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ANALYTICAL DATA ASSESSMENT AND VALIDATION

BAYER EXCESS SOIL SAMPLING

GLENN SPRINGS HOLDINGS, INC.

HICKSVILLE, NEW YORK

APRIL 2012

PREPARED BY:
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TABLE OF CONTENTS

LIST OF TABLES
(Following Text)

1.0 INTRODUCTION

Soil samples were collected at the former Hooker Ruco Site in Hicksville, New York (Site), in support of the Bayer Excess Soil sampling program. Analytical services were performed by Mitkem Laboratories, in Warwick, Rhode Island (Mitkem). A summary of the sampling and analysis scheme is presented in Table 1.

The soil samples were analyzed for volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs), pesticides, polychlorinated biphenyls (PCBs) and metals.

Summaries of the analytical data are presented in Table 2. These data were validated in accordance with the analytical methods and the documents entitled:

i) "USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review", USEPA 540/R-99/008, October 1999

ii) "USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Data Review", USEPA 540/R-94/013, February 1994

Full Contract Laboratory Program (CLP)-equivalent raw data deliverables were provided by Mitkem. A level four validation was performed on these data. The validation findings are presented in the following subsections.

2.0 SAMPLE HOLDING TIMES

Sample holding time and preservation requirements are summarized in the analytical methods. All sample extractions and/or analyses were performed within the specified holding times.

All samples were properly preserved and cooled to 4°C (±2°C) after collection.

3.0 INSTRUMENT CALIBRATION

3.1 GAS CHROMATOGRAPH/MASS SPECTROMETER (GC/MS) CALIBRATION - VOLATILE ORGANIC COMPOUNDS (VOCs) AND SEMI-VOLATILE ORGANIC COMPOUNDS (SVOCs)

3.1.1 TUNING AND MASS CALIBRATION

Prior to analysis, GC/MS instrumentation is tuned to ensure optimization over the mass range of interest. To evaluate instrument tuning, the VOC and SVOC methods require the analysis of the specific tuning compounds bromofluorobenzene (BFB) and decafluorotriphenylphosphine (DFTPP), respectively. The resulting spectra must meet the criteria cited in the method before analysis is initiated. Analysis of the tuning compound must then be repeated every 12 hours throughout sample analysis to ensure the continued optimization of the instrument.

Instrument tuning data were reviewed. Tuning compounds were analyzed at the required frequency throughout the VOC and SVOC analysis periods. All tuning criteria were met for the analyses, indicating proper optimization of the instrumentation.

3.1.2 INITIAL CALIBRATION

To quantify compounds of interest in samples, calibration of the GC/MS over a specific concentration range must be performed. Initially, a five-point calibration curve containing all compounds of interest is analyzed to characterize instrument response for each analyte over a specific concentration range. Linearity of the calibration curve and instrument sensitivity are evaluated against the following criteria:

i) All relative response factors (RRFs) must be greater than or equal to 0.05.

ii) Where response factors are employed, percent relative standard deviation (%RSD) values must not exceed 30 percent.

The initial calibration data for VOCs and SVOCs were reviewed and met the above criteria for linearity and sensitivity for all compounds of interest with the exception of a high %RSD value for some VOCs and SVOCs, indicating non-linearity of the calibration curve. Associated sample results were qualified as estimated (see Table 3).

3.1.3 CONTINUING CALIBRATION

To ensure that instrument calibration is acceptable throughout the sample analysis period, continuing calibration standards must be analyzed and compared to the initial calibration curve every 12 hours.

The following criteria were employed to evaluate continuing calibration data:

i) All RRF values must be greater than or equal to 0.05.

ii) Percent difference (%D) values must not exceed 25 percent.

Calibration standards were analyzed at the required frequency and all results met the above criteria for instrument sensitivity and linearity with the exception of some SVOC compounds exhibiting response factors greater than 25 percent. All associated sample results were qualified as estimated (see Table 4).

3.2 GAS CHROMATOGRAPH (GC) CALIBRATION - PESTICIDES AND POLYCHLORINATED BIPHENYLS (PCBs)

3.2.1 INITIAL CALIBRATION

To quantify compounds of interest, calibration of the GC over a specific concentration range must be performed. Initially, five-point calibration curves are analyzed for all pesticides and Aroclors 1016 and 1260. One-point calibration standards are analyzed for the remaining Aroclors.

Linearity of the calibration curves for the GC analyses is acceptable if %RSD values are less than or equal to 20 percent. Retention time windows are also calculated from the initial calibration analyses. These windows are then used to identify all compounds of interest in subsequent analyses.

Initial calibration standards were analyzed at the required frequencies. All retention time and linearity criteria were satisfied.

3.2.2 CONTINUING CALIBRATION

To ensure that the calibration of the instrument is valid throughout the sample analysis period, continuing calibration standards are analyzed and evaluated on a regular basis.

To evaluate the continued linearity of the calibration, %D values are calculated for each specific compound in all continuing standards and assessed against an acceptance criterion of 15 percent.

To ensure that compound retention times do not vary over the analysis period, all retention times for each peak must fall within the established retention time windows.

Continuing calibration standards were analyzed at the required frequency and the above method criteria were met for all the continuing standards.

3.3 INSTRUMENTAL CALIBRATION- METALS

3.3.1 INITIAL CALIBRATION

Initial calibration of the instruments ensures that they are capable of producing satisfactory quantitative data at the beginning of a series of analyses. For trace inductively coupled plasma (ICP) analysis a calibration blank and at least one standard must be analyzed at each wavelength to establish the analytical curve. For mercury analysis, a calibration blank and a minimum of four standards must be analyzed to establish the analytical curve.

After calibration, an initial calibration verification (ICV) standard must be analyzed to verify the analytical accuracy of the calibration curves. All analyte recoveries from the analyses of the ICVs must be within the following control limits:

Analytical Instrument	*Inorganic Species*	*Control Limits (Percent)*
ICP	Metals	90-110
Cold Vapor Atomic Absorption (AA)	Mercury	80-120

Upon review of the data, it was determined that all inorganic calibration curves and ICVs were analyzed at the proper frequencies and that all of the above-specified criteria were met. The laboratory effectively demonstrated that instrumentation used for these analyses were properly calibrated prior to sample analyses.

3.3.2 CONTINUING CALIBRATION

To ensure that instrument calibration is acceptable throughout the sample analysis period, continuing calibration verification (CCV) standards are analyzed on a regular

basis. Each CCV is deemed acceptable if all analyte recoveries are within the control limits specified above for the ICVs. If some of the CCV analyte recoveries are outside the control limits, samples analyzed before and after the CCV, up until the previous and proceeding CCV analyses, are affected.

For this study, CCVs were analyzed at the proper frequency. All analyte recoveries reported for the CCVs were within the specified limits.

3.3.3 CONTRACT REQUIRED DETECTION LIMIT (CRDL) STANDARD ANALYSES

To verify the linearity of the ICP calibration near the detection limit, a standard is analyzed which contains the ICP analytes at specified concentrations. This standard must be analyzed at the beginning and end of each sample analysis run or a minimum of twice per 8-hour working shift.

Control limits of 50-150 percent were used to evaluate the data. The CRDL recoveries were acceptable for all analytes.

4.0 SURROGATE SPIKE RECOVERIES - ORGANICS

In accordance with the methods employed, all samples, blanks, and standards analyzed for VOCs, SVOCs, pesticides and PCBs are spiked with surrogate compounds prior to sample extraction and/or analysis. Surrogate recoveries provide a means to evaluate the effects of individual sample matrices on analytical efficiency and are assessed against method control limits. For the SVOC method, it is acceptable for one surrogate recovery per fraction (base neutral or acid phenolic) to fall outside of these limits, provided it is greater than 10 percent.

All surrogate recoveries were within the laboratory control limits, demonstrating acceptable analytical accuracy for these analyses with the exception of a low PCB surrogate recovery. The associated sample results have been qualified as estimated to reflect the implied low bias (see Table 5).

