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DATA USABILTY SUMMARY REPORT (DUSR)
OF THE
PORT IVORY SITE

ORGANIC AND INORGANIC ANALYSES IN AQUEOUS AND NON-AQUEOUS SAMPLES

VERITECH LABORATORIES FAIRFIELD, NEW JERSEY

REPORT NUMBER:

11031749

October 2003

Prepared for The Port Authority of NY & NJ Jersey City, New Jersey

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Total Pages 9:

NYS DEC Data Usability Summary Report

DATA VALIDATION FOR:

Volatile Organic Analyses, Semivolatile Organic Analyses,

Pesticide Analyses and PCB Analyses

SITE:

HH-Port Ivory Site

CONTRACT LAB:

Hampton-Clarke, Inc. Veritech Laboratories

Fairfield, New Jersey

REVIEWER:

Renee Cohen

DATE REVIEW COMPLETED:

October, 2003

MATRIX:

Aqueous and Non-Aqueous

The data validation was performed according to the guidelines in the described in the New York State Department of Environmental Conservation, Division of Environmental Remediation, Guidance for the Development of Data Usability Summary Reports (DUSR). In addition the data was been reviewed using the protocol specified in the NYS Analytical Services Protocol ('95).

All data are considered valid and acceptable except those analytes which have been rejected "R" (unreliable/unusable). Due to various QC problems some analytes may have been qualified with a "J" (estimated), "N" (presumptive evidence for the presence of the material, "U" (non-detect), or "JN" (presumptive evidence for the presence of the material at an estimated value) flag. All actions are detailed on the attached sheets.

Several factors should be noted for all persons using this data. Persons using this data should be aware that no result is guaranteed to be accurate even if it has passed all QC tests. The main purpose of this review is to appropriately qualify outliers and to determine whether the results presented meet the specific site/project criteria for data quality and data use.

This data assessment is for a total of thirteen (13) soil and two (2) Field Blank samples that were collected November 2, 2000. All of the samples were shipped to Veritech Laboratories located in Fairfield, New Jersey. The samples were received at the laboratory on November 3, 2000. The samples were analyzed for the parameters marked on the Chain of custody documents that accompanied the samples to the laboratory.

A cross-reference between Field Sample ID and Laboratory Sample ID is located in Table 1 of this report. A list of definitions that may be used in this report is located in Appendix A. Copies of qualified data result pages are located in Appendix B of this report and a copy of Chain of Custody (COC) documentation associated with sampling event is located in Appendix C.

1. OVERVIEW:

The samples were submitted to the laboratory for the analyses requested on the Chain of Custody (COC) documentation. The samples were analyzed for the organic analytes using EPA Test Methods for the Evaluation of Solid Waste (SW 846), Method 8260/8270/8081/8082. Proper custody transfer of the samples was documented in the laboratory report. The laboratory provided a deliverables package similar to that of a New Jersey Reduced Deliverable for Non-CLP parameters.

Thirteen (13) soil samples and two (2) field blank samples were collected November 2, 2000 and delivered to the Veritech Laboratories in Fairfield, NJ on November 3, 2000. The samples were reported in laboratory report 11031749. The samples were analyzed for the parameters listed on the COC documents. New Jersey Reduced Deliverables were requested on the COC documents.

A number of samples had the prefix PG-BH-20..., the COC document noted that the correct ID was PG-FILL-20-... The Vertitech Sample Key notes the change to the sample ID, however, all data result reports reference the "BH" from the initial login. All comments associated with the noted samples use the correct sample identifier (PG-FILL-20). The laboratory did not provide any other documentation of the change with the data report.

2. HOLDING TIME:

The amount of an analyte in a sample can change with time due to chemical instability, degradation, volatilization, etc. If the specified holding time is exceeded, the data may not be valid. Preserved volatile organic analyses are required to be analyzed within 10 days of validated time of sample receipt (VTSR) in accordance with the NYSDEC ASP, Rev '95. The technical holding time for properly preserved aqueous and non-aqueous samples is 14 days from collection. Semivolatile Organic Analyses are to be prepared/extracted within five (5) days of validated time of sample receipt (VTSR) in accordance with the NYSDEC ASP, Rev '95. The technical holding time for properly samples is to prepare the aqueous samples within 7 days of collection and the soil samples within fourteen days of collection.

Volatile Organic Analyses

The soil samples in this data set were collected on November 2, 2000 and received November 3, 2000. All of the field samples and QC samples associated with this data set were analyzed within the ten (10) days of VTSR with the exception of sample PG-FILL-20-110200S8B. This sample was analyzed eleven (11) days beyond VTSR. This is within the method holding time, therefore data was not qualified "UJ/J" estimated based on this criteria.

Semivolatile Organic Analyses

The soil samples in this data set were collected on November 2, 2000 and received November 3, 2000. All of the soil samples were extracted on one (1) batch on November 6, 2000. All sample extracts were analyzed within the method holding time.

2. HOLDING TIME (cont'd)

Pesticide Analyses

The soil samples in this data set were collected on November 2, 2000 and received November 3, 2000. The samples were extracted on November 7, 2000. This is within the NYS DEC ASP holding time for extraction. All samples were prepared and analyzed within the method holding time.

Polychlorinated Biphenyl's (PCB's) Analyses

The soil samples in this data set were collected on November 2, 2000 and received November 3, 2000. The samples were extracted on November 7, 2000 and analyzed on November 8, 2000. All soil samples in this data set were prepared and analyzed within the method holding time.

3. SURROGATES:

All samples are spiked with surrogate compounds prior to sample preparation to evaluate the overall laboratory performance and the efficiency of the analytical technique. If the measured surrogate concentrations are outside the QC limits, qualifiers were applied to the effected samples.

Volatile Organic Analyses

Surrogate recovery limits were not cited on the final data result pages. Surrogate recoveries were reported on the quantitation reports for each sample. The surrogate recoveries and acceptance limits were summarized on the Surrogate Recovery forms in the data report. The surrogate recoveries in all soil and aqueous samples in this data set met QC criteria.

Base Neutral Semivolatile Organic Analyses

Surrogate recovery limits and sample surrogate recoveries are reported on the surrogate summary report form in the data report. All surrogate recoveries met QC criteria in the soil samples in this data set.

<u>Pesticide Analyses</u> – Each sample was spiked with the surrogate compounds TCMX and DCB. The surrogate recovery of TCMX and DCB exceeded QC criteria in samples PG-MWPA12-110200S02. Surrogate recovery in Pesticides is advisory, therefore, no action was taken based on surrogate recovery.

<u>PCB Analyses</u> - Each sample was spiked with the surrogate compounds TCMX and DCB. Surrogate recoveries were summarized from both columns in the data report. The surrogate recovery of TCMX and DCB exceeded QC criteria in samples PG-MWPA12-110200S02, PG-MWPA12-110200S04, PF-FILL-20-110200S04 and PG-FILL-20-110200S8A. Surrogate recovery in PCB analyses is advisory, therefore, no action was taken based on surrogate recovery.

4. MATRIX SPIKE/SPIKE DUPLICATE, MS/MSD:

The MS/MSD data are generated to determine the long term precision and accuracy of the analytical method in various matrices. The MS/MSD may be used in conjunction with other QC criteria for additional qualification of data. The laboratory used the in-house generated recovery criteria and RPD (precision) data for reporting purposes.

Volatile Organic Analyses

Batch QC was utilized for both the soil and aqueous samples in this data set. Spike recoveries and relative percent differences were reported on the spike recovery summary forms. Sample data was not qualified based on batch QC data.

Semivolatile Organic Analyses

Batch QC was utilized for the soil samples in this data set. Spike recoveries and relative percent differences were reported on the spike recovery summary forms. Sample data was not qualified based on batch QC data.

Pesticide Analyses

Batch QC was utilized for the soil samples in this data set. Spike recoveries and relative percent differences were reported on the spike recovery summary forms. Sample data was not qualified based on batch QC data.

Polychlorinated Biphenyl Analyses

Aroclor 1016 and Aroclor 1260 were spiked into sample PG-FILL-20-110200S8B. Recovery and Relative Percent Difference were reported. All recoveries and % Relative Percent Difference met QC criteria in this MD/MSD analysis.

5. BLANK SPIKE ANALYSIS:

The NY ASP protocol requires that a blank spike analysis be performed with each sample batch. The blank spike analysis is used to insure that the analytical system is in control. The laboratory applied in-house recovery limits for each analyte.

Volatile Organic Analytes

Blank spike data was summarized on the spike recovery form. All recoveries met QC criteria in the blank spike sample associated with this data set.

Semivolatile Organic Analytes

Blank spike data was summarized on the spike recovery form. All recoveries met QC criteria in the blank spike . sample associated with this data set.

Pesticide Analyses

Blank spike data was summarized on the spike recovery form. All recoveries met QC criteria in the blank spike sample associated with this data set.

Polychlorinated Biphenyl Analyses

Aroclor 1016 and Aroclor 1260 were added to the blank spike sample. Recovery of the spiked analytes met QC criteria in the blank spike analysis.

6. BLANK CONTAMINATION:

Quality assurance (QA) blanks, such as the method, trip, field, or rinse blanks are prepared to identify any contamination that may have been introduced into the samples during sample preparation or field activity. Method blanks measure laboratory contamination. Trip blanks measure cross-contamination of samples during shipment. Field blanks measure cross-contamination of samples during field operations. Samples are then qualified based on blank contamination when detected.

A) Method Blank contamination

Volatile Organic Analyses

One (1) aqueous and one (1) Methanol Extraction (MEOH) Method Blank and two (2) soil method blanks are associated with this data set. The aqueous method blank and MEOH method blank were free from contamination of all target analytes. The soil method blanks all contained low levels of Methylene Chloride (0.0011 J mg/kg through 0.0017 J mg/kg). Below is a summary of the method blank and associated contamination level:

Method Blank ID	Analyte Conc. (mg/kg)	Total TIC Conc. (mg/kg)
,	Methylene Chloride	
•	•	·
FT4089	0.0017 J	0.013
FT4200	0.0011 J	0.012

When the target analyte, Methylene Chloride and the unknown TIC analytes were detected in associated field samples, they have been negated in accordance with the validation guidelines. Methylene Chloride was detected and negated in all of the soil samples in the sample set.

Qualified data result pages are located in Appendix B of this report.

6. BLANK CONTAMINATION (cont'd)

Semivolatile Organic Analyses

Based on the data provided for review, one (1) soil method blank is associated with this data set. The extraction batch was prepared on November 6, 2000. This soil blank was analyzed on the instrument that the sample extracts were analyzed on. The method blank was analyzed 11/7/00 on Instrument "U". This method blank was free from contamination of all target analytes. This method blank did contain a number of Tentatively Identified Compounds (TIC's). When these TIC compounds were detected in the associated soil samples, they were negated and qualified "U" by this data validator in accordance with the validation guidelines. All of the soil samples in this data set have been qualified for laboratory contamination. The laboratory did apply the "B" qualifier to the samples analyzed on Instrument "U" as required by the method/deliverable.

Qualified data result pages are located in Appendix B of this report.

Pesticide Analyses

The method blank associated with this data set was free from contamination of target analytes.

Polychlorinated Biphenyl Analyses

The method blank associated with this data set was free from contamination of target analytes.

B) Field Blank contamination

Volatile Organic Analyses

Two (2) Field Blank samples are associated with this data set. Each was free from contamination of target analytes with the exception Methylene Chloride. Methylene Chloride was detected at a concentration of 3.2 J ug/l and 3.1 J ug/l. When detected in the samples associated with the 11//2/00 sampling event this analyte has been negated and qualified as required in the validation guidelines.

Semivolatile Organic Analyses

The Field Blank samples were not analyzed for this parameter.

Pesticide Analyses

The Field Blank samples were not analyzed for this parameter.

Polychlorinated Biphenyl Analyses

The Field Blank samples were not analyzed for this parameter.

C) Trip Blank contamination

Volatile Organic Analyses

A Trip Blank was not submitted with this data set.

7. GC/MS CALIBRATION:

Satisfactory instrument calibration is established to ensure that the instrument is capable of producing acceptable quantitative data. An initial calibration demonstrates that the instrument is capable of giving acceptable performance at the beginning of an experimental sequence. The continuing calibration verifies that the instrument is giving satisfactory daily performance. USEPA data validation criteria is the same for all analytes in both GC/MS Volatile and GC/MS Semivolatile Organic analyses, therefore, all text discussion is for VOA and SVOA samples analyses.

A) RESPONSE FACTOR

The response factor measures the instrument's response to specific chemical compounds. USEPA data review requires that the response factor of all analytes be greater than or equal to 0.05 in both initial and continuing calibration analyses. A value less than 0.05 indicates a serious detection and quantitation problem (poor sensitivity). USEPA data validation criteria states that if the minimum RRF criteria is not met in an initial calibration the positive results are qualified "J". Non detect results in the initial calibration with a RRF <0.05 are qualified "R", unusable. If RRF criteria is not met in the continuing calibration curve analysis, effected positive analytes will be qualified "J" estimated. Those analytes not detected are not qualified. The SW-846 Methods cite specific analytes known as System Performance Check Compounds (SPCC). Minimum response criteria is set for these analytes. If the minimum criteria is not met, analyses must stop and the source of problems must be found and corrected. Data associated with this set has been reviewed for the criteria in the cited in the EPA Method and the USEPA criteria.

Volatile Organic Analyses

Initial and continuing calibration data was submitted with this sample set. Raw data was not submitted with the sample set. Data was reviewed based on the calibration summary data provided.

Three (3) initial calibration curves are associated with the soil samples in this data set. The first curve was analyzed November 3, 2000 (Inst. FT). The second calibration curve associated with this data set was analyzed on November 7, 2000 (Inst. FR) and the third was analyzed on November 9, 2000 (Inst. FT). The response factor for all target analytes met QC criteria in each of the initial calibration curves with the exception of the following:

Date	Instrument ID	Analyte	Response Factor Average
11/3/00	FT	Acrolein	0.030
11/9/00	FT	Acrolein	0.025

7. GC/MS CALIBRATION (cont'd)

Four (4) continuing calibration standards are associated with the samples in this data set. All response factor criteria was met in each of the standards with the exception of the following:

Date	File ID	Analyte	Response Factor Average
11/6/00	FT3989	Acrolein	0.024
11/9/00	FR9887	Acrolein	0.045
11/14/00	FT4199	Acrolein	0.016

Due to the low response factor across the calibration curve, Acrolein has been qualified "R" unusable, in all samples associated with the initial and continuing calibration standards listed above. This "R" qualifier has been added to all soil and aqueous samples in this data set.

Qualified data result pages are located in Appendix B of this report.

Base Neutral Semivolatile Organic Analyses

Initial and continuing calibration form summaries were submitted with the data report. Raw data was not submitted with this sample set. Data was reviewed/qualified based on calibration summary data provided.

Two (2) initial calibration curves are associated with the soil samples in this data set. The first curve was analyzed November 3, 2000 (Inst. U). The second calibration curve associated with this data set was analyzed on November 8, 2000 (Inst. U). The response factor for all target analytes met QC criteria in each of the initial calibration curves.

One (1) continuing calibration standard is associated with the soil samples in this data set. The response factor for each of the target analytes met QC criteria in the continuing calibration curve analysis.

7. GC/MS CALIBRATION (cont'd)

B) PERCENT RELATIVE STANDARD DEVIATION (RSD) AND PERCENT DIFFERENCE (%D):

Percent RSD is calculated from the initial calibration and is used to indicate the stability of the specific compound response factor over increasing concentration. Percent D compares the response factor of the compounds in the continuing calibration standard to the mean response factor (RRF) from the initial calibration. Percent D is a measure of the instrument's daily performance. Region II data validation criteria states that the percent RSD of the initial calibration curve must be less than or equal to 30%. The %D must be <25% in the continuing calibration standard. This criteria has been applied to all target analytes. A value outside of these limits indicates potential detection and quantitation errors. For these reasons, all positive results are flagged as estimated, "J" and non-detects may be flagged "UJ", based on professional judgement. If %RSD and %D grossly exceed QC criteria (>90%), non-detects data may be qualified "R", unuseable. Data associated with this set has been reviewed for the criteria in the cited in the USEPA Data Validation Guidelines.

Volatile Organic Analyses

Initial and Continuing calibration form summaries were submitted with the data report. Raw data was not submitted with this sample set. Data was reviewed/qualified based on calibration summary data provided.

Three (3) initial calibration curves are associated with this data set. All target analytes with the exception of 2-Cloroethyl vinyl ether (2-CEVE) (34.7%) met QC criteria in the initial calibration curve analyzed November 7, 2000. 2-CEVE has been qualified "UJ/J", estimated in the samples associated with this initial calibration curve.

Four (4) continuing calibration standard analyses are associated with this data set. All target analytes met QC criteria with exception of the following:

Date	File ID	Analyte	%Difference
11/9/00	FR9887	Chloromethane	31.9
		Acrolein	40.7
11/14/00	FT4199	Acrolein	36.5
		2-CEVE	167 **

These target analyte have been qualified "UJ/J" estimated in the associated samples. ** notes that the %Difference of this analyte exceeds the limits cited in the validation guidelines. 2-CEVE has been qualified "R" unusable in sample PG-FILL-20-110200S8B.

Qualified data result pages are located in Appendix B of this report.

7. GC/MS CALIBRATION (cont'd)

B) PERCENT RELATIVE STANDARD DEVIATION (RSD) AND PERCENT DIFFERENCE (%D):

Base Neutral Semivolatile Organic Analyses

Initial and Continuing calibration form summaries were submitted with the data report. Raw data was not submitted with this sample set. Data was reviewed/qualified based on calibration summary data provided.

Two (2) initial calibration curves are associated with this data set. All target analytes with the exception of 4-Nitrophenol (35.27%) met QC criteria in the initial calibration curve analyzed November 3, 2000. One continuing calibration standard analysis is associated with this initial calibration curve. All target analytes met QC criteria with exception of Hexachlorocyclopentadiene (55.24%). This target analyte has been qualified "UJ/J" estimated in the associated soil samples. A second initial calibration curve was analyzed on November 8, 2000. All target analytes met %RSD criteria with the exception of Benzidiene (36.34%). The soil samples associated with this initial calibration curve have been qualified "UJ/J" estimated.

Qualified data result pages are located in Appencdix B of this report.

8. GC/MS MASS SPECTROMETER TUNING:

Tuning and performance criteria are established to ensure adequate mass resolution, proper identification of compounds, and to some degree, sufficient instrument sensitivity. These criteria are not sample specific. Instrument performance is determined using standard materials. Therefore, these criteria should be met in all circumstances. The tuning standard for volatile organics is Bromofluorobenzene (BFB). The tuning compound for semivolatile organic analyses is decafluorotriphenylphosphine (DFTPP). If the mass calibration is in error, or missing, all associated data will be classified as unusable, "R".

Volatile Organic Analyses/Base Neutral Semivolatile Organic Analyses

BFB and DFTPP Tune criteria was submitted with this sample set. All Tune criteria submitted for review met QC criteria.

9. GC/MS INTERNAL STANDARDS PERFORMANCE:

Internal standard (IS) performance criteria ensure that the GC/MS sensitivity and response are stable during every run. The method recommends that the internal standard area count must not vary by more than a factor of 2 (-50%to +100%) from the associated continuing calibration standard. The method recommends that the retention time of the internal standard must not vary more than ±30 seconds from the associated continuing calibration standard. The EPA CLP validation guidelines state that if the area count is outside the (-50% to +100%) range of the associated standard, all of the positive results for compounds quantitated using that IS are qualified estimated, "J", and all non-detects below 50% are qualified "UJ", non detects above 100% should not be qualified or "R" if there is a severe loss of sensitivity. The internal standard evaluation criteria is applied to all field and OC samples.

Volatile Organic Analyses

Internal Standard area counts and retention time data was summarized and submitted with this sample set. All Internal Standard area counts and Retention Time data met QC criteria in all sample with the exception of sample PG-FILL-20-110200S8B. 1,4-Dichlorobenzene-d4 exceeded QC criteria in the sample analysis on November 13, 2000. The sample was reanalyzed on November 14, 2000 and all QC criteria was met. The final data from the November 14, 2000 analysis was submitted with the data report. This analysis was analyzed beyond the ASP holding time but within the method holding time, therefore, the target analytes were not qualified. The laboratory should have provided data from both analyses in the NJ Reduced Deliverable report.

Base Neutral Semivolatile Organic Analyses

Internal Standard area counts and retention time data was summarized on the Form 8 and submitted with this sample set. Perylene-d12 exceeded QC criteria in the initial analysis of the following samples;

PG-FILL-20-110200S02

PG-FILL-20-110200S03

PG-FILL-20-110200S04

PG-FILL-20-110200S07

PG-FILL-20-110200S8A

These samples were reanalyzed on November 8, 2000. All QC criteria were met in the reanalysis, data results from the reanalyses were reported. No action was taken based on the initial analytical run.

The Internal Standard area counts of Perylene-d12 exceeded QC criteria in sample PG-MWPA12-110200S01. This sample was not reanalyzed to confirm matrix interference. The target analytes associated with this Internal Standard have been qualified "UJ/J" estimated.

The Internal Standard area counts of Perylene-d12 exceeded QC criteria in he initial analysis (11/7/00) of sample PG-FILL-20-110200S8B. This sample was reanalyzed (11/8/00) and matrix interference was confirmed. The target analytes associated with this Internal Standard have been qualified "UJ/J" estimated.

