REMEDIAL INVESTIGATION REPORT

for the

Rahway Arch Properties Site

Block 602, Lot 1 and 8; Block 603, Lot 1; Block 705, Lots 17 and 18
(formerly Block 9.03, Lot 21; Block 10, Lots 8-11 and 12-21 and
Block 11.01, Lots 8-14 and 28)
Carteret, New Jersey 07008

Report Issued: November 15, 2012

prepared for:

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Project No. I027

TABLE OF CONTENTS

1. INTRODUCTION 1

2. SITE HISTORY 6
   2.1 Historic Site Use 6
   2.2 Previous Investigations 7
      2.2.1 American Cyanamid (Cytec) 7
         2.2.2.1 Alum-YPS Sludge 7
         2.2.2.2 Impact to Groundwater 9
         2.2.2.3 Groundwater Monitoring 9
      2.2.2 U.S. Environmental Protection Agency 10
      2.2.3 NJ Department of Environmental Protection 11
      2.2.4 NJ Turnpike Authority 11
      2.2.5 EastStar Fill Investigation 11
   2.3 Limited March 2012 Sampling 17
   2.4 Current Site Conditions 25

3. SITE CONDITIONS 26
   3.1 Geology 26
      3.1.1 Site Geology 26
      3.1.2 General Configuration of Impoundments 26
      3.1.3 Impoundments 26
      3.1.4 Natural Materials 27
   3.2 Hydrology 28
      3.2.1 Monitoring Wells 28
      3.2.2 Aquifer Characteristics 28
      3.2.3 Groundwater Flow 28
   3.3 Wetlands 32

4. ENVIRONMENTAL SAMPLING 35
   4.1 Subsurface Sampling 35
      4.1.1 Environmental/Geotechnical Investigation 35
      4.1.2 Sample Locations 35
      4.1.3 Sampling Procedures 35
      4.1.4 Sample Handling and Delivery 36
   4.2 Groundwater Sampling 36
      4.2.1 Well Redevelopment 36
      4.2.2 Well Sampling Procedures 40
      4.2.3 Quality Control Samples 51
      4.2.4 Sample Handling and Delivery 51

5. GEOTECHNICAL INVESTIGATION 52
   5.1 Scope of the Investigation 52
   5.2 Objectives 52

5.3 Field Exploration 53
5.3.1 Soil Boring Procedures 53
5.3.2 Standard Penetration Tests 53
5.3.3 Cone Penetrometer Tests with Pore Pressure Measurements 53
5.4 Laboratory Analyses 55
5.5 Subsurface Conditions 55
5.5.1 Subsurface Soils 55
5.5.2 Groundwater 56
5.6 Geotechnical Recommendations 57

6. ENVIRONMENTAL SAMPLING RESULTS 59
6.1 Subsurface Soil Sampling Results 59
6.1.1 Analytical Procedures 59
6.1.2 Surface Fill Analysis Results 59
6.1.3 Alum-YPS Sludge Analysis Results 59
6.1.4 Peat Analysis Results 70
6.1.5 Organic Clay Analysis Results 79
6.2 Groundwater Sampling Results 79
6.1.1 Analytical Procedures 79
6.1.2 Surface Aquifer Groundwater Samples Analysis Results 82
6.1.3 Brunswick Formation Groundwater Sample Analysis Results 87

7. RECEPTOR EVALUATION 92

8. ECOLOGICAL EVALUATION 93
8.1 Site Description 93
8.2 Environmentally Sensitive Natural Resources 93
8.2.1 Soil Conditions 93
8.2.2 Topography and Slope 93
8.2.3 Hydrology and Flow 94
8.2.4 Vegetation 95
8.2.5 Wildlife Habitat and Aquatic Resources 95
8.3 Contaminants of Potential Environmental Concern 95
8.4 Contaminant Migration Pathways 95
8.5 Ecological Evaluation Conclusions 96

9. REGULATORY TIME FRAMES 97

10. AREAS OF CONCERN 98

11. SUMMARY AND CONCLUSIONS 103

12. REFERENCES 104

APPENDICES

APPENDIX A UPDATED RECEPTOR EVALUATION FORM

APPENDIX B GEOTECHNICAL INVESTIGATION PLAN

APPENDIX C FEBRUARY 2012 SAMPLE ANALYSIS LABORATORY REPORT

APPENDIX D CROSS-SECTIONS OF THE IMPOUNDMENTS BY BBL

APPENDIX E SUBSURFACE SOIL SAMPLE ANALYSIS LABORATORY REPORTS

APPENDIX F GROUNDWATER SAMPLE ANALYSIS LABORATORY REPORTS

APPENDIX G EASTSTAR HYDROLOGIC BUDGET CALCULATIONS

APPENDIX H QUALITY ASSURANCE PROJECT PLAN

LIST OF FIGURES

Figure 1.1 General Location Map of the Rahway Arch Site 2

Figure 1.2 Aerial Photo Showing the Rahway Arch Site 3

Figure 1.3 USGS Quadrangle Map of the Site and Vicinity 4

Figure 1.4 Block and Lot Layout 5

Figure 2.1 Scaled Site Map of the Impoundments 8

Figure 2.2 Fill Investigation Results for PAHs 22

Figure 3.1 Monitoring Well Locations 29

Figure 3.2 Conceptual Model of Groundwater Flow Directions by Hydrosystems 1987 30

Figure 3.3 Conceptual Model of Groundwater Mounding and Flow by Hydrosystems 1987 31

Figure 3.4 LOI Map Showing Wetland Areas 33

Figure 4.1 Boring Locations 37

LIST OF TABLES

Table 2.1 NJDEP 1991 Site Investigation Data 12

Table 2.2 Summary of Analytical Results from NJTA Tremley Point Sampling 16

Table 2.3 Fill Investigation Analysis Results for PAHs and S-VOCs 18

Table 2.4 Fill Investigation Analysis Results for TPH and Inorganics 20

Table 2.5 February 2012 Sample Results for Inorganics 23

Table 2.6 February 2012 Sample Results for PAHs 24

Table 3.1 Impoundment Information 27

Table 4.1 Sampling Matrix 38

Table 4.2 Well Redevelopment Purge Data 41

Table 4.3 Well Sampling Purge Data for the Shallow Wells 43

Table 4.4 Well Sampling Purge Data for the Deep Wells 47

Table 5.1 Boring Locations and Depths 54

Table 5.2 Laboratory Testing 55

Table 6.1 Surface Fill Sample Analysis Results for Inorganics 60

Table 6.2 Surface Fill Sample Analysis Results for PAHs 61

Table 6.3 Surface Fill Sample Analysis Results for S-VOCs 62

Table 6.4 Surface Fill Sample Analysis Results for EPH & VOCs 64

Table 6.5 Parameters Exceeding NRDCRS or IGWSL for Surface Fill Samples 66

Table 6.6 Alum-YPS Sludge Sample Analysis Results for Inorganics 67

Table 6.7 Alum-YPS Sludge Sample Analysis Results for PAHs 69

Table 6.8 Parameters Exceeding IGWSL for Alum-YPS Sludge Samples 66

Table 6.9 Peat Sample Analysis Results for Inorganics 71

Table 6.10 Peat Sample Analysis Results for PAHs 73

Table 6.11 Peat Sample Analysis Results for S-VOCs 75

Table 6.12 Peat Sample Analysis Results for EPH & VOCs 77

LIST OF TABLES (cont.)

Table 6.13 Parameters Exceeding NRDCRS or IGWSL for Peat Samples 70

Table 6.14 Organic Clay Sample Analysis Results for Inorganics 80

Table 6.15 Organic Clay Sample Analysis Results for PAHs 81

Table 6.16 Parameters Exceeding IGWSL for Organic Clay Samples 79

Table 6.17 Shallow Aquifer Groundwater Sample Analysis Results for Inorganics 83

Table 6.18 Shallow Aquifer Groundwater Sample Analysis Results for PAHs 84

Table 6.19 Shallow Aquifer Groundwater Sample Analysis Results for EPH & VOCs 85

Table 6.20 Parameters Exceeding GWQS in Shallow Aquifer Samples 82

Table 6.21 Brunswick Formation Aquifer Sample Analysis Results for Inorganics 88

Table 6.22 Brunswick Formation Aquifer Sample Analysis Results for PAHs 89

Table 6.23 Brunswick Formation Aquifer Sample Analysis Results for EPH & VOCs 90

Table 6.24 Parameters Exceeding GWQS in Brunswick Formation Aquifer Samples 87

Table 9.1 Summary of Regulatory Time Frames 97

Table 10.1 Areas of Concern and Findings of the Remedial Investigation 99

1. INTRODUCTION

Rahway Arch Properties, LLC has contracted with EastStar to provide LSRP services for remediation of the Rahway Arch Properties site in Carteret, New Jersey. The Rahway Arch Properties site is a 126.0 acre property located at the terminus of Driftway Street. It is more precisely defined as Block 602, Lot 1; Block 603, Lot 1and Block 705, Lot 18. This property was formerly defined as Block 9.03, Lot 21; Block 10, Lots 8-10 and 12-21 and Block 11.01, Lots 8, 10-14 and 28.

The remediation project site also includes portions of two properties owned by the Borough of Carteret. The Borough has entered into an agreement with Rahway Arch Properties, LLC and EastStar for remediation of the contaminated areas of these parcels. The Carteret parcels are Block 602, Lot 8 (formerly defined as Block 10, Lot 11) and Block 705, Lot 17 (formerly defined as Block 11.01, Lot 9). Combined these parcels encompass 5.2 acres although the majority of Block 705, Lot 17 is outside the limit of remediation.

The general location of the site is shown on Figure 1.1. The specific location of the site and its boundaries are shown on Figure 1.2. The most recent USGS quadrangle map of the site and vicinity is shown in Figure 1.3. The property boundaries with the block and lot lines is shown in Figure 1.4.

Remediation of the site is being performed in accordance with the requirements of the Site Remediation Reform Act (SRRA), the Administrative Requirements for Remediation of Contaminated Sites (ARRCS) {NJAC 7:26C} and the Technical Requirements for Site Remediation (Tech Rule) {NJAC 7:26E}. Rahway Arch Properties opted-in to the Licensed Site Remediation Program on December 5, 2011 by submitting the LSRP Notification of Retention or Dismissal form to New Jersey Department of Environmental Protection (NJDEP). Albert P. Free of EastStar was retained as the Licensed Site Remediation Professional (LSRP) for the site.

Remedial activities have previously been performed on this site and a restricted use No Further Action (NFA) letter was issued by NJDEP in September 2002. The NFA established non-residential remediation standards as the applicable remediation standards for the site. However, the current conditions on the site are no longer protective and additional contamination and areas of concern have been identified that were not known when the NFA was issued. In addition, the site does not meet the intent of Section 47g (1) of SRRA because no portion of the site is usable for future development or recreational use.

A Preliminary Assessment (PA) for the property was prepared in August 2012. The PA identified 14 Areas of Concern (AOCs) and recommended further investigation of nine AOCs. Because of the known aerial extent of the contamination on the site, EastStar decided to forgo the separate Site Investigation (SI) phase and proceed directly to a remedial investigation (RI). The RI was designed to combine the requirements for both the SI and RI into a single investigation. Contained in this report are the results of this RI.

FIGURE 1.1

General Location Map of the Rahway Arch Site

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Scale:	AS SHOWN	Date:	November 2012
Drawn By:	JAC	Checked By:	APF

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Graphic Scale

1,000 500 0 1,000

1 inch = 1,000 feet

Compass

N W E S

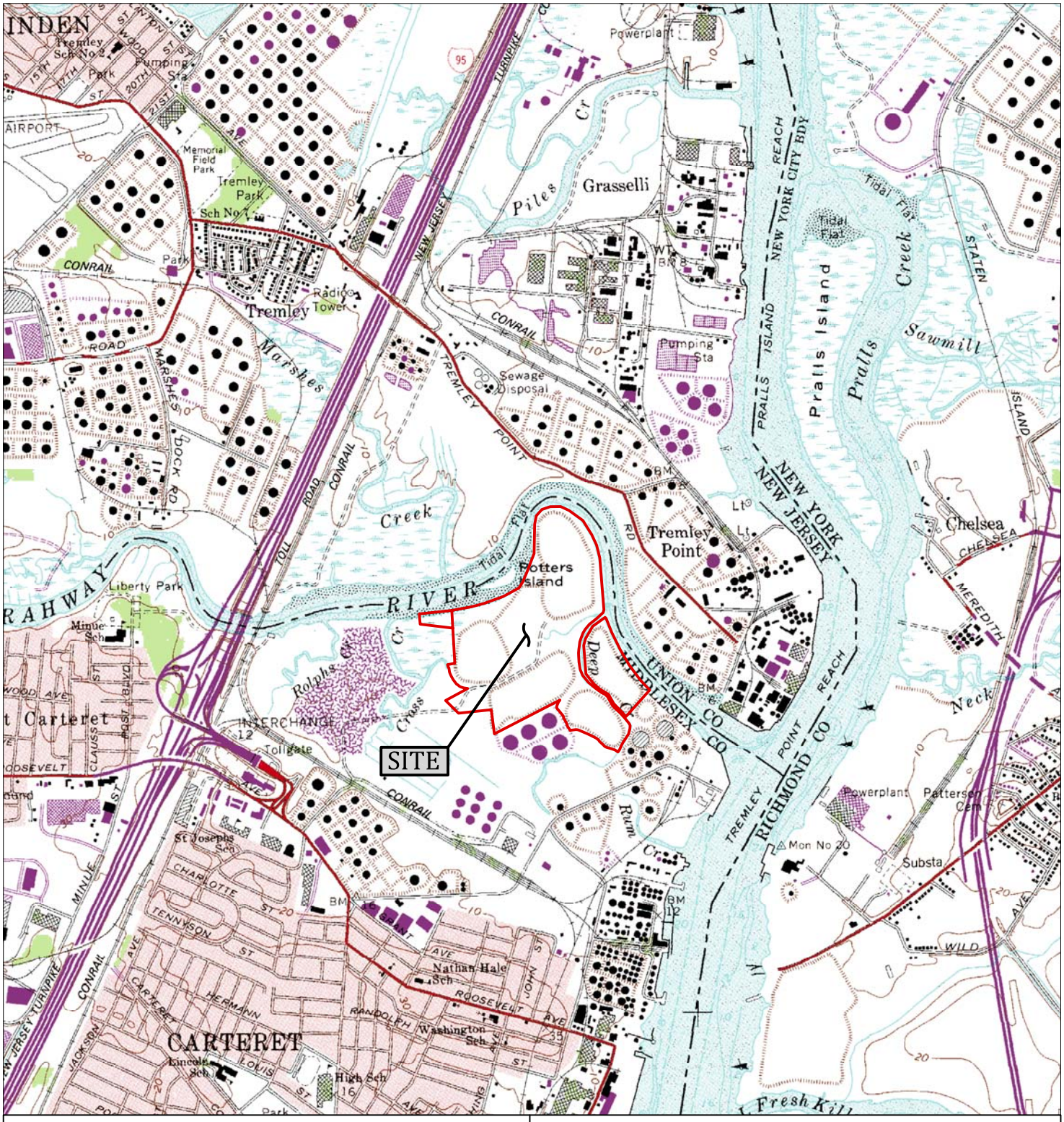
FIGURE 1.2
AERIAL PHOTO AND VICINITY MAP

RAHWAY ARCH PROPERTY SITE

BLOCK 602, LOT 1; BLOCK 603, LOTS 1 & 8 AND
BLOCK 705 LOTS 17 & 18
BOROUGH OF CARTERET
MIDDLESEX COUNTY, NEW JERSEY

Source: Google Imagery, 2011

Project	Date	Scale
I027	11/14/12	1 IN = 1,000 FT



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Graphic Scale
2,000 1,000 0 2,000
1 inch = 2,000 feet

Compass
N W E S

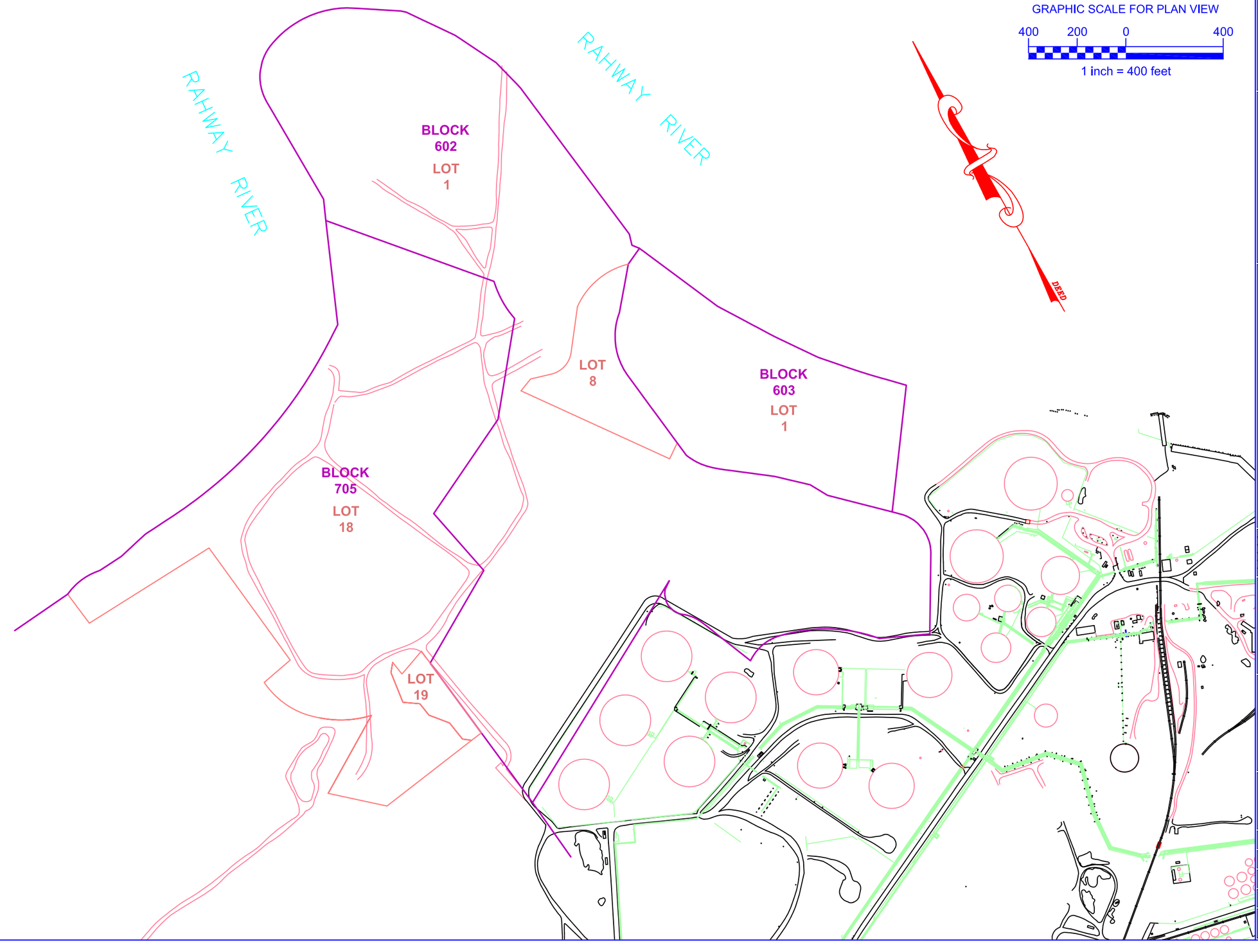
FIGURE 1.3
USGS QUADRANGLE SITE LOCATION MAP

RAHWAY ARCH PROPERTY

BLOCK 602, LOT 1; BLOCK 603, LOTS 1 & 8
BLOCK 708 LOTS 17 & 18
BOROUGH OF CARTERET
MIDDLESEX COUNTY, NEW JERSEY

Source: USGS Arthur Kill, NY-NJ Quadrangle - 7.5 Minute Series, 1979

Project	Date	Scale
1027	11/14/12	1 IN = 2,000 FT



Rahway Arch
RAHWAY ARCH PROPERTIES, LLC
7 Nottingham Drive
Florham Park, New Jersey 07932

REMEDIAL INVESTIGATION OF THE RAHWAY ARCH SITE

BLOCK 602, LOT 1
BLOCK 603 LOTS 1 &8
BLOCK 705 LOTS 17 & 18

BOROUGH OF CARTERET
MIDDLESEX COUNTY, NJ

General Notes and Legend

1. BASE MAP INFORMATION OBTAINED FROM CREST ENGINEERING, INC. PLAN ENTITLED WETLAND LOCATION MAP, DATED 8/7/97.
2. RAHWAY ARCH PROPERTIES LLC PARCELS: BLOCK 602, LOT 1; BLOCK 603, LOT 1; BLOCK 705, LOT 18. FORMERLY BLOCK 9.03, LOT 21; BLOCK 10, LOTS 8-10, 12-21; BLOCK 11.01, LOTS 8,10-14 AND 28.
3. BOROUGH OF CARTERET PARCELS: BLOCK 602, LOT 8 AND BLOCK 705, LOT 17. FORMERLY BLOCK 10, LOT 11; BLOCK 11.01, LOT 9.

Engineer

Albert P. Free, P.E., CSP, LSRP
NJ PE Number 24GE03816200

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FIGURE 1.4
BLOCK AND LOT LAYOUT

File Name: Site Blocks and Lots.dwg	Scale: 1 Inch = 400 feet
Date: November 14, 2012	Project Number: 1027
Drawn by: MAY	
Checked by: APF	

Sheet 1 of 1 Sheets

2. SITE HISTORY

2.1 Historic Site Use

The project site is the old Cytec Impoundments site, a former industrial waste disposal facility operated by American Cyanamid Company (now Cytec Incorporated) from the mid-1930s through 1974 to dispose of a mixture of acidic sludge from an alum manufacturing process and alkaline sludge from a yellow prussiate of soda (YPS) manufacturing process.

American Cyanamid Company owned and operated a chemical manufacturing plant, known as the Warner Plant, located on 30 acres of property in Tremley Point, at the confluence of the Rahway River with the Arthur Kill in Linden, New Jersey, from 1917 to 1998. The plant produced a number of organic and inorganic products including:

- "Ammo-Phos" – a concentrated fertilizer made by reacting ammonia with phosphoric acid. The ammonia was produced by reacting calcium Cyanamid and steam. The phosphoric acid was produced by mixing sulfuric acid with phosphate rock.
- Ammonia and nitric acid for military purposes during World War I
- Alum and aluminum sulfate compounds for water treatment
- Yellow prussiate of soda (YPS)
- Sulfuric acid, acrylamide, polyacrylamide and sodium hydrosulfide
- Paper treatment chemicals
- Mining and ore production chemicals
- Non-persistent organophosphate insecticides including malathion and Cygon
- A broad range of organic chemicals including surfactants, rubber accelerators, motor oil additives and fumigants (hydrocyanic acid)

The Warner plant was remediated under an Administrative Consent Order with NJDEP issued August 23, 1990. According to the U.S. EPA human exposures and migration of contaminated groundwater are considered to be under control at the Warner plant at this time.

While it was operating, waste alum and YPS sludges from the Warner plant were slurried and pumped across the Rahway River to the project site. It is not known if any other waste products from the Warner Plant were included in the slurry. Demolition debris from work performed at the Warner Plant were used on the project site for road and berm reconstruction.

Alum production consisted of digesting bauxite ore with sulfuric acid. The resulting acidic sludge was primarily silica. YPS production consisted of reacting calcium cyanide with hydrated ferrous sulfate and soda ash. The resulting basic sludge was primarily calcium carbonate and contained cyanide salts. The two waste streams were mixed together to form a neutral slurry and were pumped into the impoundments for disposal. Surface water from the

Arthur Kill was used to liquefy the slurry for pumping. River water was also pumped to the site between discharges to prevent sludges from settling in the pipeline. It is not known whether other waste streams or materials were blended with the sludges prior to disposal. YPS sludge disposal at the site ended in 1970. Alum sludge disposal ended in 1974.

The 124.7 acre site contains six impoundments, encompassing approximately 85 acres, located on the Rahway River. The impoundments were constructed above existing grade with wooden and earthen dikes. They currently contain approximately 2,000,000 tons of the cyanide containing alum-YPS sludge. The size and capacity of each of the impoundments varies, as does the thickness of the sludge, which ranges from 5 to 20 feet. A scaled site map showing the location of the six impoundments is provided in Figure 2.1.

Evidence indicates that undocumented fill material has been imported and used on the site over the years to maintain the dikes and to stabilize the surface in several of the impoundments. This fill material was imported from various sites over the years for operations and maintenance of the disposal areas. Because it was imported to the site for the operations of the impoundments, the fill may not be considered historic fill, as defined by the Tech Rule. However, the fill has the physical and chemical characteristics of historic fill, as defined by the Tech Rule.

From the time that waste from the Warner Plant was no longer placed in the impoundments until 2005, the site was unused. Various activities were performed during that time to maintain the berms, prevent nuisance dusting, characterize the environmental conditions and monitor the groundwater.

In 2005, a portion of the site in Impoundment 2 was leased by Dauman Recycling Company to operate a Class B recycling facility for wood waste and pallets. Dauman operated on the site from 2006 through 2008. Permit violations related to improper storage and handling the wood waste were recorded. According the DataMiner, several of these violations are still outstanding. Several piles of wood waste remain on Impoundment 2, and the surface of some areas of Impoundment 2 is covered with wood chips.

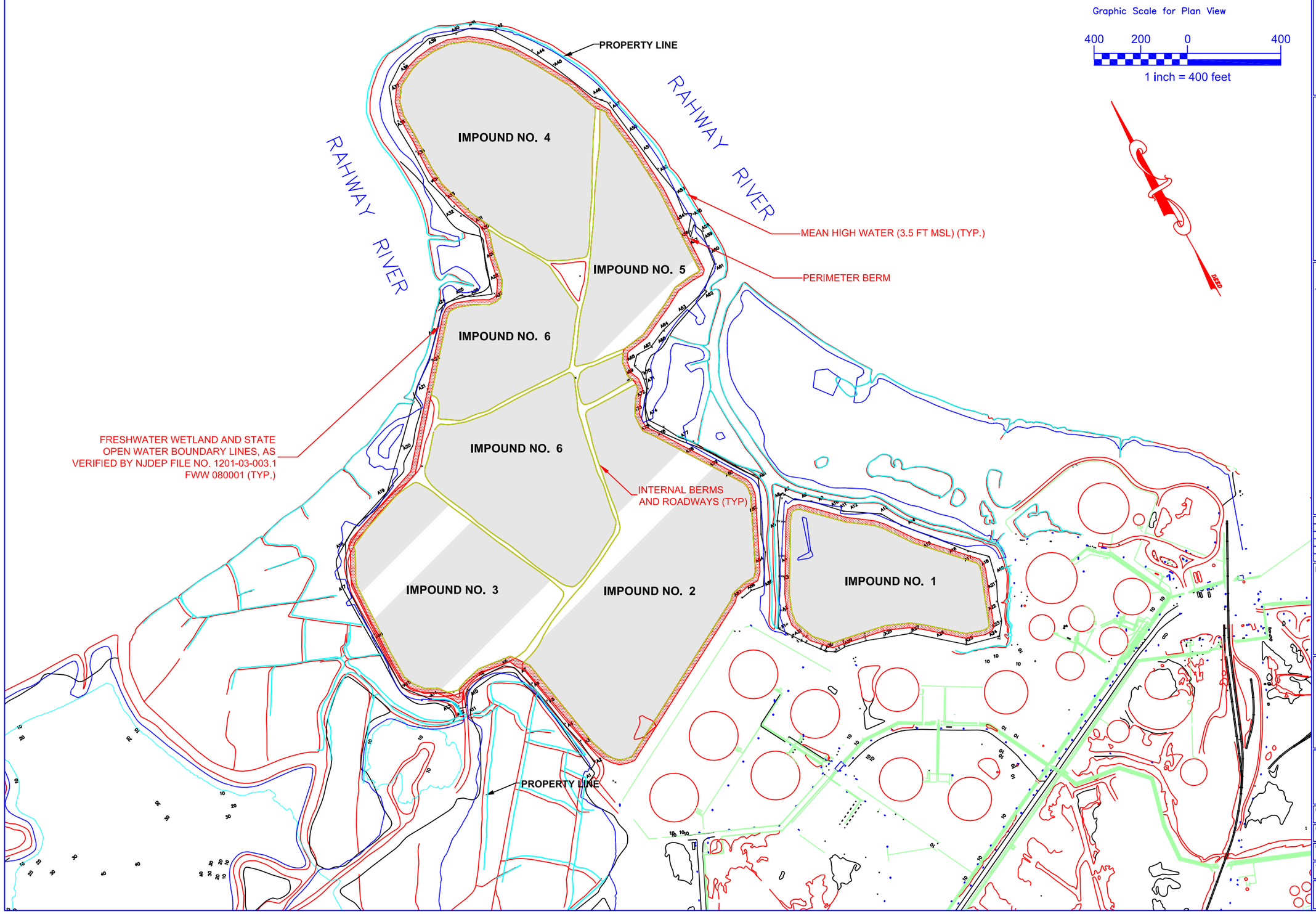
2.2 Previous Investigations

2.2.1 American Cyanamid (Cytec)

2.2.1.1 Alum-YPS Sludge

The alum-YPS sludge in the impoundments was tested on several occasions by American Cyanamid and Cytec. Analyses performed on the residue since the 1950s have shown a chemical composition of inorganic ions and salts characteristic of alum and YPS. The residue constituents are mainly gypsum, calcium carbonate, aluminum oxide, silica, sulfate and sodium. The sludge was also characterized as containing volatile organic compounds (VOCs), semi-volatile organic compounds (S-VOCs), polychlorinated biphenyls (PCBs) and pesticides. The concentrations of these compounds were reported to be below the NJDEP non-residential remediation criteria at the time of reporting.

Previous reports documented that the sludge was non-hazardous. In the 1986, American Cyanamid consultant Hydrosystems performed an Extraction Procedure Toxicity (EP-TOX) test



Graphic Scale for Plan View

400 200 0 400

1 inch = 400 feet

RAHWAY ARCH PROPERTIES, LLC
7 Nottingham Drive
Florham Park, New Jersey 07932

REMEDIAL INVESTIGATION OF THE RAHWAY ARCH SITE

BLOCK 602, IOT 1
BLOCK 603, LOTS 1 & 8
BLOCK 705 LOTS 17 & 18

BOROUGH OF CARTERET
MIDDLESEX COUNTY, NJ

General Notes and Legend

1. BASE MAP INFORMATION OBTAINED FROM CREST ENGINEERING, INC. PLAN ENTITLED WETLAND LOCATION MAP, DATED 8/7/97.

Engineer

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FIGURE 2.1
SCALED SITE MAP OF THE IMPOUNDMENTS

File Name: Impoundments.dwg	Scale: 1 Inch = 400 feet
Date: November 14, 2012	Project Number: 1027
Drawn by: MAY	
Checked by: APF	

Sheet 1 of 1 Sheets

for metals on sludge samples and judged the sludge to be non-hazardous. A desktop analysis was performed by Cytec consultant Blasland, Bouck and Lee (BBL) as part of the remedial action workplan to demonstrate that the sludge would be non-hazardous under the toxicity characteristics leaching procedure (TCLP). The highest measured concentrations from NJDEP's October 1991 sampling event were used, and the maximum potential leachate concentrations were calculated. The results showed that the sludge would not be hazardous under a TCLP analysis.

Cyanide was detected in samples of the sludge. Two sludge samples collected in Impoundment 3 in 1981 and one sludge sample collected in Impoundment 4 in 1991 had cyanide concentrations ranging from 1,020 mg/kg to 2,198 mg/kg. The current non-residential direct contact remediation standard for cyanide is 23,000 mg/kg and the default impact to groundwater standard is 13 mg/kg.

The form of cyanide has not been fully quantified, and it is possible that some forms could convert to free cyanide in the presence of sunlight (ultraviolet light), or when subjected to acidic conditions. The amount and type of cyanide forms present in the sludge and the potential adverse effect on the site redevelopment was not evaluated in these previous studies.

2.2.1.2 Impact to Groundwater

In August 1986, American Cyanamid was issued a New Jersey Pollutant Discharge Elimination System - Discharge to Ground Water (NJPDES-DGW) Permit NJ0061611 for discharge from the impoundments to the underlying aquifer. This permit resulted in a site assessment and several sampling events in the late 1980s by American Cyanamid consultants. Sampling events included sludge sampling, groundwater monitoring and surface water monitoring. Groundwater monitoring was performed using five shallow/deep monitoring well clusters. Surface water sampling included water in the impoundments and upstream and downstream sampling in the Rahway River and adjacent creeks.

The preliminary assessment from these results determined that approximately 100 pounds per day of cyanide was being discharged into the groundwater from the unlined impoundments. Cyanide was also detected outside the berms and in the Rahway River.

2.2.1.3 Groundwater Monitoring

Ten monitoring wells (5 well pairs, each pair consisting of 1 shallow and 1 deep monitoring well) were installed in the mid-1980s. These wells were sampled quarterly from 1987 through 1993 under a NJPDES-DGW permit. This permit was invalidated in 1990, but NJDEP advised Cytec to continue the sampling program. This sampling program was terminated after the Amended Warner Plant ACO, which included the requirement to remediate the impoundments site, was issued in 1993.

Three additional monitoring well pairs (3 shallow and 3 deep wells) were installed as part of the remedial action in 1995. Between 1995 and 1999, groundwater monitoring was performed by sampling all 16 wells. The results of the monitoring reportedly did not exceed the Class III-B site specific groundwater quality criteria.

The groundwater at the Carteret Impoundment site is classified as non-potable and is tidally affected by the Rahway River and the Arthur Kill. Therefore, site-specific Class III-B groundwater quality criteria, following NJAC 7:9-6.7(f), were developed as part of the site remediation.

Potential impacts to groundwater quality from inorganic materials leaching through the sludge contained in the impoundments, consisted of constituents used in alum and YPS production and included aluminum, calcium, sodium, iron, cyanide, carbonate, and sulfate.

Elevated levels of chloride, sulfate and total dissolved solids (TDS) were detected in all of the shallow ground water samples. The previous investigations attributed these measurements to saline water intrusion from the Rahway River.

VOCs and S-VOCs were detected in monitoring wells CRT-1S and CRT-1D, which were designed to be the upgradient wells for the site. The previous investigations did not determine the source of these compounds, but speculated they were coming from the Borough of Carteret landfill, upgradient and to the west of the site. Well cluster CRT-8 was installed in 1995 and was designed to be a better representation upgradient well cluster rather than CRT-1.

Cyanide was detected in most of the shallow and deep wells. The previous reports indicated that the cyanide concentrations were less than the site specific Class III-B groundwater criteria of 6 mg/l.

In 1999, after five years of groundwater monitoring, Cytec terminated the groundwater monitoring program based on data that showed constituent concentrations below the site specific groundwater quality criteria. Trend analyses presented in the 1999 annual report did not show negative trends for all constituents. However, Cytec stated that this was attributable to the techniques used to analyze results that were below the laboratory reporting limits.

2.2.2 U.S. Environmental Protection Agency

The site has been the subject of several environmental investigations by the U.S. Environmental Protection Agency. The U.S. EPA placed the site on CERCLIS in 1990, CERCLIS EPA ID Number NJD986603439. According to a web search, a preliminary assessment was completed in January 1991 and site investigation was completed in September 1992. Both studies indicated a low priority for further assessment. No documents were obtained during the site document search to support this conclusion.

In October 2007, a site re-assessment was performed by NJDEP for EPA. This re-assessment reviewed several previous documents prepared regarding the site. Contaminants, including cyanide, heavy metals, base-neutral semi-volatile organic compounds and volatile organic compounds, were identified. However, the re-assessment determined that the site did not qualify for the National Priorities List (NPL). The EPA issued a no further remedial actions planned (NFRAP) status based upon the existing information.

2.2.3 NJ Department of Environmental Protection

The site has been the subject of multiple investigation and remedial actions under NJDEP oversight since it was closed in the 1970s. These activities are described in detail in the PA. Refer to the PA and the references listed in Appendix A of the PA for specifics on those activities.

In 1991, NJDEP collected ten samples (plus one duplicate sample) of soil from Impounds 2, 3, 4 and 5. This sampling was performed as a follow-up to a preliminary assessment of the site that was performed by NJDEP for EPA.

The samples were analyzed for S-VOCs, metals and cyanide. The sample analysis results are summarized in Table 2.1.

2.2.4 New Jersey Turnpike Authority – Tremley Point Connector

In 2005 the New Jersey Turnpike Authority (NJTA) investigated a portion of the site as a possible route for the Tremley Point Connector Project. Three environmental borings were drilled in the area of Impoundment 3. Samples collected from these borings were analyzed for the target compound list plus cyanide and petroleum hydrocarbons. Laboratory results from an NJDEP-licensed laboratory were compared to residential and non-residential direct contact soil remediation criteria (RDCSRC and NRCSRC) for soils.

PAH compounds were detected in all three samples from Impoundment 3, along with metals, petroleum hydrocarbons and cyanide. Phthalate plasticizers were found in two of the samples. PAH concentrations exceeded the current non-residential remediation standards in two of the samples. The highest measured concentration of benzo(a)pyrene was 1,700 ug/kg in sample E-3. The analytical results from these three samples are provided in Table 2.2.

Water samples were also collected from surface water in Impoundment 3 and the adjacent Rahway River. These samples were analyzed for the target compound list plus cyanide and petroleum hydrocarbons. The results were compared to the NJDEP Surface Water Quality Standards (SWQS).

The analytical results from the surface water samples from Impoundment 3 had a concentration above the SWQS for a phthalate plasticizer. A sample collected on the site near the impoundments had concentrations of base neutrals, a pesticide and heavy metals that exceeded the SWQS. A second surface water sample collected near the impoundments had concentrations of heavy metals in excess of the SWQS.

2.2.5 EastStar Fill Investigation

As is documented in the PA and EastStar's October 2011 fill investigation report, undocumented fill materials have been placed on the site over the years to stabilize the dikes, provide work areas and bulk up the alum-YPS sludge in portions of the impoundments.

