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Golder Associates

REVISED DRAFT

REMEDIAL INVESTIGATION REPORT
BERKS LANDFILL
BERKS COUNTY, PENNSYLVANIA

VOLUME 3 OF 3

Appendices N through W
and
Attachments 1 and 2

Prepared by:

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March 1995

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APPENDIX N

AQUATIC HABITAT ASSESSMENT

1.0 INTRODUCTION

A benthic macroinvertebrate study was conducted at the Berks Landfill, Spring Township, Berks County, Pennsylvania, as part of the implementation of the Berks Landfill Remedial Investigation/Feasibility Study Work Plan approved by USEPA on June 8, 1992. The purpose of the study was to characterize the composition and structure of the benthic macroinvertebrate communities in streams within and adjacent to the Berks Landfill Site and to assess potential impacts of the Site on aquatic habitats. Characterization of benthic macroinvertebrate communities in streams was accomplished by using qualitative benthos sampling and identification methods. Samples were collected from the tributary to Cacoosing Creek and other unnamed tributaries at the Site. Potential impacts of the Site to aquatic habitats (impairment) were assessed by comparing macroinvertebrate communities upstream and downstream of the Site.

2.0 BENTHIC MACROINVERTEBRATES AS INDICATORS OF ENVIRONMENTAL IMPACTS

Benthic macroinvertebrates (benthos) are aquatic organisms which inhabit the bottom or substratum of streams, estuaries, and other waterbodies. Although some immature benthos (early instars) of many species are extremely small, the majority of benthos are visible to the unaided eye. Benthos serve as the primary food source for many fish and other aquatic animals.

The composition and structure of the benthic communities are generally stable from year to year in undisturbed habitats. Seasonal variations, however, may exist due to life-cycle dynamics. A diverse and balanced distribution of benthic

communities are indicative of most free-flowing aquatic environments that have not been adversely impacted.

Benthos generally have limited ranges and are, therefore, good indicators of localized aquatic conditions. When macroinvertebrate communities are subjected to even minor habitat disturbances (i.e., water quality, siltation, organic load, etc.) they generally respond by adjustments in the community structure. Benthic macroinvertebrate surveys can therefore provide useful information to characterize potential adverse impacts to aquatic habitats.

3.0 METHODS

Rapid Bioassessment Protocol I (RBP I) methodologies, outlined in the Rapid Bioassessment Protocols For Use In Stream And Rivers: Benthic Macroinvertebrates And Fish (EPA/444/4-89-001), 1989 were utilized to evaluate benthic macroinvertebrate communities at the Site. RBP I focuses on the qualitative assessment of benthic communities. It should be noted that Golder conducted additional investigative work beyond the typical RBP I protocol which was not specified in the Work Plan. This additional work was performed to provide a more comprehensive evaluation of the aquatic habitats. Typical RBP III protocols including collection, preservation, and subsequent identification and comparisons of benthic macroinvertebrate specimens, grain size distribution for benthic macroinvertebrate colonization, and more detailed sample station evaluations were conducted. Details of the sample collection and evaluation methods utilized are discussed below. In addition, field measurements of surface water quality and laboratory analyses of surface water and sediment samples were performed. These sampling and analysis procedures are also described below.

3.1 Sample Station Locations

Six sampling stations were established in ecologically similar settings to provide a representative comparison of benthic macroinvertebrate communities. Prior to the selection of the sampling station locations, a review of stream habitats and physical conditions was conducted through stream reconnaissance at the general location of the sampling points identified in the USEPA approved RI/FS Work Plan. Final sample station locations were then selected considering stream substrate, vegetation, water depth, and other stream conditions such as riffle-pool and riffle-run ratios and sun exposure. All the stations were considered to have ecologically similar habitats even though there were certain physical differences.

For future reference and relocation, a marker (placard on a wooden stake) was placed in the general location of each of the sampling stations. Sampling stations were identified as Macroinvertebrate (MI) Station 1 through 6. The general location of the benthic macroinvertebrate sampling stations are shown on Figure N-1.

Two reference or background sampling stations, Station 4 and Station 6, (see Figure N-1) were established. Station 6 was selected upstream of the Site within the unnamed tributary to Cacoosing Creek. Station 4 was selected in the upstream headwaters of the central drainage channel which flows between the western and eastern landfills at the Site. Both stations were selected and sampled in the same manner as all other sampling locations. These reference locations were used for the final comparison of benthos within the Site.

3.2 Sampling Methods

Benthic macroinvertebrate samples were collected using a rectangular aquatic kick net with a mesh size of 800 microns. The net was firmly placed against the stream bottom while the substrata immediately upstream from the net was disturbed,

allowing the benthic macroinvertebrate organisms and debris to be washed into the net by the stream flow. An area of approximately 1-foot by 3-feet was kicked or disturbed by hand for each sample collected. Large rocks within the sample zone, were also examined for the presence of benthos. Eight individual kick samples (collection points), four in the riffle habitat and four in the pool or run habitat, were collected at each of the six sample stations.

The contents of the net were emptied into a sorting tray containing about 1/2 inch of water. The net was then carefully checked for any remaining benthos. Benthic macroinvertebrate organisms were hand picked (with curved forceps; eye droppers; etc.) from the tray and preserved in 2 ounce glass bottles (with polyethylene inserts) using a 10% Formalin solution buffered for tissue fixation. Organic debris and substrata were sorted from all samples prior to preservation. Samples from each collection point at a sample station were placed in separate sample bottles (i.e., 8 bottles for each sample station). It should be noted that RBP I does not require the collection of specimens and that Golder retained the specimens for a more accurate evaluation of the benthos present at the Site. It is also worth noting that, in most cases, greater than 100 organism counts were found at each collection point.

Samples were collected on May 19 through 21, 1992. Representatives from the USEPA and Tetra Tech, Inc. (the USEPA oversight contractor) were present for a portion of the benthic macroinvertebrate sampling. Each collection point was assigned a unique sample identification number including the sample station identification number. All benthic sampling was supplemented with surface water quality field measurements for dissolved oxygen, temperature, pH, and specific conductivity, stream flow measurements, and physical observations and notes. Surface water samples were collected for laboratory analyses of total suspended solids, alkalinity and hardness. In addition, sediment samples were collected for laboratory analyses (i.e., grain size distribution, total organic carbon, percent

moisture, percent solids). Field measurements, sample collection and laboratory analyses were conducted in accordance with the USEPA approved RI/FS Work Plan.

3.3 Evaluation of Benthic Macroinvertebrate Samples

Benthic macroinvertebrate organism samples were examined with an illuminated stereomicroscope. Identifications were conducted to an Order and/or Family taxonomic level (refer to Table N-1). Sample specimens were then compared with the background specimens collected at the Site and with known pollutant sensitive benthic macroinvertebrate groups (established by USEPA) to evaluate stream environmental conditions.

4.0 MACROINVERTEBRATE SURVEY RESULTS

Complexity in benthic macroinvertebrate community structure is mainly determined by the numbers of individuals present, the number of taxa (species) present and the type and distribution of the taxa found within the community. Density, taxa richness, and species diversity are descriptive parameters used to evaluate these various community characteristics. The Biosurvey Field Data Sheets (provided in Attachment N-1) present the results of the benthic macroinvertebrate surveys for the Berks Landfill Site. These data are intended to reflect the relative complexity of the community structures and provide a comparison of each of the communities observed.

The results indicate that, within the benthic macroinvertebrate communities assessed both upstream and downstream of the Site, there is an overall benthic macroinvertebrate abundance and rich taxa diversity. There is also a dominance of the following pollutant sensitive or intolerant organisms, as identified by USEPA: Ephemeroptera (mayflies), Plecoptera (stoneflies) and Trichoptera

(caddisflies) collectively referred to as "EPT". In addition, there is a relatively low distribution of pollutant tolerant groups such as Diptera and Annelida (e.g., Chironomidae and Oligochaetes).

Minnows (Notropis sp.) were observed at five (5) of the sampling stations. Station 4 was the only station where minnows were not observed. It should be noted, however, that sampling Station 4 is an upstream location and is within the first order stream headwaters of the central drainage channel. Fish would typically not be expected within these areas.

The benthic macroinvertebrate survey results indicate that a healthy aquatic habitat exists within the streams sampled and that there is a dominance of EPT species which indicate that suitable conditions exist within the stream systems at the Site to support normal benthic communities. Distribution of species appeared to be consistent throughout the stream system and overall species diversity was also observed which reflects the similarity of conditions at each of the individual sampling stations.

Water quality parameters measured in the field included pH, temperature, specific conductance and dissolved oxygen. The results are provided in Table N-2. Chemical analyses of surface water samples for alkalinity, hardness, and Total Suspended Solids are provided in Table N-3. The range of field parameter values measured and analytical results for the conventional parameters sampled during this study were as follows:

pH	6.46	-	7.90	standard units;
specific conductance	220	-	330	umhos/cm;
dissolved oxygen	7.9	-	9.7	mg/l;
temperature	10.6°C	-	17.7°C;	
alkalinity	72	-	126	mg/l as $CaCO_3$;
hardness	137	-	188	mg/l as $CaCO_3$; and
total suspended solids	<xx	-	23	mg/l.

The Pennsylvania Water Quality Standards, outlined in Pennsylvania Code Title 25, Chapter 93 define the designated use of Cacoosing Creek as a Warm Water Fishery (WWF). The WWF designated use criteria established for the measured parameters are as follows:

pH	6.0 - 9.0 standard units;
total dissolved solids (specific conductance)	1500 mg/l maximum (specific conductance x 0.65 = TDS);
dissolved oxygen	minimum daily average 5.0 mg/l, any one minimum 4.0 mg/l;
temperature	maximum temperature 22.2°C for May 16 through May 31;
alkalinity	minimum of 20 mg/l as $CaCO_3$;
hardness	maximum monthly average 150 mg/l as $CaCO_3$; and
total suspended solids	no criteria established.

All of the values, except hardness, were within the PADER criteria for the designated use of the surface water body. It should be noted that, while three of the six sample locations minimally exceeded the hardness criteria, one of the three samples was from a reference location (Station 6) which may indicate that the hardness levels measured are indicative of natural stream conditions.

Table N-4 presents the inorganic chemical analyses results for Total Organic Carbon (TOC) and percent solids for stream sediments. These results indicate that TOC concentrations are considerably low (i.e., near the detection limit of the analytical method). These results also indicate suitable conditions for benthic macroinvertebrate communities.

The results of the grain size distribution analyses (summary provided in Table N-5 and in Attachment N-2 for laboratory data) show that stream habitat conditions, with regard to substrate characteristics, are relatively similar and that colonization within benthic communities could therefore be expected to be similar at each of

the sampling station locations. It should be noted the grain size distribution conducted during the benthos survey was to evaluate benthic macroinvertebrate colonization habitat similarities.

Stream flow measurements were also performed at each macroinvertebrate station. Stream flow were measured by the standard USGS Streamflow Measurement Technique using a pygmy current meter suspended on a top setting wading rod. Results of the measurements are presented in Table N-6 and cross sections of the streams are presented on Figure N-2.

5.0 SUMMARY OF RESULTS

The results of the benthic macroinvertebrate survey, field measured surface water quality parameters and laboratory analyses of surface water samples for conventional parameters indicate that the Berks Landfill Site has not adversely impacted the benthic community structure and, has not exceeded the criteria to protect the designated use of the streams. This conclusion is evident by: (1) the diverse benthic community structure with a high occurrence of taxa present; (2) high population densities at each benthic sampling station; (3) a dominance of EPT (pollutant intolerant) species which are abundant and generally widespread throughout the stream systems at the Site; (4) a low occurrence of pollutant tolerant species such as those in the Order Diptera; and, (5) surface water parameters measured in the field and the laboratory generally meet PADER surface water quality criteria for the designated use of the stream. In summary, the data collected indicates that healthy aquatic habitats exist at the Berks Landfill Site.

REFERENCES

Adler, P.H. and K.C. Kim. February 1986. The Blackflies of PennsylvaniaDiptera), Bionomics, Taxonomy, and Distribution. The Pennsylvania State University, College of Agriculture, Agricultural Experiment Station, Bulletin 856., University Park, Pennsylvania. 88 pp.

Klemm, Donald J. et. al. November 1990. Macroinvertebrate Field and Laboratory Methods for Evaluating the Biological Integrity of Surface Waters. United States Environmental Protection Agency. Cincinnati, Ohio EPA/600/4-90/030.

Merritt, R.W., and K.W. Cummins. 1984. An Introduction to the Aquatic Insects of North America, Second Edition. Kendall/Hunt Publishing Co., Dubuque, Iowa. 721 pp.

PADER. 1988. Guidelines for Benthic Macroinvertebrates Stream Surveys for Landfills, June 1988. PADER Bureau of Waste Management, Harrisburg, PA.

Plafkin, J.L.,et al. May 1989. Rapid Bioassessment Protocols For Use in Streams and Rivers, Benthic Macroinvertebrates and Fish. United States Environmental Protection Agency. Washington, D.C. EPA/444/4-89-001.

Surdick, R.F., and K.C. Kim. May 1976. Stoneflies (Plecoptera) of Pennsylvania. The Pennsylvania State University, College of Agriculture, 125 Agricultural Experiment Station, Bulletin 808., University Park, Pennsylvania. 73 pp.

Thorp, J.H. and A.P. Covich. 1991. Ecology and Classification of North American Freshwater Invertebrates. Academic Press, Inc. San Diego, California. 910 pp.

TABLE N-1

LIST OF MACROINVERTEBRATES OBSERVED AT THE BERKS LANDFILL

ORDER
- Suborder
  - Family
    - Genera

EPHEMEROPTERA
- Suborder Pannota
  - Ephemerellidae
- Suborder Schistonota
  - Baetidae
  - Heptageniidae
  - Leptophlebiidae

PLECOPTERA
- Suborder Systellognatha
  - Chloroperlidae
  - Perlidae
  - Perlodidae
- Suborder Euholognatha
  - Leuctridae
  - Nemouridae

TRICHOPTERA
- Suborder Annulipalpia
  - Hydropsychidae
  - Psychomyiidae
- Suborder Spicipalpia
  - Hydroptilidae
- Suborder Integripalpia
  - Limnephilidae
  - Uenoidae

DIPTERA
- Chironomidae
- Empididae
- Simuliidae
- Suborder Nematocera
  - Tipulidae
    - Tipula sp.

COLEOPTERA
- Elmidae
  - Microcylloepus sp.
- Heterlimnius sp.
- Psephenidae

HEMIPTERA
- Gerridae
  - Gerris sp.
- Veliidae
  - Microvelia sp.

DECAPODA
- Cambaridae
  - Cambrus sp.

ODONATA
- Suborder Anisoptera
  - Gomphidae

TABLE N-2

RESULTS OF SURFACE WATER SAMPLES

BERKS LANDFILL REMEDIAL INVESTIGATION - MAY 1992
BERKS COUNTY, PENNSYLVANIA

Primary Sample Results FIELD PARAMETERS							
Parameter	Units	Sample Location MI STATION 1 Date Sampled: 05/19/92	Sample Location MI STATION 2 Date Sampled: 05/19/92	Sample Location MI STATION 3 Date Sampled: 05/20/92	Sample Location MI STATION 4 Date Sampled: 05/20/92	Sample Location MI STATION 5 Date Sampled: 05/20/92	Sample Location MI STATION 6 Date Sampled: 05/21/92
		Result	Result	Result	Result	Result	Result
pH	std. units	7.64	7.90	6.46	7.20	7.51	7.02
Specific Conductance	umhos/cm	330	320	285	220	270	240
Dissolved Oxygen	mg/l	9.2	7.9	9.6	9.1	8.5	9.7
Temperature	Deg. C	13.2	14.2	10.6	13.5	17.7	11.1
Temperature using traceable thermometer	Deg. C	13.5	15.2	10.8	13.5	17.5	11.2

Notes:
1. MI indicates Macroinvertebrate
2. MI STATION 1 is SW-08 monitoring location as shown on Figure 2 of the FSP.
3. MI STATION 2 is SW-09 monitoring location as shown on Figure 2 of the FSP.
4. MI STATION 3 is SW-10 monitoring location as shown on Figure 2 of the FSP.
5. MI STATION 4 is SW-04 monitoring location as shown on Figure 2 of the FSP.
6. MI STATION 5 is SW-11 monitoring location as shown on Figure 2 of the FSP.
7. MI STATION 6 is SW-01 monitoring location as shown on Figure 2 of the FSP.

TABLE N-3

RESULTS OF SURFACE WATER SAMPLES

BERKS LANDFILL REMEDIAL INVESTIGATION - MAY 1992
BERKS COUNTY, PENNSYLVANIA

Primary Sample Results INORGANICS																		
Parameter	Sample Location SW-01/1A Date Sampled: 05/21/92			Sample Location SW-04/1A Date Sampled: 05/20/92			Sample Location SW-08/1A Date Sampled: 05/19/92			Sample Location SW-09/1A Date Sampled: 05/19/92			Sample Location SW-10/1A Date Sampled: 05/20/92			Sample Location SW-11/1A Date Sampled: 05/20/92		
	MRL	Result	Qual	MRL	Result	Qual	MRL	Result	Qual	MRL	Result	Qual	MRL	Result	Qual	MRL	Result	Qual
Alkalinity	2	92	A	2	72	A	2	126	A	2	120	A	2	92	A	2	120	A
Hardness	2	151	A	2	137	A	2	188	A	2	163	A	2	144	A	2	139	A
Total Suspended Solids	5	13	A	5	ND	U	5	ND	U	5	23	A	5	20	A	5	23	A

Notes:

1. All results are reported in units of mg/l.
2. MRL is the laboratory method reporting limit.
3. ND indicates that this parameter was not detected in this sample.
4. Qualifiers (Qual) are indicated as follows:
   A - Acceptable (Quantitative) Data
   J - Estimated (Semi-quantitative) Data
   R - Unusable Data
   L - Estimated, Biased Low Data
   K - Estimated Biased High Data
   U - Not Detected (Quantitative) Data
   UJ - Not Detected (Semi-quantitative) Data
   UL - Not Detected, Biased Low Data
5. Sample location SW-01 is Macroinvertebrate Station 6.
   Sample location SW-04 is Macroinvertebrate Station 4.
   Sample location SW-08 is Macroinvertebrate Station 1.
   Sample location SW-09 is Macroinvertebrate Station 2.
   Sample location SW-10 is Macroinvertebrate Station 3.
   Sample location SW-11 is Macroinvertebrate Station 5.

AR302661

TABLE N-4

RESULTS OF SEDIMENT SAMPLES

BERKS LANDFILL REMEDIAL INVESTIGATION - MAY 1992
BERKS COUNTY, PENNSYLVANIA

Primary Sample Results INORGANICS												
Parameter	Sample Location SED01/1A Date Sampled: 05/21/92			Sample Location SED03/1A Date Sampled: 05/20/92			Sample Location SED07/1A Date Sampled: 05/20/92			Sample Location SED08/1A Date Sampled: 05/19/92		
	MRL	Result	Qual	MRL	Result	Qual	MRL	Result	Qual	MRL	Result	Qual
Total Organic Carbon (TOC)	0.1	0.4	A	0.1	0.5	A	0.1	0.2	A	0.1	0.2	A
Percent Solid	NA	76	NA	NA	76	NA	NA	73	NA	NA	79	NA

Notes:

1. All sediment results are reported as a percent and the Rinsate Blank results are reported in mg/l. TOC results are reported on a dry weight basis.
2. MRL is the laboratory method reporting limit.
3. ND indicates that this parameter was not detected in this sample.
4. NA indicates Not Applicable.
5. Qualifiers (Qual) are indicated as follows:
   - A - Acceptable (Quantitative) Data
   - J - Estimated (Semi-quantitative) Data
   - UJ - Not Detected (Semi-quantitative) Data
   - UL - Not Detected, Biased Low Data
   - R - Unusable Data
   - L - Estimated, Biased Low Data
   - K - Estimated Biased High Data
   - U - Not Detected (Quantitative) Data
6. Sample Location SED01/1A is Macroinvertebrate Station 6.
   Sample Location SED03/1A is Macroinvertebrate Station 4.
   Sample Location SED07/1A is Macroinvertebrate Station 5.
   Sample Location SED08/1A is Macroinvertebrate Station 1.
   Sample Location SED09/1A is Macroinvertebrate Station 3.
   Sample Location SED10/1A is Macroinvertebrate Station 2.
   RB001/1A sample is the Rinsate Blank Sample.

TABLE N-4 (Cont'd)

RESULTS OF SEDIMENT SAMPLES

BERKS LANDFILL REMEDIAL INVESTIGATION - MAY 1992
BERKS COUNTY, PENNSYLVANIA

Primary Sample Results INORGANICS									
Parameter	Sample Location SED09/1A Date Sampled: 05/20/92			Sample Location SED10/1A Date Sampled: 05/19/92			Sample Location RB001/1A Date Sampled: 05/21/92		
	MRL	Result	Qual	MRL	Result	Qual	MRL	Result	Qual
Total Organic Carbon (TOC)	0.1	0.3	A	0.1	0.4	A	1	ND	U
Percent Solid	NA	83	NA	NA	74	NA	NA	ND	NA

Notes:

1. All sediment results are reported as a percent and the Rinsate Blank results are reported in mg/l. TOC results are reported on a dry weight basis.
2. MRL is the laboratory method reporting limit.
3. ND indicates that this parameter was not detected in this sample.
4. NA indicates Not Applicable.
5. Qualifiers (Qual) are indicated as follows:
   - A - Acceptable (Quantitative) Data
   - J - Estimated (Semi-quantitative) Data
   - UJ - Not Detected (Semi-quantitative) Data
   - UL - Not Detected, Biased Low Data
   - R - Unusable Data
   - L - Estimated, Biased Low Data
   - K - Estimated Biased High Data
   - U - Not Detected (Quantitative) Data
6. Sample Location SED01/1A is Macroinvertebrate Station 6.
   Sample Location SED03/1A is Macroinvertebrate Station 4.
   Sample Location SED07/1A is Macroinvertebrate Station 5.
   Sample Location SED08/1A is Macroinvertebrate Station 1.
   Sample Location SED09/1A is Macroinvertebrate Station 3.
   Sample Location SED10/1A is Macroinvertebrate Station 2.
   RB001/1A sample is the Rinsate Blank Sample.

TABLE N-5

SUMMARY OF RESULTS OF GRAIN SIZE DISTRIBUTION

BERKS LANDFILL REMEDIAL INVESTIGATION – MAY 1992
BERKS COUNTY, PENNSYLVANIA

Macro-Invertebrate Station	Sample Number	Delivered Moisture Content	Distribution		
			% Finer #4 Sieve	% Finer #200 Sieve	% Finer 2 Micron
1	GSD-1	11.1%	31.4%	1.6%	0.3%
2	GSD-2	21.5%	45.5%	4.9%	0.7%
3	GSD-3	18.4%	23.6%	2.0%	0.2%
4	GSD-4	21.7%	42.3%	1.7%	0.0%
5	GSD-5	21.4%	51.8%	2.0%	0.5%
6	GSD-6	32.0%	65.3%	6.2%	1.6%

TABLE N-6

STREAM FLOW MEASUREMENTS
BERKS LANDFILL REMEDIAL INVESTIGATION - MAY 1992
BERKS COUNTY, PENNSYLVANIA

STATION ID	LOCATION	DATE	METHOD	FLOW GPM
MI-1	Macroinvertebrate Station 1	5/18/92	Pygmy Meter	386.0
MI-2	Macroinvertebrate Station 2	5/19/92	Pygmy Meter	52.5
MI-3	Macroinvertebrate Station 3	5/20/92	Pygmy Meter	104.1
MI-4	Macroinvertebrate Station 4	5/20/92	Pygmy Meter	34.6
MI-5	Macroinvertebrate Station 5	5/18/92	Pygmy Meter	187.5
MI-6	Macroinvertebrate Station 6	5/21/92	Pygmy Meter	84.4

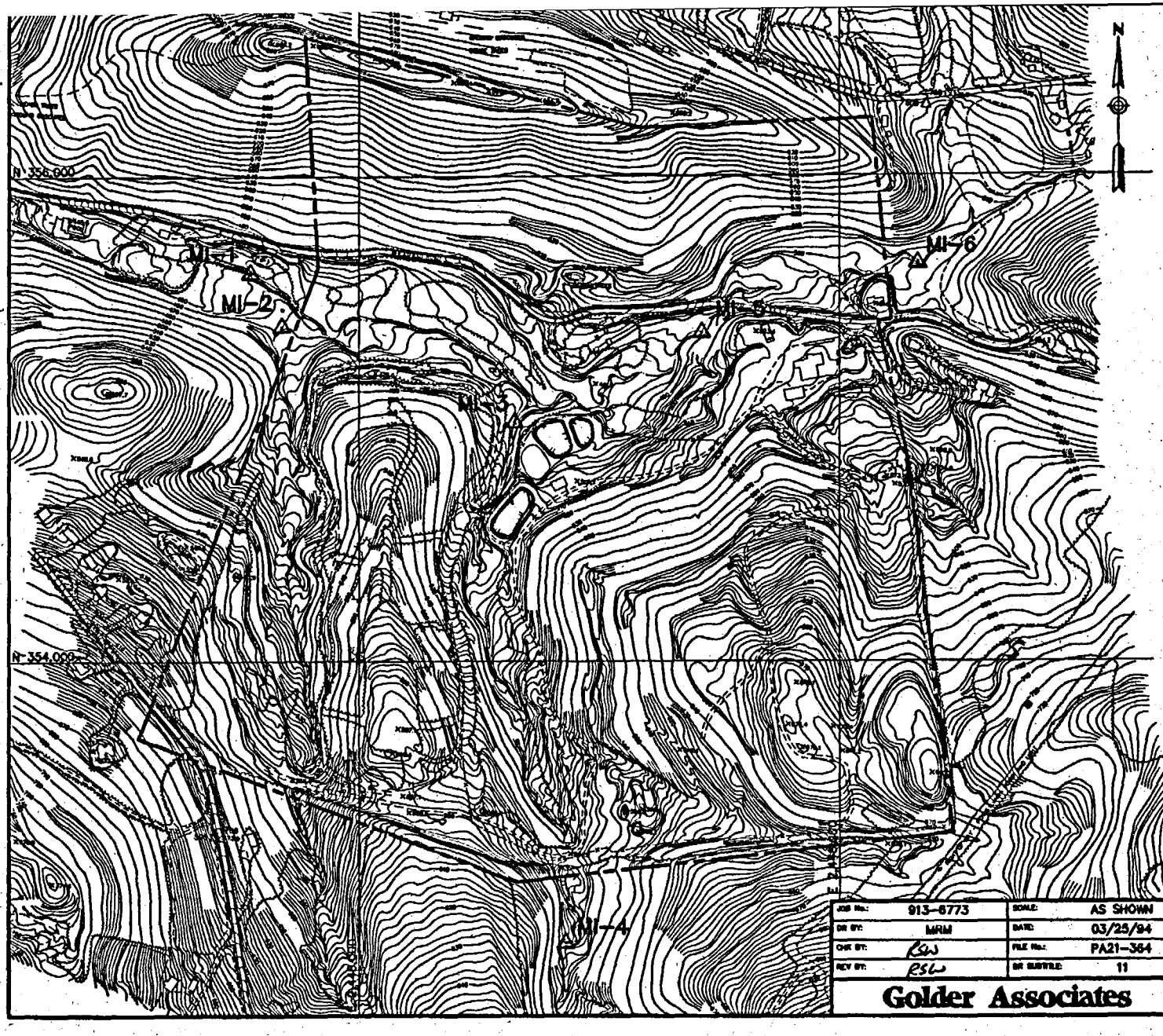
LABORATORY DATA QUALIFIER LEGEND

ORGANICS

U	-	Indicates compound was analyzed for but not detected.
J	-	Indicates an estimated value.
B	-	This flag is used when the analyte is found in the associated blank as well as in the sample. It indicates possible/probable blank contamination and warns the data user to take appropriate action.

METALS AND CYANIDES

E	-	The reported value is estimated because of the presence of interference.
N	-	Spiked sample recovery not within control limits.
W	-	Post-digestion spike for Furnace AA analysis is out of control limits (85-115%), while sample absorbance is less than 50% of spike absorbance.
*	-	Duplicate analysis not within control limits.



LEGEND

- BENTHIC MACROINVERTEBRATE SAMPLE LOCATIONS
- APPROXIMATE SITE BOUNDARY

NOTES

1.) SOME OF THE MACROINVERTEBRATE SAMPLING LOCATIONS ARE FIELD LOCATED.

REFERENCE

1.) TOPOGRAPHIC MAPPING PROVIDED BY GEOD CORPORATION, NEWFOUNDLAND, NJ, AERIAL PHOTOGRAPHY DATE DECEMBER 10, 1991.

HORIZONTAL COORDINATE SYSTEM IS PENNSYLVANIA STATE PLANE NORTH AMERICAN DATUM 1983 AND VERTICAL DATA ARE TIED TO NGVD 1929.

3.) SITE BOUNDARY TAKEN FROM DRAWINGS PREPARED BY L. ROBERT KIMBALL & ASSOCIATES, CONSULTING ENGINEERS & ARCHITECTS, EBENSBURG, PA, MAP Nos. 4375 02 AND 4375 04 TITLED "PROPERTY MAP OF BERKS COUNTY PENNSYLVANIA", DATED NOVEMBER 05, 1993. PROJECTED FROM PA STATE PLANE NAD27 TO NAD83 BY GOLDER ASSOCIATES USING ArcCAD GEOGRAPHIC INFORMATION SYSTEM.

400 0 400
scale feet

JOB No.:	913-6773	SCALE:	AS SHOWN
DR BY:	MRM	DATE:	03/25/94
CHK BY:	KSW	FILE No.:	PA21-364
REV BY:	PSW	DR SUBTITLE:	11

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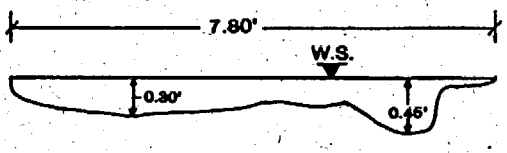
BENTHIC MACROINVERTEBRATE SAMPLE LOCATIONS

BERKS LANDFILL

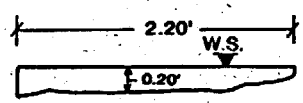
FIGURE N-1

MI-1
MACROINVERTEBRATE STATION 1



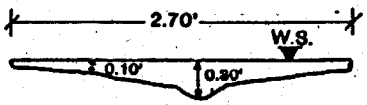
VIEW: DOWNSTREAM
BOTTOM: COBBLES, GRAVELS AND SAND
AREA: 1.97 ft^2
VELOCITY: 0.43 ft/sec
DISCHARGE: 386 gpm

MI-2
MACROINVERTEBRATE STATION 2



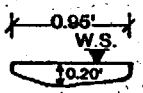
VIEW: DOWNSTREAM
BOTTOM: SAND AND GRAVEL
AREA: 0.38 ft^2
VELOCITY: 0.31 ft/sec
DISCHARGE: 52.5 gpm

MI-3
MACROINVERTEBRATE STATION 3



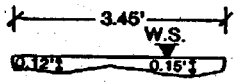
VIEW: DOWNSTREAM
BOTTOM: COBBLES, SAND AND GRAVEL
AREA: 0.36 ft^2
VELOCITY: 0.65 ft/sec
DISCHARGE: 104.1 gpm

MI-4
MACROINVERTEBRATE STATION 4



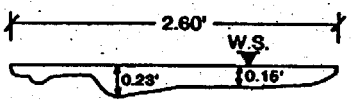
VIEW: DOWNSTREAM
BOTTOM: SAND AND GRAVEL
AREA: 0.15 ft^2
VELOCITY: 0.51 ft/sec
DISCHARGE: 34.6 gpm

MI-5
MACROINVERTEBRATE STATION 5



VIEW: DOWNSTREAM
BOTTOM: GRAVEL
AREA: 0.36 ft^2
VELOCITY: 1.17 ft/sec
DISCHARGE: 187.5 gpm

MI-6
MACROINVERTEBRATE STATION 6



VIEW: DOWNSTREAM
BOTTOM: SAND AND GRAVEL
AREA: 0.37 ft^2
VELOCITY: 0.51 ft/sec
DISCHARGE: 84.4 gpm

MAR 28 1994

AR302668

JOB No.:	913-6773	SCALE:	N.T.S.
DR BY:	MRM	DATE:	12/15/93
CHK BY:	EC	FILE No.:	PA21-394
REV BY:	RSW	DR SUBTRK:	11

Golder Associates

STREAM CROSS SECTIONS
MAY 1992 SAMPLING EVENT

BERKS LANDFILL

FIGURE N-2

Attachment N-1

Biosurvey Data Forms

MI - 1
SAMPLE STATION ID.

MAY 19, 1992
DATE

Rapid Bioassessment Protocol I

Biosurvey Field Data Sheet

RELATIVE ABUNDANCE OF AQUATIC BIOTA

Periphyton	0	1	2	3	4	Slimes	0	1	2	3	4
Filamentous Algae	0	(1)	2	3	4	Macroinvertebrates	0	1	2	3	(4)
Macrophytes	0	1	2	3	4	Fish	0	1	2	(3)	4

0 = Absent/Not Observed 1 = Rare 2 = Common 3 = Abundant 4 = Dominant

MACROBENTHOS QUALITATIVE SAMPLE LIST (Indicate Relative Abundance R = Rare, C = Common, A = Abundant, D = Dominant)

Porifera		Anisoptera	C	Chironomidae	R
Hydrozoa		Zygoptera		Plecoptera	D
Platyhelminthes		Hemiptera		Ephemeroptera	D
Turbellaria		Coleoptera	R	Trichoptera	R
Hirudinea		Lepidoptera		Other	
Oligochaeta		Sialidae			
Isopoda		Corydalidae			
Amphipoda		Tipulidae	R		
Decapoda	R	Empididae			
Gastropoda		Simulidae	R		
Bivalvia		Tabanidae			
		Culicidae			

Rare < 3 Common 3–9 Abundant > 10 Dominant > 50 (Estimate)

Observations

Plant species observed:

- mayapple
- sycamore
- honeysuckle (shrub)
- grasses
- curly dock
- garlic mustard
- creeping buttercup
- christmas fern
- multiflora rose
- clearweed
- wild geranium
- jack in the pulpit

GOLDER PROJECT NO. 913-6773

Reference: Figure taken from USEPA Guidance
Manual No. EPA/444/4-89-001, 1989
Figure 6.1-1 pg. 6-2

Benthic Macroinvertebrate Organism Sampling

MI-1
SAMPLE STATION ID.

MAY 19 1992
DATE

IMPAIRMENT ASSESSMENT SHEET

1. Detection of impairment: Impairment detected (Complete items 2-6) — No impairment detected (Stop here)

2. Biological impairment indicator:

Benthic macroinvertebrates	Other aquatic communities
___ absence of EPT taxa	___ Periphyton
___ dominance of tolerant groups	___ filamentous
___ low benthic abundance	___ other
___ low taxa richness	___ Macrophytes
___ other	___ Slimes
	___ Fish

3. Brief description of problem: _____
Year and date of previous surveys: _____
Survey data available in: _____

4. Cause: (indicate major cause) organic enrichment toxicants flow habitat limitations other _____

5. Estimated areal extent of problem (m^2) and length of stream reach affected (m), where applicable: _____

6. Suspected source(s) of problem:

___ point source discharge (name, type of facility, location)
___ construction site runoff
___ combined sewer outfall
___ silviculture runoff
___ animal feedlot
___ agricultural runoff
___ urban runoff
___ ground water
___ other
___ unknown

Briefly explain:

GOLDER PROJECT NO. 913-6773

Reference: Figure taken from USEPA Guidance Manual No. EPA/444/4-89-001, 1989 Figure 6.1-2 pg. 6-3

Benthic Macroinvertebrate Organism Sampling

MI-2
SAMPLE STATION ID.

MAY 19, 1992
DATE

Rapid Bioassessment Protocol I

Biosurvey Field Data Sheet

RELATIVE ABUNDANCE OF AQUATIC BIOTA

Periphyton	0	1	2	3	4	Silmes	0	1	2	3	4
Filamentous Algae	0	1	2	3	4	Macroinvertebrates	0	1	2	3	(4)
Macrophytes	0	1	2	3	4	Fish	0	1	2	(3)	4

0 = Absent/Not Observed 1 = Rare 2 = Common 3 = Abundant 4 = Dominant

MACROBENTHOS QUALITATIVE SAMPLE LIST (Indicate Relative Abundance R = Rare, C = Common, A = Abundant, D = Dominant)

Porifera		Anisoptera	R	Chironomidae	R
Hydrozoa		Zygoptera		Plecoptera	D
Platyhelminthes		Hemiptera	R	Ephemeroptera	D
Turbellaria		Coleoptera	R	Trichoptera	C
Hirudinea		Lepidoptera		Other	
Oligochaeta		Sialidae		Newt: Diemictylus sp.	
Isopoda		Corydalidae			
Amphipoda		Tipulidae	R		
Decapoda	R	Empididae			
Gastropoda		Simulidae			
Bivalvia		Tabanidae			
		Culicidae			

Rare < 3 Common 3–9 Abundant > 10 Dominant > 50 (Estimate)

Observations

Plant species observed:

multiflora rose
clearweed
mayapple
oak
curly dock
honeysuckle
shagbark hickory
sycamore
christmas fern
tulip tree
spice bush
poison ivy
wild onion
wild geranium
creeping buttercup
garlic mustard
jack in the pulpit

GOLDER PROJECT NO. 913-6773

Reference: Figure taken from USEPA Guidance Manual No. EPA/444/4-89-001, 1989
Figure 6.1-1 pg. 6-2

Benthic Macroinvertebrate Organism Sampling

MI-2
SAMPLE STATION ID.

MAY 19 1992
DATE

IMPAIRMENT ASSESSMENT SHEET

1. Detection of impairment: Impairment detected (Complete items 2-6) — No impairment detected ~~(Stop here)~~

2. Biological impairment indicator:

Benthic macroinvertebrates	Other aquatic communities
___ absence of EPT taxa	___ Periphyton
___ dominance of tolerant groups	___ filamentous
___ low benthic abundance	___ other
___ low taxa richness	___ Macrophytes
___ other	___ Slimes
	___ Fish

3. Brief description of problem: _____
Year and date of previous surveys: _____
Survey data available in: _____

4. Cause: (indicate major cause) organic enrichment toxicants flow habitat limitations other _____

5. Estimated areal extent of problem (m^2) and length of stream reach affected (m), where applicable: _____

6. Suspected source(s) of problem:

___ point source discharge (name, type of facility, location)
___ construction site runoff
___ combined sewer outfall
___ silviculture runoff
___ animal feedlot
___ agricultural runoff
___ urban runoff
___ ground water
___ other
___ unknown

Briefly explain:

GOLDER PROJECT NO. 913-6773

Reference: Figure taken from USEPA Guidance Manual No. EPA/444/4-89-001, 1989 Figure 6.1-2 pg. 6-3

MI-3
SAMPLE STATION ID.

MAY 20, 1992
DATE

Rapid Bioassessment Protocol I

Biosurvey Field Data Sheet

RELATIVE ABUNDANCE OF AQUATIC BIOTA

Periphyton	0	1	2	3	4	Silmes	0	1	2	3	4
Filamentous Algae	0	(1)	2	3	4	Macroinvertebrates	0	1	2	(3)	4
Macrophytes	0	1	2	3	4	Fish	0	1	(2)	3	4

0 = Absent/Not Observed 1 = Rare 2 = Common 3 = Abundant 4 = Dominant

MACROBENTHOS QUALITATIVE SAMPLE LIST (Indicate Relative Abundance R = Rare, C = Common, A = Abundant, D = Dominant)

Porifera		Anisoptera	R	Chironomidae	R
Hydrozoa		Zygoptera		Plecoptera	D
Platyhelminthes		Hemiptera		Ephemeroptera	D
Turbellaria		Coleoptera	R	Trichoptera	R
Hirudinea		Lepidoptera		Other	
Oligochaeta		Sialidae		rowt: Diemictylus sp.	
Isopoda		Corydalidae			
Amphipoda		Tipulidae	R		
Decapoda	R	Empididae			
Gastropoda		Simulidae			
Bivalvia		Tabanidae			
		Culicidae			

Rare < 3 Common 3–9 Abundant > 10 Dominant > 50 (Estimate)

Observations

plant species observed.

mayapple
jack in the pulpit
honeysuckle
multiflora rose
ash
Clearweed
vitis sp.
poison ivy
curly dock
moss
christmas fern
ground ivy
common reed
garlic mustard

GOLDER PROJECT NO. 913-6773

Reference: Figure taken from USEPA Guidance Manual No. EPA/444/4-89-001, 1989 Figure 6.1-1 pg. 6-2

MI - 3
SAMPLE STATION ID.

MAY 20, 1992
DATE

IMPAIRMENT ASSESSMENT SHEET

1. Detection of impairment: Impairment detected (Complete items 2-6) — No impairment detected (Stop here)

2. Biological impairment indicator:

Benthic macroinvertebrates	Other aquatic communities
___ absence of EPT taxa	___ Periphyton
___ dominance of tolerant groups	___ filamentous
___ low benthic abundance	___ other
___ low taxa richness	___ Macrophytes
___ other	___ Slimes
	___ Fish

3. Brief description of problem: _____
Year and date of previous surveys: _____
Survey data available in: _____

4. Cause: (indicate major cause) organic enrichment toxicants flow habitat limitations other _____

5. Estimated areal extent of problem (m^2) and length of stream reach affected (m), where applicable: _____

6. Suspected source(s) of problem:

___ point source discharge (name, type of facility, location)
___ construction site runoff
___ combined sewer outfall
___ silviculture runoff
___ animal feedlot
___ agricultural runoff
___ urban runoff
___ ground water
___ other
___ unknown

Briefly explain:

GOLDER PROJECT NO. _____

Reference: Figure taken from USEPA Guidance Manual No. EPA/444/4-89-001, 1989 Figure 6.1-2 pg. 6-3

Benthic Macroinvertebrate Organism Sampling

MI - 4
SAMPLE STATION ID.

May 20, 1992
DATE

Rapid Bioassessment Protocol I

Biosurvey Field Data Sheet

RELATIVE ABUNDANCE OF AQUATIC BIOTA

Periphyton	0	1	2	3	4	Slimes	0	1	2	3	4
Filamentous Algae	0	1	2	3	4	Macroinvertebrates	0	1	2	(3)	4
Macrophytes	0	1	2	3	4	Fish	(0)	1	2	3	4

0 = Absent/Not Observed 1 = Rare 2 = Common 3 = Abundant 4 = Dominant

MACROBENTHOS QUALITATIVE SAMPLE LIST (Indicate Relative Abundance R = Rare, C = Common, A = Abundant, D = Dominant)

Porifera		Anisoptera		Chironomidae	
Hydrozoa		Zygoptera		Plecoptera	D
Platyhelminthes		Hemiptera		Ephemeroptera	D
Turbellaria		Coleoptera	R	Trichoptera	D
Hirudinea		Lepidoptera		Other	
Oligochaeta		Sialidae		newt : Diemictylus	
Isopoda		Corydalidae			
Amphipoda		Tipulidae	R		
Decapoda	C	Empididae			
Gastropoda		Simuliidae			
Bivalvia		Tabanidae			
		Culicidae			

Rare < 3 Common 3–9 Abundant > 10 Dominant > 50 (Estimate)

Observations

plant species observed:

christmas fern
honeysuckle
mayapple
sugar maple
tulip tree
lady's slipper fern
jack in the pulpit
shagbark hickory
slippery elm
rubus sp.
bloodroot

GOLDER PROJECT NO. 913-6773

Reference: Figure taken from USEPA Guidance Manual No. EPA/444/4-89-001, 1989
Figure 6.1-1 pg. 6-2

MI-4
SAMPLE STATION ID.

MAY 20, 1992
DATE

IMPAIRMENT ASSESSMENT SHEET

1. Detection of impairment: Impairment detected (Complete items 2-6) — No impairment detected (Stop here)

2. Biological impairment indicator:

Benthic macroinvertebrates	Other aquatic communities
___ absence of EPT taxa	___ Periphyton
___ dominance of tolerant groups	___ filamentous
___ low benthic abundance	___ other
___ low taxa richness	___ Macrophytes
___ other	___ Slimes
	___ Fish

3. Brief description of problem: _____
Year and date of previous surveys: _____
Survey data available in: _____

4. Cause: (indicate major cause) organic enrichment toxicants flow habitat limitations other _____

5. Estimated areal extent of problem (m^2) and length of stream reach affected (m), where applicable: _____

6. Suspected source(s) of problem:

___ point source discharge (name, type of facility, location)
___ construction site runoff
___ combined sever outfall
___ silviculture runoff
___ animal feedlot
___ agricultural runoff
___ urban runoff
___ ground water
___ other
___ unknown

Briefly explain:

GOLDER PROJECT NO. 913-10773

Reference: Figure taken from USEPA Guidance Manual No. EPA/444/4-89-001, 1989 Figure 6.1-2 pg. 6-3

M1-5
SAMPLE STATION ID.

MAY 20, 1992
DATE

Rapid Bioassessment Protocol I

Biosurvey Field Data Sheet

RELATIVE ABUNDANCE OF AQUATIC BIOTA

Periphyton	0	1	2	3	4	Slimes	0	1	2	3	4
Filamentous Algae	0	(1)	2	3	4	Macroinvertebrates	0	1	2	3	(4)
Macrophytes	0	1	2	3	4	Fish	0	1	2	(3)	4

0 = Absent/Not Observed 1 = Rare 2 = Common 3 = Abundant 4 = Dominant

MACROBENTHOS QUALITATIVE SAMPLE LIST (Indicate Relative Abundance R = Rare, C = Common, A = Abundant, D = Dominant)

Porifera		Anisoptera		Chironomidae	R
Hydrozoa		Zygoptera		Plecoptera	D
Platyhelminthes		Hemiptera		Ephemeroptera	D
Turbellaria		Coleoptera	R	Trichoptera	R
Hirudinea		Lepidoptera		Other	
Oligochaeta		Sialidae		Newt: Diemictylus sp.	
Isopoda		Corydalidae			
Amphipoda		Tipulidae	R		
Decapoda	R	Empididae			
Gastropoda		Simulidae	R		
Bivalvia		Tabanidae			
		Culicidae			

Rare < 3 Common 3–9 Abundant > 10 Dominant > 50 (Estimate)

Observations

plant species observed:

skunk cabbage
christmas fern
honeysuckle
mayapple
sugar maple
tulip tree
cedar
garlic mustard
clearweed
jack in the pulpit
poison ivy
common burdock
multiflora rose
common reed
larch
curly dock

GOLDER PROJECT NO. 913-1673

Reference: Figure taken from USEPA Guidance Manual No. EPA/444/4-89-001, 1989 Figure 6.1-1 pg. 6-2

Benthic Macroinvertebrate Organism Sampling

MI - 5
SAMPLE STATION ID.

MAY 20, 1992
DATE

IMPAIRMENT ASSESSMENT SHEET

1. Detection of impairment: Impairment detected (Complete items 2-6) (No impairment detected (Stop here))

2. Biological impairment indicator:

Benthic macroinvertebrates	Other aquatic communities
___ absence of EPT taxa	___ Periphyton
___ dominance of tolerant groups	___ filamentous
___ low benthic abundance	___ other
___ low taxa richness	___ Macrophytes
___ other	___ Slimes
	___ Fish

3. Brief description of problem: _____
Year and date of previous surveys: _____
Survey data available in: _____

4. Cause: (indicate major cause) organic enrichment toxicants flow habitat limitations other _____

5. Estimated areal extent of problem (m^2) and length of stream reach affected (m), where applicable: _____

6. Suspected source(s) of problem:

___ point source discharge (name, type of facility, location)
___ construction site runoff
___ combined sewer outfall
___ silviculture runoff
___ animal feedlot
___ agricultural runoff
___ urban runoff
___ ground water
___ other
___ unknown

Briefly explain:

GOLDER PROJECT NO. 913-6773

Reference: Figure taken from USEPA Guidance Manual No. EPA/444/4-89-001, 1989 Figure 6.1-2 pg. 6-3

Benthic Macroinvertebrate Organism Sampling

MT - 6
SAMPLE STATION ID.

MAY 21 1992
DATE

Rapid Bioassessment Protocol I

Biosurvey Field Data Sheet

RELATIVE ABUNDANCE OF AQUATIC BIOTA

Periphyton	0	1	2	3	4	Slimes	0	1	2	3	4
Filamentous Algae	0	(1)	2	3	4	Macroinvertebrates	0	1	2	3	(4)
Macrophytes	0	1	2	3	4	Fish	0	(1)	2	3	4

0 = Absent/Not Observed 1 = Rare 2 = Common 3 = Abundant 4 = Dominant

MACROBENTHOS QUALITATIVE SAMPLE LIST (Indicate Relative Abundance R = Rare, C = Common, A = Abundant, D = Dominant)

Porifera		Anisoptera	R	Chironomidae	R
Hydrozoa		Zygoptera		Plecoptera	D
Platyhelminthes		Hemiptera		Ephemeroptera	D
Turbellaria		Coleoptera	C	Trichoptera	R
Hirudinea		Lepidoptera		Other	
Oligochaeta		Sialidae			
Isopoda		Corydalidae			
Amphipoda		Tipulidae	R		
Decapoda	R	Empididae			
Gastropoda		Simuliidae	R		
Bivalvia		Tabanidae			
		Culicidae			

Rare < 3 Common 3–9 Abundant > 10 Dominant > 50 (Estimate)

Observations

Plant species observed:

early dock
Clearweed
honeysuckle
ground ivy
garlic mustard
sycamore
ash
multiflora rose
grasses
wild onion
skunk cabbage
Jack in the pulpit
wild geranium
rubus sp.

GOLDER PROJECT NO. 913-6773

Reference: Figure taken from USEPA Guidance Manual No. EPA/444/4-89-001, 1989 Figure 6.1-1 pg. 6-2

MT-6
SAMPLE STATION ID.

MAY 21 1992
DATE

IMPAIRMENT ASSESSMENT SHEET

1. Detection of impairment: Impairment detected (Complete items 2-6) — No impairment detected (Stop here) (circled)

2. Biological impairment indicator:

Benthic macroinvertebrates	Other aquatic communities
___ absence of EPT taxa	___ Periphyton
___ dominance of tolerant groups	___ filamentous
___ low benthic abundance	___ other
___ low taxa richness	___ Macrophytes
___ other	___ Slimes
	___ Fish

3. Brief description of problem: _____
Year and date of previous surveys: _____
Survey data available in: _____

4. Cause: (indicate major cause) organic enrichment toxicants flow habitat limitations other _____

5. Estimated areal extent of problem (m^2) and length of stream reach affected (m), where applicable: _____

6. Suspected source(s) of problem:

___ point source discharge (name, type of facility, location)
___ construction site runoff
___ combined sever outfall
___ silviculture runoff
___ animal feedlot
___ agricultural runoff
___ urban runoff
___ ground water
___ other
___ unknown

Briefly explain:

GOLDER PROJECT NO. 913-6773

Reference: Figure taken from USEPA Guidance Manual No. EPA/444/4-89-001, 1989 Figure 6.1-2 pg. 6-3

Attachment N-2

Grain Size Distribution Data

ASTM GRAIN SIZE ANALYSIS
ASTM D421, D422, D1140, D2216 and D2217

PROJECT TITLE:	BERKS PRP/RIFS/SPRING TWP PA	Sample No.:	GSD 1
PROJECT NUMBER:	913-6773	Sample ID.:	BULK BAG

WATER CONTENT (Delivered Moisture)

Tare no.		OOP1
Wt soil & tare,moist	(gm)	341.07
Wt soil & tare,dry	(gm)	318.07
Wt tare	(gm)	111.51
Wt moisture	(gm)	23.00
Wt dry soil	(gm)	206.56
% WATER	(%)	11.13%

% PASSING #10 SIEVE

Total Wt	(gm)	2365.84
Wt Split #10	(gm)	529.19
% PASSING #10	(%)	22.4%

USCS	SIEVE	wt ret	% ret (% Cumulative)	% PASS	SIEVE	
	3.000		0.00%	100.00%	3.000	coarse gravel
coarse gravel	1.500	366.31	15.48%	84.52%	1.500	
	1.000	803.49	33.96%	66.04%	1.000	
fine gravel	0.750	1019.46	43.09%	56.91%	0.750	fine gravel
	0.375	1377.80	58.24%	41.76%	0.375	
coarse sand	#4	1622.40	68.58%	31.42%	#4	coarse sand
medium sand	#10	1836.32	77.62%	22.38%	#10	medium sand

SAMPLE PREPARATION FOR HYDROMETER ANALYSIS

% Pass #10 Sieve		22.38	Initial Moist Wt.	70.29
Specific Gravity	(assumed)	2.65	Calculated Dry Wt	69.49
ml Dispering Agent Used		125	(40ml Na(PO4)n per 1000ml H2O)	

WATER CONTENT (Hygroscopic #10)

Tare no.		49
Wt soil and tare,moist	(gm)	47.62
Wt soil&tare,dry	(gm)	47.32
Wt tare	(gm)	21.13
Wt moisture lost	(gm)	0.30
Wt dry soil,final	(gm)	26.19
% HYGROSCOPIC MOISTURE	(%)	1.1%

% PASSING 200 SIEVE

TOTAL WT (g)		
Wt soil and tare,dry (wt,dry)	(gm)	188.99
Wt soil&tare,wash (wt,wash)	(gm)	183.97
Wt tare	(gm)	119.50
Wt fines lost (wt,dry-wt,wash)	(gm)	5.02
Wt dry soil, (wt,dry-wt,tare)	(gm)	69.49
% FINES LOST	(%)	7.2%

PERCENT BETWEEN #10 AND #200 SIEVE CALCULATION

SIEVE	CUMUL WT. RETAINED	CUMUL WT. RET. CORR	PERCENT PASSING
#10	0.00	241.00	22.38%
#20	22.04	263.04	15.28%
#40	48.72	289.72	6.69%
#60	58.87	299.87	3.42%
#100	62.69	303.69	2.19%
#200	64.56	305.56	1.59%

LL	
PL	
PI	
Gs	

DATE	TIME	ET (min)	RDNG R	TEMP T	TEMP.COR K	HYD.RDNG. H
05/28/92	09:13	2.00	8.0	25.00	0.013	4.00
	09:15	4.00	8.0	25.00	0.013	4.00
	09:19	8.00	7.5	25.00	0.013	4.00
	09:26	15.00	7.0	25.00	0.013	4.00
	09:41	30.00	6.5	25.00	0.013	3.50
	10:11	60.00	6.0	25.00	0.013	4.00
	11:11	120.00	5.0	24.50	0.013	4.00
	13:11	240.00	5.0	24.00	0.013	4.00
	17:11	480.00	4.5	24.00	0.013	3.50
05/29/92	09:11	1440.0	4.0	22.00	0.013	4.00

Grain Size Percentages

% GRAVEL	43.1%
% SAND	25.5%
% SILT	9.0%
% CLAY	15.7%
% FINES	5.1%
% COLLOIDS	1.6%
% TOTAL	100.00%

ET (min)	RDNG,C	EFF LTH	K	A	PAR DIA	%FINER
2.00	4.00	15.6	0.013	1.00	0.036	1.3
4.00	4.00	15.6	0.013	1.00	0.025	1.3
8.00	3.50	15.8	0.013	1.00	0.018	1.1
15.00	3.00	15.8	0.013	1.00	0.013	1.0
30.00	3.00	15.8	0.013	1.00	0.009	1.0
60.00	2.00	16.0	0.013	1.00	0.007	0.6
120.00	1.00	16.1	0.013	1.00	0.005	0.3
240.00	1.00	16.1	0.013	1.00	0.003	0.3
480.00	1.00	16.1	0.013	1.00	0.002	0.3
1440.00	0.00	16.3	0.013	1.00	0.001	0.0

WET COLOR: Dark grayish brown

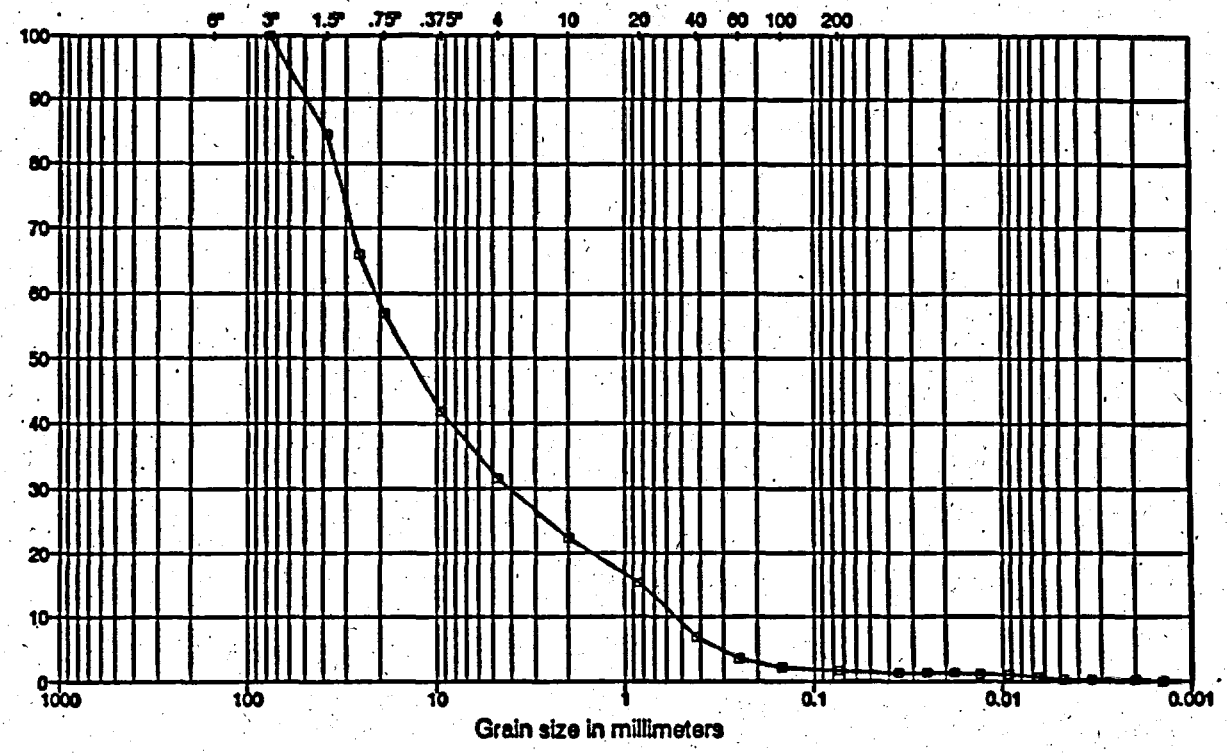
DESCRIPTION: of GRAVEL, some to med. fine Sand

GOLDER ASSOCIATES INC		TECH	TK	CHECKED	
MT. LAUREL, NJ		DATE	5/29/92	REVIEWED	

AR302683

PARTICLE SIZE DISTRIBUTION ASTM D421 AND D422

US STANDARD SIEVE OPENING SIZES



USCS							
	COBBLES	Coarse	Fine	Cor	Med	Fine	FINES (Silt and Clay)
		GRAVEL		SAND			

TECH: TK
DATE: 6/1/92
CHECKED: PMD
REVIEWED:

SAMPLE ID	W%	LL	PL	PI	Gs	DESCRIPTION
GSD 1	11.1					Dark grayish brown c-f GRAVEL, some m sand, trace fines
Sample Type: BULK			Date Tested: 5/29/92			

BERKS PRP/RIFS/SPRING TWP PA
913-6773

GOLDER ASSOCIATES INC.
MT. LAUREL,NJ

AR302684

ASTM GRAIN SIZE ANALYSIS
ASTM D421, D422, D1140, D2216 and D2217

PROJECT TITLE:	BERKS PRP/RIFS/SPRING TWP PA	Sample No.:	GSD 2
PROJECT NUMBER:	913-6773	Sample ID.:	BULK BAG

WATER CONTENT (Delivered Moisture)

Tare no.		E-3
Wt soil & tare,moist	gm	563.51
Wt soil & tare,dry	gm	497.67
Wt tare	gm	191.53
Wt moisture	gm	65.84
Wt dry soil	gm	306.14
% WATER		21.51%

% PASSING #10 SIEVE

Total Wt	gm	1843.84
Wt Split #10	gm	573.77
% PASSING #10		31.1%

USCS	SIEVE	wt ret	% ret	% PASS	SIEVE	
			gm Retained			
coarse gravel	3.000		0.00%	100.00%	3.000	coarse gravel
	1.500		0.00%	100.00%	1.500	
	1.000	179.77	9.75%	90.25%	1.000	
fine gravel	0.750	247.84	13.44%	86.56%	0.750	fine gravel
	0.375	649.88	35.25%	64.75%	0.375	
coarse sand	#4	1005.13	54.51%	45.49%	#4	coarse sand
medium sand	#10	1270.85	68.92%	31.08%	#10	medium sand

SAMPLE PREPARATION FOR HYDROMETER ANALYSIS

% Pass #10 Sieve		31.08	Initial Moist Wt.	69.65
Specific Gravity	assumed	2.65	Calculated Dry Wt	69.11
ml Dispering Agent Used		125	(40ml Na(PO4)n per 1000ml H2O)	

WATER CONTENT (Hygroscopic #10)

Tare no.		4B
Wt soil and tare,moist	gm	45.20
Wt soil&tare,dry	gm	45.01
Wt tare	gm	20.76
Wt moisture lost	gm	0.19
Wt dry soil,final	gm	24.25
% HYGROSCOPIC MOISTURE	gm	0.8%

% PASSING 200 SIEVE

TOTAL WT (g)		M-2
Wt soil and tare,dry (wt,dry)	gm	220.48
Wt soil&tare,wash (wt,wash)	gm	209.68
Wt tare	gm	151.37
Wt fines lost (wt,dry-wt,wash)	gm	10.80
Wt dry soil, (wt,dry-wt,tare)	gm	69.11
% FINES LOST	gm	15.6%

PERCENT BETWEEN #10 AND #200 SIEVE CALCULATION

SIEVE	CUMUL WT. RETAINED	CUMUL WT. RET. CORR	PERCENT PASSING
#10	0.00	153.28	31.08%
#20	14.26	167.54	24.66%
#40	32.01	185.29	16.68%
#60	46.43	199.71	10.20%
#100	54.35	207.63	6.64%
#200	58.14	211.42	4.93%

LL	
PL	
PI	
Gs	

DATE	TIME	ET (min)	RDNG R	TEMP T	TEMP.COR K	HYD.RDNG. H
05/28/92	09:22	2.00	11.0	25.00	0.013	4.00
	09:24	4.00	9.5	25.00	0.013	4.00
	09:28	8.00	9.0	25.00	0.013	4.00
	09:35	15.00	8.5	25.00	0.013	3.50
	09:50	30.00	8.0	25.00	0.013	3.50
	10:20	60.00	7.5	25.00	0.013	4.00
	11:20	120.00	6.0	24.50	0.013	4.00
	13:20	240.00	5.0	24.00	0.013	4.00
	17:20	480.00	5.0	24.00	0.013	3.50
05/29/92	09:20	1440.0	4.0	22.00	0.013	4.00

Grain Size Percentages

% GRAVEL	13.4%
% SAND	41.1%
% SILT	14.4%
% CLAY	14.4%
% FINES	11.7%
% OTHER	4.9%
% TOTAL	100.00%

ET (min)	RDNG,C	EFF LTH	K	A	PAR DIA	%FINER
2.00	7.00	15.2	0.013	1.00	0.035	3.1
4.00	6.50	15.5	0.013	1.00	0.025	2.5
8.00	5.00	15.5	0.013	1.00	0.018	2.2
15.00	5.00	15.5	0.013	1.00	0.013	2.2
30.00	4.50	15.6	0.013	1.00	0.009	2.0
60.00	3.50	15.8	0.013	1.00	0.007	1.6
120.00	2.00	16.0	0.013	1.00	0.005	0.9
240.00	1.00	16.1	0.013	1.00	0.003	0.4
480.00	1.50	16.1	0.013	1.00	0.002	0.7
1440.00	0.00	16.3	0.013	1.00	0.001	0.0

