Prepared for:

LCP SITE STEERING COMMITTEE

ISM DIOXIN/FURAN DATA SUMMARY (OPERABLE UNIT 3) LCP CHEMICALS SITE BRUNSWICK, GEORGIA

Prepared by:

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July 2011

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1 INTRODUCTION

This report presents the results of the recent soil sampling for polychlorinated dibenzo-*p*-dioxin and polychlorinated dibenzo-*p*-furan congeners (hereafter referred to as "dioxins/furans") conducted in of the upland area (i.e., Operable Unit 3 ("OU3")) of the LCP Chemicals Site, Brunswick, Georgia ("Site") in April 2011 .

In summary, and as set forth in more detail below, the results of the dioxin/furan characterization for OU3 demonstrate that the concentrations of dioxins/furans are below the current EPA soil cleanup levels in residential and commercial/industrial soil. Further, none of the samples exceed the more conservative interim draft recommended preliminary remediation goal values in commercial/industrial soils. When these interim draft preliminary remediation goals are used in risk ratio calculations for commercial/industrial receptors, the cancer risk estimates are within the National Contingency Plan risk range and the hazard quotient estimates below the regulatory threshold of 1. Therefore, these results indicate that concentrations of dioxins/furans do not represent a health concern for future commercial or industrial uses LCP site.

2 OVERVIEW

On March 10, 2011, representatives of Honeywell, EPA, and the Georgia Environmental Protection Division ("EPD") met to discuss soil sampling for dioxins/furans at the Site. On March 16, 2011, pursuant to EPA's request at the meeting, Honeywell submitted a document entitled Workplan *for Dioxin/Furan Characterization, LCP Chemical Site, Operable Unit 3* (hereafter "Workplan").

The Workplan proposed the use of Incremental Sampling Methodology ("ISM") for the dioxin/furan sampling in OU3. ISM is a structured composite sampling and processing protocol that is designed to reduce data variability and provides a robust estimate of the mean concentration of an analyte in the area/volume of soil being sampled, which is commonly called a Sampling Unit ("SU") or Decision Unit ("DU")[1].

Consistent with the conceptual basis of ISM, the objective of this investigation was to determine the representative (i.e., approximately average) dioxin/furan concentrations within the four site quadrants that were established as exposure units for the OU3 Human Health Risk Assessment ("HHRA"). Accordingly, each site quadrant is a separate DU. Quadrant 1 includes a single SU that essentially covers the entire quadrant, while Quadrants 2, 3, and 4 each include three smaller SUs situated within the Quadrants. Figure 1 illustrates the Quadrants and SUs established for the LCP Site.

The Agencies provided comments on the Workplan in a letter dated April 14, 2011. Honeywell modified the sampling protocol to accommodate all of the sampling-related comments and provided a written response to the Agencies comments related to sample collection methodology in an email dated April 19, 2011, prior to the initiation of sampling. In addition, the Agencies' other comments and recommendations were taken into account by Honeywell in the data evaluation presented in this report.

[1] A DU is defined as the area/volume of soil in which the mean concentration is estimated to meet one or more investigation objectives. A SU is defined the area/volume of soil within which an ISM sample is collected and to which the analytical result directly applies. In the simplest case, the DU and SU are identical. In other cases, a DU can consist of two or more SUs, the results of which may be combined or integrated to draw conclusions about the DU.

3 ISM SAMPLING

Prior to the initiation of soil sampling, the ISM SU grids shown on Figure 1 were surveyed and laid out in the field. To accomplish this, the geographic coordinates (i.e., Northing and Easting) of each SU grid were established using ArcGIS® 10 software. Unique alpha-numeric identifiers were assigned to the cells within each of the SU grids. For example, the Quadrant 1 grid was composed of columns A to H and rows 1 to 18 (Figure 2). In Quadrants 2, 3, and 4, the "columns" of the three SU grids were assigned consecutive alphabetic letters. For example Quadrant 3, SU-1 was assigned columns A to F, SU-2 was assigned columns G to I, and SU-3 was assigned columns J to O. A stake labeled with the specific row/column identifier was placed in the northwest corner of each grid cell. These markers facilitated the appropriate orientation of the sampling personnel in the field.

The collection of surface soil samples for dioxin/furan analysis using ISM was conducted between April 20 and April 29, 2011. One or more EPA representatives were present to observe the sampling on April 20th, 21st, 26th, 28th, and 29th. As specified in the Workplan, ISM samples from each SU were comprised of multiple equal-mass sample increments2 collected from the 0 to 3 inch depth interval below ground surface. For Quadrant 1, three replicate ISM samples were collected, each consisting of 100 increments. Quadrants 2, 3, and 4, each included three SUs from which two replicate ISM samples per SU were collected, each consisting of 30 equal mass increments. As requested by EPA, the sample location coordinates of each increment location were obtained and recorded using a Trimble portable Global Positioning System ("GPS") unit. These coordinates were subsequently uploaded to the project database (discussed below) and ArcGIS® software for mapping purposes. Figures 2, 3, 4, and 5 show the locations of the individual sample increment locations in Quadrants 1, 2, 3, and 4, respectively. These figures demonstrate that the ISM methodology results in a robust characterization of the dioxin/furan concentrations across the site.

The Workplan proposed the use of a cordless drill with wood auger bits to collect the sample increments. While this method has been used successfully at other sites, the dry sandy soil at soil at the LCP site made it difficult to obtain a consistent increment mass using this tool. Therefore, partially through the sampling of Quadrant 1 (the first Quadrant sampled), the sampling method was modified to the use of hand trowels to collect the sample increments. EPA representatives were consulted on this modification and concurred, with the provision that care should be taken to ensure methodological consistency between sample increments. To that end, all field personnel were instructed on the revised methodology. Briefly, this methodology consisted of removing any surfical layer of organic debris (e.g., leaves, pine straw, sticks) with a hand rake, forming a triangle shaped core by plunging the hand trowel to a depth of three inches on three sides, using the hand trowel to gently mix the soil in situ within that triangle shaped core, extracting the mixed soil with the hand trowel, pouring the soil into a measuring device of pre-determined volume3, and finally pouring the soil from the measuring device into a certified

[2] The term "increments" is used to describe the sub-samples or aliquots of soil that are ultimately combined to create a single ISM sample.

[3] For Quadrant 1, a level tablespoon of soil (approximately 15 grams) was collected at each increment location in order to achieve a final target sample mass of 1.5 kg for each replicate. For Quadrants 2, 3, and 4, a level ¼ cup of

clean, sample-specific, 2.5-liter wide-mouth amber glass jar. As specified in the Workplan, dedicated sampling equipment was used for each replicate sample within a SU. The sampling equipment was decontaminated between each SU. The amber glass sample jars were stored in the dark at 4°C prior to shipment to the laboratory.

3.1 Laboratory Processing and Analysis

The ISM replicate samples were shipped in three separate batches under chain-of-custody protocol to TestAmerica's West Sacramento laboratory for ISM sample processing and analysis by EPA SW846 Method 8290. Laboratory sample processing included the following steps:

- air-drying of the sample;
- sieving the dried sample with a #10 (2 mm) sieve to obtain a consistent particle size;
- spreading the soil from the sample onto a tray to a final depth of approximately ½ inch; and
- collecting 30 equal mass sub-samples from random locations on the tray and combining these into a single sample which was then analyzed by EPA SW946 Method 8290.

To evaluate the performance of the laboratory ISM sample processing, one of the ISM replicate samples from Quadrant 1 (Q1-U1-R1) was sub-sampled and analyzed three times[4].

The laboratory analytical report summaries for the ISM samples are provided as Attachment A. In addition, Level IV data packages and electronic data deliverables ("EDDs") were provided by the TestAmerica. The laboratory analytical report includes results for the 7 dioxin and 10 furan congeners for which toxic equivalency factors ("TEFs") has been developed. TEFs are used to estimate the relative toxicity of different dioxin/furan congeners present in environmental samples, and are used to convert congener-specific data into equivalent concentrations of the congener 2,3,7,8-tetrachlordibenzo-p-dioxin ("TCDD"). These TCDD equivalent concentrations are typically denoted as "TEQ."

3.2 Data Validation and Management

The Level IV analytical data packages provided by the laboratory were sent to an independent data validator – Validata LLC, Seattle, Washington ("Validata") – for data validation. No significant issues were noted by Validata. The data validation report is provided as Attachment B to this letter report.

The EDDs provided by TestAmerica were incorporated into the "Master" project database. Before the data were uploaded to the database, a series of data quality checks were performed as described in the Workplan. Briefly, the "raw" electronic data from each of the laboratory EDDs were imported into a "Build" database, assigned separate batch number, and subjected to a series of Quality Assurance/Quality Control ("QA/QC") queries, which included:

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soil (approximately 50 g) was collected at each increment location to achieve a final target sample mass of 1.5 kg for each replicate.

[4] The laboratory did not apply a unique identifier to each of these subsamples, so the laboratory results provided in Attachment A include three separate data sheets for Sample Q1-U1-R1. These three laboratory subsamples were subsequently given an "a", "b", or "c" identifier in the project database in order to distinguish them.

- Analyte names were checked for spelling to ensure proper encoding;
- Units and laboratory analytical methods were checked to ensure proper encoding;
- Missing values were checked in order to prevent errors of omission;
- Sample ID and Sample Date pairs were checked against chain of custody forms and field log books to ensure proper encoding; and
- All raw records were checked against the Master database's "Data" table to prevent duplicate entries.

For the dioxin/furan ISM samples, these QA/QC queries did not identify any data quality issues with the EDDs provided by TestAmerica. Accordingly, the data were added to the Master database and all temporary tables were deleted.

The Master database is a relational Microsoft Access database where multiple tables are used in order to store unique information only once. For example, the "Location" table stores coordinates, the "Sample ID" table contains information about the sampling parameters (e.g. sample identifiers, date of collection, etc.), and the "Data" table contains results of chemical or other analyses. Each table is linked or related to another by a common field. For example, the "Location" table is linked to the "Sample ID" table by the location, which is linked to the "Data" table by the Sample ID. This eliminates redundancy and reduces the potential for errors.

Storing the ISM data in this format presents a challenge due the fact that Northing, Easting coordinates were recorded for each increment location and multiple increment locations are associated with a single analytical result. For example, Sample Q2-U1-R1 is composed of 30 increments, each with unique Northing, Easting coordinates but only one analytical result. Unique Sample IDs were created in the "Sample ID" table for each sample increment by adding grid cell information to the parent Sample ID (e.g., Q2-U1-**A1**-R1). This table also contains a field called Sample Type in which these Sample IDs are given the designation "ISM". These Sample IDs are linked to specific Northing, Easting coordinates in the "Location" table and with the dioxin/furan congener results for the parent Sample ID in the "Data" table. This requires repetition of the same set of result values for each sample increment in the data table. For example, the results for Sample Q2-U1-R1 are repeated 30 times in the data table, once for each unique sample increment. When querying the database for ISM data, database users must be cognizant of the repetition of data for each unique sample increment to ensure that these data are only presented or used in conjunction with the parent Sample ID.

3.3 Data Evaluation

The dioxin/furan data were converted to 2,3,7,8-tetrachloro dibenzo-p-dioxin ("2,3,7,8-TCDD") Equivalents ("TEQ") using the current World Health Organization ("WHO") TEFs[5], using two different methods. Table 1 presents the results of these calculations. For each Quadrant, the column labeled "1/2 EDL for NDs" shows TEQ results for each ISM sample computed by applying the WHO TEFs to the congener-specific analytical result, or ½ of the estimated detection limit ("EDL") when a particular congener was not detected ("ND") in a sample, and summing those products to generate a TEQ value for each ISM sample. The values in columns labeled "KM Method for NDs" were calculated using a draft EPA Kaplan-Meier ("KM") TEQ

[5] Van den Berg M, Birnbaum LS, Dennison M, et al. (2006). The 2005 World Health Organization reevaluation of human and mammalian toxic equivalency factors for dioxins and dioxin-like compounds, *Toxicological Sciences*, 93(2):223-241.

calculator that uses the KM statistical method to generate estimated concentrations below the sample detection limits. As seen in this table, both methods produce similar results for all of the ISM samples (and the Quadrant 1 laboratory replicate sub-samples).

Table 1 also provides the calculated relative standard deviation ("RSD") for each SU. This statistic can be useful in evaluating the variability associated with replicate ISM samples. The RSD values for all but one of the SU replicates ranged from 1.2% to 34.1%, below the 35% RSD target specified in Agencies comments on the Workplan. The only instance in which the RSD exceeded 35% for SU replicates was for Quadrant 4, SU-2, which had calculated TEQ results of 5.1 nanograms per kilogram (ng/kg) or parts per trillion ("ppt") and 1.2 ppt for replicates 1 and 2, respectively. The elevated RSD is a result of an approximate 4-fold difference in the TEQ results between the two replicates, but it is not considered significant as these were the two lowest TEQ results among all of the ISM samples collected during this event. These values provide a high degree of certainty that dioxin/furan concentrations do not pose a health concern in that area of Quadrant 4.

The TCDD TEQ results from all of the ISM replicate samples from across the site are well below the dioxin soil cleanup levels of 1,000 ppt for residential soil and 5,000 to 20,000 ppt for commercial/industrial soil identified in EPA's OSWER Directive 9200.4-26[6]. The TCDD TEQ results for ISM replicate samples within the individual Quadrants were also screened against the EPA's draft recommended interim residential preliminary remediation goal ("PRG")[7] for TCDD TEQ of 72 ppt as recommended in the Agencies comments on the Workplan. Only the two replicate samples from SU-2 in Quadrant 2, with values of 81.2 ppt and 117.1 ppt, exceeded the draft interim residential PRG.

Based on this "screening" exercise, a more detailed risk characterization was conducted for the Quadrant 2 exposure unit. A "risk ratio" approach was used to calculate potential excess lifetime cancer risks and noncancer hazard quotients for TCDD TEQ in Quadrant 2. The risk-ratio approach is an abbreviated form of risk characterization in which an exposure point concentration ("EPC") is divided by a risk-based target level (i.e., the draft interim PRGs) that incorporates conservative default assumptions regarding receptor exposure and toxicity factors. When the PRG is based on a noncancer toxicity factor (e.g., a reference dose), the resulting quotient is equivalent to the Hazard Quotient ("HQ") commonly used in human health risk assessments. When the PRG is based on a cancer toxicity factor (e.g., a cancer slope factor), the quotient is multiplied by the target risk level used to calculate the cancer-based PRG, typically 1E-6 or 1 in 1,000,000. The following equations illustrate this calculation for cancer and noncancer endpoints:

[6] EPA. 1998. Approach for Addressing Dioxin in Soil at CERCLA and RCRA Sites. Washington, DC, Office of Solid Waste and Emergency Response, OSWER Directive 9200.4-26, April 13.

[7] EPA. 2009. Draft Recommended Interim Preliminary Remediation Goals for Dioxins in Soil and CERCLA and RCRA Sites. Washington, DC, Office of Superfund Remediation and Technology Innovation, OSWER 9200. 3-56, December 30.

$$ELCR = \left(\frac{EPC}{Cancer\text{–}Based\ PRG} \right) \times 1E\text{–}6$$

Where:
ELCR = excess lifetime cancer risk
EPC = Quadrant 2 TCDD TEQ exposure point concentration (maximum detected replicate and Quadrant 2 SU average)
PRG = draft Interim PRG for TCDD TEQ based on a cancer endpoint and target risk of 1E-6 (residential and commercial/industrial)

$$HQ = \frac{EPC}{Noncancer\text{–}Based\ PRG}$$

Where:
HQ = hazard quotient for non-cancer effects
EPC = Quadrant 2 TCDD TEQ exposure point concentration (maximum detected replicate and Quadrant 2 SU average)
PRG = draft Interim PRG for TCDD TEQ based on noncancer endpoint and a target HQ of 1 (residential and commercial/industrial)

Tables 2 and 3 present the results of the risk ratio calculations for TCDD TEQ in Quadrant 2. As shown in these tables, ELCR and HQ values were calculated for both residential and outdoor commercial/industrial receptors. In addition, two EPCs were used in the risk ratio calculations in order to present a range of ELCR and HQ values for these receptors. The first row of each table provides a high-end or "reasonable maximum exposure" ("RME") estimate of ELCR (Table 2) or HQ (Table 3) based on the maximum TCDD TEQ concentration from all the replicate ISM samples collected in Quadrant 2. The second row of each table provides a "central tendency exposure" ("CTE")8 estimate of ELCR (Table 2) or HQ (Table 3) based on the average TCDD TEQ concentration among the three Quadrant 2 SUs.

The RME and CTE cancer risk estimates for both residential and commercial/industrial receptors are within the EPA's target risk range of 1 in 1,000,000 (1E-6) to 1 in 10,000 (1E-4) identified in the National Contingency Plan ("NCP"), 40 C.F.R. Part 300, indicating that no remedial action to address dioxin/furan risks is warranted. Only the RME HQ for the residential receptor slightly exceeds EPA's target of 1. As described above, this HQ is based on a single ISM replicate result and is likely to significantly overestimate potential receptor exposure over the entire quadrant.

[8] The term "central tendency" is used here only with respect to the EPC used in the risk ratio calculation. It is noted that the exposure factors used in the derivation of the draft interim PRGs for both residential and commercial/industrial receptors reflect upper-bound or RME estimates.

4 CONCLUSIONS

The results of the ISM-based dioxin/furan characterization for OU3 demonstrate that the concentrations of dioxins/furans (as represented by TCDD TEQ) of are below the current EPA soil cleanup levels for TCDD TEQ in residential and commercial/industrial soil. Further, none of the replicate ISM samples exceed the more conservative interim draft recommended PRG values for TCDD TEQ in commercial/industrial soils. When these interim draft PRGs are used in risk ratio calculations for commercial/industrial receptors, the cancer risk estimates are within the NCP risk range and the HQ estimates below the regulatory threshold of 1. These results indicate that concentrations of dioxins/furans do not represent a health concern for future commercial or industrial uses LCP site.

4.1 Closing

As agreed in the meeting on March 10, 2011, the ISM sampling work will be summarized in the HHRA report for OU3. A description of this sampling effort will also be included in the Remedial Investigation Report for OU3.

Figures

LCP Site Showing Quadrants and ISM Sampling Units

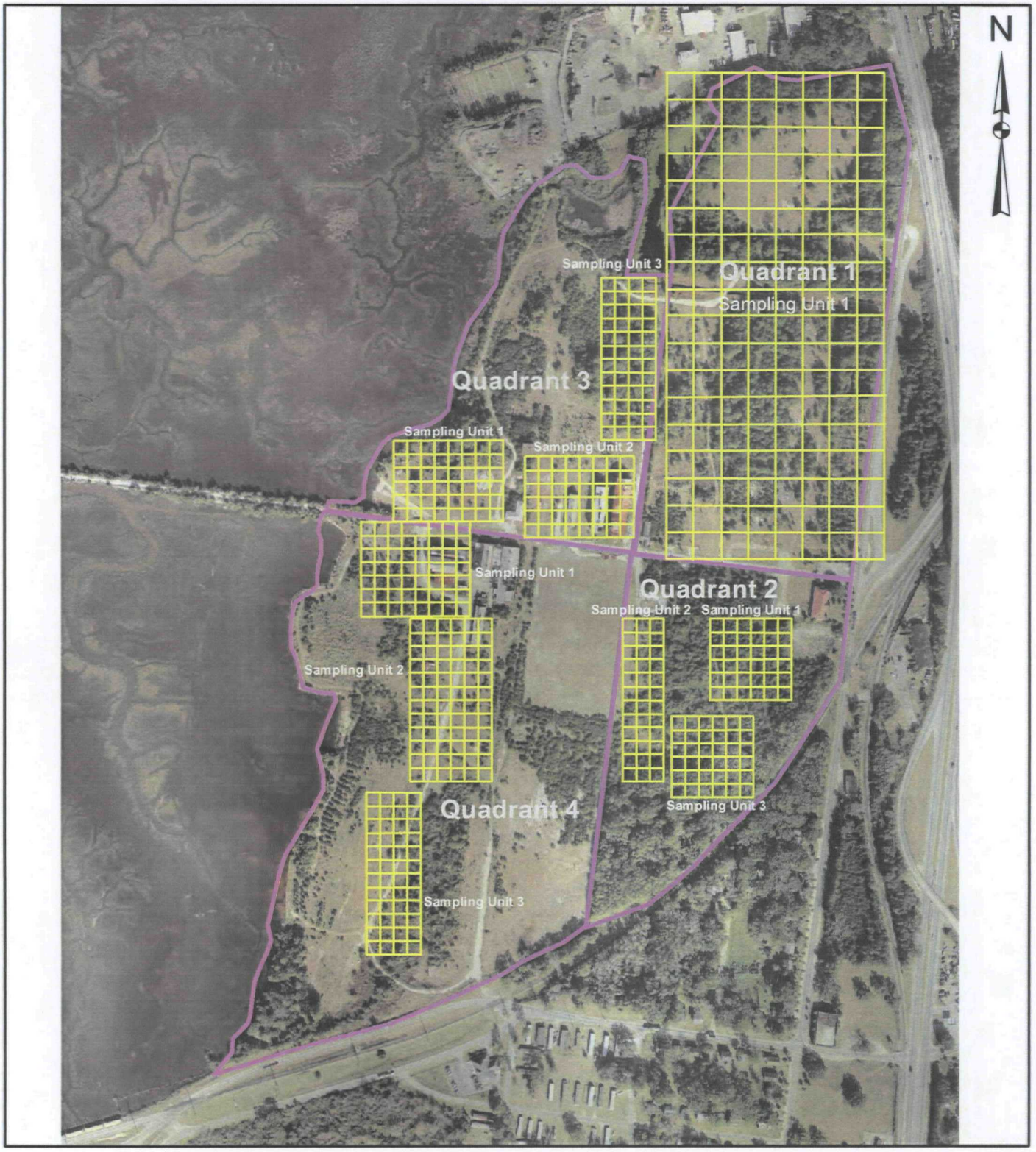

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Figure No.1

ISM Sample Locations – Quadrant 1

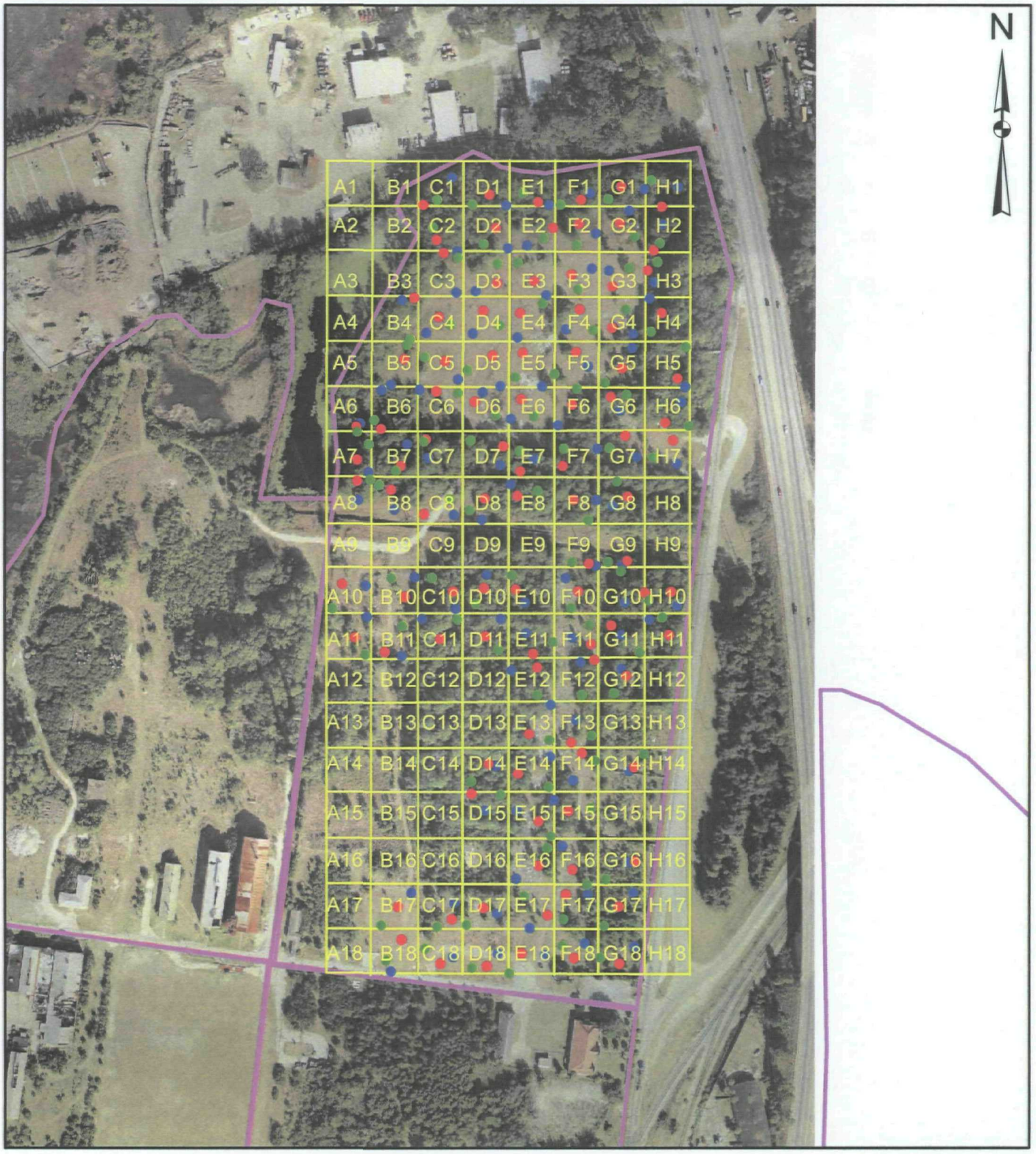

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Figure No.2

ISM Sample Locations – Quadrant 2

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Figure No.3

ISM Sample Locations – Quadrant 3

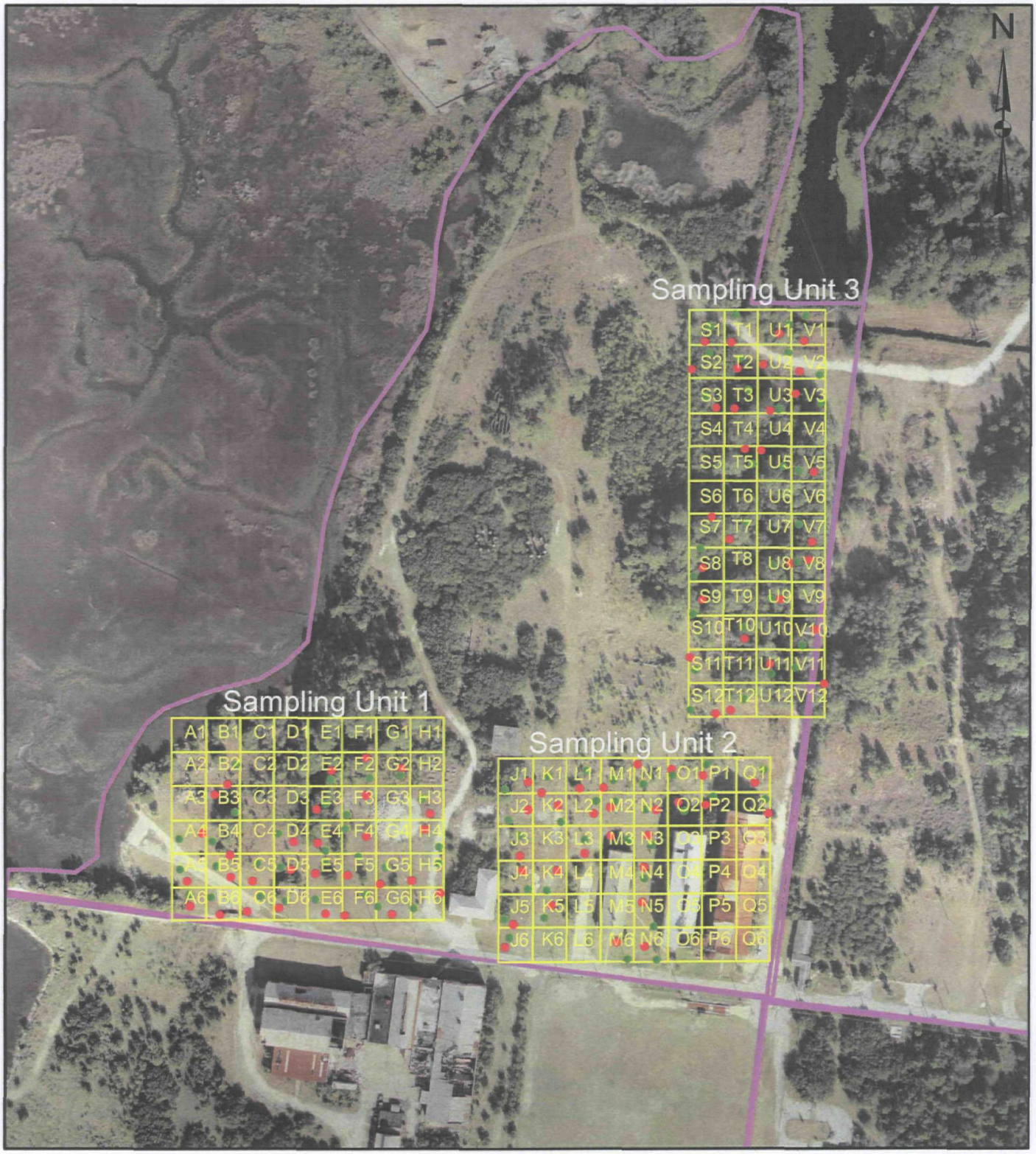

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Figure No.4

ISM Sample Locations – Quadrant 4

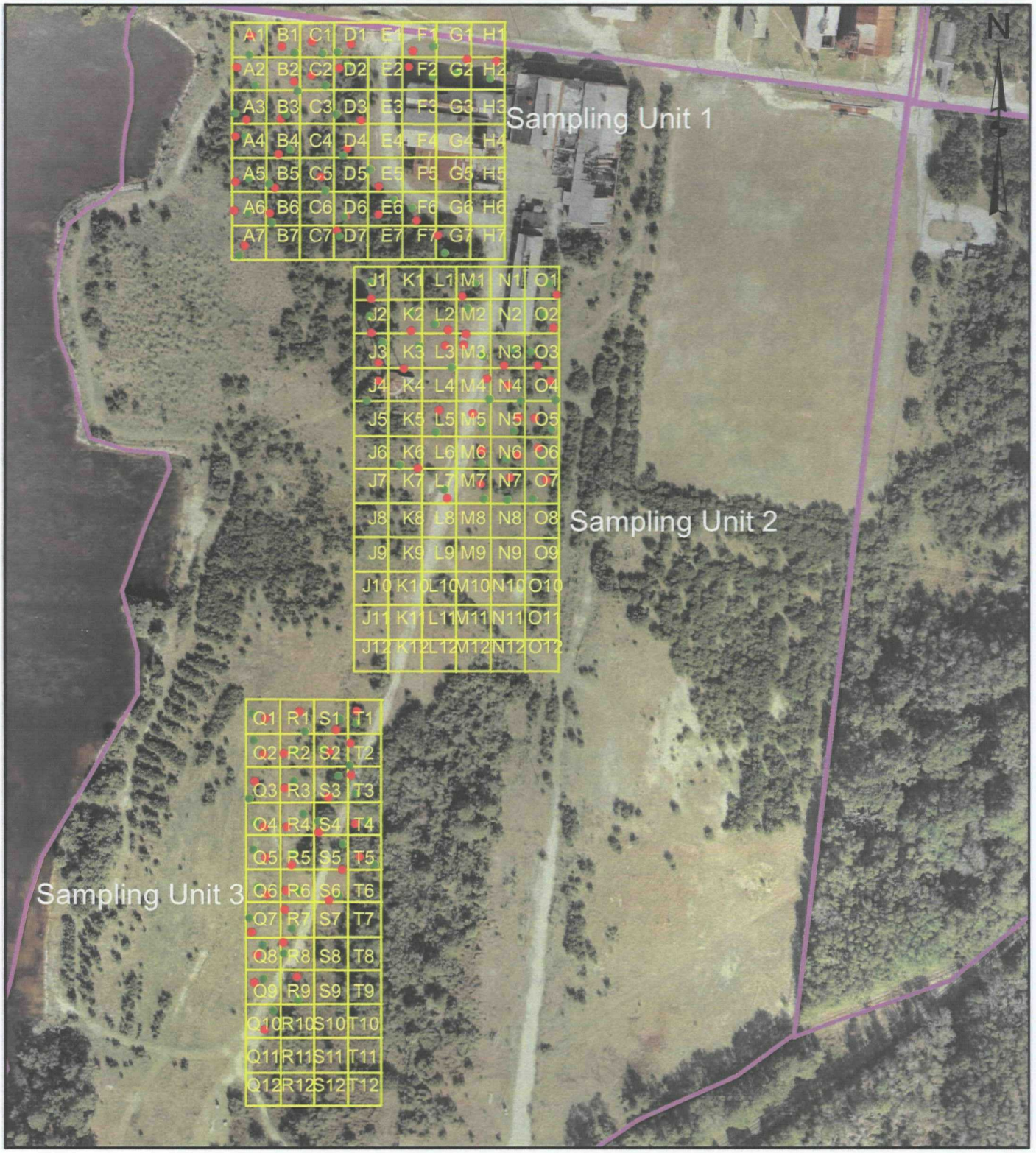

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Figure No.5

Tables

Table 1

TCDD TEQ Results from OU3 ISM Samples

Quadrant 1 TCDD TEQ (ng/kg)			Quadrant 2 TCDD TEQ (ng/kg)			Quadrant 3 TCDD TEQ (ng/kg)			Quadrant 4 TCDD TEQ (ng/kg)		
SAMPLE ID	1/2 DL for NDs	KM Method for NDs	SAMPLE ID	1/2 DL for NDs	KM Method for NDs	SAMPLE ID	1/2 DL for NDs	KM Method for NDs	SAMPLE ID	1/2 DL for NDs	KM Method for NDs
Q1-U1-R1 (lab rep A)	6.3	6.4	Q2-U1-R1	13	12.4	Q3-U1-R1	9.3	9.3	Q4-U1-R1	12	12.4
Q1-U1-R1 (lab rep B)	5.6	5.5	Q2-U1-R2	15	14.5	Q3-U1-R2	11	10.7	Q4-U1-R2	8	7.6
Q1-U1-R1 (lab rep C)	6.6	6.9	U1 Mean:	14.0	13.5	U1 Mean:	10.2	10.0	U1 Mean:	10.0	10.0
R1 Mean:	6.2	6.3	U1 StdDev:	1.41	1.48	U1 StdDev:	1.20	0.99	U1 StdDev:	2.83	3.39
R1 StdDev:	0.51	0.71	U1 RSD:	10.1%	11.0%	U1 RSD:	11.8%	9.9%	U1 RSD:	28.3%	33.9%
R1 RSD:	8.3%	11.3%									
Q1-U1-R2	5.5	5.2	Q2-U2-R1	81	81.2	Q3-U2-R1	38	38.3	Q4-U2-R1	5.1	5.0
Q1-U1-R3	6.3	6.3	Q2-U2-R2	120	117.8	Q3-U2-R2	46	46.5	Q4-U2-R2	1.2	1.1
			U2 Mean:	100.5	99.5	U2 Mean:	42.0	42.4	U2 Mean:	3.2	3.1
Q1-U1 Mean:	**6.0**	**5.8**	U2 StdDev:	27.58	25.88	U2 StdDev:	5.66	5.80	U2 StdDev:	2.76	2.76
Q1-U1 StdDev:	**0.43**	**0.60**	U2 RSD:	27.4%	26.0%	U2 RSD:	13.5%	13.7%	U2 RSD:	87.5%	90.4%
Q1-U1 RSD:	**7.2%**	**10.0%**									
95% UCL:	**6.7**		Q2-U3-R1	30	29.9	Q3-U3-R1	14	13.7	Q4-U3-R1	15	14.3
			Q2-U3-R2	30	29.4	Q3-U3-R2	22	22.4	Q4-U3-R2	14	13.9
			U3 Mean:	30.0	29.7	U3 Mean:	18.0	18.1	U3 Mean:	14.5	14.1
			U3 StdDev:	0.00	0.35	U3 StdDev:	5.66	6.15	U3 StdDev:	0.71	0.28
			U3 RSD:	0.0%	1.2%	U3 RSD:	31.4%	34.1%	U3 RSD:	4.9%	2.0%
			Q2 Grand Mean:	**48.2**	**47.7**	**Q3 Grand Mean:**	**23.4**	**24.9**	**Q4 Grand Mean:**	**9.2**	**9.3**
			Q2 Grand SD:	**46.0**	**45.5**	**Q3 Grand SD:**	**16.6**	**16.3**	**Q4 Grand SD:**	**5.7**	**5.8**
			Q2 Grand RSD:	**95.5%**	**95.5%**	**Q2 Grand RSD:**	**71.0%**	**65.7%**	**Q2 Grand RSD:**	**62.0%**	**62.1%**
			95% UCL:	**124.5**		**95% UCL:**	**52.4**		**95% UCL:**	**19.0**	

Table 2
Quadrant 2 Excess Lifetime Cancer Risk Estimates for TCDD TEQ

EPC TCDD TEQ	Basis	Units	Residential PRG (cancer)	Commercial/ Industrial PRG (cancer)[1]	Excess Lifetime Cancer Risk (Residential)[2]	Excess Lifetime Cancer Risk (Industrial)[2]
117.8	Max Replicate	ng/kg	3.7	17	3.2E-05	6.9E-06
47.7	SU Average	ng/kg	3.7	17	1.3E-05	2.8E-06

Notes:

(1) The more conservative draft interim PRG for outdoor Commercial/Industrial receptor used in the calculation.

