210 J	100 J	73 J	810	920	280 J	100 J	150 J	220 J	110 J	99C	1200	61	NA
Indeno(1,2,3-cd)pyrene	3700	430	560 J	430						650	550						460	750	3200	NA
Dibenzo(a,h)anthracene	960		560 J															170 J	14	NA
Benzo(g,h,i)perylene	4100	500	560 J	480	120 J		180 J			700		200 J		99 J	150 J	95 J	480	680	50000	NA
Metals (mg/kg)																				
Aluminum	24800	30400	22700	25300	20800	37400	21300	16600	20400	20900	17600	21100	23900	45700	29100	26600	16300	24000	SB	33000
Antimony				6.99		8.48	7.65	15.1	12.8	7.78		9.26	11.2		7.4	10.1	7.4J	9.02	SB	NA
Arsenic				15.4					21.9						61.7				7.5 or SB	3 - 12
Barium	193	350	247	220	194	338	222	174	127	160	192	220	252	238	365	272	80.7	204	300 or SB	15 - 600
Beryllium	4.19	7.45	5.21	4.78	3.05	5.39	5.29	2.88	2.18	3.43	3.04	5.64	3.68	6.86	6.62	4.92	1.44	4.12	.016 or SB	0 - 1.75
Cadmium			6.7					7.3		8		1.19						0.707	1 or SB	0.1-1
Calcium	119000	163000	118000	137000	102000	191000	154000	77100	48000	123000	88700	158000	82500	212000	194000	139000	73400	125000	SB	130-35000
Chromium	24.5	12.2	127	42.8	51.2	23.2	24.5	54.7	86.3	38.4	65.7	18.2	48.5	6.89	20.3	23.4	78.2	20.7	10 or SB	1.5 - 40
Cobalt	3.79	1.89	5.55	6.26	12.7	5.64	5.88	13.4	15.7	5.9	7.5	5.79	9.56	4.75	4.12	7.24	7.03	5.15	30 or SB	2.5 - 60
Copper	31.7	27.7	40.9	42.8	44.6	39.1	49.7	48.2	108	120	181	39.1	48.6	20.1	168	96.4	98.5	51.2	25 or SB	1 - 50
Cyanide, Total	6.67	2.17	11.4	16.5	3.35	10.4	21.2	5.58	3.52	8.18	7.64	10.2	4.34	28.8	3.54	3.76	11.3	10.1	1600[2]	NA
Iron	57200	13700	79300	82500	60100	59900	80800	202000	236000	65100	70400	137000	193000	23800	56200	114000	103000	77000	2000 or SB	2000 - 550000
Lead	170	33.9	185	97.2	203	115	1120	220	285	274	611	116	208	22.1	245	218	618	177	400[2]	4 - 500
Magnesium	9270	38200	23500	20400	16400	18800	20900	11400	5890	18100	16400	10900	10700	15400	23900	16100	14100	12500	SB	100 - 5000
Manganese	2590	2320	3530	2860	2110	3920	2670	5750	4590	2950	3030	3340	5250	1900	10400	2020	1950	2690	SB	50 - 5000
Mercury	0.21								0.047					0.026			0.025		0.1	0.001 - 0.2
Nickel	20.5	14.2	34.1	30.2	35.8	28.9	24.8	53.5	96.9	33.3	40.6	24.8	52.7	11.9	52.1	23.7	42.8	25	13 or SB	0.5 - 25
Potassium	1290	2010	1570	1730	1710	2310	1560	1420	1110	1050	1250	969	1880	1100	2090	1530	716	1490	SB	8500 - 43000
Silver	429	1170	1020	579	370	796	662	456	264	557	512	396	702	454	944	434	191	531	SB	NA
Sodium	19.7	6.26	30.1	27.3	37.5	26.6	14.8	66.3	48.9	26.4	37.3	18.3	54.9	14.9	17.2	27.8	44.4	19.6	SB	6000 - 8000
Vanadium	343	75.8	322	266	251	412	331	1050	1100	1150	1020	233	582	63.7	128	446	472	393	150 or SB	1 - 300
Zinc	340	76	320	270	250	410	330	1100	1100	1200	1000	230	580	64	130	450	470	390	20 or SB	9 - 50

Notes:
PAHS - Polycyclic Aromatic Hydrocarbons.
Blank space denotes analyte was not detected.
Only compounds detected in at least one sample included in table.
NA - No NYSDEC TAGM 4046 Soil Background Concentration.
SB - Site Background.
J - Estimated concentrations.
1 - Background concentrations from NYSDEC TAGM 4046.
2 - USEPA Region 3 Soil Screening Levels (SSLs).
Shading indicates that concentration exceeds Guidance Value, and the background range is used when there is no Guidance Value.

guidelines were contravened for at least one PAH compound in 17 of the 18 surface soil composite samples, but in only 5 of the 18 subsurface soil composite samples. In the surface soil samples, concentrations of indeno(1,2,3-cd)pyrene and benzo(k)fluoranthene were slightly above the soil cleanup guidelines, while concentrations of benzo(a)anthracene, chrysene, benzo(b)fluoranthene, benzo(a)pyrene, and dibenzo(a,h)anthracene were significantly above the guidelines. The results of the subsurface soil samples indicated that concentrations of benzo(a)anthracene and chrysene slightly exceeded the soil cleanup guidelines, and concentrations of benzo(a)pyrene were significantly above the guidelines.

The concentrations of PAHs detected in both surface and subsurface soils at this site are primarily within the range typically found in urban soils. Because PAHs are formed through anthropogenic combustion processes such as the burning of coal, oil and gasoline, they are generally ubiquitous in soils, especially urban soils.

The presence of PAH's at this site is consistent with its urban location and past use as a railroad yard.

3.4 ANALYTICAL RESULTS - INORGANIC ANALYTES

The analysis of composite soil samples for inorganic analytes (TAL metals plus cyanide) indicated that a number of metals were detected at concentrations above the soil cleanup guidelines. Table 3 shows the analytical results for the surface samples, and Table 4 shows the analytical results for the subsurface samples. The elevated metals concentrations in the surface soils are generally consistent with previous sampling performed at the Hanna Furnace Site.

Surface Soils

The analysis of the surface soil composite samples indicated that aluminum, arsenic, beryllium, cadmium, calcium, chromium, copper, lead, magnesium, manganese, mercury, nickel, and zinc were detected in at least one sample at concentrations exceeding the soil cleanup guidelines and/or the Eastern U.S. background concentrations.

Maximum detected concentrations of aluminum, manganese, and mercury were less than 2 times the Eastern U.S. soil background concentrations. Maximum chromium, copper, lead and nickel concentrations were less than 4 times the background concentrations; and maximum arsenic, beryllium, cadmium, calcium, and magnesium concentrations were equal to or less than 8 times the background concentrations. The highest detected concentration of zinc was 24 times the background concentrations.

Barium and iron were detected in the surface soil samples at concentrations above the soil cleanup guidelines, but below the Eastern U.S. background concentrations. Cadmium, cobalt, mercury, potassium, sodium, selenium, silver, and thallium were detected at concentrations at or below the guidelines, or were not detected in the composite surface soil samples.

Subsurface Soils

The concentrations of metals in the composite subsurface soil samples were generally lower than or similar to those of the surface soil samples. Aluminum, arsenic, beryllium, cadmium, calcium, magnesium, manganese, nickel, and zinc were detected in at least one composite surface sample at concentrations exceeding the soil cleanup guidelines and/or the Eastern U.S. background concentrations.

Maximum detected concentrations of aluminum, manganese, and nickel were less than 2 times the Eastern U.S. soil background concentrations. Maximum arsenic, beryllium, and magnesium concentrations were less than 6 times the background concentrations; and maximum cadmium and calcium concentrations were less than 9 times the background concentrations. The highest detected concentration of zinc was 34 times the background concentrations.

Barium and iron were detected in the subsurface samples at concentrations above the soil cleanup guidelines, but below the Eastern U.S. background concentrations. Cadmium, chromium, cobalt, copper, lead, mercury, potassium, sodium, selenium, silver, and thallium were detected at concentrations at or below the applicable guidelines, or were not detected in the composite subsurface soil samples.

Total cyanide concentrations in the composite surface and subsurface soil samples ranged from 1 to 33 mg/kg. Analysis of the sample of blue sandy material collected from boring SB-20 revealed that no reactive cyanide was detected in the sample, and that the total cyanide concentration was 38.8 mg/kg. Although there currently is no NYSDEC soil cleanup guideline for cyanide, the USEPA soil screening level (SSL) can be used for comparison. The SSL for amenable cyanide is 1600 mg/kg. Amenable cyanide is that portion which is amenable to chlorination. The susceptibility of cyanide complexes to chlorination is indicative of its availability to organisms. Total cyanide includes the cyanide that is amenable and that is not amenable to chlorination. Because the total cyanide concentrations detected in the samples from the site are less than 40 mg/kg, the concentrations detected in the soil at the Former Rail Yard are well below the USEPA soil screening levels for amenable cyanide.

3.5 ANALYTICAL RESULTS - TOXICITY CHARACTERISTIC LEACHING PROCEDURE (TCLP)

The TCLP analysis of 5 subsurface composite samples indicated that only barium is present in leachable quantities. Barium concentrations ranged from 0.2 to 0.6 µg/L in the samples of fill material, well below the USEPA Maximum Concentration Value for Toxicity Characteristics of 100 µg/L for barium.

4.0 SUMMARY AND CONCLUSIONS

The characterization of the Former Rail Yard at the Hanna Furnace Site revealed that fill material is present at the site at an average thickness of 9 feet and a maximum thickness of approximately 12 feet. Underlying the fill material is native material consisting of a layer of peat underlain by gray silt and clay. Staining and odors were absent in the soil borings, and PID measurements were detected in only 8 out of 36 borings.

The laboratory analytical results indicate that VOCs, PCBs, and phenols were not detected in the samples from the Former Rail Yard. Additionally, cyanide concentrations were well below the USEPA soil screening levels. A number of metals and PAHs were detected at concentrations above the NYSDEC soil cleanup guidelines, with higher concentrations generally occurring in the samples collected from the 0 to 2 foot interval. The TCLP analysis indicated that only barium was present in leachable quantities in the fill material at the site, and that the concentrations of barium in the TCLP samples were well below the applicable guidelines.

These results indicate that the rail yard is suitable for re-development as a commercial/light industrial park provided that certain precautions are taken to limit exposure to the metals and PAHs present in the on-site fill material. Minimum precautions should include:

- Establishment of health and safety protocols for specific re-development activities to minimize exposure potential.
- Development of a protocol for dealing with excavated fill material
- Placement of a minimum of 1-foot of clean soil over the surface following or during development to minimize the potential for exposure following site re-development.
- Establishment of a protocol for digging required to maintain or enhance utilities following completion of site redevelopment including health and safety requirements and excavated soil handling/disposal requirements.

MALCOLM PIRNIE

APPENDIX A

LABORATORY ANALYTICAL RESULTS

FLI
FRIEND LABORATORY I · N · C

ONE RESEARCH CIRCLE WAVERLY, NY 14892-1532
TELEPHONE (607) 565-3500 FAX (607) 565-4083

DATE : 25-FEB-1999

LAB SAMPLE ID : L30628-9

Malcolm Pirnie, Inc. - Orchard Park
Daniel Riker
40 Centre Drive
PO Box 1938
Buffalo, NY 14219-0138

SAMPLE SOURCE	HANNA FURNACE, 3587-001
ORIGIN	J-2
DESCRIPTION	COMPOSITE
SAMPLED ON	26-JAN-99 00:00 by CLIENT
DATE RECEIVED	28-JAN-99 00:00
P.O. NO.	N/A

CAS #	Analysis Performed	Result	Units	Detection Limit	Date Analyzed	Method	Notebook Reference
	Cyanide, Total	6.35	mg/kg	0.54	03-FEB-99	EPA 335.3	99-003-004
	Total Solids	73.36	%		01-FEB-99	CLP 3.0	97-070-45
	Aluminum	33300	mg/kg	9.74	05-FEB-99	EPA 6010A	99-016-08
	Antimony	U	mg/kg	6.49	09-FEB-99	EPA 6010A	99-016-10
	Arsenic	U	mg/kg	15.5	05-FEB-99	EPA 6010A	99-016-08
	Barium	356	mg/kg	2.08	05-FEB-99	EPA 6010A	99-016-08
	Beryllium	5.82	mg/kg	0.260	05-FEB-99	EPA 6010A	99-016-08
	Cadmium	4.7	mg/kg	2.6	17-FEB-99	EPA 7130	93-259-85
	Calcium	148000	mg/kg	1300	09-FEB-99	EPA 6010A	99-016-10
	Chromium	23	mg/kg	1.30	05-FEB-99	EPA 6010A	99-016-08
	Cobalt	4.26	mg/kg	1.30	05-FEB-99	EPA 6010A	99-016-08
	Copper	13.4	mg/kg	2.21	05-FEB-99	EPA 6010A	99-016-08
	Iron	78200	mg/kg	100	09-FEB-99	EPA 6010A	99-016-10
	Lead	50	mg/kg	5.71	05-FEB-99	EPA 6010A	99-016-08
	Magnesium	16600	mg/kg	64.9	05-FEB-99	EPA 6010A	99-016-08
	Manganese	3210	mg/kg	13.0	09-FEB-99	EPA 6010A	99-016-10
	Mercury	U	mg/kg	0.0140	03-FEB-99	EPA 7470	98-126-03
	Nickel	20.9	mg/kg	1.56	05-FEB-99	EPA 6010A	99-016-08
	Potassium	1960	mg/kg	64.9	05-FEB-99	EPA 6010A	99-016-08
	Selenium	U	mg/kg	9.09	19-FEB-99	EPA 6010A	99-036-04
	Silver	U	mg/kg	26.0	09-FEB-99	EPA 6010A	99-016-10

U = None Detected

QC ✓ NY 10252 NJ 73168 PA 68180 EPA NY 00033

Approved by: _____ Lab Director

KEY: ND or U = None Detected; < = less than; ug/L = micrograms per liter (equivalent to parts per billion)
mg/L = milligrams per liter (equivalent to parts per million); mg/kg = milligrams per kilogram (equivalent to parts per millio
B = analyte was detected in the method or trip blank; J = result estimated below the quantitation limit

FLI
FRIEND LABORATORY I · N · C

ONE RESEARCH CIRCLE WAVERLY, NY 14892-1532
TELEPHONE (607) 565-3500 FAX (607) 565-4083

DATE : 25-FEB-1999

LAB SAMPLE ID : L30628-1

Malcolm Pirnie, Inc. - Orchard Park
Daniel Riker
40 Centre Drive
PO Box 1938
Buffalo, NY 14219-0138

SAMPLE SOURCE	HANNA FURNACE, 3587-001
ORIGIN	A-1
DESCRIPTION	COMPOSITE
SAMPLED ON	25-JAN-99 00:00 by CLIENT
DATE RECEIVED	28-JAN-99 00:00
P.O. NO	N/A

CAS #	Analysis Performed	Result	Units	Detection Limit	Date Analyzed	Method	Notebook Reference
	Sodium	429	mg/kg	27.8	05-FEB-99	EPA 6010A	99-016-08
	Thallium	U	mg/kg	9.04	05-FEB-99	EPA 6010	99-016-08
	Vanadium	19.7	mg/kg	1.39	05-FEB-99	EPA 6010A	99-016-08
	Zinc	343	mg/kg	2.78	05-FEB-99	EPA 6010A	99-016-08
108-95-2	Phenol	U	ug/kg	330	08-FEB-99	EPA 8270	98-051-7897
95-57-8	2-Chlorophenol	U	ug/kg	330	08-FEB-99	EPA 8270	98-051-7897
95-48-7	2-Methylphenol	U	ug/kg	330	08-FEB-99	EPA 8270	98-051-7897
	3-Methylphenol/4-Methylphenol	U	ug/kg	330	08-FEB-99	EPA 8270	98-051-7897
88-75-5	2-Nitrophenol	U	ug/kg	330	08-FEB-99	EPA 8270	98-051-7897
105-67-9	2,4-Dimethylphenol	U	ug/kg	330	08-FEB-99	EPA 8270	98-051-7897
120-83-2	2,4-Dichlorophenol	U	ug/kg	330	08-FEB-99	EPA 8270	98-051-7897
91-20-3	Naphthalene	120 J	ug/kg	330	08-FEB-99	EPA 8270	98-051-7897
59-50-7	4-Chloro-3-methylphenol	U	ug/kg	660	08-FEB-99	EPA 8270	98-051-7897
91-57-6	2-Methylnaphthalene	91 J	ug/kg	330	08-FEB-99	EPA 8270	98-051-7897
208-96-8	Acenaphthylene	200 J	ug/kg	330	08-FEB-99	EPA 8270	98-051-7897
83-32-9	Acenaphthene	400	ug/kg	330	08-FEB-99	EPA 8270	98-051-7897
51-28-4	2,4-Dinitrophenol	U	ug/kg	1300	08-FEB-99	EPA 8270	98-051-7897
100-02-7	4-Nitrophenol	U	ug/kg	1300	08-FEB-99	EPA 8270	98-051-7897
534-52-1	2-Methyl-4,6-dinitrophenol	U	ug/kg	1300	08-FEB-99	EPA 8270	98-051-7897
87-86-5	Pentachlorophenol	U	ug/kg	1300	08-FEB-99	EPA 8270	98-051-7897
85-01-8	Phenanthrene	1500	ug/kg	330	08-FEB-99	EPA 8270	98-051-7897
120-12-7	Anthracene	530	ug/kg	330	08-FEB-99	EPA 8270	98-051-7897
206-44-0	Fluoranthene	200 J	ug/kg	330	08-FEB-99	EPA 8270	98-051-7897
129-00-0	Pyrene	5200	ug/kg	330	08-FEB-99	EPA 8270	98-051-7897
56-55-3	Benzo(a)anthracene	3700	ug/kg	330	08-FEB-99	EPA 8270	98-051-7897
215-01-9	Chrysene	3300	ug/kg	330	08-FEB-99	EPA 8270	98-051-7897
205-99-2	Benzo(b)fluoranthene	6400	ug/kg	330	08-FEB-99	EPA 8270	98-051-7897
207-88-9	Benzo(k)fluoranthene	1900	ug/kg	330	08-FEB-99	EPA 8270	98-051-7897
50-32-8	Benzo(a)pyrene	5100	ug/kg	330	08-FEB-99	EPA 8270	98-051-7897
193-39-5	Indeno(1,2,3-cd)pyrene	3700	ug/kg	330	08-FEB-99	EPA 8270	98-051-7897
53-7-3	Dibenzo(a,h)anthracene	960	ug/kg	330	08-FEB-99	EPA 8270	98-051-7897
191-24-2	Benzo(g,h,i)perylene	4100	ug/kg	330	08-FEB-99	EPA 8270	98-051-7897
	Extraction Information:				04-FEB-99		98-174-51
Surrogate Recovery:							
	2-Fluorophenol	83	%				98-051-7897

U = None Detected

QC ✓ NY 10252 NJ 73168 PA 68180 EPA NY 00033

Approved by: _____ Lab Director

KEY: ND or U = None Detected < = less than ug/L = micrograms per liter (equivalent to parts per billion)
mg/L = milligrams per liter (equivalent to parts per million) mg/kg = milligrams per kilogram (equivalent to parts per million)
B = analyte was detected in the method or trip blank J = result estimated below the quantitation limit

FLI
FRIEND LABORATORY I · N · C

ONE RESEARCH CIRCLE WAVERLY, NY 14892-1532
TELEPHONE (607) 565-3500 FAX (607) 565-4083

DATE 25-FEB-1999

LAB SAMPLE ID : L30628-1

Malcolm Pirnie, Inc. - Orchard Park
Daniel Riker
40 Centre Drive
PO Box 1938
Buffalo, NY 14219-0138

SAMPLE SOURCE	HANNA FURNACE, 3587-001
ORIGIN	A-1
DESCRIPTION	COMPOSITE
SAMPLED ON	25-JAN-99 00:00 by CLIENT
DATE RECEIVED	28-JAN-99 00:00
P.O. NO.	N/A

CAS #	Analysis Performed	Result	Units	Detection Limit	Date Analyzed	Method	Notebook Reference
	Phenol-d5	106	%				98-051-7897
	Nitrobenzene-d5	110	%				98-051-7897
	2-Fluorobiphenyl	109	%				98-051-7897
	2,4,6-Tribromophenol	68	%				98-051-7897
	Terphenyl-d14	114	%				98-051-7897

Analysis Comment: Results Calculated on a dry weight basis.

U = None Detected

QC NY 10252 NJ 73168 PA 68180 EPA NY 00033

Approved by: _____ Lab Director

KEY: ND or U = None Detected < = less than ug/L = micrograms per liter (equivalent to parts per billion)
mg/L = milligrams per liter (equivalent to parts per million) mg/kg = milligrams per kilogram (equivalent to parts per million)
B = analyte was detected in the method or trip blank J = result estimated below the quantitation limit

FLI
FRIEND LABORATORY · N · C

ONE RESEARCH CIRCLE WAVERLY, NY 14892-1532
TELEPHONE (607) 565-3500 FAX (607) 565-4083

DATE 25-FEB-1999

LAB SAMPLE ID : L30628-8

Malcolm Pirnie, Inc. - Orchard Park
Daniel Riker
40 Centre Drive
PO Box 1938
Buffalo, NY 14219-0138

SAMPLE SOURCE	HANNA FURNACE, 3587-001
ORIGIN	J-1
DESCRIPTION	COMPOSITE
SAMPLED ON	26-JAN-99 00:00 by CLIENT
DATE RECEIVED	28-JAN-99 00:00
P.O. NO.	N/A

AS #	Analysis Performed	Result	Units	Detection Limit	Date Analyzed	Method	Notebook Reference
	Phenol-d5	86	%				97-186-10883
	Nitrobenzene-d5	96	%				97-186-10883
	2-Fluorobiphenyl	98	%				97-186-10883
	2,4,6-Tribromophenol	82	%				97-186-10883
	Terphenyl-d14	95	%				97-186-10883

Analysis Comment: Results Calculated on a dry weight basis.

J = None Detected

IC NY 10252 NJ 73168 PA 68180 EPA NY 00033

Approved by: _____
Lab Director

KEY: ND or U = None Detected < = less than
mg/L = milligrams per liter (equivalent to parts per million)
B = analyte was detected in the method or trip blank
ug/L = micrograms per liter (equivalent to parts per billion)
mg/kg = milligrams per kilogram (equivalent to parts per million)
J = result estimated below the quantitation limit

FLI
FRIEND LABORATORY I · N · C

ONE RESEARCH CIRCLE WAVERLY, NY 14892-1532
TELEPHONE (607) 565-3500 FAX (607) 565-4083

DATE 25-FEB-1999

LAB SAMPLE ID : L30628-2

Malcolm Pirnie, Inc. - Orchard Park
Daniel Riker
40 Centre Drive
PO Box 1938
Buffalo, NY 14219-0138

SAMPLE SOURCE	HANNA FURNACE, 3587-001
ORIGIN	A-2
DESCRIPTION	COMPOSITE
SAMPLED ON	25-JAN-99 00:00 by CLIENT
DATE RECEIVED	28-JAN-99 00:00
P.O. NO.	N/A

CAS #	Analysis Performed	Result	Units	Detection Limit	Date Analyzed	Method	Notebook Reference
	Sodium	467	mg/kg	46.3	05-FEB-99	EPA 6010A	99-016-08
	Thallium	U	mg/kg	15.0	05-FEB-99	EPA 6010	99-016-08
	Vanadium	8.4	mg/kg	2.32	05-FEB-99	EPA 6010A	99-016-08
	Zinc	9.05	mg/kg	4.64	05-FEB-99	EPA 6010A	99-016-08
108-95-2	Phenol	U	ug/kg	560	05-FEB-99	EPA 8270	97-186-10881
95-57-8	2-Chlorophenol	U	ug/kg	560	05-FEB-99	EPA 8270	97-186-10881
95-48-7	2-Methylphenol	U	ug/kg	560	05-FEB-99	EPA 8270	97-186-10881
	3-Methylphenol/4-Methylphenol	U	ug/kg	560	05-FEB-99	EPA 8270	97-186-10881
88-75-5	2-Nitrophenol	U	ug/kg	560	05-FEB-99	EPA 8270	97-186-10881
105-67-9	2,4-Dimethylphenol	U	ug/kg	560	05-FEB-99	EPA 8270	97-186-10881
120-83-2	2,4-Dichlorophenol	U	ug/kg	560	05-FEB-99	EPA 8270	97-186-10881
91-20-3	Naphthalene	U	ug/kg	560	05-FEB-99	EPA 8270	97-186-10881
59-50-7	4-Chloro-3-methylphenol	U	ug/kg	1100	05-FEB-99	EPA 8270	97-186-10881
91-57-6	2-Methylnaphthalene	U	ug/kg	560	05-FEB-99	EPA 8270	97-186-10881
208-96-8	Acenaphthylene	U	ug/kg	560	05-FEB-99	EPA 8270	97-186-10881
83-32-9	Acenaphthene	U	ug/kg	560	05-FEB-99	EPA 8270	97-186-10881
51-28-4	2,4-Dinitrophenol	U	ug/kg	2200	05-FEB-99	EPA 8270	97-186-10881
100-02-7	4-Nitrophenol	U	ug/kg	2200	05-FEB-99	EPA 8270	97-186-10881
534-52-1	2-Methyl-4,6-dinitrophenol	U	ug/kg	2200	05-FEB-99	EPA 8270	97-186-10881
87-86-5	Pentachlorophenol	U	ug/kg	2200	05-FEB-99	EPA 8270	97-186-10881
85-01-8	Phenanthrene	450 J	ug/kg	560	05-FEB-99	EPA 8270	97-186-10881
120-12-7	Anthracene	U	ug/kg	560	05-FEB-99	EPA 8270	97-186-10881
206-44-0	Fluoranthene	710	ug/kg	560	05-FEB-99	EPA 8270	97-186-10881
129-00-0	Pyrene	900	ug/kg	560	05-FEB-99	EPA 8270	97-186-10881
56-55-3	Benzo(a)anthracene	410 J	ug/kg	560	05-FEB-99	EPA 8270	97-186-10881
215-01-9	Chrysene	500 J	ug/kg	560	05-FEB-99	EPA 8270	97-186-10881
205-99-2	Benzo(b)fluoranthene	650	ug/kg	560	05-FEB-99	EPA 8270	97-186-10881
207-88-9	Benzo(k)fluoranthene	U	ug/kg	560	05-FEB-99	EPA 8270	97-186-10881
50-32-8	Benzo(a)pyrene	470 J	ug/kg	560	05-FEB-99	EPA 8270	97-186-10881
193-39-5	Indeno(1,2,3-cd)pyrene	330 J	ug/kg	560	05-FEB-99	EPA 8270	97-186-10881
53-7-3	Dibenzo(a,h)anthracene	U	ug/kg	560	05-FEB-99	EPA 8270	97-186-10881
191-24-2	Benzo(g,h,i)perylene	410 J	ug/kg	560	05-FEB-99	EPA 8270	97-186-10881
	Extraction Information:				04-FEB-99		98-174-51
Surrogate Recovery:							
	2-Fluorophenol	58	%				97-186-10881

U = None Detected

Approved by: _____
Lab Director

KEY: ND or U = None Detected < = less than ug/L = micrograms per liter (equivalent to parts per billion)
mg/L = milligrams per liter (equivalent to parts per million) mg/kg = milligrams per kilogram (equivalent to parts per million)
B = analyte was detected in the method or trip blank J = result estimated below the quantitation limit

FLI
FRIEND LABORATORY I · N · C

ONE RESEARCH CIRCLE WAVERLY, NY 14892-1532
TELEPHONE (607) 565-3500 FAX (607) 565-4083

DATE 25-FEB-1999

LAB SAMPLE ID : L30628-2

Malcolm Pirnie, Inc. - Orchard Park
Daniel Riker
40 Centre Drive
PO Box 1938
Buffalo, NY 14219-0138

SAMPLE SOURCE	HANNA FURNACE, 3587-001
ORIGIN	A-2
DESCRIPTION	COMPOSITE
SAMPLED ON	25-JAN-99 00:00 by CLIENT
DATE RECEIVED	28-JAN-99 00:00
P.O. NO.	N/A

CAS #	Analysis Performed	Result	Units	Detection Limit	Date Analyzed	Method	Notebook Reference
	Cyanide, Total	8.04	mg/kg	1.1	03-FEB-99	EPA 335.3	99-003-004
	Total Solids	43.29	%		01-FEB-99	CLP 3.0	97-070-45
	Aluminum	40800	mg/kg	17.3	05-FEB-99	EPA 6010A	99-016-08
	Antimony	U	mg/kg	11.5	09-FEB-99	EPA 6010A	99-016-10
	Arsenic	U	mg/kg	27.8	05-FEB-99	EPA 6010A	99-016-08
	Barium	226	mg/kg	3.71	05-FEB-99	EPA 6010A	99-016-08
	Beryllium	6.4	mg/kg	0.464	05-FEB-99	EPA 6010A	99-016-08
	Cadmium	U	mg/kg	1.16	05-FEB-99	EPA 6010A	99-016-08
	Calcium	196000	mg/kg	2300	09-FEB-99	EPA 6010A	99-016-10
	Chromium	5.89	mg/kg	2.32	05-FEB-99	EPA 6010A	99-016-08
	Cobalt	U	mg/kg	2.32	05-FEB-99	EPA 6010A	99-016-08
	Copper	9.58	mg/kg	3.94	05-FEB-99	EPA 6010A	99-016-08
	Iron	4250	mg/kg	9.28	05-FEB-99	EPA 6010A	99-016-08
	Lead	U	mg/kg	10.2	05-FEB-99	EPA 6010A	99-016-08
	Magnesium	13100	mg/kg	120	05-FEB-99	EPA 6010A	99-016-08
	Manganese	2630	mg/kg	1.16	05-FEB-99	EPA 6010A	99-016-08
	Mercury	U	mg/kg	0.0230	03-FEB-99	EPA 7470	98-126-03
	Nickel	9.92	mg/kg	2.78	05-FEB-99	EPA 6010A	99-016-08
	Potassium	1200	mg/kg	120	05-FEB-99	EPA 6010A	99-016-08
	Selenium	U	mg/kg	16.2	05-FEB-99	EPA 6010A	99-016-08
	Silver	U	mg/kg	2.32	05-FEB-99	EPA 6010A	99-016-08

U = None Detected

QC _____ NY 10252 NJ 73168 PA 68180 EPA NY 00033

Approved by: _____
Lab Director

KEY: ND or U = None Detected < = less than ug/L = micrograms per liter (equivalent to parts per billion)
mg/L = milligrams per liter (equivalent to parts per million) mg/kg = milligrams per kilogram (equivalent to parts per million)
B = analyte was detected in the method or trip blank J = result estimated below the quantitation limit

FLI
FRIEND LABORATORY I · N · C

ONE RESEARCH CIRCLE WAVERLY, NY 14892-1532
TELEPHONE (607) 565-3500 FAX (607) 565-4083

DATE 25-FEB-1999

LAB SAMPLE ID : L30628-3

Malcolm Pirnie, Inc. - Orchard Park
Daniel Riker
40 Centre Drive
PO Box 1938
Buffalo, NY 14219-0138

SAMPLE SOURCE	HANNA FURNACE, 3587-001
ORIGIN	B-1
DESCRIPTION	COMPOSITE
SAMPLED ON	25-JAN-99 00:00 by CLIENT
DATE RECEIVED	28-JAN-99 00:00
P.O. NO.	N/A

AS #	Analysis Performed	Result	Units	Detection Limit	Date Analyzed	Method	Notebook Reference
	Cyanide, Total	2.17	mg/kg	0.38	03-FEB-99	EPA 335.3	99-003-004
	Total Solids	85.46	%		01-FEB-99	CLP 3.0	97-070-45
	Aluminum	30400	mg/kg	8.66	05-FEB-99	EPA 6010A	99-016-08
	Antimony	U	mg/kg	5.77	09-FEB-99	EPA 6010A	99-016-10
	Arsenic	U	mg/kg	13.8	05-FEB-99	EPA 6010A	99-016-08
	Barium	350	mg/kg	1.85	05-FEB-99	EPA 6010A	99-016-08
	Beryllium	7.45	mg/kg	0.231	05-FEB-99	EPA 6010A	99-016-08
	Cadmium	U	mg/kg	0.5770	05-FEB-99	EPA 6010A	99-016-08
	Calcium	163000	mg/kg	1200	09-FEB-99	EPA 6010A	99-016-10
	Chromium	12.2	mg/kg	1.15	05-FEB-99	EPA 6010A	99-016-08
	Cobalt	1.89	mg/kg	1.15	05-FEB-99	EPA 6010A	99-016-08
	Copper	27.7	mg/kg	1.96	05-FEB-99	EPA 6010A	99-016-08
	Iron	13700	mg/kg	4.62	05-FEB-99	EPA 6010A	99-016-08
	Lead	33.9	mg/kg	5.08	05-FEB-99	EPA 6010A	99-016-08
	Magnesium	38200	mg/kg	57.6	05-FEB-99	EPA 6010A	99-016-08
	Manganese	2320	mg/kg	0.577	05-FEB-99	EPA 6010A	99-016-08
	Mercury	UE	mg/kg	0.0120	17-FEB-99	EPA 7470	98-126-06
Analysis Comment: E-RESULT IS SUSPECT DUE TO NO MATRIX SPIKE RECOVERY.							
	Nickel	14.2	mg/kg	1.39	05-FEB-99	EPA 6010A	99-016-08
	Potassium	2010	mg/kg	57.6	05-FEB-99	EPA 6010A	99-016-08
	Selenium	U	mg/kg	40.3	19-FEB-99	EPA 6010A	99-036-04
	Silver	U	mg/kg	1.15	05-FEB-99	EPA 6010A	99-016-08

J = None Detected

Approved by: _____
Lab Director

KEY: ND or U = None Detected < = less than ug/L = micrograms per liter (equivalent to parts per billion)
mg/L = milligrams per liter (equivalent to parts per million) mg/kg = milligrams per kilogram (equivalent to parts per million)
B = analyte was detected in the method or trip blank J = result estimated below the quantitation limit

FLI
FRIEND LABORATORY INC

ONE RESEARCH CIRCLE WAVERLY, NY 14892-1532
TELEPHONE (607) 565-3500 FAX (607) 565-4083

DATE 25-FEB-1999

LAB SAMPLE ID : L30628-2

Malcolm Pirnie, Inc. - Orchard Park
Daniel Riker
40 Centre Drive
PO Box 1938
Buffalo, NY 14219-0138

SAMPLE SOURCE	HANNA FURNACE, 3587-001
ORIGIN	A-2
DESCRIPTION	COMPOSITE
SAMPLED ON	25-JAN-99 00:00 by CLIENT
DATE RECEIVED	28-JAN-99 00:00
P.O. NO.	N/A

CAS #	Analysis Performed	Result	Units	Detection Limit	Date Analyzed	Method	Notebook Reference
	Phenol-d5	64	%				97-186-10881
	Nitrobenzene-d5	67	%				97-186-10881
	2-Fluorobiphenyl	71	%				97-186-10881
	2,4,6-Tribromophenol	62	%				97-186-10881
	Terphenyl-d14	76	%				97-186-10881

Analysis Comment: Results Calculated on a dry weight basis.

U = None Detected

QC _____ NY 10252 NJ 73168 PA 68180 EPA NY 00033

Approved by: _____
Lab Director

KEY: ND or U = None Detected < = less than
mg/L = milligrams per liter (equivalent to parts per million)
B = analyte was detected in the method or trip blank
ug/L = micrograms per liter (equivalent to parts per billion)
mg/kg = milligrams per kilogram (equivalent to parts per million)
J = result estimated below the quantitation limit

FLI
FRIEND LABORATORY I · N · C

ONE RESEARCH CIRCLE WAVERLY, NY 14892-1532
TELEPHONE (607) 565-3500 FAX (607) 565-4083

DATE 25-FEB-1999

LAB SAMPLE ID : L30628-3

Malcolm Pirnie, Inc. - Orchard Park
Daniel Riker
40 Centre Drive
PO Box 1938
Buffalo, NY 14219-0138

SAMPLE SOURCE	HANNA FURNACE, 3587-001
ORIGIN	B-1
DESCRIPTION	COMPOSITE
SAMPLED ON	25-JAN-99 00:00 by CLIENT
DATE RECEIVED	28-JAN-99 00:00
P.O. NO.	N/A

CAS #	Analysis Performed	Result	Units	Detection Limit	Date Analyzed	Method	Notebook Reference
	Phenol-d5	85	%				97-186-10875
	Nitrobenzene-d5	88	%				97-186-10875
	2-Fluorobiphenyl	91	%				97-186-10875
	2,4,6-Tribromophenol	90	%				97-186-10875
	Terphenyl-d14	98	%				97-186-10875

Analysis Comment: Results Calculated on a dry weight basis.

U = None Detected

QC NY 10252 NJ 73168 PA 68180 EPA NY 00033

Approved by: _____ Lab Director

KEY: ND or U = None Detected < = less than ug/L = micrograms per liter (equivalent to parts per billion)
mg/L = milligrams per liter (equivalent to parts per million) mg/kg = milligrams per kilogram (equivalent to parts per million)
B = analyte was detected in the method or trip blank J = result estimated below the quantitation limit

FLI
FRIEND LABORATORY I · N · C

ONE RESEARCH CIRCLE WAVERLY, NY 14892-1532
TELEPHONE (607) 565-3500 FAX (607) 565-4083

DATE 25-FEB-1999

LAB SAMPLE ID : L30628-3

Malcolm Pirnie, Inc. - Orchard Park
Daniel Riker
40 Centre Drive
PO Box 1938
Buffalo, NY 14219-0138

SAMPLE SOURCE	HANNA FURNACE, 3587-001
ORIGIN	B-1
DESCRIPTION	COMPOSITE
SAMPLED ON	25-JAN-99 00:00 by CLIENT
DATE RECEIVED	28-JAN-99 00:00
P.O. NO.	N/A

CAS #	Analysis Performed	Result	Units	Detection Limit	Date Analyzed	Method	Notebook Reference
	Sodium	1170	mg/kg	23.0	05-FEB-99	EPA 6010A	99-016-08
	Thallium	U	mg/kg	7.50	05-FEB-99	EPA 6010	99-016-08
	Vanadium	6.26	mg/kg	1.15	05-FEB-99	EPA 6010A	99-016-08
	Zinc	75.8	mg/kg	2.31	05-FEB-99	EPA 6010A	99-016-08
108-95-2	Phenol	U	ug/kg	280	04-FEB-99	EPA 8270	97-186-10875
95-57-8	2-Chlorophenol	U	ug/kg	280	04-FEB-99	EPA 8270	97-186-10875
95-48-7	2-Methylphenol	U	ug/kg	280	04-FEB-99	EPA 8270	97-186-10875
	3-Methylphenol/4-Methylphenol	U	ug/kg	280	04-FEB-99	EPA 8270	97-186-10875
88-75-5	2-Nitrophenol	U	ug/kg	280	04-FEB-99	EPA 8270	97-186-10875
105-67-9	2,4-Dimethylphenol	U	ug/kg	280	04-FEB-99	EPA 8270	97-186-10875
120-83-2	2,4-Dichlorophenol	U	ug/kg	280	04-FEB-99	EPA 8270	97-186-10875
91-20-3	Naphthalene	100 J	ug/kg	280	04-FEB-99	EPA 8270	97-186-10875
59-50-7	4-Chloro-3-methylphenol	U	ug/kg	550	04-FEB-99	EPA 8270	97-186-10875
91-57-6	2-Methylnaphthalene	96 J	ug/kg	280	04-FEB-99	EPA 8270	97-186-10875
208-96-8	Acenaphthylene	U	ug/kg	280	04-FEB-99	EPA 8270	97-186-10875
83-32-9	Acenaphthene	140 J	ug/kg	280	04-FEB-99	EPA 8270	97-186-10875
51-28-4	2,4-Dinitrophenol	U	ug/kg	1100	04-FEB-99	EPA 8270	97-186-10875
100-02-7	4-Nitrophenol	U	ug/kg	1100	04-FEB-99	EPA 8270	97-186-10875
534-52-1	2-Methyl-4,6-dinitrophenol	U	ug/kg	1100	04-FEB-99	EPA 8270	97-186-10875
87-86-5	Pentachlorophenol	U	ug/kg	1100	04-FEB-99	EPA 8270	97-186-10875
85-01-8	Phenanthrene	560	ug/kg	280	04-FEB-99	EPA 8270	97-186-10875
120-12-7	Anthracene	170 J	ug/kg	280	04-FEB-99	EPA 8270	97-186-10875
206-44-0	Fluoranthene	470	ug/kg	280	04-FEB-99	EPA 8270	97-186-10875
129-00-0	Pyrene	680	ug/kg	280	04-FEB-99	EPA 8270	97-186-10875
56-55-3	Benzo(a)anthracene	250 J	ug/kg	280	04-FEB-99	EPA 8270	97-186-10875
215-01-9	Chrysene	410	ug/kg	280	04-FEB-99	EPA 8270	97-186-10875
205-99-2	Benzo(b)fluoranthene	700	ug/kg	280	04-FEB-99	EPA 8270	97-186-10875
207-88-9	Benzo(k)fluoranthene	250 J	ug/kg	280	04-FEB-99	EPA 8270	97-186-10875
50-32-8	Benzo(a)pyrene	430	ug/kg	280	04-FEB-99	EPA 8270	97-186-10875
193-39-5	Indeno(1,2,3-cd)pyrene	426	ug/kg	280	04-FEB-99	EPA 8270	97-186-10875
53-7-3	Dibenzo(a,h)anthracene	U	ug/kg	280	04-FEB-99	EPA 8270	97-186-10875
191-24-2	Benzo(g,h,i)perylene	500	ug/kg	280	04-FEB-99	EPA 8270	97-186-10875
	Extraction Information:				04-FEB-99		98-174-51
Surrogate Recovery:							
	2-Fluorophenol	74	%				97-186-10875

U = None Detected

QC ____ NY 10252 NJ 73168 PA 68180 EPA NY 00033

Approved by: _____ Lab Director

KEY: ND or U = None Detected < = less than ug/L = micrograms per liter (equivalent to parts per billion)
mg/L = milligrams per liter (equivalent to parts per million) mg/kg = milligrams per kilogram (equivalent to parts per million)
B = analyte was detected in the method or trip blank J = result estimated below the quantitation limit

FLI
FRIEND LABORATORY I · N · C

ONE RESEARCH CIRCLE WAVERLY, NY 14892-1532
TELEPHONE (607) 565-3500 FAX (607) 565-4083

DATE 25-FEB-1999

LAB SAMPLE ID : L30628-4

Malcolm Pirnie, Inc. - Orchard Park
Daniel Riker
40 Centre Drive
PO Box 1938
Buffalo, NY 14219-0138

SAMPLE SOURCE	HANNA FURNACE, 3587-001
ORIGIN	B-2
DESCRIPTION	COMPOSITE
SAMPLED ON	25-JAN-99 00:00 by CLIENT
DATE RECEIVED	28-JAN-99 00:00
P.O. NO.	N/A

CAS #	Analysis Performed	Result	Units	Detection Limit	Date Analyzed	Method	Notebook Reference
	Sodium	521	mg/kg	35.8	05-FEB-99	EPA 6010A	99-016-08
	Thallium	U	mg/kg	11.6	05-FEB-99	EPA 6010	99-016-08
	Vanadium	11.2	mg/kg	1.79	05-FEB-99	EPA 6010A	99-016-08
	Zinc	40.2	mg/kg	3.58	05-FEB-99	EPA 6010A	99-016-08
108-95-2	Phenol	U	ug/kg	420	04-FEB-99	EPA 8270	97-186-10872
95-57-8	2-Chlorophenol	U	ug/kg	420	04-FEB-99	EPA 8270	97-186-10872
95-48-7	2-Methylphenol	U	ug/kg	420	04-FEB-99	EPA 8270	97-186-10872
	3-Methylphenol/4-Methylphenol	U	ug/kg	420	04-FEB-99	EPA 8270	97-186-10872
88-75-5	2-Nitrophenol	U	ug/kg	420	04-FEB-99	EPA 8270	97-186-10872
105-67-9	2,4-Dimethylphenol	U	ug/kg	420	04-FEB-99	EPA 8270	97-186-10872
120-83-2	2,4-Dichlorophenol	U	ug/kg	420	04-FEB-99	EPA 8270	97-186-10872
91-20-3	Naphthalene	140 J	ug/kg	420	04-FEB-99	EPA 8270	97-186-10872
59-50-7	4-Chloro-3-methylphenol	U	ug/kg	840	04-FEB-99	EPA 8270	97-186-10872
91-57-6	2-Methylnaphthalene	230 J	ug/kg	420	04-FEB-99	EPA 8270	97-186-10872
208-96-8	Acenaphthylene	U	ug/kg	420	04-FEB-99	EPA 8270	97-186-10872
83-32-9	Acenaphthene	U	ug/kg	420	04-FEB-99	EPA 8270	97-186-10872
51-28-4	2,4-Dinitrophenol	U	ug/kg	1700	04-FEB-99	EPA 8270	97-186-10872
100-02-7	4-Nitrophenol	U	ug/kg	1700	04-FEB-99	EPA 8270	97-186-10872
534-52-1	2-Methyl-4,6-dinitrophenol	U	ug/kg	1700	04-FEB-99	EPA 8270	97-186-10872
87-86-5	Pentachlorophenol	U	ug/kg	1700	04-FEB-99	EPA 8270	97-186-10872
85-01-8	Phenanthrene	180 J	ug/kg	420	04-FEB-99	EPA 8270	97-186-10872
120-12-7	Anthracene	U	ug/kg	420	04-FEB-99	EPA 8270	97-186-10872
206-44-0	Fluoranthene	170 J	ug/kg	420	04-FEB-99	EPA 8270	97-186-10872
129-00-0	Pyrene	170 J	ug/kg	420	04-FEB-99	EPA 8270	97-186-10872
56-55-3	Benzo(a)anthracene	110 J	ug/kg	420	04-FEB-99	EPA 8270	97-186-10872
215-01-9	Chrysene	160 J	ug/kg	420	04-FEB-99	EPA 8270	97-186-10872
205-99-2	Benzo(b)fluoranthene	220 J	ug/kg	420	04-FEB-99	EPA 8270	97-186-10872
207-88-9	Benzo(k)fluoranthene	U	ug/kg	420	04-FEB-99	EPA 8270	97-186-10872
50-32-8	Benzo(a)pyrene	160 J	ug/kg	420	04-FEB-99	EPA 8270	97-186-10872
193-39-5	Indeno(1,2,3-cd)pyrene	U	ug/kg	420	04-FEB-99	EPA 8270	97-186-10872
53-7-3	Dibenzo(a,h)anthracene	U	ug/kg	420	04-FEB-99	EPA 8270	97-186-10872
191-24-2	Benzo(g,h,i)perylene	99 J	ug/kg	420	04-FEB-99	EPA 8270	97-186-10872
	Extraction Information:				04-FEB-99		98-174-51
Surrogate Recovery:							
	2-Fluorophenol	71	%				97-186-10872

U = None Detected

QC NY 10252 NJ 73168 PA 68180 EPA NY 00033

Approved by: Lab Director

KEY: ND or U = None Detected < = less than ug/L = micrograms per liter (equivalent to parts per billion)
mg/L = milligrams per liter (equivalent to parts per million) mg/kg = milligrams per kilogram (equivalent to parts per million)
B = analyte was detected in the method or trip blank J = result estimated below the quantitation limit

FLI
FRIEND LABORATORY I · N · C

ONE RESEARCH CIRCLE WAVERLY, NY 14892-1532
TELEPHONE (607) 565-3500 FAX (607) 565-4083

DATE 25-FEB-1999

LAB SAMPLE ID : L30628-4

Malcolm Pirnie, Inc. - Orchard Park
Daniel Riker
40 Centre Drive
PO Box 1938
Buffalo, NY 14219-0138

SAMPLE SOURCE	HANNA FURNACE, 3587-001
ORIGIN	B-2
DESCRIPTION	COMPOSITE
SAMPLED ON	25-JAN-99 00:00 by CLIENT
DATE RECEIVED	28-JAN-99 00:00
P.O. NO.	N/A

CAS #	Analysis Performed	Result	Units	Detection Limit	Date Analyzed	Method	Notebook Reference
	Cyanide, Total	17.4	mg/kg	0.78	03-FEB-99	EPA 335.3	99-003-004
	Total Solids	56.21	%		01-FEB-99	CLP 3.0	97-070-45
	Aluminum	28800	mg/kg	13.4	05-FEB-99	EPA 6010A	99-016-08
	Antimony	U	mg/kg	8.96	09-FEB-99	EPA 6010A	99-016-10
	Arsenic	U	mg/kg	21.4	05-FEB-99	EPA 6010A	99-016-08
	Barium	289	mg/kg	2.87	05-FEB-99	EPA 6010A	99-016-08
	Beryllium	4.91	mg/kg	0.358	05-FEB-99	EPA 6010A	99-016-08
	Cadmium	U	mg/kg	0.8960	05-FEB-99	EPA 6010A	99-016-08
	Calcium	154000	mg/kg	1800	09-FEB-99	EPA 6010A	99-016-10
	Chromium	4.36	mg/kg	1.79	05-FEB-99	EPA 6010A	99-016-08
	Cobalt	3.08	mg/kg	1.79	05-FEB-99	EPA 6010A	99-016-08
	Copper	10.7	mg/kg	3.05	05-FEB-99	EPA 6010A	99-016-08
	Iron	20600	mg/kg	7.17	05-FEB-99	EPA 6010A	99-016-08
	Lead	9.78	mg/kg	7.88	05-FEB-99	EPA 6010A	99-016-08
	Magnesium	12600	mg/kg	89.5	05-FEB-99	EPA 6010A	99-016-08
	Manganese	2030	mg/kg	0.896	05-FEB-99	EPA 6010A	99-016-08
	Mercury	U	mg/kg	0.0160	03-FEB-99	EPA 7470	98-126-03
	Nickel	8.71	mg/kg	2.15	05-FEB-99	EPA 6010A	99-016-08
	Potassium	1140	mg/kg	89.5	05-FEB-99	EPA 6010A	99-016-08
	Selenium	U	mg/kg	12.5	05-FEB-99	EPA 6010A	99-016-08
	Silver	U	mg/kg	1.79	05-FEB-99	EPA 6010A	99-016-08

U = None Detected

QC NY 10252 NJ 73168 PA 68180 EPA NY 00033

Approved by: _____ Lab Director

KEY: ND or U = None Detected < = less than
mg/L = milligrams per liter (equivalent to parts per million)
B = analyte was detected in the method or trip blank
ug/L = micrograms per liter (equivalent to parts per billion)
mg/kg = milligrams per kilogram (equivalent to parts per million)
J = result estimated below the quantitation limit

FLI
FRIEND LABORATORY INC

ONE RESEARCH CIRCLE WAVERLY, NY 14892-1532
TELEPHONE (607) 565-3500 FAX (607) 565-4083

DATE 25-FEB-1999

LAB SAMPLE ID : L30628-6

Malcolm Pirnie, Inc. - Orchard Park
Daniel Riker
40 Centre Drive
PO Box 1938
Buffalo, NY 14219-0138

SAMPLE SOURCE	HANNA FURNACE, 3587-001
ORIGIN	C-1
DESCRIPTION	COMPOSITE
SAMPLED ON	25-JAN-99 00:00 by CLIENT
DATE RECEIVED	28-JAN-99 00:00
P.O. NO.	N/A

AS #	Analysis Performed	Result	Units	Detection Limit	Date Analyzed	Method	Notebook Reference
	Phenol-d5	65	%				98-051-7898
	Nitrobenzene-d5	79	%				98-051-7898
	2-Fluorobiphenyl	78	%				98-051-7898
	2,4,6-Tribromophenol	39	%				98-051-7898
	Terphenyl-d14	88	%				98-051-7898

Analysis Comment: Dry weight basis.J-IS out low.

U = None Detected

)C NY 10252 NJ 73168 PA 68180 EPA NY 00033

Approved by: _____
Lab Director

KEY: ND or U = None Detected < = less than ug/L = micrograms per liter (equivalent to parts per billion)
mg/L = milligrams per liter (equivalent to parts per million) mg/kg = milligrams per kilogram (equivalent to parts per million)
B = analyte was detected in the method or trip blank J = result estimated below the quantitation limit

FLI
FRIEND LABORATORY I · N · C

ONE RESEARCH CIRCLE WAVERLY, NY 14892-1532
TELEPHONE (607) 565-3500 FAX (607) 565-4083

DATE 25-FEB-1999

LAB SAMPLE ID : L30628-4

Malcolm Pirnie, Inc. - Orchard Park
Daniel Riker
40 Centre Drive
PO Box 1938
Buffalo, NY 14219-0138

SAMPLE SOURCE	HANNA FURNACE, 3587-001
ORIGIN	B-2
DESCRIPTION	COMPOSITE
SAMPLED ON	25-JAN-99 00:00 by CLIENT
DATE RECEIVED	28-JAN-99 00:00
P.O. NO.	N/A

CAS #	Analysis Performed	Result	Units	Detection Limit	Date Analyzed	Method	Notebook Reference
	Phenol-d5	87	%				97-186-10872
	Nitrobenzene-d5	87	%				97-186-10872
	2-Fluorobiphenyl	88	%				97-186-10872
	2,4,6-Tribromophenol	65	%				97-186-10872
	Terphenyl-d14	93	%				97-186-10872

Analysis Comment: Results Calculated on a dry weight basis.

U = None Detected

QC ____ NY 10252 NJ 73168 PA 68180 EPA NY 00033

Approved by: _____
Lab Director

KEY: ND or U = None Detected < = less than ug/L = micrograms per liter (equivalent to parts per billion)
mg/L = milligrams per liter (equivalent to parts per million) mg/kg = milligrams per kilogram (equivalent to parts per million)
B = analyte was detected in the method or trip blank J = result estimated below the quantitation limit

FLI
FRIEND LABORATORY I · N · C

ONE RESEARCH CIRCLE WAVERLY, NY 14892-1532
TELEPHONE (607) 565-3500 FAX (607) 565-4083

DATE 25-FEB-1999

LAB SAMPLE ID : L30628-5

Malcolm Pirnie, Inc. - Orchard Park
Daniel Riker
40 Centre Drive
PO Box 1938
Buffalo, NY 14219-0138

SAMPLE SOURCE	HANNA FURNACE, 3587-001
ORIGIN	B-2
DESCRIPTION	TCLP EXTRACT
SAMPLED ON	25-JAN-99 00:00 by CLIENT
DATE RECEIVED	28-JAN-99 00:00
P.O. NO	N/A

CAS #	Analysis Performed	Result	Units	Detection Limit	Date Analyzed	Method	Notebook Reference
	Arsenic	U	mg/l	1.20	05-FEB-99	EPA 6010 TCLP	99-016-08
	Barium	.609	mg/l	0.160	05-FEB-99	EPA 6010 TCLP	99-016-08
	Cadmium	U	mg/l	0.0500	05-FEB-99	EPA 6010 TCLP	99-016-08
	Chromium	U	mg/l	0.100	05-FEB-99	EPA 6010 TCLP	99-016-08
	Lead	U	mg/l	0.440	05-FEB-99	EPA 6010 TCLP	99-016-08
	Mercury	U	mg/l	0.0100	03-FEB-99	EPA 7470 TCLP	98-126-03
	Selenium	U	mg/l	0.700	05-FEB-99	EPA 6010 TCLP	99-016-08
	Silver	U	mg/l	0.100	05-FEB-99	EPA 6010 TCLP	99-016-08
75-01-4	Vinyl chloride	U	mg/l	0.03	29-JAN-99	TCLP 8260	98-175-6164
75-35-4	1,1-Dichloroethene	U	mg/l	0.03	29-JAN-99	TCLP 8260	98-175-6164
78-93-3	Methyl ethyl ketone	U	mg/l	0.03	29-JAN-99	TCLP 8260	98-175-6164
67-66-3	Chloroform	U	mg/l	0.03	29-JAN-99	TCLP 8260	98-175-6164
56-23-5	Carbon tetrachloride	U	mg/l	0.03	29-JAN-99	TCLP 8260	98-175-6164
71-43-2	Benzene	U	mg/l	0.03	29-JAN-99	TCLP 8260	98-175-6164
107-06-2	1,2-Dichloroethane	U	mg/l	0.03	29-JAN-99	TCLP 8260	98-175-6164
79-01-6	Trichloroethene	U	mg/l	0.03	29-JAN-99	TCLP 8260	98-175-6164
127-18-4	Tetrachloroethene	U	mg/l	0.03	29-JAN-99	TCLP 8260	98-175-6164
108-90-7	Chlorobenzene	U	mg/l	0.03	29-JAN-99	TCLP 8260	98-175-6164
106-46-7	1,4-Dichlorobenzene	U	mg/l	0.03	29-JAN-99	TCLP 8260	98-175-6164
Surrogate Recovery:							
	Dibromofluoromethane	102	%				98-175-6164
	Toluene-d8	95	%				98-175-6164
	4-Bromofluorobenzene	95	%				98-175-6164
58-89-9	Lindane	U	mg/l	0.005	01-FEB-99	TCLP 8080	98-187-5710
76-44-8	Heptachlor	U	mg/l	0.005	01-FEB-99	TCLP 8080	98-187-5710
1024-57-3	Heptachlor Epoxide	U	mg/l	0.005	01-FEB-99	TCLP 8080	98-187-5710
72-20-8	Endrin	U	mg/l	0.005	01-FEB-99	TCLP 8080	98-187-5710
72-43-5	Methoxychlor	U	mg/l	0.005	01-FEB-99	TCLP 8080	98-187-5710
57-74-9	Chlordane	U	mg/l	0.005	01-FEB-99	TCLP 8080	98-187-5710
8001-35-2	Toxaphene	U	mg/l	0.05	01-FEB-99	TCLP 8080	98-187-5710

U = None Detected

QC NY 10252 NJ 73168 PA 68180 EPA NY 00033

Approved by: _____
Lab Director

KEY: ND or U = None Detected < = less than
mg/L = milligrams per liter (equivalent to parts per million)
B = analyte was detected in the method or trip blank
ug/L = micrograms per liter (equivalent to parts per billion)
mg/kg = milligrams per kilogram (equivalent to parts per million)
J = result estimated below the quantitation limit

FLI
FRIEND LABORATORY I · N · C

ONE RESEARCH CIRCLE WAVERLY, NY 14892-1532
TELEPHONE (607) 565-3500 FAX (607) 565-4083

DATE 25-FEB-1999

LAB SAMPLE ID : L30628-7

Malcolm Pirnie, Inc. - Orchard Park
Daniel Riker
40 Centre Drive
PO Box 1938
Buffalo, NY 14219-0138

SAMPLE SOURCE	HANNA FURNACE, 3587-001
ORIGIN	C-2
DESCRIPTION	COMPOSITE
SAMPLED ON	25-JAN-99 00:00 by CLIENT
DATE RECEIVED	28-JAN-99 00:00
P.O. NO.	N/A

CAS #	Analysis Performed	Result	Units	Detection Limit	Date Analyzed	Method	Notebook Reference
	Cyanide, Total	20.1	mg/kg	0.57	03-FEB-99	EPA 335.3	99-003-004
	Total Solids	64.54	%		01-FEB-99	CLP 3.0	97-070-45
	Aluminum	27600	mg/kg	10.9	05-FEB-99	EPA 6010A	99-016-08
	Antimony	U	mg/kg	7.32	09-FEB-99	EPA 6010A	99-016-10
	Arsenic	U	mg/kg	17.5	05-FEB-99	EPA 6010A	99-016-08
	Barium	274	mg/kg	2.34	05-FEB-99	EPA 6010A	99-016-08
	Beryllium	4.63	mg/kg	0.293	05-FEB-99	EPA 6010A	99-016-08
	Cadmium	U	mg/kg	0.7320	05-FEB-99	EPA 6010A	99-016-08
	Calcium	156000	mg/kg	370	05-FEB-99	EPA 6010A	99-016-08
	Chromium	14.4	mg/kg	1.47	05-FEB-99	EPA 6010A	99-016-08
	Cobalt	3.34	mg/kg	1.47	05-FEB-99	EPA 6010A	99-016-08
	Copper	26.5	mg/kg	2.49	05-FEB-99	EPA 6010A	99-016-08
	Iron	32800	mg/kg	29.3	05-FEB-99	EPA 6010A	99-016-08
	Lead	62.7	mg/kg	6.44	05-FEB-99	EPA 6010A	99-016-08
	Magnesium	13400	mg/kg	73.2	05-FEB-99	EPA 6010A	99-016-08
	Manganese	2440	mg/kg	0.732	05-FEB-99	EPA 6010A	99-016-08
	Mercury	U	mg/kg	0.0160	03-FEB-99	EPA 7470	98-126-03
	Nickel	17.8	mg/kg	1.76	05-FEB-99	EPA 6010A	99-016-08
	Potassium	1830	mg/kg	73.2	05-FEB-99	EPA 6010A	99-016-08
	Selenium	U	mg/kg	10.2	05-FEB-99	EPA 6010A	99-016-08
	Silver	U	mg/kg	1.47	05-FEB-99	EPA 6010A	99-016-08

U = None Detected

QC O NY 10252 NJ 73168 PA 68180 EPA NY 00033

Approved by: _____ Lab Director

KEY: ND or U = None Detected < = less than
mg/L = milligrams per liter (equivalent to parts per million)
B = analyte was detected in the method or trip blank
ug/L = micrograms per liter (equivalent to parts per billion)
mg/kg = milligrams per kilogram (equivalent to parts per million)
J = result estimated below the quantitation limit

FLI
FRIEND LABORATORY I · N · C

ONE RESEARCH CIRCLE WAVERLY, NY 14892-1532
TELEPHONE (607) 565-3500 FAX (607) 565-4083

DATE 25-FEB-1999

LAB SAMPLE ID : L30628-6

Malcolm Pirnie, Inc. - Orchard Park
Daniel Riker
40 Centre Drive
PO Box 1938
Buffalo, NY 14219-0138

SAMPLE SOURCE	HANNA FURNACE, 3587-001
ORIGIN	C-1
DESCRIPTION	COMPOSITE
SAMPLED ON	25-JAN-99 00:00 by CLIENT
DATE RECEIVED	28-JAN-99 00:00
P.O. NO.	N/A

CAS #	Analysis Performed	Result	Units	Detection Limit	Date Analyzed	Method	Notebook Reference
	Cyanide, Total	11.4	mg/kg	0.57	03-FEB-99	EPA 335.3	99-003-004
	Total Solids	84.67	%		01-FEB-99	CLP 3.0	97-070-45
	Aluminum	22700	mg/kg	9.04	05-FEB-99	EPA 6010A	99-016-08
	Antimony	U	mg/kg	6.03	09-FEB-99	EPA 6010A	99-016-10
	Arsenic	U	mg/kg	14.4	05-FEB-99	EPA 6010A	99-016-08
	Barium	247	mg/kg	1.93	05-FEB-99	EPA 6010A	99-016-08
	Beryllium	5.21	mg/kg	0.241	05-FEB-99	EPA 6010A	99-016-08
	Cadmium	6.7	mg/kg	2.4	17-FEB-99	EPA 7130	93-259-85
	Calcium	118000	mg/kg	1200	09-FEB-99	EPA 6010A	99-016-10
	Chromium	127	mg/kg	1.21	05-FEB-99	EPA 6010A	99-016-08
	Cobalt	5.55	mg/kg	1.21	05-FEB-99	EPA 6010A	99-016-08
	Copper	40.9	mg/kg	2.05	05-FEB-99	EPA 6010A	99-016-08
	Iron	79300	mg/kg	96.4	09-FEB-99	EPA 6010A	99-016-10
	Lead	185	mg/kg	5.30	05-FEB-99	EPA 6010A	99-016-08
	Magnesium	23500	mg/kg	60.2	05-FEB-99	EPA 6010A	99-016-08
	Manganese	3530	mg/kg	12.1	09-FEB-99	EPA 6010A	99-016-10
	Mercury	U	mg/kg	0.0120	03-FEB-99	EPA 7470	98-126-03
	Nickel	34.1	mg/kg	1.45	05-FEB-99	EPA 6010A	99-016-08
	Potassium	1570	mg/kg	60.2	05-FEB-99	EPA 6010A	99-016-08
	Selenium	U	mg/kg	8.44	19-FEB-99	EPA 6010A	99-036-04
	Silver	U	mg/kg	24.2	09-FEB-99	EPA 6010A	99-016-10

U = None Detected

QC NY 10252 NJ 73168 PA 68180 EPA NY 00033

Approved by: _____
Lab Director

KEY: ND or U = None Detected < = less than
mg/L = milligrams per liter (equivalent to parts per million)
B = analyte was detected in the method or trip blank
ug/L = micrograms per liter (equivalent to parts per billion)
mg/kg = milligrams per kilogram (equivalent to parts per million)
J = result estimated below the quantitation limit

FLI
FRIEND LABORATORY I · N · C

ONE RESEARCH CIRCLE WAVERLY, NY 14892-1532
TELEPHONE (607) 565-3500 FAX (607) 565-4083

DATE 25-FEB-1999

LAB SAMPLE ID : L30628-5

Malcolm Pirnie, Inc. - Orchard Park
Daniel Riker
40 Centre Drive
PO Box 1938
Buffalo, NY 14219-0138

SAMPLE SOURCE	HANNA FURNACE, 3587-001
ORIGIN	B-2
DESCRIPTION	TCLP EXTRACT
SAMPLED ON	25-JAN-99 00:00 by CLIENT
DATE RECEIVED	28-JAN-99 00:00
P.O. NO.	N/A

CAS #	Analysis Performed	Result	Units	Detection Limit	Date Analyzed	Method	Notebook Reference
Surrogate Recovery:							
	Decachlorobiphenyl	37	%				98-187-5710
94-75-7	2,4-D	U	mg/l	0.4	11-FEB-99	TCLP 8150	98-080-2901
93-72-1	2,4,5-TP (Silvex)	U	mg/l	0.4	11-FEB-99	TCLP 8150	98-080-2901
Surrogate Recovery:							
	DCAA	51					98-080-2901
110-86-1	Pyridine	U	mg/l	0.05	03-FEB-99	TCLP 8270	98-051-7862
	o-Cresol	U	mg/l	0.05	03-FEB-99	TCLP 8270	98-051-7862
	p-Cresol/m-Cresol	U	mg/l	0.05	03-FEB-99	TCLP 8270	98-051-7862
67-72-1	Hexachloroethane	U	mg/l	0.05	03-FEB-99	TCLP 8270	98-051-7862
98-95-3	Nitrobenzene	U	mg/l	0.05	03-FEB-99	TCLP 8270	98-051-7862
87-68-3	Hexachlorobutadiene	U	mg/l	0.05	03-FEB-99	TCLP 8270	98-051-7862
88-06-2	2,4,6-Trichlorophenol	U	mg/l	0.05	03-FEB-99	TCLP 8270	98-051-7862
95-95-4	2,4,5-Trichlorophenol	U	mg/l	0.05	03-FEB-99	TCLP 8270	98-051-7862
121-14-2	2,4-Dinitrotoluene	U	mg/l	0.05	03-FEB-99	TCLP 8270	98-051-7862
118-74-1	Hexachlorobenzene	U	mg/l	0.05	03-FEB-99	TCLP 8270	98-051-7862
87-86-5	Pentachlorophenol	U	mg/l	0.2	03-FEB-99	TCLP 8270	98-051-7862
	Extraction Information:				29-JAN-99		98-174-47
Surrogate Recovery:							
	2-Fluorophenol	53	%				98-051-7862
	Phenol-d5	45	%				98-051-7862
	Nitrobenzene-d5	92	%				98-051-7862
	2-Fluorobiphenyl	87	%				98-051-7862
	2,4,6-Tribromophenol	66	%				98-051-7862
	Terphenyl-d14	96	%				98-051-7862