WET COLOR: Dark grayish brown

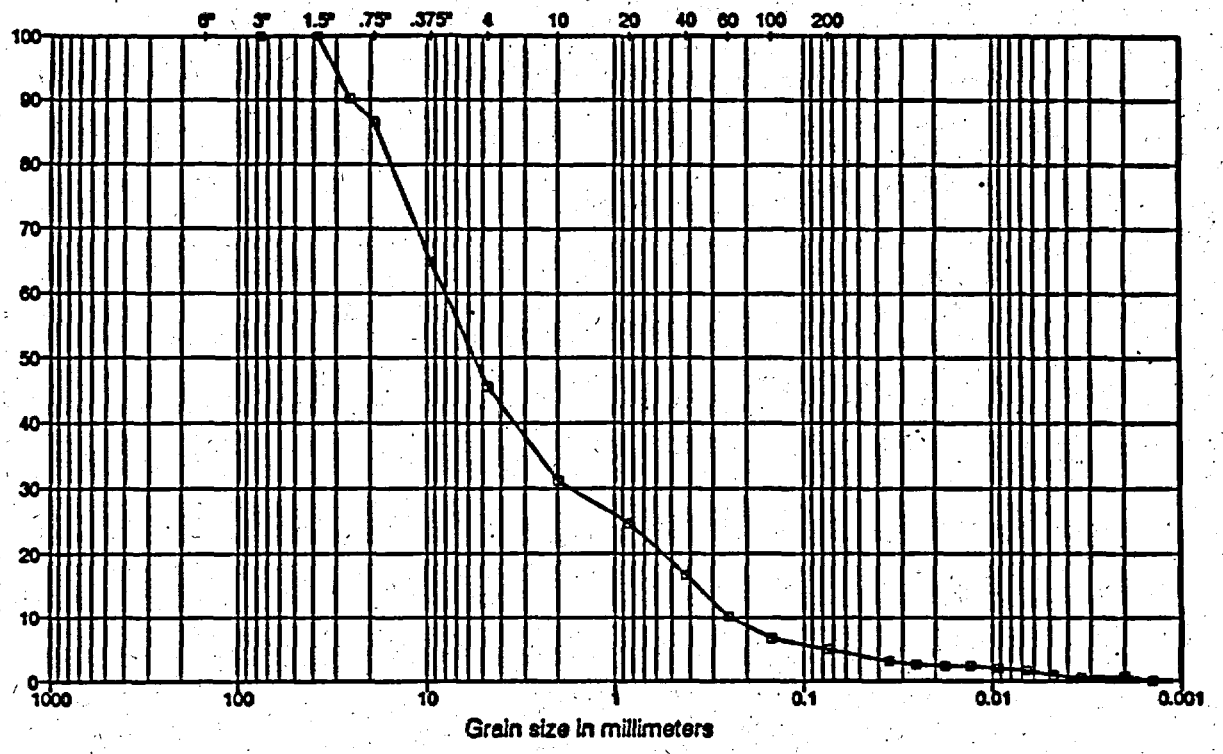
DESCRIPTION:

GOLDER ASSOCIATES INC		TECH	TK	CHECKED	
MT. LAUREL, NJ		DATE	6/1/92	REVIEWED	SW

AR302685

PARTICLE SIZE DISTRIBUTION ASTM D421 AND D422

US STANDARD SIEVE OPENING SIZES



USCS							
		Coarse	Fine	Cor	Med	Fine	
	COBBLES	GRAVEL		SAND			FINES (Silt and Clay)

TECH: TK
DATE: 6/1/92
CHECKED:
REVIEWED:

SAMPLE ID	W%	LL	PL	PI	Gs	DESCRIPTION
GSD 2	21.5					Dark grayish brown f-c GRAVEL, some c-m-f sand, trace fines
Sample Type: BULK			Date Tested: 6/1/92			

BERKS PRP/RIFS/SPRING TWP PA
913-6773

GOLDER ASSOCIATES INC.
MT. LAUREL,NJ

ASTM GRAIN SIZE ANALYSIS
ASTM D421, D422, D1140, D2216 and D2217

PROJECT TITLE:	BERKS PRP/RIFS/SPRING TWP PA	Sample No.:	GSD 3
PROJECT NUMBER:	913-6773	Sample ID.:	BULK BAG

WATER CONTENT (Delivered Moisture)

Tare no.		IC-10
Wt soil & tare,moist	(gm)	685.90
Wt soil & tare,dry	(gm)	640.11
Wt tare	(gm)	190.95
Wt moisture	(gm)	45.79
Wt dry soil	(gm)	249.16
% WATER		18.38%

% PASSING #10 SIEVE

Total Wt	(gm)	1811.52
Wt Split #10	(gm)	293.15
% PASSING #10		16.2%

USCS	SIEVE	wt ret (gm)	% ret	% PASS	SIEVE	
	3.000		0.00%	100.00%	3.000	coarse gravel
coarse gravel	1.500	94.64	5.22%	94.78%	1.500	
	1.000	531.99	29.37%	70.63%	1.000	
fine gravel	0.750	828.99	45.76%	54.24%	0.750	fine gravel
	0.375	1212.45	66.93%	33.07%	0.375	
coarse sand	#4	1384.73	76.44%	23.56%	#4	coarse sand
medium sand	#10	1518.94	83.85%	16.15%	#10	medium sand

SAMPLE PREPARATION FOR HYDROMETER ANALYSIS

% Pass #10 Sieve		16.15	Initial Moist Wt.	70.80
Specific Gravity	assumed	2.65	Calculated Dry Wt	70.12
ml Dispering Agent Used		125	(40ml Na(PO4)n per 1000ml H2O)	

WATER CONTENT (Hygroscopic #10)

Tare no.		1B
Wt soil and tare,moist	(gm)	84.99
Wt soil&tare,dry	(gm)	84.64
Wt tare	(gm)	28.63
Wt moisture lost	(gm)	0.35
Wt dry soil,final	(gm)	36.01
% HYGROSCOPIC MOISTURE		1.0%

% PASSING 200 SIEVE

TOTAL WT (g)		M-19
Wt soil and tare,dry (wt,dry)	(gm)	263.67
Wt soil&tare,wash (wt,wash)	(gm)	255.21
Wt tare	(gm)	193.55
Wt fines lost (wt,dry-wt,wash)	(gm)	8.46
Wt dry soil, (wt,dry-wt,tare)	(gm)	70.12
% FINES LOST		12.1%

PERCENT BETWEEN #10 AND #200 SIEVE CALCULATION

SIEVE	CUMUL WT. RETAINED	CUMUL WT. RET. CORR	PERCENT PASSING
#10	0.00	364.02	16.15%
#20	18.65	382.67	11.86%
#40	40.97	404.99	6.71%
#60	53.06	417.08	3.93%
#100	58.64	422.66	2.64%
#200	61.63	425.65	1.96%

LL	
PL	
PI	
Gs	

DATE	TIME	ET (min)	RDNG R	TEMP T	TEMP.COR K	HYD.RDNG. H
05/28/92	09:29	2.00	11.0	25.00	0.013	4.00
	09:31	4.00	9.5	25.00	0.013	4.00
	09:35	8.00	9.0	25.00	0.013	3.50
	09:42	15.00	9.0	25.00	0.013	3.50
	09:57	30.00	8.0	25.00	0.013	3.50
	10:27	60.00	7.5	25.00	0.013	4.00
	11:27	120.00	6.0	24.50	0.013	4.00
	13:27	240.00	5.5	24.00	0.013	4.00
	17:27	480.00	5.0	24.00	0.013	4.00
05/29/92	09:27	1440.0	4.0	22.00	0.013	4.00

Grain Size Percentages

%GRVL	45.8%
%SAND	38.7%
%SILT	7.4%
%CLAY	9.4%
%FINE	4.8%
%COAR	2.0%
%TOTAL	100.00%

ET (min)	RDNG,C	EFF LTH	K	A	PAR DIA	%FINER
2.00	7.00	15.2	0.013	1.00	0.035	1.6
4.00	6.50	15.5	0.013	1.00	0.025	1.3
8.00	6.50	15.5	0.013	1.00	0.018	1.3
15.00	6.50	15.5	0.013	1.00	0.013	1.3
30.00	4.50	15.6	0.013	1.00	0.009	1.0
60.00	3.50	15.8	0.013	1.00	0.007	0.8
120.00	2.00	16.0	0.013	1.00	0.005	0.5
240.00	1.50	16.1	0.013	1.00	0.003	0.3
480.00	1.00	16.1	0.013	1.00	0.002	0.2
1440.00	0.00	16.3	0.013	1.00	0.001	0.0

WET COLOR: Dark grayish brown

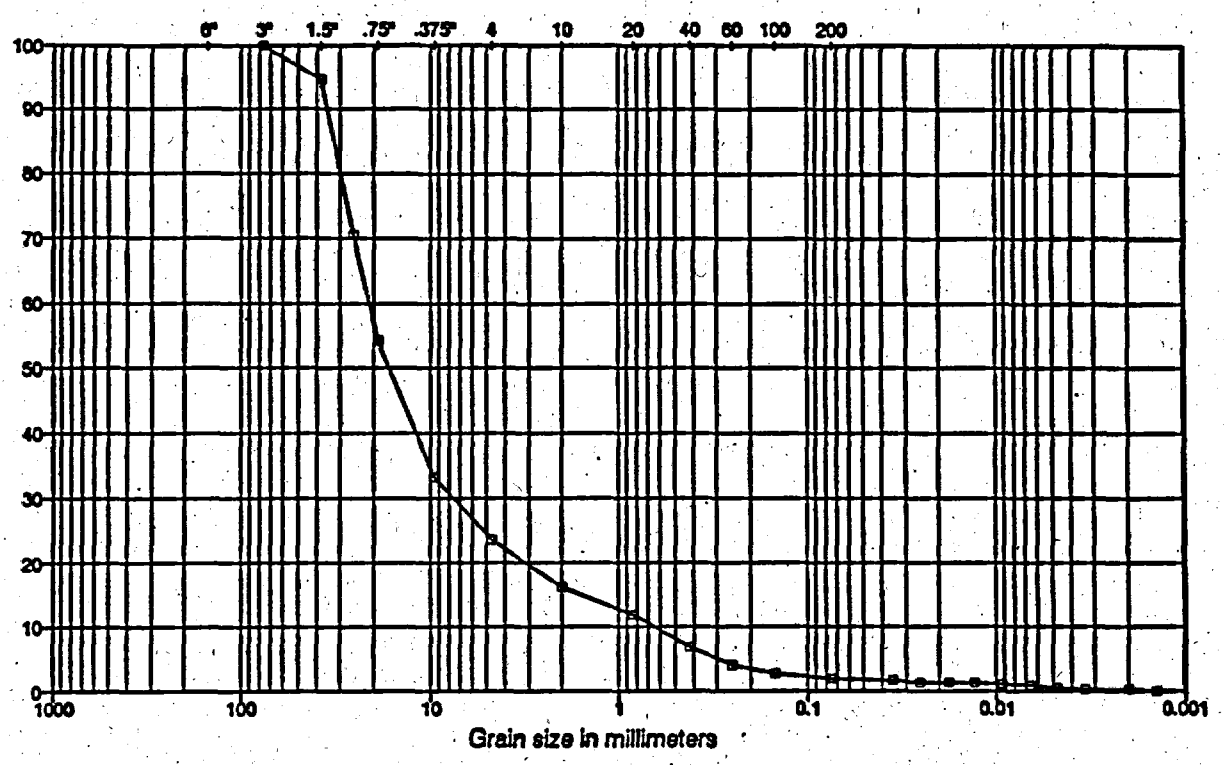
DESCRIPTION: o-f GRAVEL, some med, trace fines

GOLDER ASSOCIATES INC	TECH	TK	CHECKED
MT. LAUREL, NJ	DATE	5/29/92	REVIEWED

AR302687

PARTICLE SIZE DISTRIBUTION ASTM D421 AND D422

US STANDARD SIEVE OPENING SIZES



USCS	COBBLES	GRAVEL		SAND			FINES (Silt and Clay)
		Coarse	Fine	Cor	Med	Fine	

TECH: TK
DATE: 6/1/92
CHECKED: DM/W
REVIEWED:

SAMPLE ID	W%	LL	PL	PI	Gs	DESCRIPTION
GSD 3	18.4					Dark grayish brown c-f GRAVEL, some sand, trace fines
Sample Type: BULK			Date Tested: 5/29/92			

BERKS PRP/RIFS/SPRING TWP PA
913-6773

GOLDER ASSOCIATES INC.
MT. LAUREL,NJ

AR302688

ASTM GRAIN SIZE ANALYSIS
ASTM D421, D422, D1140, D2216 and D2217

PROJECT TITLE:	BERKS PRP/RIFS/SPRING TWP PA	Sample No.:	GSD 4
PROJECT NUMBER:	913-6773	Sample ID.:	BULK BAG

WATER CONTENT (Delivered Moisture)

Tare no.		2
Wt soil & tare,moist	(gm)	316.78
Wt soil & tare,dry	(gm)	280.04
Wt tare	(gm)	110.85
Wt moisture	(gm)	36.74
Wt dry soil	(gm)	169.19
% WATER		21.72%

% PASSING #10 SIEVE

Total Wt	(gm)	1353.70
Wt Split #10	(gm)	354.93
% PASSING #10		26.2%

USCS	SIEVE	wt ret	% ret	% PASS	SIEVE	
			(% Retained)			
coarse gravel	3.000		0.00%	100.00%	3.000	coarse gravel
	1.500		0.00%	100.00%	1.500	
	1.000	65.37	4.83%	95.17%	1.000	
fine gravel	0.750	110.26	8.15%	91.85%	0.750	fine gravel
	0.375	495.61	36.61%	63.39%	0.375	
coarse sand	#4	781.19	57.71%	42.29%	#4	coarse sand
medium sand	#10	999.41	73.83%	26.17%	#10	medium sand

SAMPLE PREPARATION FOR HYDROMETER ANALYSIS

% Pass #10 Sieve		26.17	Initial Moist Wt.	69.01
Specific Gravity	(assumed)	2.65	Calculated Dry Wt	68.22
ml Dispering Agent Used		125	(40ml Na(PO4)n per 1000ml H2O)	

WATER CONTENT (Hygroscopic #10)

Tare no.		M-1
Wt soil and tare,moist	(gm)	52.60
Wt soil&tare,dry	(gm)	52.25
Wt tare	(gm)	22.07
Wt moisture lost	(gm)	0.35
Wt dry soil,final	(gm)	30.18
% HYGROSCOPIC MOISTURE		1.2%

% PASSING 200 SIEVE

TOTAL WT (g)		R-4
Wt soil and tare,dry (wt,dry)	(gm)	254.17
Wt soil&tare,wash (wt,wash)	(gm)	249.60
Wt tare	(gm)	185.95
Wt fines lost (wt,dry-wt,wash)	(gm)	4.57
Wt dry soil, (wt,dry-wt,tare)	(gm)	68.22
% FINES LOST		6.7%

PERCENT BETWEEN #10 AND #200 SIEVE CALCULATION

SIEVE	CUMUL WT. RETAINED	CUMUL WT. RET. CORR	PERCENT PASSING
#10	0.00	192.44	26.17%
#20	30.17	222.61	14.60%
#40	53.52	245.96	8.64%
#60	60.82	253.26	2.84%
#100	62.77	255.21	2.09%
#200	63.75	256.19	1.71%

LL	
PL	
PI	
Gs	

DATE	TIME	ET (min)	RDNG R	TEMP T	TEMP.COR K	HYD.RDNG. H
05/28/92	09:39	2.00	7.0	25.00	0.013	3.50
	09:41	4.00	6.5	25.00	0.013	3.50
	09:45	8.00	6.5	25.00	0.013	3.50
	09:52	15.00	6.5	25.00	0.013	3.50
	10:07	30.00	6.0	25.00	0.013	4.00
	10:37	60.00	6.0	25.00	0.013	4.00
	11:37	120.00	5.0	24.50	0.013	4.00
	13:37	240.00	4.0	24.00	0.013	4.00
	17:37	480.00	4.0	24.00	0.013	4.00
05/29/92	09:37	1440.0	4.0	24.00	0.013	4.00

Grain Size Percentages

% CLAY	8.1%
% SILT	49.6%
% SAND	16.1%
% MEDIUM SAND	20.5%
% FINE SAND	3.9%
% GRAVEL	1.7%
% TOTAL	100.00%

ET (min)	RDNG,C	EFF LTH	K	A	PAR DIA	%FINER
2.00	3.50	15.8	0.013	1.00	0.036	1.3
4.00	3.00	15.8	0.013	1.00	0.026	1.2
8.00	3.00	15.8	0.013	1.00	0.018	1.2
15.00	3.00	15.8	0.013	1.00	0.013	1.2
30.00	2.00	16.0	0.013	1.00	0.009	0.8
60.00	2.00	16.0	0.013	1.00	0.007	0.8
120.00	1.00	16.1	0.013	1.00	0.005	0.4
240.00	0.00	16.3	0.013	1.00	0.003	0.0
480.00	0.00	16.3	0.013	1.00	0.002	0.0
1440.00	0.00	16.3	0.013	1.00	0.001	0.0

WET COLOR: Dark grayish brown

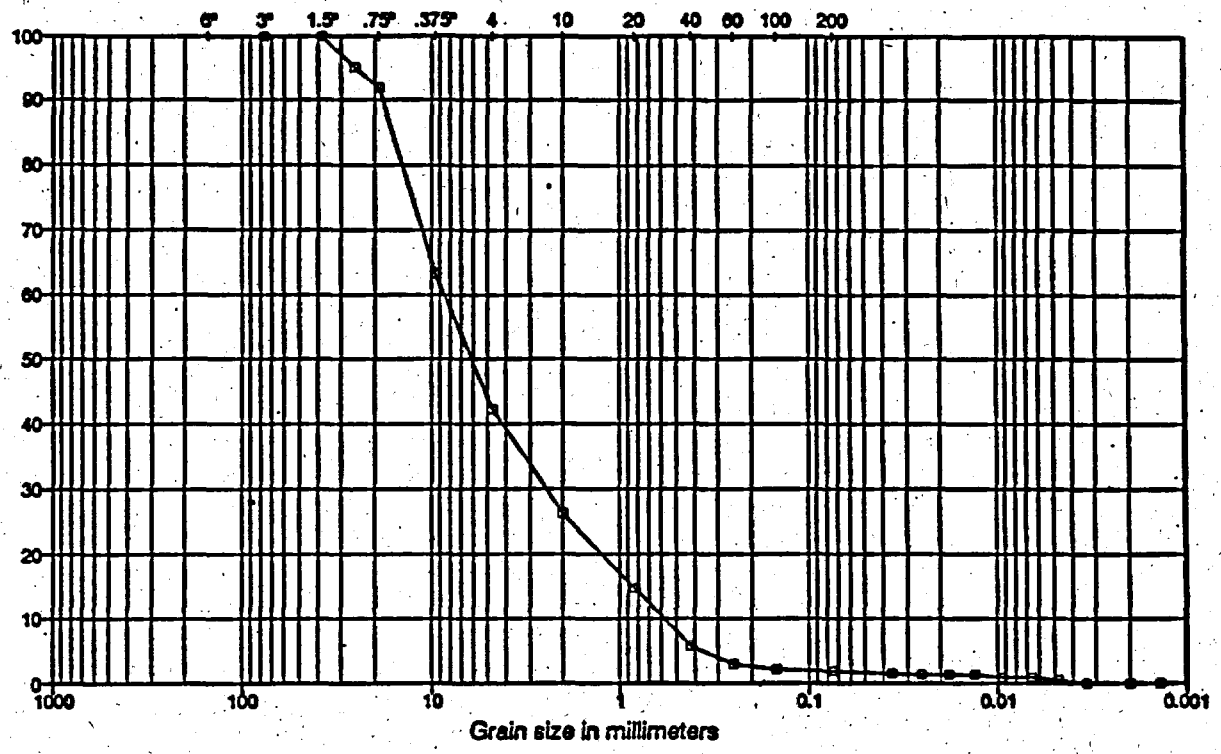
DESCRIPTION: (GRAVEL and SAND)

GOLDER ASSOCIATES INC	TECH	TK	CHECKED
MT. LAUREL, NJ	DATE	5/28/92	REVIEWED

AR302689

PARTICLE SIZE DISTRIBUTION ASTM D421 AND D422

US STANDARD SIEVE OPENING SIZES



USCS	Coarse	Fine	Cor	Med	Fine	
COBBLES	GRAVEL		SAND			FINES (Silt and Clay)

TECH: TK
DATE: 6/1/92
CHECKED: [illegible]
REVIEWED:

SAMPLE ID	W%	LL	PL	PI	Gs	DESCRIPTION
GSD 4	21.7					Dark grayish brown f GRAVEL and m-c SAND, trace fines
Sample Type: BULK			Date Tested: 5/28/92			

BERKS PRP/RIFS/SPRING TWP PA
913-6773

GOLDER ASSOCIATES INC.
MT. LAUREL,NJ

ASTM GRAIN SIZE ANALYSIS
ASTM D421, D422, D1140, D2216 and D2217

PROJECT TITLE:	BERKS PRP/RIFS/SPRING TWP PA	Sample No.:	GSD 5
PROJECT NUMBER:	913-6773	Sample ID.:	BULK BAG

WATER CONTENT (Delivered Moisture)

Tare no.		C-40
Wt soil & tare,moist	(gm)	882.02
Wt soil & tare,dry	(gm)	812.40
Wt tare	(gm)	187.35
Wt moisture	(gm)	69.62
Wt dry soil	(gm)	325.05
% WATER	(%)	21.42%

% PASSING #10 SIEVE

Total Wt	(gm)	1239.91
Wt Split #10	(gm)	430.83
% PASSING #10	(%)	34.7%

USCS	SIEVE	wt ret	% ret (% Retained)	% PASS	SIEVE	
	3.000		0.00%	100.00%	3.000	coarse gravel
coarse gravel	1.500		0.00%	100.00%	1.500	
	1.000	83.77	6.76%	93.24%	1.000	
fine gravel	0.750	149.28	12.04%	87.96%	0.750	fine gravel
	0.375	411.41	33.18%	66.82%	0.375	
coarse sand	#4	597.23	48.17%	51.83%	#4	coarse sand
medium sand	#10	810.56	65.37%	34.63%	#10	medium sand

SAMPLE PREPARATION FOR HYDROMETER ANALYSIS

% Pass #10 Sieve		34.63	Initial Moist Wt.	69.55
Specific Gravity	(unitless)	2.65	Calculated Dry Wt	67.97
ml Dispering Agent Used		125	(40ml Na(PO4)n per 1000ml H2O)	

WATER CONTENT (Hygroscopic #10)

Tare no.		16B
Wt soil and tare,moist	(gm)	43.75
Wt soil&tare,dry	(gm)	43.21
Wt tare	(gm)	20.02
Wt moisture lost	(gm)	0.54
Wt dry soil,final	(gm)	23.19
% HYGROSCOPIC MOISTURE	(%)	2.3%

% PASSING 200 SIEVE

TOTAL WT (g)		SM3
Wt soil and tare,dry (wt,dry)	(gm)	262.71
Wt soil&tare,wash (wt,wash)	(gm)	258.98
Wt tare	(gm)	194.74
Wt fines lost (wt,dry-wt,wash)	(gm)	3.73
Wt dry soil, (wt,dry-wt,tare)	(gm)	67.97
% FINES LOST	(%)	5.5%

PERCENT BETWEEN #10 AND #200 SIEVE CALCULATION

SIEVE	CUMUL WT. RETAINED	CUMUL WT. RET. CORR	PERCENT PASSING
#10	0.00	128.31	34.63%
#20	40.30	168.61	14.10%
#40	57.23	185.54	8.47%
#60	61.44	189.75	3.33%
#100	63.06	191.37	2.50%
#200	63.97	192.28	2.01%

LL	
PL	
PI	
Gs	

DATE	TIME	ET (min)	RDNG R	TEMP T	TEMP.COR K	HYD.RDNG. H
05/28/92	09:48	2.00	7.5	25.00	0.013	3.50
	09:50	4.00	7.5	25.00	0.013	3.50
	09:54	8.00	7.5	25.00	0.013	3.50
	10:01	15.00	7.5	25.00	0.013	3.50
	10:16	30.00	7.0	25.00	0.013	4.00
	10:46	60.00	6.0	25.00	0.013	4.00
	11:46	120.00	5.0	24.50	0.013	4.00
	13:46	240.00	4.5	24.00	0.013	4.00
	17:46	480.00	4.5	24.00	0.013	3.50
05/29/92	09:46	1440.0	4.0	22.00	0.013	4.00

Grain Size Percentages

%GRAVEL	12.0%
%SAND	36.1%
%SILT	17.2%
%CLAY	29.2%
%FINES	3.4%
%COLLOIDS	2.0%
%TOTAL	100.00%

ET (min)	RDNG,C	EFF LTH	K	A	PAR DIA	%FINER
2.00	4.00	15.6	0.013	1.00	0.036	2.0
4.00	4.00	15.6	0.013	1.00	0.025	2.0
8.00	4.00	15.6	0.013	1.00	0.018	2.0
15.00	4.00	15.6	0.013	1.00	0.013	2.0
30.00	3.00	15.8	0.013	1.00	0.009	1.5
60.00	2.00	16.0	0.013	1.00	0.007	1.0
120.00	1.00	16.1	0.013	1.00	0.005	0.5
240.00	0.50	16.3	0.013	1.00	0.003	0.3
480.00	1.00	16.1	0.013	1.00	0.002	0.5
1440.00	0.00	16.3	0.013	1.00	0.001	0.0

WET COLOR: Dark grayish brown

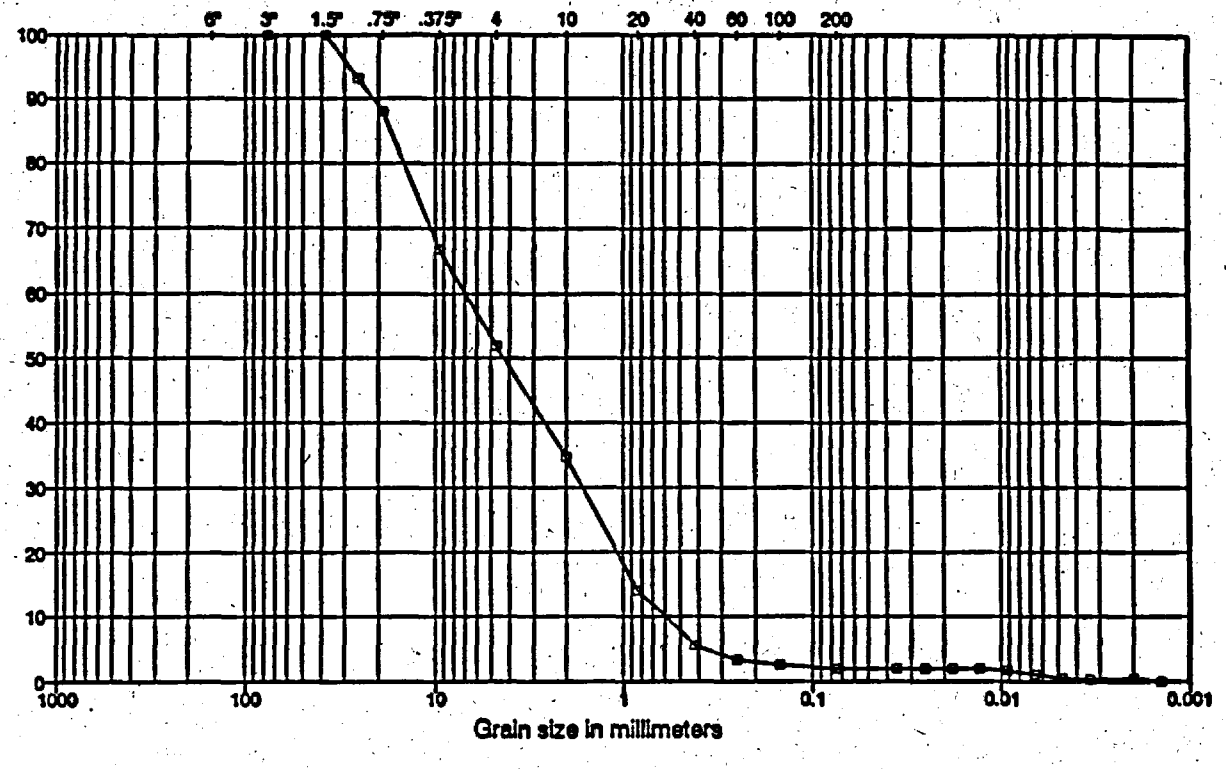
DESCRIPTION: [illegible] SAND and [illegible] GRAVEL, [illegible]

GOLDER ASSOCIATES INC	TECH	TK	CHECKED
MT. LAUREL, NJ	DATE	5/29/92	REVIEWED

AR302691

PARTICLE SIZE DISTRIBUTION ASTM D421 AND D422

US STANDARD SIEVE OPENING SIZES



USCS							
		Coarse	Fine	Cor	Med	Fine	
	COBBLES	GRAVEL		SAND			FINES (Silt and Clay)

TECH: TK
DATE: 6/1/92
CHECKED: DJW
REVIEWED:

SAMPLE ID	W%	LL	PL	PI	Gs	DESCRIPTION
GSD 5	21.4					Dark grayish brown m-c SAND and f-c GRAVEL, trace fines
Sample Type: BULK			Date Tested: 5/29/92			

BERKS PRP/RIFS/SPRING TWP PA
913-6773

GOLDER ASSOCIATES INC.
MT. LAUREL,NJ

ASTM GRAIN SIZE ANALYSIS
ASTM D421, D422, D1140, D2216 and D2217

PROJECT TITLE:	BERKS PRP/RIFS/SPRING TWP PA	Sample No.:	GSD 6
PROJECT NUMBER:	913-6773	Sample ID.:	BULK BAG

WATER CONTENT (Delivered Moisture)

Tare no.		A-2
Wt soil & tare,moist	(gm)	830.95
Wt soil & tare,dry	(gm)	449.09
Wt tare	(gm)	193.63
Wt moisture	(gm)	81.86
Wt dry soil	(gm)	255.46
% WATER		32.04%

% PASSING #10 SIEVE

Total Wt	(gm)	1266.00
Wt Split #10	(gm)	666.59
% PASSING #10		52.7%

USCS	SIEVE	wt ret	% ret	% PASS	SIEVE	
	3.000		0.00%	100.00%	3.000	coarse gravel
	1.500		0.00%	100.00%	1.500	
	1.000	81.42	6.43%	93.57%	1.000	
fine gravel	0.750	109.87	8.68%	91.32%	0.750	fine gravel
	0.375	258.15	20.39%	79.61%	0.375	
coarse sand	#4	439.21	34.69%	65.31%	#4	coarse sand
medium sand	#10	600.00	47.39%	52.61%	#10	medium sand

SAMPLE PREPARATION FOR HYDROMETER ANALYSIS

% Pass #10 Sieve		52.61	Initial Moist Wt.	69.10
Specific Gravity		2.65	Calculated Dry Wt	66.94
ml Dispering Agent Used		125	(40ml Na(PO4)n per 1000ml H2O)	

WATER CONTENT (Hygroscopic #10)

Tare no.		M-3
Wt soil and tare,moist	(gm)	49.47
Wt soil&tare,dry	(gm)	48.60
Wt tare	(gm)	21.60
Wt moisture lost	(gm)	0.87
Wt dry soil,final	(gm)	27.00
% HYGROSCOPIC MOISTURE		3.2%

% PASSING 200 SIEVE

TOTAL WT (g)		M-13
Wt soil and tare,dry (wt,dry)	(gm)	260.33
Wt soil&tare,wash (wt,wash)	(gm)	252.60
Wt tare	(gm)	193.39
Wt fines lost (wt,dry-wt,wash)	(gm)	7.73
Wt dry soil, (wt,dry-wt,tare)	(gm)	66.94
% FINES LOST		11.5%

PERCENT BETWEEN #10 AND #200 SIEVE CALCULATION

SIEVE	CUMUL WT. RETAINED	CUMUL WT. RET. CORR	PERCENT PASSING
#10	0.00	60.31	52.61%
#20	21.27	81.58	35.89%
#40	41.95	102.26	19.64%
#60	51.71	112.02	11.97%
#100	56.95	117.26	7.85%
#200	58.99	119.30	6.25%

LL	
PL	
PI	
Gs	

DATE	TIME	ET (min)	RDNG R	TEMP T	TEMP.COR K	HYD.RDNG. H
05/28/92	09:56	2.00	18.5	25.00	0.013	3.50
	09:58	4.00	18.0	25.00	0.013	3.50
	10:02	8.00	18.0	25.00	0.013	3.50
	10:09	15.00	18.0	25.00	0.013	4.00
	10:24	30.00	9.0	25.00	0.013	4.00
	10:54	60.00	8.0	25.00	0.013	4.00
	11:54	120.00	7.5	24.50	0.013	4.00
	13:54	240.00	6.0	24.00	0.013	4.00
	17:54	480.00	5.5	24.00	0.013	3.50
05/29/92	09:54	1440.0	4.0	22.00	0.013	4.00

Grain Size Percentages

% GRAVEL	8.7%
% SAND	26.9%
% SILT	12.7%
% CLAY	33.9%
% FINES	13.4%
% COLLOIDS	6.2%
% TOTAL	100.00%

ET (min)	RDNG,C	EFF LTH	K	A	PAR DIA	%FINER
2.00	7.00	15.2	0.013	1.00	0.035	8.5
4.00	6.50	15.3	0.013	1.00	0.025	8.1
8.00	6.50	15.3	0.013	1.00	0.018	8.1
15.00	6.00	15.3	0.013	1.00	0.013	4.7
30.00	5.00	15.5	0.013	1.00	0.009	3.9
60.00	4.00	15.6	0.013	1.00	0.007	3.1
120.00	3.50	15.8	0.013	1.00	0.005	2.8
240.00	2.00	16.0	0.013	1.00	0.003	1.6
480.00	2.00	16.0	0.013	1.00	0.002	1.6
1440.00	0.00	16.3	0.013	1.00	0.001	0.0

WET COLOR: Dark grayish brown

DESCRIPTION: [illegible] GRAVEL

GOLDER ASSOCIATES INC
MT. LAUREL, NJ

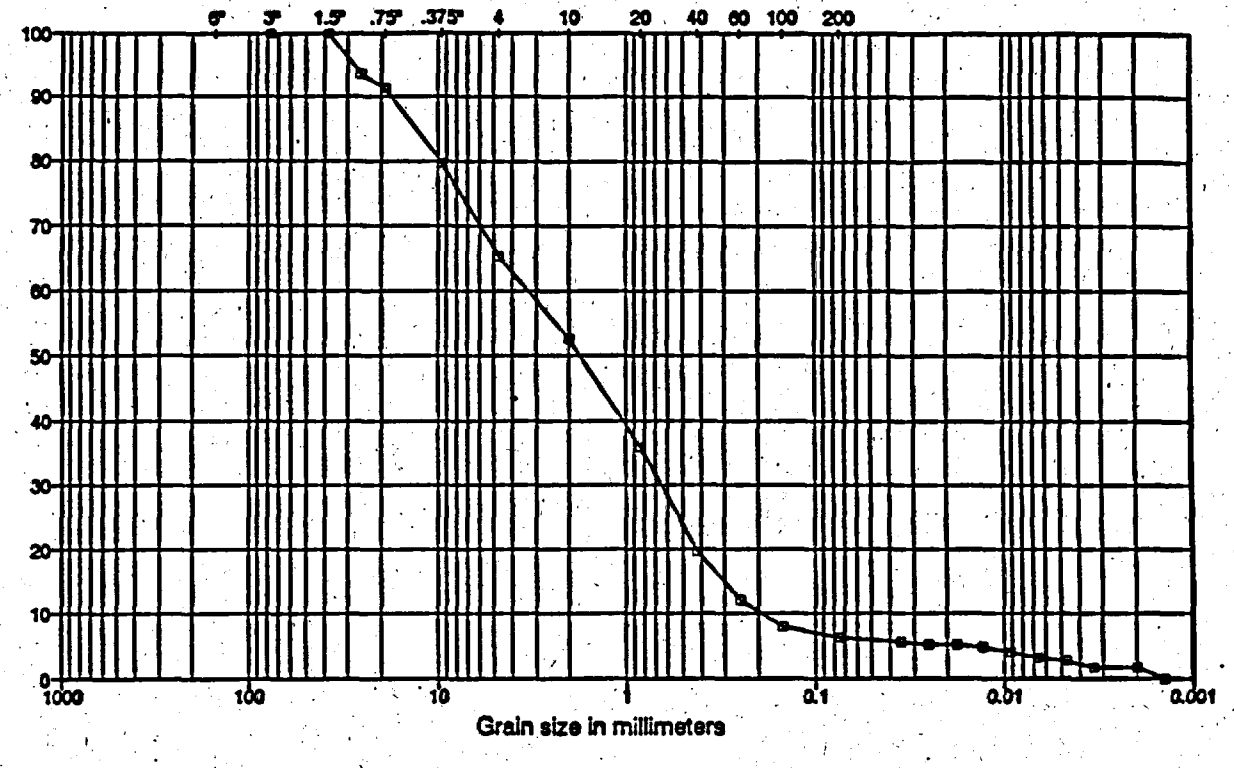
TECH: TK
DATE: 5/29/92

CHECKED:
REVIEWED:

AR302693

PARTICLE SIZE DISTRIBUTION ASTM D421 AND D422

US STANDARD SIEVE OPENING SIZES



USCS

COBBLES	GRAVEL		SAND			FINES (Silt and Clay)
	Coarse	Fine	Cor	Med	Fine	

TECH: TK
DATE: 6/1/92
CHECKED: DHN
REVIEWED:

SAMPLE ID	W%	LL	PL	PI	Gs	DESCRIPTION
GSD 6	32.0					Dark grayish brown m-f-c SAND and f GRAVEL, little fines
Sample Type: BULK			Date Tested: 5/29/92			

BERKS PRP/RIFS/SPRING TWP PA
913-6773

GOLDER ASSOCIATES INC.
MT. LAUREL,NJ

AR302694

CHAIN OF CUSTODY RECORD

PROJ. NO.: 913-6773

SITE/LOCATION: BERKS LANDFILL

SAMPLERS: (Signature) Daniel J. Wallner

STA. NO.	DATE	TIME	SAMPLE TYPE	MEDIA	SAMPLE IDENTIFICATION	NO. OF CONTAINERS	AMOUNT/PRESERVATIVE	1 BAG NO PRESERVATIVE	SEAL NO.	SEAL INTACT? (Y or N)	REMARKS (with initials)
MI 1	5/19/92	10:20	BAG		GSD 1	1					5.2
MI 2	5/19/92	15:10			2						4.8
MI 3	5/20/92	11:50			3						6.0
MI 4	5/20/92	19:35			4						4.4
MI 5	5/20/92	17:30			5						2.5
MI 6	5/21/92	11:40			6						10.6

Relinquished by: (Signature/Firm)	Date/Time	Received by: (Signature/Firm)	Relinquished by: (Signature/Firm)	Date/Time	Received by: (Signature/Firm)
Daniel J. Wallner	5/21/92 1600	[illegible] 5/21/92			

Remarks (attachments if necessary)

AR302695

SAMPLE TRACKING RECORD *

JOB NAME: BERKS JOB NUMBER: 913-10773 LOCATION: MACROINVERT. STAT. SHEET 1 OF 1

SAMPLED BY: SAW DATE: 05/19-21/92 SHIPPED BY: STEPHEN A. WHEELER DATE: MAY 19-21 1992

SHIP FROM: BERKS L/F SHIP TO: GOLDERS SOIL LAB PROJ MRG: SAW/RSW

FIELD				LABORATORY			STORAGE			DISPOSAL		
SAMPLE LOCATION	SAMPLE NUMBER	SAMPLE TYPE (1)	HAZARD (2)	DATE SAMPLE RECEIVED	RECEIVED BY	SAMPLE CONDITION (3)	STORAGE LOCATION	STORAGE DATE	PROJ. MGR. INT.	DISPOSAL DATE	PROJ. MGR. INT.	DISPOSAL METHOD (4)
MI 1	GSD 1	B	*	5/21/92	R Davis		NJ LAB			7/7/92	SAW	R
MI 2	2	B		5/21/92	R Davis		NJ LAB			7/7/92	SAW	R
MI 3	3	B		5/21/92	R Davis		NJ LAB			7/7/92	SAW	R
MI 4	4	B		5/21/92	R Davis		NJ LAB			7/7/92	SAW	R
MI 5	5	B		5/21/92	R Davis		NJ LAB			7/7/92	SAW	R
MI 6	10	B		5/21/92	R Davis		NJ LAB			7/7/92	SAW	R

SPECIAL INSTRUCTION AND NOTES (5)

- ALL SAMPLES MAY CONTAIN HAZARDOUS CONSTITUENTS
- ALL SAMPLES TO BE ANALYZED FOR GRAIN SIZE DIST. & % MOISTURE

* THIS FORM IS FOR TRACKING SAMPLES THROUGH THE GOLDER ASSOCIATES LABORATORY.
ADDITIONAL DOCUMENTATION SHALL BE USED FOR SAMPLES SENT TO OTHER LABORATORIES.

(1) SAMPLE TYPES: J-JAR, T-TUBE, B-BAG, CR-CORE, W-WATER, P-PAIL, GX-GEOTEXTILE, GM-GEOMEMBRANE, GN-GEONET

(2) CODE: C-CHEMICAL, R-RADIOACTIVE, E-EXTREME HAZARD * UNKNOWN

(3) G-GOOD, D-DAMAGED, M-MISSING

(4) T-TRASH, C-CLIENT PICKUP, R-RETURN TO CLIENT, O-OTHER

(5) SPECIAL INSTRUCTIONS SHALL INCLUDE LABORATORY TEST ASSIGNMENTS, PACKING, STORAGE, OR DISPOSAL.

FORM G.A.-V-18

Golder Associates

cc: PROJECT FILE
LAB MGR. FILE

AR302696

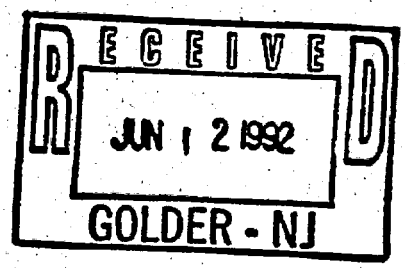
Attachment N-3

Laboratory Analytical Results and Data Validation Forms

CEIMIC
CORPORATION
"Analytical Chemistry for Environmental Management"

June 11, 1992

913 6773.0006
(431)



Ms. Lori Hendel
Golder Associates
20000 Horizon Way
Suite 500
Mt. Laurel, NJ 08054

Dear Ms. Hendel:

Enclosed is the data report of results for the analyses of samples received at Ceimic Corporation on May 22, 1992.

Please note that the duplicate and spike analysis for Hardness and Alkalinity were performed after the sample analysis. The analysis date for the Hardness QC set is 6/09/92 and for the Alkalinity QC set it is 6/08/92.

Please don't hesitate to call if you have any questions.

Sincerely,

Phyllis Shiller

Phyllis Shiller
Inorganic Laboratory
Manager

PS/ll

enc.

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CEIMIC
CORPORATION
"Analytical Chemistry for Environmental Management"

INORGANIC ANALYTES

Client: Golder Associates

Client ID: SED01/1A

Laboratory ID: 920255-01

Date Sample Received: 5/22/92

Date Sampled: 5/21/92

Target Analyte	Result	Units	Method Reporting Limit	Date Analyzed
Total Organic Carbon (TOC)	0.4	%+	0.1	5/29/92

+ Dry weight basis, solid = 76%

Reported by: Accutest

Approved by: Gilbert Shelton

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CEIMIC
CORPORATION
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INORGANIC ANALYTES

Client: Golder Associates

Client ID: SED03/1A

Laboratory ID: 920255-02

Date Sample Received: 5/22/92

Date Sampled: 5/20/92

Target Analyte	Result	Units	Method Reporting Limit	Date Analyzed
Total Organic Carbon (TOC)	0.5	%+	0.1	5/29/92

+ Dry weight basis, solid = 76%

Reported by: _____ Approved by: _____

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CEIMIC
CORPORATION
"Analytical Chemistry for Environmental Management"

INORGANIC ANALYTES

Client: Golder Associates

Client ID: SED07/1A

Laboratory ID: 920255-03

Date Sample Received: 5/22/92

Date Sampled: 5/20/92

Target Analyte	Result	Units	Method Reporting Limit	Date Analyzed
Total Organic Carbon (TOC)	0.2	%+	0.1	5/29/92

+ Dry weight basis, solid = 73%

Reported by: Accutest

Approved by: Gilles Skilla

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CEIMIC
CORPORATION
"Analytical Chemistry for Environmental Management"

INORGANIC ANALYTES

Client: Golder Associates

Client ID: SED08/1A

Laboratory ID: 920255-04

Date Sample Received: 5/22/92

Date Sampled: 5/19/92

Target Analyte	Result	Units	Method Reporting Limit	Date Analyzed
Total Organic Carbon (TOC)	0.2	%+	0.1	5/29/92

+ Dry weight basis, solid = 79%

Reported by: Accutest

Approved by: Gilli Stubbe

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CEIMIC
CORPORATION
"Analytical Chemistry for Environmental Management"

INORGANIC ANALYTES

Client: Golder Associates

Client ID: SED09/1A

Laboratory ID: 920255-05

Date Sample Received: 5/22/92

Date Sampled: 5/20/92

Target Analyte	Result	Units	Method Reporting Limit	Date Analyzed
Total Organic Carbon (TOC)	0.3	%+	0.1	5/29/92

+ Dry weight basis, solid = 83%

Reported by: Accutest

Approved by: Billie Shiele

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CEIMIC
CORPORATION
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QUALITY CONTROL

MATRIX SPIKE ANALYSIS SUMMARY

Client: Golder Associates

Client Sample ID: SED09/1A **Laboratory ID: 920255-05**

Date Analyzed: 5/29/92 **Concentration in: %**

Target Analyte	Sample Result	Spike Added	Spiked Sample Result	Percent Recovery
Total Organic Carbon (TOC)	0.315	0.196	0.506	97%

Reported by: Accutest

Approved by: Billie Shuler

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CEIMIC
CORPORATION
"Analytical Chemistry for Environmental Management"

QUALITY CONTROL

MATRIX SPIKE DUPLICATE ANALYSIS SUMMARY

Client: Golder Associates

Client Sample ID: SED09/1A

Laboratory ID: 920255-05

Date Analysis Completed: 5/29/92

Target Analyte	Matrix Spike Recovery	Matrix Spike Duplicate Recovery
Total Organic Carbon (TOC)	97%	101%

Reported by: Accutest

Approved by: Phyllis Shedd

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CEIMIC
CORPORATION
"Analytical Chemistry for Environmental Management"

INORGANIC ANALYTES

Client: Golder Associates

Client ID: SED10/1A

Laboratory ID: 920255-06

Date Sample Received: 5/22/92

Date Sampled: 5/19/92

Target Analyte	Result	Units	Method Reporting Limit	Date Analyzed
Total Organic Carbon (TOC)	0.4	%+	0.1	5/29/92

+ Dry weight basis, solid = 74%

Reported by: Accutest

Approved by: Gillis Stalla

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AR302706

CEIMIC
CORPORATION
"Analytical Chemistry for Environmental Management"

INORGANIC ANALYTES

Client: Golder Associates

Client ID: SW-01/1A

Laboratory ID: 920255-07

Date Sample Received: 5/22/92

Date Sampled: 5/21/92

Target Analyte	Result	Units	Method Reporting Limit	Date Analyzed
Alkalinity (as $CaCo_3$)	92	mg/L (ppm)	2	5/28/92
Hardness (as $CaCo_3$)	151	mg/L (ppm)	2	5/29/92
Total Suspended Solids	13	mg/L (ppm)	5	5/26/92

Reported by: Jeffrey D. Mayman Approved by: Phyllis Skelly

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CEIMIC
CORPORATION
"Analytical Chemistry for Environmental Management"

INORGANIC ANALYTES

Client: Golder Associates

Client ID: SW-04/1A

Laboratory ID: 920255-08

Date Sample Received: 5/22/92

Date Sampled: 5/20/92

Target Analyte	Result	Units	Method Reporting Limit	Date Analyzed
Alkalinity (as $CaCo_3$)	72	mg/L (ppm)	2	5/28/92
Hardness (as $CaCo_3$)	137	mg/L (ppm)	2	5/29/92
Total Suspended Solids	ND	mg/L (ppm)	5	5/26/92

ND = Not detected

Reported by: Jeffrey D. Mayhew

Approved by: Phillis Shell

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AR302708

CEIMIC
CORPORATION
"Analytical Chemistry for Environmental Management"

INORGANIC ANALYTES

Client: Golder Associates

Client ID: SW-08/1A

Laboratory ID: 920255-09

Date Sample Received: 5/22/92

Date Sampled: 5/19/92

Target Analyte	Result	Units	Method Reporting Limit	Date Analyzed
Alkalinity (as $CaCo_3$)	126	mg/L (ppm)	2	5/28/92
Hardness (as $CaCo_3$)	188	mg/L (ppm)	2	5/29/92
Total Suspended Solids	ND	mg/L (ppm)	5	5/26/92

ND = Not detected

Reported by: Jeffrey D. Magnon Approved by: Gilles Shukl

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CEIMIC
CORPORATION
"Analytical Chemistry for Environmental Management"

INORGANIC ANALYTES

Client: Golder Associates

Client ID: SW-09/1A

Laboratory ID: 920255-10

Date Sample Received: 5/22/92

Date Sampled: 5/19/92

Target Analyte	Result	Units	Method Reporting Limit	Date Analyzed
Alkalinity (as $CaCo_3$)	120	mg/L (ppm)	2	5/28/92
Hardness (as $CaCo_3$)	163	mg/L (ppm)	2	5/29/92
Total Suspended Solids	23	mg/L (ppm)	5	5/26/92

Reported by: Jeffrey D. Magnan Approved by: Phyllis Skalla

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CEIMIC
CORPORATION
"Analytical Chemistry for Environmental Management"

INORGANIC ANALYTES

Client: Golder Associates

Client ID: SW-10/1A

Laboratory ID: 920255-11

Date Sample Received: 5/22/92

Date Sampled: 5/20/92

Target Analyte	Result	Units	Method Reporting Limit	Date Analyzed
Alkalinity (as $CaCo_3$)	92	mg/L (ppm)	2	5/28/92
Hardness (as $CaCo_3$)	144	mg/L (ppm)	2	5/29/92
Total Suspended Solids	20	mg/L (ppm)	5	5/26/92

Reported by: Jeffrey D. Maynor Approved by: Ellis Shile

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CEIMIC
CORPORATION
"Analytical Chemistry for Environmental Management"

QUALITY CONTROL

SPIKE ANALYSIS SUMMARY

Client: Golder Associates

Client Sample ID: SW-10/1A **Laboratory ID: 920255-11**

Date Sample Received: 5/22/92 **Concentration in: mg/L**

Target Analyte	Sample Result	Predigest Spike Added	Spiked Sample Result	Percent Recovery Predigest Spike	Control Limit	Post Digest Spike Recovery*
Alkalinity (as $CaCo_3$)	92	25	114	88	75-125%	NR
Hardness (as $CaCo_3$)	144	182	361	119	75-125	NR

NR = Not required

* Post digest spike added at twice the CRDL or twice the indigenous level which ever is greater.

Reported by: Jeffrey D Maynor Approved by: Phyllis Shedl

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CEIMIC
CORPORATION
"Analytical Chemistry for Environmental Management"

QUALITY CONTROL

DUPLICATE ANALYSIS SUMMARY

Client: Golder Associates

Client Sample ID: SW-10/1A

Laboratory ID: 920255-11

Date Samples Received: 5/22/92

Date Sampled: 5/20/92

Target Analyte	Sample Result	Duplicate Result	RPD	Control Limit
Alkalinity (as $CaCo_3$)	92	91	1%	20%
Hardness (as $CaCo_3$)	144	168	15%	20%
Total Suspended Solids	20	18	11%	20%

RPD = Relative Percent Difference

Reported by: Jeffrey D. Mayman

Approved by: Phyllis Shile

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CEIMIC
CORPORATION
"Analytical Chemistry for Environmental Management"

INORGANIC ANALYTES

Client: Golder Associates

Client ID: SW-11/1A

Laboratory ID: 920255-12

Date Sample Received: 5/22/92

Date Sampled: 5/20/92

Target Analyte	Result	Units	Method Reporting Limit	Date Analyzed
Alkalinity (as $CaCo_3$)	120	mg/L (ppm)	2	5/28/92
Hardness (as $CaCo_3$)	139	mg/L (ppm)	2	5/29/92
Total Suspended Solids	23	mg/L (ppm)	5	5/26/92

Reported by: Jeffrey D. Maynard Approved by: Billie Shelton

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AR302714

CEIMIC
CORPORATION
"Analytical Chemistry for Environmental Management"

INORGANIC ANALYTES

Client: Golder Associates

Client ID: RB001/1A

Laboratory ID: 920255-13

Date Sample Received: 5/22/92

Date Sampled: 5/21/92

Target Analyte	Result	Units	Method Reporting Limit	Date Analyzed
Total Organic Carbon (TOC)	ND	mg/L (ppm)	1	5/28/92

ND = Not detected

Reported by: Accutest

Approved by: Phyllis Shuttle

10 Dean Knauss Drive, Narragansett, R.I. 02882 • (401) 782-8900 • FAX (401) 782-8905

AR302715

CEIMIC
CORPORATION
"Analytical Chemistry for Environmental Management"

QUALITY CONTROL

METHOD BLANK

Client: Golder Associates

Client ID: Method Blank

Project No.: 920255

Laboratory ID: PBS

Concentration in: %

Target Analyte	Result	Method Reporting Limit	Date Analyzed
Total Organic Carbon (TOC)	ND	0.1	5/29/92

ND = Not detected

Reported by: Accutest

Approved by: Phillis Shuttle

10 Dean Knauss Drive, Narragansett, R.I. 02882 • (401) 782-8900 • FAX (401) 782-8905

CEIMIC
CORPORATION
"Analytical Chemistry for Environmental Management"

QUALITY CONTROL

LABORATORY CONTROL SAMPLE

Client: Golder Associates

Client Sample ID: Laboratory Control Sample

Project No.: 920255

Laboratory ID: LCSS

Matrix: Soil

Target Analyte	% Recovery	Control Limits
Total Organic Carbon (TOC)	103%	75-125%

Reported by: Accutest

Approved by: Phyllis Shea

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CEIMIC
CORPORATION
"Analytical Chemistry for Environmental Management"

QUALITY CONTROL

METHOD BLANK

Client: Golder Associates

Client ID: Method Blank

Project No.: 920255

Laboratory ID: PBW

Target Analyte	Result	Units	Method Reporting Limit	Date Analyzed
Alkalinity (as $CaCo_3$)	ND	mg/L (ppm)	2	5/28/92
Hardness (as $CaCo_3$)	ND	mg/L (ppm)	2	6/10/92
Total Organic Carbon	ND	mg/L (ppm)	1	5/28/92
Total Suspended Solids	ND	mg/L (ppm)	5	5/26/92

ND = Not detected

Reported by: Jeffrey D. Maymon Approved by: Bill Stubbe

10 Dean Knauss Drive, Narragansett, R.I. 02882 • (401) 782-8900 • FAX (401) 783-8905

CEIMIC
CORPORATION
"Analytical Chemistry for Environmental Management"

QUALITY CONTROL

LABORATORY CONTROL SAMPLE

Client: Golder Associates

Client Sample ID: Laboratory Control Sample

Project No.: 920255

Laboratory ID: LCSW

Matrix: Aqueous

Target Analyte	% Recovery	Control Limits
Alkalinity (as $CaCO_3$)	101%	75-125%
Hardness (as $CaCo_3$)	101	75-125
Total Organic Carbon (TOC)	100	75-125
Total Suspended Solids	84	75-125

Reported by: Jeffrey D. Mayhew

Approved by: Phyllis Shedl

10 Dean Knauss Drive, Narragansett, R.I. 02882 • (401) 782-8900 • FAX (401) 782-8905

CHAIN OF CUSTODY

Original chain of Custody goes to Laboratory

Proj. #	Project name	Samplers (Please print)
913-10773	PERKINS PAP / RI/FS / SPRING TOWNSHIP PA	STEPHEN A. WHEELER, DANIEL J. WILLNER

Date	Time	Comp.	Grab	Sample Identification	Type of container	Number of containers	HNO3	No Preserv.	Remarks
5/21	0910		X	SW-01/1A HARDNESS	250 P	1	X		MACROINVERT SAMP 10
5/21	0910			SW-01/1A ALKALINITY, TSS	500 P	1		X	10
5/20	1220			SW-04/1A HARDNESS	250 P	1	X		4
5/20	1220			SW-04/1A ALKALINITY TSS	500 P	1		X	4
5/19	1015			SW-08/1A HARDNESS	250 P	1	X		1
5/19	1015			SW-08/1A ALKALINITY TSS	500 P	1		X	1
5/19	15:00			SW-09/1A HARDNESS	250 P	1	X		2
5/19	15:00			SW-09/1A ALKALINITY, TSS	500 P	1		X	2
5/20	0840			SW-10/1A HARDNESS	250 P	1	X		3
5/20	0840			SW-10/1A ALKALINITY, TSS	500 P	1		X	3
5/20	1530			SW-11/1A HARDNESS	250 P	1	X		5
5/20	1530			SW-11/1A ALKALINITY TSS	500 P	1		X	5
5/21	0946			RB001/1A RINSATE BLANK	250 P	1			

Relinquished by (Signature)	Date/Time	Received by (Signature)	Date/Time	Remarks:
Stephen A. Wheeler	05/31/92 1615			
Relinquished by (Signature)	Date/Time	Received by (Signature)	Date/Time	
Relinquished by (Signature)	Date/Time	Received by (Signature)	Date/Time	
		Ryan P. Lamm	5/22/92 1015	

CEIMIC Corporation 10 Dean Knauss Drive, Narragansett, RI 02882 (401) 782-8900 FAX (401) 782-8905

P = Plastic

CHAIN OF CUSTODY

Original chain of Custody goes to Laboratory

Proj. #: 913-6773
Project name: BERKS PRPL RIFS | SPRING TOWNSHIP, PA
Samplers (Please print): STEPHEN A. WHEELER, DANIEL J WILLNER

Date	Time	Comp.	Grab	Sample Identification	Type of container	Number of containers	NO PRESERV	TOC									Remarks	
5/21	0920	X		SED 01 / 1A	4oz	1											MACRO INVERT STAT	10
5/20	1230			SED 03 / 1A														4
5/20	1540			SED 07 / 1A														5
5/19	1020			SED 08 / 1A														1
5/20	0850			SED 09 / 1A														3
5/19	1510			SED 10 / 1A														2

Relinquished by (Signature)	Date/Time	Received by (Signature)	Date/Time
[signature]	05/21/92 1015		
		[signature]	5/22/92 1015

Remarks:

CEIMIC Corporation 10 Dean Knauss Drive, Narragansett, RI 02882 (401) 782-8900 FAX (401) 782-8905

(2, FB

CHAIN OF CUSTODY

Original chain of Custody goes to Laboratory

per Roger Larson via Steffe

923121

Proj. # 0255 Project name Ceimic

Samplers (Please print)

Date	Time	Comp.	Grab	Sample Identification	Type of container	Number of containers	TOC		Remarks
5/21	9:20	50:1		920255-01	40Z	1	✓	E1-14413	
5/20	12:30			-02		1	✓	E1-14414	
5/20	↓			-02MS		1	✓	~~E1-14415~~ NS	
5/20	↓			-02MSD		1	✓		
5/20	15:40			-03		1	✓	E1-14415	
5/19	10:20			-04		1	✓	E1-14416	
5/20	8:50			-05		1	✓	E1-14417	
5/19	15:10	↓		-06	↓	1	✓	E1-14418	
5/21	8:30	HSO	x	-13	250ml	1	✓	E1-14419	
		DKS							

(1L)

Relinquished by (Signature)	Date/Time	Received by (Signature)	Date/Time
Roger R Larson	5/22/92 3:30	Airborne Express	5/22/92 3:30
Airborne Express	5/23/92 12:20		5/23/92 12:20

Remarks:

* Refer to List of Requirements enclosed.
MS & MSD Recoveries & Results
LCS & LCS duplicate Recoveries & Results

CEIMIC Corporation 10 Dean Knauss Drive, Narragansett, RI 02882 (401) 782-8900 FAX (401) 782-8905

AR302722

** TOC Results by 6/10 (12 DAY T/A)
.TI-I pkg. to follow shortly after.
VBV Steffe

TI-1 SAMPLES RECEIVED ON ICE AT ACCUTEST

* Results Due 6/10/92

Data Evaluation Checklist

Project Name: Beers Landfill RI/FS Project Number: 913-6773.1804

Reviewer: Lori Anne Hendel Date: July 8, 1992

Signature: Lori Ann Hendel

Overall Data Quality Assessment

Sample Points: SED01/1A, SED05/1A, SED07/1A, SED08/1A, SED09/1A, SED10/1A
RB001/1A, SW-01/1A, SW-04/1A, SW-08/1A, SW-09/1A, SW-10/1A, SW-11/1A

	Y	N	NA
1. General			
(a) Were the FSP, QAPP, laboratory reports and field documentation available to support data assessment procedures?	✓		
2. Precision (reference FSP and QAPP)			
(a) Are lab duplicate RPD within control limits?	✓		
(b) Are field duplicate RPD within control limits?			✓
(c) Are MS/MSD RPD within control limits?			

Overall assessment of precision: Precision was deemed acceptable

3. Accuracy (reference FSP and QAPP)			
(a) Are MS/MSD recoveries within control limits?	✓		
(b) Are lab spike (LCS/DCS) recoveries within control limits?	✓		

Overall assessment of accuracy: Accuracy of data was deemed acceptable

4. Representativeness			
(a) Were procedures in the FSP followed? If not, were procedural variances approved and documented?	✓		
(b) Were sample preservation procedures followed?	✓		
(c) Were data reported in the proper units?	✓		
(d) Was blank contamination not evident, or well documented at low levels?	✓		
(e) Were field duplicates within control limits?			✓

Overall assessment of representativeness: Representativeness of data was deemed acceptable

	Y	N	NA
5. Comparability			
(a) Are data traceable to a standard method?	✓		
(b) Are methods approved/accepted as producing valid results?	✓		
(c) Are data reported in proper units?	✓		

Overall assessment of comparability: Comperability of data was deemed acceptable

	Y	N	NA
6. Completeness (reference FSP and QAPP)			
(a) Is the fraction of valid data within control limits?	✓		
(b) If not, are the data sufficient to meet the task objectives? (If yes, justify below)			✓
(c) Are critical (background) samples sufficient and have valid results?	✓		

Overall assessment of completeness: Completeness of data was deemed acceptable

	Y	N	NA
7. DQOs (reference FSP and QAPP)			
(a) Are the data usable and consistent with the project data quality objectives?	✓		

8. Comments/Notes

All data was deemed acceptable based upon the criteria established by the FSP and QAPP

Revision Date: 08/92

Data Evaluation Checklist

Project Name: Berks Landfill RIFS Project Number: 913-1773.1004

Reviewer: Lori Anne Hendel Date: July 8, 1992

Signature: Lori Anne Hendel

Field Performance

Sample Points: SED01|1A, SED03|1A, SED07|1A, SED08|1A, SED09|1A, SED10|1A
BR001|1A, SW-01|1A, SW-04|1A, SW-08|1A, SW-09|1A, SW-10|1A, SW-11|1A

	Y	N	NA
1. Chain-of-Custody (CoC)			
(a) Was the CoC properly completed?	✓		
(b) Was the CoC signed by both field and laboratory personnel?	✓		
(c) Were samples received in good condition?	✓		
2. Field Documentation includes (reference FSP)			
(a) Date and times samples collected?	✓		
(b) Sample locations?	✓		
(c) Field measurements?	✓		
(d) Instruments for field measurements (including instrument model and serial number)?	✓		
(e) Calibration/maintenance of field instruments (including lot number, source and frequency)?	✓		
(f) Proper preservatives used?	✓		
(g) Field quality control procedures?	✓		
(h) FSP procedures followed?	✓		
If not, procedural variances approved and documented?			
3. Precision (reference FSP)			
(a) Were Field Duplicate precision criteria met?			✓

Note: If one or both results were not detected, then RPD can not be calculated and indicate NA.

4. Blanks			
(a) Contamination of field blanks was not evident, or well documented at low levels?	✓		

5. Comments/Notes

Revision Date: 06/92

Data Evaluation Checklist

Project Name: Berks Landfill RI/FS Project Number: 913-6773.1004

Reviewer: Lori Anne Hendel Date: June 24, 1992

Signature: Lori Anne Hendel

Inorganic Conventional Parameters

Parameter: Total Organic Carbon Method: Modified EPA 415.1

Matrix: Sediment

Sample Points: SED01LA, SED03LA, SED07LA, SED08LA, SED09LA, SED10LA

	Y	N	NA
1. Chain-of-Custody (CoC)			
(a) Was the CoC properly completed?	✓		
(b) Was the CoC signed by both field and laboratory personnel?	✓		
(c) Were samples received in good condition?	✓		
2. Samples (reference QAPP or Method)			
(a) Were hold times met for all samples?	✓		
(b) Were the correct preservatives used?	✓		
(c) Was the correct method used?	✓		
(d) Were appropriate reporting limits achieved?	✓		
(e) Were any sample dilutions noted?		✓	
(f) Were any matrix problems noted?		✓	
3. Precision (reference QAPP)			
(a) Were Field Duplicate precision criteria met?			✓
(b) Were MS/MSD precision criteria met? 4%	✓		
(c) Were Lab Duplicate precision criteria met?			✓

Note: If one or both results were not detected, then RPD can not be calculated and indicate NA.