5.0 INTERNAL STANDARD (IS) RECOVERIES - VOCs AND SVOCs

To correct for changes in GC/MS response and sensitivity, IS compounds are added to investigative samples and quality control samples prior to VOC and SVOC analyses. All results are calculated as a ratio of the IS response. The criteria by which the IS results are assessed are as follows:

i) IS area counts must not vary by more than a factor of two (-50 percent to +100 percent) from the associated calibration standard.

ii) The retention time of the IS must not vary more than ±30 seconds from the associated calibration standard.

All sample IS results met the above criteria and were correctly used to calculate all positive sample results.

6.0 METHOD BLANK ANALYSES

Method blanks are prepared from deionized water and analyzed with investigative samples to determine the existence and magnitude of sample contamination introduced during the procedures. Additionally, continuing calibration blanks (CCBs) are routinely analyzed after each CCV for the inorganic parameters.

For this study, method blanks were analyzed at a minimum frequency of one per analytical batch and CCBs were analyzed for inorganic parameters after each CCV. The data were non-detect with the exception of low concentrations of antimony and calcium observed in the method blanks and/or CCBs. All associated sample results within five times the blank concentration were qualified as non-detect (see Table 6).

7.0 LABORATORY CONTROL SAMPLE (LCS) ANALYSES

The LCS serves as a measure of overall analytical performance. LCSs are prepared with all analytes of interest and analyzed with each sample batch.

LCSs were prepared and analyzed for all parameters. All recoveries were within the laboratory control limits.

8.0 MATRIX SPIKE/MATRIX SPIKE DUPLICATE (MS/MSD) AND MATRIX SPIKE/LABORATORY DUPLICATE (MS/DUP) ANALYSES

MS/MSD samples are prepared using a representative subset of analytes for each parameter and analyzed with each sample batch for the organic parameters. MS/DUP samples are prepared and analyzed with the samples for metals and general chemistry. The recoveries of spike analyses are used to assess the analytical accuracy achieved on individual sample matrices. If the original sample concentration is significantly greater than the spike concentration, the recovery is not assessed. The relative percent difference (RPD) between the MS and MSD or the original sample and the DUP are used to assess analytical precision.

MS/MSD samples were not performed on site samples for the organic parameters.

MS/DUP samples were prepared and analyzed for the metals where applicable. All recoveries were within the laboratory control limits with the exception of a low recovery for antimony. Associated sample results have been qualified as estimated to reflect the potential low bias (see Table 7).

9.0 ICP SERIAL DILUTION

The serial dilution determines whether significant physical or chemical interferences exist due to sample matrix. A minimum of one per 20 investigative samples is analyzed at a five-fold dilution. For samples with sufficient analyte concentrations, the serial dilution results must agree within 10 percent of the original results.

A serial dilution was performed and the results were acceptable with the exception of a high percent difference for calcium and potassium. The associated results were qualified as estimated (see Table 8).

10.0 ICP INTERFERENCE CHECK SAMPLE (ICS) ANALYSIS

To verify that proper inter-element and background correction factors have been established by the laboratory, ICSs are analyzed. These samples contain high concentrations of aluminum, calcium, magnesium, and iron and are analyzed at the beginning and end of each sample analysis period.

ICS analysis results were evaluated for all samples. All ICS recoveries were within the established control limits of 80 to 120 percent.

11.0 ANALYTE REPORTING

Non-detect data were reported down to the practical quantifiable limits (PQLs) for each analyte. Positive analyte detections were reported down to the method detection limits (MDL). All values less than the PQLs were qualified as estimated (J).

12.0 FIELD QA/QC

Field QC was not collected for this sampling event.

13.0 CONCLUSION

Based on the assessment detailed in the foregoing, the data submitted by Mitkem and summarized in Table 2 are acceptable with the specific qualifications noted herein.

TABLES

TABLE 1

SAMPLING AND ANALYSIS SUMMARY
BAYER EXCESS SOIL SAMPLING
GLENN SPRINGS HOLDINGS, INC.
HOOKER-RUCO SITE
HICKSVILLE, NEW YORK
APRIL 2012

						Analysis/Parameters					
Sample ID	*Location ID*	*Collection Date (mm/dd/yy)*	*Collection Time (hr:min)*	*Start Depth (ft bgs)*	*End Depth (ft bgs)*	*VOCs*	*SVOCs*	*Pesticides*	*PCBs*	*Metals*	*Comments*
SO-077318-042612-TN01	South	04/26/12	12:09PM	0	1		X	X	X	X	Composite of five locations
SO-077318-042612-TN01	South	04/26/12	12:09PM	0.5	1	X					Grab
SO-077318-042612-TN02	IW-15	04/26/12	3:30PM	0	10		X	X	X	X	Composite of five intervals
SO-077318-042612-TN02	IW-15	04/26/12	3:30PM	-	10	X					Grab from 10 ft bgs
SO-077318-042612-TN03	IW-20	04/26/12	1:00PM	-	10	X	X	X	X	X	Grab from 10 ft bgs
SO-077318-042612-TN04	IW-20,21,22	04/26/12	3:00PM	0	10		X	X	X	X	Composite of five intervals at each location
SO-077318-042712-TN05	North	04/27/12	8:30AM	0	1		X	X	X	X	Composite of five locations
SO-077318-042712-TN05	North	04/27/12	8:30AM	0.5	1	X					Grab

Notes:

VOCs Volatile Organic Compounds
SVOCs Semi-volatile Organic Compounds
PCBs Polychlorinated Biphenyls

TABLE 2

ANALYTICAL RESULTS SUMMARY
BAYER SOIL SAMPLING
GLENN SPRINGS HOLDINGS, INC.
HOOKER-RUCO SITE
HICKSVILLE, NEW YORK
APRIL 2012

	Sample Location:	*IW-15*	*IW-15*	*IW-20 Grab*	*IW-20,21,22*
	Sample ID:	*SO-077318-042612-TN02*	*SO-077318-042612-TN02*	*SO-077318-042612-TN03*	*SO-077318-042612-TN04*
	Sample Date:	*4/26/2012*	*4/26/2012*	*4/26/2012*	*4/26/2012*
	Sample Depth:	*(0-10) ft BGS*	*(10) ft BGS*	*(10) ft BGS*	*(0-10) ft BGS*
Parameters	*Units*				
Volatile Organic Compounds					
1,1,1,2-Tetrachloroethane	µg/kg	-	5.0 U	4.4 U	-
1,1,1-Trichloroethane	µg/kg	-	5.0 U	4.4 U	-
1,1,2,2-Tetrachloroethane	µg/kg	-	5.0 U	4.4 U	-
1,1,2-Trichloroethane	µg/kg	-	5.0 U	4.4 U	-
1,1-Dichloroethane	µg/kg	-	5.0 U	4.4 U	-
1,1-Dichloroethene	µg/kg	-	5.0 U	4.4 U	-
1,1-Dichloropropene	µg/kg	-	5.0 U	4.4 U	-
1,2,3-Trichlorobenzene	µg/kg	-	5.0 U	4.4 U	-
1,2,3-Trichloropropane	µg/kg	-	5.0 U	4.4 U	-
1,2,4-Trichlorobenzene	µg/kg	-	5.0 U	4.4 U	-
1,2,4-Trimethylbenzene	µg/kg	-	5.0 U	4.4 U	-
1,2-Dibromo-3-chloropropane (DBCP)	µg/kg	-	5.0 U	4.4 U	-
1,2-Dibromoethane (Ethylene dibromide)	µg/kg	-	5.0 U	4.4 U	-
1,2-Dichlorobenzene	µg/kg	-	5.0 U	4.4 U	-
1,2-Dichloroethane	µg/kg	-	5.0 U	4.4 U	-
1,2-Dichloropropane	µg/kg	-	5.0 U	4.4 U	-
1,3,5-Trimethylbenzene	µg/kg	-	5.0 U	4.4 U	-
1,3-Dichlorobenzene	µg/kg	-	5.0 U	4.4 U	-
1,3-Dichloropropane	µg/kg	-	5.0 U	4.4 U	-
1,4-Dichlorobenzene	µg/kg	-	5.0 U	4.4 U	-
2,2-Dichloropropane	µg/kg	-	5.0 U	4.4 U	-
2-Butanone (Methyl ethyl ketone) (MEK)	µg/kg	-	5.0 U	4.4 U	-
2-Chlorotoluene	µg/kg	-	5.0 U	4.4 U	-
2-Hexanone	µg/kg	-	5.0 U	4.4 U	-
2-Phenylbutane (sec-Butylbenzene)	µg/kg	-	5.0 U	4.4 U	-
4-Chlorotoluene	µg/kg	-	5.0 U	4.4 U	-
4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK)	µg/kg	-	5.0 U	4.4 U	-

