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January 17, 2014

Mr. Jose Font
Acting Director
Caribbean Environmental Protection Division
United States Environmental Protection Agency
City View Plaza, Suite 7000
#48 165 Rd. Km 1.2
Guaynabo, PR 00968-8069

Subject:
General Electric Energy Management - Industrial Solutions, Arecibo, Puerto Rico (EPA ID No. PRD090383860) Arsenic Background Study Letter Report

Dear Mr. Font:

This letter report summarizes the activities and results of the Arsenic Background Investigation completed at the General Electric Energy Services – Industrial Solutions (GE) for the Caribe General Electric Products, Inc. facility located in Arecibo, Puerto Rico (the Site). The objective of the Arsenic Background Investigation was to determine and establish an arsenic background concentration for the Arecibo Site.

Relevant background information supporting the Arsenic Background Investigation and its role in completing the RFI for the Site is presented below followed by a description of the background study activities, results and conclusions to support the evaluation of the RCRA Facility Investigation (RFI) completed at the site (ARCADIS, September 2012).

Relevant Background

An RFI was conducted during March 2012 and consisted of installing four soil borings and sampling the on-Site groundwater pumping well to facilitate soil and groundwater characterization and sample collection.

Based on the findings presented in the RFI Report (ARCADIS, 2012), arsenic was detected in each of the RFI soil samples at concentrations ranging from an estimated 0.75 milligrams per kilogram (mg/kg) to 23.1 mg/kg. The United States Environmental Protection Agency (USEPA) Industrial Soil Regional Screening Level (RSL) for arsenic is 2.4 mg/kg. Based on the analytical results, USEPA requested in a January 9, 2013 letter to GE that additional soil samples be collected in order to

support the conclusion that the detected arsenic concentrations are consistent with background concentrations. During a December 27, 2012 call, USEPA requested that a background study be conducted in general conformance with USEPA's *Guidance for Comparing Background and Chemical Concentrations in Soil for CERCLA Sites* (EPA 540-R-01-003; OSWER 9285.7-41; September 2002) (USEPA, 2002).

GE subsequently prepared a *RCRA Facility Investigation Work Plan Addendum* (Work Plan, ARCADIS May 2013) presenting a plan to implement the requested arsenic background investigation. The work plan was approved by the USEPA as documented in a letter to GE received on June 24, 2013.

Arsenic Background Investigation Activities

ARCADIS personnel conducted arsenic background investigation activities between August 12 and August 15, 2013. Field activities were conducted in accordance with the methodologies and protocols presented in the *Field Sampling Plan* (FSP), *Health and Safety Plan* (HASP), and the *Quality Assurance Project Plan* (QAPP) included in the appendices to the *RCRA Facility Investigation Work Plan* (ARCADIS, August, 2011).

An investigation kick-off meeting was held on August 12th between ARCADIS, a GE site representative and personnel from ARCADIS's drilling and utility clearance subcontractor (GeoEnvirotech, Inc.). During the kick-off meeting, ARCADIS reviewed investigation locations and identified potential conflicts (i.e., physical obstructions, subsurface utilities) with the proposed investigation locations. Personnel from GeoEnvirotech conducted a ground penetrating radar (GPR) survey to identify potential underground obstructions/utilities in the locations of the proposed soil boring locations.

Arsenic background soil investigation activities consisted of advancing four-foot long macrocore sampling sleeves using a jackhammer. A total of 12 soil borings (soil boring ABG-01 through ABG-12) were drilled at the approximate locations shown on Figure 1. In accordance with the Work Plan, ARCADIS field personnel visually characterized and logged each soil core for soil type, composition, texture, and moisture content.

Each of the borings was advanced to the planned depth of four feet below grade. Soil samples were collected from the 0-1; 1-2 and 2-4 foot below grade depth intervals (total of 36 samples) and submitted to TestAmerica for laboratory analysis for

arsenic. After completing each boring, boreholes were backfilled with cement/ bentonite grout.