Qualified data result pages are located in Appendix B of this report.

10. GC CALIBRATION:

Pesticide Analyses – Veritech Laboratories performed two (2) initial calibration analyses for this data set. The initial calibration curve analyses were performed on November 7, 2000 and November 10, 2000. A single injection with dual column analyses was utilized. Calibration summary data was provided for review. Raw data was included in this data report. Review of calibration data was performed using the summary forms in the data report. Initial calibration utilized five points of target pesticide analytes. A single standard of the multipeak analytes, Toxaphene and Chlordane were analyzed. Response factors, correlation coefficients and % Relative Standard Deviation was summarized. All %RSD met QC criteria for each of the target analytes with the exception of 4,4°-DDT in both of the calibration curves. Correlation criteria were met for this analyte, therefore associated sample data was not qualified.

Four (4) continuing calibration standards are associated with this data set. The laboratory reported the first CCV standard on the Form 7 using File ID GB4096. This File ID was not listed on the Form 5 summary of injections. Based on this data discrepancy, data was not qualified. The other continuing calibration standards reported %Difference from both columns. All other continuing standards met QC criteria with the exception of the closing standard analyzed November 11, 2000 (03:52). Methoxyclor (65.08%/50.74%) and Endrin Ketone (33.82%/38.80%) % difference exceeded QC criteria. This effected samples PG-MWPA12-110200S04, PG-MWPA12-110200S01, PG-FILL-20-110200S01, PG-FILL-20-110200S07, PG-FILL-20-110200S07, PG-FILL-20-110200S08A and PG-FILL-20-110200S8B. These samples bracketed by this closing standard have been qualified "UJ/J" estimated.

Qualified data result pages are located in Appendix B of this report.

PCB Analyses - Veritech Laboratories performed the initial calibration analysis on October 13, 2000. A single injection with dual column analyses was utilized. Calibration summary data was provided for review. Raw data was included in this data report. Review of calibration data was performed using the summary forms in the data report. Initial calibration utilized five points of Aroclor 1016 and Aroclor 1260. Response factors, correlation coefficients and % Relative Standard Deviation was summarized. A single standard of each of the other Aroclors was analyzed. All initial calibration data provided in the report met QC criteria. Continuing standard calibration samples were analyzed throughout the sequence. All continuing calibration data presented in the data report met QC criteria.

11. COMPOUND IDENTIFICATION:

Target compounds are identified on the GC/MS by using the analyte's relative retention time (RRT) and by comparison to the ion spectra obtained from known standards. For the results to be a positive hit, the sample peak must be within \pm 0.06 RRT units of the standard compound, and have an ion spectra which has a ratio of the primary and secondary ion intensities with 20% of that in the standard compound.

Target compounds are identified on the GC by using the analytes retention time. Concentration is quantitated from the initial calibration curve.

Volatile Organic Analyses

Samples were analyzed via EPA Method 8260. Tentatively Identified Compounds (TIC's) were reported with this data set. The laboratory did not provide analyte spectra or TIC scans for review with this data report. All sample results were reported to the MDL/PQL when dilution was not performed. Sample results were reported on a dry weight basis. Data was reported in accordance with the cited method.

The following samples were analyzed at a five (5) time dilution. Based on the chromatogram provided in the data report, matrix interference was not exhibited. The laboratory stated in the case narrative that the dilution was due to the "nature of the sample", no further information was provided or explained.

PG-MWPA12-110200S02

PG-MWPA12-110200S03

PG-FILL-20-110200S02

PG-FILL-20-110200S03

PG-FILL-20-110200S04

PG-FILL-20-110200S05

PG-FILL-20-110200S06

PG-FILL-20-110200S07

PG-FILL-20-110200S8A

Sample PG-MWPA12-110200S04 was extracted in Methanol and analyzed with a dilution factor of 125 applied to all final results. This was due to the matrix interference of late eluting peaks in the sample chromatogram. All target analytes were reported Not Detected in this soil sample.

Sample PG-FILL-20-110200S8B was initially analyzed within the NYS DEC ASP Holding Time. Internal standard QC criteria were not met in this analysis. The reanalysis was performed beyond this holding time but within the method holding time, therefore no additional data qualifiers were added.

Base Neutral Semivolatile Organic Analyses

Samples were analyzed via EPA Method 8270. Tentatively Identified Compounds (TIC's) were reported with this data set. The laboratory did not provide analyte spectra or TIC scans for review with this data report. All sample results were reported to the MDL/ PQL when dilution was not performed. Soil samples were reported on a dry weight basis. Data was reported in accordance with the cited method.

10. COMPOUND IDENTIFICATION (cont'd)

Pesticide Analyses

The soil samples were analyzed via EPA Method 8081. Samples were analyzed on dual columns (DB1701/DB608). All sample extracts were analyzed and confirmed via single injection. All sample results were reported to the MDL/PQL. Soil sample data results were reported on a dry weight basis. Data was reported in accordance with the cited method.

A number of the samples exhibited matrix interference in the sample chromatogram. Additional cleanup procedures or extract dilution may have reduced the matrix interference. This may have lead to the detection of additional target analytes in the effected samples.

Sample PG-MWPA12-110200S01 was analyzed and reported from a 1:2 dilution. 4,4'-DDE was detected at a concentration of 0.0086 mg/kg.

Samples PG-FILL-20-110200S01 was analyzed and reported from a 1:5 dilution. Target analytes were not detected in this sample extract.

Polychlorinated Biphenyl Analyses

The soil samples were analyzed via EPA Method 8082. Samples were analyzed on dual columns (DB1701/DB608). All sample extracts were analyzed and confirmed via single injection. All sample results were reported to the MDL/PQL. Soil sample data results were reported on a dry weight basis. Data was reported in accordance with the cited method.

A number of the samples exhibited matrix interference in the sample chromatogram. Additional cleanup procedures or extract dilution may have reduced the matrix interference. This may have lead to the detection of additional target analytes in the effected samples. When PCB's were detected in the samples associated with this data set, Aroclor 1260 was reported.

12 OVERALL ASSESSMENT:

All data was reported to the laboratory MDL/PQL on the result page. Soil sample results are reported on a dry weight basis. A number of the samples exhibited matrix interference in the sample chromatogram. Additional cleanup procedures or extract dilution may have reduced the matrix interference. This may have lead to the detection of additional target analytes in the effected samples.

All of the soil Volatile Organic method blank samples contained common laboratory contaminants. These contaminants have been negated in the associated field samples. All of the soil Semivolatile Organic method blank samples contained Tentatively Identified Compounds and Aldol Condensation Products (ACP). These contaminants have been negated in the associated field samples. All qualified data result pages are located in Appendix B of this report.

Sample data was qualified based on laboratory contamination and calibration criteria detailed in the above report. All data was usable with the exception of the volatile target analytes qualified "R" due to poor response in the calibration curve.

The data provided for this data set is acceptable for use, with the noted data qualifiers. All qualified data result pages are located in Appendix B of this report.

NYS DEC Data Usability Summary Report

DATA VALIDATION FOR: TAL Metals, Miscellaneous Wet Chemistry

SITE: HH/Port Ivory

CONTRACT LAB: Hampton-Clarke, Inc., Veritech Laboratories

Fairfield, New Jersey

REVIEWER: Renee Cohen

DATE REVIEW COMPLETED: October, 2003

MATRIX: Non-Aqueous

This data assessment is for thirteen (13) soil samples and two (2) Field Blank samples collected November 2, 2000 and delivered to Veritech Laboratories located in Fairfield, NJ.

The data evaluation was performed according to the guidelines noted in the "National Functional Guidelines for Inorganic Data Review, February 1994 and the NYSDEC ASP. A Data Usability Summary Report (DUSR) has been prepared in accordance with the guidelines of the Division of Environmental Remediation.

Several factors should be noted for all persons using this data. Persons using this data should be aware that no result is guaranteed to be accurate even if it has passed all QC tests. The main purpose of this review is to appropriately qualify outliers and to determine whether the results presented meet the specific site/project criteria for data quality and data use.

Table 1 of this report contains a cross reference between the Field Sample ID's and the Laboratory Sample ID's.

The samples were also analyzed for a number of organic parameters. The data review associated with the organic analytes is located in the Organic Data Validation Report (DUSR). Appendix A of this Data Usability Summary Report (DUSR) contains a summary of the data qualifiers that may be used in the report. Appendix B contains the qualified data result pages. Appendix C contains the Chain of Custody (COC) documents associated with this data set as well as additional correspondence between the Port Authority and the laboratory.

1. OVERVIEW

The samples in this data set were received at the laboratory on November 3, 2003. The samples were received in coolers. The cooler temperatures were measured by the laboratory and were reported. All cooler temperatures met QC criteria. The aqueous samples in this data set were digested and analyzed for the Target Analyte (TAL) list of metals. The samples were analyzed and reported as TAL Metals. In addition, the samples were analyzed for the following Wet Chemistry Parameters: Cyanide, Oil and Grease, pH, Phenol and Total Petroleum Hydrocarbons. All analyses were performed in accordance with the cited method.

2. HOLDING TIME

The amount of an analyte in a sample can change with time due to chemical instability, degradation, volatilization, etc. If the specified holding time is exceeded, the data may not be valid. Metals with the exception of Mercury, are required to be digested and analyzed within 180 days of Verified Time of Sample Receipt (VTSR). Mercury samples are to be digested and analyzed within 26 days of VTSR. The miscellaneous wet chemistry analytes have specific holding times cited in the approved method.

All sample analyses associated with the soil samples in this data set were prepared/digested and analyzed within the proper holding time.

3. CALIBRATION ANALYSIS

Inductively Coupled Plasma (ICP) was utilized for these analyses. The ICP was calibrated using the calibration standards required by the manufacturer. An initial calibration verification (ICV) standard was then analyzed to verify instrument calibration.

The samples were analyzed in multiple analytical sequences on November 7-9, 2000. Recoveries of the ICV standard associated with each analytical sequence met QC criteria. Continuing calibration verification (CCV) standards were analyzed throughout the runs. All CCV percent recoveries met QC criteria. It was not possible to determine the frequency of the CCV standards based on the data provided in the analytical package.

Analysis for Cold Vapor Mercury is calibrated using multi point standards and calculating the correlation coefficient of the curve. One of the calibrations standards must be analyzed at the CRDL.

The Mercury analyses associated with this data set was performed on November 6, 2000. Calibration summary data was provided in this data report. The recovery of the Initial Calibration standard and all Continuing Calibration standards met QC criteria.

The Wet Chemistry analyses were analyzed in accordance with the cited method. Calibration of the general chemistry parameters was performed in accordance with the cited method. All initial and continuing calibration criteria for each of the wet chemistry analytes met OC criteria.

4. ICP CRDL STANDARD

The CRDL standard is used for the verification of instrument linearity near the CRDL. The CRDL standard control limits are 80%-120% recovery. If the CRDL standard falls outside of the control limits, associated data less than or equal to the 10X the CRDL are qualified estimated (J or UJ) or rejected (R) depending on the recovery of the CRDL standard and the concentration of the analyte in the sample. When the CRDL standard exceeds the control limit, indicating a high bias samples are qualified estimated (J or UJ).

Veritech Laboratories did not provide documentation that a CRDL standard was analyzed for either the ICP or Mercury analyses associated with the samples in this data set. Data was not quailed based on this anamoly.

5. ICP INTERFERENCE CHECK STANDARD

The Interference Check Standard (ICS) is used to verify the laboratory interelement and background correction factors of the ICP. Two solutions comprise the ICS A and ICS AB. Solution A consists of the interferent metals while solution AB is the group of target analytes and the interferents metals. An ICS analysis consists of analyzing both solutions consecutively for all wavelengths used for each analyte reported by ICP.

All ICSA and ICSAB recoveries reported with this data set met QC criteria.

6. MATRIX SPIKE (MS) ANALYSIS

The spike sample analysis provides information about the effect of the sample matrix upon the digestion and measurement methodology. The spike control limits are 75%-125% when the sample concentration is less than four (4) times the spike added. If the matrix spike recoveries fall in the range of 30%-74%, the sample results are may be biased low and are qualified as estimated (J or UJ). If the matrix spike recoveries fall in the range of 126%-200%, sample results may be biased high. Positive results are qualified estimated (J). If the spike recovery is greater than 125% and the reported sample results are less than the IDL the data point is acceptable for use. If the matrix spike recovery is greater than 200%, the associated sample data are unusable and are rejected (R). If matrix spike results are less than 30%, the associated non-detect results are qualified unusable and rejected (R), and the results reported above the IDL are qualified estimated (J).

The COC documents associated with the data set indicated that pre-digestion spikes were to be performed on site-specific samples to confirm possible matrix interference. The data report submitted for review did not provide the pre-digestion spike results for the samples listed. Sample data from the original lab ID aliquot was in the data report. Veritech Laboratories performed MS/MSD analysis on a sample not associated with this data set. Sample data is not qualified on batch QC results. Review of the spike recoveries was made. All matrix spike recoveries submitted with this data set met QC criteria with the exception of Aluminum (192%/162%).

Matrix spike/matrix spike duplicate analysis was performed for the Wet Chemistry analyses. Batch QC was utilized for each parameter. All recoveries in the batch QC samples met QC criteria.

7. POST DIGESTION SPIKE ANALYSIS

The post digestion spike sample analysis provides additional information about the effect of the sample matrix upon the digestion and measurement methodology. The post digestion spike is performed for each analyte that the predigestion spike recovery falls outside the 75-125% control limit.

Veritech Laboratories did not provide documentation that a post digestion spike analysis was performed with this data set.

8. DUPLICATE SAMPLE ANALYSIS

The laboratory duplicate sample analysis is used to evaluate the laboratory precision of the method for each analyte. If the duplicate sample analysis results for a particular analyte fall outside the control windows of 20% RPD or +/-CRDL, whichever is appropriate depending upon the concentration of the sample, the associated sample results are qualified "J" estimated.

Veritech Laboratories performed Duplicate sample analysis on Batch QC samples. Data is not qualified based on Batch QC results. Review of the Relative Percent Difference was made. All RPD's submitted with this data set met QC criteria.

Duplicate analysis was performed for the Wet Chemistry analyses. Batch QC was utilized for each parameter. All recoveries in the batch QC samples met QC criteria.

9. ICP SERIAL DILUTION

The serial dilution analysis indicates whether significant physical or chemical interference's exist due to the sample matrix. If the concentration of any analyte in the original sample is greater than 50 times the instrument detection limit (IDL), an analysis of a 5-fold dilution samples must yield results which have a percent difference (%D) of less than or equal to 10 with the original sample results. If the %D of the serial dilution exceeds the 10% (and is not greater than 100%) for a particular analyte, all the associated sample results are qualified estimated (J).

Veritech Laboratories performed ICP Serial Dilution analysis on a Batch QC sample. A number of analytes did not meet QC criteria in the Batch QC ICP Serial Dilution analysis. Data is not qualified based on the review of Batch QC.

10. BLANKS

Blank analyses are assessed to determine the existence and magnitude of contamination problems. The criteria for the evaluation of blanks applies to all blanks, including but not limited to reagent blanks, method blanks and field blanks. The responsibility for action in the case of an unsuitable blank result depends upon the circumstances and the origin of the blank itself. If the problem with any blank exists, then all associated data must be carefully evaluated to determine whether there is inherent variability in the data for that case, or the problem is an isolated occurrence not affecting other data.

All Preparation blank, data associated with this data set were free from contamination.

All ICB and CCB analyses were free from contamination of target analytes.

A preparation blanks was prepared and analyzed for each of the Wet Chemistry analytes. All method blanks associated with these analyses were freee from contamination.

The Field Blank samples associated with this data set were not analyzed for the TAL Metals or the Wet Chemistry Analytes.

11. LABORATORY CONTROL SAMPLE ANALYSIS (LCS)

The laboratory control sample (LCS) analysis provides information about the efficiency of the laboratory digestion procedure. If the recovery of any analyte is outside the established control limits, then laboratory performance and method accuracy are in question. Professional judgment is used to determine of data should be qualified or rejected.

Veritech Laboratories prepared and analyzed an LCS sample with the TAL Metals. All LCS recoveries met QC limits in TAL Metals analyses.

LCS samples were prepared with the various wet chemistry parameters. All LCS recoveries met QC criteria.

12. INSTRUMENT OC DATA

TAL Metals - The laboratory is required by the method to perform specific instrument verification tests on a specific timeframe. Based on a review of the QC summary forms included in the data report, Veritech Laboratories performed the required studies specified by the method.

13. COMPOUND IDENTIFICATION

The samples in this data set were analyzed TAL Metals and miscellaneous Wet Chemistry parameters. All sample data was reported in accordance with the cited method. In a number of the soil samples the Calcium was reported from an additional dilution analysis due to the concentration of this analyte detected. Based on the data provided for review, the result data was correct as reported. Soil sample results are reported on a dry weight basis.

All Wet chemistry analyte data was reported in accordance with the cited method based on a review of the summary data that was included in the report. Soil sample results are reported on a dry weight basis.

14. SYSTEM PERFORMANCE AND OVERALL ASSESSMENT

This data set included the analysis of thirteen (13) soil samples and two (2) Field Blank samples. The soil samples were analyzed for TAL metals and a number of Wet Chemistry analytes. The data associated with this data set is acceptable for use without data qualifiers.

Concern of matrix interference was addressed in correspondence dated 11/14/00. Additional QC was requested by the Port Authority of NY and NJ. The NJ Reduced Deliverable submitted for review did not include the additional QC. This validator did not address the issue of matrix interference in this DUSR report.

TABLE 1

CLIENT SAMPLE ID LABORATORY SAMPLE ID PG-MWPA12-110200S02 AB18296 PG-MWPA12-110200S03 AB18297 PG-MWPA12-110200S04 AB18298 PG-FB01-110200WO01 AB18299 PG-MWPA12-110200S01 AB18300 PG-FILL-20-110200S01 AB18301 PG-FILL-20-110200S02 AB18302 PG-FILL-20-110200S03 AB18303 PG-FILL-20-110200S04 AB18304 PG-FILL-20-110200S05 AB18305 PG-FILL-20-110200S06 AB18306 PG-FILL-20-110200S07 AB18307 PG-FILL-20-110200S8A AB18308 PG-FILL-20-110200S8B AB18309

AB18310

PG-FB-02-110200WQ2

APPENDIX A

DATA QUALIFIER DEFINITIONS

- U The analyte was analyzed for, but was not detected above the reported sample quantitation limit.
- J The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample.
- N The analysis indicates the presence of an analyte for which there is presumptive evidence to make a "tentative identification."
- NJ The analysis indicates the presence of an analyte that has been "tentatively identiifed" and the associated numerical value represents its approximate concentration.
- UJ:- The analyte was not detected above the reported sample quantitation limit. However, the reported quantitation limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the analyte in the sample.
- R The sample results are unreliable/unuseable. The presence or absence of the analyte cannot be verified.
- K The analyte is present. The reported value may be biased high. The actual value is expected to be lower than reported.
- L.- The analyte is present. The reported value may be biased low. The actual value is expected to be higher than reported.
- UL The analyte was not detected, and the reported quantitation limit is probably higher than reported.

APPENDIX B

Form1 ORGANICS VOLATILE REPORT

Sample Number: AB18296(5X)

Matrix: Soil

Client Id: PG-MWPA12-110200SO2

Initial Volume: 5g

Data File: FT4101

Final Volume: NA

Dilution Factor: 5

Date Received/Extracted: 11/3/00-NA

Percent Solids: 59

Date Analyzed: 9 Nov 2000 21:52

Column: Supelco 105 m vocol col, 5 mm id, 3.0 um film

CAS#	Compound	PQL/MDL	Concentration (Units: mg/Kg)
71556	1,1,1-Trichloroethane 1,1,2,2-Tetrachloroethane 1,1,2-Trichloroethane 1,1-Dichloroethane	0.042	U
79345	1,1,2,2-Tetrachloroethane	0.042	· U
790 05	1,1,2-Trichloroethane	0.042	U
75343	1,1-Dichloroethane	0.042	, U
75354	r, r-Dichioroethene	0.042	Ū
107062	1,2-Dichloroethane	0.042	u'
78875	1,2-Dichloropropane	0.042	U
110758	2-Chloroethylvinylether	0.042	<u>U</u>
107028	Acrolein	_0 <u>.1</u> 3 R	ככככככככככככ
107131	Acrylonitrile	0.059	Ŭ
71432	Benzene	0.0085	Ų
75274	Bromodichloromethane	0.042	Ü
75252	Bromoform	0.042	Ü
74839	Bromomethane	0.042	ŭ
56235	Carbon tetrachloride	0.042	y
108907	Chlorobenzene	0.042	Ü
75003	Chloroethane	0.042	Ü
67663	Chloroform	0.042	' U
74873	Chloromethane	0.042	, U
10061015	Cis-1,3-Dichloropropene Dibromochloromethane	0.042	Ů
124481	Dibromochioromethane	0.042	ų,
100414 108383	Ethylbenzene	0.0085 0.017	U U
75092	M&p-Xylenes Methylene chloride	0.017	0.036 JB- ()
95476	O-Xylene	0.0085	·
127184	Tetrachloroethene	0.042	ĭ
108883	Toluene	0.0085	ĭ
156605	Trans-1,2-Dichloroethene	0.042	ŭ
10061026	Trans-1,3-Dichloropropene	0.042	ŭ
79016	Trichloroethene	0.042	ប័
75014	Vinyl chloride	0.042	ំប័
•			_

Total Target Concentration 0.036

U - Indicates the compound was analyzed but not detected.