	Y	N	NA
4. Accuracy (reference QAPP)			
(a) Was MS accuracy criteria met? 97%	✓		
Recovery could not be calculated since sample contained high concentration of analyte?			✓
(b) Was MSD accuracy criteria met? 101%	✓		
Recovery could not be calculated since sample contained high concentration of analyte?			✓
(c) Was LCS accuracy criteria met? 103%	✓		
Recovery could not be calculated since sample contained high concentration of analyte?			✓
5. Blanks			
(a) Was analyte detected in the method blank(s)?		✓	
(b) Was analyte detected in the field blank(s)?		✓	

6. Comments/Notes

Rinsate blank collected: QC for aqueous TOC acceptable (Blank - ND; LCS 100% recovery)

Samples subcontracted to Accutest

Data Evaluation Checklist

Project Name: Berks Landfill RI/FS Project Number: 913-6773.1004

Reviewer: Lori Anne Hendel Date: June 24, 1992

Signature: Lori Anne Hendel

Inorganic Conventional Parameters

Parameter: Alkalinity Method: EPA 310.2

Matrix: Surface Water

Sample Points: SW-01/1A, SW-04/1A, SW-08/1A, SW-09/1A, SW-10/1A, SW-11/1A

	Y	N	NA
1. Chain-of-Custody (CoC)			
(a) Was the CoC properly completed?	✓		
(b) Was the CoC signed by both field and laboratory personnel?	✓		
(c) Were samples received in good condition?	✓		
2. Samples (reference QAPP or Method)			
(a) Were hold times met for all samples?	✓		
(b) Were the correct preservatives used?	✓		
(c) Was the correct method used?	✓		
(d) Were appropriate reporting limits achieved?	✓		
(e) Were any sample dilutions noted?		✓	
(f) Were any matrix problems noted?		✓	
3. Precision (reference QAPP)			
(a) Were Field Duplicate precision criteria met?			✓
(b) Were MS/MSD precision criteria met?			✓
(c) Were Lab Duplicate precision criteria met? 1%	✓		

Note: If one or both results were not detected, then RPD can not be calculated and indicate NA.

	Y	N	NA
4. Accuracy (reference QAPP)			
(a) Was MS accuracy criteria met? 88%	✓		
Recovery could not be calculated since sample contained high concentration of analyte?			✓
(b) Was MSD accuracy criteria met?			✓
Recovery could not be calculated since sample contained high concentration of analyte?			✓
(c) Was LCS accuracy criteria met? 101%	✓		
Recovery could not be calculated since sample contained high concentration of analyte?			✓
5. Blanks			
(a) Was analyte detected in the method blank(s)?		✓	
(b) Was analyte detected in the field blank(s)?			✓

6. Comments/Notes

QC samples analyzed 6/8/92

Data Evaluation Checklist

Project Name: Berks Landfill RI/FS Project Number: 913-6773.1004

Reviewer: Lori Anne Hendel Date: June 24, 1992

Signature: Lori Anne Hendel

Inorganic Conventional Parameters

Parameter: Total Suspended Solids Method: EPA 160.1

Matrix: Surface Water

Sample Points: SW-01/1A, SW-04/1A, SW-08/1A, SW-09/1A, SW-10/1A, SW-11/1A

	Y	N	NA
1. Chain-of-Custody (CoC)			
(a) Was the CoC properly completed?	✓		
(b) Was the CoC signed by both field and laboratory personnel?	✓		
(c) Were samples received in good condition?	✓		
2. Samples (reference QAPP or Method)			
(a) Were hold times met for all samples?	✓		
(b) Were the correct preservatives used?	✓		
(c) Was the correct method used?	✓		
(d) Were appropriate reporting limits achieved?	✓		
(e) Were any sample dilutions noted?		✓	
(f) Were any matrix problems noted?		✓	
3. Precision (reference QAPP).			
(a) Were Field Duplicate precision criteria met?			✓
(b) Were MS/MSD precision criteria met?			✓
(c) Were Lab Duplicate precision criteria met? 11%	✓		

Note: If one or both results were not detected, then RPD can not be calculated and indicate NA.

	Y	N	NA
4. Accuracy (reference QAPP)			
(a) Was MS accuracy criteria met?			✓
Recovery could not be calculated since sample contained high concentration of analyte?			✓
(b) Was MSD accuracy criteria met?			✓
Recovery could not be calculated since sample contained high concentration of analyte?			✓
(c) Was LCS accuracy criteria met? 84%	✓		
Recovery could not be calculated since sample contained high concentration of analyte?			✓
5. Blanks			
(a) Was analyte detected in the method blank(s)?		✓	
(b) Was analyte detected in the field blank(s)?			✓

6. Comments/Notes

Data Evaluation Checklist

Project Name: Berks Landfill RI/FS Project Number: 913-6773.1004

Reviewer: Lori Anne Hendel Date: June 24, 1992

Signature: Lori Anne Hendel

Inorganic Conventional Parameters

Parameter: Hardness Method: EPA 200.7

Matrix: Surface Water

Sample Points: SW-01/1A, SW-04/1A, SW-08/1A, SW-09/1A, SW-10/1A, SW-11/1A

	Y	N	NA
1. Chain-of-Custody (CoC)			
(a) Was the CoC properly completed?	✓		
(b) Was the CoC signed by both field and laboratory personnel?	✓		
(c) Were samples received in good condition?	✓		
2. Samples (reference QAPP or Method)			
(a) Were hold times met for all samples?	✓		
(b) Were the correct preservatives used?	✓		
(c) Was the correct method used?	✓		
(d) Were appropriate reporting limits achieved?	✓		
(e) Were any sample dilutions noted?		✓	
(f) Were any matrix problems noted?		✓	
3. Precision (reference QAPP)			
(a) Were Field Duplicate precision criteria met?			✓
(b) Were MS/MSD precision criteria met?			✓
(c) Were Lab Duplicate precision criteria met? 15%	✓		

Note: If one or both results were not detected, then RPD can not be calculated and indicate NA.

	Y	N	NA
4. Accuracy (reference QAPP)			
(a) Was MS accuracy criteria met? 119%	✓		
Recovery could not be calculated since sample contained high concentration of analyte?			✓
(b) Was MSD accuracy criteria met?			✓
Recovery could not be calculated since sample contained high concentration of analyte?			✓
(c) Was LCS accuracy criteria met? 101%	✓		
Recovery could not be calculated since sample contained high concentration of analyte?			✓
5. Blanks			
(a) Was analyte detected in the method blank(s)?		✓	
(b) Was analyte detected in the field blank(s)?			✓

6. Comments/Notes

QC samples analyzed 6/9/92

APPENDIX O

AGENCY CORRESPONDENCE FOR NEPA ISSUES

Golder Associates Inc.

305 Fellowship Road, Suite 200
Mt. Laurel, NJ USA 08054
Tel: (609) 273-1110
Fax (609) 273-0778

Golder Associates

October 27, 1993

Project No.: 913-6773

PA Department of Environmental Resources
Forest Advisory Services/PNDI
P.O. Box 8552
Harrisburg, PA 17105-8552

Attn: Ms. Kathy McKenna

RE: PENNSYLVANIA NATURAL DIVERSITY INVENTORY (PNDI)
SEARCH REQUEST FOR THE BERKS LANDFILL SITE
BERKS COUNTY, PENNSYLVANIA

Ladies and Gentlemen:

Golder Associates Inc. (Golder) has enclosed the Pennsylvania Natural Diversity Inventory (PNDI) search request form for the Berks Landfill Site, Spring Township, Berks County, Pennsylvania. Also enclosed is a Site Location Map showing the Site location on the Sinking Spring, Pennsylvania, 7.5 minute USGS topographic quadrangle map.

Golder requests any information available regarding protected species within a one-mile radius of the Site.

If you should require any additional information, please do not hesitate to contact us.

Very truly yours,

GOLDER ASSOCIATES INC.

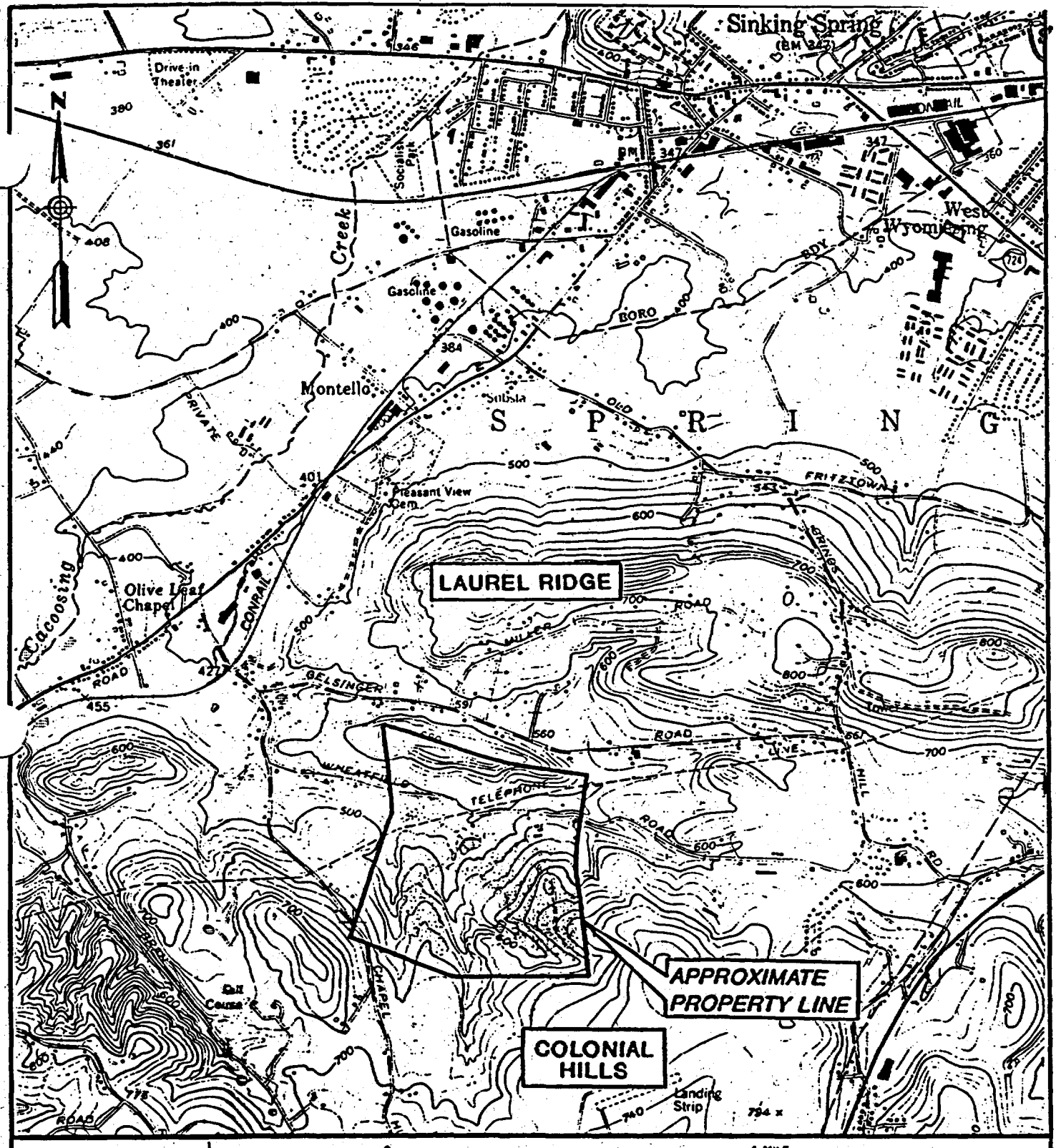
Stephen A. Wheeler
Project Environmental Scientist

Randolph S. White, P.E.
Senior Project Manager

SAW/RSW:lrl

Enclosure

z:\6773\1027ltr3.wp5



REFERENCE:
U.S.G.S. TOPOGRAPHIC MAP, SINKING SPRING QUADRANGLE, 7.5 SERIES, PHOTOREVISED 1987.

JOB No.: 913-6389	SCALE: AS SHOWN	OCT 27 1993	
DRAWN: EAM	DATE: 05/10/91	**SITE LOCATION MAP**	
CHECKED:	DWG. No.: PA21-075		
Golder Associates	**BERKS LANDFILL**	FIGURE	

AR302736

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL RESOURCES
P.O. Box 8552
Harrisburg, PA 17105-8552

December 14, 1993

717/787-3444

Bureau of Forestry

SUBJECT: PNDI Review of the Berks Landfill Site, Spring Township, Berks County, PA

TO: Stephen A. Wheeler
Golder Associates, Inc.
305 Fellowship Road, Suite 200
Mt. Laurel, NJ 08054

FROM: Pennsylvania Natural Diversity Inventory System

In response to your request of October 27, an area mapped on the Sinking Spring Quadrangle was reviewed for the presence of natural resources of special concern using the Pennsylvania Natural Diversity Inventory (PNDI) information system. We do not anticipate any impact on rare, threatened or endangered species at this location.

PNDI is a site specific information system which describes significant natural resources of Pennsylvania. PNDI includes data descriptive of plant and animal species of special concern, exemplary natural communities and unique geological features. This response represents the most up-to-date summary of the PNDI data files. However, an absence of recorded information does not necessarily imply actual conditions on-site. A field survey of any site may reveal previously unreported populations.

Be advised that legal authority for Pennsylvania's biological resources resides with three administrative agencies. The enclosure titled PNDI Species List, outlines which species groups are managed by these agencies. If you have questions concerning this response or the PNDI system, please contact Edward Dix of our office at 717/783-0392.

Enclosure

cc: Anthony Wilkinson, PNDI-East
File

PENNSYLVANIA NATURAL DIVERSITY INVENTORY

SPECIES LISTS

The statutory authority for Pennsylvania's animals and plants resides with three separate agencies. The Pennsylvania Department of Environmental Resources has the responsibility for management of the Commonwealth's native wild plants. The Pennsylvania Fish Commission is responsible for management of fish, reptiles, amphibians and aquatic organisms within the Commonwealth. The Pennsylvania Game Commission has the responsibility for managing the state's wild birds and mammals.

For information on current official status for a species, please consult the appropriate agency. Requests for information should be directed to:

PLANTS and PNDI - general	Plant Program Manager Pa. Department of Environmental Resources Bureau of Forestry Forest Advisory Services P. O. Box 8552 Harrisburg, PA 17105-8552 (717)787-3444
FISH, REPTILES, AMPHIBIANS, AQUATIC ORGANISMS	Endangered Species & Herpetology Coordinator Pennsylvania Fish & Boat Commission Bureau of Fisheries and Engineering 450 Robinson Lane Bellefonte, PA 16823 (814)359-5113
BIRDS and MAMMALS	Pennsylvania Game Commission Bureau of Wildlife Management 2001 Elmerton Avenue Harrisburg, PA 17110-9797 (717)787-5529

For information on species listed under the federal Endangered Species Act of 1973 occurring in Pennsylvania, contact:

Endangered Species Biologist
U.S. Fish and Wildlife Service
315 South Allen Street, Suite 322
State College, PA 16801
(814)234-4090

Thank you for your request. Feel free to contact PNDI if we can be of further assistance.

Golder Associates Inc.

305 Fellowship Road, Suite 200
Mt. Laurel, NJ USA 08054
Tel: (609) 273-1110
Fax (609) 273-0778

Golder Associates

October 27, 1993

Project No.: 913-6773

Pennsylvania Historical and Museum Commission
Bureau for Historic Preservation
William Penn Memorial Museum Building
P.O. Box 1026
Harrisburg, PA 17108-1026

RE: BERKS LANDFILL
SPRING TOWNSHIP, BERKS COUNTY PENNSYLVANIA
HISTORICAL, ARCHEOLOGICAL, AND CULTURAL RESOURCES

Ladies & Gentlemen:

Golder Associates Inc. (Golder) requests a review and determination as to whether any known historical, archeological or cultural resources exist on or within a one-mile radius of the Berks Landfill Site (Site). The Site is located along Wheatfield Road, Spring Township, Berks County, Pennsylvania, as shown on the enclosed Sinking Spring, Pennsylvania 7.5 minute USGS topographic quadrangle map.

The surface soils at the site have been disturbed from the former construction of a municipal solid waste landfill facility, ancillary facilities and from soil borrow areas utilized by the former landfill. Surrounding areas include farmland, forestland, residential homes, roads and other developments.

If you should require additional information for this request, please do not hesitate to contact us at (609) 273-1110.

Very truly yours,

GOLDER ASSOCIATES INC.

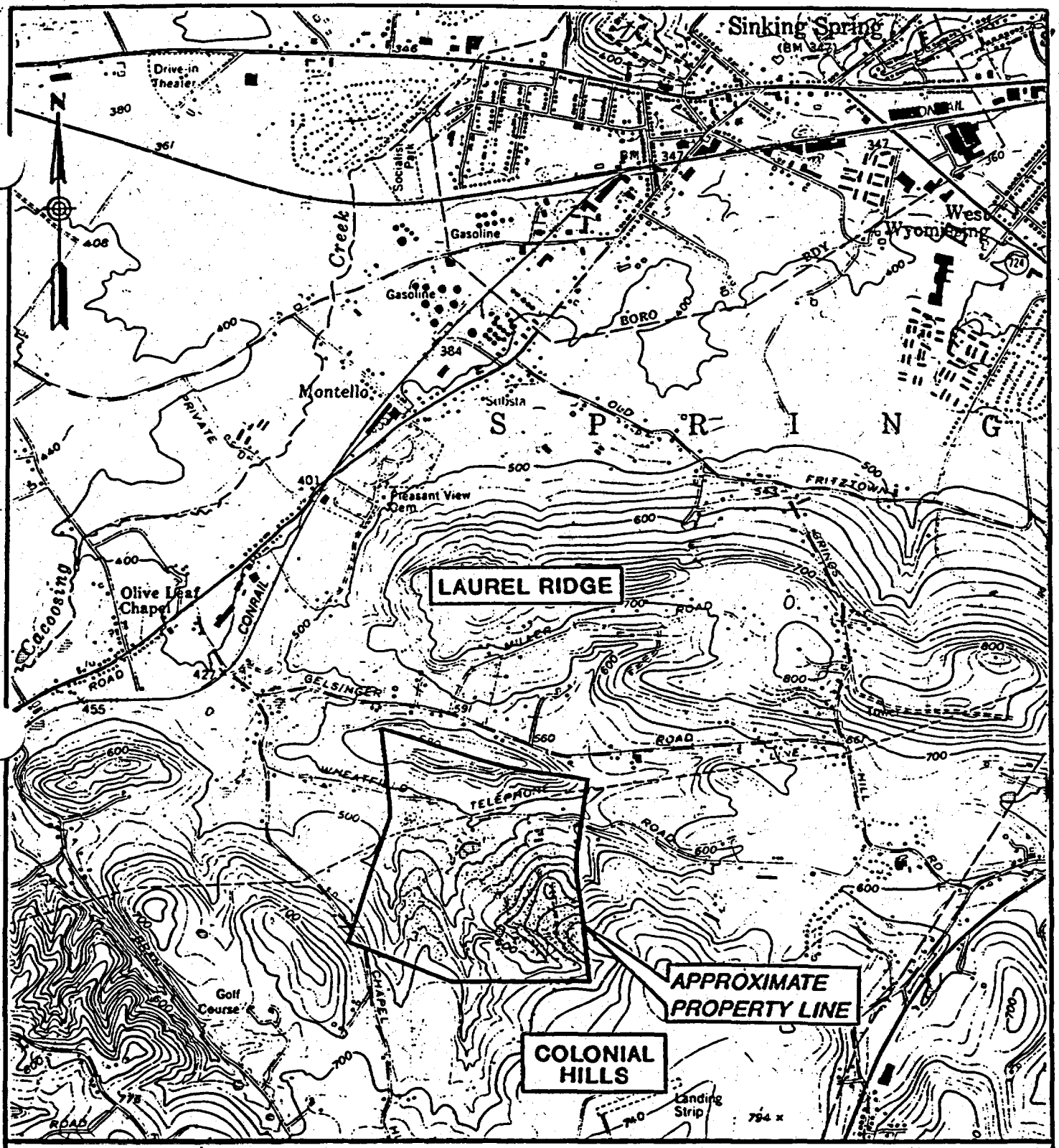
Stephen A. Wheeler
Project Environmental Scientist

Randolph S. White, P.E.
Senior Project Manager

SAW/RSW:lrl

Attachment

z:\6773\1027ltr.wp5



REFERENCE:
U.S.G.S. TOPOGRAPHIC MAP, SINKING SPRING QUADRANGLE, 7.5 SERIES, PHOTOREVISED 1987.

B No.: 913-6389	SCALE: AS SHOWN	OCT 27 1993	
DRAWN: EAM	DATE: 05/10/91	**SITE LOCATION MAP**	
CHECKED:	DWG. No.: PA21-075		
Golder Associates	**BERKS LANDFILL**	FIGURE	

AR302740

Commonwealth of Pennsylvania
Pennsylvania Historical and Museum Commission
Bureau for Historic Preservation
Post Office Box 1026
Harrisburg, Pennsylvania 17108-1026

January 12, 1994

Stephen A. Wheeler
Golder Associates, Inc.
305 Fellowship Road, Ste. 200
Mt. Laurel, NJ 08054

TO EXPEDITE REVIEW USE
BHP REFERENCE NUMBER

Re: File No. ER 94-0309-011-A
LAND, Berks Landfill
Spring Township
Berks County

Dear Mr. Wheeler:

The Bureau for Historic Preservation has reviewed this State funded, assisted or licensed project under the authority of the Environmental Rights amendment, Article 1, Section 27 of the Pennsylvania Constitution and the Pennsylvania History Code, 37 Pa. Cons. Stat. Section 507 et seq. (1988). This review includes comments on the project's potential effect on both historic and archaeological resources.

Significant archaeological sites are located in or near your project area and others are likely to exist. These resources could be adversely affected by project activities. A Phase I archaeological survey to verify the extent of known sites and to locate other sites is needed to determine their eligibility for listing in the National Register of Historic Places. Guidelines and instructions for this phase are enclosed. The recorded sites in the area are listed below.

P.A.S.S. # 36 BK 179

In our opinion this project will have no effect on historic structures.

If you need further information in this matter please consult Andrew Wyatt at (717) 772-0923.

Sincerely,

Kurt W. Carr, Chief
Division of Archaeology & Protection

Enclosure
KC/dks

Golder Associates Inc.

305 Fellowship Road, Suite 200
Mt. Laurel, NJ USA 08054
Tel: (609) 273-1110
Fax (609) 273-0778

Golder Associates

October 27, 1993

Project No.: 913-6773

National Park Service
Mid-Atlantic Regional Office
143 South Third Street
Philadelphia, PA 19106

Attn: Ms. Patricia Bentley

RE: NATIONAL HISTORIC SITES AND NATIONAL NATURAL LANDMARKS SEARCH

Dear Ms. Bentley:

Golder Associates Inc. (Golder) requests information regarding any National Historic Sites or National Natural Landmark Sites within a five-mile radius of the Berks Landfill Site (Site). The Site is located along Wheatfield Road, Spring Township, Berks County, Pennsylvania, as shown on the enclosed Sinking Spring 7.5 minute USGS topographic quadrangle map.

If you should require additional information, please do not hesitate to contact us.

Very truly yours,

GOLDER ASSOCIATES INC.

Stephen A. Wheeler
Project Environmental Scientist

Randolph S. White, P.E.
Senior Project Manager

SAW/RSW:lrl

Enclosure

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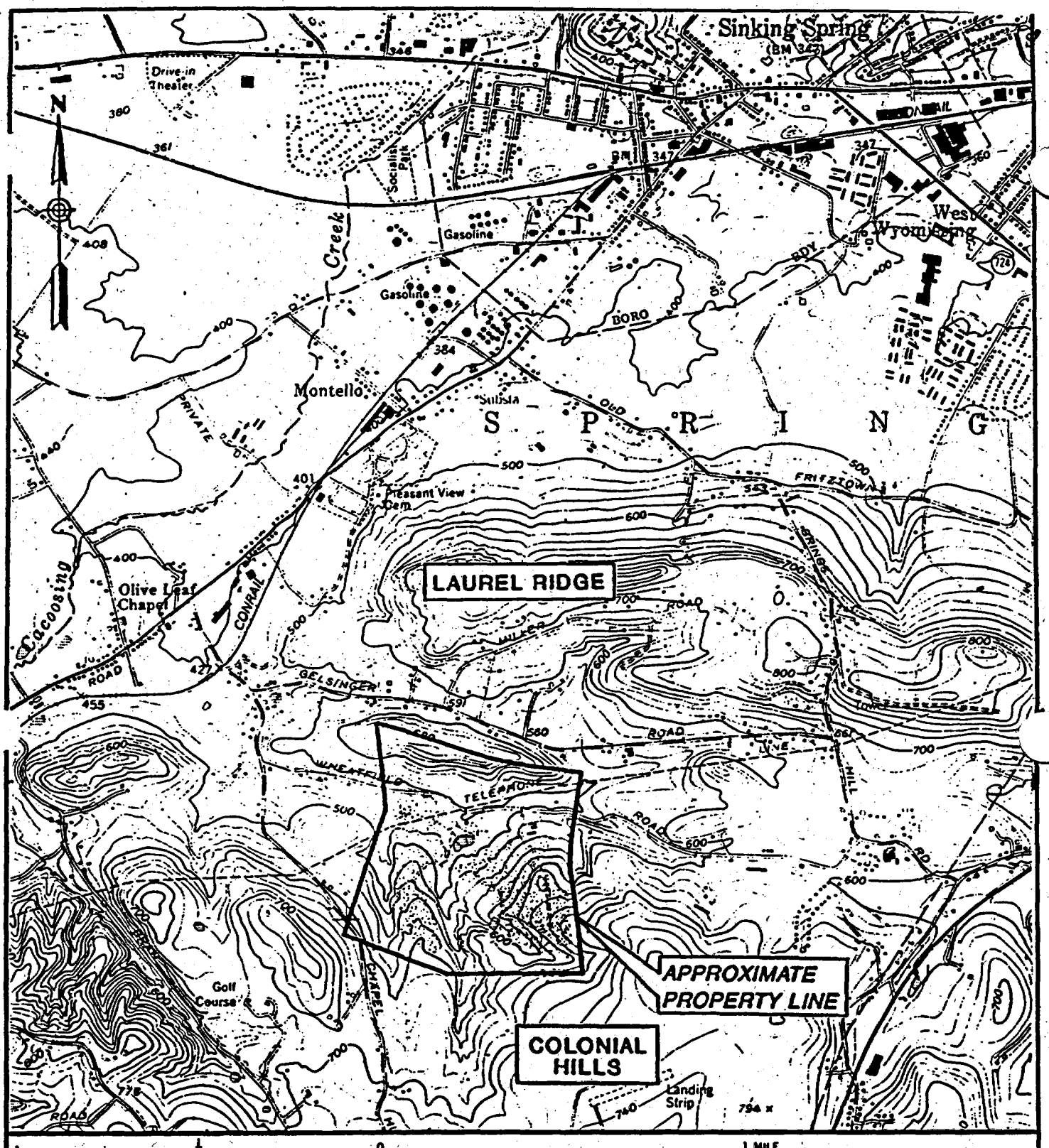

REFERENCE:
U.S.G.S. TOPOGRAPHIC MAP, SINKING SPRING QUADRANGLE, 7.5 SERIES, PHOTOREVISED 1987.

JOB No.: 913-6389	SCALE: AS SHOWN	OCT 27 1993	
DRAWN: EAM	DATE: 05/10/91	**SITE LOCATION MAP**	
CHECKED:	DWG. No.: PA21-075		
Golder Associates	**BERKS LANDFILL**	FIGURE	

AR302143

United States Department of the Interior

NATIONAL PARK SERVICE
Mid-Atlantic Region
143 South Third Street
Philadelphia, PA 19106

IN REPLY REFER TO:

TAKE PRIDE IN AMERICA

November 4, 1993

N44(MAR-MR)

Stephen A. Wheeler
Project Environmental Scientist
and
Randolph S. White, P.E.
Senior Project Manager
Golder Associates, Inc.
305 Fellowship Road, Suite 200
Mt. Laurel, NJ 08054

Re: Project No.: 913-6773

Gentlemen:

According to the map you provided, and the area described, there are no National Natural Landmarks within a five mile radius of the project area. The closest National Natural Landmark is the Hawk Mountain Sanctuary which is approximately 30 miles north of Reading, PA.

I am forwarding a copy of your letter and enclosure to our National Historic Sites Coordinator, Bill Bolger, for his input. If I can be of further assistance, please do not hesitate to contact me. I can be reached at (215) 597-7159.

Sincerely,

Ginny Paci
National Natural Landmarks Coordinator

cc:
Bill Bolger, NHS Coord., CRM w/cy of inc.

Golder Associates Inc.

305 Fellowship Road, Suite 200
Mt. Laurel, NJ USA 08054
Tel: (609) 273-1110
Fax (609) 273-0778

Golder Associates

October 27, 1993

Project No.: 913-6773

U.S. Department of Interior
U.S. Fish and Wildlife Service
Suite 322
315 South Allen Street
State College, PA 16801

Attn: Mr. Charles Kulp (Field Supervisor)

RE: BERKS LANDFILL, BERKS COUNTY, PENNSYLVANIA
INFORMATION REQUEST FOR PROTECTED SPECIES AND CULTURAL RESOURCES

Gentlemen:

Golder Associates Inc. (Golder) requests any information available regarding protected species and cultural resources within a one-mile radius of the Berks Landfill Site (Site). The Site is located along Wheatfield Road, Spring Township, Berks County, Pennsylvania, as shown on the enclosed Sinking Spring 7.5 minute USGS topographic quadrangle map.

The information received will be used to address the National Environmental Protection Act (NEPA) issues in relation to the site Remedial Investigation (RI) as required under CERCLA.

Golder has also submitted a formal request to the Pennsylvania Natural Diversity Inventory (PNDI) regarding any protected species identified or observed within a one-mile radius of the Site.

If you should require additional information, please to not hesitate to contact us.

Very truly yours,

GOLDER ASSOCIATES INC.

Stephen A. Wheeler
Project Environmental Scientist

Randolph S. White, P.E.
Senior Project Manager

SAW/RSW:lrl

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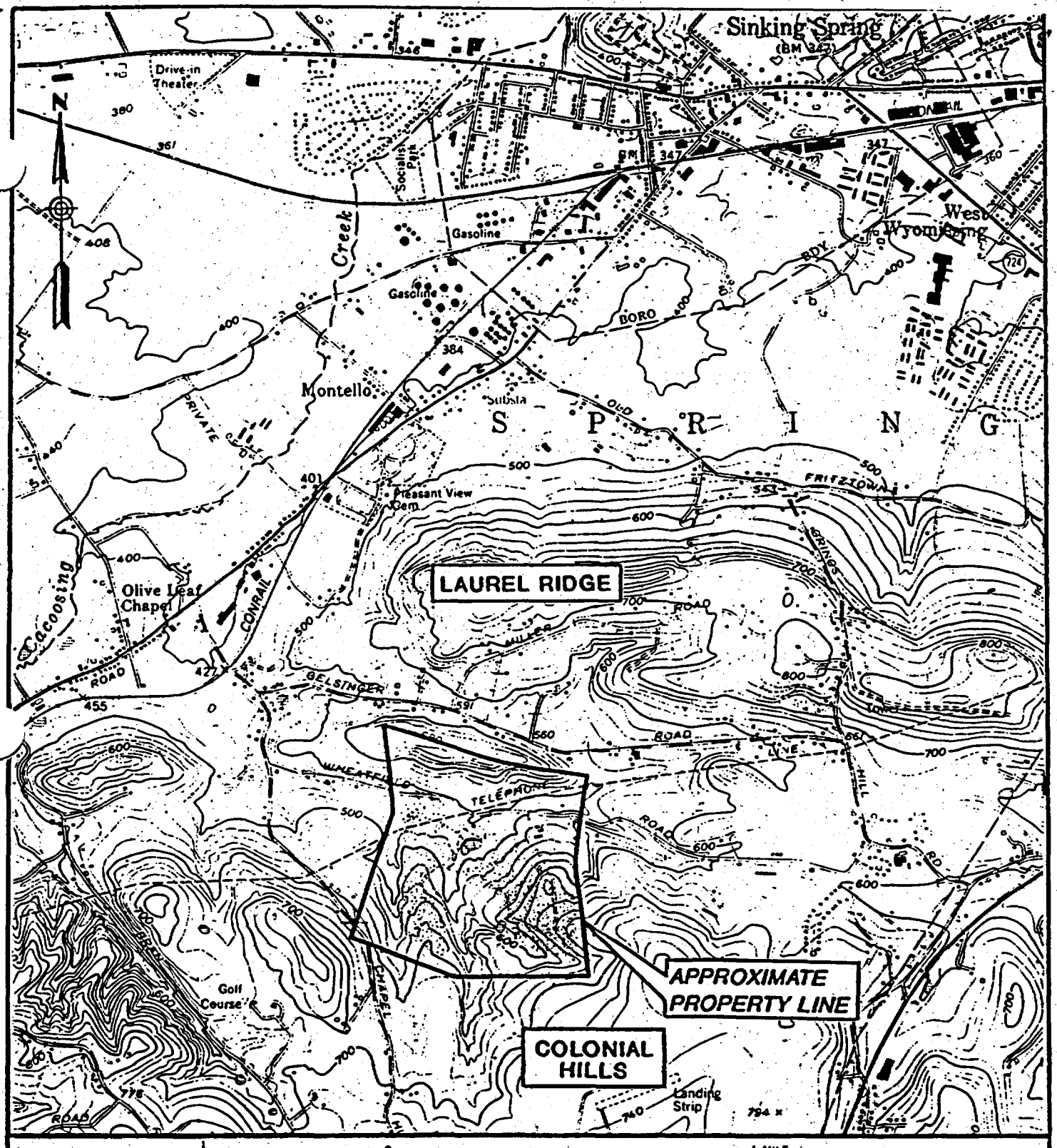


REFERENCE:
U.S.G.S. TOPOGRAPHIC MAP, SINKING SPRING QUADRANGLE, 7.5 SERIES, PHOTOREVISED 1987.

DB No.: 913-6389	SCALE: AS SHOWN	OCT 27 1993	
DRAWN: EAM	DATE: 05/10/91	**SITE LOCATION MAP**	
CHECKED:	DWG. No.: PA21-075		
Golder Associates	**BERKS LANDFILL**	FIGURE	

AR302746

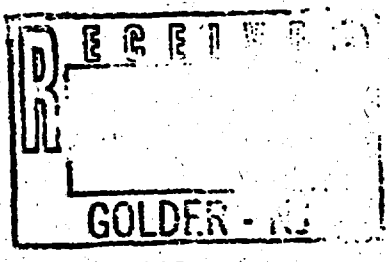
United States Department of the Interior

TAKE PRIDE IN AMERICA

FISH AND WILDLIFE SERVICE
Suite 322
315 South Allen Street
State College, Pennsylvania 16801

October 29, 1993

Mr. Randolph S. White, P.E.
Senior Project Manager
Golder Associates, Inc.
305 Fellowship Road, Suite 200
Mt. Laurel, NJ 08054



Dear Mr. White:

This responds to your letter of October 27, 1993 requesting information about questions on Form D for the proposed Berks landfill site located in Spring Township, Berks County, Pennsylvania.

In response to Question 6 (Section 2, Part 1), there are no national wildlife refuges, fish hatcheries, or environmental centers operated by the Service with one mile of the site.

In response to Question 10 (Section 2, Part 1), except for occasional transient species, no federally listed or proposed threatened or endangered species under our jurisdiction are known to exist in the project impact area. Therefore, no Biological Assessment or further Section 7 consultation under the Endangered Species Act (87 Stat. 884, as amended; 16 U.S.C. 1531 et seq.) is required with the Fish and Wildlife Service. Should project plans change, or if additional information on listed or proposed species becomes available, this determination may be reconsidered. A compilation of federally listed endangered and threatened species in Pennsylvania is enclosed for your information.

Federal Candidate and State-listed Species

Candidate species are species under consideration by the Service for possible inclusion on the Federal List of Endangered and Threatened Wildlife and Plants. Because many of these species are known to have suffered population declines, the Service encourages federal agencies and other planners to consider candidate species when planning and implementing their projects.

The Pennsylvania Natural Diversity Inventory (PNDI) is maintained by the Pennsylvania Department of Environmental Resources, The Nature Conservancy and the Western Pennsylvania Conservancy. The Pennsylvania Fish and Wildlife Database is maintained by the Pennsylvania Game Commission. These databases contain the most up-to-date information about candidate and State-listed species in Pennsylvania. Requests for a PNDI review for the presence of candidate and State-listed species, as well as other natural resources of special concern, should be directed to:

Pennsylvania Department of Environmental Resources
Bureau of Forestry
Division of Forest Advisory Services
400 Market Street (MSSOB), 3rd Floor
P.O. Box 8552
Harrisburg, PA 17105-8552

Requests for a review of the Pennsylvania Fish and Wildlife Database should be directed to:

Pennsylvania Game Commission
Bureau of Land Management
Division of Wildlife Data Base
2001 Elmerton Avenue
Harrisburg, PA 17110-9797

Should the data search reveal the presence of any candidate species on the site, the Service should be contacted to ensure that these species are not adversely affected by project activities.

Requests for information regarding State-listed endangered or threatened species should be directed to the Pennsylvania Game Commission (birds and mammals), the Pennsylvania Fish and Boat Commission (fish, reptiles, and amphibians), and the Pennsylvania Department of Environmental Resources (plants).

Section One (Exclusionary Area Criteria) questions whether the project, including any incidental earthmoving or construction activities, is located in or within 300 feet of a wetland. According to the Service's National Wetlands Inventory map for the Sinking Springs quadrangle, wetlands occur within the boundaries of the proposed project. Certain work in wetlands in Pennsylvania requires permits from the Pennsylvania Department of Environmental Resources (DER) and/or the Army Corps of Engineers (Corps). We suggest you contact the DER and the Corps at the addresses listed below for information on permit requirements.

Pennsylvania Department of
Environmental Resources
Division of Rivers and
Wetlands Conservation
P.O. Box 1467
Harrisburg, PA 17120

District Engineer, Philadelphia District
U.S. Army Corps of Engineers
100 Penn Square East
Philadelphia, PA 19107-3390

By copy of this letter, we are informing these agencies of the proposed project. You should be aware that the Service generally recommends denial of permit applications for non-water dependent fills in wetlands.

This response relates only to endangered or threatened species under our jurisdiction and a preliminary review of wetlands, based on an office review of the proposed project's location. No field inspection of the project area has been conducted by this office. Consequently, this letter is not to be construed as addressing other Service concerns under the Fish and Wildlife Coordination Act or other legislation.

If we can be of further assistance, please contact Philip Edmunds of this office at 814-234-4090.

Sincerely,

Charles J. Kulp
Supervisor

Enclosure

FEDERALLY LISTED ENDANGERED SPECIES IN PENNSYLVANIA

COMMON NAME	SCIENTIFIC NAME	STATUS*	DISTRIBUTION
FISHES			
Shortnose sturgeon**	*Acipenser brevirostrum*	E	Delaware River and other Atlantic coastal waters
REPTILES & AMPHIBIANS			
None			
BIRDS			
Bald eagle	*Haliaeetus leucocephalus*	E	Entire state-recent nesting in Butler, Crawford, Dauphin, Lancaster, Pike, Tioga, York Counties
Peregrine falcon (American)	*Falco peregrinus anatum*	E	Entire state-reestablishment to former breeding range in progress
Peregrine falcon (Arctic)	*Falco peregrinus tundrius*	E	Entire state-migratory
Piping plover	*Charadrius melodus*	E	Presque Isle-no current nesting
MAMMALS			
Indiana bat	*Myotis sodalis*	E	Entire state
MOLLUSKS			
Clubshell mussel	*Pleurobema clava*	E	French Creek and Allegheny River watersheds; Clarion, Crawford, Erie, Forest, Mercer and Venango Counties
Dwarf wedge mussel	*Alasmidonta heterodon*	E	Delaware River drainage-possibly extirpated
Fanshell	*Cyprogenia stegaria*	E	Ohio River drainage-possibly extirpated
Northern riffleshell	*Epioblasma torulosa rangiana*	E	French Creek and Allegheny River watersheds; Crawford, Erie, Forest, Venango and Warren Counties
Orange pimpleback	*Plethobasus striatus*	E	Ohio River drainage-possibly extirpated
Pink mucket pearly mussel	*Lampsilis abrupta*	E	Ohio River drainage-possibly extirpated
Rough pigtoe	*Pleurobema plenum*	E	Ohio River drainage-possibly extirpated
PLANTS			
Northeastern bulrush	*Scirpus ancistrochaetus*	E	Current - Blair, Centre, Clinton, Cumberland, Dauphin, Franklin, Huntingdon, Lackawanna, Monroe, Union Counties. Historic - Lehigh, Northampton Counties.
Small whorled pogonia	*Isotria medeoloides*	E	Current - Centre and Venango Counties. Historic - Berks, Chester, Greene, Monroe, Montgomery, Philadelphia Counties.

* E = Endangered
** Shortnose sturgeon is under the jurisdiction of the National Marine Fisheries Service

The following is a partial list of species that no longer occur in Pennsylvania: gray wolf, eastern cougar, moose, bison, lynx, wolverine, passenger pigeon, Bachman's sparrow, common tern, lark sparrow, tiger salamander, mud sunfish, longjaw cisco, lake whitefish, butterfly mussel, American burying beetle, precious underwing moth, Karner blue butterfly, American barberry, small white lady's-slipper, eastern prairie fringed orchid, Virginia spiraea, etc, etc.

Golder Associates Inc.

305 Fellowship Road, Suite 200
Mt. Laurel, NJ USA 08054
Tel: (609) 273-1110
Fax (609) 273-0778

Golder Associates

October 27, 1993

Project No.: 913-6773

National Park Service
Mid-Atlantic Regional Office
U.S. Customs House
Second & Chestnut Streets
Philadelphia, PA 19106

Attn: Ms. Katherine Stevenson

RE: NATIONAL WILD & SCENIC RIVERS AND OTHER RESOURCES SEARCH

Dear Ms. Stevenson:

Golder Associates Inc. (Golder) requests information regarding National Wild and Scenic Rivers or other national resources within a five-mile radius of the Berks Landfill Site (Site). The Site is located along Wheatfield Road, Spring Township, Berks County, Pennsylvania, as shown on the enclosed Sinking Spring 7.5 minute USGS topographic quadrangle map.

If you should require additional information, please do not hesitate to contact us.

Very truly yours,

GOLDER ASSOCIATES INC.

Stephen A. Wheeler
Project Environmental Scientist

Randolph S. White, P.E.
Senior Project Manager

SAW/RSW:lrl

Enclosure

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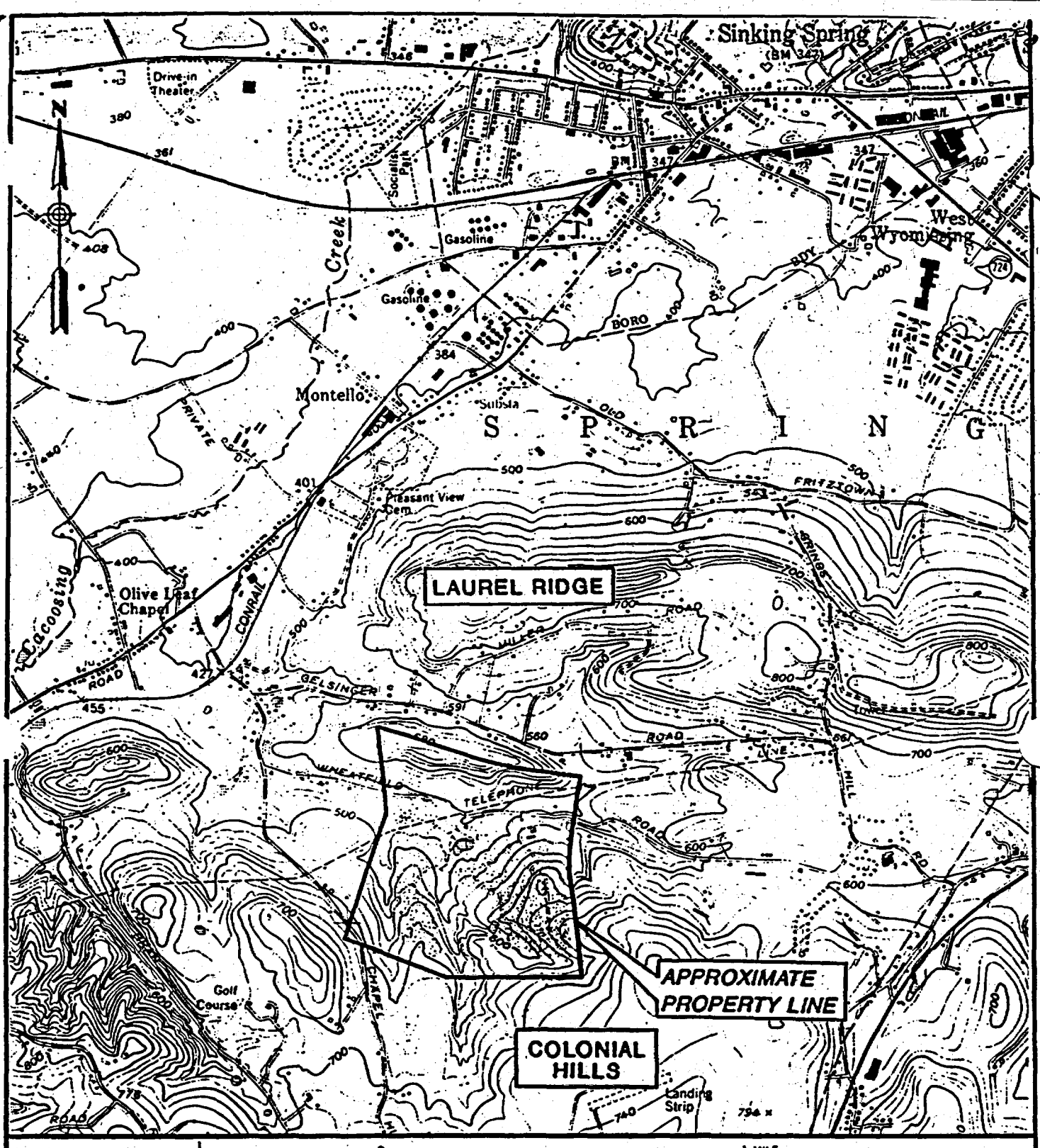

REFERENCE:
U.S.G.S. TOPOGRAPHIC MAP, SINKING SPRING QUADRANGLE, 7.5 SERIES, PHOTOREVISED 1987.

OCT 27 1993

JOB No: 913-6389	SCALE: AS SHOWN	SITE LOCATION MAP	
DRAWN: EAM	DATE: 05/10/91		
CHECKED:	DWG. No: PA21-075		
Golder Associates	BERKS LANDFILL	FIGURE	

AR302751

Commonwealth of Pennsylvania
R. Donald Dreese
Division of Rivers & Wetlands Conservation
Bureau of Water Resources Management
Department of Environmental Resources
3600 Vartan Way
Harrisburg, PA 17110-9333

Address:
ox 8761
Harrisburg, PA 17105-8761
(717) 541-7803

INSYLVANIA SCENIC RIVERS SYSTEM

System contains the following components with

		Accumulated Mileage
1.	Schuylkill River - 88.4 miles - Act No. 1978-33 November 26, 1978.	124.8
	Schuylkill River Extension - 31.2 miles - Act No. 1988-17, March 2, 1988.	Pastoral, Recreational, Modified
	DER Secretary Proclamation - 5.2 miles, July 1, 1988	Recreational
	Schuylkill River Greenway Association 960 Old Mill Road Wyomissing, PA 19610 (215) 372-3916	
2.	Stony Creek - 16 miles - Act No. 1980-18 March 24, 1980	140.8
	Pennsylvania Game Commission 2001 Elmerton Ave. Harrisburg, PA 17110-9797 (717) 787-4250	Wild
3.	Lehigh River - 63.95 miles - Act No. 1982-71 April 5, 1982	204.8
	Department of Environmental Resources Bureau of State Parks R.D. 1, Box 284 Drums, PA 18222 (717) 474-5382	Wild, Scenic
4.	French Creek - 42.75 miles - Act No. 1982-97 April 29, 1982	247.6
	Federation of Northern Chester County Communities R. D. 2 Pottstown, PA 19464 (215) 326-7835	Scenic
5.	Lick Run - 22.95 miles - Act No. 1982-324 December 17, 1982	270.6
	Pennsylvania Game Commission 2001 Elmerton Ave. Harrisburg, PA 17110-9797 (717) 787-4250	Wild, Scenic
	Department of Environmental Resources Bureau of Forestry P. O. Box 1647 Harrisburg, PA 17120 (717) 787-2703	

6.	Octoraro Creek - 36.5 miles - Act No. 1983-43 October 21, 1983 Octoraro Watershed Association P. O. Box 98 Kirkwood, PA 17536 (717) 529-2244	307.1 Scenic, Pastoral
7.	LeTort Spring Run - 7.6 miles - Act No. 1988-42 March 30, 1988 LeTort Regional Authority Community Center 415 Franklin Street Carlisle, PA 17013 (717) 737-5784, Ext. 25	314.7 Pastoral, Modified Recreational
8.	Bear Run - 4.3 miles - Act No. 1988-161 December 19, 1988 Western Pennsylvania Conservancy 316 Fourth Avenue Pittsburgh, PA 15222 (412) 288-2777	319.0 Scenic
9.	Tucquan Creek - 8.1 miles - Act No. 1988-161 December 19, 1988 Martic Hills Watershed Association 130 Creamery Road Pequea, PA 17565 (717) 284-4830	327.1 Wild, Scenic
10.	Lower Brandywine - 65.85 miles - Act No. 1989-7 June 16, 1989	392.9 Scenic, Pastoral

THE NATIONAL WILD & SCENIC RIVERS SYSTEM IN PENNSYLVANIA

The National Wild & Scenic Rivers System contains the following Pennsylvania components with the managing agency:

	Accumulated Mileage
1. Middle Delaware River - 37.0 miles - Milford to Delaware Water Gap - September 1, 1965. National Park Service Delaware Water Gap National Recreation Area Bushkill, PA 18324 (717) 588-2435	37.0
2. Upper Delaware River - 73.4 miles - Hancock, NY to Sparrowbush, NY - November 10, 1978 National Park Service P. O. Box C Narrowsburg, PA 12764 (717) 559-7527	110.4 Scenic & Rec.

Golder Associates Inc.

305 Fellowship Road, Suite 200
Mt. Laurel, NJ USA 08054
Tel: (609) 273-1110
Fax (609) 273-0778

Golder Associates

November 5, 1993

Project No.: 913-6773

Pennsylvania Game Commission
Bureau of Land Management
Division of Wildlife Data Base
2001 Elmerton Avenue
Harrisburg, PA 17110-9797

RE: PENNSYLVANIA FISH AND WILDLIFE DATABASE SEARCH REQUEST FOR THE BERKS LANDFILL SITE, BERKS COUNTY, PENNSYLVANIA

Gentlemen:

Golder Associates Inc. (Golder) requests a Pennsylvania Fish and Wildlife Database search for the Berks Landfill Site (Site), Spring Township, Berks County, Pennsylvania. Enclosed is a Site Location Map showing the Site location on the Sinking Spring, Pennsylvania, 7.5 minute USGS topographic quadrangle map.

Golder requests any information available regarding candidate and State-listed species within a one-mile radius of the Site.

If you should require additional information, please do not hesitate to contact us.

Very truly yours,

GOLDER ASSOCIATES INC.

Stephen A. Wheeler
Project Environmental Scientist

SAW:mtd

z:\projects\913-6773\search

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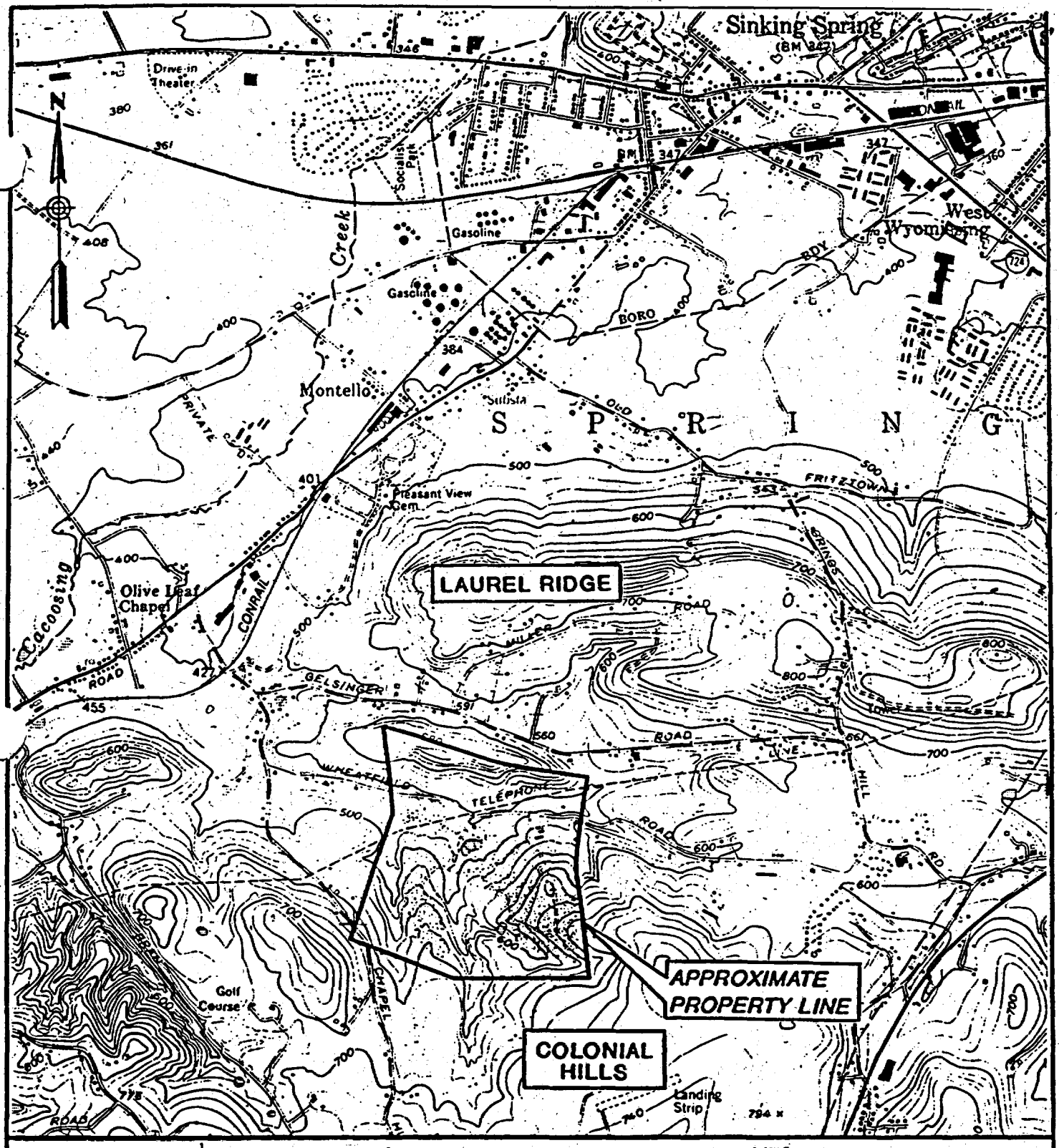

REFERENCE:
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JOB No.: 913-6389	SCALE: AS SHOWN	OCT 27 1993	
DRAWN: EAM	DATE: 05/10/91	**SITE LOCATION MAP**	
CHECKED:	DWG. No.: PA21-075		
Golder Associates	**BERKS LANDFILL**	FIGURE	

AR302756

COMMONWEALTH OF PENNSYLVANIA

PENNSYLVANIA GAME COMMISSION

2001 ELMERTON AVENUE
HARRISBURG, PA 17110-9797

ADMINISTRATIVE BUREAUS:

ADMINISTRATION	717-787-5670
AUTOMOTIVE AND PROCUREMENT DIVISION	717-787-6594
LICENSE DIVISION	717-787-2084
PERSONNEL DIVISION	717-787-7836
WILDLIFE MANAGEMENT	717-787-5529
INFORMATION & EDUCATION	717-787-6286
LAW ENFORCEMENT	717-787-5740
LAND MANAGEMENT	717-787-6818
REAL ESTATE DIVISION	717-787-6568
MANAGEMENT INFORMATION SYSTEMS	717-787-4076

November 15, 1993

Mr. Stephen A. Wheeler
Golder Associates
305 Fellowship Road
Suite 200
Mt. Laurel NJ 08054

Dear Mr. Wheeler:

In response to your request for information services, we are providing the enclosed printouts from the Pennsylvania Fish and Wildlife Data Base. This information was provided for species occurring at or near the Berks Landfill Site, Berks County, Pennsylvania.

We have no record of any endangered or threatened bird or mammal occurring at or near your project area. Additional comments concerning this data search are included on the following page.

The bill for this service is as follows:

Staff Time	9.00
Printing	1.20
Mailing Cost	.98
TOTAL	$11.18

Please make reimbursement to the Pennsylvania Game Commission, Division of Wildlife Data Base, 2001 Elmerton Avenue, Harrisburg, PA 17110-9797.

If you have any questions or require assistance interpreting this printout, please contact Ms. Bullock at (717) 787-1570.

Very truly yours,

G. J. Grabowicz

G.J. Grabowicz, Director
Bureau of Land Management

Pennsylvania Fish and Wildlife Data Base

The following species information was generated from the Pennsylvania Fish and Wildlife Data Base for your use in determining species likely to occur in your project area.

This information was provided upon request and should not be viewed as an official review or opinion of the Pennsylvania Game Commission. Species lists generated for this request should be viewed as likely or probable occurrence lists that might warrant further investigation. These lists are based on known, documented species occurrence within the counties, watershed, land use, and/or habitat types specified in your request.

Information pertaining to aquatic vertebrates and invertebrates contained in these lists is based solely on literature sources and expert opinion. Use of the aquatic species information contained in this report should be coordinated with the Pennsylvania Fish and Boat Commission for compliance with their standards and data sources.

This report does not contain information on plants. For plant species information in your project area, please contact the Bureau of Forestry, Pennsylvania Department of Environmental Resources.

The Pennsylvania Game Commission considers wetlands critical and unique wildlife habitat. If your proposed project is in the vicinity of wetlands, streams, rivers, lakes, or other bodies of water, please be aware that any impact to these areas requires a permit from the U.S. Army Corps of Engineers and the Bureau of Dams and Waterway Management, Pennsylvania Department of Environmental Resources.

Note: Bird species occurrence is based upon recorded sightings and may not imply nesting activity or year-round residence.

Contents

A. Project Area Endangered and Threatened Species List

B. Project Area Potential Special Concern Species List

C. Land Use/Cover Type Table for Potential Special Concern Species

D. MASTER LIST - Project Area Species List

Pennsylvania Fish and Wildlife Data Base
LIST A: Endangered and Threatened Species
** Berks Landfill Site **
Sinking Spring Quadrangle
15 NOV 1993

Note: The purpose of the following list is to identify endangered or threatened species which occur or are likely to occur on a designated site. We have record of the following species occurring in or near your project area. Their occurrence may depend on season, habitat type, and individual movements or migration patterns. Field surveys may be required to determine whether these species exist on your project area.

Species.ID Common Name..... Scientific Name.....

ZERO Records Listed

Pennsylvania Fish and Wildlife Data Base
LIST B: Potential Special Concern Species
(Includes Accidental and Migrant Species)
** Berks Landfill Site **
Berks County
15 NOV 1993

Note: The purpose of the following list is to identify endangered, threatened, and special concern species which may potentially occur within a designated area. This list includes species which may exist on your project area as well as migrating and accidental species. This information is based on records of these animals inhabiting specific habitat types within Berks County.