U = None Detected

QC ___ NY 10252 NJ 73168 PA 68180 EPA NY 00033

Approved by: _____ Lab Director

KEY: ND or U = None Detected < = less than ug/L = micrograms per liter (equivalent to parts per billion)
mg/L = milligrams per liter (equivalent to parts per million) mg/kg = milligrams per kilogram (equivalent to parts per million)
B = analyte was detected in the method or trip blank J = result estimated below the quantitation limit

FLI
FRIEND LABORATORY INC

ONE RESEARCH CIRCLE WAVERLY, NY 14892-1532
TELEPHONE (607) 565-3500 FAX (607) 565-4083

DATE 25-FEB-1999

LAB SAMPLE ID L30628-7

Malcolm Pirnie, Inc. - Orchard Park
Daniel Riker
40 Centre Drive
PO Box 1938
Buffalo, NY 14219-0138

SAMPLE SOURCE	HANNA FURNACE, 3587-001
ORIGIN	C-2
DESCRIPTION	COMPOSITE
SAMPLED ON	25-JAN-99 00:00 by CLIENT
DATE RECEIVED	28-JAN-99 00:00
P.O. NO.	N/A

AS #	Analysis Performed	Result	Units	Detection Limit	Date Analyzed	Method	Notebook Reference
	Sodium	562	mg/kg	29.2	05-FEB-99	EPA 6010A	99-016-08
	Thallium	U	mg/kg	9.52	05-FEB-99	EPA 6010	99-016-08
	Vanadium	17	mg/kg	1.47	05-FEB-99	EPA 6010A	99-016-08
	Zinc	182	mg/kg	2.93	05-FEB-99	EPA 6010A	99-016-08
108-95-2	Phenol	U	ug/kg	380	04-FEB-99	EPA 8270	97-186-10873
95-57-8	2-Chlorophenol	U	ug/kg	380	04-FEB-99	EPA 8270	97-186-10873
95-48-7	2-Methylphenol	U	ug/kg	380	04-FEB-99	EPA 8270	97-186-10873
	3-Methylphenol/4-Methylphenol	U	ug/kg	380	04-FEB-99	EPA 8270	97-186-10873
88-75-5	2-Nitrophenol	U	ug/kg	380	04-FEB-99	EPA 8270	97-186-10873
105-67-9	2,4-Dimethylphenol	U	ug/kg	380	04-FEB-99	EPA 8270	97-186-10873
120-83-2	2,4-Dichlorophenol	U	ug/kg	380	04-FEB-99	EPA 8270	97-186-10873
91-20-3	Naphthalene	79 J	ug/kg	380	04-FEB-99	EPA 8270	97-186-10873
59-50-7	4-Chloro-3-methylphenol	U	ug/kg	750	04-FEB-99	EPA 8270	97-186-10873
91-57-6	2-Methylnaphthalene	120 J	ug/kg	380	04-FEB-99	EPA 8270	97-186-10873
208-96-8	Acenaphthylene	U	ug/kg	380	04-FEB-99	EPA 8270	97-186-10873
83-32-9	Acenaphthene	U	ug/kg	380	04-FEB-99	EPA 8270	97-186-10873
51-28-4	2,4-Dinitrophenol	U	ug/kg	1500	04-FEB-99	EPA 8270	97-186-10873
100-02-7	4-Nitrophenol	U	ug/kg	1500	04-FEB-99	EPA 8270	97-186-10873
534-52-1	2-Methyl-4,6-dinitrophenol	U	ug/kg	1500	04-FEB-99	EPA 8270	97-186-10873
87-86-5	Pentachlorophenol	U	ug/kg	1500	04-FEB-99	EPA 8270	97-186-10873
85-01-8	Phenanthrene	U	ug/kg	380	04-FEB-99	EPA 8270	97-186-10873
120-12-7	Anthracene	U	ug/kg	380	04-FEB-99	EPA 8270	97-186-10873
206-44-0	Fluoranthene	U	ug/kg	380	04-FEB-99	EPA 8270	97-186-10873
129-00-0	Pyrene	U	ug/kg	380	04-FEB-99	EPA 8270	97-186-10873
56-55-3	Benzo(a)anthracene	U	ug/kg	380	04-FEB-99	EPA 8270	97-186-10873
218-01-9	Chrysene	U	ug/kg	380	04-FEB-99	EPA 8270	97-186-10873
205-99-2	Benzo(b)fluoranthene	U	ug/kg	380	04-FEB-99	EPA 8270	97-186-10873
207-88-9	Benzo(k)fluoranthene	U	ug/kg	380	04-FEB-99	EPA 8270	97-186-10873
50-32-8	Benzo(a)pyrene	U	ug/kg	380	04-FEB-99	EPA 8270	97-186-10873
193-39-5	Indeno(1,2,3-cd)pyrene	U	ug/kg	380	04-FEB-99	EPA 8270	97-186-10873
53-7-3	Dibenzo(a,h)anthracene	U	ug/kg	380	04-FEB-99	EPA 8270	97-186-10873
191-24-2	Benzo(g,h,i)perylene	U	ug/kg	380	04-FEB-99	EPA 8270	97-186-10873
	Extraction Information:				04-FEB-99		98-174-51
Surrogate Recovery:							
	2-Fluorophenol	67	%				97-186-10873

J = None Detected

NC ✓ NY 10252 NJ 73168 PA 68180 EPA NY 00033

Approved by: _____
Lab Director

KEY: ND or U = None Detected < = less than ug/L = micrograms per liter (equivalent to parts per billion)
mg/L = milligrams per liter (equivalent to parts per million) mg/kg = milligrams per kilogram (equivalent to parts per million)
B = analyte was detected in the method or trip blank J = result estimated below the quantitation limit

FLI
FRIEND LABORATORY I · N · C

ONE RESEARCH CIRCLE WAVERLY, NY 14892-1532
TELEPHONE (607) 565-3500 FAX (607) 565-4083

DATE 25-FEB-1999

LAB SAMPLE ID : L30628-6

Malcolm Pirnie, Inc. - Orchard Park
Daniel Riker
40 Centre Drive
PO Box 1938
Buffalo, NY 14219-0138

SAMPLE SOURCE	HANNA FURNACE, 3587-001
ORIGIN	C-1
DESCRIPTION	COMPOSITE
SAMPLED ON	25-JAN-99 00:00 by CLIENT
DATE RECEIVED	28-JAN-99 00:00
P.O. NO.	N/A

CAS #	Analysis Performed	Result	Units	Detection Limit	Date Analyzed	Method	Notebook Reference
	Sodium	1020	mg/kg	24.1	05-FEB-99	EPA 6010A	99-016-08
	Thallium	U	mg/kg	7.83	05-FEB-99	EPA 6010	99-016-08
	Vanadium	30.1	mg/kg	1.21	09-FEB-99	EPA 6010A	99-016-10
	Zinc	322	mg/kg	2.41	05-FEB-99	EPA 6010A	99-016-08
108-95-2	Phenol	U	ug/kg	560	09-FEB-99	EPA 8270	98-051-7898
95-57-8	2-Chlorophenol	U	ug/kg	560	09-FEB-99	EPA 8270	98-051-7898
95-48-7	2-Methylphenol	U	ug/kg	560	09-FEB-99	EPA 8270	98-051-7898
	3-Methylphenol/4-Methylphenol	U	ug/kg	560	09-FEB-99	EPA 8270	98-051-7898
88-75-5	2-Nitrophenol	U	ug/kg	560	09-FEB-99	EPA 8270	98-051-7898
105-67-9	2,4-Dimethylphenol	U	ug/kg	560	09-FEB-99	EPA 8270	98-051-7898
120-83-2	2,4-Dichlorophenol	U	ug/kg	560	09-FEB-99	EPA 8270	98-051-7898
91-20-3	Naphthalene	130 J	ug/kg	560	09-FEB-99	EPA 8270	98-051-7898
59-50-7	4-Chloro-3-methylphenol	U	ug/kg	1100	09-FEB-99	EPA 8270	98-051-7898
91-57-6	2-Methylnaphthalene	210 J	ug/kg	560	09-FEB-99	EPA 8270	98-051-7898
208-96-8	Acenaphthylene	U	ug/kg	560	09-FEB-99	EPA 8270	98-051-7898
83-32-9	Acenaphthene	U	ug/kg	560	09-FEB-99	EPA 8270	98-051-7898
51-28-4	2,4-Dinitrophenol	U	ug/kg	2300	09-FEB-99	EPA 8270	98-051-7898
100-02-7	4-Nitrophenol	U	ug/kg	2300	09-FEB-99	EPA 8270	98-051-7898
534-52-1	2-Methyl-4,6-dinitrophenol	U	ug/kg	2300	09-FEB-99	EPA 8270	98-051-7898
87-86-5	Pentachlorophenol	U	ug/kg	2300	09-FEB-99	EPA 8270	98-051-7898
85-01-8	Phenanthrene	460 J	ug/kg	560	09-FEB-99	EPA 8270	98-051-7898
120-12-7	Anthracene	U	ug/kg	560	09-FEB-99	EPA 8270	98-051-7898
206-44-0	Fluoranthene	630	ug/kg	560	09-FEB-99	EPA 8270	98-051-7898
129-00-0	Pyrene	820	ug/kg	560	09-FEB-99	EPA 8270	98-051-7898
56-55-3	Benzo(a)anthracene	390 J	ug/kg	560	09-FEB-99	EPA 8270	98-051-7898
215-01-9	Chrysene	530 J	ug/kg	560	09-FEB-99	EPA 8270	98-051-7898
205-99-2	Benzo(b)fluoranthene	930 J	ug/kg	560	09-FEB-99	EPA 8270	98-051-7898
207-88-9	Benzo(k)fluoranthene	560 J	ug/kg	560	09-FEB-99	EPA 8270	98-051-7898
50-32-8	Benzo(a)pyrene	480 J	ug/kg	560	09-FEB-99	EPA 8270	98-051-7898
193-39-5	Indeno(1,2,3-cd)pyrene	560 J	ug/kg	560	09-FEB-99	EPA 8270	98-051-7898
53-7-3	Dibenzo(a,h)anthracene	560 J	ug/kg	560	09-FEB-99	EPA 8270	98-051-7898
191-24-2	Benzo(g,h,i)perylene	560 J	ug/kg	560	09-FEB-99	EPA 8270	98-051-7898
	Extraction Information:				04-FEB-99		98-174-51
Surrogate Recovery:							
	2-Fluorophenol	47	%				98-051-7898

U = None Detected

QC ____ NY 10252 NJ 73168 PA 68180 EPA NY 00033

Approved by: _____
Lab Director

KEY: ND or U = None Detected < = less than ug/L = micrograms per liter (equivalent to parts per billion)
mg/L = milligrams per liter (equivalent to parts per million) mg/kg = milligrams per kilogram (equivalent to parts per million)
B = analyte was detected in the method or trip blank J = result estimated below the quantitation limit

FLI
FRIEND LABORATORY
INC

ONE RESEARCH CIRCLE WAVERLY, NY 14892-1532
TELEPHONE (607) 565-3500 FAX (607) 565-4083

DATE : 25-FEB-1999

LAB SAMPLE ID : L30628-8

Malcolm Pirnie, Inc. - Orchard Park
Daniel Riker
40 Centre Drive
PO Box 1938
Buffalo, NY 14219-0138

SAMPLE SOURCE	HANNA FURNACE, 3587-001
ORIGIN	J-1
DESCRIPTION	COMPOSITE
SAMPLED ON	26-JAN-99 00:00 by CLIENT
DATE RECEIVED	28-JAN-99 00:00
P.O. NO.	N/A

LAS #	Analysis Performed	Result	Units	Detection Limit	Date Analyzed	Method	Notebook Reference
	Cyanide, Total	8.18	mg/kg	0.56	03-FEB-99	EPA 335.3	99-003-004
	Total Solids	85.01	%		01-FEB-99	CLP 3.0	97-070-45
	Aluminum	20900	mg/kg	8.33	05-FEB-99	EPA 6010A	99-016-08
	Antimony	7.78	mg/kg	5.55	09-FEB-99	EPA 6010A	99-016-10
	Arsenic	U	mg/kg	13.3	05-FEB-99	EPA 6010A	99-016-08
	Barium	160	mg/kg	1.78	05-FEB-99	EPA 6010A	99-016-08
	Beryllium	3.43	mg/kg	0.222	05-FEB-99	EPA 6010A	99-016-08
	Cadmium	8	mg/kg	2.2	17-FEB-99	EPA 7130	93-259-85
	Calcium	123000	mg/kg	1100	09-FEB-99	EPA 6010A	99-016-10
	Chromium	38.4	mg/kg	1.11	05-FEB-99	EPA 6010A	99-016-08
	Cobalt	5.9	mg/kg	1.11	05-FEB-99	EPA 6010A	99-016-08
	Copper	120	mg/kg	1.89	05-FEB-99	EPA 6010A	99-016-08
	Iron	65100	mg/kg	88.8	09-FEB-99	EPA 6010A	99-016-10
	Lead	274	mg/kg	4.89	05-FEB-99	EPA 6010A	99-016-08
	Magnesium	18100	mg/kg	55.5	05-FEB-99	EPA 6010A	99-016-08
	Manganese	2950	mg/kg	11.1	09-FEB-99	EPA 6010A	99-016-10
	Mercury	U	mg/kg	0.0120	03-FEB-99	EPA 7470	98-126-03
	Nickel	33.3	mg/kg	1.33	05-FEB-99	EPA 6010A	99-016-08
	Potassium	1050	mg/kg	55.5	05-FEB-99	EPA 6010A	99-016-08
	Selenium	U	mg/kg	7.78	19-FEB-99	EPA 6010A	99-036-04
	Silver	U	mg/kg	2.20	09-FEB-99	EPA 6010A	99-016-10

J = None Detected

C NY 10252 NJ 73168 PA 68180 EPA NY 00033

Approved by: _____
Lab Director

KEY: ND or U = None Detected < = less than
mg/L = milligrams per liter (equivalent to parts per million)
B = analyte was detected in the method or trip blank
ug/L = micrograms per liter (equivalent to parts per billion)
mg/kg = milligrams per kilogram (equivalent to parts per million)
J = result estimated below the quantitation limit

FLI
FRIEND LABORATORY I · N · C

ONE RESEARCH CIRCLE WAVERLY, NY 14892-1532
TELEPHONE (607) 565-3500 FAX (607) 565-4083

DATE 25-FEB-1999

LAB SAMPLE ID : L30628-7

Malcolm Pirnie, Inc. - Orchard Park
Daniel Riker
40 Centre Drive
PO Box 1938
Buffalo, NY 14219-0138

SAMPLE SOURCE	HANNA FURNACE, 3587-001
ORIGIN	C-2
DESCRIPTION	COMPOSITE
SAMPLED ON	25-JAN-99 00:00 by CLIENT
DATE RECEIVED	28-JAN-99 00:00
P.O. NO.	N/A

CAS #	Analysis Performed	Result	Units	Detection Limit	Date Analyzed	Method	Notebook Reference
	Phenol-d5	75	%				97-186-10877
	Nitrobenzene-d5	76	%				97-186-10873
	2-Fluorobiphenyl	82	%				97-186-10873
	2,4,6-Tribromophenol	67	%				97-186-10873
	Terphenyl-d14	89	%				97-186-10873

Analysis Comment: Results Calculated on a dry weight basis.

U = None Detected

QC NY 10252 NJ 73168 PA 68180 EPA NY 00033

Approved by: _____ Lab Director

KEY: ND or U = None Detected < = less than ug/L = micrograms per liter (equivalent to parts per billion)
mg/L = milligrams per liter (equivalent to parts per million) mg/kg = milligrams per kilogram (equivalent to parts per million)
B = analyte was detected in the method or trip blank J = result estimated below the quantitation limit

FLI
FRIEND LABORATORY INC

ONE RESEARCH CIRCLE WAVERLY, NY 14892-1532
TELEPHONE (607) 565-3500 FAX (607) 565-4083

DATE 25-FEB-1999

LAB SAMPLE ID : L30628-8

Malcolm Pirnie, Inc. - Orchard Park
Daniel Riker
40 Centre Drive
PO Box 1938
Buffalo, NY 14219-0138

SAMPLE SOURCE	HANNA FURNACE, 3587-001
ORIGIN	J-1
DESCRIPTION	COMPOSITE
SAMPLED ON	26-JAN-99 00:00 by CLIENT
DATE RECEIVED	28-JAN-99 00:00
P.O. NO.	N/A

AS #	Analysis Performed	Result	Units	Detection Limit	Date Analyzed	Method	Notebook Reference
	Phenol-d5	86	%				97-186-10883
	Nitrobenzene-d5	96	%				97-186-10883
	2-Fluorobiphenyl	98	%				97-186-10883
	2,4,6-Tribromophenol	82	%				97-186-10883
	Terphenyl-d14	95	%				97-186-10883

Analysis Comment: Results Calculated on a dry weight basis.

J = None Detected

IC ○ NY 10252 NJ 73168 PA 68180 EPA NY 00033

Approved by: _____
Lab Director

KEY: ND or U = None Detected < = less than ug/L = micrograms per liter (equivalent to parts per billion)
mg/L = milligrams per liter (equivalent to parts per million) mg/kg = milligrams per kilogram (equivalent to parts per million)
B = analyte was detected in the method or trip blank J = result estimated below the quantitation limit

FLI
FRIEND LABORATORY I · N · C

ONE RESEARCH CIRCLE WAVERLY, NY 14892-1532
TELEPHONE (607) 565-3500 FAX (607) 565-4083

DATE 25-FEB-1999

LAB SAMPLE ID : L30628-8

Malcolm Pirnie, Inc. - Orchard Park
Daniel Riker
40 Centre Drive
PO Box 1938
Buffalo, NY 14219-0138

SAMPLE SOURCE	HANNA FURNACE, 3587-001
ORIGIN	J-1
DESCRIPTION	COMPOSITE
SAMPLED ON	26-JAN-99 00:00 by CLIENT
DATE RECEIVED	28-JAN-99 00:00
P.O. NO.	N/A

CAS #	Analysis Performed	Result	Units	Detection Limit	Date Analyzed	Method	Notebook Reference
	Sodium	557	mg/kg	22.2	05-FEB-99	EPA 6010A	99-016-08
	Thallium	U	mg/kg	7.22	05-FEB-99	EPA 6010	99-016-08
	Vanadium	26.4	mg/kg	1.11	09-FEB-99	EPA 6010A	99-016-10
	Zinc	1150	mg/kg	2.22	05-FEB-99	EPA 6010A	99-016-08
108-95-2	Phenol	U	ug/kg	280	05-FEB-99	EPA 8270	97-186-10883
95-57-8	2-Chlorophenol	U	ug/kg	280	05-FEB-99	EPA 8270	97-186-10883
95-48-7	2-Methylphenol	U	ug/kg	280	05-FEB-99	EPA 8270	97-186-10883
	3-Methylphenol/4-Methylphenol	U	ug/kg	280	05-FEB-99	EPA 8270	97-186-10883
88-75-5	2-Nitrophenol	U	ug/kg	280	05-FEB-99	EPA 8270	97-186-10883
105-67-9	2,4-Dimethylphenol	U	ug/kg	280	05-FEB-99	EPA 8270	97-186-10883
120-83-2	2,4-Dichlorophenol	U	ug/kg	280	05-FEB-99	EPA 8270	97-186-10883
91-20-3	Naphthalene	89 J	ug/kg	280	05-FEB-99	EPA 8270	97-186-10883
59-50-7	4-Chloro-3-methylphenol	U	ug/kg	570	05-FEB-99	EPA 8270	97-186-10883
91-57-6	2-Methylnaphthalene	94 J	ug/kg	280	05-FEB-99	EPA 8270	97-186-10883
208-96-8	Acenaphthylene	U	ug/kg	280	05-FEB-99	EPA 8270	97-186-10883
83-32-9	Acenaphthene	74 J	ug/kg	280	05-FEB-99	EPA 8270	97-186-10883
51-28-4	2,4-Dinitrophenol	U	ug/kg	1100	05-FEB-99	EPA 8270	97-186-10883
100-02-7	4-Nitrophenol	U	ug/kg	1100	05-FEB-99	EPA 8270	97-186-10883
534-52-1	2-Methyl-4,6-dinitrophenol	U	ug/kg	1100	05-FEB-99	EPA 8270	97-186-10883
87-86-5	Pentachlorophenol	U	ug/kg	1100	05-FEB-99	EPA 8270	97-186-10883
85-01-8	Phenanthrene	240 J	ug/kg	280	05-FEB-99	EPA 8270	97-186-10883
120-12-7	Anthracene	79 J	ug/kg	280	05-FEB-99	EPA 8270	97-186-10883
206-44-0	Fluoranthene	660	ug/kg	280	05-FEB-99	EPA 8270	97-186-10883
129-00-0	Pyrene	710	ug/kg	280	05-FEB-99	EPA 8270	97-186-10883
56-55-3	Benzo(a)anthracene	520	ug/kg	280	05-FEB-99	EPA 8270	97-186-10883
215-01-9	Chrysene	700	ug/kg	280	05-FEB-99	EPA 8270	97-186-10883
205-99-2	Benzo(b)fluoranthene	1300	ug/kg	280	05-FEB-99	EPA 8270	97-186-10883
207-88-9	Benzo(k)fluoranthene	450	ug/kg	280	05-FEB-99	EPA 8270	97-186-10883
50-32-8	Benzo(a)pyrene	810	ug/kg	280	05-FEB-99	EPA 8270	97-186-10883
193-39-5	Indeno(1,2,3-cd)pyrene	650	ug/kg	280	05-FEB-99	EPA 8270	97-186-10883
53-7-3	Dibenzo(a,h)anthracene	U	ug/kg	280	05-FEB-99	EPA 8270	97-186-10883
191-24-2	Benzo(g,h,i)perylene	700	ug/kg	280	05-FEB-99	EPA 8270	97-186-10883
	Extraction Information:				04-FEB-99		98-174-51
Surrogate Recovery:							
	2-Fluorophenol	80	%				97-186-10883

U = None Detected

QC NY 10252 NJ 73168 PA 68180 EPA NY 00033

Approved by: Lab Director

KEY: ND or U = None Detected; < = less than; ug/L = micrograms per liter (equivalent to parts per billion); mg/L = milligrams per liter (equivalent to parts per million); mg/kg = milligrams per kilogram (equivalent to parts per million); B = analyte was detected in the method or trip blank; J = result estimated below the quantitation limit

FLI
FRIEND LABORATORY · N · C

ONE RESEARCH CIRCLE WAVERLY, NY 14892-1532
TELEPHONE (607) 565-3500 FAX (607) 565-4083

DATE 25-FEB-1999

LAB SAMPLE ID : L30628-9

Malcolm Pirnie, Inc. - Orchard Park
Daniel Riker
40 Centre Drive
PO Box 1938
Buffalo, NY 14219-0138

SAMPLE SOURCE	HANNA FURNACE, 3587-001
ORIGIN	J-2
DESCRIPTION	COMPOSITE
SAMPLED ON	26-JAN-99 00:00 by CLIENT
DATE RECEIVED	28-JAN-99 00:00
P.O. NO.	N/A

AS #	Analysis Performed	Result	Units	Detection Limit	Date Analyzed	Method	Notebook Reference
	Sodium	680	mg/kg	25.9	05-FEB-99	EPA 6010A	99-016-08
	Thallium	U	mg/kg	8.44	05-FEB-99	EPA 6010	99-016-08
	Vanadium	42.8	mg/kg	1.30	09-FEB-99	EPA 6010A	99-016-10
	Zinc	331	mg/kg	2.60	05-FEB-99	EPA 6010A	99-016-08
108-95-2	Phenol	U	ug/kg	340	04-FEB-99	EPA 8270	97-186-10874
95-57-8	2-Chlorophenol	U	ug/kg	340	04-FEB-99	EPA 8270	97-186-10874
95-48-7	2-Methylphenol	U	ug/kg	340	04-FEB-99	EPA 8270	97-186-10874
	3-Methylphenol/4-Methylphenol	U	ug/kg	340	04-FEB-99	EPA 8270	97-186-10874
88-75-5	2-Nitrophenol	U	ug/kg	340	04-FEB-99	EPA 8270	97-186-10874
105-67-9	2,4-Dimethylphenol	U	ug/kg	340	04-FEB-99	EPA 8270	97-186-10874
120-83-2	2,4-Dichlorophenol	U	ug/kg	340	04-FEB-99	EPA 8270	97-186-10874
91-20-3	Naphthalene	U	ug/kg	340	04-FEB-99	EPA 8270	97-186-10874
59-50-7	4-Chloro-3-methylphenol	U	ug/kg	680	04-FEB-99	EPA 8270	97-186-10874
91-57-6	2-Methylnaphthalene	U	ug/kg	340	04-FEB-99	EPA 8270	97-186-10874
208-96-8	Acenaphthylene	U	ug/kg	340	04-FEB-99	EPA 8270	97-186-10874
83-32-9	Acenaphthene	U	ug/kg	340	04-FEB-99	EPA 8270	97-186-10874
51-28-4	2,4-Dinitrophenol	U	ug/kg	1400	04-FEB-99	EPA 8270	97-186-10874
100-02-7	4-Nitrophenol	U	ug/kg	1400	04-FEB-99	EPA 8270	97-186-10874
534-52-1	2-Methyl-4,6-dinitrophenol	U	ug/kg	1400	04-FEB-99	EPA 8270	97-186-10874
87-86-5	Pentachlorophenol	U	ug/kg	1400	04-FEB-99	EPA 8270	97-186-10874
85-01-8	Phenanthrene	U	ug/kg	340	04-FEB-99	EPA 8270	97-186-10874
120-12-7	Anthracene	U	ug/kg	340	04-FEB-99	EPA 8270	97-186-10874
206-44-0	Fluoranthene	U	ug/kg	340	04-FEB-99	EPA 8270	97-186-10874
129-00-0	Pyrene	U	ug/kg	340	04-FEB-99	EPA 8270	97-186-10874
56-55-3	Benzo(a)anthracene	U	ug/kg	340	04-FEB-99	EPA 8270	97-186-10874
218-01-9	Chrysene	U	ug/kg	340	04-FEB-99	EPA 8270	97-186-10874
205-99-2	Benzo(b)fluoranthene	U	ug/kg	340	04-FEB-99	EPA 8270	97-186-10874
207-88-9	Benzo(k)fluoranthene	U	ug/kg	340	04-FEB-99	EPA 8270	97-186-10874
50-32-8	Benzo(a)pyrene	U	ug/kg	340	04-FEB-99	EPA 8270	97-186-10874
193-39-5	Indeno(1,2,3-cd)pyrene	U	ug/kg	340	04-FEB-99	EPA 8270	97-186-10874
53-7-3	Dibenzo(a,h)anthracene	U	ug/kg	340	04-FEB-99	EPA 8270	97-186-10874
191-24-2	Benzo(g,h,i)perylene	U	ug/kg	340	04-FEB-99	EPA 8270	97-186-10874
	Extraction Information:				04-FEB-99		98-174-51
Surrogate Recovery:							
	2-Fluorophenol	64	%				97-186-10874

U = None Detected

Approved by: _____
Lab Director

KEY: ND or U = None Detected < = less than ug/L = micrograms per liter (equivalent to parts per billion)
mg/L = milligrams per liter (equivalent to parts per million) mg/kg = milligrams per kilogram (equivalent to parts per million)
B = analyte was detected in the method or trip blank J = result estimated below the quantitation limit

FLI
FRIEND LABORATORY I · N · C

ONE RESEARCH CIRCLE WAVERLY, NY 14892-1532
TELEPHONE (607) 565-3500 FAX (607) 565-4083

DATE 25-FEB-1999

LAB SAMPLE ID : L30628-9

Malcolm Pirnie, Inc. - Orchard Park
Daniel Riker
40 Centre Drive
PO Box 1938
Buffalo, NY 14219-0138

SAMPLE SOURCE	HANNA FURNACE, 3587-001
ORIGIN	J-2
DESCRIPTION	COMPOSITE
SAMPLED ON	26-JAN-99 00:00 by CLIENT
DATE RECEIVED	28-JAN-99 00:00
P.O. NO.	N/A

CAS #	Analysis Performed	Result	Units	Detection Limit	Date Analyzed	Method	Notebook Reference
	Phenol-d5	73	%				97-186-10874
	Nitrobenzene-d5	77	%				97-186-10874
	2-Fluorobiphenyl	81	%				97-186-10874
	2,4,6-Tribromophenol	61	%				97-186-10874
	Terphenyl-d14	81	%				97-186-10874

Analysis Comment: Results Calculated on a dry weight basis.

U = None Detected

QC C NY 10252 NJ 73168 PA 68180 EPA NY 00033

Approved by: _____
Lab Director

KEY: ND or U = None Detected < = less than ug/L = micrograms per liter (equivalent to parts per billion)
mg/L = milligrams per liter (equivalent to parts per million) mg/kg = milligrams per kilogram (equivalent to parts per million)
B = analyte was detected in the method or trip blank J = result estimated below the quantitation limit

FLI
FRIEND LABORATORY · N · C

ONE RESEARCH CIRCLE WAVERLY, NY 14892-1532
TELEPHONE (607) 565-3500 FAX (607) 565-4083

DATE 25-FEB-1999

LAB SAMPLE ID : L30628-10

Malcolm Pirnie, Inc. - Orchard Park
Daniel Riker
40 Centre Drive
PO Box 1938
Buffalo, NY 14219-0138

SAMPLE SOURCE	HANNA FURNACE, 3587-001
ORIGIN	K-1
DESCRIPTION	COMPOSITE
SAMPLED ON	26-JAN-99 00:00 by CLIENT
DATE RECEIVED	28-JAN-99 00:00
P.O. NO.	N/A

AS #	Analysis Performed	Result	Units	Detection Limit	Date Analyzed	Method	Notebook Reference
	Cyanide, Total	7.64	mg/kg	0.59	03-FEB-99	EPA 335.3	99-003-004
	Total Solids	78.75	%		01-FEB-99	CLP 3.0	97-070-45
	Aluminum	17600	mg/kg	9.23	05-FEB-99	EPA 6010A	99-016-08
	Antimony	U	mg/kg	120	09-FEB-99	EPA 6010A	99-016-10
	Arsenic	U	mg/kg	14.7	05-FEB-99	EPA 6010A	99-016-08
	Barium	192	mg/kg	1.97	05-FEB-99	EPA 6010A	99-016-08
	Beryllium	3.04	mg/kg	0.246	05-FEB-99	EPA 6010A	99-016-08
	Cadmium	U	mg/kg	6.15	24-FEB-99	EPA 6010A	99-036-07
	Calcium	88700	mg/kg	1200	09-FEB-99	EPA 6010A	99-016-10
	Chromium	65.7	mg/kg	1.23	05-FEB-99	EPA 6010A	99-016-08
	Cobalt	7.5	mg/kg	1.23	05-FEB-99	EPA 6010A	99-016-08
	Copper	181	mg/kg	2.09	05-FEB-99	EPA 6010A	99-016-08
	Iron	70400	mg/kg	98.4	09-FEB-99	EPA 6010A	99-016-10
	Lead	611	mg/kg	5.41	05-FEB-99	EPA 6010A	99-016-08
	Magnesium	16400	mg/kg	61.5	05-FEB-99	EPA 6010A	99-016-08
	Manganese	3030	mg/kg	12.3	09-FEB-99	EPA 6010A	99-016-10
	Mercury	U	mg/kg	0.0120	03-FEB-99	EPA 7470	98-126-03
	Nickel	40.6	mg/kg	1.48	05-FEB-99	EPA 6010A	99-016-08
	Potassium	1250	mg/kg	61.5	05-FEB-99	EPA 6010A	99-016-08
	Selenium	U	mg/kg	86.1	24-FEB-99	EPA 6010A	99-036-07
	Silver	U	mg/kg	24.6	09-FEB-99	EPA 6010A	99-016-10

J = None Detected

IC C NY 10252 NJ 73168 PA 68180 EPA NY 00033

Approved by: _____
Lab Director

KEY: ND or U = None Detected < = less than ug/L = micrograms per liter (equivalent to parts per billion)
mg/L = milligrams per liter (equivalent to parts per million) mg/kg = milligrams per kilogram (equivalent to parts per million)
B = analyte was detected in the method or trip blank J = result estimated below the quantitation limit

FLI
FRIEND LABORATORY I·N·C

ONE RESEARCH CIRCLE WAVERLY, NY 14892-1532
TELEPHONE (607) 565-3500 FAX (607) 565-4083

DATE 25-FEB-1999

LAB SAMPLE ID : L30628-10

Malcolm Pirnie, Inc. - Orchard Park
Daniel Riker
40 Centre Drive
PO Box 1938
Buffalo, NY 14219-0138

SAMPLE SOURCE	HANNA FURNACE, 3587-001
ORIGIN	K-1
DESCRIPTION	COMPOSITE
SAMPLED ON	26-JAN-99 00:00 by CLIENT
DATE RECEIVED	28-JAN-99 00:00
P.O. NO.	N/A

CAS #	Analysis Performed	Result	Units	Detection Limit	Date Analyzed	Method	Notebook Reference
	Sodium	512	mg/kg	24.6	05-FEB-99	EPA 6010A	99-016-08
	Thallium	U	mg/kg	8000	05-FEB-99	EPA 6010	99-016-08
	Vanadium	37.3	mg/kg	24.6	09-FEB-99	EPA 6010A	99-016-10
	Zinc	1020	mg/kg	2.46	05-FEB-99	EPA 6010A	99-016-08
108-95-2	Phenol	U	ug/kg	310	08-FEB-99	EPA 8270	98-051-7896
95-57-8	2-Chlorophenol	U	ug/kg	310	08-FEB-99	EPA 8270	98-051-7896
95-48-7	2-Methylphenol	U	ug/kg	310	08-FEB-99	EPA 8270	98-051-7896
	3-Methylphenol/4-Methylphenol	U	ug/kg	310	08-FEB-99	EPA 8270	98-051-7896
88-75-5	2-Nitrophenol	U	ug/kg	310	08-FEB-99	EPA 8270	98-051-7896
105-67-9	2,4-Dimethylphenol	U	ug/kg	310	08-FEB-99	EPA 8270	98-051-7896
120-83-2	2,4-Dichlorophenol	U	ug/kg	310	08-FEB-99	EPA 8270	98-051-7896
91-20-3	Naphthalene	76 J	ug/kg	310	08-FEB-99	EPA 8270	98-051-7896
59-50-7	4-Chloro-3-methylphenol	U	ug/kg	620	08-FEB-99	EPA 8270	98-051-7896
91-57-6	2-Methylnaphthalene	80 J	ug/kg	310	08-FEB-99	EPA 8270	98-051-7896
208-96-8	Acenaphthylene	U	ug/kg	310	08-FEB-99	EPA 8270	98-051-7896
83-32-9	Acenaphthene	100 J	ug/kg	310	08-FEB-99	EPA 8270	98-051-7896
51-28-4	2,4-Dinitrophenol	U	ug/kg	1200	08-FEB-99	EPA 8270	98-051-7896
100-02-7	4-Nitrophenol	U	ug/kg	1200	08-FEB-99	EPA 8270	98-051-7896
534-52-1	2-Methyl-4,6-dinitrophenol	U	ug/kg	1200	08-FEB-99	EPA 8270	98-051-7896
87-86-5	Pentachlorophenol	U	ug/kg	1200	08-FEB-99	EPA 8270	98-051-7896
85-01-8	Phenanthrene	1100	ug/kg	310	08-FEB-99	EPA 8270	98-051-7896
120-12-7	Anthracene	330	ug/kg	310	08-FEB-99	EPA 8270	98-051-7896
206-44-0	Fluoranthene	1600	ug/kg	310	08-FEB-99	EPA 8270	98-051-7896
129-00-0	Pyrene	1500	ug/kg	310	08-FEB-99	EPA 8270	98-051-7896
56-55-3	Benzo(a)anthracene	880	ug/kg	310	08-FEB-99	EPA 8270	98-051-7896
215-01-9	Chrysene	880	ug/kg	310	08-FEB-99	EPA 8270	98-051-7896
205-99-2	Benzo(b)fluoranthene	1300	ug/kg	310	08-FEB-99	EPA 8270	98-051-7896
207-88-9	Benzo(k)fluoranthene	350	ug/kg	310	08-FEB-99	EPA 8270	98-051-7896
50-32-8	Benzo(a)pyrene	920	ug/kg	310	08-FEB-99	EPA 8270	98-051-7896
193-39-5	Indeno(1,2,3-cd)pyrene	550	ug/kg	310	08-FEB-99	EPA 8270	98-051-7896
53-7-3	Dibenzo(a,h)anthracene	U	ug/kg	310	08-FEB-99	EPA 8270	98-051-7896
191-24-2	Benzo(g,h,i)perylene	U	ug/kg	310	08-FEB-99	EPA 8270	98-051-7896
	Extraction Information:				04-FEB-99		98-174-51
Surrogate Recovery:							
	2-Fluorophenol	76	%				98-051-7896

U = None Detected

QC ____ NY 10252 NJ 73168 PA 68180 EPA NY 00033

Approved by: _____ Lab Director

KEY: ND or U = None Detected < = less than ug/L = micrograms per liter (equivalent to parts per billion)
mg/L = milligrams per liter (equivalent to parts per million) mg/kg = milligrams per kilogram (equivalent to parts per million)
B = analyte was detected in the method or trip blank J = result estimated below the quantitation limit

FLI
FRIEND LABORATORY · N · C

ONE RESEARCH CIRCLE WAVERLY, NY 14892-1532
TELEPHONE (607) 565-3500 FAX (607) 565-4083

DATE 25-FEB-1999

LAB SAMPLE ID : L30628-10

Malcolm Pirnie, Inc. - Orchard Park
Daniel Riker
40 Centre Drive
PO Box 1938
Buffalo, NY 14219-0138

SAMPLE SOURCE	HANNA FURNACE, 3587-001
ORIGIN	K-1
DESCRIPTION	COMPOSITE
SAMPLED ON	26-JAN-99 00:00 by CLIENT
DATE RECEIVED	28-JAN-99 00:00
P.O. NO.	N/A

AS #	Analysis Performed	Result	Units	Detection Limit	Date Analyzed	Method	Notebook Reference
	Phenol-d5	96	%				98-051-7896
	Nitrobenzene-d5	97	%				98-051-7896
	2-Fluorobiphenyl	101	%				98-051-7896
	2,4,6-Tribromophenol	80	%				98-051-7896
	Terphenyl-d14	111	%				98-051-7896

Analysis Comment: Results Calculated on a dry weight basis.

J = None Detected

C Q NY 10252 NJ 73168 PA 68180 EPA NY 00033

Approved by: _____
Lab Director

KEY: ND or U = None Detected < = less than
mg/L = milligrams per liter (equivalent to parts per million)
B = analyte was detected in the method or trip blank
ug/L = micrograms per liter (equivalent to parts per billion)
mg/kg = milligrams per kilogram (equivalent to parts per million)
J = result estimated below the quantitation limit

FLI
FRIEND LABORATORY I · N · C

ONE RESEARCH CIRCLE WAVERLY, NY 14892-1532
TELEPHONE (607) 565-3500 FAX (607) 565-4083

DATE 25-FEB-1999

LAB SAMPLE ID L30628-11

Malcolm Pirnie, Inc. - Orchard Park
Daniel Riker
40 Centre Drive
PO Box 1938
Buffalo, NY 14219-0138

SAMPLE SOURCE	HANNA FURNACE, 3587-001
ORIGIN	K-2
DESCRIPTION	COMPOSITE
SAMPLED ON	26-JAN-99 00:00 by CLIENT
DATE RECEIVED	28-JAN-99 00:00
P.O. NO.	N/A

CAS #	Analysis Performed	Result	Units	Detection Limit	Date Analyzed	Method	Notebook Reference
	Cyanide, Total	3.23	mg/kg	0.83	03-FEB-99	EPA 335.3	99-003-004
	Total Solids	56.58	%		01-FEB-99	CLP 3.0	97-070-45
	Aluminum	50300	mg/kg	13.3	05-FEB-99	EPA 6010A	99-016-08
	Antimony	U	mg/kg	8.93	09-FEB-99	EPA 6010A	99-016-10
	Arsenic	U	mg/kg	21.4	05-FEB-99	EPA 6010A	99-016-08
	Barium	408	mg/kg	2.86	05-FEB-99	EPA 6010A	99-016-08
	Beryllium	8.57	mg/kg	0.357	05-FEB-99	EPA 6010A	99-016-08
	Cadmium	1.05	mg/kg	0.8930	05-FEB-99	EPA 6010A	99-016-08
	Calcium	201000	mg/kg	1800	09-FEB-99	EPA 6010A	99-016-10
	Chromium	20.4	mg/kg	1.79	05-FEB-99	EPA 6010A	99-016-08
	Cobalt	5.03	mg/kg	1.79	05-FEB-99	EPA 6010A	99-016-08
	Copper	42.2	mg/kg	3.04	05-FEB-99	EPA 6010A	99-016-08
	Iron	20900	mg/kg	7.14	05-FEB-99	EPA 6010A	99-016-08
	Lead	166	mg/kg	7.86	05-FEB-99	EPA 6010A	99-016-08
	Magnesium	25000	mg/kg	89.2	05-FEB-99	EPA 6010A	99-016-08
	Manganese	3690	mg/kg	17.9	09-FEB-99	EPA 6010A	99-016-10
	Mercury	U	mg/kg	0.0170	03-FEB-99	EPA 7470	98-126-03
	Nickel	23.4	mg/kg	2.14	05-FEB-99	EPA 6010A	99-016-08
	Potassium	2510	mg/kg	89.2	05-FEB-99	EPA 6010A	99-016-08
	Selenium	U	mg/kg	12.4	05-FEB-99	EPA 6010A	99-016-08
	Silver	U	mg/kg	1.79	05-FEB-99	EPA 6010A	99-016-08

U = None Detected

QC NY 10252 NJ 73168 PA 68180 EPA NY 00033

Approved by: _____
Lab Director

KEY: ND or U = None Detected < = less than ug/L = micrograms per liter (equivalent to parts per billion)
mg/L = milligrams per liter (equivalent to parts per million) mg/kg = milligrams per kilogram (equivalent to parts per million)
B = analyte was detected in the method or trip blank J = result estimated below the quantitation limit

FLI
FRIEND LABORATORY
· N · C

ONE RESEARCH CIRCLE WAVERLY, NY 14892-1532
TELEPHONE (607) 565-3500 FAX (607) 565-4083

DATE 25-FEB-1999

LAB SAMPLE ID : L30628-11

Malcolm Pirnie, Inc. - Orchard Park
Daniel Riker
40 Centre Drive
PO Box 1938
Buffalo, NY 14219-0138

SAMPLE SOURCE	HANNA FURNACE, 3587-001
ORIGIN	K-2
DESCRIPTION	COMPOSITE
SAMPLED ON	26-JAN-99 00:00 by CLIENT
DATE RECEIVED	28-JAN-99 00:00
P.O. NO.	N/A

AS #	Analysis Performed	Result	Units	Detection Limit	Date Analyzed	Method	Notebook Reference
	Sodium	610	mg/kg	35.7	05-FEB-99	EPA 6010A	99-016-08
	Thallium	U	mg/kg	11.6	05-FEB-99	EPA 6010	99-016-08
	Vanadium	25.1	mg/kg	1.79	05-FEB-99	EPA 6010A	99-016-08
	Zinc	445	mg/kg	3.57	05-FEB-99	EPA 6010A	99-016-08
108-95-2	Phenol	U	ug/kg	420	05-FEB-99	EPA 8270	97-186-10880
95-57-8	2-Chlorophenol	U	ug/kg	420	05-FEB-99	EPA 8270	97-186-10880
95-48-7	2-Methylphenol	U	ug/kg	420	05-FEB-99	EPA 8270	97-186-10880
	3-Methylphenol/4-Methylphenol	U	ug/kg	420	05-FEB-99	EPA 8270	97-186-10880
88-75-5	2-Nitrophenol	U	ug/kg	420	05-FEB-99	EPA 8270	97-186-10880
105-67-9	2,4-Dimethylphenol	U	ug/kg	420	05-FEB-99	EPA 8270	97-186-10880
120-83-2	2,4-Dichlorophenol	U	ug/kg	420	05-FEB-99	EPA 8270	97-186-10880
91-20-3	Naphthalene	U	ug/kg	420	05-FEB-99	EPA 8270	97-186-10880
59-50-7	4-Chloro-3-methylphenol	U	ug/kg	840	05-FEB-99	EPA 8270	97-186-10880
91-57-6	2-Methylnaphthalene	U	ug/kg	420	05-FEB-99	EPA 8270	97-186-10880
208-96-8	Acenaphthylene	U	ug/kg	420	05-FEB-99	EPA 8270	97-186-10880
83-32-9	Acenaphthene	U	ug/kg	420	05-FEB-99	EPA 8270	97-186-10880
51-28-4	2,4-Dinitrophenol	U	ug/kg	1700	05-FEB-99	EPA 8270	97-186-10880
100-02-7	4-Nitrophenol	U	ug/kg	1700	05-FEB-99	EPA 8270	97-186-10880
534-52-1	2-Methyl-4,6-dinitrophenol	U	ug/kg	1700	05-FEB-99	EPA 8270	97-186-10880
87-86-5	Pentachlorophenol	U	ug/kg	1700	05-FEB-99	EPA 8270	97-186-10880
85-01-8	Phenanthrene	380 J	ug/kg	420	05-FEB-99	EPA 8270	97-186-10880
120-12-7	Anthracene	110 J	ug/kg	420	05-FEB-99	EPA 8270	97-186-10880
206-44-0	Fluoranthene	630	ug/kg	420	05-FEB-99	EPA 8270	97-186-10880
129-00-0	Pyrene	570	ug/kg	420	05-FEB-99	EPA 8270	97-186-10880
56-55-3	Benzo(a)anthracene	320 J	ug/kg	420	05-FEB-99	EPA 8270	97-186-10880
215-01-9	Chrysene	320 J	ug/kg	420	05-FEB-99	EPA 8270	97-186-10880
205-99-2	Benzo(b)fluoranthene	400 J	ug/kg	420	05-FEB-99	EPA 8270	97-186-10880
207-88-9	Benzo(k)fluoranthene	U	ug/kg	420	05-FEB-99	EPA 8270	97-186-10880
50-32-8	Benzo(a)pyrene	310 J	ug/kg	420	05-FEB-99	EPA 8270	97-186-10880
193-39-5	Indeno(1,2,3-cd)pyrene	220 J	ug/kg	420	05-FEB-99	EPA 8270	97-186-10880
53-7-3	Dibenzo(a,h)anthracene	U	ug/kg	420	05-FEB-99	EPA 8270	97-186-10880
191-24-2	Benzo(g,h,i)perylene	220 J	ug/kg	420	05-FEB-99	EPA 8270	97-186-10880
	Extraction Information:				04-FEB-99		98-174-51
Surrogate Recovery:							
	2-Fluorophenol	58	%				97-186-10880

U = None Detected

NC (2) NY 10252 NJ 73168 PA 68180 EPA NY 00033

Approved by: John R. Kent
Lab Director

KEY: ND or U = None Detected < = less than ug/L = micrograms per liter (equivalent to parts per billion)
mg/L = milligrams per liter (equivalent to parts per million) mg/kg = milligrams per kilogram (equivalent to parts per million)
B = analyte was detected in the method or trip blank J = result estimated below the quantitation limit

FLI
FRIEND LABORATORY I · N · C

ONE RESEARCH CIRCLE WAVERLY, NY 14892-1532
TELEPHONE (607) 565-3500 FAX (607) 565-4083

DATE 25-FEB-1999

LAB SAMPLE ID : L30628-11

Malcolm Pirnie, Inc. - Orchard Park
Daniel Riker
40 Centre Drive
PO Box 1938
Buffalo, NY 14219-0138

SAMPLE SOURCE	HANNA FURNACE, 3587-001
ORIGIN	K-2
DESCRIPTION	COMPOSITE
SAMPLED ON	26-JAN-99 00:00 by CLIENT
DATE RECEIVED	28-JAN-99 00:00
P.O. NO.	N/A

CAS #	Analysis Performed	Result	Units	Detection Limit	Date Analyzed	Method	Notebook Reference
	Phenol-d5	71	%				97-186-10880
	Nitrobenzene-d5	76	%				97-186-10880
	2-Fluorobiphenyl	86	%				97-186-10880
	2,4,6-Tribromophenol	54	%				97-186-10880
	Terphenyl-d14	89	%				97-186-10880

Analysis Comment: Results Calculated on a dry weight basis.

U = None Detected

QC NY 10252 NJ 73168 PA 68180 EPA NY 00033

Approved by: _____
Lab Director

KEY: ND or U = None Detected < = less than
mg/L = milligrams per liter (equivalent to parts per million)
B = analyte was detected in the method or trip blank
ug/L = micrograms per liter (equivalent to parts per billion)
mg/kg = milligrams per kilogram (equivalent to parts per million)
J = result estimated below the quantitation limit

FLI
FRIEND LABORATORY
· N · C

ONE RESEARCH CIRCLE WAVERLY, NY 14892-1532
TELEPHONE (607) 565-3500 FAX (607) 565-4083

DATE 25-FEB-1999

LAB SAMPLE ID : L30628-12

Malcolm Pirnie, Inc. - Orchard Park
Daniel Riker
40 Centre Drive
PO Box 1938
Buffalo, NY 14219-0138

SAMPLE SOURCE	HANNA FURNACE, 3587-001
ORIGIN	K-2
DESCRIPTION	TCLP EXTRACT
SAMPLED ON	26-JAN-99 00:00 by CLIENT
DATE RECEIVED	28-JAN-99 00:00
P.O. NO.	N/A

CAS #	Analysis Performed	Result	Units	Detection Limit	Date Analyzed	Method	Notebook Reference
	Arsenic	U	mg/l	1.20	05-FEB-99	EPA 6010 TCLP	99-016-08
	Barium	.432	mg/l	0.160	05-FEB-99	EPA 6010 TCLP	99-016-08
	Cadmium	U	mg/l	0.0500	05-FEB-99	EPA 6010 TCLP	99-016-08
	Chromium	U	mg/l	0.100	05-FEB-99	EPA 6010 TCLP	99-016-08
	Lead	U	mg/l	0.440	05-FEB-99	EPA 6010 TCLP	99-016-08
	Mercury	U	mg/l	0.0100	03-FEB-99	EPA 7470 TCLP	98-126-03
	Selenium	U	mg/l	0.700	05-FEB-99	EPA 6010 TCLP	99-016-08
	Silver	U	mg/l	0.100	05-FEB-99	EPA 6010 TCLP	99-016-08
75-01-4	Vinyl chloride	U	mg/l	0.03	29-JAN-99	TCLP 8260	98-175-6165
75-35-4	1,1-Dichloroethene	U	mg/l	0.03	29-JAN-99	TCLP 8260	98-175-6165
78-93-3	Methyl ethyl ketone	U	mg/l	0.03	29-JAN-99	TCLP 8260	98-175-6165
67-66-3	Chloroform	U	mg/l	0.03	29-JAN-99	TCLP 8260	98-175-6165
56-23-5	Carbon tetrachloride	U	mg/l	0.03	29-JAN-99	TCLP 8260	98-175-6165
71-43-2	Benzene	U	mg/l	0.03	29-JAN-99	TCLP 8260	98-175-6165
107-06-2	1,2-Dichloroethane	U	mg/l	0.03	29-JAN-99	TCLP 8260	98-175-6165
79-01-6	Trichloroethene	U	mg/l	0.03	29-JAN-99	TCLP 8260	98-175-6165
127-18-4	Tetrachloroethene	U	mg/l	0.03	29-JAN-99	TCLP 8260	98-175-6165
108-90-7	Chlorobenzene	U	mg/l	0.03	29-JAN-99	TCLP 8260	98-175-6165
106-46-7	1,4-Dichlorobenzene	U	mg/l	0.03	29-JAN-99	TCLP 8260	98-175-6165
Surrogate Recovery:							
	Dibromofluoromethane	100	%				98-175-6165
	Toluene-d8	94	%				98-175-6165
	4-Bromofluorobenzene	96	%				98-175-6165
58-89-9	Lindane	U	mg/l	0.005	01-FEB-99	TCLP 8080	98-187-5711
76-44-8	Heptachlor	U	mg/l	0.005	01-FEB-99	TCLP 8080	98-187-5711
1024-57-3	Heptachlor Epoxide	U	mg/l	0.005	01-FEB-99	TCLP 8080	98-187-5711
72-20-8	Endrin	U	mg/l	0.005	01-FEB-99	TCLP 8080	98-187-5711
72-43-5	Methoxychlor	U	mg/l	0.005	01-FEB-99	TCLP 8080	98-187-5711
57-74-9	Chlordane	U	mg/l	0.005	01-FEB-99	TCLP 8080	98-187-5711
8001-35-2	Toxaphene	U	mg/l	0.05	01-FEB-99	TCLP 8080	98-187-5711

U = None Detected

C NY 10252 NJ 73168 PA 68180 EPA NY 00033

Approved by: _____
Lab Director

KEY: ND or U = None Detected < = less than
mg/L = milligrams per liter (equivalent to parts per million)
B = analyte was detected in the method or trip blank
ug/L = micrograms per liter (equivalent to parts per billion)
mg/kg = milligrams per kilogram (equivalent to parts per million)
J = result estimated below the quantitation limit

FLI
FRIEND LABORATORY I · N · C

ONE RESEARCH CIRCLE WAVERLY, NY 14892-1532
TELEPHONE (607) 565-3500 FAX (607) 565-4083

DATE 25-FEB-1999

LAB SAMPLE ID : L30628-12

Malcolm Pirnie, Inc. - Orchard Park
Daniel Riker
40 Centre Drive
PO Box 1938
Buffalo, NY 14219-0138

SAMPLE SOURCE	HANNA FURNACE, 3587-001
ORIGIN	K-2
DESCRIPTION	TCLP EXTRACT
SAMPLED ON	26-JAN-99 00:00 by CLIENT
DATE RECEIVED	28-JAN-99 00:00
P.O NO.	N/A

CAS #	Analysis Performed	Result	Units	Detection Limit	Date Analyzed	Method	Notebook Reference
Surrogate Recovery:							
	Decachlorobiphenyl	138	%				98-187-5711
94-75-7	2,4-D	U	mg/l	0.4	11-FEB-99	TCLP 8150	98-080-2902
93-72-1	2,4,5-TP (Silvex)	U	mg/l	0.4	11-FEB-99	TCLP 8150	98-080-2902
Surrogate Recovery:							
	DCAA	53					98-080-2902
110-86-1	Pyridine	U	mg/l	0.05	03-FEB-99	TCLP 8270	98-051-7863
	o-Cresol	U	mg/l	0.05	03-FEB-99	TCLP 8270	98-051-7863
	p-Cresol/m-Cresol	U	mg/l	0.05	03-FEB-99	TCLP 8270	98-051-7863
67-72-1	Hexachloroethane	U	mg/l	0.05	03-FEB-99	TCLP 8270	98-051-7863
98-95-3	Nitrobenzene	U	mg/l	0.05	03-FEB-99	TCLP 8270	98-051-7863
87-68-3	Hexachlorobutadiene	U	mg/l	0.05	03-FEB-99	TCLP 8270	98-051-7863
88-06-2	2,4,6-Trichlorophenol	U	mg/l	0.05	03-FEB-99	TCLP 8270	98-051-7863
95-95-4	2,4,5-Trichlorophenol	U	mg/l	0.05	03-FEB-99	TCLP 8270	98-051-7863
121-14-2	2,4-Dinitrotoluene	U	mg/l	0.05	03-FEB-99	TCLP 8270	98-051-7863
118-74-1	Hexachlorobenzene	U	mg/l	0.05	03-FEB-99	TCLP 8270	98-051-7863
87-86-5	Pentachlorophenol	U	mg/l	0.2	03-FEB-99	TCLP 8270	98-051-7863
	Extraction Information:				29-JAN-99		98-174-47
Surrogate Recovery:							
	2-Fluorophenol	51	%				98-051-7863
	Phenol-d5	39	%				98-051-7863
	Nitrobenzene-d5	73	%				98-051-7863
	2-Fluorobiphenyl	71	%				98-051-7863
	2,4,6-Tribromophenol	73	%				98-051-7863
	Terphenyl-d14	80	%				98-051-7863

U = None Detected

QC ____ NY 10252 NJ 73168 PA 68180 EPA NY 00033 Approved by: _____ Lab Director

KEY: ND or U = None Detected < = less than ug/L = micrograms per liter (equivalent to parts per billion)
mg/L = milligrams per liter (equivalent to parts per million) mg/kg = milligrams per kilogram (equivalent to parts per million)
B = analyte was detected in the method or trip blank J = result estimated below the quantitation limit

FLI
FRIEND LABORATORY INC

ONE RESEARCH CIRCLE WAVERLY, NY 14892-1532
TELEPHONE (607) 565-3500 FAX (607) 565-4083

DATE 25-FEB-1999

LAB SAMPLE ID : L30628-13

Malcolm Pirnie, Inc. - Orchard Park
Daniel Riker
40 Centre Drive
PO Box 1938
Buffalo, NY 14219-0138

SAMPLE SOURCE	HANNA FURNACE, 3587-001
ORIGIN	SB-16
DESCRIPTION	GRAB
SAMPLED ON	26-JAN-99 00:00 by CLIENT
DATE RECEIVED	28-JAN-99 00:00
P.O. NO.	N/A

CAS #	Analysis Performed	Result	Units	Detection Limit	Date Analyzed	Method	Notebook Reference
	Total Solids	80.44	%		01-FEB-99	CLP 3.0	97-070-45
12674-11-2	PCB 1016	U	mg/kg	0.1	02-FEB-99	EPA 8080	98-052-1256
11104-28-2	PCB 1221	U	mg/kg	0.2	02-FEB-99	EPA 8080	98-052-1256
11141-16-5	PCB 1232	U	mg/kg	0.1	02-FEB-99	EPA 8080	98-052-1256
53469-21-9	PCB 1242	U	mg/kg	0.1	02-FEB-99	EPA 8080	98-052-1256
12672-29-6	PCB 1248	U	mg/kg	0.1	02-FEB-99	EPA 8080	98-052-1256
11097-69-1	PCB 1254	U	mg/kg	0.1	02-FEB-99	EPA 8080	98-052-1256
11096-82-5	PCB 1260	U	mg/kg	0.1	02-FEB-99	EPA 8080	98-052-1256
Surrogate Recovery:	Decachlorobiphenyl	133	%				98-052-1256

U = None Detected

IC NY 10252 NJ 73168 PA 68180 EPA NY 00033

Approved by: _____
Lab Director

KEY:
ND or U = None Detected
< = less than
mg/L = milligrams per liter (equivalent to parts per million)
B = analyte was detected in the method or trip blank
ug/L = micrograms per liter (equivalent to parts per billion)
mg/kg = milligrams per kilogram (equivalent to parts per million)
J = result estimated below the quantitation limit

FLI
FRIEND LABORATORY I · N · C

ONE RESEARCH CIRCLE WAVERLY, NY 14892-1532
TELEPHONE (607) 565-3500 FAX (607) 565-4083

DATE 25-FEB-1999

LAB SAMPLE ID : L30628-14

Malcolm Pirnie, Inc. - Orchard Park
Daniel Riker
40 Centre Drive
PO Box 1938
Buffalo, NY 14219-0138

SAMPLE SOURCE	HANNA FURNACE, 3587-001
ORIGIN	SB-20
DESCRIPTION	GRAB
SAMPLED ON	26-JAN-99 00:00 by CLIENT
DATE RECEIVED	28-JAN-99 00:00
P.O. NO	N/A

CAS #	Analysis Performed	Result	Units	Detection Limit	Date Analyzed	Method	Notebook Reference
	Cyanide, Reactive	U	mg/kg	0.414	03-FEB-99	SW846 CH.7	99-003-004
	Cyanide, Total	38.8	mg/kg	0.41	03-FEB-99	EPA 335.3	99-003-004
	Total Solids	43.88	%		08-FEB-99	CLP 3.0	97-070-49

U = None Detected

QC NY 10252 NJ 73168 PA 68180 EPA NY 00033

Approved by: _____
Lab Director

KEY: ND or U = None Detected < = less than ug/L = micrograms per liter (equivalent to parts per billion)
mg/L = milligrams per liter (equivalent to parts per million) mg/kg = milligrams per kilogram (equivalent to parts per million)
B = analyte was detected in the method or trip blank J = result estimated below the quantitation limit

CUSTOMER CODE # _____

CHAIN OF CUSTODY RECORD

PAGE 1 OF 3

FLI
FRIEND LABORATORY I • N • C
ONE RESEARCH CIRCLE
WAVERLY NY 14892-1532
Telephone (607) 565 3500
Fax (607) 565 7160

Untreated | Sodium thiosulfate | HCl pH <2 | Ascorbic acid & HCl pH <2 | HNO_3 pH <2 | H_2SO_4 pH <2 | NaOH pH >12 | NaOH & Zinc acetate pH >9 | Acetic Buffer pH <3 | Sodium sulfite

CLIENT: MALCOLM PIRNIE
ADDRESS: 40 CENTRE ALINE BUFFALO
PHONE: 716-667-2900 FAX: 716-667-0279

INVOICE TO: DANIEL RIKER
ADDRESS: SAME

Sample Site: HANNA FURNACE

P.O. #

PROJECT NO. / NAME
3587-001
HANNA FURNACE

COPY TO:
ADDRESS:

DATE & TIME OF SAMPLE COLLECTION	SAMPLE DESCRIPTION	NUMBER OF CONTAINERS	ANALYSES / TESTS REQUESTED	SAMPLE NUMBER
1/25/99	COMP-A1 COMPOSITE SOIL	2 Description: Grab Composite Other Matrix: DW WW MW Soil Air Other	TAL METALS, CN, PAHs, PHENOLS	LAB USE ONLY L30628-1
	COMP-A2	2 Description: Grab Composite Other Matrix: DW WW MW Soil Air Other		-2
	COMP-B1	2 Description: Grab Composite Other Matrix: DW WW MW Soil Air Other		-3
	COMP-B2	4 Description: Grab Composite Other Matrix: DW WW MW Soil Air Other	PLUS FULL TCLP	-4 -5

RELINQUISHED BY	DATE /TIME	ACCEPTED BY	DATE/TIME	NOTES TO LABORATORY
SAMPLER [signature]		Kathy Wagy	1/27/99 11:31	25° temp.
		Christa Frantz	1/28-99 10:24	

SUSPECTED CONTAMINATION LEVEL

IE IT ERAI IGH ... use c. ...

R CODE #

CHAIN OF CUSTODY RECORD

FLI FRIEND LABORATORY I • N • C
ONE RESEARCH CIRCLE
WAVERLY NY 14892-1532
Telephone (607) 565 3500
Fax (607) 565 7160

Sample Site: HANNA FURNACE

P.O. #

Preservatives: Untreated | Sodium thiosulfate | HCl pH <2 | Ascorbic acid & HCl pH <2 | HNO_3 pH <2 | H_2SO_4 pH <2 | NaOH pH >12 | NaOH & Zinc acetate pH >9 | Acetic Buffer pH <3 | Sodium sulfite

CLIENT: MPI
ADDRESS:
PHONE: FAX:
PROJECT NO. / NAME: 3587-001

INVOICE TO: D. RIKER
ADDRESS:

COPY TO:
ADDRESS:

DATE & TIME OF SAMPLE COLLECTION	SAMPLE DESCRIPTION	NUMBER OF CONTAINERS	ANALYSES / TESTS REQUESTED	SAMPLE NUMBER LAB USE ONLY
1/25/99	COMP - C1 soil composite	2 Description: Grab Composite Other Matrix: DW WW MW Soil Air Other	TAL metals, CN, PAHs, phenols	-06
[↓ 1/25/99]	COMP - C2	2 Description: Grab Composite Other Matrix: DW WW MW Soil Air Other	[↓]	-07
1/26/99	COMP - J1	2 Description: Grab Composite Other Matrix: DW WW MW Soil Air Other	[↓]	-08
[↓ 1/26/99]	COMP - J2	2 Description: Grab Composite Other Matrix: DW WW MW Soil Air Other	[↓]	-09

RELINQUISHED BY	DATE/TIME	ACCEPTED BY	DATE/TIME
SAMPLER [illegible]		Kathy Wozy	1/27/99 11:51
		Christa Frantz	1/28-99 10:27

NOTES TO LABORATORY
25° temp

SUSPECTED CONTAMINATION LEVEL
NONE (SLIGHT) MODERATE HIGH (please circle)

CODE #

CHAIN OF CUSTODY RECORD

FLI FRIEND LABORATORY INC
ONE RESEARCH CIRCLE
WAVERLY NY 14892-1532
Telephone (607) 565 3500
Fax (607) 565 7160

Sample Site: HANNA FURNACE

P.O. #

Preservatives: Untreated | Sodium thiosulfate | HCl pH <2 | Ascorbic acid & HCl pH <2 | HNO_3 pH <2 | H_2SO_4 pH <2 | NaOH pH >12 | NaOH & Zinc acetate pH >9 | Acetic Buffer pH <3 | Sodium sulfite

CLIENT: MPI
ADDRESS:
PHONE: FAX:
PROJECT NO. / NAME 3587-001

INVOICE TO: D. RIKER
ADDRESS:

COPY TO:
ADDRESS:

DATE & TIME OF SAMPLE COLLECTION	SAMPLE DESCRIPTION	NUMBER OF CONTAINERS	ANALYSES / TESTS REQUESTED	SAMPLE NUMBER (LAB USE ONLY)
1/26/88	COMP-K1 composite soil	2 Description: Grab Composite Other Matrix: DW WW MW Soil Air Other	metals, PAH, phenols, CN	L30628 -10
↓	COMP-K2 ↓	4 Description: Grab Composite Other Matrix: DW WW MW Soil Air Other	↓ plus Full TCLP	-11 -12
↓	SB-16 Grab soil	1 Description: Grab Composite Other Matrix: DW WW MW Soil Air Other	PCBs	-13
↓	SB-20 ↓	1 Description: Grab Composite Other Matrix: DW WW MW Soil Air Other	Reactive Cyanide Total Cyanide	-14

RELINQUISHED BY	DATE / TIME	ACCEPTED BY	DATE/TIME
SAMPLER [signature]		Kathy Wogy	1/27/99 11:37
		Christa Frantz	1/28-99 10:27

NOTES TO LABORATORY
2.5 temp.