J - Indicates an estimated value when a compound is detected at less than the specified detection limit.

B - Indicates the analyte was found in the blank as well as in the sample.

E - Indicates the analyte concentration exceeds the calibration range of the instrument.

Formle/lf ORGANICS VOLATILE REPORT Tentatively Identified Compounds

Sample Number: AB18296(5X)

Client Id: PG-MWPA12-110200

Data File: FT4101

Date Analyzed: 9 Nov 2000 21:52

Date Received/Extracted: 11/3/00-NA

Matrix: Soil

Initial Volume: 5g

Final Volume: NA

Dilution Factor: 5

Percent Solids: 59

Hit# Cas Number

Compound unknown

RT

Concentration mg/Kg

12.880

0.028

Total Tentatively Identified Concentration

A - Indicates an aldol condensate.
J - Indicates an estimated value.
B - Indicates the analyte was found in the blank as well as in the sample.

Form1 ORGANICS VOLATILE REPORT

Sample Number: AB18297(5X)

Matrix: Soil

Client Id: PG-MWPA12-110200SO3

Initial Volume: 5g

Data File: FT4102

Final Volume: NA

Date Analyzed: 9 Nov 2000 22:18

Dilution Factor: 5

Date Received/Extracted: 11/3/00-NA

Percent Solids: 47

Column: Supelco 105 m vocol col, 5 mm id, 3.0 um film

	CAS#	Compound	PQL/MDL	Concentration (Units: mg/Kg)
•	71556	1,1,1-Trichloroethane	0.053	U
	79345	1.1.2.2-Tetrachloroethane	0.053	Ũ
	79005	1,1,2,2-Tetrachloroethane 1,1,2-Trichloroethane 1,1-Dichloroethane	0.053	U
	75343	1,1-Dichloroethane	0.053	U
	75354	1,1-Dichioroethene	0.053	¹ U
	107062	1,2-Dichloroethane	. 0.053	, n
	78875	1,2-Dichloropropane	0.053	ŭ
	110758	2-Chloroethylvinylether	0.053	ŭ
	107028	Acrolein	0. <u>1</u> 6 R	Ŭ U
	107131	Acrylonitrile	0.074	N.
	71432	Benzene	0.011	Ņ.
	75274	Bromodichloromethane	0.053	Ü
	75252	Bromoform	0.053	U U
	74839	Bromomethane	0.053 0.053	Ŭ
	56235	Carbon tetrachloride	0.053	ប៊
	108907 75003	Chlorobenzene Chloroethane	0.053	· Ŭ
	676 63	Chloroform	0.053	ŭ
	74873	Chloromethane	0.053	Ŭ
	10061015	Cis-1,3-Dichloropropene	0.053	Ŭ.
	124481	Dibromochloromethane	0.053	Ū.
	100414	Ethylbenzene	0.011	Ū
	108383	M&p-Xylenes	0.021	U
	75092	Methylene chloride	0.053	U -0.000 в
	95476	O-Xylene	0.011	ŭ
	127184	Tetráchloroethene	0.053	Ų
	108883	Toluene	0.011	ប្ត
	156605	Trans-1,2-Dichloroethene	0.053	Y .
	10061026	Trans-1,3-Dichloropropene	0.053 0.053	Y
	7901 6 75 014	Trichloroethene Vinyl chloride	0.053 0.053	N.
	13014	VIIIVI CINOTIUE	0.000	U.

Total Target Concentration 0.06

U - Indicates the compound was analyzed but not detected.

J-Indicates an estimated value when a compound is detected at less than the specified detection limit.

B-Indicates the analyte was found in the blank as well as in the sample.

E - Indicates the analyte concentration exceeds the calibration range of the instrument.

ORGANICS VOLATILE REPORT Tentatively Identified Compounds

Sample Number: AB18297(5X)

Client Id: PG-MWPA12-110200

Data File: FT4102

Date Analyzed: 9 Nov 2000 22:18

Date Received/Extracted: 11/3/00-NA

Matrix: Soil

Initial Volume: 5g

Final Volume: NA

Dilution Factor: 5

Percent Solids: 47

Hit# Cas Num	nber Compound	RT	Concentration mg/Kg
1	unknown	9.660	- 0.041 J & U
2	unknown	12.880	0.002 J & U

Total Tentatively Identified Concentration

0.13

<sup>A - Indicates an aldol condensate.
J - Indicates an estimated value.
B - Indicates the analyte was found in the blank as well as in the sample.</sup>

Form1 ORGANICS VOLATILE REPORT

Sample Number: AB18298

Matrix: Soil

Client Id: PG-MWPA12-110200SO4

Initial Volume: 5ml

Data File: FR9894

Final Volume: NA

Date Analyzed: 9 Nov 2000 16:59

Dilution Factor: 125

Date Received/Extracted: 11/3/00-NA

Percent Solids: 44

Column: Supelco 105 m vocol col, 5 mm id, 3.0 um film

CAS#	Compound	PQL/MDL	Concentration (Units: mg/Kg)
71556	1,1,1-Trichloroethane 1,1,2,2-Tetrachloroethane 1,1,2-Trichloroethane	1.4	U
79345	1,1,2,2-Tetrachloroethane	1.4	Ū
79005	1,1,2-Trichlorgethane	1.4	Ų.
75343	1,1-Dichloroethane	1.4	, y
75354	1,1-Dichloroethene	1.4	Ü
107062	1,2-Dichloroethane	1.4	Ü
78875	1,2-Dichloropropane	1403	Ŭ
110758 107028	2-Chloroethylvinylether Acrolein	4.3 R	Ŭ U
107131	Acrylonitrile	2.0	
71432	Benzene	0.28	טכבככככככ
75274	Bromodichloromethane	1 4	ŭ
75252	Bromoform	i.4	ប័
74839	Bromomethane	1.4	Ŭ
56235	Carbon tetrachloride	1.4	Ŭ
108907	Chlorobenzene	1.4	Ū
75003	Chloroethane	1.4	U
67663	Chloroform	1.4	, <u>u</u>
74873	Chloromethane	1.405	
10061015	Cis-1,3-Dichloropropene Dibromochloromethane	1.4	U U
124481 100414	Ethylbenzene	1.4 0,28	N
108383	M&n-Yvlenes	0.57	. អូ
75092	M&p-Xylenes Methylene chloride	1.4	บั
95 476	O-Xylene	0.28	U
127184	Tetrachloroethene	1.4	Ŭ U
108883	Toluene	0.28	Ŭ
156605	Trans-1,2-Dichloroethene	1.4	Ŭ
10061026	Trans-1,3-Dichloropropene	1.4	Ų,
79016	Trichloroethene	1.4	Ŋ,
7501 <i>4</i>	Vinvl chloride	1.4	U

Total Target Concentration 0

U - Indicates the compound was analyzed but not detected.

J - Indicates an estimated value when a compound is detected at less than the specified detection limit.
B - Indicates the analyte was found in the blank as well as in the sample.

E - Indicates the analyte concentration exceeds the calibration range of the instrument.

Form1e/1f ORGANICS VOLATILE REPORT Tentatively Identified Compounds

Sample Number: AB18298

Matrix: Soil

Client Id: PG-MWPA12-110200

Initial Volume: 5ml

Data File: FR9894

Final Volume: NA

Date Analyzed: 9 Nov 2000 16:59

Dilution Factor: 125

Date Received/Extracted: 11/3/00-NA

Percent Solids: 44

Hit#	Cas Number	Compound	RT	Concentration mg/Kg
1		unknown hydrocarbon	10.530	5.6 J
2	018435-45-5	1-Nonadecene	10.820	4.9 J
3	002051-30-1	Octane, 2,6-dimethyl-	10.920	5.0 <i>J</i>
4		unknown hydrocarbon	11.040	12 <i>J</i>
5	017301-94-9	Nonane, 4-methyl-	11.190	10 <i>J</i>
6	002425-54-9	Tetradecane, 1-chloro-	11.540	16 <i>J</i>
7		unknown hydrocarbon	11.760	7.5 J
8		unknown	12.050	. 11 J
9	000124-18-5	Decane	12.410	4.4 <i>J</i>
10	000493-02-7	Naphthalene, decahydro-, trans-	12.450	6.6 J
11		unknown	12.900	5.7 J
12	000934-74-7	Benzene, 1-ethyl-3,5-dimethyl-	13.300	, ¹ 9.9 J
13		unknown	14.490	5.6 J
14	000000-00-0	7H-BENZOCYCLOHEPTENE	14.700	6.7 <i>J</i>
15	000090-12-0	Naphthalene, 1-methyl-	14.870	12 J

Total Tentatively Identified Concentration

120

A - Indicates an aldol condensate.
J - Indicates an estimated value.
B - Indicates the analyte was found in the blank as well as in the sample.

Form1 ORGANICS VOLATILE REPORT

Sample Number: AB18299

Matrix: Water

Client Id: PG-FB01-110200WQ01

Initial Volume: 5ml

Data File: FT4003

Final Volume: NA

Date Analyzed: 6 Nov 2000 17:43

Dilution Factor: 1

Date Received/Extracted: 11/3/00-NA

Percent Solids: 0

Column: Supelco 105 m vocol col, 5 mm id, 3.0 um film

Concentration

	CAS#	Compound	PQL/MDL	(Units: ug/L)
71556 1,1,1-Trichloroethane 5.0 U 79345 1,1,2,2-Tetrachloroethane 5.0 U 79005 1,1,2-Trichloroethane 5.0 U 75343 1,1-Dichloroethane 5.0 U 75354 1,1-Dichloroethane 5.0 U 107062 1,2-Dichloroethane 5.0 U 107087 1,2-Dichloroethane 5.0 U 107028 Acrolein 15 U 107028 Acrolein 15 U 107131 Acrylonitrile 6.9 U 71432 Benzene 1.0 U 75274 Bromodichloromethane 5.0 U 75252 Bromoform 5.0 U 75252 Bromomethane 5.0 U 56235 Carbon tetrachloride 5.0 U 75003 Chloroethane 5.0 U 75003 Chloroethane 5.0 U 10061015 Cis-1,3-Dichloropropene	79005 75343 75354 107062 78875 110758 107028 107131 71432 75274 75252 74839 56235 108907 75003 67663 74873 10061015 124481 100414 108383 75092 95476 127184 108883 156605 10061026 79016	1,1-Dichloroethene 1,2-Dichloroethane 1,2-Dichloroethane 1,2-Dichloropropane 2-Chloroethylvinylether Acrolein Acrylonitrile Benzene Bromodichloromethane Bromodichloromethane Carbon tetrachloride Chloroethane Chloroethane Chloroethane Chloromethane Cis-1,3-Dichloropropene Dibromochloromethane Ethylbenzene M&p-Xylenes Methylene chloride O-Xylene Tetrachloroethene Trans-1,3-Dichloropropene Trans-1,3-Dichloropropene Trans-1,3-Dichloropropene Trichloroethene	E 00599000000000000000000000000000000000	מאַפטפטטטטטטטטטטטטטטטטטטטטטטטטטטטטטטטטטט

Total Target Concentration 3.2

 $[\]emph{U-Indicates the compound was analyzed but not detected.}$

J - Indicates an estimated value when a compound is detected at less than the specified detection limit.

B - Indicates the analyte was found in the blank as well as in the sample.

E - Indicates the analyte concentration exceeds the calibration range of the instrument.

Form1e/1f Organics volatile report Tentatively Identified Compounds

Sample Number: AB18299

Client Id: PG--FB01-110200WQ

Data File: FT4003

Date Analyzed: 6 Nov 2000 17:43

Date Received/Extracted: 11/3/00-NA

Matrix: Water

Initial Volume: 5ml

Final Volume: NA

Dilution Factor: 1

Percent Solids: 0

· Hit# Cas Number

Compound

RT

3

Concentration ug/L

unknown

9.550

Total Tentatively Identified Concentration

<sup>A - Indicates an aldol condensate.
J - Indicates an estimated value.
B - Indicates the analyte was found in the blank as well as in the sample.</sup>

Form1 ORGANICS VOLATILE REPORT

Sample Number: AB18300

Matrix: Soil

Client Id: PG-MWPA12-110200SO1

Initial Volume: 5g

Data File: FT4099

Final Volume: NA

Date Analyzed: 9 Nov 2000 21:00

Dilution Factor: 1

Date Received/Extracted: 11/3/00-NA

Percent Solids: 89

Column: Supelco 105 m vocol col,.5 mm id, 3.0 um film

CAS#	Compound	PQL/MDL	Concentration (Units: mg/Kg)
71556	1,1,1-Trichloroethane	0.0056	U
79345	1,1,2,2-Tetrachloroethane 1,1,2-Trichloroethane	0.0056	Ŭ .
79005	1,1,2-Trichloroethane	0.0056	Ū.
75343	1,1-Dichloroethane	0.0056	U U U
75354	1,1-Dichloroethene	0.0056	Ů
107062	1.2-Dichloroethane	· 0.0 056	U
78875	1,2-Dichloropropane	0.0056	U
110758	2-Chioroethylvinylether	0.0056	υ
107028	Acrolein	0.017 R	· U
107131	Acrylonitrile ·	0.0078	U
71432	Benzene	0.0011	. U
75274	Bromodichloromethane	0.0056	U
75252	Bromoform	0.0056	U
74839	Bromomethane	0.0056	U
56235	Carbon tetrachloride	0.0056	υ
108907	Chlorobenzene	0.0056	U
75003	Chloroethane	0,0056	U
67663	Chloroform	0.0056	· U
74873	Chloromethane	0.0056	U
10061015	Cis-1,3-Dichloropropene Dibromochloromethane	0.0056	U
124481	Dibromochloromethane	Q.QQ 5 6	. U
100414	Ethylbenzene	0.0011	, <u>u</u>
108383	M&p-Xylenes	0.0022	Ü
75092	Methylene chloride	0.0056	Ų ·
95476	Q-Xylene	0.0011	ប្ត
127184	Tetráchloroethene	0.0056	បូ
108883	Toluene	0.0011	ប្ត
156605	Trans-1,2-Dichloroethene	0.0056	ככככככככככככככככככככ
10061026 79016	Trans-1,3-Dichloropropene Trichloroethene	0.0056 0.0056	
75014	Vinyl chloride	0.0056	Ŋ
15014	vinyi cinonae . ,	0,0056	U

Total Target Concentration 0

U - Indicates the compound was analyzed but not detected.

J - Indicates an estimated value when a compound is detected at less than the specified detection limit.
B - Indicates the analyte was found in the blank as well as in the sample.

E - Indicates the analyte concentration exceeds the calibration range of the instrument.

Formle/lf ORGANICS VOLATILE REPORT Tentatively Identified Compounds.

Sample Number: AB18300

Client Id: PG-MWPA12-110200

Data File: FT4099

Date Analyzed: 9 Nov 2000 21:00

Date Received/Extracted: 11/3/00-NA

Matrix: Soil

Initial Volume: 5g

Final Volume: NA

Dilution Factor: 1

Percent Solids: 89

Hit# Cas Number	Compound	RT	Concentration mg/Kg
1	unknown	9.670	0.0047 J
2	unknown	12.880	0.0093 J 😢

Total Tentatively Identified Concentration

0.014

<sup>A - Indicates an aldol condensate.
J - Indicates an estimated value.
B - Indicates the analyte was found in the blank as well as in the sample.</sup>

Form1 ORGANICS VOLATILE REPORT

Sample Number: AB18301

Matrix: Soil

Client Id: PG-BH-20-110200SO1

Initial Volume: 5g

Data File: FT4100

Final Volume: NA

Date Analyzed: 9 Nov 2000 21:26

Dilution Factor: 1

Date Received/Extracted: 11/3/00-NA

Percent Solids: 93

Column: Supelco 105 m vocol col,.5 mm id, 3.0 um film

Concentration

CAS#	Compound	PQL/MDL	(Units: mg/Kg)
71556 79345 79045 79345 79045 75343 75354 107062 78875 110758 107028 107131 71432 75274 75252 74839 56235 108907 75003 67663 74873 10061015 12481 10081833 75092 95476 127184 108883 156605 10061026 79016	1,1,1-Trichloroethane 1,1,2,2-Tetrachloroethane 1,1,2-Trichloroethane 1,1-Dichloroethane 1,1-Dichloroethane 1,2-Dichloroethane 1,2-Dichloroethane 1,2-Dichloropropane 2-Chloroethylvinylether Acrolein Acrylonitrile Benzene Bromodichloromethane Bromodichloromethane Bromomethane Carbon tetrachloride Chloroethane Chloroethane Chloroform Chloroform Chloromethane Cis-1,3-Dichloropropene Dibromochloromethane Ethylbenzene M&p-Xylenes Metnylene chloride O-Xylene Tetrachloroethene Toluene Trans-1,2-Dichloropropene Trichloroethene Trans-1,3-Dichloropropene Trichloroethene Trichloroethene Trichloroethene Vinyl chloride	0.0054 0.0054 0.0054 0.0054 0.0054 0.0054 0.0054 0.016 0.0054	0.0012 0.0036 0.0011 0.0011

Total Target Concentration 0.015

U - Indicates the compound was analyzed but not detected.

J - Indicates an estimated value when a compound is detected at less than the specified detection limit.

B - Indicates the analyte was found in the blank as well as in the sample.

E - Indicates the analyte concentration exceeds the calibration range of the instrument.

ORGANICS VOLATILE REPORT Tentatively Identified Compounds

Sample Number: AB18301

Client Id: PG-BH-20-110200SO

Data File: FT4100

Date Analyzed: 9 Nov 2000 21:26

Date Received/Extracted: 11/3/00-NA

Matrix: Soil

Initial Volume: 50

Final Volume: NA

Dilution Factor: 1

Percent Solids: 93

Hit#	Cas Number	Compound	RT	Concentration mg/Kg
1		unknown	9.510	0.0036 J
2		unknown	9.570	0.0034 <i>J</i>
3		unknown	9.670	0.0035 J 3 V
4		unknown	12.690	0.0033 J
5		unknown	12.870	0.012 J B
6		unknown .	13.190	0.0042 J
7		unknown	13.300	0.0048 J
8	054725-16-5	2H-Inden-2-one, 1,4,5,6,7,7a-hexahydro-7	13.760	0.0037 J
9		unknown	13.880	0.0033 <i>J</i>
10		unknown	14.130	0.0075 J
11		unknown	14.390	0.0033 <i>J</i>
12	1	unknown	14.670	0.0043 J

Total Tentatively Identified Concentration

0.057

A - Indicates an aldol condensate. J - Indicates an estimated value. B - Indicates the analyte was found in the blank as well as in the sample.

Form1 **ORGANICS VOLATILE REPORT**

Sample Number: AB18302(5X)

Matrix: Soil

Client Id: PG-BH-20-110200SO2

Initial Volume: 5g

Data File: FT4103

Final Volume: NA

Date Analyzed: 9 Nov 2000 22:44

Dilution Factor: 5

Date Received/Extracted: 11/3/00-NA

Percent Solids: 53

Column: Supelco 105 m vocol col,.5 mm id, 3.0 um film

CAS#	Compound	PQL/MDL	Concentration (Units: mg/Kg)
71556 79345 79345 79005 75343 75354 107062 78875 110758 107131 71432 75274 75252 74839 56235 108907 75003 67663 74873 10061015 124481 100414 108383 75092 95476 127184 108883 156605 10061026 79016	1,1,1-Trichloroethane 1,1,2-Trichloroethane 1,1,2-Trichloroethane 1,1-Dichloroethane 1,1-Dichloroethane 1,2-Dichloroethane 1,2-Dichloroethane 1,2-Dichloroethane 1,2-Dichloropropane 2-Chloroethylvinylether Acrolein Acrylonitrile Benzene Bromodichloromethane Bromodethane Carbon tetrachloride Chloroethane Chloroethane Chloroform Chloromethane Cis-1,3-Dichloropropene Dibromochloromethane Ethylbenzene M&p-Xylenes Methylene Chloride O-Xylene Tetrachloroethene Toluene Trans-1,2-Dichloroethene Trans-1,3-Dichloropropene Trichloroethene	0.047 0.047 0.047 0.047 0.047 0.047 0.047 0.047 0.065 0.0094 0.047 0.047 0.047 0.047 0.047 0.047 0.047 0.047 0.047 0.047 0.047 0.047 0.047 0.047 0.047 0.047	ככככבכככככככככככככככככככככככ
75014	Vinyl chloride	0.047	U ·

Total Target Concentration 0

U - Indicates the compound was analyzed but not detected.

J - Indicates an estimated value when a compound is detected at less than the specified detection limit.

B - Indicates the analyte was found in the blank as well as in the sample.

E - Indicates the analyte concentration exceeds the calibration range of the instrument.