Status	No. of Species Listed
PA / Fed Endangered	2
PA Endangered	6
Fed Endangered	1
PA Threatened	3
Candidate Species	32
Total Species Listed:	44

AR302760

Pennsylvania Fish and Wildlife Data Base
LIST B: Potential Special Concern Species
(Includes Accidental and Migrant Species)
** Berks Landfill Site **
Berks County
15 NOV 1993

Common Name.....	Scientific Name.....	Status.....
Eagle, Bald	Haliaeetus leucocephalus	PA / Fed Endangered
Falcon, Peregrine	Falco peregrinus	PA / Fed Endangered
Turtle, Bog	Clemmys muhlenbergi	PA Endangered
Osprey	Pandion haliaetus	PA Endangered
Owl, Short-eared	Asio flammeus	PA Endangered
Rail, King	Rallus elegans	PA Endangered
Tern, Black	Chlidonias niger	PA Endangered
Shrew, Least	Cryptotis parva	PA Endangered
Tern, Least	Sterna antillarum	Fed Endangered
Bi rn, American	Botaurus lentiginosus	PA Threatened
Flycatcher, Yellow-bellied	Empidonax flaviventris	PA Threatened
Sandpiper, Upland	Bartramia longicauda	PA Threatened
Harrier, Northern	Circus cyaneus	Candidate - At Risk
Owl, Common Barn	Tyto alba	Candidate - At Risk
Snipe, Common	Gallinago gallinago	Candidate - At Risk
Sparrow, Henslow's	Ammodramus henslowii	Candidate - At Risk
Warbler, Prothonotary	Protonotaria citrea	Candidate - At Risk
Bobcat	Felis rufus	Candidate - At Risk
Hare, Snowshoe	Lepus americanus	Candidate - At Risk
Coot, American	Fulica americana	Candidate - Rare
Goshawk, Northern	Accipiter gentilis	Candidate - Rare
Grebe, Pied-billed	Podilymbus podiceps	Candidate - Rare
Grosbeak, Blue	Guiraca caerulea	Candidate - Rare
Tanager, Summer	Piranga rubra	Candidate - Rare
Teal, Green-winged	Anas crecca	Candidate - Rare
Thrush, Swainson's	Catharus ustulatus	Candidate - Rare
Wren, Marsh	Cistothorus palustris	Candidate - Rare
Bat, Silver-haired	Lasionycteris noctivagans	Candidate - Rare
Bobwhite, Northern	Colinus virginianus	Candidate - Undeterm
Crossbill, Red	Loxia curvirostra	Candidate - Undeterm

Pennsylvania Fish and Wildlife Data Base
LIST B: Potential Special Concern Species
(Includes Accidental and Migrant Species)
** Berks Landfill Site **
Berks County
15 NOV 1993

Common Name.....	Scientific Name.....	Status.....
Dickcissel	Spiza americana	Candidate - Undeterm
Duck, Ruddy	Oxyura jamaicensis	Candidate - Undeterm
Egret, Cattle	Bubulcus ibis ibis	Candidate - Undeterm
Gadwall	Anas strepera	Candidate - Undeterm
Nighthawk, Common	Chordeiles minor	Candidate - Undeterm
Owl, Long-eared	Otus asio	Candidate - Undeterm
Owl, Northern Saw-whet	Aegolius acadicus	Candidate - Undeterm
Pintail, Northern	Anas acuta	Candidate - Undeterm
Shoveler, Northern	Anas clypeata	Candidate - Undeterm
Whip-poor-will	Caprimulgus vociferus	Candidate - Undeterm
Wigeon, American	Anas americana	Candidate - Undeterm
Bat, Seminole	Lasiurus seminolus	Candidate - Undeterm
Bowfin	Amia calva	Candidate Species
Rattlesnake, Timber	Crotalus horridus	Candidate Species

PRIME FARMLAND

Survey Area- BERKS COUNTY, PENNSYLVANIA

Map Symbol	Prime Farmland Code	Soil Map Unit Name
AgB	1	ALLENWOOD GRAVELLY SILT LOAM, 2 TO 8 PERCENT SLOPES
AsB2	1	ATHOL SILT LOAM, 3 TO 8 PERCENT SLOPES, MODERATELY ERODED
AsC2	S	ATHOL SILT LOAM, 8 TO 15 PERCENT SLOPES, MODERATELY ERODED
AsC3	S	ATHOL SILT LOAM, 8 TO 15 PERCENT SLOPES, SEVERELY ERODED
Au	S	ATKINS SILT LOAM
BeB2	1	BEDINGTON SHALY SILT LOAM, 3 TO 8 PERCENT SLOPES, MODERATELY ERODED
BeC2	S	BEDINGTON SHALY SILT LOAM, 8 TO 15 PERCENT SLOPES, MODERATELY ERODED
BkA2	S	BERKS SHALY SILT LOAM, 0 TO 3 PERCENT SLOPES, MODERATELY ERODED
BkB2	S	BERKS SHALY SILT LOAM, 3 TO 8 PERCENT SLOPES, MODERATELY ERODED
BkC2	S	BERKS SHALY SILT LOAM, 8 TO 15 PERCENT SLOPES, MODERATELY ERODED
BlB	1	BIRDSBORO SILT LOAM, 2 TO 10 PERCENT SLOPES
BmB	1	BIRDSBORO-DUFFIELD SILT LOAMS, 3 TO 10 PERCENT SLOPES
Bo	S	BOWMANSVILLE SILT LOAM
BrB2	S	BRANDYWINE CHANNERY LOAM, 3 TO 8 PERCENT SLOPES, MODERATELY ERODED
BrC2	S	BRANDYWINE CHANNERY LOAM, 8 TO 15 PERCENT SLOPES, MODERATELY ERODED
BsB	1	BRECKNOCK CHANNERY SILT LOAM, 3 TO 8 PERCENT SLOPES
BsC2	S	BRECKNOCK CHANNERY SILT LOAM, 8 TO 15 PERCENT SLOPES, MODERATELY ERODED
BvB	1	BUCHANAN GRAVELLY LOAM, 3 TO 8 PERCENT SLOPES
ChB2	1	CHESTER CHANNERY SILT LOAM, 3 TO 8 PERCENT SLOPES, MODERATELY ERODED
ChC2	S	CHESTER CHANNERY SILT LOAM, 8 TO 15 PERCENT SLOPES, MODERATELY ERODED
ChC3	S	CHESTER CHANNERY SILT LOAM, 8 TO 15 PERCENT SLOPES, SEVERELY ERODED
CoA	1	COMLY SILT LOAM, 0 TO 3 PERCENT SLOPES
CoB2	1	COMLY SILT LOAM, 3 TO 8 PERCENT SLOPES, MODERATELY ERODED
DfA	1	DUFFIELD SILT LOAM, 0 TO 3 PERCENT SLOPES
DfB2	1	DUFFIELD SILT LOAM, 3 TO 8 PERCENT SLOPES, MODERATELY ERODED
DfC2	S	DUFFIELD SILT LOAM, 8 TO 15 PERCENT SLOPES, MODERATELY ERODED
DhC3	S	DUFFIELD AND HAGERSTOWN SOILS, 8 TO 15 PERCENT SLOPES, SEVERELY ERODED
EcB2	1	EDGEMONT CHANNERY LOAM, 3 TO 8 PERCENT SLOPES, MODERATELY ERODED
EcC2	S	EDGEMONT CHANNERY LOAM, 8 TO 15 PERCENT SLOPES, MODERATELY ERODED
FoA	1	FOGELSVILLE SILT LOAM, 0 TO 3 PERCENT SLOPES
FoB2	1	FOGELSVILLE SILT LOAM, 3 TO 8 PERCENT SLOPES, MODERATELY ERODED

PRIME FARMLAND

Survey Area- BERKS COUNTY, PENNSYLVANIA

Map Symbol	Prime Farmland Code	Soil Map Unit Name
FoC2	S	FOGELSVILLE SILT LOAM, 8 TO 15 PERCENT SLOPES, MODERATELY ERODED
GlA	1	GLENVILLE SILT LOAM, 0 TO 3 PERCENT SLOPES
GlB2	1	GLENVILLE SILT LOAM, 3 TO 8 PERCENT SLOPES, MODERATELY ERODED
HaB2	1	HAGERSTOWN SILT LOAM, 3 TO 8 PERCENT SLOPES, MODERATELY ERODED
HaC2	S	HAGERSTOWN SILT LOAM, 8 TO 15 PERCENT SLOPES, MODERATELY ERODED
KlB2	S	KLINESVILLE SHALY SILT LOAM, 3 TO 8 PERCENT SLOPES, MODERATELY ERODED
KlC2	S	KLINESVILLE SHALY SILT LOAM, 8 TO 15 PERCENT SLOPES, MODERATELY ERODED
LaB2	1	LAIDIG CHANNERY LOAM, 3 TO 8 PERCENT SLOPES, MODERATELY ERODED
LaC2	S	LAIDIG CHANNERY LOAM, 8 TO 15 PERCENT SLOPES, MODERATELY ERODED
LhA	1	LEHIGH SILT LOAM, 0 TO 3 PERCENT SLOPES
LhB2	1	LEHIGH SILT LOAM, 3 TO 8 PERCENT SLOPES, MODERATELY ERODED
LhC3	S	LEHIGH SILT LOAM, 8 TO 15 PERCENT SLOPES, SEVERELY ERODED
LrB2	1	LEWISBERRY GRAVELLY SANDY LOAM, 3 TO 8 PERCENT SLOPES, MODERATELY ERODED
LrC2	S	LEWISBERRY GRAVELLY SANDY LOAM, 8 TO 15 PERCENT SLOPES, MODERATELY ERODED
LrC3	S	LEWISBERRY GRAVELLY SANDY LOAM, 8 TO 15 PERCENT SLOPES, SEVERELY ERODED
Lt	1	LINDSIDE SILT LOAM
LzB2	S	LITZ SHALY SILT LOAM, 3 TO 8 PERCENT SLOPES, MODERATELY ERODED
LzC2	S	LITZ SHALY SILT LOAM, 8 TO 15 PERCENT SLOPES, MODERATELY
Ml	S	MELVIN SILT LOAM
MrA3	1	MURRILL GRAVELLY CLAY LOAM, 0 TO 3 PERCENT SLOPES, SEVERELY ERODED
MuA	1	MURRILL GRAVELLY LOAM, 0 TO 3 PERCENT SLOPES
MuB2	1	MURRILL GRAVELLY LOAM, 3 TO 8 PERCENT SLOPES, MODERATELY ERODED
MuC2	S	MURRILL GRAVELLY LOAM, 8 TO 15 PERCENT SLOPES, MODERATELY ERODED
NaC3	S	NESHAMINY SILTY CLAY LOAM, 8 TO 15 PERCENT SLOPES, SEVERELY ERODED
NeB2	1	NESHAMINY SILT LOAM, 3 TO 8 PERCENT SLOPES, MODERATELY ERODED
NeC2	S	NESHAMINY SILT LOAM, 8 TO 15 PERCENT SLOPES, MODERATELY ERODED
PeB2	1	PENN SHALY SOILS, 3 TO 8 PERCENT SLOPES, MODERATELY ERODED
PeC2	S	PENN SHALY SOILS, 8 TO 15 PERCENT SLOPES, MODERATELY ERODED
Ph	S	PHILO LOAM, COAL OVERWASH

PRIME FARMLAND

Survey Area- BERKS COUNTY, PENNSYLVANIA

Map Symbol	Prime Farmland Code	Soil Map Unit Name
Pl	1	PHILO SILT LOAM
Po	1	POPE SILT LOAM
RaB	1	RARITAN SILT LOAM, 0 TO 5 PERCENT SLOPES
ReA	1	READINGTON SILT LOAM, 0 TO 3 PERCENT SLOPES
ReB2	S	READINGTON SILT LOAM, 3 TO 8 PERCENT SLOPES, MODERATELY ERODED
RlA2	S	REAVILLE SHALY SILT LOAM, 0 TO 3 PERCENT SLOPES, MODERATELY ERODED
RlB2	S	REAVILLE SHALY SILT LOAM, 3 TO 8 PERCENT SLOPES, MODERATELY ERODED
Ro	1	ROWLAND SILT LOAM
RyA2	1	RYDER SILT LOAM, 0 TO 3 PERCENT SLOPES, MODERATELY ERODED
RyB2	1	RYDER SILT LOAM, 3 TO 8 PERCENT SLOPES, MODERATELY ERODED
RyC3	S	RYDER SILT LOAM, 8 TO 15 PERCENT SLOPES, SEVERELY ERODED
WaA2	1	WASHINGTON SILT LOAM, 0 TO 3 PERCENT SLOPES, MODERATELY ERODED
WaB2	1	WASHINGTON SILT LOAM, 3 TO 8 PERCENT SLOPES, MODERATELY ERODED
WaC2	S	WASHINGTON SILT LOAM, 8 TO 15 PERCENT SLOPES, MODERATELY ERODED
WcA	1	WATSON SILT LOAM, 0 TO 3 PERCENT SLOPES
WeB2	S	WEIKERT-BERKS SHALY SILT LOAMS, 3 TO 8 PERCENT SLOPES, MODERATELY ERODED
WeC2	S	WEIKERT-BERKS SHALY SILT LOAMS, 8 TO 15 PERCENT SLOPES, MODERATELY ERODED
WsA	1	WILTSHIRE SILT LOAM, 0 TO 3 PERCENT SLOPES
WsB2	1	WILTSHIRE SILT LOAM, 3 TO 8 PERCENT SLOPES, MODERATELY ERODED

Prime Farmland Code	Description
1	All areas are Prime Farmland
S	Map Units that are Statewide Important Farmland

APPENDIX P

LABORATORY ANALYTICAL RESULTS

GROUNDWATER

APPENDIX P

SUMMARY OF DATA PRESENTATION

For each phase of sampling, (Phase 1A, 1B [including residential well sampling], and 1C [soil]), analytical data was received from the laboratory on diskette and in hard copy format. The hard copy of the data was validated, and a validation narrative was written. A database was created using the data provided by the laboratory on diskette. Laboratory qualifiers in the database were revised according to validator's qualifiers (defined in Table P-1, attached to this Appendix). All validated analytical data (sample results [including re-analyses and field duplicates] and validated qualifiers) were tabulated in a format patterned after the data summary forms in the USEPA Region III data validation guidelines. A complete copy of the data package and the validation narrative for each phase were submitted to USEPA during the course of the Remedial Investigation (RI).

This appendix of the RI Report contains the Berks Landfill RI database which includes all validated analytical data for each phase of sampling but does not include USEPA split sampling results. This appendix includes primary and re-analysis results for samples which may have required more than one analysis due to quality control criteria or the need for a dilution. The data are arranged by sampling medium (groundwater, residential well, soil, leachate, surface water, and sediment). Within each medium group, the results are arranged by 1) analytical fraction--volatile; semivolatile; pesticide and PCB; total inorganics (metals and cyanide); dissolved inorganics (metals); and wet chemistry and 2) by sampling phase.

The individual databases created for each phase were copied into one large database. From this large database, a subset of analytical results consisting of constituents considered to be present in each medium subgroup (e.g., background groundwater; see Appendix Q of the RI report, "Explanation and Notes," Table Q-A for list of subgroups) was defined and tabulated. This subset database was created to provide a clearer

presentation of constituents detected in the various media studied. As explained in Appendix Q, "Explanation and Notes," within a medium subgroup, a constituent was considered to be present if at least one detected concentration (data qualified with an A, J, K, or L) for that constituent was reported. Data for each constituent determined to be present in a subgroup has been tabulated for each sample point associated with the subgroup. The tables are arranged by analytical fraction. Tables of constituents considered to be present are included in the RI report as Appendix Q.

Calculations then were performed on the data in Appendix Q to determine frequency of detection, range of detected concentrations, and mean concentration for the constituents considered to be present. Tables summarizing the calculations are included in Section 4.0 of the RI report. These data summary tables in Section 4.0 (Tables 4-2 through 4-22) are based upon data presented in Appendix Q. The tables summarize frequency of detection, range of concentration, and mean concentration of each detected constituent in each media subgroup. The summaries were prepared in accordance with procedures detailed in Appendix R of this report. Anomalies in data and the manner in which anomalies were handled are also discussed in Appendix R.

After calculations were performed on validated analytical data for total and dissolved inorganics in background groundwater and on-site groundwater in Appendix Q of the RI report, the inorganic results were compared using the Tolerance Interval Approach ("Statistical Analysis of Groundwater Monitoring Data at RCRA Facilities, USEPA, 1989), and the Wilcoxin Two Sample Test (Sokal and Rohlf, 1969). The comparisons are included in this report as Appendix T of the RI report.

Chemistry figures displaying detected results for all sampling phases by medium and analytical group (e.g., "SHALLOW GROUNDWATER MONITORING WELL AND RESIDENTIAL WELL SAMPLE ORGANIC ANALYSES RESULTS") were produced and are included in Section 4.0 of the RI report. Due to the large number of analytical values reported for each sample point, Golder chose a "representative summary data set" for

presentation on summary figures (Figures 4-1 to 4-10) for those sample points which had re-analyses or dilutions. A conservative approach was used to select the "representative summary data set." In reviewing the sample and re-analysis data, the following steps were used in selecting this "representative summary data set":

1. If the analyte was detected in both analyses and qualified (A, J, K, or L), the higher result was chosen regardless of the qualifier.

2. If one result was deemed usable (A, J, K, or L) and the other result was deemed unusable (R) or tentatively identified (N), the usable result was chosen.

3. If the analyte was only detected in one analysis, the detected result was chosen over the non-detected result.

In situations where a field duplicate was collected, both the primary and the field duplicate sample results are presented on the figure (Figures 4-1 through 4-10). Split sampling results are not presented on the figures but have been included in Attachment 2. Exceptions to this approach are noted in Appendix R for anomalous situations.

Figures 4-1 through 4-5 present the "representative summary data set" for Phase 1A and 1B groundwater and residential sampling points and include field duplicate sampling results. Figures 4-6 and 4-7 present the "representative summary data set" for Phase 1A, 1B, and 1C soil and include field duplicate sampling results. Figure 4-8 contains the "representative summary data set" for Phase 1A and 1B leachate and includes field duplicate sampling results. Figures 4-9 and 4-10 present the "representative summary data set" for Phase 1A and 1B surface water and sediments and include field duplicate sampling results.

Discussion of chemistry data in the RI text is based upon the data presented on the figures except where specifically noted otherwise because the figures provide spatial representations of the chemicals detected in environmental media. Data for samples having field duplicates are discussed in terms of average values calculated from the primary and field duplicate results. In some instances, two results are presented in the text for a particular well because these are the results from the Phase 1A and Phase 1B sampling events.

VOLATILE ORGANIC COMPOUNDS

Phase 1A
Phase 1B

SUMMARY OF CLP ORGANICS ANALYSES - PHASE 1A
BERKS LANDFILL REMEDIAL INVESTIGATION
BERKS COUNTY, PENNSYLVANIA

Matrix: Groundwater Well

Volatile Organics

		Sample Point GR18D/1A Date Sampled: 11/13/92 Dilution Factor: 1.0 Percent Moisture: NA %			Sample Point GW-16/1A Date Sampled: 09/04/92 Dilution Factor: 1.0 Percent Moisture: NA %			Sample Point GW-C5/1A Date Sampled: 09/03/92 Dilution Factor: 1.0 Percent Moisture: NA %			Sample Point GW18S/1A Date Sampled: 09/03/92 Dilution Factor: 16.7 Percent Moisture: NA %		
CRQL	Parameter	SQL	Result	Qual	SQL	Result	Qual	SQL	Result	Qual	SQL	Result	Qual
10	Acetone	10	10	U	10	32	B	10	10	U	170	170	U
10	Benzene	10	10	U	10	13	A	10	1	J	170	170	U
10	Bromodichloromethane	10	10	U	10	10	U	10	10	U	170	170	U
10	Bromoform	10	10	U	10	10	U	10	10	U	170	170	U
10	Bromomethane	10	10	U	10	10	U	10	10	U	170	170	U
10	2-Butanone	10	10	U	10	39	A	10	10	U	170	170	U
10	Carbon Disulfide	10	10	U	10	10	U	10	10	U	170	170	U
10	Carbon Tetrachloride	10	10	U	10	10	U	10	10	U	170	170	U
10	Chlorobenzene	10	10	U	10	4	J	10	10	U	170	170	U
10	Chloroethane	10	10	U	10	10	U	10	10	U	170	170	U
10	Chloroform	10	10	U	10	10	U	10	10	U	170	170	U
10	Chloromethane	10	10	U	10	10	U	10	10	U	170	170	U
10	Dibromochloromethane	10	10	U	10	10	U	10	10	U	170	170	U
10	1,1-Dichloroethane	10	10	U	10	10	U	10	6	J	170	170	U
10	1,2-Dichloroethane	10	10	U	10	10	U	10	10	U	170	170	U
10	1,1-Dichloroethene	10	10	U	10	10	U	10	10	U	170	170	U
10	Total 1,2-Dichloroethene	10	10	U	10	10	U	10	18	A	170	2200	A
10	1,2-Dichloropropene	10	10	U	10	10	U	10	10	U	170	170	U
10	cis-1,3-Dichloropropene	10	10	U	10	10	U	10	10	U	170	170	U
10	trans-1,3-Dichloropropene	10	10	U	10	10	U	10	10	U	170	170	U
10	Ethylbenzene	10	10	U	10	23	A	10	10	U	170	170	U
10	2-Hexanone	10	10	U	10	10	U	10	10	U	170	170	U
10	4-Methyl-2-Pentanone	10	10	U	10	10	U	10	10	U	170	170	U
10	Methylene Chloride	10	10	U	10	10	U	10	4	B	170	160	B
10	Styrene	10	10	U	10	10	U	10	10	U	170	170	U
10	1,1,2,2-Tetrachloroethane	10	10	U	10	10	U	10	10	U	170	170	U
10	Tetrachloroethene	10	10-	U	10	10	U	10	10	U	170	170	U
10	Toluene	10	10	U	10	10	U	10	10	U	170	170	U
10	1,1,1-Trichloroethane	10	10	U	10	10	U	10	10	U	170	170	U
10	1,1,2-Trichloroethane	10	10	U	10	10	U	10	10	U	170	170	U
10	Trichloroethene	10	10	U	10	10	U	10	2	J	170	3100	A
10	Vinyl Chloride	10	10	U	10	10	U	10	16	A	170	180	A
10	Total Xylenes	10	10	U	10	110	A	10	10	U	170	170	U

Notes:
All units are ug/l
Sample Quantitation Limit (SQL) is CRQL multiplied by the dilution factor and adjusted for percent moisture as appropriate.
The Qual column indicates the qualifier applied to the result following data validation (see below).

Qualifiers:
A - Acceptable (Quantitative) Data
B - Present in associated blanks (Semiquantitative Data)
J - Estimated (Semiquantitative) Data
K - Biased High (Semiquantitative) Data
L - Biased Low (Semiquantitative) Data
UJ- Not Detected/Estimated Data
U - Not Detected/Quantitative Data
UL- Not Detected/Biased Low
N - Tentative Identification
R - Unusable Data
Q - Not Applicable

SUMMARY OF CLP ORGANICS ANALYSES - PHASE 1A
BERKS LANDFILL REMEDIAL INVESTIGATION
BERKS COUNTY, PENNSYLVANIA

Matrix: Groundwater Well

Volatile Organics

		Sample Point GW18S/FD Date Sampled: 09/03/92 Dilution Factor: 20.0 Percent Moisture: NA %			Sample Point GWC3D/1A Date Sampled: 09/04/92 Dilution Factor: 20.0 Percent Moisture: NA %			Sample Point GWC3S/1A Date Sampled: 09/03/92 Dilution Factor: 1.0 Percent Moisture: NA %			Sample Point GWG01/1A Date Sampled: 09/02/92 Dilution Factor: 1.0 Percent Moisture: NA %		
CRQL	Parameter	SQL	Result	Qual	SQL	Result	Qual	SQL	Result	Qual	SQL	Result	Qual
10	Acetone	200	200	U	200	200	U	10	10	U	10	10	U
10	Benzene	200	200	U	200	200	U	10	2	J	10	10	U
10	Bromodichloromethane	200	200	U	200	200	U	10	10	U	10	10	U
10	Bromoform	200	200	U	200	200	U	10	10	U	10	10	U
10	Bromomethane	200	200	U	200	200	U	10	10	U	10	10	U
10	2-Butanone	200	200	U	200	200	U	10	10	U	10	10	U
10	Carbon Disulfide	200	200	U	200	200	U	10	10	U	10	10	U
10	Carbon Tetrachloride	200	200	U	200	200	U	10	10	U	10	10	U
10	Chlorobenzene	200	200	U	200	200	U	10	6	J	10	2	J
10	Chloroethane	200	200	U	200	200	U	10	10	U	10	10	U
10	Chloroform	200	200	U	200	200	U	10	10	U	10	10	U
10	Chloromethane	200	200	U	200	200	U	10	10	U	10	10	U
10	Dibromochloromethane	200	200	U	200	200	U	10	10	U	10	10	U
10	1,1-Dichloroethane	200	200	U	200	200	U	10	6	J	10	10	U
10	1,2-Dichloroethane	200	200	U	200	200	U	10	10	U	10	10	U
10	1,1-Dichloroethene	200	200	U	200	200	U	10	10	U	10	10	U
10	Total 1,2-Dichloroethene	200	2100	A	200	3700	A	10	62	A	10	10	U
10	1,2-Dichloropropane	200	200	U	200	200	U	10	10	U	10	10	U
10	cis-1,3-Dichloropropene	200	200	U	200	200	U	10	10	U	10	10	U
10	trans-1,3-Dichloropropene	200	200	U	200	200	U	10	10	U	10	10	U
10	Ethylbenzene	200	200	U	200	200	U	10	10	U	10	10	U
10	2-Hexanone	200	200	U	200	200	U	10	10	U	10	10	U
10	4-Methyl-2-Pentanone	200	200	U	200	200	U	10	10	U	10	10	U
10	Methylene Chloride	200	130	B	200	200	U	10	11	B	10	3	B
10	Styrene	200	200	U	200	200	U	10	10	U	10	10	U
10	1,1,2,2-Tetrachloroethane	200	200	U	200	200	U	10	10	U	10	10	U
10	Tetrachloroethene	200	200	U	200	200	U	10	10	U	10	10	U
10	Toluene	200	200	U	200	200	U	10	10	U	10	10	U
10	1,1,1-Trichloroethane	200	200	U	200	200	U	10	10	U	10	10	U
10	1,1,2-Trichloroethane	200	200	U	200	200	U	10	10	U	10	10	U
10	Trichloroethene	200	3100	A	200	2000	A	10	4	J	10	10	U
10	Vinyl Chloride	200	170	J	200	370	A	10	13	A	10	10	U
10	Total Xylenes	200	200	U	200	200	U	10	10	U	10	10	U

Notes:
All units are ug/l
Sample Quantitation Limit (SQL) is CRQL multiplied by the dilution factor and adjusted for percent moisture as appropriate.
The Qual column indicates the qualifier applied to the result following data validation (see below).

Qualifiers:
A - Acceptable (Quantitative) Data
J - Estimated (Semiquantitative) Data
B - Present in associated blanks (Semiquantitative Data)
K - Biased High (Semiquantitative) Data
L - Biased Low (Semiquantitative) Data
UJ- Not Detected/Estimated Data
U - Not Detected/Quantitative Data
UL- Not Detected/Biased Low
N - Tentative Identification
R - Unusable Data
Q - Not Applicable

SUMMARY OF CLP ORGANICS ANALYSES - PHASE 1A
BERKS LANDFILL REMEDIAL INVESTIGATION
BERKS COUNTY, PENNSYLVANIA

Matrix: Groundwater Well

Volatile Organics

		Sample Point GWG02/1A Date Sampled: 09/02/92 Dilution Factor: 1.0 Percent Moisture: NA %			Sample Point GWG03/1A Date Sampled: 09/02/92 Dilution Factor: 1.0 Percent Moisture: NA %			Sample Point Date Sampled: Dilution Factor: Percent Moisture: %			Sample Point Date Sampled: Dilution Factor: Percent Moisture: %		
CRQL	Parameter	SQL	Result	Qual	SQL	Result	Qual	SQL	Result	Qual	SQL	Result	Qual
10	Acetone	10	7	B	10	3	B						
10	Benzene	10	10	U	10	10	U						
10	Bromodichloromethane	10	10	U	10	10	U						
10	Bromoform	10	10	U	10	10	U						
10	Bromomethane	10	14	J	10	10	U						
10	2-Butanone	10	10	U	10	10	U						
10	Carbon Disulfide	10	10	U	10	10	U						
10	Carbon Tetrachloride	10	10	U	10	10	U						
10	Chlorobenzene	10	10	U	10	10	U						
10	Chloroethane	10	10	U	10	10	U						
10	Chloroform	10	10	U	10	10	U						
10	Chloromethane	10	20	J	10	10	U						
10	Dibromochloromethane	10	10	U	10	10	U						
10	1,1-Dichloroethane	10	10	U	10	10	U						
10	1,2-Dichloroethane	10	10	U	10	10	U						
10	1,1-Dichloroethene	10	10	U	10	10	U						
10	Total 1,2-Dichloroethene	10	10	U	10	10	U						
10	1,2-Dichloropropane	10	10	U	10	10	U						
10	cis-1,3-Dichloropropene	10	10	U	10	10	U						
10	trans-1,3-Dichloropropene	10	10	U	10	10	U						
10	Ethylbenzene	10	10	U	10	10	U						
10	2-Hexanone	10	10	U	10	10	U						
10	4-Methyl-2-Pentanone	10	10	U	10	10	U						
10	Methylene Chloride	10	22	B	10	2	B						
10	Styrene	10	10	U	10	10	U						
10	1,1,2,2-Tetrachloroethane	10	10	U	10	10	U						
10	Tetrachloroethene	10	10	U	10	10	U						
10	Toluene	10	10	U	10	10	U						
10	1,1,1-Trichloroethane	10	10	U	10	10	U						
10	1,1,2-Trichloroethane	10	10	U	10	10	U						
10	Trichloroethene	10	10	U	10	10	U						
10	Vinyl Chloride	10	10	U	10	10	U						
10	Total Xylenes	10	10	U	10	10	U						

Notes:
All units are ug/l
Sample Quantitation Limit (SQL) is CRQL multiplied by the dilution factor and adjusted for percent moisture as appropriate.
The Qual column indicates the qualifier applied to the result following data validation (see below).

Qualifiers:
A - Acceptable (Quantitative) Data
J - Estimated (Semiquantitative) Data
B - Present in associated blanks (Semiquantitative Data)
K - Biased High (Semiquantitative) Data
L - Biased Low (Semiquantitative) Data
UJ- Not Detected/Estimated Data
U - Not Detected/Quantitative Data
UL- Not Detected/Biased Low
N - Tentative Identification
R - Unusable Data
Q - Not Applicable

SUMMARY OF CLP ORGANICS ANALYSES - PHASE 1B
BERKS LANDFILL REMEDIAL INVESTIGATION
BERKS COUNTY, PENNSYLVANIA

Matrix: Groundwater Well

Volatile Organics

CRQL	Parameter	Sample Point GWC01/1B Date Sampled: 07/08/93 Dilution Factor: 1.0 Percent Moisture: NA %			Sample Point GWC02/1B Date Sampled: 07/08/93 Dilution Factor: 1.0 Percent Moisture: NA %			Sample Point GWC03D/1B Date Sampled: 07/06/93 Dilution Factor: 6.7 Percent Moisture: NA %			Sample Point GWC03D/RE Date Sampled: 07/06/93 Dilution Factor: 10.0 Percent Moisture: NA %		
		SQL	Result	Qual	SQL	Result	Qual	SQL	Result	Qual	SQL	Result	Qual
10	Acetone	10	10	UJ	10	10	UJ	67	67	U	100	100	UJ
10	Benzene	10	10	U	10	10	U	67	67	U	100	100	U
10	Bromodichloromethane	10	10	U	10	10	U	67	67	U	100	100	U
10	Bromoform	10	10	U	10	10	U	67	67	U	100	100	U
10	Bromomethane	10	10	U	10	10	U	67	67	U	100	100	U
10	2-Butanone	10	10	U	10	10	U	67	7	J	100	100	U
10	Carbon Disulfide	10	10	U	10	10	U	67	67	U	100	100	U
10	Carbon Tetrachloride	10	10	U	10	10	U	67	67	U	100	100	U
10	Chlorobenzene	10	10	U	10	10	U	67	67	U	100	100	U
10	Chloroethane	10	10	U	10	10	U	67	67	U	100	100	U
10	Chloroform	10	10	U	10	10	U	67	67	U	100	100	U
10	Chloromethane	10	10	U	10	10	U	67	67	U	100	100	U
10	Dibromochloromethane	10	10	U	10	10	U	67	67	U	100	100	U
10	1,1-Dichloroethane	10	10	U	10	10	U	67	7	J	100	100	U
10	1,2-Dichloroethane	10	10	U	10	10	U	67	67	U	100	100	U
10	1,1-Dichloroethene	10	10	U	10	10	U	67	15	J	100	13	J
10	Total 1,2-Dichloroethene	10	10	U	10	10	U	67	1600	J	100	1800	A
10	1,2-Dichloropropane	10	10	U	10	10	U	67	67	U	100	100	U
10	cis-1,3-Dichloropropene	10	10	U	10	10	U	67	67	U	100	100	U
10	trans-1,3-Dichloropropene	10	10	U	10	10	U	67	67	U	100	100	U
10	Ethylbenzene	10	10	U	10	10	U	67	67	U	100	100	U
10	2-Hexanone	10	10	UJ	10	10	UJ	67	67	UJ	100	100	UJ
10	4-Methyl-2-Pentanone	10	10	U	10	10	U	67	67	U	100	100	U
10	Methylene Chloride	10	17	B	10	3	B	67	37	B	100	200	B
10	Styrene	10	10	U	10	10	U	67	67	U	100	100	U
10	1,1,2,2-Tetrachloroethane	10	10	U	10	10	U	67	67	U	100	100	U
10	Tetrachloroethene	10	10	U	10	10	U	67	67	U	100	100	U
10	Toluene	10	10	U	10	10	U	67	67	U	100	100	U
10	1,1,1-Trichloroethane	10	10	U	10	10	U	67	67	U	100	100	U
10	1,1,2-Trichloroethane	10	10	U	10	10	U	67	67	U	100	100	U
10	Trichloroethene	10	10	U	10	10	U	67	640	A	100	650	A
10	Vinyl Chloride	10	10	U	10	10	U	67	100	A	100	150	A
10	Total Xylenes	10	10	U	10	10	U	67	67	U	100	100	U

Notes:
All units are ug/l
Sample Quantitation Limit (SQL) is CRQL multiplied by the dilution factor and adjusted for percent moisture as appropriate.
The Qual column indicates the qualifier applied to the result following data validation (see below).

Qualifiers:
A - Acceptable (Quantitative) Data
J - Estimated (Semiquantitative) Data
B - Present in associated blanks (Semiquantitative Data)
K - Biased High (Semiquantitative) Data
L - Biased Low (Semiquantitative) Data
UJ- Not Detected/Estimated Data
U - Not Detected/Quantitative Data
UL- Not Detected/Biased Low
N - Tentative Identification
R - Unusable Data
Q - Not Applicable

SUMMARY OF CLP ORGANICS ANALYSES - PHASE 1B
BERKS LANDFILL REMEDIAL INVESTIGATION
BERKS COUNTY, PENNSYLVANIA

Matrix: Groundwater Well

Volatile Organics

		Sample Point GWC03D/FD Date Sampled: 07/06/93 Dilution Factor: 1.0 Percent Moisture: NA %			Sample Point GWC03D/FR Date Sampled: 07/06/93 Dilution Factor: 10.0 Percent Moisture: NA %			Sample Point GWC03S/1B Date Sampled: 07/02/93 Dilution Factor: 1.0 Percent Moisture: NA %			Sample Point GWC04D/1B Date Sampled: 06/30/93 Dilution Factor: 1.0 Percent Moisture: NA %		
CRQL	Parameter	SQL	Result	Qual	SQL	Result	Qual	SQL	Result	Qual	SQL	Result	Qual
10	Acetone	10	3	J	100	100	UJ	10	10	U	10	10	U
10	Benzene	10	10	U	100	100	U	10	2	J	10	10	U
10	Bromodichloromethane	10	10	U	100	100	U	10	10	U	10	10	U
10	Bromoform	10	10	U	100	100	U	10	10	U	10	10	U
10	Bromomethane	10	10	U	100	100	U	10	10	U	10	10	U
10	2-Butanone	10	10	U	100	100	U	10	10	U	10	10	U
10	Carbon Disulfide	10	10	U	100	100	U	10	10	U	10	10	U
10	Carbon Tetrachloride	10	10	U	100	100	U	10	10	U	10	10	U
10	Chlorobenzene	10	10	U	100	100	U	10	5	J	10	10	U
10	Chloroethane	10	6	J	100	100	U	10	4	J	10	10	U
10	Chloroform	10	10	U	100	100	U	10	10	U	10	10	U
10	Chloromethane	10	10	U	100	100	U	10	10	U	10	10	U
10	Dibromochloromethane	10	10	U	100	100	U	10	10	U	10	10	U
10	1,1-Dichloroethane	10	7	J	100	100	U	10	8	J	10	10	U
10	1,2-Dichloroethane	10	10	U	100	100	U	10	10	U	10	10	U
10	1,1-Dichloroethene	10	11	J	100	14	J	10	10	U	10	10	U
10	Total 1,2-Dichloroethene	10	1400	J	100	1800	A	10	53	A	10	10	U
10	1,2-Dichloropropane	10	10	U	100	100	U	10	10	U	10	10	U
10	cis-1,3-Dichloropropene	10	10	U	100	100	U	10	10	U	10	10	U
10	trans-1,3-Dichloropropene	10	10	U	100	100	U	10	10	U	10	10	U
10	Ethylbenzene	10	10	U	100	100	U	10	10	U	10	10	U
10	2-Hexanone	10	10	UJ	100	100	UJ	10	10	UJ	10	10	UJ
10	4-Methyl-2-Pentanone	10	10	U	100	100	U	10	10	U	10	10	U
10	Methylene Chloride	10	11	B	100	110	B	10	3	B	10	5	B
10	Styrene	10	10	U	100	100	U	10	10	U	10	10	U
10	1,1,2,2-Tetrachloroethane	10	10	U	100	100	U	10	10	U	10	10	U
10	Tetrachloroethene	10	1	J	100	100	U	10	10	U	10	10	U
10	Toluene	10	10	U	100	100	U	10	10	U	10	10	U
10	1,1,1-Trichloroethane	10	6	J	100	100	U	10	10	U	10	10	U
10	1,1,2-Trichloroethane	10	1	J	100	100	U	10	10	U	10	10	U
10	Trichloroethene	10	660	J	100	660	A	10	2	J	10	10	U
10	Vinyl Chloride	10	95	A	100	180	A	10	10	A	10	10	U
10	Total Xylenes	10	10	U	100	100	U	10	10	U	10	10	U

Notes:
All units are ug/l
Sample Quantitation Limit (SQL) is CRQL multiplied by the dilution factor and adjusted for percent moisture as appropriate.
The Qual column indicates the qualifier applied to the result following data validation (see below).

Qualifiers:
A - Acceptable (Quantitative) Data
J - Estimated (Semiquantitative) Data
B - Present in associated blanks (Semiquantitative Data)
K - Biased High (Semiquantitative) Data
L - Biased Low (Semiquantitative) Data
UJ- Not Detected/Estimated Data
U - Not Detected/Quantitative Data
UL- Not Detected/Biased Low
N - Tentative Identification
R - Unusable Data
Q - Not Applicable

SUMMARY OF CLP ORGANICS ANALYSES - PHASE 1B
BERKS LANDFILL REMEDIAL INVESTIGATION
BERKS COUNTY, PENNSYLVANIA

Matrix: Groundwater Well

Volatile Organics

CRQL	Parameter	Sample Point GWC04S/1B Date Sampled: 06/30/93 Dilution Factor: 1.0 Percent Moisture: NA %			Sample Point GWC06D/1B Date Sampled: 07/12/93 Dilution Factor: 1.0 Percent Moisture: NA %			Sample Point GWC06S/1B Date Sampled: 07/12/93 Dilution Factor: 1.0 Percent Moisture: NA %			Sample Point GWC07D/1B Date Sampled: 07/09/93 Dilution Factor: 1.0 Percent Moisture: NA %		
		SQL	Result	Qual	SQL	Result	Qual	SQL	Result	Qual	SQL	Result	Qual
10	Acetone	10	10	U	10	10	U	10	10	U	10	10	U
10	Benzene	10	10	U	10	10	U	10	10	U	10	10	U
10	Bromodichloromethane	10	10	U	10	10	U	10	10	U	10	10	U
10	Bromoform	10	10	U	10	10	U	10	10	U	10	10	U
10	Bromomethane	10	10	U	10	10	U	10	10	U	10	10	U
10	2-Butanone	10	10	U	10	10	U	10	10	U	10	10	U
10	Carbon Disulfide	10	10	U	10	10	U	10	10	U	10	10	U
10	Carbon Tetrachloride	10	10	U	10	10	U	10	10	U	10	10	U
10	Chlorobenzene	10	10	U	10	10	U	10	10	U	10	10	U
10	Chloroethane	10	10	U	10	10	U	10	10	U	10	10	UJ
10	Chloroform	10	10	U	10	10	U	10	10	U	10	10	U
10	Chloromethane	10	10	U	10	10	U	10	10	U	10	10	UJ
10	Dibromochloromethane	10	10	U	10	10	U	10	10	U	10	10	U
10	1,1-Dichloroethane	10	1	J	10	10	U	10	10	U	10	10	U
10	1,2-Dichloroethane	10	10	U	10	10	U	10	10	U	10	10	U
10	1,1-Dichloroethene	10	10	U	10	10	U	10	10	U	10	10	U
10	Total 1,2-Dichloroethene	10	8	J	10	10	U	10	10	U	10	10	U
10	1,2-Dichloropropane	10	10	U	10	10	U	10	10	U	10	10	U
10	cis-1,3-Dichloropropene	10	10	U	10	10	U	10	10	U	10	10	U
10	trans-1,3-Dichloropropene	10	10	U	10	10	U	10	10	U	10	10	U
10	Ethylbenzene	10	10	U	10	10	U	10	10	U	10	10	U
10	2-Hexanone	10	10	UJ	10	10	UJ	10	10	U	10	10	U
10	4-Methyl-2-Pentanone	10	10	U	10	10	U	10	10	U	10	10	UJ
10	Methylene Chloride	10	4	B	10	85	B	10	9	B	10	70	B
10	Styrene	10	10	U	10	10	U	10	10	U	10	10	U
10	1,1,2,2-Tetrachloroethane	10	10	U	10	10	U	10	10	U	10	10	U
10	Tetrachloroethene	10	10	U	10	10	U	10	10	U	10	10	U
10	Toluene	10	10	U	10	10	U	10	10	U	10	10	U
10	1,1,1-Trichloroethane	10	10	U	10	10	U	10	10	U	10	10	U
10	1,1,2-Trichloroethane	10	10	U	10	10	U	10	10	U	10	10	U
10	Trichloroethene	10	2	J	10	10	U	10	10	U	10	10	U
10	Vinyl Chloride	10	2	J	10	10	U	10	10	U	10	10	U
10	Total Xylenes	10	10	U	10	10	U	10	10	U	10	10	U

Notes:
All units are ug/l
Sample Quantitation Limit (SQL) is CRQL multiplied by the dilution factor and adjusted for percent moisture as appropriate.
The Qual column indicates the qualifier applied to the result following data validation (see below).

Qualifiers:
A - Acceptable (Quantitative) Data
J - Estimated (Semiquantitative) Data
B - Present in associated blanks (Semiquantitative Data)
K - Biased High (Semiquantitative) Data
L - Biased Low (Semiquantitetive) Data
UJ- Not Detected/Estimated Data
U - Not Detected/Quantitative Data
UL- Not Detected/Biased Low
N - Tentative Identification
R - Unusable Data
Q - Not Applicable

SUMMARY OF CLP ORG..CS ANALYSES - PHASE 1B
BERKS LANDFILL REMEDIAL INVESTIGATION
BERKS COUNTY, PENNSYLVANIA

Matrix: Groundwater Well

Volatile Organics

		Sample Point GWC07S/1B Date Sampled: 07/09/93 Dilution Factor: 1.0 Percent Moisture: NA %			Sample Point GWD02/1B Date Sampled: 07/06/93 Dilution Factor: 1.0 Percent Moisture: NA %			Sample Point GWG01/1B Date Sampled: 07/02/93 Dilution Factor: 1.0 Percent Moisture: NA %			Sample Point GWG02/1B Date Sampled: 07/02/93 Dilution Factor: 1.0 Percent Moisture: NA %		
CRQL	Parameter	SQL	Result	Qual	SQL	Result	Qual	SQL	Result	Qual	SQL	Result	Qual
10	Acetone	10	10	UJ	10	10	U	10	6	J	10	10	U
10	Benzene	10	10	U	10	2	J	10	10	U	10	10	U
10	Bromodichloromethane	10	10	U	10	10	U	10	10	U	10	10	U
10	Bromoform	10	10	U	10	10	U	10	10	U	10	10	U
10	Bromomethane	10	10	U	10	10	U	10	10	U	10	10	U
10	2-Butanone	10	10	U	10	10	U	10	10	U	10	10	U
10	Carbon Disulfide	10	10	U	10	10	U	10	10	U	10	10	U
10	Carbon Tetrachloride	10	10	U	10	10	U	10	10	U	10	10	U
10	Chlorobenzene	10	7	J	10	1	J	10	10	U	10	10	U
10	Chloroethane	10	10	U	10	10	U	10	10	U	10	10	U
10	Chloroform	10	10	U	10	10	U	10	10	U	10	10	U
10	Chloromethane	10	10	U	10	10	U	10	6	J	10	10	U
10	Dibromochloromethane	10	10	U	10	10	U	10	10	U	10	10	U
10	1,1-Dichloroethane	10	10	U	10	10	U	10	10	U	10	10	U
10	1,2-Dichloroethane	10	10	U	10	10	U	10	10	U	10	10	U
10	1,1-Dichloroethene	10	10	U	10	10	U	10	10	U	10	10	U
10	Total 1,2-Dichloroethene	10	10	U	10	3	J	10	10	U	10	10	U
10	1,2-Dichloropropene	10	1	J	10	10	U	10	10	U	10	10	U
10	cis-1,3-Dichloropropene	10	10	U	10	10	U	10	10	U	10	10	U
10	trans-1,3-Dichloropropene	10	10	U	10	10	U	10	10	U	10	10	U
10	Ethylbenzene	10	10	U	10	10	U	10	10	U	10	10	U
10	2-Hexanone	10	10	UJ	10	10	UJ	10	10	UJ	10	10	UJ
10	4-Methyl-2-Pentanone	10	10	U	10	10	U	10	10	U	10	10	U
10	Methylene Chloride	10	4	B	10	3	B	10	7	B	10	3	B
10	Styrene	10	10	U	10	10	U	10	10	U	10	10	U
10	1,1,2,2-Tetrachloroethane	10	10	U	10	10	U	10	10	U	10	10	U
10	Tetrachloroethene	10	10	U	10	10	U	10	10	U	10	10	U
10	Toluene	10	10	U	10	10	U	10	10	U	10	10	U
10	1,1,1-Trichloroethane	10	10	U	10	10	U	10	10	U	10	10	U
10	1,1,2-Trichloroethane	10	10	U	10	10	U	10	10	U	10	10	U
10	Trichloroethene	10	10	U	10	10	U	10	10	U	10	10	U
10	Vinyl Chloride	10	10	U	10	10	U	10	10	U	10	10	U
10	Total Xylenes	10	10	U	10	10	U	10	10	U	10	10	U

Notes:
All units are ug/l
Sample Quantitation Limit (SQL) is CRQL multiplied by the dilution factor and adjusted for percent moisture as appropriate.
The Qual column indicates the qualifier applied to the result following data validation (see below).

Qualifiers:.....
A - Acceptable (Quantitative) Data
J - Estimated (Semiquantitative) Data
B - Present in associated blanks (Semiquantitative Data)
K - Biased High (Semiquantitative) Data
L - Biased Low (Semiquantitative) Data
UJ- Not Detected/Estimated Data
U - Not Detected/Quantitative Data
UL- Not Detected/Biased Low
N - Tentative Identification
R - Unusable Data
Q - Not Applicable

SUMMARY OF CLP ORG.. ..S ANALYSES - PHASE 1B
BERKS LANDFILL REMEDIAL INVESTIGATION
BERKS COUNTY, PENNSYLVANIA

Matrix: Groundwater Well

Volatile Organics

		Sample Point GWG03/1B Date Sampled: 07/01/93 Dilution Factor: 1.0 Percent Moisture: NA %			Sample Point GWG04/1B Date Sampled: 07/09/93 Dilution Factor: 1.0 Percent Moisture: NA %			Sample Point GWG05/1B Date Sampled: 07/01/93 Dilution Factor: 1.0 Percent Moisture: NA %			Sample Point GWG06/1B Date Sampled: 07/01/93 Dilution Factor: 1.0 Percent Moisture: NA %		
CRQL	Parameter	SQL	Result	Qual	SQL	Result	Qual	SQL	Result	Qual	SQL	Result	Qual
10	Acetone	10	10	U	10	10	U	10	10	U	10	10	U
10	Benzene	10	10	U	10	10	U	10	10	U	10	10	U
10	Bromodichloromethane	10	10	U	10	10	U	10	10	U	10	10	U
10	Bromoform	10	10	U	10	10	U	10	10	U	10	10	U
10	Bromomethane	10	10	U	10	10	U	10	10	U	10	10	U
10	2-Butanone	10	10	U	10	10	U	10	10	U	10	10	U
10	Carbon Disulfide	10	10	U	10	10	U	10	10	U	10	10	U
10	Carbon Tetrachloride	10	10	U	10	10	U	10	10	U	10	10	U
10	Chlorobenzene	10	10	U	10	2	J	10	2	J	10	10	U
10	Chloroethane	10	10	U	10	10	UJ	10	4	J	10	10	U
10	Chloroform	10	10	U	10	10	U	10	10	U	10	10	U
10	Chloromethane	10	10	U	10	10	UJ	10	10	U	10	10	U
10	Dibromochloromethane	10	10	U	10	10	U	10	10	U	10	10	U
10	1,1-Dichloroethane	10	10	U	10	10	U	10	8	J	10	10	U
10	1,2-Dichloroethane	10	10	U	10	10	U	10	2	J	10	10	U
10	1,1-Dichloroethene	10	10	U	10	10	U	10	1	J	10	10	U
10	Total 1,2-Dichloroethene	10	10	U	10	10	U	10	26	A	10	10	U
10	1,2-Dichloropropane	10	10	U	10	10	U	10	10	U	10	10	U
10	cis-1,3-Dichloropropene	10	10	U	10	10	U	10	10	U	10	10	U
10	trans-1,3-Dichloropropene	10	10	U	10	10	U	10	10	U	10	10	U
10	Ethylbenzene	10	10	U	10	10	U	10	10	U	10	10	U
10	2-Hexanone	10	10	UJ	10	10	U	10	10	UJ	10	10	UJ
10	4-Methyl-2-Pentanone	10	10	U	10	10	UJ	10	10	U	10	10	U
10	Methylene Chloride	10	2	B	10	18	B	10	2	B	10	9	B
10	Styrene	10	10	U	10	10	U	10	10	U	10	10	U
10	1,1,2,2-Tetrachloroethane	10	10	U	10	10	U	10	10	U	10	10	U
10	Tetrachloroethene	10	10	U	10	10	U	10	10	U	10	10	U
10	Toluene	10	10	U	10	10	U	10	10	U	10	1	B
10	1,1,1-Trichloroethane	10	10	U	10	10	U	10	10	U	10	10	U
10	1,1,2-Trichloroethane	10	10	U	10	10	U	10	10	U	10	10	U
10	Trichloroethene	10	10	U	10	10	U	10	5	J	10	10	U
10	Vinyl Chloride	10	10	U	10	10	U	10	50	A	10	10	U
10	Total Xylenes	10	10	U	10	10	U	10	10	U	10	10	U

Notes:
All units are ug/l
Sample Quantitation Limit (SQL) is CRQL multiplied by the dilution factor and adjusted for percent moisture as appropriate.
The Qual column indicates the qualifier applied to the result following data validation (see below).

Qualifiers:
A - Acceptable (Quantitative) Data
J - Estimated (Semiquantitative) Data
B - Present in associated blanks (Semiquantitative Data)
K - Biased High (Semiquantitative) Data
L - Biased Low (Semiquantitative) Data
UJ- Not Detected/Estimated Data
U - Not Detected/Quantitative Data
UL- Not Detected/Biased Low
N - Tentative Identification
R - Unusable Data
Q - Not Applicable

SUMMARY OF CLP ORG[illegible]S ANALYSES - PHASE 1B
BERKS LANDFILL REMEDIAL INVESTIGATION
BERKS COUNTY, PENNSYLVANIA

Matrix: Groundwater Well

Volatile Organics

		Sample Point GWG07/1B Date Sampled: 07/01/93 Dilution Factor: 1.0 Percent Moisture: NA %			Sample Point GWG08/1B Date Sampled: 07/01/93 Dilution Factor: 1.0 Percent Moisture: NA %			Sample Point GWG10/1B Date Sampled: 07/01/93 Dilution Factor: 1.0 Percent Moisture: NA %			Sample Point GWG11/1B Date Sampled: 07/09/93 Dilution Factor: 1.0 Percent Moisture: NA %		
CRQL	Parameter	SQL	Result	Qual	SQL	Result	Qual	SQL	Result	Qual	SQL	Result	Qual
10	Acetone	10	10	U	10	10	U	10	10	U	10	10	U
10	Benzene	10	10	U	10	10	U	10	10	U	10	2	J
10	Bromodichloromethane	10	10	U	10	10	U	10	10	U	10	10	U
10	Bromoform	10	10	U	10	10	U	10	10	U	10	10	U
10	Bromomethane	10	10	U	10	10	U	10	10	U	10	10	U
10	2-Butanone	10	10	U	10	10	U	10	10	U	10	10	U
10	Carbon Disulfide	10	10	U	10	10	U	10	10	U	10	10	U
10	Carbon Tetrachloride	10	10	U	10	10	U	10	10	U	10	10	U
10	Chlorobenzene	10	10	U	10	10	U	10	10	U	10	22	A
10	Chloroethane	10	10	U	10	10	U	10	10	U	10	10	UJ
10	Chloroform	10	10	U	10	10	U	10	10	U	10	10	U
10	Chloromethane	10	10	U	10	10	U	10	10	U	10	10	UJ
10	Dibromochloromethane	10	10	U	10	10	U	10	10	U	10	10	U
10	1,1-Dichloroethane	10	10	U	10	10	U	10	10	U	10	10	U
10	1,2-Dichloroethane	10	10	U	10	10	U	10	10	U	10	10	U
10	1,1-Dichloroethene	10	10	U	10	10	U	10	10	U	10	10	U
10	Total 1,2-Dichloroethene	10	10	U	10	10	U	10	10	U	10	10	U
10	1,2-Dichloropropane	10	10	U	10	10	U	10	10	U	10	1	J
10	cis-1,3-Dichloropropene	10	10	U	10	10	U	10	10	U	10	10	U
10	trans-1,3-Dichloropropene	10	10	U	10	10	U	10	10	U	10	10	U
10	Ethylbenzene	10	10	U	10	10	U	10	10	U	10	10	U
10	2-Hexanone	10	10	UJ	10	10	UJ	10	10	UJ	10	10	U
10	4-Methyl-2-Pentanone	10	10	U	10	10	U	10	10	U	10	10	UJ
10	Methylene Chloride	10	2	B	10	1	B	10	7	B	10	21	B
10	Styrene	10	10	U	10	10	U	10	10	U	10	10	U
10	1,1,2,2-Tetrachloroethane	10	10	U	10	10	U	10	10	U	10	10	U
10	Tetrachloroethene	10	10	U	10	10	U	10	10	U	10	10	U
10	Toluene	10	10	U	10	10	U	10	10	U	10	10	U
10	1,1,1-Trichloroethane	10	10	U	10	10	U	10	10	U	10	10	U
10	1,1,2-Trichloroethane	10	10	U	10	10	U	10	10	U	10	10	U
10	Trichloroethene	10	10	U	10	10	U	10	10	U	10	10	U
10	Vinyl Chloride	10	10	U	10	10	U	10	10	U	10	10	U
10	Total Xylenes	10	10	U	10	10	U	10	10	U	10	10	U

Notes:
All units are ug/l
Sample Quantitation Limit (SQL) is CRQL multiplied by the dilution factor and adjusted for percent moisture as appropriate.
The Qual column indicates the qualifier applied to the result following data validation (see below).

Qualifiers:.....
A - Acceptable (Quantitative) Data
J - Estimated (Semiquantitative) Data
B - Present in associated blanks (Semiquantitative Data)
K - Biased High (Semiquantitative) Data
L - Biased Low (Semiquantitative) Data
UJ- Not Detected/Estimated Data
U - Not Detected/Quantitative Data
UL- Not Detected/Biased Low
N - Tentative Identification
R - Unusable Data
Q - Not Applicable

SUMMARY OF CLP ORGANICS ANALYSES - PHASE 1B
BERKS LANDFILL REMEDIAL INVESTIGATION
BERKS COUNTY, PENNSYLVANIA

Matrix: Groundwater Well

Volatile Organics

		Sample Point GWG11/FD Date Sampled: 07/09/93 Dilution Factor: 1.0 Percent Moisture: NA %			Sample Point GWG12/1B Date Sampled: 07/01/93 Dilution Factor: 1.0 Percent Moisture: NA %			Sample Point GWG12/FD Date Sampled: 07/01/93 Dilution Factor: 1.0 Percent Moisture: NA %			Sample Point GWG13/1B Date Sampled: 07/12/93 Dilution Factor: 1.0 Percent Moisture: NA %		
CRQL	Parameter	SQL	Result	Qual	SQL	Result	Qual	SQL	Result	Qual	SQL	Result	Qual
10	Acetone	10	10	U	10	10	U	10	10	U	10	10	U
10	Benzene	10	2	J	10	1	J	10	1	J	10	10	U
10	Bromodichloromethane	10	10	U	10	10	U	10	10	U	10	10	U
10	Bromoform	10	10	U	10	10	U	10	10	U	10	10	U
10	Bromomethane	10	10	U	10	10	U	10	10	U	10	10	U
10	2-Butanone	10	10	U	10	10	U	10	10	U	10	10	U
10	Carbon Disulfide	10	10	U	10	3	J	10	10	U	10	10	U
10	Carbon Tetrachloride	10	10	U	10	10	U	10	10	U	10	10	U
10	Chlorobenzene	10	22	A	10	3	J	10	3	J	10	10	U
10	Chloroethane	10	10	UJ	10	6	J	10	6	J	10	10	U
10	Chloroform	10	10	U	10	10	U	10	10	U	10	10	U
10	Chloromethane	10	10	UJ	10	10	U	10	10	U	10	10	U
10	Dibromochloromethane	10	10	U	10	10	U	10	10	U	10	10	U
10	1,1-Dichloroethane	10	10	U	10	5	J	10	5	J	10	3	J
10	1,2-Dichloroethane	10	10	U	10	1	J	10	1	J	10	10	U
10	1,1-Dichloroethene	10	10	U	10	10	U	10	10	U	10	10	U
10	Total 1,2-Dichloroethene	10	10	U	10	2	J	10	2	J	10	11	A
10	1,2-Dichloropropane	10	2	J	10	10	U	10	10	U	10	10	U
10	cis-1,3-Dichloropropene	10	10	U	10	10	U	10	10	U	10	10	U
10	trans-1,3-Dichloropropene	10	10	U	10	10	U	10	10	U	10	10	U
10	Ethylbenzene	10	10	U	10	10	U	10	10	U	10	10	U
10	2-Hexanone	10	10	U	10	10	UJ	10	10	UJ	10	10	UJ
10	4-Methyl-2-Pentanone	10	10	UJ	10	10	U	10	10	U	10	10	U
10	Methylene Chloride	10	12	B	10	3	B	10	1	B	10	14	B
10	Styrene	10	10	U	10	10	U	10	10	U	10	10	U
10	1,1,2,2-Tetrachloroethane	10	10	U	10	10	U	10	10	U	10	10	U
10	Tetrachloroethene	10	10	U	10	10	U	10	10	U	10	10	U
10	Toluene	10	10	U	10	10	U	10	10	U	10	10	U
10	1,1,1-Trichloroethane	10	10	U	10	10	U	10	10	U	10	10	U
10	1,1,2-Trichloroethane	10	10	U	10	10	U	10	10	U	10	10	U
10	Trichloroethene	10	10	U	10	10	U	10	10	U	10	10	U
10	Vinyl Chloride	10	10	U	10	10	U	10	10	U	10	15	A
10	Total Xylenes	10	10	U	10	10	U	10	10	U	10	10	U

Notes:
All units are ug/l
Sample Quantitation Limit (SQL) is CRQL multiplied by the dilution factor and adjusted for percent moisture as appropriate.
The Qual column indicates the qualifier applied to the result following data validation (see below).

Qualifiers:
A - Acceptable (Quantitative) Data
J - Estimated (Semiquantitative) Data
B - Present in associated blanks (Semiquantitative Data)
K - Biased High (Semiquantitative) Data
L - Biased Low (Semiquantitative) Data
UJ- Not Detected/Estimated Data
U - Not Detected/Quantitative Data
UL- Not Detected/Biased Low
N - Tentative Identification
R - Unusable Data
Q - Not Applicable

SUMMARY OF CLP ORGANICS ANALYSES - PHASE 1B
BERKS LANDFILL REMEDIAL INVESTIGATION
BERKS COUNTY, PENNSYLVANIA

Matrix: Groundwater Well

Volatile Organics

		Sample Point GWM03/1B Date Sampled: 07/07/93 Dilution Factor: 1.0 Percent Moisture: NA %			Sample Point GWM06/1B Date Sampled: 07/08/93 Dilution Factor: 1.0 Percent Moisture: NA %			Sample Point GWM11/1B Date Sampled: 06/30/93 Dilution Factor: 1.0 Percent Moisture: NA %			Sample Point GWM14D/1B Date Sampled: 07/09/93 Dilution Factor: 1.0 Percent Moisture: NA %		
CROL	Parameter	SQL	Result	Qual	SQL	Result	Qual	SQL	Result	Qual	SQL	Result	Qual
10	Acetone	10	19	J	10	10	UJ	10	10	U	10	10	UJ
10	Benzene	10	4	J	10	10	U	10	10	U	10	10	U
10	Bromodichloromethane	10	10	U	10	10	U	10	10	U	10	10	U
10	Bromoform	10	10	U	10	10	U	10	10	U	10	10	U
10	Bromomethane	10	10	U	10	10	U	10	10	U	10	10	U
10	2-Butanone	10	10	U	10	10	U	10	10	U	10	10	U
10	Carbon Disulfide	10	10	U	10	10	U	10	10	U	10	10	U
10	Carbon Tetrachloride	10	10	U	10	10	U	10	10	U	10	10	U
10	Chlorobenzene	10	4	J	10	10	U	10	10	U	10	3	J
10	Chloroethane	10	27	A	10	10	U	10	10	U	10	10	U
10	Chloroform	10	10	U	10	10	U	10	10	U	10	10	U
10	Chloromethane	10	10	U	10	10	U	10	10	U	10	10	U
10	Dibromochloromethane	10	10	U	10	10	U	10	10	U	10	10	U
10	1,1-Dichloroethene	10	9	J	10	10	U	10	1	J	10	10	U
10	1,2-Dichloroethane	10	10	U	10	10	U	10	10	U	10	10	U
10	1,1-Dichloroethene	10	10	U	10	10	U	10	10	U	10	10	U
10	Total 1,2-Dichloroethene	10	53	A	10	10	U	10	56	A	10	10	U
10	1,2-Dichloropropene	10	10	U	10	10	U	10	10	U	10	10	U
10	cis-1,3-Dichloropropene	10	10	U	10	10	U	10	10	U	10	10	U
10	trans-1,3-Dichloropropene	10	10	U	10	10	U	10	10	U	10	10	U
10	Ethylbenzene	10	10	U	10	10	U	10	10	U	10	10	U
10	2-Hexanone	10	10	UJ	10	10	UJ	10	10	UJ	10	10	UJ
10	4-Methyl-2-Pentanone	10	10	U	10	10	U	10	10	U	10	10	U
10	Methylene Chloride	10	4	B	10	7	B	10	3	B	10	5	B
10	Styrene	10	10	U	10	10	U	10	10	U	10	10	U
10	1,1,2,2-Tetrachloroethane	10	10	U	10	10	U	10	10	U	10	10	U
10	Tetrachloroethene	10	10	U	10	10	U	10	10	U	10	10	U
10	Toluene	10	10	U	10	10	U	10	10	U	10	10	U
10	1,1,1-Trichloroethane	10	10	U	10	10	U	10	10	U	10	10	U
10	1,1,2-Trichloroethane	10	10	U	10	10	U	10	10	U	10	10	U
10	Trichloroethene	10	61	A	10	10	U	10	72	A	10	10	U
10	Vinyl Chloride	10	9	J	10	10	U	10	2	J	10	10	U
10	Total Xylenes	10	10	U	10	10	U	10	10	U	10	10	U

Notes:
All units are ug/l
Sample Quantitation Limit (SQL) is CROL multiplied by the dilution factor and adjusted for percent moisture as appropriate.
The Qual column indicates the qualifier applied to the result following data validation (see below).

Qualifiers:
A - Acceptable (Quantitative) Data
J - Estimated (Semiquantitative) Data
B - Present in associated blanks (Semiquantitative Data)
K - Biased High (Semiquantitative) Data
L - Biased Low (Semiquantitative) Data
UJ- Not Detected/Estimated Data
U - Not Detected/Quantitative Data
UL- Not Detected/Biased Low
N - Tentative Identification
R - Unusable Data
Q - Not Applicable

SUMMARY OF CLP ORGANICS ANALYSES - PHASE 1B
BERKS LANDFILL REMEDIAL INVESTIGATION
BERKS COUNTY, PENNSYLVANIA

Matrix: Groundwater Well

Volatile Organics

		Sample Point GWM14S/1B Date Sampled: 07/09/93 Dilution Factor: 1.0 Percent Moisture: NA %			Sample Point GWM15D/1B Date Sampled: 07/08/93 Dilution Factor: 1.0 Percent Moisture: NA %			Sample Point GWM15S/1B Date Sampled: 07/02/93 Dilution Factor: 1.0 Percent Moisture: NA %			Sample Point GWM16/1B Date Sampled: 07/08/93 Dilution Factor: 1.0 Percent Moisture: NA %		
CRQL	Parameter	SQL	Result	Qual	SQL	Result	Qual	SQL	Result	Qual	SQL	Result	Qual
10	Acetone	10	10	UJ	10	10	UJ	10	10	U	10	10	UJ
10	Benzene	10	5	J	10	10	U	10	10	U	10	11	A
10	Bromodichloromethane	10	10	U	10	10	U	10	10	U	10	10	U
10	Bromoform	10	10	U	10	10	U	10	10	U	10	10	U
10	Bromomethane	10	10	U	10	10	U	10	10	U	10	10	U
10	2-Butanone	10	10	U	10	10	U	10	10	U	10	10	U
10	Carbon Disulfide	10	10	U	10	10	U	10	10	U	10	10	U
10	Carbon Tetrachloride	10	10	U	10	10	U	10	10	U	10	10	U
10	Chlorobenzene	10	22	A	10	10	U	10	10	U	10	3	J
10	Chloroethane	10	10	U	10	10	U	10	10	U	10	10	U
10	Chloroform	10	10	U	10	10	U	10	10	U	10	10	U
10	Chloromethane	10	10	U	10	10	U	10	10	U	10	10	U
10	Dibromochloromethane	10	10	U	10	10	U	10	10	U	10	10	U
10	1,1-Dichloroethane	10	10	U	10	10	U	10	10	U	10	10	U
10	1,2-Dichloroethane	10	10	U	10	10	U	10	10	U	10	2	J
10	1,1-Dichloroethene	10	10	U	10	10	U	10	10	U	10	10	U
10	Total 1,2-Dichloroethene	10	10	U	10	10	U	10	10	U	10	10	U
10	1,2-Dichloropropane	10	10	U	10	10	U	10	10	U	10	10	U
10	cis-1,3-Dichloropropene	10	10	U	10	10	U	10	10	U	10	10	U
10	trans-1,3-Dichloropropene	10	10	U	10	10	U	10	10	U	10	10	U
10	Ethylbenzene	10	10	U	10	10	U	10	10	U	10	5	J
10	2-Hexanone	10	10	UJ	10	10	UJ	10	10	UJ	10	10	UJ
10	4-Methyl-2-Pentanone	10	10	U	10	10	U	10	10	U	10	10	U
10	Methylene Chloride	10	4	B	10	5	B	10	8	B	10	4	B
10	Styrene	10	10	U	10	10	U	10	10	U	10	10	U
10	1,1,2,2-Tetrachloroethane	10	10	U	10	10	U	10	10	U	10	10	U
10	Tetrachloroethene	10	10	U	10	10	U	10	10	U	10	10	U
10	Toluene	10	10	U	10	10	U	10	10	U	10	10	U
10	1,1,1-Trichloroethane	10	10	U	10	10	U	10	10	U	10	10	U
10	1,1,2-Trichloroethane	10	10	U	10	10	U	10	10	U	10	10	U
10	Trichloroethene	10	10	U	10	10	U	10	10	U	10	10	U
10	Vinyl Chloride	10	10	U	10	10	U	10	10	U	10	10	U
10	Total Xylenes	10	10	U	10	10	U	10	10	U	10	94	A

Notes:
All units are ug/l
Sample Quantitation Limit (SQL) is CRQL multiplied by the dilution factor and adjusted for percent moisture as appropriate.
The Qual column indicates the qualifier applied to the result following data validation (see below).