No source environmental test data is available for review on any of the materials brought to the site. Limited investigations were performed by NJDEP in 1991 and N.J. Turnpike Authority in 2005. In both sampling events, measured PAH concentrations exceeded the non-residential direct contact remediation criteria.

Table 2.1 - Analytical Data from the NJDEP 1991 Investigation

Parameter	Units	Boring Location						
		S-1	S-2	S-3	S-5	S-6	S-7	S-8
Metals/Inorganics (EPA Methods 6010, 6020 and 7471)								
Aluminum	mg/kg	16,400	27,700	25,800	27,200	21,400	10,400	4,450
Antimony	mg/kg	3.1	3.8	4.0	4.5	9.9	<4.1	2.9
Arsenic	mg/kg	8.0	8.9	3.0	3.5	3.5	<0.94	<0.98
Barium	mg/kg	113	61.4	49.4	59.2	41.1	78.1	45.0
Beryllium	mg/kg	1.2	0.94	0.56	1.0	0.81	0.6	0.4
Cadmium	mg/kg	<0.41	<0.60	<0.64	<0.71	<0.78	<0.66	<0.69
Calcium	mg/kg	8,690	167,000	195,000	208,000	219,000	247,000	194,000
Chromium (total)	mg/kg	24.7	27.1	26.1	25.0	18.8	12.9	6.7
Cobalt	mg/kg	13.1	4.4	2.4	6.3	4.8	<1.6	<1.6
Copper	mg/kg	127	3.2	10.7	15.5	<0.44	2.2	<0.39
Iron	mg/kg	18,200	10,700	9,060	10,400	8,850	742	1,360
Lead	mg/kg	174	44.6	32.3	40.9	28.9	18.3	10.7
Magnesium	mg/kg	4,320	13,900	15,700	12,300	31,500	752	1,650
Manganese	mg/kg	260	310	269	296	281	11.4	38.8
Mercury	mg/kg	0.19	0.69	0.36	<0..19	<0.22	<0.17	<0.20
Nickel	mg/kg	27.5	4.0	6.6	13.3	<4.9	7.2	<4.3
Potassium	mg/kg	2,920	474	<176	774	473	348	<189
Selenium	mg/kg	<0.59	<8.6	<9.1	<10.0	<11.0	<9.4	<9.8
Silver	mg/kg	<0.54	<0.79	<0.84	<0.94	<1.0	<0.86	<0.90
Sodium	mg/kg	1,980	2,340	3,600	2,750	11,300	2,110	5,210
Thallium	mg/kg	<0.59	<0.86	<0.91	<1.0	<1.1	<0.94	<0.98
Vanadium	mg/kg	30	38.3	30.0	30.2	31.5	12.3	9.9
Zinc	mg/kg	914	38.5	29.4	32.0	15.6	3.4	<0.75
Cyanide (EPA Method 9010/9014)								
Cyanide	mg/kg	3.9	337	472	768	153	9.7	403

Table 2.1 - Analytical Data from the NJDEP 1991 Investigation

Polynuclear Aromatic Hydrocarbons (EPA Method 8270)								
Acenaphthylene	ug/kg	89	<570	<600	<670	<730	<620	<650
Acenaphthene	ug/kg	1,300	<570	<600	11	<730	<620	<650
Anthracene	ug/kg	1,400	7	<600	18	<730	<620	<650
Benzo(a) anthracene	ug/kg	2,100	19	25	38	<730	<620	<650
Benzo(a)pyrene	ug/kg	1,800	<570	<600	<670	<730	<620	<650
Benzo(b) fluoranthene	ug/kg	1,200	<570	<600	<670	<730	<620	<650
Benzo(k) fluoranthene	ug/kg	1,400	<570	<600	<670	<730	<620	<650
Benzo(g,h,i) perylene	ug/kg	1,100	<570	<600	<670	<730	<620	<650
Chrysene	ug/kg	2,600	21	30	45	<730	<620	<650
Dibenzo(a,h) anthracene	ug/kg	3,220	<570	<600	<670	<730	<620	<650
Fluoranthene	ug/kg	4,100	44	56	90	22	<620	<650
Fluorene	ug/kg	1,300	<570	<600	<670	<730	<620	<650
Ideno(1,2,3-cd) pyrene	ug/kg	590	<570	<600	<670	<730	<620	<650
2-Methylnaphthalene	ug/kg	1,500	5	13	12	11	<620	<650
Naphthalene	ug/kg	610	19	332	<670	<730	<620	<650
Phenanthrene	ug/kg	4,400	44	31	86	21	<620	<650
Pyrene	ug/kg	5,100	34	44	77	16	<620	<650
Semi-Volatile Organic Compounds (EPA Method 8270)								
Butyl benzyl phthalate	ug/kg	290	<570	41	<670	20	<620	<650
Bis(2-ethylhexyl) phthalate	ug/kg	390	200	150	190	200	110	100
Carbazole	ug/kg	470	<570	<600	<670	<730	<620	<650
Dibenzofuran	ug/kg	970	3	<600	5	<730	<620	<650
Di-n-butylphthalate	ug/kg	310	340	340	350	610	410	430
Hexachlorobenzene	ug/kg	<780	56	170	110	59	<620	<650
Pentachlorophenol	ug/kg	<780	<570	<600	<670	41	<620	<650
All other compounds	ug/kg	<RL	<RL	<RL	<RL	<RL	<RL	<RL
Pesticides (EPA Method 8081)								
All compounds	ug/kg	<RL	<RL	<RL	<RL	<RL	<RL	<RL
PCBs (EPA Method 8082)								
All compounds	ug/kg	<RL	<RL	<RL	<RL	<RL	<RL	<RL

Table 2.1 - Analytical Data from the NJDEP 1991 Investigation

Parameter	Units	Boring Location			
		S-9	S-10	S-11	S-12
Metals/Inorganics (EPA Methods 6010, 6020 and 7471)					
Aluminum	mg/kg	3,260	15,900	11,700	8,870
Antimony	mg/kg	<4.2	8.8	<4.5	<4.3
Arsenic	mg/kg	<0.95	2.2	1.2	1.6
Barium	mg/kg	105	40.7	21.9	64.5
Beryllium	mg/kg	0.70	1.2	0.8	1.0
Cadmium	mg/kg	<0.67	<0.76	<0.72	<0.68
Calcium	mg/kg	233,000	264,000	218,000	264,000
Chromium (total)	mg/kg	12.0	25.1	16.4	16.7
Cobalt	mg/kg	4.0	5.5	2.3	3.3
Copper	mg/kg	4.9	11.1	1.5	11.7
Iron	mg/kg	3,070	5,880	2,780	3,930
Lead	mg/kg	21.4	25.9	12.6	30
Magnesium	mg/kg	3,270	12,600	2,570	4,390
Manganese	mg/kg	53.1	253	55.3	97.7
Mercury	mg/kg	<0.19	<0.22	<0.21	<0.19
Nickel	mg/kg	6.7	6.7	<4.5	6.5
Potassium	mg/kg	412	300	<198	469
Selenium	mg/kg	<9.5	<11.0	<1.0	<9.7
Silver	mg/kg	<0.88	<0.99	<0.95	<0.89
Sodium	mg/kg	12,100	1,740	1,200	11,800
Thallium	mg/kg	<0.95	<1.1	<1.0	<0.97
Vanadium	mg/kg	17.4	31.3	19.6	30.0
Zinc	mg/kg	10.5	22.4	2.5	25.9
Cyanide (EPA Method 9010/9014)					
Cyanide	mg/kg	972	1,020	68.7	103

Table 2.1 - Analytical Data from the NJDEP 1991 Investigation

Polynuclear Aromatic Hydrocarbons (EPA Method 8270)					
Acenaphthylene	ug/kg	<630	<720	<670	<630
Acenaphthene	ug/kg	<630	<720	<670	<630
Anthracene	ug/kg	<630	<720	<670	<630
Benzo(a) anthracene	ug/kg	<630	<720	<670	<630
Benzo(a)pyrene	ug/kg	<630	<720	<670	<630
Benzo(b) fluoranthene	ug/kg	<630	<720	<670	<630
Benzo(k) fluoranthene	ug/kg	<630	<720	<670	<630
Benzo(g,h,i) perylene	ug/kg	<630	<720	<670	<630
Chrysene	ug/kg	<630	<720	<670	<630
Dibenzo(a,h) anthracene	ug/kg	<630	<720	<670	<630
Fluoranthene	ug/kg	<630	<720	<670	<630
Fluorene	ug/kg	<630	<720	<670	<630
Ideno(1,2,3-cd) pyrene	ug/kg	<630	<720	<670	<630
2-Methylnaphthalene	ug/kg	<630	7	<670	<630
Naphthalene	ug/kg	<630	<720	<670	<630
Phenanthrene	ug/kg	<630	<720	<670	15
Pyrene	ug/kg	<630	<720	<670	17
Semi-Volatile Organic Compounds (EPA Method 8270)					
Butyl benzyl phthalate	ug/kg	<630	<720	<670	16
Bis(2-ethylhexyl) phthalate	ug/kg	150	150	110	240
Carbazole	ug/kg	<630	<720	<670	<630
Dibenzofuran	ug/kg	<630	<720	<670	<630
Di-n-butylphthalate	ug/kg	620	1,000	640	680
Hexachlorobenzene	ug/kg	<630	<720	<670	<630
Pentachlorophenol	ug/kg	<630	<720	<670	<630
All other compounds	ug/kg	<RL	<RL	<RL	<RL
Pesticides (EPA Method 8081)					
All compounds	ug/kg	<RL	<RL	<RL	<RL
PCBs (EPA Method 8082)					
All compounds	ug/kg	<RL	<RL	<RL	<RL

Table 2.2 - Analytical Data from the New Jersey Turnpike
Tremley Point Connector Investigation

Parameter	Units	Boring Location		
		E-1	E-2	E-3
Petroleum Hydrocarbons (EPA Method 8015)				
Diesel Range Organics	mg/kg	119	<53	551
Metals/Inorganics (EPA Methods 6010, 6020 and 7471)				
Antimony	mg/kg	<1.2	<2.1	<1.1
Arsenic	mg/kg	10.4	6.5	1.3
Beryllium	mg/kg	<0.59	<1.0	<0.56
Cadmium	mg/kg	1.5	2.7	0.56
Chromium (total)	mg/kg	28.2	20.6	20.6
Copper	mg/kg	99.8	21.5	28.7
Lead	mg/kg	222	52.7	56.1
Mercury	mg/kg	0.26	0.13	0.24
Nickel	mg/kg	18.0	15.5	12.0
Selenium	mg/kg	<1.2	<2.1	<1.1
Silver	mg/kg	<1.2	<2.1	<1.1
Thallium	mg/kg	<1.2	<2.1	<1.1
Zinc	mg/kg	186	1,820	50.1
Cyanide (EPA Method 9010/9014)				
Cyanide	mg/kg	0.47	84.80	0.65
Polynuclear Aromatic Hydrocarbons (EPA Method 8270)				
Acenaphthylene	ug/kg	30.2	<140	38.0
Acenaphthene	ug/kg	29.7	<140	427
Anthracene	ug/kg	101	<140	1,040
Benzo(a) anthracene	ug/kg	225	33.8	1,960
Benzo(a)pyrene	ug/kg	253	<140	1,700
Benzo(b) fluoranthene	ug/kg	199	<140	950
Benzo(k) fluoranthene	ug/kg	249	<140	2,560
Benzo(g,h,i) perylene	ug/kg	91.6	<140	728
Chrysene	ug/kg	246	55.9	1,820
Dibenzo(a,h) anthracene	ug/kg	<82	<140	129
Fluoranthene	ug/kg	447	87.4	3,650
Fluorene	ug/kg	23.4	<140	331
Ideno(1,2,3-cd) pyrene	ug/kg	82.9	<140	605
Naphthalene	ug/kg	<82	<140	88.5
Phenanthrene	ug/kg	288	52.3	2,540
Pyrene	ug/kg	515	83.9	7,940
Semi-Volatile Organic Compounds (EPA Method 8270)				
Butyl benzyl phthalate	ug/kg	<82	<140	2,260
Bis(2-ethylhexyl) phthalate	ug/kg	217	283	6,990
All other compounds	ug/kg	<RL	<RL	<RL

Table 2.2 - Analytical Data from the New Jersey Turnpike
Tremley Point Connector Investigation

Parameter	Units	Boring Location		
		E-1	E-2	E-3
Volatile Organic Compounds (EPA Method 8260)				
All compounds	ug/kg	<RL	<RL	<RL
Pesticides (EPA Method 8081)				
4,4'-DDT	ug/kg	2.1	<8.3	<1.5
Dieldrin	ug/kg	4.0	<8.3	<1.5
All other compounds	ug/kg	<RL	<RL	<RL
PCBs (EPA Method 8082)				
All compounds	ug/kg	<40	<210	<38

EastStar performed a comprehensive evaluation of the fill material in 2011. In this investigation, 20 test pits were excavated around the site. Samples were collected from each test pit. All samples were analyzed for PAHs and RCRA metals. Selected samples were analyzed for petroleum hydrocarbons and cyanide.

The test pits showed that this fill material was ubiquitous throughout the site. The analytical results showed that the fill was contaminated with metals, PAHs, cyanide and petroleum hydrocarbons. The PAH contamination in the fill was wide-spread throughout the site with concentrations exceeding non-residential direct contact remediation standards in 14 of 20 samples. Two samples contained benzo(a)pyrene (BaP) at 49,700 ug/kg and 59,300 ug/kg. The highest measured BaP concentration is 300 times the remediation standard.

The results of the fill soil analyses are summarized in Tables 2.3 for PAHs and S-VOCs and Table 2.4 for metals and cyanide. The results confirmed the previous NJDEP and NJ Turnpike Authority sample analyses that also showed PAH contamination on the site. The PAH contamination results from the fill investigation are shown on Figure 2.1 along with the limited results from the previous DEP and Turnpike Authority studies.

The contaminated fill is spread over the entire site including the berms, roads and the bio-solid cover material on the impoundments. The fill and the contamination cannot be isolated to a single area on the site. Refer to EastStar's October 17, 2011 fill investigation report for details on the investigation, results and analyses.

2.3 Limited March 2012 Sampling

In February 2012, as an initial gauge of current site conditions, EastStar collected three grab samples of alum-YPS sludge from three of the impoundments and four grab samples of water ponded in the impoundments. The objective for collecting these samples was to get a preliminary feel for the environmental conditions of the sludge and the water that was percolating through the sludge into the groundwater.

EastStar collected three sludge samples, one each from Impoundments 3, 4 and 5 as part of an initial evaluation of the site. These samples were analyzed for TAL metals, cyanide and PAHs.

The results showed that concentrations of aluminum, lead, manganese, mercury and cyanide exceeded either the non-residential direct contact remediation standards or the impact to groundwater screening levels. Cyanide concentrations ranged from 547 to 1,570 mg/kg. PAHs were not detected in any of the samples.

EastStar collected four water samples from standing water contained in three of the impoundments as part of an initial evaluation of the site. Two samples were collected from Impoundment 3 and one sample each was collected from Impoundments 4 and 6. These samples were analyzed for TAL metals, cyanide and PAHs.

The results showed that concentrations of arsenic, copper, lead, thallium and cyanide exceeded the surface water quality criteria for SE water. Cyanide concentrations ranged from 3,980 mg/l to 43,200 mg/l. The cyanide concentrations are up to 308 times the surface water quality criteria. PAHs were not detected in any of the samples.

Table 2.3 - Summary of Fill Investigation Analytical Results for PAHs and S-VOCs

Parameter	Units	TP-01 TP01-16 8-10 ft	TP-02 TP02-17 2-3 ft	TP-02A TP02A-18 1-2 ft	TP-03 TP03-15 1-2 ft	TP-05 TP05-10 2-3 ft	TP-06 TP06-14 3-4 ft	TP-07 TP07-09 4-5 ft	TP-08 TP08-11 1-2 ft	TP-09 TP09-07 2-3 ft	TP-10 TP10-06 4-5 ft	TP-11 TP11-05 2-3 ft
Polynuclear Aromatic Hydrocarbons (EPA Method 8270)												
Acenaphthylene	ug/kg	<32.8	<165	85.3	<95.1	171	<159	<34.4	782	<165	<65.6	195
Acenaphthene	ug/kg	<34.3	<173	<33.9	<99.7	318	<167	<36.0	709	<173	<68.8	379
Anthracene	ug/kg	34.1	161	67.4	<62.5	932	<105	<22.6	2,980	366	<43.1	850
Benzo(a) anthracene	ug/kg	90.8	608	411	303	2,090	<299	<64.4	9,840	674	<123	2,510
Benzo(a)pyrene	ug/kg	88.6	608	447	277	2,060	<254	<54.8	8,560	468	<105	2,530
Benzo(b) fluoranthene	ug/kg	93.1	700	496	350	1,600	<274	<59.1	10,000	514	<113	2,480
Benzo(k) fluoranthene	ug/kg	74.9	448	391	323	2,070	<307	<66.3	2,070	503	<126	2,490
Benzo(g,h,i) perylene	ug/kg	<40.2	241	247	<117	853	<196	<42.1	3,590	<202	<80.4	1,160
Chrysene	ug/kg	343	711	460	343	2,150	<334	<72.0	10,200	800	<137	2,660
Dibenzo(a,h) anthracene	ug/kg	<53.1	<269	71.8	<154	<266	<259	<55.8	1,640	<267	<106	402
Fluoranthene	ug/kg	191	1,180	788	482	3,950	<330	<71.0	22,300	1,720	<136	5,500
Fluorene	ug/kg	<38.5	<195	<38.1	<112	546	<188	<40.4	1,170	297	<77.1	482
Ideno(1,2,3-cd) pyrene	ug/kg	<45.0	287	220	<131	773	<219	<47.2	3,520	<226	<90.1	1,070
2-Methylnaphthalene	ug/kg	<40.2	<203	<39.7	<117	341	<196	<42.1	<216	<202	<80.4	310
Naphthalene	ug/kg	<41.2	<208	<40.7	<120	341	<200	<43.2	<221	<207	<82.4	471
Phenanthrene	ug/kg	120	746	344	178	3,530	<213	<22.6	12,100	1,770	<87.4	3,480
Pyrene	ug/kg	213	1,070	739	594	2,090	354	<63.4	19,800	1,520	<121	4,860
Semi-Volatile Organic Compounds (EPA Method 8270)												
Bis(2-ethylhexyl)phthalate	ug/kg											
Dimethyl phthalate	ug/kg											
All other compounds	ug/kg											

Samples collected March 29-30, 2011

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Table 2.3 - Summary of Fill Investigation Analytical Results for PAHs and S-VOCs

Parameter	Units	TP-12 TP12-12 2-3 ft	TP-12A TP12A-13 0-1 ft	TP-13 TP13-20 2-3 ft	TP-14 TP14-19 0-1 ft	TP-15 TP15-04 4-5 ft	TP-16 TP16-03 4-5 ft	TP-17 TP17-02 3-4 ft	TP-18 TP18-01 4-5 ft	TP-19 TP19-08 2-3 ft	HA-22 HA22-21 0-1 ft
Polynuclear Aromatic Hydrocarbons (EPA Method 8270)											
Acenaphthylene	ug/kg	<35.2	219	921	<264	<70.4	2,240	66.9		80.8	<139
Acenaphthene	ug/kg	<36.9	323	8,480	<325	<73.8	8,070	298		71.8	<145
Anthracene	ug/kg	29.3	1,240	18,200	<350	83.0	24,500	762		269	144
Benzo(a) anthracene	ug/kg	112	6,880	54,200	<252	332	60,200	2,220		979	635
Benzo(a)pyrene	ug/kg	97.6	3,610	49,700	<248	332	59,300	1,970		916	615
Benzo(b) fluoranthene	ug/kg	142	7,040	46,700	222	464	51,600	1,740		696	952
Benzo(k) fluoranthene	ug/kg	115	6,580	46,200	<268	278	52,300	1,740		813	548
Benzo(g,h,i) perylene	ug/kg	<43.2	2,740	21,500	<228	137	23,100	914		314	288
Chrysene	ug/kg	127	6,860	52,600	<241	425	57,000	2,120		1,090	702
Dibenzo(a,h) anthracene	ug/kg	<57.1	1,420	11,800	<187	<114	13,500	533		<105	<225
Fluoranthene	ug/kg	181	12,900	118,000	308	644	127,000	4,390		1,680	1,230
Fluorene	ug/kg	<41.4	254	6,460	<232	<82.8	9,200	302		94.3	<163
Ideno(1,2,3-cd) pyrene	ug/kg	<48.3	2,760	20,600	<242	122	23,200	930		287	279
2-Methylnaphthalene	ug/kg	<43.2	<204	1,090	<298	<86.3	465	<40.8		<79.4	<170
Naphthalene	ug/kg	<44.2	<209	2,020	<366	<88.4	747	152		<81.4	<174
Phenanthrene	ug/kg	95.2	4,080	62,800	<250	376	66,100	2,580		1,050	567
Pyrene	ug/kg	200	12,900	117,000	<279	600	106,000	3,500		2,100	1,290
Semi-Volatile Organic Compounds (EPA Method 8270)											
Bis(2-ethylhexyl)phthalate	ug/kg				312						
Dimethyl phthalate	ug/kg				1,130						
All other compounds	ug/kg				<RL						

Samples collected March 29-30, 2011

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Table 2.4 - Summary of Fill Investigation Analytical Results for Metals, Cyanide and TPH

Parameter	Units	TP-01 TP01-16 8-10 ft	TP-02 TP02-17 2-3 ft	TP-02A TP02A-18 1-2 ft	TP-03 TP03-15 1-2 ft	TP-05 TP05-10 2-3 ft	TP-06 TP06-14 3-4 ft	TP-07 TP07-09 4-5 ft	TP-08 TP08-11 1-2 ft	TP-09 TP09-07 2-3 ft	TP-10 TP10-06 4-5 ft	TP-11 TP11-05 2-3 ft
Petroleum Hydrocarbons (EPA Method 8015)												
Diesel Range	mg/kg				<264	<273					<273	<276
Metals/Inorganics (EPA Methods 6010, 6020 and 7471)												
Arsenic	mg/kg	5.33	8.76	4.68	5.94	6.94	5.52	6.22	4.05	10.1	6.01	10.2
Barium	mg/kg	105	101	258	75.4	140	51.3	122	63.3	75.3	114	261
Cadmium	mg/kg	<0.0159	<0.0161	<0.0157	<0.0154	<0.0159	<0.0155	<0.0167	<0.0171	<0.0160	<0.0256	<0.0161
Chromium (total)	mg/kg	22.6	20.3	26.0	22.5	23.1	13.0	23.2	15.3	13.4	20.6	21.0
Lead	mg/kg	18.5	172	102	45	190	66.0	21.5	44.7	792	17.5	296
Mercury	mg/kg	0.333	0.683	0.101	0.211	0.191	<0.0343	<0.0369	<0.0379	<0.0354	<0.0352	1.47
Selenium	mg/kg	<0.933	<0.943	<0.923	<0.904	<0.935	<0.909	<0.980	<1.00	<0.939	<0.684	<0.944
Silver	mg/kg	<0.126	<0.127	<0.125	<0.122	<0.126	<0.123	<0.132	<0.136	<0.127	<0.0973	<0.127
Cyanide (EPA Method 9010/9014)												
Cyanide	mg/kg											

Samples collected March 29-30, 2011

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Table 2.4 - Summary of Fill Investigation Analytical Results for Metals, Cyanide and TPH

Parameter	Units	TP-12 TP12-12 2-3 ft	TP-12A TP12A-13 0-1 ft	TP-13 TP13-20 2-3 ft	TP-14 TP14-19 0-1 ft	TP-15 TP15-04 4-5 ft	TP-16 TP16-03 4-5 ft	TP-17 TP17-02 3-4 ft	TP-18 TP18-01 4-5 ft	TP-19 TP19-08 2-3 ft	HA-22 HA22-21 0-1 ft
Petroleum Hydrocarbons (EPA Method 8015)											
Diesel Range	mg/kg			1,360		<293	1,530	<277		<269	<1,150
Metals/Inorganics (EPA Methods 6010, 6020 and 7471)											
Arsenic	mg/kg	6.14	5.84	4.69	9.97	11.4	11.0	5.34	7.18	4.34	32.5
Barium	mg/kg	95.1	339.0	148	236	154	94.7	170	57.7	85.2	111
Cadmium	mg/kg	<0.0171	<0.0161	<0.0167	0.179	5.91	<0.0171	<0.0162	<0.0158	<0.0157	<0.0673
Chromium (total)	mg/kg	29.5	18.9	24.8	10.1	19.5	18.5	21.4	18.3	20.3	64.9
Lead	mg/kg	55.8	142	68.2	100	226	173	112	50.3	26.7	221
Mercury	mg/kg	0.0537	0.148	0.34	1.17	0.217	7.61	0.848	0.266	<0.0348	2.24
Selenium	mg/kg	<1.00	<0.948	<0.983	2.18	<1.00	<1.01	<0.949	<0.926	<0.923	<3.95
Silver	mg/kg	<0.135	<0.128	<0.133	<0.217	<0.135	<0.136	<0.128	<0.125	<0.125	<0.534
Cyanide (EPA Method 9010/9014)											
Cyanide	mg/kg			4.95							

Samples collected March 29-30, 2011

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Table 2.5 - Sludge and Impoundment Water Sampling - February 21, 2012
Initial Sample Results - Inorganics

Location	Sludge Samples					Water Samples				
	Impound 3	Impound 4	Impound 5	Remediation Standards		Impound 3	Impound 3	Impound 4	Impound 6	Water Quality Criteria
Sample Number	M12-014	M12-008	M12-011	Direct Contact	Impact to GW	M12-020	M12-021	M12-004	M12-002	
	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	ug/l	ug/l	ug/l	ug/l	ug/l
Metals										
Aluminum	**25,000**	**42,400**	**21,400**		3,900	247	770	280	195	
Antimony	<1.16	<1.45	<1.29	450	6	<5.30	<5.30	<5.30	<5.30	640
Arsenic	9.07	4.54	9.92	19	19	<5.80	<5.80	**6.70**	<5.80	0.061
Barium	46.6	38.4	214	59,000	1,300	35.8	50.0	40.0	16.1	
Beryllium	0.234	0.0707	<0.145	140	0.5	<0.120	<0.120	<0.120	<0.120	42
Cadmium	<0.0554	<0.0692	0.422	78	1	<0.280	<0.280	<0.280	<0.280	8.8
Calcium	253,000	212,000	717			417,000	341,000	395,000	225,000	
Chromium	28.3	36.4	7.25			5.50	8.60	4.70	<0.310	750
Cobalt	6.59	8.23	6.62	590	59	7.10	5.70	7.60	1.90	
Copper	13	16.4	9.80	45,000	7,300	<0.580	<0.580	**3.10**	3.00	3.1
Iron	7,820	9,880	3,420			18,600	13,700	17,900	248	
Lead	17.0	14.1	**91.9**	800	59	21.2	**31.0**	**28.5**	21.4	24
Magnesium	17,000	17,200	69.1			310,000	388,000	312,000	41,600	
Manganese	**332**	**314**	**102**	5,900	42	76.5	92.7	74.0	45.6	100
Mercury	**0.229**	**0.116**	**0.110**	65	0.1	<0.0470	0.0500	<0.0470	<0.0470	0.051
Nickel	10.7	20.3	2.71	23,000	31	1.10	1.40	0.930	<0.770	22
Potassium	200	244	1,470			44,000	120,000	43,600	7,190	
Selenium	1.52	2.46	<1.46	5,700	7	29.9	<95.7	23.0	<9.60	71
Silver	<0.107	<0.134	<0.120	5,700	1	<0.780	<0.780	<0.780	<0.780	1.9
Sodium	1,830.0	1,300	1,330			1,180,000	2,450,000	1,170,000	49,500	
Thallium	<0.867	<1.08	<0.968	79	3	<6.20	**7.10**	**9.40**	**6.50**	0.47
Vanadium	39.6	48.3	30.0	1,100		<0.950	2.30	1.10	<0.950	
Zinc	42.7	39.3	12.9	110,000	600	3.60	10.5	11.4	8.50	81
Cyanide	**M12-015**	**M12-009**	**M12-012**			**M12-017**	**M12-016**	**M12-005**	**M12-003**	
Total Cyanide	**1,570**	**1,420**	**547**	23,000	13	**43,200**	**4,030**	**3,980**	29.0	140

Notes:

1. Sludge sample analysis results are reported on a dry weight basis.
2. Results with a less than sign indicate that the paramter was not detected at the laboratory reporting limit.
3. Remediation Standard for sludge samples is the Non-residential Direct Contact Soil Remediation Standard from NJAC 7:26D.
4. Impact to Groundwater standards are the Default Impact to Groundwater Soil Screening Levels from SRP Guidance Document "Development of Site Specific
5. Water Quality Criteria for water samples is Surface Water Quality Criteria for Toxic Substances for saline (SE) water from NJAC 7:9B.
6. Results shown in **bold** exceed one or more applicable standards.

Table 2.6 - Sludge and Lagoon Sampling - February 21, 2112

Initial Sample Results - PAHs

Location	Sludge Samples					Water Samples				
	Impound 3	Impound 4	Impound 5	Remediation Standard		Impound 3	Impound 3	Impound 4	Impound 6	Water Quality Criteria
Sample Number	M12-013	M12-007	M12-010	Direct Contact	Impact to GW	M12-018	M12-019	M12-006	M12-001	
	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/l	ug/l	ug/l	ug/l	ug/l
Acenaphthylene	<249	<280	<267	300,000,000		<0.700	<0.700	<0.700	<0.700	
Acenapthene	<306	<345	<345	37,000,000	74,000	<0.750	<0.750	<0.750	<0.750	990
Anthracene	<331	<372	<355	30,000,000	1,500,000	<0.770	<0.770	<0.770	<0.770	40,000
Benzo(a)anthracene	<238	<268	<255	2,000	500	<0.750	<0.750	<0.750	<0.750	0.18
Benzo(b)fluoranthene	<197	<222	<212	2,000	2,000	<0.970	<0.970	<0.970	<0.970	0.18
Benzo(k)fluoranthene	<253	<285	<272	23,000	16,000	<0.680	<0.680	<0.680	<0.680	1.8
Benzo(a)pyrene	<234	<264	<251	200	200	<0.630	<0.630	<0.630	<0.630	0.018
Benzo(g,h,i)perylene	<215	<242	<231	30,000,000		<0.790	<0.790	<0.790	<0.790	
Chrysene	<228	<256	<244	230,000	52,000	<0.620	<0.620	<0.620	<0.620	18
Dibenz(a,h)anthracene	<177	<199	<190	200	500	<0.520	<0.520	<0.520	<0.520	0.018
Fluoranthene	<214	<241	<230	24,000,000	840,000	<0.560	<0.560	<0.560	<0.560	140
Flourene	<219	<246	<235	24,000,000	110,000	<0.650	<0.650	<0.650	<0.650	5,300
Indeno(1,2,3-CD)pyrene	<228	<257	<245	2,000	5,000	<0.570	<0.570	<0.570	<0.570	0.18
Naphthalene	<345	<389	<371	17,000	16,000	<0.860	<0.860	<0.860	<0.860	
Phenanthrene	<236	<265	<253	300,000,000		<0.650	<0.650	<0.650	<0.650	
2-Methylnaphthalene	<281	<317	<302	2,400,000	5,000	<0.800	<0.800	<0.800	<0.800	
Pyrene	<263	<296	<282	18,000,000	550,000	<0.670	<0.670	<0.670	<0.670	4,000

Notes:

1. Sludge sample analysis results are reported on a dry weight basis.
2. Results with a less than sign indicate that the paramter was not detected at the laboratory reporting limit.
3. The laboratory reporting limits reported for these analyses are the method detection limits.
4. Remediation Standard for sludge samples is the Non-residential Direct Contact Soil Remediation Standard, NJAC 7:26D
5. Impact to Groundwater standards are the Default Impact to Groundwater Soil Screening Levels from SRP Guidance Document "Development of Site Specific Impact to
6. Water Quality Criteria for water samples is Surface Water Quality Criteria for Toxic Substances for saline (SE) water, NJAC 7:9B.

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The results of these sample analyses are summarized in Tables 2.5 for the inorganics and Table 2.6 for the PAHs. The laboratory report and chain of custody from these samples are provided in Appendix G.

2.4 Current Site Conditions

At the present time, the site consists of the six sludge impoundments surrounded by the containment berms. Several pathways have been built through the impoundments to allow access for maintenance or access to the eight existing monitoring well clusters. The berm between Impoundments 4 and 5 was not visible, merging these two impoundments into a single larger impoundment.

In its current condition, the project site is unusable. During wet weather, most of Impoundment 6 is filled with standing water. Vegetative cover is either sparse or non-existent over most of the area of the remaining impoundments, with the exception of Impoundment 1 and the low areas of Impoundment 3. A 12 inch cover of soil and sewage sludge had been placed over the impoundments from 1986 through 1989 to promote vegetative growth. This work was required under an April 1978 amended administrative consent order issued by New Jersey Superior Court to control dust blowing off of the site and onto the Turnpike [3]. This 12 inch cover has been eroded away in most locations on the impoundments leaving exposed alum-YPS sludge. Phragmites have grown in the soil on the berms and the roadways surrounding the impoundments.

These impoundments are impassable because the sludge has no strength and cannot bear any weight. A pole or rod can be pushed by hand its full length into the sludge with minimal effort. This creates a dangerous condition for persons, vehicles and wildlife on the site and makes the site, in its current condition, unusable.

Impoundment 3 is the lowest area on the site and appears to have been inundated regularly by the Rahway River. Trash and debris consistent with river water flowing onto the impoundment were visible.

Impoundment 2 has been covered with several feet of soil (undocumented fill) and was used for a wood waste recycling operation. That operation was halted in 2008, although wood waste from the operation remains on-site. A portion of the soil surface is covered with wood chips and there are several piles of wood chips remaining on the site.

3. SITE CONDITIONS

3.1 Geology

3.1.1 Site Geology

The project site is located along the boundary of the New Jersey Piedmont and Coastal Plain Physiographic Provinces. The surface deposits in the area consist of approximately 20 to 40 feet of Quaternary alluvium, composed of interbedded silt, sand, gravel and clay of glacial origin, with buried peat and organic horizons. Underlying the Quaternary alluvium are the bedded shales, mudstones and sandstones of the Triassic-age Brunswick Formation.

The unconsolidated overburden materials along this physiographic boundary were deposited in a brackish estuarine, salt-marsh environment. The site and the surrounding properties are located on a former tidal marsh. The soils of the marsh are mostly silts and clays containing an upper horizon of grey, organic silt interspersed with decomposed roots and grasses, locally referred to as the "meadow mat." During installation of the initial ten monitoring wells, Hydrosystems encountered between 10 and 25 feet of this marsh deposit, mostly consisting of black organic sandy silt (peat). Permeability tests on the peat indicated that it has a highly variable permeability, varying in the 10^{-3} to 10^{-6} cm/s range.

Underlying overburden is a dense, hard, red siltstone of the Brunswick Formation. This weathered bedrock surface ranges from depths between 29 and 42 feet below ground surface.

3.1.2 General Configuration of Impoundments

At least four subsurface investigations were performed at the site from 1981 to 1997. Refer to the list of historic documents contained in Appendix A for the available documents regarding the historical geotechnical data and the known historical borings, wells, soil logs and test areas on the site. Cross-sections of the impoundments, prepared by Cytec consultant Blasland, Bouck and Lee (BBL) in 2002 are contained in Appendix G. In summary the site subsurface conditions, from the top down, consist of:

- Alum/YPS sludge with limited undocumented soil cover in the impoundments and undocumented fill soil on the berms.
- Native, alluvial, soft, peat (meadow mat) and organic clay
- Native, alluvial and glacial, clay, silt, sand, and gravel soils
- Weathered siltstone/shale bedrock.
- Hard siltstone/shale bedrock.

3.1.3 Impoundments

The alum and YPS sludge contained within the six site impoundments is very soft, saturated and compressible with negligible shear strength. Tests performed on this sludge indicate that it has low to no plasticity, and that it is highly sensitive. In 1999, BBL, as consultant to Cytec

stated: "While the material may initially appear to be firm, disturbance will cause the material to behave like a highly viscous liquid".

Based upon data accompanying the NFA&CNS, the sizes, ages and thicknesses of the sludge vary for each impoundment as shown in Table 3.1.

Table 3.1 – Impoundment Information

Impoundment	Year Established	Size (acres)	Sludge Thickness (feet)
Impoundment 1	1933	12	7 to 8
Impoundment 2	1938	18	5 to 7
Impoundment 3	1938	15	6 to 10
Impoundment 4	1948	10	13 to 21
Impoundment 5	1953	15	6 to 19
Impoundment 6	1963	20	15 to 18

Data from some of the soil borings contained in the historical documents identified some sludge under the containment berms. The analyses contained in these reports also indicate that some sludge exists outside of the containment berms likely from localized berm failures that have occurred over the years.

Testing of 12 sludge samples from near the surface of the impoundments by M. Disko Associates on 1981 measured a permeability of $lx10^{-4}$ to $8x10^{-6}$ centimeters per second. This low permeability is creating the bathtub like effects currently observed in the impoundments. Stormwater is trapped in the impoundments by the low permeability sludge forcing it to slowly percolate through the sludge. This water dissolves cyanide and metals from the sludge transporting them to the underlying groundwater.

The berms consist of undocumented soil fill that was placed to form the impoundments. The depth of the berms is not known, although BBL reported in 1999 that the berms may have been constructed directly on the peat layer. Additional investigations indicate that the berms do not contain clay cutoff walls. Some of the boring logs indicate that a layer of sludge was encountered beneath the berms. The structural stability of the berms is being evaluated in the geotechnical investigation portion of this RI, discussed in Section 5 of this report.

3.1.4 Natural Materials

Beneath the sludge and berms is a soft, compressible stratum of native peat (meadow mat). This is a recent deposit of decomposed vegetation mixed with organic clay and silt, deposited by the Rahway River. Beneath the peat, is a stratum of soft organic clay, which is also a recent river deposit. This stratum is thickest towards the Rahway River, and decreases in thickness away from the river. Some of the borings indicate that the combined thickness of these strata approach 20 feet near the river.