Form1e/1f ORGANICS VOLATILE REPORT Tentatively Identified Compounds

Sample Number: AB18302(5X)

Client Id: PG-BH-20-110200SO

Data File: FT4103

Date Analyzed: 9 Nov 2000 22:44

Date Received/Extracted: 11/3/00-NA

Matrix: Soil

Initial Volume: 5g

Final Volume: NA

Dilution Factor: 5

Percent Solids: 53

Hit# Cas Numbe	r Compound	RT	Concentration mg/Kg
1	unknown	9.700	0.029 J () - V
2	unknown hydrocarbon	10.050	0.030 J
3	unknown	12.880	0.089 / (2)

Total Tentatively Identified Concentration

0.15

<sup>A - Indicates an aldol condensate.
J - Indicates an estimated value.
B - Indicates the analyte was found in the blank as well as in the sample.</sup>

Form1 ORGANICS VOLATILE REPORT

Sample Number: AB18303(5X)

Matrix: Soil

Client Id: PG-BH-20-110200SO3

Initial Volume: 59

Data File: FT4104

Final Volume: NA

Date Analyzed: 9 Nov 2000 23:09

Dilution Factor: 5

Date Received/Extracted: 11/3/00-NA

Percent Solids: 49

Column: Supelco 105 m vocol col, 5 mm id, 3.0 um film

	CAS#	Compound	PQL/MDL	Concentration (Units: mg/Kg)
•	71556	1,1,1-Trichloroethane 1,1,2,2-Tetrachloroethane 1,1,2-Trichloroethane 1,1-Dichloroethane	0.051	U
	79345	1,1,2,2-Tetrachloroethane	0.051	Ų.
	79005 75343	1,1,2-Inchloroethane	0.051	Ŋ.
	75354 75354	1,1-Dichloroethene	0.051 0.051	Ŭ U
	107062	1,2-Dichloroethane	0.051	Ϋ́
	78875	1,2-Dichloropropane	0.051	ິນ '
	110758	2-Chloroethylvinylether	0.051	ŭ
	107028	Acrolein	0.15 R	Ŭ
	10713 1	Acrylonitrile	0.071	Ū
	71432	Benzene	0.010	טטטט
	75274	Bromodichloromethane	0.051	U
	75252	Bromoform	0.051	ט ט ט ט ט ט ט ט ט ט ט ט ט ט ט ט ט ט ט
	74839	Bromomethane	0.051	Ų.
	562 3 5	Carbon tetrachloride	0.051	ប្ត
	108907 75003	Chlorobenzene Chloroethane	0.051 0.051	N.
	67663	Chloroform	0.051 0.051	N N
	74873	Chioromethane	0.051	. К
	10061015	Cis-1.3-Dichloropropene	0.051	ŭ
	124481	Cis-1,3-Dichloropropene Dibromochloromethane	0.051	Ŭ
	100414	Ethylbenzene	0.010	Ü
	108383	M&p-Xylenes Methylene chloride	0.020	U
	75092	Methylene chloride	0.051	O -0.049 JB−
	9547 6 127184	O-Xylene Tetrachloroethene	0.010 0.051	Ŋ.
	108883	Toluene	0.010	H
	156605	Trans-1 2-Dichloroethene	0.051	ĭ
	10061026	Trans-1.3-Dichloropropene	0.051	ប័
	79016	Trans-1,3-Dichloropropene Trichloroethene	0.051	Ū
	75014	Vinyl chloride	0.051	U

Total Target Concentration 0.048

U - Indicates the compound was analyzed but not detected.

J - Indicates an estimated value when a compound is detected at less than the specified detection limit.

B - Indicates the analyte was found in the blank as well as in the sample.

E - Indicates the analyte concentration exceeds the calibration range of the instrument.

ORGANICS VOLATILÉ REPORT Tentatively Identified Compounds

Sample Number: AB18303(5X)

Client Id: PG-BH-20-110200SO

Data File: FT4104

Date Analyzed: 9 Nov 2000 23:09

Date Received/Extracted: 11/3/00-NA

Matrix: Soil

Initial Volume: 5g

Final Volume: NA

Dilution Factor: 5

Percent Solids: 49

Hit# Cas	Number	Compound			RT	Concentre	ation mg/Kg
1		unknown			9,560	,	0.040 J
2		unknown			9.690	•	0.044 J G U
-3		unknown	e e	,	12.880		0.121 B

Total Tentatively Identified Concentration

0.2

<sup>A - Indicates an aldol condensate.
J - Indicates an estimated value.
B - Indicates the analyte was found in the blank as well as in the sample.</sup>

ORGANICS VOLATILE REPORT

Sample Number: AB18304(5X)

Matrix: Soil

Client Id: PG-BH-20-110200SO4

Initial Volume: 5g

Data File: FT4105

Final Volume: NA

Date Analyzed: 9 Nov 2000 23:35

Dilution Factor: 5

Date Received/Extracted: 11/3/00-NA

Percent Solids: 52

Column: Supelco 105 m vocol col, 5 mm id, 3.0 um film

CAS#	Compound	PQL/MDL	Concentration (Units: mg/Kg)
71556	1,1,1-Trichloroethane 1,1,2,2-Tetrachloroethane 1,1,2-Trichloroethane 1,1-Dichloroethane	0.048	U
79345	1,1,2,2-Tetrachloroethane	0.048	U
79005	1,1,2-Trichloroethane	0.048	υ
75343	1,1-Dichloroethane	0.048	Ū
75354	1,1-Dichloroethene	0.048	' Ū
107062	1.2-Dichloroethane	. 0.048	ี บ
78875	1,2-Dichloropropane	0.048	Ų
110758	2-Chioroethylvinylether	0.048	ប
107028	Acrolein	0.14 R	U U U U U
107131	Acrylonitrile	0.067	U
71432	Benzene	0.0096	Ų
75274	Bromodichloromethane	0.048	Ų
75252	Bromoform	0.048	ÿ
74839	Bromomelhane	0.048	Ų
56235	Carbon tetrachloride	0.040	<u> </u>
108907	Chlorobenzene	0.048	Ŭ
75003	Chloroethane	0.048	. <u>Ņ</u>
67663	Chloroform	0.048	ុ ប៉
74873	Chloromethane	0.048	ប្ត
10061015	Cis-1,3-Dichloropropene Dibromochloromethane	0.048	ÿ :
124481 100414	Dipromocnioromethane	0.048	N.
108383	Ethylbenzene	0.0096 0.019	. ,
75092	M&p-Xylenes Methylene chloride	0.048	ບ ອ.ຍ43 ປຣ
95476	O Yvlene Chloride	0.0096	
127184	O-Xylene Tetrachloroethene	0.048	· U
108883	Toluene	0.0096	H
156605	Trans-1,2-Dichloroethene	0.048	អ
10061026	Trans-1 3-Dichloropropene	0.048	ប័
79016	Trans-1,3-Dichloropropene Trichloroethene	0.048	· ŭ
75014	Vinyl chloride	0.048	ŭ
		0.0.0	

Total Target Concentration 0.043

U - Indicates the compound was analyzed but not detected. J - Indicates an estimated value when a compound is detected at less than the specified detection limit, B - Indicates the analyte was found in the blank as well as in the sample.

E - Indicates the analyte concentration exceeds the calibration range of the instrument.

ORGANICS VOLATILE REPORT Tentatively Identified Compounds

Sample Number: AB18304(5X)

Client Id: PG-BH-20-110200SO

Data File: FT4105

Date Analyzed: 9 Nov 2000 23:35

Date Received/Extracted: 11/3/00-NA

Matrix: Soil

Initial Volume: 5g

Final Volume: NA

Dilution Factor: 5

Percent Solids: 52

Hit# Cas Number

Compound

RT Concentration mg/Kg

1 unknown 12.880

0.085

Total Tentatively Identified Concentration

A - Indicates an aldol condensate, J - Indicates an estimated value.

B - Indicates the analyte was found in the blank as well as in the sample.

ORGANICS VOLATILE REPORT

Sample Number: AB18305(5X)

Matrix: Soil

Client Id: PG-BH-20-110200SO5

Initial Volume: 5g

Data File: FT4106

Date Analyzed: 10 Nov 2000 00:01

Final Volume: NA

Dilution Factor: 5

Date Received/Extracted: 11/3/00-NA

Percent Solids: 49

Column: Supelco 105 m vocol col,.5 mm id, 3.0 um film

	CAS#	Compound	PQL/MDL	(Units: mg/Kg)
-	71556 79345 79005 75343 75354 107062 78875 110758 107131 71432 75274 75252 74839 56235 108907 75003 67663 774873 10061015 124481 100414 108383 75092 95476	Compound 1.1.1-Trichloroethane 1.1.2.2-Tetrachloroethane 1.1.2-Trichloroethane 1.1-Dichloroethane 1.1-Dichloroethane 1.2-Dichloroethane 1.2-Dichloroethane 1.2-Dichloropropane 2-Chloroethylvinylether Acrolein Acrylonitrile Benzene Bromodichloromethane Bromoform Bromomethane Carbon tetrachloride Chlorobenzene Chloroethane Chloroform Chloromethane Cis-1,3-Dichloropropene Dibromochloromethane Ethylbenzene M&p-Xylenes Methylene Tetrachloroethene	0.051 0.051 0.051 0.051 0.051 0.051 0.051 0.051 0.051 0.051 0.051 0.051 0.051 0.051 0.051 0.051 0.051 0.051 0.051	(Units: mg/Kg) U U U U U U U U U U U U U U U U U U
	127184 108883 156605 10061026 79016 75014	Tetrachloroethene Toluene Trans-1,2-Dichloroethene Trans-1,3-Dichloropropene Trichloroethene Vinyl chloride	0.051 0.010 0.051 0.051 0.051 0.051	טטטטטטטטט

Total Target Concentration 0

U - Indicates the compound was analyzed but not detected.

J - Indicates an estimated value when a compound is detected at less than the specified detection limit.

B - Indicates the analyte was found in the blank as well as in the sample.

E - Indicates the analyte concentration exceeds the calibration range of the instrument.

Form1e/1f ORGANICS VOLATILE REPORT Tentatively Identified Compounds

Sample Number: AB18305(5X)

Client Id: PG-BH-20-110200SO

Data File: FT4106

Date Analyzed: 10 Nov 2000 00:01

Date Received/Extracted: 11/3/00-NA

Matrix: Soil

Initial Volume: 5g

Final Volume: NA

Dilution Factor: 5

Percent Solids: 49

Hit# Cas Number

Compound

RT

0.067

Concentration mg/Kg

unknown

12.880

Total Tentatively Identified Concentration

<sup>A - Indicates an aldol condensate.
J - Indicates an estimated value.
B - Indicates the analyte was found in the blank as well as in the sample.</sup>

ORGANICS VOLATILE REPORT

Sample Number: AB18306(5X)

Matrix: Soil

Client Id: PG-BH-20-110200SO6

Initial Volume: 5g

Data File: FT4107

Final Volume: NA

Date Analyzed: 10 Nov 2000 00:27

Dilution Factor: 5

Date Received/Extracted: 11/3/00-NA

Percent Solids: 52

Column: Supelco 105 m vocol col, 5 mm id, 3.0 um film

CAS#	Compound	PQL/MDL	(Units: mg/Kg)
71556 79345 79005 75343 75354 107662 78875 110758 107131 71432 75274 75252 74839 56235 108907 75003 67663 74873 10061015 124481 108383 75092 95476 127184 108883 156605 10061026 79016 79016	1,1,1-Trichloroethane 1,1,2-Trethloroethane 1,1,2-Trichloroethane 1,1-Dichloroethane 1,1-Dichloroethane 1,1-Dichloroethane 1,2-Dichloroethane 1,2-Dichloroethane 1,2-Dichloroethane 1,2-Dichloroethylvinylether Acrolein Acrylonitrile Benzene Bromodichloromethane Bromodichloromethane Bromoform Bromomethane Carbon tetrachloride Chloroforn Chloroforn Chloroforn Chloroforn Chloromethane Cis-1,3-Dichloropropene Dibromochloromethane Ethylbenzene M&p-Xylenes Methylene chloride O-Xylene Tetrachloroethene Toluene Trans-1,2-Dichloroethene Trichloroethene	0.048 0.048 0.048 0.048 0.048 0.048 0.048 0.048 0.047 0.067 0.096 0.048	מכנכנכנכנכנכנכנכנכנכנכנכנכנכנכנכנ
•		2,2 ,2	•

Total Target Concentration 0

U - Indicates the compound was analyzed but not detected.

J - Indicates an estimated value when a compound is detected at less than the specified detection limit.

B - Indicates the analyte was found in the blank as well as in the sample.

E - Indicates the analyte concentration exceeds the calibration range of the instrument.

Formle/1f ORGANICS VOLATILÉ REPORT Tentatively Identified Compounds

Sample Number: AB18306(5X)

Client Id: PG-BH-20-110200SO

Data File: FT4107

Date Analyzed: 10 Nov 2000 00:27

Date Received/Extracted: 11/3/00-NA

Matrix: Soil

Initial Volume: 5g

Final Volume: NA

Dilution Factor: 5

Percent Solids: 52

Hit# Cas Number	Compound	RT	Concentration mg/Kg
1	unknown	9.450	0.036 <i>J</i>
2	unknown	9.550	0.032 J
3	unknown	9.670	0049 J - F U
4	unknown	12.880	0.077 J 65 V

Total Tentatively Identified Concentration

0.19

<sup>A - Indicates an aldol condensate.
J - Indicates an estimated value.
B - Indicates the analyte was found in the blank as well as in the sample.</sup>

Form1 ORGANICS VOLATILE REPORT

Sample Number: AB18307(5X)

Matrix: Soil

Client Id: PG-BH-20-110200SO7

Initial Volume: 5g

Data File: FT4108

Final Volume: NA

Date Analyzed: 10 Nov 2000 00:53

Dilution Factor: 5

Date Received/Extracted: 11/3/00-NA

Percent Solids: 54

Column: Supelco 105 m vocol col,.5 mm id, 3.0 um film

CAS#	Compound	PQL/MDL	(Units: mg/Kg)
71556	1,1,1-Trichloroethane	0.046	U
79345	1,1,2,2-Tetrachloroethane 1,1,2-Trichloroethane	0.046	, U
79005	1,1,2-Trichloroethane	0.046	U
75343	1,1-Dichloroethane	0.046	U
75354	1,1-Dichloroethene	0.046	Ŭ '
107062	1,2-Dichloroethane	0.046	U
78875	1,2-Dichloropropane	0.046	υ
110758	2-Chloroethylvinylether	0.046	U
107028	Acrolein	0.14 R	Ų
<u>1</u> 07131	Acrylonitrile	0.064	Ų.
71432	Benzene	0.0093	כככככככככ
75274	Bromodichloromethane	0.046	Ų
75252	Bromoform	0.046	Ŋ.
74839	Bromomethane	0.046	ប្ត
56235	Carbon tetrachloride	0.046	Ü
108907	Chlorobenzene	0.046	Ŭ
75003 67663	Chloroethane	0.046	И
74873	Chloroform Chloromethane	0.046 0.046	. Ŭ
10061015	Cis-1,3-Dichloropropene	0.046	ŭ
124481	Dibromochloromethane	0.046	Ŭ
100414	Ethylbenzene	0.0093	់ ប័
108383	M&p-Xylenes	0.019	ŭ
75092	Methylene chloride	0.046	U 0:048 B
95476	O-Xvlene	0.0093	0 0.0 10
127184	O-Xylene Tetrachloroethene	0.046	Ū [;]
108883	Toluene	0.0093	Ú
156605	Trans-1,2-Dichloroethene	0.046	. น ม
10061026	Trans-1,3-Dichloropropene Trichloroethene	0.046	ŭ
79016	Trichloroethene	0.046	, Ü
` 75014	Vinyl chloride	0.046	U

Total Target Concentration 0.048

U - Indicates the compound was analyzed but not detected.

J - Indicates an estimated value when a compound is detected at less than the specified detection limit.

B - Indicates the analyte was found in the blank as well as in the sample.
E - Indicates the analyte concentration exceeds the calibration range of the instrument.

Form1e/1f ORGANICS VOLATILE REPORT Tentatively Identified Compounds

Sample Number: AB18307(5X)

Client Id: PG-BH-20-110200SO

Data File: FT4108

Date Analyzed: 10 Nov 2000 00:53

Date Received/Extracted: 11/3/00-NA

Matrix: Soil

Initial Volume: 5g

Final Volume: NA

Dilution Factor: 5

Percent Solids: 54

Hit# Cas Number

Compound

RT

Concentration mg/Kg

unknown

12.880

0.092 J

Total Tentatively Identified Concentration

0.092

A - Indicates an aldol condensate.
J - Indicates an estimated value.
B - Indicates the analyte was found in the blank as well as in the sample.

ORGANICS VOLATILE REPORT

Sample Number: AB18308(5X)

Matrix: Soil

Client Id: PG-BH-20-110200S8A

Initial Volume: 5g

Data File: FT4109

Final Volume: NA

Date Analyzed: 10 Nov 2000 1:19

Dilution Factor: 5

Date Received/Extracted: 11/3/00-NA

Percent Solids: 50

Column: Supelco 105 m vocol col, 5 mm id, 3.0 um film

CAS#	Compound	PQL/MDL	Concentration (Units: mg/Kg)
71556 79345 79005 75343 75354 107062 78875 110758 107028 107131 71432 75274 75252 74839 56235 108907 75003 67663 74873 10061015 124481 100414 108383 75092 95476 127184 108883 156605 10061026 79016	1.1.1-Trichloroethane 1.1.2-Tetrachloroethane 1.1.2-Trichloroethane 1.1.2-Dichloroethane 1.1-Dichloroethane 1.2-Dichloroethane 1.2-Dichloroethane 1.2-Dichloroethane 1.2-Dichloroethane 1.2-Dichloroethane 2-Chloroethylvinylether Acrolein Acrolein Acrolein Bromodichloromethane Bromodichloromethane Bromoform Bromomethane Carbon tetrachloride Chloroethane Chloroethane Chloroethane Chloroethane Cis-1,3-Dichloropropene Dibromochloromethane Ethylbenzene M&p-Xylenes Methylene chloride O-Xylene Tetrachloroethene Toluene Trans-1,2-Dichloroethene Trans-1,2-Dichloropropene Trichloroethene Vinyl chloride	0.050 0.050 0.050 0.050 0.050 0.050 0.050 0.050 0.15 0.069 0.010 0.050	פככככככככככככככככככככככככ

Total Target Concentration 0

U - Indicates the compound was analyzed but not detected.

J - Indicates an estimated value when a compound is detected at less than the specified detection limit.

B - Indicates the analyte was found in the blank as well as in the sample.

E - Indicates the analyte concentration exceeds the calibration range of the instrument.

Form1e/1f ORGANICS VOLATILE REPORT Tentatively Identified Compounds

Sample Number: AB18308(5X)

Client Id: PG-BH-20-110200S8

Data File: FT4109

Date Analyzed: 10 Nov 2000 1:19

Date Received/Extracted: 11/3/00-NA

Matrix: Soil

Initial Volume: 59

Final Volume: NA

Dilution Factor: 5

Percent Solids: 50

Hit# Cas Number

Compound

RT

Concentration mg/Kg

unknown

12.880

0.11

Total Tentatively Identified Concentration

A - Indicates an aldol condensate.
J - Indicates an estimated value.
B - Indicates the analyte was found in the blank as well as in the sample.

Form1 **ORGANICS VOLATILE REPORT**

Sample Number: AB18309

Matrix: Soil

Client Id: PG-BH-20-110200S8B

Initial Volume: 5g

Data File: FT4201

Final Volume: NA

Date Analyzed: 14 Nov 2000 12:13

Dilution Factor: 1

Date Received/Extracted: 11/3/00-NA

Percent Solids: 36

Column: Supelco 105 m vocol col,.5 mm id, 3.0 um film

0011	,,,,,, oupoido 100 iii 1000 o		Concentration
CAS#	Compound	PQL/MDL	(Units: mg/Kg)
71556	1,1,1-Trichloroethane 1,1,2,2-Tetrachloroethane 1,1,2-Trichloroethane 1,1-Dichloroethane	0.014	Ų.
79345	1,1,2,2- l etrachloroethane	0.014 0.014	U U
79005	1,1,2-1 richioroethane	0.014	Ď.
75343 75354	1,1-Dichloroethene	0.014	Ŭ
107062	1.2-Dichloroethane	0.014	ŭ
78875	1.2-Dichloropropane	0.014	Ŭ
110758	2-Chloroethylvinylether	0.014 🤼	Ŭ
107028	Acrolein	0.042 🤻	· U
107131	Acrylonitrile	0.019	טטטטטטטטטטטטטטטטטטטטטטטטטטטטטטטטטטטטטטט
71432	Benzene	0.0028	Ų
75274	Bromodichloromethane	0.014	Ų
75252	Bromoform	0.014 0.014	Ŋ
74839 56235	Bromomethane Carbon tetrachloride	0.014	ĭ
108907	Chlorobenzene	0.014	ŭ
75003	Chloroethane	0.014	Ŭ
67663	Chloroform	0.014	. Ŭ
74873	Chloromethane	0.014	
10061015	Cis-1,3-Dichloropropene	0.014	U
124481	Dibromochloromethane	0.014	U
100414	Ethylbenzene	0.0028	, u
108383	M&p-Xylenes Methylene chloride	0.0056	11 -0-044 iB-
75092	Methylene chloride	0.014 0.0028	V •0.011 JB− U
9547 6 127184	O-Xylene Tetrachloroethene	0.0028	ĭ
108883	Toluene	0.0028	0.0038
156605	Trans-1,2-Dichloroethene	0.014	0.0000
10061026	Trans-1.3-Dichloropropene	0.014	Ŭ
79016	Trans-1,3-Dichloropropene Trichloroethene	0.014	Ŭ
75014	Vinyl chloride	0.014	U

Total Target Concentration 0.015

U - Indicates the compound was analyzed but not detected.

J - Indicates an estimated value when a compound is detected at less than the specified detection limit.

B - Indicates the analyte was found in the blank as well as in the sample.