(2) Excess Cancer Risk = (Concentration / PRG)× 1E-6

Table 3
Quadrant 2 Noncancer Hazard Quotients for TCDD TEQ

EPC TCDD TEQ	Basis	Units	Residential PRG (noncancer)	Commercial/ Industrial PRG (noncancer)[1]	Hazard Quotient (Residential)[2]	Hazard Quotient (Industrial)[2]
117.8	Max Replicate	ng/kg	72	950	1.6	0.1
47.7	SU Average	ng/kg	72	950	0.7	0.1

Notes:

(1) The more conservative draft interim PRG for outdoor Commercial/Industrial receptor used in the calculation.

(2) Hazard Quotient = (Concentration / PRG)

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Attachment A

Laboratory Data Reports

Environmental Planning Specialists Inc.

Sample ID: 10112-Q1-U1-R1

Trace Level Organic Compounds

SW846 8290

Lot - Sample #....:	G1D230436 - 001	**Work Order #....:**	MHFXV1AA	**Matrix....:**	SOLID
Date Sampled....:	04/22/11	**Date Received....:**	04/23/11	**Instrument ID....:**	4D5
Prep Date....:	04/25/11	**Analysis Date....:**	04/26/11	**% Moisture....:**	
Prep Batch # ....:	1115357	**Dilution Factor....:**	1	**Units.....:**	pg/g
Initial Wgt/Vol :	9.99 g	**Analyst ID....:**	Lisa L. Hernandez		

PARAMETER	RESULT		REPORTING LIMIT	ESTIMATED DETECTION LIMIT	TEF FACTOR	TEQ CONCENTRATION
2,3,7,8-TCDD	ND		1.0	0.20	1	0.10
Total TCDD	**1.7**		**1.0**	**0.020**		
1,2,3,7,8-PeCDD	**0.93**	**J**	**5.0**	**0.20**	**1**	**0.93**
Total PeCDD	**5.6**		**5.0**	**0.20**		
1,2,3,4,7,8-HxCDD	**1.2**	**J**	**5.0**	**0.93**	**0.1**	**0.12**
1,2,3,6,7,8-HxCDD	**3.2**	**J**	**5.0**	**0.66**	**0.1**	**0.32**
1,2,3,7,8,9-HxCDD	**2.7**	**J**	**5.0**	**0.68**	**0.1**	**0.27**
Total HxCDD	**37**		**5.0**	**0.74**		
1,2,3,4,6,7,8-HpCDD	**99**		**5.0**	**1.0**	**0.01**	**0.99**
Total HpCDD	**260**		**5.0**	**1.0**		
OCDD	**940**	**B**	**10**	**0.25**	**0.0003**	**0.28**
2,3,7,8-TCDF	**2.1**	**CON**	**1.0**	**0.16**	**0.1**	**0.21**
Total TCDF	**16**		**1.0**	**0.35**		
1,2,3,7,8-PeCDF	**2.0**	**J**	**5.0**	**0.27**	**0.03**	**0.060**
2,3,4,7,8-PeCDF	**2.4**	**J**	**5.0**	**0.27**	**0.3**	**0.72**
Total PeCDF	**34**		**5.0**	**0.27**		
1,2,3,4,7,8-HxCDF	**12**		**5.0**	**0.37**	**0.1**	**1.2**
1,2,3,6,7,8-HxCDF	**3.2**	**J**	**5.0**	**0.29**	**0.1**	**0.32**
2,3,4,6,7,8-HxCDF	**3.0**	**Q J**	**5.0**	**0.32**	**0.1**	**0.30**
1,2,3,7,8,9-HxCDF	ND		5.0	0.37	0.1	0.019
Total HxCDF	**59**		**5.0**	**0.33**		
1,2,3,4,6,7,8-HpCDF	**37**	**B**	**5.0**	**0.39**	**0.01**	**0.37**
1,2,3,4,7,8,9-HpCDF	**3.0**	**J**	**5.0**	**0.46**	**0.01**	**0.030**
Total HpCDF	**82**		**5.0**	**0.42**		
OCDF	**57**	**B**	**10**	**0.095**	**0.0003**	**0.017**
Total TEQ Concentration						**6.3**

Environmental Planning Specialists Inc.

Sample ID: 10112-Q1-U1-R1

Trace Level Organic Compounds

SW846 8290

Lot - Sample #....:	G1D230436 - 001	**Work Order #....:**	MHFXV1AA	**Matrix....:**	SOLID
Date Sampled....:	04/22/11	**Date Received....:**	04/23/11	**Instrument ID....:**	4D5
Prep Date....:	04/25/11	**Analysis Date....:**	04/26/11	**% Moisture....:**	
Prep Batch # ....:	1115357	**Dilution Factor....:**	1	**Units.....:**	pg/g
Initial Wgt/Vol :	9.99 g	**Analyst ID....:**	Lisa L. Hernandez		

INTERNAL STANDARDS	PERCENT RECOVERY	RECOVERY LIMITS
13C-2,3,7,8-TCDD	62	40 - 135
13C-1,2,3,7,8-PeCDD	67	40 - 135
13C-1,2,3,6,7,8-HxCDD	65	40 - 135
13C-1,2,3,4,6,7,8-HpCDD	65	40 - 135
13C-OCDD	71	40 - 135
13C-2,3,7,8-TCDF	62	40 - 135
13C-1,2,3,7,8-PeCDF	59	40 - 135
13C-1,2,3,4,7,8-HxCDF	60	40 - 135
13C-1,2,3,4,6,7,8-HpCDF	63	40 - 135

QUALIFIERS

Results and reporting limits have been adjusted for dry weight.

Notes:

ND = 1/2 x EDL x TEF

WHO TEFs for human risk assessment based on the conclusions of the World Health Organization meeting in Geneva, Switzerland, June 2005.

B	Method blank contamination. The associated method blank contains the target analyte at a reportable level.
CON	Confirmation analysis.
J	Estimated Result.
Q	Estimated maximum possible concentration (EMPC).

Environmental Planning Specialists Inc.

Sample ID: 10112-Q1-U1-R1

Trace Level Organic Compounds

SW846 8290

Lot - Sample #....:	G1D230436 - 001	**Work Order #....:**	MHFXV1AD	**Matrix....:**	SOLID
Date Sampled....:	04/22/11	**Date Received....:**	04/23/11	**Instrument ID....:**	4D5
Prep Date....:	04/25/11	**Analysis Date....:**	04/26/11	**% Moisture....:**	
Prep Batch # ....:	1115357	**Dilution Factor....:**	1	**Units.....:**	pg/g
Initial Wgt/Vol :	10 g	**Analyst ID....:**	Lisa L. Hernandez		

PARAMETER	RESULT		REPORTING LIMIT	ESTIMATED DETECTION LIMIT	TEF FACTOR	TEQ CONCENTRATION
2,3,7,8-TCDD	ND		1.0	0.24	1	0.12
Total TCDD	**2.3**		**1.0**	**0.10**		
1,2,3,7,8-PeCDD	ND		5.0	0.51	1	0.26
Total PeCDD	**4.2**		**5.0**	**0.33**		
1,2,3,4,7,8-HxCDD	**1.4**	**J**	**5.0**	**0.77**	**0.1**	**0.14**
1,2,3,6,7,8-HxCDD	**3.3**	**J**	**5.0**	**0.55**	**0.1**	**0.33**
1,2,3,7,8,9-HxCDD	**2.8**	**J**	**5.0**	**0.56**	**0.1**	**0.28**
Total HxCDD	**39**		**5.0**	**0.61**		
1,2,3,4,6,7,8-HpCDD	**92**		**5.0**	**1.5**	**0.01**	**0.92**
Total HpCDD	**240**		**5.0**	**1.5**		
OCDD	**910**	**B**	**10**	**2.6**	**0.0003**	**0.27**
2,3,7,8-TCDF	**2.2**	**CON**	**1.0**	**0.22**	**0.1**	**0.22**
Total TCDF	**16**		**1.0**	**0.49**		
1,2,3,7,8-PeCDF	**2.1**	**J Q**	**5.0**	**0.32**	**0.03**	**0.063**
2,3,4,7,8-PeCDF	**2.3**	**J**	**5.0**	**0.33**	**0.3**	**0.69**
Total PeCDF	**34**		**5.0**	**0.42**		
1,2,3,4,7,8-HxCDF	**12**		**5.0**	**0.24**	**0.1**	**1.2**
1,2,3,6,7,8-HxCDF	**3.3**	**J**	**5.0**	**0.19**	**0.1**	**0.33**
2,3,4,6,7,8-HxCDF	**3.6**	**J**	**5.0**	**0.21**	**0.1**	**0.36**
1,2,3,7,8,9-HxCDF	ND		5.0	0.24	0.1	0.012
Total HxCDF	**60**		**5.0**	**0.22**		
1,2,3,4,6,7,8-HpCDF	**37**	**B**	**5.0**	**0.24**	**0.01**	**0.37**
1,2,3,4,7,8,9-HpCDF	**3.1**	**J**	**5.0**	**0.28**	**0.01**	**0.031**
Total HpCDF	**82**		**5.0**	**0.26**		
OCDF	**57**	**B**	**10**	**0.45**	**0.0003**	**0.017**
Total TEQ Concentration						**5.6**

Environmental Planning Specialists Inc.

Sample ID: 10112-Q1-U1-R1

Trace Level Organic Compounds

SW846 8290

Lot - Sample #....:	G1D230436 - 001	**Work Order #....:**	MHFXV1AD	**Matrix....:**	SOLID
Date Sampled....:	04/22/11	**Date Received....:**	04/23/11	**Instrument ID....:**	4D5
Prep Date....:	04/25/11	**Analysis Date....:**	04/26/11	**% Moisture....:**	
Prep Batch # ....:	1115357	**Dilution Factor....:**	1	**Units.....:**	pg/g
Initial Wgt/Vol :	10 g	**Analyst ID....:**	Lisa L. Hernandez		

INTERNAL STANDARDS	PERCENT RECOVERY	RECOVERY LIMITS
13C-2,3,7,8-TCDD	51	40 - 135
13C-1,2,3,7,8-PeCDD	57	40 - 135
13C-1,2,3,6,7,8-HxCDD	52	40 - 135
13C-1,2,3,4,6,7,8-HpCDD	55	40 - 135
13C-OCDD	60	40 - 135
13C-2,3,7,8-TCDF	52	40 - 135
13C-1,2,3,7,8-PeCDF	50	40 - 135
13C-1,2,3,4,7,8-HxCDF	53	40 - 135
13C-1,2,3,4,6,7,8-HpCDF	52	40 - 135

QUALIFIERS

Results and reporting limits have been adjusted for dry weight.

Notes:

ND = 1/2 x EDL x TEF

WHO TEFs for human risk assessment based on the conclusions of the World Health Organization meeting in Geneva, Switzerland, June 2005.

B	Method blank contamination. The associated method blank contains the target analyte at a reportable level.
CON	Confirmation analysis.
J	Estimated Result.
Q	Estimated maximum possible concentration (EMPC).

Environmental Planning Specialists Inc.

Sample ID: 10112-Q1-U1-R1

Trace Level Organic Compounds

SW846 8290

Lot - Sample #....:	G1D230436 - 001	**Work Order #....:**	MHFXV1AE	**Matrix....:**	SOLID
Date Sampled....:	04/22/11	**Date Received....:**	04/23/11	**Instrument ID....:**	4D5
Prep Date....:	04/25/11	**Analysis Date....:**	04/26/11	**% Moisture....:**	
Prep Batch # ....:	1115357	**Dilution Factor....:**	1	**Units.....:**	pg/g
Initial Wgt/Vol :	9.96 g	**Analyst ID....:**	Lisa L. Hernandez		

PARAMETER	RESULT		REPORTING LIMIT	ESTIMATED DETECTION LIMIT	TEF FACTOR	TEQ CONCENTRATION
2,3,7,8-TCDD	ND		1.0	0.080	1	0.040
Total TCDD	**2.4**		**1.0**	**0.016**		
1,2,3,7,8-PeCDD	**0.77**	**J**	**5.0**	**0.30**	**1**	**0.77**
Total PeCDD	**4.6**		**5.0**	**0.30**		
1,2,3,4,7,8-HxCDD	**1.8**	**J**	**5.0**	**0.35**	**0.1**	**0.18**
1,2,3,6,7,8-HxCDD	**3.9**	**J**	**5.0**	**0.25**	**0.1**	**0.39**
1,2,3,7,8,9-HxCDD	**3.2**	**J**	**5.0**	**0.26**	**0.1**	**0.32**
Total HxCDD	**44**		**5.0**	**0.28**		
1,2,3,4,6,7,8-HpCDD	**110**		**5.0**	**0.87**	**0.01**	**1.1**
Total HpCDD	**260**		**5.0**	**0.87**		
OCDD	**1100**	**B**	**10**	**2.3**	**0.0003**	**0.33**
2,3,7,8-TCDF	**2.2**	**CON**	**1.0**	**0.19**	**0.1**	**0.22**
Total TCDF	**16**		**1.0**	**0.39**		
1,2,3,7,8-PeCDF	**2.2**	**J**	**5.0**	**0.32**	**0.03**	**0.066**
2,3,4,7,8-PeCDF	**2.4**	**J**	**5.0**	**0.33**	**0.3**	**0.72**
Total PeCDF	**35**		**5.0**	**0.32**		
1,2,3,4,7,8-HxCDF	**13**		**5.0**	**0.25**	**0.1**	**1.3**
1,2,3,6,7,8-HxCDF	**3.6**	**J**	**5.0**	**0.20**	**0.1**	**0.36**
2,3,4,6,7,8-HxCDF	**3.2**	**J**	**5.0**	**0.22**	**0.1**	**0.32**
1,2,3,7,8,9-HxCDF	ND		5.0	0.26	0.1	0.013
Total HxCDF	**62**		**5.0**	**0.23**		
1,2,3,4,6,7,8-HpCDF	**45**	**B**	**5.0**	**0.35**	**0.01**	**0.45**
1,2,3,4,7,8,9-HpCDF	**4.6**	**J**	**5.0**	**0.41**	**0.01**	**0.046**
Total HpCDF	**100**		**5.0**	**0.37**		
OCDF	**80**	**B**	**10**	**0.27**	**0.0003**	**0.024**
Total TEQ Concentration						**6.6**

Environmental Planning Specialists Inc.

Sample ID: 10112-Q1-U1-R1

Trace Level Organic Compounds

SW846 8290

Lot - Sample #....:	G1D230436 - 001	**Work Order #....:**	MHFXV1AE	**Matrix....:**	SOLID
Date Sampled....:	04/22/11	**Date Received....:**	04/23/11	**Instrument ID....:**	4D5
Prep Date....:	04/25/11	**Analysis Date....:**	04/26/11	**% Moisture....:**	
Prep Batch # ....:	1115357	**Dilution Factor....:**	1	**Units.....:**	pg/g
Initial Wgt/Vol :	9.96 g	**Analyst ID....:**	Lisa L. Hernandez		

INTERNAL STANDARDS	PERCENT RECOVERY	RECOVERY LIMITS
13C-2,3,7,8-TCDD	66	40 - 135
13C-1,2,3,7,8-PeCDD	77	40 - 135
13C-1,2,3,6,7,8-HxCDD	65	40 - 135
13C-1,2,3,4,6,7,8-HpCDD	74	40 - 135
13C-OCDD	80	40 - 135
13C-2,3,7,8-TCDF	70	40 - 135
13C-1,2,3,7,8-PeCDF	66	40 - 135
13C-1,2,3,4,7,8-HxCDF	71	40 - 135
13C-1,2,3,4,6,7,8-HpCDF	68	40 - 135

QUALIFIERS

Results and reporting limits have been adjusted for dry weight.

Notes:

ND = 1/2 x EDL x TEF

WHO TEFs for human risk assessment based on the conclusions of the World Health Organization meeting in Geneva, Switzerland, June 2005.

B	Method blank contamination. The associated method blank contains the target analyte at a reportable level.
CON	Confirmation analysis.
J	Estimated Result.

Environmental Planning Specialists Inc.

Sample ID: 10112-Q1-U1-R2

Trace Level Organic Compounds

SW846 8290

Lot - Sample #....:	G1D230436 - 002	**Work Order #....:**	MHFXW1AA	**Matrix.....:**	SOLID
Date Sampled....:	04/22/11	**Date Received....:**	04/23/11	**Instrument ID....:**	4D5
Prep Date....:	04/25/11	**Analysis Date....:**	04/26/11	**% Moisture....:**	
Prep Batch # ....:	1115357	**Dilution Factor....:**	1	**Units.....:**	pg/g
Initial Wgt/Vol :	10.01 g	**Analyst ID....:**	Lisa L. Hernandez		

PARAMETER	RESULT		REPORTING LIMIT	ESTIMATED DETECTION LIMIT	TEF FACTOR	TEQ CONCENTRATION
2,3,7,8-TCDD	ND		1.0	0.23	1	0.12
Total TCDD	**2.4**		**1.0**	**0.083**		
1,2,3,7,8-PeCDD	**0.65**	**J Q**	**5.0**	**0.22**	**1**	**0.65**
Total PeCDD	**4.6**		**5.0**	**0.22**		
1,2,3,4,7,8-HxCDD	**1.4**	**J**	**5.0**	**0.53**	**0.1**	**0.14**
1,2,3,6,7,8-HxCDD	**2.6**	**J**	**5.0**	**0.37**	**0.1**	**0.26**
1,2,3,7,8,9-HxCDD	**2.7**	**J**	**5.0**	**0.38**	**0.1**	**0.27**
Total HxCDD	**33**		**5.0**	**0.42**		
1,2,3,4,6,7,8-HpCDD	**81**		**5.0**	**1.1**	**0.01**	**0.81**
Total HpCDD	**210**		**5.0**	**1.1**		
OCDD	**850**	**B**	**10**	**1.8**	**0.0003**	**0.26**
2,3,7,8-TCDF	**2.3**	**CON**	**1.0**	**0.23**	**0.1**	**0.23**
Total TCDF	**16**		**1.0**	**0.52**		
1,2,3,7,8-PeCDF	**2.2**	**J**	**5.0**	**0.34**	**0.03**	**0.066**
2,3,4,7,8-PeCDF	**2.3**	**J**	**5.0**	**0.35**	**0.3**	**0.69**
Total PeCDF	**36**		**5.0**	**0.34**		
1,2,3,4,7,8-HxCDF	**11**		**5.0**	**0.20**	**0.1**	**1.1**
1,2,3,6,7,8-HxCDF	**2.9**	**J**	**5.0**	**0.16**	**0.1**	**0.29**
2,3,4,6,7,8-HxCDF	**2.9**	**Q J**	**5.0**	**0.17**	**0.1**	**0.29**
1,2,3,7,8,9-HxCDF	ND		5.0	0.20	0.1	0.010
Total HxCDF	**53**		**5.0**	**0.18**		
1,2,3,4,6,7,8-HpCDF	**32**	**B**	**5.0**	**0.38**	**0.01**	**0.32**
1,2,3,4,7,8,9-HpCDF	**2.8**	**J**	**5.0**	**0.45**	**0.01**	**0.028**
Total HpCDF	**68**		**5.0**	**0.41**		
OCDF	**45**	**B**	**10**	**0.41**	**0.0003**	**0.014**
Total TEQ Concentration						**5.5**

Environmental Planning Specialists Inc.

Sample ID: 10112-Q1-U1-R2

Trace Level Organic Compounds

SW846 8290

Lot - Sample #....:	G1D230436 - 002	**Work Order #....:**	MHFXW1AA	**Matrix....:**	SOLID
Date Sampled....:	04/22/11	**Date Received....:**	04/23/11	**Instrument ID....:**	4D5
Prep Date....:	04/25/11	**Analysis Date....:**	04/26/11	**% Moisture....:**	
Prep Batch # ....:	1115357	**Dilution Factor....:**	1	**Units.....:**	pg/g
Initial Wgt/Vol :	10.01 g	**Analyst ID....:**	Lisa L. Hernandez		

INTERNAL STANDARDS	PERCENT RECOVERY	RECOVERY LIMITS
13C-2,3,7,8-TCDD	62	40 - 135
13C-1,2,3,7,8-PeCDD	72	40 - 135
13C-1,2,3,6,7,8-HxCDD	66	40 - 135
13C-1,2,3,4,6,7,8-HpCDD	67	40 - 135
13C-OCDD	74	40 - 135
13C-2,3,7,8-TCDF	65	40 - 135
13C-1,2,3,7,8-PeCDF	60	40 - 135
13C-1,2,3,4,7,8-HxCDF	64	40 - 135
13C-1,2,3,4,6,7,8-HpCDF	63	40 - 135

QUALIFIERS

Results and reporting limits have been adjusted for dry weight.

Notes:

ND = 1/2 x EDL x TEF

WHO TEFs for human risk assessment based on the conclusions of the World Health Organization meeting in Geneva, Switzerland, June 2005.

B	Method blank contamination. The associated method blank contains the target analyte at a reportable level.
CON	Confirmation analysis.
J	Estimated Result.
Q	Estimated maximum possible concentration (EMPC).

Environmental Planning Specialists Inc.

Sample ID: 10112-Q1-U1-R3

Trace Level Organic Compounds

SW846 8290

Lot - Sample #....:	G1D230436 - 003	**Work Order #....:**	MHFXX1AA	**Matrix....:**	SOLID
Date Sampled....:	04/22/11	**Date Received....:**	04/23/11	**Instrument ID....:**	4D5
Prep Date....:	04/25/11	**Analysis Date....:**	04/26/11	**% Moisture....:**	
Prep Batch # ....:	1115357	**Dilution Factor....:**	1	**Units.....:**	pg/g
Initial Wgt/Vol :	9.98 g	**Analyst ID....:**	Lisa L. Hernandez		

PARAMETER	RESULT		REPORTING LIMIT	ESTIMATED DETECTION LIMIT	TEF FACTOR	TEQ CONCENTRATION
2,3,7,8-TCDD	ND		1.0	0.12	1	0.060
Total TCDD	**2.6**		**1.0**	**0.054**		
1,2,3,7,8-PeCDD	**0.74**	**J**	**5.0**	**0.25**	**1**	**0.74**
Total PeCDD	**4.6**		**5.0**	**0.25**		
1,2,3,4,7,8-HxCDD	**1.4**	**J Q**	**5.0**	**0.49**	**0.1**	**0.14**
1,2,3,6,7,8-HxCDD	**5.5**		**5.0**	**0.35**	**0.1**	**0.55**
1,2,3,7,8,9-HxCDD	**3.5**	**J**	**5.0**	**0.36**	**0.1**	**0.35**
Total HxCDD	**47**		**5.0**	**0.39**		
1,2,3,4,6,7,8-HpCDD	**140**		**5.0**	**0.74**	**0.01**	**1.4**
Total HpCDD	**290**		**5.0**	**0.74**		
OCDD	**1200**	**B**	**10**	**2.2**	**0.0003**	**0.36**
2,3,7,8-TCDF	**2.4**	**CON**	**1.0**	**0.16**	**0.1**	**0.24**
Total TCDF	**13**		**1.0**	**0.49**		
1,2,3,7,8-PeCDF	**2.0**	**J**	**5.0**	**0.27**	**0.03**	**0.060**
2,3,4,7,8-PeCDF	**2.2**	**J**	**5.0**	**0.27**	**0.3**	**0.66**
Total PeCDF	**31**		**5.0**	**0.29**		
1,2,3,4,7,8-HxCDF	**7.9**		**5.0**	**0.20**	**0.1**	**0.79**
1,2,3,6,7,8-HxCDF	**2.5**	**J**	**5.0**	**0.16**	**0.1**	**0.25**
2,3,4,6,7,8-HxCDF	**2.4**	**J**	**5.0**	**0.18**	**0.1**	**0.24**
1,2,3,7,8,9-HxCDF	ND		5.0	0.20	0.1	0.010
Total HxCDF	**50**		**5.0**	**0.18**		
1,2,3,4,6,7,8-HpCDF	**43**	**B**	**5.0**	**0.28**	**0.01**	**0.43**
1,2,3,4,7,8,9-HpCDF	**3.3**	**J**	**5.0**	**0.33**	**0.01**	**0.033**
Total HpCDF	**120**		**5.0**	**0.30**		
OCDF	**120**	**B**	**10**	**0.24**	**0.0003**	**0.036**
Total TEQ Concentration						**6.3**

Environmental Planning Specialists Inc.

Sample ID: 10112-Q1-U1-R3

Trace Level Organic Compounds

SW846 8290

Lot - Sample #....:	G1D230436 - 003	**Work Order #....:**	MHFXX1AA	**Matrix....:**	SOLID
Date Sampled....:	04/22/11	**Date Received....:**	04/23/11	**Instrument ID....:**	4D5
Prep Date....:	04/25/11	**Analysis Date....:**	04/26/11	**% Moisture....:**	
Prep Batch # ....:	1115357	**Dilution Factor....:**	1	**Units.....:**	pg/g
Initial Wgt/Vol :	9.98 g	**Analyst ID....:**	Lisa L. Hernandez		

INTERNAL STANDARDS	PERCENT RECOVERY	RECOVERY LIMITS
13C-2,3,7,8-TCDD	72	40 - 135
13C-1,2,3,7,8-PeCDD	85	40 - 135
13C-1,2,3,6,7,8-HxCDD	69	40 - 135
13C-1,2,3,4,6,7,8-HpCDD	80	40 - 135
13C-OCDD	90	40 - 135
13C-2,3,7,8-TCDF	76	40 - 135
13C-1,2,3,7,8-PeCDF	71	40 - 135
13C-1,2,3,4,7,8-HxCDF	80	40 - 135
13C-1,2,3,4,6,7,8-HpCDF	73	40 - 135

QUALIFIERS

Results and reporting limits have been adjusted for dry weight.

Notes:

ND = 1/2 x EDL x TEF

WHO TEFs for human risk assessment based on the conclusions of the World Health Organization meeting in Geneva, Switzerland, June 2005.

B	Method blank contamination. The associated method blank contains the target analyte at a reportable level.
CON	Confirmation analysis.
J	Estimated Result.
Q	Estimated maximum possible concentration (EMPC).

Environmental Planning Specialists Inc.

Sample ID: 11118-Q2-U1-R1

Trace Level Organic Compounds

SW846 8290

Lot - Sample #....:	G1D290626 - 013	**Work Order #....:**	MHPL11AA	**Matrix....:**	SOLID
Date Sampled....:	04/28/11	**Date Received....:**	04/29/11	**Instrument ID....:**	9D5
Prep Date....:	05/06/11	**Analysis Date....:**	05/14/11	**% Moisture....:**	
Prep Batch # ....:	1126235	**Dilution Factor....:**	0.99	**Units.....:**	pg/g
Initial Wgt/Vol :	10.06 g	**Analyst ID....:**	Sylvia H. Krenn		

PARAMETER	RESULT		REPORTING LIMIT	ESTIMATED DETECTION LIMIT	TEF FACTOR	TEQ CONCENTRATION
2,3,7,8-TCDD	ND		0.99	0.37	1	0.18
Total TCDD	**0.47**		**0.99**	**0.37**		
1,2,3,7,8-PeCDD	ND		5.0	0.78	1	0.39
Total PeCDD	**0.82**		**5.0**	**0.78**		
1,2,3,4,7,8-HxCDD	ND		5.0	0.87	0.1	0.043
1,2,3,6,7,8-HxCDD	**1.2**	**J**	**5.0**	**0.60**	**0.1**	**0.12**
1,2,3,7,8,9-HxCDD	**1.1**	**J Q**	**5.0**	**0.60**	**0.1**	**0.11**
Total HxCDD	**17**		**5.0**	**0.67**		
1,2,3,4,6,7,8-HpCDD	**29**		**5.0**	**3.7**	**0.01**	**0.29**
Total HpCDD	**87**		**5.0**	**3.7**		
OCDD	**320**	**B**	**9.9**	**6.9**	**0.0003**	**0.096**
2,3,7,8-TCDF	**5.0**	**CON**	**0.99**	**0.15**	**0.1**	**0.50**
Total TCDF	**19**		**0.99**	**0.93**		
1,2,3,7,8-PeCDF	**4.9**	**J**	**5.0**	**0.64**	**0.03**	**0.15**
2,3,4,7,8-PeCDF	**5.8**		**5.0**	**0.65**	**0.3**	**1.7**
Total PeCDF	**45**		**5.0**	**0.65**		
1,2,3,4,7,8-HxCDF	**56**		**5.0**	**1.0**	**0.1**	**5.6**
1,2,3,6,7,8-HxCDF	**8.3**		**5.0**	**0.74**	**0.1**	**0.83**
2,3,4,6,7,8-HxCDF	**15**		**5.0**	**0.86**	**0.1**	**1.5**
1,2,3,7,8,9-HxCDF	ND		5.0	1.1	0.1	0.055
Total HxCDF	**180**		**5.0**	**0.90**		
1,2,3,4,6,7,8-HpCDF	**140**	**B**	**5.0**	**0.33**	**0.01**	**1.4**
1,2,3,4,7,8,9-HpCDF	**7.1**		**5.0**	**0.41**	**0.01**	**0.071**
Total HpCDF	**200**		**5.0**	**0.37**		
OCDF	**130**	**B**	**9.9**	**0.28**	**0.0003**	**0.039**
Total TEQ Concentration						**13**

Environmental Planning Specialists Inc.

Sample ID: 11118-Q2-U1-R1

Trace Level Organic Compounds

SW846 8290

Lot - Sample #....:	G1D290626 - 013	**Work Order #....:**	MHPL11AA	**Matrix....:**	SOLID
Date Sampled....:	04/28/11	**Date Received....:**	04/29/11	**Instrument ID....:**	9D5
Prep Date....:	05/06/11	**Analysis Date....:**	05/14/11	**% Moisture....:**	
Prep Batch # ....:	1126235	**Dilution Factor....:**	0.99	**Units.....:**	pg/g
Initial Wgt/Vol :	10.06 g	**Analyst ID....:**	Sylvia H. Krenn		

INTERNAL STANDARDS	PERCENT RECOVERY	RECOVERY LIMITS
13C-2,3,7,8-TCDD	65	40 - 135
13C-1,2,3,7,8-PeCDD	64	40 - 135
13C-1,2,3,6,7,8-HxCDD	72	40 - 135
13C-1,2,3,4,6,7,8-HpCDD	71	40 - 135
13C-OCDD	69	40 - 135
13C-2,3,7,8-TCDF	66	40 - 135
13C-1,2,3,7,8-PeCDF	69	40 - 135
13C-1,2,3,4,7,8-HxCDF	71	40 - 135
13C-1,2,3,4,6,7,8-HpCDF	75	40 - 135

QUALIFIERS

Results and reporting limits have been adjusted for dry weight.

Notes:

ND = 1/2 x EDL x TEF

WHO TEFs for human risk assessment based on the conclusions of the World Health Organization meeting in Geneva, Switzerland, June 2005.

B	Method blank contamination. The associated method blank contains the target analyte at a reportable level.
CON	Confirmation analysis.
J	Estimated Result.
Q	Estimated maximum possible concentration (EMPC).

Environmental Planning Specialists Inc.

Sample ID: 11118-Q2-U1-R2

Trace Level Organic Compounds

SW846 8290

Lot - Sample #....:	G1D290626 - 014	**Work Order #....:**	MHPL21AA	**Matrix....:**	SOLID
Date Sampled....:	04/28/11	**Date Received....:**	04/29/11	**Instrument ID....:**	9D5
Prep Date....:	05/06/11	**Analysis Date....:**	05/14/11	**% Moisture....:**	
Prep Batch # ....:	1126235	**Dilution Factor....:**	1	**Units.....:**	pg/g
Initial Wgt/Vol :	10 g	**Analyst ID....:**	Sylvia H. Krenn		

PARAMETER	RESULT		REPORTING LIMIT	ESTIMATED DETECTION LIMIT	TEF FACTOR	TEQ CONCENTRATION
2,3,7,8-TCDD	ND		1.0	0.32	1	0.16
Total TCDD	**0.87**		**1.0**	**0.32**		
1,2,3,7,8-PeCDD	ND		5.0	0.69	1	0.34
Total PeCDD	**1.7**		**5.0**	**0.69**		
1,2,3,4,7,8-HxCDD	**1.0**	**J Q**	**5.0**	**0.88**	**0.1**	**0.10**
1,2,3,6,7,8-HxCDD	**1.2**	**J Q**	**5.0**	**0.61**	**0.1**	**0.12**
1,2,3,7,8,9-HxCDD	**1.1**	**J Q**	**5.0**	**0.61**	**0.1**	**0.11**
Total HxCDD	**20**		**5.0**	**0.68**		
1,2,3,4,6,7,8-HpCDD	**34**		**5.0**	**3.7**	**0.01**	**0.34**
Total HpCDD	**99**		**5.0**	**3.7**		
OCDD	**370**	**B**	**10**	**7.6**	**0.0003**	**0.11**
2,3,7,8-TCDF	**6.3**	**CON**	**1.0**	**0.17**	**0.1**	**0.63**
Total TCDF	**26**		**1.0**	**0.80**		
1,2,3,7,8-PeCDF	**5.6**		**5.0**	**0.57**	**0.03**	**0.17**
2,3,4,7,8-PeCDF	**6.9**		**5.0**	**0.58**	**0.3**	**2.1**
Total PeCDF	**58**		**5.0**	**0.57**		
1,2,3,4,7,8-HxCDF	**61**		**5.0**	**1.1**	**0.1**	**6.1**
1,2,3,6,7,8-HxCDF	**11**		**5.0**	**0.83**	**0.1**	**1.1**
2,3,4,6,7,8-HxCDF	**16**		**5.0**	**0.96**	**0.1**	**1.6**
1,2,3,7,8,9-HxCDF	ND		5.0	1.2	0.1	0.060
Total HxCDF	**220**		**5.0**	**1.0**		
1,2,3,4,6,7,8-HpCDF	**160**	**B**	**5.0**	**0.45**	**0.01**	**1.6**
1,2,3,4,7,8,9-HpCDF	**8.6**		**5.0**	**0.56**	**0.01**	**0.086**
Total HpCDF	**240**		**5.0**	**0.49**		
OCDF	**140**	**B**	**10**	**0.22**	**0.0003**	**0.042**
Total TEQ Concentration						**15**

Environmental Planning Specialists Inc.

Sample ID: 11118-Q2-U1-R2

Trace Level Organic Compounds

SW846 8290

Lot - Sample #....:	G1D290626 - 014	**Work Order #....:**	MHPL21AA	**Matrix....:**	SOLID
Date Sampled....:	04/28/11	**Date Received....:**	04/29/11	**Instrument ID....:**	9D5
Prep Date....:	05/06/11	**Analysis Date....:**	05/14/11	**% Moisture....:**	
Prep Batch # ....:	1126235	**Dilution Factor....:**	1	**Units.....:**	pg/g
Initial Wgt/Vol :	10 g	**Analyst ID....:**	Sylvia H. Krenn		

INTERNAL STANDARDS	PERCENT RECOVERY	RECOVERY LIMITS
13C-2,3,7,8-TCDD	73	40 - 135
13C-1,2,3,7,8-PeCDD	73	40 - 135
13C-1,2,3,6,7,8-HxCDD	77	40 - 135
13C-1,2,3,4,6,7,8-HpCDD	80	40 - 135
13C-OCDD	80	40 - 135
13C-2,3,7,8-TCDF	75	40 - 135
13C-1,2,3,7,8-PeCDF	80	40 - 135
13C-1,2,3,4,7,8-HxCDF	85	40 - 135
13C-1,2,3,4,6,7,8-HpCDF	84	40 - 135

QUALIFIERS

Results and reporting limits have been adjusted for dry weight.

Notes:

ND = 1/2 x EDL x TEF

WHO TEFs for human risk assessment based on the conclusions of the World Health Organization meeting in Geneva, Switzerland, June 2005.

B	Method blank contamination. The associated method blank contains the target analyte at a reportable level.
CON	Confirmation analysis.
J	Estimated Result.
Q	Estimated maximum possible concentration (EMPC).

Environmental Planning Specialists Inc.