Native soils are located beneath the peat and organic clays. These native soils consist of a mixture of alluvial and glacial clay, silt, sand and gravel. Bedrock was encountered at depths

typically between 30 and 40 feet below grade. The bedrock is red-brown siltstone/shale and has a weathered surface layer.

3.2 Hydrogeology

3.2.1 Monitoring Wells

Five monitoring well pairs were installed at the site in 1987 for NJPDES - DGW Permit No. NJ0061611. The wells were installed to monitor the groundwater quality within the two groundwater zones. The shallow monitoring wells ranged from 15 to 31 feet deep. The deep monitoring wells ranged from 38 to 54 feet deep. These wells were sampled quarterly until American Cyanamid was notified in February 1990 that the NPDES permit was invalid.

Three additional monitoring well pairs were installed on the site in 1994 as described in the approved remedial action workplan. These wells had approximately the same depths as the original five well pairs. The monitoring well locations are shown on Figure 3.1.

All eight monitoring well pairs were sampled from 1995 through 1999 as part of the remedial action. Semi-annual sampling was performed in 1995 through 1997 and annual sampling was performed in 1998 and 1999. The results of the remedial action sampling are summarized in the 1999 groundwater sampling report prepared by BBL.

3.2.2 Aquifer Characteristics

The general site hydrostratigraphy is described in detail in reports by BBL and Hydrosystems. Groundwater is contained within two distinct aquifers:

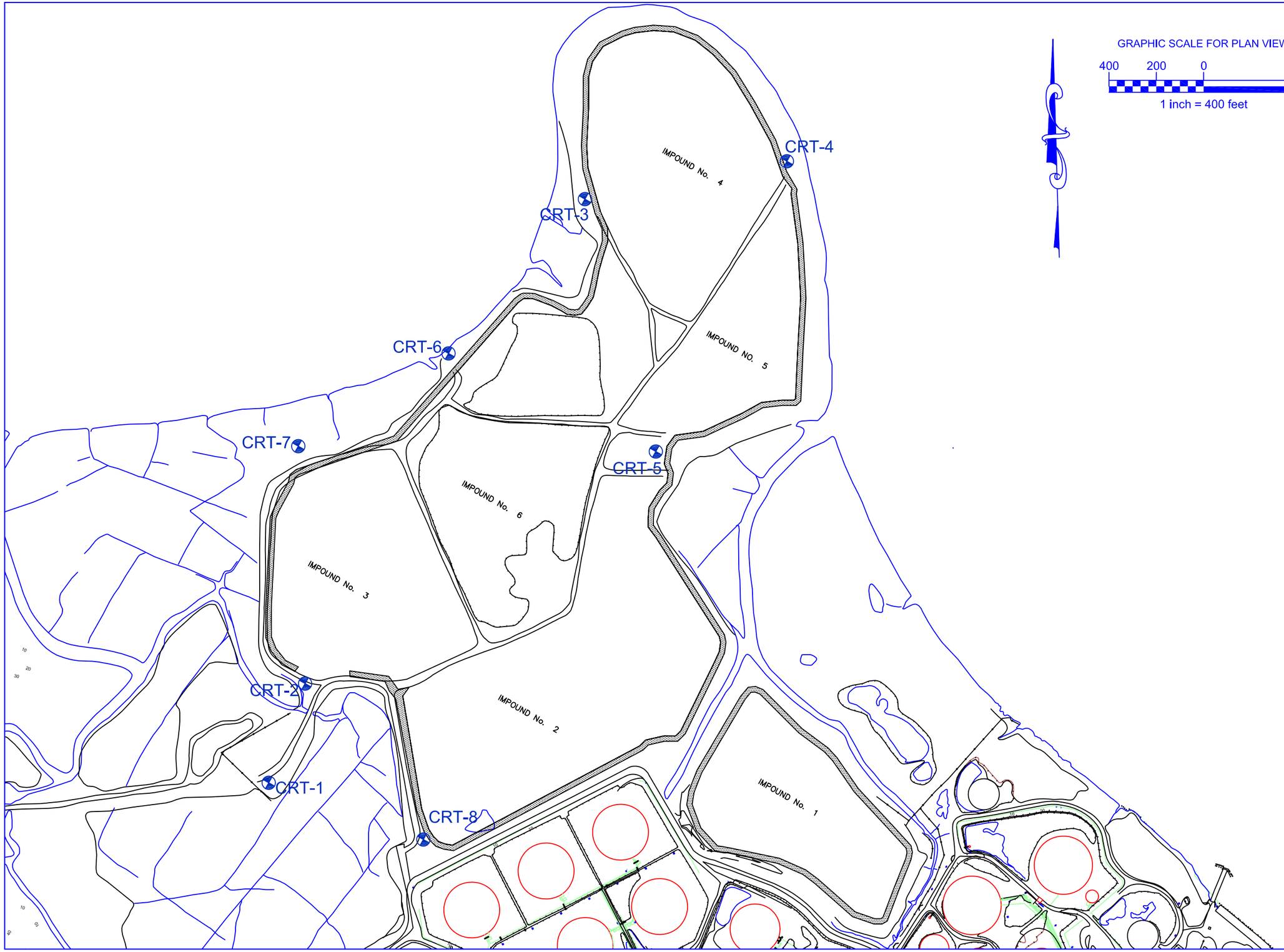
- An unconfined shallow aquifer of permeable fill materials and tidal marsh deposits
- The confined Brunswick Formation shallow bedrock aquifer

A continuous layer of red-brown clay separates these two aquifers and acts as a confining layer for the underlying Brunswick Formation. This clay layer restricts the vertical flow of water between the shallow and bedrock aquifers.

The shallow groundwater aquifer is brackish and tidally influenced. As a result, the groundwater was classified as IIIB and alternative Class IIIB groundwater quality criteria were developed for the site as part of the remedial action.

3.2.3 Groundwater Flow

Shallow groundwater is reportedly mounded beneath the impoundments and flows radially outward from the central area of the impoundments and discharges into surrounding surface water. Deep groundwater flow is generally to the north or northeast where it also discharges to the surrounding surface water (the Rahway River and the Arthur Kill). The groundwater flow direction and mounding maps from the 1987 Hydrosystems report are contained in Figures 3.2 and 3.3.



GRAPHIC SCALE FOR PLAN VIEW

400 200 0 400

1 inch = 400 feet

Rahway Arch

RAHWAY ARCH PROPERTIES, LLC

7 Nottingham Drive
Florham Park, New Jersey 07932

REMEDIAL INVESTIGATION OF THE RAHWAY ARCH SITE

BLOCK 602, LOT 1
BLOCK 602, LOTS 1 & 8
BLOCK 705, LOTS 17 & 18

BOROUGH OF CARTERET
MIDDLESEX COUNTY, NJ

LEGEND

CRT-4 Existing Monitoring Well Cluster. Each cluster consists of a shallow well and a deep well.

Engineer

Albert P. Free, P.E., CSP, LSRP
NJ PE Number 24GE03816200

EastStar Environmental Group, Inc.
Consulting and Field Services

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Columbia, Maryland 21044
Phone: (410) 290-8777 Fax: (410) 290-9055
www.EastStarEnv.com

Figure 3.1
Monitoring Well Locations on the Rahway Arch Site

File Name:	Scale:
RIR Figures2-2 and 3-1.dwg	1 Inch = 400 feet
Date: November 14, 2012	Project Number: I027
Drawn by: MAY	
Checked by: APF	

Sheet 1 of 1 Sheets

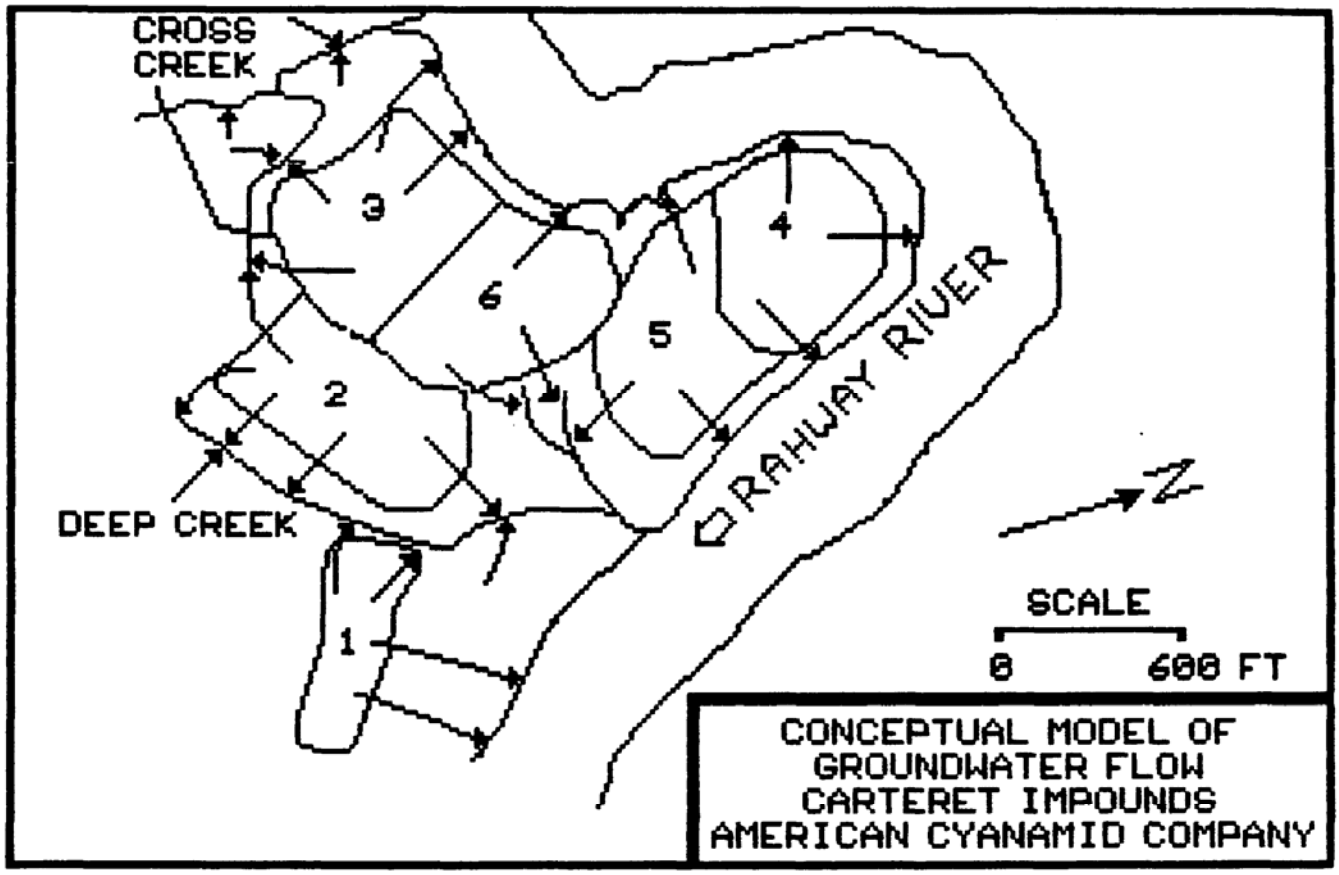

Figure 6. Areal map of the Carteret Impounds showing the conceptual model of groundwater flow radially outward from the water-table mound within the impounds. Groundwater originating within the impounds discharges into the surrounding surface water.

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FIGURE 3.2

Conceptual Model of Groundwater Flow Directions by Hydrosystems, Inc. 1987

Scale: AS SHOWN	Date: November 2012
Drawn By: JAC	Checked By: APF

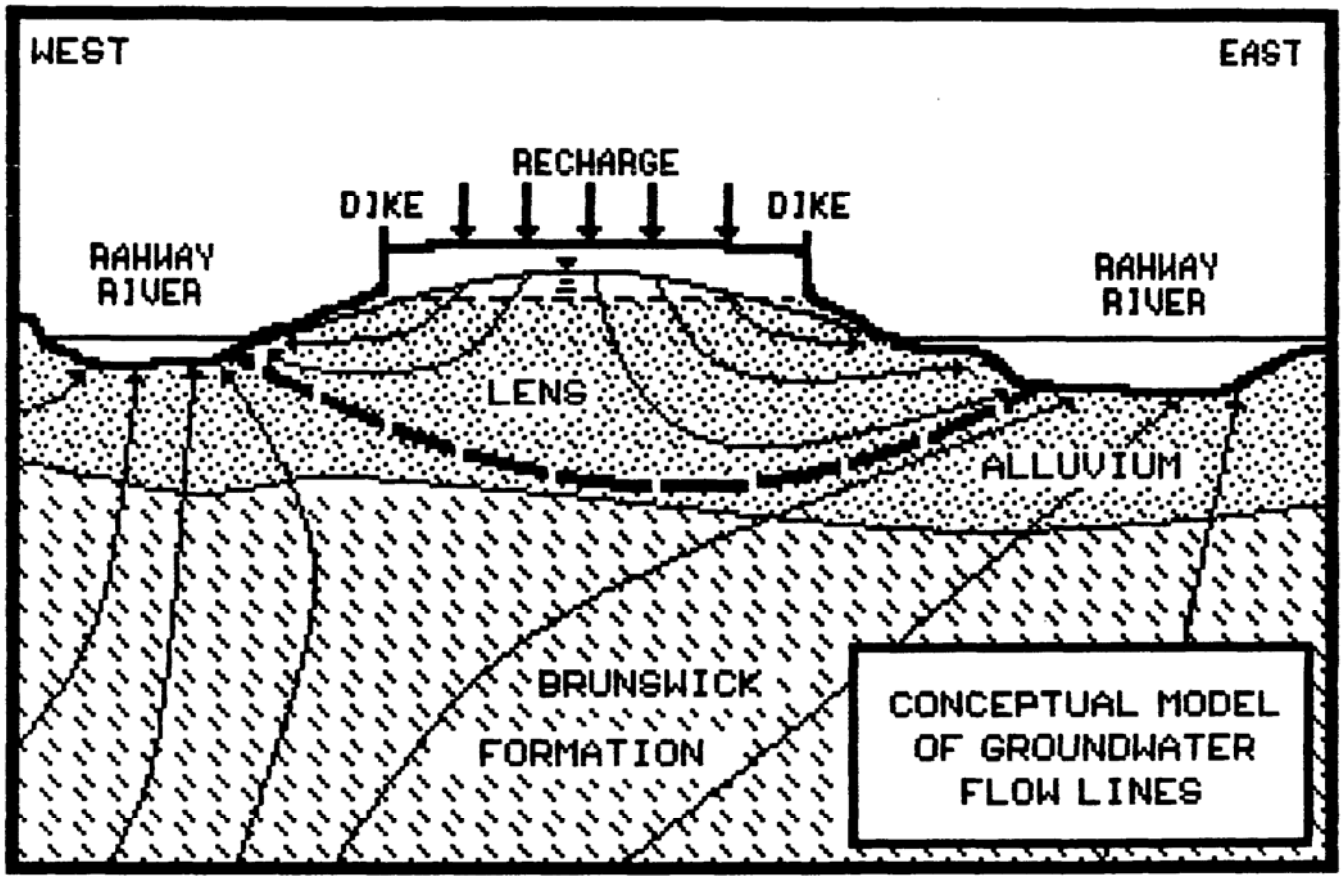

Figure 5. Generalized West-to-East cross-section through the Carteret Impounds showing the conceptual model of the groundwater flow system. Groundwater moves upward out of the Brunswick Formation to discharge into the surface water. Groundwater mounded within the impounds moves radially outward to discharge into the surrounding surface water. The density contrast between the impound leachate and native groundwater and the upward gradient in the Brunswick Formation should limit the extent of groundwater movement out of the impounds to a lens-shaped zone defined by the area above the thick dashed line.

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Columbia, Maryland 21044

FIGURE 3.3

Conceptual Model of Groundwater Mounding and Flow by Hydrosystems, Inc. 1987

Scale: AS SHOWN	Date: November 2012
Drawn By: JAC	Checked By: APF

The remedial action report indicated that groundwater-to-surface-water discharge could be inferred from existing ground-water elevation data, but found the relationship is difficult to quantify because there were no contemporaneous surface water elevation data for the Rahway River, Cross Creek and Deep Creek to match the monitoring well data. The groundwater to surface water discharge relationship for the southeast portion of the site was unknown because monitoring wells could not be installed along the Rahway River shoreline in this area. Data on the type and orientation of fractures in the bedrock aquifer system was also limited, as was knowledge of general locations of fracture discharge zones.

Based upon the available data and flow patterns, groundwater originating as infiltration through the impoundments moves radially outward from the impoundments, ultimately discharging to the adjacent surface waters of the Rahway River, Cross Creek and Deep Creek. In 1989 Hydrosystems indicated that the water table was approximately 2 feet below ground surface (bgs) in the shallow monitoring wells, roughly 5 to 10 feet above mean sea level. Water table mounding occurs in the shallow aquifer beneath the impoundments. The mounded ground water directly under the impoundments apparently is further isolated from the more saline regional ground water by a difference in density.

The Brunswick Formation typically has a low primary porosity because the rock is generally fine-grained. Where coarser-grained rock is present, it is tightly cemented and has a high clay mineral content. Most of the groundwater storage and movement in the Brunswick Formation occurs either in bedding plane fractures or in secondary fractures (joint sets) formed by stress related to faulting following the deposition and lithification of the beds (USGS, 1968). Regional flow in the Brunswick Formation occurs vertically and laterally toward the northeast, with ultimate discharge to surface water bodies which, in the vicinity of the Carteret Impoundments, include the lower Rahway River, Arthur Kill, and, eventually, the Atlantic Ocean.

Hydrosystems in 1989 estimated the discharge to groundwater from the site ranged between approximately 11,000 cubic feet per day (cfd) [82,000 gallons per day (gpd)] and 17,000 cfd (130,000 gpd). In 2012, EastStar estimated recharge through the impoundments at 9,340 cfd (69,800 gpd). These estimates are hydrologic budget calculations using regional rainfall data and site-specific conditions. The EastStar hydrologic budget calculations are provided in Appendix I.

3.3 Wetlands

Wetland areas cover approximately 35 acres of the 124.7-acre site. Wetlands were delineated in July 1997, and a Freshwater Wetlands Letter of Interpretation (LOI) (File No. 1201-97-0004.1) was issued by NJDEP Land Use Regulation Program (LURP) on March 13, 1998. Freshwater Wetland LOI extension packages were submitted in February 2003 and May 2008 to NJDEP LURP to extend the LOI. Both extensions were approved, and the current LOI is valid through September 22, 2013. The site plan from the LOI showing the wetlands is shown in Figure 3.4.

Wetlands onsite consist of tidal saltmarsh wetlands and high-marsh wetland ecotonal edges. Wetland areas exist on the edges of impoundment areas and continue to the Rahway River. New Jersey Administrative Code 7:9B classifies the Rahway River near the site as SE3, a saline estuarine water body. Hydrology of site wetlands is dominated by fluctuating tidal levels of the Rahway River. Wetland soils onsite consist of Psamments (somewhat poorly drained sandy fill

RAHWAY RIVER

RAHWAY RIVER

IMPOUND No. 4

IMPOUND No. 5

IMPOUND No. 6

IMPOUND No. 3

IMPOUND No. 2

IMPOUND No. 1

LEGEND

- PROPERTY BOUNDARY
- WATER LINE (APPROXIMATE HIGH WATER (EL. 3.5'))
- A19 WETLAND BOUNDARY
- 10 CONTOUR LINE
- GRAVEL ROAD
- BERM
- 12 SAMPLE LOCATION

NOTES:

1. WATERS AND WETLAND DELINEATION PERFORMED BY ARCADIS IN DECEMBER 2007 THROUGH JANUARY 2008.
2. SURVEY INFORMATION OBTAINED FROM DRAWING ENTITLED "WETLAND LOCATION MAP" PREPARED BY CREST ENGINEERING ASSOCIATES, INC. 8/7/97.
3. WETLAND DELINEATION INFORMATION FROM CREST ENVIRONMENTAL FILE: ARCADIS-WETL2007emdl.DWG, DATED: 1/22/08.
4. PROPERTY LINES ARE BASED ON A MAP ENTITLED "DEED ASSEMBLY MAP CARTERET SLUDGE IMPOUND" 10/16/93.
5. LOCATION OF BERMS AND ROADS ARE APPROXIMATE IN RELATION TO WATERS/WETLANDS, AND INCLUDED FOR REFERENCE PURPOSES ONLY.
6. MODIFICATIONS MADE TO MAP IN JULY 2008 PER FIELD RECOMMENDATIONS MADE BY NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION DIVISION OF LAND USE REGULATION.

APPROVED
1201-03-0003.1
Department of Environmental Protection
Land Use Regulation Program

1"=100' 100' 0 100' 200'

THIS BAR REPRESENTS ONE INCH ON THE ORIGINAL DRAWING. USE TO VERIFY FIGURE REPRODUCTION SCALE

No.	Date	Revisions	By	Chk

THIS DRAWING IS THE PROPERTY OF THE ARCADIS ENTITY CREATED IN THE TITLE BLOCK AND MAY NOT BE REPRODUCED OR ALTERED, IN WHOLE OR IN PART WITHOUT THE EXPRESS WRITTEN PERMISSION OF SAME.

Professional Engineer's Name: Gary Wroblewski P.E.
Professional Engineer's No.: 24GE04007400
State: NJ
Date Signed: 7/1/08
Project Mgr: GMW
Designed by: JS
Drawn by: TFATTO
Checked by: DP

ARCADIS
ARCADIS U.S., INC.
NEW JERSEY ENGINEERING CERTIFICATE OF AUTHORIZATION NUMBER 24GA27939600

CYTEC INDUSTRIES INC. • CARTERET, NEW JERSEY
WATERS / WETLANDS DELINEATION REPORT

WETLANDS MAP

ARCADIS Project No.: B0044134.0000.00001
Date: JULY 2008
ARCADIS 6 SOUTH RIVER ROAD CRANBURY, NEW JERSEY 08512 TEL: 609.860.0072

EXHIBIT 1

CITY: (ON DRGDEP) ES: DS: TFATTO LD: PIC: PM: TM: LYR ON=*;OFF=*REF*
CLICAD\PROJECTS\MAP\0044134\0000\0001\44134G13.dwg LAYOUT: LAYOUT1 SAVED: 7/2/2008 11:31 AM ACADVER: 17.0S (LMS TECH) PAGESETUP: — PLOTSTYLETABLE: PLTRAIL.CTB PLOTTED: 7/2/2008 11:31 AM BY: FATTO, TRACEY
XREFS: 44134G03 IMAGES: PROJECTNAME: —

material) and Sulfaquents/Sulfihemists (very poorly drained organic and mineral soils subject to tidal flooding).

Wetland vegetation in saltmarsh areas is dominated by the herbaceous species Spartina patens (saltmeadow cordgrass), Phragmites australis (common reed), and Juncus gerardii (saltmeadow rush). Trees and shrubs, such as Ailanthus altissima (Chinese tree-of-heaven), Prunus serotina (wild black cherry), Bacharis halmifolia (Eastern false-willow), and Iva frutescens (big-leaf sumpweed), are the dominant vegetation in the high-marsh ecotonal edge wetlands.

There is no indication of any intentional placement of alum-YPS sludge outside the impoundments or in the wetland areas. However, berm overtopping and berm failure events have been documented.

4. ENVIRONMENTAL SAMPLING

4.1 Subsurface Sampling

4.1.1 Environmental/Geotechnical Investigation

The subsurface sampling program was a combined geotechnical and environmental investigation. EastStar developed the sampling program and objectives for the subsurface investigation and selected boring locations based upon the combined environmental and geotechnical requirements. A summary of the geotechnical investigation plan is contained in Appendix B of this report.

The subsurface investigation consisted of:

- Shallow borings on the berms to the bottom of the organic silt and clay (BS borings)
- Deep borings on the berms to top of bedrock (BD borings)
- Shallow borings in the impoundments to the bottom of the organic silt and clay (IS borings)
- Deep borings in the impoundments to top of bedrock (ID borings)
- Deep borings in the wetlands outside the berms (W borings)
- Cone Penetrometer Borings (CP borings)

The environmental portion of the investigation was managed by EastStar and is discussed in this report. The geotechnical portion of the investigation was managed by Michael Baker, Jr., Inc. and is discussed in a separate report. The results of both portions of the investigation will be used to develop the Remedial Action Workplan (RAW) and the Remedial Design.

4.1.2 Sample Locations

All of the boring locations are shown in Figure 4.1. Environmental samples were collected from each of the borings, except the cone penetrometer borings. The cone penetrometer borings were strictly used for geotechnical investigation purposes.

The boring locations shown in Figure 4.1 are the actual boring locations, located in a field survey by Kernan Engineers after the completion of the investigation.

4.1.3 Sampling Procedures

The environmental samples were collected from soil borings drilled using mud rotary techniques with standard penetration tests (SPT). The drilling was performed by Warren-George, Inc. of Jersey City, New Jersey under the supervision of New Jersey licensed drillers. Personnel from Michael Baker directed the drilling program, following the geotechnical investigation plan.

All of the subsurface samples were collected from split spoons driven for standard penetration testing as part of the geotechnical investigation. EastStar developed a sampling matrix to collect

subsurface samples from the various strata encountered in the borings. This sampling matrix is shown in Table 4.1.

EastStar personnel collected each sample from the split spoon with a stainless steel trowel and placing it directly into the sample jar. One, two or three four ounce wide mouth laboratory pre-cleaned glass jar was filled for each sample, depending upon the analyses to be performed on that sample, following the sampling matrix. The sample jars were provided by QC Laboratories, the analytical laboratory. The jars were packed to zero headspace. The jars were then labeled and placed in a cooler, in ice. No preservatives were added to the sample containers.

The sampling equipment was decontaminated between samples. The sampler wore surgical gloves while sampling. These gloves were discarded after the sample was collected and fresh gloves were donned for the next sample.

Personnel from EastStar and Michael Baker logged the borings as they were drilled. The field notes were compared on site. The final boring logs were prepared by Michael Baker and were contained in its geotechnical report. A copy of the boring logs is provided in Appendix C.

4.1.4 Sample Handling and Delivery

All of the collected samples were labeled, placed in coolers and chilled with ice. At the end of the day, sufficient ice was placed in the cooler to maintain the samples at 4°C ±2°C, the cooler was sealed and the laboratory was contacted to arrange for a courier to pick up the samples. A chain of custody form was completed for each cooler.

The samples were picked up by QC Laboratories of Southampton, Pennsylvania. Strict chain of custody procedures were maintained from sample collection to receipt by the laboratory. The samples were maintained at 4°C with ice until delivery to the lab.

The samples were properly preserved, and the analyses were performed within the prescribed holding times. The laboratory sample checklists that accompanied the analytical reports document that all of the samples were received in acceptable condition and within the prescribed temperature range.

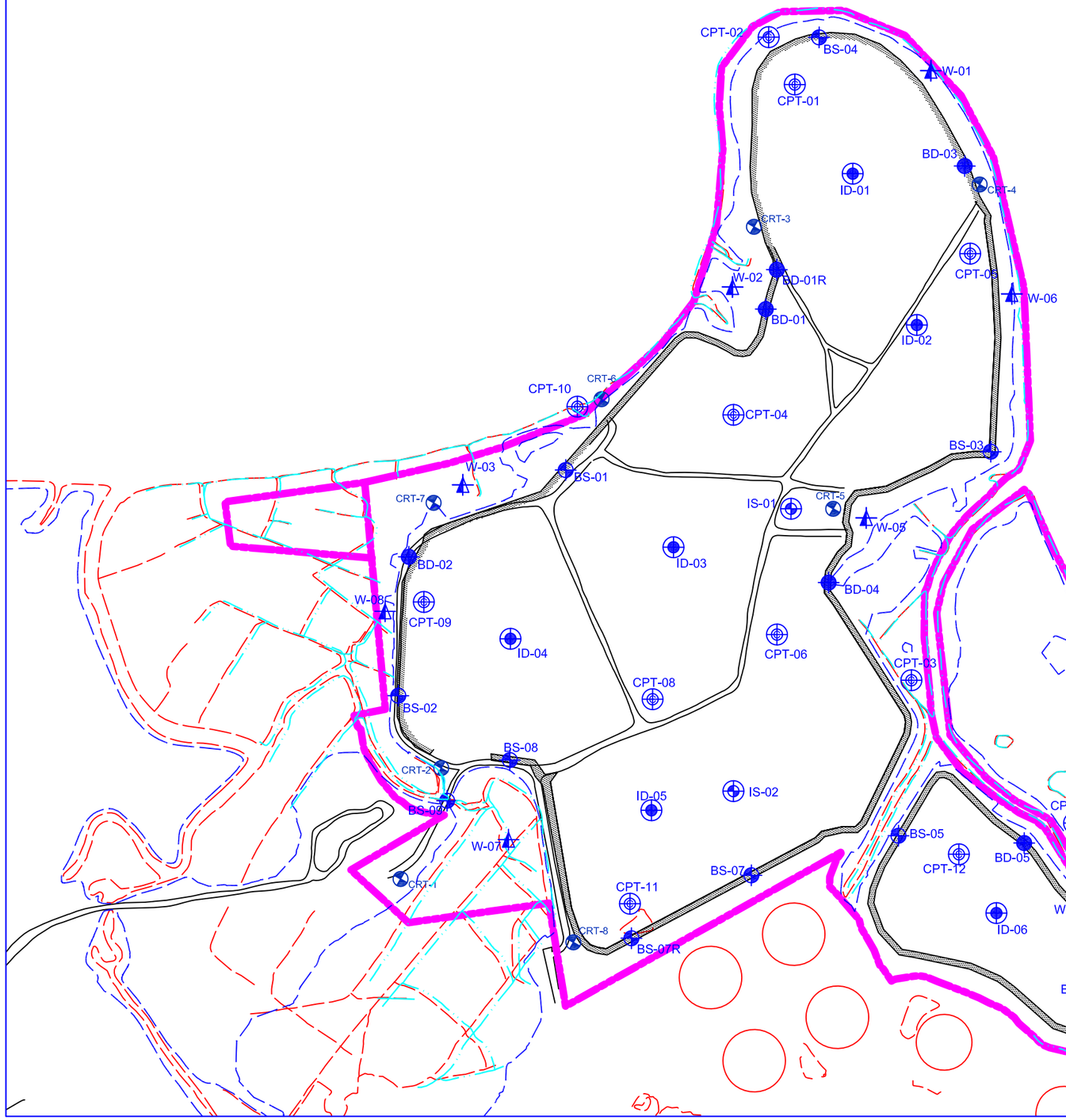
4.2 Groundwater Sampling

4.2.1 Well Development

Sixteen existing groundwater monitoring wells are located on the site in eight well clusters (CRTs). Each well cluster consists of a shallow well and a deep well. Clusters 1 through 5 were installed in 1987. Clusters 6 through 8 were installed in 1994. All of the wells were installed by Cytec for previous investigation and remediation activities.

According to the data reviewed for the PA, the monitoring wells were last sampled in June 1999. Since the wells had been dormant for the past 13 years, they were redeveloped prior to sampling.

Redevelopment was performed on August 11 and 12, 2012. Development consisted of alternately purging and surcharging the well. A variable flow submersible pump was used for



GRAPHIC SCALE FOR PLAN VIEW

400 200 0 400

1 inch = 400 feet

LEGEND

- BS-01 — BERM BORING TO BOTTOM OF ORGANIC CLAY (APPX 25 FT) - TRUCK RIG
- BD-01 — BERM BORING TO TOP OF ROCK (APPX 40 FT) - TRUCK RIG
- IS-01 — IMPOUND BORING TO BOTTOM OF ORGANIC CLAY (APPX 25 FT) - MARSH BUGGY
- ID-01 — IMPOUND BORING TO TOP OF ROCK (APPX 40 FT) - MARSH BUGGY
- W-01 — WETLAND BORING TO TOP OF ROCK (APPX 40 FT) - MARSH BUGGY
- CP-01 — CONE PENETROMETER BORING TO BOTTOM OF ORGANIC CLAY (APPX 25 FT) - MARSH BUGGY
- PROJECT SITE BOUNDARY LINE
- WETLAND
- WETLANDS TRANSITION AREA (INTERMEDIATE 50FT; EXCEPTIONAL, 150FT)
- MEAN HIGH WATER (3.5FT MSL)
- SPRING HIGH WATER (3.9FT MSL)
- CRT-01 — EXISTING MONITORING WELL CLUSTER

Rahway Arch

RAHWAY ARCH PROPERTIES, LLC

7 Nottingham Drive
Florham Park, New Jersey 07932

REMEDIAL INVESTIGATION OF THE RAHWAY ARCH SITE

BLOCK 602, LOT 1
BLOCK 603, LOTS 1 & 8
BLOCK 705, LOTS 17 & 18

BOROUGH OF CARTERET
MIDDLESEX COUNTY, NJ

BASE MAP NOTES

BASE MAP INFORMATION OBTAINED FROM THE FOLLOWING SOURCES:

1. ALTA/ACSM LAND TITLE SURVEY BLOCK9.03 LOT 21, BLOCK 10 LOTS 8-21 AND BLOCK 11.01 LOTS 6-15, 27 & 28, BOROUGH OF CARTERET, MIDDLESEX COUNTY, NEW JERSEY PREPARED BY KELLER & KITKPATRICK CONSULTING ENGINEERS AND LAND SURVEYORS, DATED 9/29/06
2. CREST ENGINEERING, INC. PLAN ENTITLED WETLAND LOCATION MAP, DATED 8/7/97.
3. WETLAND DELINEATION IS BASED UPON MAP PREPARED BY BLASLAND, BOUCK AND LEE, INC., DATED APRIL 4, 2003.
4. MEAN HIGH WATER OBTAINED FROM DRAWING ENTITLED 'SURFACE INSIDE WETLAND BUFFERS' PREPARED BY ARCADIS, 9/11/2009.

EastStar Environmental Group, Inc.
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FIGURE 4.1
GEOTECHNICAL AND REMEDIAL INVESTIGATION
BORING LOCATION PLAN

File Name: Geotech Investigation Plan2.dwg	Scale: 1 Inch = 400 feet
Date: June 22, 2012	Project Number: 1027
Drawn by: MAY	
Checked by: APF	

Sheet 1 of 1 Sheets

Table 4.1 - Environmental Sample Analysis Matrix

Boring	Anticipated Subsurface Layer	Environmental Analyses					
		TAL Metals	Cyanide	PAHs	Petroleum Hydro-carbons	VOCs	S-VOCs
BD-01 - Berm at north end of Impound 6 near suspected outfall location							
	ALUM-YPS SLUDGE	1	1				
	PEAT	1	1	1			
BD-02 - Berm on NW corner of Impound 3							
	ALUM-YPS SLUDGE	1	1				
	PEAT	1	1	1			
BD-03 - Berm at east side of Impound 4							
	ALUM-YPS SLUDGE	1	1				
	PEAT	1	1	1			
BD-04 - Berm at northeast corner of Impound 2							
	ALUM-YPS SLUDGE	1					
	PEAT	1	1	1	1	1	1
BD-05 - Berm on north side of Impound 1							
	SURFACE FILL	1		1			
	ALUM-YPS SLUDGE	1					
	PEAT	1	1	1			
BS-01 - Berm near southwest corner of Impound 6							
	ORGANIC SILT	1	1				
BS-02 - Berm on SW corner of Impound 3							
	ALUM-YPS SLUDGE	1	1				
	PEAT	1	1	1			
BS-03 - Berm at southeast corner of Impound 5							
	ALUM-YPS SLUDGE	1					
	PEAT	1	1	1	1	1	1
BS-05 - Berm on west side of Impound 1							
	SURFACE FILL	1		1			
	ORGANIC SILT	1	1		1		
BS-06 - Berm on east side of Impound 1							
	PEAT	1	1	1			
BS-07R - Berm on south side of Impound 2							
	SURFACE FILL	1	1	1	1	1	
	PEAT	1	1	1	1		1
ID-01 - Center of Impound 4							
	SURFACE FILL	1	1				
	ALUM-YPS SLUDGE	1	1				
ID-02 - Northwest side of Impound 5, north of RR tie stockpile							
	ALUM-YPS SLUDGE	1	1				
	PEAT	1	1	1			

Table 4.1 - Environmental Sample Analysis Matrix

Boring	Anticipated Subsurface Layer	Environmental Analyses					
		TAL Metals	Cyanide	PAHs	Petroleum Hydro-carbons	VOCs	S-VOCs
ID-03 - Center of southern half of Impound 6							
	ALUM-YPS SLUDGE	1	1				
	PEAT	1	1				
	ORGANIC SILT	1					
ID-04 - Center of Impound 3							
	SURFACE FILL	1		1			
	ALUM-YPS SLUDGE	1	1				
	PEAT	1	1	1			
ID-05 - Impound 2 at proposed pre-process stockpile							
	ALUM-YPS SLUDGE	1	1				
	PEAT	1	1	1			
ID-06 - Center in Impound 1							
	ALUM-YPS SLUDGE	1	1				
	PEAT	1	1	1			
IS-01 - North end of Impound 2							
	ALUM-YPS SLUDGE	1	1				
	PEAT	1	1	1			
IS-02 - Proposed Equipment Location in Impound 2							
	SURFACE FILL	1	1	1			
W-02 - North of Impound 6 near suspected outfall location							
	SURFACE MATERIAL	1	1	1			
W-08 - East of Impound 3							
	SURFACE MATERIAL	1	1				

1. Refer to Rahway Arch Site Geotechnical and Remedial Investigation Boring Location Plan for locations of the borings

purging, and the pumping rate was monitored. The purge water was collected in a bucket. After each well volume of water was purged, the well was surcharged with 2-3 gallons of previously purged water.

The purge water was monitored for pH, temperature and dissolved oxygen using a hand held multi-meter and for color, suspended solids and clarity by visual inspection. Unless the well was pumped dry, development continued until at least three well volumes were pumped from the well, all of the parameters were stable and the water was clear. If the well was pumped dry, it was allowed to re-charge before continuing purging. Development was considered complete if the well had been pumped dry three times, all of the parameters were stable and the water was clear. A summary of the purge statistics is contained in Table 4.2.