SUSPECTED CONTAMINATION LEVEL
NONE SLIGHT MODERATE HIGH (please circle)

FLI
FRIEND LABORATORY I · N · C

ONE RESEARCH CIRCLE WAVERLY, NY 14892-1532
TELEPHONE (607) 565-3500 FAX (607) 565-4083

DATE 24-FEB-1999

LAB SAMPLE ID : L30680-1

Malcolm Pirnie, Inc. - Orchard Park
Daniel Riker
40 Centre Drive
PO Box 1938
Buffalo, NY 14219-0138

SAMPLE SOURCE	HANNA FURNACE, 3587-001
ORIGIN	D-1
DESCRIPTION	COMPOSITE
SAMPLED ON	27-JAN-99 00:00 by CLIENT
DATE RECEIVED	29-JAN-99 14:36
P.O. NO	N/A

CAS #	Analysis Performed	Result	Units	Detection Limit	Date Analyzed	Method	Notebook Reference
	Cyanide, Total	16.5	mg/kg	0.52	03-FEB-99	EPA 335.3	99-003-004
	Total Solids	82.17	%		01-FEB-99	CLP 3.0	97-070-45
	Aluminum	25300	mg/kg	9.09	11-FEB-99	EPA 6010A	99-036-01
	Antimony	6.99	mg/kg	6.06	11-FEB-99	EPA 6010A	99-036-01
	Arsenic	15.4	mg/kg	14.5	11-FEB-99	EPA 6010A	99-036-01
	Barium	220	mg/kg	1.94	11-FEB-99	EPA 6010A	99-036-01
	Beryllium	4.78	mg/kg	00.242	11-FEB-99	EPA 6010A	99-036-01
	Cadmium	U	mg/kg	3.03	11-FEB-99	EPA 6010A	99-036-01
	Calcium	137000	mg/kg	303.	11-FEB-99	EPA 6010A	99-036-01
	Chromium	42.8	mg/kg	1.21	11-FEB-99	EPA 6010A	99-036-01
	Cobalt	6.26	mg/kg	1.21	11-FEB-99	EPA 6010A	99-036-01
	Copper	42.8	mg/kg	2.06	11-FEB-99	EPA 6010A	99-036-01
	Iron	82500	mg/kg	24.2	11-FEB-99	EPA 6010A	99-036-01
	Lead	97.2	mg/kg	5.33	11-FEB-99	EPA 6010A	99-036-01
	Magnesium	20400	mg/kg	60.6	11-FEB-99	EPA 6010A	99-036-01
	Manganese	2860	mg/kg	3.03	11-FEB-99	EPA 6010A	99-036-01
	Mercury	UE	mg/kg	0.0120	17-FEB-99	EPA 7470	98-126-06
Analysis Comment: E- RESULT IS SUSPECT DUE TO NO MATRIX SPIKE RECOVERY.							
	Nickel	30.2	mg/kg	1.46	11-FEB-99	EPA 6010A	99-036-01
	Potassium	1730	mg/kg	60.6	11-FEB-99	EPA 6010A	99-036-01
	Selenium	U	mg/kg	42.4	11-FEB-99	EPA 6010A	99-036-01
	Silver	U	mg/kg	12.8	24-FEB-99	EPA 6010A	99-036-07

U = None Detected

QC ____ NY 10252 NJ 73168 PA 68180 EPA NY 00033

Approved by: _____
Lab Director

KEY: ND or U = None Detected < = less than ug/L = micrograms per liter (equivalent to parts per billion)
mg/L = milligrams per liter (equivalent to parts per million) mg/kg = milligrams per kilogram (equivalent to parts per million)
B = analyte was detected in the method or trip blank J = result estimated below the quantitation limit

FLI
FRIEND LABORATORY INC

ONE RESEARCH CIRCLE WAVERLY, NY 14892-1532
TELEPHONE (607) 565-3500 FAX (607) 565-4083

DATE 24-FEB-1999

LAB SAMPLE ID : L30680-1

Malcolm Pirnie, Inc. - Orchard Park
Daniel Riker
40 Centre Drive
PO Box 1938
Buffalo, NY 14219-0138

SAMPLE SOURCE	HANNA FURNACE, 3587-001
ORIGIN	D-1
DESCRIPTION	COMPOSITE
SAMPLED ON	27-JAN-99 00:00 by CLIENT
DATE RECEIVED	29-JAN-99 14:36
P.O. NO.	N/A

CAS #	Analysis Performed	Result	Units	Detection Limit	Date Analyzed	Method	Notebook Reference
	Sodium	579	mg/kg	24.2	11-FEB-99	EPA 6010A	99-036-01
	Thallium	U	mg/kg	7.88	11-FEB-99	EPA 6010	99-036-01
	Vanadium	27.3	mg/kg	6.05	11-FEB-99	EPA 6010A	99-036-01
	Zinc	266	mg/kg	2.42	11-FEB-99	EPA 6010A	99-036-01
108-95-2	Phenol	U	ug/kg	300	05-FEB-99	EPA 8270	97-186-10882
95-57-8	2-Chlorophenol	U	ug/kg	300	05-FEB-99	EPA 8270	97-186-10882
95-48-7	2-Methylphenol	U	ug/kg	300	05-FEB-99	EPA 8270	97-186-10882
	3-Methylphenol/4-Methylphenol	U	ug/kg	300	05-FEB-99	EPA 8270	97-186-10882
88-75-5	2-Nitrophenol	U	ug/kg	300	05-FEB-99	EPA 8270	97-186-10882
105-67-9	2,4-Dimethylphenol	U	ug/kg	300	05-FEB-99	EPA 8270	97-186-10882
120-83-2	2,4-Dichlorophenol	U	ug/kg	300	05-FEB-99	EPA 8270	97-186-10882
91-20-3	Naphthalene	U	ug/kg	300	05-FEB-99	EPA 8270	97-186-10882
59-50-7	4-Chloro-3-methylphenol	U	ug/kg	610	05-FEB-99	EPA 8270	97-186-10882
91-57-6	2-Methylnaphthalene	65 J	ug/kg	300	05-FEB-99	EPA 8270	97-186-10882
208-96-8	Acenaphthylene	U	ug/kg	300	05-FEB-99	EPA 8270	97-186-10882
83-32-9	Acenaphthene	U	ug/kg	300	05-FEB-99	EPA 8270	97-186-10882
51-28-4	2,4-Dinitrophenol	U	ug/kg	1200	05-FEB-99	EPA 8270	97-186-10882
100-02-7	4-Nitrophenol	U	ug/kg	1200	05-FEB-99	EPA 8270	97-186-10882
534-52-1	2-Methyl-4,6-dinitrophenol	U	ug/kg	1200	05-FEB-99	EPA 8270	97-186-10882
87-86-5	Pentachlorophenol	U	ug/kg	1200	05-FEB-99	EPA 8270	97-186-10882
85-01-8	Phenanthrene	160 J	ug/kg	300	05-FEB-99	EPA 8270	97-186-10882
120-12-7	Anthracene	U	ug/kg	300	05-FEB-99	EPA 8270	97-186-10882
206-44-0	Fluoranthene	290 J	ug/kg	300	05-FEB-99	EPA 8270	97-186-10882
129-00-0	Pyrene	350	ug/kg	300	05-FEB-99	EPA 8270	97-186-10882
56-55-3	Benzo(a)anthracene	230 J	ug/kg	300	05-FEB-99	EPA 8270	97-186-10882
215-01-9	Chrysene	290 J	ug/kg	300	05-FEB-99	EPA 8270	97-186-10882
205-99-2	Benzo(b)fluoranthene	510	ug/kg	300	05-FEB-99	EPA 8270	97-186-10882
207-88-9	Benzo(k)fluoranthene	260 J	ug/kg	300	05-FEB-99	EPA 8270	97-186-10882
50-32-8	Benzo(a)pyrene	470	ug/kg	300	05-FEB-99	EPA 8270	97-186-10882
193-39-5	Indeno(1,2,3-cd)pyrene	427	ug/kg	300	05-FEB-99	EPA 8270	97-186-10882
53-7-3	Dibenzo(a,h)anthracene	U	ug/kg	300	05-FEB-99	EPA 8270	97-186-10882
191-24-2	Benzo(g,h,i)perylene	480	ug/kg	300	05-FEB-99	EPA 8270	97-186-10882
	Extraction Information:				04-FEB-99		98-174-51
Surrogate Recovery:							
	2-Fluorophenol	78	%				97-186-10882

U = None Detected

QC NY 10252 NJ 73168 PA 68180 EPA NY 00033

Approved by: _____
Lab Director

KEY: ND or U = None Detected < = less than ug/L = micrograms per liter (equivalent to parts per billion)
mg/L = milligrams per liter (equivalent to parts per million) mg/kg = milligrams per kilogram (equivalent to parts per million)
B = analyte was detected in the method or trip blank J = result estimated below the quantitation limit

FLI
FRIEND LABORATORY I · N · C

ONE RESEARCH CIRCLE WAVERLY, NY 14892-1532
TELEPHONE (607) 565-3500 FAX (607) 565-4083

DATE 24-FEB-1999

LAB SAMPLE ID : L30680-1

Malcolm Pirnie, Inc. - Orchard Park
Daniel Riker
40 Centre Drive
PO Box 1938
Buffalo, NY 14219-0138

SAMPLE SOURCE	HANNA FURNACE, 3587-001
ORIGIN	D-1
DESCRIPTION	COMPOSITE
SAMPLED ON	27-JAN-99 00:00 by CLIENT
DATE RECEIVED	29-JAN-99 14:36
P.O NO.	N/A

CAS #	Analysis Performed	Result	Units	Detection Limit	Date Analyzed	Method	Notebook Reference
	Phenol-d5	86	%				97-186-10882
	Nitrobenzene-d5	89	%				97-186-10882
	2-Fluorobiphenyl	91	%				97-186-10882
	2,4,6-Tribromophenol	93	%				97-186-10882
	Terphenyl-d14	107	%				97-186-10882

Analysis Comment: Results Calculated on a dry weight basis.

U = None Detected

QC (W) NY 10252 NJ 73168 PA 68180 EPA NY 00033

Approved by: _____ Lab Director

KEY: ND or U = None Detected < = less than
mg/L = milligrams per liter (equivalent to parts per million)
B = analyte was detected in the method or trip blank
ug/L = micrograms per liter (equivalent to parts per billion)
mg/kg = milligrams per kilogram (equivalent to parts per million)
J = result estimated below the quantitation limit

FLI
FRIEND LABORATORY I · N · C

ONE RESEARCH CIRCLE WAVERLY, NY 14892-1532
TELEPHONE (607) 565-3500 FAX (607) 565-4083

DATE : 26-FEB-1999

LAB SAMPLE ID : L30680-2

Malcolm Pirnie, Inc. - Orchard Park
Daniel Riker
40 Centre Drive
PO Box 1938
Buffalo, NY 14219-0138

SAMPLE SOURCE	HANNA FURNACE, 3587-001
ORIGIN	D-2
DESCRIPTION	COMPOSITE
SAMPLED ON	27-JAN-99 00:00 by CLIENT
DATE RECEIVED	29-JAN-99 14:36
P.O. NO.	N/A

CAS #	Analysis Performed	Result	Units	Detection Limit	Date Analyzed	Method	Notebook Reference
	Cyanide, Total	33.2	mg/kg	0.87	03-FEB-99	EPA 335.3	99-003-004
	Total Solids	56.03	%		01-FEB-99	CLP 3.0	97-070-45
	Aluminum	38900	mg/kg	13.2	11-FEB-99	EPA 6010A	99-036-01
	Antimony	11.4	mg/kg	8.84	11-FEB-99	EPA 6010A	99-036-01
	Arsenic	U	mg/kg	21.2	11-FEB-99	EPA 6010A	99-036-01
	Barium	286	mg/kg	2.83	11-FEB-99	EPA 6010A	99-036-01
	Beryllium	6.73	mg/kg	0.353	11-FEB-99	EPA 6010A	99-036-01
	Cadmium	8.1	mg/kg	3.5	17-FEB-99	EPA 7130	93-259-85
	Calcium	233000	mg/kg	860	24-FEB-99	EPA 6010A	99-036-07
	Chromium	12	mg/kg	9.03	22-FEB-99	EPA 6010A	99-036-05
	Cobalt	U	mg/kg	9.03	22-FEB-99	EPA 6010A	99-036-05
	Copper	21.9	mg/kg	3000	11-FEB-99	EPA 6010A	99-036-01
	Iron	37100	mg/kg	140	11-FEB-99	EPA 6010A	99-036-01
	Lead	56.2	mg/kg	7.78	11-FEB-99	EPA 6010A	99-036-01
	Magnesium	19000	mg/kg	88.3	11-FEB-99	EPA 6010A	99-036-01
	Manganese	2090	mg/kg	4.52	22-FEB-99	EPA 6010A	99-036-05
	Mercury	U	mg/kg	0.0180	03-FEB-99	EPA 7470	98-126-03
	Nickel	11.5	mg/kg	10.8	22-FEB-99	EPA 6010A	99-036-05
	Potassium	1590	mg/kg	88.3	11-FEB-99	EPA 6010A	99-036-01
	Selenium	U	mg/kg	12.3	11-FEB-99	EPA 6010A	99-036-01
	Silver	U	mg/kg	17.2	24-FEB-99	EPA 6010A	99-036-07

U = None Detected

QC NY 10252 NJ 73168 PA 68180 EPA NY 00033

Approved by: _____
Lab Director

KEY: ND or U = None Detected; < = less than; ug/L = micrograms per liter (equivalent to parts per billion)
mg/L = milligrams per liter (equivalent to parts per million); mg/kg = milligrams per kilogram (equivalent to parts per million)
B = analyte was detected in the method or trip blank; J = result estimated below the quantitation limit

FLI
FRIEND LABORATORY I · N · C

ONE RESEARCH CIRCLE WAVERLY, NY 14892-1532
TELEPHONE (607) 565-3500 FAX (607) 565-4083

DATE 26-FEB-1999

LAB SAMPLE ID : L30680-2

Malcolm Pirnie, Inc. - Orchard Park
Daniel Riker
40 Centre Drive
PO Box 1938
Buffalo, NY 14219-0138

SAMPLE SOURCE	HANNA FURNACE, 3587-001
ORIGIN	D-2
DESCRIPTION	COMPOSITE
SAMPLED ON	27-JAN-99 00:00 by CLIENT
DATE RECEIVED	29-JAN-99 14:36
P.O NO.	N/A

CAS #	Analysis Performed	Result	Units	Detection Limit	Date Analyzed	Method	Notebook Reference
	Sodium	713	mg/kg	35.3	11-FEB-99	EPA 6010A	99-036-01
	Thallium	U	mg/kg	11.4	11-FEB-99	EPA 6010	99-036-01
	Vanadium	17.8	mg/kg	1.77	11-FEB-99	EPA 6010A	99-036-01
	Zinc	107	mg/kg	18.0	22-FEB-99	EPA 6010A	99-036-05
108-95-2	Phenol	U	ug/kg	440	04-FEB-99	EPA 8270	97-186-10869
95-57-8	2-Chlorophenol	U	ug/kg	440	04-FEB-99	EPA 8270	97-186-10869
95-48-7	2-Methylphenol	U	ug/kg	440	04-FEB-99	EPA 8270	97-186-1086
	3-Methylphenol/4-Methylphenol	U	ug/kg	440	04-FEB-99	EPA 8270	97-186-1086
88-75-5	2-Nitrophenol	U	ug/kg	440	04-FEB-99	EPA 8270	97-186-1086
105-67-9	2,4-Dimethylphenol	U	ug/kg	440	04-FEB-99	EPA 8270	97-186-10869
120-83-2	2,4-Dichlorophenol	U	ug/kg	440	04-FEB-99	EPA 8270	97-186-10869
91-20-3	Naphthalene	U	ug/kg	440	04-FEB-99	EPA 8270	97-186-1086
59-50-7	4-Chloro-3-methylphenol	U	ug/kg	870	04-FEB-99	EPA 8270	97-186-1086
91-57-6	2-Methylnaphthalene	U	ug/kg	440	04-FEB-99	EPA 8270	97-186-1086
208-96-8	Acenaphthylene	U	ug/kg	440	04-FEB-99	EPA 8270	97-186-10869
83-32-9	Acenaphthene	U	ug/kg	440	04-FEB-99	EPA 8270	97-186-10869
51-28-4	2,4-Dinitrophenol	U	ug/kg	1700	04-FEB-99	EPA 8270	97-186-1086
100-02-7	4-Nitrophenol	U	ug/kg	1700	04-FEB-99	EPA 8270	97-186-1086
534-52-1	2-Methyl-4,6-dinitrophenol	U	ug/kg	1700	04-FEB-99	EPA 8270	97-186-1086
87-86-5	Pentachlorophenol	U	ug/kg	1700	04-FEB-99	EPA 8270	97-186-10869
85-01-8	Phenanthrene	U	ug/kg	440	04-FEB-99	EPA 8270	97-186-1086
120-12-7	Anthracene	U	ug/kg	440	04-FEB-99	EPA 8270	97-186-1086
206-44-0	Fluoranthene	U	ug/kg	440	04-FEB-99	EPA 8270	97-186-1086
129-00-0	Pyrene	U	ug/kg	440	04-FEB-99	EPA 8270	97-186-10869
56-55-3	Benzo(a)anthracene	U	ug/kg	440	04-FEB-99	EPA 8270	97-186-10869
215-01-9	Chrysene	U	ug/kg	440	04-FEB-99	EPA 8270	97-186-1086
205-99-2	Benzo(b)fluoranthene	U	ug/kg	440	04-FEB-99	EPA 8270	97-186-1086
207-88-9	Benzo(k)fluoranthene	U	ug/kg	440	04-FEB-99	EPA 8270	97-186-1086
50-32-8	Benzo(a)pyrene	U	ug/kg	440	04-FEB-99	EPA 8270	97-186-10869
193-39-5	Indeno(1,2,3-cd)pyrene	U	ug/kg	440	04-FEB-99	EPA 8270	97-186-10869
53-7-3	Dibenzo(a,h)anthracene	U	ug/kg	440	04-FEB-99	EPA 8270	97-186-1086
191-24-2	Benzo(g,h,i)perylene	U	ug/kg	440	04-FEB-99	EPA 8270	97-186-1086
	Extraction Information:				04-FEB-99		98-174-51
Surrogate Recovery:							
	2-Fluorophenol	29	%				97-186-1086

U = None Detected

QC NY 10252 NJ 73168 PA 68180 EPA NY 00033 Approved by: Lab Director

KEY: ND or U = None Detected < = less than ug/L = micrograms per liter (equivalent to parts per billion)
mg/L = milligrams per liter (equivalent to parts per million) mg/kg = milligrams per kilogram (equivalent to parts per million)
B = analyte was detected in the method or trip blank J = result estimated below the quantitation limit

FLI
FRIEND LABORATORY
· N · C

ONE RESEARCH CIRCLE WAVERLY, NY 14892-1532
TELEPHONE (607) 565-3500 FAX (607) 565-4083

DATE 26-FEB-1999

LAB SAMPLE ID : L30680-2

Malcolm Pirnie, Inc. - Orchard Park
Daniel Riker
40 Centre Drive
PO Box 1938
Buffalo, NY 14219-0138

SAMPLE SOURCE	HANNA FURNACE, 3587-001
ORIGIN	D-2
DESCRIPTION	COMPOSITE
SAMPLED ON	27-JAN-99 00:00 by CLIENT
DATE RECEIVED	29-JAN-99 14:36
P.O. NO.	N/A

AS #	Analysis Performed	Result	Units	Detection Limit	Date Analyzed	Method	Notebook Reference
	Phenol-d5	66	%				97-186-10869
	Nitrobenzene-d5	77	%				97-186-10869
	2-Fluorobiphenyl	79	%				97-186-10869
	2,4,6-Tribromophenol	27	%				97-186-10869
	Terphenyl-d14	89	%				97-186-10869

Analysis Comment: Results Calculated on a dry weight basis.

J = None Detected

NY 10252 NJ 73168 PA 68180 EPA NY 00033

Approved by: _____
Lab Director

KEY: ND or U = None Detected < = less than ug/L = micrograms per liter (equivalent to parts per billion)
mg/L = milligrams per liter (equivalent to parts per million) mg/kg = milligrams per kilogram (equivalent to parts per million)
B = analyte was detected in the method or trip blank J = result estimated below the quantitation limit

FLI
FRIEND LABORATORY I · N · C

ONE RESEARCH CIRCLE WAVERLY, NY 14892-1532
TELEPHONE (607) 565-3500 FAX (607) 565-4083

DATE :24-FEB-1999

LAB SAMPLE ID : L30680-3

Malcolm Pirnie, Inc. - Orchard Park
Daniel Riker
40 Centre Drive
PO Box 1938
Buffalo, NY 14219-0138

SAMPLE SOURCE	HANNA FURNACE, 3587-001
ORIGIN	F-1
DESCRIPTION	COMPOSITE
SAMPLED ON	27-JAN-99 00:00 by CLIENT
DATE RECEIVED	29-JAN-99 14:36
P.O NO.	N/A

CAS #	Analysis Performed	Result	Units	Detection Limit	Date Analyzed	Method	Notebook Reference
	Cyanide, Total	10.4	mg/kg	0.58	03-FEB-99	EPA 335.3	99-003-004
	Total Solids	84.2	%		02-FEB-99	CLP 3.0	97-070-46
	Aluminum	37400	mg/kg	41.4	11-FEB-99	EPA 6010A	99-036-01
	Antimony	8.48	mg/kg	5.51	11-FEB-99	EPA 6010A	99-036-01
	Arsenic	U	mg/kg	13.2	11-FEB-99	EPA 6010A	99-036-01
	Barium	338	mg/kg	1.76	11-FEB-99	EPA 6010A	99-036-01
	Beryllium	5.39	mg/kg	00.221	11-FEB-99	EPA 6010A	99-036-01
	Cadmium	U	mg/kg	2.76	11-FEB-99	EPA 6010A	99-036-01
	Calcium	191000	mg/kg	276.	11-FEB-99	EPA 6010A	99-036-01
	Chromium	23.2	mg/kg	1.10	11-FEB-99	EPA 6010A	99-036-01
	Cobalt	5.64	mg/kg	1.10	11-FEB-99	EPA 6010A	99-036-01
	Copper	39.1	mg/kg	1.88	11-FEB-99	EPA 6010A	99-036-01
	Iron	59900	mg/kg	22.0	11-FEB-99	EPA 6010A	99-036-01
	Lead	115	mg/kg	4.85	11-FEB-99	EPA 6010A	99-036-01
	Magnesium	18800	mg/kg	55.1	11-FEB-99	EPA 6010A	99-036-01
	Manganese	3920	mg/kg	2.76	11-FEB-99	EPA 6010A	99-036-01
	Mercury	U	mg/kg	0.0110	03-FEB-99	EPA 7470	98-126-03
	Nickel	28.9	mg/kg	1.32	11-FEB-99	EPA 6010A	99-036-01
	Potassium	2310	mg/kg	55.1	11-FEB-99	EPA 6010A	99-036-01
	Selenium	U	mg/kg	38.6	11-FEB-99	EPA 6010A	99-036-01
	Silver	U	mg/kg	11.8	24-FEB-99	EPA 6010A	99-036-07

U = None Detected

QC NY 10252 NJ 73168 PA 68180 EPA NY 00033

Approved by: Lab Director

KEY: ND or U = None Detected < = less than
mg/L = milligrams per liter (equivalent to parts per million)
B = analyte was detected in the method or trip blank
ug/L = micrograms per liter (equivalent to parts per billion)
mg/kg = milligrams per kilogram (equivalent to parts per million)
J = result estimated below the quantitation limit

FLI
FRIEND LABORATORY INC

ONE RESEARCH CIRCLE WAVERLY, NY 14892-1532
TELEPHONE (607) 565-3500 FAX (607) 565-4083

DATE 24-FEB-1999

LAB SAMPLE ID : L30680-3

Malcolm Pirnie, Inc. - Orchard Park
Daniel Riker
40 Centre Drive
PO Box 1938
Buffalo, NY 14219-0138

SAMPLE SOURCE	HANNA FURNACE, 3587-001
ORIGIN	F-1
DESCRIPTION	COMPOSITE
SAMPLED ON	27-JAN-99 00:00 by CLIENT
DATE RECEIVED	29-JAN-99 14:36
P.O. NO.	N/A

CAS #	Analysis Performed	Result	Units	Detection Limit	Date Analyzed	Method	Notebook Reference
	Sodium	796	mg/kg	22.0	11-FEB-99	EPA 6010A	99-036-01
	Thallium	U	mg/kg	7.17	11-FEB-99	EPA 6010	99-036-01
	Vanadium	26.6	mg/kg	1.10	11-FEB-99	EPA 6010A	99-036-01
	Zinc	412	mg/kg	2.21	11-FEB-99	EPA 6010A	99-036-01
108-95-2	Phenol	U	ug/kg	280	04-FEB-99	EPA 8270	97-186-10870
95-57-8	2-Chlorophenol	U	ug/kg	280	04-FEB-99	EPA 8270	97-186-10870
95-48-7	2-Methylphenol	U	ug/kg	280	04-FEB-99	EPA 8270	97-186-10870
	3-Methylphenol/4-Methylphenol	U	ug/kg	280	04-FEB-99	EPA 8270	97-186-10870
88-75-5	2-Nitrophenol	U	ug/kg	280	04-FEB-99	EPA 8270	97-186-10870
105-67-9	2,4-Dimethylphenol	U	ug/kg	280	04-FEB-99	EPA 8270	97-186-10870
120-83-2	2,4-Dichlorophenol	U	ug/kg	280	04-FEB-99	EPA 8270	97-186-10870
91-20-3	Naphthalene	U	ug/kg	280	04-FEB-99	EPA 8270	97-186-10870
59-50-7	4-Chloro-3-methylphenol	U	ug/kg	550	04-FEB-99	EPA 8270	97-186-10870
91-57-6	2-Methylnaphthalene	U	ug/kg	280	04-FEB-99	EPA 8270	97-186-10870
208-96-8	Acenaphthylene	U	ug/kg	280	04-FEB-99	EPA 8270	97-186-10870
83-32-9	Acenaphthene	U	ug/kg	280	04-FEB-99	EPA 8270	97-186-10870
51-28-4	2,4-Dinitrophenol	U	ug/kg	1100	04-FEB-99	EPA 8270	97-186-10870
100-02-7	4-Nitrophenol	U	ug/kg	1100	04-FEB-99	EPA 8270	97-186-10870
534-52-1	2-Methyl-4,6-dinitrophenol	U	ug/kg	1100	04-FEB-99	EPA 8270	97-186-10870
87-86-5	Pentachlorophenol	U	ug/kg	1100	04-FEB-99	EPA 8270	97-186-10870
85-01-8	Phenanthrene	U	ug/kg	280	04-FEB-99	EPA 8270	97-186-10870
120-12-7	Anthracene	U	ug/kg	280	04-FEB-99	EPA 8270	97-186-10870
206-44-0	Fluoranthene	U	ug/kg	280	04-FEB-99	EPA 8270	97-186-10870
129-00-0	Pyrene	U	ug/kg	280	04-FEB-99	EPA 8270	97-186-10870
56-55-3	Benzo(a)anthracene	U	ug/kg	280	04-FEB-99	EPA 8270	97-186-10870
215-01-9	Chrysene	U	ug/kg	280	04-FEB-99	EPA 8270	97-186-10870
205-99-2	Benzo(b)fluoranthene	U	ug/kg	280	04-FEB-99	EPA 8270	97-186-10870
207-88-9	Benzo(k)fluoranthene	U	ug/kg	280	04-FEB-99	EPA 8270	97-186-10870
50-32-8	Benzo(a)pyrene	U	ug/kg	280	04-FEB-99	EPA 8270	97-186-10870
193-39-5	Indeno(1,2,3-cd)pyrene	U	ug/kg	280	04-FEB-99	EPA 8270	97-186-10870
53-7-3	Dibenzo(a,h)anthracene	U	ug/kg	280	04-FEB-99	EPA 8270	97-186-10870
191-24-2	Benzo(g,h,i)perylene	U	ug/kg	280	04-FEB-99	EPA 8270	97-186-10870
	Extraction Information:				04-FEB-99		98-174-51
Surrogate Recovery:							
	2-Fluorophenol	43	%				97-186-10870

U = None Detected

Approved by: _____
Lab Director

KEY: ND or U = None Detected < = less than ug/L = micrograms per liter (equivalent to parts per billion)
mg/L = milligrams per liter (equivalent to parts per million) mg/kg = milligrams per kilogram (equivalent to parts per million)
B = analyte was detected in the method or trip blank J = result estimated below the quantitation limit

FLI
FRIEND LABORATORY I · N · C

ONE RESEARCH CIRCLE WAVERLY, NY 14892-1532
TELEPHONE (607) 565-3500 FAX (607) 565-4083

DATE 24-FEB-1999

LAB SAMPLE ID : L30680-3

Malcolm Pirnie, Inc. - Orchard Park
Daniel Riker
40 Centre Drive
PO Box 1938
Buffalo, NY 14219-0138

SAMPLE SOURCE	HANNA FURNACE, 3587-001
ORIGIN	F-1
DESCRIPTION	COMPOSITE
SAMPLED ON	27-JAN-99 00:00 by CLIENT
DATE RECEIVED	29-JAN-99 14:36
P.O. NO.	N/A

CAS #	Analysis Performed	Result	Units	Detection Limit	Date Analyzed	Method	Notebook Reference
	Phenol-d5	70	%				97-186-10870
	Nitrobenzene-d5	78	%				97-186-10870
	2-Fluorobiphenyl	84	%				97-186-10870
	2,4,6-Tribromophenol	31	%				97-186-10870
	Terphenyl-d14	84	%				97-186-10870

Analysis Comment: Results Calculated on a dry weight basis.

U = None Detected

QC Q NY 10252 NJ 73168 PA 68180 EPA NY 00033 Approved by: Lab Director

KEY: ND or U = None Detected < = less than ug/L = micrograms per liter (equivalent to parts per billion)
mg/L = milligrams per liter (equivalent to parts per million) mg/kg = milligrams per kilogram (equivalent to parts per million)
B = analyte was detected in the method or trip blank J = result estimated below the quantitation limit

FLI
FRIEND LABORATORY INC

ONE RESEARCH CIRCLE WAVERLY, NY 14892-1532
TELEPHONE (607) 565-3500 FAX (607) 565-4083

DATE 24-FEB-1999

LAB SAMPLE ID : L30680-4

Malcolm Pirnie, Inc. - Orchard Park
Daniel Riker
40 Centre Drive
PO Box 1938
Buffalo, NY 14219-0138

SAMPLE SOURCE	HANNA FURNACE, 3587-001
ORIGIN	F-2
DESCRIPTION	COMPOSITE
SAMPLED ON	27-JAN-99 00:00 by CLIENT
DATE RECEIVED	29-JAN-99 14:36
P.O. NO.	N/A

CAS #	Analysis Performed	Result	Units	Detection Limit	Date Analyzed	Method	Notebook Reference
	Cyanide, Total	5.02	mg/kg	0.66	03-FEB-99	EPA 335.3	99-003-004
	Total Solids	63.96	%		01-FEB-99	CLP 3.0	97-070-45
	Aluminum	38000	mg/kg	42.2	11-FEB-99	EPA 6010A	99-036-01
	Antimony	10.6	mg/kg	5.62	11-FEB-99	EPA 6010A	99-036-01
	Arsenic	U	mg/kg	13.4	11-FEB-99	EPA 6010A	99-036-01
	Barium	215	mg/kg	1.80	11-FEB-99	EPA 6010A	99-036-01
	Beryllium	4.19	mg/kg	00.225	11-FEB-99	EPA 6010A	99-036-01
	Cadmium	U	mg/kg	2.81	11-FEB-99	EPA 6010A	99-036-01
	Calcium	169000	mg/kg	280.	11-FEB-99	EPA 6010A	99-036-01
	Chromium	27.4	mg/kg	1.12	11-FEB-99	EPA 6010A	99-036-01
	Cobalt	7.85	mg/kg	1.12	11-FEB-99	EPA 6010A	99-036-01
	Copper	20.1	mg/kg	1.91	11-FEB-99	EPA 6010A	99-036-01
	Iron	137000	mg/kg	22.5	11-FEB-99	EPA 6010A	99-036-01
	Lead	175	mg/kg	4.95	11-FEB-99	EPA 6010A	99-036-01
	Magnesium	7960	mg/kg	56.1	11-FEB-99	EPA 6010A	99-036-01
	Manganese	2950	mg/kg	2.81	11-FEB-99	EPA 6010A	99-036-01
	Mercury	.034	mg/kg	0.0150	03-FEB-99	EPA 7470	98-126-03
	Nickel	32	mg/kg	1.35	11-FEB-99	EPA 6010A	99-036-01
	Potassium	2210	mg/kg	56.1	11-FEB-99	EPA 6010A	99-036-01
	Selenium	U	mg/kg	39.4	11-FEB-99	EPA 6010A	99-036-01
	Silver	U	mg/kg	15.9	24-FEB-99	EPA 6010A	99-036-07

U = None Detected

QC NY 10252 NJ 73168 PA 68180 EPA NY 00033

Approved by: Lab Director

KEY: ND or U = None Detected < = less than ug/L = micrograms per liter (equivalent to parts per billion)
mg/L = milligrams per liter (equivalent to parts per million) mg/kg = milligrams per kilogram (equivalent to parts per million)
B = analyte was detected in the method or trip blank J = result estimated below the quantitation limit

FLI
FRIEND LABORATORY I · N · C

ONE RESEARCH CIRCLE WAVERLY, NY 14892-1532
TELEPHONE (607) 565-3500 FAX (607) 565-4083

DATE 24-FEB-1999

LAB SAMPLE ID : L30680-4

Malcolm Pirnie, Inc. - Orchard Park
Daniel Riker
40 Centre Drive
PO Box 1938
Buffalo, NY 14219-0138

SAMPLE SOURCE	HANNA FURNACE, 3587-001
ORIGIN	F-2
DESCRIPTION	COMPOSITE
SAMPLED ON	27-JAN-99 00:00 by CLIENT
DATE RECEIVED	29-JAN-99 14:36
P.O. NO.	N/A

CAS #	Analysis Performed	Result	Units	Detection Limit	Date Analyzed	Method	Notebook Reference
	Sodium	420	mg/kg	22.4	11-FEB-99	EPA 6010A	99-036-01
	Thallium	U	mg/kg	7.31	11-FEB-99	EPA 6010	99-036-01
	Vanadium	46.5	mg/kg	1.12	11-FEB-99	EPA 6010A	99-036-01
	Zinc	1040	mg/kg	2.25	11-FEB-99	EPA 6010A	99-036-01
108-95-2	Phenol	U	ug/kg	390	04-FEB-99	EPA 8270	97-186-10868
95-57-8	2-Chlorophenol	U	ug/kg	390	04-FEB-99	EPA 8270	97-186-10868
95-48-7	2-Methylphenol	U	ug/kg	390	04-FEB-99	EPA 8270	97-186-10868
	3-Methylphenol/4-Methylphenol	U	ug/kg	390	04-FEB-99	EPA 8270	97-186-10868
88-75-5	2-Nitrophenol	U	ug/kg	390	04-FEB-99	EPA 8270	97-186-10868
105-67-9	2,4-Dimethylphenol	U	ug/kg	390	04-FEB-99	EPA 8270	97-186-10868
120-83-2	2,4-Dichlorophenol	U	ug/kg	390	04-FEB-99	EPA 8270	97-186-10868
91-20-3	Naphthalene	U	ug/kg	390	04-FEB-99	EPA 8270	97-186-10868
59-50-7	4-Chloro-3-methylphenol	U	ug/kg	770	04-FEB-99	EPA 8270	97-186-10868
91-57-6	2-Methylnaphthalene	U	ug/kg	390	04-FEB-99	EPA 8270	97-186-10868
208-96-8	Acenaphthylene	U	ug/kg	390	04-FEB-99	EPA 8270	97-186-10868
83-32-9	Acenaphthene	U	ug/kg	390	04-FEB-99	EPA 8270	97-186-10868
51-28-4	2,4-Dinitrophenol	U	ug/kg	1500	04-FEB-99	EPA 8270	97-186-10868
100-02-7	4-Nitrophenol	U	ug/kg	1500	04-FEB-99	EPA 8270	97-186-10868
534-52-1	2-Methyl-4,6-dinitrophenol	U	ug/kg	1500	04-FEB-99	EPA 8270	97-186-10868
87-86-5	Pentachlorophenol	U	ug/kg	1500	04-FEB-99	EPA 8270	97-186-10868
85-01-8	Phenanthrene	U	ug/kg	390	04-FEB-99	EPA 8270	97-186-10868
120-12-7	Anthracene	U	ug/kg	390	04-FEB-99	EPA 8270	97-186-10868
206-44-0	Fluoranthene	96 J	ug/kg	390	04-FEB-99	EPA 8270	97-186-10868
129-00-0	Pyrene	U	ug/kg	390	04-FEB-99	EPA 8270	97-186-10868
56-55-3	Benzo(a)anthracene	U	ug/kg	390	04-FEB-99	EPA 8270	97-186-10868
215-01-9	Chrysene	U	ug/kg	390	04-FEB-99	EPA 8270	97-186-10868
205-99-2	Benzo(b)fluoranthene	U	ug/kg	390	04-FEB-99	EPA 8270	97-186-10868
207-88-9	Benzo(k)fluoranthene	U	ug/kg	390	04-FEB-99	EPA 8270	97-186-10868
50-32-8	Benzo(a)pyrene	U	ug/kg	390	04-FEB-99	EPA 8270	97-186-10868
193-39-5	Indeno(1,2,3-cd)pyrene	U	ug/kg	390	04-FEB-99	EPA 8270	97-186-10868
53-7-3	Dibenzo(a,h)anthracene	U	ug/kg	390	04-FEB-99	EPA 8270	97-186-10868
191-24-2	Benzo(g,h,i)perylene	U	ug/kg	390	04-FEB-99	EPA 8270	97-186-10868
	Extraction Information:				04-FEB-99		98-174-51
Surrogate Recovery:							
	2-Fluorophenol	63	%				97-186-10868

U = None Detected

QC ✓ NY 10252 NJ 73168 PA 68180 EPA NY 00033

Approved by: _____
Lab Director

KEY: ND or U = None Detected < = less than ug/L = micrograms per liter (equivalent to parts per billion)
mg/L = milligrams per liter (equivalent to parts per million) mg/kg = milligrams per kilogram (equivalent to parts per million)
B = analyte was detected in the method or trip blank J = result estimated below the quantitation limit

FLI
FRIEND LABORATORY I · N · C

ONE RESEARCH CIRCLE WAVERLY, NY 14892-1532
TELEPHONE (607) 565-3500 FAX (607) 565-4083

DATE 24-FEB-1999

LAB SAMPLE ID : L30680-4

Malcolm Pirnie, Inc. - Orchard Park
Daniel Riker
40 Centre Drive
PO Box 1938
Buffalo, NY 14219-0138

SAMPLE SOURCE	HANNA FURNACE, 3587-001
ORIGIN	F-2
DESCRIPTION	COMPOSITE
SAMPLED ON	27-JAN-99 00:00 by CLIENT
DATE RECEIVED	29-JAN-99 14:36
P.O. NO.	N/A

CAS #	Analysis Performed	Result	Units	Detection Limit	Date Analyzed	Method	Notebook Reference
	Phenol-d5	72	%				97-186-10868
	Nitrobenzene-d5	75	%				97-186-10868
	2-Fluorobiphenyl	86	%				97-186-10868
	2,4,6-Tribromophenol	63	%				97-186-10868
	Terphenyl-d14	85	%				97-186-10868

Analysis Comment: Results Calculated on a dry weight basis.

U = None Detected

QC NY 10252 NJ 73168 PA 68180 EPA NY 00033

Approved by: _____
Lab Director

KEY: ND or U = None Detected < = less than ug/L = micrograms per liter (equivalent to parts per billion)
mg/L = milligrams per liter (equivalent to parts per million) mg/kg = milligrams per kilogram (equivalent to parts per million)
B = analyte was detected in the method or trip blank J = result estimated below the quantitation limit

FLI
FRIEND LABORATORY I · N · C

ONE RESEARCH CIRCLE WAVERLY, NY 14892-1532
TELEPHONE (607) 565-3500 FAX (607) 565-4083

DATE : 24-FEB-1999

LAB SAMPLE ID : L30680-5

Malcolm Pirnie, Inc. - Orchard Park
Daniel Riker
40 Centre Drive
PO Box 1938
Buffalo, NY 14219-0138

SAMPLE SOURCE	HANNA FURNACE, 3587-001
ORIGIN	E-2
DESCRIPTION	COMPOSITE
SAMPLED ON	27-JAN-99 00:00 by CLIENT
DATE RECEIVED	29-JAN-99 14:36
P.O. NO.	N/A

CAS #	Analysis Performed	Result	Units	Detection Limit	Date Analyzed	Method	Notebook Reference
	Cyanide, Total	5.79	mg/kg	0.63	09-FEB-99	EPA 335.3	99-003-007
	Total Solids	78.63	%		01-FEB-99	CLP 3.0	97-070-45
	Aluminum	28500	mg/kg	9.49	11-FEB-99	EPA 6010A	99-036-01
	Antimony	11.4	mg/kg	6.33	11-FEB-99	EPA 6010A	99-036-01
	Arsenic	U	mg/kg	15.1	11-FEB-99	EPA 6010A	99-036-01
	Barium	260	mg/kg	2.03	11-FEB-99	EPA 6010A	99-036-01
	Beryllium	5.05	mg/kg	00.253	11-FEB-99	EPA 6010A	99-036-01
	Cadmium	U	mg/kg	3.16	11-FEB-99	EPA 6010A	99-036-01
	Calcium	166000	mg/kg	316.	11-FEB-99	EPA 6010A	99-036-01
	Chromium	30.5	mg/kg	1.27	11-FEB-99	EPA 6010A	99-036-01
	Cobalt	7.61	mg/kg	1.27	11-FEB-99	EPA 6010A	99-036-01
	Copper	20.2	mg/kg	2.15	11-FEB-99	EPA 6010A	99-036-01
	Iron	115000	mg/kg	52.7	24-FEB-99	EPA 6010A	99-036-07
	Lead	85.1	mg/kg	5.57	11-FEB-99	EPA 6010A	99-036-01
	Magnesium	11700	mg/kg	63.2	11-FEB-99	EPA 6010A	99-036-01
	Manganese	2010	mg/kg	00.633	11-FEB-99	EPA 6010A	99-036-01
	Mercury	.057	mg/kg	0.0120	03-FEB-99	EPA 7470	98-126-03
	Nickel	16.7	mg/kg	1.52	11-FEB-99	EPA 6010A	99-036-01
	Potassium	1460	mg/kg	63.2	11-FEB-99	EPA 6010A	99-036-01
	Selenium	U	mg/kg	44.3	11-FEB-99	EPA 6010A	99-036-01
	Silver	U	mg/kg	13.2	24-FEB-99	EPA 6010A	99-036-07

U = None Detected

QC _____ NY 10252 NJ 73168 PA 68180 EPA NY 00033

Approved by: _____
Lab Director

KEY: ND or U = None Detected < = less than
mg/L = milligrams per liter (equivalent to parts per million)
B = analyte was detected in the method or trip blank
ug/L = micrograms per liter (equivalent to parts per billion)
mg/kg = milligrams per kilogram (equivalent to parts per million)
J = result estimated below the quantitation limit

FLI
FRIEND LABORATORY INC

ONE RESEARCH CIRCLE WAVERLY, NY 14892-1532
TELEPHONE (607) 565-3500 FAX (607) 565-4083

DATE 24-FEB-1999

LAB SAMPLE ID : L30680-5

Malcolm Pirnie, Inc. - Orchard Park
Daniel Riker
40 Centre Drive
PO Box 1938
Buffalo, NY 14219-0138

SAMPLE SOURCE	HANNA FURNACE, 3587-001
ORIGIN	E-2
DESCRIPTION	COMPOSITE
SAMPLED ON	27-JAN-99 00:00 by CLIENT
DATE RECEIVED	29-JAN-99 14:36
P.O. NO.	N/A

CAS #	Analysis Performed	Result	Units	Detection Limit	Date Analyzed	Method	Notebook Reference
	Sodium	328	mg/kg	25.3	11-FEB-99	EPA 6010A	99-036-01
	Thallium	U	mg/kg	8.23	11-FEB-99	EPA 6010	99-036-01
	Vanadium	57.8	mg/kg	1.27	11-FEB-99	EPA 6010A	99-036-01
	Zinc	197	mg/kg	2.53	11-FEB-99	EPA 6010A	99-036-01
108-95-2	Phenol	U	ug/kg	300	05-FEB-99	EPA 8270	97-186-10879
95-57-8	2-Chlorophenol	U	ug/kg	300	05-FEB-99	EPA 8270	97-186-10879
95-48-7	2-Methylphenol	U	ug/kg	300	05-FEB-99	EPA 8270	97-186-10879
	3-Methylphenol/4-Methylphenol	U	ug/kg	300	05-FEB-99	EPA 8270	97-186-10879
88-75-5	2-Nitrophenol	U	ug/kg	300	05-FEB-99	EPA 8270	97-186-10879
105-67-9	2,4-Dimethylphenol	U	ug/kg	300	05-FEB-99	EPA 8270	97-186-10879
120-83-2	2,4-Dichlorophenol	U	ug/kg	300	05-FEB-99	EPA 8270	97-186-10879
91-20-3	Naphthalene	150 J	ug/kg	300	05-FEB-99	EPA 8270	97-186-10879
59-50-7	4-Chloro-3-methylphenol	U	ug/kg	590	05-FEB-99	EPA 8270	97-186-10879
91-57-6	2-Methylnaphthalene	96 J	ug/kg	300	05-FEB-99	EPA 8270	97-186-10879
208-96-8	Acenaphthylene	U	ug/kg	300	05-FEB-99	EPA 8270	97-186-10879
83-32-9	Acenaphthene	170 J	ug/kg	300	05-FEB-99	EPA 8270	97-186-10879
51-28-4	2,4-Dinitrophenol	U	ug/kg	1200	05-FEB-99	EPA 8270	97-186-10879
100-02-7	4-Nitrophenol	U	ug/kg	1200	05-FEB-99	EPA 8270	97-186-10879
534-52-1	2-Methyl-4,6-dinitrophenol	U	ug/kg	1200	05-FEB-99	EPA 8270	97-186-10879
87-86-5	Pentachlorophenol	U	ug/kg	1200	05-FEB-99	EPA 8270	97-186-10879
85-01-8	Phenanthrene	1400	ug/kg	300	05-FEB-99	EPA 8270	97-186-10879
120-12-7	Anthracene	360	ug/kg	300	05-FEB-99	EPA 8270	97-186-10879
206-44-0	Fluoranthene	980	ug/kg	300	05-FEB-99	EPA 8270	97-186-10879
129-00-0	Pyrene	1100	ug/kg	300	05-FEB-99	EPA 8270	97-186-10879
56-55-3	Benzo(a)anthracene	450	ug/kg	300	05-FEB-99	EPA 8270	97-186-10879
215-01-9	Chrysene	460	ug/kg	300	05-FEB-99	EPA 8270	97-186-10879
205-99-2	Benzo(b)fluoranthene	390	ug/kg	300	05-FEB-99	EPA 8270	97-186-10879
207-88-9	Benzo(k)fluoranthene	150 J	ug/kg	300	05-FEB-99	EPA 8270	97-186-10879
50-32-8	Benzo(a)pyrene	330	ug/kg	300	05-FEB-99	EPA 8270	97-186-10879
193-39-5	Indeno(1,2,3-cd)pyrene	U	ug/kg	300	05-FEB-99	EPA 8270	97-186-10879
53-7-3	Dibenzo(a,h)anthracene	U	ug/kg	300	05-FEB-99	EPA 8270	97-186-10879
191-24-2	Benzo(g,h,i)perylene	210 J	ug/kg	300	05-FEB-99	EPA 8270	97-186-10879
	Extraction Information:				04-FEB-99		98-174-51
Surrogate Recovery:							
	2-Fluorophenol	68	%				97-186-10879

U = None Detected

Approved by: _____
Lab Director

KEY: ND or U = None Detected < = less than ug/L = micrograms per liter (equivalent to parts per billion)
mg/L = milligrams per liter (equivalent to parts per million) mg/kg = milligrams per kilogram (equivalent to parts per million)
B = analyte was detected in the method or trip blank J = result estimated below the quantitation limit

FLI
FRIEND LABORATORY I · N · C

ONE RESEARCH CIRCLE WAVERLY, NY 14892-1532
TELEPHONE (607) 565-3500 FAX (607) 565-4083

DATE 24-FEB-1999

LAB SAMPLE ID : L30680-5

Malcolm Pirnie, Inc. - Orchard Park
Daniel Riker
40 Centre Drive
PO Box 1938
Buffalo, NY 14219-0138

SAMPLE SOURCE	HANNA FURNACE, 3587-001
ORIGIN	E-2
DESCRIPTION	COMPOSITE
SAMPLED ON	27-JAN-99 00:00 by CLIENT
DATE RECEIVED	29-JAN-99 14:36
P.O. NO.	N/A

CAS #	Analysis Performed	Result	Units	Detection Limit	Date Analyzed	Method	Notebook Reference
	Phenol-d5	82	%				97-186-1087
	Nitrobenzene-d5	85	%				97-186-1087
	2-Fluorobiphenyl	85	%				97-186-1087
	2,4,6-Tribromophenol	67	%				97-186-10879
	Terphenyl-d14	99	%				97-186-10879

Analysis Comment: Results Calculated on a dry weight basis.

U = None Detected

QC NY 10252 NJ 73168 PA 68180 EPA NY 00033

Approved by: _____ Lab Director

KEY: ND or U = None Detected < = less than ug/L = micrograms per liter (equivalent to parts per billion)
mg/L = milligrams per liter (equivalent to parts per million) mg/kg = milligrams per kilogram (equivalent to parts per million)
B = analyte was detected in the method or trip blank J = result estimated below the quantitation limit

CUSTOMER CODE # ________

CHAIN OF CUSTODY RECORD

FLI FRIEND LABORATORY INC
ONE RESEARCH CIRCLE
WAVERLY NY 14892-1532
Telephone (607) 565 3500
Fax (607) 565 7160

Sample Site: HANNA FURNACE

P.O. #

Preservatives: Untreated | Sodium thiosulfate | HCl pH <2 | Ascorbic acid & HCl pH <2 | HNO_3 pH <2 | H_2SO_4 pH <2 | NaOH pH >12 | NaOH & Zinc acetate pH >9 | Acetic Buffer pH <3 | Sodium sulfite

CLIENT: MPI
ADDRESS:
PHONE: FAX:

PROJECT NO. / NAME
3587-001

INVOICE TO: D. RIKER
ADDRESS:

COPY TO:
ADDRESS:

DATE & TIME OF SAMPLE COLLECTION	SAMPLE DESCRIPTION	NUMBER OF CONTAINERS	ANALYSES / TESTS REQUESTED	SAMPLE NUMBER L30741 (LAB USE ONLY)
1/29/99	COMP - P1	2 Description: Grab (Composite) Other Matrix: DW WW MW (Soil) Air Other	metals, CN PAH, phenol	-23
↓	COMP - P2	2 Description: Grab (Composite) Other Matrix: DW WW MW (Soil) Air Other	↓	-24
↓	COMP - Q1	2 Description: Grab (Composite) Other Matrix: DW WW MW (Soil) Air Other	↓	-25
↓	COMP - Q2	2 Description: Grab (Composite) Other Matrix: DW WW MW (Soil) Air Other	↓	-26

RELINQUISHED BY	DATE / TIME	ACCEPTED BY	DATE/TIME	NOTES TO LABORATORY
SAMPLER [signature]	2/1/99 0930	Christa [signature]	2/2-99 11:55	

SUSPECTED CONTAMINATION LEVEL
NONE (SLIGHT) MODERATE HIGH (please circle)

CUSTOMER CODE # _____

CHAIN OF CUSTODY RECORD

FLI
FRIEND LABORATORY I • N • C
ONE RESEARCH CIRCLE
WAVERLY NY 14892-1532
Telephone (607) 565 3500
Fax (607) 565 7160

Untreated | Sodium thiosulfate | HCl pH <2 | Ascorbic acid & HCl pH <2 | HNO_3 pH <2 | H_2SO_4 pH <2 | NaOH pH >12 | NaOH & Zinc acetate pH >9 | Acetic Buffer pH <3 | Sodium sulfite

CLIENT: MK
ADDRESS:
PHONE: FAX:

INVOICE TO: D. RIKER
ADDRESS:

Sample Site: HANNA FURNACE

P.O. #

PROJECT NO. / NAME
3587-001

COPY TO:
ADDRESS:

DATE & TIME OF SAMPLE COLLECTION	SAMPLE DESCRIPTION	NUMBER OF CONTAINERS	ANALYSES / TESTS REQUESTED	SAMPLE NUMBER
1/29/98	SB-30	Description: (Grab) Composite Other Matrix: DW WW MW (Soil) Air Other	VOCs	L35741
	SB-31	Description: (Grab) Composite Other Matrix: DW WW MW (Soil) Air Other	VOCs	LAB USE ONLY: 27
↓	SB-33	Description: (Grab) Composite Other Matrix: DW WW MW (Soil) Air Other	PCBs	-28
		Description: Grab Composite Other Matrix: DW WW MW Soil Air Other		-29

RELINQUISHED BY	DATE /TIME	ACCEPTED BY	DATE/TIME	NOTES TO LABORATORY
SAMPLER [signature]	2/11/98 0930	Christa Franty	2/12-98 11:15	
				SUSPECTED CONTAMINATION LEVEL NONE (SLIGHT) MODERATE HIGH (please circle)

FLI
FRIEND LABORATORY INC

ONE RESEARCH CIRCLE WAVERLY, NY 14892-1532
TELEPHONE (607) 565-3500 FAX (607) 565-4083

DATE 24-FEB-1999

LAB SAMPLE ID : L30680-6

Malcolm Pirnie, Inc. - Orchard Park
Daniel Riker
40 Centre Drive
PO Box 1938
Buffalo, NY 14219-0138

SAMPLE SOURCE	HANNA FURNACE, 3587-001
ORIGIN	E-2
DESCRIPTION	TCLP EXTRACT
SAMPLED ON	27-JAN-99 00:00 by CLIENT
DATE RECEIVED	29-JAN-99 14:36
P.O. NO.	N/A

CAS #	Analysis Performed	Result	Units	Detection Limit	Date Analyzed	Method	Notebook Reference
	Arsenic	U	mg/l	1.20	11-FEB-99	EPA 6010 TCLP	99-036-01
	Barium	0.58	mg/l	00.160	11-FEB-99	EPA 6010 TCLP	99-036-01
	Cadmium	U	mg/l	0.0500	11-FEB-99	EPA 6010 TCLP	99-036-01
	Chromium	U	mg/l	00.100	09-FEB-99	EPA 6010 TCLP	99-016-10
	Lead	U	mg/l	00.440	09-FEB-99	EPA 6010 TCLP	99-016-10
	Mercury	U	mg/l	0.0100	10-FEB-99	EPA 7470 TCLP	98-126-05
	Selenium	U	mg/l	00.700	11-FEB-99	EPA 6010 TCLP	99-036-01
	Silver	U	mg/l	00.100	09-FEB-99	EPA 6010 TCLP	99-016-10
75-01-4	Vinyl chloride	U	mg/l	0.03	03-FEB-99	TCLP 8260	98-189-5566
75-35-4	1,1-Dichloroethene	U	mg/l	0.03	03-FEB-99	TCLP 8260	98-189-5566
78-93-3	Methyl ethyl ketone	U	mg/l	0.03	03-FEB-99	TCLP 8260	98-189-5566
67-66-3	Chloroform	U	mg/l	0.03	03-FEB-99	TCLP 8260	98-189-5566
56-23-5	Carbon tetrachloride	U	mg/l	0.03	03-FEB-99	TCLP 8260	98-189-5566
71-43-2	Benzene	U	mg/l	0.03	03-FEB-99	TCLP 8260	98-189-5566
107-06-2	1,2-Dichloroethane	U	mg/l	0.03	03-FEB-99	TCLP 8260	98-189-5566
79-01-6	Trichloroethene	U	mg/l	0.03	03-FEB-99	TCLP 8260	98-189-5566
127-18-4	Tetrachloroethene	U	mg/l	0.03	03-FEB-99	TCLP 8260	98-189-5566
108-90-7	Chlorobenzene	U	mg/l	0.03	03-FEB-99	TCLP 8260	98-189-5566
106-46-7	1,4-Dichlorobenzene	U	mg/l	0.03	03-FEB-99	TCLP 8260	98-189-5566
Surrogate Recovery:							
	Dibromofluoromethane	99	%				98-189-5566
	Toluene-d8	94	%				98-189-5566
	4-Bromofluorobenzene	93	%				98-189-5566
58-89-9	Lindane	U	mg/l	0.005	11-FEB-99	TCLP 8080	98-183-5917
76-44-8	Heptachlor	U	mg/l	0.005	11-FEB-99	TCLP 8080	98-183-5917
1024-57-3	Heptachlor Epoxide	U	mg/l	0.005	11-FEB-99	TCLP 8080	98-183-5917
72-20-8	Endrin	U	mg/l	0.005	11-FEB-99	TCLP 8080	98-183-5917
72-43-5	Methoxychlor	U	mg/l	0.005	11-FEB-99	TCLP 8080	98-183-5917
57-74-9	Chlordane	U	mg/l	0.005	11-FEB-99	TCLP 8080	98-183-5917
8001-35-2	Toxaphene	U	mg/l	0.05	11-FEB-99	TCLP 8080	98-183-5917

U = None Detected

)C NY 10252 NJ 73168 PA 68180 EPA NY 00033

Approved by: _____
Lab Director

KEY: ND or U = None Detected < = less than
mg/L = milligrams per liter (equivalent to parts per million)
B = analyte was detected in the method or trip blank
ug/L = micrograms per liter (equivalent to parts per billion)
mg/kg = milligrams per kilogram (equivalent to parts per million)
J = result estimated below the quantitation limit

FLI
FRIEND LABORATORY I · N · C

ONE RESEARCH CIRCLE WAVERLY, NY 14892-1532
TELEPHONE (607) 565-3500 FAX (607) 565-4083

DATE 24-FEB-1999

LAB SAMPLE ID : L30680-6

Malcolm Pirnie, Inc. - Orchard Park
Daniel Riker
40 Centre Drive
PO Box 1938
Buffalo, NY 14219-0138

SAMPLE SOURCE	HANNA FURNACE, 3587-001
ORIGIN	E-2
DESCRIPTION	TCLP EXTRACT
SAMPLED ON	27-JAN-99 00:00 by CLIENT
DATE RECEIVED	29-JAN-99 14:36
P.O. NO.	N/A

CAS #	Analysis Performed	Result	Units	Detection Limit	Date Analyzed	Method	Notebook Reference
Surrogate Recovery:							
	Tetrachloro-m-Xylene	94	%				98-183-5917
94-75-7	2,4-D	U	mg/l	0.4	11-FEB-99	TCLP 8150	98-080-2898
93-72-1	2,4,5-TP (Silvex)	U	mg/l	0.4	11-FEB-99	TCLP 8150	98-080-2898
Surrogate Recovery:							
	DCAA	68					98-080-2898
110-86-1	Pyridine	U	mg/l	0.05	03-FEB-99	TCLP 8270	97-186-10858
	o-Cresol	U	mg/l	0.05	03-FEB-99	TCLP 8270	97-186-10858
	p-Cresol/m-Cresol	U	mg/l	0.05	03-FEB-99	TCLP 8270	97-186-1085
67-72-1	Hexachloroethane	U	mg/l	0.05	03-FEB-99	TCLP 8270	97-186-1085
98-95-3	Nitrobenzene	U	mg/l	0.05	03-FEB-99	TCLP 8270	97-186-1085
87-68-3	Hexachlorobutadiene	U	mg/l	0.05	03-FEB-99	TCLP 8270	97-186-10858
88-06-2	2,4,6-Trichlorophenol	U	mg/l	0.05	03-FEB-99	TCLP 8270	97-186-10858
95-95-4	2,4,5-Trichlorophenol	U	mg/l	0.05	03-FEB-99	TCLP 8270	97-186-1085
121-14-2	2,4-Dinitrotoluene	U	mg/l	0.05	03-FEB-99	TCLP 8270	97-186-1085
118-74-1	Hexachlorobenzene	U	mg/l	0.05	03-FEB-99	TCLP 8270	97-186-1085
87-86-5	Pentachlorophenol	U	mg/l	0.2	03-FEB-99	TCLP 8270	97-186-10858
	Extraction Information:				03-FEB-99		98-174-50
Surrogate Recovery:							
	2-Fluorophenol	51	%				97-186-10858
	Phenol-d5	45	%				97-186-1085
	Nitrobenzene-d5	89	%				97-186-1085
	2-Fluorobiphenyl	86	%				97-186-1085
	2,4,6-Tribromophenol	73	%				97-186-10858
	Terphenyl-d14	93	%				97-186-10858

U = None Detected

QC ___ NY 10252 NJ 73168 PA 68180 EPA NY 00033

Approved by: _____ Lab Director

KEY: ND or U = None Detected < = less than ug/L = micrograms per liter (equivalent to parts per billion)
mg/L = milligrams per liter (equivalent to parts per million) mg/kg = milligrams per kilogram (equivalent to parts per million)
B = analyte was detected in the method or trip blank J = result estimated below the quantitation limit

FLI
FRIEND LABORATORY I · N · C

ONE RESEARCH CIRCLE WAVERLY, NY 14892-1532
TELEPHONE (607) 565-3500 FAX (607) 565-4083

DATE 25-FEB-1999

LAB SAMPLE ID : L30680-7

Malcolm Pirnie, Inc. - Orchard Park
Daniel Riker
40 Centre Drive
PO Box 1938
Buffalo, NY 14219-0138

SAMPLE SOURCE	HANNA FURNACE, 3587-001
ORIGIN	M-2
DESCRIPTION	COMPOSITE
SAMPLED ON	27-JAN-99 00:00 by CLIENT
DATE RECEIVED	29-JAN-99 14:36
P.O. NO.	N/A

CAS #	Analysis Performed	Result	Units	Detection Limit	Date Analyzed	Method	Notebook Reference
	Cyanide, Total	18.5	mg/kg	0.76	03-FEB-99	EPA 335.3	99-003-004
	Total Solids	61.97	%		01-FEB-99	CLP 3.0	97-070-45
	Aluminum	17700	mg/kg	11.1	11-FEB-99	EPA 6010A	99-036-01
	Antimony	16.6	mg/kg	7.42	11-FEB-99	EPA 6010A	99-036-01
	Arsenic	35.6	mg/kg	17.7	11-FEB-99	EPA 6010A	99-036-01
	Barium	202	mg/kg	2.37	11-FEB-99	EPA 6010A	99-036-01
	Beryllium	3.42	mg/kg	0.297	11-FEB-99	EPA 6010A	99-036-01
	Cadmium	7.8	mg/kg	3	17-FEB-99	EPA 7130	93-259-85
	Calcium	85000	mg/kg	370	11-FEB-99	EPA 6010A	99-036-01
	Chromium	35.2	mg/kg	1.48	11-FEB-99	EPA 6010A	99-036-01
	Cobalt	11.2	mg/kg	1.48	11-FEB-99	EPA 6010A	99-036-01
	Copper	5.53	mg/kg	2.52	11-FEB-99	EPA 6010A	99-036-01
	Iron	200000	mg/kg	60.8	24-FEB-99	EPA 6010A	99-036-07
	Lead	65.4	mg/kg	6.53	11-FEB-99	EPA 6010A	99-036-01
	Magnesium	5320	mg/kg	74.1	11-FEB-99	EPA 6010A	99-036-01
	Manganese	2660	mg/kg	0.742	11-FEB-99	EPA 6010A	99-036-01
	Mercury	.022	mg/kg	0.0170	03-FEB-99	EPA 7470	98-126-03
	Nickel	27.2	mg/kg	1.78	11-FEB-99	EPA 6010A	99-036-01
	Potassium	1490	mg/kg	74.1	11-FEB-99	EPA 6010A	99-036-01
	Selenium	U	mg/kg	51.5	11-FEB-99	EPA 6010A	99-036-01
	Silver	U	mg/kg	15.2	24-FEB-99	EPA 6010A	99-036-07

U = None Detected

QC NY 10252 NJ 73168 PA 68180 EPA NY 00033

Approved by: _____
Lab Director

KEY: ND or U = None Detected < = less than
mg/L = milligrams per liter (equivalent to parts per million)
B = analyte was detected in the method or trip blank
ug/L = micrograms per liter (equivalent to parts per billion)
mg/kg = milligrams per kilogram (equivalent to parts per million)
J = result estimated below the quantitation limit

FLI
FRIEND LABORATORY INC

ONE RESEARCH CIRCLE WAVERLY, NY 14892-1532
TELEPHONE (607) 565-3500 FAX (607) 565-4083

DATE : 25-FEB-1999

LAB SAMPLE ID : L30680-7

Malcolm Pirnie, Inc. - Orchard Park
Daniel Riker
40 Centre Drive
PO Box 1938
Buffalo, NY 14219-0138

SAMPLE SOURCE	HANNA FURNACE, 3587-001
ORIGIN	M-2
DESCRIPTION	COMPOSITE
SAMPLED ON	27-JAN-99 00:00 by CLIENT
DATE RECEIVED	29-JAN-99 14:36
P.O. NO.	N/A

CAS #	Analysis Performed	Result	Units	Detection Limit	Date Analyzed	Method	Notebook Reference
	Sodium	201	mg/kg	29.6	11-FEB-99	EPA 6010A	99-036-01
	Thallium	U	mg/kg	9.64	11-FEB-99	EPA 6010	99-036-01
	Vanadium	104	mg/kg	1.48	11-FEB-99	EPA 6010A	99-036-01
	Zinc	683	mg/kg	2.97	11-FEB-99	EPA 6010A	99-036-01
108-95-2	Phenol	U	ug/kg	400	04-FEB-99	EPA 8270	97-186-10871
95-57-8	2-Chlorophenol	U	ug/kg	400	04-FEB-99	EPA 8270	97-186-10871
95-48-7	2-Methylphenol	U	ug/kg	400	04-FEB-99	EPA 8270	97-186-1087
	3-Methylphenol/4-Methylphenol	U	ug/kg	400	04-FEB-99	EPA 8270	97-186-10871
88-75-5	2-Nitrophenol	U	ug/kg	400	04-FEB-99	EPA 8270	97-186-10871
105-67-9	2,4-Dimethylphenol	U	ug/kg	400	04-FEB-99	EPA 8270	97-186-10871
120-83-2	2,4-Dichlorophenol	U	ug/kg	400	04-FEB-99	EPA 8270	97-186-10871
91-20-3	Naphthalene	U	ug/kg	400	04-FEB-99	EPA 8270	97-186-1087
59-50-7	4-Chloro-3-methylphenol	U	ug/kg	790	04-FEB-99	EPA 8270	97-186-10871
91-57-6	2-Methylnaphthalene	U	ug/kg	400	04-FEB-99	EPA 8270	97-186-10871
208-96-8	Acenaphthylene	U	ug/kg	400	04-FEB-99	EPA 8270	97-186-10871
83-32-9	Acenaphthene	U	ug/kg	400	04-FEB-99	EPA 8270	97-186-10871
51-28-4	2,4-Dinitrophenol	U	ug/kg	1600	04-FEB-99	EPA 8270	97-186-10871
100-02-7	4-Nitrophenol	U	ug/kg	1600	04-FEB-99	EPA 8270	97-186-1087
534-52-1	2-Methyl-4,6-dinitrophenol	U	ug/kg	1600	04-FEB-99	EPA 8270	97-186-10871
87-86-5	Pentachlorophenol	U	ug/kg	1600	04-FEB-99	EPA 8270	97-186-10871
85-01-8	Phenanthrene	U	ug/kg	400	04-FEB-99	EPA 8270	97-186-1087
120-12-7	Anthracene	U	ug/kg	400	04-FEB-99	EPA 8270	97-186-1087
206-44-0	Fluoranthene	U	ug/kg	400	04-FEB-99	EPA 8270	97-186-1087
129-00-0	Pyrene	U	ug/kg	400	04-FEB-99	EPA 8270	97-186-10871
56-55-3	Benzo(a)anthracene	U	ug/kg	400	04-FEB-99	EPA 8270	97-186-10871
215-01-9	Chrysene	U	ug/kg	400	04-FEB-99	EPA 8270	97-186-1087
205-99-2	Benzo(b)fluoranthene	U	ug/kg	400	04-FEB-99	EPA 8270	97-186-10871
207-88-9	Benzo(k)fluoranthene	U	ug/kg	400	04-FEB-99	EPA 8270	97-186-1087
50-32-8	Benzo(a)pyrene	U	ug/kg	400	04-FEB-99	EPA 8270	97-186-10871
193-39-5	Indeno(1,2,3-cd)pyrene	U	ug/kg	400	04-FEB-99	EPA 8270	97-186-10871
53-7-3	Dibenzo(a,h)anthracene	U	ug/kg	400	04-FEB-99	EPA 8270	97-186-10871
191-24-2	Benzo(g,h,i)perylene	U	ug/kg	400	04-FEB-99	EPA 8270	97-186-10871
	Extraction Information:				04-FEB-99		98-174-51
Surrogate Recovery:							
	2-Fluorophenol	66	%				97-186-1087

U = None Detected

QC ____ NY 10252 NJ 73168 PA 68180 EPA NY 00033

Approved by: _____ Lab Director

KEY: ND or U = None Detected < = less than
mg/L = milligrams per liter (equivalent to parts per million)
B = analyte was detected in the method or trip blank
ug/L = micrograms per liter (equivalent to parts per billion)
mg/kg = milligrams per kilogram (equivalent to parts per million)
J = result estimated below the quantitation limit

FLI
FRIEND LABORATORY · N · C

ONE RESEARCH CIRCLE WAVERLY, NY 14892-1532
TELEPHONE (607) 565-3500 FAX (607) 565-4083

DATE : 25-FEB-1999

LAB SAMPLE ID : L30680-7

Malcolm Pirnie, Inc. - Orchard Park
Daniel Riker
40 Centre Drive
PO Box 1938
Buffalo, NY 14219-0138

SAMPLE SOURCE	HANNA FURNACE, 3587-001
ORIGIN	M-2
DESCRIPTION	COMPOSITE
SAMPLED ON	27-JAN-99 00:00 by CLIENT
DATE RECEIVED	29-JAN-99 14:36
P.O. NO.	N/A

CAS #	Analysis Performed	Result	Units	Detection Limit	Date Analyzed	Method	Notebook Reference
	Phenol-d5	74	%				97-186-10871
	Nitrobenzene-d5	80	%				97-186-10871
	2-Fluorobiphenyl	85	%				97-186-10871
	2,4,6-Tribromophenol	74	%				97-186-10871
	Terphenyl-d14	91	%				97-186-10871

Analysis Comment: Results Calculated on a dry weight basis.