IDW Management

Investigation-derived waste (IDW) (e.g., soil cuttings, decontamination water) was drummed and staged on-site in a secure location. Drums were labeled with non-hazardous labels describing the drum contents, as well as start and end accumulation dates. IDW generated during the arsenic background investigation will be profiled for waste disposal using the waste characterization data generated during the RFI as the material is similar in nature. Waste material will be disposed of at an appropriate off-site waste disposal facility.

Arsenic Background Study Results

Soil borings were completed at the approximate locations shown on Figure 1. Soil boring logs are included as Attachment 1. No visually impacted soil was noted in the soil samples. The majority of the soil consisted of brown poorly sorted fine to medium sand.

Analytical results for soil samples collected during the arsenic background study are presented in Table 1. Results obtained for the analysis of the soil samples indicated the presence of arsenic at concentrations ranging from 0.47 to 5.3 milligrams per kilogram (mg/kg). Results for one soil sample (ABG-01 [2-4']) indicated that arsenic was not present at concentrations exceeding laboratory detection limits. There was no significant variation in arsenic concentrations with depth interval as summarized in the table below.

Depth Interval (ft bgs)	Arsenic Concentrations (mg/kg)		
	Low	High	Average
0-1'	0.94	5.30	2.65
1-2'	0.47	3.50	1.23
2-4'	0.43	4.40	1.63

Note: ft bgs – feet below ground surface.

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A statistically based site-specific arsenic background concentration was calculated following USEPA's Guidance for Comparing Background and Chemical Concentrations in Soil for CERCLA Sites (EPA 540-R-01-003; OSWER 9285.7-41; September 2002). Statistical background concentrations were calculated using USEPA ProUCL Version 4.1.

The overall average arsenic concentration detected in the 36 soil samples was 1.83 mg/kg with a median concentration of 1.3 mg/kg and geometric mean concentration of 1.33 mg/kg, suggesting a log normal distribution. Prior to calculating a background concentration an outlier test was performed using ProUCL.

The data were confirmed to be log normally distributed using the Shapiro Wilk test in ProUCL, and the data was log-transformed prior to running the outlier test to satisfy the normality assumption. The log-transformed data were tested using the Rosner test, which identified one sample (sample ABG-01 [2-4']) as a statistical outlier on the low end of the distribution. This was confirmed using an interquartile test on the log-transformed data, which showed that the arsenic concentration in sample ABG-01 (2-4') was more than one and a half times the interquartile range lower than the 25th percent quartile. Therefore, this sample was excluded from the dataset (it was also the only censored data point) for the background level calculation.

Using the USEPA's Pro UCL software, the site-specific arsenic background concentration (i.e., defined as the 90th percentile of the data set) was calculated as 3.5 mg/kg, based on a lognormal distribution.

Comparison of RFI Arsenic Results

As presented in the *RCRA Facility Investigation Report* (RFI Report, ARCADIS, September 2012), four soil borings were drilled during the RFI near solid waste management units (SWMUs) #5 and #6 (i.e., the Former Electroplating Sumps and the Chromium, Cyanide and Alkali/Acid Sumps, respectively). Similar to the arsenic background study, RFI soil samples were collected at each of these borings from depth intervals of 0-1, 1-2 and 2-4 feet bgs. Each of the soil samples was submitted for laboratory analyses that included total metals (i.e., including arsenic). The table below summarizes the results obtained for the analysis of the RFI soil samples:

RFI Sample Location		Analytical Result (mg/kg)
SB-1	(0-1')	8.4
	(1-2')	3.5
	(2-4')	5.4
SB-2	(0-1')	2.1
	(1-2')	0.75
	(2-4')	5.5
SB-3	(0-1')	2.8
	(1-2')	8.1
	(2-4')	3.8
SB-4	(0-1')	23.1
	(1-2')	17.2
	(2-4')	4.7

With the exception of the soil samples collected at SB-4 the arsenic concentrations detected in RFI soil sample SB-4, the remaining RFI soil samples contained arsenic concentrations at or only slightly greater than the statistically based site-specific arsenic background concentration. RFI soil samples SB-4 (0-1') and SB-4 (1-2) contained the most elevated concentrations of arsenic (23.1 and 17.2 mg/kg, respectively). Soil boring SB-4 was drilled outside the electroplating facility building between SWMUs #5, 6 and 7. With the exception of soil boring SB-03, each of the RFI soil borings was drilled through soil located beneath a 4-inch layer of asphalt. Soil boring SB-03 was drilled beneath an approximately 8-inch thick concrete slab.