4.2.2 Well Sampling Procedures

The sixteen groundwater monitoring wells were sampled on August 22-24, 2012. The wells were sampled with a variable flow rate submersible pump using low flow purging and sampling techniques. For the shallow monitoring wells, the pump was placed approximately 5 feet below the groundwater surface. For the deep wells, the pump was placed approximately 5 feet below the estimated top of the screen interval. The screen interval was estimated based upon the well completion logs and available data from the previous investigation reports.

Sampling at each well consisted of:

- Measurement of depth to groundwater from the survey mark at the top of the well casing
- Purging the well using the low flow pump
- Measurement of water quality parameters as the well was being purged
- Visual observation of the water
- Collection of samples using low-flow sampling techniques into the appropriate pre-preserved sample containers

The submersible pump was decontaminated before it was placed in each well. New, dedicated polyethylene tubing was used for each well and was discarded following the completion of sampling for that well.

As water was purged from each well using the low flow technique, it was monitored for pH, temperature, dissolved oxygen, conductivity, turbidity and reduction-oxidation potential using a hand held multi-meter. The flow rate and volume of water purged from the well was also recorded. The results of the well purging and monitoring are summarized in Table 4.3 for the shallow wells and Table 4.4 for the deep wells.

Once the monitored parameters were stable, a sample was collected from the well. Samples were collected directly into the appropriate laboratory pre-cleaned containers. Preservatives required for the analytical methods had been previously added to the containers by the analytical laboratory. Based upon the analyses being performed, each groundwater sample consisted of one 1-liter amber glass jar with no preservative, one 250-ml plastic bottle with nitric acid preservative, one 250-ml plastic bottle with sodium hydroxide preservative and three 40-ml VOA vials with hydrochloric acid preservative. One additional one liter amber glass jar with hydrochloric acid was filled for the samples from the shallow aquifer wells.

Table 4.2 - Well Re-development Purge Data

Well Number	Units	Shallow Wells							
		1S	2D	3D	4S	5S	6S	7S	8S
Date		8/11/12	8/11/12	8/11/12	8/12/12	8/12/12	8/12/12	8/12/12	8/12/12
Time		12:20	13:50	16:00	8:45	12:00	16:40	14:45	13:15
Diameter	(in)	4	4	4	4	4	2	2	2
Depth	(ft)	21.17	21.49	31.19	22.72	21.35	30.38	32.82	31.89
Depth to Water	(ft)	5.02	4.85	8.64	9.19	4.10	4.40	10.37	4.44
Well Volume	(gal)	10.54	10.86	14.72	8.83	11.26	4.24	3.66	4.48
Pumping Rate	(gpm)	1.58	0.80	1.05	0.83	0.66	0.59	0.50	0.46
Volume Pumped	(gal)	40	22	24	13	25	21	15.5	15
Volume Surcharged	(gal)	9	6	4.5	5	8	3	4	2
Pumped Dry		No	3 times	3 times	3 times	3 times	1 time	1 time	No
Final Water Quality Parameters									
pH		6.83	7.37	7.02	7.98	7.47	7.11	7.52	7.31
Temperature	(C)	15.40	16.56	16.35	15.36	18.21	14.34	13.52	16.14
Dissolved Oxygen	(mg/l)	1.00	0.43	0.00	0.53	0.00	0.00	0.00	0.00
Color		Yellow tint	black	Lt brown	Yellow	Med yellow	Black	Lt yellow	Yellow tint
Clarity		Clear	Clear	Cloudy	Clear	Clear	Clear	Clear	Clear

Table 4.2 - Well Re-development Purge Data

Well Number	Units	Deep Wells							
		1D	2S	3S	4D	5D	6D	7D	8D
Date		8/11/12	8/11/12	8/11/12	8/12/12	8/12/12	8/12/12	8/12/12	8/12/12
Time		10:40	13:00	15:15	8:50	11:10	15:30	15:30	14:00
Diameter	(in)	4	4	4	4	4	4	4	4
Depth	(ft)	53.44	50.81	54.41	52.83	38.22	68.32	67.27	52.23
Depth to Water	(ft)	4.47	5.38	8.69	9.98	4.40	5.65	10.05	5.11
Well Volume	(gal)	31.97	29.65	29.84	27.97	22.08	40.91	37.35	30.76
Pumping Rate	(gpm)	1.52	1.80	0.89	1.14	1.78	1.86	1.26	1.83
Volume Pumped	(gal)	65	70	34.5	75	70	39	50	50
Volume Surcharged	(gal)	9	6	8	13	10	4	8	8
Pumped Dry		No	No	1 time	No	No	1 time	No	No
Final Water Quality Parameters									
pH		6.38	6.73	7.29	6.80	6.92	7.49	6.80	7.11
Temperature	(C0	13.58	13.43	16.56	13.51	13.94	13.67	13.46	13.84
Dissolved Oxygen	(mg/l)	0.58	0.00	0.00	0.55	0.00	6.10	0.00	0.00
Color		none	Lt yellow	Tr Black	Med Brown	Yellow tint	Yellow tint	Pale yellow	Pale yellow
Clarity		clear	clear	Clear	Cloudy	Clear	Clear	Clear	Clear

Table 4.3 - Well Sampling Purge Data for Shallow Monitoring Wells

Well ID 1S

Date	8/22/2012	Start Time	15:45	End Time	16:25
Depth of Well	15.75 ft	Depth to Water	4.49 ft	Height of Water	11.26 ft
Well Diameter	4 in	Well Volume	7.83 gal	Pumping Rate	0.5 gpm
Depth of Pump	10 ft	Volume Pumped	22.5 gal		

Water Quality Data

Parameter	Units	Initial	First Well Volume	Stabilized
Temperature	C	20.78	15.06	15.05
pH		6.94	6.66	6.65
PHmV	mV	-17	0	0
ORP	mV	-113	-100	102
Conductivity	ms/cm	21.5	37.8	37.3
DO	mg/l	0.60	0.00	0.00
Color		Clear	Clear	Clear
Clarity		Clear	Clear	Clear

Well ID 2D

Date	8/24/2012	Start Time	9:25	End Time	10:25
Depth of Well	17.49 ft	Depth to Water	4.91 ft	Height of Water	12.58 ft
Well Diameter	4 in	Well Volume	7.83 gal	Pumping Rate	0.5 gpm
Depth of Pump	14 ft	Volume Pumped	30.0 gal		

Water Quality Data

Parameter	Units	Initial	First Well Volume	Stabilized
Temperature	C	15.72	16.71	17.86
pH		7.65	7.28	7.12
PHmV	mV	-54	-34	-28
ORP	mV	-265	-294	-304
Conductivity	ms/cm	34.5	34.7	34.3
DO	mg/l	0.32	0.00	0.00
Color		Grey	Grey	Grey
Clarity		Partially Clear	Partially Clear	Partially Clear

Table 4.3 - Well Sampling Purge Data for Shallow Monitoring Wells

Well ID 3D

Date	8/24/2012	Start Time	8:35	End Time	9:15
Depth of Well	38.45 ft	Depth to Water	8.65 ft	Height of Water	29.80 ft
Well Diameter	4 in	Well Volume	19.60 gal	Pumping Rate	0.5 gpm
Depth of Pump	18 ft	Volume Pumped	20.0 gal		

Water Quality Data

Parameter	Units	Initial	First Well Volume	Stabilized
Temperature	C	14.09	18.63	14.97
pH		6.51	6.38	6.49
PHmV	mV	8	15	9
ORP	mV	-323	-352	-346
Conductivity	ms/cm	28.8	38.6	39.1
DO	mg/l	4.24	0.24	0.09
Color		Clear	Clear	Clear
Clarity		Clear	Clear	Clear

Well ID 4S

Date	8/23/2012	Start Time	9:40	End Time	10:25
Depth of Well	24.91 ft	Depth to Water	9.21 ft	Height of Water	15.70 ft
Well Diameter	4 in	Well Volume	10.40 gal	Pumping Rate	0.5 gpm
Depth of Pump	19 ft	Volume Pumped	22.5 gal		

Water Quality Data

Parameter	Units	Initial	First Well Volume	Stabilized
Temperature	C	16.38	14.99	14.19
pH		8.15	8.64	8.68
PHmV	mV	-82	-111	-111
ORP	mV	-335	-335	-335
Conductivity	ms/cm	53.7	51.6	51.7
DO	mg/l	0.00	0.00	0.00
Color		Clear	Clear	Clear
Clarity		Clear	Clear	Clear

Table 4.3 - Well Sampling Purge Data for Shallow Monitoring Wells

Well ID 5D

Date	8/23/2012	Start Time	6:40	End Time	7:30
Depth of Well	31.09 ft	Depth to Water	4.45 ft	Height of Water	26.64 ft
Well Diameter	4 in	Well Volume	17.00 gal	Pumping Rate	0.5 gpm
Depth of Pump	22 ft	Volume Pumped	25.0 gal		

Water Quality Data

Parameter	Units	Initial	First Well Volume	Stabilized
Temperature	C	17.59	12.86	12.83
pH		6.86	6.86	6.86
PHmV	mV	-11	-11	-11
ORP	mV	-106	-142	-142
Conductivity	ms/cm	33.5	36.5	36.5
DO	mg/l	0.17	0.00	0.00
Color		Clear	Clear	Clear
Clarity		Clear	Clear	Clear

Well ID 6S

Date	8/23/2012	Start Time	12:50	End Time	13:15
Depth of Well	32.82 ft	Depth to Water	10.03 ft	Height of Water	22.79 ft
Well Diameter	2 in	Well Volume	3.59 gal	Pumping Rate	0.5 gpm
Depth of Pump	20 ft	Volume Pumped	12.5 gal		

Water Quality Data

Parameter	Units	Initial	First Well Volume	Stabilized
Temperature	C	14.26	13.94	13.61
pH		7.25	7.17	7.15
PHmV	mV	-32	-28	-27
ORP	mV	-177	-204	-204
Conductivity	ms/cm	34.6	35.5	35.7
DO	mg/l	0.00	0.00	0.00
Color		Clear	Grey	Black
Clarity		Clear	Partially Clear	Opaque

Table 4.3 - Well Sampling Purge Data for Shallow Monitoring Wells

Well ID 7S

Date	8/23/2012	Start Time	11:45	End Time	12:15
Depth of Well	30.31 ft	Depth to Water	4.43 ft	Height of Water	22.88 ft
Well Diameter	2 in	Well Volume	4.90 gal	Pumping Rate	0.5 gpm
Depth of Pump	15 ft	Volume Pumped	15.0 gal		

Water Quality Data

Parameter	Units	Initial	First Well Volume	Stabilized
Temperature	C	15.90	13.67	13.78
pH		6.84	6.78	6.73
PHmV	mV	-10	-7	-4
ORP	mV	-131	-284	-32
Conductivity	ms/cm	35.1	35.8	34.9
DO	mg/l	3.00	0.00	0.00
Color		Black	Black	Black
Clarity		Opaque	Opaque	Opaque

Well ID 8S

Date	8/22/2012	Start Time	11:05	End Time	11:40
Depth of Well	31.89 ft	Depth to Water	4.96 ft	Height of Water	26.93 ft
Well Diameter	2 in	Well Volume	4.57 gal	Pumping Rate	0.5 gpm
Depth of Pump	14 ft	Volume Pumped	17.5 gal		

Water Quality Data

Parameter	Units	Initial	First Well Volume	Stabilized
Temperature	C	14.55	14.53	14.52
pH		6.77	6.66	6.62
PHmV	mV	-6	0	2
ORP	mV	-81	-66	-61
Conductivity	ms/cm	36.4	37.4	37.7
DO	mg/l	0.30	0.26	0.25
Color		Clear	Clear	Clear
Clarity		Clear	Clear	Clear

Table 4.4 - Well Sampling Purge Data for Deep Monitoring Wells

Well ID 1D

Date	8/22/2012	Start Time	14:00	End Time	15:20
Depth of Well	53.43 ft	Depth to Water	4.01 ft	Height of Water	49.42 ft
Well Diameter	4 in	Well Volume	32.60 gal	Pumping Rate	0.5 gpm
Depth of Pump	29 ft	Volume Pumped	40.0 gal		

Water Quality Data

Parameter	Units	Initial	First Well Volume	Stabilized
Temperature	C	13.60	13.83	14.10
pH		6.75	6.35	6.30
PHmV	mV	-5	17	19
ORP	mV	-64	-50	-46
Conductivity	ms/cm	19.2	30.6	30.9
DO	mg/l	0.00	0.00	0.00
Color		Clear	Clear	Clear
Clarity		Clear	Clear	Clear

Well ID 2S

Date	8/24/2012	Start Time	10:25	End Time	11:15
Depth of Well	50.72 ft	Depth to Water	5.83 ft	Height of Water	44.89 ft
Well Diameter	4 in	Well Volume	28.70 gal	Pumping Rate	0.5 gpm
Depth of Pump	31 ft	Volume Pumped	30.0 gal		

Water Quality Data

Parameter	Units	Initial	First Well Volume	Stabilized
Temperature	C	13.21	13.04	13.04
pH		7.42	6.74	6.62
PHmV	mV	-41	-5	2
ORP	mV	-46	-172	-178
Conductivity	ms/cm	33.6	38.0	31.8
DO	mg/l	2.55	0.00	0.00
Color		Grey	Grey	Grey
Clarity		Partially Clear	Partially Clear	Partially Clear

Table 4.4 - Well Sampling Purge Data for Deep Monitoring Wells

Well ID 3S

Date	8/24/2012	Start Time	7:00	End Time	8:25
Depth of Well	56.54 ft	Depth to Water	8.79 ft	Height of Water	47.75 ft
Well Diameter	4 in	Well Volume	31.30 gal	Pumping Rate	0.5 gpm
Depth of Pump	32 ft	Volume Pumped	45.0 gal		

Water Quality Data

Parameter	Units	Initial	First Well Volume	Stabilized
Temperature	C	13.55	14.43	13.91
pH		6.55	6.70	6.56
PHmV	mV	6	-2	5
ORP	mV	-186	-254	-260
Conductivity	ms/cm	39.4	38.4	39.3
DO	mg/l	4.76	2.76	1.26
Color		Clear	Clear	Clear
Clarity		Clear	Clear	Clear

Well ID 4D

Date	8/23/2012	Start Time	8:50	End Time	9:25
Depth of Well	44.31 ft	Depth to Water	10.34 ft	Height of Water	33.97 ft
Well Diameter	4 in	Well Volume	22.20 gal	Pumping Rate	0.5 gpm
Depth of Pump	30 ft	Volume Pumped	25.0 gal		

Water Quality Data

Parameter	Units	Initial	First Well Volume	Stabilized
Temperature	C	12.72	12.75	12.76
pH		7.09	6.81	6.68
PHmV	mV	-23	-8	-1
ORP	mV	-171	-173	-177
Conductivity	ms/cm	25.4	34.4	36.9
DO	mg/l	0.00	0.00	0.00
Color		Clear	Clear	Clear
Clarity		Clear	Clear	Clear

Table 4.4 - Well Sampling Purge Data for Deep Monitoring Wells

Well ID 5S

Date	8/23/2012	Start Time	7:35	End Time	8:25
Depth of Well	54.54 ft	Depth to Water	4.19 ft	Height of Water	50.35 ft
Well Diameter	4 in	Well Volume	32.60 gal	Pumping Rate	0.5 gpm
Depth of Pump	29 ft	Volume Pumped	35.0 gal		

Water Quality Data

Parameter	Units	Initial	First Well Volume	Stabilized
Temperature	C	14.66	18.05	14.58
pH		6.95	7.03	6.94
PHmV	mV	-16	-20	-15
ORP	mV	-353	-360	-363
Conductivity	ms/cm	40.2	40.0	41.7
DO	mg/l	0.00	0.00	0.00
Color		Clear	Clear	Clear
Clarity		Clear	Clear	Clear

Well ID 6D

Date	8/23/2012	Start Time	13:20	End Time	14:00
Depth of Well	68.32 ft	Depth to Water	8.25 ft	Height of Water	60.07 ft
Well Diameter	4 in	Well Volume	39.20 gal	Pumping Rate	0.5 gpm
Depth of Pump	32 ft	Volume Pumped	30.0 gal		

Water Quality Data

Parameter	Units	Initial	First Well Volume	Stabilized
Temperature	C	13.91	13.30	13.35
pH		7.21	6.55	6.49
PHmV	mV	-30	6	9
ORP	mV	-100	-88	-94
Conductivity	ms/cm	34.3	34.7	34.7
DO	mg/l	5.81	0.51	0.00
Color		Grey	Grey	Grey
Clarity		Partially Clear	Opaque	Opaque

Table 4.4 - Well Sampling Purge Data for Deep Monitoring Wells

Well ID 7D

Date	8/23/2012	Start Time	10:30	End Time	11:30
Depth of Well	96.77 ft	Depth to Water	5.21 ft	Height of Water	91.56 ft
Well Diameter	4 in	Well Volume	22.20 gal	Pumping Rate	0.5 gpm
Depth of Pump	30 ft	Volume Pumped	25.0 gal		

Water Quality Data

Parameter	Units	Initial	First Well Volume	Stabilized
Temperature	C	13.56	18.06	13.81
pH		6.77	6.75	6.34
PHmV	mV	-6	-5	-16
ORP	mV	-76	-6	-29
Conductivity	ms/cm	33.0	32.5	32.5
DO	mg/l	0.22	4.66	0.00
Color		Black	Black	Black
Clarity		Opaque	Opaque	Opaque

Well ID 8D

Date	8/22/2012	Start Time	11:50	End Time	13:15
Depth of Well	52.23 ft	Depth to Water	5.28 ft	Height of Water	46.95 ft
Well Diameter	4 in	Well Volume	30.03 gal	Pumping Rate	0.5 gpm
Depth of Pump	32 ft	Volume Pumped	42.5 gal		

Water Quality Data

Parameter	Units	Initial	First Well Volume	Stabilized
Temperature	C	14.24	14.31	14.23
pH		6.62	6.56	6.55
PHmV	mV	2	5	6
ORP	mV	-48	-52	-51
Conductivity	ms/cm	35.4	35.5	35.6
DO	mg/l	0.24	0.00	0.00
Color		Clear	Clear	Clear
Clarity		Clear	Clear	Clear

4.2.3 Quality Control Samples

Two duplicate samples were collected along with the other samples. One duplicate was collected from a shallow well and the other duplicate was collected from a deep well. The wells used for the duplicate samples were selected at random. The laboratory was not notified of the duplicate samples and analyzed all of the samples in the same manner.

A trip blank, consisting of two VOA vials filled by the laboratory with deionized water, was placed in the sample cooler by the laboratory. This trip blank accompanied the cooler throughout the sample collection and handling process.

4.2.4 Sample Handling and Delivery

All of the collected samples were labeled, placed in coolers and chilled with ice. At the end of the day, sufficient ice was placed in the cooler to maintain the samples at 4°C ±2°C, the cooler was sealed and the laboratory was contacted to arrange for a courier to pick up the samples. A chain of custody form was completed for each cooler.

The samples were picked up by QC Laboratories of Southampton, Pennsylvania. Strict chain of custody procedures were maintained from sample collection to receipt by the laboratory. The samples were maintained at 4°C with ice until delivery to the lab.

The samples were properly preserved, and the analyses were performed within the prescribed holding times. The laboratory sample checklists that accompanied the analytical reports document that all of the samples were received in acceptable condition and within the prescribed temperature range.

5. GEOTECHNICAL INVESTIGATION

5.1 Scope of the Investigation

The geotechnical investigation for the project was performed by Michael Baker Jr., Inc. The purpose of the geotechnical investigation was to determine general subsurface conditions at the project site and to evaluate those conditions with respect to geotechnical engineering considerations for the proposed construction.

In order to cap the contaminated areas of the site, the shear strength and compressibility of the underlying materials were determined. These included the time-dependent stress behavior of the underlying materials in order to formulate a time sequenced soil placement plan to safely construct the cap.

The information contained in this section of this RIR was obtained from Baker's Geotechnical Engineering Report, prepared October 2012.

5.2 Objectives

Specific objectives accomplished during the geotechnical investigation included:

- Characterizing the subsurface conditions in the impoundments, berms and the adjacent wetlands outside the berms
- Determining the stability of the berms for the existing conditions and placement of an engineered fill cap
- Evaluating the geotechnical conditions in the proposed area for the Class B facility, the scale and the steel bridge that allows access of the site
- Evaluating stability of the impoundments to support the engineered fill cap
- Performing slope stability analyses to ensure that adequate factors of safety will be maintained in the design
- Estimating the settlement that will occur in the impounds
- Determining the effective vertical overburden pressure by area and related time rate of consolidation allowable to safely place the cap
- Developing construction options for handling settlement and slope stability issues
- Developing a geotechnical monitoring program to be implemented during construction

5.3 Field Exploration

5.3.1 Boring Procedures

The field exploration consisted of drilling 31 standard penetration test (SPT) borings and ten cone penetrometer test (CPT) borings. Warren George, Inc. completed the borings using a swamp buggy-mounted drill rig and a truck-mounted drill rig from July 10 to August 3, 2012 using flush joint casing with mud rotary drilling (casing advancer system) methods to drill the borings. "Tiger" mud and powdered sodium-bentonite were circulated within the hole to remove cuttings. Rock coring was not conducted. All CPT borings were performed from the swamp buggy using a drill rig to advance the CPT rods and probe.

Baker personnel logged the borings. The boring logs and the results of all of the subsurface investigation are documented in Baker's Geotechnical Engineering Report, prepared October 2012. The boring locations and depths are summarized in Table 5.1.

5.3.2 Standard Penetration Testing

The field exploration consisted of SPT soil samples obtained at continuous 2-foot intervals for the top 10 feet of drilling, and at 5-foot intervals below 10 feet, except within the impounds, where continuous sampling was conducted through the entire depth of the alum-YPS sludge.

In general, the SPT consisted of advancing a split spoon 2 feet by driving it with a 140-pound hammer falling 30-inches. The values reported on the boring logs are the blows required to advance four successive 6-inch increments. The first 6-inch increment is considered as seating. The sum of the number of blows for the second and third increments is the "N" value. The fourth value is not used, but is recorded on the logs. The soils collected in the spoon were visually examined and classified in general accordance with the Unified Soil Classification System.

5.3.3 Cone Penetrometer Testing with Pore Pressure Measurements

The CPT testing was performed on July 10-16, 2012. A total of eighteen (18) soundings were completed at eleven different locations. The CPT program was performed to evaluate in-situ geotechnical criteria relative to the soils. Shear wave velocity tests were performed at eight of the locations with testing at five-foot depth intervals. Dissipation tests were performed at nine locations at various depths.

The cone penetrometer tests were carried out using an integrated electronic piezocone. The piezocone was a compression model cone penetrometer with a 15 cm^2 tip and a 225 cm^2 friction sleeve. The cone is designed with an equal end area friction sleeve and a tip end area ratio of 0.80. The piezocone dimensions and the operating procedure were in accordance with ASTM standard D-5778-07.

Pore pressure filter elements, made of porous plastic, were saturated under a vacuum using silicone fluid as the saturating medium. The pore pressure element was six millimeters thick and was located immediately behind the tip (the u2 location) for all soundings. The cone was advanced using a skid drill rig, mounted on a Kori rig operated by Warren George.

Table 5.1 – Boring Locations and Depths

Boring	Depth (ft)	Location	Boring	Depth (ft)	Location
BD-01R	41.5	Impound 4 Berm	IS-02	27.0	Impound 2
BD-02	32.0	Impound 3 Berm	W-01	41.0	Wetland adjacent to Impound 4
BD-03	47.0	Impound 4 Berm	W-02	26.5	Wetland adjacent to Impound 4
BD-04R	39.0	Impound 2 Berm	W-03	30.0	Wetland adjacent to Impound 3
BD-05	37.0	Impound 1 Berm	W-04	32.0	Wetland adjacent to Impound 1
BS-01	32.0	Impound 6 Berm	W-05	42.0	Wetland adjacent to Impound 5
BS-02	32.0	Impound 3 Berm	W-07R	27.0	Wetland adjacent to Impound 2
BS-03	26.0	Impound 4 Berm	W-08	32.0	Wetland adjacent to Impound 3
BS-04	27.0	Impound 4 Berm	CP-01	28.9	Impound 4
BS-05	27.0	Impound 1 Berm	CP-02	29.5	Impound 4
BS-06	24.0	Impound 1 Berm	CP-03	19.8	Wetland adjacent to Impound 2
BS-07R	27.0	Impound 2 Berm	CP-04	26.6	Impound 6
BS-08	25.0	Impound 3 Berm	CP-05	39.5	Impound 5
BS-09	26.0	Access Bridge	CP-06A	26.9	Impound 2
ID-01	49.0	Impound 4	CP-08	24.1	Impound 6
ID-02	47.0	Impound 5	CP-08A	20.8	Impound 6
ID-03R	34.5	Impound 6	CP-09D	18.9	Impound 3
ID-04	36.0	Impound 3	CP-10	21.0	Wetland adjacent to Impound 6
ID-05	47.0	Impound 2	CP-11A	21.2	Impound 2
ID-06	37.0	Impound 1	CP-12	20.8	Impound 1
IS-01	27.0	Impound 2/5			

Tip resistance (qc), sleeve friction (fs) and dynamic pore pressure (u) data were recorded onto electronic media every five centimeters as the cone was advanced into the ground.

During seismic testing, the seismic signals were recorded using a geophone mounted in the cone and an up-hole digital oscilloscope. A sledge hammer, struck against a steel wedge was used as the seismic source. While stopped, pore water pressures were automatically recorded at five-second intervals and the readings were stored in a dissipation file for estimation of $C_{h,}$ the coefficient of consolidation that can in turn be used to calculate K_h, the horizontal hydraulic conductivity.

5.4 Laboratory Analyses

The laboratory tests performed and the testing procedures are listed in Table 5.2. The results of all of the analyses are discussed in detail in Baker's Geotechnical Engineering Report.

Table 5.2 - Laboratory Testing

Laboratory Analysis	ASTM Standard	Purpose
Natural Moisture Content	D2216	Determine soil moisture content
Atterberg Limits	D4318	Determine soil plasticity
Sieve Analysis	D422	Determine soil grain size distribution
Hydrometer Analysis	D422	Determine clay and silt fraction
Specific Gravity	D854	Determine specific gravity
pH	D4972	Determine acidity
Organic Content	D2974	Determine organic content
Permeability	D5084	Determine soil permeability
Consolidation	D2435	Determine soil compressibility
Unconsolidated-undrained (UU) triaxial	D2850	Determine undrained shear strength
Consolidated-undrained (CIU) triaxial	D4767	Determine drained shear strength

5.5 Subsurface Conditions

5.5.1 Subsurface Soils

The soil profiles and the test boring logs contained in the Geotechnical Report depict details related to the subsurface conditions. The borings encountered seven (7) distinct strata.

Stratum I: FILL (Existing Berm): This stratum was encountered at ground surface to depths ranging from 0.5 feet to 14.9 feet below ground surface within most of the berm borings. Fill was also encountered at ground surface in several impoundment borings. The stratum generally consisted of black to brown to gray, loose to very dense, Silty SAND (SM) with Gravel and red-brown, Clayey GRAVEL (GC) to stiff to very stiff, yellow to light gray, Clayey SILT (ML) and red-brown, Sandy Lean CLAY (CL), with varying amounts of debris (bricks, rail ties, and similar debris). The SPT N-values ranged from 5 to 200 blows per foot (bpf), averaging 43 bpf.

Stratum II: FILL (Sludge): This stratum was encountered in some berm borings, all impoundment borings and one wetland boring. It was found at ground surface or just below berm fill soils to depths ranging from 2.3 feet to 19.8 feet. Soils within this layer can be generally classified as gray to dark gray, very loose to dense, Elastic SILT (MH) with varying amounts of peat and sand. The SPT-N values varied from 0 to 38 bpf, averaging 9 blows bpf, indicating a wide range of density for this layer. The sludge had liquid limits ranging from 59 to 62 percent, averaging 61 percent and plasticity indices ranging from 1 to 10 percent, averaging 5 percent. The moisture content ranged from 73.6 to 269.9 percent, averaging 122 percent.

Stratum III: Peat: This stratum was encountered in almost all borings below Stratum I and/or II to depths ranging from 8.7 feet to 29.9 feet below ground surface. In wetland borings, it was encountered at ground surface. Soils within this layer can be generally classified as gray, very loose to very dense, Elastic SILT (MH) with varying amounts of Sand and brown, very loose, Silty SAND (SM) to gray to dark gray, very soft to very stiff, Organic Fat CLAY (CH-OH); very soft to stiff, Organic Lean CLAY (CL) with varying amounts of Sand, and very soft to soft, Sandy Silty CLAY (CL-ML), with varying amounts of plant fiber. The SPT-N values varied from 0 to over 35 bpf, averaging 3 bpf. The higher blow counts were generally found near interfaces with harder soils. The soil was highly plastic with liquid limits ranging from 25.0 to 467.0 percent, averaging 141 percent and plasticity indices ranging from 15 to 256 percent, averaging 69 percent. The moisture content ranged from 26.1 to 375.7 percent, averaging 101 percent.

Stratum IV: Soft Organic Clay/Silt: This stratum was encountered in almost all borings, generally below Stratum III and above Stratum V or VI. Soils within this layer can be generally classified as very loose to very dense, Elastic SILT (MH) with varying amounts of Sand to gray to dark gray, very soft to very stiff, Organic Fat CLAY (CH-OH); very soft to stiff and Organic Lean CLAY (CL) with varying amounts of Sand. The SPT-N values varied from 0 to over 7 bpf, averaging 5 bpf.

Stratum V: Stiff Clay/Silt: This stratum was encountered in some borings, generally below Stratum III or IV. Soils within this layer can be generally classified as tan to white, very loose to very dense, Poorly-Graded GRAVEL with Silt and Sand, Silty GRAVEL with Sand. The SPT-N values varied from 4 to over 60 bpf, averaging 24 bpf.

Stratum VI: Alluvial Soil: This stratum was encountered in almost all borings, generally below Stratum III or IV. Soils within this layer can be generally classified as grey to brown, loose to very dense, Silty GRAVEL (SM) with Sand; Poorly-Graded GRAVEL (GP) with Sand; Clayey SAND (SC); Silty SAND (SM); and Sandy SILT (ML). The SPT-N values varied from 0 to over 200 bpf, averaging 55 bpf.

Stratum VII: Residual Soil: This stratum was generally below Stratum V or VI to the boring termination depth. Soils within this layer can be generally classified as red-brown, medium dense to very dense, Clayey SAND (SC) and Clayey SILT (ML) to very stiff to hard, Sandy Lean CLAY (CL); commonly with Shale fragments. The SPT-N values varied from 10 to over 200 bpf, averaging 59 bpf.

5.5.2 Groundwater

Groundwater was encountered in most borings from ground surface to as deep as 6 feet below ground surface, averaging 3.5 feet, during the field exploration. Within the berms, groundwater depths ranged from 1 foot to 6 feet below ground surface, averaging 3.8 feet below ground surface. Within the impoundments, groundwater depths ranged from 0 to 6 feet below ground surface, averaging 3.2 feet below ground surface. Groundwater within the wetlands was approximately at ground surface. It should be noted that the actual level of the hydrostatic water table and the amount and level of perched water should be anticipated to fluctuate throughout the year, depending upon variations in precipitation, surface run-off, infiltration, site topography and drainage.

5.6 Geotechnical Recommendations

Both the settlement and the stability analysis indicate that the proposed grading plan can be safely achieved as long as construction is performed in stages with waiting periods between stages. It is anticipated that the completion of the capping project will take approximately 5 years; therefore this should not be an issue. Based on the current available data, 90% consolidation of the cohesive soil underneath the sludge will take two to three years after the placement of fill. For a sludge layer 13 feet thick, the estimated time required to reach 90% of consolidation is approximately 48 days.

The following construction sequence is recommended:

1. Prepare the subgrade.

   - Only cut trees and stumps flush with ground surface.
   - Do not remove or disturb root mat or meadow mat.
   - Leave small vegetative cover, such as grass and reeds, in place. The vegetation will help to carry the construction equipment load during the site preparation and placing the first several feet of the fill.

2. Place 3 feet of "fair drainage material" on top of the impoundments. The "fair drainage material" is defined as soil materials with permeability greater than 5.0×10^{-5} cm/s. The following procedure should be followed for placing the "fair drainage material:

   - End-dump the initial fill materials into the impoundment from the adjacent access road. The first lift of the fill should consist of "fair drainage material".
     - Use appropriate trucks and equipment compatible with constructability design.
     - End-dump on the previously placed fill
     - Limit height of dumped piles, e.g., to less than 4 ft above the adjacent sludge or 5 feet above the previous fill, to avoid a local bearing failure. Spread piles immediately to avoid local depressions.
     - Use lightweight dozers and/or front-end loaders to spread the fill.
   - Traffic on the first lift should be limited. Construction vehicles should be limited in size and weight to limit rutting to 3 inches.
   - The first lift should be compacted only by tracking in place with low-ground-pressure bulldozers or end-loaders.
   - Once the fair drainage material is at least 2 ft above the original ground, subsequent lifts can be compacted with a smooth drum vibratory roller or other suitable compactor. If localized liquefied conditions occur, the vibrator should be turned off and the weight of the drum alone should be used for compaction.

- Generally, the above procedure applies to Impoundments 1, 4, 5 and 6. Minor adjustment of the thickness of the first lift and the construction sequence might be required during the construction.

3. After the "fair drainage material" is placed, the geotechnical instrumentation needs to be installed: Settlement Plates, Vibrating Wire Piezometer and Slope Inclinometer. The detailed requirements for these instrumentations will be developed during the final design. The following are the brief summary:

   - The settlement plates should be placed at the top of the first lift. The objective of the settlement plate installation is to control the construction sequence.

   - For the piezometers located near the river, filters shall be installed in both organic cohesive soil as well as the sludge. At other locations, the filters of the piezometers only need to be installed within the sludge. The objective for the piezometers is to monitor the dissipation of the excess pore pressures generated during the construction. The shear strength of the soil will increase after the dissipation.

   - The slope inclinometers should be installed along the edge of the proposed fill to ensure that slope stability is maintained.

   - Additional geotechnical in-situ tests such as CPT and field vane shear testing may be required during the construction

4. This is the end of Stage One construction. The starting time for the next construction stage will be based on the instrumentation monitoring results. Generally, the criterion for the next construction stage is when the soft material reaches a minimum 90% of the primary consolidation. The estimated waiting period is approximately 38 days.

5. At areas near the river (Impoundments 4 and 6), the fill placement might be controlled by the time required to dissipate the pore pressure of the existing cohesive soils underneath the sludge. Longer waiting period times might be required as determined by the geotechnical monitoring. More frequent instrumentation monitoring will be required to ensure the rate of fill placement is slow enough to allow the dissipation of excess pore pressure.

6. Place the fill for each consecutive construction stage. The thickness of each construction layer should not exceed 5 ft. The fill material needs to be roller compacted.

7. To facilitate the dissipation of the pore water pressure in the in-situ cohesive soil underneath the sludge, place all fill material in a pattern with relatively the same elevation.

8. Due to the relatively high shear strength of the surface materials in Impounds 2 and 3, fill materials may be stockpiled 10 feet above adjacent ground. If higher stockpiles are required, the stockpiles should be placed in a staged manner, thereby allowing the underlying soils to consolidate. Once the stockpile has reached the desired height, further staged placement should not be required. The consolidation of the underlying materials should also be monitored with field shear strength testing prior to increasing the stockpile height. In all other areas, piles should be no more than 6 feet high.

6. ENVIRONMENTAL SAMPLING RESULTS

6.1 Subsurface Soil Sample Results

6.1.1 Analytical Procedures

The soil samples were analyzed by QC Laboratories in Southampton, Pennsylvania. QC Laboratories is accredited in accordance with the National Environmental Laboratory Accreditation Program (NELAP) requirements. Its New Jersey NELAP identification number is PA166.

The samples were analyzed for potential contaminants, following the analytical matrix in the Investigation Plan and the QAPP. The following analytical methods were used to analyze the samples:

- Petroleum hydrocarbons by NJDEP Method EPH
- Semi-volatile organic compounds (S-VOCs) by EPA Method 8270C
- Polynuclear aromatic hydrocarbons (PAHs) by EPA Method 8270C
- TAL metals by EPA Method Methods 6010B and Method 7071A
- Cyanide by EPA Method 9091/9014.

The laboratory report and the chains of custody for the subsurface soil and sludge samples are contained in Appendix E. The results are discussed in the following paragraphs.

6.1.2 Surface Fill Analysis Results

Eight samples of the surface fill soil were collected from the borings. Selected samples were analyzed for TAL metals, cyanide, PAHs, S-VOCs, EPH and VOCs. The analytical results are summarized in Table 6.1 for the inorganics, Table 6.2 for the PAHs, Table 6.3 for the S-VOCs (excluding the PAHs) and Table 6.4 for the EPH and VOCs. Also shown on the tables for comparison purposes are the Non-residential Direct Contact Remediation Standards (NRDCRS) and the Impact to Groundwater Screening Levels (IGWSL).

Review of the data in Tables 6.1 through 6.4 shows that several metals, cyanide and several PAH compounds exceeded either the NRDCRS or the IGWSL or both. Specific parameters that exceeded either standard in one or more samples are listed in Table 6.5.

Parameters that exceed one or more of the standards are shown in bold on the tables. The metals and PAH results correlate well with the results from the October 2011 fill investigation.

6.1.3 Alum-YPS Sludge Analysis Results

Thirteen samples of the alum-YPS sludge were collected from the borings. All of these samples were analyzed for TAL metals and cyanide. One sample was also analyzed for PAHs. The analytical results are summarized in Tables 6.6 for the inorganics and 6.7 for the PAHs. Also shown on the tables for comparison purposes are the NRDCRS and IGWSL concentrations.