U = None Detected

NC NY 10252 NJ 73168 PA 68180 EPA NY 00033

Approved by: _____
Lab Director

KEY: ND or U = None Detected < = less than ug/L = micrograms per liter (equivalent to parts per billion)
mg/L = milligrams per liter (equivalent to parts per million) mg/kg = milligrams per kilogram (equivalent to parts per million)
B = analyte was detected in the method or trip blank J = result estimated below the quantitation limit

FLI
FRIEND LABORATORY I · N · C

ONE RESEARCH CIRCLE WAVERLY, NY 14892-1532
TELEPHONE (607) 565-3500 FAX (607) 565-4083

DATE 25-FEB-1999

LAB SAMPLE ID : L30680-8

Malcolm Pirnie, Inc. - Orchard Park
Daniel Riker
40 Centre Drive
PO Box 1938
Buffalo, NY 14219-0138

SAMPLE SOURCE	HANNA FURNACE, 3587-001
ORIGIN	SB-32
DESCRIPTION	GRAB
SAMPLED ON	27-JAN-99 00:00 by CLIENT
DATE RECEIVED	29-JAN-99 14:36
P.O. NO.	N/A

CAS #	Analysis Performed	Result		Units	Detection Limit	Date Analyzed	Method	Notebook Reference
	Total Solids	82.92		%		01-FEB-99	CLP 3.0	97-070-45
74-87-3	Chloromethane	U,J		ug/kg	6	09-FEB-99	EPA 8260	98-189-5637
75-01-4	Vinyl chloride	U,J		ug/kg	6	09-FEB-99	EPA 8260	98-189-5637
75-00-3	Chloroethane	U,J		ug/kg	6	09-FEB-99	EPA 8260	98-189-5637
74-83-9	Bromomethane	U,J		ug/kg	6	09-FEB-99	EPA 8260	98-189-5637
75-35-4	1,1-Dichloroethene	U,J		ug/kg	6	09-FEB-99	EPA 8260	98-189-5637
67-64-1	Acetone	U,J		ug/kg	28	09-FEB-99	EPA 8260	98-189-5637
75-15-0	Carbon disulfide	U,J		ug/kg	6	09-FEB-99	EPA 8260	98-189-5637
75-09-2	Methylene chloride	U,J		ug/kg	6	09-FEB-99	EPA 8260	98-189-5637
156-60-5	trans-1,2-Dichloroethene	U,J		ug/kg	6	09-FEB-99	EPA 8260	98-189-5637
75-34-3	1,1-Dichloroethane	U,J		ug/kg	6	09-FEB-99	EPA 8260	98-189-5637
156-59-4	cis-1,2-Dichloroethene	U,J		ug/kg	6	09-FEB-99	EPA 8260	98-189-5637
67-66-3	Chloroform	U,J		ug/kg	6	09-FEB-99	EPA 8260	98-189-5637
71-55-6	1,1,1-Trichloroethane	U,J		ug/kg	6	09-FEB-99	EPA 8260	98-189-5637
56-23-5	Carbon tetrachloride	U,J		ug/kg	6	09-FEB-99	EPA 8260	98-189-5637
71-43-2	Benzene	U,J		ug/kg	6	09-FEB-99	EPA 8260	98-189-5637
107-06-2	1,2-Dichloroethane	U,J		ug/kg	6	09-FEB-99	EPA 8260	98-189-5637
79-01-6	Trichloroethene	U		ug/kg	6	09-FEB-99	EPA 8260	98-189-5637
78-87-5	1,2-Dichloropropane	U		ug/kg	6	09-FEB-99	EPA 8260	98-189-5637
75-27-4	Bromodichloromethane	U		ug/kg	6	09-FEB-99	EPA 8260	98-189-5637
10061-01-5	cis-1,3-Dichloropropene	U		ug/kg	6	09-FEB-99	EPA 8260	98-189-5637
108-88-3	Toluene	U,J		ug/kg	6	09-FEB-99	EPA 8260	98-189-5637
10061-02-6	trans-1,3-Dichloropropene	U,J		ug/kg	6	09-FEB-99	EPA 8260	98-189-5637
79-00-5	1,1,2-Trichloroethane	U,J		ug/kg	6	09-FEB-99	EPA 8260	98-189-5637
127-18-4	Tetrachloroethene	U,J		ug/kg	6	09-FEB-99	EPA 8260	98-189-5637
591-78-6	2-Hexanone	U,J		ug/kg	11	09-FEB-99	EPA 8260	98-189-5637
124-48-1	Dibromochloromethane	U,J		ug/kg	6	09-FEB-99	EPA 8260	98-189-5637
108-90-7	Chlorobenzene	U,J		ug/kg	6	09-FEB-99	EPA 8260	98-189-5637
100-41-4	Ethylbenzene	U,J		ug/kg	6	09-FEB-99	EPA 8260	98-189-5637
1330-20-7	p-Xylene/m-Xylene	U,J		ug/kg	6	09-FEB-99	EPA 8260	98-189-5637
	o-Xylene	U,J		ug/kg	6	09-FEB-99	EPA 8260	98-189-5637
100-42-5	Styrene	U,J		ug/kg	6	09-FEB-99	EPA 8260	98-189-5637
75-25-2	Bromoform	U,J		ug/kg	6	09-FEB-99	EPA 8260	98-189-5637
79-334-5	1,1,2,2-Tetrachloroethane	U,J		ug/kg	6	09-FEB-99	EPA 8260	98-189-5637
Surrogate Recovery:								
	Dibromofluoromethane	142	*	%				98-189-5637
	Toluene-d8	144	*	%				98-189-5637
	4-Bromofluorobenzene	162	*	%				98-189-5637

U = None Detected

QC NY 10252 NJ 73168 PA 68180 EPA NY 00033

Approved by: _____ Lab Director

KEY: ND or U = None Detected < = less than
mg/L = milligrams per liter (equivalent to parts per million)
B = analyte was detected in the method or trip blank
ug/L = micrograms per liter (equivalent to parts per billion)
mg/kg = milligrams per kilogram (equivalent to parts per million)
J = result estimated below the quantitation limit

FLI
FRIEND LABORATORY I · N · C

ONE RESEARCH CIRCLE WAVERLY, NY 14892-1532
TELEPHONE (607) 565-3500 FAX (607) 565-4083

DATE 25-FEB-1999

LAB SAMPLE ID : L30680-8

Malcolm Pirnie, Inc. - Orchard Park
Daniel Riker
40 Centre Drive
PO Box 1938
Buffalo, NY 14219-0138

SAMPLE SOURCE	HANNA FURNACE, 3587-001
ORIGIN	SB-32
DESCRIPTION	GRAB
SAMPLED ON	27-JAN-99 00:00 by CLIENT
DATE RECEIVED	29-JAN-99 14:36
P.O. NO.	N/A

CAS #	Analysis Performed	Result	Units	Detection Limit	Date Analyzed	Method	Notebook Reference

Analysis Comment: Dry weight basis.J-IS below limit. *Surr. above limit(C5621).

U = None Detected

QC NY 10252 NJ 73168 PA 68180 EPA NY 00033

Approved by: _____
Lab Director

KEY: ND or U = None Detected < = less than ug/L = micrograms per liter (equivalent to parts per billion)
mg/L = milligrams per liter (equivalent to parts per million) mg/kg = milligrams per kilogram (equivalent to parts per million)
B = analyte was detected in the method or trip blank J = result estimated below the quantitation limit

FLI
FRIEND LABORATORY I·N·C

ONE RESEARCH CIRCLE WAVERLY, NY 14892-1532
TELEPHONE (607) 565-3500 FAX (607) 565-4083

DATE : 25-FEB-1999

LAB SAMPLE ID : L30680-9

Malcolm Pirnie, Inc. - Orchard Park
Daniel Riker
40 Centre Drive
PO Box 1938
Buffalo, NY 14219-0138

SAMPLE SOURCE	HANNA FURNACE, 3587-001
ORIGIN	SB-28
DESCRIPTION	GRAB
SAMPLED ON	27-JAN-99 00:00 by CLIENT
DATE RECEIVED	29-JAN-99 14:36
P.O. NO.	N/A

CAS #	Analysis Performed	Result		Units	Detection Limit	Date Analyzed	Method	Notebook Reference
	Total Solids	42.29		%		01-FEB-99	CLP 3.0	97-070-45
74-87-3	Chloromethane	U		ug/kg	12	08-FEB-99	EPA 8260	98-089-5632
75-01-4	Vinyl chloride	U		ug/kg	12	08-FEB-99	EPA 8260	98-089-5632
75-00-3	Chloroethane	U		ug/kg	12	08-FEB-99	EPA 8260	98-089-5632
74-83-9	Bromomethane	U		ug/kg	12	08-FEB-99	EPA 8260	98-089-5632
75-35-4	1,1-Dichloroethene	U		ug/kg	12	08-FEB-99	EPA 8260	98-089-5632
67-64-1	Acetone	U		ug/kg	58	08-FEB-99	EPA 8260	98-089-5632
75-15-0	Carbon disulfide	U		ug/kg	12	08-FEB-99	EPA 8260	98-089-5632
75-09-2	Methylene chloride	U		ug/kg	12	08-FEB-99	EPA 8260	98-089-5632
156-60-5	trans-1,2-Dichloroethene	U		ug/kg	12	08-FEB-99	EPA 8260	98-089-5632
75-34-3	1,1-Dichloroethane	U		ug/kg	12	08-FEB-99	EPA 8260	98-089-5632
156-59-4	cis-1,2-Dichloroethene	U		ug/kg	12	08-FEB-99	EPA 8260	98-089-5632
67-66-3	Chloroform	U		ug/kg	12	08-FEB-99	EPA 8260	98-089-5632
71-55-6	1,1,1-Trichloroethane	U		ug/kg	12	08-FEB-99	EPA 8260	98-089-5632
56-23-5	Carbon tetrachloride	U		ug/kg	12	08-FEB-99	EPA 8260	98-089-5632
71-43-2	Benzene	U		ug/kg	12	08-FEB-99	EPA 8260	98-089-5632
107-06-2	1,2-Dichloroethane	U		ug/kg	12	08-FEB-99	EPA 8260	98-089-5632
79-01-6	Trichloroethene	U		ug/kg	12	08-FEB-99	EPA 8260	98-089-5632
78-87-5	1,2-Dichloropropane	U		ug/kg	12	08-FEB-99	EPA 8260	98-089-5632
75-27-4	Bromodichloromethane	U		ug/kg	12	08-FEB-99	EPA 8260	98-089-5632
10061-01-5	cis-1,3-Dichloropropene	U		ug/kg	12	08-FEB-99	EPA 8260	98-089-5632
108-88-3	Toluene	U		ug/kg	12	08-FEB-99	EPA 8260	98-089-5632
10061-02-6	trans-1,3-Dichloropropene	U		ug/kg	12	08-FEB-99	EPA 8260	98-089-5632
79-00-5	1,1,2-Trichloroethane	U		ug/kg	12	08-FEB-99	EPA 8260	98-089-5632
127-18-4	Tetrachloroethene	U		ug/kg	12	08-FEB-99	EPA 8260	98-089-5632
591-78-6	2-Hexanone	U		ug/kg	23	08-FEB-99	EPA 8260	98-089-5632
124-48-1	Dibromochloromethane	U		ug/kg	12	08-FEB-99	EPA 8260	98-089-5632
108-90-7	Chlorobenzene	U		ug/kg	12	08-FEB-99	EPA 8260	98-089-5632
100-41-4	Ethylbenzene	U		ug/kg	12	08-FEB-99	EPA 8260	98-089-5632
1330-20-7	p-Xylene/m-Xylene	U		ug/kg	12	08-FEB-99	EPA 8260	98-089-5632
	o-Xylene	U		ug/kg	12	08-FEB-99	EPA 8260	98-089-5632
100-42-5	Styrene	U		ug/kg	12	08-FEB-99	EPA 8260	98-089-5632
75-25-2	Bromoform	U		ug/kg	12	08-FEB-99	EPA 8260	98-089-5632
79-334-5	1,1,2,2-Tetrachloroethane	U		ug/kg	12	08-FEB-99	EPA 8260	98-089-5632
Surrogate Recovery:								
	Dibromofluoromethane	8	*	%				98-089-5632
	Toluene-d8	101		%				98-089-5632
	4-Bromofluorobenzene	96		%				98-089-5632

U = None Detected

QC NY 10252 NJ 73168 PA 68180 EPA NY 00033

Approved by: _____ Lab Director

KEY: ND or U = None Detected < = less than ug/L = micrograms per liter (equivalent to parts per billion)
mg/L = milligrams per liter (equivalent to parts per million) mg/kg = milligrams per kilogram (equivalent to parts per million)
B = analyte was detected in the method or trip blank J = result estimated below the quantitation limit

FLI
FRIEND LABORATORY I · N · C

ONE RESEARCH CIRCLE WAVERLY, NY 14892-1532
TELEPHONE (607) 565-3500 FAX (607) 565-4083

DATE 25-FEB-1999

LAB SAMPLE ID : L30680-9

Malcolm Pirnie, Inc. - Orchard Park
Daniel Riker
40 Centre Drive
PO Box 1938
Buffalo, NY 14219-0138

SAMPLE SOURCE	HANNA FURNACE, 3587-001
ORIGIN	SB-28
DESCRIPTION	GRAB
SAMPLED ON	27-JAN-99 00:00 by CLIENT
DATE RECEIVED	29-JAN-99 14:36
P.O. NO.	N/A

CAS #	Analysis Performed	Result	Units	Detection Limit	Date Analyzed	Method	Notebook Reference

Analysis Comment: Dry weight basis.*Surr. below limit(C5643).

U = None Detected

QC NY 10252 NJ 73168 PA 68180 EPA NY 00033

Approved by: _____
Lab Director

KEY: ND or U = None Detected < = less than ug/L = micrograms per liter (equivalent to parts per billion)
mg/L = milligrams per liter (equivalent to parts per million) mg/kg = milligrams per kilogram (equivalent to parts per million)
B = analyte was detected in the method or trip blank J = result estimated below the quantitation limit

FLI
FRIEND LABORATORY I · N · C

ONE RESEARCH CIRCLE WAVERLY, NY 14892-1532
TELEPHONE (607) 565-3500 FAX (607) 565-4083

DATE 25-FEB-1999

LAB SAMPLE ID L30680-10

Malcolm Pirnie, Inc. - Orchard Park
Daniel Riker
40 Centre Drive
PO Box 1938
Buffalo, NY 14219-0138

SAMPLE SOURCE	HANNA FURNACE, 3587-001
ORIGIN	SB-27
DESCRIPTION	GRAB
SAMPLED ON	27-JAN-99 00:00 by CLIENT
DATE RECEIVED	29-JAN-99 14:36
P.O. NO.	N/A

CAS #	Analysis Performed	Result	Units	Detection Limit	Date Analyzed	Method	Notebook Reference
	Total Solids	77.35	%		01-FEB-99	CLP 3.0	97-070-45
12674-11-2	PCB 1016	U	mg/kg	0.1	08-FEB-99	EPA 8080	98-183-1278
11104-28-2	PCB 1221	U	mg/kg	0.2	08-FEB-99	EPA 8080	98-183-1278
11141-16-5	PCB 1232	U	mg/kg	0.1	08-FEB-99	EPA 8080	98-183-1278
53469-21-9	PCB 1242	U	mg/kg	0.1	08-FEB-99	EPA 8080	98-183-1278
12672-29-6	PCB 1248	U	mg/kg	0.1	08-FEB-99	EPA 8080	98-183-1278
11097-69-1	PCB 1254	U	mg/kg	0.1	08-FEB-99	EPA 8080	98-183-1278
11096-82-5	PCB 1260	U	mg/kg	0.1	08-FEB-99	EPA 8080	98-183-1278
Surrogate Recovery:	Decachlorobiphenyl	138	%				98-183-1278

U = None Detected

QC _____ NY 10252 NJ 73168 PA 68180 EPA NY 00033

Approved by: _____
Lab Director

KEY: ND or U = None Detected < = less than ug/L = micrograms per liter (equivalent to parts per billion)
mg/L = milligrams per liter (equivalent to parts per million) mg/kg = milligrams per kilogram (equivalent to parts per million)
B = analyte was detected in the method or trip blank J = result estimated below the quantitation limit

CUSTOMER CODE # _____

CHAIN OF CUSTODY RECORD

PAGE 1 OF 3

FLI
FRIEND LABORATORY I • N • C

ONE RESEARCH CIRCLE
WAVERLY NY 14892-1532
Telephone (607) 565 3500
Fax (607) 565 7160

Sample Site: HANNA FURNACE

P.O. #

Untreated	Sodium thiosulfate	HCl pH <2	Ascorbic acid & HCl pH <2	HNO_3 pH <2	H_2SO_4 pH <2	NaOH pH >12	NaOH & Zinc acetate pH >9	Acetic Buffer pH <3	Sodium sulfite

CLIENT: MALCOLM PIRNIE
ADDRESS: 40 CENTRE IRL BUFFALO NY
PHONE: 716-667-0900 FAX: 716-667-0611

INVOICE TO: DANIEL RIKER
ADDRESS: SAME

PROJECT NO. / NAME: 3587-[redacted]001

COPY TO:
ADDRESS:

DATE & TIME OF SAMPLE COLLECTION	SAMPLE DESCRIPTION	NUMBER OF CONTAINERS	ANALYSES / TESTS REQUESTED	SAMPLE NUMBER
1/27/99	COMP-D1 SOIL COMPOSITE	2 Description: Grab Composite Other Matrix: DW WW MW Soil Air Other	METALS, CYANIDE PHENOL, PAH	LAB USE ONLY L30690-1
	COMP-D2	2 Description: Grab Composite Other Matrix: DW WW MW Soil Air Other		-2
	COMP-F1	2 Description: Grab Composite Other Matrix: DW WW MW Soil Air Other		-3
	COMP-F2	2 Description: Grab Composite Other Matrix: DW WW MW Soil Air Other		-4

RELINQUISHED BY	DATE /TIME	ACCEPTED BY	DATE/TIME	NOTES TO LABORATORY
SAMPLER DJE	1/28/99 0830	Christa Frantz	1/29-99 14:36	

SUSPECTED CONTAMINATION LEVEL

NE (HT) ERA. IGH se c

CUSTOMER CODE #

CHAIN OF COUSTODY RECORD

FLI FRIEND LABORATORY INC
ONE RESEARCH CIRCLE
WAVERLY NY 14892-1532
Telephone (607) 565 3500
Fax (607) 565 7160

Sample Site: HANNA FURNACE

P.O. #

Preservatives: Untreated | Sodium thiosulfate | HCl pH <2 | Ascorbic acid & HCl pH <2 | HNO_3 pH <2 | H_2SO_4 pH <2 | NaOH pH >12 | NaOH & Zinc acetate pH >9 | Acetic Buffer pH <3 | Sodium sulfite

CLIENT: MPE
ADDRESS:
PHONE: FAX:
PROJECT NO. / NAME: 3587-001

INVOICE TO:
ADDRESS:

COPY TO:
ADDRESS:

DATE & TIME OF SAMPLE COLLECTION	SAMPLE DESCRIPTION	NUMBER OF CONTAINERS	ANALYSES / TESTS REQUESTED	SAMPLE NUMBER L3536 (LAB USE ONLY)
1/27/99	COMP-E2 composite soil	4 Description: Grab Composite Other Matrix: DW WW MW Soil Air Other	metals, cyanide PAH, phenol TCLP	-5
↓	COMP-M2 ↓	2 Description: Grab Composite Other Matrix: DW WW MW Soil Air Other	metals cyanide PAH, phenol	-6 -7
↓	SB-32 grab soil	1 Description: Grab Composite Other Matrix: DW WW MW Soil Air Other	VOCs	-8
↓	SB-28 ↓	1 Description: Grab Composite Other Matrix: DW WW MW Soil Air Other	↓	-9

RELINQUISHED BY	DATE/TIME	ACCEPTED BY	DATE/TIME
SAMPLER [signature]	1/28/99 0830	Christa Frantz	1/29-99 14:36

NOTES TO LABORATORY

SUSPECTED CONTAMINATION LEVEL
NONE SLIGHT MODERATE HIGH (please circle)

CUSTOMER CODE # _____

CHAIN OF CUSTODY RECORD

PAGE 3 OF 3

FLI FRIEND LABORATORY I • N • C

ONE RESEARCH CIRCLE
WAVERLY NY 14892-1532
Telephone (607) 565 3500
Fax (607) 565 7160

Sample Site: HANNA FURNACE

P.O. #

Untreated | Sodium thiosulfate | HCl pH <2 | Ascorbic acid & HCl pH <2 | HNO_3 pH <2 | H_2SO_4 pH <2 | NaOH pH >12 | NaOH & Zinc acetate pH >9 | Acetic Buffer pH <3 | Sodium sulfite

CLIENT: MPE
ADDRESS:
PHONE: FAX:

INVOICE TO:
ADDRESS:

PROJECT NO. / NAME
3587-001

COPY TO:
ADDRESS:

DATE & TIME OF SAMPLE COLLECTION	SAMPLE DESCRIPTION	NUMBER OF CONTAINERS	ANALYSES / TESTS REQUESTED	SAMPLE NUMBER
1/27/99	SB-27 soil grab	1 Description: Grab Composite Other Matrix: DW WW MW Soil Air Other	PCBs	L58680-10 LAB USE ONLY
		Description: Grab Composite Other Matrix: DW WW MW Soil Air Other		
		Description: Grab Composite Other Matrix: DW WW MW Soil Air Other		
		Description: Grab Composite Other Matrix: DW WW MW Soil Air Other		

RELINQUISHED BY	DATE /TIME	ACCEPTED BY	DATE/TIME	NOTES TO LABORATORY
SAMPLER [signature]	1/28/99 0830	Christa Frey	1/29/99 14:30	

SUSPECTED CONTAMINATION LEVEL

NE HT ERA IIGH ase

FLI
FRIEND LABORATORY I · N · C

ONE RESEARCH CIRCLE WAVERLY, NY 14892-1532
TELEPHONE (607) 565-3500 FAX (607) 565-4083

DATE : 24-FEB-1999

LAB SAMPLE ID : L30741-1

Malcolm Pirnie, Inc. - Orchard Park
Daniel Riker
40 Centre Drive
PO Box 1938
Buffalo, NY 14219-0138

SAMPLE SOURCE	HANNA FURNACE, 3587-001
ORIGIN	E-1
DESCRIPTION	COMPOSITE
SAMPLED ON	28-JAN-99 00:00 by CLIENT
DATE RECEIVED	02-FEB-99 11:00
P.O. NO.	N/A

CAS #	Analysis Performed	Result	Units	Detection Limit	Date Analyzed	Method	Notebook Reference
	Cyanide, Total	3.35	mg/kg	0.62	09-FEB-99	EPA 335.3	99-003-007
	Total Solids	73.32	%		03-FEB-99	CLP 3.0	97-070-47
	Aluminum	20800	mg/kg	10.2	22-FEB-99	EPA 6010A	99-036-05
	Antimony	U	mg/kg	6.99	11-FEB-99	EPA 6010A	99-036-01
	Arsenic	U	mg/kg	16.7	11-FEB-99	EPA 6010A	99-036-01
	Barium	194	mg/kg	2.24	11-FEB-99	EPA 6010A	99-036-01
	Beryllium	3.05	mg/kg	00.280	11-FEB-99	EPA 6010A	99-036-01
	Cadmium	U	mg/kg	0.6990	11-FEB-99	EPA 7130	99-036-01
	Calcium	102000	mg/kg	350.	11-FEB-99	EPA 6010A	99-036-01
	Chromium	51.2	mg/kg	1.40	11-FEB-99	EPA 6010A	99-036-01
	Cobalt	12.7	mg/kg	1.40	11-FEB-99	EPA 6010A	99-036-01
	Copper	44.6	mg/kg	2.38	11-FEB-99	EPA 6010A	99-036-01
	Iron	60100	mg/kg	27.4	22-FEB-99	EPA 6010A	99-036-05
	Lead	203	mg/kg	6.16	11-FEB-99	EPA 6010A	99-036-01
	Magnesium	16400	mg/kg	342.	22-FEB-99	EPA 6010A	99-036-05
	Manganese	2110	mg/kg	00.699	11-FEB-99	EPA 6010A	99-036-01
	Mercury	U	mg/kg	0.0140	10-FEB-99	EPA 7470	98-126-05
	Nickel	35.8	mg/kg	1.68	11-FEB-99	EPA 6010A	99-036-01
	Potassium	1710	mg/kg	69.9	11-FEB-99	EPA 6010A	99-036-01
	Selenium	U	mg/kg	47.9	22-FEB-99	EPA 6010A	99-036-05
	Silver	U	mg/kg	1.40	11-FEB-99	EPA 6010A	99-036-01

U = None Detected

QC _____ NY 10252 NJ 73168 PA 68180 EPA NY 00033

Approved by: _____
Lab Director

KEY: ND or U = None Detected < = less than
mg/L = milligrams per liter (equivalent to parts per million)
B = analyte was detected in the method or trip blank
ug/L = micrograms per liter (equivalent to parts per billion)
mg/kg = milligrams per kilogram (equivalent to parts per million)
J = result estimated below the quantitation limit

FLI
FRIEND LABORATORY I · N · C

ONE RESEARCH CIRCLE WAVERLY, NY 14892-1532
TELEPHONE (607) 565-3500 FAX (607) 565-4083

DATE 24-FEB-1999

LAB SAMPLE ID : L30741-1

Malcolm Pirnie, Inc. - Orchard Park
Daniel Riker
40 Centre Drive
PO Box 1938
Buffalo, NY 14219-0138

SAMPLE SOURCE	HANNA FURNACE, 3587-001
ORIGIN	E-1
DESCRIPTION	COMPOSITE
SAMPLED ON	28-JAN-99 00:00 by CLIENT
DATE RECEIVED	02-FEB-99 11:00
P.O. NO.	N/A

CAS #	Analysis Performed	Result	Units	Detection Limit	Date Analyzed	Method	Notebook Reference
	Sodium	370	mg/kg	27.9	11-FEB-99	EPA 6010A	99-036-01
	Thallium	U	mg/kg	9.09	11-FEB-99	EPA 6010	99-036-01
	Vanadium	37.5	mg/kg	1.40	11-FEB-99	EPA 6010A	99-036-01
	Zinc	251	mg/kg	2.80	11-FEB-99	EPA 6010A	99-036-01
108-95-2	Phenol	U	ug/kg	340	08-FEB-99	EPA 8270	98-051-7895
95-57-8	2-Chlorophenol	U	ug/kg	340	08-FEB-99	EPA 8270	98-051-7895
95-48-7	2-Methylphenol	U	ug/kg	340	08-FEB-99	EPA 8270	98-051-7895
	3-Methylphenol/4-Methylphenol	U	ug/kg	340	08-FEB-99	EPA 8270	98-051-7895
88-75-5	2-Nitrophenol	U	ug/kg	340	08-FEB-99	EPA 8270	98-051-7895
105-67-9	2,4-Dimethylphenol	U	ug/kg	340	08-FEB-99	EPA 8270	98-051-7895
120-83-2	2,4-Dichlorophenol	U	ug/kg	340	08-FEB-99	EPA 8270	98-051-7895
91-20-3	Naphthalene	U	ug/kg	340	08-FEB-99	EPA 8270	98-051-7895
59-50-7	4-Chloro-3-methylphenol	U	ug/kg	670	08-FEB-99	EPA 8270	98-051-7895
91-57-6	2-Methylnaphthalene	U	ug/kg	340	08-FEB-99	EPA 8270	98-051-7895
208-96-8	Acenaphthylene	U	ug/kg	340	08-FEB-99	EPA 8270	98-051-7895
83-32-9	Acenaphthene	U	ug/kg	340	08-FEB-99	EPA 8270	98-051-7895
51-28-4	2,4-Dinitrophenol	U	ug/kg	1300	08-FEB-99	EPA 8270	98-051-7895
100-02-7	4-Nitrophenol	U	ug/kg	1300	08-FEB-99	EPA 8270	98-051-7895
534-52-1	2-Methyl-4,6-dinitrophenol	U	ug/kg	1300	08-FEB-99	EPA 8270	98-051-7895
87-86-5	Pentachlorophenol	U	ug/kg	1300	08-FEB-99	EPA 8270	98-051-7895
85-01-8	Phenanthrene	730	ug/kg	340	08-FEB-99	EPA 8270	98-051-7895
120-12-7	Anthracene	180 J	ug/kg	340	08-FEB-99	EPA 8270	98-051-7895
206-44-0	Fluoranthene	680	ug/kg	340	08-FEB-99	EPA 8270	98-051-7895
129-00-0	Pyrene	590	ug/kg	340	08-FEB-99	EPA 8270	98-051-7895
56-55-3	Benzo(a)anthracene	320 J	ug/kg	340	08-FEB-99	EPA 8270	98-051-7895
215-01-9	Chrysene	280 J	ug/kg	340	08-FEB-99	EPA 8270	98-051-7895
205-99-2	Benzo(b)fluoranthene	340 J	ug/kg	340	08-FEB-99	EPA 8270	98-051-7895
207-88-9	Benzo(k)fluoranthene	U	ug/kg	340	08-FEB-99	EPA 8270	98-051-7895
50-32-8	Benzo(a)pyrene	260 J	ug/kg	340	08-FEB-99	EPA 8270	98-051-7895
193-39-5	Indeno(1,2,3-cd)pyrene	U	ug/kg	340	08-FEB-99	EPA 8270	98-051-7895
53-7-3	Dibenzo(a,h)anthracene	U	ug/kg	340	08-FEB-99	EPA 8270	98-051-7895
191-24-2	Benzo(g,h,i)perylene	120 J	ug/kg	340	08-FEB-99	EPA 8270	98-051-7895
	Extraction Information:				08-FEB-99		98-174-54
Surrogate Recovery:							
	2-Fluorophenol	69	%				98-051-7895

U = None Detected

QC NY 10252 NJ 73168 PA 68180 EPA NY 00033

Approved by: _____
Lab Director

KEY: ND or U = None Detected; < = less than; ug/L = micrograms per liter (equivalent to parts per billion); mg/L = milligrams per liter (equivalent to parts per million); mg/kg = milligrams per kilogram (equivalent to parts per million); B = analyte was detected in the method or trip blank; J = result estimated below the quantitation limit

FLI
FRIEND LABORATORY I · N · C

ONE RESEARCH CIRCLE WAVERLY, NY 14892-1532
TELEPHONE (607) 565-3500 FAX (607) 565-4083

DATE 24-FEB-1999

LAB SAMPLE ID : L30741-1

Malcolm Pirnie, Inc. - Orchard Park
Daniel Riker
40 Centre Drive
PO Box 1938
Buffalo, NY 14219-0138

SAMPLE SOURCE	HANNA FURNACE, 3587-001
ORIGIN	E-1
DESCRIPTION	COMPOSITE
SAMPLED ON	28-JAN-99 00:00 by CLIENT
DATE RECEIVED	02-FEB-99 11:00
P.O. NO.	N/A

CAS #	Analysis Performed	Result	Units	Detection Limit	Date Analyzed	Method	Notebook Reference
	Phenol-d5	80	%				98-051-7895
	Nitrobenzene-d5	85	%				98-051-7895
	2-Fluorobiphenyl	87	%				98-051-7895
	2,4,6-Tribromophenol	62	%				98-051-7895
	Terphenyl-d14	85	%				98-051-7895

Analysis Comment: Results Calculated on a dry weight basis.

U = None Detected

QC NY 10252 NJ 73168 PA 68180 EPA NY 00033

Approved by: Lab Director

KEY: ND or U = None Detected < = less than
mg/L = milligrams per liter (equivalent to parts per million)
B = analyte was detected in the method or trip blank
ug/L = micrograms per liter (equivalent to parts per billion)
mg/kg = milligrams per kilogram (equivalent to parts per million)
J = result estimated below the quantitation limit

FLI
FRIEND LABORATORY
I · N · C

ONE RESEARCH CIRCLE WAVERLY, NY 14892-1532
TELEPHONE (607) 565-3500 FAX (607) 565-4083

DATE 25-FEB-1999

LAB SAMPLE ID : L30741-2

Malcolm Pirnie, Inc. - Orchard Park
Daniel Riker
40 Centre Drive
PO Box 1938
Buffalo, NY 14219-0138

SAMPLE SOURCE	HANNA FURNACE, 3587-001
ORIGIN	M-1
DESCRIPTION	COMPOSITE
SAMPLED ON	28-JAN-99 00:00 by CLIENT
DATE RECEIVED	02-FEB-99 11:00
P.O. NO.	N/A

CAS #	Analysis Performed	Result	Units	Detection Limit	Date Analyzed	Method	Notebook Reference
	Cyanide, Total	4.34	mg/l	0.56	09-FEB-99	EPA 335.3	99-003-007
	Total Solids	71.68	%		03-FEB-99	CLP 3.0	97-070-47
	Aluminum	23900	mg/kg	53.0	22-FEB-99	EPA 6010A	99-036-05
	Antimony	11.2	mg/kg	7.25	11-FEB-99	EPA 6010A	99-036-01
	Arsenic	U	mg/kg	17.4	11-FEB-99	EPA 6010A	99-036-01
	Barium	252	mg/kg	2.32	11-FEB-99	EPA 6010A	99-036-01
	Beryllium	3.68	mg/kg	0.290	11-FEB-99	EPA 6010A	99-036-01
	Cadmium	U	mg/kg	3.62	11-FEB-99	EPA 7130	99-036-01
	Calcium	82500	mg/kg	360	11-FEB-99	EPA 6010A	99-036-01
	Chromium	48.5	mg/kg	1.45	11-FEB-99	EPA 6010A	99-036-01
	Cobalt	9.56	mg/kg	1.45	11-FEB-99	EPA 6010A	99-036-01
	Copper	48.6	mg/kg	2.47	11-FEB-99	EPA 6010A	99-036-01
	Iron	193000	mg/kg	56.9	24-FEB-99	EPA 6010A	99-036-07
	Lead	208	mg/kg	6.38	11-FEB-99	EPA 6010A	99-036-01
	Magnesium	10700	mg/kg	71.1	22-FEB-99	EPA 6010A	99-036-05
	Manganese	5250	mg/kg	3.62	11-FEB-99	EPA 6010A	99-036-01
	Mercury	U	mg/kg	0.0140	10-FEB-99	EPA 7470	98-126-05
	Nickel	52.7	mg/kg	1.74	11-FEB-99	EPA 6010A	99-036-01
	Potassium	1880	mg/kg	72.5	11-FEB-99	EPA 6010A	99-036-01
	Selenium	U	mg/kg	99.6	24-FEB-99	EPA 6010A	99-036-07
	Silver	U	mg/kg	7.25	11-FEB-99	EPA 6010A	99-036-01

U = None Detected

QC NY 10252 NJ 73168 PA 68180 EPA NY 00033

Approved by: _____
Lab Director

KEY: ND or U = None Detected < = less than
mg/L = milligrams per liter (equivalent to parts per million)
B = analyte was detected in the method or trip blank
ug/L = micrograms per liter (equivalent to parts per billion)
mg/kg = milligrams per kilogram (equivalent to parts per million)
J = result estimated below the quantitation limit

FLI
FRIEND LABORATORY I · N · C

ONE RESEARCH CIRCLE WAVERLY, NY 14892-1532
TELEPHONE (607) 565-3500 FAX (607) 565-4083

DATE 25-FEB-1999

LAB SAMPLE ID : L30741-2

Malcolm Pirnie, Inc. - Orchard Park
Daniel Riker
40 Centre Drive
PO Box 1938
Buffalo, NY 14219-0138

SAMPLE SOURCE	HANNA FURNACE, 3587-001
ORIGIN	M-1
DESCRIPTION	COMPOSITE
SAMPLED ON	28-JAN-99 00:00 by CLIENT
DATE RECEIVED	02-FEB-99 11:00
P.O. NO.	N/A

CAS #	Analysis Performed	Result	Units	Detection Limit	Date Analyzed	Method	Notebook Reference
	Sodium	702	mg/kg	29.0	11-FEB-99	EPA 6010A	99-036-01
	Thallium	U	mg/kg	9.43	11-FEB-99	EPA 6010	99-036-01
	Vanadium	54.9	mg/kg	7.25	11-FEB-99	EPA 6010A	99-036-01
	Zinc	582	mg/kg	2.90	11-FEB-99	EPA 6010A	99-036-01
108-95-2	Phenol	U	ug/kg	310	08-FEB-99	EPA 8270	98-051-7893
95-57-8	2-Chlorophenol	U	ug/kg	310	08-FEB-99	EPA 8270	98-051-7893
95-48-7	2-Methylphenol	U	ug/kg	310	08-FEB-99	EPA 8270	98-051-7893
	3-Methylphenol/4-Methylphenol	U	ug/kg	310	08-FEB-99	EPA 8270	98-051-7893
88-75-5	2-Nitrophenol	U	ug/kg	310	08-FEB-99	EPA 8270	98-051-7893
105-67-9	2,4-Dimethylphenol	U	ug/kg	310	08-FEB-99	EPA 8270	98-051-7893
120-83-2	2,4-Dichlorophenol	U	ug/kg	310	08-FEB-99	EPA 8270	98-051-7893
91-20-3	Naphthalene	U	ug/kg	310	08-FEB-99	EPA 8270	98-051-7893
59-50-7	4-Chloro-3-methylphenol	U	ug/kg	630	08-FEB-99	EPA 8270	98-051-7893
91-57-6	2-Methylnaphthalene	U	ug/kg	310	08-FEB-99	EPA 8270	98-051-7893
208-96-8	Acenaphthylene	U	ug/kg	310	08-FEB-99	EPA 8270	98-051-7893
83-32-9	Acenaphthene	U	ug/kg	310	08-FEB-99	EPA 8270	98-051-7893
51-28-4	2,4-Dinitrophenol	U	ug/kg	1300	08-FEB-99	EPA 8270	98-051-7893
100-02-7	4-Nitrophenol	U	ug/kg	1300	08-FEB-99	EPA 8270	98-051-7893
534-52-1	2-Methyl-4,6-dinitrophenol	U	ug/kg	1300	08-FEB-99	EPA 8270	98-051-7893
87-86-5	Pentachlorophenol	U	ug/kg	1300	08-FEB-99	EPA 8270	98-051-7893
85-01-8	Phenanthrene	U	ug/kg	310	08-FEB-99	EPA 8270	98-051-7893
120-12-7	Anthracene	U	ug/kg	310	08-FEB-99	EPA 8270	98-051-7893
206-44-0	Fluoranthene	120 J	ug/kg	310	08-FEB-99	EPA 8270	98-051-7893
129-00-0	Pyrene	130 J	ug/kg	310	08-FEB-99	EPA 8270	98-051-7893
56-55-3	Benzo(a)anthracene	95 J	ug/kg	310	08-FEB-99	EPA 8270	98-051-7893
215-01-9	Chrysene	100 J	ug/kg	310	08-FEB-99	EPA 8270	98-051-7893
205-99-2	Benzo(b)fluoranthene	170 J	ug/kg	310	08-FEB-99	EPA 8270	98-051-7893
207-88-9	Benzo(k)fluoranthene	U	ug/kg	310	08-FEB-99	EPA 8270	98-051-7893
50-32-8	Benzo(a)pyrene	100 J	ug/kg	310	08-FEB-99	EPA 8270	98-051-7893
193-39-5	Indeno(1,2,3-cd)pyrene	U	ug/kg	310	08-FEB-99	EPA 8270	98-051-7893
53-7-3	Dibenzo(a,h)anthracene	U	ug/kg	310	08-FEB-99	EPA 8270	98-051-7893
191-24-2	Benzo(g,h,i)perylene	U	ug/kg	310	08-FEB-99	EPA 8270	98-051-7893
	Extraction Information:				08-FEB-99		98-174-54
Surrogate Recovery:							
	2-Fluorophenol	70	%				98-051-7893

U = None Detected

QC ____ NY 10252 NJ 73168 PA 68180 EPA NY 00033

Approved by: _____ Lab Director

KEY: ND or U = None Detected < = less than ug/L = micrograms per liter (equivalent to parts per billion)
mg/L = milligrams per liter (equivalent to parts per million) mg/kg = milligrams per kilogram (equivalent to parts per million)
B = analyte was detected in the method or trip blank J = result estimated below the quantitation limit

FLI
FRIEND LABORATORY I · N · C

ONE RESEARCH CIRCLE WAVERLY, NY 14892-1532
TELEPHONE (607) 565-3500 FAX (607) 565-4083

DATE 25-FEB-1999

LAB SAMPLE ID : L30741-2

Malcolm Pirnie, Inc. - Orchard Park
Daniel Riker
40 Centre Drive
PO Box 1938
Buffalo, NY 14219-0138

SAMPLE SOURCE	HANNA FURNACE, 3587-001
ORIGIN	M-1
DESCRIPTION	COMPOSITE
SAMPLED ON	28-JAN-99 00:00 by CLIENT
DATE RECEIVED	02-FEB-99 11:00
P.O. NO.	N/A

CAS #	Analysis Performed	Result	Units	Detection Limit	Date Analyzed	Method	Notebook Reference
	Phenol-d5	84	%				98-051-7893
	Nitrobenzene-d5	86	%				98-051-7893
	2-Fluorobiphenyl	84	%				98-051-7893
	2,4,6-Tribromophenol	57	%				98-051-7893
	Terphenyl-d14	82	%				98-051-7893

Analysis Comment: Results Calculated on a dry weight basis.

U = None Detected

QC NY 10252 NJ 73168 PA 68180 EPA NY 00033

Approved by: _____
Lab Director

KEY: ND or U = None Detected < = less than ug/L = micrograms per liter (equivalent to parts per billion)
mg/L = milligrams per liter (equivalent to parts per million) mg/kg = milligrams per kilogram (equivalent to parts per million)
B = analyte was detected in the method or trip blank J = result estimated below the quantitation limit

FLI
FRIEND LABORATORY I · N · C

ONE RESEARCH CIRCLE WAVERLY, NY 14892-1532
TELEPHONE (607) 565-3500 FAX (607) 565-4083

DATE 24-FEB-1999

LAB SAMPLE ID : L30741-3

Malcolm Pirnie, Inc. - Orchard Park
Daniel Riker
40 Centre Drive
PO Box 1938
Buffalo, NY 14219-0138

SAMPLE SOURCE	HANNA FURNACE, 3587-001
ORIGIN	G-1
DESCRIPTION	COMPOSITE
SAMPLED ON	28-JAN-99 00:00 by CLIENT
DATE RECEIVED	02-FEB-99 11:00
P.O. NO.	N/A

CAS #	Analysis Performed	Result	Units	Detection Limit	Date Analyzed	Method	Notebook Reference
	Cyanide, Total	21.2	mg/kg	0.6	09-FEB-99	EPA 335.3	99-003-007
	Total Solids	75.59	%		03-FEB-99	CLP 3.0	97-070-47
	Aluminum	21300	mg/kg	9.48	22-FEB-99	EPA 6010A	99-036-05
	Antimony	7.65	mg/kg	6.20	11-FEB-99	EPA 6010A	99-036-01
	Arsenic	U	mg/kg	14.8	11-FEB-99	EPA 6010A	99-036-01
	Barium	222	mg/kg	1.98	11-FEB-99	EPA 6010A	99-036-01
	Beryllium	5.29	mg/kg	00.248	11-FEB-99	EPA 6010A	99-036-01
	Cadmium	U	mg/kg	3.1	11-FEB-99	EPA 7130	99-036-01
	Calcium	154000	mg/kg	310.	11-FEB-99	EPA 6010A	99-036-01
	Chromium	24.5	mg/kg	1.24	11-FEB-99	EPA 6010A	99-036-01
	Cobalt	5.88	mg/kg	1.24	11-FEB-99	EPA 6010A	99-036-01
	Copper	49.7	mg/kg	2.11	11-FEB-99	EPA 6010A	99-036-01
	Iron	80800	mg/kg	25.2	22-FEB-99	EPA 6010A	99-036-05
	Lead	1120	mg/kg	5.46	11-FEB-99	EPA 6010A	99-036-01
	Magnesium	20900	mg/kg	316.	22-FEB-99	EPA 6010A	99-036-05
	Manganese	2670	mg/kg	3.10	11-FEB-99	EPA 6010A	99-036-01
	Mercury	U	mg/kg	0.0120	10-FEB-99	EPA 7470	98-126-05
	Nickel	24.8	mg/kg	1.49	11-FEB-99	EPA 6010A	99-036-01
	Potassium	1560	mg/kg	61.9	11-FEB-99	EPA 6010A	99-036-01
	Selenium	U	mg/kg	44.2	22-FEB-99	EPA 6010A	99-036-05
	Silver	U	mg/kg	1.24	11-FEB-99	EPA 6010A	99-036-01

U = None Detected

QC ____ NY 10252 NJ 73168 PA 68180 EPA NY 00033

Approved by: _____
Lab Director

KEY: ND or U = None Detected; < = less than; ug/L = micrograms per liter (equivalent to parts per billion); mg/L = milligrams per liter (equivalent to parts per million); mg/kg = milligrams per kilogram (equivalent to parts per million); B = analyte was detected in the method or trip blank; J = result estimated below the quantitation limit

FLI
FRIEND LABORATORY I · N · C

ONE RESEARCH CIRCLE WAVERLY, NY 14892-1532
TELEPHONE (607) 565-3500 FAX (607) 565-4083

DATE 24-FEB-1999

LAB SAMPLE ID : L30741-3

Malcolm Pirnie, Inc. - Orchard Park
Daniel Riker
40 Centre Drive
PO Box 1938
Buffalo, NY 14219-0138

SAMPLE SOURCE	HANNA FURNACE, 3587-001
ORIGIN	G-1
DESCRIPTION	COMPOSITE
SAMPLED ON	28-JAN-99 00:00 by CLIENT
DATE RECEIVED	02-FEB-99 11:00
P.O. NO.	N/A

CAS #	Analysis Performed	Result	Units	Detection Limit	Date Analyzed	Method	Notebook Reference
	Sodium	662	mg/kg	24.7	11-FEB-99	EPA 6010A	99-036-01
	Thallium	U	mg/kg	8.06	11-FEB-99	EPA 6010	99-036-01
	Vanadium	14.8	mg/kg	1.24	11-FEB-99	EPA 6010A	99-036-01
	Zinc	331	mg/kg	2.48	11-FEB-99	EPA 6010A	99-036-01
108-95-2	Phenol	U	ug/kg	310	08-FEB-99	EPA 8270	98-051-7894
95-57-8	2-Chlorophenol	U	ug/kg	310	08-FEB-99	EPA 8270	98-051-7894
95-48-7	2-Methylphenol	U	ug/kg	310	08-FEB-99	EPA 8270	98-051-7894
	3-Methylphenol/4-Methylphenol	U	ug/kg	310	08-FEB-99	EPA 8270	98-051-7894
88-75-5	2-Nitrophenol	U	ug/kg	310	08-FEB-99	EPA 8270	98-051-7894
105-67-9	2,4-Dimethylphenol	U	ug/kg	310	08-FEB-99	EPA 8270	98-051-7894
120-83-2	2,4-Dichlorophenol	U	ug/kg	310	08-FEB-99	EPA 8270	98-051-7894
91-20-3	Naphthalene	U	ug/kg	310	08-FEB-99	EPA 8270	98-051-7894
59-50-7	4-Chloro-3-methylphenol	U	ug/kg	630	08-FEB-99	EPA 8270	98-051-7894
91-57-6	2-Methylnaphthalene	U	ug/kg	310	08-FEB-99	EPA 8270	98-051-7894
208-96-8	Acenaphthylene	U	ug/kg	310	08-FEB-99	EPA 8270	98-051-7894
83-32-9	Acenaphthene	U	ug/kg	310	08-FEB-99	EPA 8270	98-051-7894
51-28-4	2,4-Dinitrophenol	U	ug/kg	1300	08-FEB-99	EPA 8270	98-051-7894
100-02-7	4-Nitrophenol	U	ug/kg	1300	08-FEB-99	EPA 8270	98-051-7894
534-52-1	2-Methyl-4,6-dinitrophenol	U	ug/kg	1300	08-FEB-99	EPA 8270	98-051-7894
87-86-5	Pentachlorophenol	U	ug/kg	1300	08-FEB-99	EPA 8270	98-051-7894
85-01-8	Phenanthrene	78 J	ug/kg	310	08-FEB-99	EPA 8270	98-051-7894
120-12-7	Anthracene	U	ug/kg	310	08-FEB-99	EPA 8270	98-051-7894
206-44-0	Fluoranthene	220 J	ug/kg	310	08-FEB-99	EPA 8270	98-051-7894
129-00-0	Pyrene	270 J	ug/kg	310	08-FEB-99	EPA 8270	98-051-7894
56-55-3	Benzo(a)anthracene	180 J	ug/kg	310	08-FEB-99	EPA 8270	98-051-7894
215-01-9	Chrysene	240 J	ug/kg	310	08-FEB-99	EPA 8270	98-051-7894
205-99-2	Benzo(b)fluoranthene	410	ug/kg	310	08-FEB-99	EPA 8270	98-051-7894
207-88-9	Benzo(k)fluoranthene	U	ug/kg	310	08-FEB-99	EPA 8270	98-051-7894
50-32-8	Benzo(a)pyrene	210 J	ug/kg	310	08-FEB-99	EPA 8270	98-051-7894
193-39-5	Indeno(1,2,3-cd)pyrene	U	ug/kg	310	08-FEB-99	EPA 8270	98-051-7894
53-7-3	Dibenzo(a,h)anthracene	U	ug/kg	310	08-FEB-99	EPA 8270	98-051-7894
191-24-2	Benzo(g,h,i)perylene	180 J	ug/kg	310	08-FEB-99	EPA 8270	98-051-7894
	Extraction Information:				08-FEB-99		98-174-54
Surrogate Recovery:							
	2-Fluorophenol	62	%				98-051-7894

U = None Detected

QC NY 10252 NJ 73168 PA 68180 EPA NY 00033

Approved by: _____
Lab Director

KEY: ND or U = None Detected < = less than
mg/L = milligrams per liter (equivalent to parts per million)
B = analyte was detected in the method or trip blank
ug/L = micrograms per liter (equivalent to parts per billion)
mg/kg = milligrams per kilogram (equivalent to parts per million)
J = result estimated below the quantitation limit

FLI
FRIEND LABORATORY I · N · C

ONE RESEARCH CIRCLE WAVERLY, NY 14892-1532
TELEPHONE (607) 565-3500 FAX (607) 565-4083

DATE 24-FEB-1999

LAB SAMPLE ID : L30741-3

Malcolm Pirnie, Inc. - Orchard Park
Daniel Riker
40 Centre Drive
PO Box 1938
Buffalo, NY 14219-0138

SAMPLE SOURCE	HANNA FURNACE, 3587-001
ORIGIN	G-1
DESCRIPTION	COMPOSITE
SAMPLED ON	28-JAN-99 00:00 by CLIENT
DATE RECEIVED	02-FEB-99 11:00
P.O. NO.	N/A

CAS #	Analysis Performed	Result	Units	Detection Limit	Date Analyzed	Method	Notebook Reference
	Phenol-d5	75	%				98-051-7894
	Nitrobenzene-d5	77	%				98-051-7894
	2-Fluorobiphenyl	81	%				98-051-7894
	2,4,6-Tribromophenol	59	%				98-051-7894
	Terphenyl-d14	85	%				98-051-7894

Analysis Comment: Results Calculated on a dry weight basis.

U = None Detected

QC ✓ NY 10252 NJ 73168 PA 68180 EPA NY 00033

Approved by: _____
Lab Director

KEY: ND or U = None Detected < = less than
mg/L = milligrams per liter (equivalent to parts per million)
B = analyte was detected in the method or trip blank
ug/L = micrograms per liter (equivalent to parts per billion)
mg/kg = milligrams per kilogram (equivalent to parts per million)
J = result estimated below the quantitation limit

FLI
FRIEND LABORATORY I · N · C

ONE RESEARCH CIRCLE WAVERLY, NY 14892-1532
TELEPHONE (607) 565-3500 FAX (607) 565-4083

DATE 24-FEB-1999

LAB SAMPLE ID : L30741-4

Malcolm Pirnie, Inc. - Orchard Park
Daniel Riker
40 Centre Drive
PO Box 1938
Buffalo, NY 14219-0138

SAMPLE SOURCE	HANNA FURNACE, 3587-001
ORIGIN	G-2
DESCRIPTION	COMPOSITE
SAMPLED ON	28-JAN-99 00:00 by CLIENT
DATE RECEIVED	02-FEB-99 11:00
P.O. NO.	N/A

CAS #	Analysis Performed	Result	Units	Detection Limit	Date Analyzed	Method	Notebook Reference
	Cyanide, Total	32.7	mg/kg	0.99	09-FEB-99	EPA 335.3	99-003-007
	Total Solids	49.43	%		03-FEB-99	CLP 3.0	97-070-47
	Aluminum	43200	mg/kg	14.9	22-FEB-99	EPA 6010A	99-036-05
	Antimony	10.3	mg/kg	10.2	11-FEB-99	EPA 6010A	99-036-01
	Arsenic	U	mg/kg	24.6	11-FEB-99	EPA 6010A	99-036-01
	Barium	389	mg/kg	3.29	11-FEB-99	EPA 6010A	99-036-01
	Beryllium	7.6	mg/kg	00.411	11-FEB-99	EPA 6010A	99-036-01
	Cadmium	U	mg/kg	1.03	11-FEB-99	EPA 7130	99-036-01
	Calcium	255000	mg/kg	515.	11-FEB-99	EPA 6010A	99-036-01
	Chromium	20.2	mg/kg	2.06	11-FEB-99	EPA 6010A	99-036-01
	Cobalt	4.93	mg/kg	2.06	11-FEB-99	EPA 6010A	99-036-01
	Copper	13.8	mg/kg	3.50	11-FEB-99	EPA 6010A	99-036-01
	Iron	25400	mg/kg	7.96	22-FEB-99	EPA 6010A	99-036-05
	Lead	24.4	mg/kg	9.05	11-FEB-99	EPA 6010A	99-036-01
	Magnesium	26800	mg/kg	99.4	22-FEB-99	EPA 6010A	99-036-05
	Manganese	5150	mg/kg	5.15	11-FEB-99	EPA 6010A	99-036-01
	Mercury	U	mg/kg	0.0200	10-FEB-99	EPA 7470	98-126-05
	Nickel	23.8	mg/kg	2.47	11-FEB-99	EPA 6010A	99-036-01
	Potassium	2970	mg/kg	103.	11-FEB-99	EPA 6010A	99-036-01
	Selenium	U	mg/kg	13.9	22-FEB-99	EPA 6010A	99-036-05
	Silver	U	mg/kg	2.06	11-FEB-99	EPA 6010A	99-036-01

U = None Detected

QC (C) NY 10252 NJ 73168 PA 68180 EPA NY 00033

Approved by: _____
Lab Director

KEY: ND or U = None Detected < = less than
mg/L = milligrams per liter (equivalent to parts per million)
B = analyte was detected in the method or trip blank
ug/L = micrograms per liter (equivalent to parts per billion)
mg/kg = milligrams per kilogram (equivalent to parts per million)
J = result estimated below the quantitation limit

FLI
FRIEND LABORATORY I · N · C

ONE RESEARCH CIRCLE WAVERLY, NY 14892-1532
TELEPHONE (607) 565-3500 FAX (607) 565-4083

DATE 24-FEB-1999

LAB SAMPLE ID : L30741-4

Malcolm Pirnie, Inc. - Orchard Park
Daniel Riker
40 Centre Drive
PO Box 1938
Buffalo, NY 14219-0138

SAMPLE SOURCE	HANNA FURNACE, 3587-001
ORIGIN	G-2
DESCRIPTION	COMPOSITE
SAMPLED ON	28-JAN-99 00:00 by CLIENT
DATE RECEIVED	02-FEB-99 11:00
P.O. NO.	N/A

CAS #	Analysis Performed	Result	Units	Detection Limit	Date Analyzed	Method	Notebook Reference
	Sodium	746	mg/kg	41.1	11-FEB-99	EPA 6010A	99-036-01
	Thallium	U	mg/kg	13.3	11-FEB-99	EPA 6010	99-036-01
	Vanadium	24.8	mg/kg	2.06	11-FEB-99	EPA 6010A	99-036-01
	Zinc	37	mg/kg	4.11	11-FEB-99	EPA 6010A	99-036-01
108-95-2	Phenol	U	ug/kg	470	08-FEB-99	EPA 8270	98-051-7890
95-57-8	2-Chlorophenol	U	ug/kg	470	08-FEB-99	EPA 8270	98-051-7890
95-48-7	2-Methylphenol	U	ug/kg	470	08-FEB-99	EPA 8270	98-051-7890
	3-Methylphenol/4-Methylphenol	U	ug/kg	470	08-FEB-99	EPA 8270	98-051-7890
88-75-5	2-Nitrophenol	U	ug/kg	470	08-FEB-99	EPA 8270	98-051-7890
105-67-9	2,4-Dimethylphenol	U	ug/kg	470	08-FEB-99	EPA 8270	98-051-7890
120-83-2	2,4-Dichlorophenol	U	ug/kg	470	08-FEB-99	EPA 8270	98-051-7890
91-20-3	Naphthalene	U	ug/kg	470	08-FEB-99	EPA 8270	98-051-7890
59-50-7	4-Chloro-3-methylphenol	U	ug/kg	940	08-FEB-99	EPA 8270	98-051-7890
91-57-6	2-Methylnaphthalene	U	ug/kg	470	08-FEB-99	EPA 8270	98-051-7890
208-96-8	Acenaphthylene	U	ug/kg	470	08-FEB-99	EPA 8270	98-051-7890
83-32-9	Acenaphthene	U	ug/kg	470	08-FEB-99	EPA 8270	98-051-7890
51-28-4	2,4-Dinitrophenol	U	ug/kg	1900	08-FEB-99	EPA 8270	98-051-7890
100-02-7	4-Nitrophenol	U	ug/kg	1900	08-FEB-99	EPA 8270	98-051-7890
534-52-1	2-Methyl-4,6-dinitrophenol	U	ug/kg	1900	08-FEB-99	EPA 8270	98-051-7890
87-86-5	Pentachlorophenol	U	ug/kg	1900	08-FEB-99	EPA 8270	98-051-7890
85-01-8	Phenanthrene	U	ug/kg	470	08-FEB-99	EPA 8270	98-051-7890
120-12-7	Anthracene	U	ug/kg	470	08-FEB-99	EPA 8270	98-051-7890
206-44-0	Fluoranthene	U	ug/kg	470	08-FEB-99	EPA 8270	98-051-7890
129-00-0	Pyrene	U	ug/kg	470	08-FEB-99	EPA 8270	98-051-7890
56-55-3	Benzo(a)anthracene	U	ug/kg	470	08-FEB-99	EPA 8270	98-051-7890
215-01-9	Chrysene	U	ug/kg	470	08-FEB-99	EPA 8270	98-051-7890
205-99-2	Benzo(b)fluoranthene	U	ug/kg	470	08-FEB-99	EPA 8270	98-051-7890
207-88-9	Benzo(k)fluoranthene	U	ug/kg	470	08-FEB-99	EPA 8270	98-051-7890
50-32-8	Benzo(a)pyrene	U	ug/kg	470	08-FEB-99	EPA 8270	98-051-7890
193-39-5	Indeno(1,2,3-cd)pyrene	U	ug/kg	470	08-FEB-99	EPA 8270	98-051-7890
53-7-3	Dibenzo(a,h)anthracene	U	ug/kg	470	08-FEB-99	EPA 8270	98-051-7890
191-24-2	Benzo(g,h,i)perylene	U	ug/kg	470	08-FEB-99	EPA 8270	98-051-7890
	Extraction Information:				08-FEB-99		98-174-54
Surrogate Recovery:							
	2-Fluorophenol	41	%				98-051-7890

U = None Detected

QC ___ NY 10252 NJ 73168 PA 68180 EPA NY 00033

Approved by: _____
Lab Director

KEY: ND or U = None Detected < = less than ug/L = micrograms per liter (equivalent to parts per billion)
mg L = milligrams per liter (equivalent to parts per million) mg/kg = milligrams per kilogram (equivalent to parts per million)
B = analyte was detected in the method or trip blank J = result estimated below the quantitation limit

FLI
FRIEND LABORATORY I · N · C

ONE RESEARCH CIRCLE WAVERLY, NY 14892-1532
TELEPHONE (607) 565-3500 FAX (607) 565-4083

DATE 24-FEB-1999

LAB SAMPLE ID : L30741-4

Malcolm Pirnie, Inc. - Orchard Park
Daniel Riker
40 Centre Drive
PO Box 1938
Buffalo, NY 14219-0138

SAMPLE SOURCE	HANNA FURNACE, 3587-001
ORIGIN	G-2
DESCRIPTION	COMPOSITE
SAMPLED ON	28-JAN-99 00:00 by CLIENT
DATE RECEIVED	02-FEB-99 11:00
P.O. NO.	N/A

CAS #	Analysis Performed	Result	Units	Detection Limit	Date Analyzed	Method	Notebook Reference
	Phenol-d5	66	%				98-051-7890
	Nitrobenzene-d5	72	%				98-051-7890
	2-Fluorobiphenyl	72	%				98-051-7890
	2,4,6-Tribromophenol	37	%				98-051-7890
	Terphenyl-d14	72	%				98-051-7890

Analysis Comment: Results Calculated on a dry weight basis.