As noted in the USEPA's initial RFI Report comment letter (received by GE on November 27, 2012), USEPA recognized that arsenic was not utilized in the electro plating process. However, the concentrations of arsenic detected from the 0-2 foot bgs depth interval in soil boring SB-4 appear to contain arsenic at a concentration one order of magnitude higher than the calculated site-specific background.

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Conclusion

Based on the results of the arsenic background investigation, GE is requesting no further action for this site due to arsenic based on the following:

- The site is currently and anticipated to be utilized for manufacturing purposes in the foreseeable future.
- Arsenic is not and has never been used as part of the electroplating or coating processes conducted by GE at this facility.
- The on-site soils where arsenic was detected are located beneath concrete or asphalt and are not readily accessible to create a complete exposure pathway to human beings.
- No other constituents were detected in RFI soil samples that would be considered indicative of a release during manufacturing operations at the site.
- A 2004 study of arsenic in native soils of Puerto Rico (Blasland, Bouck & Lee, Inc., September 2004) concluded the following:

  Both the USEPA and the EQB have agreed on several sites (e.g., Juncos Landfill, Barceloneta Landfill, Fibers Public Water Supply Wells) that detected arsenic concentrations were within ranges of natural concentrations in soils. It is reported for many sites that arsenic is naturally present in the soils of Puerto Rico at concentrations up to, and in some cases exceeding, 22 mg/kg. Therefore, it is reasonable to conclude that arsenic is present in the native soils of Puerto Rico and can occur naturally in soil at concentrations of 22mg/kg or higher.

Based upon these factors, GE concludes that the concentrations of arsenic in soil at the site do not warrant additional consideration and GE and ARCADIS request USEPA's concurrence.

Please contact me at (315) 671-9114 or Joel Robinson at GE (412-319-7000 or joel.robinson@ge.com) if you have any questions regarding these responses.

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Sincerely,

Jason Brien, ARCADIS

Copies:
David N. Cuevas, EPA
Josephine Acevedo Esquilin, EQB
Maria Victoria Rodriguez, EQB
Joel Robinson, GE