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	Sample Location:	*IW-15*	*IW-15*	*IW-20 Grab*	*IW-20,21,22*
	Sample ID:	*SO-077318-042612-TN02*	*SO-077318-042612-TN02*	*SO-077318-042612-TN03*	*SO-077318-042612-TN04*
	Sample Date:	*4/26/2012*	*4/26/2012*	*4/26/2012*	*4/26/2012*
	Sample Depth:	*(0-10) ft BGS*	*(10) ft BGS*	*(10) ft BGS*	*(0-10) ft BGS*
Parameters	*Units*				
Volatile Organic Compounds (Cont'd.)					
Acetone	µg/kg	-	5.0 UJ	4.4 UJ	-
Benzene	µg/kg	-	5.0 U	4.4 U	-
Bromobenzene	µg/kg	-	5.0 U	4.4 U	-
Bromodichloromethane	µg/kg	-	5.0 U	4.4 U	-
Bromoform	µg/kg	-	5.0 U	4.4 U	-
Bromomethane (Methyl bromide)	µg/kg	-	5.0 U	4.4 U	-
Carbon disulfide	µg/kg	-	5.0 U	4.4 U	-
Carbon tetrachloride	µg/kg	-	5.0 U	4.4 U	-
Chlorobenzene	µg/kg	-	5.0 U	4.4 U	-
Chlorobromomethane	µg/kg	-	5.0 U	4.4 U	-
Chloroethane	µg/kg	-	5.0 U	4.4 U	-
Chloroform (Trichloromethane)	µg/kg	-	5.0 U	4.4 U	-
Chloromethane (Methyl chloride)	µg/kg	-	5.0 U	4.4 U	-
cis-1,2-Dichloroethene	µg/kg	-	5.0 U	4.4 U	-
cis-1,3-Dichloropropene	µg/kg	-	5.0 U	4.4 U	-
Cymene (p-Isopropyltoluene)	µg/kg	-	5.0 U	4.4 U	-
Dibromochloromethane	µg/kg	-	5.0 U	4.4 U	-
Dibromomethane	µg/kg	-	5.0 U	4.4 U	-
Dichlorodifluoromethane (CFC-12)	µg/kg	-	5.0 U	4.4 U	-
Ethylbenzene	µg/kg	-	5.0 U	4.4 U	-
Hexachlorobutadiene	µg/kg	-	5.0 U	4.4 U	-
Iodomethane	µg/kg	-	5.0 U	4.4 U	-
Isopropyl benzene	µg/kg	-	5.0 U	4.4 U	-
m&p-Xylenes	µg/kg	-	5.0 U	4.4 U	-
Methyl tert butyl ether (MTBE)	µg/kg	-	5.0 U	4.4 U	-
Methylene chloride	µg/kg	-	5.0 U	4.4 U	-
Naphthalene	µg/kg	-	5.0 U	4.4 U	-

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	Sample Location:	*IW-15*	*IW-15*	*IW-20 Grab*	*IW-20,21,22*
	Sample ID:	*SO-077318-042612-TN02*	*SO-077318-042612-TN02*	*SO-077318-042612-TN03*	*SO-077318-042612-TN04*
	Sample Date:	*4/26/2012*	*4/26/2012*	*4/26/2012*	*4/26/2012*
	Sample Depth:	*(0-10) ft BGS*	*(10) ft BGS*	*(10) ft BGS*	*(0-10) ft BGS*
Parameters	*Units*				
Volatile Organic Compounds (Cont'd.)					
N-Butylbenzene	µg/kg	-	5.0 U	4.4 U	-
N-Propylbenzene	µg/kg	-	5.0 U	4.4 U	-
o-Xylene	µg/kg	-	5.0 U	4.4 U	-
Styrene	µg/kg	-	5.0 U	4.4 U	-
tert-Butylbenzene	µg/kg	-	5.0 U	4.4 U	-
Tetrachloroethene	µg/kg	-	5.0 U	4.4 U	-
Toluene	µg/kg	-	5.0 U	4.4 U	-
trans-1,2-Dichloroethene	µg/kg	-	5.0 U	4.4 U	-
trans-1,3-Dichloropropene	µg/kg	-	5.0 U	4.4 U	-
Trichloroethene	µg/kg	-	5.0 U	4.4 U	-
Trichlorofluoromethane (CFC-11)	µg/kg	-	5.0 U	4.4 U	-
Vinyl acetate	µg/kg	-	5.0 U	4.4 U	-
Vinyl chloride	µg/kg	-	5.0 U	4.4 U	-
Xylenes (total)	µg/kg	-	5.0 U	4.4 U	-
Semi-volatile Organic Compounds					
1,2,4-Trichlorobenzene	µg/kg	340 U	-	330 U	340 U
1,2-Dichlorobenzene	µg/kg	340 U	-	330 U	340 U
1,3-Dichlorobenzene	µg/kg	340 U	-	330 U	340 U
1,4-Dichlorobenzene	µg/kg	340 U	-	330 U	340 U
2,2'-Oxybis(1-chloropropane) (bis(2-Chloroisopropyl) ether)	µg/kg	340 UJ	-	330 UJ	340 UJ
2,4,5-Trichlorophenol	µg/kg	680 U	-	670 U	690 U
2,4,6-Trichlorophenol	µg/kg	340 U	-	330 U	340 U
2,4-Dichlorophenol	µg/kg	340 U	-	330 U	340 U
2,4-Dimethylphenol	µg/kg	340 UJ	-	330 UJ	340 UJ
2,4-Dinitrophenol	µg/kg	680 UJ	-	670 UJ	690 UJ
2,4-Dinitrotoluene	µg/kg	340 U	-	330 U	340 U

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	Sample ID:	*SO-077318-042612-TN02*	*SO-077318-042612-TN02*	*SO-077318-042612-TN03*	*SO-077318-042612-TN04*
	Sample Date:	*4/26/2012*	*4/26/2012*	*4/26/2012*	*4/26/2012*
	Sample Depth:	*(0-10) ft BGS*	*(10) ft BGS*	*(10) ft BGS*	*(0-10) ft BGS*
Parameters	*Units*				
Semi-volatile Organic Compounds (Cont'd.)					
2,6-Dinitrotoluene	µg/kg	340 U	-	330 U	340 U
2-Chloronaphthalene	µg/kg	340 U	-	330 U	340 U
2-Chlorophenol	µg/kg	340 U	-	330 U	340 U
2-Methylnaphthalene	µg/kg	340 U	-	330 U	340 U
2-Methylphenol	µg/kg	340 U	-	330 U	340 U
2-Nitroaniline	µg/kg	680 U	-	670 U	690 U
2-Nitrophenol	µg/kg	340 U	-	330 U	340 U
3,3'-Dichlorobenzidine	µg/kg	340 U	-	330 U	340 U
3-Nitroaniline	µg/kg	680 U	-	670 U	690 U
4,6-Dinitro-2-methylphenol	µg/kg	680 U	-	670 U	690 U
4-Bromophenyl phenyl ether	µg/kg	340 U	-	330 U	340 U
4-Chloro-3-methylphenol	µg/kg	340 U	-	330 U	340 U
4-Chloroaniline	µg/kg	340 U	-	330 U	340 U
4-Chlorophenyl phenyl ether	µg/kg	340 U	-	330 U	340 U
4-Methylphenol	µg/kg	340 U	-	330 U	340 U
4-Nitroaniline	µg/kg	680 U	-	670 U	690 U
4-Nitrophenol	µg/kg	680 UJ	-	670 UJ	690 UJ
Acenaphthene	µg/kg	340 U	-	330 U	340 U
Acenaphthylene	µg/kg	340 U	-	330 U	340 U
Anthracene	µg/kg	340 U	-	330 U	340 U
Benzo(a)anthracene	µg/kg	340 U	-	330 U	340 U
Benzo(a)pyrene	µg/kg	340 U	-	330 U	340 U
Benzo(b)fluoranthene	µg/kg	340 U	-	330 U	340 U
Benzo(g,h,i)perylene	µg/kg	340 U	-	330 U	340 U
Benzo(k)fluoranthene	µg/kg	340 U	-	330 U	340 U
bis(2-Chloroethoxy)methane	µg/kg	340 U	-	330 U	340 U
bis(2-Chloroethyl)ether	µg/kg	340 UJ	-	330 UJ	340 UJ