U = None Detected

QC NY 10252 NJ 73168 PA 68180 EPA NY 00033

Approved by: _____
Lab Director

KEY: ND or U = None Detected < = less than
mg/L = milligrams per liter (equivalent to parts per million)
B = analyte was detected in the method or trip blank
ug/L = micrograms per liter (equivalent to parts per billion)
mg/kg = milligrams per kilogram (equivalent to parts per million)
J = result estimated below the quantitation limit

FLI
FRIEND LABORATORY I · N · C

ONE RESEARCH CIRCLE WAVERLY, NY 14892-1532
TELEPHONE (607) 565-3500 FAX (607) 565-4083

DATE : 25-FEB-1999

LAB SAMPLE ID : L30741-5

Malcolm Pirnie, Inc. - Orchard Park
Daniel Riker
40 Centre Drive
PO Box 1938
Buffalo, NY 14219-0138

SAMPLE SOURCE	HANNA FURNACE, 3587-001
ORIGIN	H-1
DESCRIPTION	COMPOSITE
SAMPLED ON	28-JAN-99 00:00 by CLIENT
DATE RECEIVED	02-FEB-99 11:00
P.O. NO.	N/A

CAS #	Analysis Performed	Result	Units	Detection Limit	Date Analyzed	Method	Notebook Reference
	Cyanide, Total	5.58	mg/kg	0.67	09-FEB-99	EPA 335.3	99-003-007
	Total Solids	78.14	%		03-FEB-99	CLP 3.0	97-070-47
	Aluminum	16600	mg/kg	9.48	22-FEB-99	EPA 6010A	99-036-05
	Antimony	15.1	mg/kg	6.44	11-FEB-99	EPA 6010A	99-036-01
	Arsenic	U	mg/kg	77.2	11-FEB-99	EPA 6010A	99-036-01
	Barium	174	mg/kg	2.06	11-FEB-99	EPA 6010A	99-036-01
	Beryllium	2.88	mg/kg	0.257	11-FEB-99	EPA 6010A	99-036-01
	Cadmium	7.3	mg/kg	2.6	17-FEB-99	EPA 7130	93-259-85
	Calcium	77100	mg/kg	320	11-FEB-99	EPA 6010A	99-036-01
	Chromium	54.7	mg/kg	1.29	11-FEB-99	EPA 6010A	99-036-01
	Cobalt	13.4	mg/kg	1.29	11-FEB-99	EPA 6010A	99-036-01
	Copper	48.2	mg/kg	2.19	11-FEB-99	EPA 6010A	99-036-01
	Iron	202000	mg/kg	50.6	24-FEB-99	EPA 6010A	99-036-07
	Lead	220	mg/kg	5.67	11-FEB-99	EPA 6010A	99-036-01
	Magnesium	11400	mg/kg	63.2	22-FEB-99	EPA 6010A	99-036-05
	Manganese	5750	mg/kg	3.22	11-FEB-99	EPA 6010A	99-036-01
	Mercury	U	mg/kg	0.0130	10-FEB-99	EPA 7470	98-126-05
	Nickel	53.5	mg/kg	1.55	11-FEB-99	EPA 6010A	99-036-01
	Potassium	1420	mg/kg	64.3	11-FEB-99	EPA 6010A	99-036-01
	Selenium	U	mg/kg	8.85	22-FEB-99	EPA 6010A	99-036-05
	Silver	U	mg/kg	6.44	11-FEB-99	EPA 6010A	99-036-01

U = None Detected

QC ✓ NY 10252 NJ 73168 PA 68180 EPA NY 00033

Approved by: _____ Lab Director

KEY: ND or U = None Detected < = less than
mg/L = milligrams per liter (equivalent to parts per million)
B = analyte was detected in the method or trip blank
ug/L = micrograms per liter (equivalent to parts per billion)
mg/kg = milligrams per kilogram (equivalent to parts per million)
J = result estimated below the quantitation limit

FLI
FRIEND LABORATORY I · N · C

ONE RESEARCH CIRCLE WAVERLY, NY 14892-1532
TELEPHONE (607) 565-3500 FAX (607) 565-4083

DATE : 25-FEB-1999

LAB SAMPLE ID : L30741-5

Malcolm Pirnie, Inc. - Orchard Park
Daniel Riker
40 Centre Drive
PO Box 1938
Buffalo, NY 14219-0138

SAMPLE SOURCE	HANNA FURNACE, 3587-001
ORIGIN	H-1
DESCRIPTION	COMPOSITE
SAMPLED ON	28-JAN-99 00:00 by CLIENT
DATE RECEIVED	02-FEB-99 11:00
P.O. NO.	N/A

CAS #	Analysis Performed	Result	Units	Detection Limit	Date Analyzed	Method	Notebook Reference
	Sodium	456	mg/kg	25.7	11-FEB-99	EPA 6010A	99-036-01
	Thallium	U	mg/kg	8.37	11-FEB-99	EPA 6010	99-036-01
	Vanadium	66.3	mg/kg	6.44	11-FEB-99	EPA 6010A	99-036-01
	Zinc	1050	mg/kg	2.58	11-FEB-99	EPA 6010A	99-036-01
108-95-2	Phenol	U	ug/kg	290	08-FEB-99	EPA 8270	98-051-7891
95-57-8	2-Chlorophenol	U	ug/kg	290	08-FEB-99	EPA 8270	98-051-7891
95-48-7	2-Methylphenol	U	ug/kg	290	08-FEB-99	EPA 8270	98-051-7891
	3-Methylphenol/4-Methylphenol	U	ug/kg	290	08-FEB-99	EPA 8270	98-051-7891
88-75-5	2-Nitrophenol	U	ug/kg	290	08-FEB-99	EPA 8270	98-051-7891
105-67-9	2,4-Dimethylphenol	U	ug/kg	290	08-FEB-99	EPA 8270	98-051-7891
120-83-2	2,4-Dichlorophenol	U	ug/kg	290	08-FEB-99	EPA 8270	98-051-7891
91-20-3	Naphthalene	U	ug/kg	290	08-FEB-99	EPA 8270	98-051-7891
59-50-7	4-Chloro-3-methylphenol	U	ug/kg	570	08-FEB-99	EPA 8270	98-051-7891
91-57-6	2-Methylnaphthalene	U	ug/kg	290	08-FEB-99	EPA 8270	98-051-7891
208-96-8	Acenaphthylene	U	ug/kg	290	08-FEB-99	EPA 8270	98-051-7891
83-32-9	Acenaphthene	U	ug/kg	290	08-FEB-99	EPA 8270	98-051-7891
51-28-4	2,4-Dinitrophenol	U	ug/kg	1100	08-FEB-99	EPA 8270	98-051-7891
100-02-7	4-Nitrophenol	U	ug/kg	1100	08-FEB-99	EPA 8270	98-051-7891
534-52-1	2-Methyl-4,6-dinitrophenol	U	ug/kg	1100	08-FEB-99	EPA 8270	98-051-7891
87-86-5	Pentachlorophenol	U	ug/kg	1100	08-FEB-99	EPA 8270	98-051-7891
85-01-8	Phenanthrene	U	ug/kg	290	08-FEB-99	EPA 8270	98-051-7891
120-12-7	Anthracene	U	ug/kg	290	08-FEB-99	EPA 8270	98-051-7891
206-44-0	Fluoranthene	83 J	ug/kg	290	08-FEB-99	EPA 8270	98-051-7891
129-00-0	Pyrene	120 J	ug/kg	290	08-FEB-99	EPA 8270	98-051-7891
56-55-3	Benzo(a)anthracene	75 J	ug/kg	290	08-FEB-99	EPA 8270	98-051-7891
215-01-9	Chrysene	84 J	ug/kg	290	08-FEB-99	EPA 8270	98-051-7891
205-99-2	Benzo(b)fluoranthene	150 J	ug/kg	290	08-FEB-99	EPA 8270	98-051-7891
207-88-9	Benzo(k)fluoranthene	U	ug/kg	290	08-FEB-99	EPA 8270	98-051-7891
50-32-8	Benzo(a)pyrene	100 J	ug/kg	290	08-FEB-99	EPA 8270	98-051-7891
193-39-5	Indeno(1,2,3-cd)pyrene	U	ug/kg	290	08-FEB-99	EPA 8270	98-051-7891
53-7-3	Dibenzo(a,h)anthracene	U	ug/kg	290	08-FEB-99	EPA 8270	98-051-7891
191-24-2	Benzo(g,h,i)perylene	U	ug/kg	290	08-FEB-99	EPA 8270	98-051-7891
	Extraction Information:				08-FEB-99		98-174-54
Surrogate Recovery:							
	2-Fluorophenol	66	%				98-051-7891

U = None Detected

QC ✓ NY 10252 NJ 73168 PA 68180 EPA NY 00033

Approved by: _____
Lab Director

KEY: ND or U = None Detected < = less than ug/L = micrograms per liter (equivalent to parts per billion)
mg/L = milligrams per liter (equivalent to parts per million) mg/kg = milligrams per kilogram (equivalent to parts per million)
B = analyte was detected in the method or trip blank J = result estimated below the quantitation limit

FLI
FRIEND LABORATORY I · N · C

ONE RESEARCH CIRCLE WAVERLY, NY 14892-1532
TELEPHONE (607) 565-3500 FAX (607) 565-4083

DATE : 25-FEB-1999

LAB SAMPLE ID : L30741-5

Malcolm Pirnie, Inc. - Orchard Park
Daniel Riker
40 Centre Drive
PO Box 1938
Buffalo, NY 14219-0138

SAMPLE SOURCE	HANNA FURNACE, 3587-001
ORIGIN	H-1
DESCRIPTION	COMPOSITE
SAMPLED ON	28-JAN-99 00:00 by CLIENT
DATE RECEIVED	02-FEB-99 11:00
P.O. NO.	N/A

CAS #	Analysis Performed	Result	Units	Detection Limit	Date Analyzed	Method	Notebook Reference
	Phenol-d5	78	%				98-051-7891
	Nitrobenzene-d5	84	%				98-051-7891
	2-Fluorobiphenyl	87	%				98-051-7891
	2,4,6-Tribromophenol	72	%				98-051-7891
	Terphenyl-d14	88	%				98-051-7891

Analysis Comment: Results Calculated on a dry weight basis.

U = None Detected

QC ___ NY 10252 NJ 73168 PA 68180 EPA NY 00033 Approved by: _____ Lab Director

KEY: ND or U = None Detected < = less than ug/L = micrograms per liter (equivalent to parts per billion)
mg/L = milligrams per liter (equivalent to parts per million) mg/kg = milligrams per kilogram (equivalent to parts per million)
B = analyte was detected in the method or trip blank J = result estimated below the quantitation limit

FLI
FRIEND LABORATORY I · N · C

ONE RESEARCH CIRCLE WAVERLY, NY 14892-1532
TELEPHONE (607) 565-3500 FAX (607) 565-4083

DATE 24-FEB-1999

LAB SAMPLE ID : L30741-6

Malcolm Pirnie, Inc. - Orchard Park
Daniel Riker
40 Centre Drive
PO Box 1938
Buffalo, NY 14219-0138

SAMPLE SOURCE	HANNA FURNACE, 3587-001
ORIGIN	H-2
DESCRIPTION	COMPOSITE
SAMPLED ON	28-JAN-99 00:00 by CLIENT
DATE RECEIVED	02-FEB-99 11:00
P.O. NO.	N/A

CAS #	Analysis Performed	Result	Units	Detection Limit	Date Analyzed	Method	Notebook Reference
	Cyanide, Total	7.65	mg/kg	0.69	09-FEB-99	EPA 335.3	99-003-007
	Total Solids	63.94	%		03-FEB-99	CLP 3.0	97-070-47
	Aluminum	27400	mg/kg	11.4	22-FEB-99	EPA 6010A	99-036-05
	Antimony	13.5	mg/kg	7.16	11-FEB-99	EPA 6010A	99-036-01
	Arsenic	20.4	mg/kg	17.1	11-FEB-99	EPA 6010A	99-036-01
	Barium	226	mg/kg	2.29	11-FEB-99	EPA 6010A	99-036-01
	Beryllium	4.52	mg/kg	00.287	11-FEB-99	EPA 6010A	99-036-01
	Cadmium	U	mg/kg	3.58	11-FEB-99	EPA 6010A	99-036-01
	Calcium	102000	mg/kg	358.	11-FEB-99	EPA 6010A	99-036-01
	Chromium	27.7	mg/kg	1.43	11-FEB-99	EPA 6010A	99-036-01
	Cobalt	10.6	mg/kg	1.43	11-FEB-99	EPA 6010A	99-036-01
	Copper	9.18	mg/kg	2.44	11-FEB-99	EPA 6010A	99-036-01
	Iron	177000	mg/kg	61.0	24-FEB-99	EPA 6010A	99-036-07
	Lead	66.5	mg/kg	6.30	11-FEB-99	EPA 6010A	99-036-01
	Magnesium	9080	mg/kg	76.2	22-FEB-99	EPA 6010A	99-036-05
	Manganese	2540	mg/kg	00.716	11-FEB-99	EPA 6010A	99-036-01
	Mercury	U	mg/kg	0.0160	10-FEB-99	EPA 7470	98-126-05
	Nickel	27.8	mg/kg	1.72	11-FEB-99	EPA 6010A	99-036-01
	Potassium	2410	mg/kg	71.6	11-FEB-99	EPA 6010A	99-036-01
	Selenium	U	mg/kg	44.2	22-FEB-99	EPA 6010A	99-036-05
	Silver	U	mg/kg	7.16	11-FEB-99	EPA 6010A	99-036-01

U = None Detected

QC NY 10252 NJ 73168 PA 68180 EPA NY 00033

Approved by: _____ Lab Director

KEY: ND or U = None Detected < = less than ug/L = micrograms per liter (equivalent to parts per billion)
mg/L = milligrams per liter (equivalent to parts per million) mg/kg = milligrams per kilogram (equivalent to parts per million)
B = analyte was detected in the method or trip blank J = result estimated below the quantitation limit

FLI
FRIEND LABORATORY I · N · C

ONE RESEARCH CIRCLE WAVERLY, NY 14892-1532
TELEPHONE (607) 565-3500 FAX (607) 565-4083

DATE 24-FEB-1999

LAB SAMPLE ID : L30741-6

Malcolm Pirnie, Inc. - Orchard Park
Daniel Riker
40 Centre Drive
PO Box 1938
Buffalo, NY 14219-0138

SAMPLE SOURCE	HANNA FURNACE, 3587-001
ORIGIN	H-2
DESCRIPTION	COMPOSITE
SAMPLED ON	28-JAN-99 00:00 by CLIENT
DATE RECEIVED	02-FEB-99 11:00
P.O. NO.	N/A

CAS #	Analysis Performed	Result	Units	Detection Limit	Date Analyzed	Method	Notebook Reference
	Sodium	356	mg/kg	28.6	11-FEB-99	EPA 6010A	99-036-01
	Thallium	U	mg/kg	9.31	11-FEB-99	EPA 6010	99-036-01
	Vanadium	78	mg/kg	1.43	11-FEB-99	EPA 6010A	99-036-01
	Zinc	1670	mg/kg	2.86	11-FEB-99	EPA 6010A	99-036-01
108-95-2	Phenol	U	ug/kg	390	15-FEB-99	EPA 8270	97-186-10977
95-57-8	2-Chlorophenol	U	ug/kg	390	15-FEB-99	EPA 8270	97-186-10977
95-48-7	2-Methylphenol	U	ug/kg	390	15-FEB-99	EPA 8270	97-186-1097
	3-Methylphenol/4-Methylphenol	U	ug/kg	390	15-FEB-99	EPA 8270	97-186-1097
88-75-5	2-Nitrophenol	U	ug/kg	390	15-FEB-99	EPA 8270	97-186-1097
105-67-9	2,4-Dimethylphenol	U	ug/kg	390	15-FEB-99	EPA 8270	97-186-10977
120-83-2	2,4-Dichlorophenol	U	ug/kg	390	15-FEB-99	EPA 8270	97-186-10977
91-20-3	Naphthalene	U	ug/kg	390	15-FEB-99	EPA 8270	97-186-1097
59-50-7	4-Chloro-3-methylphenol	U	ug/kg	770	15-FEB-99	EPA 8270	97-186-1097
91-57-6	2-Methylnaphthalene	U	ug/kg	390	15-FEB-99	EPA 8270	97-186-1097
208-96-8	Acenaphthylene	U	ug/kg	390	15-FEB-99	EPA 8270	97-186-10977
83-32-9	Acenaphthene	U	ug/kg	390	15-FEB-99	EPA 8270	97-186-10977
51-28-4	2,4-Dinitrophenol	U	ug/kg	1500	15-FEB-99	EPA 8270	97-186-1097
100-02-7	4-Nitrophenol	U	ug/kg	1500	15-FEB-99	EPA 8270	97-186-1097
534-52-1	2-Methyl-4,6-dinitrophenol	U	ug/kg	1500	15-FEB-99	EPA 8270	97-186-1097
87-86-5	Pentachlorophenol	U	ug/kg	1500	15-FEB-99	EPA 8270	97-186-10977
85-01-8	Phenanthrene	U	ug/kg	390	15-FEB-99	EPA 8270	97-186-10977
120-12-7	Anthracene	U	ug/kg	390	15-FEB-99	EPA 8270	97-186-1097
206-44-0	Fluoranthene	U	ug/kg	390	15-FEB-99	EPA 8270	97-186-1097
129-00-0	Pyrene	U	ug/kg	390	15-FEB-99	EPA 8270	97-186-10977
56-55-3	Benzo(a)anthracene	U	ug/kg	390	15-FEB-99	EPA 8270	97-186-10977
215-01-9	Chrysene	U	ug/kg	390	15-FEB-99	EPA 8270	97-186-1097
205-99-2	Benzo(b)fluoranthene	U	ug/kg	390	15-FEB-99	EPA 8270	97-186-1097
207-88-9	Benzo(k)fluoranthene	U	ug/kg	390	15-FEB-99	EPA 8270	97-186-1097
50-32-8	Benzo(a)pyrene	U	ug/kg	390	15-FEB-99	EPA 8270	97-186-10977
193-39-5	Indeno(1,2,3-cd)pyrene	U	ug/kg	390	15-FEB-99	EPA 8270	97-186-10977
53-7-3	Dibenzo(a,h)anthracene	U	ug/kg	390	15-FEB-99	EPA 8270	97-186-1097
191-24-2	Benzo(g,h,i)perylene	U	ug/kg	390	15-FEB-99	EPA 8270	97-186-1097
	Extraction Information:				09-FEB-99		98-174-55
Surrogate Recovery:							
	2-Fluorophenol	76	%				97-186-1097

U = None Detected

QC (w) NY 10252 NJ 73168 PA 68180 EPA NY 00033

Approved by: _____ Lab Director

KEY: ND or U = None Detected < = less than ug/L = micrograms per liter (equivalent to parts per billion)
mg/L = milligrams per liter (equivalent to parts per million) mg/kg = milligrams per kilogram (equivalent to parts per million)
B = analyte was detected in the method or trip blank J = result estimated below the quantitation limit

FLI
FRIEND LABORATORY I · N · C

ONE RESEARCH CIRCLE WAVERLY, NY 14892-1532
TELEPHONE (607) 565-3500 FAX (607) 565-4083

DATE : 24-FEB-1999

LAB SAMPLE ID : L30741-6

Malcolm Pirnie, Inc. - Orchard Park
Daniel Riker
40 Centre Drive
PO Box 1938
Buffalo, NY 14219-0138

SAMPLE SOURCE	HANNA FURNACE, 3587-001
ORIGIN	H-2
DESCRIPTION	COMPOSITE
SAMPLED ON	28-JAN-99 00:00 by CLIENT
DATE RECEIVED	02-FEB-99 11:00
P.O. NO.	N/A

CAS #	Analysis Performed	Result	Units	Detection Limit	Date Analyzed	Method	Notebook Reference
	Phenol-d5	83	%				97-186-10977
	Nitrobenzene-d5	89	%				97-186-10977
	2-Fluorobiphenyl	89	%				97-186-10977
	2,4,6-Tribromophenol	75	%				97-186-10977
	Terphenyl-d14	88	%				97-186-10977

Analysis Comment: Results Calculated on a dry weight basis.

U = None Detected

QC (e) NY 10252 NJ 73168 PA 68180 EPA NY 00033

Approved by: _____
Lab Director

KEY: ND or U = None Detected < = less than
mg/L = milligrams per liter (equivalent to parts per million)
B = analyte was detected in the method or trip blank
ug/L = micrograms per liter (equivalent to parts per billion)
mg/kg = milligrams per kilogram (equivalent to parts per million)
J = result estimated below the quantitation limit

FLI
FRIEND LABORATORY I · N · C

ONE RESEARCH CIRCLE WAVERLY, NY 14892-1532
TELEPHONE (607) 565-3500 FAX (607) 565-4083

DATE 24-FEB-1999

LAB SAMPLE ID : L30741-7

Malcolm Pirnie, Inc. - Orchard Park
Daniel Riker
40 Centre Drive
PO Box 1938
Buffalo, NY 14219-0138

SAMPLE SOURCE	HANNA FURNACE, 3587-001
ORIGIN	I-1
DESCRIPTION	COMPOSITE
SAMPLED ON	28-JAN-99 00:00 by CLIENT
DATE RECEIVED	02-FEB-99 11:00
P.O. NO.	N/A

CAS #	Analysis Performed	Result	Units	Detection Limit	Date Analyzed	Method	Notebook Reference
	Cyanide, Total	3.52	mg/kg	0.92	09-FEB-99	EPA 335.3	99-003-007
	Total Solids	77.69	%		03-FEB-99	CLP 3.0	97-070-47
	Aluminum	20400	mg/kg	9.58	22-FEB-99	EPA 6010A	99-036-05
	Antimony	12.8	mg/kg	6.11	11-FEB-99	EPA 6010A	99-036-01
	Arsenic	21.9	mg/kg	14.6	11-FEB-99	EPA 6010A	99-036-01
	Barium	127	mg/kg	1.96	11-FEB-99	EPA 6010A	99-036-01
	Beryllium	2.18	mg/kg	00.244	11-FEB-99	EPA 6010A	99-036-01
	Cadmium	U	mg/kg	3.06	11-FEB-99	EPA 6010A	99-036-01
	Calcium	48000	mg/kg	306.	11-FEB-99	EPA 6010A	99-036-01
	Chromium	86.3	mg/kg	1.22	11-FEB-99	EPA 6010A	99-036-01
	Cobalt	15.7	mg/kg	1.22	11-FEB-99	EPA 6010A	99-036-01
	Copper	108	mg/kg	2.08	11-FEB-99	EPA 6010A	99-036-01
	Iron	236000	mg/kg	51.1	24-FEB-99	EPA 6010A	99-036-07
	Lead	285	mg/kg	5.38	11-FEB-99	EPA 6010A	99-036-01
	Magnesium	5890	mg/kg	63.8	22-FEB-99	EPA 6010A	99-036-05
	Manganese	4590	mg/kg	3.06	11-FEB-99	EPA 6010A	99-036-01
	Mercury	.047	mg/kg	0.0130	10-FEB-99	EPA 7470	98-126-05
	Nickel	96.9	mg/kg	1.47	11-FEB-99	EPA 6010A	99-036-01
	Potassium	1110	mg/kg	61.1	11-FEB-99	EPA 6010A	99-036-01
	Selenium	U	mg/kg	44.7	22-FEB-99	EPA 6010A	99-036-05
	Silver	U	mg/kg	6.11	11-FEB-99	EPA 6010A	99-036-01

U = None Detected

QC ____ NY 10252 NJ 73168 PA 68180 EPA NY 00033

Approved by: _____ Lab Director

KEY: ND or U = None Detected < = less than ug/L = micrograms per liter (equivalent to parts per billion)
mg/L = milligrams per liter (equivalent to parts per million) mg/kg = milligrams per kilogram (equivalent to parts per million)
B = analyte was detected in the method or trip blank J = result estimated below the quantitation limit

FLI
FRIEND LABORATORY I · N · C

ONE RESEARCH CIRCLE WAVERLY, NY 14892-1532
TELEPHONE (607) 565-3500 FAX (607) 565-4083

DATE 24-FEB-1999

LAB SAMPLE ID : L30741-7

Malcolm Pirnie, Inc. - Orchard Park
Daniel Riker
40 Centre Drive
PO Box 1938
Buffalo, NY 14219-0138

SAMPLE SOURCE	HANNA FURNACE, 3587-001
ORIGIN	I-1
DESCRIPTION	COMPOSITE
SAMPLED ON	28-JAN-99 00:00 by CLIENT
DATE RECEIVED	02-FEB-99 11:00
P.O. NO.	N/A

CAS #	Analysis Performed	Result	Units	Detection Limit	Date Analyzed	Method	Notebook Reference
	Sodium	264	mg/kg	24.4	11-FEB-99	EPA 6010A	99-036-01
	Thallium	U	mg/kg	7.95	11-FEB-99	EPA 6010	99-036-01
	Vanadium	48.9	mg/kg	6.10	11-FEB-99	EPA 6010A	99-036-01
	Zinc	1100	mg/kg	2.45	11-FEB-99	EPA 6010A	99-036-01
108-95-2	Phenol	U	ug/kg	320	16-FEB-99	EPA 8270	97-186-10998
95-57-8	2-Chlorophenol	U	ug/kg	320	16-FEB-99	EPA 8270	97-186-10998
95-48-7	2-Methylphenol	U	ug/kg	320	16-FEB-99	EPA 8270	97-186-10998
	3-Methylphenol/4-Methylphenol	U	ug/kg	320	16-FEB-99	EPA 8270	97-186-10998
88-75-5	2-Nitrophenol	U	ug/kg	320	16-FEB-99	EPA 8270	97-186-10998
105-67-9	2,4-Dimethylphenol	U	ug/kg	320	16-FEB-99	EPA 8270	97-186-10998
120-83-2	2,4-Dichlorophenol	U	ug/kg	320	16-FEB-99	EPA 8270	97-186-10998
91-20-3	Naphthalene	U	ug/kg	320	16-FEB-99	EPA 8270	97-186-10998
59-50-7	4-Chloro-3-methylphenol	U	ug/kg	630	16-FEB-99	EPA 8270	97-186-10998
91-57-6	2-Methylnaphthalene	U	ug/kg	320	16-FEB-99	EPA 8270	97-186-10998
208-96-8	Acenaphthylene	U	ug/kg	320	16-FEB-99	EPA 8270	97-186-10998
83-32-9	Acenaphthene	U	ug/kg	320	16-FEB-99	EPA 8270	97-186-10998
51-28-4	2,4-Dinitrophenol	U	ug/kg	1300	16-FEB-99	EPA 8270	97-186-10998
100-02-7	4-Nitrophenol	U	ug/kg	1300	16-FEB-99	EPA 8270	97-186-10998
534-52-1	2-Methyl-4,6-dinitrophenol	U	ug/kg	1300	16-FEB-99	EPA 8270	97-186-10998
87-86-5	Pentachlorophenol	U	ug/kg	1300	16-FEB-99	EPA 8270	97-186-10998
85-01-8	Phenanthrene	99 J	ug/kg	320	16-FEB-99	EPA 8270	97-186-10998
120-12-7	Anthracene	U	ug/kg	320	16-FEB-99	EPA 8270	97-186-10998
206-44-0	Fluoranthene	110 J	ug/kg	320	16-FEB-99	EPA 8270	97-186-10998
129-00-0	Pyrene	110 J	ug/kg	320	16-FEB-99	EPA 8270	97-186-10998
56-55-3	Benzo(a)anthracene	U	ug/kg	320	16-FEB-99	EPA 8270	97-186-10998
215-01-9	Chrysene	88 J	ug/kg	320	16-FEB-99	EPA 8270	97-186-10998
205-99-2	Benzo(b)fluoranthene	120 J	ug/kg	320	16-FEB-99	EPA 8270	97-186-10998
207-88-9	Benzo(k)fluoranthene	U	ug/kg	320	16-FEB-99	EPA 8270	97-186-10998
50-32-8	Benzo(a)pyrene	73 J	ug/kg	320	16-FEB-99	EPA 8270	97-186-10998
193-39-5	Indeno(1,2,3-cd)pyrene	U	ug/kg	320	16-FEB-99	EPA 8270	97-186-10998
53-7-3	Dibenzo(a,h)anthracene	U	ug/kg	320	16-FEB-99	EPA 8270	97-186-10998
191-24-2	Benzo(g,h,i)perylene	U	ug/kg	320	16-FEB-99	EPA 8270	97-186-10998
	Extraction Information:				09-FEB-99		98-174-55
Surrogate Recovery:							
	2-Fluorophenol	61	%				97-186-10998

U = None Detected

QC NY 10252 NJ 73168 PA 68180 EPA NY 00033

Approved by: _____
Lab Director

KEY: ND or U = None Detected < = less than ug/L = micrograms per liter (equivalent to parts per billion)
mg/L = milligrams per liter (equivalent to parts per million) mg/kg = milligrams per kilogram (equivalent to parts per million)
B = analyte was detected in the method or trip blank J = result estimated below the quantitation limit

FLI
FRIEND LABORATORY I · N · C

ONE RESEARCH CIRCLE WAVERLY, NY 14892-1532
TELEPHONE (607) 565-3500 FAX (607) 565-4083

DATE 24-FEB-1999

LAB SAMPLE ID : L30741-7

Malcolm Pirnie, Inc. - Orchard Park
Daniel Riker
40 Centre Drive
PO Box 1938
Buffalo, NY 14219-0138

SAMPLE SOURCE	HANNA FURNACE, 3587-001
ORIGIN	I-1
DESCRIPTION	COMPOSITE
SAMPLED ON	28-JAN-99 00:00 by CLIENT
DATE RECEIVED	02-FEB-99 11:00
P.O. NO.	N/A

CAS #	Analysis Performed	Result	Units	Detection Limit	Date Analyzed	Method	Notebook Reference
	Phenol-d5	73	%				97-186-1099E
	Nitrobenzene-d5	81	%				97-186-1099E
	2-Fluorobiphenyl	83	%				97-186-1099E
	2,4,6-Tribromophenol	64	%				97-186-10998
	Terphenyl-d14	94	%				97-186-10998

Analysis Comment: Results Calculated on a dry weight basis.

U = None Detected

QC NY 10252 NJ 73168 PA 68180 EPA NY 00033

Approved by: _____ Lab Director

KEY: ND or U = None Detected < = less than ug/L = micrograms per liter (equivalent to parts per billion)
mg/L = milligrams per liter (equivalent to parts per million) mg/kg = milligrams per kilogram (equivalent to parts per million)
B = analyte was detected in the method or trip blank J = result estimated below the quantitation limit

FLI
FRIEND LABORATORY I · N · C

ONE RESEARCH CIRCLE WAVERLY, NY 14892-1532
TELEPHONE (607) 565-3500 FAX (607) 565-4083

DATE 25-FEB-1999

LAB SAMPLE ID : L30741-8

Malcolm Pirnie, Inc. - Orchard Park
Daniel Riker
40 Centre Drive
PO Box 1938
Buffalo, NY 14219-0138

SAMPLE SOURCE	HANNA FURNACE, 3587-001
ORIGIN	I-2
DESCRIPTION	COMPOSITE
SAMPLED ON	28-JAN-99 00:00 by CLIENT
DATE RECEIVED	02-FEB-99 11:00
P.O. NO.	N/A

CAS #	Analysis Performed	Result	Units	Detection Limit	Date Analyzed	Method	Notebook Reference
	Cyanide, Total	11.9	mg/kg	0.76	09-FEB-99	EPA 335.3	99-003-007
	Total Solids	58	%		03-FEB-99	CLP 3.0	97-070-47
	Aluminum	31200	mg/kg	12.7	22-FEB-99	EPA 6010A	99-036-05
	Antimony	13.2	mg/kg	8.68	11-FEB-99	EPA 6010A	99-036-01
	Arsenic	U	mg/kg	20.8	11-FEB-99	EPA 6010A	99-036-01
	Barium	305	mg/kg	2.78	11-FEB-99	EPA 6010A	99-036-01
	Beryllium	5.09	mg/kg	00.347	11-FEB-99	EPA 6010A	99-036-01
	Cadmium	U	mg/kg	4.34	11-FEB-99	EPA 6010A	99-036-01
	Calcium	162000	mg/kg	434.	11-FEB-99	EPA 6010A	99-036-01
	Chromium	28.6	mg/kg	1.74	11-FEB-99	EPA 6010A	99-036-01
	Cobalt	11.3	mg/kg	1.74	11-FEB-99	EPA 6010A	99-036-01
	Copper	21.4	mg/kg	2.95	11-FEB-99	EPA 6010A	99-036-01
	Iron	200000	mg/kg	67.9	24-FEB-99	EPA 6010A	99-036-07
	Lead	77.1	mg/kg	7.64	11-FEB-99	EPA 6010A	99-036-01
	Magnesium	7950	mg/kg	84.9	22-FEB-99	EPA 6010A	99-036-05
	Manganese	2670	mg/kg	4.34	11-FEB-99	EPA 6010A	99-036-01
	Mercury	.028	mg/kg	0.0180	10-FEB-99	EPA 7470	98-126-05
	Nickel	25.6	mg/kg	2.08	11-FEB-99	EPA 6010A	99-036-01
	Potassium	1080	mg/kg	86.8	11-FEB-99	EPA 6010A	99-036-01
	Selenium	U	mg/kg	59.0	22-FEB-99	EPA 6010A	99-036-05
	Silver	U	mg/kg	8.68	11-FEB-99	EPA 6010A	99-036-01

U = None Detected

NY 10252 NJ 73168 PA 68180 EPA NY 00033

Approved by: _____
Lab Director

KEY: ND or U = None Detected < = less than
mg/L = milligrams per liter (equivalent to parts per million)
B = analyte was detected in the method or trip blank
ug/L = micrograms per liter (equivalent to parts per billion)
mg/kg = milligrams per kilogram (equivalent to parts per million)
J = result estimated below the quantitation limit

FLI
FRIEND LABORATORY I · N · C

ONE RESEARCH CIRCLE WAVERLY, NY 14892-1532
TELEPHONE (607) 565-3500 FAX (607) 565-4083

DATE 25-FEB-1999

LAB SAMPLE ID : L30741-8

Malcolm Pirnie, Inc. - Orchard Park
Daniel Riker
40 Centre Drive
PO Box 1938
Buffalo, NY 14219-0138

SAMPLE SOURCE	HANNA FURNACE, 3587-001
ORIGIN	I-2
DESCRIPTION	COMPOSITE
SAMPLED ON	28-JAN-99 00:00 by CLIENT
DATE RECEIVED	02-FEB-99 11:00
P.O. NO	N/A

CAS #	Analysis Performed	Result	Units	Detection Limit	Date Analyzed	Method	Notebook Reference
	Sodium	279	mg/kg	34.7	11-FEB-99	EPA 6010A	99-036-01
	Thallium	U	mg/kg	11.2	11-FEB-99	EPA 6010	99-036-01
	Vanadium	68.7	mg/kg	1.74	11-FEB-99	EPA 6010A	99-036-01
	Zinc	1030	mg/kg	3.47	11-FEB-99	EPA 6010A	99-036-01
108-95-2	Phenol	U	ug/kg	430	15-FEB-99	EPA 8270	97-186-10978
95-57-8	2-Chlorophenol	U	ug/kg	430	15-FEB-99	EPA 8270	97-186-10978
95-48-7	2-Methylphenol	U	ug/kg	430	15-FEB-99	EPA 8270	97-186-1097
	3-Methylphenol/4-Methylphenol	U	ug/kg	430	15-FEB-99	EPA 8270	97-186-1097
88-75-5	2-Nitrophenol	U	ug/kg	430	15-FEB-99	EPA 8270	97-186-1097
105-67-9	2,4-Dimethylphenol	U	ug/kg	430	15-FEB-99	EPA 8270	97-186-10978
120-83-2	2,4-Dichlorophenol	U	ug/kg	430	15-FEB-99	EPA 8270	97-186-10978
91-20-3	Naphthalene	U	ug/kg	430	15-FEB-99	EPA 8270	97-186-1097
59-50-7	4-Chloro-3-methylphenol	U	ug/kg	860	15-FEB-99	EPA 8270	97-186-1097
91-57-6	2-Methylnaphthalene	U	ug/kg	430	15-FEB-99	EPA 8270	97-186-10978
208-96-8	Acenaphthylene	U	ug/kg	430	15-FEB-99	EPA 8270	97-186-10978
83-32-9	Acenaphthene	U	ug/kg	430	15-FEB-99	EPA 8270	97-186-10978
51-28-4	2,4-Dinitrophenol	U	ug/kg	1700	15-FEB-99	EPA 8270	97-186-1097
100-02-7	4-Nitrophenol	U	ug/kg	1700	15-FEB-99	EPA 8270	97-186-1097
534-52-1	2-Methyl-4,6-dinitrophenol	U	ug/kg	1700	15-FEB-99	EPA 8270	97-186-10978
87-86-5	Pentachlorophenol	U	ug/kg	1700	15-FEB-99	EPA 8270	97-186-10978
85-01-8	Phenanthrene	U	ug/kg	430	15-FEB-99	EPA 8270	97-186-1097
120-12-7	Anthracene	U	ug/kg	430	15-FEB-99	EPA 8270	97-186-1097
206-44-0	Fluoranthene	U	ug/kg	430	15-FEB-99	EPA 8270	97-186-1097
129-00-0	Pyrene	U	ug/kg	430	15-FEB-99	EPA 8270	97-186-10978
56-55-3	Benzo(a)anthracene	U	ug/kg	430	15-FEB-99	EPA 8270	97-186-10978
215-01-9	Chrysene	U	ug/kg	430	15-FEB-99	EPA 8270	97-186-1097
205-99-2	Benzo(b)fluoranthene	U	ug/kg	430	15-FEB-99	EPA 8270	97-186-1097
207-88-9	Benzo(k)fluoranthene	U	ug/kg	430	15-FEB-99	EPA 8270	97-186-1097
50-32-8	Benzo(a)pyrene	U	ug/kg	430	15-FEB-99	EPA 8270	97-186-10978
193-39-5	Indeno(1,2,3-cd)pyrene	U	ug/kg	430	15-FEB-99	EPA 8270	97-186-10978
53-7-3	Dibenzo(a,h)anthracene	U	ug/kg	430	15-FEB-99	EPA 8270	97-186-1097
191-24-2	Benzo(g,h,i)perylene	U	ug/kg	430	15-FEB-99	EPA 8270	97-186-1097
	Extraction Information:				09-FEB-99		98-174-55
Surrogate Recovery:							
	2-Fluorophenol	75	%				97-186-1097

U = None Detected

QC P NY 10252 NJ 73168 PA 68180 EPA NY 00033 Approved by: Lab Director

KEY: ND or U = None Detected < = less than ug/L = micrograms per liter (equivalent to parts per billion)
mg/L = milligrams per liter (equivalent to parts per million) mg/kg = milligrams per kilogram (equivalent to parts per million)
B = analyte was detected in the method or trip blank J = result estimated below the quantitation limit

FLI
FRIEND LABORATORY I · N · C

ONE RESEARCH CIRCLE WAVERLY, NY 14892-1532
TELEPHONE (607) 565-3500 FAX (607) 565-4083

DATE 25-FEB-1999

LAB SAMPLE ID : L30741-8

Malcolm Pirnie, Inc. - Orchard Park
Daniel Riker
40 Centre Drive
PO Box 1938
Buffalo, NY 14219-0138

SAMPLE SOURCE	HANNA FURNACE, 3587-001
ORIGIN	I-2
DESCRIPTION	COMPOSITE
SAMPLED ON	28-JAN-99 00:00 by CLIENT
DATE RECEIVED	02-FEB-99 11:00
P.O. NO.	N/A

CAS #	Analysis Performed	Result	Units	Detection Limit	Date Analyzed	Method	Notebook Reference
	Phenol-d5	79	%				97-186-10978
	Nitrobenzene-d5	86	%				97-186-10978
	2-Fluorobiphenyl	86	%				97-186-10978
	2,4,6-Tribromophenol	72	%				97-186-10978
	Terphenyl-d14	87	%				97-186-10978

Analysis Comment: Results Calculated on a dry weight basis.

U = None Detected

QC NY 10252 NJ 73168 PA 68180 EPA NY 00033

Approved by: _____
Lab Director

KEY: ND or U = None Detected < = less than
mg/L = milligrams per liter (equivalent to parts per million)
B = analyte was detected in the method or trip blank
ug/L = micrograms per liter (equivalent to parts per billion)
mg/kg = milligrams per kilogram (equivalent to parts per million)
J = result estimated below the quantitation limit

FLI
FRIEND LABORATORY I · N · C

ONE RESEARCH CIRCLE WAVERLY, NY 14892-1532
TELEPHONE (607) 565-3500 FAX (607) 565-4083

DATE 24-FEB-1999

LAB SAMPLE ID : L30741-9

Malcolm Pirnie, Inc. - Orchard Park
Daniel Riker
40 Centre Drive
PO Box 1938
Buffalo, NY 14219-0138

SAMPLE SOURCE	HANNA FURNACE, 3587-001
ORIGIN	L-1
DESCRIPTION	COMPOSITE
SAMPLED ON	28-JAN-99 00:00 by CLIENT
DATE RECEIVED	02-FEB-99 11:00
P.O. NO.	N/A

CAS #	Analysis Performed	Result	Units	Detection Limit	Date Analyzed	Method	Notebook Reference
	Cyanide, Total	10.2	mg/kg	0.3	05-FEB-99	EPA 335.3	99-003-5
	Total Solids	67.03	%		03-FEB-99	CLP 3.0	97-070-47
	Aluminum	21100	mg/kg	11.1	22-FEB-99	EPA 6010A	99-036-05
	Antimony	9.26	mg/kg	6.91	11-FEB-99	EPA 6010A	99-036-01
	Arsenic	U	mg/kg	16.5	11-FEB-99	EPA 6010A	99-036-01
	Barium	220	mg/kg	2.21	11-FEB-99	EPA 6010A	99-036-01
	Beryllium	5.64	mg/kg	00.276	11-FEB-99	EPA 6010A	99-036-01
	Cadmium	1.19	mg/kg	0.6910	11-FEB-99	EPA 6010A	99-036-01
	Calcium	158000	mg/kg	345.	11-FEB-99	EPA 6010A	99-036-01
	Chromium	18.2	mg/kg	1.38	11-FEB-99	EPA 6010A	99-036-01
	Cobalt	5.79	mg/kg	1.38	11-FEB-99	EPA 6010A	99-036-01
	Copper	39.1	mg/kg	2.35	11-FEB-99	EPA 6010A	99-036-01
	Iron	137000	mg/kg	29.8	22-FEB-99	EPA 6010A	99-036-05
	Lead	116	mg/kg	6.08	11-FEB-99	EPA 6010A	99-036-01
	Magnesium	10900	mg/kg	74.3	22-FEB-99	EPA 6010A	99-036-05
	Manganese	3340	mg/kg	00.691	11-FEB-99	EPA 6010A	99-036-01
	Mercury	U	mg/kg	0.0140	10-FEB-99	EPA 7470	98-126-05
	Nickel	24.8	mg/kg	1.66	11-FEB-99	EPA 6010A	99-036-01
	Potassium	969	mg/kg	69.0	11-FEB-99	EPA 6010A	99-036-01
	Selenium	U	mg/kg	52.0	22-FEB-99	EPA 6010A	99-036-05
	Silver	U	mg/kg	1.38	11-FEB-99	EPA 6010A	99-036-01

U = None Detected

QC [signature] NY 10252 NJ 73168 PA 68180 EPA NY 00033

Approved by: [signature]
Lab Director

KEY: ND or U = None Detected; < = less than; ug/L = micrograms per liter (equivalent to parts per billion); mg/L = milligrams per liter (equivalent to parts per million); mg/kg = milligrams per kilogram (equivalent to parts per million); B = analyte was detected in the method or trip blank; J = result estimated below the quantitation limit

FLI
FRIEND LABORATORY · N · C

ONE RESEARCH CIRCLE WAVERLY, NY 14892-1532
TELEPHONE (607) 565-3500 FAX (607) 565-4083

DATE 24-FEB-1999

LAB SAMPLE ID : L30741-9

Malcolm Pirnie, Inc. - Orchard Park
Daniel Riker
40 Centre Drive
PO Box 1938
Buffalo, NY 14219-0138

SAMPLE SOURCE	HANNA FURNACE, 3587-001
ORIGIN	L-1
DESCRIPTION	COMPOSITE
SAMPLED ON	28-JAN-99 00:00 by CLIENT
DATE RECEIVED	02-FEB-99 11:00
P.O. NO.	N/A

CAS #	Analysis Performed	Result	Units	Detection Limit	Date Analyzed	Method	Notebook Reference
	Sodium	396	mg/kg	27.6	11-FEB-99	EPA 6010A	99-036-01
	Thallium	U	mg/kg	8.98	11-FEB-99	EPA 6010	99-036-01
	Vanadium	18.3	mg/kg	1.38	11-FEB-99	EPA 6010A	99-036-01
	Zinc	233	mg/kg	2.76	11-FEB-99	EPA 6010A	99-036-01
108-95-2	Phenol	U	ug/kg	370	16-FEB-99	EPA 8270	97-186-10983
95-57-8	2-Chlorophenol	U	ug/kg	370	16-FEB-99	EPA 8270	97-186-10983
95-48-7	2-Methylphenol	U	ug/kg	370	16-FEB-99	EPA 8270	97-186-10983
	3-Methylphenol/4-Methylphenol	U	ug/kg	370	16-FEB-99	EPA 8270	97-186-10983
88-75-5	2-Nitrophenol	U	ug/kg	370	16-FEB-99	EPA 8270	97-186-10983
105-67-9	2,4-Dimethylphenol	U	ug/kg	370	16-FEB-99	EPA 8270	97-186-10983
120-83-2	2,4-Dichlorophenol	U	ug/kg	370	16-FEB-99	EPA 8270	97-186-10983
91-20-3	Naphthalene	U	ug/kg	370	16-FEB-99	EPA 8270	97-186-10983
59-50-7	4-Chloro-3-methylphenol	U	ug/kg	740	16-FEB-99	EPA 8270	97-186-10983
91-57-6	2-Methylnaphthalene	U	ug/kg	370	16-FEB-99	EPA 8270	97-186-10983
208-96-8	Acenaphthylene	U	ug/kg	370	16-FEB-99	EPA 8270	97-186-10983
83-32-9	Acenaphthene	U	ug/kg	370	16-FEB-99	EPA 8270	97-186-10983
51-28-4	2,4-Dinitrophenol	U	ug/kg	1500	16-FEB-99	EPA 8270	97-186-10983
100-02-7	4-Nitrophenol	U	ug/kg	1500	16-FEB-99	EPA 8270	97-186-10983
534-52-1	2-Methyl-4,6-dinitrophenol	U	ug/kg	1500	16-FEB-99	EPA 8270	97-186-10983
87-86-5	Pentachlorophenol	U	ug/kg	1500	16-FEB-99	EPA 8270	97-186-10983
85-01-8	Phenanthrene	310 J	ug/kg	370	16-FEB-99	EPA 8270	97-186-10983
120-12-7	Anthracene	78 J	ug/kg	370	16-FEB-99	EPA 8270	97-186-10983
206-44-0	Fluoranthene	590	ug/kg	370	16-FEB-99	EPA 8270	97-186-10983
129-00-0	Pyrene	460	ug/kg	370	16-FEB-99	EPA 8270	97-186-10983
56-55-3	Benzo(a)anthracene	270 J	ug/kg	370	16-FEB-99	EPA 8270	97-186-10983
215-01-9	Chrysene	290 J	ug/kg	370	16-FEB-99	EPA 8270	97-186-10983
205-99-2	Benzo(b)fluoranthene	400	ug/kg	370	16-FEB-99	EPA 8270	97-186-10983
207-88-9	Benzo(k)fluoranthene	U	ug/kg	370	16-FEB-99	EPA 8270	97-186-10983
50-32-8	Benzo(a)pyrene	280 J	ug/kg	370	16-FEB-99	EPA 8270	97-186-10983
193-39-5	Indeno(1,2,3-cd)pyrene	U	ug/kg	370	16-FEB-99	EPA 8270	97-186-10983
53-7-3	Dibenzo(a,h)anthracene	U	ug/kg	370	16-FEB-99	EPA 8270	97-186-10983
191-24-2	Benzo(g,h,i)perylene	200 J	ug/kg	370	16-FEB-99	EPA 8270	97-186-10983
	Extraction Information:				09-FEB-99		98-174-55
Surrogate Recovery:							
	2-Fluorophenol	71	%				97-186-10983

U = None Detected

C NY 10252 NJ 73168 PA 68180 EPA NY 00033

Approved by: _____
Lab Director

KEY: ND or U = None Detected < = less than ug/L = micrograms per liter (equivalent to parts per billion)
mg/L = milligrams per liter (equivalent to parts per million) mg/kg = milligrams per kilogram (equivalent to parts per million)
B = analyte was detected in the method or trip blank J = result estimated below the quantitation limit

FLI
FRIEND LABORATORY I · N · C

ONE RESEARCH CIRCLE WAVERLY, NY 14892-1532
TELEPHONE (607) 565-3500 FAX (607) 565-4083

DATE 24-FEB-1999

LAB SAMPLE ID : L30741-9

Malcolm Pirnie, Inc. - Orchard Park
Daniel Riker
40 Centre Drive
PO Box 1938
Buffalo, NY 14219-0138

SAMPLE SOURCE	HANNA FURNACE, 3587-001
ORIGIN	L-1
DESCRIPTION	COMPOSITE
SAMPLED ON	28-JAN-99 00:00 by CLIENT
DATE RECEIVED	02-FEB-99 11:00
P.O. NO.	N/A

CAS #	Analysis Performed	Result	Units	Detection Limit	Date Analyzed	Method	Notebook Reference
	Phenol-d5	73	%				97-186-1098
	Nitrobenzene-d5	79	%				97-186-1098
	2-Fluorobiphenyl	77	%				97-186-1098
	2,4,6-Tribromophenol	66	%				97-186-10983
	Terphenyl-d14	83	%				97-186-10983

Analysis Comment: Results Calculated on a dry weight basis.

U = None Detected

QC CB NY 10252 NJ 73168 PA 68180 EPA NY 00033

Approved by: _____ Lab Director

KEY: ND or U = None Detected < = less than ug/L = micrograms per liter (equivalent to parts per billion)
mg/L = milligrams per liter (equivalent to parts per million) mg/kg = milligrams per kilogram (equivalent to parts per million)
B = analyte was detected in the method or trip blank J = result estimated below the quantitation limit

FLI
FRIEND LABORATORY · N · C

ONE RESEARCH CIRCLE WAVERLY, NY 14892-1532
TELEPHONE (607) 565-3500 FAX (607) 565-4083

DATE 24-FEB-1999

LAB SAMPLE ID : L30741-10

Malcolm Pirnie, Inc. - Orchard Park
Daniel Riker
40 Centre Drive
PO Box 1938
Buffalo, NY 14219-0138

SAMPLE SOURCE	HANNA FURNACE, 3587-001
ORIGIN	L-2
DESCRIPTION	COMPOSITE
SAMPLED ON	28-JAN-99 00:00 by CLIENT
DATE RECEIVED	02-FEB-99 11:00
P.O. NO.	N/A

CAS #	Analysis Performed	Result	Units	Detection Limit	Date Analyzed	Method	Notebook Reference
	Cyanide, Total	4.23	mg/kg	0.89	09-FEB-99	EPA 335.3	99-003-007
	Total Solids	50.26	%		03-FEB-99	CLP 3.0	97-070-47
	Aluminum	54000	mg/kg	74.0	22-FEB-99	EPA 6010A	99-036-05
	Antimony	U	mg/kg	10.1	11-FEB-99	EPA 6010A	99-036-01
	Arsenic	U	mg/kg	24.4	11-FEB-99	EPA 6010A	99-036-01
	Barium	240	mg/kg	3.26	11-FEB-99	EPA 6010A	99-036-01
	Beryllium	8.38	mg/kg	00.407	11-FEB-99	EPA 6010A	99-036-01
	Cadmium	U	mg/kg	1.02	11-FEB-99	EPA 6010A	99-036-01
	Calcium	221000	mg/kg	510.	11-FEB-99	EPA 6010A	99-036-01
	Chromium	5.18	mg/kg	2.03	11-FEB-99	EPA 6010A	99-036-01
	Cobalt	4.4	mg/kg	2.03	11-FEB-99	EPA 6010A	99-036-01
	Copper	12.7	mg/kg	3.46	11-FEB-99	EPA 6010A	99-036-01
	Iron	19500	mg/kg	7.94	22-FEB-99	EPA 6010A	99-036-05
	Lead	16.2	mg/kg	8.95	11-FEB-99	EPA 6010A	99-036-01
	Magnesium	14100	mg/kg	99.2	22-FEB-99	EPA 6010A	99-036-05
	Manganese	2460	mg/kg	1.02	11-FEB-99	EPA 6010A	99-036-01
	Mercury	U	mg/kg	0.0200	10-FEB-99	EPA 7470	98-126-05
	Nickel	11.8	mg/kg	2.44	11-FEB-99	EPA 6010A	99-036-01
	Potassium	1440	mg/kg	102.	11-FEB-99	EPA 6010A	99-036-01
	Selenium	U	mg/kg	13.9	22-FEB-99	EPA 6010A	99-036-05
	Silver	U	mg/kg	2.03	11-FEB-99	EPA 6010A	99-036-01

U = None Detected

C NY 10252 NJ 73168 PA 68180 EPA NY 00033

Approved by: _____
Lab Director

KEY: ND or U = None Detected < = less than
mg/L = milligrams per liter (equivalent to parts per million)
B = analyte was detected in the method or trip blank
ug/L = micrograms per liter (equivalent to parts per billion)
mg/kg = milligrams per kilogram (equivalent to parts per million)
J = result estimated below the quantitation limit

FLI
FRIEND LABORATORY I · N · C

ONE RESEARCH CIRCLE WAVERLY, NY 14892-1532
TELEPHONE (607) 565-3500 FAX (607) 565-4083

DATE 24-FEB-1999

LAB SAMPLE ID : L30741-10

Malcolm Pirnie, Inc. - Orchard Park
Daniel Riker
40 Centre Drive
PO Box 1938
Buffalo, NY 14219-0138

SAMPLE SOURCE	HANNA FURNACE, 3587-001
ORIGIN	L-2
DESCRIPTION	COMPOSITE
SAMPLED ON	28-JAN-99 00:00 by CLIENT
DATE RECEIVED	02-FEB-99 11:00
P.O. NO.	N/A

CAS #	Analysis Performed	Result	Units	Detection Limit	Date Analyzed	Method	Notebook Reference
	Sodium	458	mg/kg	40.6	11-FEB-99	EPA 6010A	99-036-01
	Thallium	U	mg/kg	13.2	11-FEB-99	EPA 6010	99-036-01
	Vanadium	17.3	mg/kg	2.03	11-FEB-99	EPA 6010A	99-036-01
	Zinc	90.3	mg/kg	4.07	11-FEB-99	EPA 6010A	99-036-01
108-95-2	Phenol	U	ug/kg	460	08-FEB-99	EPA 8270	98-051-7892
95-57-8	2-Chlorophenol	U	ug/kg	460	08-FEB-99	EPA 8270	98-051-7892
95-48-7	2-Methylphenol	U	ug/kg	460	08-FEB-99	EPA 8270	98-051-7892
	3-Methylphenol/4-Methylphenol	U	ug/kg	460	08-FEB-99	EPA 8270	98-051-7892
88-75-5	2-Nitrophenol	U	ug/kg	460	08-FEB-99	EPA 8270	98-051-7892
105-67-9	2,4-Dimethylphenol	U	ug/kg	460	08-FEB-99	EPA 8270	98-051-7892
120-83-2	2,4-Dichlorophenol	U	ug/kg	460	08-FEB-99	EPA 8270	98-051-7892
91-20-3	Naphthalene	U	ug/kg	460	08-FEB-99	EPA 8270	98-051-7892
59-50-7	4-Chloro-3-methylphenol	U	ug/kg	920	08-FEB-99	EPA 8270	98-051-7892
91-57-6	2-Methylnaphthalene	U	ug/kg	460	08-FEB-99	EPA 8270	98-051-7892
208-96-8	Acenaphthylene	U	ug/kg	460	08-FEB-99	EPA 8270	98-051-7892
83-32-9	Acenaphthene	U	ug/kg	460	08-FEB-99	EPA 8270	98-051-7892
51-28-4	2,4-Dinitrophenol	U	ug/kg	1800	08-FEB-99	EPA 8270	98-051-7892
100-02-7	4-Nitrophenol	U	ug/kg	1800	08-FEB-99	EPA 8270	98-051-7892
534-52-1	2-Methyl-4,6-dinitrophenol	U	ug/kg	1800	08-FEB-99	EPA 8270	98-051-7892
87-86-5	Pentachlorophenol	U	ug/kg	1800	08-FEB-99	EPA 8270	98-051-7892
85-01-8	Phenanthrene	U	ug/kg	460	08-FEB-99	EPA 8270	98-051-7892
120-12-7	Anthracene	U	ug/kg	460	08-FEB-99	EPA 8270	98-051-7892
206-44-0	Fluoranthene	U	ug/kg	460	08-FEB-99	EPA 8270	98-051-7892
129-00-0	Pyrene	U	ug/kg	460	08-FEB-99	EPA 8270	98-051-7892
56-55-3	Benzo(a)anthracene	U	ug/kg	460	08-FEB-99	EPA 8270	98-051-7892
215-01-9	Chrysene	U	ug/kg	460	08-FEB-99	EPA 8270	98-051-7892
205-99-2	Benzo(b)fluoranthene	U	ug/kg	460	08-FEB-99	EPA 8270	98-051-7892
207-88-9	Benzo(k)fluoranthene	U	ug/kg	460	08-FEB-99	EPA 8270	98-051-7892
50-32-8	Benzo(a)pyrene	U	ug/kg	460	08-FEB-99	EPA 8270	98-051-7892
193-39-5	Indeno(1,2,3-cd)pyrene	U	ug/kg	460	08-FEB-99	EPA 8270	98-051-7892
53-7-3	Dibenzo(a,h)anthracene	U	ug/kg	460	08-FEB-99	EPA 8270	98-051-7892
191-24-2	Benzo(g,h,i)perylene	U	ug/kg	460	08-FEB-99	EPA 8270	98-051-7892
	Extraction Information:				08-FEB-99		98-174-54
Surrogate Recovery:							
	2-Fluorophenol	63	%				98-051-7892

U = None Detected

QC ____ NY 10252 NJ 73168 PA 68180 EPA NY 00033

Approved by: _____
Lab Director

KEY: ND or U = None Detected < = less than ug/L = micrograms per liter (equivalent to parts per billion)
mg/L = milligrams per liter (equivalent to parts per million) mg/kg = milligrams per kilogram (equivalent to parts per million)
B = analyte was detected in the method or trip blank J = result estimated below the quantitation limit

FLI
FRIEND LABORATORY I · N · C

ONE RESEARCH CIRCLE WAVERLY, NY 14892-1532
TELEPHONE (607) 565-3500 FAX (607) 565-4083

DATE 24-FEB-1999

LAB SAMPLE ID : L30741-10

Malcolm Pirnie, Inc. - Orchard Park
Daniel Riker
40 Centre Drive
PO Box 1938
Buffalo, NY 14219-0138

SAMPLE SOURCE	HANNA FURNACE, 3587-001
ORIGIN	L-2
DESCRIPTION	COMPOSITE
SAMPLED ON	28-JAN-99 00:00 by CLIENT
DATE RECEIVED	02-FEB-99 11:00
P.O. NO.	N/A

CAS #	Analysis Performed	Result	Units	Detection Limit	Date Analyzed	Method	Notebook Reference
	Phenol-d5	86	%				98-051-7892
	Nitrobenzene-d5	91	%				98-051-7892
	2-Fluorobiphenyl	90	%				98-051-7892
	2,4,6-Tribromophenol	38	%				98-051-7892
	Terphenyl-d14	89	%				98-051-7892

Analysis Comment: Results Calculated on a dry weight basis.

U = None Detected

NC NY 10252 NJ 73168 PA 68180 EPA NY 00033

Approved by: _____
Lab Director

KEY: ND or U = None Detected < = less than
mg/L = milligrams per liter (equivalent to parts per million)
B = analyte was detected in the method or trip blank
ug/L = micrograms per liter (equivalent to parts per billion)
mg/kg = milligrams per kilogram (equivalent to parts per million)
J = result estimated below the quantitation limit

FLI
FRIEND LABORATORY I · N · C

ONE RESEARCH CIRCLE WAVERLY, NY 14892-1532
TELEPHONE (607) 565-3500 FAX (607) 565-4083

DATE 24-FEB-1999

LAB SAMPLE ID : L30741-11

Malcolm Pirnie, Inc. - Orchard Park
Daniel Riker
40 Centre Drive
PO Box 1938
Buffalo, NY 14219-0138

SAMPLE SOURCE	HANNA FURNACE, 3587-001
ORIGIN	L-2
DESCRIPTION	TCLP EXTRACT
SAMPLED ON	28-JAN-99 00:00 by CLIENT
DATE RECEIVED	02-FEB-99 11:00
P.O. NO.	N/A

CAS #	Analysis Performed	Result	Units	Detection Limit	Date Analyzed	Method	Notebook Reference
	Arsenic	U	mg/l	1.20	11-FEB-99	EPA 6010 TCLP	99-036-01
	Barium	0.376	mg/l	00.160	11-FEB-99	EPA 6010 TCLP	99-036-01
	Cadmium	U	mg/l	0.0500	11-FEB-99	EPA 6010 TCLP	99-036-01
	Chromium	U	mg/l	00.100	09-FEB-99	EPA 6010 TCLP	99-016-10
	Lead	U	mg/l	00.440	09-FEB-99	EPA 6010 TCLP	99-016-10
	Mercury	U	mg/l	0.0100	10-FEB-99	EPA 7470 TCLP	98-126-05
	Selenium	U	mg/l	00.700	11-FEB-99	EPA 6010 TCLP	99-036-01
	Silver	U	mg/l	00.100	09-FEB-99	EPA 6010 TCLP	99-016-10
75-01-4	Vinyl chloride	U	mg/l	0.03	05-FEB-99	TCLP 8260	98-189-5605
75-35-4	1,1-Dichloroethene	U	mg/l	0.03	05-FEB-99	TCLP 8260	98-189-5605
78-93-3	Methyl ethyl ketone	U	mg/l	0.03	05-FEB-99	TCLP 8260	98-189-5605
67-66-3	Chloroform	U	mg/l	0.03	05-FEB-99	TCLP 8260	98-189-5605
56-23-5	Carbon tetrachloride	U	mg/l	0.03	05-FEB-99	TCLP 8260	98-189-5605
71-43-2	Benzene	U	mg/l	0.03	05-FEB-99	TCLP 8260	98-189-5605
107-06-2	1,2-Dichloroethane	U	mg/l	0.03	05-FEB-99	TCLP 8260	98-189-5605
79-01-6	Trichloroethene	U	mg/l	0.03	05-FEB-99	TCLP 8260	98-189-5605
127-18-4	Tetrachloroethene	U	mg/l	0.03	05-FEB-99	TCLP 8260	98-189-5605
108-90-7	Chlorobenzene	U	mg/l	0.03	05-FEB-99	TCLP 8260	98-189-5605
106-46-7	1,4-Dichlorobenzene	U	mg/l	0.03	05-FEB-99	TCLP 8260	98-189-5605
Surrogate Recovery:							
	Dibromofluoromethane	98	%				98-189-5605
	Toluene-d8	97	%				98-189-5605
	4-Bromofluorobenzene	92	%				98-189-5605
58-89-9	Lindane	U	mg/l	0.005	11-FEB-99	TCLP 8080	98-183-5915
76-44-8	Heptachlor	U	mg/l	0.005	11-FEB-99	TCLP 8080	98-183-5915
1024-57-3	Heptachlor Epoxide	U	mg/l	0.005	11-FEB-99	TCLP 8080	98-183-5915
72-20-8	Endrin	U	mg/l	0.005	11-FEB-99	TCLP 8080	98-183-5915
72-43-5	Methoxychlor	U	mg/l	0.005	11-FEB-99	TCLP 8080	98-183-5915
57-74-9	Chlordane	U	mg/l	0.005	11-FEB-99	TCLP 8080	98-183-5915
8001-35-2	Toxaphene	U	mg/l	0.05	11-FEB-99	TCLP 8080	98-183-5915

U = None Detected

QC NY 10252 NJ 73168 PA 68180 EPA NY 00033

Approved by: _____
Lab Director

KEY: ND or U = None Detected < = less than ug/L = micrograms per liter (equivalent to parts per billion)
mg/L = milligrams per liter (equivalent to parts per million) mg/kg = milligrams per kilogram (equivalent to parts per million)
B = analyte was detected in the method or trip blank J = result estimated below the quantitation limit

FLI
FRIEND LABORATORY · N · C

ONE RESEARCH CIRCLE WAVERLY, NY 14892-1532
TELEPHONE (607) 565-3500 FAX (607) 565-4083

DATE 24-FEB-1999

LAB SAMPLE ID : L30741-11

Malcolm Pirnie, Inc. - Orchard Park
Daniel Riker
40 Centre Drive
PO Box 1938
Buffalo, NY 14219-0138

SAMPLE SOURCE	HANNA FURNACE, 3587-001
ORIGIN	L-2
DESCRIPTION	TCLP EXTRACT
SAMPLED ON	28-JAN-99 00:00 by CLIENT
DATE RECEIVED	02-FEB-99 11:00
P.O. NO.	N/A

CAS #	Analysis Performed	Result	Units	Detection Limit	Date Analyzed	Method	Notebook Reference
	Surrogate Recovery:						
	Tetrachloro-m-Xylene	88	%				98-183-5915
94-75-7	2,4-D	U	mg/l	0.4	11-FEB-99	TCLP 8150	98-080-2900
93-72-1	2,4,5-TP (Silvex)	U	mg/l	0.4	11-FEB-99	TCLP 8150	98-080-2900
	Surrogate Recovery:						
	DCAA	34					98-080-2900
110-86-1	Pyridine	U	mg/l	0.05	08-FEB-99	TCLP 8270	97-186-10903
	o-Cresol	U	mg/l	0.05	08-FEB-99	TCLP 8270	97-186-10903
	p-Cresol/m-Cresol	U	mg/l	0.05	08-FEB-99	TCLP 8270	97-186-10903
67-72-1	Hexachloroethane	U	mg/l	0.05	08-FEB-99	TCLP 8270	97-186-10903
98-95-3	Nitrobenzene	U	mg/l	0.05	08-FEB-99	TCLP 8270	97-186-10903
87-68-3	Hexachlorobutadiene	U	mg/l	0.05	08-FEB-99	TCLP 8270	97-186-10903
88-06-2	2,4,6-Trichlorophenol	U	mg/l	0.05	08-FEB-99	TCLP 8270	97-186-10903
95-95-4	2,4,5-Trichlorophenol	U	mg/l	0.05	08-FEB-99	TCLP 8270	97-186-10903
121-14-2	2,4-Dinitrotoluene	U	mg/l	0.05	08-FEB-99	TCLP 8270	97-186-10903
118-74-1	Hexachlorobenzene	U	mg/l	0.05	08-FEB-99	TCLP 8270	97-186-10903
87-86-5	Pentachlorophenol	U	mg/l	0.2	08-FEB-99	TCLP 8270	97-186-10903
	Extraction Information:				05-FEB-99		98-174-52
	Surrogate Recovery:						
	2-Fluorophenol	50	%				97-186-10903
	Phenol-d5	39	%				97-186-10903
	Nitrobenzene-d5	77	%				97-186-10903
	2-Fluorobiphenyl	75	%				97-186-10903
	2,4,6-Tribromophenol	68	%				97-186-10903
	Terphenyl-d14	82	%				97-186-10903

U = None Detected

Approved by: _____
Lab Director

KEY: ND or U = None Detected < = less than
mg/L = milligrams per liter (equivalent to parts per million)
B = analyte was detected in the method or trip blank
ug/L = micrograms per liter (equivalent to parts per billion)
mg/kg = milligrams per kilogram (equivalent to parts per million)
J = result estimated below the quantitation limit

FLI
FRIEND LABORATORY I · N · C

ONE RESEARCH CIRCLE WAVERLY, NY 14892-1532
TELEPHONE (607) 565-3500 FAX (607) 565-4083

DATE 24-FEB-1999

LAB SAMPLE ID : L30741-12

Malcolm Pirnie, Inc. - Orchard Park
Daniel Riker
40 Centre Drive
PO Box 1938
Buffalo, NY 14219-0138

SAMPLE SOURCE	HANNA FURNACE, 3587-001
ORIGIN	R-1
DESCRIPTION	COMPOSITE
SAMPLED ON	28-JAN-99 00:00 by CLIENT
DATE RECEIVED	02-FEB-99 11:00
P.O. NO.	N/A

CAS #	Analysis Performed	Result	Units	Detection Limit	Date Analyzed	Method	Notebook Reference
	Cyanide, Total	10.1	mg/kg	0.43	05-FEB-99	EPA 335.3	99-003-5
	Total Solids	82.13	%		03-FEB-99	CLP 3.0	97-070-47
	Aluminum	24000	mg/kg	9.07	22-FEB-99	EPA 6010A	99-036-05
	Antimony	9.02	mg/kg	6.03	11-FEB-99	EPA 6010A	99-036-01
	Arsenic	U	mg/kg	14.4	11-FE3-99	EPA 6010A	99-036-01
	Barium	204	mg/kg	1.93	11-FEB-99	EPA 6010A	99-036-01
	Beryllium	4.12	mg/kg	00.241	11-FEB-99	EPA 6010A	99-036-01
	Cadmium	.707	mg/kg	0.6030	11-FEB-99	EPA 6010A	99-036-01
	Calcium	125000	mg/kg	301.	11-FEB-99	EPA 6010A	99-036-01
	Chromium	20.7	mg/kg	1.21	11-FEB-99	EPA 6010A	99-036-01
	Cobalt	5.15	mg/kg	1.21	11-FEB-99	EPA 6010A	99-036-01
	Copper	51.2	mg/kg	2.05	11-FEB-99	EPA 6010A	99-036-01
	Iron	77000	mg/kg	48.4	24-FEB-99	EPA 6010A	99-036-07
	Lead	177	mg/kg	5.30	11-FEB-99	EPA 6010A	99-036-01
	Magnesium	12500	mg/kg	60.4	22-FEB-99	EPA 6010A	99-036-05
	Manganese	2690	mg/kg	3.02	11-FEB-99	EPA 6010A	99-036-01
	Mercury	U	mg/kg	0.0120	10-FEB-99	EPA 7470	98-126-05
	Nickel	25	mg/kg	1.45	11-FEB-99	EPA 6010A	99-036-01
	Potassium	1490	mg/kg	60.2	11-FEB-99	EPA 6010A	99-036-01
	Selenium	U	mg/kg	84.6	24-FEB-99	EPA 6010A	99-036-07
	Silver	U	mg/kg	1.21	11-FEB-99	EPA 6010A	99-036-01

U = None Detected

QC O NY 10252 NJ 73168 PA 68180 EPA NY 00033

Approved by: _____ Lab Director

KEY: ND or U = None Detected < = less than ug/L = micrograms per liter (equivalent to parts per billion)
mg/L = milligrams per liter (equivalent to parts per million) mg/kg = milligrams per kilogram (equivalent to parts per million)
B = analyte was detected in the method or trip blank J = result estimated below the quantitation limit

FLI
FRIEND LABORATORY
· N · C

ONE RESEARCH CIRCLE WAVERLY, NY 14892-1532
TELEPHONE (607) 565-3500 FAX (607) 565-4083

DATE : 24-FEB-1999

LAB SAMPLE ID : L30741-12

Malcolm Pirnie, Inc. - Orchard Park
Daniel Riker
40 Centre Drive
PO Box 1938
Buffalo, NY 14219-0138

SAMPLE SOURCE	HANNA FURNACE, 3587-001
ORIGIN	R-1
DESCRIPTION	COMPOSITE
SAMPLED ON	28-JAN-99 00:00 by CLIENT
DATE RECEIVED	02-FEB-99 11:00
P.O. NO.	N/A

CAS #	Analysis Performed	Result	Units	Detection Limit	Date Analyzed	Method	Notebook Reference
	Sodium	531	mg/kg	24.1	11-FEB-99	EPA 6010A	99-036-01
	Thallium	U	mg/kg	7.84	11-FEB-99	EPA 6010	99-036-01
	Vanadium	19.6	mg/kg	1.21	11-FEB-99	EPA 6010A	99-036-01
	Zinc	393	mg/kg	2.41	11-FEB-99	EPA 6010A	99-036-01
108-95-2	Phenol	U	ug/kg	270	16-FEB-99	EPA 8270	97-186-10984
95-57-8	2-Chlorophenol	U	ug/kg	270	16-FEB-99	EPA 8270	97-186-10984
95-48-7	2-Methylphenol	U	ug/kg	270	16-FEB-99	EPA 8270	97-186-10984
	3-Methylphenol/4-Methylphenol	U	ug/kg	270	16-FEB-99	EPA 8270	97-186-10984
88-75-5	2-Nitrophenol	U	ug/kg	270	16-FEB-99	EPA 8270	97-186-10984
105-67-9	2,4-Dimethylphenol	U	ug/kg	270	16-FEB-99	EPA 8270	97-186-10984
120-83-2	2,4-Dichlorophenol	U	ug/kg	270	16-FEB-99	EPA 8270	97-186-10984
91-20-3	Naphthalene	U	ug/kg	270	16-FEB-99	EPA 8270	97-186-10984
59-50-7	4-Chloro-3-methylphenol	U	ug/kg	550	16-FEB-99	EPA 8270	97-186-10984
91-57-6	2-Methylnaphthalene	U	ug/kg	270	16-FEB-99	EPA 8270	97-186-10984
208-96-8	Acenaphthylene	130 J	ug/kg	270	16-FEB-99	EPA 8270	97-186-10984
83-32-9	Acenaphthene	U	ug/kg	270	16-FEB-99	EPA 8270	97-186-10984
51-28-4	2,4-Dinitrophenol	U	ug/kg	1100	16-FEB-99	EPA 8270	97-186-10984
100-02-7	4-Nitrophenol	U	ug/kg	1100	16-FEB-99	EPA 8270	97-186-10984
534-52-1	2-Methyl-4,6-dinitrophenol	U	ug/kg	1100	16-FEB-99	EPA 8270	97-186-10984
87-86-5	Pentachlorophenol	U	ug/kg	1100	16-FEB-99	EPA 8270	97-186-10984
85-01-8	Phenanthrene	310	ug/kg	270	16-FEB-99	EPA 8270	97-186-10984
120-12-7	Anthracene	110 J	ug/kg	270	16-FEB-99	EPA 8270	97-186-10984
206-44-0	Fluoranthene	2000	ug/kg	270	16-FEB-99	EPA 8270	97-186-10984
129-00-0	Pyrene	2200	ug/kg	270	16-FEB-99	EPA 8270	97-186-10984
56-55-3	Benzo(a)anthracene	1400	ug/kg	270	16-FEB-99	EPA 8270	97-186-10984
215-01-9	Chrysene	1400	ug/kg	270	16-FEB-99	EPA 8270	97-186-10984
205-99-2	Benzo(b)fluoranthene	1800	ug/kg	270	16-FEB-99	EPA 8270	97-186-10984
207-88-9	Benzo(k)fluoranthene	660	ug/kg	270	16-FEB-99	EPA 8270	97-186-10984
50-32-8	Benzo(a)pyrene	1200	ug/kg	270	16-FEB-99	EPA 8270	97-186-10984
193-39-5	Indeno(1,2,3-cd)pyrene	750	ug/kg	270	16-FEB-99	EPA 8270	97-186-10984
53-7-3	Dibenzo(a,h)anthracene	170 J	ug/kg	270	16-FEB-99	EPA 8270	97-186-10984
191-24-2	Benzo(g,h,i)perylene	680	ug/kg	270	16-FEB-99	EPA 8270	97-186-10984
	Extraction Information:				08-FEB-99		98-174-54
Surrogate Recovery:							
	2-Fluorophenol	75	%				97-186-10984

U = None Detected

IC NY 10252 NJ 73168 PA 68180 EPA NY 00033

Approved by: _____
Lab Director

KEY:
ND or U = None Detected
< = less than
mg/L = milligrams per liter (equivalent to parts per million)
B = analyte was detected in the method or trip blank
ug/L = micrograms per liter (equivalent to parts per billion)
mg/kg = milligrams per kilogram (equivalent to parts per million)
J = result estimated below the quantitation limit

FLI
FRIEND LABORATORY I·N·C

ONE RESEARCH CIRCLE WAVERLY, NY 14892-1532
TELEPHONE (607) 565-3500 FAX (607) 565-4083

DATE 24-FEB-1999

LAB SAMPLE ID : L30741-12

Malcolm Pirnie, Inc. - Orchard Park
Daniel Riker
40 Centre Drive
PO Box 1938
Buffalo, NY 14219-0138

SAMPLE SOURCE	HANNA FURNACE, 3587-001
ORIGIN	R-1
DESCRIPTION	COMPOSITE
SAMPLED ON	28-JAN-99 00:00 by CLIENT
DATE RECEIVED	02-FEB-99 11:00
P.O NO.	N/A

CAS #	Analysis Performed	Result	Units	Detection Limit	Date Analyzed	Method	Notebook Reference
	Phenol-d5	79	%				97-186-1098
	Nitrobenzene-d5	76	%				97-186-1098
	2-Fluorobiphenyl	85	%				97-186-1098
	2,4,6-Tribromophenol	99	%				97-186-10984
	Terphenyl-d14	99	%				97-186-10984

Analysis Comment: Results Calculated on a dry weight basis.