Figures

Figure 1	Arsenic Background Investigation Sampling Locations

Tables

Table 1	Soil Analytical Summary

Attachments

Attachment 1	Soil Boring Logs

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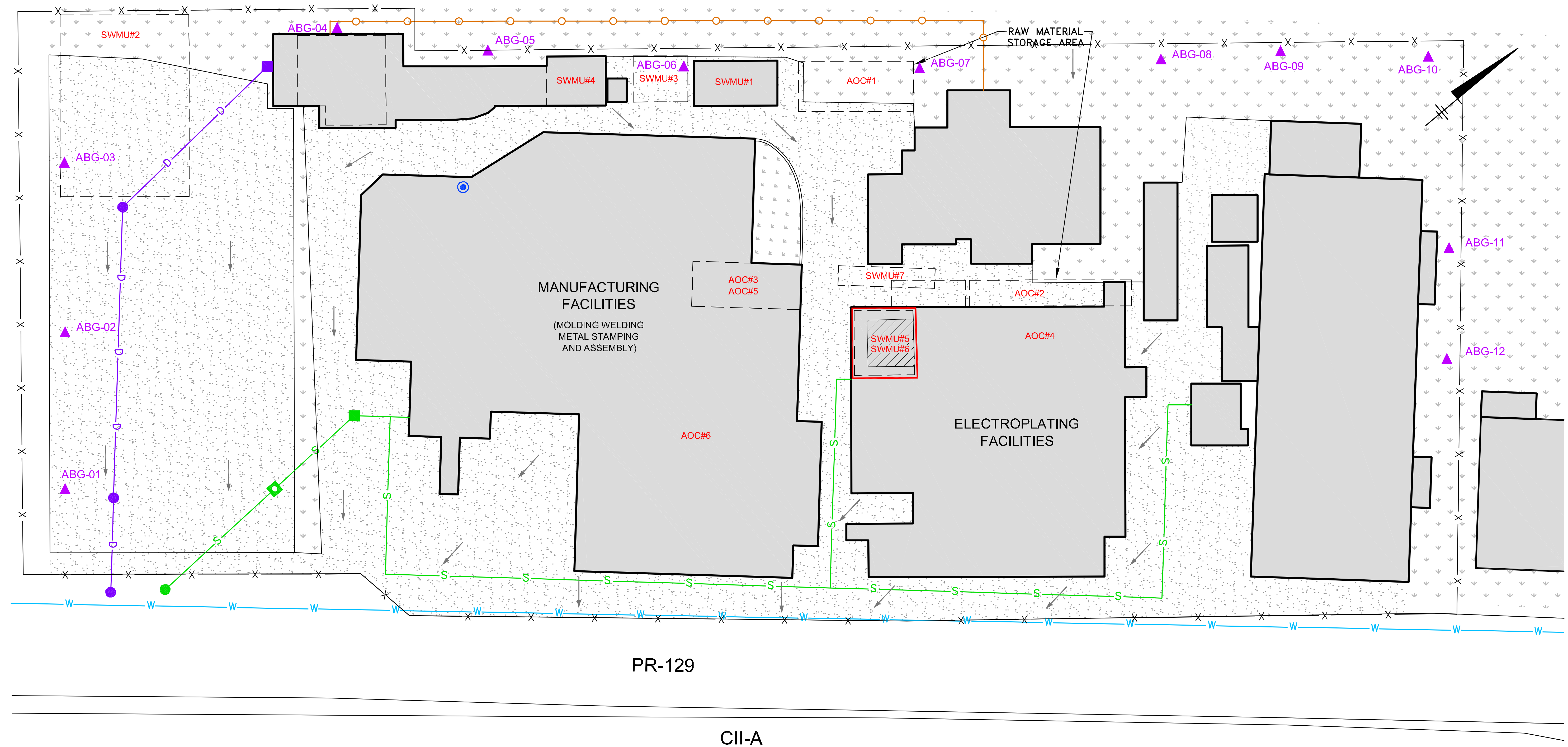
Figure



0 60' 120'
GRAPHIC SCALE

LEGEND:

(dashed box)	FORMER MANUFACTURING PROCESS AREAS
SWMU	SOLID WASTE MANAGEMENT UNIT
AOC	AREA OF CONCERN
▲ ABG-01	ARSENIC BACKGROUND INVESTIGATION SOIL BORING LOCATION
—x—x—	FENCE LINE
—S—	SANITARY WASTE WATER (4" DIA.)
—o—o—	PROCESS WASTE WATER (2" DIA.)
—D—	DISCHARGE WASTE WATER (6" DIA.)
—W—	CITY WATER (2" DIA.)
●	MANHOLE
■	DISCHARGE POINT D001 & D002
◘	RESPIRADERO/VENT
◉	GROUNDWATER PUMPING WELL (APPROX. LOCATION)
←	DIRECTION OF OVERLAND STORM WATER FLOW
(hatch)	GRASS
(hatch)	PAVED AREAS

NOTES:

1. BASE MAP DIGITIZED FROM 2010 U.S GEOLOGICAL SURVEY © EUROPA TECHNOLOGIES COURTESY OF GOOGLE EARTH.
2. FORMER MANUFACTURING PROCESS AREA LOCATIONS ARE BASED ON MAPS PROVIDED IN THE RFA REPORT. ALL LOCATIONS ARE APPROXIMATE.
3. UNDERGROUND UTILITY LOCATIONS ARE BASED ON GE MAP "PLANO de LOCALIZACION" DATED 25 de OCTUBRE de 2005. ALL LOCATIONS ARE APPROXIMATE.
4. SURFACE INFORMATION IS BASED ON A SITE PLAN PROVIDED BY THE CLIENT. ORIGIN AND DATE NOT VISIBLE.
5. SAMPLING LOCATIONS BASED ON TIE DISTANCES. LOCATIONS ARE APPROXIMATE.