Qualifiers:
A - Acceptable (Quantitative) Data
J - Estimated (Semiquantitative) Data
B - Present in associated blanks (Semiquantitative Data)
K - Biased High (Semiquantitative) Data
L - Biased Low (Semiquantitative) Data
UJ- Not Detected/Estimated Data
U - Not Detected/Quantitative Data
UL- Not Detected/Biased Low
N - Tentative Identification
R - Unusable Data
Q - Not Applicable

SUMMARY OF CLP ORGANICS ANALYSES - PHASE 1B
BERKS LANDFILL REMEDIAL INVESTIGATION
BERKS COUNTY, PENNSYLVANIA

Matrix: Groundwater Well

Volatile Organics

		Sample Point GWM17/1B Date Sampled: 07/08/93 Dilution Factor: 1.0 Percent Moisture: NA %			Sample Point GWM19S/1B Date Sampled: 06/30/93 Dilution Factor: 1.0 Percent Moisture: NA %			Sample Point GWR19D/1B Date Sampled: 07/06/93 Dilution Factor: 1.0 Percent Moisture: NA %			Sample Point Date Sampled: Dilution Factor: Percent Moisture: %		
CRQL	Parameter	SQL	Result	Qual	SQL	Result	Qual	SQL	Result	Qual	SQL	Result	Qual
10	Acetone	10	10	UJ	10	10	U	10	10	U			
10	Benzene	10	10	U	10	10	U	10	10	U			
10	Bromodichloromethane	10	10	U	10	10	U	10	10	U			
10	Bromoform	10	10	U	10	10	U	10	10	U			
10	Bromomethane	10	10	U	10	10	U	10	10	U			
10	2-Butanone	10	10	U	10	10	U	10	10	U			
10	Carbon Disulfide	10	10	U	10	10	U	10	10	U			
10	Carbon Tetrachloride	10	10	U	10	10	U	10	10	U			
10	Chlorobenzene	10	10	U	10	10	U	10	10	U			
10	Chloroethane	10	10	U	10	10	U	10	10	U			
10	Chloroform	10	10	U	10	10	U	10	10	U			
10	Chloromethane	10	10	U	10	10	U	10	10	U			
10	Dibromochloromethane	10	10	U	10	10	U	10	10	U			
10	1,1-Dichloroethane	10	10	U	10	3	J	10	10	U			
10	1,2-Dichloroethane	10	10	U	10	10	U	10	10	U			
10	1,1-Dichloroethene	10	10	U	10	10	U	10	10	U			
10	Total 1,2-Dichloroethene	10	10	U	10	10	U	10	1	J			
10	1,2-Dichloropropene	10	10	U	10	10	U	10	10	U			
10	cis-1,3-Dichloropropene	10	10	U	10	10	U	10	10	U			
10	trans-1,3-Dichloropropene	10	10	U	10	10	U	10	10	U			
10	Ethylbenzene	10	10	U	10	10	U	10	10	U			
10	2-Hexanone	10	10	UJ	10	10	UJ	10	10	UJ			
10	4-Methyl-2-Pentanone	10	10	U	10	10	U	10	10	U			
10	Methylene Chloride	10	5	B	10	2	B	10	3	B			
10	Styrene	10	10	U	10	10	U	10	10	U			
10	1,1,2,2-Tetrachloroethane	10	10	U	10	10	U	10	10	U			
10	Tetrachloroethene	10	10	U	10	10	U	10	10	U			
10	Toluene	10	10	U	10	10	U	10	10	U			
10	1,1,1-Trichloroethane	10	10	U	10	10	U	10	10	U			
10	1,1,2-Trichloroethane	10	10	U	10	10	U	10	10	U			
10	Trichloroethene	10	10	U	10	10	U	10	10	U			
10	Vinyl Chloride	10	10	U	10	10	U	10	10	U			
10	Total Xylenes	10	10	U	10	10	U	10	10	U			

Notes:
All units are ug/l
Sample Quantitation Limit (SQL) is CRQL multiplied by the dilution factor and adjusted for percent moisture as appropriate.
The Qual column indicates the qualifier applied to the result following data validation (see below).

Qualifiers:
A - Acceptable (Quantitative) Data
J - Estimated (Semiquantitative) Data
B - Present in associated blanks (Semiquantitative Data)
K - Biased High (Semiquantitative) Data
L - Biased Low (Semiquantitative) Data
UJ- Not Detected/Estimated Data
U - Not Detected/Quantitative Data
UL- Not Detected/Biased Low
N - Tentative Identification
R - Unusable Data
Q - Not Applicable

SEMI-VOLATILE ORGANIC COMPOUNDS

Phase 1A
Phase 1B

SUMMARY OF CLP ORG..S ANALYSES - PHASE 1A
BERKS LANDFILL REMEDIAL INVESTIGATION
BERKS COUNTY, PENNSYLVANIA

Matrix: Groundwater Well

Semivolatile Organics

		Sample Point GR18D/1A Date Sampled: 11/13/92 Dilution Factor: Percent Moisture: NA %			Sample Point GW-16/1A Date Sampled: 09/04/92 Dilution Factor: Percent Moisture: NA %			Sample Point GW-16/1A Date Sampled: 09/09/92 Dilution Factor: Percent Moisture: NA %			Sample Point GW-C5/1A Date Sampled: 09/03/92 Dilution Factor: Percent Moisture: NA %		
CRQL	Parameter	SQL	Result	Qual	SQL	Result	Qual	SQL	Result	Qual	SQL	Result	Qual
10	Acenaphthene	10	10	U	10	10	U	10	10	U	10	10	U
10	Acenaphthylene	10	10	U	10	10	U	10	10	U	10	10	U
10	Anthracene	10	10	U	10	10	U	10	10	U	10	10	U
10	Benzo(a)Anthracene	10	10	U	10	10	U	10	10	U	10	10	U
10	4-Bromophenyl-phenylether	10	10	U	10	10	U	10	10	U	10	10	U
10	Butylbenzylphthalate	10	10	U	10	10	U	10	10	U	10	10	U
10	Carbazole	10	10	U	10	10	U	10	10	U	10	10	U
10	4-Chloro-3-Methylphenol	10	10	U	10	10	U	10	10	U	10	10	U
10	4-Chloroaniline	10	10	U	10	10	U	10	10	U	10	10	U
10	bis(2-Chloroethoxy)Methane	10	10	U	10	10	U	10	10	U	10	10	U
10	bis(2-Chloroethyl)ether	10	10	U	10	10	U	10	10	U	10	10	U
10	2-Chloronaphthalene	10	10	U	10	10	U	10	10	U	10	10	U
10	2-Chlorophenol	10	10	U	10	10	U	10	10	U	10	10	U
10	4-Chlorophenyl-phenylether	10	10	U	10	10	U	10	10	U	10	10	U
10	Chrysene	10	10	U	10	10	U	10	10	U	10	10	U
10	Dibenz(a,h)Anthracene	10	10	U	10	10	U	10	10	U	10	10	U
10	Dibenzofuran	10	10	U	10	10	U	10	10	U	10	10	U
10	1,2-Dichlorobenzene	10	10	U	10	10	U	10	10	U	10	10	U
10	1,3-Dichlorobenzene	10	10	U	10	10	U	10	10	U	10	10	U
10	1,4-Dichlorobenzene	10	10	U	10	7	J	10	5	J	10	10	U
10	3,3'-Dichlorobenzidine	10	10	U	10	10	U	10	10	U	10	10	U
10	2,4-Dichlorophenol	10	10	U	10	10	U	10	10	U	10	10	U
10	Diethylphthalate	10	10	U	10	22	A	10	13	A	10	10	U
10	2,4-Dimethylphenol	10	10	U	10	10	U	10	2	J	10	10	U
10	Dimethyl Phthalate	10	10	U	10	10	U	10	10	U	10	10	U
10	Di-n-butylphthalate	10	10	U	10	10	U	10	10	U	10	1	J
25	4,6-Dinitro-2-methylphenol	25	25	U	25	25	U	25	25	U	25	25	U
25	2,4-Dinitrophenol	25	25	U	25	25	U	25	25	U	25	25	U
10	2,4-Dinitrotoluene	10	10	U	10	10	U	10	10	U	10	10	U
10	2,6-Dinitrotoluene	10	10	U	10	10	U	10	10	U	10	10	U
10	Di-n-Octyl Phthalate	10	10	UJ	10	10	U	10	10	U	10	10	U
10	bis(2-Ethylhexyl)Phthalate	10	1	J	10	8	B	10	5	B	10	8	J
10	Fluoranthene	10	10	U	10	10	U	10	10	U	10	10	U
10	Benzo(b)Fluoranthene	10	10	U	10	10	U	10	10	U	10	10	U
10	Benzo(k)Fluoranthene	10	10	U	10	10	U	10	10	U	10	10	U
10	Fluorene	10	10	U	10	10	U	10	10	U	10	10	U
10	Hexachlorobenzene	10	10	U	10	10	U	10	10	U	10	10	U
10	Hexachlorobutadiene	10	10	U	10	10	U	10	10	U	10	10	U
10	Hexachlorocyclopentadiene	10	10	U	10	10	U	10	10	U	10	10	U
10	Hexachloroethane	10	10	U	10	10	U	10	10	U	10	10	U

Notes:
All units are ug/l
Sample Quantitation Limit (SQL) is CRQL multiplied by the dilution factor and adjusted for percent moisture as appropriate.
The Qual column indicates the qualifier applied to the result following data validation (see below).

Qualifiers:
A - Acceptable (Quantitative) Data
J - Estimated (Semiquantitative) Data
B - Present in associated blanks (Semiquantitative Data)
K - Biased High (Semiquantitative) Data
L - Biased Low (Semiquantitative) Data
UJ- Not Detected/Estimated Data
U - Not Detected/Quantitative Data
UL- Not Detected/Biased Low
N - Tentative Identification
R - Unusable Data
Q - Not Applicable

SUMMARY OF CLP ORGANICS ANALYSES - PHASE 1A
BERKS LANDFILL REMEDIAL INVESTIGATION
BERKS COUNTY, PENNSYLVANIA

Matrix: Groundwater Well

Semivolatile Organics

CRQL	Parameter	Sample Point GR18D/1A Date Sampled: 11/13/92 Dilution Factor: Percent Moisture: NA % SQL	Result	Qual	Sample Point GW-16/1A Date Sampled: 09/04/92 Dilution Factor: Percent Moisture: NA % SQL	Result	Qual	Sample Point GW-16/1A Date Sampled: 09/09/92 Dilution Factor: Percent Moisture: NA % SQL	Result	Qual	Sample Point GW-C5/1A Date Sampled: 09/03/92 Dilution Factor: Percent Moisture: NA % SQL	Result	Qual
10	Indeno(1,2,3-cd)Pyrene	10	10	U	10	10	U	10	10	U	10	10	U
10	Isophorone	10	10	U	10	2	J	10	2	J	10	10	U
10	2-Methylnaphthalene	10	10	U	10	10	U	10	10	U	10	10	U
10	2-Methylphenol	10	10	U	10	10	U	10	10	U	10	10	U
10	4-Methylphenol	10	10	U	10	10	U	10	10	U	10	10	U
10	Naphthalene	10	10	U	10	2	J	10	10	U	10	10	U
25	2-Nitroaniline	25	25	U	25	25	UJ	25	25	UJ	25	25	UJ
25	3-Nitroaniline	25	25	U	25	25	U	25	25	U	25	25	U
25	4-Nitroaniline	25	25	U	25	25	U	25	25	U	25	25	U
10	Nitrobenzene	10	10	U	10	10	U	10	10	U	10	10	U
10	2-Nitrophenol	10	10	U	10	10	U	10	10	U	10	10	U
25	4-Nitrophenol	25	25	U	25	25	U	25	25	U	25	25	U
10	N-Nitroso-di-n-propylamine	10	10	U	10	10	U	10	10	U	10	10	U
10	N-Nitrosodiphenylamine	10	10	U	10	10	U	10	10	U	10	10	U
10	2,2'-Oxybis(1-Chloropropane)	10	10	U	10	10	UJ	10	10	UJ	10	10	UJ
25	Pentachlorophenol	25	25	U	25	25	U	25	25	U	25	25	U
10	Benzo(g,h,i)Perylene	10	10	U	10	10	U	10	10	U	10	10	U
10	Phenanthrene	10	10	U	10	10	U	10	10	U	10	10	U
10	Phenol	10	10	U	10	10	U	10	10	U	10	10	U
10	Pyrene	10	10	U	10	10	U	10	10	U	10	10	U
10	Benzo(a)Pyrene	10	10	U	10	10	U	10	10	U	10	10	U
10	1,2,4-Trichlorobenzene	10	10	U	10	10	U	10	10	U	10	10	U
25	2,4,5-Trichlorophenol	25	25	U	25	25	U	25	25	U	25	25	U
10	2,4,6-Trichlorophenol	10	10	U	10	10	U	10	10	U	10	10	U

Notes:
All units are ug/l
Sample Quantitation Limit (SQL) is CRQL multiplied by the dilution factor and adjusted for percent moisture as appropriate.
The Qual column indicates the qualifier applied to the result following data validation (see below).

Qualifiers:
A - Acceptable (Quantitative) Data
J - Estimated (Semiquantitative) Data
K - Biased High (Semiquantitative) Data
L - Biased Low (Semiquantitative) Data
UJ- Not Detected/Estimated Data
U - Not Detected/Quantitative Data
UL- Not Detected/Biased Low
N - Tentative Identification
R - Unusable Data
Q - Not Applicable
[illegible] - Present in associated blanks (Semiquantitative Data)

SUMMARY OF CLP ORG[illegible]S ANALYSES - PHASE 1A
BERKS LANDFILL REMEDIAL INVESTIGATION
BERKS COUNTY, PENNSYLVANIA

Matrix: Groundwater Well

Semivolatile Organics

		Sample Point GW18S/1A Date Sampled: 09/03/92 Dilution Factor: Percent Moisture: NA %			Sample Point GW18S/FD Date Sampled: 09/03/92 Dilution Factor: Percent Moisture: NA %			Sample Point GW18S/RE Date Sampled: 09/03/92 Dilution Factor: Percent Moisture: NA %			Sample Point GWC3D/1A Date Sampled: 09/04/92 Dilution Factor: Percent Moisture: NA %		
CRQL	Parameter	SQL	Result	Qual	SQL	Result	Qual	SQL	Result	Qual	SQL	Result	Qual
10	Acenaphthene	10	10	U	10	10	U	10	10	U	10	10	U
10	Acenaphthylene	10	10	U	10	10	U	10	10	U	10	10	U
10	Anthracene	10	10	U	10	10	U	10	10	U	10	10	U
10	Benzo(a)Anthracene	10	10	U	10	10	U	10	10	U	10	10	U
10	4-Bromophenyl-phenylether	10	10	U	10	10	U	10	10	U	10	10	U
10	Butylbenzylphthalate	10	10	U	10	10	U	10	10	U	10	10	U
10	Carbazole	10	10	U	10	10	U	10	10	U	10	10	U
10	4-Chloro-3-Methylphenol	10	10	U	10	10	U	10	10	U	10	10	U
10	4-Chloroaniline	10	10	U	10	10	U	10	10	U	10	10	U
10	bis(2-Chloroethoxy)Methane	10	10	U	10	10	U	10	10	U	10	10	U
10	bis(2-Chloroethyl)ether	10	10	U	10	10	U	10	10	U	10	10	U
10	2-Chloronaphthalene	10	10	U	10	10	U	10	10	U	10	10	U
10	2-Chlorophenol	10	10	U	10	10	U	10	10	U	10	10	U
10	4-Chlorophenyl-phenylether	10	10	U	10	10	U	10	10	U	10	10	U
10	Chrysene	10	10	U	10	10	U	10	10	U	10	10	U
10	Dibenz(a,h)Anthracene	10	10	UJ	10	10	U	10	10	UJ	10	10	U
10	Dibenzofuran	10	10	U	10	10	U	10	10	U	10	10	U
10	1,2-Dichlorobenzene	10	10	U	10	10	U	10	10	U	10	10	U
10	1,3-Dichlorobenzene	10	10	U	10	10	U	10	10	U	10	10	U
10	1,4-Dichlorobenzene	10	10	U	10	10	U	10	10	U	10	10	U
10	3,3'-Dichlorobenzidine	10	10	U	10	10	U	10	10	U	10	10	U
10	2,4-Dichlorophenol	10	10	U	10	10	U	10	10	U	10	10	U
10	Diethylphthalate	10	10	U	10	10	U	10	10	U	10	10	U
10	2,4-Dimethylphenol	10	10	U	10	10	U	10	10	U	10	10	U
10	Dimethyl Phthalate	10	10	U	10	10	U	10	10	U	10	10	U
10	Di-n-butylphthalate	10	10	U	10	10	U	10	10	U	10	10	U
25	4,6-Dinitro-2-methylphenol	25	25	U	25	25	U	25	25	U	25	25	U
25	2,4-Dinitrophenol	25	25	U	25	25	U	25	25	U	25	25	U
10	2,4-Dinitrotoluene	10	10	U	10	10	U	10	10	U	10	10	U
10	2,6-Dinitrotoluene	10	10	U	10	10	U	10	10	U	10	10	U
10	Di-n-Octyl Phthalate	10	10	UJ	10	10	U	10	10	UJ	10	10	U
10	bis(2-Ethylhexyl)Phthalate	10	12	A	10	7	J	10	12	J	10	11	B
10	Fluoranthene	10	10	U	10	10	U	10	10	U	10	10	U
10	Benzo(b)Fluoranthene	10	10	UJ	10	10	U	10	10	UJ	10	10	U
10	Benzo(k)Fluoranthene	10	10	UJ	10	10	U	10	10	UJ	10	10	U
10	Fluorene	10	10	U	10	10	U	10	10	U	10	10	U
10	Hexachlorobenzene	10	10	U	10	10	U	10	10	U	10	10	U
10	Hexachlorobutadiene	10	10	U	10	10	U	10	10	U	10	10	U
10	Hexachlorocyclopentadiene	10	10	U	10	10	U	10	10	U	10	10	U
10	Hexachloroethane	10	10	U	10	10	U	10	10	U	10	10	U

Notes:
All units are ug/l
Sample Quantitation Limit (SQL) is CRQL multiplied by the dilution factor and adjusted for percent moisture as appropriate.
The Qual column indicates the qualifier applied to the result following data validation (see below).

Qualifiers:
A - Acceptable (Quantitative) Data
J - Estimated (Semiquantitative) Data
B - Present in associated blanks (Semiquantitative Data)
K - Biased High (Semiquantitative) Data
L - Biased Low (Semiquantitative) Data
UJ- Not Detected/Estimated Data
U - Not Detected/Quantitative Data
UL- Not Detected/Biased Low
N - Tentative Identification
R - Unusable Data
Q - Not Applicable

SUMMARY OF CLP ORGANICS ANALYSES - PHASE 1A
BERKS LANDFILL REMEDIAL INVESTIGATION
BERKS COUNTY, PENNSYLVANIA

Matrix: Groundwater Well

Semivolatile Organics

		Sample Point GW18S/1A Date Sampled: 09/03/92 Dilution Factor: Percent Moisture: NA %			Sample Point GW18S/FD Date Sampled: 09/03/92 Dilution Factor: Percent Moisture: NA %			Sample Point GW18S/RE Date Sampled: 09/03/92 Dilution Factor: Percent Moisture: NA %			Sample Point GWC3D/1A Date Sampled: 09/04/92 Dilution Factor: Percent Moisture: NA %		
CRQL	Parameter	SQL	Result	Qual	SQL	Result	Qual	SQL	Result	Qual	SQL	Result	Qual
10	Indeno(1,2,3-cd)Pyrene	10	10	UJ	10	10	U	10	10	UJ	10	10	U
10	Isophorone	10	10	U	10	10	U	10	10	U	10	10	U
10	2-Methylnaphthalene	10	10	U	10	10	U	10	10	U	10	10	U
10	2-Methylphenol	10	10	U	10	10	U	10	10	U	10	10	U
10	4-Methylphenol	10	10	U	10	10	U	10	10	U	10	10	U
10	Naphthalene	10	10	U	10	10	U	10	10	U	10	10	U
25	2-Nitroaniline	25	25	U	25	25	U	25	25	U	25	25	UJ
25	3-Nitroaniline	25	25	U	25	25	U	25	25	U	25	25	U
25	4-Nitroaniline	25	25	U	25	25	U	25	25	U	25	25	U
10	Nitrobenzene	10	10	U	10	10	U	10	10	U	10	10	U
10	2-Nitrophenol	10	10	U	10	10	U	10	10	U	10	10	U
25	4-Nitrophenol	25	25	U	25	25	U	25	25	U	25	25	U
10	N-Nitroso-di-n-propylamine	10	10	U	10	10	U	10	10	U	10	10	U
10	N-Nitrosodiphenylamine	10	10	U	10	10	U	10	10	U	10	10	U
10	2,2'-Oxybis(1-Chloropropane)	10	10	U	10	10	U	10	10	U	10	10	UJ
25	Pentachlorophenol	25	25	U	25	25	U	25	25	U	25	25	U
10	Benzo(g,h,i)Perylene	10	10	UJ	10	10	U	10	10	UJ	10	10	U
10	Phenanthrene	10	10	U	10	10	U	10	10	U	10	10	U
10	Phenol	10	10	U	10	10	U	10	10	U	10	10	U
10	Pyrene	10	10	U	10	10	U	10	10	U	10	10	U
10	Benzo(a)Pyrene	10	10	UJ	10	10	U	10	10	UJ	10	10	U
10	1,2,4-Trichlorobenzene	10	10	U	10	10	U	10	10	U	10	10	U
25	2,4,5-Trichlorophenol	25	25	U	25	25	U	25	25	U	25	25	U
10	2,4,6-Trichlorophenol	10	10	U	10	10	U	10	10	U	10	10	U

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All units are ug/l
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K - Biased High (Semiquantitative) Data
L - Biased Low (Semiquantitative) Data
UJ- Not Detected/Estimated Data
U - Not Detected/Quantitative Data
UL- Not Detected/Biased Low
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R - Unusable Data
Q - Not Applicable

SUMMARY OF CLP ORGANICS ANALYSES - PHASE 1A
BERKS LANDFILL REMEDIAL INVESTIGATION
BERKS COUNTY, PENNSYLVANIA

Matrix: Groundwater Well

Semivolatile Organics

		Sample Point GWC3S/1A Date Sampled: 09/03/92 Dilution Factor: Percent Moisture: NA %			Sample Point GWG01/1A Date Sampled: 09/02/92 Dilution Factor: Percent Moisture: NA %			Sample Point GWG02/1A Date Sampled: 09/02/92 Dilution Factor: Percent Moisture: NA %			Sample Point GWG03/1A Date Sampled: 09/02/92 Dilution Factor: Percent Moisture: NA %		
CRQL	Parameter	SQL	Result	Qual	SQL	Result	Qual	SQL	Result	Qual	SQL	Result	Qual
10	Acenephthene	10	10	U	10	10	R	10	10	U	10	10	U
10	Acenaphthylene	10	10	U	10	10	R	10	10	U	10	10	U
10	Anthracene	10	10	U	10	10	R	10	10	U	10	10	U
10	Benzo(a)Anthracene	10	10	U	10	10	R	10	10	U	10	10	U
10	4-Bromophenyl-phenylether	10	10	U	10	10	R	10	10	U	10	10	U
10	Butylbenzylphthalate	10	10	U	10	10	R	10	10	U	10	10	U
10	Carbazole	10	10	U	10	10	R	10	10	U	10	10	U
10	4-Chloro-3-Methylphenol	10	10	U	10	10	UL	10	10	U	10	10	U
10	4-Chloroaniline	10	10	U	10	10	R	10	10	U	10	10	U
10	bis(2-Chloroethoxy)Methane	10	10	U	10	10	R	10	10	U	10	10	U
10	bis(2-Chloroethyl)ether	10	10	U	10	10	R	10	10	U	10	10	U
10	2-Chloronaphthalene	10	10	U	10	10	R	10	10	U	10	10	U
10	2-Chlorophenol	10	10	U	10	10	UL	10	10	U	10	10	U
10	4-Chlorophenyl-phenylether	10	10	U	10	10	R	10	10	U	10	10	U
10	Chrysene	10	10	U	10	10	R	10	10	U	10	10	U
10	Dibenz(a,h)Anthracene	10	10	U	10	10	R	10	10	U	10	10	U
10	Dibenzofuran	10	10	U	10	10	R	10	10	U	10	10	U
10	1,2-Dichlorobenzene	10	10	U	10	10	R	10	10	U	10	10	U
10	1,3-Dichlorobenzene	10	10	U	10	10	R	10	10	U	10	10	U
10	1,4-Dichlorobenzene	10	10	U	10	10	R	10	10	U	10	10	U
10	3,3'-Dichlorobenzidine	10	10	U	10	10	R	10	10	U	10	10	U
10	2,4-Dichlorophenol	10	10	U	10	10	UL	10	10	U	10	10	U
10	Diethylphthalate	10	10	U	10	10	R	10	10	U	10	10	U
10	2,4-Dimethylphenol	10	10	U	10	10	UL	10	10	U	10	10	U
10	Dimethyl Phthalate	10	10	U	10	10	R	10	10	U	10	10	U
10	Di-n-butylphthalate	10	10	U	10	10	R	10	10	U	10	10	U
25	4,6-Dinitro-2-methylphenol	25	25	U	25	25	UL	25	25	U	25	25	U
25	2,4-Dinitrophenol	25	25	U	25	25	UL	25	25	U	25	25	U
10	2,4-Dinitrotoluene	10	10	U	10	10	R	10	10	U	10	10	U
10	2,6-Dinitrotoluene	10	10	U	10	10	R	10	10	U	10	10	U
10	Di-n-Octyl Phthalate	10	10	UJ	10	10	R	10	10	U	10	10	U
10	bis(2-Ethylhexyl)Phthalate	10	5	J	10	10	R	10	10	U	10	1	B
10	Fluoranthene	10	10	U	10	10	R	10	10	U	10	10	U
10	Benzo(b)Fluoranthene	10	10	U	10	10	R	10	10	U	10	10	U
10	Benzo(k)Fluoranthene	10	10	U	10	10	R	10	10	U	10	10	U
10	Fluorene	10	10	U	10	10	R	10	10	U	10	10	U
10	Hexachlorobenzene	10	10	U	10	10	R	10	10	U	10	10	U
10	Hexachlorobutadiene	10	10	U	10	10	R	10	10	U	10	10	U
10	Hexachlorocyclopentadiene	10	10	U	10	10	R	10	10	U	10	10	U
10	Hexachloroethane	10	10	U	10	10	R	10	10	U	10	10	U

Notes:
All units are ug/l
Sample Quantitation Limit (SQL) is CRQL multiplied by the dilution factor and adjusted for percent moisture as appropriate.
The Qual column indicates the qualifier applied to the result following data validation (see below).

Qualifiers:
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J - Estimated (Semiquantitative) Data
B - Present in associated blanks (Semiquantitative Data)
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L - Biased Low (Semiquantitative) Data
UJ- Not Detected/Estimated Data
U - Not Detected/Quantitative Data
UL- Not Detected/Biased Low
N - Tentative Identification
R - Unusable Data
Q - Not Applicable

SUMMARY OF CLP ORGANICS ANALYSES - PHASE 1A
BERKS LANDFILL REMEDIAL INVESTIGATION
BERKS COUNTY, PENNSYLVANIA

Matrix: Groundwater Well

Semivolatile Organics

		Sample Point GWC3S/1A Date Sampled: 09/03/92 Dilution Factor: Percent Moisture: NA %			Sample Point GWG01/1A Date Sampled: 09/02/92 Dilution Factor: Percent Moisture: NA %			Sample Point GWG02/1A Date Sampled: 09/02/92 Dilution Factor: Percent Moisture: NA %			Sample Point GWG03/1A Date Sampled: 09/02/92 Dilution Factor: Percent Moisture: NA %		
CRQL	Parameter	SQL	Result	Qual	SQL	Result	Qual	SQL	Result	Qual	SQL	Result	Qual
10	Indeno(1,2,3-cd)Pyrene	10	10	U	10	10	R	10	10	U	10	10	U
10	Isophorone	10	10	U	10	10	R	10	10	U	10	10	U
10	2-Methylnaphthalene	10	10	U	10	10	R	10	10	U	10	10	U
10	2-Methylphenol	10	10	U	10	10	UL	10	10	U	10	10	U
10	4-Methylphenol	10	10	U	10	10	UL	10	10	U	10	10	U
10	Naphthalene	10	10	U	10	10	R	10	10	U	10	10	U
25	2-Nitroaniline	25	25	U	25	25	R	25	25	U	25	25	U
25	3-Nitroaniline	25	25	U	25	25	R	25	25	U	25	25	U
25	4-Nitroaniline	25	25	U	25	25	R	25	25	U	25	25	U
10	Nitrobenzene	10	10	U	10	10	R	10	10	U	10	10	U
10	2-Nitrophenol	10	10	U	10	10	UL	10	10	U	10	10	U
25	4-Nitrophenol	25	25	U	25	25	UL	25	25	U	25	25	U
10	N-Nitroso-di-n-propylamine	10	10	U	10	10	R	10	10	U	10	10	U
10	N-Nitrosodiphenylamine	10	10	U	10	10	R	10	10	U	10	10	U
10	2,2'-Oxybis(1-Chloropropane)	10	10	U	10	10	R	10	10	U	10	10	U
25	Pentachlorophenol	25	25	U	25	25	UL	25	25	U	25	25	U
10	Benzo(g,h,i)Perylene	10	10	U	10	10	R	10	10	U	10	10	U
10	Phenanthrene	10	10	U	10	10	R	10	10	U	10	10	U
10	Phenol	10	10	U	10	10	UL	10	10	U	10	10	U
10	Pyrene	10	10	U	10	10	R	10	10	U	10	10	U
10	Benzo(e)Pyrene	10	10	U	10	10	R	10	10	U	10	10	U
10	1,2,4-Trichlorobenzene	10	10	U	10	10	R	10	10	U	10	10	U
25	2,4,5-Trichlorophenol	25	25	U	25	25	UL	25	25	U	25	25	U
10	2,4,6-Trichlorophenol	10	10	U	10	10	UL	10	10	U	10	10	U

AR302791

Notes:
All units are ug/l
Sample Quantitation Limit (SQL) is CRQL multiplied by the dilution factor and adjusted for percent moisture as appropriate.
The Qual column indicates the qualifier applied to the result following data validation (see below).

Qualifiers:
A - Acceptable (Quantitative) Data
J - Estimated (Semiquantitative) Data
B - Present in associated blanks (Semiquantitative Data)
K - Biased High (Semiquantitative) Data
L - Biased Low (Semiquantitative) Data
UJ- Not Detected/Estimated Data
U - Not Detected/Quantitative Data
UL- Not Detected/Biased Low
N - Tentative Identification
R - Unusable Data
Q - Not Applicable

SUMMARY OF CLP ORGA... ANALYSES - PHASE 1B
BERKS LANDFILL REMEDIAL INVESTIGATION
BERKS COUNTY, PENNSYLVANIA

Matrix: Groundwater Well

Semivolatile Organics

		Sample Point GWC01/1B Date Sampled: 07/08/93 Dilution Factor: 1.0 Percent Moisture: NA %			Sample Point GWC02/1B Date Sampled: 07/08/93 Dilution Factor: 1.0 Percent Moisture: NA %			Sample Point GWC03D/1B Date Sampled: 07/06/93 Dilution Factor: 1.0 Percent Moisture: NA %			Sample Point GWC03D/FD Date Sampled: 07/06/93 Dilution Factor: 1.0 Percent Moisture: NA %		
CRQL	Parameter	SQL	Result	Qual	SQL	Result	Qual	SQL	Result	Qual	SQL	Result	Qual
10	Acenaphthene	10	10	U	10	10	U	10	10	U	10	10	U
10	Acenaphthylene	10	10	U	10	10	U	10	10	U	10	10	U
10	Anthracene	10	10	U	10	10	U	10	10	U	10	10	U
10	Benzo(a)Anthracene	10	10	U	10	10	U	10	10	U	10	10	UJ
10	4-Bromophenyl-phenylether	10	10	U	10	10	U	10	10	U	10	10	U
10	Butylbenzylphthalate	10	10	U	10	10	U	10	1	J	10	10	UJ
10	Carbazole	10	10	U	10	10	U	10	10	U	10	10	U
10	4-Chloro-3-Methylphenol	10	10	U	10	10	U	10	10	U	10	10	U
10	4-Chloroaniline	10	10	U	10	10	U	10	10	U	10	10	U
10	bis(2-Chloroethoxy)Methane	10	10	U	10	10	U	10	10	U	10	10	U
10	bis(2-Chloroethyl)ether	10	10	U	10	10	U	10	10	U	10	10	U
10	2-Chloronaphthalene	10	10	U	10	10	U	10	10	U	10	10	U
10	2-Chlorophenol	10	10	U	10	10	U	10	10	U	10	10	U
10	4-Chlorophenyl-phenylether	10	10	U	10	10	U	10	10	U	10	10	U
10	Chrysene	10	10	U	10	10	U	10	10	U	10	10	UJ
10	Dibenz(a,h)Anthracene	10	10	U	10	10	U	10	10	U	10	10	UJ
10	Dibenzofuran	10	10	U	10	10	U	10	10	U	10	10	U
10	1,2-Dichlorobenzene	10	10	U	10	10	U	10	10	U	10	10	U
10	1,3-Dichlorobenzene	10	10	U	10	10	U	10	10	U	10	10	U
10	1,4-Dichlorobenzene	10	10	U	10	10	U	10	10	U	10	10	U
10	3,3'-Dichlorobenzidine	10	10	U	10	10	U	10	10	U	10	10	UJ
10	2,4-Dichlorophenol	10	10	U	10	10	U	10	10	U	10	10	U
10	Diethylphthalate	10	10	U	10	10	U	10	2	B	10	2	B
10	2,4-Dimethylphenol	10	10	U	10	10	U	10	10	U	10	10	U
10	Dimethyl Phthalate	10	10	U	10	10	U	10	10	U	10	10	U
10	Di-n-butylphthalate	10	10	U	10	10	U	10	2	B	10	2	B
25	4,6-Dinitro-2-methylphenol	25	25	U	25	25	U	25	25	U	25	25	U
25	2,4-Dinitrophenol	25	25	U	25	25	U	25	25	U	25	25	U
10	2,4-Dinitrotoluene	10	10	U	10	10	U	10	10	U	10	10	U
10	2,6-Dinitrotoluene	10	10	U	10	10	U	10	10	U	10	10	U
10	Di-n-Octyl Phthalate	10	10	U	10	10	U	10	10	U	10	10	UJ
10	bis(2-Ethylhexyl)Phthalate	10	10	U	10	10	U	10	7	B	10	5	B
10	Fluoranthene	10	10	U	10	10	U	10	10	U	10	10	U
10	Benzo(b)Fluoranthene	10	10	U	10	10	U	10	10	U	10	10	UJ
10	Benzo(k)Fluoranthene	10	10	U	10	10	U	10	10	U	10	10	UJ
10	Fluorene	10	10	U	10	10	U	10	10	U	10	10	U
10	Hexachlorobenzene	10	10	U	10	10	U	10	10	U	10	10	U
10	Hexachlorobutadiene	10	10	U	10	10	U	10	10	U	10	10	U
10	Hexachlorocyclopentadiene	10	10	U	10	10	U	10	10	U	10	10	U
10	Hexachloroethane	10	10	U	10	10	U	10	10	U	10	10	U

Notes:
All units are ug/l
Sample Quantitation Limit (SQL) is CRQL multiplied by the dilution factor and adjusted for percent moisture as appropriate.
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Qualifiers:
A - Acceptable (Quantitative) Data
J - Estimated (Semiquantitative) Data
B - Present in associated blanks (Semiquantitative Data)
K - Biased High (Semiquantitative) Data
L - Biased Low (Semiquantitative) Data
UJ- Not Detected/Estimated Data
U - Not Detected/Quantitative Data
UL- Not Detected/Biased Low
N - Tentative Identification
R - Unusable Data
Q - Not Applicable

SUMMARY OF CLP ORGANI ANALYSES - PHASE 1B
BERKS LANDFILL REMEDIAL INVESTIGATION
BERKS COUNTY, PENNSYLVANIA

Matrix: Groundwater Well

Semivolatile Organics

		Sample Point GWC01/1B Date Sampled: 07/08/93 Dilution Factor: 1.0 Percent Moisture: NA %			Sample Point GWC02/1B Date Sampled: 07/08/93 Dilution Factor: 1.0 Percent Moisture: NA %			Sample Point GWC03D/1B Date Sampled: 07/06/93 Dilution Factor: 1.0 Percent Moisture: NA %			Sample Point GWC03D/FD Date Sampled: 07/06/93 Dilution Factor: 1.0 Percent Moisture: NA %		
CRQL	Parameter	SQL	Result	Qual	SQL	Result	Qual	SQL	Result	Qual	SQL	Result	Qual
10	Indeno(1,2,3-cd)Pyrene	10	10	U	10	10	U	10	10	U	10	10	UJ
10	Isophorone	10	10	U	10	10	U	10	10	U	10	10	U
10	2-Methylnaphthalene	10	10	U	10	10	U	10	10	U	10	10	U
10	2-Methylphenol	10	10	U	10	10	U	10	10	U	10	10	U
10	4-Methylphenol	10	10	U	10	10	U	10	10	U	10	10	U
10	Naphthalene	10	10	U	10	10	U	10	10	U	10	10	U
25	2-Nitroaniline	25	25	U	25	25	U	25	25	U	25	25	U
25	3-Nitroaniline	25	25	U	25	25	U	25	25	U	25	25	U
25	4-Nitroaniline	25	25	U	25	25	U	25	25	U	25	25	U
10	Nitrobenzene	10	10	U	10	10	U	10	10	U	10	10	U
10	2-Nitrophenol	10	10	U	10	10	U	10	10	U	10	10	U
25	4-Nitrophenol	25	25	U	25	25	U	25	25	U	25	25	U
10	N-Nitroso-di-n-propylamine	10	10	U	10	10	U	10	10	U	10	10	U
10	N-Nitrosodiphenylamine	10	10	U	10	10	U	10	10	U	10	10	U
10	2,2'-Oxybis(1-Chloropropane)	10	10	U	10	10	U	10	10	U	10	10	U
25	Pentachlorophenol	25	25	U	25	25	U	25	25	U	25	25	U
10	Benzo(g,h,i)Perylene	10	10	U	10	10	U	10	10	U	10	10	UJ
10	Phenanthrene	10	10	U	10	10	U	10	10	U	10	10	U
10	Phenol	10	10	U	10	10	U	10	10	U	10	3	B
10	Pyrene	10	10	U	10	10	U	10	10	U	10	10	UJ
10	Benzo(e)Pyrene	10	10	U	10	10	U	10	10	U	10	10	UJ
10	1,2,4-Trichlorobenzene	10	10	U	10	10	U	10	10	U	10	10	U
25	2,4,5-Trichlorophenol	25	25	U	25	25	U	25	25	U	25	25	U
10	2,4,6-Trichlorophenol	10	10	U	10	10	U	10	10	U	10	10	U

Notes:
All units are ug/l
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U - Not Detected/Quantitative Data
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SUMMARY OF CLP ORGANICS ANALYSES - PHASE 1B
BERKS LANDFILL REMEDIAL INVESTIGATION
BERKS COUNTY, PENNSYLVANIA

Matrix: Groundwater Well

Semivolatile Organics

		Sample Point GWC03D/FR Date Sampled: 07/06/93 Dilution Factor: 1.0 Percent Moisture: NA %			Sample Point GWC03S/1B Date Sampled: 07/02/93 Dilution Factor: 1.0 Percent Moisture: NA %			Sample Point GWC04D/1B Date Sampled: 06/30/93 Dilution Factor: 1.0 Percent Moisture: NA %			Sample Point GWC04S/1B Date Sampled: 06/30/93 Dilution Factor: 1.0 Percent Moisture: NA %		
CRQL	Parameter	SQL	Result	Qual	SQL	Result	Qual	SQL	Result	Qual	SQL	Result	Qual
10	Acenaphthene	10	10	U	10	10	U	10	10	U	10	10	U
10	Acenaphthylene	10	10	U	10	10	U	10	10	U	10	10	U
10	Anthracene	10	10	U	10	10	U	10	10	U	10	10	U
10	Benzo(a)Anthracene	10	10	UJ	10	10	U	10	10	U	10	10	U
10	4-Bromophenyl-phenylether	10	10	U	10	10	U	10	10	U	10	10	U
10	Butylbenzylphthalate	10	10	UJ	10	10	U	10	10	U	10	10	U
10	Carbazole	10	10	U	10	10	U	10	10	U	10	10	U
10	4-Chloro-3-Methylphenol	10	10	U	10	10	U	10	10	U	10	10	R
10	4-Chloroaniline	10	10	U	10	10	U	10	10	U	10	10	U
10	bis(2-Chloroethoxy)Methane	10	10	U	10	10	U	10	10	U	10	10	U
10	bis(2-Chloroethyl)ether	10	10	U	10	10	U	10	10	U	10	10	U
10	2-Chloronaphthalene	10	10	U	10	10	U	10	10	U	10	10	U
10	2-Chlorophenol	10	10	U	10	10	U	10	10	U	10	10	R
10	4-Chlorophenyl-phenylether	10	10	U	10	10	U	10	10	U	10	10	U
10	Chrysene	10	10	UJ	10	10	U	10	10	U	10	10	U
10	Dibenz(a,h)Anthracene	10	10	UJ	10	10	U	10	10	U	10	10	U
10	Dibenzofuran	10	10	U	10	10	U	10	10	U	10	10	U
10	1,2-Dichlorobenzene	10	10	U	10	10	U	10	10	U	10	10	U
10	1,3-Dichlorobenzene	10	10	U	10	10	U	10	10	U	10	10	U
10	1,4-Dichlorobenzene	10	10	U	10	2	J	10	10	U	10	10	U
10	3,3'-Dichlorobenzidine	10	10	UJ	10	10	U	10	10	U	10	10	U
10	2,4-Dichlorophenol	10	10	U	10	10	U	10	10	U	10	10	R
10	Diethylphthalate	10	2	B	10	10	U	10	2	B	10	10	U
10	2,4-Dimethylphenol	10	10	U	10	10	U	10	10	U	10	10	R
10	Dimethyl Phthalate	10	10	U	10	10	U	10	10	U	10	10	U
10	Di-n-butylphthalate	10	2	B	10	1	B	10	2	B	10	10	U
25	4,6-Dinitro-2-methylphenol	25	25	U	25	25	U	25	25	U	25	25	R
25	2,4-Dinitrophenol	25	25	U	25	25	U	25	25	U	25	25	R
10	2,4-Dinitrotoluene	10	10	U	10	10	U	10	10	U	10	10	U
10	2,6-Dinitrotoluene	10	10	U	10	10	U	10	10	U	10	10	U
10	Di-n-Octyl Phthalate	10	10	UJ	10	10	U	10	10	U	10	10	U
10	bis(2-Ethylhexyl)Phthalate	10	6	B	10	2	B	10	3	B	10	6	B
10	Fluoranthene	10	10	U	10	10	U	10	10	U	10	10	U
10	Benzo(b)Fluoranthene	10	10	UJ	10	10	U	10	10	U	10	10	U
10	Benzo(k)Fluoranthene	10	10	UJ	10	10	U	10	10	U	10	10	U
10	Fluorene	10	10	U	10	10	U	10	10	U	10	10	U
10	Hexachlorobenzene	10	10	U	10	10	U	10	10	U	10	10	U
10	Hexachlorobutadiene	10	10	U	10	10	U	10	10	U	10	10	U
10	Hexachlorocyclopentadiene	10	10	U	10	10	U	10	10	U	10	10	U
10	Hexachloroethane	10	10	U	10	10	U	10	10	U	10	10	U

Notes:
All units are ug/l
Sample Quantitation Limit (SQL) is CRQL multiplied by the dilution factor and adjusted for percent moisture as appropriate.
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J - Estimated (Semiquantitative) Data
B - Present in associated blanks (Semiquantitative Data)
K - Biased High (Semiquantitative) Data
L - Biased Low (Semiquantitative) Data
UJ- Not Detected/Estimated Data
U - Not Detected/Quantitative Data
UL- Not Detected/Biased Low
N - Tentative Identification
R - Unusable Data
Q - Not Applicable

SUMMARY OF CLP ORGANICS ANALYSES - PHASE 1B
BERKS LANDFILL REMEDIAL INVESTIGATION
BERKS COUNTY, PENNSYLVANIA

Matrix: Groundwater Well

Semivolatile Organics

		Sample Point GWC03D/FR Date Sampled: 07/06/93 Dilution Factor: 1.0 Percent Moisture: NA %			Sample Point GWC03S/1B Date Sampled: 07/02/93 Dilution Factor: 1.0 Percent Moisture: NA %			Sample Point GWC04D/1B Date Sampled: 06/30/93 Dilution Factor: 1.0 Percent Moisture: NA %			Sample Point GWC04S/1B Date Sampled: 06/30/93 Dilution Factor: 1.0 Percent Moisture: NA %		
CRQL	Parameter	SQL	Result	Qual	SQL	Result	Qual	SQL	Result	Qual	SQL	Result	Qual
10	Indeno(1,2,3-cd)Pyrene	10	10	UJ	10	10	U	10	10	U	10	10	U
10	Isophorone	10	10	U	10	10	U	10	10	U	10	10	U
10	2-Methylnaphthalene	10	10	U	10	10	U	10	10	U	10	10	U
10	2-Methylphenol	10	10	U	10	10	U	10	10	U	10	10	R
10	4-Methylphenol	10	10	U	10	10	U	10	10	U	10	10	R
10	Naphthalene	10	10	U	10	10	U	10	10	U	10	10	U
25	2-Nitroaniline	25	25	U	25	25	U	25	25	U	25	25	U
25	3-Nitroaniline	25	25	U	25	25	U	25	25	U	25	25	U
25	4-Nitroaniline	25	25	U	25	25	U	25	25	U	25	25	U
10	Nitrobenzene	10	10	U	10	10	U	10	10	U	10	10	U
10	2-Nitrophenol	10	10	U	10	10	U	10	10	U	10	10	R
25	4-Nitrophenol	25	25	U	25	25	U	25	25	U	25	25	R
10	N-Nitroso-di-n-propylamine	10	10	U	10	10	U	10	10	U	10	10	U
10	N-Nitrosodiphenylamine	10	10	U	10	10	U	10	10	U	10	10	U
10	2,2'-Oxybis(1-Chloropropane)	10	10	U	10	10	U	10	10	U	10	10	U
25	Pentachlorophenol	25	25	U	25	25	U	25	25	U	25	25	R
10	Benzo(g,h,i)Perylene	10	10	UJ	10	10	U	10	10	U	10	10	U
10	Phenanthrene	10	10	U	10	10	U	10	10	U	10	10	U
10	Phenol	10	4	B	10	10	U	10	3	B	10	10	R
10	Pyrene	10	10	UJ	10	10	U	10	10	U	10	10	U
10	Benzo(a)Pyrene	10	10	UJ	10	10	U	10	10	U	10	10	U
10	1,2,4-Trichlorobenzene	10	10	U	10	10	U	10	10	U	10	10	U
25	2,4,5-Trichlorophenol	25	25	U	25	25	U	25	25	U	25	25	R
10	2,4,6-Trichlorophenol	10	10	U	10	10	U	10	10	U	10	10	R

Notes:
All units are ug/l
Sample Quantitation Limit (SQL) is CRQL multiplied by the dilution factor and adjusted for percent moisture as appropriate.
The Qual column indicates the qualifier applied to the result following data validation (see below).

Qualifiers:
A - Acceptable (Quantitative) Data
J - Estimated (Semiquantitative) Data
B - Present in associated blanks (Semiquantitative Data)
K - Biased High (Semiquantitative) Data
L - Biased Low (Semiquantitative) Data
UJ- Not Detected/Estimated Data
U - Not Detected/Quantitative Data
UL- Not Detected/Biased Low
N - Tentative Identification
R - Unusable Data
Q - Not Applicable

SUMMARY OF CLP ORG[illegible]S ANALYSES - PHASE 1B
BERKS LANDFILL REMEDIAL INVESTIGATION
BERKS COUNTY, PENNSYLVANIA

Matrix: Groundwater Well

Semivolatile Organics

		Sample Point GWC04S/RE Date Sampled: 06/30/93 Dilution Factor: 1.0 Percent Moisture: NA %			Sample Point GWC06D/1B Date Sampled: 07/12/93 Dilution Factor: 1.0 Percent Moisture: NA %			Sample Point GWC06S/1B Date Sampled: 07/12/93 Dilution Factor: 1.0 Percent Moisture: NA %			Sample Point GWC07D/1B Date Sampled: 07/09/93 Dilution Factor: 1.0 Percent Moisture: NA %		
CRQL	Parameter	SQL	Result	Qual	SQL	Result	Qual	SQL	Result	Qual	SQL	Result	Qual
10	Acenaphthene	10	10	U	10	10	U	10	10	U	10	10	U
10	Acenaphthylene	10	10	U	10	10	U	10	10	U	10	10	U
10	Anthracene	10	10	U	10	10	U	10	10	U	10	10	U
10	Benzo(a)Anthracene	10	10	U	10	10	U	10	10	U	10	10	U
10	4-Bromophenyl-phenylether	10	10	U	10	10	U	10	10	U	10	10	U
10	Butylbenzylphthalate	10	10	U	10	1	J	10	10	U	10	10	U
10	Carbazole	10	10	U	10	10	U	10	10	U	10	10	U
10	4-Chloro-3-Methylphenol	10	10	R	10	10	U	10	10	U	10	10	U
10	4-Chloroaniline	10	10	U	10	10	U	10	10	U	10	10	U
10	bis(2-Chloroethoxy)Methane	10	10	U	10	10	U	10	10	U	10	10	U
10	bis(2-Chloroethyl)ether	10	10	U	10	10	U	10	10	U	10	10	U
10	2-Chloronaphthalene	10	10	U	10	10	U	10	10	U	10	10	U
10	2-Chlorophenol	10	10	R	10	10	U	10	10	U	10	10	U
10	4-Chlorophenyl-phenylether	10	10	U	10	10	U	10	10	U	10	10	U
10	Chrysene	10	10	U	10	10	U	10	10	U	10	10	U
10	Dibenz(a,h)Anthracene	10	10	U	10	10	U	10	10	U	10	10	U
10	Dibenzofuran	10	10	U	10	10	U	10	10	U	10	10	U
10	1,2-Dichlorobenzene	10	10	U	10	10	U	10	10	U	10	10	U
10	1,3-Dichlorobenzene	10	10	U	10	10	U	10	10	U	10	10	U
10	1,4-Dichlorobenzene	10	10	U	10	10	U	10	10	U	10	10	U
10	3,3'-Dichlorobenzidine	10	10	U	10	10	U	10	10	U	10	10	U
10	2,4-Dichlorophenol	10	10	R	10	10	U	10	10	U	10	10	U
10	Diethylphthalate	10	10	U	10	9	B	10	3	B	10	10	U
10	2,4-Dimethylphenol	10	10	R	10	10	U	10	10	U	10	10	U
10	Dimethyl Phthalate	10	10	U	10	10	U	10	10	U	10	10	U
10	Di-n-butylphthalate	10	10	U	10	1	B	10	10	U	10	10	U
25	4,6-Dinitro-2-methylphenol	25	25	R	25	25	U	25	25	U	25	25	U
25	2,4-Dinitrophenol	25	25	R	25	25	U	25	25	U	25	25	U
10	2,4-Dinitrotoluene	10	10	U	10	10	U	10	10	U	10	10	U
10	2,6-Dinitrotoluene	10	10	U	10	10	U	10	10	U	10	10	U
10	Di-n-Octyl Phthalate	10	10	U	10	10	U	10	10	U	10	10	U
10	bis(2-Ethylhexyl)Phthalate	10	2	B	10	11	B	10	7	B	10	24	B
10	Fluoranthene	10	10	U	10	10	U	10	10	U	10	10	U
10	Benzo(b)Fluoranthene	10	10	U	10	10	U	10	10	U	10	10	U
10	Benzo(k)Fluoranthene	10	10	U	10	10	U	10	10	U	10	10	U
10	Fluorene	10	10	U	10	10	U	10	10	U	10	10	U
10	Hexachlorobenzene	10	10	U	10	10	U	10	10	U	10	10	U
10	Hexachlorobutadiene	10	10	U	10	10	U	10	10	U	10	10	U
10	Hexachlorocyclopentadiene	10	10	U	10	10	U	10	10	U	10	10	U
10	Hexachloroethane	10	10	U	10	10	U	10	10	U	10	10	U

Notes:
All units are ug/l
Sample Quantitation Limit (SQL) is CRQL multiplied by the dilution factor and adjusted for percent moisture as appropriate.
The Qual column indicates the qualifier applied to the result following data validation (see below).

Qualifiers:
A - Acceptable (Quantitative) Data
J - Estimated (Semiquantitative) Data
B - Present in associated blanks (Semiquantitative Data)
K - Biased High (Semiquantitative) Data
L - Biased Low (Semiquantitative) Data
UJ- Not Detected/Estimated Data
U - Not Detected/Quantitative Data
UL- Not Detected/Biased Low
N - Tentative Identification
R - Unusable Data
Q - Not Applicable

SUMMARY OF CLP ORGANICS ANALYSES - PHASE 1B
BERKS LANDFILL REMEDIAL INVESTIGATION
BERKS COUNTY, PENNSYLVANIA

Matrix: Groundwater Well

Semivolatile Organics

		Sample Point GWC04S/RE Date Sampled: 06/30/93 Dilution Factor: 1.0 Percent Moisture: NA %			Sample Point GWC06D/1B Date Sampled: 07/12/93 Dilution Factor: 1.0 Percent Moisture: NA %			Sample Point GWC06S/1B Date Sampled: 07/12/93 Dilution Factor: 1.0 Percent Moisture: NA %			Sample Point GWC07D/1B Date Sampled: 07/09/93 Dilution Factor: 1.0 Percent Moisture: NA %		
CRQL	Parameter	SQL	Result	Qual	SQL	Result	Qual	SQL	Result	Qual	SQL	Result	Qual
10	Indeno(1,2,3-cd)Pyrene	10	10	U	10	10	U	10	10	U	10	10	U
10	Isophorone	10	10	U	10	10	U	10	10	U	10	10	U
10	2-Methylnaphthalene	10	10	U	10	10	U	10	10	U	10	10	U
10	2-Methylphenol	10	10	R	10	10	U	10	10	U	10	10	U
10	4-Methylphenol	10	10	R	10	10	U	10	10	U	10	10	U
10	Naphthalene	10	10	U	10	10	U	10	10	U	10	10	U
25	2-Nitroaniline	25	25	U	25	25	U	25	25	U	25	25	U
25	3-Nitroaniline	25	25	U	25	25	U	25	25	U	25	25	U
25	4-Nitroaniline	25	25	U	25	25	U	25	25	U	25	25	U
10	Nitrobenzene	10	10	U	10	10	U	10	10	U	10	10	U
10	2-Nitrophenol	10	10	R	10	10	U	10	10	U	10	10	U
25	4-Nitrophenol	25	25	R	25	25	U	25	25	UJ	25	25	U
10	N-Nitroso-di-n-propylamine	10	10	U	10	10	U	10	10	U	10	10	U
10	N-Nitrosodiphenylamine	10	10	U	10	10	U	10	10	U	10	10	U
10	2,2'-Oxybis(1-Chloropropane)	10	10	U	10	10	U	10	10	U	10	10	U
25	Pentachlorophenol	25	25	R	25	25	U	25	25	U	25	25	U
10	Benzo(g,h,i)Perylene	10	10	U	10	10	U	10	10	U	10	10	U
10	Phenanthrene	10	10	U	10	10	U	10	10	U	10	10	U
10	Phenol	10	10	R	10	6	B	10	10	U	10	10	U
10	Pyrene	10	10	U	10	10	U	10	10	U	10	10	U
10	Benzo(a)Pyrene	10	10	U	10	10	U	10	10	U	10	10	U
10	1,2,4-Trichlorobenzene	10	10	U	10	10	U	10	10	U	10	10	U
25	2,4,5-Trichlorophenol	25	25	R	25	25	U	25	25	U	25	25	U
10	2,4,6-Trichlorophenol	10	10	R	10	10	U	10	10	U	10	10	U

Notes:
All units are ug/l
Sample Quantitation Limit (SQL) is CRQL multiplied by the dilution factor and adjusted for percent moisture as appropriate.
The Qual column indicates the qualifier applied to the result following data validation (see below).

Qualifiers:
A - Acceptable (Quantitative) Data
J - Estimated (Semiquantitative) Data
B - Present in associated blanks (Semiquantitative Data)
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L - Biased Low (Semiquantitative) Data
UJ- Not Detected/Estimated Data
U - Not Detected/Quantitative Data
UL- Not Detected/Biased Low
N - Tentative Identification
R - Unusable Data
Q - Not Applicable

SUMMARY OF CLP ORGA... ANALYSES - PHASE 1B
BERKS LANDFILL REMEDIAL INVESTIGATION
BERKS COUNTY, PENNSYLVANIA

Matrix: Groundwater Well

Semivolatile Organics

		Sample Point GWC07S/1B Date Sampled: 07/09/93 Dilution Factor: 1.0 Percent Moisture: NA %			Sample Point GWD02/1B Date Sampled: 07/06/93 Dilution Factor: 1.0 Percent Moisture: NA %			Sample Point GWG01/1B Date Sampled: 07/02/93 Dilution Factor: 1.0 Percent Moisture: NA %			Sample Point GWG02/1B Date Sampled: 07/02/93 Dilution Factor: 1.0 Percent Moisture: NA %		
CRQL	Parameter	SQL	Result	Qual	SQL	Result	Qual	SQL	Result	Qual	SQL	Result	Qual
10	Acenaphthene	10	10	U	10	10	U	10	10	U	10	10	U
10	Acenaphthylene	10	10	U	10	10	U	10	10	U	10	10	U
10	Anthracene	10	10	U	10	10	U	10	10	U	10	10	U
10	Benzo(a)Anthracene	10	10	U	10	10	U	10	10	U	10	10	U
10	4-Bromophenyl-phenylether	10	10	U	10	10	U	10	10	U	10	10	U
10	Butylbenzylphthalate	10	2	J	10	10	U	10	10	U	10	10	U
10	Carbazole	10	10	U	10	10	U	10	10	U	10	10	U
10	4-Chloro-3-Methylphenol	10	10	U	10	10	U	10	10	U	10	10	U
10	4-Chloroaniline	10	10	U	10	10	U	10	10	U	10	10	U
10	bis(2-Chloroethoxy)Methane	10	10	U	10	10	U	10	10	U	10	10	U
10	bis(2-Chloroethyl)ether	10	10	U	10	10	U	10	10	U	10	10	U
10	2-Chloronaphthalene	10	10	U	10	10	U	10	10	U	10	10	U
10	2-Chlorophenol	10	10	U	10	10	U	10	10	U	10	10	U
10	4-Chlorophenyl-phenylether	10	10	U	10	10	U	10	10	U	10	10	U
10	Chrysene	10	10	U	10	10	U	10	10	U	10	10	U
10	Dibenz(a,h)Anthracene	10	10	U	10	10	U	10	10	U	10	10	U
10	Dibenzofuran	10	10	U	10	10	U	10	10	U	10	10	U
10	1,2-Dichlorobenzene	10	10	U	10	10	U	10	10	U	10	10	U
10	1,3-Dichlorobenzene	10	10	U	10	10	U	10	10	U	10	10	U
10	1,4-Dichlorobenzene	10	5	J	10	1	J	10	10	U	10	10	U
10	3,3'-Dichlorobenzidine	10	10	U	10	10	U	10	10	U	10	10	U
10	2,4-Dichlorophenol	10	10	U	10	10	U	10	10	U	10	10	U
10	Diethylphthalate	10	3	B	10	10	U	10	10	U	10	10	U
10	2,4-Dimethylphenol	10	10	U	10	10	U	10	10	U	10	10	U
10	Dimethyl Phthalate	10	10	U	10	10	U	10	10	U	10	10	U
10	Di-n-butylphthalate	10	1	B	10	10	U	10	1	B	10	1	B
25	4,6-Dinitro-2-methylphenol	25	25	U	25	25	U	25	25	U	25	25	U
25	2,4-Dinitrophenol	25	25	U	25	25	U	25	25	U	25	25	U
10	2,4-Dinitrotoluene	10	10	U	10	10	U	10	10	U	10	10	U
10	2,6-Dinitrotoluene	10	10	U	10	10	U	10	10	U	10	10	U
10	Di-n-Octyl Phthalate	10	10	U	10	10	U	10	10	U	10	10	U
10	bis(2-Ethylhexyl)Phthalate	10	4	B	10	10	U	10	1	B	10	3	B
10	Fluoranthene	10	10	U	10	10	U	10	10	U	10	10	U
10	Benzo(b)Fluoranthene	10	10	U	10	10	U	10	10	U	10	10	U
10	Benzo(k)Fluoranthene	10	10	U	10	10	U	10	10	U	10	10	U
10	Fluorene	10	10	U	10	10	U	10	10	U	10	10	U
10	Hexachlorobenzene	10	10	U	10	10	U	10	10	U	10	10	U
10	Hexachlorobutadiene	10	10	U	10	10	U	10	10	U	10	10	U
10	Hexachlorocyclopentadiene	10	10	U	10	10	U	10	10	U	10	10	U
10	Hexachloroethane	10	10	U	10	10	U	10	4	J	10	10	U

Notes:
All units are ug/l
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J - Estimated (Semiquantitative) Data
B - Present in associated blanks (Semiquantitative Data)
K - Biased High (Semiquantitative) Data
L - Biased Low (Semiquantitative) Data
UJ- Not Detected/Estimated Data
U - Not Detected/Quantitative Data
UL- Not Detected/Biased Low
N - Tentative Identification
R - Unusable Data
Q - Not Applicable

SUMMARY OF CLP ORGANICS ANALYSES - PHASE 1B
BERKS LANDFILL REMEDIAL INVESTIGATION
BERKS COUNTY, PENNSYLVANIA

Matrix: Groundwater Well

Semivolatile Organics

		Sample Point GWC07S/1B Date Sampled: 07/09/93 Dilution Factor: 1.0 Percent Moisture: NA %			Sample Point GWD02/1B Date Sampled: 07/06/93 Dilution Factor: 1.0 Percent Moisture: NA %			Sample Point GWG01/1B Date Sampled: 07/02/93 Dilution Factor: 1.0 Percent Moisture: NA %			Sample Point GWG02/1B Date Sampled: 07/02/93 Dilution Factor: 1.0 Percent Moisture: NA %		
CRQL	Parameter	SQL	Result	Qual	SQL	Result	Qual	SQL	Result	Qual	SQL	Result	Qual
10	Indeno(1,2,3-cd)Pyrene	10	10	U	10	10	U	10	10	U	10	10	U
10	Isophorone	10	10	U	10	10	U	10	10	U	10	10	U
10	2-Methylnaphthalene	10	10	U	10	10	U	10	10	U	10	10	U
10	2-Methylphenol	10	10	U	10	10	U	10	10	U	10	10	U
10	4-Methylphenol	10	10	U	10	10	U	10	10	U	10	10	U
10	Naphthalene	10	10	U	10	10	U	10	10	U	10	10	U
25	2-Nitroaniline	25	25	U	25	25	U	25	25	U	25	25	U
25	3-Nitroaniline	25	25	U	25	25	U	25	25	U	25	25	U
25	4-Nitroaniline	25	25	U	25	25	U	25	25	U	25	25	U
10	Nitrobenzene	10	10	U	10	10	U	10	10	U	10	10	U
10	2-Nitrophenol	10	10	U	10	10	U	10	10	U	10	10	U
25	4-Nitrophenol	25	25	U	25	25	U	25	25	U	25	25	U
10	N-Nitroso-di-n-propylamine	10	10	U	10	10	U	10	10	U	10	10	U
10	N-Nitrosodiphenylamine	10	10	U	10	10	U	10	10	U	10	10	U
10	2,2'-Oxybis(1-Chloropropane)	10	10	U	10	10	U	10	10	U	10	10	U
25	Pentachlorophenol	25	25	U	25	25	U	25	25	U	25	25	U
10	Benzo(g,h,i)Perylene	10	10	U	10	10	U	10	10	U	10	10	U
10	Phenanthrene	10	10	U	10	10	U	10	10	U	10	10	U
10	Phenol	10	3	B	10	10	U	10	10	U	10	10	U
10	Pyrene	10	10	U	10	10	U	10	10	U	10	10	U
10	Benzo(a)Pyrene	10	10	U	10	10	U	10	10	U	10	10	U
10	1,2,4-Trichlorobenzene	10	10	U	10	10	U	10	10	U	10	10	U
25	2,4,5-Trichlorophenol	25	25	U	25	25	U	25	25	U	25	25	U
10	2,4,6-Trichlorophenol	10	10	U	10	10	U	10	10	U	10	10	U

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L - Biased Low (Semiquantitative) Data
UJ- Not Detected/Estimated Data
U - Not Detected/Quantitative Data
UL- Not Detected/Biased Low
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R - Unusable Data
Q - Not Applicable

SUMMARY OF CLP ORGANICS ANALYSES - PHASE 1B
BERKS LANDFILL REMEDIAL INVESTIGATION
BERKS COUNTY, PENNSYLVANIA

Matrix: Groundwater Well

Semivolatile Organics

		Sample Point GWG03/1B Date Sampled: 07/01/93 Dilution Factor: 1.0 Percent Moisture: NA %			Sample Point GWG04/1B Date Sampled: 07/09/93 Dilution Factor: 1.0 Percent Moisture: NA %			Sample Point GWG05/1B Date Sampled: 07/01/93 Dilution Factor: 1.0 Percent Moisture: NA %			Sample Point GWG06/1B Date Sampled: 07/01/93 Dilution Factor: 1.0 Percent Moisture: NA %		
CRQL	Parameter	SQL	Result	Qual	SQL	Result	Qual	SQL	Result	Qual	SQL	Result	Qual
10	Acenaphthene	10	10	U	10	10	U	10	10	U	10	10	U
10	Acenaphthylene	10	10	U	10	10	U	10	10	U	10	10	U
10	Anthracene	10	10	U	10	10	U	10	10	U	10	10	U
10	Benzo(a)Anthracene	10	10	U	10	10	U	10	10	U	10	10	U
10	4-Bromophenyl-phenylether	10	10	U	10	10	U	10	10	U	10	10	U
10	Butylbenzylphthalate	10	10	U	10	10	U	10	10	U	10	10	U
10	Carbazole	10	10	U	10	10	U	10	10	U	10	10	U
10	4-Chloro-3-Methylphenol	10	10	U	10	10	U	10	10	U	10	10	U
10	4-Chloroaniline	10	10	U	10	10	U	10	10	U	10	10	U
10	bis(2-Chloroethoxy)Methane	10	10	U	10	10	U	10	10	U	10	10	U
10	bis(2-Chloroethyl)ether	10	10	U	10	10	U	10	10	U	10	10	U
10	2-Chloronaphthalene	10	10	U	10	10	U	10	10	U	10	10	U
10	2-Chlorophenol	10	10	U	10	10	U	10	10	U	10	10	U
10	4-Chlorophenyl-phenylether	10	10	U	10	10	U	10	10	U	10	10	U
10	Chrysene	10	10	U	10	10	U	10	10	U	10	10	U
10	Dibenz(a,h)Anthracene	10	10	U	10	10	U	10	10	U	10	10	U
10	Dibenzofuran	10	10	U	10	10	U	10	10	U	10	10	U
10	1,2-Dichlorobenzene	10	10	U	10	10	U	10	10	U	10	10	U
10	1,3-Dichlorobenzene	10	10	U	10	10	U	10	10	U	10	10	U
10	1,4-Dichlorobenzene	10	10	U	10	1	J	10	1	J	10	10	U
10	3,3'-Dichlorobenzidine	10	10	U	10	10	U	10	10	U	10	10	U
10	2,4-Dichlorophenol	10	10	U	10	10	U	10	10	U	10	10	U
10	Diethylphthalate	10	10	U	10	3	B	10	10	U	10	1	B
10	2,4-Dimethylphenol	10	10	U	10	10	U	10	10	U	10	10	U
10	Dimethyl Phthalate	10	10	U	10	10	U	10	10	U	10	10	U
10	Di-n-butylphthalate	10	10	U	10	10	U	10	10	U	10	1	B
25	4,6-Dinitro-2-methylphenol	25	25	U	25	25	U	25	25	U	25	25	U
25	2,4-Dinitrophenol	25	25	U	25	25	U	25	25	U	25	25	U
10	2,4-Dinitrotoluene	10	10	U	10	10	U	10	10	U	10	10	U
10	2,6-Dinitrotoluene	10	10	U	10	10	U	10	10	U	10	10	U
10	Di-n-Octyl Phthalate	10	10	U	10	10	U	10	10	U	10	10	U
10	bis(2-Ethylhexyl)Phthalate	10	2	B	10	18	B	10	5	B	10	2	B
10	Fluoranthene	10	10	U	10	10	U	10	10	U	10	10	U
10	Benzo(b)Fluoranthene	10	10	U	10	10	U	10	10	U	10	10	U
10	Benzo(k)Fluoranthene	10	10	U	10	10	U	10	10	U	10	10	U
10	Fluorene	10	10	U	10	10	U	10	10	U	10	10	U
10	Hexachlorobenzene	10	10	U	10	10	U	10	10	U	10	10	U
10	Hexachlorobutadiene	10	10	U	10	10	U	10	10	U	10	10	U
10	Hexachlorocyclopentadiene	10	10	U	10	10	U	10	10	U	10	10	U
10	Hexachloroethane	10	10	U	10	10	U	10	10	U	10	10	U

Notes:
All units are ug/l
Sample Quantitation Limit (SQL) is CRQL multiplied by the dilution factor and adjusted for percent moisture as appropriate.
The Qual column indicates the qualifier applied to the result following data validation (see below).