U = None Detected

QC ___ NY 10252 NJ 73168 PA 68180 EPA NY 00033

Approved by: _____
Lab Director

KEY: ND or U = None Detected < = less than
mg/L = milligrams per liter (equivalent to parts per million)
B = analyte was detected in the method or trip blank
ug/L = micrograms per liter (equivalent to parts per billion)
mg/kg = milligrams per kilogram (equivalent to parts per million)
J = result estimated below the quantitation limit

FLI
FRIEND LABORATORY
· N · C

ONE RESEARCH CIRCLE WAVERLY, NY 14892-1532
TELEPHONE (607) 565-3500 FAX (607) 565-4083

DATE 24-FEB-1999

LAB SAMPLE ID : L30741-13

Malcolm Pirnie, Inc. - Orchard Park
Daniel Riker
40 Centre Drive
PO Box 1938
Buffalo, NY 14219-0138

SAMPLE SOURCE	HANNA FURNACE, 3587-001
ORIGIN	R-2
DESCRIPTION	COMPOSITE
SAMPLED ON	28-JAN-99 00:00 by CLIENT
DATE RECEIVED	02-FEB-99 11:00
P.O. NO.	N/A

AS #	Analysis Performed	Result	Units	Detection Limit	Date Analyzed	Method	Notebook Reference
	Cyanide, Total	20.9	mg/kg	0.85	09-FEB-99	EPA 335.3	99-003-007
	Total Solids	56.07	%		03-FEB-99	CLP 3.0	97-070-47
	Aluminum	43100	mg/kg	13.2	22-FEB-99	EPA 6010A	99-036-05
	Antimony	U	mg/kg	8.75	11-FEB-99	EPA 6010A	99-036-01
	Arsenic	U	mg/kg	21.0	11-FEB-99	EPA 6010A	99-036-01
	Barium	264	mg/kg	2.80	11-FEB-99	EPA 6010A	99-036-01
	Beryllium	6.17	mg/kg	00.350	11-FEB-99	EPA 6010A	99-036-01
	Cadmium	U	mg/kg	0.8750	11-FEB-99	EPA 6010A	99-036-01
	Calcium	193000	mg/kg	438.	11-FEB-99	EPA 6010A	99-036-01
	Chromium	4.7	mg/kg	1.75	11-FEB-99	EPA 6010A	99-036-01
	Cobalt	4.56	mg/kg	1.75	11-FEB-99	EPA 6010A	99-036-01
	Copper	8.49	mg/kg	2.98	11-FEB-99	EPA 6010A	99-036-01
	Iron	29900	mg/kg	7.08	22-FEB-99	EPA 6010A	99-036-05
	Lead	15.3	mg/kg	7.70	11-FEB-99	EPA 6010A	99-036-01
	Magnesium	14000	mg/kg	88.4	22-FEB-99	EPA 6010A	99-036-05
	Manganese	2480	mg/kg	00.875	11-FEB-99	EPA 6010A	99-036-01
	Mercury	U	mg/kg	0.0180	10-FEB-99	EPA 7470	98-126-05
	Nickel	13.7	mg/kg	2.10	11-FEB-99	EPA 6010A	99-036-01
	Potassium	1420	mg/kg	87.5	11-FEB-99	EPA 6010A	99-036-01
	Selenium	U	mg/kg	61.5	22-FEB-99	EPA 6010A	99-036-05
	Silver	U	mg/kg	1.75	11-FEB-99	EPA 6010A	99-036-01

U = None Detected

C NY 10252 NJ 73168 PA 68180 EPA NY 00033

Approved by: _____
Lab Director

KEY: ND or U = None Detected < = less than ug/L = micrograms per liter (equivalent to parts per billion)
mg/L = milligrams per liter (equivalent to parts per million) mg/kg = milligrams per kilogram (equivalent to parts per million)
B = analyte was detected in the method or trip blank J = result estimated below the quantitation limit

FLI
FRIEND LABORATORY I · N · C

ONE RESEARCH CIRCLE WAVERLY, NY 14892-1532
TELEPHONE (607) 565-3500 FAX (607) 565-4083

DATE 24-FEB-1999

LAB SAMPLE ID : L30741-13

Malcolm Pirnie, Inc. - Orchard Park
Daniel Riker
40 Centre Drive
PO Box 1938
Buffalo, NY 14219-0138

SAMPLE SOURCE	HANNA FURNACE, 3587-001
ORIGIN	R-2
DESCRIPTION	COMPOSITE
SAMPLED ON	28-JAN-99 00:00 by CLIENT
DATE RECEIVED	02-FEB-99 11:00
P.O. NO.	N/A

CAS #	Analysis Performed	Result	Units	Detection Limit	Date Analyzed	Method	Notebook Reference
	Sodium	443	mg/kg	35.0	11-FEB-99	EPA 6010A	99-036-01
	Thallium	U	mg/kg	11.3	11-FEB-99	EPA 6010	99-036-01
	Vanadium	19.3	mg/kg	1.75	11-FEB-99	EPA 6010A	99-036-01
	Zinc	475	mg/kg	3.50	11-FEB-99	EPA 6010A	99-036-01
108-95-2	Phenol	U	ug/kg	400	08-FEB-99	EPA 8270	97-186-10906
95-57-8	2-Chlorophenol	U	ug/kg	400	08-FEB-99	EPA 8270	97-186-10906
95-48-7	2-Methylphenol	U	ug/kg	400	08-FEB-99	EPA 8270	97-186-1090
	3-Methylphenol/4-Methylphenol	U	ug/kg	400	08-FEB-99	EPA 8270	97-186-1090
88-75-5	2-Nitrophenol	U	ug/kg	400	08-FEB-99	EPA 8270	97-186-1090
105-67-9	2,4-Dimethylphenol	U	ug/kg	400	08-FEB-99	EPA 8270	97-186-10906
120-83-2	2,4-Dichlorophenol	U	ug/kg	400	08-FEB-99	EPA 8270	97-186-10906
91-20-3	Naphthalene	U	ug/kg	400	08-FEB-99	EPA 8270	97-186-1090
59-50-7	4-Chloro-3-methylphenol	U	ug/kg	800	08-FEB-99	EPA 8270	97-186-1090
91-57-6	2-Methylnaphthalene	U	ug/kg	400	08-FEB-99	EPA 8270	97-186-1090
208-96-8	Acenaphthylene	U	ug/kg	400	08-FEB-99	EPA 8270	97-186-10906
83-32-9	Acenaphthene	U	ug/kg	400	08-FEB-99	EPA 8270	97-186-1090
51-28-4	2,4-Dinitrophenol	U	ug/kg	1600	08-FEB-99	EPA 8270	97-186-1090
100-02-7	4-Nitrophenol	U	ug/kg	1600	08-FEB-99	EPA 8270	97-186-1090
534-52-1	2-Methyl-4,6-dinitrophenol	U	ug/kg	1600	08-FEB-99	EPA 8270	97-186-10906
87-86-5	Pentachlorophenol	U	ug/kg	1600	08-FEB-99	EPA 8270	97-186-10906
85-01-8	Phenanthrene	U	ug/kg	400	08-FEB-99	EPA 8270	97-186-1090
120-12-7	Anthracene	U	ug/kg	400	08-FEB-99	EPA 8270	97-186-1090
206-44-0	Fluoranthene	U	ug/kg	400	08-FEB-99	EPA 8270	97-186-1090
129-00-0	Pyrene	U	ug/kg	400	08-FEB-99	EPA 8270	97-186-10906
56-55-3	Benzo(a)anthracene	U	ug/kg	400	08-FEB-99	EPA 8270	97-186-10906
215-01-9	Chrysene	U	ug/kg	400	08-FEB-99	EPA 8270	97-186-1090
205-99-2	Benzo(b)fluoranthene	U	ug/kg	400	08-FEB-99	EPA 8270	97-186-1090
207-88-9	Benzo(k)fluoranthene	U	ug/kg	400	08-FEB-99	EPA 8270	97-186-1090
50-32-8	Benzo(a)pyrene	U	ug/kg	400	08-FEB-99	EPA 8270	97-186-10906
193-39-5	Indeno(1,2,3-cd)pyrene	U	ug/kg	400	08-FEB-99	EPA 8270	97-186-10906
53-7-3	Dibenzo(a,h)anthracene	U	ug/kg	400	08-FEB-99	EPA 8270	97-186-1090
191-24-2	Benzo(g,h,i)perylene	U	ug/kg	400	08-FEB-99	EPA 8270	97-186-1090
	Extraction Information:				08-FEB-99		98-174-54
Surrogate Recovery:							
	2-Fluorophenol	53	%				97-186-1090

U = None Detected

QC ✓ NY 10252 NJ 73168 PA 68180 EPA NY 00033

Approved by: _____ Lab Director

KEY: ND or U = None Detected < = less than ug/L = micrograms per liter (equivalent to parts per billion)
mg/L = milligrams per liter (equivalent to parts per million) mg/kg = milligrams per kilogram (equivalent to parts per million)
B = analyte was detected in the method or trip blank J = result estimated below the quantitation limit

FLI
FRIEND LABORATORY · N · C

ONE RESEARCH CIRCLE WAVERLY, NY 14892-1532
TELEPHONE (607) 565-3500 FAX (607) 565-4083

DATE 24-FEB-1999

LAB SAMPLE ID : L30741-13

Malcolm Pirnie, Inc. - Orchard Park
Daniel Riker
40 Centre Drive
PO Box 1938
Buffalo, NY 14219-0138

SAMPLE SOURCE	HANNA FURNACE, 3587-001
ORIGIN	R-2
DESCRIPTION	COMPOSITE
SAMPLED ON	28-JAN-99 00:00 by CLIENT
DATE RECEIVED	02-FEB-99 11:00
P.O. NO.	N/A

AS #	Analysis Performed	Result	Units	Detection Limit	Date Analyzed	Method	Notebook Reference
	Phenol-d5	70	%				97-186-10906
	Nitrobenzene-d5	71	%				97-186-10906
	2-Fluorobiphenyl	75	%				97-186-10906
	2,4,6-Tribromophenol	53	%				97-186-10906
	Terphenyl-d14	93	%				97-186-10906

Analysis Comment: Results Calculated on a dry weight basis.

U = None Detected

Approved by: _____
Lab Director

KEY: ND or U = None Detected < = less than
mg/L = milligrams per liter (equivalent to parts per million)
B = analyte was detected in the method or trip blank
ug/L = micrograms per liter (equivalent to parts per billion)
mg/kg = milligrams per kilogram (equivalent to parts per million)
J = result estimated below the quantitation limit

FLI
FRIEND LABORATORY I · N · C

ONE RESEARCH CIRCLE WAVERLY, NY 14892-1532
TELEPHONE (607) 565-3500 FAX (607) 565-4083

DATE 24-FEB-1999

LAB SAMPLE ID : L30741-14

Malcolm Pirnie, Inc. - Orchard Park
Daniel Riker
40 Centre Drive
PO Box 1938
Buffalo, NY 14219-0138

SAMPLE SOURCE	HANNA FURNACE, 3587-001
ORIGIN	SB-15
DESCRIPTION	GRAB
SAMPLED ON	28-JAN-99 00:00 by CLIENT
DATE RECEIVED	02-FEB-99 11:00
P.O. NO.	N/A

CAS #	Analysis Performed	Result		Units	Detection Limit	Date Analyzed	Method	Notebook Reference
	Total Solids	79.26		%		03-FEB-99	CLP 3.0	97-070-47
74-87-3	Chloromethane	U		ug/kg	6	09-FEB-99	EPA 8260	98-189-5638
75-01-4	Vinyl chloride	U		ug/kg	6	09-FEB-99	EPA 8260	98-189-5638
75-00-3	Chloroethane	U		ug/kg	6	09-FEB-99	EPA 8260	98-189-5638
74-83-9	Bromomethane	U		ug/kg	6	09-FEB-99	EPA 8260	98-189-5638
75-35-4	1,1-Dichloroethene	U		ug/kg	6	09-FEB-99	EPA 8260	98-189-5638
67-64-1	Acetone	U		ug/kg	31	09-FEB-99	EPA 8260	98-189-5638
75-15-0	Carbon disulfide	U		ug/kg	6	09-FEB-99	EPA 8260	98-189-5638
75-09-2	Methylene chloride	U		ug/kg	6	09-FEB-99	EPA 8260	98-189-5638
156-60-5	trans-1,2-Dichloroethene	U		ug/kg	6	09-FEB-99	EPA 8260	98-189-5638
75-34-3	1,1-Dichloroethane	U		ug/kg	6	09-FEB-99	EPA 8260	98-189-5638
156-59-4	cis-1,2-Dichloroethene	U		ug/kg	6	09-FEB-99	EPA 8260	98-189-5638
67-66-3	Chloroform	U		ug/kg	6	09-FEB-99	EPA 8260	98-189-5638
71-55-6	1,1,1-Trichloroethane	U		ug/kg	6	09-FEB-99	EPA 8260	98-189-5638
56-23-5	Carbon tetrachloride	U		ug/kg	6	09-FEB-99	EPA 8260	98-189-5638
71-43-2	Benzene	U		ug/kg	6	09-FEB-99	EPA 8260	98-189-5638
107-06-2	1,2-Dichloroethane	U		ug/kg	6	09-FEB-99	EPA 8260	98-189-5638
79-01-6	Trichloroethene	U		ug/kg	6	09-FEB-99	EPA 8260	98-189-5638
78-87-5	1,2-Dichloropropane	U		ug/kg	6	09-FEB-99	EPA 8260	98-189-5638
75-27-4	Bromodichloromethane	U		ug/kg	6	09-FEB-99	EPA 8260	98-189-5638
10061-01-5	cis-1,3-Dichloropropene	U		ug/kg	6	09-FEB-99	EPA 8260	98-189-5638
108-88-3	Toluene	U		ug/kg	6	09-FEB-99	EPA 8260	98-189-5638
10061-02-6	trans-1,3-Dichloropropene	U		ug/kg	6	09-FEB-99	EPA 8260	98-189-5638
79-00-5	1,1,2-Trichloroethane	U		ug/kg	6	09-FEB-99	EPA 8260	98-189-5638
127-18-4	Tetrachloroethene	U		ug/kg	6	09-FEB-99	EPA 8260	98-189-5638
591-78-6	2-Hexanone	U		ug/kg	13	09-FEB-99	EPA 8260	98-189-5638
124-48-1	Dibromochloromethane	U		ug/kg	6	09-FEB-99	EPA 8260	98-189-5638
108-90-7	Chlorobenzene	U		ug/kg	6	09-FEB-99	EPA 8260	98-189-5638
100-41-4	Ethylbenzene	U		ug/kg	6	09-FEB-99	EPA 8260	98-189-5638
1330-20-7	p-Xylene/m-Xylene	U		ug/kg	6	09-FEB-99	EPA 8260	98-189-5638
	o-Xylene	U		ug/kg	6	09-FEB-99	EPA 8260	98-189-5638
100-42-5	Styrene	U		ug/kg	6	09-FEB-99	EPA 8260	98-189-5638
75-25-2	Bromoform	U		ug/kg	6	09-FEB-99	EPA 8260	98-189-5638
79-334-5	1,1,2,2-Tetrachloroethane	U,J		ug/kg	6	09-FEB-99	EPA 8260	98-189-5638
Surrogate Recovery:								
	Dibromofluoromethane	112		%				98-189-5638
	Toluene-d8	118		%				98-189-5638
	4-Bromofluorobenzene	121	*	%				98-189-5638

U = None Detected

QC NY 10252 NJ 73168 PA 68180 EPA NY 00033

Approved by: _____ Lab Director

KEY: ND or U = None Detected < = less than ug/L = micrograms per liter (equivalent to parts per billion)
mg/L = milligrams per liter (equivalent to parts per million) mg/kg = milligrams per kilogram (equivalent to parts per million)
B = analyte was detected in the method or trip blank J = result estimated below the quantitation limit

FLI
FRIEND LABORATORY I · N · C

ONE RESEARCH CIRCLE WAVERLY, NY 14892-1532
TELEPHONE (607) 565-3500 FAX (607) 565-4083

DATE 24-FEB-1999

LAB SAMPLE ID : L30741-14

Malcolm Pirnie, Inc. - Orchard Park
Daniel Riker
40 Centre Drive
PO Box 1938
Buffalo, NY 14219-0138

SAMPLE SOURCE	HANNA FURNACE, 3587-001
ORIGIN	SB-15
DESCRIPTION	GRAB
SAMPLED ON	28-JAN-99 00:00 by CLIENT
DATE RECEIVED	02-FEB-99 11:00
P.O. NO.	N/A

CAS #	Analysis Performed	Result	Units	Detection Limit	Date Analyzed	Method	Notebook Reference
Analysis Comment: Dry weight basis.J-IS rec. below limit.*Surr. above limit(C5622).							
12674-11-2	PCB 1016	U	mg/kg	0.1	08-FEB-99	EPA 8080	98-183-1280
11104-28-2	PCB 1221	U	mg/kg	0.2	08-FEB-99	EPA 8080	98-183-1280
11141-16-5	PCB 1232	U	mg/kg	0.1	08-FEB-99	EPA 8080	98-183-1280
53469-21-9	PCB 1242	U	mg/kg	0.1	08-FEB-99	EPA 8080	98-183-1280
12672-29-6	PCB 1248	U	mg/kg	0.1	08-FEB-99	EPA 8080	98-183-1280
11097-69-1	PCB 1254	U	mg/kg	0.1	08-FEB-99	EPA 8080	98-183-1280
11096-82-5	PCB 1260	U	mg/kg	0.1	08-FEB-99	EPA 8080	98-183-1280
Surrogate Recovery:							
	Decachlorobiphenyl	145	%				98-183-1280

U = None Detected

QC NY 10252 NJ 73168 PA 68180 EPA NY 00033

Approved by: _____
Lab Director

KEY: ND or U = None Detected < = less than ug/L = micrograms per liter (equivalent to parts per billion)
mg/L = milligrams per liter (equivalent to parts per million) mg/kg = milligrams per kilogram (equivalent to parts per million)
B = analyte was detected in the method or trip blank J = result estimated below the quantitation limit

FLI
FRIEND LABORATORY I · N · C

ONE RESEARCH CIRCLE WAVERLY, NY 14892-1532
TELEPHONE (607) 565-3500 FAX (607) 565-4083

DATE 24-FEB-1999

LAB SAMPLE ID : L30741-15

Malcolm Pirnie, Inc. - Orchard Park
Daniel Riker
40 Centre Drive
PO Box 1938
Buffalo, NY 14219-0138

SAMPLE SOURCE	HANNA FURNACE, 3587-001
ORIGIN	SB-22
DESCRIPTION	GRAB
SAMPLED ON	28-JAN-99 00:00 by CLIENT
DATE RECEIVED	02-FEB-99 11:00
P.O. NO.	N/A

CAS #	Analysis Performed	Result	Units	Detection Limit	Date Analyzed	Method	Notebook Reference
	Total Solids	75.76	%		03-FEB-99	CLP 3.0	97-070-47
12674-11-2	PCB 1016	U	mg/kg	0.1	08-FEB-99	EPA 8080	98-183-1279
11104-28-2	PCB 1221	U	mg/kg	0.2	08-FEB-99	EPA 8080	98-183-1279
11141-16-5	PCB 1232	U	mg/kg	0.1	08-FEB-99	EPA 8080	98-183-1279
53469-21-9	PCB 1242	U	mg/kg	0.1	08-FEB-99	EPA 8080	98-183-1279
12672-29-6	PCB 1248	U	mg/kg	0.1	08-FEB-99	EPA 8080	98-183-1279
11097-69-1	PCB 1254	U	mg/kg	0.1	08-FEB-99	EPA 8080	98-183-1279
11096-82-5	PCB 1260	U	mg/kg	0.1	08-FEB-99	EPA 8080	98-183-1279
Surrogate Recovery:	Decachlorobiphenyl	149	%				98-183-1279

U = None Detected

QC ✓ NY 10252 NJ 73168 PA 68180 EPA NY 00033

Approved by: _____ Lab Director

KEY: ND or U = None Detected < = less than ug/L = micrograms per liter (equivalent to parts per billion)
mg/L = milligrams per liter (equivalent to parts per million) mg/kg = milligrams per kilogram (equivalent to parts per million)
B = analyte was detected in the method or trip blank J = result estimated below the quantitation limit

FLI
FRIEND LABORATORY
INC

ONE RESEARCH CIRCLE WAVERLY, NY 14892-1532
TELEPHONE (607) 565-3500 FAX (607) 565-4083

DATE 24-FEB-1999

LAB SAMPLE ID : L30741-16

Malcolm Pirnie, Inc. - Orchard Park
Daniel Riker
40 Centre Drive
PO Box 1938
Buffalo, NY 14219-0138

SAMPLE SOURCE	HANNA FURNACE, 3587-001
ORIGIN	SB-14
DESCRIPTION	GRAB
SAMPLED ON	28-JAN-99 00:00 by CLIENT
DATE RECEIVED	02-FEB-99 11:00
P.O. NO.	N/A

CAS #	Analysis Performed	Result	Units	Detection Limit	Date Analyzed	Method	Notebook Reference
	Total Solids	73.17	%		03-FEB-99	CLP 3.0	97-070-47
74-87-3	Chloromethane	U	ug/kg	7	09-FEB-99	EPA 8260	98-189-5639
75-01-4	Vinyl chloride	U	ug/kg	7	09-FEB-99	EPA 8260	98-189-5639
75-00-3	Chloroethane	U	ug/kg	7	09-FEB-99	EPA 8260	98-189-5639
74-83-9	Bromomethane	U	ug/kg	7	09-FEB-99	EPA 8260	98-189-5639
75-35-4	1,1-Dichloroethene	U	ug/kg	7	09-FEB-99	EPA 8260	98-189-5639
67-64-1	Acetone	U	ug/kg	35	09-FEB-99	EPA 8260	98-189-5639
75-15-0	Carbon disulfide	U	ug/kg	7	09-FEB-99	EPA 8260	98-189-5639
75-09-2	Methylene chloride	U	ug/kg	7	09-FEB-99	EPA 8260	98-189-5639
156-60-5	trans-1,2-Dichloroethene	U	ug/kg	7	09-FEB-99	EPA 8260	98-189-5639
75-34-3	1,1-Dichloroethane	U	ug/kg	7	09-FEB-99	EPA 8260	98-189-5639
156-59-4	cis-1,2-Dichloroethene	U	ug/kg	7	09-FEB-99	EPA 8260	98-189-5639
67-66-3	Chloroform	U	ug/kg	7	09-FEB-99	EPA 8260	98-189-5639
71-55-6	1,1,1-Trichloroethane	U	ug/kg	7	09-FEB-99	EPA 8260	98-189-5639
56-23-5	Carbon tetrachloride	U	ug/kg	7	09-FEB-99	EPA 8260	98-189-5639
71-43-2	Benzene	U	ug/kg	7	09-FEB-99	EPA 8260	98-189-5639
107-06-2	1,2-Dichloroethane	U	ug/kg	7	09-FEB-99	EPA 8260	98-189-5639
79-01-6	Trichloroethene	U	ug/kg	7	09-FEB-99	EPA 8260	98-189-5639
78-87-5	1,2-Dichloropropane	U	ug/kg	7	09-FEB-99	EPA 8260	98-189-5639
75-27-4	Bromodichloromethane	U	ug/kg	7	09-FEB-99	EPA 8260	98-189-5639
10061-01-5	cis-1,3-Dichloropropene	U	ug/kg	7	09-FEB-99	EPA 8260	98-189-5639
108-88-3	Toluene	U	ug/kg	7	09-FEB-99	EPA 8260	98-189-5639
10061-02-6	trans-1,3-Dichloropropene	U	ug/kg	7	09-FEB-99	EPA 8260	98-189-5639
79-00-5	1,1,2-Trichloroethane	U	ug/kg	7	09-FEB-99	EPA 8260	98-189-5639
127-18-4	Tetrachloroethene	U	ug/kg	7	09-FEB-99	EPA 8260	98-189-5639
591-78-6	2-Hexanone	U	ug/kg	14	09-FEB-99	EPA 8260	98-189-5639
124-48-1	Dibromochloromethane	U	ug/kg	7	09-FEB-99	EPA 8260	98-189-5639
108-90-7	Chlorobenzene	U	ug/kg	7	09-FEB-99	EPA 8260	98-189-5639
100-41-4	Ethylbenzene	U	ug/kg	7	09-FEB-99	EPA 8260	98-189-5639
1330-20-7	p-Xylene/m-Xylene	U	ug/kg	7	09-FEB-99	EPA 8260	98-189-5639
	o-Xylene	U	ug/kg	7	09-FEB-99	EPA 8260	98-189-5639
100-42-5	Styrene	U	ug/kg	7	09-FEB-99	EPA 8260	98-189-5639
75-25-2	Bromoform	U	ug/kg	7	09-FEB-99	EPA 8260	98-189-5639
79-334-5	1,1,2,2-Tetrachloroethane	U,J	ug/kg	7	09-FEB-99	EPA 8260	98-189-5639
Surrogate Recovery:							
	Dibromofluoromethane	115	%				98-189-5639
	Toluene-d8	113	%				98-189-5639
	4-Bromofluorobenzene	112	%				98-189-5639

U = None Detected

IC NY 10252 NJ 73168 PA 68180 EPA NY 00033

Approved by: _____
Lab Director

KEY: ND or U = None Detected < = less than
mg/L = milligrams per liter (equivalent to parts per million)
B = analyte was detected in the method or trip blank
ug/L = micrograms per liter (equivalent to parts per billion)
mg/kg = milligrams per kilogram (equivalent to parts per million)
J = result estimated below the quantitation limit

FLI
FRIEND LABORATORY I · N · C

ONE RESEARCH CIRCLE WAVERLY, NY 14892-1532
TELEPHONE (607) 565-3500 FAX (607) 565-4083

DATE : 24-FEB-1999

LAB SAMPLE ID : L30741-16

Malcolm Pirnie, Inc. - Orchard Park
Daniel Riker
40 Centre Drive
PO Box 1938
Buffalo, NY 14219-0138

SAMPLE SOURCE	HANNA FURNACE, 3587-001
ORIGIN	SB-14
DESCRIPTION	GRAB
SAMPLED ON	28-JAN-99 00:00 by CLIENT
DATE RECEIVED	02-FEB-99 11:00
P.O. NO.	N/A

CAS #	Analysis Performed	Result	Units	Detection Limit	Date Analyzed	Method	Notebook Reference

Analysis Comment: Dry weight basis.J-IS rec. below limit(C5623).

U = None Detected

QC ____ NY 10252 NJ 73168 PA 68180 EPA NY 00033 Approved by: _____ Lab Director

KEY: ND or U = None Detected < = less than ug/L = micrograms per liter (equivalent to parts per billion)
mg/L = milligrams per liter (equivalent to parts per million) mg/kg = milligrams per kilogram (equivalent to parts per million)
B = analyte was detected in the method or trip blank J = result estimated below the quantitation limit

FLI
FRIEND LABORATORY · N · C

ONE RESEARCH CIRCLE WAVERLY, NY 14892-1532
TELEPHONE (607) 565-3500 FAX (607) 565-4083

DATE 24-FEB-1999

LAB SAMPLE ID : L30741-18

Malcolm Pirnie, Inc. - Orchard Park
Daniel Riker
40 Centre Drive
PO Box 1938
Buffalo, NY 14219-0138

SAMPLE SOURCE	HANNA FURNACE, 3587-001
ORIGIN	N-1
DESCRIPTION	COMPOSITE
SAMPLED ON	29-JAN-99 00:00 by CLIENT
DATE RECEIVED	02-FEB-99 11:00
P.O. NO.	N/A

CAS #	Analysis Performed	Result	Units	Detection Limit	Date Analyzed	Method	Notebook Reference
	Cyanide, Total	28.8	mg/kg	0.44	05-FEB-99	EPA 335.3	99-003-5
	Total Solids	58.6	%		03-FEB-99	CLP 3.0	97-070-47
	Aluminum	45700	mg/kg	12.6	22-FEB-99	EPA 6010A	99-036-05
	Antimony	U	mg/kg	8.53	11-FEB-99	EPA 6010A	99-036-01
	Arsenic	U	mg/kg	20.4	11-FEB-99	EPA 6010A	99-036-01
	Barium	238	mg/kg	2.73	11-FEB-99	EPA 6010A	99-036-01
	Beryllium	6.86	mg/kg	00.341	11-FEB-99	EPA 6010A	99-036-01
	Cadmium	U	mg/kg	0.8530	11-FEB-99	EPA 6010A	99-036-01
	Calcium	212000	mg/kg	426.	11-FEB-99	EPA 6010A	99-036-01
	Chromium	6.89	mg/kg	1.71	11-FEB-99	EPA 6010A	99-036-01
	Cobalt	4.75	mg/kg	1.71	11-FEB-99	EPA 6010A	99-036-01
	Copper	20.1	mg/kg	2.90	11-FEB-99	EPA 6010A	99-036-01
	Iron	23800	mg/kg	33.6	22-FEB-99	EPA 6010A	99-036-05
	Lead	22.1	mg/kg	7.51	11-FEB-99	EPA 6010A	99-036-01
	Magnesium	15400	mg/kg	420.	22-FEB-99	EPA 6010A	99-036-05
	Manganese	1900	mg/kg	00.853	11-FEB-99	EPA 6010A	99-036-01
	Mercury	.026	mg/kg	0.0170	10-FEB-99	EPA 7470	98-126-05
	Nickel	11.9	mg/kg	2.05	11-FEB-99	EPA 6010A	99-036-01
	Potassium	1110	mg/kg	85.3	11-FEB-99	EPA 6010A	99-036-01
	Selenium	U	mg/kg	58.8	22-FEB-99	EPA 6010A	99-036-05
	Silver	U	mg/kg	1.71	11-FEB-99	EPA 6010A	99-036-01

U = None Detected

Approved by: _____
Lab Director

KEY: ND or U = None Detected < = less than ug/L = micrograms per liter (equivalent to parts per billion)
mg/L = milligrams per liter (equivalent to parts per million) mg/kg = milligrams per kilogram (equivalent to parts per million)
B = analyte was detected in the method or trip blank J = result estimated below the quantitation limit

FLI
FRIEND LABORATORY I · N · C

ONE RESEARCH CIRCLE WAVERLY, NY 14892-1532
TELEPHONE (607) 565-3500 FAX (607) 565-4083

DATE 24-FEB-1999

LAB SAMPLE ID : L30741-18

Malcolm Pirnie, Inc. - Orchard Park
Daniel Riker
40 Centre Drive
PO Box 1938
Buffalo, NY 14219-0138

SAMPLE SOURCE	HANNA FURNACE, 3587-001
ORIGIN	N-1
DESCRIPTION	COMPOSITE
SAMPLED ON	29-JAN-99 00:00 by CLIENT
DATE RECEIVED	02-FEB-99 11:00
P.O. NO	N/A

CAS #	Analysis Performed	Result	Units	Detection Limit	Date Analyzed	Method	Notebook Reference
	Sodium	454	mg/kg	34.1	11-FEB-99	EPA 6010A	99-036-01
	Thallium	U	mg/kg	11.0	11-FEB-99	EPA 6010	99-036-01
	Vanadium	14.9	mg/kg	1.71	11-FEB-99	EPA 6010A	99-036-01
	Zinc	63.7	mg/kg	3.41	11-FEB-99	EPA 6010A	99-036-01
108-95-2	Phenol	U	ug/kg	420	16-FEB-99	EPA 8270	97-186-10981
95-57-8	2-Chlorophenol	U	ug/kg	420	16-FEB-99	EPA 8270	97-186-10981
95-48-7	2-Methylphenol	U	ug/kg	420	16-FEB-99	EPA 8270	97-186-1098
	3-Methylphenol/4-Methylphenol	U	ug/kg	420	16-FEB-99	EPA 8270	97-186-1098
88-75-5	2-Nitrophenol	U	ug/kg	420	16-FEB-99	EPA 8270	97-186-1098
105-67-9	2,4-Dimethylphenol	U	ug/kg	420	16-FEB-99	EPA 8270	97-186-10981
120-83-2	2,4-Dichlorophenol	U	ug/kg	420	16-FEB-99	EPA 8270	97-186-10981
91-20-3	Naphthalene	U	ug/kg	420	16-FEB-99	EPA 8270	97-186-1098
59-50-7	4-Chloro-3-methylphenol	U	ug/kg	830	16-FEB-99	EPA 8270	97-186-1098
91-57-6	2-Methylnaphthalene	U	ug/kg	420	16-FEB-99	EPA 8270	97-186-10981
208-96-8	Acenaphthylene	U	ug/kg	420	16-FEB-99	EPA 8270	97-186-10981
83-32-9	Acenaphthene	U	ug/kg	420	16-FEB-99	EPA 8270	97-186-10981
51-28-4	2,4-Dinitrophenol	U	ug/kg	1700	16-FEB-99	EPA 8270	97-186-1098
100-02-7	4-Nitrophenol	U	ug/kg	1700	16-FEB-99	EPA 8270	97-186-1098
534-52-1	2-Methyl-4,6-dinitrophenol	U	ug/kg	1700	16-FEB-99	EPA 8270	97-186-10981
87-86-5	Pentachlorophenol	U	ug/kg	1700	16-FEB-99	EPA 8270	97-186-10981
85-01-8	Phenanthrene	U	ug/kg	420	16-FEB-99	EPA 8270	97-186-1098
120-12-7	Anthracene	U	ug/kg	420	16-FEB-99	EPA 8270	97-186-1098
206-44-0	Fluoranthene	110 J	ug/kg	420	16-FEB-99	EPA 8270	97-186-1098
129-00-0	Pyrene	U	ug/kg	420	16-FEB-99	EPA 8270	97-186-10981
56-55-3	Benzo(a)anthracene	93 J	ug/kg	420	16-FEB-99	EPA 8270	97-186-10981
215-01-9	Chrysene	120 J	ug/kg	420	16-FEB-99	EPA 8270	97-186-1098
205-99-2	Benzo(b)fluoranthene	260 J	ug/kg	420	16-FEB-99	EPA 8270	97-186-1098
207-88-9	Benzo(k)fluoranthene	U	ug/kg	420	16-FEB-99	EPA 8270	97-186-1098
50-32-8	Benzo(a)pyrene	150 J	ug/kg	420	16-FEB-99	EPA 8270	97-186-10981
193-39-5	Indeno(1,2,3-cd)pyrene	U	ug/kg	420	16-FEB-99	EPA 8270	97-186-10981
53-7-3	Dibenzo(a,h)anthracene	U	ug/kg	420	16-FEB-99	EPA 8270	97-186-1098
191-24-2	Benzo(g,h,i)perylene	99 J	ug/kg	420	16-FEB-99	EPA 8270	97-186-1098
	Extraction Information:				09-FEB-99		98-174-55
Surrogate Recovery:							
	2-Fluorophenol	65	%				97-186-1098

U = None Detected

QC NY 10252 NJ 73168 PA 68180 EPA NY 00033

Approved by: _____
Lab Director

KEY: ND or U = None Detected < = less than ug/L = micrograms per liter (equivalent to parts per billion)
mg/L = milligrams per liter (equivalent to parts per million) mg/kg = milligrams per kilogram (equivalent to parts per million)
B = analyte was detected in the method or trip blank J = result estimated below the quantitation limit

FLI
FRIEND LABORATORY I · N · C

ONE RESEARCH CIRCLE WAVERLY, NY 14892-1532
TELEPHONE (607) 565-3500 FAX (607) 565-4083

DATE 24-FEB-1999

LAB SAMPLE ID : L30741-18

Malcolm Pirnie, Inc. - Orchard Park
Daniel Riker
40 Centre Drive
PO Box 1938
Buffalo, NY 14219-0138

SAMPLE SOURCE	HANNA FURNACE, 3587-001
ORIGIN	N-1
DESCRIPTION	COMPOSITE
SAMPLED ON	29-JAN-99 00:00 by CLIENT
DATE RECEIVED	02-FEB-99 11:00
P.O. NO.	N/A

CAS #	Analysis Performed	Result	Units	Detection Limit	Date Analyzed	Method	Notebook Reference
	Phenol-d5	75	%				97-186-10981
	Nitrobenzene-d5	81	%				97-186-10981
	2-Fluorobiphenyl	83	%				97-186-10981
	2,4,6-Tribromophenol	52	%				97-186-10981
	Terphenyl-d14	86	%				97-186-10981

Analysis Comment: Results Calculated on a dry weight basis.

U = None Detected

QC NY 10252 NJ 73168 PA 68180 EPA NY 00033

Approved by: _____ Lab Director

KEY: ND or U = None Detected < = less than
mg/L = milligrams per liter (equivalent to parts per million)
B = analyte was detected in the method or trip blank
ug/L = micrograms per liter (equivalent to parts per billion)
mg/kg = milligrams per kilogram (equivalent to parts per million)
J = result estimated below the quantitation limit

FLI
FRIEND LABORATORY I · N · C

ONE RESEARCH CIRCLE WAVERLY, NY 14892-1532
TELEPHONE (607) 565-3500 FAX (607) 565-4083

DATE 24-FEB-1999

LAB SAMPLE ID : L30741-19

Malcolm Pirnie, Inc. - Orchard Park
Daniel Riker
40 Centre Drive
PO Box 1938
Buffalo, NY 14219-0138

SAMPLE SOURCE	HANNA FURNACE, 3587-001
ORIGIN	N-2
DESCRIPTION	COMPOSITE
SAMPLED ON	29-JAN-99 00:00 by CLIENT
DATE RECEIVED	02-FEB-99 11:00
P.O. NO.	N/A

CAS #	Analysis Performed	Result	Units	Detection Limit	Date Analyzed	Method	Notebook Reference
	Cyanide, Total	3.25	mg/kg	0.46	05-FEB-99	EPA 335.3	99-003-5
	Total Solids	46.27	%		03-FEB-99	CLP 3.0	97-070-47
	Aluminum	46200	mg/kg	63.0	22-FEB-99	EPA 6010A	99-036-05
	Antimony	11.2	mg/kg	10.4	11-FEB-99	EPA 6010A	99-036-01
	Arsenic	U	mg/kg	25.1	11-FEB-99	EPA 6010A	99-036-01
	Barium	416	mg/kg	3.35	11-FEB-99	EPA 6010A	99-036-01
	Beryllium	9.61	mg/kg	00.419	11-FEB-99	EPA 6010A	99-036-01
	Cadmium	U	mg/kg	1.05	11-FEB-99	EPA 6010A	99-036-01
	Calcium	296000	mg/kg	525.	11-FEB-99	EPA 6010A	99-036-01
	Chromium	9.05	mg/kg	2.10	11-FEB-99	EPA 6010A	99-036-01
	Cobalt	4.97	mg/kg	2.10	11-FEB-99	EPA 6010A	99-036-01
	Copper	12.3	mg/kg	3.56	11-FEB-99	EPA 6010A	99-036-01
	Iron	18000	mg/kg	33.6	22-FEB-99	EPA 6010A	99-036-05
	Lead	U	mg/kg	9.22	11-FEB-99	EPA 6010A	99-036-01
	Magnesium	16900	mg/kg	530.	22-FEB-99	EPA 6010A	99-036-05
	Manganese	2730	mg/kg	1.05	11-FEB-99	EPA 6010A	99-036-01
	Mercury	U	mg/kg	0.0220	10-FEB-99	EPA 7470	98-126-05
	Nickel	11.4	mg/kg	2.52	11-FEB-99	EPA 6010A	99-036-01
	Potassium	2240	mg/kg	105.	11-FEB-99	EPA 6010A	99-036-01
	Selenium	U	mg/kg	74.5	22-FEB-99	EPA 6010A	99-036-05
	Silver	U	mg/kg	2.10	11-FEB-99	EPA 6010A	99-036-01

U = None Detected

QC C NY 10252 NJ 73168 PA 68180 EPA NY 00033

Approved by: _____
Lab Director

KEY: ND or U = None Detected < = less than ug/L = micrograms per liter (equivalent to parts per billion)
mg/L = milligrams per liter (equivalent to parts per million) mg/kg = milligrams per kilogram (equivalent to parts per million)
B = analyte was detected in the method or trip blank J = result estimated below the quantitation limit

FLI
FRIEND LABORATORY I · N · C

ONE RESEARCH CIRCLE WAVERLY, NY 14892-1532
TELEPHONE (607) 565-3500 FAX (607) 565-4083

DATE 24-FEB-1999

LAB SAMPLE ID : L30741-19

Malcolm Pirnie, Inc. - Orchard Park
Daniel Riker
40 Centre Drive
PO Box 1938
Buffalo, NY 14219-0138

SAMPLE SOURCE	HANNA FURNACE, 3587-001
ORIGIN	N-2
DESCRIPTION	COMPOSITE
SAMPLED ON	29-JAN-99 00:00 by CLIENT
DATE RECEIVED	02-FEB-99 11:00
P.O. NO.	N/A

CAS #	Analysis Performed	Result	Units	Detection Limit	Date Analyzed	Method	Notebook Reference
	Sodium	568	mg/kg	41.9	11-FEB-99	EPA 6010A	99-036-01
	Thallium	U	mg/kg	13.6	11-FEB-99	EPA 6010	99-036-01
	Vanadium	17.2	mg/kg	2.10	11-FEB-99	EPA 6010A	99-036-01
	Zinc	U	mg/kg	4.19	11-FEB-99	EPA 6010A	99-036-01
108-95-2	Phenol	U	ug/kg	530	15-FEB-99	EPA 8270	97-186-10975
95-57-8	2-Chlorophenol	U	ug/kg	530	15-FEB-99	EPA 8270	97-186-10975
95-48-7	2-Methylphenol	U	ug/kg	530	15-FEB-99	EPA 8270	97-186-10975
	3-Methylphenol/4-Methylphenol	U	ug/kg	530	15-FEB-99	EPA 8270	97-186-10975
88-75-5	2-Nitrophenol	U	ug/kg	530	15-FEB-99	EPA 8270	97-186-10975
105-67-9	2,4-Dimethylphenol	U	ug/kg	530	15-FEB-99	EPA 8270	97-186-10975
120-83-2	2,4-Dichlorophenol	U	ug/kg	530	15-FEB-99	EPA 8270	97-186-10975
91-20-3	Naphthalene	U	ug/kg	530	15-FEB-99	EPA 8270	97-186-10975
59-50-7	4-Chloro-3-methylphenol	U	ug/kg	1100	15-FEB-99	EPA 8270	97-186-10975
91-57-6	2-Methylnaphthalene	U	ug/kg	530	15-FEB-99	EPA 8270	97-186-10975
208-96-8	Acenaphthylene	U	ug/kg	530	15-FEB-99	EPA 8270	97-186-10975
83-32-9	Acenaphthene	U	ug/kg	530	15-FEB-99	EPA 8270	97-186-10975
51-28-4	2,4-Dinitrophenol	U	ug/kg	2100	15-FEB-99	EPA 8270	97-186-10975
100-02-7	4-Nitrophenol	U	ug/kg	2100	15-FEB-99	EPA 8270	97-186-10975
534-52-1	2-Methyl-4,6-dinitrophenol	U	ug/kg	2100	15-FEB-99	EPA 8270	97-186-10975
87-86-5	Pentachlorophenol	U	ug/kg	2100	15-FEB-99	EPA 8270	97-186-10975
85-01-8	Phenanthrene	U	ug/kg	530	15-FEB-99	EPA 8270	97-186-10975
120-12-7	Anthracene	U	ug/kg	530	15-FEB-99	EPA 8270	97-186-10975
206-44-0	Fluoranthene	U	ug/kg	530	15-FEB-99	EPA 8270	97-186-10975
129-00-0	Pyrene	U	ug/kg	530	15-FEB-99	EPA 8270	97-186-10975
56-55-3	Benzo(a)anthracene	U	ug/kg	530	15-FEB-99	EPA 8270	97-186-10975
215-01-9	Chrysene	U	ug/kg	530	15-FEB-99	EPA 8270	97-186-10975
205-99-2	Benzo(b)fluoranthene	U	ug/kg	530	15-FEB-99	EPA 8270	97-186-10975
207-88-9	Benzo(k)fluoranthene	U	ug/kg	530	15-FEB-99	EPA 8270	97-186-10975
50-32-8	Benzo(a)pyrene	U	ug/kg	530	15-FEB-99	EPA 8270	97-186-10975
193-39-5	Indeno(1,2,3-cd)pyrene	U	ug/kg	530	15-FEB-99	EPA 8270	97-186-10975
53-7-3	Dibenzo(a,h)anthracene	U	ug/kg	530	15-FEB-99	EPA 8270	97-186-10975
191-24-2	Benzo(g,h,i)perylene	U	ug/kg	530	15-FEB-99	EPA 8270	97-186-10975
	Extraction Information:				09-FEB-99		98-174-55
Surrogate Recovery:							
	2-Fluorophenol	47	%				97-186-10975

U = None Detected

QC NY 10252 NJ 73168 PA 68180 EPA NY 00033

Approved by: _____
Lab Director

KEY: ND or U = None Detected < = less than ug/L = micrograms per liter (equivalent to parts per billion)
mg/L = milligrams per liter (equivalent to parts per million) mg/kg = milligrams per kilogram (equivalent to parts per million)
B = analyte was detected in the method or trip blank J = result estimated below the quantitation limit

FLI
FRIEND LABORATORY I · N · C

ONE RESEARCH CIRCLE WAVERLY, NY 14892-1532
TELEPHONE (607) 565-3500 FAX (607) 565-4083

DATE 24-FEB-1999

LAB SAMPLE ID : L30741-19

Malcolm Pirnie, Inc. - Orchard Park
Daniel Riker
40 Centre Drive
PO Box 1938
Buffalo, NY 14219-0138

SAMPLE SOURCE	HANNA FURNACE, 3587-001
ORIGIN	N-2
DESCRIPTION	COMPOSITE
SAMPLED ON	29-JAN-99 00:00 by CLIENT
DATE RECEIVED	02-FEB-99 11:00
P.O. NO.	N/A

CAS #	Analysis Performed	Result	Units	Detection Limit	Date Analyzed	Method	Notebook Reference
	Phenol-d5	73	%				97-186-1097
	Nitrobenzene-d5	82	%				97-186-1097
	2-Fluorobiphenyl	83	%				97-186-1097
	2,4,6-Tribromophenol	37	%				97-186-1097
	Terphenyl-d14	86	%				97-186-1097

Analysis Comment: Results Calculated on a dry weight basis.

U = None Detected

QC ____ NY 10252 NJ 73168 PA 68180 EPA NY 00033

Approved by: _____
Lab Director

KEY: ND or U = None Detected < = less than ug/L = micrograms per liter (equivalent to parts per billion)
mg/L = milligrams per liter (equivalent to parts per million) mg/kg = milligrams per kilogram (equivalent to parts per million)
B = analyte was detected in the method or trip blank J = result estimated below the quantitation limit

FLI
FRIEND LABORATORY INC

ONE RESEARCH CIRCLE WAVERLY, NY 14892-1532
TELEPHONE (607) 565-3500 FAX (607) 565-4083

DATE 24-FEB-1999

LAB SAMPLE ID : L30741-20

Malcolm Pirnie, Inc. - Orchard Park
Daniel Riker
40 Centre Drive
PO Box 1938
Buffalo, NY 14219-0138

SAMPLE SOURCE	HANNA FURNACE, 3587-001
ORIGIN	01
DESCRIPTION	COMPOSITE
SAMPLED ON	29-JAN-99 00:00 by CLIENT
DATE RECEIVED	02-FEB-99 11:00
P.O. NO.	N/A

CAS #	Analysis Performed	Result	Units	Detection Limit	Date Analyzed	Method	Notebook Reference
	Cyanide, Total	3.54	mg/kg	0.61	09-FEB-99	EPA 335.3	99-003-007
	Total Solids	77.56	%		03-FEB-99	CLP 3.0	97-070-47
	Aluminum	29100	mg/kg	9.70	22-FEB-99	EPA 6010A	99-036-05
	Antimony	7.4	mg/kg	6.53	11-FEB-99	EPA 6010A	99-036-01
	Arsenic	61.7	mg/kg	15.6	11-FEB-99	EPA 6010A	99-036-01
	Barium	365	mg/kg	2.09	11-FEB-99	EPA 6010A	99-036-01
	Beryllium	6.62	mg/kg	00.261	11-FEB-99	EPA 6010A	99-036-01
	Cadmium	U	mg/kg	0.6530	11-FEB-99	EPA 6010A	99-036-01
	Calcium	194000	mg/kg	326.	11-FEB-99	EPA 6010A	99-036-01
	Chromium	20.3	mg/kg	1.31	11-FEB-99	EPA 6010A	99-036-01
	Cobalt	4.12	mg/kg	1.31	11-FEB-99	EPA 6010A	99-036-01
	Copper	168	mg/kg	2.22	11-FEB-99	EPA 6010A	99-036-01
	Iron	56200	mg/kg	51.7	24-FEB-99	EPA 6010A	99-036-07
	Lead	245	mg/kg	5.75	11-FEB-99	EPA 6010A	99-036-01
	Magnesium	23900	mg/kg	64.6	22-FEB-99	EPA 6010A	99-036-05
	Manganese	10400	mg/kg	3.26	11-FEB-99	EPA 6010A	99-036-01
	Mercury	U	mg/kg	0.0120	10-FEB-99	EPA 7470	98-126-05
	Nickel	52.1	mg/kg	1.57	11-FEB-99	EPA 6010A	99-036-01
	Potassium	2090	mg/kg	65.3	11-FEB-99	EPA 6010A	99-036-01
	Selenium	U	mg/kg	90.5	24-FEB-99	EPA 6010A	99-036-07
	Silver	U	mg/kg	1.31	11-FEB-99	EPA 6010A	99-036-01

U = None Detected

QC NY 10252 NJ 73168 PA 68180 EPA NY 00033

Approved by: _____
Lab Director

KEY: ND or U = None Detected < = less than
mg/L = milligrams per liter (equivalent to parts per million)
B = analyte was detected in the method or trip blank
ug/L = micrograms per liter (equivalent to parts per billion)
mg/kg = milligrams per kilogram (equivalent to parts per million)
J = result estimated below the quantitation limit

FLI
FRIEND LABORATORY I · N · C

ONE RESEARCH CIRCLE WAVERLY, NY 14892-1532
TELEPHONE (607) 565-3500 FAX (607) 565-4083

DATE 24-FEB-1999

LAB SAMPLE ID : L30741-20

Malcolm Pirnie, Inc. - Orchard Park
Daniel Riker
40 Centre Drive
PO Box 1938
Buffalo, NY 14219-0138

SAMPLE SOURCE	HANNA FURNACE, 3587-001
ORIGIN	01
DESCRIPTION	COMPOSITE
SAMPLED ON	29-JAN-99 00:00 by CLIENT
DATE RECEIVED	02-FEB-99 11:00
P.O. NO.	N/A

CAS #	Analysis Performed	Result	Units	Detection Limit	Date Analyzed	Method	Notebook Reference
	Sodium	944	mg/kg	26.1	11-FEB-99	EPA 6010A	99-036-01
	Thallium	U	mg/kg	8.49	11-FEB-99	EPA 6010	99-036-01
	Vanadium	17.2	mg/kg	1.31	11-FEB-99	EPA 6010A	99-036-01
	Zinc	128	mg/kg	2.61	11-FEB-99	EPA 6010A	99-036-01
108-95-2	Phenol	U	ug/kg	300	16-FEB-99	EPA 8270	97-186-10987
95-57-8	2-Chlorophenol	U	ug/kg	300	16-FEB-99	EPA 8270	97-186-10987
95-48-7	2-Methylphenol	U	ug/kg	300	16-FEB-99	EPA 8270	97-186-1098
	3-Methylphenol/4-Methylphenol	U	ug/kg	300	16-FEB-99	EPA 8270	97-186-1098
88-75-5	2-Nitrophenol	U	ug/kg	300	16-FEB-99	EPA 8270	97-186-1098
105-67-9	2,4-Dimethylphenol	U	ug/kg	300	16-FEB-99	EPA 8270	97-186-10987
120-83-2	2,4-Dichlorophenol	U	ug/kg	300	16-FEB-99	EPA 8270	97-186-10987
91-20-3	Naphthalene	U	ug/kg	300	16-FEB-99	EPA 8270	97-186-1098
59-50-7	4-Chloro-3-methylphenol	U	ug/kg	600	16-FEB-99	EPA 8270	97-186-1098
91-57-6	2-Methylnaphthalene	U	ug/kg	300	16-FEB-99	EPA 8270	97-186-1098
208-96-8	Acenaphthylene	U	ug/kg	300	16-FEB-99	EPA 8270	97-186-10987
83-32-9	Acenaphthene	U	ug/kg	300	16-FEB-99	EPA 8270	97-186-10987
51-28-4	2,4-Dinitrophenol	U	ug/kg	1200	16-FEB-99	EPA 8270	97-186-1098
100-02-7	4-Nitrophenol	U	ug/kg	1200	16-FEB-99	EPA 8270	97-186-1098
534-52-1	2-Methyl-4,6-dinitrophenol	U	ug/kg	1200	16-FEB-99	EPA 8270	97-186-1098
87-86-5	Pentachlorophenol	U	ug/kg	1200	16-FEB-99	EPA 8270	97-186-10987
85-01-8	Phenanthrene	160 J	ug/kg	300	16-FEB-99	EPA 8270	97-186-1098
120-12-7	Anthracene	U	ug/kg	300	16-FEB-99	EPA 8270	97-186-1098
206-44-0	Fluoranthene	280 J	ug/kg	300	16-FEB-99	EPA 8270	97-186-1098
129-00-0	Pyrene	310	ug/kg	300	16-FEB-99	EPA 8270	97-186-10987
56-55-3	Benzo(a)anthracene	170 J	ug/kg	300	16-FEB-99	EPA 8270	97-186-10987
215-01-9	Chrysene	190 J	ug/kg	300	16-FEB-99	EPA 8270	97-186-1098
205-99-2	Benzo(b)fluoranthene	260 J	ug/kg	300	16-FEB-99	EPA 8270	97-186-1098
207-88-9	Benzo(k)fluoranthene	U	ug/kg	300	16-FEB-99	EPA 8270	97-186-1098
50-32-8	Benzo(a)pyrene	220 J	ug/kg	300	16-FEB-99	EPA 8270	97-186-10987
193-39-5	Indeno(1,2,3-cd)pyrene	U	ug/kg	300	16-FEB-99	EPA 8270	97-186-10987
53-7-3	Dibenzo(a,h)anthracene	U	ug/kg	300	16-FEB-99	EPA 8270	97-186-1098
191-24-2	Benzo(g,h,i)perylene	150 J	ug/kg	300	16-FEB-99	EPA 8270	97-186-1098
	Extraction Information:				09-FEB-99		98-174-55
Surrogate Recovery:							
	2-Fluorophenol	76	%				97-186-1098

U = None Detected

QC NY 10252 NJ 73168 PA 68180 EPA NY 00033

Approved by: _____ Lab Director

KEY: ND or U = None Detected < = less than ug/L = micrograms per liter (equivalent to parts per billion)
mg/L = milligrams per liter (equivalent to parts per million) mg/kg = milligrams per kilogram (equivalent to parts per million)
B = analyte was detected in the method or trip blank J = result estimated below the quantitation limit

FLI
FRIEND LABORATORY INC

ONE RESEARCH CIRCLE WAVERLY, NY 14892-1532
TELEPHONE (607) 565-3500 FAX (607) 565-4083

DATE 24-FEB-1999

LAB SAMPLE ID : L30741-20

Malcolm Pirnie, Inc. - Orchard Park
Daniel Riker
40 Centre Drive
PO Box 1938
Buffalo, NY 14219-0138

SAMPLE SOURCE	HANNA FURNACE, 3587-001
ORIGIN	01
DESCRIPTION	COMPOSITE
SAMPLED ON	29-JAN-99 00:00 by CLIENT
DATE RECEIVED	02-FEB-99 11:00
P.O. NO.	N/A

AS #	Analysis Performed	Result	Units	Detection Limit	Date Analyzed	Method	Notebook Reference
	Phenol-d5	83	%				97-186-10987
	Nitrobenzene-d5	84	%				97-186-10987
	2-Fluorobiphenyl	85	%				97-186-10987
	2,4,6-Tribromophenol	85	%				97-186-10987
	Terphenyl-d14	108	%				97-186-10987

Analysis Comment: Results Calculated on a dry weight basis.

J = None Detected

QC NY 10252 NJ 73168 PA 68180 EPA NY 00033

Approved by: _____
Lab Director

KEY: ND or U = None Detected < = less than ug/L = micrograms per liter (equivalent to parts per billion)
mg/L = milligrams per liter (equivalent to parts per million) mg/kg = milligrams per kilogram (equivalent to parts per million)
B = analyte was detected in the method or trip blank J = result estimated below the quantitation limit

FLI
FRIEND LABORATORY I · N · C

ONE RESEARCH CIRCLE WAVERLY, NY 14892-1532
TELEPHONE (607) 565-3500 FAX (607) 565-4083

DATE 24-FEB-1999

LAB SAMPLE ID : L30741-21

Malcolm Pirnie, Inc. - Orchard Park
Daniel Riker
40 Centre Drive
PO Box 1938
Buffalo, NY 14219-0138

SAMPLE SOURCE	HANNA FURNACE, 3587-001
ORIGIN	02
DESCRIPTION	COMPOSITE
SAMPLED ON	29-JAN-99 00:00 by CLIENT
DATE RECEIVED	02-FEB-99 11:00
P.O. NO.	N/A

CAS #	Analysis Performed	Result	Units	Detection Limit	Date Analyzed	Method	Notebook Reference
	Cyanide, Total	0.99	mg/kg	0.32	05-FEB-99	EPA 335.3	99-003-5
	Total Solids	52.83	%		03-FEB-99	CLP 3.0	97-070-47
	Aluminum	40900	mg/kg	13.9	22-FEB-99	EPA 6010A	99-036-05
	Antimony	U	mg/kg	9.17	11-FEB-99	EPA 6010A	99-036-01
	Arsenic	U	mg/kg	22.0	11-FEB-99	EPA 6010A	99-036-01
	Barium	310	mg/kg	2.94	11-FEB-99	EPA 6010A	99-036-01
	Beryllium	7.65	mg/kg	00.367	11-FEB-99	EPA 6010A	99-036-01
	Cadmium	U	mg/kg	458	11-FEB-99	EPA 6010A	99-036-01
	Calcium	236000	mg/kg	91.7	11-FEB-99	EPA 6010A	99-036-01
	Chromium	13.2	mg/kg	1.83	11-FEB-99	EPA 6010A	99-036-01
	Cobalt	3.69	mg/kg	1.83	11-FEB-99	EPA 6010A	99-036-01
	Copper	11.6	mg/kg	3.12	11-FEB-99	EPA 6010A	99-036-01
	Iron	8610	mg/kg	7.45	22-FEB-99	EPA 6010A	99-036-05
	Lead	U	mg/kg	8.07	11-FEB-99	EPA 6010A	99-036-01
	Magnesium	15700	mg/kg	93.1	22-FEB-99	EPA 6010A	99-036-05
	Manganese	3670	mg/kg	00.917	11-FEB-99	EPA 6010A	99-036-01
	Mercury	U	mg/kg	0.0200	10-FEB-99	EPA 7470	98-126-05
	Nickel	16.6	mg/kg	2.20	11-FEB-99	EPA 6010A	99-036-01
	Potassium	1700	mg/kg	91.7	11-FEB-99	EPA 6010A	99-036-01
	Selenium	U	mg/kg	65.2	22-FEB-99	EPA 6010A	99-036-05
	Silver	U	mg/kg	1.83	11-FEB-99	EPA 6010A	99-036-01

U = None Detected

QC ____ NY 10252 NJ 73168 PA 68180 EPA NY 00033

Approved by: _____ Lab Director

KEY: ND or U = None Detected; < = less than; ug/L = micrograms per liter (equivalent to parts per billion); mg/L = milligrams per liter (equivalent to parts per million); mg/kg = milligrams per kilogram (equivalent to parts per million); B = analyte was detected in the method or trip blank; J = result estimated below the quantitation limit

FLI
FRIEND LABORATORY I · N · C

ONE RESEARCH CIRCLE WAVERLY, NY 14892-1532
TELEPHONE (607) 565-3500 FAX (607) 565-4083

DATE 24-FEB-1999

LAB SAMPLE ID :L30741-21

Malcolm Pirnie, Inc. - Orchard Park
Daniel Riker
40 Centre Drive
PO Box 1938
Buffalo, NY 14219-0138

SAMPLE SOURCE	HANNA FURNACE, 3587-001
ORIGIN	02
DESCRIPTION	COMPOSITE
SAMPLED ON	29-JAN-99 00:00 by CLIENT
DATE RECEIVED	02-FEB-99 11:00
P.O. NO.	N/A

AS #	Analysis Performed	Result	Units	Detection Limit	Date Analyzed	Method	Notebook Reference
	Sodium	558	mg/kg	36.6	11-FEB-99	EPA 6010A	99-036-01
	Thallium	U	mg/kg	11.9	11-FEB-99	EPA 6010	99-036-01
	Vanadium	21.2	mg/kg	1.83	11-FEB-99	EPA 6010A	99-036-01
	Zinc	11.1	mg/kg	3.67	11-FEB-99	EPA 6010A	99-036-01
108-95-2	Phenol	U	ug/kg	460	15-FEB-99	EPA 8270	97-186-10976
95-57-8	2-Chlorophenol	U	ug/kg	460	15-FEB-99	EPA 8270	97-186-10976
95-48-7	2-Methylphenol	U	ug/kg	460	15-FEB-99	EPA 8270	97-186-10976
	3-Methylphenol/4-Methylphenol	U	ug/kg	460	15-FEB-99	EPA 8270	97-186-10976
88-75-5	2-Nitrophenol	U	ug/kg	460	15-FEB-99	EPA 8270	97-186-10976
105-67-9	2,4-Dimethylphenol	U	ug/kg	460	15-FEB-99	EPA 8270	97-186-10976
120-83-2	2,4-Dichlorophenol	U	ug/kg	460	15-FEB-99	EPA 8270	97-186-10976
91-20-3	Naphthalene	U	ug/kg	460	15-FEB-99	EPA 8270	97-186-10976
59-50-7	4-Chloro-3-methylphenol	U	ug/kg	920	15-FEB-99	EPA 8270	97-186-10976
91-57-6	2-Methylnaphthalene	U	ug/kg	460	15-FEB-99	EPA 8270	97-186-10976
208-96-8	Acenaphthylene	U	ug/kg	460	15-FEB-99	EPA 8270	97-186-10976
83-32-9	Acenaphthene	U	ug/kg	460	15-FEB-99	EPA 8270	97-186-10976
51-28-4	2,4-Dinitrophenol	U	ug/kg	1800	15-FEB-99	EPA 8270	97-186-10976
100-02-7	4-Nitrophenol	U	ug/kg	1800	15-FEB-99	EPA 8270	97-186-10976
534-52-1	2-Methyl-4,6-dinitrophenol	U	ug/kg	1800	15-FEB-99	EPA 8270	97-186-10976
87-86-5	Pentachlorophenol	U	ug/kg	1800	15-FEB-99	EPA 8270	97-186-10976
85-01-8	Phenanthrene	U	ug/kg	460	15-FEB-99	EPA 8270	97-186-10976
120-12-7	Anthracene	U	ug/kg	460	15-FEB-99	EPA 8270	97-186-10976
206-44-0	Fluoranthene	U	ug/kg	460	15-FEB-99	EPA 8270	97-186-10976
129-00-0	Pyrene	U	ug/kg	460	15-FEB-99	EPA 8270	97-186-10976
56-55-3	Benzo(a)anthracene	U	ug/kg	460	15-FEB-99	EPA 8270	97-186-10976
218-01-9	Chrysene	U	ug/kg	460	15-FEB-99	EPA 8270	97-186-10976
205-99-2	Benzo(b)fluoranthene	U	ug/kg	460	15-FEB-99	EPA 8270	97-186-10976
207-88-9	Benzo(k)fluoranthene	U	ug/kg	460	15-FEB-99	EPA 8270	97-186-10976
50-32-8	Benzo(a)pyrene	U	ug/kg	460	15-FEB-99	EPA 8270	97-186-10976
193-39-5	Indeno(1,2,3-cd)pyrene	U	ug/kg	460	15-FEB-99	EPA 8270	97-186-10976
53-7-3	Dibenzo(a,h)anthracene	U	ug/kg	460	15-FEB-99	EPA 8270	97-186-10976
191-24-2	Benzo(g,h,i)perylene	U	ug/kg	460	15-FEB-99	EPA 8270	97-186-10976
	Extraction Information:				09-FEB-99		98-174-55
Surrogate Recovery:							
	2-Fluorophenol	63	%				97-186-10976

U = None Detected

QC NY 10252 NJ 73168 PA 68180 EPA NY 00033

Approved by: _____
Lab Director

KEY: ND or U = None Detected < = less than
mg/L = milligrams per liter (equivalent to parts per million)
B = analyte was detected in the method or trip blank
ug/L = micrograms per liter (equivalent to parts per billion)
mg/kg = milligrams per kilogram (equivalent to parts per million)
J = result estimated below the quantitation limit

FLI
FRIEND LABORATORY I · N · C

ONE RESEARCH CIRCLE WAVERLY, NY 14892-1532
TELEPHONE (607) 565-3500 FAX (607) 565-4083

DATE 24-FEB-1999

LAB SAMPLE ID : L30741-21

Malcolm Pirnie, Inc. - Orchard Park
Daniel Riker
40 Centre Drive
PO Box 1938
Buffalo, NY 14219-0138

SAMPLE SOURCE	HANNA FURNACE, 3587-001
ORIGIN	02
DESCRIPTION	COMPOSITE
SAMPLED ON	29-JAN-99 00:00 by CLIENT
DATE RECEIVED	02-FEB-99 11:00
P.O. NO.	N/A

CAS #	Analysis Performed	Result	Units	Detection Limit	Date Analyzed	Method	Notebook Reference
	Phenol-d5	75	%				97-186-1097(
	Nitrobenzene-d5	86	%				97-186-1097(
	2-Fluorobiphenyl	85	%				97-186-1097(
	2,4,6-Tribromophenol	25	%				97-186-10976
	Terphenyl-d14	86	%				97-186-10976

Analysis Comment: Results Calculated on a dry weight basis.