GENERAL ELECTRIC ENERGY SERVICES-INDUSTRIAL SOLUTIONS
ARECIBO, PUERTO RICO
ARSENIC BACKGROUND INVESTIGATION LETTER REPORT

ARSENIC BACKGROUND INVESTIGATION SAMPLING LOCATIONS

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FIGURE
1

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Table

Table 1
Soil Analytical Summary

General Electric Energy Management - Industrial Solutions -
Arecibo, Puerto Rico

Location ID:	Depth (Feet)	Date Collected	Arsenic mg/kg
Regional Screening Level			2.4[1]
ABG-01	0 - 1	8/13/2013	**2 J**
	1 - 2	8/13/2013	**0.47 J**
	2 - 4	8/13/2013	0.43 U
ABG-02	0 - 1	8/13/2013	**5.2**
	1 - 2	8/13/2013	**1.8 J**
	2 - 4	8/13/2013	**1.3 J**
ABG-03	0 - 1	8/13/2013	**5.3**
	1 - 2	8/13/2013	**3.5**
	2 - 4	8/13/2013	**3.5**
ABG-04	0 - 1	8/15/2013	**2.3 J**
	1 - 2	8/15/2013	**0.81 J**
	2 - 4	8/15/2013	**0.73 J**
ABG-05	0 - 1	8/15/2013	**4.6**
	1 - 2	8/15/2013	**1.4 J**
	2 - 4	8/15/2013	**1.2 J**
ABG-06	0 - 1	8/15/2013	**2.7**
	1 - 2	8/15/2013	**0.65 J**
	2 - 4	8/15/2013	**4.4**
ABG-07	0 - 1	8/15/2013	**2.4**
	1 - 2	8/15/2013	**1.3 J**
	2 - 4	8/15/2013	**1.9 J**
ABG-08	0 - 1	8/14/2013	**1.8 J**
	1 - 2	8/14/2013	**1.4 J**
	2 - 4	8/14/2013	**0.93 J**
ABG-09	0 - 1	8/14/2013	**1.2 J**
	1 - 2	8/14/2013	**1.2 J**
	2 - 4	8/14/2013	**1.9 J**
ABG-10	0 - 1	8/14/2013	**2.1**
	1 - 2	8/14/2013	**1.1 J**
	2 - 4	8/14/2013	**1.3 J**
ABG-11	1 - 2	8/14/2013	**1.2 J**
	2 - 4	8/14/2013	**0.59 J**
	11 - 1	8/14/2013	**0.87 J**
ABG-12	0 - 1	8/14/2013	**0.94 J**
	1 - 2	8/14/2013	**0.56 J**
	2 - 4	8/14/2013	**1.1 J [1.4 J]**

Notes:

1. Regional Sceening Level is from May 2013 - Industrial Soil RSL for arsenic.
2. Shading indicates exceedance of Regional Screening Level.
3. J = Estimated value.
4. U = The compound was analyzed for but not detected. The associated value is the compound quantitation limit.

Attachment 1

Soil Boring Logs

Date Start/Finish: 8/13/13
Drilling Company: GET
Driller's Name: H. Rodrigues
Drilling Method: Jack hammer
Sampling Method: 4' x 2" Macrocore
Rig Type: NA

Northing: NA
Easting: NA
Casing Elevation: NA

Borehole Depth: 4' bgs
Surface Elevation: NA

Descriptions By: Roman Bober

Well/Boring ID: **ABG-1**

Client: General Electric Energy Services - Industrial Solutions, Arecibo, Puerto Rico

Location: RTW. 129, Km. 41.0 Arecibo, Puerto Rico

DEPTH	ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Geologic Column	Stratigraphic Description	Well/Boring Construction
0	0	1	0-4	4	0		2" of ASPHALT Light gray to light brown poorly sorted very fine to medium SAND (SW), medium density, damp.	Backfill 0-4' bgs
							END OF BORING 4' bgs	
5	-5							
10	-10							
15	-15							