Sample ID: 11118-Q2-U2-R1

Trace Level Organic Compounds

SW846 8290

Lot - Sample #....:	G1D290626 - 015	**Work Order #....:**	MHPL31AA	**Matrix.....:**	SOLID
Date Sampled....:	04/28/11	**Date Received....:**	04/29/11	**Instrument ID....:**	9D5
Prep Date....:	05/06/11	**Analysis Date....:**	05/14/11	**% Moisture....:**	
Prep Batch # ....:	1126235	**Dilution Factor....:**	0.99	**Units.....:**	pg/g
Initial Wgt/Vol :	10.02 g	**Analyst ID....:**	Sylvia H. Krenn		

PARAMETER	RESULT		REPORTING LIMIT	ESTIMATED DETECTION LIMIT	TEF FACTOR	TEQ CONCENTRATION
2,3,7,8-TCDD	ND		1.0	0.45	1	0.22
Total TCDD	**3.0**		**1.0**	**0.45**		
1,2,3,7,8-PeCDD	**1.7**	**J**	**5.0**	**1.2**	**1**	**1.7**
Total PeCDD	**17**		**5.0**	**1.2**		
1,2,3,4,7,8-HxCDD	**7.6**	**Q**	**5.0**	**4.8**	**0.1**	**0.76**
1,2,3,6,7,8-HxCDD	**19**		**5.0**	**3.4**	**0.1**	**1.9**
1,2,3,7,8,9-HxCDD	**8.4**		**5.0**	**3.4**	**0.1**	**0.84**
Total HxCDD	**530**		**5.0**	**3.7**		
1,2,3,4,6,7,8-HpCDD	**1400**	**G**	**10**	**10**	**0.01**	**14**
Total HpCDD	**7600**		**10**	**10**		
OCDD	**15000**	**E G B**	**47**	**47**	**0.0003**	**4.5**
2,3,7,8-TCDF	**38**	**CON**	**1.0**	**0.20**	**0.1**	**3.8**
Total TCDF	**130**		**1.2**	**1.2**		
1,2,3,7,8-PeCDF	**29**		**5.0**	**0.66**	**0.03**	**0.87**
2,3,4,7,8-PeCDF	**27**		**5.0**	**0.68**	**0.3**	**8.1**
Total PeCDF	**200**		**5.0**	**0.67**		
1,2,3,4,7,8-HxCDF	**260**		**5.0**	**1.8**	**0.1**	**26**
1,2,3,6,7,8-HxCDF	**49**		**5.0**	**1.4**	**0.1**	**4.9**
2,3,4,6,7,8-HxCDF	**63**		**5.0**	**1.6**	**0.1**	**6.3**
1,2,3,7,8,9-HxCDF	ND		5.0	2.0	0.1	0.10
Total HxCDF	**820**		**5.0**	**1.7**		
1,2,3,4,6,7,8-HpCDF	**620**		**5.0**	**4.2**	**0.01**	**6.2**
1,2,3,4,7,8,9-HpCDF	**46**	**G B**	**5.2**	**5.2**	**0.01**	**0.46**
Total HpCDF	**1300**		**5.0**	**4.6**		
OCDF	**1200**	**B**	**10**	**3.6**	**0.0003**	**0.36**
Total TEQ Concentration						**81**

Environmental Planning Specialists Inc.

Sample ID: 11118-Q2-U2-R1

Trace Level Organic Compounds

SW846 8290

Lot - Sample #....:	G1D290626 - 015	**Work Order #....:**	MHPL31AA	**Matrix.....:**	SOLID
Date Sampled....:	04/28/11	**Date Received....:**	04/29/11	**Instrument ID....:**	9D5
Prep Date....:	05/06/11	**Analysis Date....:**	05/14/11	**% Moisture....:**	
Prep Batch # ....:	1126235	**Dilution Factor....:**	0.99	**Units.....:**	pg/g
Initial Wgt/Vol :	10.02 g	**Analyst ID....:**	Sylvia H. Krenn		

INTERNAL STANDARDS	PERCENT RECOVERY	RECOVERY LIMITS
13C-2,3,7,8-TCDD	77	40 - 135
13C-1,2,3,7,8-PeCDD	83	40 - 135
13C-1,2,3,6,7,8-HxCDD	77	40 - 135
13C-1,2,3,4,6,7,8-HpCDD	84	40 - 135
13C-OCDD	103	40 - 135
13C-2,3,7,8-TCDF	80	40 - 135
13C-1,2,3,7,8-PeCDF	88	40 - 135
13C-1,2,3,4,7,8-HxCDF	87	40 - 135
13C-1,2,3,4,6,7,8-HpCDF	88	40 - 135

QUALIFIERS

Results and reporting limits have been adjusted for dry weight.

Notes:

ND = 1/2 x EDL x TEF

WHO TEFs for human risk assessment based on the conclusions of the World Health Organization meeting in Geneva, Switzerland, June 2005.

B	Method blank contamination. The associated method blank contains the target analyte at a reportable level.
CON	Confirmation analysis.
E	Estimated result. Result concentration exceeds the calibration range.
G	Elevated reporting limit. The reporting limit is elevated due to matrix interference.
J	Estimated Result.
Q	Estimated maximum possible concentration (EMPC).

Environmental Planning Specialists Inc.

Sample ID: 11118-Q2-U2-R2

Trace Level Organic Compounds

SW846 8290

Lot - Sample #....:	G1D290626 - 016	**Work Order #....:**	MHPL41AA	**Matrix....:**	SOLID
Date Sampled....:	04/28/11	**Date Received....:**	04/29/11	**Instrument ID....:**	9D5
Prep Date....:	05/06/11	**Analysis Date....:**	05/14/11	**% Moisture....:**	
Prep Batch # ....:	1126235	**Dilution Factor....:**	1	**Units.....:**	pg/g
Initial Wgt/Vol :	10 g	**Analyst ID....:**	Sylvia H. Krenn		

PARAMETER	RESULT		REPORTING LIMIT	ESTIMATED DETECTION LIMIT	TEF FACTOR	TEQ CONCENTRATION
2,3,7,8-TCDD	ND		1.0	0.40	1	0.20
Total TCDD	**2.3**		**1.0**	**0.40**		
1,2,3,7,8-PeCDD	**1.5**	**J**	**5.0**	**1.0**	**1**	**1.5**
Total PeCDD	**12**		**5.0**	**1.0**		
1,2,3,4,7,8-HxCDD	**6.1**	**Q**	**5.0**	**2.5**	**0.1**	**0.61**
1,2,3,6,7,8-HxCDD	**31**		**5.0**	**1.7**	**0.1**	**3.1**
1,2,3,7,8,9-HxCDD	**6.5**		**5.0**	**1.7**	**0.1**	**0.65**
Total HxCDD	**310**		**5.0**	**1.9**		
1,2,3,4,6,7,8-HpCDD	**2300**	**E G**	**19**	**19**	**0.01**	**23**
Total HpCDD	**6100**		**19**	**19**		
OCDD	**23000**	**E G B**	**72**	**72**	**0.0003**	**6.9**
2,3,7,8-TCDF	**36**	**CON**	**1.0**	**0.24**	**0.1**	**3.6**
Total TCDF	**120**		**1.1**	**1.1**		
1,2,3,7,8-PeCDF	**34**		**5.0**	**0.67**	**0.03**	**1.0**
2,3,4,7,8-PeCDF	**28**		**5.0**	**0.69**	**0.3**	**8.4**
Total PeCDF	**200**		**5.0**	**0.68**		
1,2,3,4,7,8-HxCDF	**410**		**5.0**	**1.8**	**0.1**	**41**
1,2,3,6,7,8-HxCDF	**88**		**5.0**	**1.3**	**0.1**	**8.8**
2,3,4,6,7,8-HxCDF	**66**		**5.0**	**1.5**	**0.1**	**6.6**
1,2,3,7,8,9-HxCDF	**2.1**	**J**	**5.0**	**1.9**	**0.1**	**0.21**
Total HxCDF	**1100**		**5.0**	**1.6**		
1,2,3,4,6,7,8-HpCDF	**1000**	**B**	**5.0**	**1.1**	**0.01**	**10.0**
1,2,3,4,7,8,9-HpCDF	**140**		**5.0**	**1.4**	**0.01**	**1.4**
Total HpCDF	**2300**		**5.0**	**1.3**		
OCDF	**2600**	**B**	**10**	**0.20**	**0.0003**	**0.78**
Total TEQ Concentration						**120**

Environmental Planning Specialists Inc.

Sample ID: 11118-Q2-U2-R2

Trace Level Organic Compounds

SW846 8290

Lot - Sample #....:	G1D290626 - 016	**Work Order #....:**	MHPL41AA	**Matrix....:**	SOLID
Date Sampled....:	04/28/11	**Date Received....:**	04/29/11	**Instrument ID....:**	9D5
Prep Date....:	05/06/11	**Analysis Date....:**	05/14/11	**% Moisture....:**	
Prep Batch # ....:	1126235	**Dilution Factor....:**	1	**Units.....:**	pg/g
Initial Wgt/Vol :	10 g	**Analyst ID....:**	Sylvia H. Krenn		

INTERNAL STANDARDS	PERCENT RECOVERY	RECOVERY LIMITS
13C-2,3,7,8-TCDD	78	40 - 135
13C-1,2,3,7,8-PeCDD	82	40 - 135
13C-1,2,3,6,7,8-HxCDD	86	40 - 135
13C-1,2,3,4,6,7,8-HpCDD	89	40 - 135
13C-OCDD	121	40 - 135
13C-2,3,7,8-TCDF	81	40 - 135
13C-1,2,3,7,8-PeCDF	88	40 - 135
13C-1,2,3,4,7,8-HxCDF	96	40 - 135
13C-1,2,3,4,6,7,8-HpCDF	96	40 - 135

QUALIFIERS

Results and reporting limits have been adjusted for dry weight.

Notes:

ND = 1/2 x EDL x TEF

WHO TEFs for human risk assessment based on the conclusions of the World Health Organization meeting in Geneva, Switzerland, June 2005.

B	Method blank contamination. The associated method blank contains the target analyte at a reportable level.
CON	Confirmation analysis.
E	Estimated result. Result concentration exceeds the calibration range.
G	Elevated reporting limit. The reporting limit is elevated due to matrix interference.
J	Estimated Result.
Q	Estimated maximum possible concentration (EMPC).

Environmental Planning Specialists Inc.

Sample ID: 11119-Q2-U3-R1

Trace Level Organic Compounds

SW846 8290

Lot - Sample #....:	G1D300512 - 001	**Work Order #....:**	MHP7C1AA	**Matrix.....:**	SOLID
Date Sampled....:	04/29/11	**Date Received....:**	04/30/11	**Instrument ID....:**	9D5
Prep Date....:	05/06/11	**Analysis Date....:**	05/17/11	**% Moisture....:**	
Prep Batch # ....:	1126235	**Dilution Factor....:**	0.97	**Units.....:**	pg/g
Initial Wgt/Vol :	10.33 g	**Analyst ID....:**	Lisa L. Hernandez		

PARAMETER	RESULT		REPORTING LIMIT	ESTIMATED DETECTION LIMIT	TEF FACTOR	TEQ CONCENTRATION
2,3,7,8-TCDD	**0.25**	**J Q**	**0.97**	**0.13**	**1**	**0.25**
Total TCDD	**4.0**		**0.97**	**0.13**		
1,2,3,7,8-PeCDD	**0.73**	**J**	**4.8**	**0.61**	**1**	**0.73**
Total PeCDD	**2.5**		**4.8**	**0.61**		
1,2,3,4,7,8-HxCDD	**1.2**	**J Q**	**4.8**	**1.0**	**0.1**	**0.12**
1,2,3,6,7,8-HxCDD	**1.7**	**J Q**	**4.8**	**0.72**	**0.1**	**0.17**
1,2,3,7,8,9-HxCDD	**0.98**	**J Q**	**4.8**	**0.72**	**0.1**	**0.098**
Total HxCDD	**14**		**4.8**	**0.80**		
1,2,3,4,6,7,8-HpCDD	**32**	**G**	**5.6**	**5.6**	**0.01**	**0.32**
Total HpCDD	**90**		**4.8**	**5.6**		
OCDD	**280**	**B**	**9.7**	**6.2**	**0.0003**	**0.084**
2,3,7,8-TCDF	**6.6**	**CON**	**0.97**	**0.12**	**0.1**	**0.66**
Total TCDF	**33**		**0.97**	**0.41**		
1,2,3,7,8-PeCDF	**6.6**		**4.8**	**0.46**	**0.03**	**0.20**
2,3,4,7,8-PeCDF	**13**		**4.8**	**0.47**	**0.3**	**3.9**
Total PeCDF	**98**		**4.8**	**0.47**		
1,2,3,4,7,8-HxCDF	**130**		**4.8**	**1.6**	**0.1**	**13**
1,2,3,6,7,8-HxCDF	**19**		**4.8**	**1.2**	**0.1**	**1.9**
2,3,4,6,7,8-HxCDF	**40**		**4.8**	**1.4**	**0.1**	**4.0**
1,2,3,7,8,9-HxCDF	ND		4.8	1.7	0.1	0.085
Total HxCDF	**520**		**4.8**	**1.4**		
1,2,3,4,6,7,8-HpCDF	**420**	**B**	**4.8**	**0.47**	**0.01**	**4.2**
1,2,3,4,7,8,9-HpCDF	**12**		**4.8**	**0.59**	**0.01**	**0.12**
Total HpCDF	**590**		**4.8**	**0.52**		
OCDF	**260**	**B**	**9.7**	**1.2**	**0.0003**	**0.078**
Total TEQ Concentration						**30**

Environmental Planning Specialists Inc.

Sample ID: 11119-Q2-U3-R1

Trace Level Organic Compounds

SW846 8290

Lot - Sample #....:	G1D300512 - 001	**Work Order #....:**	MHP7C1AA	**Matrix....:**	SOLID
Date Sampled....:	04/29/11	**Date Received....:**	04/30/11	**Instrument ID....:**	9D5
Prep Date....:	05/06/11	**Analysis Date....:**	05/17/11	**% Moisture....:**	
Prep Batch # ....:	1126235	**Dilution Factor....:**	0.97	**Units.....:**	pg/g
Initial Wgt/Vol :	10.33 g	**Analyst ID....:**	Lisa L. Hernandez		

INTERNAL STANDARDS	PERCENT RECOVERY	RECOVERY LIMITS
13C-2,3,7,8-TCDD	77	40 - 135
13C-1,2,3,7,8-PeCDD	84	40 - 135
13C-1,2,3,6,7,8-HxCDD	80	40 - 135
13C-1,2,3,4,6,7,8-HpCDD	82	40 - 135
13C-OCDD	85	40 - 135
13C-2,3,7,8-TCDF	79	40 - 135
13C-1,2,3,7,8-PeCDF	88	40 - 135
13C-1,2,3,4,7,8-HxCDF	83	40 - 135
13C-1,2,3,4,6,7,8-HpCDF	90	40 - 135

QUALIFIERS

Results and reporting limits have been adjusted for dry weight.

Notes:

ND = 1/2 x EDL x TEF

WHO TEFs for human risk assessment based on the conclusions of the World Health Organization meeting in Geneva, Switzerland, June 2005.

B	Method blank contamination. The associated method blank contains the target analyte at a reportable level.
CON	Confirmation analysis.
G	Elevated reporting limit. The reporting limit is elevated due to matrix interference.
J	Estimated Result.
Q	Estimated maximum possible concentration (EMPC).

Environmental Planning Specialists Inc.

Sample ID: 11119-Q2-U3-R2

Trace Level Organic Compounds

SW846 8290

Lot - Sample #....:	G1D300512 - 002	**Work Order #....:**	MHP7D1AA	**Matrix....:**	SOLID
Date Sampled....:	04/29/11	**Date Received....:**	04/30/11	**Instrument ID....:**	9D5
Prep Date....:	05/06/11	**Analysis Date....:**	05/17/11	**% Moisture....:**	
Prep Batch # ....:	1126235	**Dilution Factor....:**	0.96	**Units.....:**	pg/g
Initial Wgt/Vol :	10.46 g	**Analyst ID....:**	Lisa L. Hernandez		

PARAMETER	RESULT		REPORTING LIMIT	ESTIMATED DETECTION LIMIT	TEF FACTOR	TEQ CONCENTRATION
2,3,7,8-TCDD	**0.27**	**J**	**0.96**	**0.17**	**1**	**0.27**
Total TCDD	**3.3**		**0.96**	**0.17**		
1,2,3,7,8-PeCDD	ND		4.8	0.73	1	0.36
Total PeCDD	**0.89**		**4.8**	**0.73**		
1,2,3,4,7,8-HxCDD	**1.1**	**J Q**	**4.8**	**0.99**	**0.1**	**0.11**
1,2,3,6,7,8-HxCDD	**1.8**	**J Q**	**4.8**	**0.69**	**0.1**	**0.18**
1,2,3,7,8,9-HxCDD	**1.3**	**J**	**4.8**	**0.69**	**0.1**	**0.13**
Total HxCDD	**13**		**4.8**	**0.77**		
1,2,3,4,6,7,8-HpCDD	**34**		**4.8**	**3.9**	**0.01**	**0.34**
Total HpCDD	**92**		**4.8**	**3.9**		
OCDD	**280**	**B**	**9.6**	**8.8**	**0.0003**	**0.084**
2,3,7,8-TCDF	**6.5**	**CON**	**0.96**	**0.10**	**0.1**	**0.65**
Total TCDF	**37**		**0.96**	**0.35**		
1,2,3,7,8-PeCDF	**7.2**		**4.8**	**0.60**	**0.03**	**0.22**
2,3,4,7,8-PeCDF	**13**		**4.8**	**0.61**	**0.3**	**3.9**
Total PeCDF	**86**		**4.8**	**0.60**		
1,2,3,4,7,8-HxCDF	**130**		**4.8**	**1.3**	**0.1**	**13**
1,2,3,6,7,8-HxCDF	**20**		**4.8**	**0.99**	**0.1**	**2.0**
2,3,4,6,7,8-HxCDF	**41**		**4.8**	**1.1**	**0.1**	**4.1**
1,2,3,7,8,9-HxCDF	ND		4.8	1.4	0.1	0.070
Total HxCDF	**470**		**4.8**	**1.2**		
1,2,3,4,6,7,8-HpCDF	**390**	**B**	**4.8**	**0.98**	**0.01**	**3.9**
1,2,3,4,7,8,9-HpCDF	**13**		**4.8**	**1.2**	**0.01**	**0.13**
Total HpCDF	**560**		**4.8**	**1.1**		
OCDF	**260**	**B**	**9.6**	**0.17**	**0.0003**	**0.078**
Total TEQ Concentration						**30**

Environmental Planning Specialists Inc.

Sample ID: 11119-Q2-U3-R2

Trace Level Organic Compounds

SW846 8290

Lot - Sample #....:	G1D300512 - 002	**Work Order #....:**	MHP7D1AA	**Matrix....:**	SOLID
Date Sampled....:	04/29/11	**Date Received....:**	04/30/11	**Instrument ID....:**	9D5
Prep Date....:	05/06/11	**Analysis Date....:**	05/17/11	**% Moisture....:**	
Prep Batch # ....:	1126235	**Dilution Factor....:**	0.96	**Units.....:**	pg/g
Initial Wgt/Vol :	10.46 g	**Analyst ID....:**	Lisa L. Hernandez		

INTERNAL STANDARDS	PERCENT RECOVERY	RECOVERY LIMITS
13C-2,3,7,8-TCDD	76	40 - 135
13C-1,2,3,7,8-PeCDD	80	40 - 135
13C-1,2,3,6,7,8-HxCDD	82	40 - 135
13C-1,2,3,4,6,7,8-HpCDD	81	40 - 135
13C-OCDD	84	40 - 135
13C-2,3,7,8-TCDF	76	40 - 135
13C-1,2,3,7,8-PeCDF	85	40 - 135
13C-1,2,3,4,7,8-HxCDF	78	40 - 135
13C-1,2,3,4,6,7,8-HpCDF	89	40 - 135

QUALIFIERS

Results and reporting limits have been adjusted for dry weight.

Notes:

ND = 1/2 x EDL x TEF

WHO TEFs for human risk assessment based on the conclusions of the World Health Organization meeting in Geneva, Switzerland, June 2005

B	Method blank contamination. The associated method blank contains the target analyte at a reportable level.
CON	Confirmation analysis.
J	Estimated Result.
Q	Estimated maximum possible concentration (EMPC).

Environmental Planning Specialists Inc.

Sample ID: 11117-Q3-U1-R1

Trace Level Organic Compounds

SW846 8290

Lot - Sample #....:	G1D290626 - 005	**Work Order #....:**	MHPLP1AA	**Matrix....:**	SOLID
Date Sampled....:	04/27/11	**Date Received....:**	04/29/11	**Instrument ID....:**	4D5
Prep Date....:	05/06/11	**Analysis Date....:**	05/12/11	**% Moisture....:**	
Prep Batch # ....:	1126235	**Dilution Factor....:**	1	**Units.....:**	pg/g
Initial Wgt/Vol :	9.99 g	**Analyst ID....:**	Lisa L. Hernandez		

PARAMETER	RESULT		REPORTING LIMIT	ESTIMATED DETECTION LIMIT	TEF FACTOR	TEQ CONCENTRATION
2,3,7,8-TCDD	0.34	J Q	1.0	0.094	1	0.34
Total TCDD	2.8		1.0	0.094		
1,2,3,7,8-PeCDD	0.50	J	5.0	0.21	1	0.50
Total PeCDD	2.5		5.0	0.21		
1,2,3,4,7,8-HxCDD	0.93	J	5.0	0.28	0.1	0.093
1,2,3,6,7,8-HxCDD	1.3	J	5.0	0.20	0.1	0.13
1,2,3,7,8,9-HxCDD	1.5	J	5.0	0.21	0.1	0.15
Total HxCDD	19		5.0	0.22		
1,2,3,4,6,7,8-HpCDD	22		5.0	0.45	0.01	0.22
Total HpCDD	59		5.0	0.45		
OCDD	200	B	10	0.99	0.0003	0.060
2,3,7,8-TCDF	15	CON	1.0	0.17	0.1	1.5
Total TCDF	50		1.0	0.19		
1,2,3,7,8-PeCDF	7.0		5.0	0.18	0.03	0.21
2,3,4,7,8-PeCDF	5.8		5.0	0.18	0.3	1.7
Total PeCDF	46		5.0	0.18		
1,2,3,4,7,8-HxCDF	26		5.0	0.29	0.1	2.6
1,2,3,6,7,8-HxCDF	6.0		5.0	0.23	0.1	0.60
2,3,4,6,7,8-HxCDF	5.4		5.0	0.26	0.1	0.54
1,2,3,7,8,9-HxCDF	0.30	J Q	5.0	0.30	0.1	0.030
Total HxCDF	76		5.0	0.27		
1,2,3,4,6,7,8-HpCDF	54	B	5.0	0.22	0.01	0.54
1,2,3,4,7,8,9-HpCDF	6.5		5.0	0.25	0.01	0.065
Total HpCDF	94		5.0	0.23		
OCDF	80	B	10	0.32	0.0003	0.024
Total TEQ Concentration						9.3

Environmental Planning Specialists Inc.

Sample ID: 11117-Q3-U1-R1

Trace Level Organic Compounds

SW846 8290

Lot - Sample #....:	G1D290626 - 005	**Work Order #....:**	MHPLP1AA	**Matrix....:**	SOLID
Date Sampled....:	04/27/11	**Date Received....:**	04/29/11	**Instrument ID....:**	4D5
Prep Date....:	05/06/11	**Analysis Date....:**	05/12/11	**% Moisture....:**	
Prep Batch # ....:	1126235	**Dilution Factor....:**	1	**Units.....:**	pg/g
Initial Wgt/Vol :	9.99 g	**Analyst ID....:**	Lisa L. Hernandez		

INTERNAL STANDARDS	PERCENT RECOVERY	RECOVERY LIMITS
13C-2,3,7,8-TCDD	71	40 - 135
13C-1,2,3,7,8-PeCDD	75	40 - 135
13C-1,2,3,6,7,8-HxCDD	67	40 - 135
13C-1,2,3,4,6,7,8-HpCDD	75	40 - 135
13C-OCDD	86	40 - 135
13C-2,3,7,8-TCDF	87	40 - 135
13C-1,2,3,7,8-PeCDF	72	40 - 135
13C-1,2,3,4,7,8-HxCDF	90	40 - 135
13C-1,2,3,4,6,7,8-HpCDF	79	40 - 135

QUALIFIERS

Results and reporting limits have been adjusted for dry weight.

Notes:

ND = 1/2 x EDL x TEF

WHO TEFs for human risk assessment based on the conclusions of the World Health Organizaton meeting in Geneva, Switzerland, June 2005.

B	Method blank contamination. The associated method blank contains the target analyte at a reportable level.
CON	Confirmation analysis.
J	Estimated Result.
Q	Estimated maximum possible concentration (EMPC).

Environmental Planning Specialists Inc.

Sample ID: 11117-Q3-U1-R2

Trace Level Organic Compounds

SW846 8290

Lot - Sample #....:	G1D290626 - 006	**Work Order #....:**	MHPLQ1AA	**Matrix.....:**	SOLID
Date Sampled....:	04/27/11	**Date Received....:**	04/29/11	**Instrument ID....:**	4D5
Prep Date....:	05/06/11	**Analysis Date....:**	05/12/11	**% Moisture....:**	
Prep Batch # ....:	1126235	**Dilution Factor....:**	0.99	**Units.....:**	pg/g
Initial Wgt/Vol :	10.02 g	**Analyst ID....:**	Lisa L. Hernandez		

PARAMETER	RESULT		REPORTING LIMIT	ESTIMATED DETECTION LIMIT	TEF FACTOR	TEQ CONCENTRATION
2,3,7,8-TCDD	0.51	J	1.0	0.15	1	0.51
Total TCDD	4.0		1.0	0.15		
1,2,3,7,8-PeCDD	0.30	J	5.0	0.19	1	0.30
Total PeCDD	2.1		5.0	0.19		
1,2,3,4,7,8-HxCDD	0.61	J	5.0	0.27	0.1	0.061
1,2,3,6,7,8-HxCDD	0.70	J	5.0	0.19	0.1	0.070
1,2,3,7,8,9-HxCDD	0.85	J	5.0	0.19	0.1	0.085
Total HxCDD	12		5.0	0.21		
1,2,3,4,6,7,8-HpCDD	13		5.0	0.85	0.01	0.13
Total HpCDD	35		5.0	0.85		
OCDD	110	B	10	0.62	0.0003	0.033
2,3,7,8-TCDF	32	CON	1.0	0.20	0.1	3.2
Total TCDF	81		1.0	0.26		
1,2,3,7,8-PeCDF	9.1		5.0	0.18	0.03	0.27
2,3,4,7,8-PeCDF	5.6		5.0	0.19	0.3	1.7
Total PeCDF	40		5.0	0.18		
1,2,3,4,7,8-HxCDF	26		5.0	0.29	0.1	2.6
1,2,3,6,7,8-HxCDF	6.7		5.0	0.23	0.1	0.67
2,3,4,6,7,8-HxCDF	3.9	J	5.0	0.25	0.1	0.39
1,2,3,7,8,9-HxCDF	0.47	J	5.0	0.29	0.1	0.047
Total HxCDF	71		5.0	0.26		
1,2,3,4,6,7,8-HpCDF	57	B	5.0	0.33	0.01	0.57
1,2,3,4,7,8,9-HpCDF	7.6		5.0	0.39	0.01	0.076
Total HpCDF	100		5.0	0.36		
OCDF	100	B	10	0.24	0.0003	0.030
Total TEQ Concentration						**11**

Environmental Planning Specialists Inc.

Sample ID: 11117-Q3-U1-R2

Trace Level Organic Compounds

SW846 8290

Lot - Sample #....:	G1D290626 - 006	**Work Order #....:**	MHPLQ1AA	**Matrix....:**	SOLID
Date Sampled....:	04/27/11	**Date Received....:**	04/29/11	**Instrument ID....:**	4D5
Prep Date....:	05/06/11	**Analysis Date....:**	05/12/11	**% Moisture....:**	
Prep Batch # ....:	1126235	**Dilution Factor....:**	0.99	**Units.....:**	pg/g
Initial Wgt/Vol :	10.02 g	**Analyst ID....:**	Lisa L. Hernandez		

INTERNAL STANDARDS	PERCENT RECOVERY	RECOVERY LIMITS
13C-2,3,7,8-TCDD	73	40 - 135
13C-1,2,3,7,8-PeCDD	80	40 - 135
13C-1,2,3,6,7,8-HxCDD	71	40 - 135
13C-1,2,3,4,6,7,8-HpCDD	77	40 - 135
13C-OCDD	94	40 - 135
13C-2,3,7,8-TCDF	90	40 - 135
13C-1,2,3,7,8-PeCDF	78	40 - 135
13C-1,2,3,4,7,8-HxCDF	92	40 - 135
13C-1,2,3,4,6,7,8-HpCDF	81	40 - 135

QUALIFIERS

Results and reporting limits have been adjusted for dry weight.

Notes:

ND = 1/2 x EDL x TEF

WHO TEFs for human risk assessment based on the conclusions of the World Health Organization meeting in Geneva, Switzerland, June 2005.

B	Method blank contamination. The associated method blank contains the target analyte at a reportable level.
CON	Confirmation analysis.
J	Estimated Result.

Environmental Planning Specialists Inc.

Sample ID: 11117-Q3-U2-R1

Trace Level Organic Compounds

SW846 8290

Lot - Sample #....:	G1D290626 - 001	**Work Order #....:**	MHPLK1AA	**Matrix....:**	SOLID
Date Sampled....:	04/27/11	**Date Received....:**	04/29/11	**Instrument ID....:**	4D5
Prep Date....:	05/06/11	**Analysis Date....:**	05/11/11	**% Moisture....:**	
Prep Batch # ....:	1126235	**Dilution Factor....:**	0.99	**Units.....:**	pg/g
Initial Wgt/Vol :	10.01 g	**Analyst ID....:**	Sonia Ouni		

PARAMETER	RESULT		REPORTING LIMIT	ESTIMATED DETECTION LIMIT	TEF FACTOR	TEQ CONCENTRATION
2,3,7,8-TCDD	0.51	Q J	1.0	0.17	1	0.51
Total TCDD	6.7		1.0	0.17		
1,2,3,7,8-PeCDD	2.5	J	5.0	0.42	1	2.5
Total PeCDD	12		5.0	0.42		
1,2,3,4,7,8-HxCDD	10		5.0	1.5	0.1	1.0
1,2,3,6,7,8-HxCDD	30		5.0	1.1	0.1	3.0
1,2,3,7,8,9-HxCDD	14		5.0	1.1	0.1	1.4
Total HxCDD	270		5.0	1.2		
1,2,3,4,6,7,8-HpCDD	1300		5.0	2.3	0.01	13
Total HpCDD	2700		5.0	2.3		
OCDD	12000	E G B	12	12	0.0003	3.6
2,3,7,8-TCDF	13	CON	1.0	0.28	0.1	1.3
Total TCDF	55		1.0	0.36		
1,2,3,7,8-PeCDF	9.9		5.0	0.30	0.03	0.30
2,3,4,7,8-PeCDF	8.6		5.0	0.31	0.3	2.6
Total PeCDF	76		5.0	0.30		
1,2,3,4,7,8-HxCDF	40		5.0	0.41	0.1	4.0
1,2,3,6,7,8-HxCDF	13		5.0	0.33	0.1	1.3
2,3,4,6,7,8-HxCDF	8.9		5.0	0.37	0.1	0.89
1,2,3,7,8,9-HxCDF	0.86	J	5.0	0.42	0.1	0.086
Total HxCDF	240		5.0	0.38		
1,2,3,4,6,7,8-HpCDF	240	B	5.0	0.36	0.01	2.4
1,2,3,4,7,8,9-HpCDF	22		5.0	0.43	0.01	0.22
Total HpCDF	760		5.0	0.39		
OCDF	750	B	10	0.91	0.0003	0.22
Total TEQ Concentration						**38**

Environmental Planning Specialists Inc.

Sample ID: 11117-Q3-U2-R1

Trace Level Organic Compounds

SW846 8290

Lot - Sample #....:	G1D290626 - 001	**Work Order #....:**	MHPLK1AA	**Matrix....:**	SOLID
Date Sampled....:	04/27/11	**Date Received....:**	04/29/11	**Instrument ID....:**	4D5
Prep Date....:	05/06/11	**Analysis Date....:**	05/11/11	**% Moisture....:**	
Prep Batch # ....:	1126235	**Dilution Factor....:**	0.99	**Units.....:**	pg/g
Initial Wgt/Vol :	10.01 g	**Analyst ID....:**	Sonia Ouni		

INTERNAL STANDARDS	PERCENT RECOVERY	RECOVERY LIMITS
13C-2,3,7,8-TCDD	53	40 - 135
13C-1,2,3,7,8-PeCDD	60	40 - 135
13C-1,2,3,6,7,8-HxCDD	52	40 - 135
13C-1,2,3,4,6,7,8-HpCDD	53	40 - 135
13C-OCDD	54	40 - 135
13C-2,3,7,8-TCDF	65	40 - 135
13C-1,2,3,7,8-PeCDF	56	40 - 135
13C-1,2,3,4,7,8-HxCDF	66	40 - 135
13C-1,2,3,4,6,7,8-HpCDF	58	40 - 135

QUALIFIERS

Results and reporting limits have been adjusted for dry weight.

Notes:

ND = 1/2 x EDL x TEF

WHO TEFs for human risk assessment based on the conclusions of the World Health Organization meeting in Geneva, Switzerland, June 2005.

B	Method blank contamination. The associated method blank contains the target analyte at a reportable level.
CON	Confirmation analysis.
E	Estimated result. Result concentration exceeds the calibration range.
G	Elevated reporting limit. The reporting limit is elevated due to matrix interference.
J	Estimated Result.
Q	Estimated maximum possible concentration (EMPC).

Environmental Planning Specialists Inc.

Sample ID: 11117-Q3-U2-R2

Trace Level Organic Compounds

SW846 8290

Lot - Sample #....:	G1D290626 - 003	**Work Order #....:**	MHPLM1AA	**Matrix....:**	SOLID
Date Sampled....:	04/27/11	**Date Received....:**	04/29/11	**Instrument ID....:**	4D5
Prep Date....:	05/06/11	**Analysis Date....:**	05/11/11	**% Moisture....:**	
Prep Batch # ....:	1126235	**Dilution Factor....:**	0.99	**Units.....:**	pg/g
Initial Wgt/Vol :	10.01 g	**Analyst ID....:**	Sonia Ouni		

PARAMETER	RESULT		REPORTING LIMIT	ESTIMATED DETECTION LIMIT	TEF FACTOR	TEQ CONCENTRATION
2,3,7,8-TCDD	0.75	J	1.0	0.13	1	0.75
Total TCDD	7.5		1.0	0.13		
1,2,3,7,8-PeCDD	2.8	J	5.0	0.38	1	2.8
Total PeCDD	13		5.0	0.38		
1,2,3,4,7,8-HxCDD	11		5.0	0.51	0.1	1.1
1,2,3,6,7,8-HxCDD	34		5.0	0.36	0.1	3.4
1,2,3,7,8,9-HxCDD	17		5.0	0.37	0.1	1.7
Total HxCDD	310		5.0	0.40		
1,2,3,4,6,7,8-HpCDD	1600		5.0	3.2	0.01	16
Total HpCDD	3300		5.0	3.2		
OCDD	16000	E G B	11	11	0.0003	4.8
2,3,7,8-TCDF	16	CON	1.0	0.20	0.1	1.6
Total TCDF	67		1.0	0.25		
1,2,3,7,8-PeCDF	12		5.0	0.21	0.03	0.36
2,3,4,7,8-PeCDF	10		5.0	0.22	0.3	3.0
Total PeCDF	87		5.0	0.21		
1,2,3,4,7,8-HxCDF	52		5.0	0.24	0.1	5.2
1,2,3,6,7,8-HxCDF	15		5.0	0.19	0.1	1.5
2,3,4,6,7,8-HxCDF	9.1		5.0	0.21	0.1	0.91
1,2,3,7,8,9-HxCDF	0.87	J Q	5.0	0.24	0.1	0.087
Total HxCDF	250		5.0	0.22		
1,2,3,4,6,7,8-HpCDF	270	B	5.0	0.38	0.01	2.7
1,2,3,4,7,8,9-HpCDF	28		5.0	0.44	0.01	0.28
Total HpCDF	860		5.0	0.41		
OCDF	940	B	10	0.79	0.0003	0.28
Total TEQ Concentration						46

Environmental Planning Specialists Inc.

Sample ID: 11117-Q3-U2-R2

Trace Level Organic Compounds

SW846 8290

Lot - Sample #....:	G1D290626 - 003	**Work Order #....:**	MHPLM1AA	**Matrix....:**	SOLID
Date Sampled....:	04/27/11	**Date Received....:**	04/29/11	**Instrument ID....:**	4D5
Prep Date....:	05/06/11	**Analysis Date....:**	05/11/11	**% Moisture....:**	
Prep Batch # ....:	1126235	**Dilution Factor....:**	0.99	**Units.....:**	pg/g
Initial Wgt/Vol :	10.01 g	**Analyst ID....:**	Sonia Ouni		

INTERNAL STANDARDS	PERCENT RECOVERY	RECOVERY LIMITS
13C-2,3,7,8-TCDD	70	40 - 135
13C-1,2,3,7,8-PeCDD	79	40 - 135
13C-1,2,3,6,7,8-HxCDD	69	40 - 135
13C-1,2,3,4,6,7,8-HpCDD	73	40 - 135
13C-OCDD	72	40 - 135
13C-2,3,7,8-TCDF	85	40 - 135
13C-1,2,3,7,8-PeCDF	75	40 - 135
13C-1,2,3,4,7,8-HxCDF	89	40 - 135
13C-1,2,3,4,6,7,8-HpCDF	76	40 - 135

QUALIFIERS

Results and reporting limits have been adjusted for dry weight.

Notes:

ND = 1/2 x EDL x TEF

WHO TEFs for human risk assessment based on the conclusions of the World Health Organization meeting in Geneva, Switzerland, June 2005.

B	Method blank contamination. The associated method blank contains the target analyte at a reportable level.
CON	Confirmation analysis.
E	Estimated result. Result concentration exceeds the calibration range.
G	Elevated reporting limit. The reporting limit is elevated due to matrix interference.
J	Estimated Result.
Q	Estimated maximum possible concentration (EMPC).