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	Sample Location:	*IW-15*	*IW-15*	*IW-20 Grab*	*IW-20,21,22*
	Sample ID:	*SO-077318-042612-TN02*	*SO-077318-042612-TN02*	*SO-077318-042612-TN03*	*SO-077318-042612-TN04*
	Sample Date:	*4/26/2012*	*4/26/2012*	*4/26/2012*	*4/26/2012*
	Sample Depth:	*(0-10) ft BGS*	*(10) ft BGS*	*(10) ft BGS*	*(0-10) ft BGS*
Parameters	*Units*				
Semi-volatile Organic Compounds (Cont'd.)					
bis(2-Ethylhexyl)phthalate (DEHP)	µg/kg	340 U	-	330 U	340 U
Butyl benzylphthalate (BBP)	µg/kg	340 U	-	330 U	340 U
Carbazole	µg/kg	340 U	-	330 U	340 U
Chrysene	µg/kg	340 U	-	330 U	340 U
Dibenz(a,h)anthracene	µg/kg	340 U	-	330 U	340 U
Dibenzofuran	µg/kg	340 U	-	330 U	340 U
Diethyl phthalate	µg/kg	340 U	-	330 U	340 U
Dimethyl phthalate	µg/kg	340 U	-	330 U	340 U
Di-n-butylphthalate (DBP)	µg/kg	340 U	-	330 U	340 U
Di-n-octyl phthalate (DnOP)	µg/kg	340 U	-	330 U	340 U
Fluoranthene	µg/kg	340 U	-	330 U	340 U
Fluorene	µg/kg	340 U	-	330 U	340 U
Hexachlorobenzene	µg/kg	340 U	-	330 U	340 U
Hexachlorobutadiene	µg/kg	340 U	-	330 U	340 U
Hexachlorocyclopentadiene	µg/kg	340 U	-	330 U	340 U
Hexachloroethane	µg/kg	340 U	-	330 U	340 U
Indeno(1,2,3-cd)pyrene	µg/kg	340 U	-	330 U	340 U
Isophorone	µg/kg	340 U	-	330 U	340 U
Naphthalene	µg/kg	340 U	-	330 U	340 U
Nitrobenzene	µg/kg	340 U	-	330 U	340 U
N-Nitrosodi-n-propylamine	µg/kg	340 UJ	-	330 UJ	340 UJ
N-Nitrosodiphenylamine	µg/kg	340 U	-	330 U	340 U
Pentachlorophenol	µg/kg	680 UJ	-	670 UJ	690 UJ
Phenanthrene	µg/kg	340 U	-	330 U	340 U
Phenol	µg/kg	340 U	-	330 U	340 U
Pyrene	µg/kg	340 U	-	330 U	340 U

TABLE 2

ANALYTICAL RESULTS SUMMARY
BAYER SOIL SAMPLING
GLENN SPRINGS HOLDINGS, INC.
HOOKER-RUCO SITE
HICKSVILLE, NEW YORK
APRIL 2012

	Sample Location:	*IW-15*	*IW-15*	*IW-20 Grab*	*IW-20,21,22*
	Sample ID:	*SO-077318-042612-TN02*	*SO-077318-042612-TN02*	*SO-077318-042612-TN03*	*SO-077318-042612-TN04*
	Sample Date:	*4/26/2012*	*4/26/2012*	*4/26/2012*	*4/26/2012*
	Sample Depth:	*(0-10) ft BGS*	*(10) ft BGS*	*(10) ft BGS*	*(0-10) ft BGS*
Parameters	*Units*				
Metals					
Aluminum	mg/kg	2910	-	2360	3610
Antimony	mg/kg	0.95 UJ	-	0.89 UJ	0.91 UJ
Arsenic	mg/kg	2.1	-	1.7	3.8
Barium	mg/kg	7.9 J	-	6.5 J	13.4
Beryllium	mg/kg	0.15 J	-	0.14 J	0.16 J
Cadmium	mg/kg	0.24 U	-	0.22 U	0.23 U
Calcium	mg/kg	84.1 J	-	35 U	85.9 J
Chromium	mg/kg	4.2	-	2.8	7.6
Cobalt	mg/kg	1.6 J	-	1.4 J	3.1
Copper	mg/kg	3.3	-	2.9	7.0
Iron	mg/kg	6130	-	5920	8000
Lead	mg/kg	3.1	-	1.7	4.6
Magnesium	mg/kg	451	-	366	562
Manganese	mg/kg	79.1	-	55.4	255
Mercury	mg/kg	0.017 J	-	0.010 J	0.038
Nickel	mg/kg	2.8	-	1.9 J	3.6
Potassium	mg/kg	166 J	-	156 J	159 J
Selenium	mg/kg	0.92 J	-	0.58 J	0.71 J
Silver	mg/kg	1.4 U	-	1.3 U	1.4 U
Sodium	mg/kg	8.9 J	-	7.1 J	14.2 J
Thallium	mg/kg	0.95 U	-	0.23 J	0.45 J
Vanadium	mg/kg	5.6	-	4.5	7.0
Zinc	mg/kg	8.6	-	6.3	10.1
Polychlorinated Biphenyls					
Aroclor-1016 (PCB-1016)	µg/kg	34 U	-	34 U	34 U
Aroclor-1221 (PCB-1221)	µg/kg	34 U	-	34 U	34 U
Aroclor-1232 (PCB-1232)	µg/kg	34 U	-	34 U	34 U

TABLE 2

ANALYTICAL RESULTS SUMMARY
BAYER SOIL SAMPLING
GLENN SPRINGS HOLDINGS, INC.
HOOKER-RUCO SITE
HICKSVILLE, NEW YORK
APRIL 2012

	Sample Location:	*IW-15*	*IW-15*	*IW-20 Grab*	*IW-20,21,22*
	Sample ID:	*SO-077318-042612-TN02*	*SO-077318-042612-TN02*	*SO-077318-042612-TN03*	*SO-077318-042612-TN04*
	Sample Date:	*4/26/2012*	*4/26/2012*	*4/26/2012*	*4/26/2012*
	Sample Depth:	*(0-10) ft BGS*	*(10) ft BGS*	*(10) ft BGS*	*(0-10) ft BGS*
Parameters	***Units***				
Polychlorinated Biphenyls (Cont'd.)					
Aroclor-1242 (PCB-1242)	µg/kg	34 U	-	34 U	34 U
Aroclor-1248 (PCB-1248)	µg/kg	34 U	-	34 U	34 U
Aroclor-1254 (PCB-1254)	µg/kg	34 U	-	34 U	34 U
Aroclor-1260 (PCB-1260)	µg/kg	34 U	-	34 U	34 U
Pesticides					
4,4'-DDD	µg/kg	3.4 U	-	3.4 U	3.4 U
4,4'-DDE	µg/kg	3.4 U	-	3.4 U	3.4 U
4,4'-DDT	µg/kg	3.4 U	-	3.4 U	3.4 U
Aldrin	µg/kg	1.8 U	-	1.7 U	1.8 U
alpha-BHC	µg/kg	1.8 U	-	1.7 U	1.8 U
alpha-Chlordane	µg/kg	1.8 U	-	1.7 U	1.8 U
beta-BHC	µg/kg	1.8 U	-	1.7 U	1.8 U
delta-BHC	µg/kg	1.8 U	-	1.7 U	1.8 U
Dieldrin	µg/kg	3.4 U	-	3.4 U	3.4 U
Endosulfan I	µg/kg	1.8 U	-	1.7 U	1.8 U
Endosulfan II	µg/kg	3.4 U	-	3.4 U	3.4 U
Endosulfan sulfate	µg/kg	3.4 U	-	3.4 U	3.4 U
Endrin	µg/kg	3.4 U	-	3.4 U	3.4 U
Endrin aldehyde	µg/kg	3.4 U	-	3.4 U	3.4 U
Endrin ketone	µg/kg	3.4 U	-	3.4 U	3.4 U
gamma-BHC (lindane)	µg/kg	1.8 U	-	1.7 U	1.8 U
gamma-Chlordane	µg/kg	1.8 U	-	1.7 U	1.8 U
Heptachlor	µg/kg	1.8 U	-	1.7 U	1.8 U
Heptachlor epoxide	µg/kg	1.8 U	-	1.7 U	1.8 U
Methoxychlor	µg/kg	18 U	-	17 U	18 U
Toxaphene	µg/kg	180 U	-	170 U	180 U