Qualifiers:
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UJ- Not Detected/Estimated Data
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R - Unusable Data
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SUMMARY OF CLP ORGANICS ANALYSES - PHASE 1B
BERKS LANDFILL REMEDIAL INVESTIGATION
BERKS COUNTY, PENNSYLVANIA

Matrix: Groundwater Well

Semivolatile Organics

		Sample Point GWG03/1B Date Sampled: 07/01/93 Dilution Factor: 1.0 Percent Moisture: NA %			Sample Point GWG04/1B Date Sampled: 07/09/93 Dilution Factor: 1.0 Percent Moisture: NA %			Sample Point GWG05/1B Date Sampled: 07/01/93 Dilution Factor: 1.0 Percent Moisture: NA %			Sample Point GWG06/1B Date Sampled: 07/01/93 Dilution Factor: 1.0 Percent Moisture: NA %		
CRQL	Parameter	SQL	Result	Qual	SQL	Result	Qual	SQL	Result	Qual	SQL	Result	Qual
10	Indeno(1,2,3-cd)Pyrene	10	10	U	10	10	U	10	10	U	10	10	U
10	Isophorone	10	10	U	10	10	U	10	10	U	10	10	U
10	2-Methylnaphthalene	10	10	U	10	10	U	10	10	U	10	10	U
10	2-Methylphenol	10	10	U	10	10	U	10	10	U	10	10	U
10	4-Methylphenol	10	10	U	10	10	U	10	10	U	10	10	U
10	Naphthalene	10	10	U	10	10	U	10	10	U	10	10	U
25	2-Nitroaniline	25	25	U	25	25	U	25	25	U	25	25	U
25	3-Nitroaniline	25	25	U	25	25	U	25	25	U	25	25	U
25	4-Nitroaniline	25	25	U	25	25	U	25	25	U	25	25	U
10	Nitrobenzene	10	10	U	10	10	U	10	10	U	10	10	U
10	2-Nitrophenol	10	10	U	10	10	U	10	10	U	10	10	U
25	4-Nitrophenol	25	25	U	25	25	U	25	25	U	25	25	U
10	N-Nitroso-di-n-propylamine	10	10	U	10	10	U	10	10	U	10	10	U
10	N-Nitrosodiphenylamine	10	10	U	10	10	U	10	10	U	10	10	U
10	2,2'-Oxybis(1-Chloropropane)	10	10	U	10	10	U	10	10	U	10	10	U
25	Pentachlorophenol	25	25	U	25	25	U	25	25	U	25	25	U
10	Benzo(g,h,i)Perylene	10	10	U	10	10	U	10	10	U	10	10	U
10	Phenanthrene	10	10	U	10	10	U	10	10	U	10	10	U
10	Phenol	10	10	U	10	2	B	10	10	U	10	3	B
10	Pyrene	10	10	U	10	10	U	10	10	U	10	10	U
10	Benzo(a)Pyrene	10	10	U	10	10	U	10	10	U	10	10	U
10	1,2,4-Trichlorobenzene	10	10	U	10	10	U	10	10	U	10	10	U
25	2,4,5-Trichlorophenol	25	25	U	25	25	U	25	25	U	25	25	U
10	2,4,6-Trichlorophenol	10	10	U	10	10	U	10	10	U	10	10	U

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Notes:
All units are ug/l
Sample Quantitation Limit (SQL) is CRQL multiplied by the dilution factor and adjusted for percent moisture as appropriate.
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Qualifiers:
A - Acceptable (Quantitative) Data
J - Estimated (Semiquantitative) Data
B - Present in associated blanks (Semiquantitative Data)
K - Biased High (Semiquantitative) Data
L - Biased Low (Semiquantitative) Data
UJ- Not Detected/Estimated Data
U - Not Detected/Quantitative Data
UL- Not Detected/Biased Low
N - Tentative Identification
R - Unusable Data
Q - Not Applicable

SUMMARY OF CLP ORGANICS ANALYSES - PHASE 1B
BERKS LANDFILL REMEDIAL INVESTIGATION
BERKS COUNTY, PENNSYLVANIA

Matrix: Groundwater Well

Semivolatile Organics

		Sample Point GWG07/1B Date Sampled: 07/01/93 Dilution Factor: 1.0 Percent Moisture: NA %			Sample Point GWG07/RE Date Sampled: 07/01/93 Dilution Factor: 1.0 Percent Moisture: NA %			Sample Point GWG08/1B Date Sampled: 07/01/93 Dilution Factor: 1.0 Percent Moisture: NA %			Sample Point GWG10/1B Date Sampled: 07/01/93 Dilution Factor: 1.0 Percent Moisture: NA %		
CRQL	Parameter	SQL	Result	Qual	SQL	Result	Qual	SQL	Result	Qual	SQL	Result	Qual
10	Acenaphthene	10	10	UL	10	10	U	10	10	U	10	10	U
10	Acenaphthylene	10	10	UL	10	10	U	10	10	U	10	10	U
10	Anthracene	10	10	UL	10	10	U	10	10	U	10	10	U
10	Benzo(a)Anthracene	10	10	UL	10	10	U	10	10	U	10	10	U
10	4-Bromophenyl-phenylether	10	10	UL	10	10	U	10	10	U	10	10	U
10	Butylbenzylphthalate	10	10	UL	10	10	U	10	10	U	10	10	U
10	Carbazole	10	10	UL	10	10	U	10	10	U	10	10	U
10	4-Chloro-3-Methylphenol	10	10	UL	10	10	U	10	10	U	10	10	U
10	4-Chloroaniline	10	10	UL	10	10	U	10	10	U	10	10	U
10	bis(2-Chloroethoxy)Methane	10	10	UL	10	10	U	10	10	U	10	10	U
10	bis(2-Chloroethyl)ether	10	10	UL	10	10	U	10	10	U	10	10	U
10	2-Chloronaphthalene	10	10	UL	10	10	U	10	10	U	10	10	U
10	2-Chlorophenol	10	10	UL	10	10	U	10	10	U	10	10	U
10	4-Chlorophenyl-phenylether	10	10	UL	10	10	U	10	10	U	10	10	U
10	Chrysene	10	10	UL	10	10	U	10	10	U	10	10	U
10	Dibenz(a,h)Anthracene	10	10	UL	10	10	U	10	10	U	10	10	U
10	Dibenzofuran	10	10	UL	10	10	U	10	10	U	10	10	U
10	1,2-Dichlorobenzene	10	10	UL	10	10	U	10	10	U	10	10	U
10	1,3-Dichlorobenzene	10	10	UL	10	10	U	10	10	U	10	10	U
10	1,4-Dichlorobenzene	10	10	UL	10	10	U	10	10	U	10	10	U
10	3,3'-Dichlorobenzidine	10	10	UL	10	10	U	10	10	U	10	10	U
10	2,4-Dichlorophenol	10	10	UL	10	10	U	10	10	U	10	10	U
10	Diethylphthalate	10	10	UL	10	10	U	10	2	B	10	2	B
10	2,4-Dimethylphenol	10	10	UL	10	10	U	10	10	U	10	10	U
10	Dimethyl Phthalate	10	10	UL	10	10	U	10	10	U	10	10	U
10	Di-n-butylphthalate	10	10	UL	10	10	U	10	1	B	10	2	B
25	4,6-Dinitro-2-methylphenol	25	25	UL	25	25	U	25	25	U	25	25	U
25	2,4-Dinitrophenol	25	25	UL	25	25	U	25	25	U	25	25	U
10	2,4-Dinitrotoluene	10	10	UL	10	10	U	10	10	U	10	10	U
10	2,6-Dinitrotoluene	10	10	UL	10	10	U	10	10	U	10	10	U
10	Di-n-Octyl Phthalate	10	10	UL	10	10	U	10	10	U	10	10	U
10	bis(2-Ethylhexyl)Phthalate	10	10	UL	10	2	B	10	1	B	10	2	B
10	Fluoranthene	10	10	UL	10	10	U	10	10	U	10	10	U
10	Benzo(b)Fluoranthene	10	10	UL	10	10	U	10	10	U	10	10	U
10	Benzo(k)Fluoranthene	10	10	UL	10	10	U	10	10	U	10	10	U
10	Fluorene	10	10	UL	10	10	U	10	10	U	10	10	U
10	Hexachlorobenzene	10	10	UL	10	10	U	10	10	U	10	10	U
10	Hexachlorobutadiene	10	10	UL	10	10	U	10	10	U	10	10	U
10	Hexachlorocyclopentadiene	10	10	UL	10	10	U	10	10	U	10	10	U
10	Hexachloroethane	10	10	UL	10	10	U	10	10	U	10	10	U

Notes:
All units are ug/l
Sample Quantitation Limit (SQL) is CRQL multiplied by the dilution factor and adjusted for percent moisture as appropriate.
The Qual column indicates the qualifier applied to the result following data validation (see below).

Qualifiers:
A - Acceptable (Quantitative) Data
J - Estimated (Semiquantitative) Data
B - Present in associated blanks (Semiquantitative Data)
K - Biased High (Semiquantitative) Data
L - Biased Low (Semiquantitative) Data
UJ- Not Detected/Estimated Data
U - Not Detected/Quantitative Data
UL- Not Detected/Biased Low
N - Tentative Identification
R - Unusable Data
Q - Not Applicable

SUMMARY OF CLP ORGANICS ANALYSES - PHASE 1B
BERKS LANDFILL REMEDIAL INVESTIGATION
BERKS COUNTY, PENNSYLVANIA

Matrix: Groundwater Well

Semivolatile Organics

CRQL	Parameter	Sample Point GWG07/1B Date Sampled: 07/01/93 Dilution Factor: 1.0 Percent Moisture: NA % SQL	Result	Qual	Sample Point GWG07/RE Date Sampled: 07/01/93 Dilution Factor: 1.0 Percent Moisture: NA % SQL	Result	Qual	Sample Point GWG08/1B Date Sampled: 07/01/93 Dilution Factor: 1.0 Percent Moisture: NA % SQL	Result	Qual	Sample Point GWG10/1B Date Sampled: 07/01/93 Dilution Factor: 1.0 Percent Moisture: NA % SQL	Result	Qual
10	Indeno(1,2,3-cd)Pyrene	10	10	UL	10	10	U	10	10	U	10	10	U
10	Isophorone	10	10	UL	10	10	U	10	10	U	10	10	U
10	2-Methylnaphthalene	10	10	UL	10	10	U	10	10	U	10	10	U
10	2-Methylphenol	10	10	UL	10	10	U	10	10	U	10	10	U
10	4-Methylphenol	10	10	UL	10	10	U	10	10	U	10	10	U
10	Naphthalene	10	10	UL	10	10	U	10	10	U	10	10	U
25	2-Nitroaniline	25	25	UL	25	25	U	25	25	U	25	25	U
25	3-Nitroaniline	25	25	UL	25	25	U	25	25	U	25	25	U
25	4-Nitroaniline	25	25	UL	25	25	U	25	25	U	25	25	U
10	Nitrobenzene	10	10	UL	10	10	U	10	10	U	10	10	U
10	2-Nitrophenol	10	10	UL	10	10	U	10	10	U	10	10	U
25	4-Nitrophenol	25	25	UL	25	25	U	25	25	U	25	25	U
10	N-Nitroso-di-n-propylamine	10	10	UL	10	10	U	10	10	U	10	10	U
10	N-Nitrosodiphenylamine	10	10	UL	10	10	U	10	10	U	10	10	U
10	2,2'-Oxybis(1-Chloropropane)	10	10	UL	10	10	U	10	10	U	10	10	U
25	Pentachlorophenol	25	25	UL	25	25	U	25	25	U	25	25	U
10	Benzo(g,h,i)Perylene	10	10	UL	10	10	U	10	10	U	10	10	U
10	Phenanthrene	10	10	UL	10	10	U	10	10	U	10	10	U
10	Phenol	10	10	UL	10	10	U	10	4	B	10	3	B
10	Pyrene	10	10	UL	10	10	U	10	10	U	10	10	U
10	Benzo(a)Pyrene	10	10	UL	10	10	U	10	10	U	10	10	U
10	1,2,4-Trichlorobenzene	10	10	UL	10	10	U	10	10	U	10	10	U
25	2,4,5-Trichlorophenol	25	25	UL	25	25	U	25	25	U	25	25	U
10	2,4,6-Trichlorophenol	10	10	UL	10	10	U	10	10	U	10	10	U

Notes:
All units are ug/l
Sample Quantitation Limit (SQL) is CRQL multiplied by the dilution factor and adjusted for percent moisture as appropriate.
The Qual column indicates the qualifier applied to the result following data validation (see below).

Qualifiers:
A - Acceptable (Quantitative) Data
J - Estimated (Semiquantitative) Data
B - Present in associated blanks (Semiquantitative Data)
K - Biased High (Semiquantitative) Data
L - Biased Low (Semiquantitative) Data
UJ- Not Detected/Estimated Data
U - Not Detected/Quantitative Data
UL- Not Detected/Biased Low
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SUMMARY OF CLP ORGANICS ANALYSES - PHASE 1B
BERKS LANDFILL REMEDIAL INVESTIGATION
BERKS COUNTY, PENNSYLVANIA

Matrix: Groundwater Well

Semivolatile Organics

		Sample Point GWG11/1B Date Sampled: 07/09/93 Dilution Factor: 1.0 Percent Moisture: NA %			Sample Point GWG11/RE Date Sampled: 07/09/93 Dilution Factor: 1.0 Percent Moisture: NA %			Sample Point GWG11/FD Date Sampled: 07/09/93 Dilution Factor: 1.0 Percent Moisture: NA %			Sample Point GWG11/FR Date Sampled: 07/09/93 Dilution Factor: 1.0 Percent Moisture: NA %		
CRQL	Parameter	SQL	Result	Qual	SQL	Result	Qual	SQL	Result	Qual	SQL	Result	Qual
10	Acenaphthene	10	10	U	10	10	U	10	10	U	10	10	U
10	Acenaphthylene	10	10	U	10	10	U	10	10	U	10	10	U
10	Anthracene	10	10	U	10	10	U	10	10	U	10	10	U
10	Benzo(a)Anthracene	10	10	U	10	10	U	10	10	U	10	10	U
10	4-Bromophenyl-phenylether	10	10	U	10	10	U	10	10	U	10	10	U
10	Butylbenzylphthalate	10	10	U	10	10	U	10	10	U	10	10	U
10	Carbazole	10	10	U	10	10	U	10	10	U	10	10	U
10	4-Chloro-3-Methylphenol	10	10	U	10	10	U	10	10	U	10	10	U
10	4-Chloroaniline	10	10	U	10	10	U	10	10	U	10	10	U
10	bis(2-Chloroethoxy)Methane	10	10	U	10	10	U	10	10	U	10	10	U
10	bis(2-Chloroethyl)ether	10	10	U	10	10	U	10	10	U	10	10	U
10	2-Chloronaphthalene	10	10	U	10	10	U	10	10	U	10	10	U
10	2-Chlorophenol	10	10	U	10	10	U	10	10	U	10	10	U
10	4-Chlorophenyl-phenylether	10	10	U	10	10	U	10	10	U	10	10	U
10	Chrysene	10	10	U	10	10	U	10	10	U	10	10	U
10	Dibenz(a,h)Anthracene	10	10	UJ	10	10	UJ	10	10	UJ	10	10	UJ
10	Dibenzofuran	10	10	U	10	10	U	10	10	U	10	10	U
10	1,2-Dichlorobenzene	10	2	J	10	2	J	10	2	J	10	2	J
10	1,3-Dichlorobenzene	10	9	J	10	10	U	10	10	U	10	10	U
10	1,4-Dichlorobenzene	10	10	A	10	10	A	10	8	J	10	9	J
10	3,3'-Dichlorobenzidine	10	10	U	10	10	U	10	10	U	10	10	U
10	2,4-Dichlorophenol	10	10	U	10	10	U	10	10	U	10	10	U
10	Diethylphthalate	10	7	B	10	7	B	10	6	B	10	7	B
10	2,4-Dimethylphenol	10	10	U	10	10	U	10	10	U	10	10	U
10	Dimethyl Phthalate	10	10	U	10	10	U	10	10	U	10	10	U
10	Di-n-butylphthalate	10	1	B	10	1	B	10	10	U	10	10	U
25	4,6-Dinitro-2-methylphenol	25	25	U	25	25	U	25	25	U	25	25	U
25	2,4-Dinitrophenol	25	25	U	25	25	U	25	25	U	25	25	U
10	2,4-Dinitrotoluene	10	10	U	10	10	U	10	10	U	10	10	U
10	2,6-Dinitrotoluene	10	10	U	10	10	U	10	10	U	10	10	U
10	Di-n-Octyl Phthalate	10	10	UJ	10	10	UJ	10	10	UJ	10	10	UJ
10	bis(2-Ethylhexyl)Phthalate	10	2	B	10	1	B	10	3	B	10	3	B
10	Fluoranthene	10	10	U	10	10	U	10	10	U	10	10	U
10	Benzo(b)Fluoranthene	10	10	UJ	10	10	UJ	10	10	UJ	10	10	UJ
10	Benzo(k)Fluoranthene	10	10	UJ	10	10	UJ	10	10	UJ	10	10	UJ
10	Fluorene	10	10	U	10	10	U	10	10	U	10	10	U
10	Hexachlorobenzene	10	10	U	10	10	U	10	10	U	10	10	U
10	Hexachlorobutadiene	10	10	U	10	10	U	10	10	U	10	10	U
10	Hexachlorocyclopentadiene	10	10	U	10	10	U	10	10	U	10	10	U
10	Hexachloroethane	10	6	J	10	10	U	10	10	U	10	10	U

Notes:
All units are ug/l
Sample Quantitation Limit (SQL) is CRQL multiplied by the dilution factor and adjusted for percent moisture as appropriate.
The Qual column indicates the qualifier applied to the result following data validation (see below).

Qualifiers:
A - Acceptable (Quantitative) Data
J - Estimated (Semiquantitative) Data
B - Present in associated blanks (Semiquantitative Data)
K - Biased High (Semiquantitative) Data
L - Biased Low (Semiquantitative) Data
UJ- Not Detected/Estimated Data
U - Not Detected/Quantitative Data
UL- Not Detected/Biased Low
N - Tentative Identification
R - Unusable Data
Q - Not Applicable

SUMMARY OF CLP ORGANICS ANALYSES - PHASE 1B
BERKS LANDFILL REMEDIAL INVESTIGATION
BERKS COUNTY, PENNSYLVANIA

Matrix: Groundwater Well

Semivolatile Organics

		Sample Point GWG11/1B Date Sampled: 07/09/93 Dilution Factor: 1.0 Percent Moisture: NA %			Sample Point GWG11/RE Date Sampled: 07/09/93 Dilution Factor: 1.0 Percent Moisture: NA %			Sample Point GWG11/FD Date Sampled: 07/09/93 Dilution Factor: 1.0 Percent Moisture: NA %			Sample Point GWG11/FR Date Sampled: 07/09/93 Dilution Factor: 1.0 Percent Moisture: NA %		
CRQL	Parameter	SQL	Result	Qual	SQL	Result	Qual	SQL	Result	Qual	SQL	Result	Qual
10	Indeno(1,2,3-cd)Pyrene	10	10	UJ	10	10	UJ	10	10	UJ	10	10	UJ
10	Isophorone	10	10	U	10	10	U	10	10	U	10	10	U
10	2-Methylnaphthalene	10	10	U	10	10	U	10	10	U	10	10	U
10	2-Methylphenol	10	10	U	10	10	U	10	10	U	10	10	U
10	4-Methylphenol	10	10	U	10	10	U	10	10	U	10	10	U
10	Naphthalene	10	10	U	10	10	U	10	10	U	10	10	U
25	2-Nitroaniline	25	25	U	25	25	U	25	25	U	25	25	U
25	3-Nitroaniline	25	1	J	25	25	U	25	25	U	25	25	U
25	4-Nitroaniline	25	7	J	25	25	U	25	25	U	25	25	U
10	Nitrobenzene	10	10	U	10	10	U	10	10	U	10	10	U
10	2-Nitrophenol	10	10	U	10	10	U	10	10	U	10	10	U
25	4-Nitrophenol	25	25	U	25	25	U	25	25	U	25	25	U
10	N-Nitroso-di-n-propylamine	10	1	J	10	10	U	10	10	U	10	10	U
10	N-Nitrosodiphenylamine	10	10	U	10	10	U	10	10	U	10	10	U
10	2,2'-Oxybis(1-Chloropropane)	10	10	U	10	10	U	10	10	U	10	10	U
25	Pentachlorophenol	25	25	U	25	25	U	25	25	U	25	25	U
10	Benzo(g,h,i)Perylene	10	10	UJ	10	10	UJ	10	10	UJ	10	10	UJ
10	Phenanthrene	10	10	U	10	10	U	10	10	U	10	10	U
10	Phenol	10	10	U	10	10	U	10	10	U	10	10	U
10	Pyrene	10	10	U	10	10	U	10	10	U	10	10	U
10	Benzo(a)Pyrene	10	10	UJ	10	10	UJ	10	10	UJ	10	10	UJ
10	1,2,4-Trichlorobenzene	10	10	U	10	10	U	10	10	U	10	10	U
25	2,4,5-Trichlorophenol	25	25	U	25	25	U	25	25	U	25	25	U
10	2,4,6-Trichlorophenol	10	10	U	10	10	U	10	10	U	10	10	U

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Notes:
All units are ug/l
Sample Quantitation Limit (SQL) is CRQL multiplied by the dilution factor and adjusted for percent moisture as appropriate.
The Qual column indicates the qualifier applied to the result following data validation (see below).

Qualifiers:
A - Acceptable (Quantitative) Data
J - Estimated (Semiquantitative) Data
B - Present in associated blanks (Semiquantitative Data)
K - Biased High (Semiquantitative) Data
L - Biased Low (Semiquantitative) Data
UJ- Not Detected/Estimated Data
U - Not Detected/Quantitative Data
UL- Not Detected/Biased Low
N - Tentative Identification
R - Unusable Data
Q - Not Applicable

SUMMARY OF CLP ORGANICS ANALYSES - PHASE 1B
BERKS LANDFILL REMEDIAL INVESTIGATION
BERKS COUNTY, PENNSYLVANIA

Matrix: Groundwater Well

Semivolatile Organics

		Sample Point GWG12/1B Date Sampled: 07/01/93 Dilution Factor: 1.0 Percent Moisture: NA %			Sample Point GWG12/FD Date Sampled: 07/01/93 Dilution Factor: 1.0 Percent Moisture: NA %			Sample Point GWG13/1B Date Sampled: 07/12/93 Dilution Factor: 1.0 Percent Moisture: NA %			Sample Point GWM03/1B Date Sampled: 07/07/93 Dilution Factor: 1.0 Percent Moisture: NA %		
CRQL	Parameter	SQL	Result	Qual	SQL	Result	Qual	SQL	Result	Qual	SQL	Result	Qual
10	Acenaphthene	10	10	U	10	10	U	10	10	U	10	10	U
10	Acenaphthylene	10	10	U	10	10	U	10	10	U	10	10	U
10	Anthracene	10	10	U	10	10	U	10	10	U	10	10	U
10	Benzo(a)Anthracene	10	10	U	10	10	U	10	10	U	10	10	U
10	4-Bromophenyl-phenylether	10	10	U	10	10	U	10	10	U	10	10	U
10	Butylbenzylphthalate	10	10	U	10	10	U	10	10	U	10	10	U
10	Carbazole	10	10	U	10	10	U	10	10	U	10	10	U
10	4-Chloro-3-Methylphenol	10	10	U	10	10	U	10	10	U	10	10	U
10	4-Chloroaniline	10	10	U	10	10	U	10	10	U	10	10	U
10	bis(2-Chloroethoxy)Methane	10	10	U	10	10	U	10	10	U	10	10	U
10	bis(2-Chloroethyl)ether	10	10	U	10	10	U	10	10	U	10	10	U
10	2-Chloronaphthalene	10	10	U	10	10	U	10	10	U	10	10	U
10	2-Chlorophenol	10	10	U	10	10	U	10	10	U	10	10	U
10	4-Chlorophenyl-phenylether	10	10	U	10	10	U	10	10	U	10	10	U
10	Chrysene	10	10	U	10	10	U	10	10	U	10	10	U
10	Dibenz(a,h)Anthracene	10	10	U	10	10	U	10	10	U	10	10	U
10	Dibenzofuran	10	10	U	10	10	U	10	10	U	10	10	U
10	1,2-Dichlorobenzene	10	10	U	10	10	U	10	10	U	10	1	J
10	1,3-Dichlorobenzene	10	10	U	10	10	U	10	10	U	10	10	U
10	1,4-Dichlorobenzene	10	2	J	10	2	J	10	10	U	10	3	J
10	3,3'-Dichlorobenzidine	10	10	U	10	10	U	10	10	U	10	10	U
10	2,4-Dichlorophenol	10	10	U	10	10	U	10	10	U	10	10	U
10	Diethylphthalate	10	10	U	10	10	U	10	10	U	10	10	U
10	2,4-Dimethylphenol	10	10	U	10	10	U	10	10	U	10	10	U
10	Dimethyl Phthalate	10	10	U	10	10	U	10	10	U	10	10	U
10	Di-n-butylphthalate	10	10	U	10	10	U	10	10	U	10	10	U
25	4,6-Dinitro-2-methylphenol	25	25	U	25	25	U	25	25	U	25	25	U
25	2,4-Dinitrophenol	25	25	U	25	25	U	25	25	U	25	25	U
10	2,4-Dinitrotoluene	10	10	U	10	10	U	10	10	U	10	10	U
10	2,6-Dinitrotoluene	10	10	U	10	10	U	10	10	U	10	10	U
10	Di-n-Octyl Phthalate	10	10	U	10	10	U	10	10	U	10	10	U
10	bis(2-Ethylhexyl)Phthalate	10	10	U	10	1	B	10	10	U	10	3	B
10	Fluoranthene	10	10	U	10	10	U	10	10	U	10	10	U
10	Benzo(b)Fluoranthene	10	10	U	10	10	U	10	10	U	10	10	U
10	Benzo(k)Fluoranthene	10	10	U	10	10	U	10	10	U	10	10	U
10	Fluorene	10	10	U	10	10	U	10	10	U	10	10	U
10	Hexachlorobenzene	10	10	U	10	10	U	10	10	U	10	10	U
10	Hexachlorobutadiene	10	10	U	10	10	U	10	10	U	10	10	U
10	Hexachlorocyclopentadiene	10	10	U	10	10	U	10	10	U	10	10	U
10	Hexachloroethane	10	10	U	10	10	U	10	10	U	10	10	U

Notes:
All units are ug/l
Sample Quantitation Limit (SQL) is CRQL multiplied by the dilution factor and adjusted for percent moisture as appropriate.
The Qual column indicates the qualifier applied to the result following data validation (see below).

Qualifiers:
A - Acceptable (Quantitative) Data
J - Estimated (Semiquantitative) Data
B - Present in associated blanks (Semiquantitative Data).
K - Biased High (Semiquantitative) Data
L - Biased Low (Semiquantitative) Data
UJ- Not Detected/Estimated Data
U - Not Detected/Quantitative Data
UL- Not Detected/Biased Low
N - Tentative Identification
R - Unusable Data
Q - Not Applicable

SUMMARY OF CLP ORGANICS ANALYSES - PHASE 1B
BERKS LANDFILL REMEDIAL INVESTIGATION
BERKS COUNTY, PENNSYLVANIA

Matrix: Groundwater Well

Semivolatile Organics

		Sample Point GWG12/1B Date Sampled: 07/01/93 Dilution Factor: 1.0 Percent Moisture: NA %			Sample Point GWG12/FD Date Sampled: 07/01/93 Dilution Factor: 1.0 Percent Moisture: NA %			Sample Point GWG13/1B Date Sampled: 07/12/93 Dilution Factor: 1.0 Percent Moisture: NA %			Sample Point GWM03/1B Date Sampled: 07/07/93 Dilution Factor: 1.0 Percent Moisture: NA %		
CRQL	Parameter	SQL	Result	Qual	SQL	Result	Qual	SQL	Result	Qual	SQL	Result	Qual
10	Indeno(1,2,3-cd)Pyrene	10	10	U	10	10	U	10	10	U	10	10	U
10	Isophorone	10	10	U	10	10	U	10	10	U	10	10	U
10	2-Methylnaphthalene	10	10	U	10	10	U	10	10	U	10	10	U
10	2-Methylphenol	10	10	U	10	10	U	10	10	U	10	10	U
10	4-Methylphenol	10	10	U	10	10	U	10	10	U	10	10	U
10	Naphthalene	10	10	U	10	10	U	10	10	U	10	10	U
25	2-Nitroaniline	25	25	U	25	25	U	25	25	U	25	25	U
25	3-Nitroaniline	25	25	U	25	25	U	25	25	U	25	25	U
25	4-Nitroaniline	25	25	U	25	25	U	25	25	U	25	25	U
10	Nitrobenzene	10	10	U	10	10	U	10	10	U	10	10	U
10	2-Nitrophenol	10	10	U	10	10	U	10	10	U	10	10	U
25	4-Nitrophenol	25	25	U	25	25	U	25	25	U	25	25	UJ
10	N-Nitroso-di-n-propylamine	10	10	U	10	10	U	10	10	U	10	10	U
10	N-Nitrosodiphenylamine	10	10	U	10	10	U	10	10	U	10	10	U
10	2,2'-Oxybis(1-Chloropropane)	10	10	U	10	10	U	10	10	U	10	10	U
25	Pentachlorophenol	25	25	U	25	25	U	25	25	U	25	1	B
10	Benzo(g,h,i)Perylene	10	10	U	10	10	U	10	10	U	10	10	U
10	Phenanthrene	10	10	U	10	10	U	10	10	U	10	10	U
10	Phenol	10	10	U	10	10	U	10	2	B	10	10	U
10	Pyrene	10	10	U	10	10	U	10	10	U	10	10	U
10	Benzo(a)Pyrene	10	10	U	10	10	U	10	10	U	10	10	U
10	1,2,4-Trichlorobenzene	10	10	U	10	10	U	10	10	U	10	10	U
25	2,4,5-Trichlorophenol	25	25	U	25	25	U	25	25	U	25	25	U
10	2,4,6-Trichlorophenol	10	10	U	10	10	U	10	10	U	10	10	U

Notes:
All units are ug/l
Sample Quantitation Limit (SQL) is CRQL multiplied by the dilution factor and adjusted for percent moisture as appropriate.
The Qual column indicates the qualifier applied to the result following data validation (see below).

Qualifiers:
A - Acceptable (Quantitative) Data
J - Estimated (Semiquantitative) Data
B - Present in associated blanks (Semiquantitative Data)
K - Biased High (Semiquantitative) Data
L - Biased Low (Semiquantitative) Data
UJ- Not Detected/Estimated Data
U - Not Detected/Quantitative Data
UL- Not Detected/Biased Low
N - Tentative Identification
R - Unusable Data
Q - Not Applicable

SUMMARY OF CLP ORGANICS ANALYSES - PHASE 1B
BERKS LANDFILL REMEDIAL INVESTIGATION
BERKS COUNTY, PENNSYLVANIA

Matrix: Groundwater Well

Semivolatile Organics

		Sample Point GWM06/1B Date Sampled: 07/08/93 Dilution Factor: 1.0 Percent Moisture: NA %			Sample Point GWM11/1B Date Sampled: 06/30/93 Dilution Factor: 1.0 Percent Moisture: NA %			Sample Point GWM14D/1B Date Sampled: 07/09/93 Dilution Factor: 1.0 Percent Moisture: NA %			Sample Point GWM14S/1B Date Sampled: 07/09/93 Dilution Factor: 1.0 Percent Moisture: NA %		
CRQL	Parameter	SQL	Result	Qual	SQL	Result	Qual	SQL	Result	Qual	SQL	Result	Qual
10	Acenaphthene	10	10	R	10	10	U	10	10	U	10	10	U
10	Acenaphthylene	10	10	R	10	10	U	10	10	U	10	10	U
10	Anthracene	10	10	R	10	10	U	10	10	U	10	10	U
10	Benzo(a)Anthracene	10	10	R	10	10	U	10	10	U	10	10	U
10	4-Bromophenyl-phenylether	10	10	R	10	10	U	10	10	U	10	10	U
10	Butylbenzylphthalate	10	10	R	10	10	U	10	10	U	10	10	U
10	Carbazole	10	10	R	10	10	U	10	10	U	10	10	U
10	4-Chloro-3-Methylphenol	10	10	U	10	10	U	10	10	U	10	10	U
10	4-Chloroaniline	10	10	R	10	10	U	10	10	U	10	10	U
10	bis(2-Chloroethoxy)Methane	10	10	R	10	10	U	10	10	U	10	10	U
10	bis(2-Chloroethyl)ether	10	10	R	10	10	U	10	10	U	10	10	U
10	2-Chloronaphthalene	10	10	R	10	10	U	10	10	U	10	10	U
10	2-Chlorophenol	10	10	U	10	10	U	10	10	U	10	10	U
10	4-Chlorophenyl-phenylether	10	10	R	10	10	U	10	10	U	10	10	U
10	Chrysene	10	10	R	10	10	U	10	10	U	10	10	U
10	Dibenz(a,h)Anthracene	10	10	R	10	10	U	10	10	U	10	10	UJ
10	Dibenzofuran	10	10	R	10	10	U	10	10	U	10	10	U
10	1,2-Dichlorobenzene	10	10	R	10	10	U	10	10	U	10	10	U
10	1,3-Dichlorobenzene	10	10	R	10	10	U	10	10	U	10	10	U
10	1,4-Dichlorobenzene	10	10	R	10	10	U	10	10	U	10	7	J
10	3,3'-Dichlorobenzidine	10	10	R	10	10	U	10	10	U	10	10	U
10	2,4-Dichlorophenol	10	10	U	10	10	U	10	10	U	10	10	U
10	Diethylphthalate	10	10	R	10	2	B	10	1	B	10	1	B
10	2,4-Dimethylphenol	10	10	U	10	10	U	10	10	U	10	10	U
10	Dimethyl Phthalate	10	10	R	10	10	U	10	10	U	10	10	U
10	Di-n-butylphthalate	10	10	R	10	2	B	10	1	B	10	10	U
25	4,6-Dinitro-2-methylphenol	25	25	U	25	25	U	25	25	U	25	25	U
25	2,4-Dinitrophenol	25	25	U	25	25	U	25	25	U	25	25	U
10	2,4-Dinitrotoluene	10	10	R	10	10	U	10	10	U	10	10	U
10	2,6-Dinitrotoluene	10	10	R	10	10	U	10	10	U	10	10	U
10	Di-n-Octyl Phthalate	10	10	R	10	10	U	10	10	U	10	10	UJ
10	bis(2-Ethylhexyl)Phthalate	10	1	B	10	2	B	10	4	B	10	2	B
10	Fluoranthene	10	10	R	10	10	U	10	10	U	10	10	U
10	Benzo(b)Fluoranthene	10	10	R	10	10	U	10	10	U	10	10	UJ
10	Benzo(k)Fluoranthene	10	10	R	10	10	U	10	10	U	10	10	UJ
10	Fluorene	10	10	R	10	10	U	10	10	U	10	10	U
10	Hexachlorobenzene	10	10	R	10	10	U	10	10	U	10	10	U
10	Hexachlorobutadiene	10	10	R	10	10	U	10	10	U	10	10	U
10	Hexachlorocyclopentadiene	10	10	R	10	10	U	10	10	U	10	10	U
10	Hexachloroethane	10	10	R	10	10	U	10	10	U	10	10	U

Notes:
All units are ug/l
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Qualifiers:
A - Acceptable (Quantitative) Data
J - Estimated (Semiquantitative) Data
B - Present in associated blanks (Semiquantitative Data)
K - Biased High (Semiquantitative) Data
L - Biased Low (Semiquantitative) Data
UJ - Not Detected/Estimated Data
U - Not Detected/Quantitative Data
UL - Not Detected/Biased Low
N - Tentative Identification
R - Unusable Data
Q - Not Applicable

SUMMARY OF CLP ORGANICS ANALYSES - PHASE 1B
BERKS LANDFILL REMEDIAL INVESTIGATION
BERKS COUNTY, PENNSYLVANIA

Matrix: Groundwater Well

Semivolatile Organics

		Sample Point GWM06/1B Date Sampled: 07/08/93 Dilution Factor: 1.0 Percent Moisture: NA %			Sample Point GWM11/1B Date Sampled: 06/30/93 Dilution Factor: 1.0 Percent Moisture: NA %			Sample Point GWM14D/1B Date Sampled: 07/09/93 Dilution Factor: 1.0 Percent Moisture: NA %			Sample Point GWM14S/1B Date Sampled: 07/09/93 Dilution Factor: 1.0 Percent Moisture: NA %		
CRQL	Parameter	SQL	Result	Qual	SQL	Result	Qual	SQL	Result	Qual	SQL	Result	Qual
10	Indeno(1,2,3-cd)Pyrene	10	10	R	10	10	U	10	10	U	10	10	UJ
10	Isophorone	10	10	R	10	10	U	10	10	U	10	10	U
10	2-Methylnaphthalene	10	10	R	10	10	U	10	10	U	10	10	U
10	2-Methylphenol	10	10	U	10	10	U	10	10	U	10	10	U
10	4-Methylphenol	10	10	U	10	10	U	10	10	U	10	10	U
10	Naphthalene	10	2	L	10	10	U	10	10	U	10	4	J
25	2-Nitroaniline	25	25	R	25	25	U	25	25	U	25	25	U
25	3-Nitroaniline	25	25	R	25	25	U	25	25	U	25	25	U
25	4-Nitroaniline	25	25	R	25	25	U	25	25	U	25	25	U
10	Nitrobenzene	10	10	R	10	10	U	10	10	U	10	10	U
10	2-Nitrophenol	10	10	U	10	10	U	10	10	U	10	10	U
25	4-Nitrophenol	25	25	U	25	25	U	25	25	U	25	25	U
10	N-Nitroso-di-n-propylamine	10	10	R	10	10	U	10	10	U	10	10	U
10	N-Nitrosodiphenylamine	10	10	R	10	10	U	10	10	U	10	10	U
10	2,2'-Oxybis(1-Chloropropane)	10	10	R	10	10	U	10	10	U	10	10	U
25	Pentachlorophenol	25	25	U	25	25	U	25	25	U	25	25	U
10	Benzo(g,h,i)Perylene	10	10	R	10	10	U	10	10	U	10	10	UJ
10	Phenanthrene	10	10	R	10	10	U	10	10	U	10	10	U
10	Phenol	10	10	U	10	4	B	10	10	U	10	10	U
10	Pyrene	10	10	R	10	10	U	10	10	U	10	10	U
10	Benzo(a)Pyrene	10	10	R	10	10	U	10	10	U	10	10	UJ
10	1,2,4-Trichlorobenzene	10	10	R	10	10	U	10	10	U	10	10	U
25	2,4,5-Trichlorophenol	25	25	U	25	25	U	25	25	U	25	25	U
10	2,4,6-Trichlorophenol	10	10	U	10	10	U	10	10	U	10	10	U

Notes:
All units are ug/l
Sample Quantitation Limit (SQL) is CRQL multiplied by the dilution factor and adjusted for percent moisture as appropriate.
The Qual column indicates the qualifier applied to the result following data validation (see below).

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A - Acceptable (Quantitative) Data
J - Estimated (Semiquantitative) Data
B - Present in associated blanks (Semiquantitative Data)
K - Biased High (Semiquantitative) Data
L - Biased Low (Semiquantitative) Data
UJ- Not Detected/Estimated Data
U - Not Detected/Quantitative Data
UL- Not Detected/Biased Low
N - Tentative Identification
R - Unusable Data
Q - Not Applicable

SUMMARY OF CLP ORGANICS ANALYSES - PHASE 1B
BERKS LANDFILL REMEDIAL INVESTIGATION
BERKS COUNTY, PENNSYLVANIA

Matrix: Groundwater Well

Semivolatile Organics

		Sample Point GWM14S/RE Date Sampled: 07/09/93 Dilution Factor: 1.0 Percent Moisture: NA %			Sample Point GWM15D/1B Date Sampled: 07/08/93 Dilution Factor: 1.0 Percent Moisture: NA %			Sample Point GWM15S/1B Date Sampled: 07/02/93 Dilution Factor: 1.0 Percent Moisture: NA %			Sample Point GWM16/1B Date Sampled: 07/08/93 Dilution Factor: 1.0 Percent Moisture: NA %		
CRQL	Parameter	SQL	Result	Qual	SQL	Result	Qual	SQL	Result	Qual	SQL	Result	Qual
10	Acenaphthene	10	10	U	10	10	U	10	10	U	10	10	U
10	Acenaphthylene	10	10	U	10	10	U	10	10	U	10	10	U
10	Anthracene	10	10	U	10	10	U	10	10	U	10	10	U
10	Benzo(a)Anthracene	10	10	U	10	10	U	10	10	U	10	10	U
10	4-Bromophenyl-phenylether	10	10	U	10	10	U	10	10	U	10	10	U
10	Butylbenzylphthalate	10	10	U	10	10	U	10	10	U	10	10	U
10	Carbazole	10	10	U	10	10	U	10	10	U	10	10	U
10	4-Chloro-3-Methylphenol	10	10	U	10	10	U	10	10	U	10	10	U
10	4-Chloroaniline	10	10	U	10	10	U	10	10	U	10	10	U
10	bis(2-Chloroethoxy)Methane	10	10	U	10	10	U	10	10	U	10	10	U
10	bis(2-Chloroethyl)ether	10	10	U	10	10	U	10	10	U	10	10	U
10	2-Chloronaphthalene	10	10	U	10	10	U	10	10	U	10	10	U
10	2-Chlorophenol	10	10	U	10	10	U	10	10	U	10	10	U
10	4-Chlorophenyl-phenylether	10	10	U	10	10	U	10	10	U	10	10	U
10	Chrysene	10	10	U	10	10	U	10	10	U	10	10	U
10	Dibenz(a,h)Anthracene	10	10	UJ	10	10	U	10	10	U	10	10	U
10	Dibenzofuran	10	10	U	10	10	U	10	10	U	10	10	U
10	1,2-Dichlorobenzene	10	10	U	10	10	U	10	10	U	10	10	U
10	1,3-Dichlorobenzene	10	10	U	10	10	U	10	10	U	10	10	U
10	1,4-Dichlorobenzene	10	7	J	10	10	U	10	10	U	10	3	J
10	3,3'-Dichlorobenzidine	10	10	U	10	10	U	10	10	U	10	10	U
10	2,4-Dichlorophenol	10	10	U	10	10	U	10	10	U	10	10	U
10	Diethylphthalate	10	1	B	10	10	U	10	10	U	10	13	B
10	2,4-Dimethylphenol	10	10	U	10	10	U	10	10	U	10	4	J
10	Dimethyl Phthalate	10	10	U	10	10	U	10	10	U	10	10	U
10	Di-n-butylphthalate	10	10	U	10	10	U	10	10	U	10	10	U
25	4,6-Dinitro-2-methylphenol	25	25	U	25	25	U	25	25	U	25	25	U
25	2,4-Dinitrophenol	25	25	U	25	25	U	25	25	U	25	25	U
10	2,4-Dinitrotoluene	10	10	U	10	10	U	10	10	U	10	10	U
10	2,6-Dinitrotoluene	10	10	U	10	10	U	10	10	U	10	10	U
10	Di-n-Octyl Phthalate	10	10	UJ	10	4	J	10	10	U	10	10	U
10	bis(2-Ethylhexyl)Phthalate	10	10	U	10	5	B	10	2	B	10	2	B
10	Fluoranthene	10	10	U	10	10	U	10	10	U	10	10	U
10	Benzo(b)Fluoranthene	10	10	UJ	10	10	U	10	10	U	10	10	U
10	Benzo(k)Fluoranthene	10	10	UJ	10	10	U	10	10	U	10	10	U
10	Fluorene	10	10	U	10	10	U	10	10	U	10	10	U
10	Hexachlorobenzene	10	10	U	10	10	U	10	10	U	10	10	U
10	Hexachlorobutadiene	10	10	U	10	10	U	10	10	U	10	10	U
10	Hexachlorocyclopentadiene	10	10	U	10	10	U	10	10	U	10	10	U
10	Hexachloroethane	10	10	U	10	10	U	10	10	U	10	10	U

Notes:
All units are ug/l
Sample Quantitation Limit (SQL) is CRQL multiplied by the dilution factor and adjusted for percent moisture as appropriate.
The Qual column indicates the qualifier applied to the result following data validation (see below).

Qualifiers:
A - Acceptable (Quantitative) Data
J - Estimated (Semiquantitative) Data
B - Present in associated blanks (Semiquantitative Data)
K - Biased High (Semiquantitative) Data
L - Biased Low (Semiquantitative) Data
UJ- Not Detected/Estimated Data
U - Not Detected/Quantitative Data
UL- Not Detected/Biased Low
N - Tentative Identification
R - Unusable Data
Q - Not Applicable

SUMMARY OF CLP ORGA. . ANALYSES - PHASE 1B
BERKS LANDFILL REMEDIAL INVESTIGATION
BERKS COUNTY, PENNSYLVANIA

Matrix: Groundwater Well

Semivolatile Organics

		Sample Point GWM14S/RE Date Sampled: 07/09/93 Dilution Factor: 1.0 Percent Moisture: NA %			Sample Point GWM15D/1B Date Sampled: 07/08/93 Dilution Factor: 1.0 Percent Moisture: NA %			Sample Point GWM15S/1B Date Sampled: 07/02/93 Dilution Factor: 1.0 Percent Moisture: NA %			Sample Point GWM16/1B Date Sampled: 07/08/93 Dilution Factor: 1.0 Percent Moisture: NA %		
CRQL	Parameter	SQL	Result	Qual	SQL	Result	Qual	SQL	Result	Qual	SQL	Result	Qual
10	Indeno(1,2,3-cd)Pyrene	10	10	UJ	10	10	U	10	10	U	10	10	U
10	Isophorone	10	10	U	10	10	U	10	10	U	10	2	J
10	2-Methylnaphthalene	10	10	U	10	10	U	10	10	U	10	10	U
10	2-Methylphenol	10	10	U	10	10	U	10	10	U	10	10	U
10	4-Methylphenol	10	10	U	10	10	U	10	10	U	10	1	J
10	Naphthalene	10	5	J	10	10	U	10	10	U	10	1	J
25	2-Nitroaniline	25	25	U	25	25	U	25	25	U	25	25	U
25	3-Nitroaniline	25	25	U	25	25	U	25	25	U	25	25	U
25	4-Nitroaniline	25	25	U	25	25	U	25	25	U	25	25	U
10	Nitrobenzene	10	10	U	10	10	U	10	10	U	10	10	U
10	2-Nitrophenol	10	10	U	10	10	U	10	10	U	10	10	U
25	4-Nitrophenol	25	25	U	25	25	U	25	25	U	25	25	U
10	N-Nitroso-di-n-propylamine	10	10	U	10	10	U	10	10	U	10	10	U
10	N-Nitrosodiphenylamine	10	10	U	10	10	U	10	10	U	10	10	U
10	2,2'-Oxybis(1-Chloropropane)	10	10	U	10	10	U	10	10	U	10	10	U
25	Pentachlorophenol	25	25	U	25	25	U	25	25	U	25	25	U
10	Benzo(g,h,i)Perylene	10	10	UJ	10	10	U	10	10	U	10	10	U
10	Phenanthrene	10	10	U	10	10	U	10	10	U	10	10	U
10	Phenol	10	10	U	10	2	B	10	10	U	10	10	U
10	Pyrene	10	10	U	10	10	U	10	10	U	10	10	U
10	Benzo(a)Pyrene	10	10	UJ	10	10	U	10	10	U	10	10	U
10	1,2,4-Trichlorobenzene	10	10	U	10	10	U	10	10	U	10	10	U
25	2,4,5-Trichlorophenol	25	25	U	25	25	U	25	25	U	25	25	U
10	2,4,6-Trichlorophenol	10	10	U	10	10	U	10	10	U	10	10	U

Notes:
All units are ug/l
Sample Quantitation Limit (SQL) is CRQL multiplied by the dilution factor and adjusted for percent moisture as appropriate.
The Qual column indicates the qualifier applied to the result following data validation (see below).

Qualifiers:
A - Acceptable (Quantitative) Data
J - Estimated (Semiquantitative) Data
B - Present in associated blanks (Semiquantitative Data)
K - Biased High (Semiquantitative) Data
L - Biased Low (Semiquantitative) Data
UJ- Not Detected/Estimated Data
U - Not Detected/Quantitative Data
UL- Not Detected/Biased Low
N - Tentative Identification
R - Unusable Data
Q - Not Applicable

SUMMARY OF CLP ORGANICS ANALYSES - PHASE 1B
BERKS LANDFILL REMEDIAL INVESTIGATION
BERKS COUNTY, PENNSYLVANIA

Matrix: Groundwater Well

Semivolatile Organics

		Sample Point GWM17/1B Date Sampled: 07/08/93 Dilution Factor: 1.0 Percent Moisture: NA %			Sample Point GWM19S/1B Date Sampled: 06/30/93 Dilution Factor: 1.0 Percent Moisture: NA %			Sample Point GWR19D/1B Date Sampled: 07/06/93 Dilution Factor: 1.0 Percent Moisture: NA %			Sample Point Date Sampled: Dilution Factor: Percent Moisture: %		
CRQL	Parameter	SQL	Result	Qual	SQL	Result	Qual	SQL	Result	Qual	SQL	Result	Qual
10	Acenaphthene	10	10	U	10	10	U	10	10	U			
10	Acenaphthylene	10	10	U	10	10	U	10	10	U			
10	Anthracene	10	10	U	10	10	U	10	10	U			
10	Benzo(a)Anthracene	10	10	U	10	10	U	10	10	U			
10	4-Bromophenyl-phenylether	10	10	U	10	10	U	10	10	U			
10	Butylbenzylphthalate	10	10	U	10	10	U	10	10	U			
10	Carbazole	10	10	U	10	10	U	10	10	U			
10	4-Chloro-3-Methylphenol	10	10	U	10	10	U	10	10	U			
10	4-Chloroaniline	10	10	U	10	10	U	10	10	U			
10	bis(2-Chloroethoxy)Methane	10	10	U	10	10	U	10	10	U			
10	bis(2-Chloroethyl)ether	10	10	U	10	10	U	10	10	U			
10	2-Chloronaphthalene	10	10	U	10	10	U	10	10	U			
10	2-Chlorophenol	10	10	U	10	10	U	10	10	U			
10	4-Chlorophenyl-phenylether	10	10	U	10	10	U	10	10	U			
10	Chrysene	10	10	U	10	10	U	10	10	U			
10	Dibenz(a,h)Anthracene	10	10	U	10	10	UJ	10	10	U			
10	Dibenzofuran	10	10	U	10	10	U	10	10	U			
10	1,2-Dichlorobenzene	10	10	U	10	10	U	10	10	U			
10	1,3-Dichlorobenzene	10	10	U	10	10	U	10	10	U			
10	1,4-Dichlorobenzene	10	10	U	10	10	U	10	10	U			
10	3,3'-Dichlorobenzidine	10	10	U	10	10	U	10	10	U			
10	2,4-Dichlorophenol	10	10	U	10	10	U	10	10	U			
10	Diethylphthalate	10	10	U	10	3	B	10	10	U			
10	2,4-Dimethylphenol	10	10	U	10	10	U	10	10	U			
10	Dimethyl Phthalate	10	10	U	10	10	U	10	10	U			
10	Di-n-butylphthalate	10	10	U	10	2	B	10	1	B			
25	4,6-Dinitro-2-methylphenol	25	25	U	25	25	U	25	25	U			
25	2,4-Dinitrophenol	25	25	U	25	25	U	25	25	U			
10	2,4-Dinitrotoluene	10	10	U	10	10	U	10	10	U			
10	2,6-Dinitrotoluene	10	10	U	10	10	U	10	10	U			
10	Di-n-Octyl Phthalate	10	10	U	10	10	UJ	10	10	U			
10	bis(2-Ethylhexyl)Phthalate	10	1	B	10	4	B	10	1	B			
10	Fluoranthene	10	10	U	10	10	U	10	10	U			
10	Benzo(b)Fluoranthene	10	10	U	10	10	UJ	10	10	U			
10	Benzo(k)Fluoranthene	10	10	U	10	10	UJ	10	10	U			
10	Fluorene	10	10	U	10	10	U	10	10	U			
10	Hexachlorobenzene	10	10	U	10	10	U	10	10	U			
10	Hexachlorobutadiene	10	10	U	10	10	U	10	10	U			
10	Hexachlorocyclopentadiene	10	10	U	10	10	U	10	10	U			
10	Hexachloroethane	10	10	U	10	10	U	10	10	U			

Notes:
All units are ug/l
Sample Quantitation Limit (SQL) is CRQL multiplied by the dilution factor and adjusted for percent moisture as appropriate.
The Qual column indicates the qualifier applied to the result following data validation (see below).

Qualifiers:
A - Acceptable (Quantitative) Data
J - Estimated (Semiquantitative) Data
B - Present in associated blanks (Semiquantitative Data)
K - Biased High (Semiquantitative) Data
L - Biased Low (Semiquantitative) Data
UJ- Not Detected/Estimated Data
U - Not Detected/Quantitative Data
UL- Not Detected/Biased Low
N - Tentative Identification
R - Unusable Data
Q - Not Applicable

SUMMARY OF CLP ORGAN.. ANALYSES - PHASE 1B
BERKS LANDFILL REMEDIAL INVESTIGATION
BERKS COUNTY, PENNSYLVANIA

Matrix: Groundwater Well

Semivolatile Organics

		Sample Point GWM17/1B Date Sampled: 07/08/93 Dilution Factor: 1.0 Percent Moisture: NA %			Sample Point GWM19S/1B Date Sampled: 06/30/93 Dilution Factor: 1.0 Percent Moisture: NA %			Sample Point GWR19D/1B Date Sampled: 07/06/93 Dilution Factor: 1.0 Percent Moisture: NA %			Sample Point Date Sampled: Dilution Factor: Percent Moisture: %		
CRQL	Parameter	SQL	Result	Qual	SQL	Result	Qual	SQL	Result	Qual	SQL	Result	Qual
10	Indeno(1,2,3-cd)Pyrene	10	10	U	10	10	UJ	10	10	U			
10	Isophorone	10	10	U	10	10	U	10	10	U			
10	2-Methylnaphthalene	10	10	U	10	10	U	10	10	U			
10	2-Methylphenol	10	10	U	10	10	U	10	10	U			
10	4-Methylphenol	10	10	U	10	10	U	10	10	U			
10	Naphthalene	10	10	U	10	10	U	10	10	U			
25	2-Nitroaniline	25	25	U	25	25	U	25	25	U			
25	3-Nitroaniline	25	25	U	25	25	U	25	25	U			
25	4-Nitroaniline	25	25	U	25	25	U	25	25	U			
10	Nitrobenzene	10	10	U	10	10	U	10	10	U			
10	2-Nitrophenol	10	10	U	10	10	U	10	10	U			
25	4-Nitrophenol	25	25	U	25	25	U	25	25	U			
10	N-Nitroso-di-n-propylamine	10	10	U	10	10	U	10	10	U			
10	N-Nitrosodiphenylamine	10	10	U	10	10	U	10	10	U			
10	2,2'-Oxybis(1-Chloropropane)	10	10	U	10	10	U	10	10	U			
25	Pentachlorophenol	25	25	U	25	25	U	25	25	U			
10	Benzo(g,h,i)Perylene	10	10	U	10	10	UJ	10	10	U			
10	Phenanthrene	10	10	U	10	10	U	10	10	U			
10	Phenol	10	10	U	10	5	B	10	10	U			
10	Pyrene	10	10	U	10	10	U	10	10	U			
10	Benzo(a)Pyrene	10	10	U	10	10	UJ	10	10	U			
10	1,2,4-Trichlorobenzene	10	10	U	10	10	U	10	10	U			
25	2,4,5-Trichlorophenol	25	25	U	25	25	U	25	25	U			
10	2,4,6-Trichlorophenol	10	10	U	10	10	U	10	10	U			

Notes:
All units are ug/l
Sample Quantitation Limit (SQL) is CRQL multiplied by the dilution factor and adjusted for percent moisture as appropriate.
The Qual column indicates the qualifier applied to the result following data validation (see below).

Qualifiers:
A - Acceptable (Quantitative) Data
J - Estimated (Semiquantitative) Data
B - Present in associated blanks (Semiquantitative Data)
K - Biased High (Semiquantitative) Data
L - Biased Low (Semiquantitative) Data
UJ- Not Detected/Estimated Data
U - Not Detected/Quantitative Data
UL- Not Detected/Biased Low
N - Tentative Identification
R - Unusable Data
Q - Not Applicable

PESTICIDES/PCBs

Phase 1A

SUMMARY OF CLP ORGANICS ANALYSES - PHASE 1A
BERKS LANDFILL REMEDIAL INVESTIGATION
BERKS COUNTY, PENNSYLVANIA

Matrix: Groundwater Well

Pesticide Organics

		Sample Point GW18S/1A Date Sampled: 09/03/92 Dilution Factor: 1.0 Percent Moisture: NA %			Sample Point GW18S/FD Date Sampled: 09/03/92 Dilution Factor: 1.0 Percent Moisture: NA %			Sample Point GWC3D/1A Date Sampled: 09/04/92 Dilution Factor: 1.0 Percent Moisture: NA %			Sample Point GWC3S/1A Date Sampled: 09/03/92 Dilution Factor: 1.0 Percent Moisture: NA %		
CRQL	Parameter	SQL	Result	Qual	SQL	Result	Qual	SQL	Result	Qual	SQL	Result	Qual
0.05	Aldrin	0.050	0.050	UL	0.050	0.050	U	0.050	0.050	UL	0.050	0.050	UL
1.0	Aroclor-1016	1.0	1.0	UL	1.0	1.0	U	1.0	1.0	UL	1.0	1.0	UL
2.0	Aroclor-1221	2.0	2.0	UL	2.0	2.0	U	2.0	2.0	UL	2.0	2.0	UL
1.0	Aroclor-1232	1.0	1.0	UL	1.0	1.0	U	1.0	1.0	UL	1.0	1.0	UL
1.0	Aroclor-1242	1.0	1.0	UL	1.0	1.0	U	1.0	1.0	UL	1.0	1.0	UL
1.0	Aroclor-1248	1.0	1.0	UL	1.0	1.0	U	1.0	1.0	UL	1.0	1.0	UL
1.0	Aroclor-1254	1.0	1.0	UL	1.0	1.0	U	1.0	1.0	UL	1.0	1.0	UL
1.0	Aroclor-1260	1.0	1.0	UL	1.0	1.0	U	1.0	1.0	UL	1.0	1.0	UL
0.05	alpha-BHC	0.050	0.050	UL	0.050	0.050	U	0.050	0.050	UL	0.050	0.050	UL
0.05	beta-BHC	0.050	0.050	UL	0.050	0.050	U	0.050	0.050	UL	0.050	0.050	UL
0.05	delta-BHC	0.050	0.050	UL	0.050	0.050	U	0.050	0.050	UL	0.050	0.050	UL
0.05	gamma-BHC (Lindane)	0.050	0.050	UL	0.050	0.050	U	0.050	0.050	UL	0.050	0.050	UL
0.05	alpha-Chlordane	0.050	0.050	UL	0.050	0.050	U	0.050	0.050	UL	0.050	0.050	UL
0.05	gamma-Chlordane	0.050	0.050	UL	0.050	0.050	U	0.050	0.050	UL	0.050	0.050	UL
0.10	4,4'-DDD	0.10	0.10	UL	0.10	0.10	U	0.10	0.10	UL	0.10	0.10	UL
0.10	4,4'-DDE	0.10	0.10	UL	0.10	0.10	U	0.10	0.10	UL	0.10	0.10	UL
0.10	4,4'-DDT	0.10	0.10	UL	0.10	0.10	U	0.10	0.10	UL	0.10	0.10	UL
0.10	Dieldrin	0.10	0.10	UL	0.10	0.10	U	0.10	0.10	UL	0.10	0.10	UL
0.05	Endosulfan I	0.050	0.050	UL	0.050	0.050	U	0.050	0.050	UL	0.050	0.050	UL
0.10	Endosulfan II	0.10	0.10	UL	0.10	0.10	U	0.10	0.10	UL	0.10	0.10	UL
0.10	Endosulfan Sulfate	0.10	0.10	UL	0.10	0.10	U	0.10	0.10	UL	0.10	0.10	UL
0.10	Endrin	0.10	0.10	UL	0.10	0.10	U	0.10	0.10	UL	0.10	0.10	UL
0.10	Endrin Aldehyde	0.10	0.10	UL	0.10	0.10	U	0.10	0.10	UL	0.10	0.10	UL
0.10	Endrin Ketone	0.10	0.10	UL	0.10	0.10	U	0.10	0.10	UL	0.10	0.10	UL
0.05	Heptachlor	0.050	0.050	UL	0.050	0.050	U	0.050	0.050	UL	0.050	0.050	UL
0.05	Heptachlor Epoxide	0.050	0.050	UL	0.050	0.050	U	0.050	0.050	UL	0.050	0.050	UL
0.50	Methoxychlor	0.50	0.50	UL	0.50	0.50	U	0.50	0.50	UL	0.50	0.50	UL
5.0	Toxaphene	5.0	5.0	UL	5.0	5.0	U	5.0	5.0	UL	5.0	5.0	UL

AR302815

Notes:
All units are ug/l
Sample Quantitation Limit (SQL) is CRQL multiplied by the dilution factor and adjusted for percent moisture as appropriate.
The Qual column indicates the qualifier applied to the result following data validation (see below).