Environmental Planning Specialists Inc.

Sample ID: 11117-Q3-U3-R1

Trace Level Organic Compounds

SW846 8290

Lot - Sample #....:	G1D290626 - 002	**Work Order #....:**	MHPLL1AA	**Matrix....:**	SOLID
Date Sampled....:	04/27/11	**Date Received....:**	04/29/11	**Instrument ID....:**	4D5
Prep Date....:	05/06/11	**Analysis Date....:**	05/11/11	**% Moisture....:**	
Prep Batch # ....:	1126235	**Dilution Factor....:**	0.99	**Units.....:**	pg/g
Initial Wgt/Vol :	10.02 g	**Analyst ID....:**	Sonia Ouni		

PARAMETER	RESULT		REPORTING LIMIT	ESTIMATED DETECTION LIMIT	TEF FACTOR	TEQ CONCENTRATION
2,3,7,8-TCDD	0.33	J	1.0	0.13	1	0.33
Total TCDD	4.9		1.0	0.13		
1,2,3,7,8-PeCDD	1.3	J	5.0	0.26	1	1.3
Total PeCDD	7.5		5.0	0.26		
1,2,3,4,7,8-HxCDD	3.9	J	5.0	0.67	0.1	0.39
1,2,3,6,7,8-HxCDD	11		5.0	0.48	0.1	1.1
1,2,3,7,8,9-HxCDD	5.4		5.0	0.49	0.1	0.54
Total HxCDD	97		5.0	0.53		
1,2,3,4,6,7,8-HpCDD	420		5.0	2.0	0.01	4.2
Total HpCDD	900		5.0	2.0		
OCDD	4500	E B	10	4.6	0.0003	1.4
2,3,7,8-TCDF	5.3	CON	1.0	0.23	0.1	0.53
Total TCDF	27		1.0	0.17		
1,2,3,7,8-PeCDF	4.5	J	5.0	0.13	0.03	0.14
2,3,4,7,8-PeCDF	4.0	J	5.0	0.13	0.3	1.2
Total PeCDF	33		5.0	0.14		
1,2,3,4,7,8-HxCDF	11		5.0	0.13	0.1	1.1
1,2,3,6,7,8-HxCDF	3.1	Q J	5.0	0.10	0.1	0.31
2,3,4,6,7,8-HxCDF	3.1	J	5.0	0.12	0.1	0.31
1,2,3,7,8,9-HxCDF	0.24	J	5.0	0.14	0.1	0.024
Total HxCDF	79		5.0	0.12		
1,2,3,4,6,7,8-HpCDF	81	B	5.0	0.18	0.01	0.81
1,2,3,4,7,8,9-HpCDF	5.8		5.0	0.22	0.01	0.058
Total HpCDF	270		5.0	0.20		
OCDF	270	B	10	0.25	0.0003	0.081
Total TEQ Concentration						14

Environmental Planning Specialists Inc.

Sample ID: 11117-Q3-U3-R1

Trace Level Organic Compounds

SW846 8290

Lot - Sample #....:	G1D290626 - 002	**Work Order #....:**	MHPLL1AA	**Matrix....:**	SOLID
Date Sampled....:	04/27/11	**Date Received....:**	04/29/11	**Instrument ID....:**	4D5
Prep Date....:	05/06/11	**Analysis Date....:**	05/11/11	**% Moisture....:**	
Prep Batch # ....:	1126235	**Dilution Factor....:**	0.99	**Units.....:**	pg/g
Initial Wgt/Vol :	10.02 g	**Analyst ID....:**	Sonia Ouni		

INTERNAL STANDARDS	PERCENT RECOVERY	RECOVERY LIMITS
13C-2,3,7,8-TCDD	72	40 - 135
13C-1,2,3,7,8-PeCDD	81	40 - 135
13C-1,2,3,6,7,8-HxCDD	68	40 - 135
13C-1,2,3,4,6,7,8-HpCDD	72	40 - 135
13C-OCDD	73	40 - 135
13C-2,3,7,8-TCDF	90	40 - 135
13C-1,2,3,7,8-PeCDF	78	40 - 135
13C-1,2,3,4,7,8-HxCDF	98	40 - 135
13C-1,2,3,4,6,7,8-HpCDF	76	40 - 135

QUALIFIERS

Results and reporting limits have been adjusted for dry weight.

Notes:

ND = 1/2 x EDL x TEF

WHO TEFs for human risk assessment based on the conclusions of the World Health Organization meeting in Geneva, Switzerland, June 2005.

B	Method blank contamination. The associated method blank contains the target analyte at a reportable level.
CON	Confirmation analysis.
E	Estimated result. Result concentration exceeds the calibration range.
J	Estimated Result.
Q	Estimated maximum possible concentration (EMPC).

Environmental Planning Specialists Inc.

Sample ID: 11117-Q3-U3-R2

Trace Level Organic Compounds

SW846 8290

Lot - Sample #....:	G1D290626 - 004	**Work Order #....:**	MHPLN1AA	**Matrix....:**	SOLID
Date Sampled....:	04/27/11	**Date Received....:**	04/29/11	**Instrument ID....:**	4D5
Prep Date....:	05/06/11	**Analysis Date....:**	05/11/11	**% Moisture....:**	
Prep Batch # ....:	1126235	**Dilution Factor....:**	1	**Units.....:**	pg/g
Initial Wgt/Vol :	9.99 g	**Analyst ID....:**	Sonia Ouni		

PARAMETER	RESULT		REPORTING LIMIT	ESTIMATED DETECTION LIMIT	TEF FACTOR	TEQ CONCENTRATION
2,3,7,8-TCDD	0.41	J	1.0	0.13	1	0.41
Total TCDD	5.2		1.0	0.13		
1,2,3,7,8-PeCDD	1.7	J	5.0	0.31	1	1.7
Total PeCDD	9.8		5.0	0.31		
1,2,3,4,7,8-HxCDD	5.1		5.0	0.93	0.1	0.51
1,2,3,6,7,8-HxCDD	19		5.0	0.66	0.1	1.9
1,2,3,7,8,9-HxCDD	8.8		5.0	0.68	0.1	0.88
Total HxCDD	150		5.0	0.74		
1,2,3,4,6,7,8-HpCDD	850		5.0	2.4	0.01	8.5
Total HpCDD	1700		5.0	2.4		
OCDD	8800	E B	10	7.5	0.0003	2.6
2,3,7,8-TCDF	4.5	CON	1.0	0.21	0.1	0.45
Total TCDF	31		1.0	0.17		
1,2,3,7,8-PeCDF	3.8	J	5.0	0.14	0.03	0.11
2,3,4,7,8-PeCDF	3.5	J	5.0	0.14	0.3	1.0
Total PeCDF	39		5.0	0.14		
1,2,3,4,7,8-HxCDF	13		5.0	0.18	0.1	1.3
1,2,3,6,7,8-HxCDF	4.6	J	5.0	0.14	0.1	0.46
2,3,4,6,7,8-HxCDF	4.6	J	5.0	0.16	0.1	0.46
1,2,3,7,8,9-HxCDF	0.25	J Q	5.0	0.18	0.1	0.025
Total HxCDF	130		5.0	0.16		
1,2,3,4,6,7,8-HpCDF	170	B	5.0	0.28	0.01	1.7
1,2,3,4,7,8,9-HpCDF	11		5.0	0.33	0.01	0.11
Total HpCDF	580		5.0	0.30		
OCDF	690	B	10	0.79	0.0003	0.21
Total TEQ Concentration						22

Environmental Planning Specialists Inc.

Sample ID: 11117-Q3-U3-R2

Trace Level Organic Compounds

SW846 8290

Lot - Sample #....:	G1D290626 - 004	**Work Order #....:**	MHPLN1AA	**Matrix....:**	SOLID
Date Sampled....:	04/27/11	**Date Received....:**	04/29/11	**Instrument ID....:**	4D5
Prep Date....:	05/06/11	**Analysis Date....:**	05/11/11	**% Moisture....:**	
Prep Batch # ....:	1126235	**Dilution Factor....:**	1	**Units.....:**	pg/g
Initial Wgt/Vol :	9.99 g	**Analyst ID....:**	Sonia Ouni		

INTERNAL STANDARDS	PERCENT RECOVERY	RECOVERY LIMITS
13C-2,3,7,8-TCDD	74	40 - 135
13C-1,2,3,7,8-PeCDD	82	40 - 135
13C-1,2,3,6,7,8-HxCDD	69	40 - 135
13C-1,2,3,4,6,7,8-HpCDD	70	40 - 135
13C-OCDD	75	40 - 135
13C-2,3,7,8-TCDF	92	40 - 135
13C-1,2,3,7,8-PeCDF	81	40 - 135
13C-1,2,3,4,7,8-HxCDF	93	40 - 135
13C-1,2,3,4,6,7,8-HpCDF	74	40 - 135

QUALIFIERS

Results and reporting limits have been adjusted for dry weight.

Notes:

ND = 1/2 x EDL x TEF

WHO TEFs for human risk assessment based on the conclusions of the World Health Organization meeting in Geneva, Switzerland, June 2005.

B	Method blank contamination. The associated method blank contains the target analyte at a reportable level.
CON	Confirmation analysis.
E	Estimated result. Result concentration exceeds the calibration range.
J	Estimated Result.
Q	Estimated maximum possible concentration (EMPC).

Environmental Planning Specialists Inc.

Sample ID: 11117-Q4-U1-R1

Trace Level Organic Compounds

SW846 8290

Lot - Sample #....:	G1D290626 - 009	**Work Order #....:**	MHPLV2AA	**Matrix....:**	SOLID
Date Sampled....:	04/27/11	**Date Received....:**	04/29/11	**Instrument ID....:**	9D5
Prep Date....:	05/17/11	**Analysis Date....:**	05/17/11	**% Moisture....:**	
Prep Batch # ....:	1137180	**Dilution Factor....:**	0.99	**Units.....:**	pg/g
Initial Wgt/Vol :	10.05 g	**Analyst ID....:**	Sonia Ouni		

PARAMETER	RESULT		REPORTING LIMIT	ESTIMATED DETECTION LIMIT	TEF FACTOR	TEQ CONCENTRATION
2,3,7,8-TCDD	**0.21**	**J Q**	**1.0**	**0.11**	**1**	**0.21**
Total TCDD	**2.5**		**1.0**	**0.11**		
1,2,3,7,8-PeCDD	ND		5.0	0.32	1	0.16
Total PeCDD	**1.7**		**5.0**	**0.32**		
1,2,3,4,7,8-HxCDD	ND		5.0	0.73	0.1	0.036
1,2,3,6,7,8-HxCDD	**1.3**	**J**	**5.0**	**0.51**	**0.1**	**0.13**
1,2,3,7,8,9-HxCDD	**1.1**	**J**	**5.0**	**0.51**	**0.1**	**0.11**
Total HxCDD	**18**		**5.0**	**0.56**		
1,2,3,4,6,7,8-HpCDD	**35**		**5.0**	**3.2**	**0.01**	**0.35**
Total HpCDD	**96**		**5.0**	**3.2**		
OCDD	**350**	**B**	**10**	**1.5**	**0.0003**	**0.10**
2,3,7,8-TCDF	**18**	**CON**	**1.0**	**0.12**	**0.1**	**1.8**
Total TCDF	**53**		**1.0**	**0.26**		
1,2,3,7,8-PeCDF	**14**		**5.0**	**0.36**	**0.03**	**0.42**
2,3,4,7,8-PeCDF	**7.4**		**5.0**	**0.37**	**0.3**	**2.2**
Total PeCDF	**56**		**5.0**	**0.36**		
1,2,3,4,7,8-HxCDF	**43**		**5.0**	**0.47**	**0.1**	**4.3**
1,2,3,6,7,8-HxCDF	**10**		**5.0**	**0.35**	**0.1**	**1.0**
2,3,4,6,7,8-HxCDF	**4.6**	**J**	**5.0**	**0.40**	**0.1**	**0.46**
1,2,3,7,8,9-HxCDF	**1.0**	**J**	**5.0**	**0.50**	**0.1**	**0.10**
Total HxCDF	**120**		**5.0**	**0.42**		
1,2,3,4,6,7,8-HpCDF	**71**	**B**	**5.0**	**0.44**	**0.01**	**0.71**
1,2,3,4,7,8,9-HpCDF	**19**		**5.0**	**0.55**	**0.01**	**0.19**
Total HpCDF	**140**		**5.0**	**0.49**		
OCDF	**260**	**B**	**10**	**0.10**	**0.0003**	**0.078**
Total TEQ Concentration						**12**

Environmental Planning Specialists Inc.

Sample ID: 11117-Q4-U1-R1

Trace Level Organic Compounds

SW846 8290

Lot - Sample #....:	G1D290626 - 009	**Work Order #....:**	MHPLV2AA	**Matrix.....:**	SOLID
Date Sampled....:	04/27/11	**Date Received....:**	04/29/11	**Instrument ID....:**	9D5
Prep Date....:	05/17/11	**Analysis Date....:**	05/17/11	**% Moisture....:**	
Prep Batch # ....:	1137180	**Dilution Factor....:**	0.99	**Units.....:**	pg/g
Initial Wgt/Vol :	10.05 g	**Analyst ID....:**	Sonia Ouni		

INTERNAL STANDARDS	PERCENT RECOVERY	RECOVERY LIMITS
13C-2,3,7,8-TCDD	109	40 - 135
13C-1,2,3,7,8-PeCDD	116	40 - 135
13C-1,2,3,6,7,8-HxCDD	109	40 - 135
13C-1,2,3,4,6,7,8-HpCDD	112	40 - 135
13C-OCDD	113	40 - 135
13C-2,3,7,8-TCDF	111	40 - 135
13C-1,2,3,7,8-PeCDF	121	40 - 135
13C-1,2,3,4,7,8-HxCDF	119	40 - 135
13C-1,2,3,4,6,7,8-HpCDF	119	40 - 135

QUALIFIERS

Results and reporting limits have been adjusted for dry weight.

Notes:

ND = 1/2 x EDL x TEF

WHO TEFs for human risk assessment based on the conclusions of the World Health Organization meeting in Geneva, Switzerland, June 2005.

B	Method blank contamination. The associated method blank contains the target analyte at a reportable level.
CON	Confirmation analysis.
J	Estimated Result.
Q	Estimated maximum possible concentration (EMPC).

Environmental Planning Specialists Inc.

Sample ID: 11117-Q4-U1-R2

Trace Level Organic Compounds

SW846 8290

Lot - Sample #....:	G1D290626 - 010	**Work Order #....:**	MHPLW1AA	**Matrix....:**	SOLID
Date Sampled....:	04/27/11	**Date Received....:**	04/29/11	**Instrument ID....:**	11D5
Prep Date....:	05/06/11	**Analysis Date....:**	05/14/11	**% Moisture....:**	
Prep Batch # ....:	1126235	**Dilution Factor....:**	0.99	**Units.....:**	pg/g
Initial Wgt/Vol :	10.02 g	**Analyst ID....:**	Michael Ng		

PARAMETER	RESULT		REPORTING LIMIT	ESTIMATED DETECTION LIMIT	TEF FACTOR	TEQ CONCENTRATION
2,3,7,8-TCDD	ND		1.0	0.44	1	0.22
Total TCDD	ND		1.0	0.44		
1,2,3,7,8-PeCDD	ND		5.0	0.80	1	0.40
Total PeCDD	ND		5.0	0.80		
1,2,3,4,7,8-HxCDD	ND		5.0	0.37	0.1	0.019
1,2,3,6,7,8-HxCDD	ND		5.0	0.46	0.1	0.023
1,2,3,7,8,9-HxCDD	**0.67**	**J Q**	**5.0**	**0.24**	**0.1**	**0.067**
Total HxCDD	**11**		**5.0**	**0.25**		
1,2,3,4,6,7,8-HpCDD	**18**		**5.0**	**1.9**	**0.01**	**0.18**
Total HpCDD	**51**		**5.0**	**1.9**		
OCDD	**210**	**B**	**10**	**2.6**	**0.0003**	**0.063**
2,3,7,8-TCDF	**8.3**	**CON**	**1.0**	**0.14**	**0.1**	**0.83**
Total TCDF	**19**		**1.0**	**0.70**		
1,2,3,7,8-PeCDF	**8.3**		**5.0**	**0.76**	**0.03**	**0.25**
2,3,4,7,8-PeCDF	**5.2**		**5.0**	**0.79**	**0.3**	**1.6**
Total PeCDF	**30**		**5.0**	**0.77**		
1,2,3,4,7,8-HxCDF	**28**		**5.0**	**0.38**	**0.1**	**2.8**
1,2,3,6,7,8-HxCDF	**7.1**		**5.0**	**0.32**	**0.1**	**0.71**
2,3,4,6,7,8-HxCDF	**3.1**	**J**	**5.0**	**0.36**	**0.1**	**0.31**
1,2,3,7,8,9-HxCDF	ND		5.0	0.41	0.1	0.020
Total HxCDF	**68**		**5.0**	**0.36**		
1,2,3,4,6,7,8-HpCDF	**40**	**B**	**5.0**	**0.95**	**0.01**	**0.40**
1,2,3,4,7,8,9-HpCDF	**5.5**		**5.0**	**1.1**	**0.01**	**0.055**
Total HpCDF	**74**		**5.0**	**1.0**		
OCDF	**85**	**B**	**10**	**0.51**	**0.0003**	**0.025**
Total TEQ Concentration						**8.0**

Environmental Planning Specialists Inc.

Sample ID: 11117-Q4-U1-R2

Trace Level Organic Compounds

SW846 8290

Lot - Sample #....:	G1D290626 - 010	**Work Order #....:**	MHPLW1AA	**Matrix....:**	SOLID
Date Sampled....:	04/27/11	**Date Received....:**	04/29/11	**Instrument ID....:**	11D5
Prep Date....:	05/06/11	**Analysis Date....:**	05/14/11	**% Moisture....:**	
Prep Batch # ....:	1126235	**Dilution Factor....:**	0.99	**Units.....:**	pg/g
Initial Wgt/Vol :	10.02 g	**Analyst ID....:**	Michael Ng		

INTERNAL STANDARDS	PERCENT RECOVERY	RECOVERY LIMITS
13C-2,3,7,8-TCDD	70	40 - 135
13C-1,2,3,7,8-PeCDD	66	40 - 135
13C-1,2,3,6,7,8-HxCDD	79	40 - 135
13C-1,2,3,4,6,7,8-HpCDD	70	40 - 135
13C-OCDD	70	40 - 135
13C-2,3,7,8-TCDF	71	40 - 135
13C-1,2,3,7,8-PeCDF	72	40 - 135
13C-1,2,3,4,7,8-HxCDF	82	40 - 135
13C-1,2,3,4,6,7,8-HpCDF	75	40 - 135

QUALIFIERS

Results and reporting limits have been adjusted for dry weight.

Notes:

ND = 1/2 x EDL x TEF

WHO TEFs for human risk assessment based on the conclusions of the World Health Organization meeting in Geneva, Switzerland, June 2005.

B	Method blank contamination. The associated method blank contains the target analyte at a reportable level.
CON	Confirmation analysis.
J	Estimated Result.
Q	Estimated maximum possible concentration (EMPC).

Environmental Planning Specialists Inc.

Sample ID: 11117-Q4-U2-R1

Trace Level Organic Compounds

SW846 8290

Lot - Sample #....:	G1D290626 - 007	**Work Order #....:**	MHPLR1AA	**Matrix....:**	SOLID
Date Sampled....:	04/27/11	**Date Received....:**	04/29/11	**Instrument ID....:**	4D5
Prep Date....:	05/06/11	**Analysis Date....:**	05/12/11	**% Moisture....:**	
Prep Batch # ....:	1126235	**Dilution Factor....:**	1	**Units.....:**	pg/g
Initial Wgt/Vol :	9.95 g	**Analyst ID....:**	Lisa L. Hernandez		

PARAMETER	RESULT		REPORTING LIMIT	ESTIMATED DETECTION LIMIT	TEF FACTOR	TEQ CONCENTRATION
2,3,7,8-TCDD	ND		1.0	0.11	1	0.055
Total TCDD	**0.95**		**1.0**	**0.11**		
1,2,3,7,8-PeCDD	ND		5.0	0.21	1	0.10
Total PeCDD	**0.34**		**5.0**	**0.21**		
1,2,3,4,7,8-HxCDD	ND		5.0	0.44	0.1	0.022
1,2,3,6,7,8-HxCDD	**0.49**	**J**	**5.0**	**0.31**	**0.1**	**0.049**
1,2,3,7,8,9-HxCDD	**0.68**	**J**	**5.0**	**0.32**	**0.1**	**0.068**
Total HxCDD	**9.1**		**5.0**	**0.35**		
1,2,3,4,6,7,8-HpCDD	**16**		**5.0**	**0.34**	**0.01**	**0.16**
Total HpCDD	**41**		**5.0**	**0.34**		
OCDD	**190**	**B**	**10**	**0.68**	**0.0003**	**0.057**
2,3,7,8-TCDF	**11**	**CON**	**1.0**	**0.24**	**0.1**	**1.1**
Total TCDF	**32**		**1.0**	**0.29**		
1,2,3,7,8-PeCDF	**4.6**	**J**	**5.0**	**0.21**	**0.03**	**0.14**
2,3,4,7,8-PeCDF	**3.9**	**J**	**5.0**	**0.22**	**0.3**	**1.2**
Total PeCDF	**24**		**5.0**	**0.22**		
1,2,3,4,7,8-HxCDF	**14**		**5.0**	**0.13**	**0.1**	**1.4**
1,2,3,6,7,8-HxCDF	**3.1**	**J**	**5.0**	**0.099**	**0.1**	**0.31**
2,3,4,6,7,8-HxCDF	**1.7**	**J**	**5.0**	**0.11**	**0.1**	**0.17**
1,2,3,7,8,9-HxCDF	**0.14**	**J**	**5.0**	**0.13**	**0.1**	**0.014**
Total HxCDF	**37**		**5.0**	**0.11**		
1,2,3,4,6,7,8-HpCDF	**23**	**B**	**5.0**	**0.17**	**0.01**	**0.23**
1,2,3,4,7,8,9-HpCDF	**3.6**	**J**	**5.0**	**0.20**	**0.01**	**0.036**
Total HpCDF	**46**		**5.0**	**0.19**		
OCDF	**45**	**B**	**10**	**0.19**	**0.0003**	**0.014**
Total TEQ Concentration						**5.1**

Environmental Planning Specialists Inc.

Sample ID: 11117-Q4-U2-R1

Trace Level Organic Compounds

SW846 8290

Lot - Sample #....:	G1D290626 - 007	**Work Order #....:**	MHPLR1AA	**Matrix....:**	SOLID
Date Sampled....:	04/27/11	**Date Received....:**	04/29/11	**Instrument ID....:**	4D5
Prep Date....:	05/06/11	**Analysis Date....:**	05/12/11	**% Moisture....:**	
Prep Batch # ....:	1126235	**Dilution Factor....:**	1	**Units.....:**	pg/g
Initial Wgt/Vol :	9.95 g	**Analyst ID....:**	Lisa L. Hernandez		

INTERNAL STANDARDS	PERCENT RECOVERY	RECOVERY LIMITS
13C-2,3,7,8-TCDD	71	40 - 135
13C-1,2,3,7,8-PeCDD	76	40 - 135
13C-1,2,3,6,7,8-HxCDD	71	40 - 135
13C-1,2,3,4,6,7,8-HpCDD	78	40 - 135
13C-OCDD	92	40 - 135
13C-2,3,7,8-TCDF	85	40 - 135
13C-1,2,3,7,8-PeCDF	74	40 - 135
13C-1,2,3,4,7,8-HxCDF	89	40 - 135
13C-1,2,3,4,6,7,8-HpCDF	83	40 - 135

QUALIFIERS

Results and reporting limits have been adjusted for dry weight.

Notes:

ND = 1/2 x EDL x TEF

WHO TEFs for human risk assessment based on the conclusions of the World Health Organization meeting in Geneva, Switzerland, June 2005.

B	Method blank contamination. The associated method blank contains the target analyte at a reportable level.
CON	Confirmation analysis.
J	Estimated Result.

Environmental Planning Specialists Inc.

Sample ID: 11117-Q4-U2-R2

Trace Level Organic Compounds

SW846 8290

Lot - Sample #....:	G1D290626 - 008	**Work Order #....:**	MHPLT1AA	**Matrix....:**	SOLID
Date Sampled....:	04/27/11	**Date Received....:**	04/29/11	**Instrument ID....:**	4D5
Prep Date....:	05/06/11	**Analysis Date....:**	05/12/11	**% Moisture....:**	
Prep Batch # ....:	1126235	**Dilution Factor....:**	1	**Units.....:**	pg/g
Initial Wgt/Vol :	9.96 g	**Analyst ID....:**	Lisa L. Hernandez		

PARAMETER	RESULT		REPORTING LIMIT	ESTIMATED DETECTION LIMIT	TEF FACTOR	TEQ CONCENTRATION
2,3,7,8-TCDD	ND		1.0	0.095	1	0.048
Total TCDD	**0.88**		**1.0**	**0.095**		
1,2,3,7,8-PeCDD	ND		5.0	0.16	1	0.080
Total PeCDD	**0.39**		**5.0**	**0.16**		
1,2,3,4,7,8-HxCDD	**0.27**	**J**	**5.0**	**0.25**	**0.1**	**0.027**
1,2,3,6,7,8-HxCDD	**0.18**	**J Q**	**5.0**	**0.18**	**0.1**	**0.018**
1,2,3,7,8,9-HxCDD	**0.23**	**J Q**	**5.0**	**0.18**	**0.1**	**0.023**
Total HxCDD	**7.1**		**5.0**	**0.20**		
1,2,3,4,6,7,8-HpCDD	**6.6**		**5.0**	**0.31**	**0.01**	**0.066**
Total HpCDD	**18**		**5.0**	**0.31**		
OCDD	**73**	**B**	**10**	**0.47**	**0.0003**	**0.022**
2,3,7,8-TCDF	**2.2**	**CON**	**1.0**	**0.17**	**0.1**	**0.22**
Total TCDF	**4.5**		**1.0**	**0.15**		
1,2,3,7,8-PeCDF	**1.1**	**J**	**5.0**	**0.16**	**0.03**	**0.033**
2,3,4,7,8-PeCDF	**0.84**	**J**	**5.0**	**0.16**	**0.3**	**0.25**
Total PeCDF	**3.9**		**5.0**	**0.16**		
1,2,3,4,7,8-HxCDF	**2.6**	**J**	**5.0**	**0.086**	**0.1**	**0.26**
1,2,3,6,7,8-HxCDF	**0.62**	**J**	**5.0**	**0.068**	**0.1**	**0.062**
2,3,4,6,7,8-HxCDF	**0.34**	**J**	**5.0**	**0.076**	**0.1**	**0.034**
1,2,3,7,8,9-HxCDF	ND		5.0	0.088	0.1	0.0044
Total HxCDF	**7.0**		**5.0**	**0.078**		
1,2,3,4,6,7,8-HpCDF	**5.4**	**B**	**5.0**	**0.12**	**0.01**	**0.054**
1,2,3,4,7,8,9-HpCDF	**0.83**	**J**	**5.0**	**0.14**	**0.01**	**0.0083**
Total HpCDF	**11**		**5.0**	**0.13**		
OCDF	**11**	**B**	**10**	**0.17**	**0.0003**	**0.0033**
Total TEQ Concentration						**1.2**

Environmental Planning Specialists Inc.

Sample ID: 11117-Q4-U2-R2

Trace Level Organic Compounds

SW846 8290

Lot - Sample #....:	G1D290626 - 008	**Work Order #....:**	MHPLT1AA	**Matrix....:**	SOLID
Date Sampled....:	04/27/11	**Date Received....:**	04/29/11	**Instrument ID....:**	4D5
Prep Date....:	05/06/11	**Analysis Date....:**	05/12/11	**% Moisture....:**	
Prep Batch # ....:	1126235	**Dilution Factor....:**	1	**Units.....:**	pg/g
Initial Wgt/Vol :	9.96 g	**Analyst ID....:**	Lisa L. Hernandez		

INTERNAL STANDARDS	PERCENT RECOVERY	RECOVERY LIMITS
13C-2,3,7,8-TCDD	70	40 - 135
13C-1,2,3,7,8-PeCDD	76	40 - 135
13C-1,2,3,6,7,8-HxCDD	69	40 - 135
13C-1,2,3,4,6,7,8-HpCDD	77	40 - 135
13C-OCDD	92	40 - 135
13C-2,3,7,8-TCDF	84	40 - 135
13C-1,2,3,7,8-PeCDF	73	40 - 135
13C-1,2,3,4,7,8-HxCDF	87	40 - 135
13C-1,2,3,4,6,7,8-HpCDF	79	40 - 135

QUALIFIERS

Results and reporting limits have been adjusted for dry weight.

Notes:

ND = 1/2 x EDL x TEF

WHO TEFs for human risk assessment based on the conclusions of the World Health Organization meeting in Geneva, Switzerland, June 2005.

B	Method blank contamination. The associated method blank contains the target analyte at a reportable level.
CON	Confirmation analysis.
J	Estimated Result.
Q	Estimated maximum possible concentration (EMPC).

Environmental Planning Specialists Inc.

Sample ID: 11118-Q4-U3-R1

Trace Level Organic Compounds

SW846 8290

Lot - Sample #....:	G1D290626 - 011	**Work Order #....:**	MHPLX1AA	**Matrix....:**	SOLID
Date Sampled....:	04/28/11	**Date Received....:**	04/29/11	**Instrument ID....:**	11D5
Prep Date....:	05/06/11	**Analysis Date....:**	05/14/11	**% Moisture....:**	
Prep Batch # ....:	1126235	**Dilution Factor....:**	0.99	**Units.....:**	pg/g
Initial Wgt/Vol :	10.03 g	**Analyst ID....:**	Michael Ng		

PARAMETER	RESULT		REPORTING LIMIT	ESTIMATED DETECTION LIMIT	TEF FACTOR	TEQ CONCENTRATION
2,3,7,8-TCDD	ND		1.0	0.35	1	0.18
Total TCDD	**0.86**		**1.0**	**0.35**		
1,2,3,7,8-PeCDD	ND		5.0	1.9	1	0.95
Total PeCDD	**3.6**		**5.0**	**1.9**		
1,2,3,4,7,8-HxCDD	**5.3**		**5.0**	**1.9**	**0.1**	**0.53**
1,2,3,6,7,8-HxCDD	**2.0**	**J Q**	**5.0**	**1.6**	**0.1**	**0.20**
1,2,3,7,8,9-HxCDD	**3.7**	**J Q**	**5.0**	**1.6**	**0.1**	**0.37**
Total HxCDD	**35**		**5.0**	**1.7**		
1,2,3,4,6,7,8-HpCDD	**46**		**5.0**	**3.3**	**0.01**	**0.46**
Total HpCDD	**100**		**5.0**	**3.3**		
OCDD	**270**	**B**	**10**	**5.5**	**0.0003**	**0.081**
2,3,7,8-TCDF	**13**	**CON**	**1.0**	**0.22**	**0.1**	**1.3**
Total TCDF	**27**		**1.0**	**0.79**		
1,2,3,7,8-PeCDF	**12**		**5.0**	**1.5**	**0.03**	**0.36**
2,3,4,7,8-PeCDF	**6.7**		**5.0**	**1.6**	**0.3**	**2.0**
Total PeCDF	**39**		**5.0**	**1.6**		
1,2,3,4,7,8-HxCDF	**51**		**5.0**	**2.7**	**0.1**	**5.1**
1,2,3,6,7,8-HxCDF	**14**		**5.0**	**2.3**	**0.1**	**1.4**
2,3,4,6,7,8-HxCDF	**7.9**		**5.0**	**2.6**	**0.1**	**0.79**
1,2,3,7,8,9-HxCDF	ND		5.0	2.9	0.1	0.14
Total HxCDF	**110**		**5.0**	**2.6**		
1,2,3,4,6,7,8-HpCDF	**87**	**B**	**5.0**	**4.0**	**0.01**	**0.87**
1,2,3,4,7,8,9-HpCDF	**12**		**5.0**	**4.7**	**0.01**	**0.12**
Total HpCDF	***150***		***5.0***	***4.3***		
OCDF	**150**	**B**	**10**	**3.9**	**0.0003**	**0.045**
Total TEQ Concentration						**15**

Environmental Planning Specialists Inc.

Sample ID: 11118-Q4-U3-R1

Trace Level Organic Compounds

SW846 8290

Lot - Sample #....:	G1D290626 - 011	**Work Order #....:**	MHPLX1AA	**Matrix....:**	SOLID
Date Sampled....:	04/28/11	**Date Received....:**	04/29/11	**Instrument ID....:**	11D5
Prep Date....:	05/06/11	**Analysis Date....:**	05/14/11	**% Moisture....:**	
Prep Batch # ....:	1126235	**Dilution Factor....:**	0.99	**Units.....:**	pg/g
Initial Wgt/Vol :	10.03 g	**Analyst ID....:**	Michael Ng		

INTERNAL STANDARDS	PERCENT RECOVERY	RECOVERY LIMITS
13C-2,3,7,8-TCDD	55	40 - 135
13C-1,2,3,7,8-PeCDD	48	40 - 135
13C-1,2,3,6,7,8-HxCDD	57	40 - 135
13C-1,2,3,4,6,7,8-HpCDD	56	40 - 135
13C-OCDD	53	40 - 135
13C-2,3,7,8-TCDF	57	40 - 135
13C-1,2,3,7,8-PeCDF	55	40 - 135
13C-1,2,3,4,7,8-HxCDF	62	40 - 135
13C-1,2,3,4,6,7,8-HpCDF	58	40 - 135

QUALIFIERS

Results and reporting limits have been adjusted for dry weight.

Notes:

ND = 1/2 x EDL x TEF

WHO TEFs for human risk assessment based on the conclusions of the World Health Organization meeting in Geneva, Switzerland, June 2005.

B	Method blank contamination. The associated method blank contains the target analyte at a reportable level.
CON	Confirmation analysis.
J	Estimated Result.
Q	Estimated maximum possible concentration (EMPC).

Environmental Planning Specialists Inc.

Sample ID: 11118-Q4-U3-R2

Trace Level Organic Compounds

SW846 8290

Lot - Sample #....:	G1D290626 - 012	**Work Order #....:**	MHPL01AA	**Matrix....:**	SOLID
Date Sampled....:	04/28/11	**Date Received....:**	04/29/11	**Instrument ID....:**	11D5
Prep Date....:	05/06/11	**Analysis Date....:**	05/14/11	**% Moisture....:**	
Prep Batch # ....:	1126235	**Dilution Factor....:**	1	**Units.....:**	pg/g
Initial Wgt/Vol :	9.97 g	**Analyst ID....:**	Michael Ng		

PARAMETER	RESULT		REPORTING LIMIT	ESTIMATED DETECTION LIMIT	TEF FACTOR	TEQ CONCENTRATION
2,3,7,8-TCDD	ND		1.0	0.30	1	0.15
Total TCDD	**0.59**		**1.0**	**0.30**		
1,2,3,7,8-PeCDD	ND		5.0	1.1	1	0.55
Total PeCDD	ND		5.0	1.1		
1,2,3,4,7,8-HxCDD	ND		5.0	0.56	0.1	0.028
1,2,3,6,7,8-HxCDD	**0.84**	**J**	**5.0**	**0.46**	**0.1**	**0.084**
1,2,3,7,8,9-HxCDD	**1.1**	**J**	**5.0**	**0.47**	**0.1**	**0.11**
Total HxCDD	**17**		**5.0**	**0.49**		
1,2,3,4,6,7,8-HpCDD	**17**		**5.0**	**2.3**	**0.01**	**0.17**
Total HpCDD	**61**		**5.0**	**2.3**		
OCDD	**160**	**B**	**10**	**2.1**	**0.0003**	**0.048**
2,3,7,8-TCDF	**12**	**CON**	**1.0**	**0.14**	**0.1**	**1.2**
Total TCDF	**26**		**1.0**	**0.67**		
1,2,3,7,8-PeCDF	**16**		**5.0**	**0.96**	**0.03**	**0.48**
2,3,4,7,8-PeCDF	**7.6**		**5.0**	**0.99**	**0.3**	**2.3**
Total PeCDF	**54**		**5.0**	**0.98**		
1,2,3,4,7,8-HxCDF	**59**		**5.0**	**1.0**	**0.1**	**5.9**
1,2,3,6,7,8-HxCDF	**15**		**5.0**	**0.87**	**0.1**	**1.5**
2,3,4,6,7,8-HxCDF	**7.8**		**5.0**	**0.99**	**0.1**	**0.78**
1,2,3,7,8,9-HxCDF	ND		5.0	1.1	0.1	0.055
Total HxCDF	**130**		**5.0**	**1.0**		
1,2,3,4,6,7,8-HpCDF	**78**	**B**	**5.0**	**1.3**	**0.01**	**0.78**
1,2,3,4,7,8,9-HpCDF	**13**		**5.0**	**1.6**	**0.01**	**0.13**
Total HpCDF	**140**		**5.0**	**1.4**		
OCDF	**180**	**B**	**10**	**1.2**	**0.0003**	**0.054**
Total TEQ Concentration						**14**

Environmental Planning Specialists Inc.