U = None Detected

QC @ NY 10252 NJ 73168 PA 68180 EPA NY 00033

Approved by: _____
Lab Director

KEY: ND or U = None Detected < = less than
mg/L = milligrams per liter (equivalent to parts per million)
B = analyte was detected in the method or trip blank
ug/L = micrograms per liter (equivalent to parts per billion)
mg/kg = milligrams per kilogram (equivalent to parts per million)
J = result estimated below the quantitation limit

FLI
FRIEND LABORATORY I · N · C

ONE RESEARCH CIRCLE WAVERLY, NY 14892-1532
TELEPHONE (607) 565-3500 FAX (607) 565-4083

DATE 24-FEB-1999

LAB SAMPLE ID : L30741-22

Malcolm Pirnie, Inc. - Orchard Park
Daniel Riker
40 Centre Drive
PO Box 1938
Buffalo, NY 14219-0138

SAMPLE SOURCE	HANNA FURNACE, 3587-001
ORIGIN	02
DESCRIPTION	TCLP EXTRACT
SAMPLED ON	29-JAN-99 00:00 by CLIENT
DATE RECEIVED	02-FEB-99 11:00
P.O. NO.	N/A

CAS #	Analysis Performed	Result	Units	Detection Limit	Date Analyzed	Method	Notebook Reference
	Arsenic	U	mg/l	1.20	11-FEB-99	EPA 6010 TCLP	99-036-01
	Barium	0.212	mg/l	00.160	11-FEB-99	EPA 6010 TCLP	99-036-01
	Cadmium	U	mg/l	0.0500	11-FEB-99	EPA 6010 TCLP	99-036-01
	Chromium	U	mg/l	00.100	09-FEB-99	EPA 6010 TCLP	99-016-10
	Lead	U	mg/l	00.440	09-FEB-99	EPA 6010 TCLP	99-016-10
	Mercury	U	mg/l	0.0100	10-FEB-99	EPA 7470 TCLP	98-126-05
	Selenium	U	mg/l	00.700	11-FEB-99	EPA 6010 TCLP	99-036-01
	Silver	U	mg/l	00.100	09-FEB-99	EPA 6010 TCLP	99-016-10
75-01-4	Vinyl chloride	U	mg/l	0.03	05-FEB-99	TCLP 8260	98-189-5606
75-35-4	1,1-Dichloroethene	U	mg/l	0.03	05-FEB-99	TCLP 8260	98-189-5606
78-93-3	Methyl ethyl ketone	U	mg/l	0.03	05-FEB-99	TCLP 8260	98-189-5606
67-66-3	Chloroform	U	mg/l	0.03	05-FEB-99	TCLP 8260	98-189-5606
56-23-5	Carbon tetrachloride	U	mg/l	0.03	05-FEB-99	TCLP 8260	98-189-5606
71-43-2	Benzene	U	mg/l	0.03	05-FEB-99	TCLP 8260	98-189-5606
107-06-2	1,2-Dichloroethane	U	mg/l	0.03	05-FEB-99	TCLP 8260	98-189-5606
79-01-6	Trichloroethene	U	mg/l	0.03	05-FEB-99	TCLP 8260	98-189-5606
127-18-4	Tetrachloroethene	U	mg/l	0.03	05-FEB-99	TCLP 8260	98-189-5606
108-90-7	Chlorobenzene	U	mg/l	0.03	05-FEB-99	TCLP 8260	98-189-5606
106-46-7	1,4-Dichlorobenzene	U	mg/l	0.03	05-FEB-99	TCLP 8260	98-189-5606
Surrogate Recovery:							
	Dibromofluoromethane	96	%				98-189-5606
	Toluene-d8	94	%				98-189-5606
	4-Bromofluorobenzene	92	%				98-189-5606
58-89-9	Lindane	U	mg/l	0.005	11-FEB-99	TCLP 8080	98-183-5916
76-44-8	Heptachlor	U	mg/l	0.005	11-FEB-99	TCLP 8080	98-183-5916
1024-57-3	Heptachlor Epoxide	U	mg/l	0.005	11-FEB-99	TCLP 8080	98-183-5916
72-20-8	Endrin	U	mg/l	0.005	11-FEB-99	TCLP 8080	98-183-5916
72-43-5	Methoxychlor	U	mg/l	0.005	11-FEB-99	TCLP 8080	98-183-5916
57-74-9	Chlordane	U	mg/l	0.005	11-FEB-99	TCLP 8080	98-183-5916
8001-35-2	Toxaphene	U	mg/l	0.05	11-FEB-99	TCLP 8080	98-183-5916

U = None Detected

IC NY 10252 NJ 73168 PA 68180 EPA NY 00033

Approved by: _____
Lab Director

KEY: ND or U = None Detected < = less than ug/L = micrograms per liter (equivalent to parts per billion)
mg/L = milligrams per liter (equivalent to parts per million) mg/kg = milligrams per kilogram (equivalent to parts per million)
B = analyte was detected in the method or trip blank J = result estimated below the quantitation limit

FLI
FRIEND LABORATORY I · N · C

ONE RESEARCH CIRCLE WAVERLY, NY 14892-1532
TELEPHONE (607) 565-3500 FAX (607) 565-4083

DATE 24-FEB-1999

LAB SAMPLE ID : L30741-22

Malcolm Pirnie, Inc. - Orchard Park
Daniel Riker
40 Centre Drive
PO Box 1938
Buffalo, NY 14219-0138

SAMPLE SOURCE	HANNA FURNACE, 3587-001
ORIGIN	02
DESCRIPTION	TCLP EXTRACT
SAMPLED ON	29-JAN-99 00:00 by CLIENT
DATE RECEIVED	02-FEB-99 11:00
P.O. NO.	N/A

CAS #	Analysis Performed	Result	Units	Detection Limit	Date Analyzed	Method	Notebook Reference
Surrogate Recovery:							
	Tetrachloro-m-Xylene	98	%				98-183-5916
94-75-7	2,4-D	U	mg/l	0.4	11-FEB-99	TCLP 8150	98-080-2899
93-72-1	2,4,5-TP (Silvex)	U	mg/l	0.4	11-FEB-99	TCLP 8150	98-080-2899
Surrogate Recovery:							
	DCAA	57					98-080-2899
110-86-1	Pyridine	U	mg/l	0.05	08-FEB-99	TCLP 8270	97-186-10902
	o-Cresol	U	mg/l	0.05	08-FEB-99	TCLP 8270	97-186-10902
	p-Cresol/m-Cresol	U	mg/l	0.05	08-FEB-99	TCLP 8270	97-186-1090
67-72-1	Hexachloroethane	U	mg/l	0.05	08-FEB-99	TCLP 8270	97-186-1090
98-95-3	Nitrobenzene	U	mg/l	0.05	08-FEB-99	TCLP 8270	97-186-1090
87-68-3	Hexachlorobutadiene	U	mg/l	0.05	08-FEB-99	TCLP 8270	97-186-10902
88-06-2	2,4,6-Trichlorophenol	U	mg/l	0.05	08-FEB-99	TCLP 8270	97-186-10902
95-95-4	2,4,5-Trichlorophenol	U	mg/l	0.05	08-FEB-99	TCLP 8270	97-186-1090
121-14-2	2,4-Dinitrotoluene	U	mg/l	0.05	08-FEB-99	TCLP 8270	97-186-1090
118-74-1	Hexachlorobenzene	U	mg/l	0.05	08-FEB-99	TCLP 8270	97-186-1090
87-86-5	Pentachlorophenol	U	mg/l	0.2	08-FEB-99	TCLP 8270	97-186-10902
	Extraction Information:				05-FEB-99		98-174-52
Surrogate Recovery:							
	2-Fluorophenol	50	%				97-186-10902
	Phenol-d5	38	%				97-186-1090?
	Nitrobenzene-d5	80	%				97-186-1090
	2-Fluorobiphenyl	74	%				97-186-1090
	2,4,6-Tribromophenol	76	%				97-186-10902
	Terphenyl-d14	99	%				97-186-10902

U = None Detected

QC NY 10252 NJ 73168 PA 68180 EPA NY 00033

Approved by: _____ Lab Director

KEY: ND or U = None Detected < = less than ug/L = micrograms per liter (equivalent to parts per billion)
mg/L = milligrams per liter (equivalent to parts per million) mg/kg = milligrams per kilogram (equivalent to parts per million)
B = analyte was detected in the method or trip blank J = result estimated below the quantitation limit

FLI
FRIEND LABORATORY I · N · C

ONE RESEARCH CIRCLE WAVERLY, NY 14892-1532
TELEPHONE (607) 565-3500 FAX (607) 565-4083

DATE 24-FEB-1999

LAB SAMPLE ID : L30741-23

Malcolm Pirnie, Inc. - Orchard Park
Daniel Riker
40 Centre Drive
PO Box 1938
Buffalo, NY 14219-0138

SAMPLE SOURCE	HANNA FURNACE, 3587-001
ORIGIN	P-1
DESCRIPTION	COMPOSITE
SAMPLED ON	29-JAN-99 00:00 by CLIENT
DATE RECEIVED	02-FEB-99 11:00
P.O. NO.	N/A

CAS #	Analysis Performed	Result	Units	Detection Limit	Date Analyzed	Method	Notebook Reference
	Cyanide, Total	3.76	mg/kg	0.27	05-FEB-99	EPA 335.3	99-003-5
	Total Solids	69.4	%		03-FEB-99	CLP 3.0	97-070-47
	Aluminum	26600	mg/kg	10.8	22-FEB-99	EPA 6010A	99-036-05
	Antimony	10.1	mg/kg	6.97	11-FEB-99	EPA 6010A	99-036-01
	Arsenic	U	mg/kg	16.7	11-FEB-99	EPA 6010A	99-036-01
	Barium	272	mg/kg	2.23	11-FEB-99	EPA 6010A	99-036-01
	Beryllium	4.92	mg/kg	00.279	11-FEB-99	EPA 6010A	99-036-01
	Cadmium	U	mg/kg	3.48	11-FEB-99	EPA 6010A	99-036-01
	Calcium	139000	mg/kg	348.	11-FEB-99	EPA 6010A	99-036-01
	Chromium	23.4	mg/kg	1.40	11-FEB-99	EPA 6010A	99-036-01
	Cobalt	7.24	mg/kg	1.40	11-FEB-99	EPA 6010A	99-036-01
	Copper	96.4	mg/kg	2.37	11-FEB-99	EPA 6010A	99-036-01
	Iron	114000	mg/kg	29.0	22-FEB-99	EPA 6010A	99-036-05
	Lead	218	mg/kg	6.14	11-FEB-99	EPA 6010A	99-036-01
	Magnesium	16100	mg/kg	72.4	22-FEB-99	EPA 6010A	99-036-05
	Manganese	2020	mg/kg	00.697	11-FEB-99	EPA 6010A	99-036-01
	Mercury	U	mg/kg	0.0150	10-FEB-99	EPA 7470	98-126-05
	Nickel	23.7	mg/kg	1.67	11-FEB-99	EPA 6010A	99-036-01
	Potassium	1530	mg/kg	69.7	11-FEB-99	EPA 6010A	99-036-01
	Selenium	U	mg/kg	50.7	22-FEB-99	EPA 6010A	99-036-05
	Silver	U	mg/kg	1.40	11-FEB-99	EPA 6010A	99-036-01

U = None Detected

QC NY 10252 NJ 73168 PA 68180 EPA NY 00033

Approved by: _____
Lab Director

KEY: ND or U = None Detected < = less than ug/L = micrograms per liter (equivalent to parts per billion)
mg/L = milligrams per liter (equivalent to parts per million) mg/kg = milligrams per kilogram (equivalent to parts per million)
B = analyte was detected in the method or trip blank J = result estimated below the quantitation limit

FLI
FRIEND LABORATORY I · N · C

ONE RESEARCH CIRCLE WAVERLY, NY 14892-1532
TELEPHONE (607) 565-3500 FAX (607) 565-4083

DATE 24-FEB-1999

LAB SAMPLE ID : L30741-23

Malcolm Pirnie, Inc. - Orchard Park
Daniel Riker
40 Centre Drive
PO Box 1938
Buffalo, NY 14219-0138

SAMPLE SOURCE	HANNA FURNACE, 3587-001
ORIGIN	P-1
DESCRIPTION	COMPOSITE
SAMPLED ON	29-JAN-99 00:00 by CLIENT
DATE RECEIVED	02-FEB-99 11:00
P.O. NO.	N/A

CAS #	Analysis Performed	Result	Units	Detection Limit	Date Analyzed	Method	Notebook Reference
	Sodium	434	mg/kg	27.8	11-FEB-99	EPA 6010A	99-036-01
	Thallium	U	mg/kg	9.07	11-FEB-99	EPA 6010	99-036-01
	Vanadium	27.8	mg/kg	1.40	11-FEB-99	EPA 6010A	99-036-01
	Zinc	446	mg/kg	2.79	11-FEB-99	EPA 6010A	99-036-01
108-95-2	Phenol	U	ug/kg	340	15-FEB-99	EPA 8270	97-186-10980
95-57-8	2-Chlorophenol	U	ug/kg	340	15-FEB-99	EPA 8270	97-186-10980
95-48-7	2-Methylphenol	U	ug/kg	340	15-FEB-99	EPA 8270	97-186-1098
	3-Methylphenol/4-Methylphenol	U	ug/kg	340	15-FEB-99	EPA 8270	97-186-1098
88-75-5	2-Nitrophenol	U	ug/kg	340	15-FEB-99	EPA 8270	97-186-1098
105-67-9	2,4-Dimethylphenol	U	ug/kg	340	15-FEB-99	EPA 8270	97-186-10980
120-83-2	2,4-Dichlorophenol	U	ug/kg	340	15-FEB-99	EPA 8270	97-186-10980
91-20-3	Naphthalene	U	ug/kg	340	15-FEB-99	EPA 8270	97-186-1098
59-50-7	4-Chloro-3-methylphenol	U	ug/kg	680	15-FEB-99	EPA 8270	97-186-1098
91-57-6	2-Methylnaphthalene	U	ug/kg	340	15-FEB-99	EPA 8270	97-186-1098
208-96-8	Acenaphthylene	U	ug/kg	340	15-FEB-99	EPA 8270	97-186-10980
83-32-9	Acenaphthene	U	ug/kg	340	15-FEB-99	EPA 8270	97-186-10980
51-28-4	2,4-Dinitrophenol	U	ug/kg	1400	15-FEB-99	EPA 8270	97-186-1098
100-02-7	4-Nitrophenol	U	ug/kg	1400	15-FEB-99	EPA 8270	97-186-1098
534-52-1	2-Methyl-4,6-dinitrophenol	U	ug/kg	1400	15-FEB-99	EPA 8270	97-186-1098
87-86-5	Pentachlorophenol	U	ug/kg	1400	15-FEB-99	EPA 8270	97-186-10980
85-01-8	Phenanthrene	U	ug/kg	340	15-FEB-99	EPA 8270	97-186-1098
120-12-7	Anthracene	U	ug/kg	340	15-FEB-99	EPA 8270	97-186-1098
206-44-0	Fluoranthene	120 J	ug/kg	340	15-FEB-99	EPA 8270	97-186-1098
129-00-0	Pyrene	U	ug/kg	340	15-FEB-99	EPA 8270	97-186-10980
56-55-3	Benzo(a)anthracene	78 J	ug/kg	340	15-FEB-99	EPA 8270	97-186-10980
215-01-9	Chrysene	82 J	ug/kg	340	15-FEB-99	EPA 8270	97-186-1098
205-99-2	Benzo(b)fluoranthene	150 J	ug/kg	340	15-FEB-99	EPA 8270	97-186-1098
207-88-9	Benzo(k)fluoranthene	U	ug/kg	340	15-FEB-99	EPA 8270	97-186-1098
50-32-8	Benzo(a)pyrene	110 J	ug/kg	340	15-FEB-99	EPA 8270	97-186-10980
193-39-5	Indeno(1,2,3-cd)pyrene	U	ug/kg	340	15-FEB-99	EPA 8270	97-186-10980
53-7-3	Dibenzo(a,h)anthracene	U	ug/kg	340	15-FEB-99	EPA 8270	97-186-1098
191-24-2	Benzo(g,h,i)perylene	95 J	ug/kg	340	15-FEB-99	EPA 8270	97-186-1098
	Extraction Information:				09-FEB-99		98-174-55
Surrogate Recovery:							
	2-Fluorophenol	77	%				97-186-1098

U = None Detected

QC (U) NY 10252 NJ 73168 PA 68180 EPA NY 00033

Approved by: _____ Lab Director

KEY: ND or U = None Detected; < = less than; ug/L = micrograms per liter (equivalent to parts per billion); mg/L = milligrams per liter (equivalent to parts per million); mg/kg = milligrams per kilogram (equivalent to parts per million); B = analyte was detected in the method or trip blank; J = result estimated below the quantitation limit

FLI
FRIEND LABORATORY I · N · C

ONE RESEARCH CIRCLE WAVERLY, NY 14892-1532
TELEPHONE (607) 565-3500 FAX (607) 565-4083

DATE 24-FEB-1999

LAB SAMPLE ID : L30741-23

Malcolm Pirnie, Inc. - Orchard Park
Daniel Riker
40 Centre Drive
PO Box 1938
Buffalo, NY 14219-0138

SAMPLE SOURCE	HANNA FURNACE, 3587-001
ORIGIN	P-1
DESCRIPTION	COMPOSITE
SAMPLED ON	29-JAN-99 00:00 by CLIENT
DATE RECEIVED	02-FEB-99 11:00
P.O. NO.	N/A

CAS #	Analysis Performed	Result	Units	Detection Limit	Date Analyzed	Method	Notebook Reference
	Phenol-d5	79	%				97-186-10980
	Nitrobenzene-d5	89	%				97-186-10980
	2-Fluorobiphenyl	90	%				97-186-10980
	2,4,6-Tribromophenol	80	%				97-186-10980
	Terphenyl-d14	93	%				97-186-10980

Analysis Comment: Results Calculated on a dry weight basis.

U = None Detected

QC (U) NY 10252 NJ 73168 PA 68180 EPA NY 00033

Approved by: _____
Lab Director

KEY: ND or U = None Detected < = less than
mg/L = milligrams per liter (equivalent to parts per million)
B = analyte was detected in the method or trip blank
ug/L = micrograms per liter (equivalent to parts per billion)
mg/kg = milligrams per kilogram (equivalent to parts per million)
J = result estimated below the quantitation limit

FLI
FRIEND LABORATORY I · N · C

ONE RESEARCH CIRCLE WAVERLY, NY 14892-1532
TELEPHONE (607) 565-3500 FAX (607) 565-4083

DATE 24-FEB-1999

LAB SAMPLE ID : L30741-24

Malcolm Pirnie, Inc. - Orchard Park
Daniel Riker
40 Centre Drive
PO Box 1938
Buffalo, NY 14219-0138

SAMPLE SOURCE	HANNA FURNACE, 3587-001
ORIGIN	P-2
DESCRIPTION	COMPOSITE
SAMPLED ON	29-JAN-99 00:00 by CLIENT
DATE RECEIVED	02-FEB-99 11:00
P.O. NO.	N/A

CAS #	Analysis Performed	Result	Units	Detection Limit	Date Analyzed	Method	Notebook Reference
	Cyanide, Total	26	mg/kg	0.38	05-FEB-99	EPA 335.3	99-003-5
	Total Solids	46.57	%		03-FEB-99	CLP 3.0	97-070-47
	Aluminum	23900	mg/kg	15.8	22-FEB-99	EPA 6010A	99-036-05
	Antimony	11.9	mg/kg	11.1	11-FEB-99	EPA 6010A	99-036-01
	Arsenic	U	mg/kg	26.7	11-FEB-99	EPA 6010A	99-036-01
	Barium	344	mg/kg	3.57	11-FEB-99	EPA 6010A	99-036-01
	Beryllium	6.6	mg/kg	00.446	11-FEB-99	EPA 6010A	99-036-01
	Cadmium	U	mg/kg	1.12	11-FEB-99	EPA 6010A	99-036-01
	Calcium	188000	mg/kg	555.	11-FEB-99	EPA 6010A	99-036-01
	Chromium	12.5	mg/kg	2.23	11-FEB-99	EPA 6010A	99-036-01
	Cobalt	9.91	mg/kg	2.23	11-FEB-99	EPA 6010A	99-036-01
	Copper	14.9	mg/kg	3.79	11-FEB-99	EPA 6010A	99-036-01
	Iron	105000	mg/kg	42.2	22-FEB-99	EPA 6010A	99-036-05
	Lead	34.1	mg/kg	9.81	11-FEB-99	EPA 6010A	99-036-01
	Magnesium	8200	mg/kg	106.	22-FEB-99	EPA 6010A	99-036-05
	Manganese	2100	mg/kg	1.12	11-FEB-99	EPA 6010A	99-036-01
	Mercury	U	mg/kg	0.0230	10-FEB-99	EPA 7470	98-126-05
	Nickel	16.1	mg/kg	2.68	11-FEB-99	EPA 6010A	99-036-01
	Potassium	1280	mg/kg	111.	11-FEB-99	EPA 6010A	99-036-01
	Selenium	U	mg/kg	74.0	22-FEB-99	EPA 6010A	99-036-05
	Silver	U	mg/kg	2.23	11-FEB-99	EPA 6010A	99-036-01

U = None Detected

QC _____ NY 10252 NJ 73168 PA 68180 EPA NY 00033

Approved by: _____
Lab Director

KEY: ND or U = None Detected < = less than ug/L = micrograms per liter (equivalent to parts per billion)
mg/L = milligrams per liter (equivalent to parts per million) mg/kg = milligrams per kilogram (equivalent to parts per million)
B = analyte was detected in the method or trip blank J = result estimated below the quantitation limit

FLI
FRIEND LABORATORY I · N · C

ONE RESEARCH CIRCLE WAVERLY, NY 14892-1532
TELEPHONE (607) 565-3500 FAX (607) 565-4083

DATE 24-FEB-1999

LAB SAMPLE ID : L30741-24

Malcolm Pirnie, Inc. - Orchard Park
Daniel Riker
40 Centre Drive
PO Box 1938
Buffalo, NY 14219-0138

SAMPLE SOURCE	HANNA FURNACE, 3587-001
ORIGIN	P-2
DESCRIPTION	COMPOSITE
SAMPLED ON	29-JAN-99 00:00 by CLIENT
DATE RECEIVED	02-FEB-99 11:00
P.O. NO.	N/A

CAS #	Analysis Performed	Result	Units	Detection Limit	Date Analyzed	Method	Notebook Reference
	Sodium	391	mg/kg	44.5	11-FEB-99	EPA 6010A	99-036-01
	Thallium	U	mg/kg	14.4	11-FEB-99	EPA 6010	99-036-01
	Vanadium	34.5	mg/kg	2.23	11-FEB-99	EPA 6010A	99-036-01
	Zinc	263	mg/kg	4.46	11-FEB-99	EPA 6010A	99-036-01
108-95-2	Phenol	U	ug/kg	520	15-FEB-99	EPA 8270	97-186-10979
95-57-8	2-Chlorophenol	U	ug/kg	520	15-FEB-99	EPA 8270	97-186-10979
95-48-7	2-Methylphenol	U	ug/kg	520	15-FEB-99	EPA 8270	97-186-10979
	3-Methylphenol/4-Methylphenol	U	ug/kg	520	15-FEB-99	EPA 8270	97-186-10979
88-75-5	2-Nitrophenol	U	ug/kg	520	15-FEB-99	EPA 8270	97-186-10979
105-67-9	2,4-Dimethylphenol	U	ug/kg	520	15-FEB-99	EPA 8270	97-186-10979
120-83-2	2,4-Dichlorophenol	U	ug/kg	520	15-FEB-99	EPA 8270	97-186-10979
91-20-3	Naphthalene	U	ug/kg	520	15-FEB-99	EPA 8270	97-186-10979
59-50-7	4-Chloro-3-methylphenol	U	ug/kg	1000	15-FEB-99	EPA 8270	97-186-10979
91-57-6	2-Methylnaphthalene	U	ug/kg	520	15-FEB-99	EPA 8270	97-186-10979
208-96-8	Acenaphthylene	U	ug/kg	520	15-FEB-99	EPA 8270	97-186-10979
83-32-9	Acenaphthene	U	ug/kg	520	15-FEB-99	EPA 8270	97-186-10979
51-28-4	2,4-Dinitrophenol	U	ug/kg	2100	15-FEB-99	EPA 8270	97-186-10979
100-02-7	4-Nitrophenol	U	ug/kg	2100	15-FEB-99	EPA 8270	97-186-10979
534-52-1	2-Methyl-4,6-dinitrophenol	U	ug/kg	2100	15-FEB-99	EPA 8270	97-186-10979
87-86-5	Pentachlorophenol	U	ug/kg	2100	15-FEB-99	EPA 8270	97-186-10979
85-01-8	Phenanthrene	U	ug/kg	520	15-FEB-99	EPA 8270	97-186-10979
120-12-7	Anthracene	U	ug/kg	520	15-FEB-99	EPA 8270	97-186-10979
206-44-0	Fluoranthene	U	ug/kg	520	15-FEB-99	EPA 8270	97-186-10979
129-00-0	Pyrene	U	ug/kg	520	15-FEB-99	EPA 8270	97-186-10979
56-55-3	Benzo(a)anthracene	U	ug/kg	520	15-FEB-99	EPA 8270	97-186-10979
215-01-9	Chrysene	U	ug/kg	520	15-FEB-99	EPA 8270	97-186-10979
205-99-2	Benzo(b)fluoranthene	U	ug/kg	520	15-FEB-99	EPA 8270	97-186-10979
207-88-9	Benzo(k)fluoranthene	U	ug/kg	520	15-FEB-99	EPA 8270	97-186-10979
50-32-8	Benzo(a)pyrene	U	ug/kg	520	15-FEB-99	EPA 8270	97-186-10979
193-39-5	Indeno(1,2,3-cd)pyrene	U	ug/kg	520	15-FEB-99	EPA 8270	97-186-10979
53-7-3	Dibenzo(a,h)anthracene	U	ug/kg	520	15-FEB-99	EPA 8270	97-186-10979
191-24-2	Benzo(g,h,i)perylene	U	ug/kg	520	15-FEB-99	EPA 8270	97-186-10979
	Extraction Information:				09-FEB-99		98-174-55
Surrogate Recovery:							
	2-Fluorophenol	60	%				97-186-10979

U = None Detected

QC NY 10252 NJ 73168 PA 68180 EPA NY 00033

Approved by: Lab Director

KEY: ND or U = None Detected < = less than ug/L = micrograms per liter (equivalent to parts per billion)
mg/L = milligrams per liter (equivalent to parts per million) mg/kg = milligrams per kilogram (equivalent to parts per million)
B = analyte was detected in the method or trip blank J = result estimated below the quantitation limit

FLI
FRIEND LABORATORY I · N · C

ONE RESEARCH CIRCLE WAVERLY, NY 14892-1532
TELEPHONE (607) 565-3500 FAX (607) 565-4083

DATE 24-FEB-1999

LAB SAMPLE ID : L30741-24

Malcolm Pirnie, Inc. - Orchard Park
Daniel Riker
40 Centre Drive
PO Box 1938
Buffalo, NY 14219-0138

SAMPLE SOURCE	HANNA FURNACE, 3587-001
ORIGIN	P-2
DESCRIPTION	COMPOSITE
SAMPLED ON	29-JAN-99 00:00 by CLIENT
DATE RECEIVED	02-FEB-99 11:00
P.O. NO.	N/A

CAS #	Analysis Performed	Result	Units	Detection Limit	Date Analyzed	Method	Notebook Reference
	Phenol-d5	72	%				97-186-10979
	Nitrobenzene-d5	78	%				97-186-10979
	2-Fluorobiphenyl	79	%				97-186-10979
	2,4,6-Tribromophenol	27	%				97-186-10979
	Terphenyl-d14	81	%				97-186-10979

Analysis Comment: Results Calculated on a dry weight basis.

U = None Detected

QC ___ NY 10252 NJ 73168 PA 68180 EPA NY 00033

Approved by: _____
Lab Director

KEY: ND or U = None Detected < = less than ug/L = micrograms per liter (equivalent to parts per billion)
mg/L = milligrams per liter (equivalent to parts per million) mg/kg = milligrams per kilogram (equivalent to parts per million)
B = analyte was detected in the method or trip blank J = result estimated below the quantitation limit

FLI
FRIEND LABORATORY I · N · C

ONE RESEARCH CIRCLE WAVERLY, NY 14892-1532
TELEPHONE (607) 565-3500 FAX (607) 565-4083

DATE 24-FEB-1999

LAB SAMPLE ID : L30741-25

Malcolm Pirnie, Inc. - Orchard Park
Daniel Riker
40 Centre Drive
PO Box 1938
Buffalo, NY 14219-0138

SAMPLE SOURCE	HANNA FURNACE, 3587-001
ORIGIN	Q-1
DESCRIPTION	COMPOSITE
SAMPLED ON	29-JAN-99 00:00 by CLIENT
DATE RECEIVED	02-FEB-99 11:00
P.O. NO.	N/A

CAS #	Analysis Performed	Result	Units	Detection Limit	Date Analyzed	Method	Notebook Reference
	Cyanide, Total	11.3	mg/kg	0.32	05-FEB-99	EPA 335.3	99-003-5
	Total Solids	78.74	%		03-FEB-99	CLP 3.0	97-070-47
	Aluminum	16300	mg/kg	9.38	22-FEB-99	EPA 6010A	99-036-05
	Antimony	7.42	mg/kg	5.85	11-FEB-99	EPA 6010A	99-036-01
	Arsenic	U	mg/kg	14.0	11-FEB-99	EPA 6010A	99-036-01
	Barium	80.7	mg/kg	1.87	11-FEB-99	EPA 6010A	99-036-01
	Beryllium	1.44	mg/kg	00.234	11-FEB-99	EPA 6010A	99-036-01
	Cadmium	U	mg/kg	2.93	11-FEB-99	EPA 6010A	99-036-01
	Calcium	73400	mg/kg	292.	11-FEB-99	EPA 6010A	99-036-01
	Chromium	78.2	mg/kg	1.17	11-FEB-99	EPA 6010A	99-036-01
	Cobalt	7.03	mg/kg	1.17	11-FEB-99	EPA 6010A	99-036-01
	Copper	98.9	mg/kg	1.99	11-FEB-99	EPA 6010A	99-036-01
	Iron	103000	mg/kg	25.0	22-FEB-99	EPA 6010A	99-036-05
	Lead	618	mg/kg	5.15	11-FEB-99	EPA 6010A	99-036-01
	Magnesium	14100	mg/kg	62.5	22-FEB-99	EPA 6010A	99-036-05
	Manganese	1950	mg/kg	00.585	11-FEB-99	EPA 6010A	99-036-01
	Mercury	.025	mg/kg	0.0120	10-FEB-99	EPA 7470	98-126-05
	Nickel	42.8	mg/kg	1.41	11-FEB-99	EPA 6010A	99-036-01
	Potassium	716	mg/kg	58.5	11-FEB-99	EPA 6010A	99-036-01
	Selenium	U	mg/kg	43.8	22-FEB-99	EPA 6010A	99-036-05
	Silver	U	mg/kg	5.85	11-FEB-99	EPA 6010A	99-036-01

U = None Detected

QC NY 10252 NJ 73168 PA 68180 EPA NY 00033

Approved by: _____ Lab Director

KEY: ND or U = None Detected < = less than
mg/L = milligrams per liter (equivalent to parts per million)
B = analyte was detected in the method or trip blank
ug/L = micrograms per liter (equivalent to parts per billion)
mg/kg = milligrams per kilogram (equivalent to parts per million)
J = result estimated below the quantitation limit

FLI
FRIEND LABORATORY I · N · C

ONE RESEARCH CIRCLE WAVERLY, NY 14892-1532
TELEPHONE (607) 565-3500 FAX (607) 565-4083

DATE 24-FEB-1999

LAB SAMPLE ID : L30741-25

Malcolm Pirnie, Inc. - Orchard Park
Daniel Riker
40 Centre Drive
PO Box 1938
Buffalo, NY 14219-0138

SAMPLE SOURCE	HANNA FURNACE, 3587-001
ORIGIN	Q-1
DESCRIPTION	COMPOSITE
SAMPLED ON	29-JAN-99 00:00 by CLIENT
DATE RECEIVED	02-FEB-99 11:00
P.O. NO.	N/A

CAS #	Analysis Performed	Result	Units	Detection Limit	Date Analyzed	Method	Notebook Reference
	Sodium	191	mg/kg	23.4	11-FEB-99	EPA 6010A	99-036-01
	Thallium	U	mg/kg	7.61	11-FEB-99	EPA 6010	99-036-01
	Vanadium	44.4	mg/kg	1.17	11-FEB-99	EPA 6010A	99-036-01
	Zinc	472	mg/kg	2.34	11-FEB-99	EPA 6010A	99-036-01
108-95-2	Phenol	U	ug/kg	320	16-FEB-99	EPA 8270	97-186-10997
95-57-8	2-Chlorophenol	U	ug/kg	320	16-FEB-99	EPA 8270	97-186-10997
95-48-7	2-Methylphenol	U	ug/kg	320	16-FEB-99	EPA 8270	97-186-1099
	3-Methylphenol/4-Methylphenol	U	ug/kg	320	16-FEB-99	EPA 8270	97-186-1099
88-75-5	2-Nitrophenol	U	ug/kg	320	16-FEB-99	EPA 8270	97-186-1099
105-67-9	2,4-Dimethylphenol	U	ug/kg	320	16-FEB-99	EPA 8270	97-186-10997
120-83-2	2,4-Dichlorophenol	U	ug/kg	320	16-FEB-99	EPA 8270	97-186-10997
91-20-3	Naphthalene	65 J	ug/kg	320	16-FEB-99	EPA 8270	97-186-1099
59-50-7	4-Chloro-3-methylphenol	U	ug/kg	630	16-FEB-99	EPA 8270	97-186-1099
91-57-6	2-Methylnaphthalene	U	ug/kg	320	16-FEB-99	EPA 8270	97-186-1099
208-96-8	Acenaphthylene	U	ug/kg	320	16-FEB-99	EPA 8270	97-186-10997
83-32-9	Acenaphthene	130 J	ug/kg	320	16-FEB-99	EPA 8270	97-186-10997
51-28-4	2,4-Dinitrophenol	U	ug/kg	1300	16-FEB-99	EPA 8270	97-186-1099
100-02-7	4-Nitrophenol	U	ug/kg	1300	16-FEB-99	EPA 8270	97-186-1099
534-52-1	2-Methyl-4,6-dinitrophenol	U	ug/kg	1300	16-FEB-99	EPA 8270	97-186-1099
87-86-5	Pentachlorophenol	U	ug/kg	1300	16-FEB-99	EPA 8270	97-186-10997
85-01-8	Phenanthrene	1200	ug/kg	320	16-FEB-99	EPA 8270	97-186-1099
120-12-7	Anthracene	340	ug/kg	320	16-FEB-99	EPA 8270	97-186-1099
206-44-0	Fluoranthene	1700	ug/kg	320	16-FEB-99	EPA 8270	97-186-1099
129-00-0	Pyrene	1600	ug/kg	320	16-FEB-99	EPA 8270	97-186-10997
56-55-3	Benzo(a)anthracene	980	ug/kg	320	16-FEB-99	EPA 8270	97-186-10997
215-01-9	Chrysene	990	ug/kg	320	16-FEB-99	EPA 8270	97-186-1099
205-99-2	Benzo(b)fluoranthene	1400	ug/kg	320	16-FEB-99	EPA 8270	97-186-1099
207-88-9	Benzo(k)fluoranthene	520	ug/kg	320	16-FEB-99	EPA 8270	97-186-1099
50-32-8	Benzo(a)pyrene	990	ug/kg	320	16-FEB-99	EPA 8270	97-186-10997
193-39-5	Indeno(1,2,3-cd)pyrene	460	ug/kg	320	16-FEB-99	EPA 8270	97-186-10997
53-7-3	Dibenzo(a,h)anthracene	U	ug/kg	320	16-FEB-99	EPA 8270	97-186-1099
191-24-2	Benzo(g,h,i)perylene	480	ug/kg	320	16-FEB-99	EPA 8270	97-186-1099
	Extraction Information:				09-FEB-99		98-174-55
Surrogate Recovery:							
	2-Fluorophenol	49	%				97-186-1099

U = None Detected

QC NY 10252 NJ 73168 PA 68180 EPA NY 00033

Approved by: _____ Lab Director

KEY: ND or U = None Detected; < = less than; ug/L = micrograms per liter (equivalent to parts per billion); mg/L = milligrams per liter (equivalent to parts per million); mg/kg = milligrams per kilogram (equivalent to parts per million); B = analyte was detected in the method or trip blank; J = result estimated below the quantitation limit

FLI
FRIEND LABORATORY INC

ONE RESEARCH CIRCLE WAVERLY, NY 14892-1532
TELEPHONE (607) 565-3500 FAX (607) 565-4083

DATE 24-FEB-1999

LAB SAMPLE ID : L30741-25

Malcolm Pirnie, Inc. - Orchard Park
Daniel Riker
40 Centre Drive
PO Box 1938
Buffalo, NY 14219-0138

SAMPLE SOURCE	HANNA FURNACE, 3587-001
ORIGIN	Q-1
DESCRIPTION	COMPOSITE
SAMPLED ON	29-JAN-99 00:00 by CLIENT
DATE RECEIVED	02-FEB-99 11:00
P.O. NO.	N/A

CAS #	Analysis Performed	Result	Units	Detection Limit	Date Analyzed	Method	Notebook Reference
	Phenol-d5	53	%				97-186-10997
	Nitrobenzene-d5	68	%				97-186-10997
	2-Fluorobiphenyl	70	%				97-186-10997
	2,4,6-Tribromophenol	66	%				97-186-10997
	Terphenyl-d14	78	%				97-186-10997

Analysis Comment: Results Calculated on a dry weight basis.

U = None Detected

NELAC NY 10252 NJ 73168 PA 68180 EPA NY 00033

Approved by: _____
Lab Director

KEY: ND or U = None Detected < = less than
mg/L = milligrams per liter (equivalent to parts per million)
B = analyte was detected in the method or trip blank
ug/L = micrograms per liter (equivalent to parts per billion)
mg/kg = milligrams per kilogram (equivalent to parts per million)
J = result estimated below the quantitation limit

FLI
FRIEND LABORATORY I · N · C

ONE RESEARCH CIRCLE WAVERLY, NY 14892-1532
TELEPHONE (607) 565-3500 FAX (607) 565-4083

DATE 24-FEB-1999

LAB SAMPLE ID : L30741-26

Malcolm Pirnie, Inc. - Orchard Park
Daniel Riker
40 Centre Drive
PO Box 1938
Buffalo, NY 14219-0138

SAMPLE SOURCE	HANNA FURNACE, 3587-001
ORIGIN	Q-2
DESCRIPTION	COMPOSITE
SAMPLED ON	29-JAN-99 00:00 by CLIENT
DATE RECEIVED	02-FEB-99 11:00
P.O. NO.	N/A

CAS #	Analysis Performed	Result	Units	Detection Limit	Date Analyzed	Method	Notebook Reference
	Cyanide, Total	1.05	mg/kg	0.37	05-FEB-99	EPA 335.3	99-003-5
	Total Solids	81.57	%		03-FEB-99	CLP 3.0	97-070-47
	Aluminum	12200	mg/kg	9.11	22-FEB-99	EPA 6010A	99-036-05
	Antimony	U	mg/kg	6.22	11-FEB-99	EPA 6010A	99-036-01
	Arsenic	U	mg/kg	14.9	11-FEB-99	EPA 6010A	99-036-01
	Barium	89.3	mg/kg	1.99	11-FEB-99	EPA 6010A	99-036-01
	Beryllium	0.73	mg/kg	00.249	11-FEB-99	EPA 6010A	99-036-01
	Cadmium	U	mg/kg	0.6220	11-FEB-99	EPA 6010A	99-036-01
	Calcium	37400	mg/kg	62.1	11-FEB-99	EPA 6010A	99-036-01
	Chromium	25.9	mg/kg	1.24	11-FEB-99	EPA 6010A	99-036-01
	Cobalt	14	mg/kg	1.24	11-FEB-99	EPA 6010A	99-036-01
	Copper	30.7	mg/kg	2.11	11-FEB-99	EPA 6010A	99-036-01
	Iron	34700	mg/kg	24.3	22-FEB-99	EPA 6010A	99-036-05
	Lead	35.9	mg/kg	5.47	11-FEB-99	EPA 6010A	99-036-01
	Magnesium	14900	mg/kg	60.7	22-FEB-99	EPA 6010A	99-036-05
	Manganese	671	mg/kg	00.622	11-FEB-99	EPA 6010A	99-036-01
	Mercury	.097	mg/kg	0.0120	10-FEB-99	EPA 7470	98-126-05
	Nickel	33.5	mg/kg	1.49	11-FEB-99	EPA 6010A	99-036-01
	Potassium	1940	mg/kg	62.1	11-FEB-99	EPA 6010A	99-036-01
	Selenium	U	mg/kg	85.1	24-FEB-99	EPA 6010A	99-036-07
	Silver	U	mg/kg	1.24	11-FEB-99	EPA 6010A	99-036-01

U = None Detected

QC ___ NY 10252 NJ 73168 PA 68180 EPA NY 00033

Approved by: _____
Lab Director

KEY: ND or U = None Detected < = less than
mg/L = milligrams per liter (equivalent to parts per million)
B = analyte was detected in the method or trip blank
ug/L = micrograms per liter (equivalent to parts per billion)
mg/kg = milligrams per kiiogram (equivalent to parts per million
J = result estimated below the quantitation limit

FLI
FRIEND LABORATORY INC

ONE RESEARCH CIRCLE WAVERLY, NY 14892-1532
TELEPHONE (607) 565-3500 FAX (607) 565-4083

DATE 24-FEB-1999

LAB SAMPLE ID : L30741-26

Malcolm Pirnie, Inc. - Orchard Park
Daniel Riker
40 Centre Drive
PO Box 1938
Buffalo, NY 14219-0138

SAMPLE SOURCE	HANNA FURNACE, 3587-001
ORIGIN	Q-2
DESCRIPTION	COMPOSITE
SAMPLED ON	29-JAN-99 00:00 by CLIENT
DATE RECEIVED	02-FEB-99 11:00
P.O. NO.	N/A

CAS #	Analysis Performed	Result	Units	Detection Limit	Date Analyzed	Method	Notebook Reference
	Sodium	189	mg/kg	24.8	11-FEB-99	EPA 6010A	99-036-01
	Thallium	U	mg/kg	8.08	11-FEB-99	EPA 6010	99-036-01
	Vanadium	25.7	mg/kg	1.24	11-FEB-99	EPA 6010A	99-036-01
	Zinc	101	mg/kg	2.49	11-FEB-99	EPA 6010A	99-036-01
108-95-2	Phenol	U	ug/kg	300	16-FEB-99	EPA 8270	97-186-10983
95-57-8	2-Chlorophenol	U	ug/kg	300	16-FEB-99	EPA 8270	97-186-10983
95-48-7	2-Methylphenol	U	ug/kg	300	16-FEB-99	EPA 8270	97-186-10983
	3-Methylphenol/4-Methylphenol	U	ug/kg	300	16-FEB-99	EPA 8270	97-186-10983
88-75-5	2-Nitrophenol	U	ug/kg	300	16-FEB-99	EPA 8270	97-186-10983
105-67-9	2,4-Dimethylphenol	U	ug/kg	300	16-FEB-99	EPA 8270	97-186-10983
120-83-2	2,4-Dichlorophenol	U	ug/kg	300	16-FEB-99	EPA 8270	97-186-10983
91-20-3	Naphthalene	U	ug/kg	300	16-FEB-99	EPA 8270	97-186-10983
59-50-7	4-Chloro-3-methylphenol	U	ug/kg	590	16-FEB-99	EPA 8270	97-186-10983
91-57-6	2-Methylnaphthalene	U	ug/kg	300	16-FEB-99	EPA 8270	97-186-10983
208-96-8	Acenaphthylene	U	ug/kg	300	16-FEB-99	EPA 8270	97-186-10983
83-32-9	Acenaphthene	U	ug/kg	300	16-FEB-99	EPA 8270	97-186-10983
51-28-4	2,4-Dinitrophenol	U	ug/kg	1200	16-FEB-99	EPA 8270	97-186-10983
100-02-7	4-Nitrophenol	U	ug/kg	1200	16-FEB-99	EPA 8270	97-186-10983
534-52-1	2-Methyl-4,6-dinitrophenol	U	ug/kg	1200	16-FEB-99	EPA 8270	97-186-10983
87-86-5	Pentachlorophenol	U	ug/kg	1200	16-FEB-99	EPA 8270	97-186-10983
85-01-8	Phenanthrene	470	ug/kg	300	16-FEB-99	EPA 8270	97-186-10983
120-12-7	Anthracene	150 J	ug/kg	300	16-FEB-99	EPA 8270	97-186-10983
206-44-0	Fluoranthene	530	ug/kg	300	16-FEB-99	EPA 8270	97-186-10983
129-00-0	Pyrene	380	ug/kg	300	16-FEB-99	EPA 8270	97-186-10983
56-55-3	Benzo(a)anthracene	240 J	ug/kg	300	16-FEB-99	EPA 8270	97-186-10983
215-01-9	Chrysene	210 J	ug/kg	300	16-FEB-99	EPA 8270	97-186-10983
205-99-2	Benzo(b)fluoranthene	250 J	ug/kg	300	16-FEB-99	EPA 8270	97-186-10983
207-88-9	Benzo(k)fluoranthene	U	ug/kg	300	16-FEB-99	EPA 8270	97-186-10983
50-32-8	Benzo(a)pyrene	180 J	ug/kg	300	16-FEB-99	EPA 8270	97-186-10983
193-39-5	Indeno(1,2,3-cd)pyrene	U	ug/kg	300	16-FEB-99	EPA 8270	97-186-10983
53-7-3	Dibenzo(a,h)anthracene	U	ug/kg	300	16-FEB-99	EPA 8270	97-186-10983
191-24-2	Benzo(g,h,i)perylene	89 J	ug/kg	300	16-FEB-99	EPA 8270	97-186-10983
	Extraction Information:				09-FEB-99		98-174-55
Surrogate Recovery:							
	2-Fluorophenol	74	%				97-186-10983

U = None Detected

QC NY 10252 NJ 73168 PA 68180 EPA NY 00033

Approved by: _____
Lab Director

KEY: ND or U = None Detected < = less than ug/L = micrograms per liter (equivalent to parts per billion)
mg/L = milligrams per liter (equivalent to parts per million) mg/kg = milligrams per kilogram (equivalent to parts per million)
B = analyte was detected in the method or trip blank J = result estimated below the quantitation limit

FLI
FRIEND LABORATORY I · N · C

ONE RESEARCH CIRCLE WAVERLY, NY 14892-1532
TELEPHONE (607) 565-3500 FAX (607) 565-4083

DATE 24-FEB-1999

LAB SAMPLE ID : L30741-26

Malcolm Pirnie, Inc. - Orchard Park
Daniel Riker
40 Centre Drive
PO Box 1938
Buffalo, NY 14219-0138

SAMPLE SOURCE	HANNA FURNACE, 3587-001
ORIGIN	Q-2
DESCRIPTION	COMPOSITE
SAMPLED ON	29-JAN-99 00:00 by CLIENT
DATE RECEIVED	02-FEB-99 11:00
P.O. NO.	N/A

CAS #	Analysis Performed	Result	Units	Detection Limit	Date Analyzed	Method	Notebook Reference
	Phenol-d5	81	%				97-186-10987
	Nitrobenzene-d5	86	%				97-186-10983
	2-Fluorobiphenyl	88	%				97-186-10983
	2,4,6-Tribromophenol	81	%				97-186-10983
	Terphenyl-d14	95	%				97-186-10983

Analysis Comment: Results Calculated on a dry weight basis.

U = None Detected

QC NY 10252 NJ 73168 PA 68180 EPA NY 00033

Approved by: _____
Lab Director

KEY: ND or U = None Detected < = less than ug/L = micrograms per liter (equivalent to parts per billion)
mg/L = milligrams per liter (equivalent to parts per million) mg/kg = milligrams per kilogram (equivalent to parts per million)
B = analyte was detected in the method or trip blank J = result estimated below the quantitation limit

FLI
FRIEND LABORATORY I · N · C

ONE RESEARCH CIRCLE WAVERLY, NY 14892-1532
TELEPHONE (607) 565-3500 FAX (607) 565-4083

DATE 24-FEB-1999

LAB SAMPLE ID : L30741-27

Malcolm Pirnie, Inc. - Orchard Park
Daniel Riker
40 Centre Drive
PO Box 1938
Buffalo, NY 14219-0138

SAMPLE SOURCE	HANNA FURNACE, 3587-001
ORIGIN	SB-30
DESCRIPTION	GRAB
SAMPLED ON	29-JAN-99 00:00 by CLIENT
DATE RECEIVED	02-FEB-99 11:00
P.O. NO.	N/A

CAS #	Analysis Performed	Result		Units	Detection Limit	Date Analyzed	Method	Notebook Reference
	Total Solids	66.38		%		03-FEB-99	CLP 3.0	97-070-47
74-87-3	Chloromethane	U		ug/kg	8	09-FEB-99	EPA 8260	98-189-5640
75-01-4	Vinyl chloride	U		ug/kg	8	09-FEB-99	EPA 8260	98-189-5640
75-00-3	Chloroethane	U		ug/kg	8	09-FEB-99	EPA 8260	98-189-5640
74-83-9	Bromomethane	U		ug/kg	8	09-FEB-99	EPA 8260	98-189-5640
75-35-4	1,1-Dichloroethene	U		ug/kg	8	09-FEB-99	EPA 8260	98-189-5640
67-64-1	Acetone	U		ug/kg	38	09-FEB-99	EPA 8260	98-189-5640
75-15-0	Carbon disulfide	U		ug/kg	8	09-FEB-99	EPA 8260	98-189-5640
75-09-2	Methylene chloride	U		ug/kg	8	09-FEB-99	EPA 8260	98-189-5640
156-60-5	trans-1,2-Dichloroethene	U		ug/kg	8	09-FEB-99	EPA 8260	98-189-5640
75-34-3	1,1-Dichloroethane	U		ug/kg	8	09-FEB-99	EPA 8260	98-189-5640
156-59-4	cis-1,2-Dichloroethene	U		ug/kg	8	09-FEB-99	EPA 8260	98-189-5640
67-66-3	Chloroform	U		ug/kg	8	09-FEB-99	EPA 8260	98-189-5640
71-55-6	1,1,1-Trichloroethane	U		ug/kg	8	09-FEB-99	EPA 8260	98-189-5640
56-23-5	Carbon tetrachloride	U		ug/kg	8	09-FEB-99	EPA 8260	98-189-5640
71-43-2	Benzene	U		ug/kg	8	09-FEB-99	EPA 8260	98-189-5640
107-06-2	1,2-Dichloroethane	U		ug/kg	8	09-FEB-99	EPA 8260	98-189-5640
79-01-6	Trichloroethene	U		ug/kg	8	09-FEB-99	EPA 8260	98-189-5640
78-87-5	1,2-Dichloropropane	U		ug/kg	8	09-FEB-99	EPA 8260	98-189-5640
75-27-4	Bromodichloromethane	U		ug/kg	8	09-FEB-99	EPA 8260	98-189-5640
10061-01-5	cis-1,3-Dichloropropene	U		ug/kg	8	09-FEB-99	EPA 8260	98-189-5640
108-88-3	Toluene	U		ug/kg	8	09-FEB-99	EPA 8260	98-189-5640
10061-02-6	trans-1,3-Dichloropropene	U		ug/kg	8	09-FEB-99	EPA 8260	98-189-5640
79-00-5	1,1,2-Trichloroethane	U		ug/kg	8	09-FEB-99	EPA 8260	98-189-5640
127-18-4	Tetrachloroethene	U		ug/kg	8	09-FEB-99	EPA 8260	98-189-5640
591-78-6	2-Hexanone	U		ug/kg	15	09-FEB-99	EPA 8260	98-189-5640
124-48-1	Dibromochloromethane	U		ug/kg	8	09-FEB-99	EPA 8260	98-189-5640
108-90-7	Chlorobenzene	U		ug/kg	8	09-FEB-99	EPA 8260	98-189-5640
100-41-4	Ethylbenzene	U		ug/kg	8	09-FEB-99	EPA 8260	98-189-5640
1330-20-7	p-Xylene/m-Xylene	U		ug/kg	8	09-FEB-99	EPA 8260	98-189-5640
	o-Xylene	U		ug/kg	8	09-FEB-99	EPA 8260	98-189-5640
100-42-5	Styrene	U		ug/kg	8	09-FEB-99	EPA 8260	98-189-5640
75-25-2	Bromoform	U		ug/kg	8	09-FEB-99	EPA 8260	98-189-5640
79-334-5	1,1,2,2-Tetrachloroethane	U		ug/kg	8	09-FEB-99	EPA 8260	98-189-5640
Surrogate Recovery:								
	Dibromofluoromethane	27	*	%				98-189-5640
	Toluene-d8	99		%				98-189-5640
	4-Bromofluorobenzene	116		%				98-189-5640

U = None Detected

QC NY 10252 NJ 73168 PA 68180 EPA NY 00033

Approved by: _____
Lab Director

KEY: ND or U = None Detected < = less than
mg/L = milligrams per liter (equivalent to parts per million)
B = analyte was detected in the method or trip blank
ug/L = micrograms per liter (equivalent to parts per billion)
mg/kg = milligrams per kilogram (equivalent to parts per million)
J = result estimated below the quantitation limit

FLI
FRIEND LABORATORY I · N · C

ONE RESEARCH CIRCLE WAVERLY, NY 14892-1532
TELEPHONE (607) 565-3500 FAX (607) 565-4083

DATE : 24-FEB-1999

LAB SAMPLE ID : L30741-27

Malcolm Pirnie, Inc. - Orchard Park
Daniel Riker
40 Centre Drive
PO Box 1938
Buffalo, NY 14219-0138

SAMPLE SOURCE	HANNA FURNACE, 3587-001
ORIGIN	SB-30
DESCRIPTION	GRAB
SAMPLED ON	29-JAN-99 00:00 by CLIENT
DATE RECEIVED	02-FEB-99 11:00
P.O. NO.	N/A

CAS #	Analysis Performed	Result	Units	Detection Limit	Date Analyzed	Method	Notebook Reference

Analysis Comment: Dry weight basis.*Surr. below limit(C5624).

U = None Detected

QC ✓ NY 10252 NJ 73168 PA 68180 EPA NY 00033

Approved by: _____
Lab Director

KEY: ND or U = None Detected < = less than ug/L = micrograms per liter (equivalent to parts per billion)
mg/L = milligrams per liter (equivalent to parts per million) mg/kg = milligrams per kilogram (equivalent to parts per million)
B = analyte was detected in the method or trip blank J = result estimated below the quantitation limit

FLI
FRIEND LABORATORY I · N · C

ONE RESEARCH CIRCLE WAVERLY, NY 14892-1532
TELEPHONE (607) 565-3500 FAX (607) 565-4083

DATE 24-FEB-1999

LAB SAMPLE ID : L30741-28

Malcolm Pirnie, Inc. - Orchard Park
Daniel Riker
40 Centre Drive
PO Box 1938
Buffalo, NY 14219-0138

SAMPLE SOURCE	HANNA FURNACE, 3587-001
ORIGIN	SB-31
DESCRIPTION	GRAB
SAMPLED ON	29-JAN-99 00:00 by CLIENT
DATE RECEIVED	02-FEB-99 11:00
P.O. NO.	N/A

CAS #	Analysis Performed	Result		Units	Detection Limit	Date Analyzed	Method	Notebook Reference
	Total Solids	66.39		%		03-FEB-99	CLP 3.0	97-070-47
74-87-3	Chloromethane	U		ug/kg	7	08-FEB-99	EPA 8260	98-089-5625
75-01-4	Vinyl chloride	U		ug/kg	7	08-FEB-99	EPA 8260	98-089-5625
75-00-3	Chloroethane	U		ug/kg	7	08-FEB-99	EPA 8260	98-089-5625
74-83-9	Bromomethane	U		ug/kg	7	08-FEB-99	EPA 8260	98-089-5625
75-35-4	1,1-Dichloroethene	U		ug/kg	7	08-FEB-99	EPA 8260	98-089-5625
67-64-1	Acetone	U		ug/kg	37	08-FEB-99	EPA 8260	98-089-5625
75-15-0	Carbon disulfide	U		ug/kg	7	08-FEB-99	EPA 8260	98-089-5625
75-09-2	Methylene chloride	U		ug/kg	7	08-FEB-99	EPA 8260	98-089-5625
156-60-5	trans-1,2-Dichloroethene	U		ug/kg	7	08-FEB-99	EPA 8260	98-089-5625
75-34-3	1,1-Dichloroethane	U		ug/kg	7	08-FEB-99	EPA 8260	98-089-5625
156-59-4	cis-1,2-Dichloroethene	U		ug/kg	7	08-FEB-99	EPA 8260	98-089-5625
67-66-3	Chloroform	U		ug/kg	7	08-FEB-99	EPA 8260	98-089-5625
71-55-6	1,1,1-Trichloroethane	U		ug/kg	7	08-FEB-99	EPA 8260	98-089-5625
56-23-5	Carbon tetrachloride	U		ug/kg	7	08-FEB-99	EPA 8260	98-089-5625
71-43-2	Benzene	U		ug/kg	7	08-FEB-99	EPA 8260	98-089-5625
107-06-2	1,2-Dichloroethane	U		ug/kg	7	08-FEB-99	EPA 8260	98-089-5625
79-01-6	Trichloroethene	U		ug/kg	7	08-FEB-99	EPA 8260	98-089-5625
78-87-5	1,2-Dichloropropane	U		ug/kg	7	08-FEB-99	EPA 8260	98-089-5625
75-27-4	Bromodichloromethane	U		ug/kg	7	08-FEB-99	EPA 8260	98-089-5625
10061-01-5	cis-1,3-Dichloropropene	U		ug/kg	7	08-FEB-99	EPA 8260	98-089-5625
108-88-3	Toluene	U,J		ug/kg	7	08-FEB-99	EPA 8260	98-089-5625
10061-02-6	trans-1,3-Dichloropropene	U,J		ug/kg	7	08-FEB-99	EPA 8260	98-089-5625
79-00-5	1,1,2-Trichloroethane	U,J		ug/kg	7	08-FEB-99	EPA 8260	98-089-5625
127-18-4	Tetrachloroethene	U,J		ug/kg	7	08-FEB-99	EPA 8260	98-089-5625
591-78-6	2-Hexanone	U,J		ug/kg	15	08-FEB-99	EPA 8260	98-089-5625
124-48-1	Dibromochloromethane	U,J		ug/kg	7	08-FEB-99	EPA 8260	98-089-5625
108-90-7	Chlorobenzene	U,J		ug/kg	7	08-FEB-99	EPA 8260	98-089-5625
100-41-4	Ethylbenzene	U,J		ug/kg	7	08-FEB-99	EPA 8260	98-089-5625
1330-20-7	p-Xylene/m-Xylene	U,J		ug/kg	7	08-FEB-99	EPA 8260	98-089-5625
	o-Xylene	U,J		ug/kg	7	08-FEB-99	EPA 8260	98-089-5625
100-42-5	Styrene	U,J		ug/kg	7	08-FEB-99	EPA 8260	98-089-5625
75-25-2	Bromoform	U,J		ug/kg	7	08-FEB-99	EPA 8260	98-089-5625
79-334-5	1,1,2,2-Tetrachloroethane	U,J		ug/kg	7	08-FEB-99	EPA 8260	98-089-5625
Surrogate Recovery:								
	Dibromofluoromethane	107		%				98-089-5625
	Toluene-d8	118		%				98-089-5625
	4-Bromofluorobenzene	120	*	%				98-089-5625

U = None Detected

QC NY 10252 NJ 73168 PA 68180 EPA NY 00033

Approved by: _____ Lab Director

KEY: ND or U = None Detected < = less than ug/L = micrograms per liter (equivalent to parts per billion)
mg/L = milligrams per liter (equivalent to parts per million) mg/kg = milligrams per kilogram (equivalent to parts per million)
B = analyte was detected in the method or trip blank J = result estimated below the quantitation limit

FLI
FRIEND LABORATORY I · N · C

ONE RESEARCH CIRCLE WAVERLY, NY 14892-1532
TELEPHONE (607) 565-3500 FAX (607) 565-4083

DATE 24-FEB-1999

LAB SAMPLE ID : L30741-28

Malcolm Pirnie, Inc. - Orchard Park
Daniel Riker
40 Centre Drive
PO Box 1938
Buffalo, NY 14219-0138

SAMPLE SOURCE	HANNA FURNACE, 3587-001
ORIGIN	SB-31
DESCRIPTION	GRAB
SAMPLED ON	29-JAN-99 00:00 by CLIENT
DATE RECEIVED	02-FEB-99 11:00
P.O. NO.	N/A

CAS #	Analysis Performed	Result	Units	Detection Limit	Date Analyzed	Method	Notebook Reference

Analysis Comment: Dry weight basis.J-IS below limit.*Surr. above limit.(C5641).