TABLE 2

ANALYTICAL RESULTS SUMMARY
BAYER SOIL SAMPLING
GLENN SPRINGS HOLDINGS, INC.
HOOKER-RUCO SITE
HICKSVILLE, NEW YORK
APRIL 2012

	Sample Location:	*IW-15*	*IW-15*	*IW-20 Grab*	*IW-20,21,22*
	Sample ID:	*SO-077318-042612-TN02*	*SO-077318-042612-TN02*	*SO-077318-042612-TN03*	*SO-077318-042612-TN04*
	Sample Date:	*4/26/2012*	*4/26/2012*	*4/26/2012*	*4/26/2012*
	Sample Depth:	*(0-10) ft BGS*	*(10) ft BGS*	*(10) ft BGS*	*(0-10) ft BGS*
Parameters	***Units***				
General Chemistry					
Percent moisture	%	4.0	-	3.0	5.0

TABLE 2

ANALYTICAL RESULTS SUMMARY
BAYER SOIL SAMPLING
GLENN SPRINGS HOLDINGS, INC.
HOOKER-RUCO SITE
HICKSVILLE, NEW YORK
APRIL 2012

	Sample Location:	*North*	*North*	*South*	*South*
	Sample ID:	*SO-077318-042712-TN05*	*SO-077318-042712-TN05*	*SO-077318-042612-TN01*	*SO-077318-042612-TN01*
	Sample Date:	*4/27/2012*	*4/27/2012*	*4/26/2012*	*4/26/2012*
	Sample Depth:	*(0-4) ft BGS*	*(0.5-1) ft BGS*	*(0-4) ft BGS*	*(0.5-1) ft BGS*
Parameters	*Units*				
Volatile Organic Compounds					
1,1,1,2-Tetrachloroethane	µg/kg	-	4.8 U	-	5.1 U
1,1,1-Trichloroethane	µg/kg	-	4.8 U	-	5.1 U
1,1,2,2-Tetrachloroethane	µg/kg	-	4.8 U	-	5.1 U
1,1,2-Trichloroethane	µg/kg	-	4.8 U	-	5.1 U
1,1-Dichloroethane	µg/kg	-	4.8 U	-	5.1 U
1,1-Dichloroethene	µg/kg	-	4.8 U	-	5.1 U
1,1-Dichloropropene	µg/kg	-	4.8 U	-	5.1 U
1,2,3-Trichlorobenzene	µg/kg	-	4.8 U	-	5.1 U
1,2,3-Trichloropropane	µg/kg	-	4.8 U	-	5.1 U
1,2,4-Trichlorobenzene	µg/kg	-	4.8 U	-	5.1 U
1,2,4-Trimethylbenzene	µg/kg	-	4.8 U	-	5.1 U
1,2-Dibromo-3-chloropropane (DBCP)	µg/kg	-	4.8 U	-	5.1 U
1,2-Dibromoethane (Ethylene dibromide)	µg/kg	-	4.8 U	-	5.1 U
1,2-Dichlorobenzene	µg/kg	-	4.8 U	-	5.1 U
1,2-Dichloroethane	µg/kg	-	4.8 U	-	5.1 U
1,2-Dichloropropane	µg/kg	-	4.8 U	-	5.1 U
1,3,5-Trimethylbenzene	µg/kg	-	4.8 U	-	5.1 U
1,3-Dichlorobenzene	µg/kg	-	4.8 U	-	5.1 U
1,3-Dichloropropane	µg/kg	-	4.8 U	-	5.1 U
1,4-Dichlorobenzene	µg/kg	-	4.8 U	-	5.1 U
2,2-Dichloropropane	µg/kg	-	4.8 U	-	5.1 U
2-Butanone (Methyl ethyl ketone) (MEK)	µg/kg	-	4.8 U	-	5.1 U
2-Chlorotoluene	µg/kg	-	4.8 U	-	5.1 U
2-Hexanone	µg/kg	-	4.8 U	-	5.1 U
2-Phenylbutane (sec-Butylbenzene)	µg/kg	-	4.8 U	-	5.1 U
4-Chlorotoluene	µg/kg	-	4.8 U	-	5.1 U
4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK)	µg/kg	-	4.8 U	-	5.1 U

TABLE 2

ANALYTICAL RESULTS SUMMARY
BAYER SOIL SAMPLING
GLENN SPRINGS HOLDINGS, INC.
HOOKER-RUCO SITE
HICKSVILLE, NEW YORK
APRIL 2012

	Sample Location:	*North*	*North*	*South*	*South*
	Sample ID:	*SO-077318-042712-TN05*	*SO-077318-042712-TN05*	*SO-077318-042612-TN01*	*SO-077318-042612-TN01*
	Sample Date:	*4/27/2012*	*4/27/2012*	*4/26/2012*	*4/26/2012*
	Sample Depth:	*(0-4) ft BGS*	*(0.5-1) ft BGS*	*(0-4) ft BGS*	*(0.5-1) ft BGS*
Parameters	*Units*				
Volatile Organic Compounds (Cont'd.)					
Acetone	µg/kg	-	4.8 UJ	-	5.1 UJ
Benzene	µg/kg	-	4.8 U	-	5.1 U
Bromobenzene	µg/kg	-	4.8 U	-	5.1 U
Bromodichloromethane	µg/kg	-	4.8 U	-	5.1 U
Bromoform	µg/kg	-	4.8 U	-	5.1 U
Bromomethane (Methyl bromide)	µg/kg	-	4.8 U	-	5.1 U
Carbon disulfide	µg/kg	-	4.8 U	-	5.1 U
Carbon tetrachloride	µg/kg	-	4.8 U	-	5.1 U
Chlorobenzene	µg/kg	-	4.8 U	-	5.1 U
Chlorobromomethane	µg/kg	-	4.8 U	-	5.1 U
Chloroethane	µg/kg	-	4.8 U	-	5.1 U
Chloroform (Trichloromethane)	µg/kg	-	4.8 U	-	5.1 U
Chloromethane (Methyl chloride)	µg/kg	-	4.8 U	-	5.1 U
cis-1,2-Dichloroethene	µg/kg	-	4.8 U	-	5.1 U
cis-1,3-Dichloropropene	µg/kg	-	4.8 U	-	5.1 U
Cymene (p-Isopropyltoluene)	µg/kg	-	4.8 U	-	5.1 U
Dibromochloromethane	µg/kg	-	4.8 U	-	5.1 U
Dibromomethane	µg/kg	-	4.8 U	-	5.1 U
Dichlorodifluoromethane (CFC-12)	µg/kg	-	4.8 U	-	5.1 U
Ethylbenzene	µg/kg	-	4.8 U	-	5.1 U
Hexachlorobutadiene	µg/kg	-	4.8 U	-	5.1 U
Iodomethane	µg/kg	-	4.8 U	-	5.1 U
Isopropyl benzene	µg/kg	-	4.8 U	-	5.1 U
m&p-Xylenes	µg/kg	-	4.8 U	-	5.1 U
Methyl tert butyl ether (MTBE)	µg/kg	-	4.8 U	-	5.1 U
Methylene chloride	µg/kg	-	4.8 U	-	5.1 U
Naphthalene	µg/kg	-	4.8 U	-	5.1 U