Sample ID: 11118-Q4-U3-R2

Trace Level Organic Compounds

SW846 8290

Lot - Sample #....:	G1D290626 - 012	**Work Order #....:**	MHPL01AA	**Matrix....:**	SOLID
Date Sampled....:	04/28/11	**Date Received....:**	04/29/11	**Instrument ID....:**	11D5
Prep Date....:	05/06/11	**Analysis Date....:**	05/14/11	**% Moisture....:**	
Prep Batch # ....:	1126235	**Dilution Factor....:**	1	**Units.....:**	pg/g
Initial Wgt/Vol :	9.97 g	**Analyst ID....:**	Michael Ng		

INTERNAL STANDARDS	PERCENT RECOVERY	RECOVERY LIMITS
13C-2,3,7,8-TCDD	74	40 - 135
13C-1,2,3,7,8-PeCDD	67	40 - 135
13C-1,2,3,6,7,8-HxCDD	81	40 - 135
13C-1,2,3,4,6,7,8-HpCDD	77	40 - 135
13C-OCDD	76	40 - 135
13C-2,3,7,8-TCDF	72	40 - 135
13C-1,2,3,7,8-PeCDF	78	40 - 135
13C-1,2,3,4,7,8-HxCDF	87	40 - 135
13C-1,2,3,4,6,7,8-HpCDF	82	40 - 135

QUALIFIERS

Results and reporting limits have been adjusted for dry weight.

Notes:

ND = 1/2 x EDL x TEF

WHO TEFs for human risk assessment based on the conclusions of the World Health Organization meeting in Geneva, Switzerland, June 2005.

B	Method blank contamination. The associated method blank contains the target analyte at a reportable level.
CON	Confirmation analysis.
J	Estimated Result.

EPS

Attachment B

Data Validation QA/QC Review

DATA VALIDATION QA/QC REVIEW

Polychlorinated dibenzodioxins and dibenzofurans analyses were performed by Test America Laboratory of West Sacramento, California. Twenty-three solid samples were analyzed for polychlorinated dioxins and furans by high-resolution gas chromatography/high-resolution mass spectometery (HRGC/HRMS) by EPA 8290. The laboratory provided U.S. EPA CLP style deliverables for each sample delivery group (SDG).

Samples were analyzed and results reported by the laboratory in batch numbers as summarized below:

G1D290626

Sample	Date Collected	Matrix
11117-Q3-U2-R1	4/27/11	Solid
11117-Q3-U3-R1	4/27/11	Solid
11117-Q3-U2-R2	4/27/11	Solid
11117-Q3-U3-R2	4/27/11	Solid
11117-Q3-U1-R1	4/27/11	Solid
11117-Q3-U1-R2	4/27/11	Solid
11117-Q4-U2-R1	4/27/11	Solid
11117-Q4-U2-R2	4/27/11	Solid
11117-Q4-U1-R1	4/27/11	Solid
11117-Q4-U1-R2	4/27/11	Solid
11118-Q4-U3-R1	4/28/11	Solid
11118-Q4-U3-R2	4/28/11	Solid
11118-Q2-U1-R1	4/28/11	Solid
11118-Q2-U1-R2	4/28/11	Solid
11118-Q2-U2-R1	4/28/11	Solid
11118-Q2-U2-R2	4/28/11	Solid

G1D300512

Sample	Date Collected	Matrix
11119-Q2-U3-R1	4/29/11	Solid
11117-Q3-U3-R2	4/29/11	Solid

G1D230436

Sample	Date Collected	Matrix
10112-Q1-U1-R1 in triplicate	4/22/11	Solid
10112-Q1-U1-R2	4/22/11	Solid
10112-Q1-U1-R3	4/22/11	Solid

DIOXINS/FURANS - U.S. EPA Method 8290

Sample Holding Times- *acceptable*

All samples were handled and delivered to the laboratory according to chain-of-custody procedure. Laboratory data deliverables were complete. The cooler temperature upon laboratory receipt ranged from 3 to 6 °C. Maximum holding times for extractables were specified as 30 days/1 year (sample/ extract maximum holding times) for solids. All extraction and analytical holding times were met.

GC Resolution Criteria – *acceptable*

The chromatographic peak separation criteria of ≤25% valley measurement between peaks 2,3,7,8-TCDF and 2,3,4,7-TCDF was met for the instrument columns.

Initial and Continuing calibration – *acceptable*

The initial six point calibration mean relative response factors (RRFs) met the criteria, and the continuing calibration was performed for each twelve hour timeframe.

For SDGs G1D290626 and G1D300512, the percent difference (%D) was exceeded for the opening continuing calibration for 1,2,3,4,7,8-HxCDD and ending calibration for 1,2,3,7,8,9-HxCDD. However, since the associated results were estimated values below the reporting limit (reported as J), no further qualification was deemed necessary.

Blanks – *acceptable*

One method blank was analyzed with each analytical group. The blanks contained low levels of target compounds, which were compared to the associated laboratory data. The sample concentrations were much higher than the blank concentrations, therefore no qualification was made during data validation.

Labeled Compound Performance – *acceptable as qualified*

Labeled compound performance was reviewed. The labeled compound recoveries were acceptable while the ion abundance ratio criteria was exceeded for the following samples for the indicated compounds, which were flagged as estimated and assigned secondary qualifier AB:

Sample 10112-Q1-U1-R3 for 1,2,3,4,7,8-HxCDD
Sample 10112-Q1-U1-R2 for 1,2,3,7,8-PeCDD
Samples 10112-Q1-U1-R2, 101120-Q1-U1-R1 for 2,3,4,6,7,8-HxCDF
Sample 10112-Q1-U1-R1 for 1,2,3,7,8-PeCDF for the third triplicate
Sample 11118-Q4-U3-R1 for 1,2,3,6,7,8-HxCDD and 1,2,3,7,8,9-HxCDD
Sample 11118-Q2-U1-R2 for 1,2,3,4,8-HxCDD, 1,2,3,6,7,8-HxCDD and 1,2,3,7,8,9-HxCDD

Sample 11118-Q2-U2-R1 for 1,2,3,7,8-PeCDD
Sample 11118-Q2-U2-R2 for 1,2,3,4,7,8-HxCDD
Samples 11117-Q3-U2-R1 and 11117-Q3-U1-R1 for 2,3,7,8-TCDD
Sample 11117-Q3-U3-R1 for 1,2,3,6,7,8-HxCDF
Samples 11117-Q3-U3-R1, 11117-Q3-U2-R2 and 11117-Q3-U3-R2 for 1,2,3,7,8,9-HxCDF
Sample 11117-Q4-U2-R2 for 1,2,3,6,7,8-HxCDD and 1,2,3,7,8,9-HxCDD
Sample 11117-Q4-U1-R1 for 2,3,7,8-TCDD
Samples 11117-Q4-U1-R2 and 11118-Q2-U1-R1 for 1,2,3,7,8,9-HxCDD
Sample 11119-Q2-U3-R1 for 2,3,7,8-TCDD, 1,2,3,4,7,8-HxCDD, 1,2,3,6,7,8-HxCDD and 1,2,3,7,8,9-HxCDD
Sample 11119-Q2-U3-R2 for 1,2,3,4,7,8-HxCDD and 1,2,3,6,7,8-HxCDD

Laboratory Precision – *acceptable*

The laboratory analyzed sample 10112-Q1-U1-R1 in triplicate. The results compared between the three samples and precision criteria were met.

Target Compound Identification and Reporting Limits – *acceptable as qualified*

The laboratory noted instrument problems where they could not generate an ending mass resolution printout until later in the day. Upon laboratory review, all criteria had been met.

The laboratory reported several compounds with an E qualifier to indicate the upper limit of the instrument range was exceeded. Therefore, these compounds were qualified as estimated and assigned secondary qualifier LR: OCDD for 11117-Q3-U2-R1, 11117-Q3-U3-R1, 11117-Q3-U2-R2, 11117-Q3-U3-R2, 11118-Q2-U2-R2 and 1,2,3,4,6,7,8-HpCDD for 11118-Q2-U2-R2.

The laboratory noted the internal standard recoveries were low for sample 11117-Q4-U1-R1. The sample was reextracted and reanalyzed with acceptable recoveries, and was reported as the final data for the sample.

The following compounds for the indicated samples were reported as G by the laboratory to indicate elevated noise or matrix interference, these results were qualified as estimated and assigned secondary qualifier LOCK:

Samples 11117-Q3-U2-R1 and 11117-Q3-U2-R2 for OCDD
Sample 11118-Q2-U2-R1 for 1,2,3,4,7,8,9-HpCDF, OCDD and 1,2,3,4,6,7,8-HpCDD
Sample 11118-Q2-U2-R2 for 1,2,3,4,6,7,8-HpCDD and OCDD
Sample 11119-Q2-U3-R1 for 1,2,3,4,6,7,8-HpCDD

Overall Assessment: All deliverables were present and data packages were complete. Recommended sample holding times and conditions were met. Method blanks show trace levels of target compounds which were too low for resulting qualification of associated samples. Compound identification and quantitation is acceptable. Raw data show no indications of system anomalies. The native triplicate samples met precision criteria. Overall analytical performance was considered acceptable.

References:

U.S. Environmental Protection Agency (USEPA). 1996. Test Methods for Evaluating Solid Waste, Physical/Chemical Methods, SW-846.

U.S. Environmental Protection Agency (USEPA). 2005. USEPA Contract Laboratory Program National Functional Guidelines for Chlorinated Dioxin/Furan Data Review. EPA-540-R-05-001
September

APPENDIX A

Validation Qualifiers

DATA QUALIFIER DEFINITIONS

The following definitions provide brief explanations of the data qualifiers assigned to results in the data review process. If the data reviewer chooses to use additional qualifiers, a complete explanation of those qualifiers must accompany the data review.

Data Qualifier	Qualifier Definitions
U	The analyte was analyzed for, but was not detected at a level greater than or equal to the level of the adjusted Contract Required Quantitation Limit (CRQL) for sample and method.
J	The analyte was positively identified and the associated numerical value is the approximate concentration of the analyte in the sample [due either to the quality of the data generated because certain Quality Control (QC) criteria were not met, or the concentration of the analyte was below the adjusted CRQL].
UJ	The analyte was not detected at a level greater than or equal to the adjusted CRQL or the reported adjusted CRQL is approximate and may be inaccurate or imprecise.
R	The sample results are unusable due to the quality of the data generated because certain criteria were not met. The analyte may or may not be present in the sample.

Secondary Qualifiers

Qualifier	Definition
2SH	Second source calibration verification standard greater than the upper control limit
2SL	Second source calibration verification standard less than the lower control limit
ABH	Ambient blank concentration greater than the RL
ABL	Ambient blank concentration less than the RL
BKD	The result is qualified because the DDT and/or Endrin breakdown was greater than 20%
CBKD	The result is qualified because the combined DDT/Endrin breakdown is greater than 30%
CCBH	Continuing calibration blank concentration greater than the RL
CCBL	Continuing calibration blank concentration less than RL
CCC	CCC Failure
CCRRF	Continuing calibration relative response factor below the LCL
CCVF	Continuing Calibration not analyzed at the required frequency
CCVH	Continuing calibration recovery greater than upper control limit
CCVL	Continuing calibration recovery less than lower control limit
CF	Confirmation result
CFP	Confirmation precision exceeded
CO	Compounds were reported combined on one column
DL	Secondary dilution
EBH	Equipment blank concentration greater than the RL
EBL	Equipment blank concentration less than the RL
EMPC	Estimated Maximum Possible Concentration Reported
FBH	Field blank concentration greater than the RL
FBL	Field blank concentration less than the RL
FD	Field duplicate exceeds RPD criteria
GPC	The results are qualified due to GPC calibration deficiencies.
HTA	Analytical Holding Time exceeded
HTP	Preparation Holding Time exceeded
IB	Result between the MDL and RL
ICBH	Initial calibration blank concentration greater than the RL
ICBL	Initial calibration blank concentration less than RL
ICR2	Initial calibration exceeded the R2 for first order regression
ICRR	Exceeds RSD criteria and initial calibration exceeded the R2 for first order regression
ICRRF	Initial calibration relative response factor below the LCL
ICRSD	Initial calibration RSD exceeded
ICSP	Single Point Initial Calibration used for Quantitation
ICVSH	Initial calibration verification recovery greater than upper control limit
ICVSL	Initial calibration verification recovery less than lower control limit
ISH	Internal standard response exceeded the UCL criteria
ISL	Internal standard response exceeded the LCL criteria
LBH	Laboratory blank contamination greater than the RL
LBL	Laboratory blank contamination less than the RL
LCSDH	LCSD recovery greater than criteria
LCSDL	LCSD recovery less than the criteria
LCSH	LCS recovery greater than criteria
LCSL	LCS recovery less than the criteria

LCSP	LCS/LCSD RPD criteria exceeded
LDP	Laboratory Duplicate Precision out
LR	Linear range exceeded. Concentration above linear range
LOCK	Lock Mass or matrix interference, G flagged by lab
MSA	Quantitated by the method of standard additions
MSALL	Global matrix spike flagging
MSAR2	method of standard additions R2 out
MSDH	Matrix spike duplicate recovery criteria greater than the upper limit
MSDL	Matrix spike duplicate recovery criteria less than the lower limit
MSDP	Matrix Spike Duplicate RPD criteria exceedances
MSH	Matrix spike recovery criteria greater than the upper limit
MSL	Matrix spike recovery criteria less than the lower limit
NMS	Not Site-specific Matrix Spike
PH	Sample pH out. Not properly preserved
PRM	Result differs from Preliminary Result
PSH	Post spike recovery criteria greater than the upper limit
PSL	Post spike recovery criteria less than the lower limit
RA	Sample was reanalyzed
RE	Sample was re-extracted and reanalyzed
RT	Result is outside the laboratory determined retention time window
SCRN	Screening method and/or data
SDIL	Serial Dilution %D exceeds the upper control limit
SPCC	SPCC Failure
SSH	Surrogate recovery greater than upper limit
SSL	Surrogate recovery less than lower limit
SSR	Surrogate spike recovery <10%
TBH	Trip blank concentration greater than the RL
TBL	Trip blank concentration less than the RL
TD	Total Concentration < Dissolved Concentration
TEMP	Cooler temperature out upon arrival
TIC	Tentatively identified compound
TN	GC/MS tune does not meet criteria
XCC	No Continuing Calibration analyzed in the analytical batch
X-DL	Data not used due to dilution; another value is more appropriate or data was not requested
XIC	No initial calibration analyzed in the analytical batch
XICVS	Initial calibration verification standard was not analyzed
XLCS	No LCS in the analytical batch
XLD	Laboratory Duplicate not reported
XMS	Matrix Spike not reported
XMSD	Matrix Spike Duplicate not reported
X-RE	Data not used due to reanalysis; another value is more appropriate or data was not requested
XPB	Preparation blank was not reported or provided

APPENDIX B

Data Validation Checklist
Calculations
Field Forms

VALIDATION WORKSHEET

Method: 8290 Dioxin / Furan
Date Reviewed: 6/23/14
Sample Collection Dates: 4/22/14

SDG: 610290626
Reviewer: C Jensen

The following data validation areas were reviewed:

Sample Identification / Validation Criteria	1 11117-Q3-U2-R1	2 11117-Q3-U3-R1	3 11117-Q3-U2-R2	4 11117-Q3-U3-R2	5 11117-Q2-U1-R1	6 11117-Q3-U1-R2	7 11117-Q4-U2-R1	8 11117-Q4-U2-R2	9 11117-Q4-U1-R1	10 11117-Q4-U1-R2	11 11118-Q4-U3-R1	12 11118-Q4-U2-R2	13 11118-Q2-U1-R1	14 11118-Q2-U1-R2	15 11118-Q2-U2-R1	16 11118-Q2-U2-R2	17	18	19	20
Completeness of Analyses	A																5/8/14			
Holding Times	A																1234678 HxCDD			
Initial Calibration	A																123789 HxCDD			
Continuing Calibration (Q)	X	X	X	X	A										X	X	11118-Q4-U3-R1			
Method Blanks	A																			
LCS	A																1234678 HxCDD			
Surrogate %R or duplicate RPD																	1234678 HxCDD			
MS/MSD: (internal std)	A																123789 HxCDD			
Reporting Limits	A																11118-Q2-U1-R2			
Completeness of Analyte List	A																1234678 PeCDD			
Field Duplicate Pair :																	11118-Q2-U3-R1			
Equip /Field Blank																	1234678 HxCDD			
																	11118-Q2-U2-R2			

Note: X = Criteria were evaluated and not met. A = Criteria were evaluated and met. N = Data was not available for review. NA = Not applicable.

Comments:

Lab Blank contam (Q) "LBR" no blank flags, Spl Concys too high

Coolers: Temp blanks 3° / 4°, Smls 6°

(J) upper limit E qual - "LR" 2nd qual + J

QCom for 11117-Q3-U2-R1, 11117-Q3-U3-R1, 11117-Q3-U2-R2

11117-Q3-U3-R2, 11118-Q2-U2-R1, 11118-Q2-U2-R2 ← also 1234678-HpCDD for this Spl only

~~Lab Q qual~~

(J) QCom Ab ion abundance J qual

2378 TCDD 11117-Q3-U2-R1, 11117-Q3-U1-R1 11117-Q3-U1-R1

1234678 HxCDF 11117-Q3-U3-R1 123789 HxCDF 11117-Q3-U2-R2, 11117-Q3-U3-R2

(J) internal std low, re-extracted: ok LR or reanalysis - RR

11117-Q4-U1-R1 (J) 1234678 HxCDD, 123789 HxCDD 11117-Q4-U2-R2

2378 TCDD 11117-Q4-U3-R1

123789 HxCDD 11117-Q4-U1-R2, 11118-Q2-U1-R1

SDG: G1D290426

roject: Howell

Date: 6.13.11

Method: 8290 Diox/Furan

Calibration 15SEP078D2 %RSD <20 natives <30 labeled , S/N >10

ICV %R lab reported

Dely <20% native <30 from curve RRFs labeled

CCV %R end <25 from curve RRFs <35 " lab reported

LCS ok in control. lab reported

ICS %R NA lab reported

MS %R N/A lab reported

MS/MSD %RPD NA lab reported

uplicate %D lab reported

High Std Check lab reported

Low Cal Check lab reported

Serial D % lab reported

Sample Recalculation lab reported

other (moisture) lab reported

DJ / lock interference OCDD 11117-Q3-U2-R1, 11117-Q3-U2-R2

1234789-HpCDF, OCDD, 1234678 HpCDD for 11118-Q2-U2-R1

1234678-HpCDD, OCDD for 11118-Q2-U2-R2

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Test America – West Sacramento

Daily Calibration Checklist
Dioxin Methods

Method ID 8290 | Associated ICAL 8290 022211 4D5

Column ID DB5 | Instrument ID 4D5

STD ID STO511B, STO511C | STD Solution 11DXN109

Analyzed by AS, AM | Date Analyzed 05-11-11, 05-12-11

Std. Pkg. By AS | Date Std. Pkg. Assembled 05-12-11

Std. Pkg. Reviewed By NK | Date Std. Pkg. Reviewed 05-12-11

DAILY STANDARD PACKAGE	INITIATED	REVIEWED
Standard, CPSM, and Solvent Blank present?	✓	✓
Copy of log-file and Beginning Static Resolution present?	✓	✓
CPSM blow up present?	✓	✓
Curve Summary present?	✓	✓
Summary of Method criteria present or documented below?	✓	✓
Daily standard within method specified limits?*	① ②	① ②
Analyte retention times correct?	✓	✓
Isotopic ratios within limits?	✓	✓
CPSM valley ≤ method specified limits?**	✓	✓
Are chromatographic windows correct?	✓	✓
Samples analyzed within 12 hrs of daily standard?	✓	✓
Manual reintegration's checked and hardcopies included?	NA	NA
Ending Standard present?	✓	✓
Ending Static Resolutions present	✓	✓
Absolute retention times for 13C12-1,2,3,4-TCDD and 13C12-1,2,3,7,8,9-HxCDD are within +/- 15 seconds of the retention times in the Initial Calibration? (required for **all** 1613B samples)	NA	NA

COMMENTS:

① opening ccv >20% D for 1,2,3,4,7,8-HxCDD - Samples with positive results for this analyte shall be R.I.

② Ending ccv >20% D for 1,2,3,7,8,9-HxCDD <25% D, use Avg RRF = 1.16

* Method 8290/TO9/M0023A: (beginning) ≤ 20% from curve RRFs for native analytes, ≤ 30% from curve RRFs for labeled compounds.
Method 8290/TO9/M0023A: (ending) ≤ 25% from curve RRFs for native analytes, ≤ 35% from curve RRFs for labeled compounds.
Method 23: See Method 23 Daily Standard Criteria, Table 5.
Method 1613B: See, Method 1613B or Method 1613B Tetras Daily Standard Criteria,

** Method 23/0023A CPSM Criteria: 25% valley between 2378 TCDF (DB-225)/TCDD (DB-5) and its closest eluters normalized to the smallest peak of the triplet
Method 1613B/8290/TO9 CPSM Criteria: 25% valley between 2378 TCDF (DB-225)/TCDD (DB-5) and its closest eluters normalized to the 2378 peak.

affects samples 5,6,7,8 which are all J below RL > RL, no further flag.

ICal recalc ok. 9/6/15/11

diox furan ical run 15SE098D2

6pt	cal 1	cal 2	cal 3	cal 4	cal 5	cal6	std dev	avg RF	RSD
13C 2378TCDF	1.12	1.14	1.14	1.14	1.05	1.03	0.0500666	1.103333	0.045378

SD/RF x 100 = %RSD

6pt	cal 1	cal 2	cal 3	cal 4	cal 5	cal6	std dev	avg RF	RSD
total PECDD	1.06	0.99	1.05	1.01	1.07	1.07	0.0337145	1.041667	0.032366

SD/RF x 100 = %RSD

6pt	cal 1	cal 2	cal 3	cal 4	cal 5	cal6	std dev	avg RF	RSD
123789HxCDF	1.29	1.1	1.16	0.99	1.09	1.11	0.0987252	1.123333	0.087886

SD/RF x 100 = %RSD

Method Blank Report

Trace Level Organic Compounds

SW846 8290

Lot - Sample #....:	G1E060000 - 235B	**Work Order #....:**	MH2Q21AA	**Matrix....:**	SOLID
Date Sampled....:	04/27/11	**Date Received....:**	04/29/11	**Dilution Factor:**	1
Prep Date....:	05/06/11	**Analysis Date....:**	05/12/11	**Percent Moisture:**	100
Prep Batch # ....:	1126235	**Instrument ID....:**	4D5		
Initial Wgt/Vol :	10 g	**Analyst ID....:**	Lisa L. Hernandez		

PARAMETER	RESULT		REPORTING LIMIT	ESTIMATED DETECTION LIMIT	UNITS
2,3,7,8-TCDD	ND		1.0	0.11	pg/g
Total TCDD	ND		1.0	0.11	pg/g
1,2,3,7,8-PeCDD	ND		5.0	0.13	pg/g
Total PeCDD	ND		5.0	0.13	pg/g
1,2,3,4,7,8-HxCDD	ND		5.0	0.14	pg/g
1,2,3,6,7,8-HxCDD	ND		5.0	0.10	pg/g
1,2,3,7,8,9-HxCDD	ND		5.0	0.11	pg/g
Total HxCDD	ND		5.0	0.14	pg/g
1,2,3,4,6,7,8-HpCDD	ND		5.0	0.11	pg/g
Total HpCDD	**0.11**	.55	**5.0**	**0.11**	**pg/g**
OCDD	**0.32**	1.6 J Q	**10**	**0.13**	**pg/g**
2,3,7,8-TCDF	ND		1.0	0.14	pg/g
Total TCDF	ND		1.0	0.14	pg/g
1,2,3,7,8-PeCDF	ND		5.0	0.11	pg/g
2,3,4,7,8-PeCDF	ND		5.0	0.12	pg/g
Total PeCDF	ND		5.0	0.12	pg/g
1,2,3,4,7,8-HxCDF	ND		5.0	0.049	pg/g
1,2,3,6,7,8-HxCDF	ND		5.0	0.039	pg/g
2,3,4,6,7,8-HxCDF	ND		5.0	0.043	pg/g
1,2,3,7,8,9-HxCDF	ND		5.0	0.050	pg/g
Total HxCDF	ND		5.0	0.050	pg/g
1,2,3,4,6,7,8-HpCDF	**0.10**	.5 J Q	**5.0**	**0.083**	**pg/g**
1,2,3,4,7,8,9-HpCDF	ND		5.0	0.097	pg/g
Total HpCDF	**0.10**	.5	**5.0**	**0.089**	**pg/g**
OCDF	**0.25**	1.25 J	**10**	**0.23**	**pg/g**

Method Blank Report

Trace Level Organic Compounds

SW846 8290

Lot - Sample #....:	G1E170000 - 180B	**Work Order #....:**	MJHQJ1AA	**Matrix....:**	SOLID
Date Sampled....:	04/27/11	**Date Received....:**	04/29/11	**Dilution Factor:**	1
Prep Date....:	05/17/11	**Analysis Date....:**	05/17/11	**Percent Moisture:**	100
Prep Batch #....:	1137180	**Instrument ID....:**	9D5		
Initial Wgt/Vol :	10 g	**Analyst ID....:**	Sonia Ouni		

PARAMETER	RESULT	REPORTING LIMIT	ESTIMATED DETECTION LIMIT	UNITS
2,3,7,8-TCDD	ND	1.0	0.12	pg/g
Total TCDD	**0.23 .15**	**1.0**	**0.12**	**pg/g**
1,2,3,7,8-PeCDD	ND	5.0	0.21	pg/g
Total PeCDD	ND	5.0	0.21	pg/g
1,2,3,4,7,8-HxCDD	ND	5.0	0.10	pg/g
1,2,3,6,7,8-HxCDD	ND	5.0	0.071	pg/g
1,2,3,7,8,9-HxCDD	ND	5.0	0.070	pg/g
Total HxCDD	ND	5.0	0.12	pg/g
1,2,3,4,6,7,8-HpCDD	ND	5.0	0.077	pg/g
Total HpCDD	**0.12 .6**	**5.0**	**0.077**	**pg/g**
OCDD	**0.27 1.35 J Q**	**10**	**0.19**	**pg/g**
2,3,7,8-TCDF	ND	1.0	0.19	pg/g
Total TCDF	ND	1.0	0.19	pg/g
1,2,3,7,8-PeCDF	ND	5.0	0.18	pg/g
2,3,4,7,8-PeCDF	ND	5.0	0.18	pg/g
Total PeCDF	ND	5.0	0.18	pg/g
1,2,3,4,7,8-HxCDF	ND	5.0	0.11	pg/g
1,2,3,6,7,8-HxCDF	ND	5.0	0.079	pg/g
2,3,4,6,7,8-HxCDF	ND	5.0	0.091	pg/g
1,2,3,7,8,9-HxCDF	ND	5.0	0.11	pg/g
Total HxCDF	ND	5.0	0.11	pg/g
1,2,3,4,6,7,8-HpCDF	**0.073 .365**	**5.0**	**0.072**	**pg/g**
1,2,3,4,7,8,9-HpCDF	ND	5.0	0.090	pg/g
Total HpCDF	ND	5.0	0.080	pg/g
OCDF	**0.15 .75 J**	**10**	**0.11**	**pg/g**

No flags

LABORATORY CONTROL SAMPLE DATA REPORT

Trace Level Organic Compounds

Client Lot # ...:	G1D290626	Work Order # ...:	MH2Q21AC-LCS	Matrix .....:	SOLID
LCS Lot-Sample#:	G1E060000 - 235				
Prep Date .....:	05/06/11	Analysis Date ..:	05/12/11		
Prep Batch # ...:	1126235				
Dilution Factor:	1				
Analyst ID.....:	Lisa L. Hernandez	Instrument ID..:	4D5	Method.....:	SW846 8290
Initial Wgt/Vol:	10 g				

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCENT RECOVERY	RECOVERY LIMITS
2,3,7,8-TCDD	**20.0**	**20.3**	**pg/g**	**102**	**(77 - 130)** 20.3/20 = 1.015
1,2,3,7,8-PeCDD	**100**	**82.5**	**pg/g**	**82**	**(79 - 134)**
1,2,3,4,7,8-HxCDD	**100**	**101**	**pg/g**	**101**	**(65 - 144)**
1,2,3,6,7,8-HxCDD	**100**	**97.8**	**pg/g**	**98**	**(73 - 147)**
1,2,3,7,8,9-HxCDD	**100**	**85.1**	**pg/g**	**85**	**(80 - 143)**
1,2,3,4,6,7,8-HpCDD	**100**	**91.8**	**pg/g**	**92**	**(86 - 134)**
OCDD	**200**	**176**	**pg/g**	**88**	**(80 - 137)**
2,3,7,8-TCDF	**20.0**	**20.5**	**pg/g**	**102**	**(79 - 137)**
1,2,3,7,8-PeCDF	**100**	**93.8**	**pg/g**	**94**	**(81 - 134)** 93.8/100 = 93.8
2,3,4,7,8-PeCDF	**100**	**93.8**	**pg/g**	**94**	**(76 - 132)**
1,2,3,4,7,8-HxCDF	**100**	**92.4**	**pg/g**	**92**	**(72 - 140)**
1,2,3,6,7,8-HxCDF	**100**	**85.4**	**pg/g**	**85**	**(63 - 152)**
2,3,4,6,7,8-HxCDF	**100**	**91.0**	**pg/g**	**91**	**(72 - 151)**
1,2,3,7,8,9-HxCDF	**100**	**90.5**	**pg/g**	**90**	**(72 - 152)**
1,2,3,4,6,7,8-HpCDF	**100**	**94.7**	**pg/g**	**95**	**(81 - 137)**
1,2,3,4,7,8,9-HpCDF	**100**	**95.0**	**pg/g**	**95**	**(79 - 139)**
OCDF	**200**	**180**	**pg/g**	**90**	**(75 - 141)**

INTERNAL STANDARD	PERCENT RECOVERY	RECOVERY LIMITS
13C-2,3,7,8-TCDD	60	(40 - 135)
13C-1,2,3,7,8-PeCDD	65	(40 - 135)
13C-1,2,3,6,7,8-HxCDD	67	(40 - 135)
13C-1,2,3,4,6,7,8-HpCDD	64	(40 - 135)
13C-OCDD	76	(40 - 135)
13C-2,3,7,8-TCDF	73	(40 - 135)
13C-1,2,3,7,8-PeCDF	62	(40 - 135)
13C-1,2,3,4,7,8-HxCDF	77	(40 - 135)
13C-1,2,3,4,6,7,8-HpCDF	66	(40 - 135)

Notes:

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

LABORATORY CONTROL SAMPLE DATA REPORT

Trace Level Organic Compounds

Client Lot # ...:	G1D290626	**Work Order # ...:**	MJHQJ1AC-LCS	**Matrix .....:**	SOLID
LCS Lot-Sample# :	G1E170000-180				
Prep Date .....:	05/17/11	**Analysis Date ..:**	05/17/11		
Prep Batch # ...:	1137180				
Dilution Factor :	1				
Analyst ID.....:	Sonia Ouni	**Instrument ID..:**	9D5	**Method.....:**	SW846 8290
Initial Wgt/Vol:	10 g				

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCENT RECOVERY	RECOVERY LIMITS
2,3,7,8-TCDD	**20.0**	**22.9**	**pg/g**	**114**	**(77 - 130)** 22.9/20 = 1.14
1,2,3,7,8-PeCDD	**100**	**112**	**pg/g**	**112**	**(79 - 134)**
1,2,3,4,7,8-HxCDD	**100**	**110**	**pg/g**	**110**	**(65 - 144)**
1,2,3,6,7,8-HxCDD	**100**	**108**	**pg/g**	**108**	**(73 - 147)**
1,2,3,7,8,9-HxCDD	**100**	**111**	**pg/g**	**111**	**(80 - 143)**
1,2,3,4,6,7,8-HpCDD	**100**	**113**	**pg/g**	**113**	**(86 - 134)** 113/100 = 1.13
OCDD	**200**	**212**	**pg/g**	**106**	**(80 - 137)**
2,3,7,8-TCDF	**20.0**	**21.6**	**pg/g**	**108**	**(79 - 137)**
1,2,3,7,8-PeCDF	**100**	**99.0**	**pg/g**	**99**	**(81 - 134)**
2,3,4,7,8-PeCDF	**100**	**101**	**pg/g**	**101**	**(76 - 132)**
1,2,3,4,7,8-HxCDF	**100**	**102**	**pg/g**	**102**	**(72 - 140)**
1,2,3,6,7,8-HxCDF	**100**	**99.0**	**pg/g**	**99**	**(63 - 152)**
2,3,4,6,7,8-HxCDF	**100**	**99.5**	**pg/g**	**99**	**(72 - 151)**
1,2,3,7,8,9-HxCDF	**100**	**103**	**pg/g**	**103**	**(72 - 152)** 103/100 = 1.03
1,2,3,4,6,7,8-HpCDF	**100**	**101**	**pg/g**	**101**	**(81 - 137)**
1,2,3,4,7,8,9-HpCDF	**100**	**100**	**pg/g**	**100**	**(79 - 139)**
OCDF	**200**	**213**	**pg/g**	**106**	**(75 - 141)**

INTERNAL STANDARD	PERCENT RECOVERY	RECOVERY LIMITS
13C-2,3,7,8-TCDD	104	(40 - 135)
13C-1,2,3,7,8-PeCDD	113	(40 - 135)
13C-1,2,3,6,7,8-HxCDD	108	(40 - 135)
13C-1,2,3,4,6,7,8-HpCDD	110	(40 - 135)
13C-OCDD	103	(40 - 135)
13C-2,3,7,8-TCDF	106	(40 - 135)
13C-1,2,3,7,8-PeCDF	117	(40 - 135)
13C-1,2,3,4,7,8-HxCDF	114	(40 - 135)
13C-1,2,3,4,6,7,8-HpCDF	117	(40 - 135)

Notes:

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

June 1252

VALIDATION WORKSHEET

Method: 8290 (or 1)
Date Reviewed: 6/20/11
Sample Collection Dates: 4/29/11
SDG: G103005
Reviewer: C Jensen

The following data validation areas were reviewed:

Sample Identification	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
	1119-Q2-U3-R4	1119-Q2-U3-R2																		
Validation Criteria																				
Completeness of Analyses	A																			
Holding Times	A																			
Initial Calibration	A																			
Continuing Calibration	A																			
Method Blanks	A	A																		
LCS	A	A																		
Surrogate %R or duplicate RPD																				
MS/MSD: Bottles	A																			
Reporting Limits	A																			
Completeness of Analyte List	A																			
Field Duplicate Pair :																				
Equip /Field Blank																				

Note: X = Criteria were evaluated and not met. A = Criteria were evaluated and met. N = Data was not available for review. NA = Not applicable.