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Remarks: ags = above ground surface; bgs = below ground surface; NA = Not Applicable/Available; AMSL = Above Mean Sea Level; NR = No Recovery

Date Start/Finish: 8/13/13
Drilling Company: GET
Driller's Name: H. Rodrigues
Drilling Method: Jack hammer
Sampling Method: 4' x 2" Macrocore
Rig Type: NA

Northing: NA
Easting: NA
Casing Elevation: NA

Borehole Depth: 4' bgs
Surface Elevation: NA

Descriptions By: Roman Bober

Well/Boring ID: **ABG-2**

Client: General Electric Energy Services - Industrial Solutions, Arecibo, Puerto Rico

Location: RTW. 129, Km. 41.0 Arecibo, Puerto Rico

DEPTH	ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Geologic Column	Stratigraphic Description	Well/Boring Construction
0	0	1	0-4	4	0		2" of ASPHALT Brown to yellowish brown poorly sorted fine to medium SAND (SW), some Silt, medium density, damp.	Backfill 0-4' bgs
							END OF BORING 4' bgs	
5	-5							
10	-10							
15	-15							

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Date Start/Finish: 8/13/13
Drilling Company: GET
Driller's Name: H. Rodrigues
Drilling Method: Jack hammer
Sampling Method: 4' x 2" Macrocore
Rig Type: NA

Northing: NA
Easting: NA
Casing Elevation: NA

Borehole Depth: 4' bgs
Surface Elevation: NA

Descriptions By: Roman Bober

Well/Boring ID: **ABG-3**

Client: General Electric Energy Services - Industrial Solutions, Arecibo, Puerto Rico

Location: RTW. 129, Km. 41.0 Arecibo, Puerto Rico

DEPTH	ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Geologic Column	Stratigraphic Description	Well/Boring Construction
0	0	1	0-4	4	0		2" of ASPHALT Yellowish white, coarse angular fragments of LIMESTONE and SILT (GW) dry. Reddish brown Clayey SAND (SC), dense, dry. Reddish brown poorly sorted very fine to medium SAND (SW), very dense, dry.	Backfill 0-4' bgs
							END OF BORING 4' bgs	
5	-5							
10	-10							
15	-15							

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Remarks: ags = above ground surface; bgs = below ground surface; NA = Not Applicable/Available; AMSL = Above Mean Sea Level; NR = No Recovery

Date Start/Finish: 8/15/13
Drilling Company: GET
Driller's Name: H. Rodrigues
Drilling Method: Jack hammer
Sampling Method: 4' x 2" Macrocore
Rig Type: NA

Northing: NA
Easting: NA
Casing Elevation: NA

Borehole Depth: 4' bgs
Surface Elevation: NA

Descriptions By: Roman Bober

Well/Boring ID: **ABG-4**

Client: General Electric Energy Services - Industrial Solutions, Arecibo, Puerto Rico

Location: RTW. 129, Km. 41.0 Arecibo, Puerto Rico

DEPTH	ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Geologic Column	Stratigraphic Description	Well/Boring Construction
0	0	1	0-4	4	0		Brown and light ivory, Clayey SAND (SC), dense.	Backfill 0-4' bgs
							Brown poorly sorted, fine to medium SAND (SW), medium density, damp.	
							END OF BORING 4' bgs	
5	-5							
10	-10							
15	-15							

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Remarks: ags = above ground surface; bgs = below ground surface; NA = Not Applicable/Available; AMSL = Above Mean Sea Level; NR = No Recovery

Date Start/Finish: 8/15/13
Drilling Company: GET
Driller's Name: H. Rodrigues
Drilling Method: Jack hammer
Sampling Method: 4' x 2" Macrocore
Rig Type: NA

Northing: NA
Easting: NA
Casing Elevation: NA

Borehole Depth: 4' bgs
Surface Elevation: NA

Descriptions By: Roman Bober

Well/Boring ID: **ABG-5**

Client: General Electric Energy Services - Industrial Solutions, Arecibo, Puerto Rico