TABLE 2

ANALYTICAL RESULTS SUMMARY
BAYER SOIL SAMPLING
GLENN SPRINGS HOLDINGS, INC.
HOOKER-RUCO SITE
HICKSVILLE, NEW YORK
APRIL 2012

	Sample Location:	*North*	*North*	*South*	*South*
	Sample ID:	*SO-077318-042712-TN05*	*SO-077318-042712-TN05*	*SO-077318-042612-TN01*	*SO-077318-042612-TN01*
	Sample Date:	*4/27/2012*	*4/27/2012*	*4/26/2012*	*4/26/2012*
	Sample Depth:	*(0-4) ft BGS*	*(0.5-1) ft BGS*	*(0-4) ft BGS*	*(0.5-1) ft BGS*
Parameters	*Units*				
Volatile Organic Compounds (Cont'd.)					
N-Butylbenzene	µg/kg	-	4.8 U	-	5.1 U
N-Propylbenzene	µg/kg	-	4.8 U	-	5.1 U
o-Xylene	µg/kg	-	4.8 U	-	5.1 U
Styrene	µg/kg	-	4.8 U	-	5.1 U
tert-Butylbenzene	µg/kg	-	4.8 U	-	5.1 U
Tetrachloroethene	µg/kg	-	4.8 U	-	5.1 U
Toluene	µg/kg	-	4.8 U	-	5.1 U
trans-1,2-Dichloroethene	µg/kg	-	4.8 U	-	5.1 U
trans-1,3-Dichloropropene	µg/kg	-	4.8 U	-	5.1 U
Trichloroethene	µg/kg	-	4.8 U	-	5.1 U
Trichlorofluoromethane (CFC-11)	µg/kg	-	4.8 U	-	5.1 U
Vinyl acetate	µg/kg	-	4.8 U	-	5.1 U
Vinyl chloride	µg/kg	-	4.8 U	-	5.1 U
Xylenes (total)	µg/kg	-	4.8 U	-	5.1 U
Semi-volatile Organic Compounds					
1,2,4-Trichlorobenzene	µg/kg	370 U	-	390 U	-
1,2-Dichlorobenzene	µg/kg	370 U	-	390 U	-
1,3-Dichlorobenzene	µg/kg	370 U	-	390 U	-
1,4-Dichlorobenzene	µg/kg	370 U	-	390 U	-
2,2'-Oxybis(1-chloropropane) (bis(2-Chloroisopropyl) ether)	µg/kg	370 UJ	-	390 UJ	-
2,4,5-Trichlorophenol	µg/kg	760 U	-	800 U	-
2,4,6-Trichlorophenol	µg/kg	370 U	-	390 U	-
2,4-Dichlorophenol	µg/kg	370 U	-	390 U	-
2,4-Dimethylphenol	µg/kg	370 UJ	-	390 UJ	-
2,4-Dinitrophenol	µg/kg	760 UJ	-	800 UJ	-
2,4-Dinitrotoluene	µg/kg	370 U	-	390 U	-

TABLE 2

ANALYTICAL RESULTS SUMMARY
BAYER SOIL SAMPLING
GLENN SPRINGS HOLDINGS, INC.
HOOKER-RUCO SITE
HICKSVILLE, NEW YORK
APRIL 2012

	Sample Location:	*North*	*North*	*South*	*South*
	Sample ID:	*SO-077318-042712-TN05*	*SO-077318-042712-TN05*	*SO-077318-042612-TN01*	*SO-077318-042612-TN01*
	Sample Date:	*4/27/2012*	*4/27/2012*	*4/26/2012*	*4/26/2012*
	Sample Depth:	*(0-4) ft BGS*	*(0.5-1) ft BGS*	*(0-4) ft BGS*	*(0.5-1) ft BGS*
Parameters	*Units*				
Semi-volatile Organic Compounds (Cont'd.)					
2,6-Dinitrotoluene	µg/kg	370 U	-	390 U	-
2-Chloronaphthalene	µg/kg	370 U	-	390 U	-
2-Chlorophenol	µg/kg	370 U	-	390 U	-
2-Methylnaphthalene	µg/kg	370 U	-	390 U	-
2-Methylphenol	µg/kg	370 U	-	390 U	-
2-Nitroaniline	µg/kg	760 U	-	800 U	-
2-Nitrophenol	µg/kg	370 U	-	390 U	-
3,3'-Dichlorobenzidine	µg/kg	370 U	-	390 U	-
3-Nitroaniline	µg/kg	760 U	-	800 U	-
4,6-Dinitro-2-methylphenol	µg/kg	760 U	-	800 U	-
4-Bromophenyl phenyl ether	µg/kg	370 U	-	390 U	-
4-Chloro-3-methylphenol	µg/kg	370 U	-	390 U	-
4-Chloroaniline	µg/kg	370 U	-	390 U	-
4-Chlorophenyl phenyl ether	µg/kg	370 U	-	390 U	-
4-Methylphenol	µg/kg	370 U	-	390 U	-
4-Nitroaniline	µg/kg	760 U	-	800 U	-
4-Nitrophenol	µg/kg	760 UJ	-	800 UJ	-
Acenaphthene	µg/kg	370 U	-	390 U	-
Acenaphthylene	µg/kg	370 U	-	390 U	-
Anthracene	µg/kg	370 U	-	390 U	-
Benzo(a)anthracene	µg/kg	370 U	-	390 U	-
Benzo(a)pyrene	µg/kg	370 U	-	390 U	-
Benzo(b)fluoranthene	µg/kg	370 U	-	390 U	-
Benzo(g,h,i)perylene	µg/kg	370 U	-	390 U	-
Benzo(k)fluoranthene	µg/kg	370 U	-	390 U	-
bis(2-Chloroethoxy)methane	µg/kg	370 U	-	390 U	-
bis(2-Chloroethyl)ether	µg/kg	370 UJ	-	390 UJ	-

TABLE 2

ANALYTICAL RESULTS SUMMARY
BAYER SOIL SAMPLING
GLENN SPRINGS HOLDINGS, INC.
HOOKER-RUCO SITE
HICKSVILLE, NEW YORK
APRIL 2012

	Sample Location:	*North*	*North*	*South*	*South*
	Sample ID:	*SO-077318-042712-TN05*	*SO-077318-042712-TN05*	*SO-077318-042612-TN01*	*SO-077318-042612-TN01*
	Sample Date:	*4/27/2012*	*4/27/2012*	*4/26/2012*	*4/26/2012*
	Sample Depth:	*(0-4) ft BGS*	*(0.5-1) ft BGS*	*(0-4) ft BGS*	*(0.5-1) ft BGS*
Parameters	*Units*				
Semi-volatile Organic Compounds (Cont'd.)					
bis(2-Ethylhexyl)phthalate (DEHP)	µg/kg	370 U	-	390 U	-
Butyl benzylphthalate (BBP)	µg/kg	370 U	-	390 U	-
Carbazole	µg/kg	370 U	-	390 U	-
Chrysene	µg/kg	370 U	-	390 U	-
Dibenz(a,h)anthracene	µg/kg	370 U	-	390 U	-
Dibenzofuran	µg/kg	370 U	-	390 U	-
Diethyl phthalate	µg/kg	370 U	-	390 U	-
Dimethyl phthalate	µg/kg	370 U	-	390 U	-
Di-n-butylphthalate (DBP)	µg/kg	370 U	-	390 U	-
Di-n-octyl phthalate (DnOP)	µg/kg	370 U	-	390 U	-
Fluoranthene	µg/kg	370 U	-	390 U	-
Fluorene	µg/kg	370 U	-	390 U	-
Hexachlorobenzene	µg/kg	370 U	-	390 U	-
Hexachlorobutadiene	µg/kg	370 U	-	390 U	-
Hexachlorocyclopentadiene	µg/kg	370 U	-	390 U	-
Hexachloroethane	µg/kg	370 U	-	390 U	-
Indeno(1,2,3-cd)pyrene	µg/kg	370 U	-	390 U	-
Isophorone	µg/kg	370 U	-	390 U	-
Naphthalene	µg/kg	370 U	-	390 U	-
Nitrobenzene	µg/kg	370 U	-	390 U	-
N-Nitrosodi-n-propylamine	µg/kg	370 UJ	-	390 UJ	-
N-Nitrosodiphenylamine	µg/kg	370 U	-	390 U	-
Pentachlorophenol	µg/kg	760 UJ	-	800 UJ	-
Phenanthrene	µg/kg	370 U	-	390 U	-
Phenol	µg/kg	370 U	-	390 U	-
Pyrene	µg/kg	370 U	-	390 U	-