Comments:

Coolers 3°

(J) Q' ion abund. ratio out AB, J flag
2378 TCDD
123478 HxCDD
123678 HxCDD
123789 HxCDD
} 1119-Q2-U3-R1

(J) 123478 HxCDD
123678 HxCDD
} 1119-Q2-U3-R2

(J) Lab G. J flag LOCIC 1119-Q2-U3-R1 1234678 HpCDD

Method Blank Report

Trace Level Organic Compounds

SW846 8290

Lot - Sample #....:	G1E060000-235B	Work Order #....:	MH2Q21AA	Matrix....:	SOLID
Date Sampled....:	04/27/11	Date Received....:	04/29/11	Dilution Factor:	1
Prep Date....:	05/06/11	Analysis Date....:	05/12/11	Percent Moisture:	100
Prep Batch # ....:	1126235	Instrument ID....:	4D5		
Initial Wgt/Vol :	10 g	Analyst ID....:	Lisa L. Hernandez		

PARAMETER	RESULT		REPORTING LIMIT	ESTIMATED DETECTION LIMIT	UNITS
2,3,7,8-TCDD	ND		1.0	0.11	pg/g
Total TCDD	ND		1.0	0.11	pg/g
1,2,3,7,8-PeCDD	ND		5.0	0.13	pg/g
Total PeCDD	ND		5.0	0.13	pg/g
1,2,3,4,7,8-HxCDD	ND		5.0	0.14	pg/g
1,2,3,6,7,8-HxCDD	ND		5.0	0.10	pg/g
1,2,3,7,8,9-HxCDD	ND		5.0	0.11	pg/g
Total HxCDD	ND		5.0	0.14	pg/g
1,2,3,4,6,7,8-HpCDD	ND		5.0	0.11	pg/g
Total HpCDD	**0.11**	.55	**5.0**	**0.11**	**pg/g**
OCDD	0.32	1.6 J Q	10	0.13	pg/g
2,3,7,8-TCDF	ND		1.0	0.14	pg/g
Total TCDF	ND		1.0	0.14	pg/g
1,2,3,7,8-PeCDF	ND		5.0	0.11	pg/g
2,3,4,7,8-PeCDF	ND		5.0	0.12	pg/g
Total PeCDF	ND		5.0	0.12	pg/g
1,2,3,4,7,8-HxCDF	ND		5.0	0.049	pg/g
1,2,3,6,7,8-HxCDF	ND		5.0	0.039	pg/g
2,3,4,6,7,8-HxCDF	ND		5.0	0.043	pg/g
1,2,3,7,8,9-HxCDF	ND		5.0	0.050	pg/g
Total HxCDF	ND		5.0	0.050	pg/g
1,2,3,4,6,7,8-HpCDF	**0.10**	.5 J Q	**5.0**	**0.083**	**pg/g**
1,2,3,4,7,8,9-HpCDF	ND		5.0	0.097	pg/g
Total HpCDF	**0.10**	.5	**5.0**	**0.089**	**pg/g**
OCDF	0.25	1.25 J	10	0.23	pg/g

LABORATORY CONTROL SAMPLE DATA REPORT

Trace Level Organic Compounds

Client Lot # ...:	G1D300512	Work Order # ...:	MH2Q21AC-LCS	Matrix .....:	SOLID
LCS Lot-Sample#:	G1E060000 - 235				
Prep Date .....:	05/06/11	Analysis Date ..:	05/12/11		
Prep Batch # ...:	1126235				
Dilution Factor:	1				
Analyst ID.....:	Lisa L. Hernandez	Instrument ID..:	4D5	Method.....:	SW846 8290
Initial Wgt/Vol:	10 g				

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCENT RECOVERY	RECOVERY LIMITS
2,3,7,8-TCDD	**20.0**	**20.3**	**pg/g**	**102**	**(77 - 130)**
1,2,3,7,8-PeCDD	**100**	**82.5**	**pg/g**	**82**	**(79 - 134)**
1,2,3,4,7,8-HxCDD	**100**	**101**	**pg/g**	**101**	**(65 - 144)**
1,2,3,6,7,8-HxCDD	**100**	**97.8**	**pg/g**	**98**	**(73 - 147)**
1,2,3,7,8,9-HxCDD	**100**	**85.1**	**pg/g**	**85**	**(80 - 143)**
1,2,3,4,6,7,8-HpCDD	**100**	**91.8**	**pg/g**	**92**	**(86 - 134)**
OCDD	**200**	**176**	**pg/g**	**88**	**(80 - 137)**
2,3,7,8-TCDF	**20.0**	**20.5**	**pg/g**	**102**	**(79 - 137)**
1,2,3,7,8-PeCDF	**100**	**93.8**	**pg/g**	**94**	**(81 - 134)**
2,3,4,7,8-PeCDF	**100**	**93.8**	**pg/g**	**94**	**(76 - 132)**
1,2,3,4,7,8-HxCDF	**100**	**92.4**	**pg/g**	**92**	**(72 - 140)**
1,2,3,6,7,8-HxCDF	**100**	**85.4**	**pg/g**	**85**	**(63 - 152)**
2,3,4,6,7,8-HxCDF	**100**	**91.0**	**pg/g**	**91**	**(72 - 151)**
1,2,3,7,8,9-HxCDF	**100**	**90.5**	**pg/g**	**90**	**(72 - 152)**
1,2,3,4,6,7,8-HpCDF	**100**	**94.7**	**pg/g**	**95**	**(81 - 137)**
1,2,3,4,7,8,9-HpCDF	**100**	**95.0**	**pg/g**	**95**	**(79 - 139)**
OCDF	**200**	**180**	**pg/g**	**90**	**(75 - 141)**

INTERNAL STANDARD	PERCENT RECOVERY	RECOVERY LIMITS
13C-2,3,7,8-TCDD	60	(40 - 135)
13C-1,2,3,7,8-PeCDD	65	(40 - 135)
13C-1,2,3,6,7,8-HxCDD	67	(40 - 135)
13C-1,2,3,4,6,7,8-HpCDD	64	(40 - 135)
13C-OCDD	76	(40 - 135)
13C-2,3,7,8-TCDF	73	(40 - 135)
13C-1,2,3,7,8-PeCDF	62	(40 - 135)
13C-1,2,3,4,7,8-HxCDF	77	(40 - 135)
13C-1,2,3,4,6,7,8-HpCDF	66	(40 - 135)

Notes:

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

VALIDATION WORKSHEET

Method: Dioxin / Furan
Date Reviewed: 12-16-11
Sample Collection Dates: 4/22/11
SDG: GIDZ30436
Reviewer: C. Jensen

The following data validation areas were reviewed:

Sample Identification / Validation Criteria	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
	10112-01-LL-R1	10112-01-LL-R2	10112-01-LL-R3																	
Completeness of Analyses	A	→	→																	
Holding Times	A	→	→																	
Initial Calibration	A	→	→																	
Continuing Calibration	N	→	→																	
Method Blanks (1)	A	→	→																	
LCS	A	→	→			+ extr														
Surrogate %R or Replicate RPD	A	→	→	samples run in triplicate - ok																
MS/MSD: Internals	A	→	→																	
Reporting Limits	A	→	→																	
Completeness of Analyte List	A	→	→																	
Field Duplicate Pair :																				
Equip /Field Blank																				

Note: X = Criteria were evaluated and not met. A = Criteria were evaluated and met. N = Data was not available for review. NA = Not applicable.

Comments:

Cooler 3° C

(1) Sample 10112-01-LL-R1 extracted + analyzed in triplicate; precision acceptable

(2) Lab notes instr. problem - could not generate locking mass res. check until later - it was acceptable - no problems.

mass. not high enough to flag samples. 123478 HxCDD 10112-01-LL-R3
123678 PeCDD 10112-01-LL-R2
234678 HxCDF 10112-01-LL-R2

(3) Q ion absorb. ratios out { 234678 HxCDF 10112-01-LL-R1 (3rd dupl.)
12378 PeCDF
"AB", J

SDG: GLDZ304324

Project: Honeywell

Date: 6/17/11 MB oh.

Method: 8290

ICV %R	lab reported
CCV %R	lab reported
LCS oh	lab reported
ICS %R	lab reported
MS %R	lab reported
MS/MSD %RPD	lab reported
Duplicate %D all 3 duplicates precise	lab reported
High Std Check	lab reported
Low Cal Check	lab reported
Serial D %	lab reported
Sample Recalculation	lab reported
other (moisture)	lab reported

Method Blank Report

Trace Level Organic Compounds

SW846 8290

Lot - Sample #....:	G1D250000 - 357B	**Work Order #....:**	MHG6A1AA	**Matrix....:**	SOLID
Date Sampled....:	04/22/11	**Date Received....:**	04/23/11	**Dilution Factor:**	1
Prep Date....:	04/25/11	**Analysis Date....:**	04/26/11	**Percent Moisture:**	100
Prep Batch # ....:	1115357	**Instrument ID....:**	4D5		
Initial Wgt/Vol :	10 g	**Analyst ID....:**	Lisa L. Hernandez		

PARAMETER	RESULT 5X		REPORTING LIMIT	ESTIMATED DETECTION LIMIT	UNITS
2,3,7,8-TCDD	ND		1.0	0.017	pg/g
Total TCDD	ND		1.0	0.15	pg/g
1,2,3,7,8-PeCDD	ND		5.0	0.16	pg/g
Total PeCDD	ND		5.0	0.16	pg/g
1,2,3,4,7,8-HxCDD	ND		5.0	0.027	pg/g
1,2,3,6,7,8-HxCDD	ND		5.0	0.035	pg/g
1,2,3,7,8,9-HxCDD	ND		5.0	0.048	pg/g
Total HxCDD	ND		5.0	0.081	pg/g
1,2,3,4,6,7,8-HpCDD	ND		5.0	0.10	pg/g
Total HpCDD	ND		5.0	0.15	pg/g
OCDD	**0.51** 2.55	**J**	**10**	**0.041**	**pg/g**
2,3,7,8-TCDF	ND		1.0	0.11	pg/g
Total TCDF	ND		1.0	0.13	pg/g
1,2,3,7,8-PeCDF	ND		5.0	0.055	pg/g
2,3,4,7,8-PeCDF	ND		5.0	0.046	pg/g
Total PeCDF	ND		5.0	0.12	pg/g
1,2,3,4,7,8-HxCDF	ND		5.0	0.082	pg/g
1,2,3,6,7,8-HxCDF	ND		5.0	0.063	pg/g
2,3,4,6,7,8-HxCDF	ND		5.0	0.071	pg/g
1,2,3,7,8,9-HxCDF	ND		5.0	0.082	pg/g
Total HxCDF	ND		5.0	0.082	pg/g
1,2,3,4,6,7,8-HpCDF	**0.22** 1.1	**J Q**	**5.0**	**0.023**	**pg/g**
1,2,3,4,7,8,9-HpCDF	ND		5.0	0.14	pg/g
Total HpCDF	**0.22** 1.1		**5.0**	**0.025**	**pg/g**
OCDF	**0.51** 2.55	**J**	**10**	**0.037**	**pg/g**

Method Blank Report

Trace Level Organic Compounds

SW846 8290

Lot - Sample #....:	G1D250000 - 357B	**Work Order #....:**	MHG6A1AA	**Matrix....:**	SOLID
Date Sampled....:	04/22/11	**Date Received....:**	04/23/11	**Dilution Factor:**	1
Prep Date....:	04/25/11	**Analysis Date....:**	04/26/11	**Percent Moisture:**	100
Prep Batch # ....:	1115357	**Instrument ID....:**	4D5		
Initial Wgt/Vol :	10 g	**Analyst ID....:**	Lisa L. Hernandez		

INTERNAL STANDARDS	PERCENT RECOVERY	RECOVERY LIMITS
13C-2,3,7,8-TCDD	59	40 - 135
13C-1,2,3,7,8-PeCDD	66	40 - 135
13C-1,2,3,6,7,8-HxCDD	68	40 - 135
13C-1,2,3,4,6,7,8-HpCDD	63	40 - 135
13C-OCDD	60	40 - 135
13C-2,3,7,8-TCDF	62	40 - 135
13C-1,2,3,7,8-PeCDF	57	40 - 135
13C-1,2,3,4,7,8-HxCDF	61	40 - 135
13C-1,2,3,4,6,7,8-HpCDF	61	40 - 135

QUALIFIERS

Results and reporting limits have been adjusted for dry weight.

J Estimated Result.

Q Estimated maximum possible concentration (EMPC).

LABORATORY CONTROL SAMPLE DATA REPORT

Trace Level Organic Compounds

Client Lot # ...:	G1D230436	Work Order # ...:	MHG6A1AC-LCS	Matrix .....:	SOLID
LCS Lot-Sample# :	G1D250000 - 357				
Prep Date .....:	04/25/11	Analysis Date ..:	04/26/11		
Prep Batch # ...:	1115357				
Dilution Factor :	1				
Analyst ID.....:	Lisa L. Hernandez	Instrument ID..:	4D5	Method.....:	SW846 8290
Initial Wgt/Vol:	10 g				

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCENT RECOVERY	RECOVERY LIMITS
2,3,7,8-TCDD	**20.0**	**21.6**	**pg/g**	**108**	**(77 - 130)**
1,2,3,7,8-PeCDD	**100**	**89.0**	**pg/g**	**89**	**(79 - 134)**
1,2,3,4,7,8-HxCDD	**100**	**105**	**pg/g**	**105**	**(65 - 144)**
1,2,3,6,7,8-HxCDD	**100**	**98.6**	**pg/g**	**99**	**(73 - 147)**
1,2,3,7,8,9-HxCDD	**100**	**103**	**pg/g**	**103**	**(80 - 143)**
1,2,3,4,6,7,8-HpCDD	**100**	**94.7**	**pg/g**	**95**	**(86 - 134)**
OCDD	**200**	**186**	**pg/g**	**93**	**(80 - 137)**
2,3,7,8-TCDF	**20.0**	**22.1**	**pg/g**	**110**	**(79 - 137)**
1,2,3,7,8-PeCDF	**100**	**95.8**	**pg/g**	**96**	**(81 - 134)**
2,3,4,7,8-PeCDF	**100**	**95.9**	**pg/g**	**96**	**(76 - 132)**
1,2,3,4,7,8-HxCDF	**100**	**95.6**	**pg/g**	**96**	**(72 - 140)**
1,2,3,6,7,8-HxCDF	**100**	**92.7**	**pg/g**	**93**	**(63 - 152)**
2,3,4,6,7,8-HxCDF	**100**	**95.6**	**pg/g**	**96**	**(72 - 151)**
1,2,3,7,8,9-HxCDF	**100**	**98.4**	**pg/g**	**98**	**(72 - 152)**
1,2,3,4,6,7,8-HpCDF	**100**	**102**	**pg/g**	**102**	**(81 - 137)**
1,2,3,4,7,8,9-HpCDF	**100**	**102**	**pg/g**	**102**	**(79 - 139)**
OCDF	**200**	**173**	**pg/g**	**87**	**(75 - 141)**

21.6/20 = 1.08

102/100 = 1.02

INTERNAL STANDARD	PERCENT RECOVERY	RECOVERY LIMITS
13C-2,3,7,8-TCDD	52	(40 - 135)
13C-1,2,3,7,8-PeCDD	60	(40 - 135)
13C-1,2,3,6,7,8-HxCDD	57	(40 - 135)
13C-1,2,3,4,6,7,8-HpCDD	65	(40 - 135)
13C-OCDD	69	(40 - 135)
13C-2,3,7,8-TCDF	54	(40 - 135)
13C-1,2,3,7,8-PeCDF	53	(40 - 135)
13C-1,2,3,4,7,8-HxCDF	58	(40 - 135)
13C-1,2,3,4,6,7,8-HpCDF	59	(40 - 135)

Notes:

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

Case Narrative

TestAmerica West Sacramento Project Number G1D290626

General Comments

As requested, the samples were air dried, sieved through a #10 sieve, and were incrementally sub-sampled.

SOLID, 8290, Dioxins/Furans
Samples: 1, 2, 3, 4, 5, 8, 9, 10, 11, 13, 14, 15, 16
There are analytes in the method blank and each sample that have been qualified with a "Q" flag due to the ion abundance ratios being outside of criteria. The analytes have been reported as an "estimated maximum possible concentration" (EMPC) because the quantitation is based on the theoretical ion abundance ratio for these analytes.

Samples: 1, 2, 3, 4, 5, 6, 7, 8, 10, 11, 12
The result for 2, 3, 7, 8-TCDF is reported from the confirmation analysis that occurred on May 12, 2011.

Samples: 13, 14, 15, 16
The result for 2, 3, 7, 8-TCDF is reported from the confirmation analysis that occurred on May 13, 2011.

Samples: 1, 2, 3, 4, 15, 16
The concentrations of certain analytes in these samples exceeded the upper quantitation level of the initial calibration curve, but the peaks did not saturate the instrument detector. Historical data indicates that for the isotope dilution method, dilution and re-analysis will not produce significantly different results from those reported with the 'E" qualifier.

Samples: 5, 6, 7, 8
The percent difference value for 1,2,3,4,7,8-HxCDD is 24% D and above the method acceptance limit of 20% in the continuing calibration standard. This standard was analyzed before the associated samples on May 11, 2011 at 21:46. As the associated samples are non-detect and there is a potential for a high bias, there is no adverse impact on the data quality.

Samples: 1, 3, 15, 16
These samples exhibited elevated noise or matrix interferences for certain analytes requiring the detection limits to be raised appropriately. These analytes were flagged with the "G" qualifier.

Case Narrative

TestAmerica West Sacramento Project Number G1D290626

SOLID, 8290, Dioxins/Furans (continued)
Sample: 9
All the internal standard recoveries are very low in the noted sample. The sample was re-extracted.

The result for 2, 3, 7, 8-TCDF is reported from the confirmation analysis that occurred on May 18, 2011.

There were no other anomalies associated with this project.

Case Narrative

TestAmerica West Sacramento Project Number G1D230436

General Comments
As requested, the samples were air dried, sieved through a #10 sieve, and were incrementally subsampled.

As requested, sample 1 was extracted and analyzed in triplicate.

SOLID, 8290, Dioxins/Furans
Samples: 1, 2, 3
The 2,3,7,8-TCDF results for these samples were reported from confirmation analyses that occurred on 4/26/11.

Samples: 1, 2, 3
Some analytes for these samples & the method blank have been qualified with a "Q" flag since their ion abundance ratios did not meet acceptance criteria. These analytes have been reported as "estimated maximum possible concentrations" (EMPCs) since their quantitation was based on theoretical ion abundance ratios.

Samples: 1, 2, 3
The scheduled ending static mass resolution check was not generated due to an instrument problem. The analyst generated an ending static mass resolution check as soon as possible and it met acceptance criteria. The ending check occurred more than 12 hours after the beginning check.

There are no other anomalies associated with this project.

Case Narrative

TestAmerica West Sacramento Project Number G1D300512

General Comments

As requested, the samples were air dried, sieved through a #10 sieve, and were incrementally sub-sampled.

SOLID, 8290, Dioxins/Furans
Samples: 1, 2
The noted samples required Confirmation (CON) analyses for 2,3,7,8-TCDF, which were performed May 17, 2011.

Several analytes in each sample and the Method Blank have been qualified with a "Q" flag as the ion abundance ratios are outside of criteria. The analytes have been reported as an "estimated maximum possible concentration" (EMPC) because the quantitation is based on the theoretical ion abundance ratio for these analytes.

Sample: 1
The noted sample exhibited elevated noise or matrix interference for 1,2,3,4,6,7,8-HpCDD requiring the detection limit to be raised appropriately. This analyte was flagged with the "G" qualifier.

There are no other anomalies associated with this project.

APPENDIX C

Qualified result forms (Form 1s)

Environmental Planning Specialists Inc.

Sample ID: 11117-Q3-U2-R1

Trace Level Organic Compounds

SW846 8290

Lot - Sample #....:	G1D290626 - 001	**Work Order #....:**	MHPLK1AA	**Matrix....:**	SOLID
Date Sampled....:	04/27/11	**Date Received....:**	04/29/11	**Dilution Factor:**	0.99
Prep Date....:	05/06/11	**Analysis Date....:**	05/11/11	**Percent Moisture:**	
Prep Batch # ....:	1126235	**Instrument ID....:**	4D5		
Initial Wgt/Vol :	10.01 g	**Analyst ID....:**	Sonia Ouni		

PARAMETER	RESULT		REPORTING LIMIT	ESTIMATED DETECTION LIMIT	UNITS
2,3,7,8-TCDD	0.51	Q J T	1.0 AS	0.17	pg/g
Total TCDD	6.7		1.0	0.17	pg/g
1,2,3,7,8-PeCDD	2.5	J	5.0	0.42	pg/g
Total PeCDD	12		5.0	0.42	pg/g
1,2,3,4,7,8-HxCDD	10		5.0	1.5	pg/g
1,2,3,6,7,8-HxCDD	30		5.0	1.1	pg/g
1,2,3,7,8,9-HxCDD	14		5.0	1.1	pg/g
Total HxCDD	270		5.0	1.2	pg/g
1,2,3,4,6,7,8-HpCDD	1300		5.0	2.3	pg/g
Total HpCDD	2700		5.0	2.3	pg/g
OCDD	12000	E G B J	12 LR / LOCL	12	pg/g
2,3,7,8-TCDF	13	CON	1.0	0.28	pg/g
Total TCDF	55		1.0	0.36	pg/g
1,2,3,7,8-PeCDF	9.9		5.0	0.30	pg/g
2,3,4,7,8-PeCDF	8.6		5.0	0.31	pg/g
Total PeCDF	76		5.0	0.30	pg/g
1,2,3,4,7,8-HxCDF	40		5.0	0.41	pg/g
1,2,3,6,7,8-HxCDF	13		5.0	0.33	pg/g
2,3,4,6,7,8-HxCDF	8.9		5.0	0.37	pg/g
1,2,3,7,8,9-HxCDF	0.86	J	5.0	0.42	pg/g
Total HxCDF	240		5.0	0.38	pg/g
1,2,3,4,6,7,8-HpCDF	240	B	5.0	0.36	pg/g
1,2,3,4,7,8,9-HpCDF	22		5.0	0.43	pg/g
Total HpCDF	760		5.0	0.39	pg/g
OCDF	750	B	10	0.91	pg/g

9/6/11

Environmental Planning Specialists Inc.

Sample ID: 11117-Q3-U2-R1

Trace Level Organic Compounds

SW846 8290

Lot - Sample #....:	G1D290626 - 001	**Work Order #....:**	MHPLK1AA	**Matrix....:**	SOLID
Date Sampled....:	04/27/11	**Date Received....:**	04/29/11	**Dilution Factor:**	0.99
Prep Date....:	05/06/11	**Analysis Date....:**	05/11/11	**Percent Moisture:**	
Prep Batch # ....:	1126235	**Instrument ID....:**	4D5		
Initial Wgt/Vol :	10.01 g	**Analyst ID....:**	Sonia Ouni		

INTERNAL STANDARDS	PERCENT RECOVERY	RECOVERY LIMITS
13C-2,3,7,8-TCDD	53	40 - 135
13C-1,2,3,7,8-PeCDD	60	40 - 135
13C-1,2,3,6,7,8-HxCDD	52	40 - 135
13C-1,2,3,4,6,7,8-HpCDD	53	40 - 135
13C-OCDD	54	40 - 135
13C-2,3,7,8-TCDF	65	40 - 135
13C-1,2,3,7,8-PeCDF	56	40 - 135
13C-1,2,3,4,7,8-HxCDF	66	40 - 135
13C-1,2,3,4,6,7,8-HpCDF	58	40 - 135

QUALIFIERS

B Method blank contamination. The associated method blank contains the target analyte at a reportable level.

CON Confirmation analysis.

E Estimated result. Result concentration exceeds the calibration range.

G Elevated reporting limit. The reporting limit is elevated due to matrix interference.

J Estimated Result.

Q Estimated maximum possible concentration (EMPC).

9/6/11

Environmental Planning Specialists Inc.

Sample ID: 11117-Q3-U3-R1

Trace Level Organic Compounds

SW846 8290

Lot - Sample #....:	G1D290626 - 002	Work Order #....:	MHPLL1AA	Matrix....:	SOLID
Date Sampled....:	04/27/11	Date Received....:	04/29/11	Dilution Factor:	0.99
Prep Date....:	05/06/11	Analysis Date....:	05/11/11	Percent Moisture:	
Prep Batch # ....:	1126235	Instrument ID....:	4D5		
Initial Wgt/Vol :	10.02 g	Analyst ID....:	Sonia Ouni		

PARAMETER	RESULT		REPORTING LIMIT	ESTIMATED DETECTION LIMIT	UNITS
2,3,7,8-TCDD	0.33	J	1.0	0.13	pg/g
Total TCDD	4.9		1.0	0.13	pg/g
1,2,3,7,8-PeCDD	1.3	J	5.0	0.26	pg/g
Total PeCDD	7.5		5.0	0.26	pg/g
1,2,3,4,7,8-HxCDD	3.9	J	5.0	0.67	pg/g
1,2,3,6,7,8-HxCDD	11		5.0	0.48	pg/g
1,2,3,7,8,9-HxCDD	5.4		5.0	0.49	pg/g
Total HxCDD	97		5.0	0.53	pg/g
1,2,3,4,6,7,8-HpCDD	420		5.0	2.0	pg/g
Total HpCDD	900		5.0	2.0	pg/g
OCDD	4500	E B J	10 LR	4.6	pg/g
2,3,7,8-TCDF	5.3	CON	1.0	0.23	pg/g
Total TCDF	27		1.0	0.17	pg/g
1,2,3,7,8-PeCDF	4.5	J	5.0	0.13	pg/g
2,3,4,7,8-PeCDF	4.0	J	5.0	0.13	pg/g
Total PeCDF	33		5.0	0.14	pg/g
1,2,3,4,7,8-HxCDF	11		5.0	0.13	pg/g
1,2,3,6,7,8-HxCDF	3.1	Q J J	5.0 AV	0.10	pg/g
2,3,4,6,7,8-HxCDF	3.1	J	5.0	0.12	pg/g
1,2,3,7,8,9-HxCDF	0.24	J	5.0	0.14	pg/g
Total HxCDF	79		5.0	0.12	pg/g
1,2,3,4,6,7,8-HpCDF	81	B	5.0	0.18	pg/g
1,2,3,4,7,8,9-HpCDF	5.8		5.0	0.22	pg/g
Total HpCDF	270		5.0	0.20	pg/g
OCDF	270	B	10	0.25	pg/g

Environmental Planning Specialists Inc.

Sample ID: 11117-Q3-U3-R1

Trace Level Organic Compounds

SW846 8290

Lot - Sample #....:	G1D290626 - 002	**Work Order #....:**	MHPLL1AA	**Matrix....:**	SOLID
Date Sampled....:	04/27/11	**Date Received....:**	04/29/11	**Dilution Factor:**	0.99
Prep Date....:	05/06/11	**Analysis Date....:**	05/11/11	**Percent Moisture:**	
Prep Batch #....:	1126235	**Instrument ID....:**	4D5		
Initial Wgt/Vol :	10.02 g	**Analyst ID....:**	Sonia Ouni		

INTERNAL STANDARDS	PERCENT RECOVERY	RECOVERY LIMITS
13C-2,3,7,8-TCDD	72	40 - 135
13C-1,2,3,7,8-PeCDD	81	40 - 135
13C-1,2,3,6,7,8-HxCDD	68	40 - 135
13C-1,2,3,4,6,7,8-HpCDD	72	40 - 135
13C-OCDD	73	40 - 135
13C-2,3,7,8-TCDF	90	40 - 135
13C-1,2,3,7,8-PeCDF	78	40 - 135
13C-1,2,3,4,7,8-HxCDF	98	40 - 135
13C-1,2,3,4,6,7,8-HpCDF	76	40 - 135

QUALIFIERS

B Method blank contamination. The associated method blank contains the target analyte at a reportable level.

CON Confirmation analysis.

E Estimated result. Result concentration exceeds the calibration range.

J Estimated Result.

Q Estimated maximum possible concentration (EMPC).

9/6/11

Environmental Planning Specialists Inc.

Sample ID: 11117-Q3-U2-R2

Trace Level Organic Compounds

SW846 8290

Lot - Sample #....:	G1D290626 - 003	Work Order #....:	MHPLM1AA	Matrix....:	SOLID
Date Sampled....:	04/27/11	Date Received....:	04/29/11	Dilution Factor:	0.99
Prep Date....:	05/06/11	Analysis Date....:	05/11/11	Percent Moisture:	
Prep Batch #....:	1126235	Instrument ID....:	4D5		
Initial Wgt/Vol :	10.01 g	Analyst ID....:	Sonia Ouni		

PARAMETER	RESULT		REPORTING LIMIT	ESTIMATED DETECTION LIMIT	UNITS
2,3,7,8-TCDD	0.75	J	1.0	0.13	pg/g
Total TCDD	7.5		1.0	0.13	pg/g
1,2,3,7,8-PeCDD	2.8	J	5.0	0.38	pg/g
Total PeCDD	13		5.0	0.38	pg/g
1,2,3,4,7,8-HxCDD	11		5.0	0.51	pg/g
1,2,3,6,7,8-HxCDD	34		5.0	0.36	pg/g
1,2,3,7,8,9-HxCDD	17		5.0	0.37	pg/g
Total HxCDD	310		5.0	0.40	pg/g
1,2,3,4,6,7,8-HpCDD	1600		5.0	3.2	pg/g
Total HpCDD	3300		5.0	3.2	pg/g
OCDD	16000	E G B J	11 LR, LOCK	11	pg/g
2,3,7,8-TCDF	16	CON	1.0	0.20	pg/g
Total TCDF	67		1.0	0.25	pg/g
1,2,3,7,8-PeCDF	12		5.0	0.21	pg/g
2,3,4,7,8-PeCDF	10		5.0	0.22	pg/g
Total PeCDF	87		5.0	0.21	pg/g
1,2,3,4,7,8-HxCDF	52		5.0	0.24	pg/g
1,2,3,6,7,8-HxCDF	15		5.0	0.19	pg/g
2,3,4,6,7,8-HxCDF	9.1		5.0	0.21	pg/g
1,2,3,7,8,9-HxCDF	0.87	J Q J	5.0 AB	0.24	pg/g
Total HxCDF	250		5.0	0.22	pg/g
1,2,3,4,6,7,8-HpCDF	270	B	5.0	0.38	pg/g
1,2,3,4,7,8,9-HpCDF	28		5.0	0.44	pg/g
Total HpCDF	860		5.0	0.41	pg/g
OCDF	940	B	10	0.79	pg/g

G 61571

Environmental Planning Specialists Inc.

Sample ID: 11117-Q3-U2-R2

Trace Level Organic Compounds

SW846 8290

Lot - Sample #....:	G1D290626 - 003	**Work Order #....:**	MHPLM1AA	**Matrix....:**	SOLID
Date Sampled....:	04/27/11	**Date Received....:**	04/29/11	**Dilution Factor:**	0.99
Prep Date....:	05/06/11	**Analysis Date....:**	05/11/11	**Percent Moisture:**	
Prep Batch # ....:	1126235	**Instrument ID....:**	4D5		
Initial Wgt/Vol :	10.01 g	**Analyst ID....:**	Sonia Ouni		

INTERNAL STANDARDS	PERCENT RECOVERY	RECOVERY LIMITS
13C-2,3,7,8-TCDD	70	40 - 135
13C-1,2,3,7,8-PeCDD	79	40 - 135
13C-1,2,3,6,7,8-HxCDD	69	40 - 135
13C-1,2,3,4,6,7,8-HpCDD	73	40 - 135
13C-OCDD	72	40 - 135
13C-2,3,7,8-TCDF	85	40 - 135
13C-1,2,3,7,8-PeCDF	75	40 - 135
13C-1,2,3,4,7,8-HxCDF	89	40 - 135
13C-1,2,3,4,6,7,8-HpCDF	76	40 - 135

QUALIFIERS

B Method blank contamination. The associated method blank contains the target analyte at a reportable level.

CON Confirmation analysis.

E Estimated result. Result concentration exceeds the calibration range.

G Elevated reporting limit. The reporting limit is elevated due to matrix interference.

J Estimated Result.

Q Estimated maximum possible concentration (EMPC).

5/6/11

Environmental Planning Specialists Inc.

Sample ID: 11117-Q3-U3-R2

Trace Level Organic Compounds

SW846 8290

Lot - Sample #....:	G1D290626 - 004	Work Order #....:	MHPLN1AA	Matrix....:	SOLID
Date Sampled....:	04/27/11	Date Received....:	04/29/11	Dilution Factor:	1
Prep Date....:	05/06/11	Analysis Date....:	05/11/11	Percent Moisture:	
Prep Batch # ....:	1126235	Instrument ID....:	4D5		
Initial Wgt/Vol :	9.99 g	Analyst ID....:	Sonia Ouni		

PARAMETER	RESULT		REPORTING LIMIT	ESTIMATED DETECTION LIMIT	UNITS
2,3,7,8-TCDD	0.41	J	1.0	0.13	pg/g
Total TCDD	5.2		1.0	0.13	pg/g
1,2,3,7,8-PeCDD	1.7	J	5.0	0.31	pg/g
Total PeCDD	9.8		5.0	0.31	pg/g
1,2,3,4,7,8-HxCDD	5.1		5.0	0.93	pg/g
1,2,3,6,7,8-HxCDD	19		5.0	0.66	pg/g
1,2,3,7,8,9-HxCDD	8.8		5.0	0.68	pg/g
Total HxCDD	150		5.0	0.74	pg/g
1,2,3,4,6,7,8-HpCDD	850		5.0	2.4	pg/g
Total HpCDD	1700		5.0	2.4	pg/g
OCDD	8800	E B J	10 LR	7.5	pg/g
2,3,7,8-TCDF	4.5	CON	1.0	0.21	pg/g
Total TCDF	31		1.0	0.17	pg/g
1,2,3,7,8-PeCDF	3.8	J	5.0	0.14	pg/g
2,3,4,7,8-PeCDF	3.5	J	5.0	0.14	pg/g
Total PeCDF	39		5.0	0.14	pg/g
1,2,3,4,7,8-HxCDF	13		5.0	0.18	pg/g
1,2,3,6,7,8-HxCDF	4.6	J	5.0	0.14	pg/g
2,3,4,6,7,8-HxCDF	4.6	J	5.0	0.16	pg/g
1,2,3,7,8,9-HxCDF	0.25	J Q J	5.0 AK	0.18	pg/g
Total HxCDF	130		5.0	0.16	pg/g
1,2,3,4,6,7,8-HpCDF	170	B	5.0	0.28	pg/g
1,2,3,4,7,8,9-HpCDF	11		5.0	0.33	pg/g
Total HpCDF	580		5.0	0.30	pg/g
OCDF	690	B	10	0.79	pg/g

6/6/11

Environmental Planning Specialists Inc.

Sample ID: 11117-Q3-U3-R2

Trace Level Organic Compounds

SW846 8290

Lot - Sample #....:	G1D290626 - 004	**Work Order #....:**	MHPLN1AA	**Matrix....:**	SOLID
Date Sampled....:	04/27/11	**Date Received....:**	04/29/11	**Dilution Factor:**	1
Prep Date....:	05/06/11	**Analysis Date....:**	05/11/11	**Percent Moisture:**	
Prep Batch # ....:	1126235	**Instrument ID....:**	4D5		
Initial Wgt/Vol :	9.99 g	**Analyst ID....:**	Sonia Ouni		

INTERNAL STANDARDS	PERCENT RECOVERY	RECOVERY LIMITS
13C-2,3,7,8-TCDD	74	40 - 135
13C-1,2,3,7,8-PeCDD	82	40 - 135
13C-1,2,3,6,7,8-HxCDD	69	40 - 135
13C-1,2,3,4,6,7,8-HpCDD	70	40 - 135
13C-OCDD	75	40 - 135
13C-2,3,7,8-TCDF	92	40 - 135
13C-1,2,3,7,8-PeCDF	81	40 - 135
13C-1,2,3,4,7,8-HxCDF	93	40 - 135
13C-1,2,3,4,6,7,8-HpCDF	74	40 - 135

QUALIFIERS

B Method blank contamination. The associated method blank contains the target analyte at a reportable level.

CON Confirmation analysis.

E Estimated result. Result concentration exceeds the calibration range.

J Estimated Result.

Q Estimated maximum possible concentration. (EMPC).

Environmental Planning Specialists Inc.

Sample ID: 11117-Q3-U1-R1

Trace Level Organic Compounds

SW846 8290

Lot - Sample #....:	G1D290626 - 005	Work Order #....:	MHPLP1AA	Matrix....:	SOLID
Date Sampled....:	04/27/11	Date Received....:	04/29/11	Dilution Factor:	1
Prep Date....:	05/06/11	Analysis Date....:	05/12/11	Percent Moisture:	
Prep Batch # ....:	1126235	Instrument ID....:	4D5		
Initial Wgt/Vol :	9.99 g	Analyst ID....:	Lisa L. Hernandez		

PARAMETER	RESULT		REPORTING LIMIT	ESTIMATED DETECTION LIMIT	UNITS
2,3,7,8-TCDD	0.34	J Q J	1.0 HB	0.094	pg/g
Total TCDD	2.8		1.0	0.094	pg/g
1,2,3,7,8-PeCDD	0.50	J	5.0	0.21	pg/g
Total PeCDD	2.5		5.0	0.21	pg/g
1,2,3,4,7,8-HxCDD	0.93	J	5.0	0.28	pg/g
1,2,3,6,7,8-HxCDD	1.3	J	5.0	0.20	pg/g
1,2,3,7,8,9-HxCDD	1.5	J	5.0	0.21	pg/g
Total HxCDD	19		5.0	0.22	pg/g
1,2,3,4,6,7,8-HpCDD	22		5.0	0.45	pg/g
Total HpCDD	59		5.0	0.45	pg/g
OCDD	200	B	10	0.99	pg/g
2,3,7,8-TCDF	15	CON	1.0	0.17	pg/g
Total TCDF	50		1.0	0.19	pg/g
1,2,3,7,8-PeCDF	7.0		5.0	0.18	pg/g
2,3,4,7,8-PeCDF	5.8		5.0	0.18	pg/g
Total PeCDF	46		5.0	0.18	pg/g
1,2,3,4,7,8-HxCDF	26		5.0	0.29	pg/g
1,2,3,6,7,8-HxCDF	6.0		5.0	0.23	pg/g
2,3,4,6,7,8-HxCDF	5.4		5.0	0.26	pg/g
1,2,3,7,8,9-HxCDF	0.30	J Q J	5.0 HB	0.30	pg/g
Total HxCDF	76		5.0	0.27	pg/g
1,2,3,4,6,7,8-HpCDF	54	B	5.0	0.22	pg/g
1,2,3,4,7,8,9-HpCDF	6.5		5.0	0.25	pg/g
Total HpCDF	94		5.0	0.23	pg/g
OCDF	80	B	10	0.32	pg/g

96157

Environmental Planning Specialists Inc.

Sample ID: 11117-Q3-U1-R1

Trace Level Organic Compounds

SW846 8290

Lot - Sample #....:	G1D290626 - 005	**Work Order #....:**	MHPLP1AA	**Matrix....:**	SOLID
Date Sampled....:	04/27/11	**Date Received....:**	04/29/11	**Dilution Factor:**	1
Prep Date....:	05/06/11	**Analysis Date....:**	05/12/11	**Percent Moisture:**	
Prep Batch #....:	1126235	**Instrument ID....:**	4D5		
Initial Wgt/Vol :	9.99 g	**Analyst ID....:**	Lisa L. Hernandez		

INTERNAL STANDARDS	PERCENT RECOVERY	RECOVERY LIMITS
13C-2,3,7,8-TCDD	71	40 - 135
13C-1,2,3,7,8-PeCDD	75	40 - 135
13C-1,2,3,6,7,8-HxCDD	67	40 - 135
13C-1,2,3,4,6,7,8-HpCDD	75	40 - 135
13C-OCDD	86	40 - 135
13C-2,3,7,8-TCDF	87	40 - 135
13C-1,2,3,7,8-PeCDF	72	40 - 135
13C-1,2,3,4,7,8-HxCDF	90	40 - 135
13C-1,2,3,4,6,7,8-HpCDF	79	40 - 135

QUALIFIERS

B Method blank contamination. The associated method blank contains the target analyte at a reportable level.