E - Indicates the analyte concentration exceeds the calibration range of the instrument.

Form1e/1f ORGANICS VOLATILE REPORT Tentatively Identified Compounds .

Sample Number: AB18309

Matrix: Soil

Client Id: PG-BH-20-110200S8

Initial Volume: 59

Data File: FT4201

Final Volume: NA

Date Analyzed: 14 Nov 2000 12:13

Dilution Factor: 1

0.1

Date Received/Extracted: 11/3/00-NA

Percent Solids: 36

Hit#	Cas Number	Compound	ŔT	Concentration mg/Kg
1		unknown	8.760	0.0095 J
2		unknown	11.390	0.042 J
3	000535-77-3	Benzene, 1-methyl-3-(1-methylethyl)-	12.340	· 0.014 J
4		unknown	12.880	0.028 J B U
5		unknown	13.220	0.0085 <i>J</i>

Total Tentatively Identified Concentration

<sup>A - Indicates an aldol condensate.
J - Indicates an estimated value
B - Indicates the analyte was found in the blank as well as in the sample.</sup>

Form1 **ORGANICS VOLATILE REPORT**

Sample Number: AB18310

Matrix: Water

Client Id: PG-FB-02-110200WQ2

Initial Volume: 5ml

Data File: FT4004

Final Volume: NA

Date Analyzed: 6 Nov 2000 18:07

Dilution Factor: 1

Date Received/Extracted: 11/3/00-NA

Percent Solids: 0

Column: Supelco 105 m vocol col, 5 mm id, 3.0 um film

CAS#	Compound	PQL/MDL	Concentration (Units: ug/L)
71556 70345	1,1,1-Trichloroethane 1,1,2,2-Tetrachloroethane	5.0 5.0 5.0 5.0 5.0	U
7 9345 79005	1,1,2-Trichloroethane	50	บั .
75343	1,1-Dichloroethane	5.0	Ŭ
75354	1,1-Dichloroethene	5.0	Ū
107062	1 2-Dichloroethane	5.0	Ŭ
78875	1,2-Dichloropropane 2-Chloroethylvinylether	5.0	U
110758	2-Chloroethylvinylether	5.0	ŭ
107028	Acrolein	15 R	ŭ
107131	Acrylonitrile	6.9	Ų.
71432	Benzene	<u>1.0</u>	טננספטפטטטטטטטטטטטטטטטטטטטטטטטטטטטטטטטט
<u>75274</u>	Bromodichloromethane	5.0	ប្ត
75252	Bromoform	5.0 5.0 5.0	អ្ន
74839	Bromomethane	5.0	N .
56235	Carbon tetrachloride	5.0	· N
108907 75003	Chlorobenzene Chloroethane	5.0 5.0	អ
67663	Chloroform	5.0	ំ ព័
74873	Chloromethane	5.0	· ŭ
10061015	Cis-1 3-Dichloropropene	5.0	Ŭ
124481	Cis-1,3-Dichloropropene Dibromochloromethane	5.0 1.0	Ŭ
100414	Ethylbenzene	1.0	υ
108383	M&p-Xvlenes	2.0	Ų
75092	Methylene chloride	5.0	3.1 J
95476	O-Xylene	1.0	ប្ត
127184	Tetráchioroethene	5.0 1.0	
108883 156605	Toluene Trans-1,2-Dichloroethene	5.0	ដ
10061026	Trans-1 3-Dichloropropene	5.0	υ υ υ
79016	Trans-1,3-Dichloropropene Trichloroethene	5.0 5.0	ŭ
75014	Vinyl chloride	5.0	Ŭ U

Total Target Concentration 3.1

U - Indicates the compound was analyzed but not detected.

J - Indicates an estimated value when a compound is detected at less than the specified detection limit.

B - Indicates the analyte was found in the blank as well as in the sample.

E - Indicates the analyte concentration exceeds the calibration range of the instrument.

Formle/1f ORGANICS VOLATILE REPORT Tentatively Identified Compounds

Sample Number: AB18310

Client Id: PG-FB-02-110200WQ

Data File: FT4004

Date Analyzed: 6 Nov 2000 18:07

Date Received/Extracted: 11/3/00-NA

Matrix: Water

Initial Volume: 5ml

Final Volume: NA

Dilution Factor: 1

Percent Solids: 0

Hit# Cas Number

Compound

RT

Concentration ug/L

unknown

9.610

3.1

Total Tentatively Identified Concentration

A - Indicates an aldol condensate.
J - Indicates an estimated value.
B - Indicates the analyte was found in the blank as well as in the sample.

Form1 ORGANICS SEMIVOLATILE REPORT

Sample Number: AB18296

Matrix: Soil

Client Id: PG-MWPA12-110200SO2

Initial Volume: 30g

Data File: FU2115

Final Volume: 1ml

Date Analyzed: 7 Nov 2000 18:40

Dilution Factor: 1

Date Received/Extracted: 11/3/2000-11/6/2000

Percent Solids: 59

Column: Supelco 105 m vocol col,.5 mm id, 3.0 um film

	CAS#	Compound	PQL/MDL	Concentration (Units: mg/Kg)	
•	120821	1,2,4-Trichlorobenzene	0.28 0.28	U U	
	95501	1,2-Dichlorobenzene 1,2-Diphenylhydrazine	0.26 0.056	ŭ	
	122667 541731	1,3-Dichlorobenzene	0.28	ŭ	
	106467	1 4-Dichlorobenzene	0.28	, Ŭ	
	88062	2,4,6-Trichlorophenol 2,4-Dichlorophenol 2,4-Dimethylphenol	0.28	Ū	
	120832	2,4-Dichlorophenol	0.28 0.28	ñ	
	105679	2,4-Dimethylphenol	0.28	Ų	
	51285	2,4-Dinitrophenol 2,4-Dinitrotoluene 2,6-Dinitrotoluene 2-Chloropaphthalene	0.56 0.28	ככככככככ	
	121142	2,4-Dintrotoluene	0.28 0.28	X	
	606202 91587	2,0-Dillitotoluerie	0.28	ŭ	
	95578	2-Chlorophenol	0.20	ŭ	
•	88755	2-Chlorophenol 2-Nitrophenol 3,3'-Dichlorobenzidine	0.28 0.28	Ŭ	
	91941	3,3'-Dichlorobenzidine	0.28 0.28	U	
	121142	4.6-Dinitro-2-methylphenol	0.28	Ü	
	101553	4-Bromophenyl-phenylether 4-Chloro-3-methylphenol	0.28	. !!	
	59507	4-Chloro-3-methylphenol	0.28 0.28	ָּט ט ט	
	7005723 100027	4-Chlorophenyl-phenylether 4-Nitrophenol	رِي 0.28 1 ن 0.28	r ii	
	83329	Acenaphthene	0.20	, ŭ	
	208968	Acenaphthylene	0.28 0.28 0.28	, U	
	120127	Anthracene	0.28 0.56	· Ŭ	
	92875	Benzidine	0.56	. ນ ບ ບ	
	56553	Benzo[a]anthracene	. 0.28	Ņ	
	50328	Benzolalpyrene	0.28	Ŋ	
	205992 191242	Benzolajanthracene Benzolajpyrene Benzolojliluoranthene Benzoloj, i, ijperylene Benzoloj, i, ijperylene Benzoloj, ifuoranthene Bis(2-Chioroethoxy)methane Bis(2-Chioroethoy)Ether Bis(2-Chioroisopropyl)ether Bis(2-Ethylhexyl)phthalate Butylbenzylphthalate Chysene	0.28 0.28 0.28	טטטטטטטטטטטטטטטטטטטטטטט	
	207089	Renzolkifluoranthene	0.28	ŭ	
	111911	Bis(2-Chloroethoxy)methane	0.28	Ŭ ·	
	111444	Bis(2-Chloroethyl)Ether	0.28	U	
•	108601	Bis(2-Chloroisopropyl)ether	0.28 0.28 0.28	ñ	
	1178 1 7	Bis(2-Ethylhexyl)phthalate	0.28 0.28	Ü	
	85687 218019	Chacana	0.28	Ü	
	117840		0.28 0.28 0.28 0.28 0.28	0.089 J	
	84742	DI-n-octylphthalate Di-n-butylphthalate	0.28	U	
	53703	Dibenzo[a,h]Anthracene	0.28	U	
	84662	Diethylphthalate	11.78	Ŭ	
	131113	Dimethylphthalate	0.28	ÿ	
	206440	Fluoranthene	0.28 0.28 0.28 0.28 0.28	ט ט ט	
	86737 118741	Fluorene Hexachlorobenzene	U.∠o 0.28	N .	
	87683	Hexachlorobutadiene	0.28	ŭ	
	77474	Hexachlorocyclopentadiene	0.85 0ゴ 0.28 0.28	Ū .	
	67721	Hexachloroethane	0.28	Ü	
	193395	Indeno[1,2,3-cd]pyrene	0.28	Ŭ	
	78591	Isophorone	0.28	Ü	
	621647	N-Nitroso-Di-N-Propylamine N-Nitrosodimethylamine N-Nitrosodiphenylamine	0.28 0.28 0.28 0.28 0.28	Ū	
	62759 86306	N-Nitrosodimenylamine	U.∠o 0.28	U U U	
	91203	Naphthalene	0.28	ŭ	
	98953	Nitrobenzene	0.28	Ŭ	
	87865	Pentachlorophenol	0.28 0.28	Ū	
	85018	Phenanthrene	0.28	Ŭ U	
	108952	Phenol	0.28	ប្ល	
	129000	Pyrene	0.28	U	

Total Target Concentration 0.089

 $[\]emph{U}$ - Indicates the compound was analyzed but not detected.

J - Indicates an estimated value when a compound is detected at less than the specified detection limit.

B - Indicates the analyte was found in the blank as well as in the sample.

E - Indicates the analyte concentration exceeds the calibration range of the instrument.

Formle/1f ORGANICS SEMIVOLATILE REPORT Tentatively Identified Compounds

Sample Number: AB18296

Matrix: Soil

Client Id: PG-MWPA12-110200

Initial Volume: 30g

Data File: FU2115

Final Volume: 1ml

Date Analyzed: 7 Nov 2000 18:40

Dilution Factor: 1

Date Received/Extracted: 11/3/2000-11/6/2000

Percent Solids: 59

RTConcentration mg/Kg Hit# Cas Number Compound 2.000 0.30 J /3 1 unknown 2 000141-79-7 3-Penten-2-one, 4-methyl-2.130 unknown 3 2.440 4 000123-42-2 2-Pentanone, 4-hydroxy-4-methyl-2.800 5 3.570 unknown 0.28] 6 unknown 3.700 (0.33 J 🗗 U 7 unknown 4.450 9.900 d231 2 8 unknown 9 unknown 15.240 16.010 0.38 J 10 000544-85-4 Dotriacontane 16.380 0.27 J unknown hydrocarbon 11 0.35 J 12 unknown hydrocarbon 16.740 13 unknown hydrocarbon 17.110 0.35 .1 unknown hydrocarbon 17.450 0.36 J 14

Total Tentatively Identified Concentration

unknown

unknown

140

18.250 18.670

0.28 J

Control File h:\import\12359.txt

15

16

A - Indicates an aldol condensate.

J - Indicates an estimated value
 B - Indicates the analyte was found in the blank as well as in the sample.

ORGANICS SEMIVOLATILE REPORT

Sample Number: AB18297

Matrix: Soil

Client Id: PG-MWPA12-110200SO3

Initial Volume: 30g

Data File: FU2116

Final Volume: 1ml

Date Analyzed: 7 Nov 2000 19:06

Dilution Factor: 1

Date Received/Extracted: 11/3/2000-11/6/2000

Percent Solids: 47

id 3.0 um film

Coli	Column: Supelco 105 m vocol col,.5 mm id, 3.0 um film				
CAS#	Compound	PQL/MDL	Concentration (Units: mg/Kg)		
120821 95501 122667 541731 106467 88062 120832 105679 51285 121142 60622 91587 95578 88755 91941 121142 101553 59507 7005723 100027 83329 208968 120127 928575 56553 50328 205992 191242 207089 111911 111444 108601 117817 85687 218019 117840 84742 53703 84742 53703 84742 53703 84744 67721 193395 78591 6216447 62759 86306 91203 98953 87865 85018 108952	1,2,4-Trichlorobenzene 1,2-Dichlorobenzene 1,2-Diphenylhydrazine 1,3-Dichlorobenzene 2,4-6-Trichlorobenzene 2,4-6-Trichlorophenol 2,4-Dimethylphenol 2,4-Dimethylphenol 2,4-Dinitrotoluene 2,6-Dinitrotoluene 2,6-Dinitrotoluene 2,6-Dinitrotoluene 2,6-Dinitrobenzidine 4,6-Dinitro-2-methylphenol 4,8-Dichlorobenzidine 4,6-Dinitro-2-methylphenol 4-Bromophenyl-phenylether 4-Chloro-3-methylphenol 4-Chlorophenyl-phenylether 4-Chloro-3-methylphenol 4-Chlorophenyl-phenylether 4-Chloro-3-methylphenol 4-Chlorophenyl-phenylether 4-Nitrophenol Acenaphthene Acenaphthylene Anthracene Benzolajpyrene Benzolajpyrene Benzolajpyrene Benzolg, h,ilperylene Benzolg, h,ilperylene Benzolg, h,ilperylene Bis(2-Chloroethyl)Ether Bis(2-Chlorosopropyl)ether Bis(2-Chlorosopropyl)ether Bis(2-Ethylhexyl)phthalate Butylbenzylphthalate Din-n-octylphthalate Din-n-octylphthalate Din-n-ottylphthalate Dibenzola, h]Anthracene Diethylphthalate Dimethylphthalate	1 35571353555555555555555555555555555555			
129000	Pyrene	0.35	0.10 J		

Total Target Concentration 0.43

Control File h:\import\12359.txt

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U - Indicates the compound was analyzed but not detected.

J - Indicates an estimated value when a compound is detected at less than the specified detection limit.

B - Indicates the analyte was found in the blank as well as in the sample.

E - Indicates the analyte concentration exceeds the calibration range of the instrument.

Form1e/If ORGANICS SEMIVOLATILE REPORT Tentatively Identified Compounds

Sample Number: AB18297

Client Id: PG-MWPA12-110200

Data File: FU2116

Date Analyzed: 7 Nov 2000 19:06

Date Received/Extracted: 11/3/2000-11/6/2000

Matrix: Soil

Initial Volume: 30g

Final Volume: 1ml

Dilution Factor: 1

Percent Solids: 47

Hit#	Cas Number	Compound	RT	Concentration mg/Kg
1		unknown	2.130	2.4 J 🥳 U
2		unknown	2.440	1.3
3	000123-42-2	2-Pentanone, 4-hydroxy-4-methyl-	2.860	26,413 4
4		unknown	3.660	12 <i>J</i>
5		unknown hydrocarbon	4.450	0.56 J B U
6	000371-41-5	Phenol, 4-fluoro-	5.030	0.69 J
7		unknown	6.300	. 1.8 J
8		unknown	9.890	-0.20 J B U
9		unknown	13.100	0.35 <i>J</i>
10		unknown	15.230	0.40 J B
11		unknown	15.420	0.32 <i>J</i>
12		unknown hydrocarbon	16.740	0.35 <i>J</i>
, 13		unknown hydrocarbon	17.100	0.30 <i>J</i>
14	`	unknown	18.260 ·	_ <u>038.7 €</u> U
15	•	unknown	18.630	0.38 J

Total Tentatively Identified Concentration

230

<sup>A - Indicates an aldol condensate.
J - Indicates an estimated value
B - Indicates the analyte was found in the blank as well as in the sample.</sup>

Form1 ORGANICS SEMIVOLATILE REPORT

Sample Number: AB18298

Matrix: Soil

Client Id: PG-MWPA12-110200SO4

Initial Volume: 30g

Data File: FU2103

Final Volume: 1ml

Date Analyzed: 7 Nov 2000 13:33

Dilution Factor: 1

Date Received/Extracted: 11/3/2000-11/6/2000

Percent Solids: 44

Column: Supelco 105 m vocol col,.5 mm id, 3.0 um film Concentration PQL/MDL CAS# (Units: mg/Kg) Compound

C) 10 1/		T QEIME E	(0111151 11181-118)
120821 95501 122667 541731 106467 88062 120832			U U U U U U U U U U U U U U U U U U U
105679 51285 121142 606202 91587 95578 88755 91941	1,2,4-Trichlorobenzene 1,2-Dichlorobenzene 1,2-Diphenylhydrazine 1,3-Dichlorobenzene 1,4-Dichlorobenzene 2,4-6-Trichlorophenol 2,4-Dinitrohlorophenol 2,4-Dinitrohlorophenol 2,4-Dinitrohlorene 2,4-Dinitrohlorene 2,6-Dinitrohlorene 2-Chloronaphthalene 2-Chlorophenol 2-Nitrophenol 3,3'-Dichlorobenzidine 4,6-Dinitro-2-methylphenol 4-Bromophenyl-phenylether 4-Chloro-3-methylphenol 4-Chlorophenyl-phenylether 4-Nitrophenol Acenaphthene	0.38 0.76 0.38 0.38 0.38 0.38 0.38 0.38	נטטטטטט
121142 101553 59507 7005723 100027 83329 208968	Acenaphthylene	0.38	נכננננננננננננ
120127 92875 56553 50328 205992 191242 207089 111911	Anthracené Benzidine Benzolajanthracene Benzolajpyrene Benzolajpyrene Benzolg, n, i)perylene Benzolkifluoranthene Benzolkifluoranthene Bis(2-Chloroethoxy)methane Bis(2-Chloroethyl)Ether Bis(2-Chloroisopropylether Bis(2-Ethylhexyl)phthalate Butylbenzylphthalate Chrysene	0.36, 0.76 0.38 0.38 0.38 0.38 0.38	כככככככ
111444 108601 117817 85687 218019 117840 84742 53703	Bis(2-Chloroethyl)-ther Bis(2-Chloroisopropyl)ether Bis(2-Ethylhexyl)phthalate Butylbenzylphthalate Chrysene DI-n-octylphthalate Di-n-butylphthalate Dibenzola,h]Anthracene Diethylphthalate Dimethylphthalate Elycrasthore	0.38 0.38 0.38 0.38 0.38 0.38 0.38 0.38	0.090 J 0.090 J U U 0.15 J 0.15 J U
84662 131113 206440 86737 118741 87683 77474 67721	Fluorene Hexachlorobenzene	0.38 0.38 0.38 0.38 0.38	U U
193395 78591 621647 62759 86306 91203 98953 87865	Hexachlorocutaciene Hexachlorocyclopentadiene Hexachlorocyclopentadiene Hexachlorocyclopentadiene Indeno[1,2,3-cd]pyrene Isophorone N-Nitroso-Di-N-Propylamine N-Nitrosodimethylamine N-Nitrosodiphenylamine Naphthalene Nitrobenzene Pentachlorophenol	0.38 0.38 0.38 0.38 0.38 0.38 0.38 0.38	ככככככככככככ
85018 108952 129000	Phenanthrene Phenol Pyrene	0.38 0.38 0.38	1.7 U

Total Target Concentration 2.1

U - Indicates the compound was analyzed but not detected.

J - Indicates an estimated value when a compound is detected at less than the specified detection limit.

B - Indicates the analyte was found in the blank as well as in the sample.

E - Indicates the analyte concentration exceeds the calibration range of the instrument.

Form1e/If Organics semivolatile report Tentatively Identified Compounds

Sample Number: AB18298

Client Id: PG-MWPA12-110200

Date Analyzed: 7 Nov 2000 13:33

Date Received/Extracted: 11/3/2000-11/6/2000

Data File: FU2103

Matrix: Soil

Initial Volume: 30g

Final Volume: 1ml

Dilution Factor: 1

Percent Solids: 44

Hit#	Cas Number	Compound	RT	Concentration mg/Kg
1		unknown	2.010	0.47 j B /
2	000141-79-7	3-Penten-2-one, 4-methyl-	2.120	0.55 J B
3		únknown	2.420	8.3 J A
4	000123-42-2	2-Pentanone, 4-hydroxy-4-methyl-	2.780	140 / Ri3
5		unknown	3.560	6.8 J B
6		unknown hydrocarbon	4.450	9.44 1 13
7	000140-29-4	Benzeneacetonitrile	7.200	0.45 J
8		unknown	9.890	0.42JB U
9		unknown	10.800	0.46 <i>J</i>
10	074267-01-9	1,2,3,4,6-Pentamethylindole	11.880	2.5 J
11		unknown	13.480	1.6 <i>J</i>
12	ı,	unknown	13.770	2.1 J
13		unknown	13,970	0.55 <i>J</i>
14	000630-06-8	Hexatriacontane	14.870	. 1.2 <i>J</i>
15		unknown	15.600	0.47 <i>J</i>
16		unknown	15.740	. 1.5 <i>J</i>
17		unknown	17.050	0.57 J
18		unknown	17.230	0.47 J
19	000489-39-4	(+)-Aromadendrene	17,390	3.4 <i>J</i>
20		unknown	17.450	0.85 J
21		unknown	17.500	3.2 <i>J</i>
22		unknown	17.570	0.59 J
23	010219-75-7	Eremophilene	17.620	1.4 <i>J</i>
24	019890-84-7	LONGIFOLENALDEHYDE	17.720	1.8 <i>J</i>
25		unknown	17.960	3.5 <i>J</i>

Total Tentatively Identified Concentration

180

<sup>A - Indicates an aldol condensate.
J - Indicates an estimated value
B - Indicates the analyte was found in the blank as well as in the sample.</sup>

ORGANICS SEMIVOLATILE REPORT

Sample Number: AB18300

Matrix: Soil

Client Id: PG-MWPA12-110200SO1

Initial Volume: 30g

Data File: FU2112

Final Volume: 1ml.