U = None Detected

QC ___ NY 10252 NJ 73168 PA 68180 EPA NY 00033

Approved by: _____ Lab Director

KEY: ND or U = None Detected < = less than ug/L = micrograms per liter (equivalent to parts per billion)
mg/L = milligrams per liter (equivalent to parts per million) mg/kg = milligrams per kiiogram (equivalent to parts per million)
B = analyte was detected in the method or trip blank J = result estimated below the quantitation limit

FLI
FRIEND LABORATORY · N · C

ONE RESEARCH CIRCLE WAVERLY, NY 14892-1532
TELEPHONE (607) 565-3500 FAX (607) 565-4083

DATE 24-FEB-1999

LAB SAMPLE ID : L30741-29

Malcolm Pirnie, Inc. - Orchard Park
Daniel Riker
40 Centre Drive
PO Box 1938
Buffalo, NY 14219-0138

SAMPLE SOURCE	HANNA FURNACE, 3587-001
ORIGIN	SB-33
DESCRIPTION	GRAB
SAMPLED ON	29-JAN-99 00:00 by CLIENT
DATE RECEIVED	02-FEB-99 11:00
P.O. NO.	N/A

CAS #	Analysis Performed	Result	Units	Detection Limit	Date Analyzed	Method	Notebook Reference
	Total Solids	86	%		03-FEB-99	CLP 3.0	97-070-47
12674-11-2	PCB 1016	U	mg/kg	0.1	08-FEB-99	EPA 8080	98-183-1281
11104-28-2	PCB 1221	U	mg/kg	0.2	08-FEB-99	EPA 8080	98-183-1281
11141-16-5	PCB 1232	U	mg/kg	0.1	08-FEB-99	EPA 8080	98-183-1281
53469-21-9	PCB 1242	U	mg/kg	0.1	08-FEB-99	EPA 8080	98-183-1281
12672-29-6	PCB 1248	U	mg/kg	0.1	08-FEB-99	EPA 8080	98-183-1281
11097-69-1	PCB 1254	U	mg/kg	0.1	08-FEB-99	EPA 8080	98-183-1281
11096-82-5	PCB 1260	U	mg/kg	0.1	08-FEB-99	EPA 8080	98-183-1281
Surrogate Recovery:	Decachlorobiphenyl	146	%				98-183-1281

U = None Detected

IC NY 10252 NJ 73168 PA 68180 EPA NY 00033

Approved by: _____
Lab Director

KEY: ND or U = None Detected < = less than ug/L = micrograms per liter (equivalent to parts per billion)
mg/L = milligrams per liter (equivalent to parts per million) mg/kg = milligrams per kilogram (equivalent to parts per million)
B = analyte was detected in the method or trip blank J = result estimated below the quantitation limit

CUSTOMER CODE # _____

CHAIN OF CUSTODY RECORD

PAGE 1 OF 2

FLI
FRIEND LABORATORY I • N • C

ONE RESEARCH CIRCLE
WAVERLY NY 14892-1532
Telephone (607) 565 3500
Fax (607) 565 7160

Sample Site: HANNA FURNACE

P.O. #

Untreated	Sodium thiosulfate	HCl pH <2	Ascorbic acid & HCl pH <2	HNO_3 pH <2	H_2SO_4 pH <2	NaOH pH >12	NaOH & Zinc acetate pH >9	Acetic Buffer pH <3	Sodium sulfite

CLIENT: MALCOLM PIRNIE, INC
ADDRESS: 40 CENTRE ST
BUFFALO NY
PHONE: 716-667-0900 FAX: 716-667-0678

INVOICE TO: DANIEL RIKER
ADDRESS: SAME

PROJECT NO. / NAME
3587-001

COPY TO:
ADDRESS:

LAB NUMBER L30741

LAB USE ONLY

DATE & TIME OF SAMPLE COLLECTION	SAMPLE DESCRIPTION	NUMBER OF CONTAINERS	ANALYSES / TESTS REQUESTED	
1/28/99	COMP-E1	2 Description: Grab (Composite) Other Matrix: DW WW MW (Soil) Air Other	METALS, CN PHENOLS, FAH	-2
	COMP-M1	2 Description: Grab (Composite) Other Matrix: DW WW MW (Soil) Air Other		-3
	COMP-G1	2 Description: Grab (Composite) Other Matrix: DW WW MW (Soil) Air Other		-4
	COMP-G2	2 Description: Grab (Composite) Other Matrix: DW WW MW (Soil) Air Other		

RELINQUISHED BY	DATE /TIME	ACCEPTED BY	DATE/TIME	NOTES TO LABORATORY
SAMPLER [signature]	2/1/99 0930	Christa Frantz	2/2-99 11:15	
				SUSPECTED CONTAMINATION LEVEL NONE (SLIGHT) MODERATE HIGH (please circle)

CUSTOMER CODE # _____

CHAIN OF CUSTODY RECORD

PAGE 2 OF 7

FLI
FRIEND LABORATORY I • N • C
ONE RESEARCH CIRCLE
WAVERLY NY 14892-1532
Telephone (607) 565 3500
Fax (607) 565 7160

Sample Site: HANNA FURNACE

P.O. #

Untreated	Sodium thiosulfate	HCl pH <2	Asco:bic acid & HCl pH <2	HNO_3 pH <2	H_2SO_4 pH <2	NaOH pH >12	NaOH & Zinc acetate pH >9	Acetic Buffer pH <3	Sodium sulfite

CLIENT: MPI
ADDRESS:

PHONE: FAX:

INVOICE TO: DR
ADDRESS:

PROJECT NO. / NAME
3587-001

COPY TO:
ADDRESS:

DATE & TIME OF SAMPLE COLLECTION	SAMPLE DESCRIPTION	NUMBER OF CONTAINERS	ANALYSES / TESTS REQUESTED	LAB SAMPLE NUMBER
1/28/99	COMP-H1	2 Description: Grab Composite Other Matrix: DW WW MW Soil Air Other	metals, CN PAH, PHENOL	L30741-5
	COMP-H2	2 Description: Grab Composite Other Matrix: DW WW MW Soil Air Other		-6
	COMP-F1	2 Description: Grab Composite Other Matrix: DW WW MW Soil Air Other		-7
	COMP-F2	2 Description: Grab Composite Other Matrix: DW WW MW Soil Air Other		-8

RELINQUISHED BY	DATE /TIME	ACCEPTED BY	DATE/TIME	NOTES TO LABORATORY
SAMPLER DiDell	2/1/99 0930	Christa Frantz	2/2-99 11:15	

SUSPECTED CONTAMINATION LEVEL
NONE (SLIGHT) MODERATE HIGH (please circle)

CUSTOMER CODE # ______

CHAIN OF CUSTODY RECORD

FLI FRIEND LABORATORY INC
ONE RESEARCH CIRCLE
WAVERLY NY 14892-1532
Telephone (607) 565 3500
Fax (607) 565 7160

Sample Site: HANNA FURNACE

P.O. #

Preservatives: Untreated | Sodium thiosulfate | HCl pH <2 | Ascorbic acid & HCl pH <2 | HNO_3 pH <2 | H_2SO_4 pH <2 | NaOH pH >12 | NaOH & Zinc acetate pH >9 | Acetic Buffer pH <3 | Sodium sulfite

CLIENT: MPI
ADDRESS:
PHONE: FAX:
PROJECT NO. / NAME: 3587-001

INVOICE TO: DR
ADDRESS:
COPY TO:
ADDRESS:

DATE & TIME OF SAMPLE COLLECTION	SAMPLE DESCRIPTION	NUMBER OF CONTAINERS	ANALYSES / TESTS REQUESTED	SAMPLE NUMBER L30741 LAB USE ONLY
1/28/99	COMP-L1	2 Description: Grab Composite Other Matrix: DW WW MW Soil Air Other	metals CN PAH, phenol	-9
↓	COMP-L2	4 Description: Grab Composite Other Matrix: DW WW MW Soil Air Other	↓ PLUS TCLP	-10 -11
↓	COMP-R1	2 Description: Grab Composite Other Matrix: DW WW MW Soil Air Other	↓	-12
↓	COMP-R2	2 Description: Grab Composite Other Matrix: DW WW MW Soil Air Other	↓	-13

RELINQUISHED BY	DATE /TIME	ACCEPTED BY	DATE/TIME
SAMPLER [signature]	2/1/99 0930	Christa Frantz	2/2/99 11:15

NOTES TO LABORATORY

SUSPECTED CONTAMINATION LEVEL
NONE (SLIGHT) MODERATE HIGH (please circle)

CUSTOMER CODE # ________

CHAIN OF CUSTODY RECORD

FLI FRIEND LABORATORY INC
ONE RESEARCH CIRCLE
WAVERLY NY 14892-1532
Telephone (607) 565 3500
Fax (607) 565 7160

Sample Site: HANNA FURNACE

P.O. #

Preservatives: Untreated | Sodium thiosulfate | HCl pH <2 | Ascorbic acid & HCl pH <2 | HNO_3 pH <2 | H_2SO_4 pH <2 | NaOH pH >12 | NaOH & Zinc acetate pH >9 | Acetic Buffer pH <3 | Sodium sulfite

CLIENT: MPI
ADDRESS:
PHONE: FAX:
PROJECT NO. / NAME 3587-001

INVOICE TO: D. RIKER
ADDRESS:

COPY TO:
ADDRESS:

DATE & TIME OF SAMPLE COLLECTION	SAMPLE DESCRIPTION	NUMBER OF CONTAINERS	ANALYSES / TESTS REQUESTED	SAMPLE NUMBER LAB USE ONLY L30741
1/28/99	SB-15	Description: (Grab) Composite Other Matrix: DW WW MW (Soil) Air Other	PCBs	-14
↓	SB-22	Description: (Grab) Composite Other Matrix: DW WW MW (Soil) Air Other	PCBs	-15
↓	SB-14	Description: (Grab) Composite Other Matrix: DW WW MW (Soil) Air Other	VOCs	-16
↓	SB-15	Description: (Grab) Composite Other Matrix: DW WW MW (Soil) Air Other	VOCs	-17

RELINQUISHED BY	DATE /TIME	ACCEPTED BY	DATE/TIME
SAMPLER [signature]	2/1/99 0930	Christa Frantz	2/2/99 11:15

NOTES TO LABORATORY

SUSPECTED CONTAMINATION LEVEL
NONE (SLIGHT) MODERATE HIGH (please)

CUSTOMER CODE # _____

CHAIN OF CUSTODY RECORD

FLI
FRIEND LABORATORY I • N • C
ONE RESEARCH CIRCLE
WAVERLY NY 14892-1532
Telephone (607) 565 3500
Fax (607) 565 7160

Sample Site: HANNA FURNACE

P.O. #

Untreated	Sodium thiosulfate	HCl pH <2	Ascorbic acid & HCl pH <2	HNO_3 pH <2	H_2SO_4 pH <2	NaOH pH >12	NaOH & Zinc acetate pH >9	Acetic Buffer pH <3	Sodium sulfite

CLIENT: MPI
ADDRESS:
PHONE: FAX:

INVOICE TO: D. RIKER
ADDRESS:

PROJECT NO. / NAME: 3587-001

COPY TO:
ADDRESS:

DATE & TIME OF SAMPLE COLLECTION	SAMPLE DESCRIPTION	NUMBER OF CONTAINERS	ANALYSES / TESTS REQUESTED	SAMPLE NUMBER / LAB USE ONLY
1/29/99	COMP-N1	2 Description: Grab Composite Other; Matrix: DW WW MW Soil Air Other	metals, phenols CN, PAH	L30741-18
	COMP-N2	2 Description: Grab Composite Other; Matrix: DW WW MW Soil Air Other		-19
	COMP-01	2 Description: Grab Composite Other; Matrix: DW WW MW Soil Air Other		-20
	COMP-02	4 Description: Grab Composite Other; Matrix: DW WW MW Soil Air Other	PLUS TCLP	-21 -22

RELINQUISHED BY	DATE /TIME	ACCEPTED BY	DATE/TIME	NOTES TO LABORATORY
SAMPLER [signature]	2/1/99 0930	Christa Franz	2/2.99 11:15	
				SUSPECTED CONTAMINATION LEVEL: NONE (SLIGHT) MODERATE HIGH (please circle)

MALCOLM PIRNIE

APPENDIX B

BORING LOGS

FIELD BOREHOLE LOG

MALCOLM PIRNIE

Project Name: Hanna Furnace
Project No.: 3587-001
Client: BERC
Location: 2,4 Fuhrman Blvd.

Surface Elev.: _____
Reference Elev.: _____
Contractor: Maxim
Logged By: DER

Borehole No.: ~~DBLOG~~ SB-1
Date Started: 1/25/99
Date Finished: 1/25/99
Method of Boring: 2¼" HSA, 2" SS

Depth (BGS)	Sample No.	Blows (6")	Recovery	Soil Classification	Description and Remarks ~~Density/~~Consistency, Color, Plasticity, Soil Types, Texture, Fabric, Bedding, Moisture, Other Characteristics	Samples	Moisture (%)	HNu (ppm) Scan	HNu (ppm) Headspace
		10			0-4 DARK BROWN - SILTY SAND & GRAVEL WET		W		0.3
1		30	16		4-7 TAN SILT W/ FINE SAND & ANGULAR GRAVEL		VM		
		35			7-14 TAN FINE TO MED SAND, ~~SOME~~ VM		VM		
2		24			ORANGE SOME GRAVEL				
		16	14		0-11 TAN TO ORANGE, MED TO COARSE		M		0.0
3		11			~~ANGULAR~~ SAND, SOME GRAVEL (SLAG)				
		10			MUCH FAIRLY CLEAR QUARTZ				
4		10							
		5	22		0-22 SAME A/A, SOME DARK (BLACK)		W		0.6
5		6			SAND TO GRAVEL AT 16-22				
		8			GRAY TO GRAY/BLUE IN COLOR				
6		8							
		8	10		0-4 SAME A/A, GRAY TO BLUE COLOR		W		0.3
7		8			4-20 DARK BLUE TO BLACK SILTY MED				
		6			TO COARSE SAND				
8		4							
		1	14		0-2 DARK BROWN TO BLACK SILTY		W		0.3
9		1			MED SAND → SOME WOODY MATERIAL				
		2			2-10 MED BROWN SILTY MATERIAL				
10		3			10-14 ~~TAN~~ GREENISH-GRAY SILTY CLAY				
					END BORING				
					NOTE: STAKE 1025				

FIELD BOREHOLE LOG

MALCOLM PIRNIE

Project Name: Hanna Furnace
Project No.: 3587-001
Client: BERC
Location: 2.4 Fuhrman Blvd.

Surface Elev.: ____
Reference Elev.: ____
Contractor: Maxim
Logged By: NEL

Borehole No.: SB-12
Date Started: 1/25/89
Date Finished: 1/25/89
Method of Boring: HSA, 2" SS

Depth (BGS)	Sample No.	Blows (6"	Recovery	Soil Classification	Description and Remarks Density/Consistency, Color, Plasticity, Soil Types, Texture, Fabric, Bedding, Moisture, Other Characteristics	Samples	Moisture (%)	HNu (ppm) Scan	HNu (ppm) Headspace
		7	16		0-16 RED-BROWN SANDY SILT, SOME BLACK		VM		0.7
1		9			GRAVEL, SOME GRAY SLAG GRAVEL				
		13							
2		18							
		9	12		0-12 ORANGE TO RED-BROWN SILTY		VM		6.3
3		8			COARSE ANGULAR SAND, SOME				
		8			FAIRLY CLEAN (GRAY TO CLEAR) QUARTZ,				
4		10			SOME RED SLAG GRAVEL (GRAY)				
		5	15		0-2 SAME A/A		W		0.0
5		8			2-15 BLUE TO GREENISH BLUE				
		9			COARSE SAND, SOME GRAY QUARTZ				
6		12							
		20	18		0-18 SAME A/A		VM		0.0
7		29							
		00							
8		12							
		2	9		0-5 BROWN PEAT WITH SOME WOOD		W		0.0
9		1			5-9 GRAY TO GREENISH GRAY CLAYEY SILT				
		1							
10		2							
					END BORING				
					NOTE: STAND 10 24				

FIELD BOREHOLE LOG

MALCOLM PIRNIE

Project Name: Hanna Furnace
Project No.: 3587-001
Client: BERC
Location: 2,4 Fuhrman Blvd.

Surface Elev.: _____
Reference Elev.: _____
Contractor: Maxim
Logged By: KKF

Borehole No.: SB 36
Date Started: 1-27-99
Date Finished: 1-27-99
Method of Boring: HSA 2" SS

Depth (BGS)	Sample No.	Blows (6")	Recovery	Soil Classification	Description and Remarks Density/Consistency, Color, Plasticity, Soil Types, Texture, Fabric, Bedding, Moisture, Other Characteristics	Samples	Moisture (%)	HNu (ppm) Scan	HNu (ppm) Headspace
1		12	10		0-10 DARK Brown SILTY Sand		M		0.0
		7							
2		4							
		4							
3		4	22		0-2 DARK Brown SILTY Sand		M		0.3
		7			2-8 Brown / RUST / Tan Coarse Sand				
4		18			8-22 Blue / Green / White Coarse Sand				
		17			gravel size / Slag				
5		12	24		0-16 RUST / Tan Coarse Sand, gravel		M		0.3
		9			size Slag				
6		13			16-18 White Coarse Sand, gravel size				
		24			18-24 Same as 0-16				
7		26	20		0-20 RUST / Tan Colored Coarse Sand		M		0.0
		11			gravel size, Slag				
8		11							
		14							
9		4	24		0-24 Brown / Grey / White gravel		M		0.0
		6			Coarse Sand / Slag				
10		5							
		3							
11		5	18		0-18 Blue / White / Green Coarse Sand		Wet		0.0
		8			gravel size / Slag				
12		11							
		8							
					* Flag SB 36				
					20 ft South of SB7				

FIELD BOREHOLE LOG

MALCOLM PIRNIE

Project Name: Hanna Furnace
Project No.: 3587-001
Client: BERC
Location: 2,4 Fuhrman Blvd.

Surface Elev.: _____
Reference Elev.: _____
Contractor: Maxim
Logged By: DEL

Borehole No.: SB-3
Date Started: 1/25/99
Date Finished: 1/25/99
Method of Boring: HSA, 2"SS

Depth (BGS)	Sample No.	Blows (6"	Recovery	Soil Classification	Description and Remarks Density/Consistency, Color, Plasticity, Soil Types, Texture, Fabric, Bedding, Moisture, Other Characteristics	Samples	Moisture (%)	HNu (ppm) Scan	HNu (ppm) Headspace
		3	10		0-3 MED. BROWN SILTY CLAY W/ GRAVEL		VM		0.0
1		5			3-10 BROWN TO GRAY SILTY SAND W/				
		9			SLAG GRAVEL		VM		
2		14							
		9	12		0-6 RED-BROWN SILTY FINE SAND		M		0.3
3		10			6-8 TAN TO BROWN SILTY FINE SAND				
		11			8-12 RE-BROWN SILTY SAND WITH				
4		11			VITREOUS BLACK GRAVEL				
		7	0				VM		—
5		4							
		2							
6		2							
		4	2		0-2 WHITE TO GRAY SILTY COARSE SAND		W		0.3
7		8							
		8							
8		12							
		4	16		0-16 BLUE/GREY COARSE SILTY SAND		VM		0.3
9		5							
		18							
10		20							
		5	20		0-16 BLUE/GREY COARSE SILTY SAND		W		0.3
11		2			16-20 BROWN TO DARK BROWN SILTY				
		6			CLAY (PEAT)				
12		2							
					STAKE 1023				

FIELD BOREHOLE LOG

MALCOLM PIRNIE

Project Name: Hanna Furnace
Project No.: 3587-001
Client: BERC
Location: 2.4 Fuhrman Blvd.

Surface Elev.: _____
Reference Elev.: _____
Contractor: Maxim
Logged By: KKZ

Borehole No.: 99-SB 4
Date Started: 1-25-99
Date Finished: 1-25-99
Method of Boring: HSA 2" SS

Depth (BGS)	Sample No.	Blows (6")	Recovery	Soil Classification	Description and Remarks Density/Consistency, Color, Plasticity, Soil Types, Texture, Fabric, Bedding, Moisture, Other Characteristics	Samples	Moisture (%)	HNu (ppm) Scan	HNu (ppm) Headspace
1		8	12		0-12 med Brown SILTY SAND		Wet		0.3
		12			with Slag + Gravel				
2		14							
		14							
3		12	12		0-8 med / dark BROWN SILTY Sand		Wet		2.5
		14			with Slag - Gravel				
4		10			8-12 MED TO COARSE SAND WITH				
		30			Slag Gravel				
5		20	20		0-3 Med Brown SILTY SAND WITH Some		Wet		6.3
		22			Slag + Gravel				
6		22			3-19 med to COARSE SAND WITH Slag + Gravel				
		15			19-20 GRAY BLUE COARSE SAND				
7		16	20		0-20 GRAY BLUE COARSE SAND WITH		W		0.3
		15			SOME Slag and gravel				
8		11							
		11							
9		4	12		0-12 GRAY BLUE COARSE SAND, SOME		Wet		0.3
		7			gravel and Slag				
10		8							
		10							
11		3	10		0-2 GRAY BLUE COARSE SAND		Wet		0.0
		4			2-5 med / DARK BROWN SILTY Sand (PEAT)				
12		4			5-10 GREY and BROWN Clay				
		4							
					SITE 1022				

FIELD BOREHOLE LOG

MALCOLM PIRNIE

Project Name: Hanna Furnace
Project No.: 3587-001
Client: BERC
Location: 2,4 Fuhrman Blvd.

Surface Elev.: _____
Reference Elev.: _____
Contractor: Maxim
Logged By: RKF

Borehole No.: SB-#5
Date Started: 1-25-99
Date Finished: 1-25-99
Method of Boring: HSA 2" SS

Depth (BGS)	Sample No.	Blows (6"	Recovery	Soil Classification	Description and Remarks Density/Consistency, Color, Plasticity, Soil Types, Texture, Fabric, Bedding, Moisture, Other Characteristics	Samples	Moisture (%)	HNu (ppm) Scan	HNu (ppm) Headspace
1		6	20		0-12 BROWN SILTY SAND, SOME GRAVEL		VM		QP
		50			12-18 WHITE, BROWN COARSE SAND				
2		45			18-20 BROWN SILTY LOAM				
		50							
3		18	10		0-5 BROWN SILTY SAND, SOME CLAY AND GRAVEL		VM		2.1
		44							
4		20			5-10 BLACK, RED BROWN, WHITE STREAKS COARSE SAND				
		32							
5		18	10		0-5 BROWN SILTY CLAY WITH SOME SILT		VM		0.0
		30			5-10 WHITE / TAN COARSE SAND				
6		36							
		22							
7		12	12		0-8 WHITE / BROWN COARSE SAND & SOME GRAVEL		VM		0.6
		16			8-12 BLUE / GRAY COARSE SAND SOME SILT AND ROCKS				
8		16							
		8							
9		16	14		0-4 BROWN SILT CLAY		VM		0.3
		14			4-14 BLUE GRAY COARSE SAND / GRAVEL				
10		13							
		8							
11		3	10		0-3 GRAY BLUE COARSE SAND / GRAVEL		W		0.3
		3			3-7 BROWN SILTY CLAY SOME GRAVEL (PEAT)				
12		3			7-10 BROWN CLAY				
		3							
					STAKE 1021				

FIELD BOREHOLE LOG

MALCOLM PIRNIE

Project Name: Hanna Furnace
Project No.: 3587-001
Client: BERC
Location: 24 Fuhrman Blvd.

Surface Elev.: _____
Reference Elev.: _____
Contractor: Maxim
Logged By: KIF

Borehole No.: SB-6
Date Started: 1-25-99
Date Finished: 1-25-99
Method of Boring: HSA 2" SS

Depth (BGS)	Sample No	Blows (6")	Recovery	Soil Classification	Description and Remarks Density/Consistency, Color, Plasticity, Soil Types, Texture, Fabric, Bedding, Moisture, Other Characteristics	Samples	Moisture (%)	HNu (ppm) Scan	HNu (ppm) Headspace
1		4	14		0-4 Brown Silty Clay, Slag and Rocks		M		1.2
		4			Present				
2		7							
		16							
3		20	6		0-4 Brown Silty Clay with Slag		M		0.6
		15			4-6 Hard Silicky Black (Slag?)				
4		15							
		15							
5		6	8		0-8 Brown Grey Silty Coarse Sand		M		0.3
		6			Gravel / Slag				
6		3							
		3							
7		3	12		0-6 Black Slag with Rust		M		0.9
		2			6-8 Sand + Gravel size Pieces of Brick				
8		2			8-12 Coarse Sand + Gravel White + Black				
		3							
9		40	8		0-8 Silty Coarse Sand with Gravel		W		0.3
		55			Size Pieces of Brick				
10		18							
		14							
11		14	24		0-10 Silty Coarse Sand with Gravel		W		0.3
		17			White, Brown, Red Brick				
12		24			10-24 Blue, White, Grey Coarse Sand				
		30			Gravel and Slag				
					STEAK 1020				

FIELD BOREHOLE LOG

MALCOLM PIRNIE

Project Name: Hanna Furnace
Project No.: 3587-001
Client: BERC
Location: 2,4 Fuhrman Blvd.

Surface Elev.: _____
Reference Elev.: _____
Contractor: Maxim
Logged By: KKF

Borehole No.: SB-7
Date Started: 1-26-99
Date Finished: 1-26-99
Method of Boring: HSA 2" SS

Depth (BGS)	Sample No.	Blows (6"	Recovery	Soil Classification	Description and Remarks Density/Consistency, Color, Plasticity, Soil Types, Texture, Fabric, Bedding, Moisture, Other Characteristics	Samples	Moisture (%)	HNu (ppm) Scan	HNu (ppm) Headspace
1		6	16		0-10 Brown silty sand with slag		VM	0.0	0.6
		8							
2		12							
		20							
3		24	20		0-10 Brown, ~~tan~~, white silty sand slag particle size		VM	0.0	0.6
		16							
4		12							
		13							
5		32	10		0-4 Brown silty sand		VM	0.0	0.3
		20			4-10 white sandy				
6		15							
		9							
7		6	12		0-12 white to tan & coarse sand		W	0.0	0.0
		5			with slag				
8		6							
		3							
9		5	18		0-14 white to tan coarse sand		W	0.0	0.3
		7			with slag				
10		7			14-18 Blue/grey coarse sand/gravel				
		9			slag				
					STAKE 10 19				

FIELD BOREHOLE LOG

MALCOLM PIRNIE

Project Name: Hanna Furnace
Project No.: 3587-001
Client: BERC
Location: 2,4 Fuhrman Blvd.

Surface Elev.:
Reference Elev.:
Contractor: Maxim
Logged By: KKF

Borehole No.: SB - 8
Date Started: 1-27-91
Date Finished: 1-27-91
Method of Boring: HSA 2" SS

Depth (BGS)	Sample No	Blows (6"	Recovery	Soil Classification	Description and Remarks Density/Consistency, Color, Plasticity, Soil Types, Texture, Fabric, Bedding, Moisture, Other Characteristics	Samples	Moisture (%)	HNu (ppm) Scan	HNu (ppm) Headspace
1		3	1		0-1 TAN ROCK		M		—
		5							
2		8							
		10			* NO SAMPLE TAKEN				
3		8	8		0-8 BROWN SILTY Clay, BRICK and Slag		M		6.3
		8							
4		50/3							
5		25	18		0-10 WHITE/GRAY COARSE Sand, Clay Slag		VM		0.0
		22							
6		18			10-18 TAN COARSE Sand, Slag				
		13							
7		14	14		0-14 TAN / BROWN PARTIAL Size Sand / ROCK / Slag		VM		0.0
		7							
8		8							
		8							
9		3	14		0-14 TAN / WHITE COARSE Sand / Slag AT END BLUE COLOR		W		0.0
		3							
10		4							
		3							

FIELD BOREHOLE LOG

MALCOLM PIRNIE

Project Name: Hanna Furnace
Project No.: 3587-001
Client: BERC
Location: 2,4 Fuhrman Blvd.

Surface Elev.: _____
Reference Elev.: _____
Contractor: Maxim
Logged By: KKE

Borehole No.: SB-9
Date Started: 1-28-99
Date Finished: 1/29/99
Method of Boring: HSA 2" SS

Depth (BGS)	Sample No.	Blows (6"	Recovery	Soil Classification	Description and Remarks Density/Consistency, Color, Plasticity, Soil Types, Texture, Fabric, Bedding, Moisture, Other Characteristics	Samples	Moisture (%)	HNu (ppm) Scan	HNu (ppm) Headspace
1		2	8		0-2 Tan Rock like		M		0.3
		5			2-4 Grey Rock like				
2		15			4-8 Brown SILT Sand				
		50							
3		20	18		0-12 Grey / White Coarse Sand gravel Size / Slag		Wet		0.0
		32							
4		25			12-18 Brown SILTY [redacted] Sand				
		25							
5		5	20		0-20 Brown SILTY Sand Some Slag		W		0.0
		5							
6		4							
		4							
7		5	24		0-14 Brown SILTY Sand Some Slag		W		0.3
		5			14-24 Dark Brown / Black SILTY Sand				
8		5							
		8							
9		3	16		0-16 DARK Brown / Black SILTY Sand		W		0.3
		4							
10		4							
		4							
11		4	24		0-16 DARK Brown / Black SILTY Sand (PEAT)		W		0.0
		6			16-24 Grey Clay				
12		7							
		8							

FIELD BOREHOLE LOG

MALCOLM PIRNIE

Project Name: Hanna Furnace
Project No.: 3587-001
Client: BERC
Location: 2.4 Fuhrman Blvd.

Surface Elev.: _____
Reference Elev.: _____
Contractor: Maxim
Logged By: KKF

Borehole No.: SB - 10
Date Started: 1-27-99
Date Finished: 1/27/99
Method of Boring: HSA 2" SS

Depth (BGS)	Sample No.	Blows (6"	Recovery	Soil Classification	Description and Remarks Density/Consistency, Color, Plasticity, Soil Types, Texture, Fabric, Bedding, Moisture, Other Characteristics	Samples	Moisture (%)	HNu (ppm) Scan	HNu (ppm) Headspace
1		5	14		0-8 TAN WITH Slag Coarse Sand		M		0.3
		5			8-14 Brown / gray Slag SILT, Sand				
2		13							
		22							
3		6	12		0-6 Brown / gray SILT Sand, Slag		M		0.3
		14			6-12 Brown Silty Clay				
4		12							
		10							
5		4	12		0-8 Tan Coarse Sand / Slag		M		0.3
		14			8-12 Brown / gray Silty Sand, Some				
6		18			Slag				
		5							
7		7	24		0-6 Red Brown Coarse Sand with Slag		VM		0.3
		6			6-12 Tan / White Coarse Sand with Slag				
8		7			12-24 Brown Silty / Sand Some Slag				
		15							
9		10	18		0-8 Brown Silty Sand / Some Slag		W		0.3
		5			8-18 Dark Brown Silty Sand				
10		6							
		6			Coarse Sand (Some Blue/White				
11		6	24		0-16 Dark Brown Silty Sand		W		0.3
		6			16-23 Brown Silty (Peat)				
12		6			23-24 Gray Clay				
		6							

FIELD BOREHOLE LOG

MALCOLM PIRNIE

Project Name: Hanna Furnace
Project No.: 3587-001
Client: BERC
Location: 2,4 Fuhrman Blvd.

Surface Elev.: _____
Reference Elev.: _____
Contractor: Maxim
Logged By: KKF

Borehole No.: SB-#11
Date Started: 1-26-99
Date Finished: 1-26-99
Method of Boring: HSA 2¼ SS

Depth (BGS)	Sample No.	Blows (6"	Recovery	Soil Classification	Description and Remarks Density/Consistency, Color, Plasticity, Soil Types, Texture, Fabric, Bedding, Moisture, Other Characteristics	Samples	Moisture (%)	HNu (ppm) Scan	HNu (ppm) Headspace
1		3	14		0-9 Brown silty sand & Rocky		M		0.0
		7			9-14 Tan/white coarse sand & slag				
2		8							
		25							
3		50	6		0-1 Brown coarse sand		VM		0.3
		50			1-6 Tan/white/orange & gravel				
4		50			coarse sand & slag				
		50							
5		9	24		0-12 White/Tan coarse sand & gravel		VM		0.3
		9			slag				
6		9			12-24 Blue/green coarse sand & gravel				
		13			slag				
7		9	8		0-8 Green/gray coarse sand		VM		0.3
		16			gravel size				
8		22							
		34							
9		4	16		0-8 Green/gray/white coarse sand		W		0.3
		15			gravel size				
10		4			8-16 Brown silty clay ~~(PEAT)~~				
		6			(PEAT)				
					STAKE 1009				

FIELD BOREHOLE LOG

MALCOLM PIRNIE

Project Name: Hanna Furnace
Project No.: 3587-001
Client: BERC
Location: 2.4 Fuhrman Blvd.

Surface Elev.: _____
Reference Elev.: _____
Contractor: Maxim
Logged By: KKF

Borehole No.: SB 12
Date Started: 1-28-99
Date Finished: 1-28-99
Method of Boring: HSA 2' SS

Depth (BGS)	Sample No.	Blows (6"	Recovery	Soil Classification	Description and Remarks Density/Consistency, Color, Plasticity, Soil Types, Texture, Fabric, Bedding, Moisture, Other Characteristics	Samples	Moisture (%)	HNu (ppm) Scan	HNu (ppm) Headspace
1		2	12		0-12 Brown / white Some Brick, Some		m		0.3
		7			Slag Silty Sand				
2		18							
		32							
3		30	14		0-8 Brown / gray Silty Sand		m		0.3
		16			with Slag				
4		10			8-14 Tan / white Coarse Sand				
		16			Some Slag				
5		10	14		7-14 Tan / white Coarse Sand		m		0.3
		4			Some Slag				
6		7							
		11							
7		6	24		0-16 White / Tan Coarse Sand		vm		0.6
		6			Some Slag				
8		5			16-24 White / green / blue Coarse				
		10			Sand				
9		4	10		0-10 Green / Blue Coarse Sand		vm		0.3
		5			Slag				
10		8							
		5							
11		5	12		0-6 Green / Blue Coarse Sand		vm		0.3
		4			6-12 Brown / woody (Peat)				
12		4							
		3							
					STOP 10:10				

FIELD BOREHOLE LOG

MALCOLM PIRNIE

Project Name: Hanna Furnace
Project No.: 3587-001
Client: BERC
Location: 2,4 Fuhrman Blvd.

Surface Elev.: _____
Reference Elev.: _____
Contractor: Maxim
Logged By: NKF

Borehole No.: SB-12
Date Started: 1-28-94
Date Finished: _____
Method of Boring: HSA 2" SS

Depth (BGS)	Sample No.	Blows (6")	Recovery	Soil Classification	Description and Remarks FIRST ATTEMPT Density/Consistency, Color, Plasticity, Soil Types, Texture, Fabric, Bedding, Moisture, Other Characteristics	Samples	Moisture (%)	HNu (ppm) Scan	HNu (ppm) Headspace
1		50/4	12		0-8 Brown/White Silty Sand		M		
					Some Gray Slag				
2					8-12 WOOD				
3		50/1	1		Concrete				
4					REMOVAL - MOVE BORING 10' AWAY				
5									
6									
7									
8									
9									
10									
					STAKE 1010				

FIELD BOREHOLE LOG

MALCOLM PIRNIE

Surface Elev.: _____ Borehole No.: SB-13

Project Name: Hanna Furnace Reference Elev.: _____ Date Started: 1-28-99

Project No.: 3587-001 Contractor: Maxim Date Finished: 1-28-99

Client: BERC Logged By: KKF Method of Boring: HSA 2" SS

Location: 2.4 Fuhrman Blvd.

Depth (BGS)	Sample No.	Blows (6")	Recovery	Soil Classification	Description and Remarks Density/Consistency, Color, Plasticity, Soil Types, Texture, Fabric, Bedding, Moisture, Other Characteristics	Samples	Moisture (%)	HNu (ppm) Scan	HNu (ppm) Headspace
1		3	12		0-12 Brown / Gray gravel / Slag		m		0.6
		19							
2		20							
		13							
3		18	18		0-18 Tan with Speckled Black and		m		0.3
		18			White Coarse Sand / Slag				
4		13							
		13							
5		6	17		0-9 Tan, Speckled Black and White		vm		0.3
		23			Coarse Sand / Slag				
6		11			9-17 Clay Slag, gravel				
		8							
7		14	24		0-8 Tan / Black Coarse Sand		vm		0.6
		14			8-12 Tan / White Coarse Sand, Some				
8		26			Slag				
		30			12-24 Blue / Green Coarse Sand				
9		5	12		0-11 Blue / Green / White Coarse Sand		vm		0.3
		7			Some Slag				
10		3			11-12 Brown, Silty Clay (Peat)				
		3							
					STAKE 1011				

FIELD BOREHOLE LOG

MALCOLM PIRNIE

Project Name: Hanna Furnace
Project No.: 3587-001
Client: BERC
Location: 2,4 Fuhrman Blvd.

Surface Elev.: _____
Reference Elev.: _____
Contractor: Maxim
Logged By: KKF

Borehole No.: SB-14
Date Started: 1-28-99
Date Finished: 1-28-99
Method of Boring: HSA 7" SS

Depth (BGS)	Sample No.	Blows (6"	Recovery	Soil Classification	Description and Remarks Density/Consistency, Color, Plasticity, Soil Types, Texture, Fabric, Bedding, Moisture, Other Characteristics	Samples	Moisture (%)	HNu (ppm) Scan	HNu (ppm) Headspace
1		2	20		0-20 Brownish Red Silty Sand		VM		3.0
		5							
2		5							
		4							
3		3	18		0-18 Brownish Red Silty Sand		W		4.5
		3							
4		5							
		3							
5		4	18		0-18 Reddish Dark Brown Silty Sand		VM		0.6
		4							
6		5							
		5							
7		3	22		0-18 Reddish Dark Brown Silty Sand		VM		0.3
		4							
8		3			18-22 Black Silty Sand, Some Clay				
		4							
9		2	12		0-12 Dark Brown / Black Silty Sand		W		0.8
		2							
10		1							
		2							
					STAKE 10-2				

FIELD BOREHOLE LOG

MALCOLM PIRNIE

Project Name: Hanna Furnace
Project No.: 3587-001
Client: BERC
Location: 2.4 Fuhrman Blvd.

Surface Elev.: _____
Reference Elev.: _____
Contractor: Maxim
Logged By: KICF

Borehole No.: SB - 15
Date Started: 1-28-99
Date Finished: 1-28-99
Method of Boring: HSA 2" SS

Depth (BGS)	Sample No.	Blows (6")	Recovery	Soil Classification	Description and Remarks Density/Consistency, Color, Plasticity, Soil Types, Texture, Fabric, Bedding, Moisture, Other Characteristics	Samples	Moisture (%)	HNu (ppm) Scan	HNu (ppm) Headspace
1		10	10		0-6 Brown / Tan Silty Coarse Sand		M		
		50/5			6-8 Pink Sand				3.3
2					9-10 White Coarse Sand				
3		10	10		0-8 Brown / Clay Coarse Sand & Gravel		M		
		12			Size method				
4		8			8-9 Silty Sand Black				0.3
		8			9-10 Silty Sand Brownish Red				
5		2	12		0-12 Brown / Red Silty Sand		VM		
		5							0.0
6		4							
		7							
7		3	24		0-24 Red Brown Silty Sand		VM		0.3
		3							
8		7							
		7							
9		1	24		0-10 Red / Brown Silty Sand		W		0.0
		3			10-24 Black Silty Sand				
10		4							
		4							
11		2	12		0-6 Black Silty Sand		W		
		3			6-8 Black Silty Clay				0.3
12		4			8-18 Brown Silty (/Peat)				
		5							
					Stake 10/2				

FIELD BOREHOLE LOG

MALCOLM PIRNIE

Project Name: Hanna Furnace
Project No.: 3587-001
Client: BERC
Location: 2,4 Fuhrman Blvd.

Surface Elev.: _____
Reference Elev.: _____
Contractor: Maxim
Logged By: KKF

Borehole No.: SB 16
Date Started: 1-26-99
Date Finished: 1-26-99
Method of Boring: HSA 2" SS

Depth (BGS)	Sample No.	Blows (6")	Recovery	Soil Classification	Description and Remarks Density/Consistency, Color, Plasticity, Soil Types, Texture, Fabric, Bedding, Moisture, Other Characteristics	Samples	Moisture (%)	HNu (ppm) Scan	HNu (ppm) Headspace
1		3	4		0-6 med [redacted] Brown SILTY Sand		M	0.0	0.3
		6			6-11 White / Tan Coarse Sand, Slag				
2		36							
		42							
3		26	11		0-8 White / Tan Coarse Sand, Slag		M	0.0	0.3
		27			8-11 Tan / Grey Coarse Sand, Slag				
4		12			gravel				
		10							
5		5	20		0-20 White / Tan Coarse Sand Slag gravel, some silt		VM	0.0	0.3
		5							
6		5							
		4							
7		3	22		0-22 White / Tan / Grey Coarse Sand		VM	0.0	0.0
		4			Slag				
8		9							
		12							
9		8	24		0-24 White / Tan / Grey Coarse Sand		W	0.0	0.3
		15			Slag				
10		27							
		20							
					STAKE - 1013				

FIELD BOREHOLE LOG

MALCOLM PIRNIE

Project Name: Hanna Furnace
Project No.: 3587-001
Client: BERC
Location: 2,4 Fuhrman Blvd.

Surface Elev.: _____
Reference Elev.: _____
Contractor: Maxim
Logged By: KKF

Borehole No.: SB - 317
Date Started: 1-26-99
Date Finished: 1-26-99
Method of Boring: HSA 2" SS

Depth (BGS)	Sample No.	Blows (6"	Recovery	Soil Classification	Description and Remarks Density/Consistency, Color, Plasticity, Soil Types, Texture, Fabric, Bedding, Moisture, Other Characteristics	Samples	Moisture (%)	HNu (ppm) Scan	HNu (ppm) Headspace
1		5	18		0-10 LIGHT BROWN / GREY SILTY GRAVEL		M	0.0	0.3
		7			SLAG				
2		11			10-18 BROWN/RED SILTY CLAY WITH SLAG				
		16							
3		20	10		0-8 TAN / GREY COARSE SAND, SLAG		VM	0.0	0.3
		10			8-10 MED BROWN COARSE SAND				
4		50							
		4							
5		50	10		0-10 GREY / ORANGE / DK BROWN		VM	0.0	0.3
		11			SILT and COARSE SAND WITH				
6		9			SLAG				
		7							
7		6	22		0-22 WHITE / TAN / GREY COARSE SAND		VM	0.0	0.3
		12			SOME SILT WITH SLAG				
8		16							
		18							
9		10	24		0-12 TAN COARSE SAND, SLAG		W	0.0	0.0
		9			12-24 WHITE / BLUE GREY COARSE SAND, SLAG				
10		18							
		16							
					STAKE 1014				

FIELD BOREHOLE LOG

MALCOLM PIRNIE

Project Name: Hanna Furnace
Project No.: 3587-001
Client: BERC
Location: 2,4 Fuhrman Blvd.

Surface Elev.: _____
Reference Elev.: _____
Contractor: Maxim
Logged By: KKF

Borehole No.: SB-~~3~~18
Date Started: 1-26-99
Date Finished: 1-26-99
Method of Boring: HSA 2¼ 35

Depth (BGS)	Sample No.	Blows (6"	Recovery	Soil Classification	Description and Remarks Density/Consistency, Color, Plasticity, Soil Types, Texture, Fabric, Bedding, Moisture, Other Characteristics	Samples	Moisture (%)	HNu (ppm) Scan	HNu (ppm) Headspace
1		20	8		0-2 Brown Silty Sand		Vm	0.0	0.3
		65			2-8 Brown/Grey Rock, Slag				
2		20							
		20							
3		24	12		0-3 Brown Silty Sand		Vm	0.0	0.6
		47			3-8 White to Tan Coarse Sand				
4		49			With Slag				
		30			8-12 White/Tan/Grey coarse Sand/gravel/Slag				
5		8	14		0-8 White/Grey Coarse Sand/Slag		Vm	0.0	0.3
		0			Gravel				
6		5			8-14 Brown Silty Sand				
		6							
7		5	18		0-10 Brown/Red Silty Sand		W	0.0	0.6
		5			10-18 Black Silty Sand				
8		6							
		8							
9		3	24		0-20 Black Silty Sand		W	0.0	0.3
		2			20-23 Brown Silty (Peat)				
10		3			23-24 Grey Clay				
		2							
					STAKE 1015				

FIELD BOREHOLE LOG

MALCOLM PIRNIE

Project Name: Hanna Furnace
Project No.: 3587-001
Client: BERC
Location: 2.4 Fuhrman Blvd.

Surface Elev.:
Reference Elev.:
Contractor: Maxim
Logged By: KKF

Borehole No.: SB-19
Date Started: 1-26-99
Date Finished: 1-26-99
Method of Boring: HSA 2" SS

Depth (BGS)	Sample No	Blows (6")	Recovery	Soil Classification	Description and Remarks (Density/Consistency, Color, Plasticity, Soil Types, Texture, Fabric, Bedding, Moisture, Other Characteristics)	Samples	Moisture (%)	HNu (ppm) Scan	HNu (ppm) Headspace
1		6	24		0-12 Brown / Red Brick SILT Sand		m		0.3
		14			12-24 Grey, gravel, Slag				
2		14							
		14							
3		10	20		0-2 Gray gravel, Coarse Sand		m		0.3
		14			2-5 Brown SILT Sand				
4		18			5-20 White / Tan / grey Coarse Sand				
		20							
5		10	22		0-8 Brown / White Coarse Sand		VM		0.0
		11			8-22 White / Blue / grey Coarse Sand				
6		20							
		20							
7		10	24		0-24 Blue / gray / green Coarse Sand, Slag		VM		0.0
		9							
8		13							
		15							
9		4	18		0-17 Blue / gray, w/m slag		VM		0.0
		7			17-18 Brown Silty (Peat)				
10		7							
		3							

STEEL 1004

FIELD BOREHOLE LOG

MALCOLM PIRNIE

Project Name: Hanna Furnace
Project No.: 3587-001
Client: BERC
Location: 2,4 Fuhrman Blvd.

Surface Elev.: _____
Reference Elev.: _____
Contractor: Maxim
Logged By: KKF

Borehole No.: SB - 20
Date Started: 1-26-99
Date Finished: 1-26-99
Method of Boring: HSA 2" SS

Depth (BGS)	Sample No.	Blows (6")	Recovery	Soil Classification	Description and Remarks Density/Consistency, Color, Plasticity, Soil Types, Texture, Fabric, Bedding, Moisture, Other Characteristics	Samples	Moisture (%)	HNu (ppm) Scan	HNu (ppm) Headspace
1		3	14		0-14 Brown SILTY Sand		Wet		0.0
		3							
2		5							
		7							
3		10	14		0-8 Brown SILTY Sand		Wet		[illegible]
		22			8-14 Brown / White / green Coarse Sand				0.9
4		24			and SILT WITH Slag				
		33							
5		8	20		0-4 White / Brown Coarse Sand / gravel		Wet		0.3
		14			4-20 Blue / green / gray Coarse Sand Slag				
6		24			gravel				
		45							
7		Sat 8	8		0-8 Blue / green / gray coarse Sand		Wet		0.3
		~~Sat~~			Slag, gravel				
8		~~50~~							
		~~50~~							
9		10	24		0-24 Blue / gray / White Coarse Sand		Wet		0.0
		11			gravel / Slag				
10		22							
		17							
11		13	10		0-4 Blue / gray / White coarse sand		Wet		0.3
		11			4-10 Brown SILTY (~~[illegible]~~) (DEBRIS)				
12		11							
		7							
					STABLE 1003				

FIELD BOREHOLE LOG

MALCOLM PIRNIE

Project Name: Hanna Furnace
Project No.: 3587-001
Client: BERC
Location: 2.4 Fuhrman Blvd.

Surface Elev.: _____
Reference Elev.: _____
Contractor: Maxim
Logged By: KKF

Borehole No.: SB - 21
Date Started: 1-28-99
Date Finished: 1-28-99
Method of Boring: HSA 7" ID

Depth (BGS)	Sample No.	Blows (6"	Recovery	Soil Classification	Description and Remarks Density/Consistency, Color, Plasticity, Soil Types, Texture, Fabric, Bedding, Moisture, Other Characteristics	Samples	Moisture (%)	HNu (ppm) Scan	HNu (ppm) Headspace
1		2	8		0-8 Brown Silty Sand, some Slag		Wet		0.3
		4							
2		13							
		8							
3		4	8		0-2 Brownish Red Silty Sand		Wet		0.6
		3			2-8 Rusty / Tan Coarse Sand				
4		2			Slag				
		2							
5		7	22		0-14 Brown / White / Gray Coarse Sand		Wet		0.3
		9			Slag				
6		9			14-22 Blue / Green Coarse Sand				
		6							
7		6	24		0-24 Greenish Blue / Black Coarse		Wet		0.6
		16			Sand, some Slag				
8		16							
		24							
9		5	10		8-9 Greenish Blue / Black Coarse		Wet		0.3
		7			Sand				
10		1			9-10 Brown (Peat) Silty				
		2							

STOKE 1031

FIELD BOREHOLE LOG

MALCOLM PIRNIE

Project Name: Hanna Furnace
Project No.: 3587-001
Client: BERC
Location: 2,4 Fuhrman Blvd.

Surface Elev.: _____
Reference Elev.: _____
Contractor: Maxim
Logged By: KKF

Borehole No.: SB - 22
Date Started: 1-28-99
Date Finished: 1-28-99
Method of Boring: HSA 2" SS

Depth (BGS)	Sample No.	Blows (6"	Recovery	Soil Classification	Description and Remarks Density/Consistency, Color, Plasticity, Soil Types, Texture, Fabric, Bedding, Moisture, Other Characteristics	Samples	Moisture (%)	HNu (ppm) Scan	HNu (ppm) Headspace
1		6	24		0-8 Brown Silty Sand		Wet		0.6
		14			8-11 Gray (Rock like) Rubbles				
2		16			11-14 Black / Brown Silty Sand Some				
		8			Shale				
3		4	10		0-4 Black / Brown Coarse Sand		Wet		0.3
		4			4-10 Tan / White Coarse Sand				
4		8			Some Silt				
		14							
5		6	24		0-12 Black / Brown Coarse Sand		Wet		0.6
		8			12-16 Gray / Tan / White Coarse Sand				
6		10			Some Silt				
		18			16-24 Blue / White Coarse Sand				
7		48	24		0-16 Black / Brown Coarse Sand		Wet		0.3
		32			Some Silt				
8		50/5			16-24 Pink / White Coarse Sand				
9		3	18		0-6 Blue Green Coarse Sand		Wet		0.3
		9			6-9 Silty Sand Dark Brown / Black				
10		12			Black Liquid Sheen				
		12			9-18 Brown (Peat) To Gray Clay				
					STAKE 1039				

FIELD BOREHOLE LOG

MALCOLM PIRNIE

Project Name: Hanna Furnace
Project No.: 3587-001
Client: BERC
Location: 2.4 Fuhrman Blvd.

Surface Elev.: _____
Reference Elev.: _____
Contractor: Maxim
Logged By: _____
Method of Boring: _____

Borehole No.: [illegible] 23
Date Started: [illegible]
Date Finished: 1-29-99

Depth (BGS)	Sample No.	Blows (6")	Recovery	Soil Classification	Description and Remarks Density/Consistency, Color, Plasticity, Soil Types, Texture, Fabric, Bedding, Moisture, Other Characteristics	Samples	Moisture (%)	HNu (ppm) Scan	HNu (ppm) Head-space
1		4	14		0-4 Gray / Brown SILT Sand, Slag		dm		2.3
		5			4-14 Tan White Coarse Sand Pebble				
2		10			Size, Slag				
		10							
3		6	15		0-2 Rust / Brown Coarse Sand		Wm		0.3
		6			Pebble Size Slag		M		
4		8							
		10							
5		7	22		0-6 BROWN / WHITE Coarse Sand		Wm		0.3
		11			6-22 White / Tan Some Blue / Gray				
6		11			Coarse Sand with Slag				
		12							
7		15	22		0-10 Brown / Black / White Coarse		Wm		0.3
		28			Sand, Some Slag / Brick				
8		32			10-24 Blue / Green / White Coarse				
		32			Sand				
9		6	22		0-21 Blue / Green / White Coarse		Wm		0.6
		7			Sand, Some Slag				
10		4			21-22 Brown SILTY (Peat)				
		3							
					STOP 1040				

FIELD BOREHOLE LOG

MALCOLM PIRNIE

Project Name: Hanna Furnace
Project No.: 3587-001
Client: BERC
Location: 2,4 Fuhrman Blvd.

Surface Elev.: _____
Reference Elev.: _____
Contractor: Maxim
Logged By: KKF

Borehole No.: SB 24
Date Started: 1-27-99
Date Finished: 1-27-99
Method of Boring: HSA 2" SS

Depth (BGS)	Sample No.	Blows (6"	Recovery	Soil Classification	Description and Remarks Density/Consistency, Color, Plasticity, Soil Types, Texture, Fabric, Bedding, Moisture, Other Characteristics	Samples	Moisture (%)	HNu (ppm) Scan	HNu (ppm) Headspace
1		2	0						—
		4							
2		9							
		11							
3		9	0						—
		9							
4		9							
		8							
5		8	24		0-24 Dark Reddish Brown Silty Sand Some Slag		W		0.3
		3							
6		2							
		3							
7		4	24		0-14 Dark Reddish Brown Silty Sand		W		0.3
		5			14-24 Dark Brown / Black Silty Sand				
8		6							
		7							
9		2	22		0-4 Dark Reddish Brown Silty Sand		W		0.0
~~10~~		3			4-12 Black Silty Sand				
10		5			12-22 Grey Clay				
		7							

FIELD BOREHOLE LOG

MALCOLM PIRNIE

Project Name: Hanna Furnace
Project No.: 3587-001
Client: BERC
Location: 2,4 Fuhrman Blvd.

Surface Elev.: _____
Reference Elev.: _____
Contractor: Maxim
Logged By: KCF

Borehole No.: SB - ~~B~~ 25
Date Started: 1-26-99
Date Finished: 1-26-99
Method of Boring: HSA 2" SS

Depth (BGS)	Sample No.	Blows (6"	Recovery	Soil Classification	Description and Remarks Density/Consistency, Color, Plasticity, Soil Types, Texture, Fabric, Bedding, Moisture, Other Characteristics	Samples	Moisture (%)	HNu (ppm) Scan	HNu (ppm) Headspace
1		5	20		0-6 Brown SILTY Sand		M		0.0
		8			6-20 White / Tan Coarse Sand, Slag				
2		30							
		45							
3		50	10		0-10 TAN / White / Gray / Blue gravel, Slag, Coarse Sand		Wet		0.0
		50							
4		50							
		50							
5		7	24		0-10 Blue / Green / Gray Coarse Sand, gravel		Wet		6.0
		8			10-16 White / Tan Coarse Sand, Slag				
6		7			16-24 White / Blue / Gray Coarse Sand, gravel				
		18							
7		12	24		0-2 Gray / Silvery Sand,		W		0.3
		16			2-14 Brown SILTY, gravel				
8		24			14-24 Blue / Green / White Coarse Sand, Slag				
		28							
9		1	24		0-18 White / Blue / Green, Slag, Coarse Sand, gravel		W		0.3
		1							
10		1			18-24 Brown SILTY, ~~[illegible]~~ - DEAT				
		2							
					STALE 1032				

FIELD BOREHOLE LOG

MALCOLM PIRNIE

Project Name: Hanna Furnace	Surface Elev.:	Borehole No.: SB - 26
Project No.: 3587-001	Reference Elev.:	Date Started: 1-29-99
Client: BERC	Contractor: Maxim	Date Finished: 1-29-99
Location: 2,4 Fuhrman Blvd.	Logged By: KKF	Method of Boring: HSA 2" SS

Depth (BGS)	Sample No.	Blows (6")	Recovery	Soil Classification	Description and Remarks Density/Consistency, Color, Plasticity, Soil Types, Texture, Fabric, Bedding, Moisture, Other Characteristics	Samples	Moisture (%)	HNu (ppm) Scan	HNu (ppm) Headspace
1		5	18		0-8 Brown Silty Sand		M		0.3
		5			8-18 Tan / Black and White Speckled				
2		7			Coarse Sand				
		9							
3		8	20		0-16 Rusty / Tan Coarse Sand		VM		0.9
		10			Some Slag				
4		10			16-20 Gray / White Coarse Sand				
		20			Slag				
5		5	20		0-20 Blue / Green Coarse Sand		VM		0.3
		11			Some Slag				
6		14							
		17							
7		22	14		0-14 Greenish Blue Coarse Sand		VM		0.0
		20			Some Slag				
8		18							
		8							
9		3	12		0-8 Dark Brown Silty Sand To (Peat)		W		0.3
		3			8-12 Gray Clay				
10		3							
		8							
					Stake 1036				

FIELD BOREHOLE LOG

MALCOLM PIRNIE

Project Name: Hanna Furnace
Project No.: 3587-001
Client: BERC
Location: 2,4 Fuhrman Blvd.

Surface Elev.: _____
Reference Elev.: _____
Contractor: Maxim
Logged By: KKF

Borehole No.: SB-27
Date Started: 1-27-99
Date Finished: 1-27-99
Method of Boring: HSA 2" SS

Depth (BGS)	Sample No.	Blows (6"	Recovery	Soil Classification	Description and Remarks Density/Consistency, Color, Plasticity, Soil Types, Texture, Fabric, Bedding, Moisture, Other Characteristics	Samples	Moisture (%)	HNu (ppm) Scan	HNu (ppm) Headspace
1		6	16		0-12 Brown SILTY Sand Some Slag		M		0.9
		10			12-16 White Coarse Sand				
2		7							
		5							
3		30	20		0-20 White / Rust Colored / Some		VM		0.6
		20			Blue Coarse Sand / Slag				
4		15			Pebbles				
		15							
5		5	22		0-22 White / Blue Coarse Sand		VM		0.3
		8			pebble size, Some Slag				
6		9			—				
		13							
7		14	24		0-24 Blue / Green / Gray Coarse Sand		VM		0.3
		14			Pebble Size, Some Slag				
8		14							
		20							
9		10	20		0-10 Brown SILTY CLAY - PEAT		W		0.3
		9			10-20 RAT CLAY				
10		5							
		6							

FIELD BOREHOLE LOG

MALCOLM PIRNIE

Project Name: Hanna Furnace
Project No.: 3587-001
Client: BERC
Location: 2,4 Fuhrman Blvd.

Surface Elev.: _____
Reference Elev.: _____
Contractor: Maxim
Logged By: KKF

Borehole No.: SB - 28
Date Started: 1-27-99
Date Finished: 1-27-99
Method of Boring: HSA 2" SS

Depth (BGS)	Sample No.	Blows (6"	Recovery	Soil Classification	Description and Remarks Density/Consistency, Color, Plasticity, Soil Types, Texture, Fabric, Bedding, Moisture, Other Characteristics	Samples	Moisture (%)	HNu (ppm) Scan	HNu (ppm) Headspace
1		3	12		0-12 Brown Rocky / Slag Some Silt and Sand		Wet		0.9
		3							
2		5							
		5							
3		9	18		0-6 Brown Rock / Slag, Some Silt and Sand		Wet		[illegible]
		9							1.5
4		21			6-18 Tan / White Coarse Sand Pebble Size				
		14							
5		5	22		0-12 Tan / White Coarse Sand Pebble Size / Some Slag		Wet		[illegible]
		9							2.7
6		18			12-22 Blue / Gray / White Coarse Sand Pebble Size, Some Slag				
		18							
7		14	24		0-12 Tan / White / Gray Coarse Sand Pebble Size, Some Slag		Wet		0.9
		18							
8		24			12-24 Blue / Green Coarse Sand Pebble Size, Some Slag				
		19							
9									
10									

FIELD BOREHOLE LOG

MALCOLM PIRNIE

Project Name: Hanna Furnace	Surface Elev.:	Borehole No.: SB - 29
Project No.: 3587-001	Reference Elev.:	Date Started: 1-29-99
Client: BERC	Contractor: Maxim	Date Finished: 1-29-99
Location: 2,4 Fuhrman Blvd.	Logged By: KKF	Method of Boring: HSA 2" SS

Depth (BGS)	Sample No.	Blows (6")	Recovery	Soil Classification	Description and Remarks Density/Consistency, Color, Plasticity, Soil Types, Texture, Fabric, Bedding, Moisture, Other Characteristics	Samples	Moisture (%)	HNu (ppm) Scan	HNu (ppm) Headspace
1		5	14		0-2 Tan Silty Sand		Wm		0.9
		7			2-14 White / Gray Coarse Sand				
2		9			Some Slag				
		8							
3		6	20		0-20 Gray / White Coarse Sand		Wm		0.6
		4			Some Slag (Black Streak				
4		6			at 10 ½ in wide)				
		6							
5		5	24		0-12 Gray / White Coarse Sand		Wm		0.6
		6			/ Some Slag				
6		7			12-22 Green / Blue / Gray Coarse Sand				
		9			22-24 Dark Green / Blue Coarse Sand				
7		6	18		0-17 Dark Green / Blue / Black		Wm		0.3
		7			Coarse Sand, Some Slag				
8		8			17-18 Brown Silty (Peat)				
		8							
9									
10									
					Strike 1033				

FIELD BOREHOLE LOG

MALCOLM PIRNIE

Surface Elev.: _____ Borehole No.: SB - 30

Project Name: Hanna Furnace Reference Elev.: _____ Date Started: 1-28-94

Project No.: 3587-001 Contractor: Maxim Date Finished: 1-29-94

Client: BERC Logged By: KKF Method of Boring: HSA 2¼ SS

Location: 2.4 Fuhrman Blvd.

Depth (BGS)	Sample No.	Blows (6"	Recovery	Soil Classification	Description and Remarks Density/Consistency, Color, Plasticity, Soil Types, Texture, Fabric, Bedding, Moisture, Other Characteristics	Samples	Moisture (%)	HNu (ppm) Scan	HNu (ppm) Headspace
1		14	18		0-6 Brown Coarse Sand Some Silt		M		0.9
		25			6-13 Gray / White / Yellowish Coarse				
2		32			Sand Slag				
		25			13-18 Gray Coarse Sand / Slag				
3		20	22		0-6 Brown Silty Sand		M		1.2
		16			6-12 White Coarse Sand / Some Slag				
4		14			12-22 Brown / Tan Coarse Sand.				
		10			Some Slag				
5		10	24		0-16 White / Tan / Gray Coarse Sand		M		3.9
		10			Some Slag				
6		17			16-24 Black / Gray / Tan Coarse Sand				
		19			Some Slag				
7		33	12		0-12 Tan / White / Gray Coarse		W		1.5
		50/3			Sand Some Slag				
8									
9		12	14		0-9 Blue / Green Coarse Sand		Wet		1.8
		3			Some Slag				
10		2			9-11 Rust Colored / Tan coarse Sand				
		3			Some Slag				
			14		11-13 Black Silty Sand		W		—
11					13-14 Brown Silty (Asph)				
12									
					STICK 10 35				

FIELD BOREHOLE LOG

MALCOLM PIRNIE

Project Name: Hanna Furnace
Project No.: 3587-001
Client: BERC
Location: 2.4 Fuhrman Blvd.

Surface Elev.:
Reference Elev.:
Contractor: Maxim
Logged By: ICKF

Borehole No.: SB - 31
Date Started: 1-24-99
Date Finished: 1-29-99
Method of Boring: HSA 2" SS

Depth (BGS)	Sample No.	Blows (6"	Recovery	Soil Classification	Description and Remarks Density/Consistency, Color, Plasticity, Soil Types, Texture, Fabric, Bedding, Moisture, Other Characteristics	Samples	Moisture (%)	HNu (ppm) Scan	HNu (ppm) Headspace
1		3	14		0-9 Brown Silty Sand		vm		3.6
		5			9-14 Tan / White / Black Coarse Sand				
2		7			Some Slag				
		7							
3		13	22		0-16 Rusty / Tan Coarse Sand		vm		3.3
		11			Some Slag				
4		9			16-22 White / Gray Coarse Sand				
		12			Some Slag				
5		2	24		0-2 Rusty / Tan / Coarse Sand, Some		vm		1.2
		6			Slag				
6		11			2-24 Blue / White Coarse Sand, Some				
		16			Slag				
7		15	14		0-14 Brown To Dark Brown Silty		vm		0.8
		15			Sand				
8		13							
		10							
9		1	12		0-10 Brown Silty Clay & Some (Peat)		w		0.6
		2			10-12 Gray Clay				
10		2							
		2							
					STICK 1042				

FIELD BOREHOLE LOG

MALCOLM PIRNIE

Project Name: Hanna Furnace
Project No.: 3587-001
Client: BERC
Location: 2,4 Fuhrman Blvd.

Surface Elev.: _____
Reference Elev.: _____
Contractor: Maxim
Logged By: KKF
Method of Boring: HSA 7" SS

Borehole No.: SB-32
Date Started: 1-27-99
Date Finished: 1-27-99

Depth (BGS)	Sample No.	Blows (6"	Recovery	Soil Classification	Description and Remarks Density/Consistency, Color, Plasticity, Soil Types, Texture, Fabric, Bedding, Moisture, Other Characteristics	Samples	Moisture (%)	HNu (ppm) Scan	HNu (ppm) Headspace
1		6	22		0-12 Brown, Some Black / Slag		M		5.6
		10			Rock Silty Sand				3.6
2		20			12-22 Black / Silvery / Brown / Slag				
		45			Silty Sand				
3		10	12		0-6 Brown Silty Sand, Some Slag		Wet		3.3
		50			6-12 Black Silty Sand, Pebbles				
4		50			and Slag				
		50							
5		6	14		0-1 Blue Coarse Sand		M		0.3
		32			1-14 Beige Clay				
6		20							
		17							
7		10	6		0-6 Beige / gRey Clay		M		0.3
		11							
8		13							
		11							
9									
10									

FIELD BOREHOLE LOG

MALCOLM PIRNIE

Project Name: Hanna Furnace
Project No.: 3587-001
Client: BERC
Location: 2,4 Fuhrman Blvd.

Surface Elev.:
Reference Elev.:
Contractor: Maxim
Logged By: ICUF

Borehole No.: SB- 33
Date Started: 1-29-99
Date Finished: 1-29-99
Method of Boring: HSA-2¼ SS

Depth (BGS)	Sample No.	Blows (6"	Recovery	Soil Classification	Description and Remarks Density/Consistency, Color, Plasticity, Soil Types, Texture, Fabric, Bedding, Moisture, Other Characteristics	Samples	Moisture (%)	HNu (ppm) Scan	HNu (ppm) Headspace
1		5	8		0-4 Brown Silty Sand		M		~~0.0~~
		12			4-6 Gray / white Slag				0.3
2		14			6-8 Brown / Tan Clay				
		10							
3		6	12		0-12 Tan / Brown Clay		M		0.3
		7							
4		7							
		7							
5		7	8		0-8 Tan / Brown Clay		M		
		2							
6		3							
		2							
7									
8									
9									
10									
								3	
					STAKE 1043				

FIELD BOREHOLE LOG

MALCOLM PIRNIE

Surface Elev.: _____ Borehole No.: SB - 34

Project Name: Hanna Furnace Reference Elev.: _____ Date Started: 1-28-99

Project No.: 3587-001 Contractor: Maxim Date Finished: 1-28-99

Client: BERC Logged By: KKF Method of Boring: HSA 2" SS

Location: 2,4 Fuhrman Blvd.

Depth (BGS)	Sample No.	Blows (6"	Recovery	Soil Classification	Description and Remarks Density/Consistency, Color, Plasticity, Soil Types, Texture, Fabric, Bedding, Moisture, Other Characteristics	Samples	Moisture (%)	HNu (ppm) Scan	HNu (ppm) Headspace
1		2	16		0-14 Brown Silty Sand		M		0.3
		2			14-16 Rusty / Tan Coarse Sand				
2		4							
		5							
3		4	20		0-20 Rusty / Tan Coarse Sand / Some Slag		M		0.3
		6							
4		10							
		13							
5		10	18		0-8 Rusty, Speckled Black Coarse Sand / Slag		M		0.6
		9							
6		13			8-18 Blue / White / Some Rust Color Coarse Sand / Slag				
		14							
7		12	20		0-15 Rusty, Black Speckled Coarse Sand, Some Slag		M		0.6
		20							
8		19			15-18 White Coarse Sand				
		22			18-20 Blue / Green Coarse Sand				
9		7	24		0-24 Blue / Green / Gray / White Coarse Sand / Slag		Wet		0.3
		13							
10		7							
		14							
					100 ft South of 1023				

Page ___ of ___

FIELD BOREHOLE LOG

MALCOLM PIRNIE

Project Name: Hanna Furnace
Project No.: 3587-001
Client: BERC
Location: 2,4 Fuhrman Blvd.

Surface Elev.:
Reference Elev.:
Contractor: Maxim
Logged By: KKF

Borehole No.: SB - 35
Date Started: 1-27-99
Date Finished: 1-27-99
Method of Boring: HSA 2" SS

Depth (BGS)	Sample No.	Blows (6")	Recovery	Soil Classification	Description and Remarks Density/Consistency, Color, Plasticity, Soil Types, Texture, Fabric, Bedding, Moisture, Other Characteristics	Samples	Moisture (%)	HNu (ppm) Scan	HNu (ppm) Headspace
1		3	5		0-5 Dark Brown Silty Sand		m		0.3
		10							
2		8							
		4							
3		4	22		0-6 Brown Silty Sand		m		0.3
		6			6-22 White / Tan / Grey Coarse Sand				
4		10			gravel, Slag				
5		6	24		0-24 Rust Colored Coarse Sand		m		0.0
		7			with Slag				
6		6							
		3							
7		6	22		0-4 Rust Colored Coarse Sand, Slag		m		0.0
		6			4-22 Tan / white / grey Coarse Sand				
8		7			gravel size / Slag				
		11							
9		4	20		0-12 Rust / Tan Colored Coarse Sand		m		0.0
		7			gravel size, Slag				
10		10			12-20 Blue / white / green Coarse Sand				
		11			gravel size, Slag				
					* Flag SB 35				
					100 west of Stake 1053				