Location: RTW. 129, Km. 41.0 Arecibo, Puerto Rico

DEPTH	ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Geologic Column	Stratigraphic Description	Well/Boring Construction
0	0	1	0-4	4	0		Brown poorly sorted fine to medium SAND (SW), dense, dry.	Backfill 0-4' bgs
							END OF BORING 4' bgs	
5	-5							
10	-10							
15	-15							

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Remarks: ags = above ground surface; bgs = below ground surface; NA = Not Applicable/Available; AMSL = Above Mean Sea Level; NR = No Recovery

Date Start/Finish: 8/15/13
Drilling Company: GET
Driller's Name: H. Rodrigues
Drilling Method: Jack hammer
Sampling Method: 4' x 2" Macrocore
Rig Type: NA

Northing: NA
Easting: NA
Casing Elevation: NA

Borehole Depth: 4' bgs
Surface Elevation: NA

Descriptions By: Roman Bober

Well/Boring ID: **ABG-6**

Client: General Electric Energy Services - Industrial Solutions, Arecibo, Puerto Rico

Location: RTW. 129, Km. 41.0 Arecibo, Puerto Rico

DEPTH	ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Geologic Column	Stratigraphic Description	Well/Boring Construction
0	0	1	0-4	4	0		2" of ASPHALT Brown poorly sorted, fine to medium SAND (SW), dense, damp. Light gray to brown very Sandy fat CLAY (CH), stiff, damp. END OF BORING 4' bgs	Backfill 0-4' bgs
5	-5							
10	-10							
15	-15							

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Remarks: ags = above ground surface; bgs = below ground surface; NA = Not Applicable/Available; AMSL = Above Mean Sea Level; NR = No Recovery

Date Start/Finish: 8/15/13
Drilling Company: GET
Driller's Name: H. Rodrigues
Drilling Method: Jack hammer
Sampling Method: 4' x 2" Macrocore
Rig Type: NA

Northing: NA
Easting: NA
Casing Elevation: NA

Borehole Depth: 4' bgs
Surface Elevation: NA

Descriptions By: Roman Bober

Well/Boring ID: **ABG-7**

Client: General Electric Energy Services - Industrial Solutions, Arecibo, Puerto Rico

Location: RTW. 129, Km. 41.0 Arecibo, Puerto Rico

DEPTH	ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Geologic Column	Stratigraphic Description	Well/Boring Construction
0	0	1	0-4	4	0		Brown poorly sorted, fine to medium SAND (SW), medium density, dry.	Backfill 0-4' bgs
							END OF BORING 4' bgs	
5	-5							
10	-10							
15	-15							

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Remarks: ags = above ground surface; bgs = below ground surface; NA = Not Applicable/Available; AMSL = Above Mean Sea Level; NR = No Recovery

Date Start/Finish: 8/14/13
Drilling Company: GET
Driller's Name: H. Rodrigues
Drilling Method: Jack hammer
Sampling Method: 4' x 2" Macrocore
Rig Type: NA

Northing: NA
Easting: NA
Casing Elevation: NA

Borehole Depth: 4' bgs
Surface Elevation: NA

Descriptions By: Roman Bober

Well/Boring ID: **ABG-8**

Client: General Electric Energy Services - Industrial Solutions, Arecibo, Puerto Rico

Location: RTW. 129, Km. 41.0 Arecibo, Puerto Rico

DEPTH	ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Geologic Column	Stratigraphic Description	Well/Boring Construction
0	0	1	0-4	4	0		Brown poorly sorted, fine to medium SAND (SW), loose, damp.	Backfill 0-4' bgs
							END OF BORING 4' bgs	
5	-5							
10	-10							
15	-15							

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Remarks: ags = above ground surface; bgs = below ground surface; NA = Not Applicable/Available; AMSL = Above Mean Sea Level; NR = No Recovery

Date Start/Finish: 8/14/13
Drilling Company: GET
Driller's Name: H. Rodrigues
Drilling Method: Jack hammer
Sampling Method: 4' x 2" Macrocore
Rig Type: NA