Table 6.1 - Surface Fill Sample Analysis Results
Inorganics - EPA Methods 6010C, 7471B and 9010/9014

Parameter	Units	Non-Res Remed Std	Impact to GW Scr Lvl	IS-02-02-04-008	BS-07R-02-04-009	ID-01-04-06-021	BS-05-0-2-023	BD-05-02-04-027	ID-04-02-04-030	W-02-00-04-036	W-08-00-04-039
Aluminum	mg/kg	na	3,900	8,350	7,140	8,860	10,700	10,900	10,100	20,500	9,380
Antimony	mg/kg	450	6	1.67 j	<0.988	<1.43	0.956 j	4.90 j	<1.08	7.64	1.16
Arsenic	mg/kg	19	19	8.60	2.82	<1.38	**48.5**	18.0	4.34	**248**	7.50
Barium	mg/kg	59,000	1,300	90.3	97.2	48.0	63.0	176	75.8	495	63.9
Beryllium	mg/kg	140	0.5	**0.687**	0.329	0.156 j	0.382	**0.929**	**0.504**	**1.13**	0.410
Calcium	mg/kg	none	none	4,180	14,200	280,000	13,300	214,000	26,100	4,190	59,300
Cadmium	mg/kg	78	1	<0.0246	<0.0255	<0.0363	<0.0240	**1.95**	<0.0274	<0.0725	<0.00541
Chromium	mg/kg	none	none	28.6	16.5	13.5	19.9	38.3	34.7	314	20.7
Cobalt	mg/kg	590	59	9.00	7.91	2.57	7.89	5.17	9.15	21.4	4.23
Copper	mg/kg	45,000	7,300	61.3	42.2	1.85	28.4	186	31.7	677	41.2
Iron	mg/kg	none	none	20,100	14,100	2,150	18,100	11,900	22,900	35,200	10,700
Lead	mg/kg	800	59	**112**	**148**	11.0	45.8	**236**	**112**	**757**	36.3
Magnesium	mg/kg	none	none	2,560	4,270	1,040	4,930	2,250	7,230	7,120	2,840
Manganese	mg/kg	5,900	42	**231**	**264**	37.4	**294**	**194**	**415**	**270**	**142**
Mercury	mg/kg	65	0.1	**0.317**	**0.469**	<0.0169	0.0605 j	**0.226** j	0.0785 j	**31.6**	1.03
Nickel	mg/kg	23,000	31	21.2	14.2	3.74	15.6	**50.2**	20.0	**118**	13.1
Potassium	mg/kg	none	none	970	1,860	166	1,380	1,160	1,560	4,220	2,300
Selenium	mg/kg	5,700	7	<0.399	<0.413	2.18	<0.389	<0.978	<0.444	5.55 j	<0.0869
Silver	mg/kg	5,700	1	<0.0935	<0.0967	<0.138	<0.0911	0.311 j	<0.104	<0.276	<0.0204
Sodium	mg/kg	none	none	207	433	1,330	534	5,280	1,130	15,900	7,710
Thallium	mg/kg	79	3	<1.17	<1.21	<1.73	<1.14	<2.87	<1.30	<3.45	<0.255
Vanadium	mg/kg	1,100	none	36.7	31.8	14.8	39.1	87.6	28.5	91.7	23.5
Zinc	mg/kg	110,000	600	231	124	4.21	68.4	389	168	**652**	75.3
Cyanide	mg/kg	23,000	13	<2.96	<3.06	**1,120**	N/A	**66.4**	N/A	**334**	**1,330**

Table 6.2 - Surface Fill Sample Analysis Results
Polynuclear Aromatic Hydrocarbons (PAHs) - EPA Method 8270C

Compound	Units	Non-Res Remed Std	Impact to GW Scr Lvl	IS-02-02-04-008	BS-07R-02-04-009	BS-05-0-2-023	BD-05-02-04-027	ID-04-02-04-030	W-02-00-04-036
Acenaphthene	ug/kg	3.70E+07	74,000	<492	<509	<480	<121	<54.9	<145
Acenaphthylene	ug/kg	3.00E+08	na	766 j	<414	<390	<98.1	<44.6	<118
Anthracene	ug/kg	3.00E+07	1,500,000	1,030 j	<550	<518	<130	138 j	<157
Benzo(a)anthracene	ug/kg	2,000	500	**4,170**	**771** j	**1,000** j	<93.7	**506**	<113
Benzo(b)fluoranthene	ug/kg	2,000	2,000	**4,690**	762 j	1,030 j	<77.8	413	<93.5
Benzo(k)fluoranthene	ug/kg	23,000	16,000	4,010	583 j	800 j	<99.8	398	<120
Benzo(a)pyrene	ug/kg	200	200	**4,870**	**724** j	**1,030** j	<92.3	**482**	<111
Benzo(g,h,i)perylene	ug/kg	3.00E+07	na	3,110	503 j	<673	<84.7	295 j	<102
Chrysene	ug/kg	230,000	52,000	4,620	893 j	967 j	<89.7	523	112 j
Dibenz(a,h)anthracene	ug/kg	200	500	1,340 j	<249	<553	<69.6	115 j	<83.7
Fluoranthene	ug/kg	2.40E+07	840,000	9,400	1,520 j	1,950 j	<84.4	915	142 j
Fluorene	ug/kg	2.40E+07	110,000	679 j	<364	<342	<86.2	50.8 j	<104
Indeno(1,2,3-cd)pyrene	ug/kg	2,000	5,000	**2,920** j	397 j	<715	<90.0	270 j	<108
2-Methylnaphthalene	ug/kg	2.40E+06	5,000	<452	<468	<440	<111	<50.4	<133
Naphthalene	ug/kg	17,000	16,000	<555	<574	<541	<136	<61.9	<164
Phenanthrene	ug/kg	3.00E+08	n/a	6,710	1,210 j	1,110 j	<92.9	523	132 j
Pyrene	ug/kg	1.80E+07	550,000	8,670	1,630 j	2,080 j	<104	1,040	144 j

Table 6.3 - Surface Fill Sample Analysis Results
Semi-Volatile Organic Compounds (SVOC) - EPA Method 8270C
(excludes PAHs)

Parameter	Units	Non-Res Remed Std	Impact to GW Scr Lvl	BS-07R-02-04-009
Aniline	ug/kg	none	none	<447
Benzidine	ug/kg	700	700	<4,580
Benzoic acid	ug/kg	none	none	<8,020
Benzyl alcohol	ug/kg	none	none	<400
Bis(2-chloroethyl)ether	ug/kg	2,000	200	<604
Bis(2-chloroethoxy)methane	ug/kg	none	none	<435
Bis(2-chloroisopropyl)ether	ug/kg	67,000	3,000	<632
Bis(2-ethylhexyl) phthalate	ug/kg	140,000	790,000	408 j
4-Bromophenyl-phenyl ether	ug/kg	none	none	<370
Butylbenzyl phthalate	ug/kg	14,000,000	150,000	<405
Carbazole	ug/kg	96,000	none	<431
4-Chloroaniline	ug/kg	none	none	<370
4-Chloro-3-methylphenol	ug/kg	none	none	<351
4-Chlorophenyl-phenylether	ug/kg	none	none	<432
2-Chloronaphthalene	ug/kg	none	none	<387
2-Chlorophenol	ug/kg	2,200,000	500	<427
Dibenzofuran	ug/kg	none	none	<487
1,2-Dichlorobenzene	ug/kg	59,000,000	11,000	<645
1,3-Dichlorobenzene	ug/kg	59,000,000	12,000	<634
1,4-Dichlorobenzene	ug/kg	13,000	1,000	<666
3,3'-Dichlorobenzidine	ug/kg	4,000	200	<466
2,4-Dichlorophenol	ug/kg	2,100	200	<739
Diethyl phthalate	ug/kg	550,000,000	57,000	<409
2,4-Dimethylphenol	ug/kg	14,000,000	700	<349
Dimethyl phthalate	ug/kg	none	none	<1,050
Di-n-butyl phthalate	ug/kg	68,000,000	620,000	<376
4,6-Dinitro-2-methyl phenol	ug/kg	68,000	300	<340
2,4-Dinitrophenol	ug/kg	1,400,000	300	<1,680
2,4-Dinitrotoluene	ug/kg	3,000	none	<484
2,6-Dinitrotoluene	ug/kg	3,000	none	<469
Di-n-octylphthalate	ug/kg	270,000,000	3,300,000	<322
1,2-Diphenylhydrazine	ug/kg	2,000	700	<373
Hexachlorobenzene	ug/kg	1,000	200	<453
Hexachlorobutadiene	ug/kg	25,000	600	<622
Hexachlorocyclopentadiene	ug/kg	110,000	210,000	<346
Hexachloroethane	ug/kg	140,000	200	<469
Isophorone	ug/kg	2,000,000	200	<335
2-Methylphenol	ug/kg	3,400,000	none	<427
3 & 4-Methylphenol	ug/kg	340,000	none	<649
2-Nitroaniline	ug/kg	23,000,000	none	<427
3-Nitroaniline	ug/kg	none	none	<480
4-Nitroaniline	ug/kg	none	none	<384

Table 6.3 - Surface Fill Sample Analysis Results
Semi-Volatile Organic Compounds (SVOC) - EPA Method 8270C
(excludes PAHs)

Parameter	Units	Non-Res Remed Std	Impact to GW Scr Lvl	BS-07R-02-04-009
Nitrobenzene	ug/kg	340,000	200	<613
2-Nitrophenol	ug/kg	none	none	<426
4-Nitrophenol	ug/kg	none	none	<409
n-Nitrosodimethylamine	ug/kg	700	700	<601
n-Nitroso-di-n-propylamine	ug/kg	300	200	<342
n-Nitrosodiphenylamine	ug/kg	390,000	200	<692
Pentachlorophenol	ug/kg	10,000	300	<547
Phenol	ug/kg	210,000,000	5,000	<393
1,2,4-Trichlorobenzene	ug/kg	820,000	400	<600
2,4,5-Trichlorophenol	ug/kg	68,000,000	44,000	<378
2,4,6-Trichlorophenol	ug/kg	74,000	200	<371

Table 6.4 - Surface Fill Sample Analysis Results

Petroleum Hydrocarbons (NJDEP EPH) and Volatile Organic Compounds (EPA Method 8260B)

Parameter	Units	Non-Res Remed Std	Impact to GW Scr Lvl	BS-07R-02-04-009
Petroleum Hydrocarbons (EPH)	mg/kg	none	none	19.5 j
Acetone	ug/kg	na	12,000	33.3 b
Benzene	ug/kg	5	5	<2.00
Bromochloromethane	ug/kg	none	none	<2.09
Bromodichloromethane	ug/kg	3	5	<2.05
Bromoform	ug/kg	280	20	<1.54
Bromomethane	ug/kg	59	30	<2.71
2-Butanone	ug/kg	44,000	600	5.55 j
Carbon disulfide	ug/kg	110,000	4,000	10.1 j
Carbon tetrachloride	ug/kg	2	5	<2.09
Chlorobenzene	ug/kg	7,400	400	27.3
Chloroethane	ug/kg	1,100	na	<1.68
Chloroform	ug/kg	2	200	<1.81
Chloromethane	ug/kg	12	na	<2.52
Cyclohexane	ug/kg	none	none	<2.03
Dibromochloromethane	ug/kg	8	5	<1.58
1,2-Dibromoethane	ug/kg	0.04	5	<1.88
1,2-Dibromo-3-chloropropane	ug/kg	0.2	5	<2.28
1,2-Dichlorobenzene	ug/kg	59,000	11,000	<2.09
1,3-Dichlorobenzene	ug/kg	29,000	12,000	4.59 j
1,4-Dichlorobenzene	ug/kg	13	1,000	<2.50
Dichlorodifluoromethane	ug/kg	230,000	25,000	<1.92
1,1-Dichloroethane	ug/kg	24	200	<2.24
1,2-Dichloroethane	ug/kg	3	5	<1.79
1,1-Dichloroethene	ug/kg	50	5	<2.39
cis-1,2-Dichloroethene	ug/kg	560	200	<1.62
trans-1,2-Dichloroethene	ug/kg	720	400	<2.13
1,2-Dichloropropane	ug/kg	5	5	<1.98
cis-1,3-Dichloropropene	ug/kg	7	5	<1.73
trans-1,3-Dichloropropene	ug/kg	7	5	<1.86
1,4-Dioxane	ug/kg	none	none	<91.5
Ethyl benzene	ug/kg	110,000	8,000	<2.43
2-Hexanone	ug/kg	none	none	<4.18
Isopropyl benzene	ug/kg	none	none	<2.32
Methyl acetate	ug/kg	na	14,000	<2.28
Methyl tertiary butyl ether	ug/kg	320	200	<1.83
Methylcyclohexane	ug/kg	none	none	<2.54
Methylene chloride	ug/kg	97	7	<3.22
4-Methyl-2-pentanone	ug/kg	none	none	<3.60
Styrene	ug/kg	260	2,000	<1.90

Table 6.4 - Surface Fill Sample Analysis Results

Petroleum Hydrocarbons (NJDEP EPH) and Volatile Organic Compounds (EPA Method 8260B)

Parameter	Units	Non-Res Remed Std	Impact to GW Scr Lvl	BS-07R-02-04-009
1,1,2,2-Tetrachloroethane	ug/kg	3	5	<1.96
Tetrachloroethene	ug/kg	5	5	<2.32
Toluene	ug/kg	91,000	4,000	2.73 j
1,2,3-Trichlorobenzene	ug/kg	none	none	<3.67
1,2,4-Trichlorobenzene	ug/kg	820	400	<2.84
1,1,1-Trichloroethane	ug/kg	4,200	200	<2.15
1,1,2-Trichloroethane	ug/kg	6	10	<2.11
Trichloroethene	ug/kg	20	7	<2.67
Trichlorofluoromethane	ug/kg	340,000	22,000	<2.32
1,1,2-Trichloro-1,2,2- trifluoroethane	ug/kg	none	none	<2.45
Vinyl chloride	ug/kg	2	5	<2.47
m&p-Xylenes	ug/kg	170,000	12,000	<4.93
o-Xylene	ug/kg	170,000	12,000	3.33 j

Table 6.5 – Parameters Exceeding NRDCRS or IGWSL in Surface Fill Samples

Inorganics	Organics
Arsenic	Benzo(a)anthracene
Beryllium	Benzo(b)fluoranthene
Cadmium	Benzo(a)pyrene
Lead	Dibenz(a,h)anthracene
Manganese	Indeno(1,2,3-c,d)pyrene
Mercury	
Nickel	
Zinc	
Cyanide	

Review of the data in Tables 6.6 and 6.7 shows that alum-YPS sludge is characterized by elevated concentrations of aluminum and calcium, characteristic of the primary components of the sludge. The results also show that several metals and cyanide exceeded the IGWSL concentrations. Specific parameters that exceeded the standard in one or more samples are listed in Table 6.8.

None of the PAH compounds were detected at the laboratory reporting limit in the one sample analyzed for PAHs. However, because of the high metals concentration in the sample, matrix interference required the laboratory to dilute the sample, raising the reporting limits. As a result, the reporting limits exceeded the standards for benzo(a)anthracene, benzo(a) pyrene and dibenz(a,h)anthracene.

Parameters that exceed one or more of the standards are shown in bold on the tables.

Table 6.8 – Parameters Exceeding IGWSL in Alum-YPS Sludge Samples

Inorganics
Aluminum
Beryllium
Cadmium
Cobalt
Lead
Manganese
Mercury
Nickel
Cyanide

Table 6.6 - Alum-YPS Sludge Sample Analysis Results
Inorganics - EPA Methods 6010C, 7471B and 9010/9014

Parameter	Units	Non-Res Remed Std	Impact to GW Scr Lvl	BS-02-03-05-001	BD-02-07-09-003	ID-05-08-10-006	BD-01R-03-05-011	BD-03-06-08-013	BD-04R-04-06-015	IS-01-6-8-017
Aluminum	mg/kg	na	3,900	**7,140**	**3,820**	**14,800**	**6,520**	**14,200**	**6,320**	**29,200**
Antimony	mg/kg	450	6	1.79 j	<1.66	<1.33	<1.50	<1.53	<1.48	<1.81
Arsenic	mg/kg	19	19	5.33	3.49	1.90	<1.47	<1.48	<1.44	4.51
Barium	mg/kg	59,000	1,300	479	30.0	107	23.3	36.6	84.8	48.2
Beryllium	mg/kg	140	0.5	**1.13**	0.347 j	0.376	0.240 j	0.246 j	0.203 j	<0.00597
Calcium	mg/kg	none	none	203,000	215,000	66,000	276,000	227,000	234,000	226,000
Cadmium	mg/kg	78	1	**4.33**	<0.0427	0.329	<0.0688	<0.0390	<0.0378	<0.0460
Chromium	mg/kg	none	none	3.69		5.01	14.6		2.14	38.0
Cobalt	mg/kg	590	59	**75.3**	1.77 j	19.5	2.63	3.99	12.5	7.14
Copper	mg/kg	45,000	7,300	24.4	2.48	32.0	1.70 j	1.60 j	0.837 j	15.0
Iron	mg/kg	none	none	13,300	3,160	18,700	2,960	6,050	1,830	9,690
Lead	mg/kg	800	59	**60.2**	43.1	56.1	11.3	17.1	11.5	20.7
Magnesium	mg/kg	none	none	4,400	3,820	1,740	882	1,240	773	20,700
Manganese	mg/kg	5,900	42	**156**	**55.8**	**123**	**56.1**	**96.2**	40.1	**356**
Mercury	mg/kg	65	0.1	<0.105	<0.0997	**0.262**	<0.0906	<0.0911	<0.0882	0.261
Nickel	mg/kg	23,000	31	**38.4**	7.86	13.3	4.77	8.10	4.92	8.51
Potassium	mg/kg	none	none	1,170	371	1,270	248	800	110	294
Selenium	mg/kg	5,700	7	2.46 j	2.79 j	<0.548	4.45	2.61 j	1.41	6.59
Silver	mg/kg	5,700	1	<0.170	<0.162	<0.129	<0.147	<0.148	<0.143	<0.175
Sodium	mg/kg	none	none	8,630	7,020	2,240	1,330	1,010	873	2,960
Thallium	mg/kg	79	3	<2.13	<2.03	<1.61	<1.84	<1.85	<1.79	<2.18
Vanadium	mg/kg	1,100	none	59.1	9.19	28.1	13.8	23.1	12.8	48.0
Zinc	mg/kg	110,000	600	185	20.9	147	7.98	16.0	6.48	36.9
Cyanide	mg/kg	23,000	13	**2,300**	**1,720**	**123**	**405**	**825**	**1,180**	**2,850**

Table 6.6 - Alum-YPS Sludge Sample Analysis Results
Inorganics - EPA Methods 6010C, 7471B and 9010/9014

Parameter	Units	Non-Res Remed Std	Impact to GW Scr Lvl	ID-02-2-4-019	ID-01-18-20-022	ID-06-02-04-025	ID-04-06-08-031	ID-03R-00-02-033	BS-03R-02-04-037
Aluminum	mg/kg	na	3,900	**4,330**	**6,830**	3,430	**3,980**	**15,000**	2,990
Antimony	mg/kg	450	6	<1.37	<2.78	<1.91	1.13	<1.89	<1.21
Arsenic	mg/kg	19	19	<1.32	<2.69	7.44	4.10	4.53	<1.17
Barium	mg/kg	59,000	1,300	14.0	20.9	18.8	6.01	31.7	28.9
Beryllium	mg/kg	140	0.5	0.103 j	0.319 j	0.326 j	0.264	0.0534 j	0.232 j
Calcium	mg/kg	none	none	254,000	58,100	278,000	86,800	197,000	256,000
Cadmium	mg/kg	78	1	<0.0348	<0.0707	<0.0485	0.990	<0.0481	<0.0308
Cobalt	mg/kg	none	none	11.6	12.9	27.3	17.7	17.4	1.64
Chromium	mg/kg	590	59	3.56	4.99	2.19 j	1.68	5.96	7.51
Copper	mg/kg	45,000	7,300	0.636 j	7.57	14.1	17.3	14.3	1.54
Iron	mg/kg	none	none	2,440	5,880	6,860	14,500	9,820	1,900
Lead	mg/kg	800	59	10.5	12.7	28.7	22.2	2.91 j	<0.650
Magnesium	mg/kg	none	none	111	4,990	19,400	2,240	27,700	919
Manganese	mg/kg	5,900	42	**86.8**	**46.2**	**233**	**76.8**	**307**	39.7
Mercury	mg/kg	65	0.1	<0.0813	<0.165	**0.131** j	0.0937	**0.135** j	<0.0720
Nickel	mg/kg	23,000	31	4.55	10.9	16.4	9.16	10.4	4.49
Potassium	mg/kg	none	none	<19.4	1,780	306	1,070	102 j	82.3
Selenium	mg/kg	5,700	7	4.69	2.08 b	3.19 j	<0.0286	<0.779	<0.499
Silver	mg/kg	5,700	1	<0.132	<0.268	<0.184	<0.00677	<0.183	<0.117
Sodium	mg/kg	none	none	634	20,400	9,470	2,840	2,430	748
Thallium	mg/kg	79	3	<1.65	<3.36	<2.30	<0.0836	<2.28	<1.46
Vanadium	mg/kg	1,100	none	14.4	22.7	8.02	12.9	30.7	7.39
Zinc	mg/kg	110,000	600	43.0	14.1	141	85.5	24.7	3.44
Cyanide	mg/kg	23,000	13	**190**	**210**	**1,820**	**1,420**	**2,420**	N/A

Tabl 6.7 - Alum-YPS Sludge Sample Analysis Results
Polynuclear Aromatic Hydrocarbons (PAHs) - EPA Method 8270C

Parameter	Units	Non-Res Remed Std	Impact to GW Scr Lvl	ID-01-18-20-022
Acenaphthene	ug/kg	3.70E+07	74,000	<1,410
Acenaphthylene	ug/kg	3.00E+08	na	<1,150
Anthracene	ug/kg	3.00E+07	1,500,000	<1,530
Benzo(a)anthracene	ug/kg	2,000	500	<1,100
Benzo(b)fluoranthene	ug/kg	2,000	2,000	<910
Benzo(k)fluoranthene	ug/kg	23,000	16,000	<1,170
Benzo(a)pyrene	ug/kg	200	200	<1,080
Benzo(g,h,i)perylene	ug/kg	3.00E+07	na	<922
Chrysene	ug/kg	230,000	52,000	<1,050
Dibenz(a,h)anthracene	ug/kg	200	500	<815
Fluoranthene	ug/kg	2.40E+07	840,000	<988
Fluorene	ug/kg	2.40E+07	110,000	<1,010
Indeno(1,2,3-cd)pyrene	ug/kg	2,000	5,000	<1,050
2-Methylnaphthalene	ug/kg	2.40E+06	5,000	<1,300
Naphthalene	ug/kg	17,000	16,000	<1,590
Phenanthrene	ug/kg	3.00E+08	n/a	<1,090
Pyrene	ug/kg	1.80E+07	550,000	<1,210

6.1.4 Peat Analysis Results

Fifteen samples were collected from the peat layer that underlies the alum-YPS sludge from the borings. As is described in the geotechnical investigation section of this report, this peat layer is the first layer of natural material underlying the fill created by the berms and the alum-YPS sludge.

Selected peat samples were analyzed for TAL metals, cyanide, PAHs, S-VOCs, EPH and VOCs. The analytical results are summarized in Table 6.9 for the inorganics, Table 6.10 for the PAHs, Table 6.11 for the S-VOCs (excluding the PAHs) and Table 6.12 for the EPH and VOCs. Also shown on the tables for comparison purposes are the Non-residential Direct Contact Remediation Standards (NRDCRS) and the Impact to Groundwater Screening Levels (IGWSL).

Review of the data in Tables 6.9 through 6.12 shows some degree of contamination of the peat layer by the alum-YPS sludge. The elevated cyanide and aluminum concentrations in the peat are characteristic of the alum-YPS sludge. These concentrations and elevated manganese and beryllium concentrations, similar to those detected in the alum-YPS sludge samples, indicate migration of these contaminants into the peat.

Review of the data in Tables 6.9 through 6.12 shows that several metals and cyanide exceeded either the NRDCRS or the IGWSL or both. At this depth below the ground surface, NRDCRS are not very relevant because the direct contact exposure pathway does not exist. However, all of the parameters that exceeded NRDCRS also exceeded the IGWSL concentrations. Specific parameters that exceeded either standard in one or more samples are listed in Table 6.13.

Parameters that exceed one or more of the standards are shown in bold on the tables.

Table 6.13 – Parameters Exceeding NRDCRS or IGWSL in Peat Samples

Inorganics
Aluminum
Antimony
Arsenic
Beryllium
Cadmium
Lead
Manganese
Mercury
Nickel
Zinc
Cyanide

Table 6.9 - Peat Sample Analysis Results
Inorganics - EPA Methods 6010C, 7471B and 9010/9014

Parameter	Units	Non-Res Remed Std	Impact to GW Scr Lvl	BS-02-06-08-002	BD-02-13-14-004	ID-05-12-14-007	BS-07R-14-18-010	BD-01R-19-21-012	BD-03-19-20-014	BD-04R-17-19-016	IS-01-11-13-018
Aluminum	mg/kg	na	3,900	**17,800**	**16,900**	**12,400**	**10,400**	**11,900**	**16,300**	**17,800**	**20,700**
Antimony	mg/kg	450	6	<4.21	<3.27	<3.26	<3.94	<2.92	<1.59	<2.28	<1.71
Arsenic	mg/kg	19	19	12.4	14.4	7.38	<3.87	**28.3**	10.2	5.03	17.6
Barium	mg/kg	59,000	1,300	351	337	714	34.7	58.3	133	41.4	42.1
Beryllium	mg/kg	140	0.5	**0.856**	**0.961**	**0.550** j	**0.582** j	0.345 j	**0.734**	**0.777**	**0.956**
Calcium	mg/kg	none	none	75,700	167,000	61,800	10,400	13,700	37,000	5,790	6,270
Cadmium	mg/kg	78	1	0.190	0.333 j	<0.0829	0.151 j	**12.2**	<0.0405	<0.0581	<0.0436
Chromium	mg/kg	none	none	67.4	47.9	56.6	17.8	23.5		40.2	68.1
Cobalt	mg/kg	590	59	13.5	12.3	5.22	5.33	5.61	11.6	6.99	13.3
Copper	mg/kg	45,000	7,300	150	21.1	319	10.9	57.5	15.4	11.8	13.4
Iron	mg/kg	none	none	23,700	23,800	11,200	9,380	5,650	28,600	21,200	44,000
Lead	mg/kg	800	59	**105**	**59.2**	**303**	18.6	**90.8**	17.8	7.38	11.7
Magnesium	mg/kg	none	none	9,090	6,690	7,140	6,600	7,200	7,090	7,040	8,510
Manganese	mg/kg	5,900	42	**254**	**178**	**76.2**	**66.5**	**105**	**413**	**147**	**493**
Mercury	mg/kg	65	0.1	<0.254	**0.470**	<0.194	<0.238	<0.176	<0.0946	<0.136	<0.102
Nickel	mg/kg	23,000	31	**51.7**	**75.0**	**45.9**	13.7	**68.8**	25.7	16.7	28.5
Potassium	mg/kg	none	none	3,840	3,000	2,760	2,390	2,910	3,410	4,470	4,840
Selenium	mg/kg	5,700	7	2.55 j	<1.37	8.37	<1.65	6.23 j	<0.656	<0.942	<0.707
Silver	mg/kg	5,700	1	<0.413	<0.320	<0.315	<0.386	<0.286	<0.154	<0.221	<0.166
Sodium	mg/kg	none	none	15,900	17,800	14,900	22,400	26,300	7,490	13,300	8,110
Thallium	mg/kg	79	3	<5.16	<4.01	<3.94	<4.83	<3.58	<1.92	<2.76	<2.07
Vanadium	mg/kg	1,100	none	54.8	56.0	32.7	27.0	78.2	38.7	55.1	50.1
Zinc	mg/kg	110,000	600	194	260	103	53.8	**796**	109	48.1	137
Cyanide	mg/kg	23,000	13	**857**	**145**	**286**	**1,060**	**1,130**	**92.5**	**164**	**40.6**

Table 6.9 - Peat Sample Analysis Results
Inorganics - EPA Methods 6010C, 7471B and 9010/9014

Parameter	Units	Non-Res Remed Std	Impact to GW Scr Lvl	ID-02-14-16-020	ID-06-06-08-026	BD-05-08-10-028	BS-06-06-08-029	ID-04-10-12-032	ID-03R-14-16-034	BS-03R-13-15-038
Aluminum	mg/kg	na	3,900	**25,200**	**10,500**	**21,300**	**22,300**	**10,000**	**20,100**	**19,200**
Antimony	mg/kg	450	6	<2.14	<3.93	3.04 j	6.04	<2.67	<2.64	<1.64
Arsenic	mg/kg	19	19	10.9	10.8	**20.3**	14.2	5.69	14.9	14.4
Barium	mg/kg	59,000	1,300	33.0	22.5	58.2	351	54.9	53.0	43.2
Beryllium	mg/kg	140	0.5	**0.571**	0.386 j	**0.973**	**1.39**	0.425 j	**0.798**	**0.911**
Calcium	mg/kg	none	none	30,600	25,000	5,690	29,800	21,600	72,700	14,200
Cadmium	mg/kg	78	1	<0.0544	<0.100	<0.0536	<0.0554	<0.0680	<0.0672	<0.0418
Chromium	mg/kg	none	none	29.8	16.6	42.0	103	36.9	39.4	32.4
Cobalt	mg/kg	590	59	10.7	3.64 j	12.0	16.5	5.43	9.07	11.5
Copper	mg/kg	45,000	7,300	5.71	5.43	28.8	254	16.8	22.4	12.9
Iron	mg/kg	none	none	24,400	15,700	39,100	43,400	17,300	20,700	35,000
Lead	mg/kg	800	59	15.8	5.43 j	43.5	**242**	7.13	26.5	9.49
Magnesium	mg/kg	none	none	7,140	3,330	7,050	11,100	5,300	8,620	8,200
Manganese	mg/kg	5,900	42	**142**	**44.9**	**324**	**255**	**78.5**	**257**	**354**
Mercury	mg/kg	65	0.1	<0.127	<0.234	**0.991**	**0.674**	<0.159	**0.195** j	<0.0977
Nickel	mg/kg	23,000	31	23.1	13.8	28.6	**52.4**	15.0	24.2	25.5
Potassium	mg/kg	none	none	4,290	2,230	5,070	5,670	2,500	2,860	4,280
Selenium	mg/kg	5,700	7	<0.882	<1.62	<0.868	1.80 j	<1.10	<1.09	<0.678
Silver	mg/kg	5,700	1	<0.207	<0.380	<0.203	<0.210	<0.258	<0.255	<0.159
Sodium	mg/kg	none	none	15,300	28,800	9,370	7,930	14,200	21,000	12,900
Thallium	mg/kg	79	3	<2.59	<4.75	<2.54	<2.63	<3.23	<3.19	<1.99
Vanadium	mg/kg	1,100	none	47.1	31.3	53.8	55.6	37.9	46.8	46.2
Zinc	mg/kg	110,000	600	55.2	36.5	81.9	152	39.6	69.7	68.0
Cyanide	mg/kg	23,000	13	**530**	**207**	**21.3**	**255**	**61.5**	**857**	**977**

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Table 6.10 - Peat Sample Analysis Results
Polynuclear Aromatic Hydrocarbons (PAHs) - EPA Method 8270C

Parameter	Units	Non-Res Remed Std	Impact to GW Scr Lvl	BS-02-06-08-002	BD-02-13-14-004	ID-05-12-14-007	BS-07R-14-18-010	BD-01R-19-21-012	BD-03-19-20-014	IS-01-11-13-018
Acenaphthene	ug/kg	3.70E+07	74	<1,300	<169	<166	<203	192 j	<81.0	<87.2
Acenaphthylene	ug/kg	3.00E+08	na	<1,060	<137	<135	<165	<122	<65.8	<70.9
Anthracene	ug/kg	3.00E+07	1,500,000	<1,410	<182	<179	<219	<163	<87.4	<94.1
Benzo(a)anthracene	ug/kg	2,000	500	<1,010	<131	<129	<158	<117	<62.9	<67.7
Benzo(b)fluoranthene	ug/kg	2,000	2,000	<840	<109	<107	<131	<97.0	<52.2	<56.2
Benzo(k)fluoranthene	ug/kg	23,000	16,000	<1,080	<139	<137	<168	<125	<67.0	<72.1
Benzo(a)pyrene	ug/kg	200	200	<996	<129	<127	<155	<115	<61.9	<66.7
Benzo(g,h,i)perylene	ug/kg	3.00E+07	na	<915	<118	<116	<143	<106	<56.8	<61.2
Chrysene	ug/kg	230,000	52,000	<968	<125	<123	<151	<112	<60.2	<64.8
Dibenz(a,h)anthracene	ug/kg	200	500	<752	<97.3	<95.7	<117	<86.9	<46.7	<50.3
Fluoranthene	ug/kg	2.40E+07	840,000	<912	<118	<116	144 j	227 j	<56.6	<61.0
Fluorene	ug/kg	2.40E+07	110,000	<931	<120	<118	<145	169 j	<57.8	<62.3
Indeno(1,2,3-cd)pyrene	ug/kg	2,000	5,000	<971	<126	<124	<152	<112	<60.3	<65.0
2-Methylnaphthalene	ug/kg	2.40E+06	5,000	<1,200	<155	<152	<187	169 j	<74.4	<80.1
Naphthalene	ug/kg	17,000	16,000	<1,470	<190	<187	<229	537 j	<91.3	<98.3
Phenanthrene	ug/kg	3.00E+08	n/a	1,030 j	<130	<128	173 j	528 j	<62.3	<67.1
Pyrene	ug/kg	1.80E+07	550,000	<1,120	<145	<142	<174	202 j	<69.5	<74.9

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Table 6.10 - Peat Sample Analysis Results
Polynuclear Aromatic Hydrocarbons (PAHs) - EPA Method 8270C

Parameter	Units	Non-Res Remed Std	Impact to GW Scr Lvl	BD-04R-17-19-016	ID-02-14-16-020	ID-06-06-08-026	BD-05-08-10-028	BS-06-06-08-029	ID-04-10-12-032	BS-03R-13-15-038
Acenaphthene	ug/kg	3.70E+07	74,000	<116	<109	<200	<107	<111	<272	<64.9
Acenaphthylene	ug/kg	3.00E+08	na	<94.5	<88.5	<162	<87.0	<90.0	<221	<90.3
Anthracene	ug/kg	3.00E+07	1,500,000	<125	<118	<216	<116	<120	<294	<63.9
Benzo(a)anthracene	ug/kg	2,000	500	135	<84.5	<155	<83.2	<86.0	<211	<48.3
Benzo(b)fluoranthene	ug/kg	2,000	2,000	<74.9	<70.1	<129	<69.0	<71.4	<175	<59.7
Benzo(k)fluoranthene	ug/kg	23,000	16,000	169	<90.0	<165	<88.6	<91.6	<225	<62.3
Benzo(a)pyrene	ug/kg	200	200	172	<83.2	<153	<81.9	<84.7	<208	<76.8
Benzo(g,h,i)perylene	ug/kg	3.00E+07	na	101	<76.4	<140	<75.2	<77.7	<191	<71.8
Chrysene	ug/kg	230,000	52,000	144	<80.9	<149	<79.6	<82.3	<202	<58.5
Dibenz(a,h)anthracene	ug/kg	200	500	<67.1	<62.8	<115	<61.8	<63.9	<157	<64.3
Fluoranthene	ug/kg	2.40E+07	840,000	162	<76.2	<140	<74.9	<77.5	<190	<58.7
Fluorene	ug/kg	2.40E+07	110,000	<83.0	<77.7	<143	<76.5	<79.1	<194	<53.9
Indeno(1,2,3-cd)pyrene	ug/kg	2,000	5,000	<86.6	<81.1	<149	<79.8	<82.5	<203	<94.3
2-Methylnaphthalene	ug/kg	2.40E+06	5,000	<94.5	<100	<184	<98.4	<102	<250	<68.0
Naphthalene	ug/kg	17,000	16,000	<131	<123	<225	<121	<125	<307	<83.6
Phenanthrene	ug/kg	3.00E+08	n/a	<89.4	<83.7	<154	<82.4	<85.2	<209	<69.2
Pyrene	ug/kg	1.80E+07	550,000	206	<93.4	<172	<91.9	<95.0	<233	<62.1

Table 6.11 - Peat Sample Analysis Results
Semi-Volatile Organic Compounds (SVOC) - EPA Method 8270C
(excludes PAHs)

Parameter	Units	Non-Res Remed Std	Impact to GW Scr Lvl	BD-04R-17-19-016	BS-03R-13-15-038
Aniline	ug/kg	none	none	<102	<73.4
Benzidine	ug/kg	700	700	<1,050	<752
Benzoic acid	ug/kg	none	none	<1,830	<1,320
Benzyl alcohol	ug/kg	none	none	<91.4	<65.7
Bis(2-chloroethyl)ether	ug/kg	2,000	200	<138	<99.1
Bis(2-chloroethoxy)methane	ug/kg	none	none	<99.2	<71.4
Bis(2-chloroisopropyl)ether	ug/kg	67,000	3,000	<144	<104
Bis(2-ethylhexyl) phthalate	ug/kg	140,000	790,000	111	<55.1
4-Bromophenyl-phenyl ether	ug/kg	none	none	<84.4	<60.7
Butylbenzyl phthalate	ug/kg	14,000,000	150,000	109	<66.5
Carbazole	ug/kg	96,000	none	<98.4	<70.8
4-Chloroaniline	ug/kg	none	none	<84.4	<60.7
4-Chloro-3-methylphenol	ug/kg	none	none	<80.2	<57.7
4-Chlorophenyl-phenylether	ug/kg	none	none	<98.7	<71.0
2-Chloronaphthalene	ug/kg	none	none	<88.3	<63.5
2-Chlorophenol	ug/kg	2,200,000	500	<97.5	<70.2
Dibenzofuran	ug/kg	none	none	<111	<80.0
1,2-Dichlorobenzene	ug/kg	59,000,000	11,000	<147	<106
1,3-Dichlorobenzene	ug/kg	59,000,000	12,000	<145	<104
1,4-Dichlorobenzene	ug/kg	13,000	1,000	<152	<109
3,3'-Dichlorobenzidine	ug/kg	4,000	200	<106	<76.6
2,4-Dichlorophenol	ug/kg	2,100	200	<169	<121
Diethyl phthalate	ug/kg	550,000,000	57,000	198	<61.7
2,4-Dimethylphenol	ug/kg	14,000,000	700	<93.3	<67.1
Dimethyl phthalate	ug/kg	none	none	<79.7	<57.3
Di-n-butyl phthalate	ug/kg	68,000,000	620,000	<383	<275
4,6-Dinitro-2-methyl phenol	ug/kg	68,000	300	<239	<172
2,4-Dinitrophenol	ug/kg	1,400,000	300	<77.7	<55.9
2,4-Dinitrotoluene	ug/kg	3,000	none	<110	<79.4
2,6-Dinitrotoluene	ug/kg	3,000	none	<107	<77.0
Di-n-octylphthalate	ug/kg	270,000,000	3,300,000	<73.5	<52.9
1,2-Diphenylhydrazine	ug/kg	2,000	700	<85.2	<61.3
Hexachlorobenzene	ug/kg	1,000	200	<103	<74.4
Hexachlorobutadiene	ug/kg	25,000	600	<142	<102
Hexachlorocyclopentadiene	ug/kg	110,000	210,000	<79.1	<56.9
Hexachloroethane	ug/kg	140,000	200	<107	<77.0
Isophorone	ug/kg	2,000,000	200	<76.6	<55.1
2-Methylphenol	ug/kg	3,400,000	none	<97.5	<70.2
3 & 4-Methylphenol	ug/kg	340,000	none	<148	<107
2-Nitroaniline	ug/kg	23,000,000	none	<97.5	<70.2
3-Nitroaniline	ug/kg	none	none	<110	<78.8
4-Nitroaniline	ug/kg	none	none	<87.8	<63.1