Qualifiers:
A - Acceptable (Quantitative) Data
J - Estimated (Semiquantitative) Data
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L - Biased Low (Semiquantitative) Data
UJ- Not Detected/Estimated Data
U - Not Detected/Quantitative Data
UL- Not Detected/Biased Low
N - Tentative Identification
R - Unusable Data
Q - Not Applicable

SUMMARY OF CLP ORGANICS ANALYSES - PHASE 1A
BERKS LANDFILL REMEDIAL INVESTIGATION
BERKS COUNTY, PENNSYLVANIA

Matrix: Groundwater Well

Pesticide Organics

		Sample Point GR18D/1A Date Sampled: 11/13/92 Dilution Factor: 1.0 Percent Moisture: NA %			Sample Point GW-16/1A Date Sampled: 09/04/92 Dilution Factor: 1.0 Percent Moisture: NA %			Sample Point GW-16/1A Date Sampled: 09/09/92 Dilution Factor: 1.0 Percent Moisture: NA %			Sample Point GW-C5/1A Date Sampled: 09/03/92 Dilution Factor: 1.0 Percent Moisture: NA %		
CRQL	Parameter	SQL	Result	Qual	SQL	Result	Qual	SQL	Result	Qual	SQL	Result	Qual
0.05	Aldrin	0.050	0.050	UL	0.050	0.050	UL	0.050	0.050	UL	0.050	0.050	UL
1.0	Aroclor-1016	1.0	1.0	UL	1.0	1.0	UL	1.0	1.0	UL	1.0	1.0	UL
2.0	Aroclor-1221	2.0	2.0	UL	2.0	2.0	UL	2.0	2.0	UL	2.0	2.0	UL
1.0	Aroclor-1232	1.0	1.0	UL	1.0	1.0	UL	1.0	1.0	UL	1.0	1.0	UL
1.0	Aroclor-1242	1.0	1.0	UL	1.0	1.0	UL	1.0	1.0	UL	1.0	1.0	UL
1.0	Aroclor-1248	1.0	1.0	UL	1.0	1.0	UL	1.0	1.0	UL	1.0	1.0	UL
1.0	Aroclor-1254	1.0	1.0	UL	1.0	1.0	UL	1.0	1.0	UL	1.0	1.0	UL
1.0	Aroclor-1260	1.0	1.0	UL	1.0	1.0	UL	1.0	1.0	UL	1.0	1.0	UL
0.05	alpha-BHC	0.050	0.050	UL	0.050	0.050	UL	0.050	0.050	UL	0.050	0.050	UL
0.05	beta-BHC	0.050	0.050	UL	0.050	0.050	UL	0.050	0.050	UL	0.050	0.050	UL
0.05	delta-BHC	0.050	0.050	UL	0.050	0.050	UL	0.050	0.050	UL	0.050	0.050	UL
0.05	gamma-BHC (Lindane)	0.050	0.050	UL	0.050	0.050	UL	0.050	0.050	UL	0.050	0.050	UL
0.05	alpha-Chlordane	0.050	0.050	UL	0.050	0.050	UL	0.050	0.050	UL	0.050	0.050	UL
0.05	gamma-Chlordane	0.050	0.050	UL	0.050	0.050	UL	0.050	0.050	UL	0.050	0.050	UL
0.10	4,4'-DDD	0.10	0.10	UL	0.10	0.10	UL	0.10	0.10	UL	0.10	0.10	UL
0.10	4,4'-DDE	0.10	0.10	UL	0.10	0.10	UL	0.10	0.10	UL	0.10	0.10	UL
0.10	4,4'-DDT	0.10	0.10	UL	0.10	0.10	UL	0.10	0.10	UL	0.10	0.10	UL
0.10	Dieldrin	0.10	0.10	UL	0.10	0.10	UL	0.10	0.10	UL	0.10	0.10	UL
0.05	Endosulfan I	0.050	0.050	UL	0.050	0.050	UL	0.050	0.050	UL	0.050	0.050	UL
0.10	Endosulfan II	0.10	0.10	UL	0.10	0.10	UL	0.10	0.10	UL	0.10	0.10	UL
0.10	Endosulfan Sulfate	0.10	0.10	UL	0.10	0.10	UL	0.10	0.10	UL	0.10	0.10	UL
0.10	Endrin	0.10	0.10	UL	0.10	0.10	UL	0.10	0.10	UL	0.10	0.10	UL
0.10	Endrin Aldehyde	0.10	0.10	UL	0.10	0.10	UL	0.10	0.10	UL	0.10	0.10	UL
0.10	Endrin Ketone	0.10	0.10	UL	0.10	0.10	UL	0.10	0.10	UL	0.10	0.10	UL
0.05	Heptachlor	0.050	0.050	UL	0.050	0.050	UL	0.050	0.050	UL	0.050	0.050	UL
0.05	Heptachlor Epoxide	0.050	0.050	UL	0.050	0.050	UL	0.050	0.050	UL	0.050	0.050	UL
0.50	Methoxychlor	0.50	0.50	UL	0.50	0.50	UL	0.50	0.50	UL	0.50	0.50	UL
5.0	Toxaphene	5.0	5.0	UL	5.0	5.0	UL	5.0	5.0	UL	5.0	5.0	UL

Notes:
All units are ug/l
Sample Quantitation Limit (SQL) is CRQL multiplied by the dilution factor and adjusted for percent moisture as appropriate.
The Qual column indicates the qualifier applied to the result following data validation (see below).

Qualifiers:
A - Acceptable (Quantitative) Data
J - Estimated (Semiquantitative) Data
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K - Biased High (Semiquantitative) Data
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UJ- Not Detected/Estimated Data
U - Not Detected/Quantitative Data
UL- Not Detected/Biased Low
N - Tentative Identification
R - Unusable Data
Q - Not Applicable

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SUMMARY OF CLP ORGA[illegible] ANALYSES - PHASE 1A
BERKS LANDFILL REMEDIAL INVESTIGATION
BERKS COUNTY, PENNSYLVANIA

Matrix: Groundwater Well

Pesticide Organics

		Sample Point GWG01/1A Date Sampled: 09/02/92 Dilution Factor: 1.0 Percent Moisture: NA %			Sample Point GWG02/1A Date Sampled: 09/02/92 Dilution Factor: 1.0 Percent Moisture: NA %			Sample Point GWG03/1A Date Sampled: 09/02/92 Dilution Factor: 1.0 Percent Moisture: NA %			Sample Point Date Sampled: Dilution Factor: Percent Moisture: %		
CRQL	Parameter	SQL	Result	Qual	SQL	Result	Qual	SQL	Result	Qual	SQL	Result	Qual
0.05	Aldrin	0.050	0.050	UL	0.050	0.050	UL	0.050	0.050	UL			
1.0	Aroclor-1016	1.0	1.0	UL	1.0	1.0	UL	1.0	1.0	UL			
2.0	Aroclor-1221	2.0	2.0	UL	2.0	2.0	UL	2.0	2.0	UL			
1.0	Aroclor-1232	1.0	1.0	UL	1.0	1.0	UL	1.0	1.0	UL			
1.0	Aroclor-1242	1.0	1.0	UL	1.0	1.0	UL	1.0	1.0	UL			
1.0	Aroclor-1248	1.0	1.0	UL	1.0	1.0	UL	1.0	1.0	UL			
1.0	Aroclor-1254	1.0	1.0	UL	1.0	1.0	UL	1.0	1.0	UL			
1.0	Aroclor-1260	1.0	1.0	UL	1.0	1.0	UL	1.0	1.0	UL			
0.05	alpha-BHC	0.050	0.050	UL	0.050	0.050	UL	0.050	0.050	UL			
0.05	beta-BHC	0.050	0.050	UL	0.050	0.050	UL	0.050	0.050	UL			
0.05	delta-BHC	0.050	0.050	UL	0.050	0.050	UL	0.050	0.050	UL			
0.05	gamma-BHC (Lindane)	0.050	0.050	UL	0.050	0.050	UL	0.050	0.050	UL			
0.05	alpha-Chlordane	0.050	0.050	UL	0.050	0.050	UL	0.050	0.050	UL			
0.05	gamma-Chlordane	0.050	0.050	UL	0.050	0.050	UL	0.050	0.050	UL			
0.10	4,4'-DDD	0.10	0.10	UL	0.10	0.10	UL	0.10	0.10	UL			
0.10	4,4'-DDE	0.10	0.10	UL	0.10	0.10	UL	0.10	0.10	UL			
0.10	4,4'-DDT	0.10	0.10	UL	0.10	0.10	UL	0.10	0.10	UL			
0.10	Dieldrin	0.10	0.10	UL	0.10	0.10	UL	0.10	0.10	UL			
0.05	Endosulfan I	0.050	0.050	UL	0.050	0.050	UL	0.050	0.050	UL			
0.10	Endosulfan II	0.10	0.10	UL	0.10	0.10	UL	0.10	0.10	UL			
0.10	Endosulfan Sulfate	0.10	0.10	UL	0.10	0.10	UL	0.10	0.10	UL			
0.10	Endrin	0.10	0.10	UL	0.10	0.10	UL	0.10	0.10	UL			
0.10	Endrin Aldehyde	0.10	0.10	UL	0.10	0.10	UL	0.10	0.10	UL			
0.10	Endrin Ketone	0.10	0.10	UL	0.10	0.10	UL	0.10	0.10	UL			
0.05	Heptachlor	0.050	0.050	UL	0.050	0.050	UL	0.050	0.050	UL			
0.05	Heptachlor Epoxide	0.050	0.050	UL	0.050	0.050	UL	0.050	0.050	UL			
0.50	Methoxychlor	0.50	0.50	UL	0.50	0.50	UL	0.50	0.50	UL			
5.0	Toxaphene	5.0	5.0	UL	5.0	5.0	UL	5.0	5.0	UL			

Notes:
All units are ug/l
Sample Quantitation Limit (SQL) is CRQL multiplied by the dilution factor and adjusted for percent moisture as appropriate.
The Qual column indicates the qualifier applied to the result following data validation (see below).

Qualifiers:
A - Acceptable (Quantitative) Data
J - Estimated (Semiquantitative) Data
B - Present in associated blanks (Semiquantitative Data)
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UJ- Not Detected/Estimated Data
U - Not Detected/Quantitative Data
UL- Not Detected/Biased Low
N - Tentative Identification
R - Unusable Data
Q - Not Applicable

TOTAL (UNFILTERED) METALS

Phase 1A
Phase 1B

SUMMARY OF CLP TOTAL INORGANICS ANALYSES - PHASE 1A
BERKS LANDFILL REMEDIAL INVESTIGATION - PHASE 1A
BERKS COUNTY, PENNSYLVANIA

Matrix: Groundwater Well

	Sample Point GR-18/1A Date Sampled: 11/13/92 Dilution Factor: Percent Solids: NA %				Sample Point GW-03S/1A Date Sampled: 09/03/92 Dilution Factor: Percent Solids: NA %				Sample Point GW-05/1A Date Sampled: 09/03/92 Dilution Factor: Percent Solids: NA %				Sample Point GW-16/1A Date Sampled: 09/04/92 Dilution Factor: Percent Solids: NA %			
Parameter	CRDL	IDL	Result	Qual	CRDL	IDL	Result	Qual	CRDL	IDL	Result	Qual	CRDL	IDL	Result	Qual
Aluminum	200	14.0	104	B	200	14.0	3160	J	200	14.0	81.8	B	200	14.0	3330	J
Antimony	60.0	14.0	14.0	U	60.0	14.0	16.2	B	60.0	14.0	14.0	U	60.0	14.0	14.0	U
Arsenic	10.0	3.0	4.8	A	10.0	3.0	6.6	A	10.0	3.0	3.0	A	10.0	3.0	20.0	B
Barium	200	0.40	32.6	B	200	0.40	116	J	200	0.40	42.6	J	200	0.40	389	J
Beryllium	5.0	0.30	0.30	U	5.0	0.30	1.0	A	5.0	0.30	0.30	U	5.0	0.30	0.30	U
Cadmium	5.0	1.9	2.4	B	5.0	1.9	2.2	J	5.0	1.9	14.4	J	5.0	1.9	1.9	U
Calcium	5000	4.1	57100	A	5000	4.1	251000	J	5000	4.1	80100	J	5000	4.1	465000	J
Chromium	10.0	3.6	3.6	U	10.0	3.6	3.6	UL	10.0	3.6	3.6	UL	10.0	3.6	13.7	J
Cobalt	50.0	2.0	2.0	U	50.0	2.0	14.6	A	50.0	2.0	4.2	A	50.0	2.0	10.5	A
Copper	25.0	1.9	11.6	B	25.0	1.9	12.6	B	25.0	1.9	8.0	B	25.0	1.9	10.8	B
Iron	100	9.2	146.0	B	100	9.2	7220	J	100	9.2	119000	J	100	9.2	9670	J
Lead	3.0	1.0	7.4	A	3.0	1.0	9.6	A	3.0	1.0	3.4	B	3.0	1.0	27.3	A
Magnesium	5000	12.2	9780	A	5000	12.2	153000	J	5000	12.2	34400	J	5000	12.2	129000	J
Manganese	15.0	0.60	24.5	A	15.0	0.60	10100	J	15.0	0.60	1300	J	15.0	0.60	12200	J
Mercury	0.20	0.05	0.05	U	0.20	0.04	0.04	U	0.20	0.04	0.07	B	0.20	0.04	0.05	B
Nickel	40.0	7.9	7.9	U	40.0	7.9	104	A	40.0	7.9	10.3	B	40.0	7.9	32.4	A
Potassium	5000	64.0	7040	A	5000	64.0	3720	J	5000	64.0	5340	J	5000	64.0	15600	J
Selenium	5.0	5.0	5.0	U	5.0	5.0	5.0	U	5.0	5.0	5.0	U	5.0	5.0	5.0	U
Silver	10.0	2.0	2.0	U	10.0	2.0	2.0	U	10.0	2.0	5.4	B	10.0	2.0	2.0	U
Sodium	5000	8.0	17400	A	5000	8.0	48200	J	5000	8.0	23100	J	5000	8.0	71900	J
Thallium	10.0	2.0	2.0	U	10.0	2.0	10.0	UL	10.0	2.0	2.0	UL	10.0	2.0	2.0	UL
Vanadium	50.0	1.8	1.8	U	50.0	1.8	12.8	J	50.0	1.8	8.3	J	50.0	1.8	8.1	J
Zinc	20.0	1.2	22.0	B	20.0	1.2	30.9	J	20.0	1.2	11.0	B	20.0	1.2	47.4	J
Cyanide	10.0	10.0	10.0	U	10.0	10.0	10.0	U	10.0	10.0	10.0	U	10.0	10.0	10.0	U

Notes: All units are ug/l
Sample Quantitation Limit (SQL) is the Instrument Detection Limit (IDL).
The CRDLs and IDLs have been adjusted for dilution factors and percent solids as appropriate.

Qualifiers.....

A - Acceptable (Quantitative) Data
J - Estimated (Semiquantitative) Data
K - Biased High (Semiquantitative) Data
L - Biased Low (Semiquantitative) Data
B - Present in associated blanks (Semiquantitative) Data
UJ- Not Detected/Estimated Data
U - Not Detected/Quantitative Data
UL- Not Detected/Biased Low
N - Tentative Identification
R - Unusable Data
Q - Not Applicable

SUMMARY OF CLP TOTAL INORGANICS ANALYSES - PHASE 1A
BERKS LANDFILL REMEDIAL INVESTIGATION - PHASE 1A
BERKS COUNTY, PENNSYLVANIA

Matrix: Groundwater Well

	Sample Point GW-18S/1A Date Sampled: 09/03/92 Dilution Factor: Percent Solids: NA %				Sample Point GW-18S/FD Date Sampled: 09/03/92 Dilution Factor: Percent Solids: NA %				Sample Point GWC-03D/1A Date Sampled: 09/04/92 Dilution Factor: Percent Solids: NA %				Sample Point GWG-01/1A Date Sampled: 09/02/92 Dilution Factor: Percent Solids: NA %			
Parameter	CRDL	IDL	Result	Qual	CRDL	IDL	Result	Qual	CRDL	IDL	Result	Qual	CRDL	IDL	Result	Qual
Aluminum	200	14.0	50.2	B	200	14.0	75.4	B	200	14.0	41.9	B	200	14.0	55700	J
Antimony	60.0	14.0	14.0	U	60.0	14.0	14.0	U	60.0	14.0	14.0	U	60.0	14.0	14.0	U
Arsenic	10.0	3.0	3.0	U	10.0	3.0	3.0	U	10.0	3.0	3.0	U	10.0	3.0	8.9	A
Barium	200	0.40	58.3	J	200	0.40	60.6	J	200	0.40	56.0	J	200	0.40	309	J
Beryllium	5.0	0.30	0.30	U	5.0	0.30	0.30	U	5.0	0.30	0.30	U	5.0	0.30	2.4	A
Cadmium	5.0	1.9	1.9	U	5.0	1.9	1.9	U	5.0	1.9	4.0	J	5.0	1.9	11.4	J
Calcium	5000	4.1	203000	J	5000	4.1	209000	J	5000	4.1	178000	J	5000	4.1	113000	J
Chromium	10.0	3.6	3.6	UL	10.0	3.6	3.6	UL	10.0	3.6	3.6	UL	10.0	3.6	65.5	J
Cobalt	50.0	2.0	2.0	U	50.0	2.0	2.0	U	50.0	2.0	2.0	U	50.0	2.0	30.2	A
Copper	25.0	1.9	1.9	U	25.0	1.9	4.2	B	25.0	1.9	3.4	B	25.0	1.9	152	J
Iron	100	9.2	82.2	B	100	9.2	114	B	100	9.2	16500	J	100	9.2	52000	J
Lead	3.0	1.0	1.6	B	3.0	1.0	2.0	B	3.0	1.0	1.0	B	3.0	1.0	18.4	A
Magnesium	5000	12.2	47600	J	5000	12.2	49300	J	5000	12.2	83800	J	5000	12.2	44400	J
Manganese	15.0	0.60	62.3	J	15.0	0.60	65.3	J	15.0	0.60	429	J	15.0	0.60	2960	J
Mercury	0.20	0.04	0.30	B	0.20	0.04	0.10	B	0.20	0.04	0.04	U	0.20	0.04	0.27	B
Nickel	40.0	7.9	7.9	U	40.0	7.9	30.4	B	40.0	7.9	7.9	U	40.0	7.9	60.1	A
Potassium	5000	64.0	2540	J	5000	64.0	2690	J	5000	64.0	1890	J	5000	64.0	8490	J
Selenium	5.0	5.0	5.0	U	5.0	5.0	5.0	U	5.0	5.0	5.0	U	5.0	5.0	5.0	U
Silver	10.0	2.0	4.4	B	10.0	2.0	3.5	B	10.0	2.0	2.7	B	10.0	2.0	2.6	L
Sodium	5000	8.0	15000	J	5000	8.0	15600	J	5000	8.0	14300	J	5000	8.0	12000	J
Thallium	10.0	10.0	10.0	UL	10.0	2.0	2.0	UL	10.0	2.0	2.0	UL	10.0	2.0	2.0	UL
Vanadium	50.0	1.8	1.8	U	50.0	1.8	1.8	U	50.0	1.8	1.8	U	50.0	1.8	111	J
Zinc	20.0	1.2	7.3	B	20.0	1.2	10.4	B	20.0	1.2	7.3	B	20.0	1.2	152	J
Cyanide	10.0	10.0	10.0	U	10.0	10.0	10.0	U	10.0	10.0	10.0	U	10.0	10.0	10.0	U

Notes: All units are ug/l
Sample Quantitation Limit (SQL) is the Instrument Detection Limit (IDL).
The CRDLs and IDLs have been adjusted for dilution factors and percent solids as appropriate.

Qualifiers.....

A - Acceptable (Quantitative) Data
J - Estimated (Semiquantitative) Data
K - Biased High (Semiquantitative) Data
L - Biased Low (Semiquantitative) Data
B - Present in associated blanks (Semiquantitative) Data
UJ - Not Detected/Estimated Data
U - Not Detected/Quantitative Data
UL - Not Detected/Biased Low
N - Tentative Identification
R - Unusable Data
Q - Not Applicable

AR302821

SUMMARY OF CLP TOTAL INORGANICS ANALYSES - PHASE 1A
BERKS LANDFILL REMEDIAL INVESTIGATION - PHASE 1A
BERKS COUNTY, PENNSYLVANIA

Matrix: Groundwater Well

	Sample Point GWG-02/1A Date Sampled: 09/02/92 Dilution Factor: Percent Solids: NA %				Sample Point GWG-03/1A Date Sampled: 09/02/92 Dilution Factor: Percent Solids: NA %				Sample Point Date Sampled: Dilution Factor: Percent Solids: %				Sample Point Date Sampled: Dilution Factor: Percent Solids: %			
Parameter	CRDL	IDL	Result	Qual	CRDL	IDL	Result	Qual	CRDL	IDL	Result	Qual	CRDL	IDL	Result	Qual
Aluminum	200	14.0	58300	J	200	14.0	44600	J								
Antimony	60.0	14.0	14.0	U	60.0	14.0	14.0	U								
Arsenic	10.0	3.0	8.0	A	10.0	3.0	3.4	L								
Barium	200	0.40	173	J	200	0.40	72.1	J								
Beryllium	5.0	0.30	4.5	A	5.0	0.30	0.30	U								
Cadmium	5.0	1.9	13.1	J	5.0	1.9	9.4	J								
Calcium	5000	4.1	35300	J	5000	4.1	22000	J								
Chromium	10.0	3.6	97.5	J	10.0	3.6	4.4	J								
Cobalt	50.0	2.0	26.7	A	50.0	2.0	26.0	A								
Copper	25.0	1.9	83.7	J	25.0	1.9	272	J								
Iron	100	9.2	66400	J	100	9.2	56400	J								
Lead	3.0	1.0	11.2	A	3.0	1.0	10.0	A								
Magnesium	5000	12.2	22600	J	5000	12.2	9970	J								
Manganese	15.0	0.60	844	J	15.0	0.60	1180	J								
Mercury	0.2	0.04	0.19	B	0.2	0.04	0.21	B								
Nickel	40.0	7.9	75.5	A	40.0	7.9	36.4	B								
Potassium	5000	64.0	3950	J	5000	64.0	2110	J								
Selenium	5.0	5.0	5.0	U	5.0	5.0	5.0	U								
Silver	10.0	2.0	2.0	UL	10.0	2.0	2.0	UL								
Sodium	5000	8.0	9340	J	5000	8.0	5940	J								
Thallium	10.0	2.0	2.0	UL	10.0	2.0	2.0	UL								
Vanadium	50.0	1.8	156	J	50.0	1.8	122	J								
Zinc	20.0	1.2	124	J	20.0	1.2	67.4	J								
Cyanide	10.0	10.0	10.0	U	10.0	10.0	10.0	U								

Notes: All units are ug/l
Sample Quantitation Limit (SQL) is the Instrument Detection Limit (IDL).
The CRDLs and IDLs have been adjusted for dilution factors and percent solids as appropriate.

Qualifiers.....

A - Acceptable (Quantitative) Data
J - Estimated (Semiquantitative) Data
K - Biased High (Semiquantitative) Data
L - Biased Low (Semiquantitative) Data
B - Present in associated blanks (Semiquantitative) Data
UJ- Not Detected/Estimated Data
U - Not Detected/Quantitative Data
UL- Not Detected/Biased Low
N - Tentative Identification
R - Unusable Data
Q - Not Applicable

SUMMARY OF CLP TOTAL INORGANICS ANALYSES - PHASE 1B
BERKS LANDFILL REMEDIAL INVESTIGATION - PHASE 1B
BERKS COUNTY, PENNSYLVANIA

Matrix: Groundwater Well

	Sample Point GWC01/1B Date Sampled: 07/08/93 Dilution Factor: NA Percent Solids:NA %				Sample Point GWC02/1B Date Sampled: 07/08/93 Dilution Factor: NA Percent Solids: NA %				Sample Point GWC030/1B Date Sampled: 07/06/93 Dilution Factor: NA Percent Solids: NA %				Sample Point GWC030/FD Date Sampled: 07/06/93 Dilution Factor: NA Percent Solids: NA %			
Parameter	CRDL	IDL	Result	Qual	CRDL	IDL	Result	Qual	CRDL	IDL	Result	Qual	CRDL	IDL	Result	Qual
Aluminum	200	44.0	127	B	200	44.0	161	B	200	44.0	575	J	200	44.0	660	J
Antimony	60.0	35.0	35.0	UL	60.0	35.0	35.0	UL	60.0	35.0	35.0	UL	60.0	35.0	35.0	UL
Arsenic	10.0	4.0	4.0	UL	10.0	4.0	4.0	UL	10.0	4.0	4.0	UJ	10.0	4.0	4.0	UJ
Barium	200	2.0	3.1	A	200	2.0	21.2	A	200	2.0	22.7	A	200	2.0	24.7	A
Beryllium	5.0	1.0	1.0	U	5.0	1.0	1.0	U	5.0	1.0	1.0	UL	5.0	1.0	1.0	UL
Cadmium	5.0	3.0	3.6	B	5.0	3.0	3.9	B	5.0	3.0	3.0	U	5.0	3.0	3.0	U
Calcium	5000	17.0	29300	A	5000	17.0	33300	A	5000	17.0	134000	A	5000	17.0	138000	A
Chromium	10.0	8.0	8.0	U	10.0	8.0	8.0	U	10.0	8.0	8.0	U	10.0	8.0	8.0	U
Cobalt	50.0	9.0	9.0	U	50.0	9.0	9.0	U	50.0	9.0	9.0	U	50.0	9.0	9.0	U
Copper	25.0	4.0	4.0	U	25.0	4.0	4.0	U	25.0	4.0	9.2	J	25.0	4.0	9.7	J
Iron	100	25.0	14200	J	100	25.0	8590	J	100	25.0	679	J	100	25.0	862	J
Lead	3.0	2.0	2.0	UL	3.0	2.0	2.0	UL	3.0	2.0	2.0	U	3.0	2.0	2.0	U
Magnesium	5000	48.0	10000	J	5000	48.0	11300	J	5000	48.0	45100	J	5000	48.0	46400	J
Manganese	15.0	1.0	1020	J	15.0	1.0	111	J	15.0	1.0	118	J	15.0	1.0	145	J
Mercury	0.20	0.20	0.20	U	0.20	0.20	0.20	U	0.20	0.20	0.20	U	0.20	0.20	0.20	U
Nickel	40.0	18.0	18.0	U	40.0	18.0	18.0	U	40.0	18.0	18.0	UL	40.0	18.0	18.0	UL
Potassium	5000	1270	1270	U	5000	1270	1270	U	5000	1270	2440	A	5000	1270	1870	A
Selenium	5.0	3.0	3.0	R	5.0	3.0	3.0	R	5.0	3.0	3.0	R	5.0	3.0	3.0	R
Silver	10.0	4.0	4.0	U	10.0	4.0	4.0	U	10.0	4.0	4.0	U	10.0	4.0	4.0	U
Sodium	5000	123	6990	J	5000	123	9220	J	5000	123	11800	J	5000	123	12100	J
Thallium	10.0	3.0	3.0	UL	10.0	3.0	3.0	UL	10.0	3.0	3.0	UL	10.0	3.0	3.0	UL
Vanadium	50.0	6.0	6.0	U	50.0	6.0	6.0	U	50.0	6.0	6.0	U	50.0	6.0	6.0	U
Zinc	20.0	4.0	16.2	B	20.0	4.0	6.7	B	20.0	4.0	30.0	J	20.0	4.0	39.1	J
Cyanide			Not Analyzed				Not Analyzed				Not Analyzed				Not Analyzed	

Notes: All units are ug/l
Sample Quantitation Limit (SQL) is the Instrument Detection Limit (IDL).
The CRDLs and IDLs have been adjusted for dilution factors and percent solids as appropriate.

Qualifiers.....

A - Acceptable (Quantitative) Data
J - Estimated (Semiquantitative) Data
K - Biased High (Semiquantitative) Data
L - Biased Low (Semiquantitative) Data
B - Present in associated blanks (Semiquantitative) Data
UJ- Not Detected/Estimated Data
U - Not Detected/Quantitative Data
UL- Not Detected/Biased Low
N - Tentative Identification
R - Unusable Data
Q - Not Applicable

SUMMARY OF CLP TOTAL INORGANICS ANALYSES - PHASE 1B
BERKS LANDFILL REMEDIAL INVESTIGATION - PHASE 1B
BERKS COUNTY, PENNSYLVANIA

Matrix: Groundwater Well

	Sample Point GWC03S/1B Date Sampled: 07/02/93 Dilution Factor: NA Percent Solids:NA %				Sample Point GWC04D/1B Date Sampled: 06/30/93 Dilution Factor: NA Percent Solids: NA %				Sample Point GWC04S/1B Date Sampled: 06/30/93 Dilution Factor: NA Percent Solids: NA %				Sample Point GWC06D/1B Date Sampled: 07/12/93 Dilution Factor: NA Percent Solids: NA %			
Parameter	CRDL	IDL	Result	Qual	CRDL	IDL	Result	Qual	CRDL	IDL	Result	Qual	CRDL	IDL	Result	Qual
Aluminum	200	44.0	1930	J	200	44.0	506	B	200	44.0	201	B	200	44.0	184	B
Antimony	60.0	35.0	35.0	UL	60.0	35.0	35.0	UL	60.0	35.0	35.0	UL	60.0	35.0	42.9	B
Arsenic	10.0	4.0	5.6	J	10.0	4.0	13.6	L	10.0	4.0	4.0	UL	10.0	4.0	4.0	UL
Barium	200	2.0	89.4	A	200	2.0	79.4	A	200	2.0	403	A	200	2.0	52.0	A
Beryllium	5.0	1.0	1.0	UL	5.0	1.0	3.5	B	5.0	1.0	1.0	U	5.0	1.0	1.0	U
Cadmium	5.0	3.0	3.3	A	5.0	3.0	3.0	U	5.0	3.0	3.4	B	5.0	3.0	3.0	U
Calcium	5000	17.0	210000	A	5000	17.0	37700	A	5000	17.0	145000	A	5000	17.0	35800	A
Chromium	10.0	8.0	19.8	J	10.0	8.0	8.0	U	10.0	8.0	8.0	U	10.0	8.0	8.0	U
Cobalt	50.0	9.0	14.3	A	50.0	9.0	12.7	A	50.0	9.0	9.0	U	50.0	9.0	9.0	U
Copper	25.0	4.0	7.6	J	25.0	4.0	10.0	J	25.0	4.0	9.5	J	25.0	4.0	6.2	J
Iron	100	25.0	4920	J	100	25.0	371	J	100	25.0	2060	J	100	25.0	133	J
Lead	3.0	2.0	2.0	U	3.0	2.0	2.0	UL	3.0	2.0	2.0	UL	3.0	2.0	2.0	UL
Magnesium	5000	48.0	135000	J	5000	48.0	7260	J	5000	48.0	46100	J	5000	48.0	11300	J
Manganese	15.0	1.0	7580	J	15.0	1.0	361	J	15.0	1.0	942	J	15.0	1.0	15.7	J
Mercury	0.20	0.20	0.20	U	0.20	0.20	0.20	U	0.20	0.20	0.20	U	0.20	0.20	0.20	U
Nickel	40.0	18.0	56.7	L	40.0	18.0	18.0	U	40.0	18.0	18.0	U	40.0	18.0	18.0	U
Potassium	5000	1270	3180	A	5000	1270	3350	A	5000	1270	5710	A	5000	1270	1270	U
Selenium	5.0	3.0	3.0	R	25.0	15.0	15.0	R	25.0	15.0	15.0	R	5.0	3.0	3.0	R
Silver	10.0	4.0	4.0	U	10.0	4.0	4.0	U	10.0	4.0	4.0	U	10.0	4.0	4.0	U
Sodium	5000	123	36100	J	5000	123	35000	J	5000	123	18200	J	5000	123	7830	J
Thallium	10.0	3.0	3.0	UL	10.0	3.0	3.0	UL	10.0	3.0	3.0	UL	10.0	3.0	3.0	UL
Vanadium	50.0	6.0	6.0	U	50.0	6.0	6.0	U	50.0	6.0	6.0	U	50.0	6.0	10.1	A
Zinc	20.0	4.0	27.1	J	20.0	4.0	81.1	J	20.0	4.0	83.9	J	20.0	4.0	16.9	B
Cyanide			Not Analyzed				Not Analyzed				Not Analyzed				Not Analyzed	

Notes: All units are ug/l
Sample Quantitation Limit (SQL) is the Instrument Detection Limit (IDL).
The CRDLs and IDLs have been adjusted for dilution factors and percent solids as appropriate.

Qualifiers.....

A - Acceptable (Quantitative) Data	UJ- Not Detected/Estimated Data	N - Tentative Identification
J - Estimated (Semiquantitative) Data	U - Not Detected/Quantitative Data	R - Unusable Data
K - Biased High (Semiquantitative) Data	UL- Not Detected/Biased Low	Q - Not Applicable
L - Biased Low (Semiquantitative) Data		
B - Present in associated blanks (Semiquantitative) Data		

AR302824

SUMMARY OF CLP TOTAL INORGANICS ANALYSES - PHASE 1B
BERKS LANDFILL REMEDIAL INVESTIGATION - PHASE 1B
BERKS COUNTY, PENNSYLVANIA

Matrix: Groundwater Well

	Sample Point GWC06S/1B Date Sampled: 07/12/93 Dilution Factor: NA Percent Solids:NA %				Sample Point GWC07D/1B Date Sampled: 07/12/93 Dilution Factor: NA Percent Solids: NA %				Sample Point GWC07S/1B Date Sampled: 07/09/93 Dilution Factor: NA Percent Solids: NA %				Sample Point GWD02/1B Date Sampled: 07/06/93 Dilution Factor: NA Percent Solids: NA %			
Parameter	CRDL	IDL	Result	Qual	CRDL	IDL	Result	Qual	CRDL	IDL	Result	Qual	CRDL	IDL	Result	Qual
Aluminum	200	44.0	230	B	200	44.0	218	B	200	44.0	413	B	200	44.0	7050	J
Antimony	60.0	35.0	50.7	B	60.0	35.0	35.0	UL	60.0	35.0	35.1	B	60.0	35.0	35.0	UL
Arsenic	10.0	4.0	4.0	UJ	10.0	4.0	4.2	J	10.0	4.0	4.0	UL	10.0	4.0	4.4	J
Barium	200	2.0	107	A	200	2.0	59.6	A	200	2.0	323	A	200	2.0	449	A
Beryllium	5.0	1.0	1.0	U	5.0	1.0	1.0	U	5.0	1.0	1.0	U	5.0	1.0	1.0	UL
Cadmium	5.0	3.0	3.0	U	5.0	3.0	5.3	B	5.0	3.0	3.8	B	5.0	3.0	3.0	U
Calcium	5000	17.0	26600	A	5000	17.0	31500	A	5000	17.0	333000	A	5000	17.0	123000	A
Chromium	10.0	8.0	8.0	U	10.0	8.0	8.0	U	10.0	8.0	8.0	U	10.0	8.0	8.9	J
Cobalt	50.0	9.0	9.0	U	50.0	9.0	9.0	U	50.0	9.0	9.0	U	50.0	9.0	15.5	A
Copper	25.0	4.0	4.0	U	25.0	4.0	4.0	U	25.0	4.0	9.4	J	25.0	4.0	31.4	J
Iron	100	25.0	2980	J	100	25.0	126	J	100	25.0	518	J	100	25.0	32800	J
Lead	3.0	2.0	2.0	UL	3.0	2.0	2.0	UL	3.0	2.0	2.0	UL	3.0	2.0	12.0	J
Magnesium	5000	48.0	7200	J	5000	48.0	6300	J	5000	48.0	68200	J	5000	48.0	47100	J
Manganese	15.0	1.0	64.6	J	15.0	1.0	42.2	J	15.0	1.0	1400	J	15.0	1.0	2510	J
Mercury	0.20	0.20	0.20	U	0.20	0.20	0.20	U	0.20	0.20	0.20	U	0.20	0.20	0.20	U
Nickel	40.0	18.0	18.0	U	40.0	18.0	18.0	U	40.0	18.0	19.1	A	40.0	18.0	18.0	UL
Potassium	5000	1270	1640	A	5000	1270	1850	A	5000	1270	4060	A	5000	1270	7540	A
Selenium	5.0	3.0	3.0	R	5.0	3.0	3.0	R	5.0	3.0	3.0	R	50.0	30.0	30.0	R
Silver	10.0	4.0	4.0	U	10.0	4.0	4.0	U	10.0	4.0	4.0	U	10.0	4.0	4.0	U
Sodium	5000	123	7210	J	5000	123	9650	J	5000	123	24200	J	5000	123	33900	J
Thallium	10.0	3.0	3.0	UL	10.0	3.0	3.0	UL	10.0	3.0	3.0	UL	10.0	3.0	3.0	UL
Vanadium	50.0	6.0	6.0	U	50.0	6.0	6.0	U	50.0	6.0	6.0	U	50.0	6.0	13.8	U
Zinc	20.0	4.0	11.6	B	20.0	4.0	7.7	B	20.0	4.0	29.6	J	20.0	4.0	70.7	J
Cyanide			Not Analyzed				Not Analyzed				Not Analyzed				Not Analyzed	

Notes: All units are ug/l
Sample Quantitation Limit (SQL) is the Instrument Detection Limit (IDL).
The CRDLs and IDLs have been adjusted for dilution factors and percent solids as appropriate.

Qualifiers.....

A - Acceptable (Quantitative) Data
J - Estimated (Semiquantitative) Data
K - Biased High (Semiquantitative) Data
L - Biased Low (Semiquantitative) Data
B - Present in associated blanks (Semiquantitative) Data
UJ- Not Detected/Estimated Data
U - Not Detected/Quantitative Data
UL- Not Detected/Biased Low
N - Tentative Identification
R - Unusable Data
Q - Not Applicable

SUMMARY OF CLP TOTAL INORGANICS ANALYSES - PHASE 1B
BERKS LANDFILL REMEDIAL INVESTIGATION - PHASE 1B
BERKS COUNTY, PENNSYLVANIA

Matrix: Groundwater Well

	Sample Point GWG01/1B Date Sampled: 07/02/93 Dilution Factor: NA Percent Solids:NA %				Sample Point GWG02/1B Date Sampled: 07/02/93 Dilution Factor: NA Percent Solids: NA %				Sample Point GWG03/1B Date Sampled: 07/01/93 Dilution Factor: NA Percent Solids: NA %				Sample Point GWG04/1B Date Sampled: 07/09/93 Dilution Factor: NA Percent Solids: NA %			
Parameter	CRDL	IDL	Result	Qual	CRDL	IDL	Result	Qual	CRDL	IDL	Result	Qual	CRDL	IDL	Result	Qual
Aluminum	200	44.0	13400	J	200	44.0	29200	J	200	44.0	5150	J	200	44.0	362	B
Antimony	60.0	35.0	35.0	UL	60.0	35.0	35.0	UL	60.0	35.0	35.0	UL	60.0	35.0	46.7	B
Arsenic	10.0	4.0	5.8	J	10.0	4.0	7.9	J	10.0	4.0	4.0	UL	10.0	4.0	21.2	L
Barium	200	2.0	154	A	200	2.0	116	A	200	2.0	11.3	A	200	2.0	63.0	A
Beryllium	5.0	1.0	1.0	UL	5.0	1.0	2.2	L	5.0	1.0	1.0	UL	5.0	1.0	1.0	U
Cadmium	5.0	3.0	3.0	U	5.0	3.0	3.0	U	5.0	3.0	3.0	U	5.0	3.0	3.0	U
Calcium	5000	17.0	22400	A	5000	17.0	37100	A	5000	17.0	20200	A	5000	17.0	246000	A
Chromium	10.0	8.0	15.7	J	10.0	8.0	57.0	J	10.0	8.0	8.0	U	10.0	8.0	8.0	U
Cobalt	50.0	9.0	10.3	A	50.0	9.0	25.2	A	50.0	9.0	9.0	U	50.0	9.0	9.0	U
Copper	25.0	4.0	46.5	J	25.0	4.0	57.3	J	25.0	4.0	41.1	J	25.0	4.0	12.6	J
Iron	100	25.0	11000	J	100	25.0	35600	J	100	25.0	6460	J	100	25.0	1220	J
Lead	3.0	2.0	5.1	J	3.0	2.0	11.9	J	3.0	2.0	2.5	J	3.0	2.0	2.2	J
Magnesium	5000	48.0	14600	J	5000	48.0	16600	J	5000	48.0	6940	J	5000	48.0	41000	J
Manganese	15.0	1.0	6670	J	15.0	1.0	813	J	15.0	1.0	158	J	15.0	1.0	1580	J
Mercury	0.20	0.20	0.20	U	0.20	0.20	0.20	U	0.20	0.20	0.20	U	0.20	0.20	0.20	U
Nickel	40.0	18.0	18.0	UL	40.0	18.0	18.0	UL	40.0	18.0	18.0	UL	40.0	18.0	18.0	U
Potassium	5000	1270	2840	A	5000	1270	2590	A	5000	1270	1270	U	5000	1270	4020	A
Selenium	5.0	3.0	3.0	R	50.0	30.0	30.0	R	50.0	30.0	30.0	R	5.0	3.0	3.0	R
Silver	10.0	4.0	4.0	U	10.0	4.0	4.0	U	10.0	4.0	4.0	U	10.0	4.0	4.0	U
Sodium	5000	123	12200	J	5000	123	10300	J	5000	123	5410	J	5000	123	38200	J
Thallium	10.0	3.0	3.0	UL	10.0	3.0	3.0	UL	10.0	3.0	3.0	UL	10.0	3.0	3.0	UL
Vanadium	50.0	6.0	25.4	A	50.0	6.0	84.2	A	50.0	6.0	16.3	A	50.0	6.0	6.0	U
Zinc	20.0	4.0	44.3	J	20.0	4.0	136	J	20.0	4.0	25.4	J	20.0	4.0	68.3	J
Cyanide			Not Analyzed				Not Analyzed				Not Analyzed				Not Analyzed	

Notes: All units are ug/l
Sample Quantitation Limit (SQL) is the Instrument Detection Limit (IDL).
The CRDLs and IDLs have been adjusted for dilution factors and percent solids as appropriate.

Qualifiers.....

A - Acceptable (Quantitative) Data	UJ- Not Detected/Estimated Data	N - Tentative Identification
J - Estimated (Semiquantitative) Data	U - Not Detected/Quantitative Data	R - Unusable Data
K - Biased High (Semiquantitative) Data	UL- Not Detected/Biased Low	Q - Not Applicable
L - Biased Low (Semiquantitative) Data		
B - Present in associated blanks (Semiquantitative) Data		

SUMMARY OF CLP TOTAL INORGANICS ANALYSES - PHASE 1B
BERKS LANDFILL REMEDIAL INVESTIGATION - PHASE 1B
BERKS COUNTY, PENNSYLVANIA

Matrix: Groundwater Well

	Sample Point GWG05/1B Date Sampled: 07/01/93 Dilution Factor: NA Percent Solids:NA %				Sample Point GWG06/1B Date Sampled: 07/01/93 Dilution Factor: NA Percent Solids: NA %				Sample Point GWG07/1B Date Sampled: 07/01/93 Dilution Factor: NA Percent Solids: NA %				Sample Point GWG08/1B Date Sampled: 07/01/93 Dilution Factor: NA Percent Solids: NA %			
Parameter	CRDL	IDL	Result	Qual	CRDL	IDL	Result	Qual	CRDL	IDL	Result	Qual	CRDL	IDL	Result	Qual
Aluminum	200	44.0	18300	J	200	44.0	186	B	200	44.0	7510	J	200	44.0	14100	J
Antimony	60.0	35.0	35.0	UL	60.0	35.0	35.0	UL	60.0	35.0	35.0	UL	60.0	35.0	35.0	UL
Arsenic	10.0	4.0	10.4	L	10.0	4.0	4.0	UL	10.0	4.0	7.4	L	10.0	4.0	4.0	UL
Barium	200	2.0	605	A	200	2.0	2.0	U	200	2.0	28.0	A	200	2.0	73.6	A
Beryllium	5.0	1.0	1.4	L	5.0	1.0	1.0	UL	5.0	1.0	1.0	UL	5.0	1.0	1.0	UL
Cadmium	5.0	3.0	3.0	U	5.0	3.0	3.0	U	5.0	3.0	3.0	U	5.0	3.0	3.0	U
Calcium	5000	17.0	229000	A	5000	17.0	35500	A	5000	17.0	26400	A	5000	17.0	29600	A
Chromium	10.0	8.0	16.6	J	10.0	8.0	8.0	U	10.0	8.0	8.0	U	10.0	8.0	8.0	U
Cobalt	50.0	9.0	9.0	U	50.0	9.0	9.0	U	50.0	9.0	13.8	A	50.0	9.0	20.1	A
Copper	25.0	4.0	7.0	J	25.0	4.0	10.8	J	25.0	4.0	47.6	J	25.0	4.0	142	J
Iron	100	25.0	7510	J	100	25.0	339	J	100	25.0	16000	J	100	25.0	30000	J
Lead	3.0	2.0	12.6	J	3.0	2.0	2.0	UL	3.0	2.0	4.0	J	3.0	2.0	7.0	J
Magnesium	5000	48.0	48900	J	5000	48.0	13100	J	5000	48.0	4290	J	5000	48.0	7490	J
Manganese	15.0	1.0	1260	J	15.0	1.0	23.3	J	15.0	1.0	126	J	15.0	1.0	611	J
Mercury	0.20	0.20	0.20	U	0.20	0.20	0.20	U	0.20	0.20	0.20	U	0.20	0.20	0.20	U
Nickel	40.0	18.0	18.0	UL	40.0	18.0	18.0	UL	40.0	18.0	18.0	UL	40.0	18.0	18.0	UL
Potassium	5000	1270	7320	A	5000	1270	1270	U	5000	1270	1850	A	5000	1270	2820	A
Selenium	50.0	30.0	30.0	R	50.0	30.0	30.0	R	50.0	30.0	30.0	R	50.0	30.0	30.0	R
Silver	10.0	4.0	4.0	U	10.0	4.0	4.0	U	10.0	4.0	4.0	U	10.0	4.0	4.0	U
Sodium	5000	123	61500	J	5000	123	6810	J	5000	123	12300	J	5000	123	6780	J
Thallium	100	30.0	30.0	UL	10.0	3.0	3.0	UL	10.0	3.0	3.0	UL	10.0	3.0	3.0	UL
Vanadium	50.0	6.0	6.0	U	50.0	6.0	8.5	A	50.0	6.0	134	A	50.0	6.0	49.6	A
Zinc	20.0	4.0	48.6	J	20.0	4.0	23.8	J	20.0	4.0	37.8	J	20.0	4.0	63.5	J
Cyanide			Not Analyzed				Not Analyzed				Not Analyzed				Not Analyzed	

Notes: All units are ug/l
Sample Quantitation Limit (SQL) is the Instrument Detection Limit (IDL).
The CRDLs and IDLs have been adjusted for dilution factors and percent solids as appropriate.

Qualifiers.....

A - Acceptable (Quantitative) Data	UJ- Not Detected/Estimated Data	N - Tentative Identification
J - Estimated (Semiquantitative) Data	U - Not Detected/Quantitative Data	R - Unusable Data
K - Biased High (Semiquantitative) Data	UL- Not Detected/Biased Low	Q - Not Applicable
L - Biased Low (Semiquantitative) Data		
B - Present in associated blanks (Semiquantitative) Data		

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SUMMARY OF CLP TOTAL INORGANICS ANALYSES - PHASE 1B
BERKS LANDFILL REMEDIAL INVESTIGATION - PHASE 1B
BERKS COUNTY, PENNSYLVANIA

Matrix: Groundwater Well

	Sample Point GWG10/1B Date Sampled: 07/01/93 Dilution Factor: NA Percent Solids:NA %				Sample Point GWG11/1B Date Sampled: 07/09/93 Dilution Factor: NA Percent Solids: NA %				Sample Point GWG11/FD Date Sampled: 07/09/93 Dilution Factor: NA Percent Solids: NA %				Sample Point GWG12/1B Date Sampled: 07/01/93 Dilution Factor: NA Percent Solids: NA %			
Parameter	CRDL	IDL	Result	Qual	CRDL	IDL	Result	Qual	CRDL	IDL	Result	Qual	CRDL	IDL	Result	Qual
Aluminum	200	44.0	47300	J	200	44.0	520	B	200	44.0	650	J	200	44.0	6820	J
Antimony	60.0	35.0	35.0	UL	60.0	35.0	46.8	B	60.0	35.0	50.8	B	60.0	35.0	35.0	UL
Arsenic	10.0	4.0	7.9	J	10.0	4.0	4.0	UL	10.0	4.0	5.3	L	10.0	4.0	6.6	J
Barium	200	2.0	144	A	200	2.0	1360	A	200	2.0	1380	A	200	2.0	450	A
Beryllium	5.0	1.0	5.7	L	5.0	1.0	1.0	U	5.0	1.0	1.0	U	5.0	1.0	1.0	UL
Cadmium	5.0	3.0	3.0	U	5.0	3.0	4.2	B	5.0	3.0	3.2	B	5.0	3.0	3.0	U
Calcium	5000	17.0	32000	A	5000	17.0	473000	A	5000	17.0	480000	A	5000	17.0	418000	A
Chromium	10.0	8.0	57.5	J	10.0	8.0	8.0	U	10.0	8.0	8.0	U	10.0	8.0	8.0	U
Cobalt	50.0	9.0	27.5	A	50.0	9.0	9.0	U	50.0	9.0	9.0	U	50.0	9.0	9.0	U
Copper	25.0	4.0	175	J	25.0	4.0	4.6	J	25.0	4.0	10.8	J	25.0	4.0	15.1	J
Iron	100	25.0	46000	J	100	25.0	917	J	100	25.0	994	J	100	25.0	5740	J
Lead	3.0	2.0	17.3	J	3.0	2.0	2.0	UL	3.0	2.0	2.9	J	3.0	2.0	19.5	J
Magnesium	5000	48.0	22600	J	5000	48.0	107000	J	5000	48.0	109000	J	5000	48.0	108000	J
Manganese	15.0	1.0	1240	J	15.0	1.0	5170	J	15.0	1.0	5250	J	15.0	1.0	2370	J
Mercury	0.20	0.20	0.20	U	0.20	0.20	0.20	U	0.20	0.20	0.20	U	0.20	0.20	0.20	U
Nickel	40.0	18.0	23.9	L	40.0	18.0	51.4	A	40.0	18.0	52.1	A	40.0	18.0	18.5	L
Potassium	5000	1270	4090	A	5000	1270	8250	A	5000	1270	8830	A	5000	1270	8480	A
Selenium	50.0	30.0	30.0	R	5.0	3.0	3.0	R	5.0	3.0	3.0	R	50.0	30.0	30.0	R
Silver	10.0	4.0	4.0	U	10.0	4.0	4.0	U	10.0	4.0	4.0	U	10.0	4.0	4.0	U
Sodium	5000	123	10000	J	5000	123	151000	J	5000	123	154000	J	5000	123	27100	J
Thallium	10.0	3.0	3.0	UL	100	30.0	30.0	UL	100	30.0	30.0	UL	100	30.0	30.0	UL
Vanadium	50.0	6.0	107	A	50.0	6.0	6.0	U	50.0	6.0	6.0	U	50.0	6.0	7.3	A
Zinc	20.0	4.0	116	J	20.0	4.0	18.6	B	20.0	4.0	18.6	B	20.0	4.0	76.3	J
Cyanide			Not Analyzed				Not Analyzed				Not Analyzed				Not Analyzed	

Notes: All units are ug/l
Sample Quantitation Limit (SQL) is the Instrument Detection Limit (IDL).
The CRDLs and IDLs have been adjusted for dilution factors and percent solids as appropriate.

Qualifiers.....

A - Acceptable (Quantitative) Data
J - Estimated (Semiquantitative) Data
K - Biased High (Semiquantitative) Data
L - Biased Low (Semiquantitative) Data
B - Present in associated blanks (Semiquantitative) Data
UJ- Not Detected/Estimated Data
U - Not Detected/Quantitative Data
UL- Not Detected/Biased Low
N - Tentative Identification
R - Unusable Data
Q - Not Applicable

SUMMARY OF CLP TOTAL INORGANICS ANALYSES - PHASE 1B
BERKS LANDFILL REMEDIAL INVESTIGATION - PHASE 1B
BERKS COUNTY, PENNSYLVANIA

Matrix: Groundwater Well

	Sample Point GWG12/FD Date Sampled: 07/01/93 Dilution Factor: NA Percent Solids:NA %				Sample Point GWG13/1B Date Sampled: 07/12/93 Dilution Factor: NA Percent Solids: NA %				Sample Point GWM03/1B Date Sampled: 07/07/93 Dilution Factor: NA Percent Solids: NA %				Sample Point GWM06/1B Date Sampled: 07/08/93 Dilution Factor: NA Percent Solids: NA %			
Parameter	CRDL	IDL	Result	Qual	CRDL	IDL	Result	Qual	CRDL	IDL	Result	Qual	CRDL	IDL	Result	Qual
Aluminum	200	44.0	48100	J	200	44.0	136	B	200	44.0	2240	J	200	44.0	147000	J
Antimony	60.0	35.0	35.0	UL	60.0	35.0	35.0	UL	60.0	35.0	35.0	UL	60.0	35.0	35.0	UL
Arsenic	10.0	4.0	11.3	J	10.0	4.0	16.4	L	10.0	4.0	12.6	J	10.0	4.0	28.1	J
Barium	200	2.0	615	A	200	2.0	10.0	A	200	2.0	127	A	200	2.0	493	A
Beryllium	5.0	1.0	1.9	L	5.0	1.0	1.0	U	5.0	1.0	1.0	UL	5.0	1.0	11.6	L
Cadmium	5.0	3.0	3.0	U	5.0	3.0	3.4	B	5.0	3.0	3.0	U	5.0	3.0	4.1	A
Calcium	5000	17.0	517000	A	5000	17.0	47400	A	5000	17.0	176000	A	5000	17.0	87100	A
Chromium	10.0	8.0	54.0	J	10.0	8.0	8.0	U	10.0	8.0	8.0	U	10.0	8.0	8.0	U
Cobalt	50.0	9.0	30.4	A	50.0	9.0	9.0	U	50.0	9.0	29.8	A	50.0	9.0	13.8	A
Copper	25.0	4.0	93.0	J	25.0	4.0	4.0	U	25.0	4.0	14.6	J	25.0	4.0	24.3	J
Iron	100	25.0	42800	J	100	25.0	280	J	100	25.0	10800	J	100	25.0	75900	J
Lead	30.0	20.0	93.4	J	3.0	2.0	2.0	UL	3.0	2.0	5.9	J	30.0	20.0	233	J
Magnesium	5000	48.0	190000	J	5000	48.0	13200	J	5000	48.0	101000	J	5000	48.0	50300	J
Manganese	15.0	1.0	3380	J	15.0	1.0	26.6	J	15.0	1.0	13500	J	15.0	1.0	582	J
Mercury	0.20	0.20	0.20	U	0.20	0.20	0.20	U	0.20	0.20	0.20	U	0.20	0.20	0.20	U
Nickel	40.0	18.0	38.3	L	40.0	18.0	18.0	U	40.0	18.0	57.0	L	40.0	18.0	18.0	UL
Potassium	5000	1270	11000	A	5000	1270	1270	U	5000	1270	3590	A	5000	1270	4020	A
Selenium	5.0	3.0	30.0	R	5.0	3.0	3.0	R	5.0	3.0	3.0	R	5.0	3.0	3.0	R
Silver	10.0	4.0	4.0	U	10.0	4.0	4.0	U	10.0	4.0	4.0	U	10.0	4.0	4.0	U
Sodium	5000	123	26900	J	5000	123	12100	J	5000	123	188000	J	5000	123	105000	J
Thallium	100	30.0	30.0	UL	10.0	3.0	3.0	UL	10.0	3.0	3.0	UL	10.0	3.0	3.0	UL
Vanadium	50.0	6.0	54.8	A	50.0	6.0	9.8	A	50.0	6.0	6.0	U	50.0	6.0	16.1	A
Zinc	20.0	4.0	236	J	20.0	4.0	10.2	B	20.0	4.0	315	J	20.0	4.0	919	J
Cyanide			Not Analyzed				Not Analyzed				Not Analyzed				Not Analyzed	

Notes: All units are ug/l
Sample Quantitation Limit (SQL) is the Instrument Detection Limit (IDL).
The CRDLs and IDLs have been adjusted for dilution factors and percent solids as appropriate.

Qualifiers.....

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SUMMARY OF CLP TOTAL INORGANICS ANALYSES - PHASE 1B
BERKS LANDFILL REMEDIAL INVESTIGATION - PHASE 1B
BERKS COUNTY, PENNSYLVANIA

Matrix: Groundwater Well

	Sample Point GWM11/1B Date Sampled: 06/30/93 Dilution Factor: NA Percent Solids:NA %				Sample Point GWM14D/1B Date Sampled: 07/12/93 Dilution Factor: NA Percent Solids: NA %				Sample Point GWM14S/1B Date Sampled: 07/09/93 Dilution Factor: NA Percent Solids: NA %				Sample Point GWM15D/1B Date Sampled: 07/08/93 Dilution Factor: NA Percent Solids: NA %			
Parameter	CRDL	IDL	Result	Qual	CRDL	IDL	Result	Qual	CRDL	IDL	Result	Qual	CRDL	IDL	Result	Qual
Aluminum	200	44.0	705	J	200	44.0	347	B	200	44.0	311	B	200	44.0	247	B
Antimony	60.0	35.0	35.0	UL	60.0	35.0	35.0	UL	60.0	35.0	62.5	B	60.0	35.0	35.0	UL
Arsenic	10.0	4.0	4.0	UL	10.0	4.0	4.0	UL	10.0	4.0	9.5	L	10.0	4.0	4.0	UL
Barium	200	2.0	94.4	A	200	2.0	571	A	200	2.0	481	A	200	2.0	48.6	A
Beryllium	5.0	1.0	1.0	U	5.0	1.0	1.0	U	5.0	1.0	1.0	U	5.0	1.0	1.0	U
Cadmium	5.0	3.0	3.0	U	5.0	3.0	3.0	U	5.0	3.0	3.8	B	5.0	3.0	4.7	B
Calcium	5000	17.0	108000	A	5000	17.0	428000	A	5000	17.0	358000	A	5000	17.0	33900	A
Chromium	10.0	8.0	9.0	J	10.0	8.0	8.0	U	10.0	8.0	8.0	U	10.0	8.0	8.0	U
Cobalt	50.0	9.0	9.3	A	50.0	9.0	9.0	U	50.0	9.0	9.0	U	50.0	9.0	9.0	U
Copper	25.0	4.0	12.1	J	25.0	4.0	4.0	U	25.0	4.0	4.8	J	25.0	4.0	34.2	J
Iron	100	25.0	7850	J	100	25.0	400	J	100	25.0	12900	J	100	25.0	365	J
Lead	3.0	2.0	2.0	UL	3.0	2.0	2.6	J	3.0	2.0	2.0	UL	3.0	2.0	3.8	J
Magnesium	5000	48.0	23900	J	5000	48.0	46300	J	5000	48.0	95400	J	5000	48.0	4970	J
Manganese	15.0	1.0	3850	J	15.0	1.0	142	J	15.0	1.0	6070	J	15.0	1.0	58.2	J
Mercury	0.20	0.20	0.20	U	0.20	0.20	0.20	U	0.20	0.20	0.25	A	0.20	0.20	0.20	U
Nickel	40.0	18.0	18.0	U	40.0	18.0	22.2	A	40.0	18.0	36.0	A	40.0	18.0	18.0	U
Potassium	5000	1270	2880	A	5000	1270	32600	A	5000	1270	32000	A	5000	1270	4260	A
Selenium	5.0	3.0	3.0	R	5.0	3.0	3.0	R	5.0	3.0	3.0	R	5.0	3.0	3.0	R
Silver	10.0	4.0	4.0	U	10.0	4.0	4.0	U	10.0	4.0	4.0	U	10.0	4.0	4.0	U
Sodium	5000	123	20600	J	5000	123	183000	J	5000	123	429000	J	5000	123	17700	J
Thallium	10.0	3.0	3.0	UL	100	30.0	30.0	UL	100	30.0	30.0	UL	10.0	3.0	3.0	UL
Vanadium	50.0	6.0	6.0	U	50.0	6.0	6.0	U	50.0	6.0	6.0	U	50.0	6.0	6.0	U
Zinc	20.0	4.0	41.1	B	20.0	4.0	162	J	20.0	4.0	21.8	B	20.0	4.0	47.1	B
Cyanide			Not Analyzed				Not Analyzed				Not Analyzed				Not Analyzed	

Notes: All units are ug/l
Sample Quantitation Limit (SQL) is the Instrument Detection Limit (IDL).
The CRDLs and IDLs have been adjusted for dilution factors and percent solids as appropriate.

Qualifiers.....

A - Acceptable (Quantitative) Data
J - Estimated (Semiquantitative) Data
K - Biased High (Semiquantitative) Data
L - Biased Low (Semiquantitative) Data
B - Present in associated blanks (Semiquantitative) Data
UJ- Not Detected/Estimated Data
U - Not Detected/Quantitative Data
UL- Not Detected/Biased Low
N - Tentative Identification
R - Unusable Data
Q - Not Applicable

SUMMARY OF CLP TOTAL INORGANICS ANALYSES - PHASE 1B
BERKS LANDFILL REMEDIAL INVESTIGATION - PHASE 1B
BERKS COUNTY, PENNSYLVANIA

Matrix: Groundwater Well

	Sample Point GWM15S/1B Date Sampled: 07/02/93 Dilution Factor: NA Percent Solids:NA %				Sample Point GWM16/1B Date Sampled: 07/08/93 Dilution Factor: NA Percent Solids: NA %				Sample Point GWM17/1B Date Sampled: 07/08/93 Dilution Factor: NA Percent Solids: NA %				Sample Point GWM19S/1B Date Sampled: 06/30/93 Dilution Factor: NA Percent Solids: NA %			
Parameter	CRDL	IDL	Result	Qual	CRDL	IDL	Result	Qual	CRDL	IDL	Result	Qual	CRDL	IDL	Result	Qual
Aluminum	200	44.0	18100	J	200	44.0	873	J	200	44.0	464	B	200	44.0	647	J
Antimony	60.0	35.0	35.0	UL	60.0	35.0	35.0	UL	60.0	35.0	35.0	UL	60.0	35.0	35.0	UL
Arsenic	10.0	4.0	14.7	J	10.0	4.0	4.0	UJ	10.0	4.0	4.0	UL	10.0	4.0	4.0	UJ
Barium	200	2.0	330	A	200	2.0	365	A	200	2.0	7.7	A	200	2.0	61.8	A
Beryllium	5.0	1.0	1.4	L	5.0	1.0	1.0	UL	5.0	1.0	1.0	U	5.0	1.0	1.0	U
Cadmium	5.0	3.0	3.0	U	5.0	3.0	3.0	U	5.0	3.0	3.0	U	5.0	3.0	3.0	U
Calcium	5000	17.0	88200	A	5000	17.0	394000	A	5000	17.0	13400	A	5000	17.0	384000	A
Chromium	10.0	8.0	51.5	J	10.0	8.0	8.0	U	10.0	8.0	8.0	U	10.0	8.0	8.0	U
Cobalt	50.0	9.0	29.2	A	50.0	9.0	9.7	A	50.0	9.0	9.0	U	50.0	9.0	9.0	U
Copper	25.0	4.0	24.9	J	25.0	4.0	4.9	J	25.0	4.0	5.9	J	25.0	4.0	6.6	J
Iron	100	25.0	24500	J	100	25.0	4110	J	100	25.0	5400	J	100	25.0	636	J
Lead	3.0	2.0	12.7	J	3.0	2.0	3.8	J	3.0	2.0	2.1	J	3.0	2.0	2.0	UL
Magnesium	5000	48.0	25800	J	5000	48.0	102000	J	5000	48.0	5460	J	5000	48.0	46400	J
Manganese	15.0	1.0	27600	J	15.0	1.0	12600	J	15.0	1.0	325	J	15.0	1.0	693	J
Mercury	0.20	0.20	0.20	U	0.20	0.20	0.20	U	0.20	0.20	0.20	U	0.20	0.20	0.20	U
Nickel	40.0	18.0	30.2	L	40.0	18.0	24.6	L	40.0	18.0	18.0	U	40.0	18.0	18.0	U
Potassium	5000	1270	4880	A	5000	1270	13000	A	5000	1270	1270	U	5000	1270	4450	A
Selenium	50.0	30.0	30.0	R	5.0	3.0	3.0	R	5.0	3.0	3.0	R	5.0	3.0	3.9	J
Silver	10.0	4.0	4.0	U	10.0	4.0	4.0	U	10.0	4.0	4.0	U	10.0	4.0	4.0	U
Sodium	5000	123	28600	J	5000	123	78100	J	5000	123	3450	J	5000	123	9570	J
Thallium	10.0	3.0	3.0	UL	100	30.0	30.0	UL	10.0	3.0	3.0	UL	10.0	3.0	3.0	UL
Vanadium	50.0	6.0	47.2	A	50.0	6.0	6.0	U	50.0	6.0	6.0	U	50.0	6.0	10.0	A
Zinc	20.0	4.0	102	J	20.0	4.0	16.0	J	20.0	4.0	47.9	B	20.0	4.0	17.2	B
Cyanide			Not Analyzed				Not Analyzed				Not Analyzed				Not Analyzed	

Notes: All units are ug/l
Sample Quantitation Limit (SQL) is the Instrument Detection Limit (IDL).
The CRDLs and IDLs have been adjusted for dilution factors and percent solids as appropriate.