Date Analyzed: 7 Nov 2000 17:23

Dilution Factor: 1

Date Received/Extracted: 11/3/2000-11/6/2000 Percent Solids
Column: Supelco 105 m vocol col. 5 mm id, 3.0 um film

Percent Solids: 89

\boldsymbol{C}	Column: Supelco 105 m vocol col,.5 mm id, 3.0 um film Concentration				
CAS#	Compound	PQL/MDL	(Units: mg/Kg)		
120821 95501 122667 541731 106467 120832 105679 51285 121142 606202 91587 95578 88755 91941 121142 101553 59507 7005723 100027 83329 208968 120127 92875 56553 50328 207982 191242 207089 111911 111444 108601 117817 85687 218019 117840 84742 53703 84662 131113 206440 86737 118741 87683 77474 67721 193395 78591 621647 62759 86306 91203 98953 87865 85018 108952 129000	1,2,4-Trichlorobenzene 1,2-Diphenylhydrazine 1,3-Dichlorobenzene 1,4-Dichlorobenzene 2,4,6-Trichlorophenol 2,4-Dinitrobenzene 2,4-Dinitrobenol 2,4-Dinitrobluene 2,4-Dinitrobluene 2,5-Dinitrobluene 2,6-Dinitrobluene 2,6-Dinitrobluene 2,6-Dinitrobluene 2,6-Dinitrobluene 2,6-Dinitrobenol 3,3'-Dichlorobenzidine 4,6-Dinitro-2-methylphenol 4-Bromophenyl-phenylether 4-Chloro-3-methylphenol 4-Bromophenyl-phenylether 4-Nitrophenol Acenaphthylene Anthracene Benzolalanthracene Benzolalpyrene Benzolbilluoranthene Benzolbilluoranthene Benzolbilluoranthene Bis(2-Chloroethyl)Ether Bis(2-Chloroethyl)Ether Bis(2-Chloroethyl)Ether Bis(2-Chloroethyl)Halate Din-butylphthalate Chrysene DI-n-octylphthalate Dinenzola, I)Anthracene Diethylphthalate Dibenzola, I)Anthracene Eluoranthene Fluoranthene Fluoranthene Fluorene Hexachlorobutadiene Hexachloroethane Indeno[1,2,3-cd]pyrene Isophorone N-Nitroso-Di-N-Propylamine N-Nitrosodiphenylamine N-Nitrosodiphenylamine N-Nitrosodiphenylamine N-Nitrosodiphenol Phenol Pyrene		JJJ J J J J J J J J J J J J J J J J J		

Total Target Concentration 0.81

Control File h:\import\12359.txt

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U - Indicates the compound was analyzed but not detected.

J - Indicates an estimated value when a compound is detected at less than the specified detection limit.

B - Indicates the analyte was found in the blank as well as in the sample.

E - Indicates the analyte concentration exceeds the calibration range of the instrument.

Formle/lf ORGANICS SEMIVOLATILE REPORT Tentatively Identified Compounds

Sample Number: AB18300

Matrix: Soil

Client Id: PG-MWPA12-110200

Initial Volume: 30g

Data File: FU2112

Final Volume: 1ml

Dilution Factor: 1

Date Analyzed: 7 Nov 2000 17:23

82

Date Received/Extracted: 11/3/2000-11/6/2000

Percent Solids: 89

Hit#	Cas Number	Compound	RT	Concentration mg/Kg
1	000141-79-7	3-Penten-2-one, 4-methyl-	2.110	0.32 J B/ U
2		unknown	2.450	4.5 J B
3	000123-42-2	2-Pentanone, 4-hydroxy-4-methyl-	2.810	71/3 A13
4	•	unknown	3.570	101 B V
5		unknown	4.160	0.16 <i>J</i>
6		unknown hydrocarbon	4.450	0.22 J = 3 V
7	006051-98-5	7H-Benzo[c]fluoren-7-one	13,600	0.16 <i>J</i>
. 8		unknown	15.230	244 J B V
9		unknown	15.660	0.46 <i>J</i>
10		unknown	15.910	0.25 <i>J</i>
11		unknown	16.130	0.19 <i>J</i>
12		unknown	16.190	0.31 <i>J</i>
13		unknown	16.400	0.26 <i>J</i>
14		unknown	16.740	0.17 J

Total Tentatively Identified Concentration

<sup>A - Indicates an aldol condensate.
J - Indicates an estimated value
B - Indicates the analyte was found in the blank as well as in the sample.</sup>

ORGANICS SEMIVOLATILE REPORT

Sample Number: AB18301

Matrix: Soil

Client Id: PG-BH-20-110200SO1

Initial Volume: 30g

Data File: FU2109

Final Volume: 1ml

Date Analyzed: 7 Nov 2000 16:06

Dilution Factor: 1

Percent Solids: 93

Date Received/Extracted: 11/3/2000-11/6/2000 Percent Solids: Column: Supelco 105 m vocol col, 5 mm id, 3.0 um film

CAS#	Compound	PQL/MDL	Concentration (Units: mg/Kg)
120821 95501	1,2,4-Trichlorobenzene	0.18 0:18	U U
122667	1,2-Dichlorobenzene 1,2-Diphenylhydrazine	0.036	ŭ
541731	1,3-Dichlorobenzene 1,4-Dichlorobenzene	0.18	Ú
106467	1,4-Dichlorobenzene	0.18	Ŭ
88062 120832	2,4,6-1 richiorophenoi	0.18 0.18	U '
105679	2.4-Dimethylphenol	0.18	ĭi ·
51285	2.4-Dinitrophenal	0.36	ŭ
121142	2.4.6-Trichlorophenol 2.4-Dichlorophenol 2.4-Dimethylphenol 2.4-Dinitrophenol 2.4-Dinitrotoluene	0.18	
606202 91587	2,6-Dinitrotoluene	0.18	Ų
91507	2-Chlorophenol	0.18 0.18	ii Ii
95578 88755	2-Nitrophenol	0.18	ŭ
91941	3,3'-Dichlorobenzidine	0.18	บ
121142	4,6-Dinitro-2-methylphenol	0.18	Ŋ
101553 59507	4-Bromophenyl-phenyletner	0.18 0.18	Ŭ
7005723	2,4-Dintrotoluene 2,6-Dinitrotoluene 2-Chlorophenol 2-Nitrophenol 3,3'-Dichlorobenzidine 4,6-Dinitro-2-methylphenol 4-Bromophenyl-phenylether 4-Chloro-3-methylphenol 4-Chlorophenyl-phenylether 4-Nitrophenol Acenaphthenol Acenaphthene	0.18	υ
100027	4-Nitrophenol	0.18 urt	υ U
83329		0.18	ט כי כי כי
208968 120127	Acenaphthylene Anthracene	0.18	
120127 92875		0.18 0.36	ŭ
56553	Benzo[a]anthracene	· 0.18	Ū
50328	Benzo[a]pyrene	0.18	U
205992 191242	Benzola h ibendene	0.18 0.18	Ü
191242 207089	Benzolkifluoranthene	0.18	Ü
111911	Bis(2-Chloroethoxy)methane	0.18	
111444 108601	Bis(2-Chloroethyl)Ether	0.18	Ŋ
117817	Bis(2-Chlorolsopropyr)ether Bis(2-Ethylbeyyl)nhthalate	0.18 0.18	U 0.064 J
85687	Butylbenzylphthalate	0.18	Ü
218019	Benzidine Benzolajanthracene Benzolajnthracene Benzolajpyrene Benzolajnthracene Benzolajnthene Benzolajnthene Bis(2-Chloroethoxy)methane Bis(2-Chloroethyl)Ether Bis(2-Chloroethyl)ether Bis(2-Ethylhexyl)phthalate Butylbenzylphthalate Chrysene DI-n-octylohthalate	0.18	0.052 J
117840 84742	Di-n-octylphthalate	0.18	0.079 J
53703	Dibenzola hlAnthracene	0.18 0.18	0,068 J U
84662	Diethylphthalate	0.18	U
131113	Olinyaere DI-n-octylphthalate DI-n-butylphthalate Dibenzola,h]Anthracene Diethylphthalate Dimethylphthalate	0.18	Ŭ
206440 86737	Fluoranthene Fluorene	0.18	U . U
86737 11 8741	Hexachlorobenzene	0.18 0.18	Ŭ
87683	Hexachlorobutadiene	0.18	
77474	Hexachlorocyclopentadiene Hexachloroethane Indeno[1,2,3-cd]pyrene	0.54 01	U U U
67721 193395	Indepoil 2 3-cdlovrene	0.18 0.18	Ü
785 91	Isophorone	0.18	. บ
621647	N-Nitroso-Di-N-Propylamine	0.18 0.18	Ŭ U
62759 86306	N-Nitroso-Di-N-Propylamine N-Nitrosodimethylamine N-Nitrosodiphenylamine Naphthalene Nitrobenzene Pentachlorophenol	0.18	
91203	Naphthalene	0.18 0.18	U 0.050 J
98953	Nitrobenzene	0.18	U.030 3
87 865	Pentachlorophenol	0.18	Ŭ
85018	Frieriantificite	0.18	0.049 J
108952 129000	Phenol Pyrene	0.18 0.18	U
, 20000	· j.c.ic	0,10	. 0

Total Target Concentration 0.36

U - Indicates the compound was analyzed but not detected.

J - Indicates an estimated value when a compound is detected at less than the specified detection limit.

B - Indicates the analyte was found in the blank as well as in the sample.

E - Indicates the analyte concentration exceeds the calibration range of the instrument.

Form1e/1f ORGANICS SEMIVOLATILE REPORT Tentatively Identified Compounds

Sample Number: AB18301

Matrix: Soil

Client Id: PG-BH-20-110200SO

Initial Volume: 30g

Data File: FU2109

Final Volume: 1ml

Date Analyzed: 7 Nov 2000 16:06

Dilution Factor: 1

Date Received/Extracted: 11/3/2000-11/6/2000

Percent Solids: 93

Hit#	Cas Number	Compound	RT	Concentration mg/Kg
1		unknown	2.000	0.20 1 8/6
2	000141-79-7	3-Penten-2-one, 4-methyl-	2.120	0.31 1
3		unknown	2.430	4.8 J/B
4	000123-42-2	2-Pentanone, 4-hydroxy-4-methyl-	2.810	74/J AB
5		unknown	3.570	40,13
6	•	unknown hydrocarbon	4.450	6.22 J B V
7		unknown	6.580	0.20 <i>J</i>
8		unknown	6.900	0.22 J
9		unknown	7.350	0.22 J
10		unknown	7.540	0.22 J
11		unknown	7.650	0.22 <i>J</i>
12	ı	unknown	8.180	0.40 <i>J</i>
13		unknown	8.450	0.29 <i>J</i>
14	000099-99-0	Benzene, 1-methyl-4-nitro-	9,580	0.27 <i>J</i>
15	000070-55-3	4-TOLUENESULFONAMIDE	9.830	0.29 J
16		unknown	9.890	0.24 J 13 U
17		unknown	15.240	0.53 1 B U
18		unknown	15.410	0.29 <i>J</i>
19		unknown	15.660	0.21 <i>J</i>
20		unknown	16.190	0.25 J
21		unknown	16.740	0.26 <i>J</i>
22		unknown	17.110	0.28 J
23	·	unknown	18.100	0.22 J
24		unknown hydrocarbon	18.260	0.31 <i>J</i>
25		unknown	18.520	0.19.7B- U

Total Tentatively Identified Concentration

89

<sup>A - Indicates an aldol condensate.
J - Indicates an estimated value
B - Indicates the analyte was found in the blank as well as in the sample.</sup>

Form1 ORGANICS SEMIVOLATILE REPORT

Sample Number: AB18302

Matrix: Soil

Concentration

Client Id: PG-BH-20-110200SO2

Initial Volume: 30g

Data File: FU2137

Final Volume: 1ml

Date Analyzed: 8 Nov 2000 17:45

Dilution Factor: 1

Date Received/Extracted: 11/3/2000-11/6/2000

Percent Solids: 53

Column: Supelco 105 m vocol col, 5 mm id, 3.0 um film

CAS#	Compound	PQL/MDL	(Units: mg/Kg)
120821 95501 122667 541731 106467 88062 120832 105679 51285 51285 5121142 606202 91587 88755 91941 121142 101553 7005723 100027 83329 208968 120127 92875 56553 50328 120127 92875 56553 10127 92875 56553 10127 92875	1,2,4-Trichlorobenzene 1,2-Dichlorobenzene 1,2-Diphenylhydrazine 1,3-Dichlorobenzene 1,4-Dichlorobenzene 2,4,6-Trichlorophenol 2,4-Dinitrophenol 2,4-Dinitrophenol 2,4-Dinitrophenol 2,4-Dinitrotoluene 2,6-Dinitrotoluene 2,6-Dinitrotoluene 2,6-Dinitrophenol 3,3-Dichlorobenzidine 4,6-Dinitrophenol 3,3-Dichlorobenzidine 4,6-Dinitro-2-methylphenol 4,6-Dinitro-2-methylphenol 4-Chloro-3-methylphenol 4-Chloro-3-methylphenol 4-Chlorophenyl-phenylether 4-Chlorophenyl-phenylether 4-Chlorophenol Acenaphthene Acenaphthene Benzo[a]anthracene Benzo[a]pyrene Benzo[b]fluoranthene Benzo[a]pyrene Benzo[b]fluoranthene Benzo[b]fluoranthene Bis(2-Chloroethoxy)methane Bis(2-Chloroethoxy)methane Bis(2-Chloroisopropy)ether Bis(2-Chloroiso	0,31 0.063 0.31 0.063 0.31 0.31 0.31 0.31 0.31 0.31 0.31 0.3	פמטניניניניניניניניניניניניניניניניניניני

Total Target Concentration 0.23

Control File h:\import\12359.txt

U - Indicates the compound was analyzed but not detected.

J - Indicates an estimated value when a compound is detected at less than the specified detection limit.

B - Indicates the analyte was found in the blank as well as in the sample.

E - Indicates the analyte concentration exceeds the calibration range of the instrument.

$Form 1e/1f \\ {\tt ORGANICS SEMIVOLATILE REPORT}$ Tentatively Identified Compounds

Sample Number: AB18302

Matrix: Soil

Client Id: PG-BH-20-110200SO

Initial Volume: 30g

Data File: FU2137

Final Volume: 1ml.

Date Analyzed: 8 Nov 2000 17:45

Dilution Factor: 1

Date Received/Extracted: 11/3/2000-11/6/2000

Percent Solids: 53

Hit#	Cas Number	Compound	RT	Concentration mg/Kg
1	000141-79-7	3-Penten-2-one, 4-methyl-	2.060	0.42 1 3 /
2		unknown	2.360	7.2 1 13/
3	000123-42-2	2-Pentanone, 4-hydroxy-4-methyl-	2.740	120 1/15
4		unknown	3.510	5.8/J B
5		unknown	4.030	9/30 1 13 🗸
6	•	unknown	6.250	0.27 J
7		unknown	9.020	0.27 J
8		unknown	9.850	0.20 1 13
9		unknown	10.260	0.51 J
10		unknown	. 11.330	0.27 J
11	000057-10-3	Hexadecanoic acid	11,490	12 <i>J</i>
12	000112-80-1	9-Octadecenoic acid (Z)-	12.420	. 12 J
13		unknown	12,500	2.2 J
14	1	unknown	15.170	0,67 万 万 U
15		unknown	18.180	9.50 TB

Total Tentatively Identified Concentration

160

<sup>A - Indicates an aldol condensate.
J - Indicates an estimated value
B - Indicates the analyte was found in the blank as well as in the sample.</sup>

Form1 ORGANICS SEMIVOLATILE REPORT

Sample Number: AB18303

Matrix: Soil

Client Id: PG-BH-20-110200SO3

Initial Volume: 30g

Data File: FU2138

Final Volume: 1ml

Date Analyzed: 8 Nov 2000 18:11

Dilution Factor: 1

Date Received/Extracted: 11/3/2000-11/6/2000

Percent Solids: 49

Column: Supelco 105 m vocol col,.5 mm id, 3.0 um film

CAS #	Compound	PQL/MDL	Concentration (Units: mg/Kg)
120821 95501 122667 541677 541731 106467 88062 120832 105679 51285 121142 606202 91587 95578 88755 91941 121142 101553 59507 7005723 100027 83329 208968 120127 92875 56553 50328 205992 191242 207089 1117840 84742 53703 84662 131113 206440 86737 118741 8663 77474 67721 193395 78591 621647 62759 86306 91203 98953 87865 85018 108952	1,2,4-Trichlorobenzene 1,2-Dichlorobenzene 1,2-Dichlorobenzene 1,3-Dichlorobenzene 1,4-Dichlorobenzene 1,4-Dichlorobenzene 2,4-Dichlorobenzene 2,4-Dichlorophenol 2,4-Dinitrophenol 2,4-Dinitrophenol 2,4-Dinitrobluene 2,6-Dinitrotoluene 2,6-Dinitrotoluene 2-Chloronaphthalene 2-Chlorophenol 3,3-Dichlorobenzidine 4,6-Dinitro-2-methylphenol 4-Bromophenyl-phenylether 4-Chloro-3-methylphenol 4-Chloro-3-methylphenol 4-Chlorophenyl-phenylether 4-Chloro-3-methylphenol 4-Chloro-3-methylphenol 4-Chloro-3-methylphenol 4-Chloro-3-methylphenol 4-Chloro-3-methylphenol 8-Enzolalpyrene 8-enzolalpyrene 8-enzolalpyrene 8-enzolalpyrene 8-enzolalpyrene 8-enzolalpyrene 8-enzolylfluoranthene 8-enzolylphthalate Di-n-octylphthalate Di-n-octylphthalate Di-n-butylphthalate Di-n-butylphthalat	0.34 0.34 0.34 0.34 0.34 0.34 0.34 0.34	(Units: mg/kg)
129000	Pyrene	0.34	Ų

Total Target Concentration 0.35

U - Indicates the compound was analyzed but not detected.

J - Indicates an estimated value when a compound is detected at less than the specified detection limit.

B - Indicates the analyte was found in the blank as well as in the sample.

E - Indicates the analyte concentration exceeds the calibration range of the instrument.

Formle/1f ORGANICS SEMIVOLATILE REPORT Tentatively Identified Compounds

Sample Number: AB18303

Client Id: PG-BH-20-110200\$O

Data File: FU2138

Date Analyzed: 8 Nov 2000 18:11

Date Received/Extracted: 11/3/2000-11/6/2000

Matrix: Soil

Initial Volume: 309

Final Volume: 1ml

Dilution Factor: 1

Percent Solids: 49

Hit#	Cas Number	Compound	RT	Concentration mg/Kg
1	004127-47-3	Cyclopropane, 1,1,2,2-tetramethyl-	2.060	0.68 J
2.	•	unknown	2.580	16 <i>J</i>
3	000123-42-2	2-Pentanone, 4-hydroxy-4-methyl-	2.870	250 1 💆 🔾
4		unknow n	3.570	10 3/ B
5		unknown	4.080	0.41/1 3
6		unknown hydrocarbon	4.400	0/85 / B V
7		unknown	6.250	0.31 <i>J</i>
8		unknown	9.840	0.32 J & U
9		unknown	12.400	7.1 <i>J</i>
10		unknown	15.170	0.51 J 3 U
11		unknown hydrocarbon	17.340	0.43 <i>J</i>
12	1	unknown	18 190	i neare V

Total Tentatively Identified Concentration

290

<sup>A - Indicates an aldol condensate.
J - Indicates an estimated value
B - Indicates the analyte was found in the blank as well as in the sample.</sup>

Sample Number: AB18304

Matrix: Soil

Client Id: PG-BH-20-110200SO4

Initial Volume: 30g

Data File: FU2139

Final Volume: 1ml

Date Analyzed: 8 Nov 2000 18:36

Dilution Factor: 1

Date Received/Extracted: 11/3/2000-11/6/2000

Percent Solids: 52

Column: Supelco 105 m vocal cal 5 mm id 3 0 um film

Column: Supelco 105 m vocol col, 5 mm id, 3.0 um film Concentration					
CAS#	Compound	PQL/MDL	(Units: mg/Kg)		
120821 95501 122667 541731 106467 88062 120832 105679 51285 121142 606202 91587 95578 88755 91941 121142 101553 59507 7005723 100027 830898 120127 9208968 120127 9208968 120127 9208968 120127 9308968 120127 9308968 120127 9408068 120127 9408068 120127 9408068 120127 9508068 120127 9608068 120127 9608068 120127 9608068 120127 9608068 120127 9608068 120127 9608068 120127 9608068 120127 9608068 120127 9608068 120127 9608068 120127 9608068 120127 9608068 120127 9608068 120127 9608068 120127 9608068 9608068 960806 9608	1,2,4-Trichlorobenzene 1,2-Dichlorobenzene 1,2-Diphenylhydrazine 1,3-Dichlorobenzene 1,4-Dichlorobenzene 2,4,6-Trichlorophenol 2,4-Dimethylphenol 2,4-Dinitrophenol 2,4-Dinitrotoluene 2,6-Dinitrotoluene 2,6-Dinitrotoluene 2,6-Dinitrotoluene 2,6-Dinitrotoluene 2,6-Dinitrotoluene 2,6-Dinitrotoluene 2,6-Dinitrophenol 3,3'-Dichlorobenzidine 4,6-Dinitro-2-methylphenol 4-Bromophenyl-phenylether 4-Chloro-3-methylphenol 4-Chlorophenol Achiorophenyl-phenylether 4-Chloro-3-methylphenol 4-Chlorophenyl-phenylether 4-Chloro-3-methylphenol 4-Chlorophenyl-phenylether 4-Chloro-3-methylphenol 4-Chlorophenyl-phenylether 4-Chloro-3-methylphenol 4-Chlorophenyl-phenylether 4-Chlorophenyl-phenylether 8-Dinitrophenol	0.32 0.32 0.32 0.32 0.32 0.32 0.32 0.32			

Total Target Concentration 0.25

U - Indicates the compound was analyzed but not detected.