TABLE 2

ANALYTICAL RESULTS SUMMARY
BAYER SOIL SAMPLING
GLENN SPRINGS HOLDINGS, INC.
HOOKER-RUCO SITE
HICKSVILLE, NEW YORK
APRIL 2012

	Sample Location:	*North*	*North*	*South*	*South*
	Sample ID:	*SO-077318-042712-TN05*	*SO-077318-042712-TN05*	*SO-077318-042612-TN01*	*SO-077318-042612-TN01*
	Sample Date:	*4/27/2012*	*4/27/2012*	*4/26/2012*	*4/26/2012*
	Sample Depth:	*(0-4) ft BGS*	*(0.5-1) ft BGS*	*(0-4) ft BGS*	*(0.5-1) ft BGS*
Parameters	*Units*				
Metals					
Aluminum	mg/kg	7960	-	14900	-
Antimony	mg/kg	1.1 UJ	-	0.98 UJ	-
Arsenic	mg/kg	4.2	-	8.2	-
Barium	mg/kg	22.0	-	39.4	-
Beryllium	mg/kg	0.20 J	-	0.35	-
Cadmium	mg/kg	0.058 J	-	0.023 J	-
Calcium	mg/kg	476 J	-	462 J	-
Chromium	mg/kg	11.1	-	16.5	-
Cobalt	mg/kg	3.3	-	5.2	-
Copper	mg/kg	9.7	-	11.3	-
Iron	mg/kg	10000	-	15800	-
Lead	mg/kg	20.9	-	16.8	-
Magnesium	mg/kg	1170	-	2190	-
Manganese	mg/kg	117	-	153	-
Mercury	mg/kg	0.026 J	-	0.079	-
Nickel	mg/kg	5.9	-	9.5	-
Potassium	mg/kg	299 J	-	423 J	-
Selenium	mg/kg	1.3	-	1.5	-
Silver	mg/kg	1.3 U	-	1.3 U	-
Sodium	mg/kg	18.8 J	-	46.1	-
Thallium	mg/kg	0.38 J	-	0.43 J	-
Vanadium	mg/kg	16.4	-	25.2	-
Zinc	mg/kg	26.5	-	30.4	-
Polychlorinated Biphenyls					
Aroclor-1016 (PCB-1016)	µg/kg	37 UJ	-	39 U	-
Aroclor-1221 (PCB-1221)	µg/kg	37 UJ	-	39 U	-
Aroclor-1232 (PCB-1232)	µg/kg	37 UJ	-	39 U	-

TABLE 2

ANALYTICAL RESULTS SUMMARY
BAYER SOIL SAMPLING
GLENN SPRINGS HOLDINGS, INC.
HOOKER-RUCO SITE
HICKSVILLE, NEW YORK
APRIL 2012

	Sample Location:	*North*	*North*	*South*	*South*
	Sample ID:	*SO-077318-042712-TN05*	*SO-077318-042712-TN05*	*SO-077318-042612-TN01*	*SO-077318-042612-TN01*
	Sample Date:	*4/27/2012*	*4/27/2012*	*4/26/2012*	*4/26/2012*
	Sample Depth:	*(0-4) ft BGS*	*(0.5-1) ft BGS*	*(0-4) ft BGS*	*(0.5-1) ft BGS*
Parameters	*Units*				
Polychlorinated Biphenyls (Cont'd.)					
Aroclor-1242 (PCB-1242)	µg/kg	37 UJ	-	39 U	-
Aroclor-1248 (PCB-1248)	µg/kg	97 J	-	39 U	-
Aroclor-1254 (PCB-1254)	µg/kg	37 UJ	-	39 U	-
Aroclor-1260 (PCB-1260)	µg/kg	37 UJ	-	39 U	-
Pesticides					
4,4'-DDD	µg/kg	3.7 U	-	3.9 U	-
4,4'-DDE	µg/kg	3.7 U	-	13	-
4,4'-DDT	µg/kg	4.6	-	9.7	-
Aldrin	µg/kg	1.9 U	-	2.0 U	-
alpha-BHC	µg/kg	1.9 U	-	2.0 U	-
alpha-Chlordane	µg/kg	1.9 U	-	2.0 U	-
beta-BHC	µg/kg	1.9 U	-	2.0 U	-
delta-BHC	µg/kg	1.9 U	-	2.0 U	-
Dieldrin	µg/kg	3.7 U	-	3.9 U	-
Endosulfan I	µg/kg	1.9 U	-	2.0 U	-
Endosulfan II	µg/kg	3.7 U	-	3.9 U	-
Endosulfan sulfate	µg/kg	3.7 U	-	3.9 U	-
Endrin	µg/kg	3.7 U	-	3.9 U	-
Endrin aldehyde	µg/kg	3.7 U	-	3.9 U	-
Endrin ketone	µg/kg	3.7 U	-	3.9 U	-
gamma-BHC (lindane)	µg/kg	1.9 U	-	2.0 U	-
gamma-Chlordane	µg/kg	1.9 U	-	2.0 U	-
Heptachlor	µg/kg	1.9 U	-	2.0 U	-
Heptachlor epoxide	µg/kg	1.9 U	-	2.0 U	-
Methoxychlor	µg/kg	19 U	-	20 U	-
Toxaphene	µg/kg	190 U	-	200 U	-

TABLE 2

ANALYTICAL RESULTS SUMMARY
BAYER SOIL SAMPLING
GLENN SPRINGS HOLDINGS, INC.
HOOKER-RUCO SITE
HICKSVILLE, NEW YORK
APRIL 2012

	Sample Location:	*North*	*North*	*South*	*South*
	Sample ID:	*SO-077318-042712-TN05*	*SO-077318-042712-TN05*	*SO-077318-042612-TN01*	*SO-077318-042612-TN01*
	Sample Date:	*4/27/2012*	*4/27/2012*	*4/26/2012*	*4/26/2012*
	Sample Depth:	*(0-4) ft BGS*	*(0.5-1) ft BGS*	*(0-4) ft BGS*	*(0.5-1) ft BGS*
Parameters	***Units***				
General Chemistry					
Percent moisture	%	12	-	17	-

Notes:

J - Estimated concentration.
U - Not present at or above the associated value.
UJ - Estimated reporting limit.
- Not analyzed.

TABLE 3

QUALIFIED SAMPLE RESULTS DUE TO OUTLYING INITIAL CALIBRATION RESULTS
BAYER EXCESS SOIL SAMPLING
GLENN SPRINGS HOLDINGS, INC.
HOOKER-RUCO SITE
HICKSVILLE, NEW YORK
APRIL 2012

Parameter	*Compound*	*Calibration Date*	*%RSD*	*Associated Sample ID*	*Qualified Sample Results*	*Units*
VOCs	Acetone	04/23/12	42	SO-077318-042612-TN02	5.0 UJ	µg/Kg
				SO-077318-042612-TN03	4.4 UJ	µg/Kg
				SO-077318-042712-TN05	4.8 UJ	µg/Kg
				SO-077318-042612-TN01	5.1 UJ	µg/Kg
SVOCs	2,4-Dinitrophenol	03/23/12	39	SO-077318-042612-TN02	680 UJ	µg/Kg
				SO-077318-042612-TN03	670 UJ	µg/Kg
				SO-077318-042612-TN04	690 UJ	µg/Kg
				SO-077318-042712-TN05	760 UJ	µg/Kg
				SO-077318-042612-TN01	800 UJ	µg/Kg
SVOCs	Pentachlorophenol	03/23/12	35	SO-077318-042612-TN02	680 UJ	µg/Kg
				SO-077318-042612-TN03	670 UJ	µg/Kg
				SO-077318-042612-TN04	690 UJ	µg/Kg
				SO-077318-042712-TN05	760 UJ	µg/Kg
				SO-077318-042612-TN01	800 UJ	µg/Kg

Notes:

%RSD	Percent Relative Standard Deviation
VOCs	Volatile Organic Compounds
SVOCs	Semi-Volatile Organic Compounds
UJ	Not detected, estimated reporting limit.