Table 6.11 - Peat Sample Analysis Results
Semi-Volatile Organic Compounds (SVOC) - EPA Method 8270C
(excludes PAHs)

Parameter	Units	Non-Res Remed Std	Impact to GW Scr Lvl	BD-04R-17-19-016	BS-03R-13-15-038
Nitrobenzene	ug/kg	340,000	200	<140	<101
2-Nitrophenol	ug/kg	none	none	<97.3	<70.0
4-Nitrophenol	ug/kg	none	none	<93.3	<67.1
n-Nitrosodimethylamine	ug/kg	700	700	<137	<98.7
n-Nitroso-di-n-propylamine	ug/kg	300	200	<78.0	<56.1
n-Nitrosodiphenylamine	ug/kg	390,000	200	<158	<114
Pentachlorophenol	ug/kg	10,000	300	<125	<89.9
Phenol	ug/kg	210,000,000	5,000	<89.7	<64.5
1,2,4-Trichlorobenzene	ug/kg	820,000	400	<137	<98.5
2,4,5-Trichlorophenol	ug/kg	68,000,000	44,000	<86.4	<62.1
2,4,6-Trichlorophenol	ug/kg	74,000	200	<84.7	<60.9

Table 6.12 - Peat Sample Analysis Results
Petroleum Hydrocarbons (NJDEP EPH) and Volatile Organic Compounds (EPA Method 8260B)

Parameter	Units	Non-Res Remed Std	Impact to GW Scr Lvl	BD-04R-17-19-016	BS-03R-13-15-038	BS-07R-14-18-010
Petroleum Hydrocarbons (EPH)	mg/kg	none	none		<72.4	107 j
Acetone	ug/kg	na	12,000	31.6	38.4 b	71.8 b
Benzene	ug/kg	5	5	2.73 j	<1.66	<6.09
Bromochloromethane	ug/kg	none	none	<2.78	<1.73	<6.35
Bromodichloromethane	ug/kg	3	5	<2.73	<1.70	<6.22
Bromoform	ug/kg	280	20	<2.05	<1.27	<4.67
Bromomethane	ug/kg	59	30	<3.61	<2.24	<8.23
2-Butanone	ug/kg	44,000	600	<5.34	<3.32	<12.2
Carbon disulfide	ug/kg	110,000	4,000	1,720 j	21.2	391
Carbon tetrachloride	ug/kg	2	5	<2.78	<1.73	<6.35
Chlorobenzene	ug/kg	7,400	400	<2.84	<1.77	<6.48
Chloroethane	ug/kg	1,100	na	<2.24	<1.40	5.12 j
Chloroform	ug/kg	2	200	<2.41	<1.50	<5.51
Chloromethane	ug/kg	12	na	<3.35	<2.08	<7.65
Cyclohexane	ug/kg	none	none	<2.70	<1.68	<6.16
Dibromochloromethane	ug/kg	8	5	<2.10	<1.31	<4.80
1,2-Dibromoethane	ug/kg	0.04	5	<2.50	<1.55	<5.70
1,2-Dibromo-3-chloropropane	ug/kg	0.2	5	<3.04	<1.89	<6.94
1,2-Dichlorobenzene	ug/kg	59,000	11,000	<2.78	<1.73	<6.35
1,3-Dichlorobenzene	ug/kg	29,000	12,000	<3.12	<1.94	<7.13
1,4-Dichlorobenzene	ug/kg	13	1,000	<3.32	<2.07	<7.58
Dichlorodifluoromethane	ug/kg	230,000	25,000	<2.56	<1.59	<5.83
1,1-Dichloroethane	ug/kg	24	200	<2.98	<1.85	<6.81
1,2-Dichloroethane	ug/kg	3	5	<2.39	<1.48	<5.45
1,1-Dichloroethene	ug/kg	50	5	<3.18	<1.98	<7.26
cis-1,2-Dichloroethene	ug/kg	560	200	<2.16	<1.34	<4.93
trans-1,2-Dichloroethene	ug/kg	720	400	<2.84	<1.77	<6.48
1,2-Dichloropropane	ug/kg	5	5	<2.64	<1.64	<6.03
cis-1,3-Dichloropropene	ug/kg	7	5	<2.30	<1.43	<5.25
trans-1,3-Dichloropropene	ug/kg	7	5	<2.47	<1.54	<5.64
1,4-Dioxane	ug/kg	none	none	<122	<75.8	<278
Ethyl benzene	ug/kg	110,000	8,000	<3.24	<2.01	<7.39
2-Hexanone	ug/kg	none	none	<5.57	<3.46	<12.7
Isopropyl benzene	ug/kg	none	none	<3.10	<1.93	<7.07
Methyl acetate	ug/kg	na	14,000	40.5	<1.89	23.0 j
Methyl tertiary butyl ether	ug/kg	320	200	<2.44	<1.52	<5.57
Methylcyclohexane	ug/kg	none	none	<3.38	<2.10	<7.71
Methylene chloride	ug/kg	97	7	<4.29	<2.67	<9.79
4-Methyl-2-pentanone	ug/kg	none	none	<4.80	<2.99	<11.0
Styrene	ug/kg	260	2,000	<2.53	<1.57	<5.77
1,1,2,2-Tetrachloroethane	ug/kg	3	5	<2.61	<1.63	<5.96
Tetrachloroethene	ug/kg	5	5	<3.10	<1.93	<7.07

Table 6.12 - Peat Sample Analysis Results
Petroleum Hydrocarbons (NJDEP EPH) and Volatile Organic Compounds (EPA Method 8260B)

Parameter	Units	Non-Res Remed Std	Impact to GW Scr Lvl	BD-04R-17-19-016	BS-03R-13-15-038	BS-07R-14-18-010
Toluene	ug/kg	91,000	4,000	<3.27	<2.03	<7.45
1,2,3-Trichlorobenzene	ug/kg	none	none	<4.89	<3.04	<11.1
1,2,4-Trichlorobenzene	ug/kg	820	400	<3.78	<2.35	<8.62
1,1,1-Trichloroethane	ug/kg	4,200	200	<2.87	<1.78	<6.55
1,1,2-Trichloroethane	ug/kg	6	10	<2.81	<1.75	<6.42
Trichloroethene	ug/kg	20	7	<3.55	<2.21	<8.10
Trichlorofluoromethane	ug/kg	340,000	22,000	<3.10	<1.93	<7.07
1,1,2-Trichloro-1,2,2- trifluoroethane	ug/kg	none	none	<3.27	<2.03	<7.45
Vinyl chloride	ug/kg	2	5	<3.29	<2.05	<7.52
m&p-Xylenes	ug/kg	170,000	12,000	<6.56	<4.08	<15.0
o-Xylene	ug/kg	170,000	12,000	<2.64	<1.64	<6.03

6.1.5 Organic Clay Analysis Results

Three samples were collected from the organic clay layer that underlies the peat from the borings. As is described in the geotechnical investigation section of this report, this clay layer is situated between the peat layer and the competent layers that lead to the rock that forms the Brunswick formation. Previous investigations have indicated that this clay layer provides a partial aquitard to limit vertical migration of contaminants, although the reports indicated that the clay layer was not present under the entire site.

Selected organic clay samples were analyzed for TAL metals, cyanide and EPH. The analytical results are summarized in Table 6.14 for the inorganics and Table 6.15 for the EPH. Also shown on the tables for comparison purposes are the Non-residential Direct Contact Remediation Standards (NRDCRS) and the Impact to Groundwater Screening Levels (IGWSL).

Review of the data in Tables 6.14 and 6.15 shows similar contamination characteristics as the peat layer, indicating some contamination by the alum-YPS sludge. The elevated cyanide and aluminum concentrations in the clay are characteristic of the alum-YPS sludge. These concentrations and elevated manganese and beryllium concentrations, similar to those detected in the alum-YPS sludge samples, indicate migration of these contaminants into the clay.

Review of the data in Tables 6.14 through 6.15 shows that several metals and cyanide exceeded the IGWSL concentrations. Specific parameters that exceeded the standards in one or more samples are listed in Table 6.16.

Parameters that exceed one or more of the standards are shown in bold on the tables.

Table 6.16 – Parameters Exceeding IGWSL in Organic Clay Samples

Inorganics
Aluminum
Beryllium
Manganese
Mercury
Nickel
Cyanide

6.2 Groundwater Sampling Results

6.2.1 Analytical Procedures

The groundwater samples were analyzed by QC Laboratories in Southampton, Pennsylvania. QC Laboratories is accredited in accordance with the National Environmental Laboratory Accreditation Program (NELAP) requirements. Its New Jersey NELAP identification number is PA166.

Table 6.14 - Organic Clay Sample Analysis Results
Inorganics - EPA Methods 6010C, 7471B and 9010/9014

Parameter	Units	Non-Res Remed	Impact to GW Scr	BS-01-14-16-005	BS-05-8-10-024	ID-03R-22-24-035
Aluminum	mg/kg	na	3,900	**12,800**	**13,800**	**9,780**
Antimony	mg/kg	450	6	<1.00	<2.50	<1.12
Arsenic	mg/kg	19	19	3.87	12.7	1.28 j
Barium	mg/kg	59,000	1,300	141	74.9	20.5
Beryllium	mg/kg	140	0.5	**0.822**	**0.648**	0.332
Calcium	mg/kg	none	none	15,800	7,210	2,880
Cadmium	mg/kg	78	1	<0.0255	<0.0636	<0.0309
Chromium	mg/kg	none	none	23.4	30.4	13.0
Cobalt	mg/kg	590	59	13.2	9.48	4.91
Copper	mg/kg	45,000	7,300	15.7	70.9	3.99
Iron	mg/kg	none	none	27,200	27,800	12,900
Lead	mg/kg	800	59	11.4	40.7	5.80
Magnesium	mg/kg	none	none	7,760	5,530	2,890
Manganese	mg/kg	5,900	42	**775**	**260**	**97.8**
Mercury	mg/kg	65	0.1	0.0681	**0.495**	<0.0721
Nickel	mg/kg	23,000	31	26.7	**31.2**	7.82
Potassium	mg/kg	none	none	3,250	3,180	1,100
Selenium	mg/kg	5,700	7	<0.413	<1.03	<0.500
Silver	mg/kg	5,700	1	<0.0969	<0.242	<0.177
Sodium	mg/kg	none	none	302	11,000	4,070
Thallium	mg/kg	79	3	<1.21	<3.02	<1.47
Vanadium	mg/kg	1,100	none	33.1	41.9	24.9
Zinc	mg/kg	110,000	600	62.2	138	20.8
Cyanide	mg/kg	23,000	13	<6.13	**69.8**	N/A

Table 6.15 - Organic Clay Sample Analysis Results
Petroleum Hydrocarbons (NJDEP EPH)

Parameter	Units	Non-Res Remed Std	Impact to GW Scr Lvl	BS-05-8-10-024
Petroleum Hydrocarbons (EPH)	mg/kg	none	none	51.4 j

All of the groundwater samples were analyzed for potential contaminants, in accordance with the Investigation Plan and the QAPP. The following analytical methods were used to analyze the samples:

- Petroleum hydrocarbons (EPH) by NJDEP Method EPH 10/08 rev3
- Semi-volatile organic compounds (S-VOCs) by EPA Method 8270C
- Polynuclear aromatic hydrocarbons (PAHs) by EPA Method 8270C
- TAL metals by EPA Method Methods 6010B and Method 7071A
- Cyanide by EPA Method 9091/9014.

The laboratory report and the chains of custody for the groundwater samples are contained in Appendix F. The results are discussed in the following paragraphs.

6.2.2 Surface Aquifer Groundwater Samples

The nine surface aquifer groundwater samples (eight wells plus a duplicate sample from Well 3D) were analyzed for TAL metals, cyanide, PAHs, EPH and VOCs. The analytical results are summarized in Table 6.17 for the inorganics, Table 6.18 for the PAHs and Table 6.19 for the EPH and VOCs. Note that wells 2D, 3D and 5D are actually shallow wells, although the nomenclature would identify them as deep wells. Also shown on the tables for comparison purposes are the Class II-A groundwater quality criteria.

Review of the data in Tables 6.17 through 6.19 shows that several metals and cyanide exceeded the groundwater quality criteria. One of these parameters was sodium, likely reflecting the brackish nature of the groundwater on the site. Specific parameters that exceeded either standard in one or more samples are listed in Table 6.20.

Parameters that exceed one or more of the standards are shown in bold on the tables.

Table 6.20 – Parameters Exceeding Groundwater Quality Criteria in the Surface Aquifer Samples

Inorganics
Aluminum
Antimony
Arsenic
Beryllium
Iron
Manganese
Selenium
Sodium
Cyanide

Table 6.17 - Shallow Aquifer Groundwater Sample Analysis Results
Inorganics - EPA Methods 200.7, 245.1 and SN 4500CN C,E

Parameter	Units	GW Quality Criteria	1S I027-1S-004	2D I027-2D-016	3D I027-3D-014	3D dup I027-3D-015	4S I027-4S-008	5D I027-5D-005	6S I027-6S-012	7S I027-7S-011	8S I027-8S-001
Aluminum	mg/l	0.2	<0.175	<0.175	<0.175	<0.175	0.260 j	<0.175	<0.175	<0.175	<0.175
Antimony	mg/l	0.006	<0.0220	<0.0220	<0.0220	<0.0220	0.0239 j	<0.0220	<0.0220	<0.0220	<0.0220
Arsenic	mg/l	0.003	0.0669 j	0.267	<0.0283	0.0789 j	0.332	0.139	0.0522 j	0.0655 j	0.0981
Barium	mg/l	6	0.5880	0.0263 j	0.196	0.200	0.0319 j	0.141	0.359	0.510	0.472
Beryllium	mg/l	0.001	0.0013 j	0.001 j	0.0012 j	0.0012 j	0.0019 j	0.0012 j	0.0015 j	0.0013 j	0.0011 j
Calcium	mg/l	none	308	870	251	261	1,150	420	330	241	255
Cadmium	mg/l	0.004	<0.00110	<0.00110	<0.00110	<0.00110	<0.00110	<0.00110	<0.00110	<0.00110	<0.0110
Chromium	mg/l	none	0.0118 j	0.0099 j	0.0101 j	0.0127 j	0.0027 j	0.0049 j	0.0093 j	0.0067 j	0.0104 j
Cobalt	mg/l	none	0.0055 j	0.0089 j	0.0049 j	0.0058 j	0.0375 j	<0.0040	<0.0040	0.0060 j	0.0175 j
Copper	mg/l	1.3	0.0149 j	0.0137 j	0.0224 j	0.0221 j	0.0757	0.0107 j	0.0182 j	0.0100 j	0.0125 j
Iron	mg/l	0.3	2.75	12.5	0.696	0.565	4.78	28.6	3.89	8.24	2.31
Lead	mg/l	0.005	<0.0175	<0.0175	<0.0175	<0.0175	<0.0175	<0.0175	<0.0175	<0.0175	<0.0175
Magnesium	mg/l	none	797	890	686	704	159	733	725	641	786
Manganese	mg/l	0.05	2.40	0.636	0.0364 j	0.0368 j	0.0514 j	1.04	0.197	0.461	5.33
Mercury	mg/l	0.002	0.000022 j	0.000046 j	0.000033 j	0.000037 j	0.000042 j	0.000021 j	0.000021 j	0.000025 j	<0.0000130
Nickel	mg/l	0.1	<0.00340	<0.00340	<0.00340	<0.00340	0.0231 j	<0.00340	<0.00340	<0.00340	<0.00340
Potassium	mg/l	none	218	98.4	221	231	164	190	162	169	172
Selenium	mg/l	0.04	<0.0517	0.0636 j	0.0558 j	0.0558 j	0.169	0.119	<0.0517	<0.0517	<0.0517
Silver	mg/l	0.04	0.0069 j	0.0128 j	0.0060 j	<0.00510	0.0250	0.0074 j	0.0073 j	0.0128 j	0.0064 j
Sodium	mg/l	50	6,590	4,670	5,880	6,180	9,070	6,310	5,760	5,730	6,540
Thallium	mg/l	0.002	<0.0324	<0.0324	<0.0324	<0.0324	<0.0324	<0.0324	<0.0324	<0.0324	<0.0324
Vanadium	mg/l	none	0.0106 j	<0.00260	0.0029 j	0.0032 j	<0.00260	<0.00260	0.0061 j	0.0093 j	<0.00260
Zinc	mg/l	2	0.101	0.0592	0.0442 j	0.0355 j	0.120	0.0345	0.0818	0.0245 j	0.0322 j
Cyanide	mg/l	0.1	<0.0200	1.70	<0.0200	<0.0200	12.4	<0.0200	<0.0400	<0.0250	0.0580

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Table 6.18 - Shallow Aquifer Groundwater Sample Analysis Results
Polycyclic Aromatic Hydrocarbons (PAHs) - EPA Method 8270C

Parameter	Units	GW Quality Criteria	1S I027-1S-004	2D I027-2D-016	3D I027-3D-014	3D dup I027-3D-015	4S I027-4S-008	5D I027-5D-005	6S I027-6S-012	7S I027-7S-011	8S I027-8S-001
Acenaphthene	ug/l	none	<0.01	<0.01	0.05	0.04	0.04	<0.01	<0.01	0.02	<0.01
Acenaphthylene	ug/l	400	<0.01	<0.01	<0.01	<0.01	0.06	<0.01	<0.01	<0.01	<0.01
Anthracene	ug/l	2,000	<0.01	<0.01	0.02	0.01 j	0.03	<0.01	0.02	<0.01	<0.01
Benzo(a)anthracene	ug/l	0.1	<0.01	<0.01	<0.01	<0.01	0.02	<0.01	<0.01	<0.01	<0.01
Benzo(b)fluoranthene	ug/l	0.2	<0.02	<0.02	<0.02	<0.02	0.02	<0.02	<0.02	<0.02	<0.02
Benzo(k)fluoranthene	ug/l	0.5	<0.02	<0.02	<0.02	<0.02	0.02	<0.02	<0.02	<0.02	<0.02
Benzo(a)pyrene	ug/l	0.1	<0.02	<0.02	<0.02	<0.02	0.02	<0.02	<0.02	<0.02	<0.02
Benzo(g,h,i)perylene	ug/l	none	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Chrysene	ug/l	5	<0.01	<0.01	<0.01	<0.01	0.02	<0.01	<0.01	<0.01	<0.01
Dibenz(a,h)anthracene	ug/l	0.3	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Fluoranthene	ug/l	300	<0.02	<0.02	0.03	0.03	0.05	<0.02	<0.02	<0.02	<0.02
Fluorene	ug/l	300	<0.02	<0.02	0.02	0.02	0.06	<0.02	<0.01	<0.02	<0.02
Indeno(1,2,3-cd)pyrene	ug/l	0.2	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
2-Methylnaphthalene	ug/l	none	0.02	<0.01	0.01 j	0.01 j	0.81	<0.01	0.01 j	<0.01	<0.01
Naphthalene	ug/l	300	0.02	0.01 j	0.02	0.02	0.49	<0.01	0.02	<0.01	<0.01
Phenanthrene	ug/l	none	0.02	0.02	0.04	0.03	0.07	<0.01	<0.02	<0.01	<0.01
Pyrene	ug/l	200	<0.02	<0.02	0.02	<0.02	0.04	0.04	<0.02	<0.02	<0.02

Table 6.19 - Shallow Aquifer Groundwater Sample Analysis Results
Petroleum Hydrocarbons (EPH) Method 1664 ASGT and Volatile Organic Compounds (VOCs) EPA Method 8260B

Parameter	Units	GW Quality Criteria	1S I027-1S-004	2D I027-2D-016	3D I027-3D-014	3D dup I027-3D-015	4S I027-4S-008	5D I027-5D-005	6S I027-6S-012	7S I027-7S-011	8S I027-8S-001
Petroleum Hydrocarbons	mg/l	none	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00
Acetone	ug/l	6,000	<16.3	<22.6	<3.26	<22.6	24.4	<3.26	<16.3	<3.26	<3.26
Benzene	ug/l	1	<1.10	<3.80	<0.220	<3.80	<1.10	<0.220	<1.10	<0.220	<0.220
Bromochloromethane	ug/l	none	<1.50	<4.60	<0.300	<4.60	<1.50	<0.300	<1.50	<0.300	<0.300
Bromodichloromethane	ug/l	1	<1.05	<3.50	<0.210	<3.50	<1.05	<0.210	<1.05	<0.210	<0.210
Bromoform	ug/l	4	<1.55	<2.80	<0.310	<2.80	<1.55	<0.310	<1.55	<0.310	<0.310
Bromomethane	ug/l	none	<2.30	<4.30	<0.460	<4.30	<2.30	<0.460	<2.30	<0.460	<0.460
2-Butanone	ug/l	300	<7.20	<20.1	<1.44	<20.1	<7.20	<1.44	<7.20	<1.44	<1.44
Carbon disulfide	ug/l	700	<3.20	<6.20	<0.640	<6.20	25.7	<0.640	<3.20	1.02 j	<0.640
Carbon tetrachloride	ug/l	1	<1.40	<4.50	<0.280	<4.50	<1.40	<0.280	<1.40	<0.280	<0.280
Chlorobenzene	ug/l	50	<1.15	<3.20	<0.230	<3.20	<1.15	<0.230	<1.15	<0.230	<0.230
Chloroethane	ug/l	none	<1.70	<5.90	<0.340	<5.90	<1.70	<0.340	<1.70	<0.340	<0.340
Chloroform	ug/l	70	<1.15	<3.40	<0.230	<3.40	<1.15	<0.230	<1.15	<0.230	<0.230
Chloromethane	ug/l	none	<1.60	<4.30	<0.320	<4.30	<1.60	<0.320	<1.60	<0.320	<0.320
Cyclohexane	ug/l	none	<2.20	<3.20	<0.440	<3.20	<2.20	<0.440	<2.20	<0.440	<0.440
Dibromochloromethane	ug/l	1	<0.700	<3.70	<0.140	<3.70	<0.700	<0.140	<0.700	<0.140	<0.140
1,2-Dibromoethane	ug/l	none	<1.05	<3.70	<0.210	<3.70	<1.05	<0.210	<1.05	<0.210	<0.210
1,2-Dibromo-3-chloropropane	ug/l	0.02	<2.35	<6.60	<0.470	<6.60	<2.35	<0.470	<2.35	<0.470	<0.470
1,2-Dichlorobenzene	ug/l	600	<1.00	<3.50	<0.200	<3.50	<1.00	<0.200	<1.00	<0.200	<0.200
1,3-Dichlorobenzene	ug/l	600	<1.05	<3.50	<0.210	<3.50	<1.05	<0.210	<1.05	<0.210	<0.210
1,4-Dichlorobenzene	ug/l	75	<0.850	<3.70	<0.170	<3.70	<0.850	<0.170	<0.850	<0.170	<0.170
Dichlorodifluoro methane	ug/l	1,000	<2.15	<3.60	<0.430	<3.60	<2.15	<0.430	<2.15	<0.430	<0.430
1,1-Dichloroethane	ug/l	50	<1.20	<4.00	<0.240	<4.00	<1.20	<0.240	<1.20	<0.240	<0.240
1,2-Dichloroethane	ug/l	2	<1.20	<4.40	<0.240	<4.40	<1.20	<0.240	<1.20	<0.240	<0.240
1,1-Dichloroethene	ug/l	1	<1.55	<3.20	<0.310	<3.20	<1.55	<0.310	<1.55	<0.310	<0.310
cis-1,2-Dichloroethene	ug/l	70	<1.40	<3.30	<0.280	<3.30	<1.40	<0.280	<1.40	<0.280	<0.280
trans-1,2-Dichloroethene	ug/l	100	<0.700	<4.10	<0.140	<4.10	<0.700	<0.140	<0.700	<0.140	<0.140

Table 6.19 - Shallow Aquifer Groundwater Sample Analysis Results
Petroleum Hydrocarbons (EPH) Method 1664 ASGT and Volatile Organic Compounds (VOCs) EPA Method 8260B

Parameter	Units	GW Quality Criteria	1S I027-1S-004	2D I027-2D-016	3D I027-3D-014	3D dup I027-3D-015	4S I027-4S-008	5D I027-5D-005	6S I027-6S-012	7S I027-7S-011	8S I027-8S-001
1,2-Dichloropropane	ug/l	1	<1.00	<5.70	<0.200	<5.70	<1.00	<0.200	<1.00	<0.200	<0.200
cis-1,3-Dichloropropene	ug/l	1	<1.10	<3.40	<0.220	<3.40	<1.10	<0.220	<1.10	<0.220	<0.220
trans-1,3-Dichloropropene	ug/l	1	<1.10	<2.70	<0.220	<2.70	<1.10	<0.220	<1.10	<0.220	<0.220
1,4-Dioxane	ug/l	none	<643	NA	NA	NA	<643	<129	<643	<129	<129
Ethyl benzene	ug/l	700	<1.15	<3.40	<0.230	<3.40	<1.15	<0.230	<1.15	<0.230	<0.230
2-Hexanone	ug/l	none	<4.15	<5.30	<0.830	<5.30	<4.15	<0.830	<4.15	<0.830	<0.830
Isopropyl benzene	ug/l	none	<1.35	<2.90	<0.270	<2.90	<1.35	<0.270	<1.35	<0.270	<0.270
Methyl acetate	ug/l	7,000	<1.80	<9.10	<0.360	<9.10	<1.80	<0.360	<1.80	<0.360	<0.360
Methyl tertiary butyl ether	ug/l	70	<1.00	<3.10	<0.200	<3.10	<1.00	<0.200	<1.00	<0.200	<0.200
Methylcyclohexane	ug/l	none	<1.80	<7.10	<0.360	<7.10	<1.80	<0.360	<1.80	<0.360	<0.360
Methylene chloride	ug/l	none	3.60 j	<4.00	<0.500	<4.00	3.00 j	<0.500	3.100 j	<0.500	<0.500
4-Methyl-2-pentanone	ug/l	none	<2.20	<5.80	<0.440	<5.80	<2.20	<0.440	<2.20	<0.440	<0.440
Styrene	ug/l	100	<1.00	<3.30	<0.200	<3.30	<1.00	<0.200	<1.00	<0.200	<0.200
1,1,2,2-Tetrachloroethane	ug/l	1	<1.60	<3.50	<0.320	<3.50	<1.60	<0.320	<1.60	<0.320	<0.320
Tetrachloroethene	ug/l	1	<1.85	<3.60	<0.370	<3.60	<1.85	<0.370	<1.85	<0.370	<0.370
Toluene	ug/l	600	<0.950	<3.70	<0.190	<3.70	<0.950	<0.190	<0.950	<0.190	<0.190
1,2,3-Trichlorobenzene	ug/l	none	<1.55	<3.80	<0.310	<3.80	<1.55	<0.310	<1.55	<0.310	<0.310
1,2,4-Trichlorobenzene	ug/l	9	<1.80	<1.60	<0.360	<1.60	<1.80	<0.360	<1.80	<0.360	<0.360
1,1,1-Trichloroethane	ug/l	30	<1.05	<3.40	<0.210	<3.40	<1.05	<0.210	<1.05	<0.210	<0.210
1,1,2-Trichloroethane	ug/l	3	<1.20	<3.80	<0.240	<3.80	<1.20	<0.240	<1.20	<0.240	<0.240
Trichloroethene	ug/l	1	<1.25	<2.60	<0.250	<2.60	<1.25	<0.250	<1.25	<0.250	<0.250
Trichlorofluoromethane	ug/l	2,000	<1.90	<4.30	<0.380	<4.30	<1.90	<0.380	<1.90	<0.380	<0.380
1,1,2-Trichloro-1,2,2-trifluoroethane	ug/l	none	<2.35	<4.90	<0.470	<4.90	<2.35	<0.470	<2.35	<0.470	<0.470
Vinyl chloride	ug/l	1	<1.20	<3.90	<0.240	<3.90	<1.20	<0.240	<1.20	<0.240	<0.240
m&p-Xylenes	ug/l	1,000	<2.30	<6.20	<0.460	<6.20	<2.30	<0.460	<2.30	<0.460	<0.460
o-Xylene	ug/l	1,000	<1.20	<2.90	<0.240	<2.90	<1.20	<0.240	<1.20	<0.240	<0.240

6.2.3 Brunswick Formation Groundwater Samples

The nine Brunswick Formation aquifer groundwater samples (eight wells plus a duplicate sample from Well 7D) were analyzed for TAL metals, cyanide, PAHs, EPH and VOCs. The analytical results are summarized in Table 6.21 for the inorganics, Table 6.22 for the PAHs and Table 6.23 for the EPH and VOCs. Note that wells 2S, 3S and 5S are actually deep wells, although the nomenclature would identify them as shallow wells. Also shown on the tables for comparison purposes are the Class II-A groundwater quality criteria.

Review of the data in Tables 6.21 through 6.23 shows that several metals and cyanide exceeded the groundwater quality criteria. One of these parameters was sodium, likely reflecting the brackish nature of the groundwater on the site. Specific parameters that exceeded either standard in one or more samples are listed in Table 6.24.

Parameters that exceed one or more of the standards are shown in bold on the tables.

Table 6.24 – Parameters Exceeding Groundwater Quality Criteria in the Brunswick Formation Aquifer Samples

Inorganics
Aluminum
Antimony
Arsenic
Beryllium
Iron
Manganese
Selenium
Sodium
Cyanide

Table 6.21 - Brunswick Formation Aquifer Groundwater Sample Analysis Results
Inorganics - EPA Methods 200.7, 245.1 and SN 4500CN C,E

Parameter	Units	GW Quality Criteria	1D I027-1D-003	2S I027-2S-017	3S I027-3S-013	4D I027-4D-007	5S I027-5S-006	6D I027-6D-013	7D I027-7D-009	7D dup I027-7D-010	8D I027-8D-002
Aluminum	mg/l	0.2	<0.175	<0.175	<0.175	0.207 j	<0.175	<0.175	<0.175	<0.175	<0.175
Antimony	mg/l	0.006	<0.0220	0.0280 j	0.0927 j	<0.0220	<0.0220	<0.0220	<0.0220	<0.0220	0.0529 j
Arsenic	mg/l	0.003	0.287	0.133	0.151	0.425	0.0655 j	0.180	0.208	0.145	0.138
Barium	mg/l	6	0.0612 j	0.0444 j	0.0938 j	0.0535 j	0.2480	0.0416 j	0.0728 j	0.0717 j	0.0660 j
Beryllium	mg/l	0.001	0.0014 j	0.0014 j	0.0014 j	0.0014 j	0.0014 j	0.0015 j	0.0015 j	0.0018 j	0.0018 j
Calcium	mg/l	none	2,040	866	726	1,810	298	897	1,490	1,460	396
Cadmium	mg/l	0.004	<0.001100	<0.00110	<0.00110	<0.00110	<0.00110	<0.00110	<0.00110	<0.00110	<0.00110
Chromium	mg/l	none	<0.00220	<0.00220	0.0095 j	<0.00220	0.0191 j	0.0028 j	<0.00220	<0.00220	0.0029 j
Cobalt	mg/l	none	0.0067 j	0.0072 j	0.0057 j	0.0076 j	0.0067 j	0.0041 j	0.0060 j	0.0067 j	0.0041 j
Copper	mg/l	1.3	0.0058 j	0.0063 j	0.0187 j	0.0070 j	0.0390	0.0091 j	0.0093 j	0.0044 j	0.0113 j
Iron	mg/l	0.3	34.2	12.8	7.13	17.8	1.30	10.4	39.6	35.3	5.84
Lead	mg/l	0.005	<0.0175	<0.0175	<0.0175	<0.0175	<0.0175	<0.0175	<0.0175	<0.0175	<0.0175
Magnesium	mg/l	none	535	593	648	576	777	677	569	559	640
Manganese	mg/l	0.05	4.60	1.19	0.708	0.835	0.0023 j	0.633	1.24	1.15	0.608
Mercury	mg/l	0.002	0.000023 j	0.000020 j	0.000033 j	0.000030 j	0.000033 j	0.000027 j	0.000021 j	0.000030 j	0.000021 j
Nickel	mg/l	0.1	<0.00340	<0.00340	<0.00340	<0.00340	<0.00340	<0.00340	<0.00340	<0.00340	<0.00340
Potassium	mg/l	none	29.1	56.6	143	47.8	233	67.0	33.2	32.8	104
Selenium	mg/l	0.04	0.148	<0.0517	0.101	0.183	0.0647 j	0.0642 j	0.112	<0.0517	0.0717 j
Silver	mg/l	0.04	0.0347	0.0189 j	0.0172 j	0.0295	0.0075 j	0.0195 j	0.0279	0.0246	0.0112 j
Sodium	mg/l	50	3,450	5,740	5,640	4,550	6,710	4,630	3,970	3,860	6,430
Thallium	mg/l	0.002	<0.0324	<0.0324	<0.0324	<0.0324	<0.0324	<0.0324	<0.0324	<0.0324	<0.0324
Vanadium	mg/l	none	<0.00260	<0.00260	0.0043 j	<0.00260	0.0075 j	<0.00260	<0.00260	<0.00260	<0.00260
Zinc	mg/l	2	0.0758	0.0532	0.0784	0.0658	0.0472 j	<0.00260	0.0748	0.0664	0.0331 j
Cyanide, Total	mg/l	0.1	<0.0200	<0.0400	0.0960	0.391	0.0810	<0.0400	<0.0250	<0.0200	<0.0200

Table 6.22 - Brunswick Formation Aquifer Groundwater Sample Analysis Results
Polycyclic Aromatic Hydrocarbons (PAHs) - EPA Method 8270C

Parameter	Units	GW Quality Criteria	1D I027-1D-003	2S I027-2S-017	3S I027-3S-013	4D I027-4D-007	5S I027-5S-006	6D I027-6D-013	7D I027-7D-009	7D dup I027-7D-010	8D I027-8D-002
Acenaphthene	ug/l		0.03	<0.01	0.02	<0.01	0.02	<0.01	<0.01	<0.01	0.02
Acenaphthylene	ug/l	400	0.03	<0.01	<0.01	<0.01	<0.10	<0.01	<0.01	<0.01	<0.01
Anthracene	ug/l	2,000	0.03	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.02
Benzo(a)anthracene	ug/l	0.1	0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Benzo(b)fluoranthene	ug/l	0.2	0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Benzo(k)fluoranthene	ug/l	0.5	0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Benzo(a)pyrene	ug/l	0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Benzo(g,h,i)perylene	ug/l	none	0.03	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.01
Chrysene	ug/l	5	0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Dibenz(a,h)anthracene	ug/l	0.3	0.03	<0.02	<0.02	<0.02	0.02	<0.02	<0.02	<0.02	<0.02
Fluoranthene	ug/l	300	0.03	<0.02	0.02	<0.02	0.02	<0.02	<0.02	<0.02	<0.02
Fluorene	ug/l	300	0.03	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.02
Indeno(1,2,3-cd)pyrene	ug/l	0.2	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
2-Methylnaphthalene	ug/l	none	0.03	<0.01	0.03	<0.01	0.01 j	<0.01	<0.01	0.03	0.02
Naphthalene	ug/l	300	0.02	0.01 j	0.03	<0.01	0.02	<0.01	0.01 j	<0.01	0.02
Phenanthrene	ug/l	none	0.04	0.04	0.02	<0.01	0.02	0.02	0.02	0.03	0.03
Pyrene	ug/l	200	0.03	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02

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Table 6.23 - Brunswick Formation Aquifer Groundwater Sample Analysis Results
Volatile Organic Compounds (VOCs) EPA Method 8260B