J-Indicates an estimated value when a compound is detected at less than the specified detection limit.

B - Indicates the analyte was found in the blank as well as in the sample.

E - Indicates the analyte concentration exceeds the calibration range of the instrument.

Form1e/1f ORGANICS SEMIVOLATILE REPORT Tentatively Identified Compounds

Sample Number: AB18304

Client Id: PG-BH-20-110200SO

Data File: FU2139

Date Analyzed: 8 Nov 2000 18:36

Date Received/Extracted: 11/3/2000-11/6/2000

Matrix: Soil

Initial Volume: 30g

Final Volume: 1ml

Dilution Factor: 1

Percent Solids: 52

Hit#	Cas Number	Compound	RT	Concentration mg/Kg
1	000141-79-7	3-Penten-2-one, 4-methyl-	2.070	0.53 1 3/
2		unknown	2.440	10 1
3	000123-42-2	2-Pentanone, 4-hydroxy-4-methyl-	2.790	160 J/AB
4		unknown	3.520	6.9/1 13
5		unknown	4.050	9.27 J B
6		unknown	6.240	0.41 <i>J</i>
7		unknown	9,840	0:27 J 日 V
8		unknown	11.410	0.27 <i>J</i>
9		unknown hydrocarbon	12.100	0.27 J
10	004248-77-5	1,9-Nonanediol, dimethanesulfonate	. 12.350	1.1 J
11		unknown	15.170	1.1.13-13- V
12		unknown hydrocarbon	15.590	0.31 <i>J</i>
13		unknown hydrocarbon	15.960	0.34 <i>J</i>
14	000593-49-7	Heptacosane	16.330	0.30 J
15		unknown	17.320	0.47 <i>J</i>
16		unknown hydrocarbon	18.190	0.52 <i>J</i>

Total Tentatively Identified Concentration

180

<sup>A - Indicates an aldol condensate.
J - Indicates an estimated value
B - Indicates the analyte was found in the blank as well as in the sample.</sup>

Sample Number: AB18305

Matrix: Soil

Client Id: PG-BH-20-110200SO5

Initial Volume: 30g

Data File: FU2119

Final Volume: 1ml

Date Analyzed: 7 Nov 2000 20:22

Dilution Factor: 1

Date Received/Extracted: 11/3/2000-11/6/2000 Percent Solids: Column: Supelco 105 m vocol col., 5 mm id, 3.0 um film

Percent Solids: 49

CAS#	Compound	PQL/MDL	Concentration (Units: mg/Kg)
120821 95501 122667 541731	1,2,4-Trichlorobenzene 1,2-Dichlorobenzene 1,2-Diphenylhydrazine 1,3-Dichlorobenzene	0.84 0.34 0.068 0.34	בככנ
106467 88062 120832 105679	1,4-Dichlorobenzene 2,4,6-Trichlorophenol 2,4-Dichlorophenol	0.34 0.34 0.34 0.34	ָ ט ט ט
51285 121142 606202 91587	2,4-Dimethylphenol 2,4-Dinitrophenol 2,4-Dinitrotoluene 2,6-Dinitrotoluene 2-Chloronaphthalene	0.34 0.34 0.34 0.34	נפטטטטטטטטטטטטטטטטטטטטטטטטטטטטטטטטטטטטט
95578 88755 91941 121142	2-Chlorophenol 2-Chlorophenol 3,3'-Dichlorobenzidine 4,6-Dinitro-2-methylphenol	0.34 0.34 0.34 0.34	ט ט ט
101553 59507 7005723 100027	4-Bromophenyl-phenylether 4-Chloro-3-methylphenol 4-Chlorophenyl-phenylether 4-Nitrophenol	0.34 0.34 0.34 0.34 0.34	טטטטטטטטטטטטטטטטטט
83329 208968 120127 92875	Acenaphthene Acenaphthylene Anthracene Benzidine	0.34 0.34 0.34 0.68	
56553 50328 205992 191242	Benzo[a]anthracene Benzo[a]pyrene Benzo[b]fluoranthene Benzo[g],h,i]perylene Benzo[k]fluoranthene	0.34 0.34 0.34 0.34	U U
207089 111911 111444 108601	Bis(2-Chloroethoxy)methane Bis(2-Chloroethyl)Ether	0.34 0.34 0.34 0.34	Ü
117817 85687 218019 117840	Bis(2-Chloroisopropyl)ether Bis(2-Ethylhexyl)phthalate Butylbenzylphthalate Chrysene DI-n-octylphthalate Di-n-butylphthalate	0.34 0.34 0.34 0.34	0.13 J U U 0.19 J
84742 53703 84662 131113 206440	Di-n-butyiphthalate Dibenzola, h]Anthracene Diethylphthalate Dimethylphthalate Fluoranthene	0.34 0.34 0.34 0.34 0.34	υ υ υ
86737 118741 87683 77474	Fluorene Fluorene Hexachlorobenzene Hexachlorobutadiene Hexachlorocyclopentadiene	0.34 0.34 0.34 1.0 01	Ü
67721 193395 78591 621647	Hexachioroethane indeno[1,2,3-cd]pyrene isophorone	0.34 0.34 0.34 0.34	Ŭ U U U
6275 9 86306 91203 98953	N-Nitroso-Di-N-Propylamine N-Nitrosodimethylamine N-Nitrosodiphenylamine Naphthalene Nitrobenzene	0.34 0.34 0.34 0.34	U U
87865 85018 108952 129000	Pentachlorophenol Phenanthrene Phenol Pyrene	0.34 0.34 0.34 0.34	טטט

Total Target Concentration 0.32

 $[\]emph{U}$ - Indicates the compound was analyzed but not detected.

J - Indicates an estimated value when a compound is detected at less than the specified detection limit.

B - Indicates the analyte was found in the blank as well as in the sample.

E - Indicates the analyte concentration exceeds the calibration range of the instrument.

$Formle/lf \\ {\tt ORGANICS SEMIVOLATILE REPORT}$ Tentatively Identified Compounds

Sample Number: AB18305

Client Id: PG-BH-20-110200SO

Data File: FU2119

Date Analyzed: 7 Nov 2000 20:22

Date Received/Extracted: 11/3/2000-11/6/2000

Matrix: Soil

Initial Volume: 30g

Final Volume: 1ml

Dilution Factor: 1.

370

Percent Solids: 49

Hit#	Cas Number	Compound	RT	Concentration mg/Kg
1		unknown	2.010	0.28 J B
2	000141-79-7	3-Penten-2-one, 4-methyl-	2.120	1.0 J B
3		unknown	2.530	2.1 <i>j</i>
4	000123-42-2	2-Pentanone, 4-hydroxy-4-methyl-	2.920	350 J RB
5		unknown	3.680	16,1 B · V
6	t.	unknown	5.030	0.40 <i>J</i>
7		unknown	6.310	1.3 <i>J</i>
8		unknown	9.900	0381 F U
9		unknown	15.230	0.94 J 13 V
10		unknown hydrocarbon	15.640	0.37 <i>J</i>
11		unknown hydrocarbon	16.380	0.50 J
12	•	unknown hydrocarbon	16.740	0.28 J
13		unknown hydrocarbon	17.110	0.29 J
14	`	unknown	18.250	0 .38 y - } - U

Total Tentatively Identified Concentration

A - Indicates an aldol condensate.
J - Indicates an estimated value
B - Indicates the analyte was found in the blank as well as in the sample.

Sample Number: AB18306

Matrix: Soil

Client Id: PG-BH-20-110200SO6

Initial Volume: 30g

Data File: FU2150

Final Volume: 1ml

Date Analyzed: 8 Nov 2000 23:18

Dilution Factor: 1

Date Received/Extracted: 11/3/2000-11/6/2000

Percent Solids: 52

Column: Supelco 105 m vocol col, 5 mm id, 3.0 um film

Concentration

CAS#	Compound	PQL/MDL	(Units: mg/Kg)
120821 95501 122667 541731 106467 88062 120832 105679 51285 121142 606202 91587 95578 88755 91941 121142 101553 59507 7005723 100027 83329 208968 120127 92875 56553 50328 205992 191242 207089 111911 111444 108601 117817 85687 218019 117840 84742 53703 84662 131113 206440 86737 118741 87683 77474 67721 193395 78591 621647 62759 86306 91203 98953 98953 88953 88953 88952 85018 1089500	1,2.4-Trichlorobenzene 1,2-Dichlorobenzene 1,2-Diphenylhydrazine 1,3-Dichlorobenzene 1,4-Dichlorobenzene 2,4,6-Trichlorophenol 2,4-Dimethylphenol 2,4-Dimitrophenol 2,4-Dimitrophenol 2,4-Dimitrophenol 2,4-Dimitrophenol 2,4-Dinitrodoluene 2,6-Dinitrodoluene 4,6-Dinitrodoluene 4,6-Dinitrodoluene 4,6-Dinitrodoluene 4,6-Dinitrodoluene 4,6-Dinitrodoluene 4,6-Dinitrodoluene 4,6-Dinitrodoluene 4,6-Dinitrodoluene 4,0-Dinitrodoluene 4,0-Dinitrodoluene 4,0-Dinitrodoluene 8enzolalphyene 8enzolalphyenthalate 8enzolalphyenthalate 8enzolalphyenthalate 8enzolalphyenthalate 8enzolalphyene 8enzolal	0.32 0.064 0.32 0.32 0.32 0.32 0.32 0.32 0.32 0.32	כככככככככככככככככככככככככככככככככככככככ

Total Target Concentration 0

Control File h:\import\12359.bd

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U - Indicates the compound was analyzed but not detected.

J-Indicates an estimated value when a compound is detected at less than the specified detection limit.

B - Indicates the analyte was found in the blank as well as in the sample.

E - Indicates the analyte concentration exceeds the calibration range of the instrument.

$Form 1e/1f \\ {\tt ORGANICS SEMIVOLATILE REPORT}$ Tentatively Identified Compounds

Sample Number: AB18306

Client Id: PG-BH-20-110200SO

Data File: FU2150

Date Analyzed: 8 Nov 2000 23:18

Date Received/Extracted: 11/3/2000-11/6/2000

Matrix: Soil

Initial Volume: 30g

Final Volume: 1ml

Dilution Factor: 1

Percent Solids: 52

Hit#	Cas Number	Compound	RT	Concentration mg/Kg
1	003102-33-8	3-Penten-2-one, (E)-	1.540	0.32 <i>J</i>
2	000141-79-7	3-Penten-2-one, 4-methyl-	2.070	0.60 J B / U
3		unknown	2.340	2.8 1
4	000123-42-2	2-Pentanone, 4-hydroxy-4-methyl-	2.970	480 J/AP
5		unknown	3.650	17 B
6		unknown	4.100	0/27 J 3 V
7		unknown .	4.980	0.62 J
8		unknown	6.150	0.28 J
9		unknown	6.270	3.9 J
10		unknown	12.340	0.29 J
11	000544-76-3	Hexadecane	14.820	0.27 <i>J</i>
12		unknown hydrocarbon	15.200	0.54 J
13	000638-67-5	Tricosane	15.590	0.27 <i>J</i>
14		unknown	17.330	0.79 J
15		unknown	18.180	0.42 J B U

Total Tentatively Identified Concentration

500

<sup>A - Indicates an aldol condensate.
J - Indicates an estimated value
B - Indicates the analyte was found in the blank as well as in the sample.</sup>

Sample Number: AB18307

Matrix: Soil

Client Id: PG-BH-20-110200SO7

Initial Volume: 30g

Data File: FU2141

Final Volume: 1ml

Date Analyzed: 8 Nov 2000 19:28

Dilution Factor: 1

Date Received/Extracted: 11/3/2000-11/6/2000

Percent Solids: 54

Column: Supelco 105 m vocol col,.5 mm id, 3.0 um film

CAS#	Compound	PQL/MDL	Concentration (Units: mg/Kg)
120821	1,2,4-Trichlorobenzene 1,2-Dichlorobenzene 1,2-Diphenylhydrazine 1,3-Dichlorobenzene	0.31	Ü
9550 1	1,2-Dichlorobenzene	0.31	Ü
122667	1,2-Diphenylhydrazine	0.062	Ū
54173 <u>1</u>	1,3-Dichlorobenzene	0.31	ņ
106467	1,4-Dichlorobenzene	0.31	Ų
88062 120832	2,4,0- Michierophenoi	0.31 0.31	Ŋ
105679	2.4-Dimethylphenol	0.31	ü .
51285	2.4-Dinitrophenol	0.62	ĭi
121142	2,4,6-Trichlorophenol 2,4-Dichlorophenol 2,4-Dimethylphenol 2,4-Dinitrophenol 2,4-Dinitrotoluene 2,6-Dinitrotoluene	0.31	כככככככ
606202	2,6-Dinitrotoluene	0.31	Ū
91587		0.31	U
95578 88755	2-Chlorophenol	0.31	U U U
88755	2-Nitrophenol	0.31	Ų.
91941	3,3-Dichlorobenzidine	0.31	U
121142 101553	4,0-Dinitio-2-methylphenol	0.31 0.31	Ü
59507	2-Chlorophenol 2-Nitrophenol 2-Nitrophenol 3,3'-Dichlorobenzidine 4,6-Dinitro-2-methylphenol 4-Bromophenyl-phenylether 4-Chloro-3-methylphenol 4-Chlorophenyl-phenylether	0.31	ñ
7005723	4-Chlorophenyl-phenylether	0.31	ָ ט ט ט
100027	4-Chlorophenyl-phenylether 4-Nitrophenol	0.31	ŭ.
83329	Acenaphthene Acenaphthylene	0.31 0.31	Ŭ'
208968	Acenaphthylene	0.31	Ũ
120127 92875	Anthracené ,	0.31	Ņ
	Benzidine Benzolajanthracene Benzolajpyrene Benzolajpyrene Benzolojfiluoranthene Benzolg, h. ijperylene Benzolk/filuoranthene Bis(2-Chloroethoxy)methane Bis(2-Chloroethy)/Ether Bis(2-Chlorospyropyl)ether Bis(2-Ethylhexyl)phthalate Butylbenzylphthalate Chrysene	0.6203	UUUUUUUUUUUUUUUUUUUUUUUUUUUUUUUUUUUUUUU
56553 50 328	Benzolalowene	0.31 0.31	U ,
205992	Renzolhiti uranthene	0.31	ដ
191242	Benzola h. ilpervlene	0.31	ŭ
207089	Benzolklfluoranthene	0.31	. U
111911	Bis(2-Chloroethoxy)methane	0.31	Ū
111444	Bis(2-Chloroethyl)Ether	0.31	· Ŭ · · ·
108601	Bis(2-Chloroisopropyl)ether	0.31	200
117817	Bis(2-Ethylnexyl)phthalate	0.31 0.31	0.093 J
85687 218019	Chrysene .	0.31	Ų
117840	DI-n-octvinhthalate	0.31	0.074 J
84742	Di-n-butylphthalate	0.31	
53703	Dibenzo[a,h]Anthracene	0.31	U
84662	Diethylphthalate	0.31	U
131113	Ol-n-octylphthalate Di-n-ottylphthalate Dibenzola, hjAnthracene Diethylphthalate Dimethylphthalate Fluoranthene	0.31	Ü
206440	Fluorantnene Fluorene	0.31 0.31	Ų
86737 118741	Hexachlorobenzene	0.31	ŭ
87683	Hexachlorobutadiene	0.31	ŭ
77474	Hexachlorocyclopentadiene	0.93	ŭ
67721	Hexachlorocyclopentadiene Hexachloroethane Indeno[1,2,3-cd]pyrene	0.31	Ū
193395	Indeno[1,2,3-cd]pyrene	0.31	U
78591_		0.31 0.31	ñ
621647	N-Nitroso-DI-N-Propylamine N-Nitrosodimethylamine N-Nitrosodiphenylamine	0,31 0.31	מבמבמבמבמבמבמב
62759 86306	N-Nitrosodinhenvlamine	0.31 0.31	Ü
91203	Naphthalene	0.31	ŭ
98953	Nitrobenzene	0.31	ŭ
87865	Pentachlorophenol	0.31	ũ
8501.8	Phenanthrene	0.31	u
108952	Phenol	0.31	Ņ.
129000	Pyrene	0.31	Ŭ

Total Target Concentration 0.17

U - Indicates the compound was analyzed but not detected.

J - Indicates an estimated value when a compound is detected at less than the specified detection limit.

B - Indicates the analyte was found in the blank as well as in the sample.

E - Indicates the analyte concentration exceeds the calibration range of the instrument.

Form1e/1f ORGANICS SEMIVOLATILE REPORT Tentatively Identified Compounds

Sample Number: AB18307

Matrix: Soil

Client Id: PG-BH-20-110200SO

Initial Volume: 30g

Data File: FU2141

Final Volume: 1ml

Dilution Factor: 1

Date Analyzed: 8 Nov 2000 19:28 Date Received/Extracted: 11/3/2000-11/6/2000

Percent Solids: 54

Hit#	Cas Number	Compound	RT	Concentration mg/Kg
1	000141-79-7	3-Penten-2-one, 4-methyl-	2.070	0.80 J B O
2		unknown	2.300	3.5
3	000123-42-2	2-Pentanone, 4-hydroxy-4-methyl-	2.760	200 , 48 1
4		unknown	3.020	420 <i>J</i>
5		unknown	3.590	43 J 13 U
6	000371-41-5	Phenol, 4-fluoro-	4.970	0.41 <i>J</i>
7		unknown	6.250	1.6 <i>J</i>
8		unknown	13.030	0.36 <i>J</i>
9		unknown	15.170	0.68 ታ ፡ኝ , ህ
10		unknown	17.310	. 0.55 J

Total Tentatively Identified Concentration

640

<sup>A - Indicates an aldol condensate.
J - Indicates an estimated value
B - Indicates the analyte was found in the blank as well as in the sample.</sup>

Sample Number: AB18308

Matrix: Soil

Client Id: PG-BH-20-110200S8A

Initial Volume: 30g

Data File: FU2142

Final Volume: 1ml

Date Analyzed: 8 Nov 2000 19:53

Dilution Factor: 1

Date Received/Extracted: 11/3/2000-11/6/2000

Percent Solids: 50

Column: Supelco 105 m vocol col,.5 mm id, 3.0 um film

Concentration

_	CAS#	Compound	PQL/MDL	(Units: mg/Kg)
•	120821 95501 122667 541731 106467 88062 120832 105679 51285 121142 606202 91587 95578 88755 91941 121142 101553 59507 7005723 100027 83329 208968 120127 92875 56553 50507 7005723 100027 83329 208968 120127 92875 56553 505653 50328 205992 191242 207089 111911 117840 86772 117840 84742 53703 84662 131113 206440 84774 67721 193395 78591 67721 193395 78595 86306 91203 98953 87865 87865 870865 870865 870865	1,2,4-Trichlorobenzene 1,2-Dichlorobenzene 1,2-Diphenylhydrazine 1,3-Dichlorobenzene 1,4-Dichlorobenzene 1,4-Dichlorobenzene 2,4,6-Trichlorophenol 2,4-Dimitrophenol 2,4-Dimitrophenol 2,4-Dinitrodiuene 2,6-Dinitrodiuene 4,6-Dinitrodiuene 4,6-Dinitrodiuene 4,6-Dinitrodiuene 4,6-Dinitrodiuene 4,6-Dinitrodiuene 4,6-Dinitrodiuene 4,6-Dinitrodiuene 4,6-Dinitrodiuene 4,6-Dinitrodiuene 4,7-Dinitrodiuene 4,7-Dinit	0.33 0.33	0.000000000000000000000000000000000000
	123000	Pyrene	0.00	U

Total Target Concentration 0.26

Control File h:\import\12359.bd.

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 $[\]emph{U}$ - Indicates the compound was analyzed but not detected.

J - Indicates an estimated value when a compound is detected at less than the specified detection limit.

B - Indicates the analyte was found in the blank as well as in the sample.

E - Indicates the analyte concentration exceeds the calibration range of the instrument.