CON Confirmation analysis.

J Estimated Result.

Q Estimated maximum possible concentration (EMPC).

file 1571

Environmental Planning Specialists Inc.

Sample ID: 11117-Q3-U1-R2

Trace Level Organic Compounds

SW846 8290

Lot - Sample #....:	G1D290626 - 006	Work Order #....:	MHPLQ1AA	Matrix....:	SOLID
Date Sampled....:	04/27/11	Date Received....:	04/29/11	Dilution Factor:	0.99
Prep Date....:	05/06/11	Analysis Date....:	05/12/11	Percent Moisture:	
Prep Batch # ....:	1126235	Instrument ID....:	4D5		
Initial Wgt/Vol :	10.02 g	Analyst ID....:	Lisa L. Hernandez		

PARAMETER	RESULT		REPORTING LIMIT	ESTIMATED DETECTION LIMIT	UNITS
2,3,7,8-TCDD	0.51	J	1.0	0.15	pg/g
Total TCDD	4.0		1.0	0.15	pg/g
1,2,3,7,8-PeCDD	0.30	J	5.0	0.19	pg/g
Total PeCDD	2.1		5.0	0.19	pg/g
1,2,3,4,7,8-HxCDD	0.61	J	5.0	0.27	pg/g
1,2,3,6,7,8-HxCDD	0.70	J	5.0	0.19	pg/g
1,2,3,7,8,9-HxCDD	0.85	J	5.0	0.19	pg/g
Total HxCDD	12		5.0	0.21	pg/g
1,2,3,4,6,7,8-HpCDD	13		5.0	0.85	pg/g
Total HpCDD	35		5.0	0.85	pg/g
OCDD	110	B	10	0.62	pg/g
2,3,7,8-TCDF	32	CON	1.0	0.20	pg/g
Total TCDF	81		1.0	0.26	pg/g
1,2,3,7,8-PeCDF	9.1		5.0	0.18	pg/g
2,3,4,7,8-PeCDF	5.6		5.0	0.19	pg/g
Total PeCDF	40		5.0	0.18	pg/g
1,2,3,4,7,8-HxCDF	26		5.0	0.29	pg/g
1,2,3,6,7,8-HxCDF	6.7		5.0	0.23	pg/g
2,3,4,6,7,8-HxCDF	3.9	J	5.0	0.25	pg/g
1,2,3,7,8,9-HxCDF	0.47	J	5.0	0.29	pg/g
Total HxCDF	71		5.0	0.26	pg/g
1,2,3,4,6,7,8-HpCDF	57	B	5.0	0.33	pg/g
1,2,3,4,7,8,9-HpCDF	7.6		5.0	0.39	pg/g
Total HpCDF	100		5.0	0.36	pg/g
OCDF	100	B	10	0.24	pg/g

5/6/15/11

Environmental Planning Specialists Inc.

Sample ID: 11117-Q3-U1-R2

Trace Level Organic Compounds

SW846 8290

Lot - Sample #....:	G1D290626 - 006	**Work Order #....:**	MHPLQ1AA	**Matrix....:**	SOLID
Date Sampled....:	04/27/11	**Date Received....:**	04/29/11	**Dilution Factor:**	0.99
Prep Date....:	05/06/11	**Analysis Date....:**	05/12/11	**Percent Moisture:**	
Prep Batch # ....:	1126235	**Instrument ID....:**	4D5		
Initial Wgt/Vol :	10.02 g	**Analyst ID....:**	Lisa L. Hernandez		

INTERNAL STANDARDS	PERCENT RECOVERY	RECOVERY LIMITS
13C-2,3,7,8-TCDD	73	40 - 135
13C-1,2,3,7,8-PeCDD	80	40 - 135
13C-1,2,3,6,7,8-HxCDD	71	40 - 135
13C-1,2,3,4,6,7,8-HpCDD	77	40 - 135
13C-OCDD	94	40 - 135
13C-2,3,7,8-TCDF	90	40 - 135
13C-1,2,3,7,8-PeCDF	78	40 - 135
13C-1,2,3,4,7,8-HxCDF	92	40 - 135
13C-1,2,3,4,6,7,8-HpCDF	81	40 - 135

QUALIFIERS

B Method blank contamination. The associated method blank contains the target analyte at a reportable level.

CON Confirmation analysis.

J Estimated Result.

5/26/11

Environmental Planning Specialists Inc.

Sample ID: 11117-Q4-U2-R1

Trace Level Organic Compounds

SW846 8290

Lot - Sample #....:	G1D290626 - 007	**Work Order #....:**	MHPLR1AA	**Matrix....:**	SOLID
Date Sampled....:	04/27/11	**Date Received....:**	04/29/11	**Dilution Factor:**	1
Prep Date....:	05/06/11	**Analysis Date....:**	05/12/11	**Percent Moisture:**	
Prep Batch # ....:	1126235	**Instrument ID....:**	4D5		
Initial Wgt/Vol :	9.95 g	**Analyst ID....:**	Lisa L. Hernandez		

PARAMETER	RESULT		REPORTING LIMIT	ESTIMATED DETECTION LIMIT	UNITS
2,3,7,8-TCDD	ND		1.0	0.11	pg/g
Total TCDD	**0.95**		**1.0**	**0.11**	**pg/g**
1,2,3,7,8-PeCDD	ND		5.0	0.21	pg/g
Total PeCDD	**0.34**		**5.0**	**0.21**	**pg/g**
1,2,3,4,7,8-HxCDD	ND		5.0	0.44	pg/g
1,2,3,6,7,8-HxCDD	**0.49**	**J**	**5.0**	**0.31**	**pg/g**
1,2,3,7,8,9-HxCDD	**0.68**	**J**	**5.0**	**0.32**	**pg/g**
Total HxCDD	**9.1**		**5.0**	**0.35**	**pg/g**
1,2,3,4,6,7,8-HpCDD	**16**		**5.0**	**0.34**	**pg/g**
Total HpCDD	**41**		**5.0**	**0.34**	**pg/g**
OCDD	**190**	**B**	**10**	**0.68**	**pg/g**
2,3,7,8-TCDF	**11**	**CON**	**1.0**	**0.24**	**pg/g**
Total TCDF	**32**		**1.0**	**0.29**	**pg/g**
1,2,3,7,8-PeCDF	**4.6**	**J**	**5.0**	**0.21**	**pg/g**
2,3,4,7,8-PeCDF	**3.9**	**J**	**5.0**	**0.22**	**pg/g**
Total PeCDF	**24**		**5.0**	**0.22**	**pg/g**
1,2,3,4,7,8-HxCDF	**14**		**5.0**	**0.13**	**pg/g**
1,2,3,6,7,8-HxCDF	**3.1**	**J**	**5.0**	**0.099**	**pg/g**
2,3,4,6,7,8-HxCDF	**1.7**	**J**	**5.0**	**0.11**	**pg/g**
1,2,3,7,8,9-HxCDF	**0.14**	**J**	**5.0**	**0.13**	**pg/g**
Total HxCDF	**37**		**5.0**	**0.11**	**pg/g**
1,2,3,4,6,7,8-HpCDF	**23**	**B**	**5.0**	**0.17**	**pg/g**
1,2,3,4,7,8,9-HpCDF	**3.6**	**J**	**5.0**	**0.20**	**pg/g**
Total HpCDF	**46**		**5.0**	**0.19**	**pg/g**
OCDF	**45**	**B**	**10**	**0.19**	**pg/g**

G41571

Environmental Planning Specialists Inc.

Sample ID: 11117-Q4-U2-R1

Trace Level Organic Compounds

SW846 8290

Lot - Sample #....:	G1D290626 - 007	**Work Order #....:**	MHPLR1AA	**Matrix....:**	SOLID
Date Sampled....:	04/27/11	**Date Received....:**	04/29/11	**Dilution Factor:**	1
Prep Date....:	05/06/11	**Analysis Date....:**	05/12/11	**Percent Moisture:**	
Prep Batch # ....:	1126235	**Instrument ID....:**	4D5		
Initial Wgt/Vol :	9.95 g	**Analyst ID....:**	Lisa L. Hernandez		

INTERNAL STANDARDS	PERCENT RECOVERY	RECOVERY LIMITS
13C-2,3,7,8-TCDD	71	40 - 135
13C-1,2,3,7,8-PeCDD	76	40 - 135
13C-1,2,3,6,7,8-HxCDD	71	40 - 135
13C-1,2,3,4,6,7,8-HpCDD	78	40 - 135
13C-OCDD	92	40 - 135
13C-2,3,7,8-TCDF	85	40 - 135
13C-1,2,3,7,8-PeCDF	74	40 - 135
13C-1,2,3,4,7,8-HxCDF	89	40 - 135
13C-1,2,3,4,6,7,8-HpCDF	83	40 - 135

QUALIFIERS

B Method blank contamination. The associated method blank contains the target analyte at a reportable level.

CON Confirmation analysis.

J Estimated Result.

561571

Environmental Planning Specialists Inc.

Sample ID: 11117-Q4-U2-R2

Trace Level Organic Compounds

SW846 8290

Lot - Sample #....:	G1D290626 - 008	**Work Order #....:**	MHPLT1AA	**Matrix....:**	SOLID
Date Sampled....:	04/27/11	**Date Received....:**	04/29/11	**Dilution Factor:**	1
Prep Date....:	05/06/11	**Analysis Date....:**	05/12/11	**Percent Moisture:**	
Prep Batch # ....:	1126235	**Instrument ID....:**	4D5		
Initial Wgt/Vol:	9.96 g	**Analyst ID....:**	Lisa L. Hernandez		

PARAMETER	RESULT		REPORTING LIMIT	ESTIMATED DETECTION LIMIT	UNITS
2,3,7,8-TCDD	ND		1.0	0.095	pg/g
Total TCDD	0.88		1.0	0.095	pg/g
1,2,3,7,8-PeCDD	ND		5.0	0.16	pg/g
Total PeCDD	0.39		5.0	0.16	pg/g
1,2,3,4,7,8-HxCDD	0.27	J	5.0	0.25	pg/g
1,2,3,6,7,8-HxCDD	0.18	J Q J	5.0 AB	0.18	pg/g
1,2,3,7,8,9-HxCDD	0.23	J Q J	5.0 AB	0.18	pg/g
Total HxCDD	7.1		5.0	0.20	pg/g
1,2,3,4,6,7,8-HpCDD	6.6		5.0	0.31	pg/g
Total HpCDD	18		5.0	0.31	pg/g
OCDD	73	B	10	0.47	pg/g
2,3,7,8-TCDF	2.2	CON	1.0	0.17	pg/g
Total TCDF	4.5		1.0	0.15	pg/g
1,2,3,7,8-PeCDF	1.1	J	5.0	0.16	pg/g
2,3,4,7,8-PeCDF	0.84	J	5.0	0.16	pg/g
Total PeCDF	3.9		5.0	0.16	pg/g
1,2,3,4,7,8-HxCDF	2.6	J	5.0	0.086	pg/g
1,2,3,6,7,8-HxCDF	0.62	J	5.0	0.068	pg/g
2,3,4,6,7,8-HxCDF	0.34	J	5.0	0.076	pg/g
1,2,3,7,8,9-HxCDF	ND		5.0	0.088	pg/g
Total HxCDF	7.0		5.0	0.078	pg/g
1,2,3,4,6,7,8-HpCDF	5.4	B	5.0	0.12	pg/g
1,2,3,4,7,8,9-HpCDF	0.83	J	5.0	0.14	pg/g
Total HpCDF	11		5.0	0.13	pg/g
OCDF	11	B	10	0.17	pg/g

4 6 1 5 7 1

Environmental Planning Specialists Inc.

Sample ID: 11117-Q4-U2-R2

Trace Level Organic Compounds

SW846 8290

Lot - Sample #....:	G1D290626 - 008	**Work Order #....:**	MHPLT1AA	**Matrix....:**	SOLID
Date Sampled....:	04/27/11	**Date Received....:**	04/29/11	**Dilution Factor:**	1
Prep Date....:	05/06/11	**Analysis Date....:**	05/12/11	**Percent Moisture:**	
Prep Batch # ....:	1126235	**Instrument ID....:**	4D5		
Initial Wgt/Vol :	9.96 g	**Analyst ID....:**	Lisa L. Hernandez		

INTERNAL STANDARDS	PERCENT RECOVERY	RECOVERY LIMITS
13C-2,3,7,8-TCDD	70	40 - 135
13C-1,2,3,7,8-PeCDD	76	40 - 135
13C-1,2,3,6,7,8-HxCDD	69	40 - 135
13C-1,2,3,4,6,7,8-HpCDD	77	40 - 135
13C-OCDD	92	40 - 135
13C-2,3,7,8-TCDF	84	40 - 135
13C-1,2,3,7,8-PeCDF	73	40 - 135
13C-1,2,3,4,7,8-HxCDF	87	40 - 135
13C-1,2,3,4,6,7,8-HpCDF	79	40 - 135

QUALIFIERS

B Method blank contamination. The associated method blank contains the target analyte at a reportable level.

CON Confirmation analysis.

J Estimated Result.

Q Estimated maximum possible concentration (EMPC).

5/20/11

Environmental Planning Specialists Inc.

Sample ID: 11117-Q4-U1-R1

Trace Level Organic Compounds

SW846 8290

Lot - Sample #....:	G1D290626 - 009	**Work Order #....:**	MHPLV2AA	**Matrix....:**	SOLID
Date Sampled....:	04/27/11	**Date Received....:**	04/29/11	**Dilution Factor:**	0.99
Prep Date....:	05/17/11	**Analysis Date....:**	05/17/11	**Percent Moisture:**	
Prep Batch #....:	1137180	**Instrument ID....:**	9D5		
Initial Wgt/Vol :	10.05 g	**Analyst ID....:**	Sonia Ouni		

PARAMETER	RESULT		REPORTING LIMIT	ESTIMATED DETECTION LIMIT	UNITS
2,3,7,8-TCDD	0.21	J Q J	1.0 AB	0.11	pg/g
Total TCDD	2.5		1.0	0.11	pg/g
1,2,3,7,8-PeCDD	ND		5.0	0.32	pg/g
Total PeCDD	1.7		5.0	0.32	pg/g
1,2,3,4,7,8-HxCDD	ND		5.0	0.73	pg/g
1,2,3,6,7,8-HxCDD	1.3	J	5.0	0.51	pg/g
1,2,3,7,8,9-HxCDD	1.1	J	5.0	0.51	pg/g
Total HxCDD	18		5.0	0.56	pg/g
1,2,3,4,6,7,8-HpCDD	35		5.0	3.2	pg/g
Total HpCDD	96		5.0	3.2	pg/g
OCDD	350	B	10	1.5	pg/g
2,3,7,8-TCDF	18	CON	1.0	0.12	pg/g
Total TCDF	53		1.0	0.26	pg/g
1,2,3,7,8-PeCDF	14		5.0	0.36	pg/g
2,3,4,7,8-PeCDF	7.4		5.0	0.37	pg/g
Total PeCDF	56		5.0	0.36	pg/g
1,2,3,4,7,8-HxCDF	43		5.0	0.47	pg/g
1,2,3,6,7,8-HxCDF	10		5.0	0.35	pg/g
2,3,4,6,7,8-HxCDF	4.6	J	5.0	0.40	pg/g
1,2,3,7,8,9-HxCDF	1.0	J	5.0	0.50	pg/g
Total HxCDF	120		5.0	0.42	pg/g
1,2,3,4,6,7,8-HpCDF	71	B	5.0	0.44	pg/g
1,2,3,4,7,8,9-HpCDF	19		5.0	0.55	pg/g
Total HpCDF	140		5.0	0.49	pg/g
OCDF	260	B	10	0.10	pg/g

5/26/11

Environmental Planning Specialists Inc:

Sample ID: 11117-Q4-U1-R1

Trace Level Organic Compounds

SW846 8290

Lot - Sample #....:	G1D290626 - 009	**Work Order #....:**	MHPLV2AA	**Matrix....:**	SOLID
Date Sampled....:	04/27/11	**Date Received....:**	04/29/11	**Dilution Factor:**	0.99
Prep Date....:	05/17/11	**Analysis Date....:**	05/17/11	**Percent Moisture:**	
Prep Batch #....:	1137180	**Instrument ID....:**	9D5		
Initial Wgt/Vol :	10.05 g	**Analyst ID....:**	Sonia Ouni		

INTERNAL STANDARDS	PERCENT RECOVERY	RECOVERY LIMITS
13C-2,3,7,8-TCDD	109	40 - 135
13C-1,2,3,7,8-PeCDD	116	40 - 135
13C-1,2,3,6,7,8-HxCDD	109	40 - 135
13C-1,2,3,4,6,7,8-HpCDD	112	40 - 135
13C-OCDD	113	40 - 135
13C-2,3,7,8-TCDF	111	40 - 135
13C-1,2,3,7,8-PeCDF	121	40 - 135
13C-1,2,3,4,7,8-HxCDF	119	40 - 135
13C-1,2,3,4,6,7,8-HpCDF	119	40 - 135

QUALIFIERS

B Method blank contamination. The associated method blank contains the target analyte at a reportable level.

CON Confirmation analysis.

J Estimated Result.

Q Estimated maximum possible concentration (EMPC).

9e1571

Environmental Planning Specialists Inc.

Sample ID: 11117-Q4-U1-R2

Trace Level Organic Compounds

SW846 8290

Lot - Sample #....:	G1D290626 - 010	**Work Order #....:**	MHPLWIAA	**Matrix....:**	SOLID
Date Sampled....:	04/27/11	**Date Received....:**	04/29/11	**Dilution Factor:**	0.99
Prep Date....:	05/06/11	**Analysis Date....:**	05/14/11	**Percent Moisture:**	
Prep Batch #....:	1126235	**Instrument ID....:**	11D5		
Initial Wgt/Vol :	10.02 g	**Analyst ID....:**	Michael Ng		

PARAMETER	RESULT		REPORTING LIMIT	ESTIMATED DETECTION LIMIT	UNITS
2,3,7,8-TCDD	ND		1.0	0.44	pg/g
Total TCDD	ND		1.0	0.44	pg/g
1,2,3,7,8-PeCDD	ND		5.0	0.80	pg/g
Total PeCDD	ND		5.0	0.80	pg/g
1,2,3,4,7,8-HxCDD	ND		5.0	0.37	pg/g
1,2,3,6,7,8-HxCDD	ND		5.0	0.46	pg/g
1,2,3,7,8,9-HxCDD	**0.67**	**J Q** J	**5.0** AB	**0.24**	**pg/g**
Total HxCDD	**11**		**5.0**	**0.25**	**pg/g**
1,2,3,4,6,7,8-HpCDD	**18**		**5.0**	**1.9**	**pg/g**
Total HpCDD	**51**		**5.0**	**1.9**	**pg/g**
OCDD	**210**	**B**	**10**	**2.6**	**pg/g**
2,3,7,8-TCDF	**8.3**	**CON**	**1.0**	**0.14**	**pg/g**
Total TCDF	**19**		**1.0**	**0.70**	**pg/g**
1,2,3,7,8-PeCDF	**8.3**		**5.0**	**0.76**	**pg/g**
2,3,4,7,8-PeCDF	**5.2**		**5.0**	**0.79**	**pg/g**
Total PeCDF	**30**		**5.0**	**0.77**	**pg/g**
1,2,3,4,7,8-HxCDF	**28**		**5.0**	**0.38**	**pg/g**
1,2,3,6,7,8-HxCDF	**7.1**		**5.0**	**0.32**	**pg/g**
2,3,4,6,7,8-HxCDF	**3.1**	**J**	**5.0**	**0.36**	**pg/g**
1,2,3,7,8,9-HxCDF	ND		5.0	0.41	pg/g
Total HxCDF	**68**		**5.0**	**0.36**	**pg/g**
1,2,3,4,6,7,8-HpCDF	**40**	**B**	**5.0**	**0.95**	**pg/g**
1,2,3,4,7,8,9-HpCDF	**5.5**		**5.0**	**1.1**	**pg/g**
Total HpCDF	**74**		**5.0**	**1.0**	**pg/g**
OCDF	**85**	**B**	**10**	**0.51**	**pg/g**

9/6/11

Environmental Planning Specialists Inc.

Sample ID: 11117-Q4-U1-R2

Trace Level Organic Compounds

SW846 8290

Lot - Sample #....:	G1D290626 - 010	**Work Order #....:**	MHPLW1AA	**Matrix....:**	SOLID
Date Sampled....:	04/27/11	**Date Received....:**	04/29/11	**Dilution Factor:**	0.99
Prep Date....:	05/06/11	**Analysis Date....:**	05/14/11	**Percent Moisture:**	
Prep Batch # ....:	1126235	**Instrument ID....:**	11D5		
Initial Wgt/Vol :	10.02 g	**Analyst ID....:**	Michael Ng		

INTERNAL STANDARDS	PERCENT RECOVERY	RECOVERY LIMITS
13C-2,3,7,8-TCDD	70	40 - 135
13C-1,2,3,7,8-PeCDD	66	40 - 135
13C-1,2,3,6,7,8-HxCDD	79	40 - 135
13C-1,2,3,4,6,7,8-HpCDD	70	40 - 135
13C-OCDD	70	40 - 135
13C-2,3,7,8-TCDF	71	40 - 135
13C-1,2,3,7,8-PeCDF	72	40 - 135
13C-1,2,3,4,7,8-HxCDF	82	40 - 135
13C-1,2,3,4,6,7,8-HpCDF	75	40 - 135

QUALIFIERS

B Method blank contamination. The associated method blank contains the target analyte at a reportable level.

CON Confirmation analysis.

J Estimated Result.

Q Estimated maximum possible concentration (EMPC).

5 of 571

Environmental Planning Specialists Inc.

Sample ID: 11118-Q4-U3-R1

Trace Level Organic Compounds

SW846 8290

Lot - Sample #....:	G1D290626 - 011	Work Order #....:	MHPLX1AA	Matrix....:	SOLID
Date Sampled....:	04/28/11	Date Received....:	04/29/11	Dilution Factor:	0.99
Prep Date....:	05/06/11	Analysis Date....:	05/14/11	Percent Moisture:	
Prep Batch # ....:	1126235	Instrument ID....:	11D5		
Initial Wgt/Vol :	10.03 g	Analyst ID....:	Michael Ng		

PARAMETER	RESULT		REPORTING LIMIT	ESTIMATED DETECTION LIMIT	UNITS
2,3,7,8-TCDD	ND		1.0	0.35	pg/g
Total TCDD	0.86		1.0	0.35	pg/g
1,2,3,7,8-PeCDD	ND		5.0	1.9	pg/g
Total PeCDD	3.6		5.0	1.9	pg/g
1,2,3,4,7,8-HxCDD	5.3		5.0	1.9	pg/g
1,2,3,6,7,8-HxCDD	2.0	J Q J	5.0 AB	1.6	pg/g
1,2,3,7,8,9-HxCDD	3.7	J Q J	5.0 AB	1.6	pg/g
Total HxCDD	35		5.0	1.7	pg/g
1,2,3,4,6,7,8-HpCDD	46		5.0	3.3	pg/g
Total HpCDD	100		5.0	3.3	pg/g
OCDD	270	B	10	5.5	pg/g
2,3,7,8-TCDF	13	CON	1.0	0.22	pg/g
Total TCDF	27		1.0	0.79	pg/g
1,2,3,7,8-PeCDF	12		5.0	1.5	pg/g
2,3,4,7,8-PeCDF	6.7		5.0	1.6	pg/g
Total PeCDF	39		5.0	1.6	pg/g
1,2,3,4,7,8-HxCDF	51		5.0	2.7	pg/g
1,2,3,6,7,8-HxCDF	14		5.0	2.3	pg/g
2,3,4,6,7,8-HxCDF	7.9		5.0	2.6	pg/g
1,2,3,7,8,9-HxCDF	ND		5.0	2.9	pg/g
Total HxCDF	110		5.0	2.6	pg/g
1,2,3,4,6,7,8-HpCDF	87	B	5.0	4.0	pg/g
1,2,3,4,7,8,9-HpCDF	12		5.0	4.7	pg/g
Total HpCDF	150		5.0	4.3	pg/g
OCDF	150	B	10	3.9	pg/g

Qe 1571

Environmental Planning Specialists Inc

Sample ID: 11118-Q4-U3-R1

Trace Level Organic Compounds

SW846 8290

Lot - Sample #....:	G1D290626 - 011	**Work Order #....:**	MHPLX1AA	**Matrix.....:**	SOLID
Date Sampled....:	04/28/11	**Date Received....:**	04/29/11	**Dilution Factor:**	0.99
Prep Date.....:	05/06/11	**Analysis Date....:**	05/14/11	**Percent Moisture:**	
Prep Batch # ....:	1126235	**Instrument ID....:**	11D5		
Initial Wgt/Vol :	10.03 g	**Analyst ID....:**	Michael Ng		

INTERNAL STANDARDS	PERCENT RECOVERY	RECOVERY LIMITS
13C-2,3,7,8-TCDD	55	40 - 135
13C-1,2,3,7,8-PeCDD	48	40 - 135
13C-1,2,3,6,7,8-HxCDD	57	40 - 135
13C-1,2,3,4,6,7,8-HpCDD	56	40 - 135
13C-OCDD	53	40 - 135
13C-2,3,7,8-TCDF	57	40 - 135
13C-1,2,3,7,8-PeCDF	55	40 - 135
13C-1,2,3,4,7,8-HxCDF	62	40 - 135
13C-1,2,3,4,6,7,8-HpCDF	58	40 - 135

QUALIFIERS

B Method blank contamination. The associated method blank contains the target analyte at a reportable level.

CON Confirmation analysis.

J Estimated Result.

Q Estimated maximum possible concentration (EMPC).

96021

Environmental Planning Specialists Inc.

Sample ID: 11118-Q4-U3-R2

Trace Level Organic Compounds

SW846 8290

Lot - Sample #....:	G1D290626 - 012	Work Order #....:	MHPL01AA	Matrix....:	SOLID
Date Sampled....:	04/28/11	Date Received....:	04/29/11	Dilution Factor:	1
Prep Date....:	05/06/11	Analysis Date....:	05/14/11	Percent Moisture:	
Prep Batch # ....:	1126235	Instrument ID....:	11D5		
Initial Wgt/Vol :	9.97 g	Analyst ID....:	Michael Ng		

PARAMETER	RESULT		REPORTING LIMIT	ESTIMATED DETECTION LIMIT	UNITS
2,3,7,8-TCDD	ND		1.0	0.30	pg/g
Total TCDD	0.59		1.0	0.30	pg/g
1,2,3,7,8-PeCDD	ND		5.0	1.1	pg/g
Total PeCDD	ND		5.0	1.1	pg/g
1,2,3,4,7,8-HxCDD	ND		5.0	0.56	pg/g
1,2,3,6,7,8-HxCDD	0.84	J	5.0	0.46	pg/g
1,2,3,7,8,9-HxCDD	1.1	J	5.0	0.47	pg/g
Total HxCDD	17		5.0	0.49	pg/g
1,2,3,4,6,7,8-HpCDD	17		5.0	2.3	pg/g
Total HpCDD	61		5.0	2.3	pg/g
OCDD	160	B	10	2.1	pg/g
2,3,7,8-TCDF	12	CON	1.0	0.14	pg/g
Total TCDF	26		1.0	0.67	pg/g
1,2,3,7,8-PeCDF	16		5.0	0.96	pg/g
2,3,4,7,8-PeCDF	7.6		5.0	0.99	pg/g
Total PeCDF	54		5.0	0.98	pg/g
1,2,3,4,7,8-HxCDF	59		5.0	1.0	pg/g
1,2,3,6,7,8-HxCDF	15		5.0	0.87	pg/g
2,3,4,6,7,8-HxCDF	7.8		5.0	0.99	pg/g
1,2,3,7,8,9-HxCDF	ND		5.0	1.1	pg/g
Total HxCDF	130		5.0	1.0	pg/g
1,2,3,4,6,7,8-HpCDF	78	B	5.0	1.3	pg/g
1,2,3,4,7,8,9-HpCDF	13		5.0	1.6	pg/g
Total HpCDF	140		5.0	1.4	pg/g
OCDF	180	B	10	1.2	pg/g

Environmental Planning Specialists Inc.

Sample ID: 11118-Q4-U3-R2

Trace Level Organic Compounds

SW846 8290

Lot - Sample #....:	G1D290626 - 012	**Work Order #....:**	MHPL01AA	**Matrix....:**	SOLID
Date Sampled....:	04/28/11	**Date Received....:**	04/29/11	**Dilution Factor:**	1
Prep Date....:	05/06/11	**Analysis Date....:**	05/14/11	**Percent Moisture:**	
Prep Batch # ....:	1126235	**Instrument ID....:**	11D5		
Initial Wgt/Vol :	9.97 g	**Analyst ID....:**	Michael Ng		

INTERNAL STANDARDS	PERCENT RECOVERY	RECOVERY LIMITS
13C-2,3,7,8-TCDD	74	40 - 135
13C-1,2,3,7,8-PeCDD	67	40 - 135
13C-1,2,3,6,7,8-HxCDD	81	40 - 135
13C-1,2,3,4,6,7,8-HpCDD	77	40 - 135
13C-OCDD	76	40 - 135
13C-2,3,7,8-TCDF	72	40 - 135
13C-1,2,3,7,8-PeCDF	78	40 - 135
13C-1,2,3,4,7,8-HxCDF	87	40 - 135
13C-1,2,3,4,6,7,8-HpCDF	82	40 - 135

QUALIFIERS

B Method blank contamination. The associated method blank contains the target analyte at a reportable level.

CON Confirmation analysis.

J Estimated Result.

T le 571

Environmental Planning Specialists Inc.

Sample ID: 11118-Q2-U1-R1

Trace Level Organic Compounds

SW846 8290

Lot - Sample #....:	G1D290626 - 013	Work Order #....:	MHPL11AA	Matrix....:	SOLID
Date Sampled....:	04/28/11	Date Received....:	04/29/11	Dilution Factor:	0.99
Prep Date....:	05/06/11	Analysis Date....:	05/14/11	Percent Moisture:	
Prep Batch #....:	1126235	Instrument ID....:	9D5		
Initial Wgt/Vol:	10.06 g	Analyst ID....:	Sylvia H. Krenn		

PARAMETER	RESULT		REPORTING LIMIT	ESTIMATED DETECTION LIMIT	UNITS
2,3,7,8-TCDD	ND		0.99	0.37	pg/g
Total TCDD	0.47		0.99	0.37	pg/g
1,2,3,7,8-PeCDD	ND		5.0	0.78	pg/g
Total PeCDD	0.82		5.0	0.78	pg/g
1,2,3,4,7,8-HxCDD	ND		5.0	0.87	pg/g
1,2,3,6,7,8-HxCDD	1.2	J	5.0	0.60	pg/g
1,2,3,7,8,9-HxCDD	1.1	J Q J	5.0 AB	0.60	pg/g
Total HxCDD	17		5.0	0.67	pg/g
1,2,3,4,6,7,8-HpCDD	29		5.0	3.7	pg/g
Total HpCDD	87		5.0	3.7	pg/g
OCDD	320	B	9.9	6.9	pg/g
2,3,7,8-TCDF	5.0	CON	0.99	0.15	pg/g
Total TCDF	19		0.99	0.93	pg/g
1,2,3,7,8-PeCDF	4.9	J	5.0	0.64	pg/g
2,3,4,7,8-PeCDF	5.8		5.0	0.65	pg/g
Total PeCDF	45		5.0	0.65	pg/g
1,2,3,4,7,8-HxCDF	56		5.0	1.0	pg/g
1,2,3,6,7,8-HxCDF	8.3		5.0	0.74	pg/g
2,3,4,6,7,8-HxCDF	15		5.0	0.86	pg/g
1,2,3,7,8,9-HxCDF	ND		5.0	1.1	pg/g
Total HxCDF	180		5.0	0.90	pg/g
1,2,3,4,6,7,8-HpCDF	140	B	5.0	0.33	pg/g
1,2,3,4,7,8,9-HpCDF	7.1		5.0	0.41	pg/g
Total HpCDF	200		5.0	0.37	pg/g
OCDF	130	B	9.9	0.28	pg/g

5/20/11

Environmental Planning Specialists Inc.

Sample ID: 11118-Q2-U1-R1

Trace Level Organic Compounds

SW846 8290

Lot - Sample #....:	G1D290626 - 013	**Work Order #....:**	MHPL11AA	**Matrix....:**	SOLID
Date Sampled....:	04/28/11	**Date Received....:**	04/29/11	**Dilution Factor:**	0.99
Prep Date....:	05/06/11	**Analysis Date....:**	05/14/11	**Percent Moisture:**	
Prep Batch # ....:	1126235	**Instrument ID....:**	9D5		
Initial Wgt/Vol :	10.06 g	**Analyst ID....:**	Sylvia H. Krenn		

INTERNAL STANDARDS	PERCENT RECOVERY	RECOVERY LIMITS
13C-2,3,7,8-TCDD	65	40 - 135
13C-1,2,3,7,8-PeCDD	64	40 - 135
13C-1,2,3,6,7,8-HxCDD	72	40 - 135
13C-1,2,3,4,6,7,8-HpCDD	71	40 - 135
13C-OCDD	69	40 - 135
13C-2,3,7,8-TCDF	66	40 - 135
13C-1,2,3,7,8-PeCDF	69	40 - 135
13C-1,2,3,4,7,8-HxCDF	71	40 - 135
13C-1,2,3,4,6,7,8-HpCDF	75	40 - 135

QUALIFIERS

B Method blank contamination. The associated method blank contains the target analyte at a reportable level.

CON Confirmation analysis.

J Estimated Result.

Q Estimated maximum possible concentration (EMPC).

5/20/11

Environmental Planning Specialists Inc.

Sample ID: 11118-Q2-U1-R2

Trace Level Organic Compounds

SW846 8290

Lot - Sample #...:	G1D290626 - 014	Work Order #...:	MHPL21AA	Matrix...:	SOLID
Date Sampled....:	04/28/11	Date Received....:	04/29/11	Dilution Factor:	1
Prep Date....:	05/06/11	Analysis Date....:	05/14/11	Percent Moisture:	
Prep Batch # ....:	1126235	Instrument ID....:	9D5		
Initial Wgt/Vol :	10 g	Analyst ID....:	Sylvia H. Krenn		

PARAMETER	RESULT		REPORTING LIMIT	ESTIMATED DETECTION LIMIT	UNITS
2,3,7,8-TCDD	ND		1.0	0.32	pg/g
Total TCDD	0.87		1.0	0.32	pg/g
1,2,3,7,8-PeCDD	ND		5.0	0.69	pg/g
Total PeCDD	1.7		5.0	0.69	pg/g
1,2,3,4,7,8-HxCDD	1.0	J Q J	5.0 AB	0.88	pg/g
1,2,3,6,7,8-HxCDD	1.2	J Q J	5.0 AB	0.61	pg/g
1,2,3,7,8,9-HxCDD	1.1	J Q J	5.0 AB	0.61	pg/g
Total HxCDD	20		5.0	0.68	pg/g
1,2,3,4,6,7,8-HpCDD	34		5.0	3.7	pg/g
Total HpCDD	99		5.0	3.7	pg/g
OCDD	370	B	10	7.6	pg/g
2,3,7,8-TCDF	6.3	CON	1.0	0.17	pg/g
Total TCDF	26		1.0	0.80	pg/g
1,2,3,7,8-PeCDF	5.6		5.0	0.57	pg/g
2,3,4,7,8-PeCDF	6.9		5.0	0.58	pg/g
Total PeCDF	58		5.0	0.57	pg/g
1,2,3,4,7,8-HxCDF	61		5.0	1.1	pg/g
1,2,3,6,7,8-HxCDF	11		5.0	0.83	pg/g
2,3,4,6,7,8-HxCDF	16		5.0	0.96	pg/g
1,2,3,7,8,9-HxCDF	ND		5.0	1.2	pg/g
Total HxCDF	220		5.0	1.0	pg/g
1,2,3,4,6,7,8-HpCDF	160	B	5.0	0.45	pg/g
1,2,3,4,7,8,9-HpCDF	8.6		5.0	0.56	pg/g
Total HpCDF	240		5.0	0.49	pg/g
OCDF	140	B	10	0.22	pg/g

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Environmental Planning Specialists Inc.

Sample ID: 11118-Q2-U1-R2

Trace Level Organic Compounds

SW846 8290

Lot - Sample #....:	G1D290626 - 014	**Work Order #....:**	MHPL21AA	**Matrix....:**	SOLID
Date Sampled....:	04/28/11	**Date Received....:**	04/29/11	**Dilution Factor:**	1
Prep Date....:	05/06/11	**Analysis Date....:**	05/14/11	**Percent Moisture:**	
Prep Batch # ....:	1126235	**Instrument ID....:**	9D5		
Initial Wgt/Vol :	10 g	**Analyst ID....:**	Sylvia H. Krenn		

INTERNAL STANDARDS	PERCENT RECOVERY	RECOVERY LIMITS
13C-2,3,7,8-TCDD	73	40 - 135
13C-1,2,3,7,8-PeCDD	73	40 - 135
13C-1,2,3,6,7,8-HxCDD	77	40 - 135
13C-1,2,3,4,6,7,8-HpCDD	80	40 - 135
13C-OCDD	80	40 - 135
13C-2,3,7,8-TCDF	75	40 - 135
13C-1,2,3,7,8-PeCDF	80	40 - 135
13C-1,2,3,4,7,8-HxCDF	85	40 - 135
13C-1,2,3,4,6,7,8-HpCDF	84	40 - 135

QUALIFIERS

B Method blank contamination. The associated method blank contains the target analyte at a reportable level.