Parameter	Units	GW Quality Criteria	1D I027-1D-003	2S I027-2S-017	3S I027-3S-013	4D I027-4D-007	5S I027-5S-006	6D I027-6D-013	7D I027-7D-009	7D dup I027-7D-010	8D I027-8D-002
Acetone	ug/l	6,000	<3.26	<22.6	<22.6	<3.26	<3.26	<3.26	<3.26	<3.26	<3.26
Benzene	ug/l	1	<0.220	<3.80	<3.80	<0.220	<0.220	<0.220	<0.220	<0.220	<0.220
Bromochloromethane	ug/l	none	<0.300	<4.60	<4.60	<0.300	<0.300	<0.300	<0.300	<0.300	<0.300
Bromodichloromethane	ug/l	1	<0.210	<3.50	<3.50	<0.210	<0.210	<0.210	<0.210	<0.210	<0.210
Bromoform	ug/l	4	<0.310	<2.80	<2.80	<0.310	<0.310	<0.310	<0.310	<0.310	<0.310
Bromomethane	ug/l	none	<0.460	<4.30	<4.30	<0.460	<0.460	<0.430	<0.460	<0.460	0.610 jb
2-Butanone	ug/l	300	<1.44	<20.1	<20.1	<1.44	<1.44	<1.44	<1.44	<1.44	<1.44
Carbon disulfide	ug/l	700	<0.640	<6.20	<6.20	<0.640	2.39	<0.640	<0.640	<0.640	<0.640
Carbon tetrachloride	ug/l	1	<0.280	<4.50	<4.50	<0.280	<0.280	<0.280	<0.280	<0.280	<0.280
Chlorobenzene	ug/l	50	<0.230	<3.20	<3.20	<0.230	<0.230	<0.230	<0.230	<0.230	<0.230
Chloroethane	ug/l	none	<0.340	<5.90	<5.90	<0.340	<0.340	<0.340	<0.340	<0.340	<0.340
Chloroform	ug/l	70	<0.230	<3.40	<3.40	<0.230	<0.230	<0.230	<0.230	<0.230	<0.230
Chloromethane	ug/l	none	<0.320	<4.30	<4.30	<0.320	<0.320	<0.320	<0.320	<0.320	<0.320
Cyclohexane	ug/l	none	<0.440	<3.20	<3.20	<0.440	<0.440	<0.440	<0.440	<0.440	<0.440
Dibromochloromethane	ug/l	1	<0.140	<3.70	<3.70	<0.140	<0.140	<0.140	<0.140	<0.140	<0.140
1,2-Dibromoethane	ug/l	none	<0.210	<3.70	<3.70	<0.210	<0.210	<0.210	<0.210	<0.210	<0.210
1,2-Dibromo-3-chloropropane	ug/l	0.02	<0.470	<6.60	<6.60	<0.470	<0.470	<0.470	<0.470	<0.470	<0.470
1,2-Dichlorobenzene	ug/l	600	<0.200	<3.50	<3.50	<0.200	<0.200	<0.200	<0.200	<0.200	<0.200
1,3-Dichlorobenzene	ug/l	600	<0.210	<3.50	<3.50	<0.210	<0.210	<0.210	<0.210	<0.210	<0.210
1,4-Dichlorobenzene	ug/l	75	<0.170	<3.70	<3.70	<0.170	<0.170	<0.170	<0.170	<0.170	<0.170
Dichlorodifluoro methane	ug/l	1,000	<0.430	<3.60	<3.60	<0.430	<0.430	<0.430	<0.430	<0.430	<0.430
1,1-Dichloroethane	ug/l	50	<0.240	<4.00	<4.00	<0.240	<0.240	<0.240	<0.240	<0.240	<0.240
1,2-Dichloroethane	ug/l	2	<0.240	<4.40	<4.40	<0.240	<0.240	<0.240	<0.240	<0.240	<0.240
1,1-Dichloroethene	ug/l	1	<0.310	<3.20	<3.20	<0.310	<0.310	<0.310	<0.310	<0.310	<0.310
cis-1,2-Dichloroethene	ug/l	70	<0.280	<3.30	<3.30	<0.280	<0.280	<0.280	<0.280	<0.280	<0.280
trans-1,2-Dichloroethene	ug/l	100	<0.140	<4.10	<4.10	<0.140	<0.140	<0.140	<0.140	<0.140	<0.140

Table 6.23 - Brunswick Formation Aquifer Groundwater Sample Analysis Results
Volatile Organic Compounds (VOCs) EPA Method 8260B

Parameter	Units	GW Quality Criteria	1D I027-1D-003	2S I027-2S-017	3S I027-3S-013	4D I027-4D-007	5S I027-5S-006	6D I027-6D-013	7D I027-7D-009	7D dup I027-7D-010	8D I027-8D-002
1,2-Dichloropropane	ug/l	1	<0.200	<5.70	<5.70	<0.200	<0.200	<0.200	<0.200	<0.200	<0.200
cis-1,3-Dichloropropene	ug/l	1	<0.220	<3.40	<3.40	<0.220	<0.220	<0.220	<0.220	<0.220	<0.220
trans-1,3-Dichloropropene	ug/l	1	<0.220	<2.70	<2.70	<0.220	<0.220	<0.270	<0.220	<0.220	<0.220
1,4-Dioxane	ug/l	none	<129	NA	NA	<129	<129	<129	<129	<129	<129
Ethyl benzene	ug/l	700	<0.230	<3.40	<3.40	<0.230	<0.230	<0.230	<0.230	<0.230	<0.230
2-Hexanone	ug/l	none	<0.830	<5.30	<5.30	<0.830	<0.830	<0.830	<0.830	<0.830	<0.830
Isopropyl benzene	ug/l	none	<0.270	<2.90	<2.90	<0.270	<0.270	<0.270	<0.270	<0.270	<0.270
Methyl acetate	ug/l	7,000	<0.360	<9.10	<9.10	<0.360	<0.360	<0.360	<0.360	<0.360	<0.360
Methyl tertiary butyl ether	ug/l	70	<0.200	<3.10	<3.10	<0.200	<0.200	<0.200	<0.200	<0.200	<0.200
Methylcyclohexane	ug/l	none	<0.360	<7.10	<7.10	<0.360	<0.360	<0.360	<0.360	<0.360	<0.360
Methylene chloride	ug/l	none	<0.500	<4.00	<4.00	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500
4-Methyl-2-pentanone	ug/l	none	<0.440	<5.80	<5.80	<0.440	<0.440	<0.440	<0.440	<0.440	<0.44
Styrene	ug/l	100	<0.200	<3.30	<3.30	<0.200	<0.200	<0.200	<0.200	<0.200	<0.200
1,1,2,2-Tetrachloroethane	ug/l	1	<0.320	<3.50	<3.50	<0.320	<0.320	<0.320	<0.320	<0.320	<0.320
Tetrachloroethene	ug/l	1	<0.370	<3.60	<3.60	<0.370	<0.370	<0.370	<0.370	<0.370	<0.370
Toluene	ug/l	600	<0.190	<3.70	<3.70	<0.190	<0.190	<0.190	<0.190	<0.190	<0.190
1,2,3-Trichlorobenzene	ug/l	none	<0.310	<3.80	<3.80	<0.310	<0.310	<0.310	<0.310	<0.310	<0.310
1,2,4-Trichlorobenzene	ug/l	9	<0.360	<1.60	<1.60	<0.360	<0.360	<0.360	<0.360	<0.360	<0.360
1,1,1-Trichloroethane	ug/l	30	<0.210	<3.40	<3.40	<0.210	<0.210	<0.210	<0.210	<0.210	<0.210
1,1,2-Trichloroethane	ug/l	3	<0.240	<3.80	<3.80	<0.240	<0.240	<0.240	<0.240	<0.240	<0.240
Trichloroethene	ug/l	1	<0.250	<2.60	<2.60	<0.250	<0.250	<0.250	<0.250	<0.250	<0.250
Trichlorofluoromethane	ug/l	2,000	<0.380	<4.30	<4.30	<0.380	<0.380	<0.380	<0.380	<0.380	<0.380
1,1,2-Trichloro-1,2,2-trifluoroethane	ug/l	none	<0.470	<4.90	<4.90	<0.470	<0.470	<0.470	<0.470	<0.470	<0.470
Vinyl chloride	ug/l	1	<0.240	<3.90	<3.90	<0.240	<0.240	<0.240	<0.240	<0.240	<0.240
m&p-Xylenes	ug/l	1,000	<0.460	<6.20	<6.20	<0.460	<0.460	<0.460	<0.460	<0.460	<0.460
o-Xylene	ug/l	1,000	<0.240	<2.90	<2.90	<0.240	<0.240	<0.240	<0.240	<0.240	<0.240

7. RECEPTOR EVALUATION

An initial receptor evaluation form was prepared and submitted to NJDEP under separate cover. This form was submitted within the regulatory time frame of one year from the initiation of remediation. The date of initiation of remediation was November 23, 2011.

An updated receptor evaluation form has been prepared and is contained in Appendix J to this RIR. No changes were identified in the updated receptor evaluation, compared to the initial receptor evaluation.

8. ECOLOGICAL EVALUATION

8.1 Site Description

The Rahway Arch property consists of approximately 85 acres of previously disturbed land, comprised of the six impoundments and the surrounding berms; and approximately 40 acres of surrounding wetlands. There is no indication that the wetland areas have been impacted by the impoundments or the disposal of alum-YPS sludge in the impoundments.

The site is bounded to the north, northeast and northwest by the Rahway River. It is bounded to the south and southeast by a Kinder-Morgan fuel terminal. The site is bounded to the west and southwest by a small equipment salvage yard and the I-Port 12 trucking terminal. The truck terminal was built on the former Borough of Carteret landfill.

Cross Creek forms a portion of the western site boundary. Deep Creek is located on the east side of the site and separates Impounds 1 and 2 from some of the un-impacted wetlands areas of the site.

This ecological evaluation has been prepared in accordance with the Tech Rule and the Ecological Evaluation Technical Guidance (August 2011) and was based on the remediation assessment, remedial investigation results and topography.

8.2 Environmentally Sensitive Natural Resources

8.2.1 Soil Conditions

The soil in the project limits and vicinity is mapped as Psamments waste substratum, 0 to 8 percent slopes (PsuB) on the NRCS Soil Survey Map. The Psamments waste substratum unit is typically formed from waste disposal sites and inactive sanitary landfills. These areas contain smoothed or uneven accumulations and general refuse. These are reclaimed areas or areas used as landfills. For most uses, on-site geotechnical and environmental investigation and evaluation are needed.

8.2.2 Topography and Slope

The topography of the site is relatively level, ranging from approximately 6 feet above mean sea level (msl) to 14 feet above msl. In the tidal creeks adjacent to the site, the elevation drops to 2 feet above msl. Drainage is towards the tidal creeks located to the east and west. These creeks are tidally influenced twice daily by the Rahway River.

Remediating the site will consist of placement of compacted low permeability soil fill to eliminate direct contact, provide stable surfaces prevent ponding in the impoundments and eliminate any impact to groundwater hazards from the contaminants. During construction, all disturbed areas will be stabilized in accordance with the New Jersey Soil Erosion and Sediment Control Standards.

8.2.3 Hydrology & Freshwater Wetlands

Review of the U.S. Department of Interior National Wetland Inventory Map for the site indicates that palustrine, emergent, persistent and narrow leaved wetlands with seasonally saturated regimes (PEM1E and PEM5E) are located at on the project site, outside the berms. These wetlands are outside the planned limits of the remediation project and will not be impacted by the remediation.

A Letter of Interpretation-Line Verification (LOI) was obtained for the Rahway Arch property. The approved wetland line from the September 22, 2008 LOI (NJDEP File No. 1201-03-0003.1 FWW 080001) is shown on the conceptual grading plan for the cap. The LOI is valid for five years.

As referenced in the LOI,

> "The Department has determined that the wetlands delineated by flags A1 through A101, B1 through B10 and C11 through C18 are of exceptional resource value. The standard transition area or buffer adjacent to exceptional resource value wetlands is 150 feet. All other onsite wetlands are of intermediate resource value. The standard transition area or buffer adjacent to intermediate resource value wetlands is 50 feet."

N.J.A.C. 7:7A-2.6 identifies regulated activities in transition areas:

> "…the following activities are not regulated in transition areas and do not require Department approval under this chapter, provided that the activities are performed in a manner that minimizes adverse effects to the transition area and adjacent freshwater wetlands, and provided that the transition area is not contained within a conservation restriction or easement. If the transition area is contained in a conservation restriction or easement, none of the following activities are allowed unless explicitly stated in the conservation restriction or easement:
>
> 1. Normal property maintenance; (9) Maintenance of artificial features including the repair, rehabilitation, replacement, maintenance or reconstruction of any previously authorized, currently serviceable structure, lawfully existing prior to July 1, 1989, or permitted under this chapter, provided such activities do not result in additional disturbance of the transition area upon completion of the activity. Minor deviations from the existing structure due to changes in materials or construction techniques and which are necessary to make repairs, rehabilitation or replacements are allowed provided such changes do not result in disturbance of additional transition area upon completion of the activity".

Based on the above section of the Freshwater Wetlands Protection Act the existing berms and the reservoir portions of the impoundments within 150 feet of the wetlands on the project site can be maintained or reconstructed without a permit since they are "artificial features" and their maintenance, reconstruction or rehabilitation may be required to satisfactorily remediate the site.

No remedial activities are anticipated in the wetland areas.

8.2.4 Vegetation

The vegetation in the project area and vicinity consists mainly of phragmites dominated emergent and scrub shrub wetlands. Herbaceous vegetation characteristic to this area includes common reed (*Phragmites australis*), marsh elder (*Iva frutescens*), groundsel tree (*Baccharis halimifolia*), seaside goldenrod (*Solidago sempervirens*), Queen Anne's lace (*Daucus carota*), common mugwort (*Artemisia vulgaris*), common plantain (*Plantago major*), and common dandelion (*Taraxacum officinale*). *Spartina alterniflora* and *Spartina patens* are commonly found along the tidal fringes. The wetlands areas primarily contain monotone *Phragmites australis*. Non-vegetated pathways are primarily disturbed gravel lined areas.

8.2.5 Wildlife, Habitat and Aquatic Resources

The NJDEP iMAP for Threatened and Endangered Species Habitat Mapping (iMAP), indicated forested wetland, and emergent wetland patches with records for tricolored heron, little blue heron, glossy ibis, black-crowned night-heron, cattle egret, yellow-crowned night-heron, snowy egret. The LOI provided for the site also indicates documentation of exceptional resource wetlands that are directly associated with the above mentioned colonial water bird species.

No site remediation is planned for the wetlands areas. Access will utilize existing gravel and dirt roads. With exception of clearing noxious weeds, no impacts are anticipated to vegetation that could potentially serve as viable sheltering habitat, nesting, roosting or foraging areas for the colonial water bird species.

No consultation was pursued with the National Marine Fisheries Service for documentation of diadromous aquatic species. This is not necessary because the remediation will not impact any watercourses, will be installed with appropriate Best Management Measures (BMPs) and will comply with all soil erosion and sediment control requirements.

8.3 Contaminants of Potential Ecological Concern

The sampling analysis results documented in Sections 2 and 6 of this RIR indicate that metals, cyanide and PAH compounds were detected in one or more samples of the surface fill or the alum-YPS sludge above the ecological screening criteria listed in the NJDEP Ecological Screening Criteria Table. Refer to Tables 2.3, 2.4, 6.1 and 6.2 for the specific concentrations in the surface fill and Tables 2.5, 2.6, 6.6 and 6.7 for specific concentrations in the alum-YPS sludge.

8.4 Contaminant Migration Pathways

All of the contaminants of concern in the surface fill, alum-YPS sludge and the underlying natural materials are contained within the six impoundments that form the 85 acre contaminated portion of the site. There is no historical data to identify any contaminants being placed outside the containment berms. Geotechnical soil borings drilled in the wetland areas surrounding the impoundment berms did not identify the presence of any alum-YPS sludge.

Current potential pathways for migration of the contaminants of concern on the site are vertical percolation of accumulated water through the contaminated materials into the upper

groundwater aquifer or to a lesser extent transport by stormwater percolating through the containment berms. Failure of one or more of the existing berms could also cause a potential release of contaminants into the surrounding wetland areas.

The planned remedial action for the site is to cap the 85 acres comprising the six impoundments and the berms with engineered fill. This engineered fill will provide structural stability to prevent berm failure and will have reduced permeability to eliminate percolation into the groundwater. The fill will be designed to generate runoff rather than infiltration. The planned design would eliminate more than 99% of the current infiltration.

The planned site remediation will eliminate all potential contaminant migration pathways, therefore eliminating any potential impact to environmentally sensitive natural resources.

8.5 Ecological Evaluation Conclusion

Site investigation activities have identified potential ecological receptors as adjacent and on-site wetlands. Plant and animal species of special concern or other unique features were not observed during site wide field inspections.

Although contaminant concentrations in excess of the ecological screening levels were found at the site, very limited existing migration pathways to environmentally sensitive natural resources currently exist, namely contaminants seeping through the existing berms to surface water or into the groundwater. The planned site remediation will eliminate all potential pathways to environmentally sensitive natural resources. As a result, it can be concluded that there is no reasonably anticipated mechanism for transport to environmentally sensitive areas. Accordingly, further ecological evaluation is not warranted.

9. REGULATORY TIME FRAMES

The date for initiation of remediation for this site is November 23, 2011. On this date, Rahway Arch Properties submitted a report to NJDEP-SRP identifying previously undocumented contamination and de-certifying the March 2011 biennial report required by the previously issued NFA.

The applicable regulatory time frames and the actual submission dates that these time frames have been met are summarized in Table 9.1. Note that this site is not subject to ISRA, there are no USTs (regulated or unregulated) on the site and there have been no UST discharges.

Table 9.1 – Summary of Regulatory Time Frames

Requirement	Regulatory Time Frame	Required Date	Completed Date
Initiation of remediation	n/a	n/a	11/23/2011
Notification of LSRP Retention	45 days	1/7/2012	12/5/2012
Post Public Notification Signage	14 days prior to RI field investigation	6/25/2012	6/16/2012
Pay initial annual remediation fee	270 days	8/22/2012	8/22/2012
Prepare Preliminary Assessment	none	n/a	August 7, 2012
Submit Initial Receptor Evaluation Form	1 year	11/23/2012	10/31/2012
RI completed and RIR submitted	6 years	11/23/2017	This document
Submit RAWP	60 days prior to start of remedial action	TBD	TBD
Submit Remedial Action Report	5 years after RIR	11/1/2017	TBD

10. AREAS OF CONCERN

The Preliminary Assessment identified 14 Areas of Concern (AOCs) related to the condition of the site. These areas of concern were investigated as part of this Remedial Investigation. The AOCs, findings of the RI and recommendations for remedial action are provided in Table 10.1.

Table 10.1 - Rahway Arch Property Areas of Concern and Findings of the Remedial Investigation

AOC	Title	Description	Findings	Recommendations
1	Sludge Chemical Constituents	The alum-YPS sludge may contain other chemical constituents. The Warner Plant produced a number of chemical products and had a number of waste streams. These additional constituents may be mixed with the sludge. Undocumented fill has been placed on top of and mixed with the sludge as part of the vegetation efforts. Additionally, demolition debris from buildings at the Warner Plant were used in the berms. The fill and debris were never tested and are considered undocumented fill.	Inorganc and PAH compounds were detected in the alum-YPS sludge and fill in excess of NRDCRC and IGWSC concentrations.	Place engineered fill cap over impoundments and berms
2	Residue Sludge Extent	The sludge is mostly contained within the soil berms. However, a review of historical boring logs in the vicinity of the berms identified a layer of sludge beneath the berms in some locations. In addition, historical reports indicate that in some areas, sludge likely extends beyond the present location of the berms resulting from several incidents of embankment failure.	No impact was identifed outside the impoundments and berms.	No further action required
3	Residue Sludge and Containment Berm Stability	The structural properties of the sludge are very poor. The sludge within the impoundments had negligible shear strength and is not capable of supporting any significant weight, including lightly loaded construction equipment. The sludge is sensitive and thixotropic. The structural stability of the berms is questionable. Previous reports have documented past instances of failures.	The sludge and berms will support the weight of the cap. However, a specific construction sequence, a drainage mat and time between placement of cap lifts to allow excess pore water pressure to dissipate will be necessary.	Place engineered fill cap over impoundments and berms

Table 10.1 - Rahway Arch Property Areas of Concern and Findings of the Remedial Investigation

AOC	Title	Description	Findings	Recommendations
4	Impacts to Surface Water Quality	The portion of the Rahway River that abuts the site is classified as SE3 (saline estuarine).Surface water quality data collected in the 1990s indicates that cyanide and manganese were detected at concentrations that exceed the applicable most stringent surface water quality standard (SWQS). Cyanide is a site-specific contaminant associated with the sludge and could be mobilized by storm water runoff and/or by discharge of shallow groundwater. The relatively high levels of manganese in the surface water were believed to be associated with the high levels of manganese characteristic of the regional groundwater. However, the sludge was not analyzed for manganese to determine if this was a site-specific contaminant. A six inch transite pipe used to discharge sludge onto the site from the former American Cyanamid plant runs across the Rahway River. This pipe, if it was not removed or properly abandoned, may act as preferential pathway for migration of potential contaminants into the Rahway River. Also, NJDEP reported the existence of Outfall No. 7, the NJPDES permitted outfall for discharging supernatant from the impoundments. Discolored surface runoff was observed from the impoundments in 2012. Samples collected of water in the impoundments detected elevated concentrations of cyanide and metals, in excess of surface water quality criteria.	Elevated concentrations of inorganics and PAHs, including cyanide and manganese, were detected in the fill and sludge, as well as the underlying natural materials. These contaminants could leach through the berms and impact surface water. Pieces of transite pipes were observed in Impoundment 5.	Place engineered fill cap over impoundments and berms
5	Fill Used to Construct Access Roads	Fill generated during the demolition of structures at the Warner Plant in Linden was used to construct and maintain the access roads around the embankments. This fill may be potentially impacted by historical operations associated with these structures. Other undocumented fill, including composed sewage sludge, C&D debris and excess soil excavated from re-development sites has been used on the berms and access roads over the years.	Surface fill materials on the berms and the impoundments contained inorganics and PAHs in excess of NRDCRS and IGWSL concentrations.	Place engineered fill cap over impoundments and berms
6	Indoor Vapor Intrusion	Groundwater samples from monitoring wells MW-1S and MW-1D contain volatile organic compounds (VOCs), which exceed the applicable NJDEP Generic Vapor Intrusion Screening Levels for groundwater. These impacts were suspected to be associated with operations of Industrial Reclamation Service, an operator on the neighboring property or the Carteret landfill. The extent of the elevated levels of VOCs is not currently known.	VOCs were not detected above indoor air screening levels in the groundwater.	No further action required

Table 10.1 - Rahway Arch Property Areas of Concern and Findings of the Remedial Investigation

AOC	Title	Description	Findings	Recommendations
7	Ecological Evaluation	The discharge of impacted groundwater into the surface water bodies in the vicinity of the site is possibly impacting the local ecology. The literature review did not identify any ecological studies of the site, with the exception of delineation of the extent of wetlands.	Fill and sludge were not detected in the wetland areas. Completed pathways for ecological impact were not identified.	No further action required
8	Solid Waste	A significant pile of railroad ties is located on Impoundment 5. Railroad ties were used to stabilize the access roads. This pile appears to be extra ties delivered to the site but not used.Several piles of chipped wood waste along with scattered wood chips are located on Impoundment 2. These materials appear to be remnants of the wood waste recycling operation that was located on Impoundment 2 in 2005 through 2008.	These materials remain on site.	Remove or use during site remediation
9	Natural Resources Damages	A Natural Resource Damages assessment was not performed as a part of this PA or any previous investigations.	No natural resource damages were identified.	No further action required
10	Undocumented Fill	EastStar performed a fill investigation performed in 2011 and determined that, in addition to the alum-YPS sludge, undocumented fill materials have been placed over most of the site. Sampling and analysis of these fill materials determined that they are contaminated with PAHs, metals and petroleum hydrocarbons. PAH concentrations range up to 300 times the non-residential direct contact remediation criteria.	Inorganc and PAH compounds were detected in the alum-YPS sludge and fill in excess of NRDCRC and IGWSC concentrations.	Place engineered fill cap over impoundments and berms
11	Contaminated Water in Impoundments	The impoundments act like bathtubs, trapping precipitation. This precipitation is forced to percolate through the contaminated fill and alum-YPS sludge into the groundwater. Alternatively during periods of heavy rainfall, this water will seep through the sides of the berms or will overtop the berms, threatening the berm stability.Limited sampling performed in 2012 has shown that the water has dissolved contaminants from the impoundment contents. Elevated concentrations of cyanide and metals were measured in four samples collected from three of the impoundments in March 2012. The only discharge paths for this contaminated water are into groundwater or surface water. EastStar estimates that 25,000,000 gallons per year of water will percolate through the sludge and enter the groundwater. In 1986, American Cyanamid's consultant Hydrosystems estimated this quantity could be up to 46,000,000 gallons per year and that the resulting discharge of cyanide could be 100 pounds per day. Hydrosystems calculated that this discharge exceeded the U.S. EPA reporting limit for cyanide discharge under the National Contingency Plan.	Limited amounts of water observed during RI in July-August 2012, but the condition remains unchanged.	Place engineered fill cap over impoundments and berms

Table 10.1 - Rahway Arch Property Areas of Concern and Findings of the Remedial Investigation

AOC	Title	Description	Findings	Recommendations
12	Groundwater Contamination	Groundwater samples were last collected on the site in 1999. However, the contaminants in the sludge have remained exposed to infiltration since that time. As a result, the condition of the groundwater under the site is unknown at this time. The existing 16 groundwater monitoring wells installed by American Cyanamid and Cytec remain on the site. Although unused for a long time, in 2011 the wells were open and appeared to be usable.	Wells were re-developed and sampled. Metals contamination exceeds groundwater standards.	Place engineered fill cap over impoundments and berms
13	Public Safety from Exposed Sludge	The sludge in the impoundments has no shear strength and will not support weight. This poses a direct safety hazard to any persons or animals that wander out onto the impoundments. The remedial action plan and the DER discuss engineering controls to limit access by locking to two gates and posting no trespassing signage along the Rahway River and Arthur Kill. While the gates are locked, no signage was observed.	This condition is unchanged.	Place engineered fill cap over impoundments and berms. This will eliminate need for signage
14	Former Wood Waste Recycling Facility	A Class B recycling facility for recycling wood waste was operated on Impoundment 2 for several years. This facility had numerous permit violations, including several NOVs that remain outstanding at this time. As discussed in AOC 8, remnants of the operation are visible on the site at this time.	This condition is unchanged.	Remove or use during site remediation

11. SUMMARY AND CONCLUSIONS

EastStar has completed the Remedial Investigation of the Rahway Arch Property site. The 125 acre site is comprised of 85 acres of containment berms and impoundments and 40 acres of undisturbed wetlands.

This Remedial Investigation has confirmed historic data discussed in the Preliminary Assessment and this report that the undocumented fill material that has been placed on the site and the alum-YPS sludge in the impoundments contain metals, cyanide and PAHs above non-residential soil direct contact remediation criteria and soil impact to groundwater screening levels. The groundwater on the site, sampled through the sixteen existing groundwater monitoring wells, is also contaminated with metals and cyanide. Additionally, EastStar determined in the PA that the site in its current condition is unusable and poses a safety risk to the public.

A geotechnical investigation was performed as part of the remedial investigation. The geotechnical data showed that the alum-YPS sludge in the impoundments and the underlying peat and clay layers have minimal strength. These layers cannot support a load that would allow the site to be usable. However, the geotechnical report did identify a construction process for capping the site with engineered fill that would allow future development over a portion of the site.

Based upon these results, remediation of the site is required under the SRP regulations and guidelines. This remediation will:

- Eliminate direct contact hazard with contaminated surface fill and alum-YPS sludge
- Prevent precipitation from coming in contact with the contaminated materials and discharging to groundwater or surface water
- Promote runoff and evapotranspiration of precipitation rather than infiltration
- Ensure the long term integrity of the berms
- Eliminate site safety hazards posed by soft soils and sludge and ponded water in the impoundments
- Allow future development on a portion of the site by the property owners, making at least a portion of the site usable.

A Remedial Action Workplan (RAW) will be developed for capping the site using engineered fill, following the guidelines recommended in the geotechnical report. The RAW will be prepared in accordance with the requirements of the Tech Rule and will contain specifics on the cap design and the materials that may be used to construct the engineered fill.

12. REFERENCES

1. *Technical Requirements for Site Remediation*, NJAC 7:26E, last amended May 7, 2012.

2. EastStar Environmental Group, Inc., *Preliminary Assessment of the Rahway Arch Properties Site*, August 7, 2012.

3. SESI Consulting Engineers, *Preliminary Assessment Report for American-Cyanamid/Cytec Impoundments, Block 9.03, Lot 21; Block 10, Lots 8-10 & 12-21; Block 11.01, Lots 8, 10-14 & 28, 55 Salt Meadow Road, Carteret, NJ 07008,* draft, October 26, 2006.

4. NJDEP, Letter from Kenneth Kloo to Angela Dohl, American Cyanamid Company, with attachments, December 6, 1991.

5. Cytec Industries, *Remedial Action Plan: Operation, Maintenance and Monitoring for Carteret Impoundments, Borough of Carteret, New Jersey*, April 21, 1994.

6. Blasland, Bouck & Lee, Inc., *Remedial Action Plan Addendum: Carteret Impoundments, Borough of Carteret, New Jersey*, revised February 1995.

7. Blasland, Bouck & Lee, Inc., *Remedial Investigation Work Plan: Carteret Impoundments, Borough of Carteret, New Jersey*, December 1993.

8. New Jersey Turnpike Authority, Letter from Kathy Critchley to Thomas J. Irwin, Cytec Industries, with attachments, July 15, 2010.

9. Hydrosystems, Inc., *Groundwater and Surface Water Assessment Carteret Impoundments, American Cyanamid Company, Linden, New Jersey*, February 9, 1987.

10. Hydrosystems, Inc., *Environmental Assessment of the Carteret Impoundments, American Cyanamid Company, Linden, New Jersey*, March 10, 1989.

11. EastStar Environmental Group, Inc., *Environmental Investigation of Fill Material at the Rahway Arch (Old Cytec Landfill) Site*, October 17, 2011.

12. Michael Baker, Jr., Inc., *Draft Geotechnical Engineering Report – Rahway Arch Property, Carteret, New Jersey*, October 2012.

13. NJDEP, *Ecological Evaluation Technical Guidance*, August 2011.

APPENDICES

APPENDIX A

UPDATED RECEPTOR EVALUATION FORM

New Jersey Department of Environmental Protection
Site Remediation Program

RECEPTOR EVALUATION (RE) FORM

Date Stamp
(For Department use only)

SECTION A. SITE NAME AND LOCATION

Site Name: Rahway Arch Property

List all AKAs: see attached list

Street Address: terminus of Driftway Street

Municipality: Cartertet (Township, Borough or City)

County: Middlesex Zip Code: 07008

Program Interest (PI) Number(s): G000007844 Case Tracking Number(s): NJD986603439

Indicate the type of submission:

☐ Initial RE Submission

☐ Updated RE Submission

Indicate the reason for submission of an updated RE form

- ☐ Submission of an Immediate Environmental Concern (IEC) source control report;
- ☒ Submission of a Remedial Investigation Report;
- ☐ Submission of a Remedial Action Report;

Check if included in updated RE

- ☐ The known concentration or extent of contamination in any medium has increased;
- ☐ A new AOC has been identified;
- ☐ A new receptor is identified;
- ☐ A new exposure pathway has been identified.

SECTION B. ON SITE AND SURROUNDING PROPERTY USE

1. Identify any sensitive populations/uses that are currently on-site or surrounding property usage within 200 feet of the site boundary (check all that apply):

	On-site	Off-site
None of the following	☒	☒
Residences or residential property	☐	☐
Public or Private Schools grades K-12	☐	☐
Child care centers	☐	☐
Public parks, playgrounds or other recreation areas	☐	☐
Other sensitive population use(s) Explain _____	☐	☐

If any of the above applies, attach a list of addresses, facility names, type of use, and a map depicting each location relative to the site.

2. Current site uses (check all that apply):

☐ Industrial ☐ Residential ☐ Commercial ☐ Agricultural
☐ School or child care ☐ Government ☐ Park or recreational use
☒ Vacant ☐ Other: _____

3. Planned future site uses and off-site use within 200 ft of site boundary (check all that apply):

☒ Industrial ☐ Residential ☐ Commercial ☐ Agricultural
☐ School or child care ☐ Government ☐ Park or recreational use
☒ Vacant ☐ Other: _____

Provide a map depicting the location of the proposed changes in land use.

SECTION C. DESCRIPTION OF CONTAMINATION

1. Identify if any of the following exist at the site (check all that apply):
   - ☐ Free product [N.J.A.C. 7:26E-1.8] identified is ☐ LNAPL* or ☐ DNAPL**. Date identified: _____
   - ☐ Residual product [N.J.A.C. 7:26E-1.8]
   - ☐ Other high concentration source materials not identified above (e.g., buried drums, containers, unsecured friable asbestos)

     Explain: _____

   * LNAPL – measured thickness of .01 feet or more

   **DNAPL – See US EPA DNAPL Overview

2. Soil Migration Pathway

   Has soil contamination been delineated to the applicable Direct Contact Soil Remediation Standard? ☒ Yes ☐ No

   Are all soils either below the applicable Direct Contact Criteria or under an institutional control (i.e. deed notice)? ☐ Yes ☒ No

3. If this evaluation is submitted with a technical document that includes contaminant summary information, proceed to Section D. Otherwise attach a brief summary of all currently available data and information to be included in the site investigation or remedial investigation report.

SECTION D. GROUND WATER USE

1. Has the requirement for ground water sampling been triggered? ☒ Yes ☐ No ☐ Unknown
   If "No," proceed to Section F. If "Unknown," explain:

   _____

2. Is Ground water contaminated above the Ground Water Remediation Standards [N.J.A.C.7:9C]? ☒ Yes ☐ No ☐ Unknown

   Or ☐ Awaiting laboratory data with the expected due date: _____

   If "Yes," provide the date that the laboratory data was available and confirmed contamination above the Ground Water Remediation Standards. Date: 09/19/2012

   If "Unknown," explain: _____

   If "No," or awaiting laboratory data proceed to Section F.

3. Has ground water contamination been delineated to the applicable Remediation Standard? ☒ Yes ☐ No
4. Has a well search been completed? ☒ Yes ☐ No

   Date of most recent or updated well search: 09/10/2012

   Identify if any of the following conditions exist based on the well search [N.J.A.C.7:26E-1.14(a)] (check all that apply):
   - ☐ Potable wells located within 500 feet from the downgradient edge of the currently known extent of contamination.
   - ☐ Potable well located 250 feet upgradient or 500 feet side gradient of the currently known extent of contamination.
   - ☐ Ground water contamination is located within a Tier 1 wellhead protection area (WHPA).

5. Is a completed Well Search Spreadsheet or historical well search table attached and has an electronic copy of the spreadsheet been submitted to srpgis_wrs@dep.state.nj.us. ☒ Yes ☐ No

   If "No," explain: _____

6. Are any private potable or irrigation wells located within ½ mile of the currently known extent of contamination? ☐ Yes ☒ No

   If "Yes," was a door to door survey completed? ☐ Yes ☐ No

   If survey was not completed explain: _____

7. Has sampling been conducted of ☐ potable well(s) and /or ☐ non-potable use well(s)? ☐ Yes ☐ No

   If "No," provide justification then proceed to Section E.

   _____

8 Has contamination been identified in potable well(s) above Ground Water Remediation Standards that is not suspected to be from the site? (If "Yes," provide justification) ..... ☐ Yes ☐ No

_____

9 Has contamination been identified in potable well(s) that is above the Ground Water Remediation Standards or Federal Drinking Water Standards? ..... ☐ Yes ☐ No

Provide date laboratory data was received: _____

Or ☐ awaiting laboratory data with the expected due date: _____

If "Yes" for potable well contamination **not attributable to background**, follow the IEC Guidance Document at http://www.nj.gov/dep/srp/guidance/index.html#iec for required actions and answer the following:

Has an engineered system response action been completed on all receptors? ..... ☐ Yes ☐ No

Provide a brief narrative description:

Date completed: _____ NJDEP Case Manager: _____

10. Were Non-potable use well(s) sampled and results were above Class II Ground Water Remediation Standards? ..... ☐ Yes ☐ No

Provide date laboratory data was received: _____

Or ☐ awaiting laboratory data with the expected due date: _____

11. Has the ground water use evaluation been completed? ..... ☐ Yes ☐ No

SECTION E. VAPOR INTRUSION (VI)

1. Contaminants present in ground water exceed the Vapor Intrusion Ground Water Screening Levels that trigger a VI evaluation. (see NJDEP Vapor Intrusion Technical Guidance). ... ☐ Yes ☒ No ☐ Unknown

Or ☐ Awaiting laboratory data and the expected due date: _____

Provide the date that the laboratory data was available and confirmed contamination above the Vapor Intrusion Trigger Levels. Date: _____

2. Other existing conditions that trigger a VI evaluation. (see NJDEP Vapor Intrusion Technical Guidance)

☐ Wet basement or sump containing free product or ground water containing volatile organics
☐ Methane generating conditions causing oxygen deficient or explosion concern
☐ Other human or safety concern from the VI pathway (i.e. elemental mercury, unsaturated contamination, elevated soil gas or indoor vapor (explain):

If you answered "No," or awaiting laboratory data to Question 1., *and* did not check any boxes in Question 2, proceed to Section F, "Ecological Receptors", otherwise complete the rest of this section.