Form1e/1f ORGANICS SEMIVOLATILE REPORT Tentatively Identified Compounds

Sample Number: AB18308

Matrix: Soil

Client Id: PG-BH-20-110200S8

Initial Volume: 30g

Data File: FU2142

Final Volume: 1ml

Dilution Factor: 1

Date Analyzed: 8 Nov 2000 19:53

Percent Solids: 50

Date Received/Extracted: 11/3/2000-11/6/2000

Hit#	Cas Number	Compound	RT	Concentration mg/Kg
1	000141-79-7	3-Penten-2-one, 4-methyl-	2.070	。 6 70ヶ月
2		unknown	2.310	4.2 J
3	•	unknown	2.470	0.28 J 13 / U
4	000123-42-2	2-Pentanone, 4-hydroxy-4-methyl-	2.870	340 J AB
5		unknown	3.610	18 1 B V
6		unknown	4.970	0.42 <i>J</i>
7		unknown ·	6.250	1.6 <i>J</i>
8		unknown	9.840	030130
9		unknown hydrocarbon	15.210	0.29 <i>J</i>
10		unknown	15.350	· 0.33 <i>J</i>
11	000638-67-5	Tricosane	15.590	0.29 <i>J</i>
12		unknown hydrocarbon	15.970	0.30 <i>J</i>
13	000629-94-7	Heneicosane	16.330	0.30 J
14		unknown hydrocarbon	17.040	0.27 <i>J</i>
15		unknown hydrocarbon	17.320	0.96 J
16		unknown hydrocarbon	17.390	0.44 <i>J</i>
17	•	unknown hydrocarbon	18.190	0.39 J
18		unknown hydrocarbon	18.460	0.33 <i>J</i>

Total Tentatively Identified Concentration

370

<sup>A - Indicates an aldol condensate.
J - Indicates an estimated value
B - Indicates the analyte was found in the blank as well as in the sample.</sup>

Sample Number: AB18309

Matrix: Soil

Client Id: PG-BH-20-110200S8B

Initial Volume: 30g

Data File: FU2110

Final Volume: 1ml

Date Analyzed: 7 Nov 2000 16:32

Dilution Factor: 1

Date Received/Extracted: 11/3/2000-11/6/2000

Percent Solids: 36

Column: Supelco 105 m vocol col,.5 mm id, 3.0 um film

	its: mg/Kg)
85687 Butýlbenzýlphthálate 0.46 218019 Chrysene 0.46 117840 DI-n-octylphthalate 0.46 ブ	0 00

Total Target Concentration 0.54

U - Indicates the compound was analyzed but not detected.

J - Indicates an estimated value when a compound is detected at less than the specified detection limit.

B - Indicates the analyte was found in the blank as well as in the sample.
E - Indicates the analyte concentration exceeds the calibration range of the instrument.

Form1e/1f ORGANICS SEMIVOLATILE REPORT Tentatively Identified Compounds

Sample Number: AB18309

Client Id: PG-BH-20-110200S8

Initial Volume: 30g

Matrix: Soil

Data File: FU2110

Final Volume: 1ml

Date Analyzed: 7 Nov 2000 16:32

Dilution Factor: 1

Date Received/Extracted: 11/3/2000-11/6/2000

Percent Solids: 36

			-	•
Hit#	Cas Number	Compound	RT	Concentration mg/Kg
1	000141-79-7	3-Penten-2-one, 4-methyl-	2.110	1.11 3/0
2		unknown	2.420	12 1 18
3	000123-42-2	2-Pentanone, 4-hydroxy-4-methyl-	2.800	210 AB
4		unknown	3.570	y/J B V
5		unknown	13.760	1.5 J
6		unknown	15.230	221 B U
7	000630-06-8	Hexatriacontane	15.650	1.4 <i>J</i>
8		unknown	15.720	2.6 J
9	•	unknown	15.890	1.6 <i>J</i>
10		unknown	16.090	1.2 J
11		unknowņ	16.190	1.1 <i>J</i>
12	ı	unknown	16.350	· 1.8 J
13		unknown	16.480	2.3 <i>J</i>
14	V	unknown	16.530	1.5 J
15		unknown	16.710	1.7 J
16		unknown	16.810	1.1 J
17		unknown	16.870	1.9 <i>J</i>
18		unknown	17.110	4.5 J
19		unknown	17.210	3.0 <i>J</i>
20		unknown	17.260	2.8 J
21	000514-07-8	D-Friedoolean-14-en-3-one	17.390	38 <i>J</i>
22		unknown	17.450	8.7 J
23		unknown	17.500	38 <i>J</i>
. 24		unknown	17.630	47 J
25		unknown	17.710	6.7 <i>J</i>

Total Tentatively Identified Concentration

360

A - Indicates an aldol condensate. J - Indicates an estimated value

B - Indicates the analyte was found in the blank as well as in the sample.

Sample Number: AB18298

Matrix: Soil

Client Id: PG-MWPA12-110200SO4

Initial Volume: 30g

Data File: GB4142

Final Volume: 10ml

Date Analyzed: 11 Nov 2000 1:54

Dilution Factor: 1

Date Received/Extracted: 11/03/2000-11/09/2000

Percent Solids: 44

Column: J&W-Scientific db-608/1701 30m .32mmlD

CAS#	Compound	PQL/MDL	Concentration (Units: mg/Kg)
309002 319846 319857 57749 319868 60571 959988 33213659 1031078 7421934 53494705 58899 76448 1024573 72435 72548 72559 50293 8001352	Aldrin Alpha-BHC Beta-BHC Chlordane Delta-BHC Dieldrin Endosulfan I Endosulfan II Endosulfan Sulfate Endrin Aldehyde Endrin Ketone Gamma-BHC Heptachlor Heptachlor P,P'-DDD P,P'-DDE P,P'-DDT Toxaphene	0.0076 0.0076 0.0076 0.015 0.0076 0.0076 0.0076 0.0076 0.0076 0.0076 0.0076 0.0076 0.0076 0.0076 0.0076 0.0076 0.0076 0.0076	ככבבבבבבבבבבבבבבבבבבבבבבבבבבבבבבבבבבב

Total Target Concentration 0

U - Indicates the compound was analyzed but not detected.

J - Indicates an estimated value when a compound is detected at less than the specified detection limit.

B - Indicates the analyte was found in the blank as well as in the sample.

E - Indicates the analyte concentration exceeds the calibration range of the instrument.

Sample Number: AB18300(2X)

Matrix: Soil

Client Id: PG-MWPA12-110200SO1

Initial Volume: 30a

Data File: GB4139

Final Volume: 10ml

Date Analyzed: 11 Nov 2000 1:03

Dilution Factor: 2

Date Received/Extracted: 11/03/2000-11/09/2000

Percent Solids: 89

Column: J&W-Scientific db-608/1701 30m .32mmID

CAS#	Compound	PQL/MDL	Concentration (Units: mg/Kg)
309002 319846 319857 57749 319868 60571 959988 33213659 1031078 72208 7421934 53494705 58899 76448 1024573 72435 72548 72559 50293 8001352	Aldrin Alpha-BHC Beta-BHC Chlordane Delta-BHC Dieldrin Endosulfan I Endosulfan II Endosulfan Sulfate Endrin Endrin Aldehyde Endrin Ketone Gamma-BHC Heptachlor Heptachlor P,P'-DDD P,P'-DDE P,P'-DDE P,P'-DDT Toxaphene	0.0075 0.0075	0.0086 0.0086 0.0086

Total Target Concentration 0.0086

U - Indicates the compound was analyzed but not detected.

J - Indicates an estimated value when a compound is detected at less than the specified detection limit.
B - Indicates the analyte was found in the blank as well as in the sample.

E - Indicates the analyte concentration exceeds the calibration range of the instrument.

Sample Number: AB18301(5X)

Matrix: Soil

Client Id: PG-BH-20-110200SO1

Initial Volume: 30g

Data File: GB4138

Final Volume: 10ml

Date Analyzed: 11 Nov 2000 00:46

Dilution Factor: 5

Date Received/Extracted: 11/03/2000-11/09/2000

Percent Solids: 93

Column: J&W-Scientific db-608/1701 30m .32mmID

CAS#	Compound	PQL/MDL	Concentration (Units: mg/Kg)
309002 319846 319857 57749 319868 60571 959988 33213659 1031078 72208 7421934 53494705 58899 76448 1024573 72435 72559 50293 8001352	Aldrin Alpha-BHC Beta-BHC Chlordane Delta-BHC Dieldrin Endosulfan I Endosulfan II Endosulfan Sulfate Endrin Endrin Aldehyde Endrin Ketone Gamma-BHC Heptachlor Heptachlor P,P'-DDD P,P'-DDE P,P'-DDE P,P'-DDT Toxaphene	0.018 0.018 0.036 0.018 0.018 0.018 0.018 0.018 0.018 0.018 0.018 0.018 0.018 0.018 0.018 0.018	כככככככככככככככ

Total Target Concentration 0

U - Indicates the compound was analyzed but not detected.

J - Indicates an estimated value when a compound is detected at less than the specified detection limit.

B - Indicates the analyte was found in the blank as well as in the sample.

E - Indicates the analyte concentration exceeds the calibration range of the instrument.

Sample Number: AB18302

'Matrix: Soil

Client Id: PG-BH-20-110200SO2

Initial Volume: 30g

Data File: GB4140

Final Volume: 10ml

Dilution Factor: 1

Date Analyzed: 11 Nov 2000 1:20

Date Received/Extracted: 11/03/2000-11/09/2000

Percent Solids: 53

Column: J&W-Scientific db-608/1701 30m .32mmlD

CAS#	Compound	PQL/MDL	Concentration (Units: mg/Kg)
309002 319846 319857 57749 319868 60571 959988 33213659 1031078 72208 7421934 53494705 58899 76448 1024573 72435 72548 72559 50293 8001352	Aldrin Alpha-BHC Beta-BHC Chlordane Delta-BHC Dieldrin Endosulfan I Endosulfan II Endosulfan Sulfate Endrin Endrin Aldehyde Endrin Ketone Gamma-BHC Heptachlor Heptachlor P,P'-DDD P,P'-DDE P,P'-DDE P,P'-DDT Toxaphene	0.0063 0.0063 0.0063 0.0063 0.0063 0.0063 0.0063 0.0063 0.0063 0.0063 0.0063 0.0063 0.0063 0.0063 0.0063 0.0063 0.0063 0.0063 0.0063	Ŭ U

Total Target Concentration 0

U - Indicates the compound was analyzed but not detected.

J - Indicates an estimated value when a compound is detected at less than the specified detection limit.

B - Indicates the analyte was found in the blank as well as in the sample.

E - Indicates the analyte concentration exceeds the calibration range of the instrument.

Sample Number: AB18307

Matrix: Soil

Client Id: PG-BH-20-110200SO7

Initial Volume: 30g

Data File: GB4143

Final Volume: 10ml

Date Analyzed: 11 Nov 2000 2:11

Dilution Factor: 1

Date Received/Extracted: 11/03/2000-11/09/2000

Percent Solids: 54

Column: J&W-Scientific db-608/1701 30m .32mmID

CAS#	Compound	PQL/MDL	Concentration (Units: mg/Kg)
309002 319846 319857 57749 319868 60571 959988 33213659 1031078 72208 7421934 53494705 58899 76448 1024573 72435 72548 72559 50293 8001352	Aldrin Alpha-BHC Beta-BHC Chlordane Delta-BHC Dieldrin Endosulfan I Endosulfan II Endosulfan Sulfate Endrin Aldehyde Endrin Ketone Gamma-BHC Heptachlor Heptachlor P,P'-DDD P,P'-DDE P,P'-DDT Toxaphene	0.0062 0.0062 0.0062 0.012 0.0062 0.0062 0.0062 0.0062 0.0062 0.0062 0.0062 0.0062 0.0062 0.0062 0.0062 0.0062 0.0062 0.0062 0.0062 0.0062 0.0062 0.0062	ככככככככככככככככ

Total Target Concentration 0

U - Indicates the compound was analyzed but not detected.

J - Indicates an estimated value when a compound is detected at less than the specified detection limit.

B - Indicates the analyte was found in the blank as well as in the sample.

E - Indicates the analyte concentration exceeds the calibration range of the instrument.

Sample Number: AB18308

Matrix: Soil

Client Id: PG-BH-20-110200S8A

Initial Volume: 30g

Data File: GB4144

Final Volume: 10ml

Date Analyzed: 11 Nov 2000 2:28

Dilution Factor: 1

Date Received/Extracted: 11/03/2000-11/09/2000

Percent Solids: 50

Column: J&W-Scientific db-608/1701 30m .32mmID

CAS # Compound 309002 Aldrin 319846 Alpha-BHC 319857 Beta-BHC 57749 Chlordane 319868 Delta-BHC 60571 Dieldrin 959988 Endosulfan I 1031078 Endosulfan Sulfate 72208 Endrin 7421934 Endrin Aldehyde 53494705 Endrin Ketone 58899 Gamma-BHC	PQL/MDL	Concentration (Units: mg/Kg)	
309002	Aldrin	0.0067	U
		0.0067	U
319857	Beta-BHC	0.0067	U.
		0.013	Ų '
		0.0067	U
		0.0067	, <u>u</u>
		0.0067	<u>u</u>
		0.0067	y ·
		0.0067	Ų.
		0.0067	Ų
		0.0067	S.
		0.0067 0 1 0.0067	N.
76448	Heptachlor	0.0067	H
1024573	Heptachlor Epoxide	0.0067	ij
72435	Methoxychlor	0.0067 ップ	Ŭ
72548	P.P'-DDD	0.0067	มั
72559	P.P'-DDE	0.0067	Ŭ
50293	P.P'-DDT	0.0067	บั
8001352	Toxaphene	0.067	บั

Total Target Concentration 0

U - Indicates the compound was analyzed but not detected.

J - Indicates an estimated value when a compound is detected at less than the specified detection limit.
B - Indicates the analyte was found in the blank as well as in the sample.

E - Indicates the analyte concentration exceeds the calibration range of the instrument.

Sample Number: AB18309

Matrix: Soil

Client Id: PG-BH-20-110200S8B

Initial Volume: 30g

Data File: GB4141

Final Volume: 10ml

Date Analyzed: 11 Nov 2000 1:37

Dilution Factor: 1

Percent Solids: 36

Date Received/Extracted: 11/03/2000-11/09/2000

Column: J&W-Scientific db-608/1701 30m .32mmID

CAS#	Compound	PQL/MDL	Concentration (Units: mg/Kg)
309002	Aldrin	0:0093	U
319846	Alpha-BHC	0.0093	Ų
319857 577 4 9	Beta-BHC Chlordane	0.0093 0.019	Ų
319868	Delta-BHC	0.0093	й
60571	Dieldrin	0.0093	ŭ
959 988	Endosulfan I	0.0093	Ū
33213659	Endosulfan II	0.0093	Ų
1031078	Endosulfan Sulfate	0.0093	Й
72208 7421934	Endrin Endrin Aldehyde	0.0093 0.0093	Ų
53494705	Endrin Ketone	0.0093 0ブ	i,
58899	Gamma-BHC	0.0093	ŭ
76448	Heptachlor	0.0093	Ū
1024573	Heptachlor Epoxide	0.0093	_' U
72435	Methoxychlor	0.0093	5 0.011
725 48 72559	P,P'-DDD P.P'-DDE	0.0093 0.0093	Ų
50293	P.P'-DDE	0.0093	· II
8001352	Toxaphene	.0.093	й.

Total Target Concentration 0.011

U - Indicates the compound was analyzed but not detected.

J - Indicates an estimated value when a compound is detected at less than the specified detection limit.

B - Indicates the analyte was found in the blank as well as in the sample.

E - Indicates the analyte concentration exceeds the calibration range of the instrument.

Premier Environmental Services.

APPENDIX C

HE PORT AUTHORITY OF NY & NU



Chain-of-Custody

PAGE OF PAPROJECT SDG NO 1

Materials Engineering Division	- 241 Erle Street, Room 234
Jersey City	, NJ 07310

Facility	Howland Hook
Project Info.	HH-PORT IVORY P&G SITE
Charge Code	501-233-295

		, , , , , , , , , , , , , , , , , , , ,
Contact Name	Dorian Bailey/	Angelos Zafirelis
Contact Phone No.	(201) 216-2963/	(201) 216-2960
Contact Fax No.	(201) 216-2158	
Contact Email:		

HCV Destination Laboratory: Lab Case/SDG:

EQUIS Sys_Sample_Code Loc(8)Date(6)Matrix(2)Type(2)Counter(2)	Contract Lab Sample ID	Date of Collection Year	Time of Collection	Geotech Cross Id	# of Containers	Preservative Codes (MeOH No.)	Grab or Composite	TCL VOAS	FEL BNA, + PCBS	TAL Metals	046	H d	TPHC	
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? 6 - m w P A 1 2 - 1 1 & 2 & & 5 = 2	AB18296		1	MW-PA12,5-2	-3			٠/-	من	·/·	Ţ	~	v	
96-muPA12-116200503	18297		12:55	MW-PAIZIS	3				-	~	~	~	ن	
16-MUPA12-110200504	18298		14:30	MW-PA12,5-	13			· ·	し	· •	·	<i>i/</i>	~	
6-F8C1-110200WQX1	18299	\ <u>\</u>	13:25	F.B.1	2	HCI		اسما ا						
) E-Mara12-110200501	¥ 18300	lillips	120	ובצווף- במו	3				V		V	V	·/	
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elinquished By:	Date:			Received	Ву:_						Dat	e:	_	

IE PORT AUTHORITY OF MY & MAI



Chain-of-Custody

PAGE 2 OF 2 PA PROJECT SDG NO_

Materials Engineering Division - 241 Erio Street, Room 234 Jersey City, NJ 07310

Facility	Howland Hoek
Project Info.	HH-PORT IVORY P&G SITE
Charge Code	501-233,295

Contact Name	Dorian Bailen / Annelos Zafire lis
Contact Phone No.	(201) 216-2963/ (201) 216-2960
Contact Fax No.	(201) 216-2158
Contact Email:	

Destination Laboratory: HCV Lab Case/SDG:

		Lo	3(8)	EC	QuIS e(6)	S Sy Mat	s_S rix(Sam (2)7	пріє	e(2	od(e un	ter	(2)			Contract Lab Sample ID ,	Date of Collection Year	Time of Collection	Geotech Cross Id			# of Containers	Preservative Codes (MeOH No.)	Grab or Composite	TCL VOAS, BWA, PCB.		Otc	b H	TPHC		
,						. بر	, 11/1	ما																<u> </u>				Parame	eters/A	nalytes	;	
P	6	Fa	AF	0	4	52	0	-		1	0 3	20	0	5	0	1	AB18301	11/2/00		F	11-20	5-1	3			1/	V	<u></u>)	~		
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am,	oled oling	By:_ Me	thod												rese Ice		tives: 2. HCl	3. H	NO3			TA OT	T: HER	One	STD We	eK	Delive OTH	erables:	NIRe	duced	Data Su VeX+	m.

Sampling Memoria	4. NaOH 5. MeOH 6. H2SO4		
Relinquished By:	Date: 1/3/00 /520 Received	By:	20/570
Relinquished By:) - HCC Date: 1/3/20 1520 Received	By: Date: 1/3/	00 1620
Relinquished By:	Date: Received	By: Date:	_
		2 1 97	

(.: 7

Subj: pre-digestion spike request for Proctor and Gamble Samples Date: Tue, 14 Nov 2000 11:36:14 AM Eastern Standard Time From: "Bailey, Dorian" <dbailey@panynj.gov> "'Frank Brant'" < HCILAB@aol.com>, "Zafirelis, Angelos" <azafirel@panynj.gov>, "Aldrich, Ed" <ealdrich@panynj.gov> To HCV: As discussed with Stan G, please perform pre-digestion spikes for metals on the following samples: original lab# QC lab# AB18300 PG-MWPA12-110200S001 AB18297 PG-MWPA12-110200S003 AB18298 PG-MWPA12-110200S004 MS/MSD PG-BH20-110200SO05 ABIX305 PG-BH20-110200SO02 MS/MSD AB18302 PG-BH20-110200SO08A AB 18308 Of the 6 sample, please run 2 as MS/MSDs, and the other 4 as MS's only. Our concerns are negative interference from the silica bodies in the

diatomaceous earth matrix. If poor recovery is exhibited, we may need to have these samples digested by Method 3052 (HF+microwave). Please look into

possible subs for this.

Thanks.

Ms. Dorian Bailey, Chemical/Environmental Laboratory Supervisor Materials Engineering Division

The Port Authority of NY & NJ

Phone: (201) 216-2963

COMPLION OF ON	RECEIPT FORM	Veritech
Date Received: Client: Veritech Project #	Filed By: Project/Account:	HH PORT TVORYPAGSIT
YES NO		INITIAL CONDITION
[1]	Is there a corresponding Chain of Custody included v	vith the samples?
[2]	Are the samples in a container such as a cooler or ice	chest?
[3]	Are the custody seals intact? IF NO, please circle one of the following:	missing broken N.A
<u>2-3</u> °C [4]	Please specify the temperature inside the container.	
YES NO		SAMPLE INFORMATIO
[5]	Are the samples properly refrigerated (where required	d), have they arrived on ice?
[6]	Are the samples within holding times for the parameter If NO, list parameters and associated samples:	
[7]	Are all of the sample bottles intact? If NO, specify s broken: leaking:	•
[8]	Are all of the sample labels or numbers legible? If N only Two Received.	0, specify: <u>MW-PA - 12 S#4</u>
[9]	Do the contents of the container match the COC? If	NO, specify:
[10]	Is there enough sample sent for the analyses listed on	the COC? If NO, specify:
[11]	Are the samples preserved correctly (see Preservation	Form for actual pH readings)?
[12]	Are all soil VO(NJ) samples properly preserved in me (8g - 12g) and accompanied by dry soil?	ethanol with the correct soil weights
[13]	Specify:	ОТНЕ
NO.	ION	CORRECTIVE ACTION
NO. ACT		