CON Confirmation analysis.

J Estimated Result.

Q Estimated maximum possible concentration (EMPC).

961571

Environmental Planning Specialists Inc.

Sample ID: 11118-Q2-U2-R1

Trace Level Organic Compounds

SW846 8290

Lot - Sample #....:	G1D290626 - 015	Work Order #....:	MHPL31AA	Matrix....:	SOLID
Date Sampled....:	04/28/11	Date Received....:	04/29/11	Dilution Factor:	0.99
Prep Date....:	05/06/11	Analysis Date....:	05/14/11	Percent Moisture:	
Prep Batch # ....:	1126235	Instrument ID....:	9D5		
Initial Wgt/Vol :	10.02 g	Analyst ID....:	Sylvia H. Krenn		

PARAMETER	RESULT		REPORTING LIMIT	ESTIMATED DETECTION LIMIT	UNITS
2,3,7,8-TCDD	ND		1.0	0.45	pg/g
Total TCDD	3.0		1.0	0.45	pg/g
1,2,3,7,8-PeCDD	1.7	J J	5.0 A B	1.2	pg/g
Total PeCDD	17		5.0	1.2	pg/g
1,2,3,4,7,8-HxCDD	7.6	Q	5.0	4.8	pg/g
1,2,3,6,7,8-HxCDD	19		5.0	3.4	pg/g
1,2,3,7,8,9-HxCDD	8.4		5.0	3.4	pg/g
Total HxCDD	530		5.0	3.7	pg/g
1,2,3,4,6,7,8-HpCDD	1400	G J	10 LOCK	10	pg/g
Total HpCDD	7600		10	10	pg/g
OCDD	15000	E G B J	47 LR LOCK	47	pg/g
2,3,7,8-TCDF	38	CON	1.0	0.20	pg/g
Total TCDF	130		1.2	1.2	pg/g
1,2,3,7,8-PeCDF	29		5.0	0.66	pg/g
2,3,4,7,8-PeCDF	27		5.0	0.68	pg/g
Total PeCDF	200		5.0	0.67	pg/g
1,2,3,4,7,8-HxCDF	260		5.0	1.8	pg/g
1,2,3,6,7,8-HxCDF	49		5.0	1.4	pg/g
2,3,4,6,7,8-HxCDF	63		5.0	1.6	pg/g
1,2,3,7,8,9-HxCDF	ND		5.0	2.0	pg/g
Total HxCDF	820		5.0	1.7	pg/g
1,2,3,4,6,7,8-HpCDF	620		5.0	4.2	pg/g
1,2,3,4,7,8,9-HpCDF	46	G B J	5.2 LOCK	5.2	pg/g
Total HpCDF	1300		5.0	4.6	pg/g
OCDF	1200	B	10	3.6	pg/g

5/20/11

Environmental Planning Specialists Inc.

Sample ID: 11118-Q2-U2-R1

Trace Level Organic Compounds

SW846 8290

Lot - Sample #....:	G1D290626 - 015	**Work Order #....:**	MHPL31AA	**Matrix....:**	SOLID
Date Sampled....:	04/28/11	**Date Received....:**	04/29/11	**Dilution Factor:**	0.99
Prep Date....:	05/06/11	**Analysis Date....:**	05/14/11	**Percent Moisture:**	
Prep Batch # ....:	1126235	**Instrument ID....:**	9D5		
Initial Wgt/Vol:	10.02 g	**Analyst ID....:**	Sylvia H. Krenn		

INTERNAL STANDARDS	PERCENT RECOVERY	RECOVERY LIMITS
13C-2,3,7,8-TCDD	77	40 - 135
13C-1,2,3,7,8-PeCDD	83	40 - 135
13C-1,2,3,6,7,8-HxCDD	77	40 - 135
13C-1,2,3,4,6,7,8-HpCDD	84	40 - 135
13C-OCDD	103	40 - 135
13C-2,3,7,8-TCDF	80	40 - 135
13C-1,2,3,7,8-PeCDF	88	40 - 135
13C-1,2,3,4,7,8-HxCDF	87	40 - 135
13C-1,2,3,4,6,7,8-HpCDF	88	40 - 135

QUALIFIERS

- B Method blank contamination. The associated method blank contains the target analyte at a reportable level.
- CON Confirmation analysis.
- E Estimated result. Result concentration exceeds the calibration range.
- G Elevated reporting limit. The reporting limit is elevated due to matrix interference.
- J Estimated Result.
- Q Estimated maximum possible concentration (EMPC).

Environmental Planning Specialists Inc.

Sample ID: 11118-Q2-U2-R2

Trace Level Organic Compounds

SW846 8290

Lot - Sample #....:	G1D290626 - 016	Work Order #....:	MHPL41AA	Matrix....:	SOLID
Date Sampled....:	04/28/11	Date Received....:	04/29/11	Dilution Factor:	1
Prep Date....:	05/06/11	Analysis Date....:	05/14/11	Percent Moisture:	
Prep Batch # ....:	1126235	Instrument ID....:	9D5		
Initial Wgt/Vol :	10 g	Analyst ID....:	Sylvia H. Krenn		

PARAMETER	RESULT		REPORTING LIMIT	ESTIMATED DETECTION LIMIT	UNITS
2,3,7,8-TCDD	ND		1.0	0.40	pg/g
Total TCDD	2.3		1.0	0.40	pg/g
1,2,3,7,8-PeCDD	1.5	J	5.0	1.0	pg/g
Total PeCDD	12		5.0	1.0	pg/g
1,2,3,4,7,8-HxCDD	6.1	Q J	5.0 AB	2.5	pg/g
1,2,3,6,7,8-HxCDD	31		5.0	1.7	pg/g
1,2,3,7,8,9-HxCDD	6.5		5.0	1.7	pg/g
Total HxCDD	310		5.0	1.9	pg/g
1,2,3,4,6,7,8-HpCDD	2300	E G J	19 LR LOCK	19	pg/g
Total HpCDD	6100		19	19	pg/g
OCDD	23000	E G B J	72 LR LOCK	72	pg/g
2,3,7,8-TCDF	36	CON	1.0	0.24	pg/g
Total TCDF	120		1.1	1.1	pg/g
1,2,3,7,8-PeCDF	34		5.0	0.67	pg/g
2,3,4,7,8-PeCDF	28		5.0	0.69	pg/g
Total PeCDF	200		5.0	0.68	pg/g
1,2,3,4,7,8-HxCDF	410		5.0	1.8	pg/g
1,2,3,6,7,8-HxCDF	88		5.0	1.3	pg/g
2,3,4,6,7,8-HxCDF	66		5.0	1.5	pg/g
1,2,3,7,8,9-HxCDF	2.1	J	5.0	1.9	pg/g
Total HxCDF	1100		5.0	1.6	pg/g
1,2,3,4,6,7,8-HpCDF	1000	B	5.0	1.1	pg/g
1,2,3,4,7,8,9-HpCDF	140		5.0	1.4	pg/g
Total HpCDF	2300		5.0	1.3	pg/g
OCDF	2600	B	10	0.20	pg/g

Environmental Planning Specialists Inc.

Sample ID: 11118-Q2-U2-R2

Trace Level Organic Compounds

SW846 8290

Lot - Sample #....:	G1D290626 - 016	**Work Order #....:**	MHPL41AA	**Matrix....:**	SOLID
Date Sampled....:	04/28/11	**Date Received....:**	04/29/11	**Dilution Factor:**	1
Prep Date....:	05/06/11	**Analysis Date....:**	05/14/11	**Percent Moisture:**	
Prep Batch # ....:	1126235	**Instrument ID....:**	9D5		
Initial Wgt/Vol :	10 g	**Analyst ID....:**	Sylvia H. Krenn		

INTERNAL STANDARDS	PERCENT RECOVERY	RECOVERY LIMITS
13C-2,3,7,8-TCDD	78	40 - 135
13C-1,2,3,7,8-PeCDD	82	40 - 135
13C-1,2,3,6,7,8-HxCDD	86	40 - 135
13C-1,2,3,4,6,7,8-HpCDD	89	40 - 135
13C-OCDD	121	40 - 135
13C-2,3,7,8-TCDF	81	40 - 135
13C-1,2,3,7,8-PeCDF	88	40 - 135
13C-1,2,3,4,7,8-HxCDF	96	40 - 135
13C-1,2,3,4,6,7,8-HpCDF	96	40 - 135

QUALIFIERS

B	Method blank contamination. The associated method blank contains the target analyte at a reportable level.
CON	Confirmation analysis.
E	Estimated result. Result concentration exceeds the calibration range.
G	Elevated reporting limit. The reporting limit is elevated due to matrix interference.
J	Estimated Result.
Q	Estimated maximum possible concentration (EMPC).

5/20/11

Environmental Planning Specialists Inc.

Sample ID: 10112-Q1-U1-R1

Trace Level Organic Compounds

SW846 8290

Lot - Sample #....:	G1D230436 - 001	Work Order #....:	MHFXV1AA	Matrix....:	SOLID
Date Sampled....:	04/22/11	Date Received....:	04/23/11	Dilution Factor:	1
Prep Date....:	04/25/11	Analysis Date....:	04/26/11	Percent Moisture:	
Prep Batch #....:	1115357	Instrument ID....:	4D5		
Initial Wgt/Vol:	9.99 g	Analyst ID....:	Lisa L. Hernandez		

PARAMETER	RESULT		REPORTING LIMIT	ESTIMATED DETECTION LIMIT	UNITS
2,3,7,8-TCDD	ND		1.0	0.20	pg/g
Total TCDD	1.7		1.0	0.020	pg/g
1,2,3,7,8-PeCDD	0.93	J	5.0	0.20	pg/g
Total PeCDD	5.6		5.0	0.20	pg/g
1,2,3,4,7,8-HxCDD	1.2	J	5.0	0.93	pg/g
1,2,3,6,7,8-HxCDD	3.2	J	5.0	0.66	pg/g
1,2,3,7,8,9-HxCDD	2.7	J	5.0	0.68	pg/g
Total HxCDD	37		5.0	0.74	pg/g
1,2,3,4,6,7,8-HpCDD	99		5.0	1.0	pg/g
Total HpCDD	260		5.0	1.0	pg/g
OCDD	940	B	10	0.25	pg/g
2,3,7,8-TCDF	2.1	CON	1.0	0.16	pg/g
Total TCDF	16		1.0	0.35	pg/g
1,2,3,7,8-PeCDF	2.0	J	5.0	0.27	pg/g
2,3,4,7,8-PeCDF	2.4	J	5.0	0.27	pg/g
Total PeCDF	34		5.0	0.27	pg/g
1,2,3,4,7,8-HxCDF	12		5.0	0.37	pg/g
1,2,3,6,7,8-HxCDF	3.2	J	5.0	0.29	pg/g
2,3,4,6,7,8-HxCDF	3.0	Q J J	5.0 AB	0.32	pg/g
1,2,3,7,8,9-HxCDF	ND		5.0	0.37	pg/g
Total HxCDF	59		5.0	0.33	pg/g
1,2,3,4,6,7,8-HpCDF	37	B	5.0	0.39	pg/g
1,2,3,4,7,8,9-HpCDF	3.0	J	5.0	0.46	pg/g
Total HpCDF	82		5.0	0.42	pg/g
OCDF	57	B	10	0.095	pg/g

Environmental Planning Specialists Inc.

Sample ID: 10112-Q1-U1-R1

Trace Level Organic Compounds

SW846 8290

Lot - Sample #....:	G1D230436 - 001	**Work Order #....:**	MHFXV1AA	**Matrix....:**	SOLID
Date Sampled....:	04/22/11	**Date Received....:**	04/23/11	**Dilution Factor:**	1
Prep Date....:	04/25/11	**Analysis Date....:**	04/26/11	**Percent Moisture:**	
Prep Batch # ....:	1115357	**Instrument ID....:**	4D5		
Initial Wgt/Vol :	9.99 g	**Analyst ID....:**	Lisa L. Hernandez		

INTERNAL STANDARDS	PERCENT RECOVERY	RECOVERY LIMITS
13C-2,3,7,8-TCDD	62	40 - 135
13C-1,2,3,7,8-PeCDD	67	40 - 135
13C-1,2,3,6,7,8-HxCDD	65	40 - 135
13C-1,2,3,4,6,7,8-HpCDD	65	40 - 135
13C-OCDD	71	40 - 135
13C-2,3,7,8-TCDF	62	40 - 135
13C-1,2,3,7,8-PeCDF	59	40 - 135
13C-1,2,3,4,7,8-HxCDF	60	40 - 135
13C-1,2,3,4,6,7,8-HpCDF	63	40 - 135

QUALIFIERS

B Method blank contamination. The associated method blank contains the target analyte at a reportable level.

CON Confirmation analysis.

J Estimated Result.

Q Estimated maximum possible concentration (EMPC).

Environmental Planning Specialists Inc.

Sample ID: 10112-Q1-U1-R1

Trace Level Organic Compounds

SW846 8290

Lot - Sample #....:	G1D230436 - 001	Work Order #....:	MHFXV1AE	Matrix....:	SOLID
Date Sampled....:	04/22/11	Date Received....:	04/23/11	Dilution Factor:	1
Prep Date....:	04/25/11	Analysis Date....:	04/26/11	Percent Moisture:	
Prep Batch # ....:	1115357	Instrument ID....:	4D5		
Initial Wgt/Vol :	9.96 g	Analyst ID....:	Lisa L. Hernandez		

PARAMETER	RESULT		REPORTING LIMIT	ESTIMATED DETECTION LIMIT	UNITS
2,3,7,8-TCDD	ND		1.0	0.080	pg/g
Total TCDD	2.4		1.0	0.016	pg/g
1,2,3,7,8-PeCDD	0.77	J	5.0	0.30	pg/g
Total PeCDD	4.6		5.0	0.30	pg/g
1,2,3,4,7,8-HxCDD	1.8	J	5.0	0.35	pg/g
1,2,3,6,7,8-HxCDD	3.9	J	5.0	0.25	pg/g
1,2,3,7,8,9-HxCDD	3.2	J	5.0	0.26	pg/g
Total HxCDD	44		5.0	0.28	pg/g
1,2,3,4,6,7,8-HpCDD	110		5.0	0.87	pg/g
Total HpCDD	260		5.0	0.87	pg/g
OCDD	1100	B	10	2.3	pg/g
2,3,7,8-TCDF	2.2	CON	1.0	0.19	pg/g
Total TCDF	16		1.0	0.39	pg/g
1,2,3,7,8-PeCDF	2.2	J	5.0	0.32	pg/g
2,3,4,7,8-PeCDF	2.4	J	5.0	0.33	pg/g
Total PeCDF	35		5.0	0.32	pg/g
1,2,3,4,7,8-HxCDF	13		5.0	0.25	pg/g
1,2,3,6,7,8-HxCDF	3.6	J	5.0	0.20	pg/g
2,3,4,6,7,8-HxCDF	3.2	J	5.0	0.22	pg/g
1,2,3,7,8,9-HxCDF	ND		5.0	0.26	pg/g
Total HxCDF	62		5.0	0.23	pg/g
1,2,3,4,6,7,8-HpCDF	45	B	5.0	0.35	pg/g
1,2,3,4,7,8,9-HpCDF	4.6	J	5.0	0.41	pg/g
Total HpCDF	100		5.0	0.37	pg/g
OCDF	80	B	10	0.27	pg/g

Environmental Planning Specialists Inc.

Sample ID: 10112-Q1-U1-R1

Trace Level Organic Compounds

SW846 8290

Lot - Sample #...:	G1D230436 - 001	Work Order #...:	MHFXV1AE	Matrix....:	SOLID
Date Sampled...:	04/22/11	Date Received....:	04/23/11	Dilution Factor:	1
Prep Date....:	04/25/11	Analysis Date....:	04/26/11	Percent Moisture:	
Prep Batch # ...:	1115357	Instrument ID....:	4D5		
Initial Wgt/Vol :	9.96 g	Analyst ID....:	Lisa L. Hernandez		

INTERNAL STANDARDS	PERCENT RECOVERY	RECOVERY LIMITS
13C-2,3,7,8-TCDD	66	40 - 135
13C-1,2,3,7,8-PeCDD	77	40 - 135
13C-1,2,3,6,7,8-HxCDD	65	40 - 135
13C-1,2,3,4,6,7,8-HpCDD	74	40 - 135
13C-OCDD	80	40 - 135
13C-2,3,7,8-TCDF	70	40 - 135
13C-1,2,3,7,8-PeCDF	66	40 - 135
13C-1,2,3,4,7,8-HxCDF	71	40 - 135
13C-1,2,3,4,6,7,8-HpCDF	68	40 - 135

QUALIFIERS

B Method blank contamination. The associated method blank contains the target analyte at a reportable level.

CON Confirmation analysis.

J Estimated Result.

Environmental Planning Specialists Inc.

Sample ID: 10112-Q1-U1-R1

Trace Level Organic Compounds

SW846 8290

Lot - Sample #....:	G1D230436 - 001	Work Order #....:	MHFXV1AD	Matrix....:	SOLID
Date Sampled....:	04/22/11	Date Received....:	04/23/11	Dilution Factor:	1
Prep Date....:	04/25/11	Analysis Date....:	04/26/11	Percent Moisture:	
Prep Batch # ....:	1115357	Instrument ID....:	4D5		
Initial Wgt/Vol :	10 g	Analyst ID....:	Lisa L. Hernandez		

PARAMETER	RESULT		REPORTING LIMIT	ESTIMATED DETECTION LIMIT	UNITS
2,3,7,8-TCDD	ND		1.0	0.24	pg/g
Total TCDD	2.3		1.0	0.10	pg/g
1,2,3,7,8-PeCDD	ND		5.0	0.51	pg/g
Total PeCDD	4.2		5.0	0.33	pg/g
1,2,3,4,7,8-HxCDD	1.4	J	5.0	0.77	pg/g
1,2,3,6,7,8-HxCDD	3.3	J	5.0	0.55	pg/g
1,2,3,7,8,9-HxCDD	2.8	J	5.0	0.56	pg/g
Total HxCDD	39		5.0	0.61	pg/g
1,2,3,4,6,7,8-HpCDD	92		5.0	1.5	pg/g
Total HpCDD	240		5.0	1.5	pg/g
OCDD	910	B	10	2.6	pg/g
2,3,7,8-TCDF	2.2	CON	1.0	0.22	pg/g
Total TCDF	16		1.0	0.49	pg/g
1,2,3,7,8-PeCDF	2.1	J Q J	5.0 AD	0.32	pg/g
2,3,4,7,8-PeCDF	2.3	J	5.0	0.33	pg/g
Total PeCDF	34		5.0	0.42	pg/g
1,2,3,4,7,8-HxCDF	12		5.0	0.24	pg/g
1,2,3,6,7,8-HxCDF	3.3	J	5.0	0.19	pg/g
2,3,4,6,7,8-HxCDF	3.6	J	5.0	0.21	pg/g
1,2,3,7,8,9-HxCDF	ND		5.0	0.24	pg/g
Total HxCDF	60		5.0	0.22	pg/g
1,2,3,4,6,7,8-HpCDF	37	B	5.0	0.24	pg/g
1,2,3,4,7,8,9-HpCDF	3.1	J	5.0	0.28	pg/g
Total HpCDF	82		5.0	0.26	pg/g
OCDF	57	B	10	0.45	pg/g

Environmental Planning Specialists Inc.

Sample ID: 10112-Q1-U1-R1

Trace Level Organic Compounds

SW846 8290

Lot - Sample #....:	G1D230436 - 001	**Work Order #....:**	MHFXV1AD	**Matrix....:**	SOLID
Date Sampled....:	04/22/11	**Date Received....:**	04/23/11	**Dilution Factor:**	1
Prep Date....:	04/25/11	**Analysis Date....:**	04/26/11	**Percent Moisture:**	
Prep Batch # ....:	1115357	**Instrument ID....:**	4D5		
Initial Wgt/Vol.:	10 g	**Analyst ID....:**	Lisa L. Hernandez		

INTERNAL STANDARDS	PERCENT RECOVERY	RECOVERY LIMITS
13C-2,3,7,8-TCDD	51	40 - 135
13C-1,2,3,7,8-PeCDD	57	40 - 135
13C-1,2,3,6,7,8-HxCDD	52	40 - 135
13C-1,2,3,4,6,7,8-HpCDD	55	40 - 135
13C-OCDD	60	40 - 135
13C-2,3,7,8-TCDF	52	40 - 135
13C-1,2,3,7,8-PeCDF	50	40 - 135
13C-1,2,3,4,7,8-HxCDF	53	40 - 135
13C-1,2,3,4,6,7,8-HpCDF	52	40 - 135

QUALIFIERS

B Method blank contamination. The associated method blank contains the target analyte at a reportable level.

CON Confirmation analysis.

J Estimated Result.

Q Estimated maximum possible concentration (EMPC).

Environmental Planning Specialists Inc.

Sample ID: 10112-Q1-U1-R2

Trace Level Organic Compounds

SW846 8290

Lot - Sample #....:	G1D230436 - 002	Work Order #....:	MHFXW1AA	Matrix....:	SOLID
Date Sampled....:	04/22/11	Date Received....:	04/23/11	Dilution Factor:	1
Prep Date....:	04/25/11	Analysis Date....:	04/26/11	Percent Moisture:	
Prep Batch # ....:	1115357	Instrument ID....:	4D5		
Initial Wgt/Vol :	10.01 g	Analyst ID....:	Lisa L. Hernandez		

PARAMETER	RESULT		REPORTING LIMIT	ESTIMATED DETECTION LIMIT	UNITS
2,3,7,8-TCDD	ND		1.0	0.23	pg/g
Total TCDD	2.4		1.0	0.083	pg/g
1,2,3,7,8-PeCDD	0.65	J Q J	5.0 HB	0.22	pg/g
Total PeCDD	4.6		5.0	0.22	pg/g
1,2,3,4,7,8-HxCDD	1.4	J	5.0	0.53	pg/g
1,2,3,6,7,8-HxCDD	2.6	J	5.0	0.37	pg/g
1,2,3,7,8,9-HxCDD	2.7	J	5.0	0.38	pg/g
Total HxCDD	33		5.0	0.42	pg/g
1,2,3,4,6,7,8-HpCDD	81		5.0	1.1	pg/g
Total HpCDD	210		5.0	1.1	pg/g
OCDD	850	B	10	1.8	pg/g
2,3,7,8-TCDF	2.3	CON	1.0	0.23	pg/g
Total TCDF	16		1.0	0.52	pg/g
1,2,3,7,8-PeCDF	2.2	J	5.0	0.34	pg/g
2,3,4,7,8-PeCDF	2.3	J	5.0	0.35	pg/g
Total PeCDF	36		5.0	0.34	pg/g
1,2,3,4,7,8-HxCDF	11		5.0	0.20	pg/g
1,2,3,6,7,8-HxCDF	2.9	J	5.0	0.16	pg/g
2,3,4,6,7,8-HxCDF	2.9	Q J J	5.0 AB	0.17	pg/g
1,2,3,7,8,9-HxCDF	ND		5.0	0.20	pg/g
Total HxCDF	53		5.0	0.18	pg/g
1,2,3,4,6,7,8-HpCDF	32	B	5.0	0.38	pg/g
1,2,3,4,7,8,9-HpCDF	2.8	J	5.0	0.45	pg/g
Total HpCDF	68		5.0	0.41	pg/g
OCDF	45	B	10	0.41	pg/g

Environmental Planning Specialists Inc.

Sample ID: 10112-Q1-U1-R2

Trace Level Organic Compounds

SW846 8290

Lot - Sample #....:	G1D230436 - 002	Work Order #....:	MHFXW1AA	Matrix....:	SOLID
Date Sampled....:	04/22/11	Date Received....:	04/23/11	Dilution Factor:	1
Prep Date....:	04/25/11	Analysis Date....:	04/26/11	Percent Moisture:	
Prep Batch # ....:	1115357	Instrument ID....:	4D5		
Initial Wgt/Vol :	10.01 g	Analyst ID....:	Lisa L. Hernandez		

INTERNAL STANDARDS	PERCENT RECOVERY	RECOVERY LIMITS
13C-2,3,7,8-TCDD	62	40 - 135
13C-1,2,3,7,8-PeCDD	72	40 - 135
13C-1,2,3,6,7,8-HxCDD	66	40 - 135
13C-1,2,3,4,6,7,8-HpCDD	67	40 - 135
13C-OCDD	74	40 - 135
13C-2,3,7,8-TCDF	65	40 - 135
13C-1,2,3,7,8-PeCDF	60	40 - 135
13C-1,2,3,4,7,8-HxCDF	64	40 - 135
13C-1,2,3,4,6,7,8-HpCDF	63	40 - 135

QUALIFIERS

B Method blank contamination. The associated method blank contains the target analyte at a reportable level.

CON Confirmation analysis.

J Estimated Result.

Q Estimated maximum possible concentration (EMPC).

Environmental Planning Specialists Inc.

Sample ID: 10112-Q1-U1-R3

Trace Level Organic Compounds

SW846 8290

Lot - Sample #....:	G1D230436 - 003	Work Order #....:	MHFXX1AA	Matrix....:	SOLID
Date Sampled....:	04/22/11	Date Received....:	04/23/11	Dilution Factor:	1
Prep Date....:	04/25/11	Analysis Date....:	04/26/11	Percent Moisture:	
Prep Batch # ....:	1115357	Instrument ID....:	4D5		
Initial Wgt/Vol :	9.98 g	Analyst ID....:	Lisa L. Hernandez		

PARAMETER	RESULT		REPORTING LIMIT	ESTIMATED DETECTION LIMIT	UNITS
2,3,7,8-TCDD	ND		1.0	0.12	pg/g
Total TCDD	2.6		1.0	0.054	pg/g
1,2,3,7,8-PeCDD	0.74	J	5.0	0.25	pg/g
Total PeCDD	4.6		5.0	0.25	pg/g
1,2,3,4,7,8-HxCDD	1.4	J Q J	5.0 AB	0.49	pg/g
1,2,3,6,7,8-HxCDD	5.5		5.0	0.35	pg/g
1,2,3,7,8,9-HxCDD	3.5	J	5.0	0.36	pg/g
Total HxCDD	47		5.0	0.39	pg/g
1,2,3,4,6,7,8-HpCDD	140		5.0	0.74	pg/g
Total HpCDD	290		5.0	0.74	pg/g
OCDD	1200	B	10	2.2	pg/g
2,3,7,8-TCDF	2.4	CON	1.0	0.16	pg/g
Total TCDF	13		1.0	0.49	pg/g
1,2,3,7,8-PeCDF	2.0	J	5.0	0.27	pg/g
2,3,4,7,8-PeCDF	2.2	J	5.0	0.27	pg/g
Total PeCDF	31		5.0	0.29	pg/g
1,2,3,4,7,8-HxCDF	7.9		5.0	0.20	pg/g
1,2,3,6,7,8-HxCDF	2.5	J	5.0	0.16	pg/g
2,3,4,6,7,8-HxCDF	2.4	J	5.0	0.18	pg/g
1,2,3,7,8,9-HxCDF	ND		5.0	0.20	pg/g
Total HxCDF	50		5.0	0.18	pg/g
1,2,3,4,6,7,8-HpCDF	43	B	5.0	0.28	pg/g
1,2,3,4,7,8,9-HpCDF	3.3	J	5.0	0.33	pg/g
Total HpCDF	120		5.0	0.30	pg/g
OCDF	120	B	10	0.24	pg/g

Environmental Planning Specialists Inc.

Sample ID: 10112-Q1-U1-R3

Trace Level Organic Compounds

SW846 8290

Lot - Sample #....:	G1D230436 - 003	**Work Order #....:**	MHFXX1AA	**Matrix....:**	SOLID
Date Sampled....:	04/22/11	**Date Received....:**	04/23/11	**Dilution Factor:**	1
Prep Date....:	04/25/11	**Analysis Date....:**	04/26/11	**Percent Moisture:**	
Prep Batch # ....:	1115357	**Instrument ID....:**	4D5		
Initial Wgt/Vol :	9.98 g	**Analyst ID....:**	Lisa L. Hernandez		

INTERNAL STANDARDS	PERCENT RECOVERY	RECOVERY LIMITS
13C-2,3,7,8-TCDD	72	40 - 135
13C-1,2,3,7,8-PeCDD	85	40 - 135
13C-1,2,3,6,7,8-HxCDD	69	40 - 135
13C-1,2,3,4,6,7,8-HpCDD	80	40 - 135
13C-OCDD	90	40 - 135
13C-2,3,7,8-TCDF	76	40 - 135
13C-1,2,3,7,8-PeCDF	71	40 - 135
13C-1,2,3,4,7,8-HxCDF	80	40 - 135
13C-1,2,3,4,6,7,8-HpCDF	73	40 - 135

QUALIFIERS

B Method blank contamination. The associated method blank contains the target analyte at a reportable level.

CON Confirmation analysis.

J Estimated Result.

Q Estimated maximum possible concentration (EMPC).

Environmental Planning Specialists Inc.

Sample ID: 11119-Q2-U3-R1

Trace Level Organic Compounds

SW846 8290

Lot - Sample #....:	G1D300512 - 001	Work Order #....:	MHP7C1AA	Matrix....:	SOLID
Date Sampled....:	04/29/11	Date Received....:	04/30/11	Dilution Factor:	0.97
Prep Date....:	05/06/11	Analysis Date....:	05/17/11	Percent Moisture:	
Prep Batch #....:	1126235	Instrument ID....:	9D5		
Initial Wgt/Vol:	10.33 g	Analyst ID....:	Lisa L. Hernandez		

PARAMETER	RESULT		REPORTING LIMIT	ESTIMATED DETECTION LIMIT	UNITS
2,3,7,8-TCDD	0.25	J Q J	0.97 AB	0.13	pg/g
Total TCDD	4.0		0.97	0.13	pg/g
1,2,3,7,8-PeCDD	0.73	J	4.8	0.61	pg/g
Total PeCDD	2.5		4.8	0.61	pg/g
1,2,3,4,7,8-HxCDD	1.2	J Q J	4.8 AB CCAC	1.0 5/6/2011	pg/g
1,2,3,6,7,8-HxCDD	1.7	J Q J	4.8 AB	0.72	pg/g
1,2,3,7,8,9-HxCDD	0.98	J Q J	4.8 AB	0.72	pg/g
Total HxCDD	14		4.8	0.80	pg/g
1,2,3,4,6,7,8-HpCDD	32	G J	5.6 LOCR	5.6	pg/g
Total HpCDD	90		4.8	5.6	pg/g
OCDD	280	B	9.7	6.2	pg/g
2,3,7,8-TCDF	6.6	CON	0.97	0.12	pg/g
Total TCDF	33		0.97	0.41	pg/g
1,2,3,7,8-PeCDF	6.6		4.8	0.46	pg/g
2,3,4,7,8-PeCDF	13		4.8	0.47	pg/g
Total PeCDF	98		4.8	0.47	pg/g
1,2,3,4,7,8-HxCDF	130		4.8	1.6	pg/g
1,2,3,6,7,8-HxCDF	19		4.8	1.2	pg/g
2,3,4,6,7,8-HxCDF	40		4.8	1.4	pg/g
1,2,3,7,8,9-HxCDF	ND		4.8	1.7	pg/g
Total HxCDF	520		4.8	1.4	pg/g
1,2,3,4,6,7,8-HpCDF	420	B	4.8	0.47	pg/g
1,2,3,4,7,8,9-HpCDF	12		4.8	0.59	pg/g
Total HpCDF	590		4.8	0.52	pg/g
OCDF	260	B	9.7	1.2	pg/g

Environmental Planning Specialists Inc.

Sample ID: 11119-Q2-U3-R1

Trace Level Organic Compounds

SW846 8290

Lot - Sample #....:	G1D300512 - 001	Work Order #....:	MHP7C1AA	Matrix....:	SOLID
Date Sampled....:	04/29/11	Date Received....:	04/30/11	Dilution Factor:	0.97
Prep Date....:	05/06/11	Analysis Date....:	05/17/11	Percent Moisture:	
Prep Batch # ...:	1126235	Instrument ID....:	9D5		
Initial Wgt/Vol :	10.33 g	Analyst ID....:	Lisa L. Hernandez		

INTERNAL STANDARDS	PERCENT RECOVERY	RECOVERY LIMITS
13C-2,3,7,8-TCDD	77	40 - 135
13C-1,2,3,7,8-PeCDD	84	40 - 135
13C-1,2,3,6,7,8-HxCDD	80	40 - 135
13C-1,2,3,4,6,7,8-HpCDD	82	40 - 135
13C-OCDD	85	40 - 135
13C-2,3,7,8-TCDF	79	40 - 135
13C-1,2,3,7,8-PeCDF	88	40 - 135
13C-1,2,3,4,7,8-HxCDF	83	40 - 135
13C-1,2,3,4,6,7,8-HpCDF	90	40 - 135

QUALIFIERS

B Method blank contamination. The associated method blank contains the target analyte at a reportable level.

CON Confirmation analysis.

G Elevated reporting limit. The reporting limit is elevated due to matrix interference.

J Estimated Result.

Q Estimated maximum possible concentration (EMPC).

Environmental Planning Specialists Inc.

Sample ID: 11119-Q2-U3-R2

Trace Level Organic Compounds

SW846 8290

Lot - Sample #....:	G1D300512 - 002	Work Order #....:	MHP7D1AA	Matrix....:	SOLID
Date Sampled....:	04/29/11	Date Received....:	04/30/11	Dilution Factor:	0.96
Prep Date....:	05/06/11	Analysis Date....:	05/17/11	Percent Moisture:	
Prep Batch # ....:	1126235	Instrument ID....:	9D5		
Initial Wgt/Vol :	10.46 g	Analyst ID....:	Lisa L. Hernandez		

PARAMETER	RESULT		REPORTING LIMIT	ESTIMATED DETECTION LIMIT	UNITS
2,3,7,8-TCDD	0.27	J	0.96	0.17	pg/g
Total TCDD	3.3		0.96	0.17	pg/g
1,2,3,7,8-PeCDD	ND		4.8	0.73	pg/g
Total PeCDD	0.89		4.8	0.73	pg/g
1,2,3,4,7,8-HxCDD	1.1	J Q J	4.8 AB EDR	0.99 6/22/11	pg/g
1,2,3,6,7,8-HxCDD	1.8	J Q J	4.8 AB	0.69	pg/g
1,2,3,7,8,9-HxCDD	1.3	J	4.8	0.69	pg/g
Total HxCDD	13		4.8	0.77	pg/g
1,2,3,4,6,7,8-HpCDD	34		4.8	3.9	pg/g
Total HpCDD	92		4.8	3.9	pg/g
OCDD	280	B	9.6	8.8	pg/g
2,3,7,8-TCDF	6.5	CON	0.96	0.10	pg/g
Total TCDF	37		0.96	0.35	pg/g
1,2,3,7,8-PeCDF	7.2		4.8	0.60	pg/g
2,3,4,7,8-PeCDF	13		4.8	0.61	pg/g
Total PeCDF	86		4.8	0.60	pg/g
1,2,3,4,7,8-HxCDF	130		4.8	1.3	pg/g
1,2,3,6,7,8-HxCDF	20		4.8	0.99	pg/g
2,3,4,6,7,8-HxCDF	41		4.8	1.1	pg/g
1,2,3,7,8,9-HxCDF	ND		4.8	1.4	pg/g
Total HxCDF	470		4.8	1.2	pg/g
1,2,3,4,6,7,8-HpCDF	390	B	4.8	0.98	pg/g
1,2,3,4,7,8,9-HpCDF	13		4.8	1.2	pg/g
Total HpCDF	560		4.8	1.1	pg/g
OCDF	260	B	9.6	0.17	pg/g

Environmental Planning Specialists Inc.

Sample ID: 11119-Q2-U3-R2

Trace Level Organic Compounds

SW846 8290

Lot - Sample #....:	G1D300512 - 002	Work Order #....:	MHP7D1AA	Matrix....:	SOLID
Date Sampled....:	04/29/11	Date Received....:	04/30/11	Dilution Factor:	0.96
Prep Date....:	05/06/11	Analysis Date....:	05/17/11	Percent Moisture:	
Prep Batch # ....:	1126235	Instrument ID....:	9D5		
Initial Wgt/Vol :	10.46 g	Analyst ID....:	Lisa L. Hernandez		

INTERNAL STANDARDS	PERCENT RECOVERY	RECOVERY LIMITS
13C-2,3,7,8-TCDD	76	40 - 135
13C-1,2,3,7,8-PeCDD	80	40 - 135
13C-1,2,3,6,7,8-HxCDD	82	40 - 135
13C-1,2,3,4,6,7,8-HpCDD	81	40 - 135
13C-OCDD	84	40 - 135
13C-2,3,7,8-TCDF	76	40 - 135
13C-1,2,3,7,8-PeCDF	85	40 - 135
13C-1,2,3,4,7,8-HxCDF	78	40 - 135
13C-1,2,3,4,6,7,8-HpCDF	89	40 - 135

QUALIFIERS

B Method blank contamination. The associated method blank contains the target analyte at a reportable level.

CON Confirmation analysis.

J Estimated Result.

Q Estimated maximum possible concentration (EMPC).