Qualifiers.....

A - Acceptable (Quantitative) Data
J - Estimated (Semiquantitative) Data
K - Biased High (Semiquantitative) Data
L - Biased Low (Semiquantitative) Data
B - Present in associated blanks (Semiquantitative) Data
UJ- Not Detected/Estimated Data
U - Not Detected/Quantitative Data
UL- Not Detected/Biased Low
N - Tentative Identification
R - Unusable Data
Q - Not Applicable

SUMMARY OF CLP TOTAL INORGANICS ANALYSES - PHASE 1B
BERKS LANDFILL REMEDIAL INVESTIGATION - PHASE 1B
BERKS COUNTY, PENNSYLVANIA

Matrix: Groundwater Well

	Sample Point GWR19D/1B Date Sampled: 07/06/93 Dilution Factor: NA Percent Solids:NA %				Sample Point Date Sampled: Dilution Factor: Percent Solids: %				Sample Point Date Sampled: Dilution Factor: Percent Solids: %				Sample Point Date Sampled: Dilution Factor: Percent Solids: %			
Parameter	CRDL	IDL	Result	Qual	CRDL	IDL	Result	Qual	CRDL	IDL	Result	Qual	CRDL	IDL	Result	Qual
Aluminum	200	44.0	40900	J												
Antimony	60.0	35.0	35.0	UL												
Arsenic	10.0	4.0	11.4	J												
Barium	200	2.0	92.0	A												
Beryllium	5.0	1.0	2.8	L												
Cadmium	5.0	3.0	3.0	U												
Calcium	5000	17.0	159000	A												
Chromium	10.0	8.0	84.8	J												
Cobalt	50.0	9.0	33.8	A												
Copper	25.0	4.0	12.4	J												
Iron	100	25.0	44300	J												
Lead	3.0	2.0	4.0	J												
Magnesium	5000	48.0	102000	J												
Manganese	15.0	1.0	1050	J												
Mercury	0.20	0.20	0.20	U												
Nickel	40.0	18.0	39.6	L												
Potassium	5000	1270	7080	A												
Selenium	50.0	30.0	30.0	R												
Silver	10.0	4.0	4.0	U												
Sodium	5000	123	7460	J												
Thallium	10.0	3.0	3.0	UL												
Vanadium	50.0	6.0	99.0	A												
Zinc	20.0	4.0	278	J												
Cyanide			Not Analyzed													

Notes: All units are ug/l
Sample Quantitation Limit (SQL) is the Instrument Detection Limit (IDL).
The CRDLs and IDLs have been adjusted for dilution factors and percent solids as appropriate.

Qualifiers.....

A - Acceptable (Quantitative) Data	UJ- Not Detected/Estimated Data	N - Tentative Identification
J - Estimated (Semiquantitative) Data	U - Not Detected/Quantitative Data	R - Unusable Data
K - Biased High (Semiquantitative) Data	UL- Not Detected/Biased Low	Q - Not Applicable
L - Biased Low (Semiquantitative) Data		
B - Present in associated blanks (Semiquantitative) Data		

AR302832

DISSOLVED (FILTERED) METALS

Phase 1A
Phase 1B

SUMMARY OF CLP DISSOLVED INORGANICS ANALYSES - PHASE 1A

BERKS LANDFILL REMEDIAL INVESTIGATION - PHASE 1A
BERKS COUNTY, PENNSYLVANIA

Matrix: Groundwater Well

	Sample Point GR18D/1A Date Sampled: 11/13/92 Dilution Factor: 1.0 Percent Solids: NA %				Sample Point GWG01/1A Date Sampled: 09/02/92 Dilution Factor: 1.0 Percent Solids: NA %				Sample Point GWG02/1A Date Sampled: 09/02/92 Dilution Factor: 1.0 Percent Solids: NA %				Sample Point GWG03/1A Date Sampled: 09/02/92 Dilution Factor: 1.0 Percent Solids: NA %			
Parameter	CRDL	IDL	Result	Qual	CRDL	IDL	Result	Qual	CRDL	IDL	Result	Qual	CRDL	IDL	Result	Qual
Aluminum	200	14.0	14.0	U	200	14.0	22.5	B	200	14.0	28.9	B	200	14.0	14.0	U
Antimony	60.0	14.0	14.0	U	60.0	14.0	14.0	U	60.0	14.0	14.0	U	60.0	14.0	14.0	U
Arsenic	10.0	3.0	4.8	A	10.0	3.0	3.0	U	10.0	3.0	3.0	U	10.0	3.0	3.0	U
Barium	200	0.40	30.7	B	200	0.40	39.6	A	200	0.40	11.6	A	200	0.40	2.1	B
Beryllium	5.0	0.30	0.30	U	5.0	0.30	0.30	U	5.0	0.30	0.30	U	5.0	0.30	0.30	U
Cadmium	5.0	1.9	2.3	B	5.0	1.9	1.9	UL	5.0	1.9	1.9	UL	5.0	1.9	1.9	UL
Calcium	5000	4.1	52200	A	5000	4.1	110000	J	5000	4.1	29400	J	5000	4.1	16800	J
Chromium	10.0	3.6	3.6	U	10.0	3.6	3.6	UL	10.0	3.6	3.6	UL	10.0	3.6	3.6	UL
Cobalt	50.0	2.0	2.0	B	50.0	2.0	2.0	U	50.0	2.0	2.5	B	50.0	2.0	2.0	U
Copper	25.0	1.9	6.7	B	25.0	1.9	3.9	B	25.0	1.9	3.5	B	25.0	1.9	3.2	B
Iron	100	9.2	9.2	UL	100	9.2	56.7	B	100	9.2	49.1	B	100	9.2	28.0	B
Lead	3.0	1.0	1.1	B	3.0	1.0	1.0	U	3.0	1.0	1.0	B	3.0	1.0	3.3	B
Magnesium	5000	12.2	8930	A	5000	12.2	27800	J	5000	12.2	9340	J	5000	12.2	6200	J
Manganese	15.0	0.60	15.2	A	15.0	0.60	857	J	15.0	0.60	51.7	J	15.0	0.60	122	J
Mercury	0.20	0.05	0.05	U	0.20	0.04	0.21	B	0.2	0.04	0.21	B	0.20	0.04	0.04	B
Nickel	40.0	7.9	7.9	U	40.0	7.9	12.3	B	40.0	7.9	12.0	B	40.0	7.9	8.1	B
Potassium	5000	64.0	6030	A	5000	64.0	2710	A	5000	64.0	976	A	5000	64.0	734	A
Selenium	5.0	5.0	5.0	U	5.0	5.0	5.0	U	5.0	5.0	5.0	U	5.0	5.0	5.0	U
Silver	10.0	2.0	2.0	U	10.0	2.0	2.0	UL	10.0	2.0	2.0	UL	10.0	2.0	2.0	UL
Sodium	5000	8.0	15900	A	5000	8.0	9850	J	5000	8.0	9300	J	5000	8.0	5090	J
Thallium	10.0	2.0	2.0	U	10.0	2.0	2.0	U	10.0	2.0	2.0	U	10.0	2.0	2.0	UL
Vanadium	50.0	1.8	1.8	U	50.0	1.8	1.8	U	50.0	1.8	5.0	A	50.0	1.8	1.8	U
Zinc	20.0	1.2	7.4	B	20.0	1.2	26.3	B	20.0	1.2	5.5	B	20.0	1.2	14.6	B

Notes: All units are ug/l
Sample Quantitation Limit (SQL) is the Instrument Detection Limit (IDL).
The CRDLs and IDLs have been adjusted for dilution factors and percent solids as appropriate.

Qualifiers.....

A - Acceptable (Quantitative) Data
J - Estimated (Semiquantitative) Data
K - Biased High (Semiquantitative) Data
L - Biased Low (Semiquantitative) Data
B - Present in associated blanks (Semiquantitative) Data
UJ- Not Detected/Estimated Data
U - Not Detected/Quantitative Data
UL- Not Detected/Biased Low.
N - Tentative Identification
R - Unusable Data
Q - Not Applicable

AR302834

SUMMARY OF CLP DISSOLVED INORGANICS ANALYSES - PHASE 1A

BERKS LANDFILL REMEDIAL INVESTIGATION - PHASE 1A
BERKS COUNTY, PENNSYLVANIA

Matrix: Groundwater Well

	Sample Point GWC3D/1A Date Sampled: 09/04/92 Dilution Factor: 1.0 Percent Solids: NA %				Sample Point GWC3S/1A Date Sampled: 09/03/92 Dilution Factor: 1.0 Percent Solids: NA %				Sample Point GW-C5/1A Date Sampled: 09/03/92 Dilution Factor: 1.0 Percent Solids: NA %				Sample Point GW-16/1A Date Sampled: 09/04/92 Dilution Factor: 1.0 Percent Solids: NA %			
Parameter	CRDL	IDL	Result	Qual	CRDL	IDL	Result	Qual	CRDL	IDL	Result	Qual	CRDL	IDL	Result	Qual
Aluminum	200	14.0	14.0	U	200	14.0	17.0	B	200	14.0	14.0	U	200	14.0	21.7	B
Antimony	60.0	14.0	14.0	U	60.0	14.0	14.0	U	60.0	14.0	14.0	U	60.0	14.0	14.0	U
Arsenic	10.0	3.0	3.0	U	10.0	3.0	3.9	A	10.0	3.0	3.0	U	10.0	3.0	13.8	A
Barium	200	0.40	50.7	A	200	0.40	80.4	A	200	0.40	32.2	A	200	0.40	337	A
Beryllium	5.0	0.30	0.30	U	5.0	0.30	0.30	U	5.0	0.30	0.30	U	5.0	0.30	0.30	U
Cadmium	5.0	1.9	1.9	U	5.0	1.9	1.9	U	5.0	1.9	1.9	U	5.0	1.9	1.9	U
Calcium	5000	4.1	168000	J	5000	4.1	216000	J	5000	4.1	91300	J	5000	4.1	450000	J
Chromium	10.0	3.6	3.6	UL	10.0	3.6	3.6	UL	10.0	3.6	3.6	UL	10.0	3.6	3.6	UL
Cobalt	50.0	2.0	2.0	U	50.0	2.0	13.2	A	50.0	2.0	2.0	U	50.0	2.0	6.7	B
Copper	25.0	1.9	1.9	U	25.0	1.9	9.9	B	25.0	1.9	1.9	U	25.0	1.9	1.9	U
Iron	100	9.2	12000	A	100	9.2	580	L	100	9.2	4490	A	100	9.2	1030	A
Lead	3.0	1.0	1.0	U	3.0	1.0	3.0	B	3.0	1.0	1.4	B	3.0	1.0	1.0	UL
Magnesium	5000	12.2	79600	J	5000	12.2	133000	J	5000	12.2	36700	J	5000	12.2	128000	J
Manganese	15.0	0.60	408	J	15.0	0.60	8460	J	15.0	0.60	559	J	15.0	0.60	9420	J
Mercury	0.20	0.04	0.04	UL	0.20	0.04	0.04	UL	0.20	0.04	0.04	UL	0.20	0.04	0.04	UL
Nickel	40.0	7.9	7.9	U	40.0	7.9	90.5	A	40.0	7.9	10.9	B	40.0	7.9	28.0	B
Potassium	5000	64.0	1810	A	5000	64.0	3360	A	5000	64.0	5280	A	5000	64.0	14800	A
Selenium	5.0	5.0	5.0	U	5.0	5.0	5.0	U	5.0	5.0	5.0	U	5.0	5.0	5.0	U
Silver	10.0	2.0	2.2	B	10.0	2.0	2.0	U	10.0	2.0	3.0	B	10.0	2.0	2.0	U
Sodium	5000	8.0	13500	J	5000	8.0	42400	J	5000	8.0	22800	J	5000	8.0	71500	J
Thallium	10.0	2.0	2.0	UL	10.0	2.0	2.0	UL	10.0	2.0	2.0	UL	10.0	2.0	2.0	UL
Vanadium	50.0	1.8	1.8	U	50.0	1.8	1.8	U	50.0	1.8	1.8	U	50.0	1.8	1.8	U
Zinc	20.0	1.2	16.4	B	20.0	1.2	44.9	A	20.0	1.2	8.8	B	20.0	1.2	16.4	B

Notes: All units are ug/l
Sample Quantitation Limit (SQL) is the Instrument Detection Limit (IDL).
The CRDLs and IDLs have been adjusted for dilution factors and percent solids as appropriate.

Qualifiers.....

A - Acceptable (Quantitative) Data
J - Estimated (Semiquantitative) Data
K - Biased High (Semiquantitative) Data
L - Biased Low (Semiquantitative) Data
B - Present in associated blanks (Semiquantitative) Data
UJ - Not Detected/Estimated Data
U - Not Detected/Quantitative Data
UL - Not Detected/Biased Low
N - Tentative Identification
R - Unusable Data
Q - Not Applicable

SUMMARY OF CLP DISSOLVED INORGANICS ANALYSES - PHASE 1A

BERKS LANDFILL REMEDIAL INVESTIGATION - PHASE 1A
BERKS COUNTY, PENNSYLVANIA

Matrix: Groundwater Well

	Sample Point GW18S/1A Date Sampled: 09/03/92 Dilution Factor: 1.0 Percent Solids: NA %				Sample Point GW18S/FD Date Sampled: 09/03/92 Dilution Factor: 1.0 Percent Solids: NA %				Sample Point Date Sampled: Dilution Factor: Percent Solids: %				Sample Point Date Sampled: Dilution Factor: Percent Solids: %			
Parameter	CRDL	IDL	Result	Qual	CRDL	IDL	Result	Qual	CRDL	IDL	Result	Qual	CRDL	IDL	Result	Qual
Aluminum	200	14.0	59.1	B	200	14.0	25.5	B								
Antimony	60.0	14.0	14.0	U	60.0	14.0	14.0	U								
Arsenic	10.0	3.0	3.0	U	10.0	3.0	3.0	U								
Barium	200	0.40	61.0	A	200	0.40	63.5	A								
Beryllium	5.0	0.30	0.30	U	5.0	0.30	0.30	U								
Cadmium	5.0	1.9	1.9	U	5.0	1.9	1.9	U								
Calcium	5000	4.1	216000	J	5000	4.1	221000	J								
Chromium	10.0	3.6	3.6	UL	10.0	3.6	3.6	UL								
Cobalt	50.0	2.0	2.0	U	50.0	2.0	2.0	U								
Copper	25.0	1.9	1.9	U	25.0	1.9	1.9	U								
Iron	100	9.2	10.4	B	100	9.2	9.2	UL								
Lead	3.0	1.0	1.2	B	3.0	1.0	1.0	U								
Magnesium	5000	12.2	50900	J	5000	12.2	52500	J								
Manganese	15.0	0.60	72.1	J	15.0	0.60	69.8	J								
Mercury	0.20	0.04	0.04	UL	0.20	0.04	0.04	UL								
Nickel	40.0	7.9	7.9	U	40.0	7.9	7.9	U								
Potassium	5000	64.0	2630	A	5000	64.0	2790	A								
Selenium	5.0	5.0	5.0	U	5.0	5.0	5.0	U								
Silver	10.0	2.0	3.6	B	10.0	2.0	3.6	B								
Sodium	5000	8.0	16100	J	5000	8.0	16700	J								
Thallium	10.0	2.0	2.0	UL	10.0	2.0	2.0	UL								
Vanadium	50.0	1.8	1.8	U	50.0	1.8	1.8	U								
Zinc	20.0	1.2	11.3	B	20.0	1.2	15.2	B								

Notes: All units are ug/l
Sample Quantitation Limit (SQL) is the Instrument Detection Limit (IDL).
The CRDLs and IDLs have been adjusted for dilution factors and percent solids as appropriate.

Qualifiers.....

A - Acceptable (Quantitative) Data
J - Estimated (Semiquantitative) Data
K - Biased High (Semiquantitative) Data
L - Biased Low (Semiquantitative) Data
B - Present in associated blanks (Semiquantitative) Data
UJ- Not Detected/Estimated Data
U - Not Detected/Quantitative Data
UL- Not Detected/Biased Low
N - Tentative Identification
R - Unusable Data
Q - Not Applicable

SUMMARY OF CLP DISSOLVED INORGANICS ANALYSES - PHASE 1B

BERKS LANDFILL REMEDIAL INVESTIGATION - PHASE 1B
BERKS COUNTY, PENNSYLVANIA

Matrix: Groundwater

	Sample Point GWC01/1B Date Sampled: 07/08/93 Dilution Factor: 1.0 Percent Solids: NA %				Sample Point GWC02/1B Date Sampled: 07/08/93 Dilution Factor: 1.0 Percent Solids: NA %				Sample Point GWC03D/1B Date Sampled: 06/30/93 Dilution Factor: 1.0 Percent Solids: NA %				Sample Point GWC03D/FD Date Sampled: 06/30/93 Dilution Factor: 1.0 Percent Solids: NA %			
Parameter	CRDL	IDL	Result	Qual	CRDL	IDL	Result	Qual	CRDL	IDL	Result	Qual	CRDL	IDL	Result	Qual
Aluminum	200	44	57.4	B	200	44	59.5	B	200	35	35.0	U	200	35	35.0	U
Antimony	60	35	35.0	U	60	35	35.0	U	60	36	36.0	U	60	36	36.0	U
Arsenic	10	4	4.0	U	10	4	4.0	U	10	4	4.0	UJ	10	4	4.0	UJ
Barium	200	2	2.0	U	200	2	15.7	A	200	2	18.9	B	200	2	18.2	B
Beryllium	5	1	1.0	U	5	1	1.0	U	5	1	1.0	U	5	1	1.0	U
Cadmium	5	3	3.0	U	5	3	3.0	U	5	5	5.0	U	5	5	5.0	U
Calcium	5000	17	29500	A	5000	17	33100	A	5000	24	146000	A	5000	24	150000	A
Chromium	10	8	8.0	U	10	8	8.0	U	10	8	8.0	U	10	8	8.0	U
Cobalt	50	9	9.0	U	50	9	9.0	U	50	8	8.0	U	50	8	8.0	U
Copper	25	4	4.0	U	25	4	4.0	U	25	4	4.0	U	25	4	4.0	U
Iron	100	25	66.8	A	100	25	53.5	A	100	41	41.0	U	100	41	41.0	U
Lead	3	2	2.0	UL	3	2	2.0	UL	3	2	2.0	UL	3	2	2.0	UL
Magnesium	5000	48	10800	A	5000	48	11800	A	5000	59	49700	A	5000	59	50900	A
Manganese	15	1	502	A	15	1	28.9	B	15	1	30.6	B	15	1	24.6	B
Mercury	0.2	0.2	0.20	UL	0.2	0.2	0.20	UL	0.2	0.2	0.20	UL	0.2	0.2	0.20	UL
Nickel	40	18	18.0	U	40	18	18.0	U	40	17	17.0	U	40	17	17.0	U
Potassium	5000	1270	1270	U	5000	1270	1270	U	5000	1352	1370	A	5000	1352	1350	U
Selenium	5	3	3.0	UL	5	3	3.0	UL	50	30	30.0	UJ	50	30	30.0	UJ
Silver	10	4	4.0	UL	10	4	4.0	UL	10	7	7.0	UL	10	7	7.0	UL
Sodium	5000	123	7520	A	5000	123	9950	A	5000	251	12600	A	5000	251	12900	A
Thallium	10	3	3.0	R	10	3	3.0	R	100	40	40.0	R	10	4	4.0	R
Vanadium	50	6	6.0	U	50	6	6.0	U	50	6	6.0	U	50	6	6.0	U
Zinc	20	4	4.0	U	20	4	6.0	B	20	4	16.7	B	20	4	17.3	B
Cyanide	10	10	Not Analyzed		10	10	Not Analyzed		10	10	Not Analyzed		10	10	Not Analyzed	

Notes: All units are ug/l
Sample Quantitation Limit (SQL) is the Instrument Detection Limit (IDL).
The CRDLs and IDLs have been adjusted for dilution factors and percent solids as appropriate.

Qualifiers.....

A - Acceptable (Quantitative) Data
J - Estimated (Semiquantitative) Data
K - Biased High (Semiquantitative) Data
L - Biased Low (Semiquantitative) Data
B - Present in associated blanks (Semiquantitative) Data
UJ- Not Detected/Estimated Data
U - Not Detected/Quantitative Data
UL- Not Detected/Biased Low
N - Tentative Identification
R - Unusable Data
Q - Not Applicable

SUMMARY OF CLP DISSOLVED INORGANICS ANALYSES - PHASE 1B

BERKS LANDFILL REMEDIAL INVESTIGATION - PHASE 1B
BERKS COUNTY, PENNSYLVANIA

Matrix: Groundwater

	Sample Point GWC03S/1B Date Sampled: 06/30/93 Dilution Factor: 1.0 Percent Solids: NA %				Sample Point GWC04D/1B Date Sampled: 06/30/93 Dilution Factor: 1.0 Percent Solids: NA %				Sample Point GWC04S/1B Date Sampled: 06/30/93 Dilution Factor: 1.0 Percent Solids: NA %				Sample Point GWC06D/1B Date Sampled: 07/12/93 Dilution Factor: 1.0 Percent Solids: NA %			
Parameter	CRDL	IDL	Result	Qual	CRDL	IDL	Result	Qual	CRDL	IDL	Result	Qual	CRDL	IDL	Result	Qual
Aluminum	200	35	35.0	U	200	35	396	B	200	35	35.0	U	200	44	104	B
Antimony	60	36	36.0	U	60	36	36.0	U	60	36	36.0	U	60	35	35.0	U
Arsenic	10	4	10.2	J	10	3	7.3	A	10	3	3.0	U	10	4	4.0	U
Barium	200	2	87.3	A	200	2	173	A	200	2	398	A	200	2	60.3	A
Beryllium	5	1	1.0	U	5	1	1.0	U	5	1	1.0	U	5	1	1.0	U
Cadmium	5	5	5.0	U	5	5	5.0	U	5	5	5.0	U	5	3	3.0	U
Calcium	5000	24	230000	A	5000	24	16600	A	5000	24	148000	A	5000	17	33900	A
Chromium	10	8	8.0	U	10	8	8.0	U	10	8	8.0	U	10	8	8.0	U
Cobalt	50	8	12.4	A	50	8	8.0	U	50	8	8.0	U	50	9	9.0	U
Copper	25	4	4.0	U	25	4	4.0	U	25	4	4.0	U	25	4	4.0	U
Iron	100	41	1030	A	100	41	182	A	100	41	959	A	100	25	25.0	U
Lead	3	2	2.0	UL	3	2	2.0	UL	3	2	2.0	UL	3	2	2.0	UL
Magnesium	5000	59	147000	A	5000	59	3140	A	5000	59	47000	A	5000	48	11300	A
Manganese	15	1	8320	A	15	1	78.3	A	15	1	970	A	15	1	4.1	B
Mercury	0.2	0.2	0.20	UL	0.2	0.2	0.20	UL	0.2	0.2	0.20	UL	0.2	0.2	0.20	UL
Nickel	40	17	75.3	A	40	17	17.0	U	40	17	17.0	U	40	18	18.0	A
Potassium	5000	1352	2640	A	5000	1352	1670	A	5000	1352	4370	A	5000	1270	1270	A
Selenium	5	3	3.0	UJ	50	30	30.0	R	50	30	30.0	UL	5	3	3.0	UL
Silver	10	7	7.0	UL	10	7	7.0	UL	10	7	7.0	UL	10	4	4.0	UL
Sodium	5000	251	39000	A	5000	251	21000	A	5000	251	17900	A	5000	123	8180	A
Thallium	100	40	40.0	R	10	4	4.0	R	100	40	40.0	R	10	3	3.0	R
Vanadium	50	6	6.0	U	50	6	6.0	U	50	6	6.0	U	50	6	9.5	A
Zinc	20	4	15.2	B	20	4	44.7	B	20	4	80.0	B	20	4	4.4	B
Cyanide	10	10	Not Analyzed		10	10	Not Analyzed		10	10	Not Analyzed		10	10	Not Analyzed	

Notes: All units are ug/l
Sample Quantitation Limit (SQL) is the Instrument Detection Limit (IDL).
The CRDLs and IDLs have been adjusted for dilution factors and percent solids as appropriate.

Qualifiers.....

A - Acceptable (Quantitative) Data
J - Estimated (Semiquantitative) Data
K - Biased High (Semiquantitative) Data
L - Biased Low (Semiquantitative) Data
B - Present in associated blanks (Semiquantitative) Data
UJ- Not Detected/Estimated Data
U - Not Detected/Quantitative Data
UL- Not Detected/Biased Low
N - Tentative Identification
R - Unusable Data
Q - Not Applicable

SUMMARY OF CLP DISSOLVED INORGANICS ANALYSES - PHASE 1B

BERKS LANDFILL REMEDIAL INVESTIGATION - PHASE 1B
BERKS COUNTY, PENNSYLVANIA

Matrix: Groundwater

	Sample Point GWC06S/1B Date Sampled: 07/12/93 Dilution Factor: 1.0 Percent Solids: NA %				Sample Point GWC07D/1B Date Sampled: 07/09/93 Dilution Factor: 1.0 Percent Solids: NA %				Sample Point GWC07S/1B Date Sampled: 07/09/93 Dilution Factor: 1.0 Percent Solids: NA %				Sample Point GWD02/1B Date Sampled: 07/06/93 Dilution Factor: 1.0 Percent Solids: NA %			
Parameter	CRDL	IDL	Result	Qual	CRDL	IDL	Result	Qual	CRDL	IDL	Result	Qual	CRDL	IDL	Result	Qual
Aluminum	200	44	58.9	B	200	44	54.8	B	200	44	61.5	B	200	44	44.0	U
Antimony	60	35	35.0	U	60	35	35.0	U	60	35	35.0	U	60	35	35.0	U
Arsenic	10	4	4.0	U	10	4	4.0	U	10	4	4.0	U	10	4	4.0	U
Barium	200	2	97.7	A	200	2	45.0	A	200	2	334	A	200	2	387	A
Beryllium	5	1	1.0	U	5	1	1.0	U	5	1	1.0	U	5	1	1.0	U
Cadmium	5	3	3.0	U	5	3	3.0	U	5	3	3.0	U	5	3	3.0	U
Calcium	5000	17	21800	A	5000	17	33600	A	5000	17	325000	A	5000	17	123000	A
Chromium	10	8	8.0	U	10	8	8.0	U	10	8	8.0	U	10	8	8.0	U
Cobalt	50	9	9.0	U	50	9	9.0	U	50	9	9.0	U	50	9	9.0	U
Copper	25	4	4.0	U	25	4	4.0	U	25	4	4.0	U	25	4	4.0	U
Iron	100	25	26.8	A	100	25	25.0	U	100	25	26.5	A	100	25	14000	A
Lead	3	2	2.0	UL	3	2	2.0	UL	3	2	2.0	UL	3	2	2.0	UL
Magnesium	5000	48	7050	A	5000	48	7100	A	5000	48	68500	A	5000	48	38500	A
Manganese	15	1	11.0	B	15	1	30.1	B	15	1	1330	A	15	1	2420	A
Mercury	0.2	0.2	0.20	UL	0.2	0.2	0.20	UL	0.2	0.2	0.20	UL	0.2	0.2	0.20	UL
Nickel	40	18	18.0	U	40	18	18.0	U	40	18	29.4	A	40	18	18.0	U
Potassium	5000	1270	1610	A	5000	1270	1460	A	5000	1270	4300	A	5000	1270	7490	A
Selenium	5	3	3.0	UL	5	3	3.0	UL	5	3	3.0	UL	5	3	3.0	UL
Silver	10	4	4.0	UL	10	4	4.0	UL	10	4	4.0	UL	10	4	4.0	UL
Sodium	5000	123	7290	A	5000	123	10500	A	5000	123	24800	A	5000	123	34900	A
Thallium	10	3	3.0	R	10	3	3.0	R	100	30	30.0	R	100	30	30.0	R
Vanadium	50	6	6.0	U	50	6	6.0	U	50	6	6.0	U	50	6	6.0	U
Zinc	20	4	4.0	U	20	4	4.0	U	20	4	22.1	B	20	4	5.7	B
Cyanide	10	10	Not Analyzed		10	10	Not Analyzed		10	10	Not Analyzed		10	10	Not Analyzed	

Notes: All units are ug/l
Sample Quantitation Limit (SQL) is the Instrument Detection Limit (IDL).
The CRDLs and IDLs have been adjusted for dilution factors and percent solids as appropriate.

Qualifiers.....

A - Acceptable (Quantitative) Data
J - Estimated (Semiquantitative) Data
K - Biased High (Semiquantitative) Data
L - Biased Low (Semiquantitative) Data
B - Present in associated blanks (Semiquantitative) Data
UJ- Not Detected/Estimated Data
U - Not Detected/Quantitative Data
UL- Not Detected/Biased Low
N - Tentative Identification
R - Unusable Data
Q - Not Applicable

SUMMARY OF CLP DISSOLVED INORGANICS ANALYSES - PHASE 1B

BERKS LANDFILL REMEDIAL INVESTIGATION - PHASE 1B
BERKS COUNTY, PENNSYLVANIA

Matrix: Groundwater

	Sample Point GWG01/1B Date Sampled: 06/30/93 Dilution Factor: 1.0 Percent Solids: NA %				Sample Point GWG02/1B Date Sampled: 06/30/93 Dilution Factor: 1.0 Percent Solids: NA %				Sample Point GWG03/1B Date Sampled: 06/30/93 Dilution Factor: 1.0 Percent Solids: NA %				Sample Point GWG04/1B Date Sampled: 07/09/93 Dilution Factor: 1.0 Percent Solids: NA %			
Parameter	CRDL	IDL	Result	Qual	CRDL	IDL	Result	Qual	CRDL	IDL	Result	Qual	CRDL	IDL	Result	Qual
Aluminum	200	35	35.0	U	200	35	35.0	U	200	35	35.0	U	200	44	56.1	B
Antimony	60	36	36.0	U	60	36	36.0	U	60	36	36.0	U	60	35	35.0	U
Arsenic	10	4	4.0	UJ	10	4	4.0	UJ	10	4	4.0	U	10	4	18.1	A
Barium	200	2	26.1	B	200	2	11.1	B	200	2	2.0	U	200	2	76.0	U
Beryllium	5	1	1.0	U	5	1	1.0	U	5	1	1.0	U	5	1	1.0	U
Cadmium	5	5	5.0	U	5	5	5.0	U	5	5	5.0	U	5	3	3.0	U
Calcium	5000	24	23600	A	5000	24	31600	A	5000	24	21200	A	5000	17	247000	A
Chromium	10	8	8.0	U	10	8	8.0	U	10	8	8.0	U	10	8	8.0	U
Cobalt	50	8	8.0	U	50	8	8.0	U	50	8	8.0	U	50	9	9.0	U
Copper	25	4	4.0	U	25	4	4.0	U	25	4	4.0	U	25	4	4.0	U
Iron	100	41	41.0	U	100	41	41.0	U	100	41	41.0	U	100	25	762	A
Lead	3	2	2.0	UL	3	2	2.0	UL	3	2	2.0	UL	3	1	2.6	L
Magnesium	5000	59	13200	A	5000	59	9570	A	5000	59	7120	A	5000	48	42900	A
Manganese	15	1	33.1	A	15	1	6.8	B	15	1	19.9	B	15	1	1590	A
Mercury	0.2	0.2	0.20	UL	0.2	0.2	0.20	UL	0.2	0.2	0.20	UL	0.2	0.2	0.20	UL
Nickel	40	17	17.0	U	40	17	17.0	U	40	17	17.0	U	40	18	19.7	A
Potassium	5000	1352	1350	U	5000	1352	1350	U	5000	1352	1350	U	5000	1270	3640	A
Selenium	5	3	3.0	UJ	50	30	30.0	UJ	50	30	30.0	UJ	5	3	3.0	UL
Silver	10	7	7.0	UL	10	7	7.0	UL	10	7	7.0	UL	10	4	4.0	UL
Sodium	5000	251	13100	A	5000	251	9820	A	5000	251	5670	A	5000	123	40400	A
Thallium	10	4	4.0	R	10	4	4.0	R	10	4	4.0	R	100	30	30.0	R
Vanadium	50	6	6.0	U	50	6	6.0	U	50	6	6.0	U	50	6	6.0	U
Zinc	20	4	7.9	B	20	4	8.2	B	20	4	8.5	B	20	4	37.0	B
Cyanide	10	10	Not Analyzed		10	10	Not Analyzed		10	10	Not Analyzed		10	10	Not Analyzed	

Notes: All units are ug/l
Sample Quantitation Limit (SQL) is the Instrument Detection Limit (IDL).
The CRDLs and IDLs have been adjusted for dilution factors and percent solids as appropriate.

Qualifiers.....

A - Acceptable (Quantitative) Data
J - Estimated (Semiquantitative) Data
K - Biased High (Semiquantitative) Data
L - Biased Low (Semiquantitative) Data
B - Present in associated blanks (Semiquantitative) Data
UJ- Not Detected/Estimated Data
U - Not Detected/Quantitative Data
UL- Not Detected/Biased Low
N - Tentative Identification
R - Unusable Data
Q - Not Applicable

AR302340

SUMMARY OF CLP DISSOLVED INORGANICS ANALYSES - PHASE 1B

BERKS LANDFILL REMEDIAL INVESTIGATION - PHASE 1B
BERKS COUNTY, PENNSYLVANIA

Matrix: Groundwater

	Sample Point GWG05/1B Date Sampled: 06/30/93 Dilution Factor: 1.0 Percent Solids: NA %				Sample Point GWG06/1B Date Sampled: 06/30/93 Dilution Factor: 1.0 Percent Solids: NA %				Sample Point GWG07/1B Date Sampled: 06/30/93 Dilution Factor: 1.0 Percent Solids: NA %				Sample Point GWG08/1B Date Sampled: 06/30/93 Dilution Factor: 1.0 Percent Solids: NA %			
Parameter	CRDL	IDL	Result	Qual	CRDL	IDL	Result	Qual	CRDL	IDL	Result	Qual	CRDL	IDL	Result	Qual
Aluminum	200	35	43.4	B	200	35	35.0	U	200	35	59.9	B	200	35	35.0	U
Antimony	60	36	36.0	U	60	36	36.0	U	60	36	36.0	U	60	36	36.0	U
Arsenic	10	4	11.6	A	10	4	4.0	U	10	4	7.3	A	10	4	4.0	U
Barium	200	2	148	A	200	2	2.0	U	200	2	7.5	B	200	2	15.7	B
Beryllium	5	1	1.0	U	5	1	1.0	U	5	1	1.0	U	5	1	1.0	U
Cadmium	5	5	5.0	U	5	5	5.0	U	5	5	5.0	U	5	5	5.0	U
Calcium	5000	24	232000	A	5000	24	40400	A	5000	24	22600	A	5000	24	28900	A
Chromium	10	8	8.0	U	10	8	8.0	U	10	8	8.0	U	10	8	8.0	U
Cobalt	50	8	8.0	U	50	8	8.0	U	50	8	8.0	U	50	8	8.0	U
Copper	25	4	4.0	U	25	4	4.0	U	25	4	4.0	U	25	4	4.0	U
Iron	100	41	128	A	100	41	41.0	U	100	41	162	A	100	41	41.0	U
Lead	3	2	2.0	UL	3	2	2.0	UL	3	2	2.0	UL	3	2	2.0	UL
Magnesium	5000	59	48900	A	5000	59	14900	A	5000	59	1660	A	5000	59	5640	A
Manganese	15	1	1070	A	15	1	2.5	B	15	1	8.5	B	15	1	361	A
Mercury	0.2	0.2	0.20	UL	0.2	0.2	0.20	UL	0.2	0.2	0.20	UL	0.2	0.2	0.20	UL
Nickel	40	17	20.4	A	40	17	17.0	U	40	17	17.0	U	40	17	17.0	U
Potassium	5000	1352	5090	A	5000	1352	1350	U	5000	1352	1350	U	5000	1352	1350	U
Selenium	50	30	30.0	UJ	50	30	30.0	UJ	5	3	3.0	UJ	5	3	3.0	UL
Silver	10	7	7.0	UL	10	7	7.0	UL	10	7	7.0	UL	10	7	7.0	UL
Sodium	5000	251	66600	A	5000	251	7240	A	5000	251	11700	A	5000	251	5570	A
Thallium	100	40	40.0	R	10	4	4.0	R	10	4	4.0	R	10	4	4.0	R
Vanadium	50	6	6.0	U	50	6	6.3	A	50	6	12.0	A	50	6	6.0	U
Zinc	20	4	20.4	B	20	4	9.7	B	20	4	4.0	U	20	4	6.7	B
Cyanide	10	10	Not Analyzed		10	10	Not Analyzed		10	10	Not Analyzed		10	10	Not Analyzed	

Notes: All units are ug/l
Sample Quantitation Limit (SQL) is the Instrument Detection Limit (IDL).
The CRDLs and IDLs have been adjusted for dilution factors and percent solids as appropriate.

Qualifiers.....

A - Acceptable (Quantitative) Data
J - Estimated (Semiquantitative) Data
K - Biased High (Semiquantitative) Data
L - Biased Low (Semiquantitative) Data
B - Present in associated blanks (Semiquantitative) Data
UJ- Not Detected/Estimated Data
U - Not Detected/Quantitative Data
UL- Not Detected/Biased Low
N - Tentative Identification
R - Unusable Data
Q - Not Applicable

SUMMARY OF CLP DISSOLVED INORGANICS ANALYSES - PHASE 1B

BERKS LANDFILL REMEDIAL INVESTIGATION - PHASE 1B
BERKS COUNTY, PENNSYLVANIA

Matrix: Groundwater

	Sample Point GWG10/1B Date Sampled: 06/30/93 Dilution Factor: 1.0 Percent Solids: NA %				Sample Point GWG11/1B Date Sampled: 07/09/93 Dilution Factor: 1.0 Percent Solids: NA %				Sample Point GWG11/FD Date Sampled: 07/09/93 Dilution Factor: 1.0 Percent Solids: NA %				Sample Point GWG12/1B Date Sampled: 06/30/93 Dilution Factor: 1.0 Percent Solids: NA %			
Parameter	CRDL	IDL	Result	Qual	CRDL	IDL	Result	Qual	CRDL	IDL	Result	Qual	CRDL	IDL	Result	Qual
Aluminum	200	35	35.0	U	200	44	51.7	B	200	44	44.0	U	200	35	35.0	U
Antimony	60	36	36.0	U	60	35	35.0	U	60	35	42.1	A	60	36	36.0	U
Arsenic	10	4	4.0	U	10	4	4.0	U	10	4	4.0	U	10	4	4.2	A
Barium	200	2	6.3	B	200	2	1430	A	200	2	1420	A	200	2	475	A
Beryllium	5	1	1.0	U	5	1	1.0	U	5	1	1.0	U	5	1	1.0	U
Cadmium	5	5	5.0	U	5	3	3.0	U	5	3	3.0	U	5	5	5.0	U
Calcium	5000	24	23000	A	5000	17	470000	A	5000	17	470000	A	5000	24	430000	A
Chromium	10	8	8.0	U	10	8	8.0	U	10	8	8.0	U	10	8	8.0	U
Cobalt	50	8	8.0	U	50	9	9.0	U	50	9	9.0	U	50	8	8.0	U
Copper	25	4	4.0	U	25	4	4.0	U	25	4	4.0	U	25	4	4.0	U
Iron	100	41	41.0	U	100	25	481	A	100	25	481	A	100	25	182	A
Lead	3	2	2.0	UL	3	1	2.0	UL	3	1	2.0	UL	3	2	11.2	L
Magnesium	5000	59	7180	A	5000	48	108000	A	5000	48	108000	A	5000	59	99100	A
Manganese	15	1	36.9	A	15	1	5110	A	15	1	5110	A	15	1	2470	A
Mercury	0.2	0.2	0.20	UL	0.2	0.2	0.20	UL	0.2	0.2	0.20	UL	0.2	0.2	0.20	UL
Nickel	40	17	17.0	U	40	18	47.5	A	40	18	47.4	A	40	17	24.1	A
Potassium	5000	1352	1350	U	5000	1270	8840	A	5000	1270	9080	A	5000	1352	7260	A
Selenium	5	3	3.0	UJ	5	3	3.0	UL	5	3	3.0	UL	50	30	30.0	UJ
Silver	10	7	7.0	UL	10	4	4.0	UL	10	4	4.0	UL	10	7	7.0	UL
Sodium	5000	251	7580	A	5000	123	155000	A	5000	123	155000	A	5000	251	27800	A
Thallium	10	4	4.0	R	100	30	30.0	R	100	30	30.0	R	100	40	40.0	R
Vanadium	50	6	6.0	U	50	6	6.0	U	50	6	6.0	U	50	6	6.0	U
Zinc	20	4	4.0	U	20	4	12.6	B	20	4	11.1	B	20	4	4.0	U
Cyanide	10	10	Not Analyzed		10	10	Not Analyzed		10	10	Not Analyzed		10	10	Not Analyzed	

Notes: All units are ug/l
Sample Quantitation Limit (SQL) is the Instrument Detection Limit (IDL).
The CRDLs and IDLs have been adjusted for dilution factors and percent solids as appropriate.

Qualifiers.....

A - Acceptable (Quantitative) Data
J - Estimated (Semiquantitative) Data
K - Biased High (Semiquantitative) Data
L - Biased Low (Semiquantitative) Data
B - Present in associated blanks (Semiquantitative) Data
UJ- Not Detected/Estimated Data
U - Not Detected/Quantitative Data
UL- Not Detected/Biased Low
N - Tentative Identification
R - Unusable Data
Q - Not Applicable

AR302842

SUMMARY OF CLP DISSOLVED INORGANICS ANALYSES - PHASE 1B

BERKS LANDFILL REMEDIAL INVESTIGATION - PHASE 1B
BERKS COUNTY, PENNSYLVANIA

Matrix: Groundwater

	Sample Point GWG12/FD Date Sampled: 06/30/93 Dilution Factor: 1.0 Percent Solids: NA %				Sample Point GWG13/1B Date Sampled: 07/12/93 Dilution Factor: 1.0 Percent Solids: NA %				Sample Point GWM03/1B Date Sampled: 07/08/93 Dilution Factor: 1.0 Percent Solids: NA %				Sample Point GWM11/1B Date Sampled: 06/30/93 Dilution Factor: 1.0 Percent Solids: NA %			
Parameter	CRDL	IDL	Result	Qual	CRDL	IDL	Result	Qual	CRDL	IDL	Result	Qual	CRDL	IDL	Result	Qual
Aluminum	200	35	35.0	U	200	44	49.4	B	200	44	44.0	U	200	35	35.0	U
Antimony	60	36	36.0	U	60	35	38.2	A	60	35	35.0	U	60	36	36.0	U
Arsenic	10	4	4.6	J	10	4	14.6	A	10	4	9.7	A	10	4	4.8	A
Barium	200	2	480	A	200	2	11.1	A	200	2	123	A	200	2	51.6	A
Beryllium	5	1	1.0	U	5	1	1.0	U	5	1	1.0	U	5	1	1.0	U
Cadmium	5	5	5.0	U	5	3	3.0	U	5	3	3.0	U	5	5	5.0	U
Calcium	5000	24	432000	A	5000	17	46200	A	5000	17	180000	A	5000	24	110000	A
Chromium	10	8	8.0	U	10	8	8.0	U	10	8	8.0	U	10	8	8.0	U
Cobalt	50	8	8.0	U	50	9	9.0	U	50	9	21.7	A	50	8	8.0	U
Copper	25	4	4.0	U	25	4	4.0	U	25	4	4.0	U	25	4	4.0	U
Iron	100	41	168	A	100	25	25.0	U	100	25	3640	A	100	41	661	A
Lead	3	2	14.0	L	3	1	2.0	UL	3	1	2.2	L	3	2	2.0	UL
Magnesium	5000	59	100000	A	5000	48	13400	A	5000	48	103000	A	5000	59	24000	A
Manganese	15	1	2480	A	15	1	21.2	B	15	1	13900	A	15	1	2570	A
Mercury	0.2	0.2	0.20	UL	0.2	0.2	0.20	UL	0.2	0.2	0.20	UL	0.2	0.2	0.20	UL
Nickel	40	17	21.2	A	40	18	18.0	U	40	18	77.0	A	40	17	17.0	U
Potassium	5000	1352	7340	A	5000	1270	1270	U	5000	1270	3950	A	5000	1352	1830	A
Selenium	50	30	30.0	UJ	5	3	3.0	UL	5	3	3.0	UL	50	30	30.0	UJ
Silver	10	7	7.0	UL	10	4	4.0	UL	10	4	4.0	UL	10	7	7.0	UL
Sodium	5000	251	28400	A	5000	123	12500	A	5000	123	196000	A	5000	251	20300	A
Thallium	100	40	40.0	R	10	3	3.0	R	100	30	30.0	R	100	40	40.0	R
Vanadium	50	6	6.0	U	50	6	12.3	A	50	6	6.0	U	50	6	6.0	U
Zinc	20	4	4.0	U	20	4	4.0	U	20	4	20.6	B	20	4	12.8	B
Cyanide	10	10	Not Analyzed		10	10	Not Analyzed		10	10	Not Analyzed		10	10	Not Analyzed	

Notes: All units are ug/l
Sample Quantitation Limit (SQL) is the Instrument Detection Limit (IDL).
The CRDLs and IDLs have been adjusted for dilution factors and percent solids as appropriate.

Qualifiers.....

A - Acceptable (Quantitative) Data
J - Estimated (Semiquantitative) Data
K - Biased High (Semiquantitative) Data
L - Biased Low (Semiquantitative) Data
B - Present in associated blanks (Semiquantitative) Data
UJ- Not Detected/Estimated Data
U - Not Detected/Quantitative Data
UL- Not Detected/Biased Low
N - Tentative Identification
R - Unusable Data
Q - Not Applicable

SUMMARY OF CLP DISSOLVED INORGANICS ANALYSES - PHASE 1B

BERKS LANDFILL REMEDIAL INVESTIGATION - PHASE 1B
BERKS COUNTY, PENNSYLVANIA

Matrix: Groundwater

	Sample Point GWM14D/1B Date Sampled: 07/09/93 Dilution Factor: 1.0 Percent Solids: NA %				Sample Point GWM14S/1B Date Sampled: 07/09/93 Dilution Factor: 1.0 Percent Solids: NA %				Sample Point GWM15D/1B Date Sampled: 07/06/93 Dilution Factor: 1.0 Percent Solids: NA %				Sample Point GWM15S/1B Date Sampled: 06/30/93 Dilution Factor: 1.0 Percent Solids: NA %			
Parameter	CRDL	IDL	Result	Qual	CRDL	IDL	Result	Qual	CRDL	IDL	Result	Qual	CRDL	IDL	Result	Qual
Aluminum	200	44	44.5	B	200	44	44.3	B	200	44	56.8	B	200	35	35.0	U
Antimony	60	35	35.0	U	60	35	35.0	U	60	35	35.0	U	60	36	36.0	U
Arsenic	10	4	4.0	U	10	4	4.6	K	10	4	4.0	U	10	4	4.0	UJ
Barium	200	2	576	A	200	2	445	A	200	2	36.1	A	200	2	15.9	B
Beryllium	5	1	1.0	U	5	1	1.0	U	5	1	1.0	U	5	1	1.0	U
Cadmium	5	3	3.0	U	5	3	3.0	U	5	3	3.0	U	5	5	5.0	U
Calcium	5000	17	420000	A	5000	17	333000	A	5000	17	20500	A	5000	24	81900	A
Chromium	10	8	8.0	U	10	8	8.0	U	10	8	8.0	U	10	8	8.0	U
Cobalt	50	9	9.0	U	50	9	9.0	U	50	9	9.0	U	50	8	8.0	U
Copper	25	4	4.0	U	25	4	4.0	U	25	4	4.0	U	25	4	4.0	U
Iron	100	25	25.0	U	100	25	5390	A	100	25	25.0	U	100	41	41.0	U
Lead	3	1	2.0	UL	3	1	2.0	UL	3	1	2.0	UL	3	2	2.0	UL
Magnesium	5000	48	46700	A	5000	48	95400	A	5000	48	2120	A	5000	59	10700	A
Manganese	15	1	99.6	A	15	1	5220	A	15	1	1.7	B	15	1	292	A
Mercury	0.2	0.2	0.20	UL	0.2	0.2	0.20	UL	0.2	0.2	0.20	UL	0.2	0.2	0.20	UL
Nickel	40	18	24.0	A	40	18	38.6	A	40	18	18.0	U	40	17	17.0	U
Potassium	5000	1270	33400	A	5000	1270	31500	A	5000	1270	3760	A	5000	1352	4850	A
Selenium	5	3	3.0	UL	50	30	30.0	UL	5	3	3.0	UL	5	3	3.0	UJ
Silver	10	4	4.0	UL	10	4	4.0	UL	10	4	4.0	UL	10	4	7.0	UL
Sodium	5000	123	187000	A	5000	123	440000	A	5000	123	18300	A	5000	123	30200	A
Thallium	100	30	30.0	R	100	30	30.0	R	100	30	30.0	R	100	40	40.0	R
Vanadium	50	6	6.0	U	50	6	6.0	U	50	6	6.0	U	50	6	6.0	U
Zinc	20	4	12.0	B	20	4	13.3	B	20	4	4.0	U	20	4	62.4	B
Cyanide	10	10	Not Analyzed		10	10	Not Analyzed		10	10	Not Analyzed		10	10	Not Analyzed	

Notes: All units are ug/l
Sample Quantitation Limit (SQL) is the Instrument Detection Limit (IDL).
The CRDLs and IDLs have been adjusted for dilution factors and percent solids as appropriate.

Qualifiers.....

A - Acceptable (Quantitative) Data
J - Estimated (Semiquantitative) Data
K - Biased High (Semiquantitative) Data
L - Biased Low (Semiquantitative) Data
B - Present in associated blanks (Semiquantitative) Data
UJ- Not Detected/Estimated Data
U - Not Detected/Quantitative Data
UL- Not Detected/Biased Low
N - Tentative Identification
R - Unusable Data
Q - Not Applicable

SUMMARY OF CLP DISSOLVED INORGANICS ANALYSES - PHASE 1B

BERKS LANDFILL REMEDIAL INVESTIGATION - PHASE 1B
BERKS COUNTY, PENNSYLVANIA

Matrix: Groundwater

	Sample Point GWM16/1B Date Sampled: 07/08/93 Dilution Factor: 1.0 Percent Solids: NA %				Sample Point GWM17/1B Date Sampled: 07/08/93 Dilution Factor: 1.0 Percent Solids: NA %				Sample Point GWM19S/1B Date Sampled: 06/30/93 Dilution Factor: 1.0 Percent Solids: NA %				Sample Point GWR19D/1B Date Sampled: 06/30/93 Dilution Factor: 1.0 Percent Solids: NA %			
Parameter	CRDL	IDL	Result	Qual	CRDL	IDL	Result	Qual	CRDL	IDL	Result	Qual	CRDL	IDL	Result	Qual
Aluminum	200	44	44.0	U	200	44	56.2	B	200	35	43.0	B	200	35	35.0	U
Antimony	60	35	38.0	A	60	35	35.0	U	60	36	36.0	U	60	36	36.0	U
Arsenic	10	4	9.0	A	10	4	4.0	U	10	3	3.0	U	10	4	4.0	UJ
Barium	200	2	359	A	200	2	3.2	A	200	2	67.8	A	200	2	29.6	A
Beryllium	5	1	1.0	U	5	1	1.0	U	5	1	1.0	U	5	1	1.0	U
Cadmium	5	3	3.0	U	5	3	3.0	U	5	5	5.0	U	5	5	5.0	U
Calcium	5000	17	400000	A	5000	17	13300	A	5000	24	427000	A	5000	24	43200	A
Chromium	10	8	8.0	U	10	8	8.0	U	10	8	8.0	U	10	8	8.0	U
Cobalt	50	9	10.3	A	50	9	9.0	U	50	8	8.0	U	50	8	8.0	U
Copper	25	4	4.0	U	25	4	4.0	U	25	4	4.0	U	25	4	4.0	U
Iron	100	25	1110	A	100	25	254	A	100	41	87.6	A	100	41	41.0	U
Lead	3	1	2.0	UL	3	1	2.0	UL	3	2	2.0	UL	3	2	2.0	UL
Magnesium	5000	48	105000	A	5000	48	5560	A	5000	59	52300	A	5000	59	12600	A
Manganese	15	1	12300	A	15	1	251	A	15	1	724	A	15	1	25.9	B
Mercury	0.2	0.2	0.20	UL	0.2	0.2	0.20	UL	0.2	0.2	0.20	UL	0.2	0.2	0.20	UL
Nickel	40	18	36.3	A	40	18	18.0	U	40	17	17.7	A	40	17	17.0	U
Potassium	5000	1270	13400	A	5000	1270	1270	U	5000	1352	3090	A	5000	1352	3010	A
Selenium	5	3	3.0	UL	5	3	3.0	UL	5	3	3.0	UL	50	30	30.0	UJ
Silver	10	4	4.0	UL	10	4	4.0	UL	10	7	7.0	UL	10	7	7.0	UL
Sodium	5000	123	80500	A	5000	123	3700	B	5000	251	10600	A	5000	251	5620	A
Thallium	100	30	30.0	R	10	3	3.0	R	100	40	40.0	R	10	4	4.0	R
Vanadium	50	6	6.0	U	50	6	6.0	U	50	6	6.0	U	50	6	6.0	U
Zinc	20	4	11.7	B	20	4	5.1	B	20	4	14.0	B	20	4	4.0	U
Cyanide	10	10	Not Analyzed		10	10	Not Analyzed		10	10	Not Analyzed		10	10	Not Analyzed	

Notes: All units are ug/l
Sample Quantitation Limit (SQL) is the Instrument Detection Limit (IDL).
The CRDLs and IDLs have been adjusted for dilution factors and percent solids as appropriate.

Qualifiers.....

A - Acceptable (Quantitative) Data
J - Estimated (Semiquantitative) Data
K - Biased High (Semiquantitative) Data
L - Biased Low (Semiquantitative) Data
B - Present in associated blanks (Semiquantitative) Data
UJ- Not Detected/Estimated Data
U - Not Detected/Quantitative Data
UL- Not Detected/Biased Low
N - Tentative Identification
R - Unusable Data
Q - Not Applicable

WET CHEMISTRY

Phase 1A

SUMMARY OF WET CHEMISTRY CONVENTIONALS ANALYSES - PHASE 1A

BERKS COUNTY, PENNSYLVANIA

Matrix: Groundwater

	Sample Point GR-18D/1A Date Sampled: 09/13/92 Dilution Factor: NA Percent Solids: NA %			Sample Point GW-16/1A Date Sampled: 09/09/92 Dilution Factor: NA Percent Solids: NA %			Sample Point GW-18S/1A Date Sampled: 09/03/92 Dilution Factor: NA Percent Solids: NA %			Sample Point GW-18S/FD Date Sampled: 09/03/92 Dilution Factor: NA Percent Solids: NA %		
Parameter	RL	Result	Qual	RL	Result	Qual	RL	Result	Qual	RL	Result	Qual
Alkalinity - CaCO3	2.0	47.0	A	2.0	494	A	2.0	378	A	2.0	368	A
Ammonia - N	0.10	0.50	A	0.10	0.50	A	0.10	0.20	A	0.10	0.10	A
Biochemical Oxygen Dema	2.0	33.0	J	2.0	5.0	J	2.0	7.0	J	2.0	10.0	J
Chemical Oxygen Demand	5.0	87.0	A	5.0	104	A	5.0	19.0	B	5.0	21.0	B
Chloride	2.0	130	A	2.0	680	A	2.0	252	A	2.0	265	A
Fluoride	0.10	0.10	A	0.10	0.10	A	0.10	0.10	U	0.10	0.10	U
Hardness - CaCO3	2.0	183	A	2.0	1070	A	2.0	704	A	2.0	725	A
Hexavalent Chromium		Not Analyzed		0.10	0.10	U	0.10	0.10	U	0.10	0.10	U
Nitrate/Nitrite - N	0.02	0.05	B	0.02	0.61	J	0.02	0.07	B	0.02	0.16	B
Sulfate	5.0	19.0	J	5.0	38	J	5.0	53.0	J	5.0	30.0	J
Total Dissolved Solids	5.0	396	A	5.0	2050	A	5.0	1350	L	5.0	1430	L
Total Inorganic Carbon	1.0	9.0	A	1.0	130	A	1.0	94.0	A	1.0	100	A
Total Kjeldahl Nitrogen	0.10	0.69	B	0.10	2.6	B	0.10	0.40	B	0.10	0.40	B
Total Organic Carbon	1.0	11.8	A	1.0	30	A	1.0	4.4	A	1.0	6.3	A
Total Phosphate - P	0.05	0.20	B	0.05	0.21	B	0.05	0.05	U	0.05	0.05	B
Total Suspended Solids	5.0	25.0	A	5.0	163	A	5.0	21.0	L	5.0	16.0	L
Turbidity	0.20	22.0	J	0.20	118	J	0.20	4.8	J	0.20	2.3	J

Notes: All units are mg/l except Turbidity which is NTU.
The Reporting Limits(RLs) have been adjusted for percent solids.
The Qual column indicates the Qualifier applied to the result following data validation (see below).

Qualifiers.....

A - Acceptable (Quantitative) Data	UJ- Not Detected/Estimated Data	R - Unusable Data
J - Estimated (Semiquantitative) Data	U - Not Detected/Quantitative Data	Q - Not Applicable
K - Biased High (Semiquantitative) Data	UL- Not Detected/Biased Low	N - Tentative Identification
L - Biased Low (Semiquantitative) Data		N*- Tentative Identification (result below laboratory MDL)
B - Present in associated blanks (Semiquantitative) Data		

SUMMARY OF WET CHEMISTRY CONVENTIONALS ANALYSES - PHASE 1A

BERKS COUNTY, PENNSYLVANIA

Matrix: Groundwater

	Sample Point GWC-05/1A Date Sampled: 09/03/92 Dilution Factor: NA Percent Solids: NA %			Sample Point GWC-3D/1A Date Sampled: 09/04/92 Dilution Factor: NA Percent Solids: NA %			Sample Point GWC-3S/1A Date Sampled: 09/03/92 Dilution Factor: NA Percent Solids: NA %			Sample Point GWG-01/1A Date Sampled: 09/02/92 Dilution Factor: NA Percent Solids: NA %		
Parameter	RL	Result	Qual	RL	Result	Qual	RL	Result	Qual	RL	Result	Qual
Alkalinity - CaCO3	2.0	247	A	2.0	525	A	2.0	788	A	2.0	215	A
Ammonia - N	0.10	0.30	A	0.10	0.30	A	0.10	1.5	A	0.10	0.30	A
Biochemical Oxygen Dema	2.0	16.0	J	2.0	14	J	2.0	6.0	J	2.0	5.0	J
Chemical Oxygen Demand	5.0	98.0	A	5.0	49	A	5.0	79.0	A	5.0	39.0	A
Chloride	2.0	80.0	A	2.0	225	A	2.0	181	A	2.0	165	A
Fluoride	0.10	0.01	U	0.10	0.10	A	0.10	0.10	U	0.10	0.10	A
Hardness - CaCO3	2.0	341	A	2.0	789	A	2.0	1260	A	2.0	464	A
Hexavalent Chromium	0.10	0.01	U	0.10	0.10	U	0.10	0.10	U	0.10	0.10	U
Nitrate/Nitrite - N	0.02	0.02	U	0.02	0.05	B	0.02	0.09	B	0.02	0.50	J
Sulfate	5.0	36.0	J	5.0	114	J	5.0	332	J	5.0	33.0	J
Total Dissolved Solids	5.0	484	L	5.0	1050	L	5.0	1760	L	5.0	776	L
Total Inorganic Carbon	1.0	170	A	1.0	140	A	1.0	280	A	1.0	62.0	A
Total Kjeldahl Nitrogen	0.10	0.50	B	0.10	0.40	B	0.10	1.5	B	0.10	0.80	B
Total Organic Carbon	1.0	5.1	A	1.0	10	A	1.0	22.0	A	1.0	4.9	A
Total Phosphate - P	0.05	0.05	U	0.05	0.05	U	0.05	0.36	B	0.05	0.78	A
Total Suspended Solids	5.0	176	L	5.0	84	L	5.0	135	L	5.0	426	L
Turbidity	0.20	192	J	0.20	165	J	0.20	76.0	J	0.20	618	J

Notes: All units are mg/l except Turbidity which is NTU.
The Reporting Limits(RLs) have been adjusted for percent solids.
The Qual column indicates the Qualifier applied to the result following data validation (see below).

Qualifiers.....

A - Acceptable (Quantitative) Data
J - Estimated (Semiquantitative) Data
K - Biased High (Semiquantitative) Data
L - Biased Low (Semiquantitative) Data
B - Present in associated blanks (Semiquantitative) Data
UJ- Not Detected/Estimated Data
U - Not Detected/Quantitative Data
UL- Not Detected/Biased Low
R - Unusable Data
Q - Not Applicable
N - Tentative Identification
N*- Tentative Identification (result below laboratory MDL)

SUMMARY OF WET CHEMISTRY CONVENTIONALS ANALYSES - PHASE 1A

BERKS COUNTY, PENNSYLVANIA

Matrix: Groundwater

	Sample Point GWG-02/1A Date Sampled: 09/02/92 Dilution Factor: NA Percent Solids: NA %			Sample Point GWG-03/1A Date Sampled: 09/02/92 Dilution Factor: NA Percent Solids: NA %			Sample Point Date Sampled: Dilution Factor: Percent Solids: %			Sample Point Date Sampled: Dilution Factor: Percent Solids: %		
Parameter	RL	Result	Qual	RL	Result	Qual	RL	Result	Qual	RL	Result	Qual
Alkalinity - CaCO3	2.0	104	A	2.0	64.0	A						
Ammonia - N	0.10	0.30	A	0.10	0.60	A						
Biochemical Oxygen Dema	2.0	2.0	U	2.0	2.0	U						
Chemical Oxygen Demand	5.0	7.0	B	5.0	20.0	B						
Chloride	2.0	7.0	A	2.0	4.0	A						
Fluoride	0.10	0.10	A	0.10	0.10	U						
Hardness - CaCO3	2.0	181	A	2.0	96.0	A						
Hexavalent Chromium	0.10	0.10	U	0.10	0.10	U						
Nitrate/Nitrite - N	0.02	1.84	J	0.02	0.03	B						
Sulfate	5.0	27.0	J	5.0	19.0	J						
Total Dissolved Solids	5.0	615	L	5.0	170	L						
Total Inorganic Carbon	1.0	25.0	A	1.0	24.0	A						
Total Kjeldahl Nitrogen	0.10	1.1	B	0.10	0.70	B						
Total Organic Carbon	1.0	1.0	U	1.0	1.3	A						
Total Phosphate - P	0.05	2.62	A	0.05	0.98	A						
Total Suspended Solids	5.0	412	L	5.0	950	L						
Turbidity	0.20	960	J	0.20	636	J						

Notes: All units are mg/l except Turbidity which is NTU.
The Reporting Limits(RLs) have been adjusted for percent solids.
The Qual column indicates the Qualifier applied to the result following data validation (see below).

Qualifiers.....

A - Acceptable (Quantitative) Data
J - Estimated (Semiquantitative) Data
K - Biased High (Semiquantitative) Data
L - Biased Low (Semiquantitative) Data
B - Present in associated blanks (Semiquantitative) Data
UJ- Not Detected/Estimated Data
U - Not Detected/Quantitative Data
UL- Not Detected/Biased Low
R - Unusable Data
Q - Not Applicable
N - Tentative Identification
N*- Tentative Identification (result below laboratory MDL)