TABLE 4

QUALIFIED SAMPLE RESULTS DUE TO OUTLYING CONTINUING CALIBRATION RESULTS
BAYER EXCESS SOIL SAMPLING
GLENN SPRINGS HOLDINGS, INC.
HOOKER-RUCO SITE
HICKSVILLE, NEW YORK
APRIL 2012

Parameter	*Calibration Date*	*Compound*	*%D*	*Associated Sample ID*	*Qualified Sample Results*	*Units*
SVOCs	05/01/12	bis(2-Chloroethyl)ether	31	SO-077318-042612-TN02	340 UJ	µg/Kg
				SO-077318-042612-TN03	330 UJ	µg/Kg
				SO-077318-042612-TN04	340 UJ	µg/Kg
				SO-077318-042712-TN05	370 UJ	µg/Kg
				SO-077318-042612-TN01	390 UJ	µg/Kg
SVOCs	05/01/12	2,2'-Oxybis(1-chloropropane)	32	SO-077318-042612-TN02	340 UJ	µg/Kg
				SO-077318-042612-TN03	330 UJ	µg/Kg
				SO-077318-042612-TN04	340 UJ	µg/Kg
				SO-077318-042712-TN05	370 UJ	µg/Kg
				SO-077318-042612-TN01	390 UJ	µg/Kg
SVOCs	05/01/12	N-Nitroso-di-n-propylamine	26	SO-077318-042612-TN02	340 UJ	µg/Kg
				SO-077318-042612-TN03	330 UJ	µg/Kg
				SO-077318-042612-TN04	340 UJ	µg/Kg
				SO-077318-042712-TN05	370 UJ	µg/Kg
				SO-077318-042612-TN01	390 UJ	µg/Kg
SVOCs	05/01/12	2,4-Dimethylphenol	31	SO-077318-042612-TN02	340 UJ	µg/Kg
				SO-077318-042612-TN03	330 UJ	µg/Kg
				SO-077318-042612-TN04	340 UJ	µg/Kg
				SO-077318-042712-TN05	370 UJ	µg/Kg
				SO-077318-042612-TN01	390 UJ	µg/Kg
SVOCs	05/01/12	2,4-Dinitrophenol	27	SO-077318-042612-TN02	680 UJ	µg/Kg
				SO-077318-042612-TN03	670 UJ	µg/Kg
				SO-077318-042612-TN04	690 UJ	µg/Kg
				SO-077318-042712-TN05	760 UJ	µg/Kg
				SO-077318-042612-TN01	800 UJ	µg/Kg

TABLE 4

QUALIFIED SAMPLE RESULTS DUE TO OUTLYING CONTINUING CALIBRATION RESULTS
BAYER EXCESS SOIL SAMPLING
GLENN SPRINGS HOLDINGS, INC.
HOOKER-RUCO SITE
HICKSVILLE, NEW YORK
APRIL 2012

Parameter	*Calibration Date*	*Compound*	*%D*	*Associated Sample ID*	*Qualified Sample Results*	*Units*
SVOCs	05/01/12	4-Nitrophenol	36	SO-077318-042612-TN02	680 UJ	µg/Kg
				SO-077318-042612-TN03	670 UJ	µg/Kg
				SO-077318-042612-TN04	690 UJ	µg/Kg
				SO-077318-042712-TN05	760 UJ	µg/Kg
				SO-077318-042612-TN01	800 UJ	µg/Kg

Notes:

%D	Percent Difference.
SVOCs	Semi-Volatile Organic Compounds
UJ	Not detected, estimated reporting limit.

TABLE 5

QUALIFIED SAMPLE RESULTS DUE TO OUTLYING SURROGATE RECOVERIES
BAYER EXCESS SOIL SAMPLING
GLENN SPRINGS HOLDINGS, INC.
HOOKER-RUCO SITE
HICKSVILLE, NEW YORK
APRIL 2012

Parameter	*Surrogate*	*Surrogate Recovery (percent)*	*Control Limits (percent)*	*Sample ID*	*Analytes*	*Qualified Sample Results*	*Units*
PCBs	Decachlorobiphenyl	57	60 - 125	SO-077318-042712-TN05	Aroclor-1260 (PCB-1260)	37 UJ	µg/Kg
					Aroclor-1254 (PCB-1254)	37 UJ	µg/Kg
					Aroclor-1221 (PCB-1221)	37 UJ	µg/Kg
					Aroclor-1232 (PCB-1232)	37 UJ	µg/Kg
					Aroclor-1248 (PCB-1248)	97 J	µg/Kg
					Aroclor-1016 (PCB-1016)	37 UJ	µg/Kg
					Aroclor-1242 (PCB-1242)	37 UJ	µg/Kg

Notes:

PCBs Polychlorinated Biphenyls
J Estimated.
UJ Not detected, estimated reporting limit.

TABLE 6

QUALIFIED SAMPLE RESULTS DUE TO ANALYTE CONCENTRATIONS IN THE METHOD BLANKS
BAYER EXCESS SOIL SAMPLING
GLENN SPRINGS HOLDINGS, INC.
HOOKER-RUCO SITE
HICKSVILLE, NEW YORK
APRIL 2012

Parameter	*Analysis Date*	*Analyte*	*Blank Result*	*Sample ID*	*Qualified Sample Result*	*Units*
Metals	05/02/12	Antimony	0.703	SO-077318-042612-TN02	0.95 U	mg/Kg
				SO-077318-042612-TN03	0.89 U	mg/Kg
				SO-077318-042612-TN04	0.91 U	mg/Kg
				SO-077318-042712-TN05	1.1 U	mg/Kg
				SO-077318-042612-TN01	0.98 U	mg/Kg
Metals	05/02/12	Calcium	8.23	SO-077318-042612-TN03	35 U	mg/Kg

Notes:

U Not detected.

TABLE 7

QUALIFIED SAMPLE RESULTS DUE TO OUTLYING MATRIX SPIKE RECOVERIES
BAYER EXCESS SOIL SAMPLING
GLENN SPRINGS HOLDINGS, INC.
HOOKER-RUCO SITE
HICKSVILLE, NEW YORK
APRIL 2012

Analyte	*Spike ID*	*MS Recovery (percent)*	*Control Limits (percent)*	*Associated Samples*	*Qualified Sample Results*	*Units*
Antimony	SO-077318-042712-TN05	55	75-125	SO-077318-042612-TN02	0.95 UJ	mg/Kg
				SO-077318-042612-TN03	0.89 UJ	mg/Kg
				SO-077318-042612-TN04	0.91 UJ	mg/Kg
				SO-077318-042712-TN05	1.1 UJ	mg/Kg
				SO-077318-042612-TN01	0.98 UJ	mg/Kg

Notes:

MS Matrix Spike.
UJ Not detected, estimated reporting limit.

TABLE 8

QUALIFIED SAMPLE DATA DUE TO OUTLYING ICP SERIAL DILUTION RESULTS
BAYER EXCESS SOIL SAMPLING
GLENN SPRINGS HOLDINGS, INC.
HOOKER-RUCO SITE
HICKSVILLE, NEW YORK
APRIL 2012

Parameter	*Analyte*	*Serial Dilution Sample ID*	*%D*	*Associated Sample I.D.*	*Qualified Sample Result*	*Units*
Metals	Calcium	SO-077318-042712-TN05	11	SO-077318-042612-TN02	84.1 J	mg/Kg
				SO-077318-042612-TN04	85.9 J	mg/Kg
				SO-077318-042712-TN05	476 J	mg/Kg
				SO-077318-042612-TN01	462 J	mg/Kg
Metals	Potassium	SO-077318-042712-TN05	11	SO-077318-042612-TN02	166 J	mg/Kg
				SO-077318-042612-TN03	156 J	mg/Kg
				SO-077318-042612-TN04	159 J	mg/Kg
				SO-077318-042712-TN05	299 J	mg/Kg
				SO-077318-042612-TN01	423 J	mg/Kg

Notes:

%D Percent Difference.
J Estimated.