Northing: NA
Easting: NA
Casing Elevation: NA

Borehole Depth: 4' bgs
Surface Elevation: NA

Descriptions By: Roman Bober

Well/Boring ID: **ABG-9**

Client: General Electric Energy Services - Industrial Solutions, Arecibo, Puerto Rico

Location: RTW. 129, Km. 41.0 Arecibo, Puerto Rico

DEPTH	ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Geologic Column	Stratigraphic Description	Well/Boring Construction
0	0	1	0-4	4	0		Brown poorly sorted fine to medium SAND (SW), dense, damp.	Backfill 0-4' bgs
							END OF BORING 4' bgs	
5	-5							
10	-10							
15	-15							

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Remarks: ags = above ground surface; bgs = below ground surface; NA = Not Applicable/Available; AMSL = Above Mean Sea Level; NR = No Recovery

Date Start/Finish: 8/14/13
Drilling Company: GET
Driller's Name: H. Rodrigues
Drilling Method: Jack hammer
Sampling Method: 4' x 2" Macrocore
Rig Type: NA

Northing: NA
Easting: NA
Casing Elevation: NA

Borehole Depth: 4' bgs
Surface Elevation: NA

Descriptions By: Roman Bober

Well/Boring ID: **ABG-10**

Client: General Electric Energy Services - Industrial Solutions, Arecibo, Puerto Rico

Location: RTW. 129, Km. 41.0 Arecibo, Puerto Rico

DEPTH	ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Geologic Column	Stratigraphic Description	Well/Boring Construction
0	0	1	0-4	4	0		Brown poorly sorted very fine to medium SAND (SW), some yellowish white angular Rock fragments, medium density, dry.	Backfill 0-4' bgs
							END OF BORING 4' bgs	
5	-5							
10	-10							
15	-15							

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Remarks: ags = above ground surface; bgs = below ground surface; NA = Not Applicable/Available; AMSL = Above Mean Sea Level; NR = No Recovery

Date Start/Finish: 8/14/13
Drilling Company: GET
Driller's Name: H. Rodrigues
Drilling Method: Jack hammer
Sampling Method: 4' x 2" Macrocore
Rig Type: NA

Northing: NA
Easting: NA
Casing Elevation: NA

Borehole Depth: 4' bgs
Surface Elevation: NA

Descriptions By: Roman Bober

Well/Boring ID: **ABG-11**

Client: General Electric Energy Services - Industrial Solutions, Arecibo, Puerto Rico

Location: RTW. 129, Km. 41.0 Arecibo, Puerto Rico

DEPTH	ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Geologic Column	Stratigraphic Description	Well/Boring Construction
0	0	1	0-4	4	0		Brown poorly sorted very fine to medium SAND (SW), trace fines, medium density, dry.	Backfill 0-4' bgs
							END OF BORING 4' bgs	
5	-5							
10	-10							
15	-15							

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Remarks: ags = above ground surface; bgs = below ground surface; NA = Not Applicable/Available; AMSL = Above Mean Sea Level; NR = No Recovery

Date Start/Finish: 8/14/13
Drilling Company: GET
Driller's Name: H. Rodrigues
Drilling Method: Jack hammer
Sampling Method: 4' x 2" Macrocore
Rig Type: NA

Northing: NA
Easting: NA
Casing Elevation: NA

Borehole Depth: 4' bgs
Surface Elevation: NA

Descriptions By: Roman Bober

Well/Boring ID: **ABG-12**

Client: General Electric Energy Services - Industrial Solutions, Arecibo, Puerto Rico

Location: RTW. 129, Km. 41.0 Arecibo, Puerto Rico

DEPTH	ELEVATION	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID Headspace (ppm)	Geologic Column	Stratigraphic Description	Well/Boring Construction
0	0	1	0-4	4	0		Dark brown poorly sorted very fine to medium SAND (SW), trace fines, medium density, dry. 2-4' bgs is lighter brown color	Backfill 0-4' bgs
							END OF BORING 4' bgs	
5	-5							
10	-10							
15	-15							

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