3. Has ground water contamination been delineated to the applicable Ground Water Vapor Screening Level? ..... ☐ Yes ☐ No

4. Was a site specific screening level, modeling or other alternative approach employed for the VI pathway? ..... ☐ Yes ☐ No

5. Identify and locate on a scaled map any buildings/sensitive populations that exist within the following distances from ground water contamination with concentrations above the Vapor Intrusion Ground Water Screening Levels or specific threats (check all that apply):

☐ 30 feet of petroleum free product or dissolved petroleum hydrocarbon contamination in ground water
☐ 100 feet of any non-petroleum free product or any non-petroleum dissolved volatile organic ground water contamination
☐ No buildings exist within the specified distances

6. The vapor intrusion pathway is a concern at or adjacent to the site (if "No," attach justification) ..... ☐ Yes ☐ No

7. Has soil gas sampling of the building(s) been conducted? ☐ Yes ☐ No ☐ N/A
   If "No," or "N/A," proceed to #10

8. Has indoor air sampling been conducted at the identified building(s)? ☐ Yes ☐ No
   If "No," proceed to #10

9 Has indoor air contamination been identified but not suspected to be from the site?
   (if "Yes," attach justification) ☐ Yes ☐ No

10. Indoor air results were above the NJDEP's Rapid Action Levels. ☐ Yes ☐ No

    Provide the date that the laboratory data was available and confirmed contamination above the Rapid Action Levels. Date: _____

    Or ☐ Awaiting laboratory data with the expected due date: _____

    If "Yes" to #8 above, follow the IEC Guidance Document at http://www.nj.gov/dep/srp/guidance/index.html#iec **for required actions.**

    The IEC engineering system response for control was implemented for all identified structures ☐ Yes ☐ No

    Date: _____ NJDEP Case Manager: _____

11. Indoor air sampling was conducted and results were above the NJDEP's Indoor Air Screening Levels but at or below the Rapid Action Levels ☐ Yes ☐ No

    Provide the date that the laboratory data was available. Date: _____

    Or ☐ Awaiting laboratory data with the expected due date: _____

    If "Yes" to #10 above, answer the following:

    Has the Vapor Concern (VC) Response Action Form notifying the NJDEP of the exceedances been submitted? ☐ Yes ☐ No
    Date: _____

    Has a plan to mitigate and monitor the exposure been submitted? ☐ Yes ☐ No
    Date: _____

    Has the Mitigation Response Action Report been submitted? ☐ Yes ☐ No
    Date: _____

12. Has the vapor intrusion investigation been completed? ☐ Yes ☐ No
    If "No", is the vapor intrusion investigation stepping out as part of the site investigation or remedial investigation. (If "No," attach justification) ☐ Yes ☐ No

SECTION F. ECOLOGICAL RECEPTORS

1. Has an Ecological Evaluation (EE) has been conducted? [N.J.A.C. 7:26E-1.16] ☒ Yes ☐ No
   Date conducted: 11/01/2012

2. Do the results of an EE trigger a remedial investigation of ecological receptors? [N.J.A.C. 7:26E-4.8]. ☐ Yes ☒ No

3. Has a remedial investigation of ecological receptors been conducted? ☐ Yes ☒ No
   Date conducted: _____

4. Provide the name(s) of any surface water body on or within 200 feet of the site:
   Rahway River, Cross Creek, Deep Creek

5. Is free product or residual product located within 100 feet from an ecological receptor? ☐ Yes ☒ No

6. Available data indicate an impact on: ☐ Ecological receptor(s) ☐ Surface water ☐ Sediment

   If this evaluation is submitted with a technical document that includes contaminant summary information, proceed to Section G. Otherwise attach a description of the type of contamination and provide a schedule and a description of all actions to be taken to mitigate exposure

SECTION G. PERSON RESPONSIBLE FOR CONDUCTING THE REMEDIATION INFORMATION AND CERTIFICATION

Full Legal Name of the Person Responsible for Conducting the Remediation: Rahway Arch Properties, LLC

Representative First Name: Chester Representative Last Name: Pucillo

Title: Manager

Phone Number: (201) 400-6878 Ext: Fax: (973) 593-2269

Mailing Address: 7 Nottingham Drive

City/Town: Florham Park State: NJ Zip Code: 07932

Email Address: maritimellc@aol.com

This certification shall be signed by the person responsible for conducting the remediation who is submitting this notification in accordance with Administrative Requirements for the Remediation of Contaminated Sites rule at N.J.A.C. 7:26C-1.5(a).

I certify under penalty of law that I have personally examined and am familiar with the information submitted herein, including all attached documents, and that based on my inquiry of those individuals immediately responsible for obtaining the information, to the best of my knowledge, I believe that the submitted information is true, accurate and complete. I am aware that there are significant civil penalties for knowingly submitting false, inaccurate or incomplete information and that I am committing a crime of the fourth degree if I make a written false statement which I do not believe to be true. I am also aware that if I knowingly direct or authorize the violation of any statute, I am personally liable for the penalties.

Signature: Date:

Name/Title: Chester Pucillo, Manager **No Changes Since Last Submittal** ☒

SECTION H. LICENSED SITE REMEDIATION PROFESSIONAL INFORMATION AND STATEMENT

LSRP ID Number: 575600

First Name: Albert Last Name: Free

Phone Number: (410) 290-8777 Ext: Fax: (410) 290-9055

Mailing Address: 10632 Little Patuxent Parkway, Suite 106

City/Town: Columbia State: Maryland Zip Code: 21044

Email Address: afree@eaststarenv.com

This statement shall be signed by the LSRP who is submitting this notification in accordance with SRRA Section 16 d. and Section 30 b.2.

I certify that I am a Licensed Site Remediation Professional authorized pursuant to N.J.S.A. 58:10C to conduct business in New Jersey. As the Licensed Site Remediation Professional of record for this remediation, I:

[SELECT ONE OR BOTH OF THE FOLLOWING AS APPLICABLE]:

☒ *directly oversaw and supervised all of the referenced remediation, and\or*

☒ *personally reviewed and accepted all of the referenced remediation presented herein.*

I believe that the information contained herein, and including all attached documents, is true, accurate and complete.

It is my independent professional judgment and opinion that the remediation conducted at this site, as reflected in this submission to the Department, conforms to, and is consistent with, the remediation requirements in N.J.S.A. 58:10C-14.

My conduct and decisions in this matter were made upon the exercise of reasonable care and diligence, and by applying the knowledge and skill ordinarily exercised by licensed site remediation professionals practicing in good standing, in accordance with N.J.S.A. 58:10C-16, in the State of New Jersey at the time I performed these professional services.

I am aware pursuant to N.J.S.A. 58:10C-17 that for purposely, knowingly or recklessly submitting false statement, representation or certification in any document or information submitted to the board or Department, etc., that there are significant civil, administrative and criminal penalties, including license revocation or suspension, fines and being punished by imprisonment for conviction of a crime of the third degree.

LSRP Signature: Date:

LSRP Name/Title: Albert P. Free, President **No Changes Since Last Submittal** ☐

Company Name: EastStar Environmental Group, Inc.

Completed forms should be sent to the municipal clerk, designate health department, and:

Bureau of Case Assignment & Initial Notice
Site Remediation Program
NJ Department of Environmental Protection
401-05H
PO Box 420
Trenton, NJ 08625-0420

Rahway Arch Property Site

Receptor Evaluation Form

Supplemental Information

Section A. Site Name and Location:

All Known Aliases

The site was operated as disposal impoundments for American Cyanamid since the 1930s. As a result is has been known by several names over the years. These names and the references where they were used include:

- American Cyanamid Landfill: Known Contaminated Sites Database
- Cytec Industries, Inc.: Declaration of Environmental Restrictions (4/26/1995)
- Carteret Impoundments Site: No Further Action/Covenant Not to Sue Letter from NJDEP (9/24/2002)
- Carteret Impoundments: Environmental Assessment (3/10/1989)
- American Cyanamid /Cytec Impoundments: Preliminary Assessment (10/27/2006)
- American Cyanamid Landfill – Carteret: NJDEP Preliminary

Street Address:

The site is located in the Borough of Carteret at the end of Driftway Street.

However, other past documents have also listed the site in Carteret at "55 Salt Meadow Road" and "private road off of Roosevelt Avenue".

Section B. On Site and Surrounding Property Use

3. Planned future site uses and off-site use within 200 ft of site boundary

No change is on-site use is planned for this site remediation. Future development for an industrial use is likely on a 20-25 acre portion of the 125 acre site. A development plan has not been prepared at this time. The remainder of the site will remain vacant.

No changes to off-site properties are known at this time.

Section C. Description of Contamination

The Rahway Arch Property Site is the old Cytec Impoundments site, a former industrial waste disposal facility operated by American Cyanamid Company (now Cytec Incorporated) from the mid-1930s through 1974 to dispose of a mixture of acidic sludge from an alum manufacturing process and alkaline sludge from a yellow prussiate of soda (YPS) manufacturing process. This sludge was deposited in 6 impoundments covering approximately 85 acres. Approximately 2,000,000 tons of sludge were placed in these impoundments.

In addition to the sludge, evidence indicates that undocumented fill material has been imported and used on the site over the years to maintain the dikes and to stabilize the surface in several of the impoundments. This fill material was imported from various sites over the years for operations and maintenance of the disposal areas. Because it was imported to the site for the operations of the impoundments, the fill may not be considered historic fill. However, the fill has the physical and chemical characteristics of historic fill, as defined by the Tech Rule.

Sampling and analysis from the remedial Investigation has confirmed historic data discussed in the Preliminary Assessment that the undocumented fill material that has been placed on the site and the alum-YPS sludge in the impoundments contain metals, cyanide and PAHs above non-residential soil direct contact remediation criteria and soil impact to groundwater screening levels. The highest concentration of benzo(a)pyrene measured on the site was 59,300 ug/kg, 300 times the non-residential remediation standard.

The groundwater on the site, sampled through the sixteen existing groundwater monitoring wells, is also contaminated with metals and cyanide. Additionally, EastStar determined in the PA that the site in its current condition is unusable and poses a safety risk to the public.

Specific details on the contaminant concentrations are provided in the Remedial Investigation Report.

APPENDIX B

GEOTECHNICAL INVESTIGATION PLAN

Rahway Arch Site

Geotechnical and Remedial Investigation

Scope of Work

Introduction

The Rahway Arch site is located on the banks of the Rahway River in the Borough of Carteret. The site was used from the 1930s through the 1970s for disposal of a mixture of alum sludge and yellow prussiate of soda (YPS) sludge from the American Cyanamide Warner Plant in Linden, New Jersey.

The overall 124.7 acre site contains six impoundments, encompassing approximately 85 acres, located on the Rahway River. The impoundments were constructed above existing grade with wooden and earthen dikes. They contain approximately 2,000,000 tons of the cyanide containing alum-YPS sludge. The size and capacity of each of the impoundments varies, as does the thickness of the sludge, which ranges from 5 to 20 feet. The impoundments are shown in Figure 1.

Evidence indicates that undocumented fill material has been imported and used on the site over the years to maintain the dikes and to stabilize the surface in several of the impoundments. This fill material was imported from various sites over the years for operations and maintenance of the disposal areas. Because it was imported to the site for the operations of the impoundments, the fill may not be considered historic fill, as defined by the Technical Requirements for Site Remediation (Tech Rule), NJAC 7:26.E. However, the fill has the physical and chemical characteristics of historic fill.

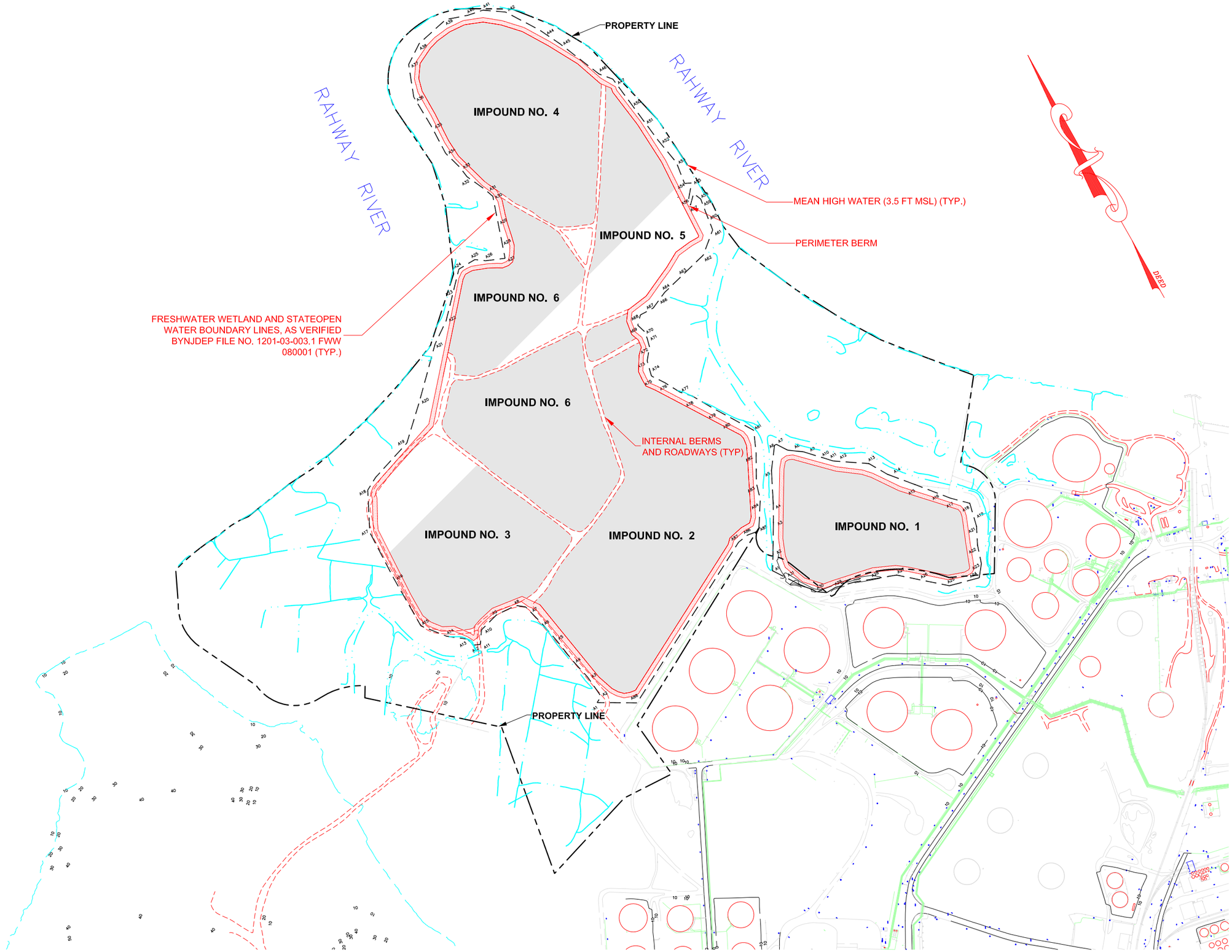
The property owner, Rahway Arch Properties LLC, is remediating the site under the New Jersey Department of Environmental Protection (NJDEP) Site Remediation Program. EastStar Environmental Group, Inc. has been retained to provide the Licensed Site Remediation Professional services and environmental engineering and consulting services.

The owner has entered into an agreement with Soil Safe Incorporated to be the reclamation contractor and construct a cap over the impoundments. Soil Safe will be constructing a Class B soil recycling facility on Impoundment 2 to manufacture the engineered fill required for the cap.

Existing Subsurface Conditions

Based upon historic data, the existing conditions on the site are expected to be comprised of the following layers, starting from the surface.

- Surface fill – soil used to form, repair and maintain the berms and thin cover placed over the sludge (may not exist in all locations)
- Alum-YPS sludge – ranges from 5 to 21 feet thick in the impoundments, may not exist under the berms
- Peat – soft, compressible, meadow mat layer upon which the berms and impoundments were constructed



General Notes and Legend

1. BASE MAP INFORMATION OBTAINED FROM CREST ENGINEERING, INC. PLAN ENTITLED WETLAND LOCATION MAP, DATED 8/7/97.
2. MEAN HIGH WATER AND FRESH WATER WETLAND LINES, AS SHOWN.

PERMIT REVIEW

NOT FOR CONSTRUCTION

Revision/Issue	Date

Graphic Scale for Plan View
200 100 0 200
1 inch = 200 feet

Compass

SOIL SAFE, INCORPORATED
6700 Alexander Bell Drive
Suite 300
Columbia, Maryland 21046

RAHWAY ARCH PROPERTY
EXISTING IMPOUNDMENTS

BLOCK 9.03 LOT 21
BLOCK 10 LOTS 8-21
BLOCK 11.01 LOTS 6-15, 27 & 28

BOROUGH OF CARTERET
MIDDLESEX COUNTY, NJ

EastStar Environmental Group, Incorporated
10632 Little Patuxent Parkway, Suite 106
Columbia, Maryland 21044

Engineer
Albert P. Free, P.E., CSP, LSRP
NJ PE Number 24GE03816200

Project: I-028	Filename: Metro12 Site Plan
Date: 3/5/2012	Last Revised
Designed by: SMA	Approved by: APF
Drawn by: SMA	Checked by
Plan View Scale: 1" = 200'	Sheet: 1 of 1

- Organic silt/clay - soft organic clay, a recent river deposit up to 20 feet near the Rahway River
- Sand - alluvial and glacial clay, silt, sand and gravel
- Bedrock - red-brown siltstone/shale (Brunswick Formation) with a weathered surface layer, typically between 30 and 40 feet below grade

Project Scope

The scope of the Geotechnical and Remedial Investigation is to characterize the subsurface conditions on the site and develop the design parameters needed to design the cap. The alum-YPS sludge contained within the six site impoundments is very soft, saturated and compressible with negligible shear strength. Past tests performed on this sludge indicate that it has low to no plasticity, and that it is highly sensitive. In a 1999 report to NJDEP, BBL, a consultant to the previous owner stated: "While the material may initially appear to be firm, disturbance will cause the material to behave like a highly viscous liquid".

The berms that contain the sludge in the six impoundments consist of undocumented soil fill that was placed to form the impoundments. The depth of the berms is not known, although BBL reported in 1999 that the berms may have been constructed directly on the peat layer. Additional investigations indicate that the berms do not contain clay cutoff walls. Some historic boring logs indicate that a layer of sludge was encountered beneath the berms. The structural stability of the berms has not been evaluated.

The access road onto the site contains a steel bridge over a small creek. The adequacy of the bridge foundation to withstand the anticipated truck traffic has not been determined

The objective of the project will be to complete the following tasks:

- Characterize the subsurface conditions in the impoundments, berms and the adjacent wetlands outside the berms
- Determine the stability of the berms for the existing conditions and placement of an engineered fill cap over the impoundments
- Evaluate the geotechnical conditions in the proposed areas for the Class B facility, the scale and the steel bridge that accesses the site.
- Evaluate the stability of the impoundments to support the engineered fill cap
- Perform slope stability analyses to ensure that adequate factors of safety can be maintained in the final cap design
- Estimate the settlement that will occur in the impoundments and develop a geotechnical monitoring program to be implemented during construction

Project Implementation

EastStar has developed a draft boring location plan and testing matrix. The boring location plan is shown in Figure 2 and the testing matrix is contained in Attachment 1. Six categories of borings are proposed:

- Shallow hollow stem auger (HSA) borings on the berms to the bottom of the organic silt and clay (BS borings)
- Deep HSA borings on the berms to top of bedrock (BD borings)
- Shallow HSA borings in the impoundments to the bottom of the organic silt and clay (IS borings)
- Deep HSA borings on the berms to top of bedrock (ID borings)
- Deep HAS borings in the wetlands outside the berms (W borings)
- Cone Penetrometer Borings (CP borings)

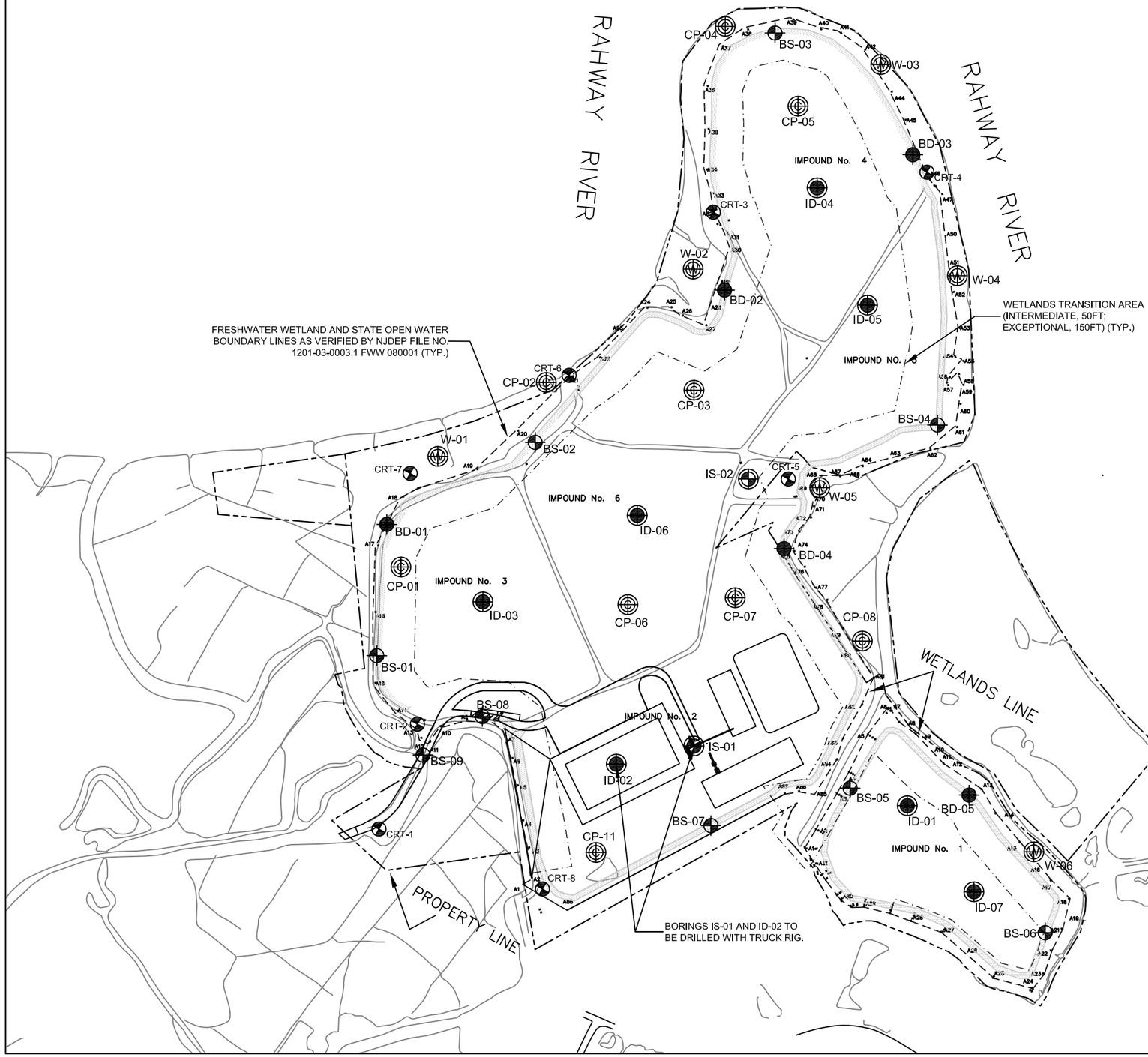
The borings on the berms and the two borings in Impoundment 2 are accessible by truck and will be drilled with a truck mounted drill rig. The remaining borings in the impoundments and the wetland and cone penetrometer borings will not be truck accessible and will be drilled using equipment mounted on a marsh buggy.

Warren-George of Jersey City, New Jersey will perform the drilling services. A permit to perform the drilling in the wetland areas has been obtained from NJDEP-LURP by Soil Safe. Samples for environmental analyses will be collected by EastStar.

Geotechnical Engineering Requirements

The following services will need to be provided by the geotechnical engineer:

- Review and comment on the draft boring location plan and geotechnical testing matrix
- Provide field oversight of the geotechnical investigation including logging the borings, characterizing the subsurface conditions and obtaining and preserving the samples required for geotechnical analyses
- Perform the requisite geotechnical analyses. Geotechnical laboratory services may be sub-contracted, however, EastStar reserves the right to review and approve the selected laboratory
- Prepare a comprehensive data report on the field investigations and laboratory testing
- Perform slope stability and settlement analyses and prepare recommendations for use in the final remediation plan design
- Provide recommendations of bearing capacities and foundations for the proposed Class B facility, scale foundation and steel bridge.



GRAPHIC SCALE FOR PLAN VIEW

400 200 0 400

1 inch = 400 feet

BASE MAP NOTES

1. BASE MAP INFORMATION OBTAINED FROM CREST ENGINEERING, INC. PLAN ENTITLED WETLAND LOCATION MAP, DATED 8/7/97.
2. FLOODPLAIN, MEAN HIGH WATER, WETLAND AND WETLAND BUFFER AREAS AS SHOWN.

Rahway Arch

RAHWAY ARCH PROPERTIES, LLC

7 Nottingham Drive
Florham Park, New Jersey 07932

REMEDIAL INVESTIGATION OF THE RAHWAY ARCH SITE

BLOCK 9.03 LOT 21
BLOCK 10 LOTS 8-10 & 12-21
BLOCK 11.01 LOTS 8, 10-14 & 28

BOROUGH OF CARTERET
MIDDLESEX COUNTY, NJ

LEGEND

BS-01	Berm Boring to bottom of organic clay (appx 25 ft) - Truck Rig
BD-01	Berm Boring to top of rock (appx 40 ft) - Truck Rig
IS-01	Impound Boring to bottom of organic clay (appx 25 ft) - Marsh Buggy
ID-01	Impound Boring to top of rock (appx 40 ft) - Marsh Buggy
W-01	Wetland Boring to top of rock (appx 40 ft) - Marsh Buggy
CP-01	Cone Penetrometer Boring to bottom of organic clay (appx 25 ft) - Marsh Buggy
CRT-4	Existing Monitoring Well Cluster

EastStar Environmental Group, Inc.
Consulting and Field Services

10632 Little Patuxent Parkway, Suite 106
Columbia, Maryland 21044
Phone: (410) 290-8777 Fax: (410) 290-9055
www.EastStarEnv.com

RAHWAY ARCH SITE
GEOTECHNICAL AND REMEDIAL INVESTIGATION
BORING LOCATION PLAN

File Name: Geotech Investigation Plan.dwg	Scale: 1 Inch = 400 feet
Date: May 17, 2012	Project Number: I027
Drawn by: MAY	
Checked by: APF	

Sheet 1 of 1 Sheets

- Prepare a geotechnical monitoring program to monitor settlement and berm movement during construction

- Review and comment on the final remedial plan design for consistency with the findings of the geotechnical investigation

Rahway Arch Site
Remedial Investigation

Proposed Geotechncial and Environmental Testing Matrix
BD Borings - Borings on Berms to Top of Bedrock

Boring Number	Anticipated Subsurface Layer	Geotechnical Analyses									Environmental Analyses					
		Dry Density	Water Content	Atterberg Limits	Grain Size Distrabution	Lab Torvane	Consolidation	Unconfined Compressive Strength	Truiaxial Compressive Strength	Fraction Organic Carbon	TAL Metals	Cyanide	PAHs	Petroleum Hydrocarbons	VOCs	S-VOCs
BD-01 - Berm on NW corner of Impound 3																
	SURFACE FILL															
	ALUM-YPS SLUDGE	1	1	1		1	1	1	1		1	1				
	PEAT	1	1	1		1	1	1	1		1	1	1			
	ORGANIC SILT	1	1	1		1	1	1	1							
	CLAY	1	1	1												
	SAND	1	1		1											
	DISINTEGRATED ROCK															
BD-02 - Berm at north end of Impound 6 near suspected outfall location																
	SURFACE FILL															
	ALUM-YPS SLUDGE										1	1				
	PEAT		1				1	1	1		1	1	1			
	ORGANIC SILT		1				1	1	1							
	CLAY															
	SAND															
	DISINTEGRATED ROCK															
BD-03 - Berm at west side of Impound 4																
	SURFACE FILL															
	ALUM-YPS SLUDGE										1	1				
	PEAT		1	1				1			1	1	1			
	ORGANIC SILT		1	1				1								
	CLAY															
	SAND															
	DISINTEGRATED ROCK															
BD-04 - Berm at northwest corner of Impound 2																
	SURFACE FILL															
	ALUM-YPS SLUDGE										1					
	PEAT		1	1							1	1	1	1	1	1
	ORGANIC SILT		1	1												
	CLAY															
	SAND															
	DISINTEGRATED ROCK															

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Rahway Arch Site
Remedial Investigation

Proposed Geotechncial and Environmental Testing Matrix
BD Borings - Borings on Berms to Top of Bedrock

Boring Number	Anticipated Subsurface Layer	Geotechnical Analyses									Environmental Analyses					
		Dry Density	Water Content	Atterberg Limits	Grain Size Distrabution	Lab Torvane	Consolidation	Unconfined Compressive Strength	Truiaxial Compressive Strength	Fraction Organic Carbon	TAL Metals	Cyanide	PAHs	Petroleum Hydrocarbons	VOCs	S-VOCs
BD-05 - Berm on northwest side of Impound 1																
	SURFACE FILL										1		1			
	ALUM-YPS SLUDGE	1	1	1							1					
	PEAT	1	1	1		1	1	1	1		1	1		1		
	ORGANIC SILT	1	1	1		1	1	1	1							
	CLAY	1	1	1												
	SAND				1											
	DISINTEGRATED ROCK															
	Total Analyses	**9**	**15**	**12**	**2**	**5**	**7**	**9**	**7**	**0**	**11**	**8**	**5**	**2**	**1**	**1**

NOTES:

1. Refer to Rahway Arch Site Geotechnical and Remedial Investigation Boring Location Plan for poposed locations of the borings
2. Boring locations and test matrix subject to change following review by geotechncial engineer
3. Borings drilled with truck mounted hollow stem auger rig.

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Rahway Arch Site
Remedial Investigation

Proposed Geotechncial and Environmental Testing Matrix
BS Borings - Borings on Berms to Bottom of Organic Silt

Boring Number	Anticipated Subsurface Layer	Geotechnical Analyses									Environmental Analyses					
		Dry Density	Water Content	Atterberg Limits	Grain Size Distrabution	Lab Torvane	Consolidation	Unconfined Compressive Strength	Truiaxial Compressive Strength	Fraction Organic Carbon	TAL Metals	Cyanide	PAHs	Petroleum Hydrocarbons	VOCs	S-VOCs
BS-01 - Berm on west side of Impound 3																
	SURFACE FILL															
	ALUM-YPS SLUDGE										1	1				
	PEAT		1	1							1	1	1			
	ORGANIC SILT		1	1												
BS-02 - Berm near northwest corner of Impound 6																
	SURFACE FILL															
	ALUM-YPS SLUDGE		1	1							1	1				
	PEAT		1	1							1	1	1			
	ORGANIC SILT		1	1												
BS-03 - Berm at north side of Impound 4																
	SURFACE FILL															
	ALUM-YPS SLUDGE															
	PEAT	1	1	1		1	1	1	1							
	ORGANIC SILT	1	1	1		1	1	1	1							
BS-04 - Berm at southeast corner of Impound 5																
	SURFACE FILL															
	ALUM-YPS SLUDGE										1					
	PEAT		1	1							1	1	1	1	1	1
	ORGANIC SILT		1	1												
BS-05 - Berm on west side of Impound 1																
	SURFACE FILL										1		1			
	ALUM-YPS SLUDGE										1					
	PEAT		1	1							1	1		1		
	ORGANIC SILT		1	1												
BS-06 - Berm on east side of Impound 1																
	SURFACE FILL										1		1			
	ALUM-YPS SLUDGE										1	1				
	PEAT	1	1	1		1	1	1	1		1	1		1		
	ORGANIC SILT	1	1	1		1	1	1	1							
BS-07 - Berm on south side of Impound 2																
	SURFACE FILL															
	ALUM-YPS SLUDGE															
	PEAT		1	1							1	1	1	1	1	1
	ORGANIC SILT		1	1												

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Rahway Arch Site
Remedial Investigation

Proposed Geotechncial and Environmental Testing Matrix
BS Borings - Borings on Berms to Bottom of Organic Silt

Boring Number	Anticipated Subsurface Layer	Geotechnical Analyses									Environmental Analyses					
		Dry Density	Water Content	Atterberg Limits	Grain Size Distrabution	Lab Torvane	Consolidation	Unconfined Compressive Strength	Truiaxial Compressive Strength	Fraction Organic Carbon	TAL Metals	Cyanide	PAHs	Petroleum Hydrocarbons	VOCs	S-VOCs
BS-08 - Proposed Scale Location on south side of Impound 2																
	SURFACE FILL															
	ALUM-YPS SLUDGE															
	PEAT	1	1	1	1			1	1							
	ORGANIC SILT	1	1	1	1			1	1							
BS-09 - Steel bridge																
	SURFACE FILL															
	ALUM-YPS SLUDGE															
	PEAT	1	1	1	1			1	1							
	ORGANIC SILT	1	1	1	1			1	1							
	Total Analyses	**8**	**19**	**19**	**4**	**4**	**4**	**8**	**8**	**0**	**13**	**9**	**6**	**4**	**2**	**2**

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NOTES:

1. Refer to Rahway Arch Site Geotechnical and Remedial Investigation Boring Location Plan for poposed locations of the borings
2. Boring locations and test matrix subject to change following review by geotechncial engineer
3. Borings drilled with truck mounted hollow stem auger rig.

Rahway Arch Site
Remedial Investigation

Proposed Geotechncial and Environmental Testing Matrix
ID Borings - Borings Inside Impounds to Top of Bedrock

Boring Number	Anticipated Subsurface Layer	Geotechnical Analyses									Environmental Analyses					
		Dry Density	Water Content	Atterberg Limits	Grain Size Distrabution	Lab Torvane	Consolidation	Unconfined Compressive Strength	Truiaxial Compressive Strength	Fraction Organic Carbon	TAL Metals	Cyanide	PAHs	Petroleum Hydrocarbons	VOCs	S-VOCs
ID-01 - Center of Impound 1																
	SURFACE FILL										1		1	1	1	1
	ALUM-YPS SLUDGE		1	1		1	1		1		1	1				
	PEAT		1	1		1	1		1	1	1	1	1			
	ORGANIC SILT		1	1		1	1		1	1						
	CLAY															
	SAND															
	DISINTEGRATED ROCK															
ID-02 - Impound 2 at proposed pre-process stockpile																
	SURFACE FILL															
	ALUM-YPS SLUDGE		1	1		1	1	1	1		1	1				
	PEAT		1	1		1	1	1	1	1	1	1	1			
	ORGANIC SILT		1	1		1	1	1	1	1						
	CLAY															
	SAND															
	DISINTEGRATED ROCK															
ID-03 - Center of Impound 3																
	SURFACE FILL										1		1			
	ALUM-YPS SLUDGE		1	1		1					1	1				
	PEAT		1	1		1				1	1	1	1			
	ORGANIC SILT		1	1		1				1						
	CLAY															
	SAND															
	DISINTEGRATED ROCK															
ID-04 - Center of Impound 4																
	SURFACE FILL										1		1			
	ALUM-YPS SLUDGE		1	1		1	1		1		1	1				
	PEAT		1	1		1	1		1	1	1	1	1			
	ORGANIC SILT		1	1		1	1		1	1						
	CLAY															
	SAND															
	DISINTEGRATED ROCK															

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Rahway Arch Site
Remedial Investigation

Proposed Geotechncial and Environmental Testing Matrix
ID Borings - Borings Inside Impounds to Top of Bedrock

Boring Number	Anticipated Subsurface Layer	Geotechnical Analyses									Environmental Analyses					
		Dry Density	Water Content	Atterberg Limits	Grain Size Distrabution	Lab Torvane	Consolidation	Unconfined Compressive Strength	Truiaxial Compressive Strength	Fraction Organic Carbon	TAL Metals	Cyanide	PAHs	Petroleum Hydrocarbons	VOCs	S-VOCs
ID-05 - Northwest side of Impound 5, north of RR tie stockpile																
	SURFACE FILL										1		1			
	ALUM-YPS SLUDGE		1	1							1	1				
	PEAT		1	1							1	1	1			
	ORGANIC SILT		1	1												
	CLAY															
	SAND															
	DISINTEGRATED ROCK															
ID-06 - Center of southern half of Impound 6																
	SURFACE FILL										1		1			
	ALUM-YPS SLUDGE		1	1		1	1		1		1	1				
	PEAT		1	1		1	1		1	1	1	1				
	ORGANIC SILT		1	1		1	1		1	1	1					
	CLAY															
	SAND															
	DISINTEGRATED ROCK															
	Total Analyses	**0**	**18**	**18**	**0**	**15**	**12**	**3**	**12**	**10**	**18**	**12**	**10**	**1**	**1**	**1**

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NOTES:

1. Refer to Rahway Arch Site Geotechnical and Remedial Investigation Boring Location Plan for poposed locations of the borings
2. Boring locations and test matrix subject to change following review by geotechncial engineer
3. Boring ID-02 drilled with truck mounted hollow stem auger rig. All other borings drilled with marsh buggy mounted hollow stem auger rig.

Rahway Arch Site
Remedial Investigation

Proposed Geotechncial and Environmental Testing Matrix
IS Borings - Borings Inside Impounds to Bottom of Organic Silt

Boring Number	Anticipated Subsurface Layer	Geotechnical Analyses									Environmental Analyses					
		Dry Density	Water Content	Atterberg Limits	Grain Size Distrabution	Lab Torvane	Consolidation	Unconfined Compressive Strength	Truiaxial Compressive Strength	Fraction Organic Carbon	TAL Metals	Cyanide	PAHs	Petroleum Hydrocarbons	VOCs	S-VOCs
IS-01 - Proposed Equipment Location in Impound 2																
	SURFACE FILL															
	ALUM-YPS SLUDGE		1	1			1		1							
	PEAT		1	1			1		1							
	ORGANIC SILT		1	1			1		1							
IS-02 - North end of Impound 2																
	SURFACE FILL															
	ALUM-YPS SLUDGE		1	1			1	1	1		1	1				
	PEAT		1	1			1	1	1	1	1	1	1			
	ORGANIC SILT		1	1			1	1	1	1						
	Total Analyses	**0**	**6**	**6**	**0**	**0**	**6**	**3**	**6**	**2**	**2**	**2**	**1**	**0**	**0**	**0**

NOTES:

1. Refer to Rahway Arch Site Geotechnical and Remedial Investigation Boring Location Plan for poposed locations of the borings
2. Boring locations and test matrix subject to change following review by geotechncial engineer
3. Boring IS-01 drilled with truck mounted hollow stem auger rig.
4. Boring IS-02 drilled with marsh buggy mounted hollow stem auger rig.

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Rahway Arch Site
Remedial Investigation

Proposed Geotechncial and Environmental Testing Matrix
W Borings - Borings Outside Berms to Top of Bedrock

Boring Number	Anticipated Subsurface Layer	Geotechnical Analyses									Environmental Analyses					
		Dry Density	Water Content	Atterberg Limits	Grain Size Distrabution	Lab Torvane	Consolidation	Unconfined Compressive Strength	Truiaxial Compressive Strength	Fraction Organic Carbon	TAL Metals	Cyanide	PAHs	Petroleum Hydrocarbons	VOCs	S-VOCs
W-01 - North side of Impound 3																
	SURFACE MATERIAL															
	ALUM-YPS SLUDGE															
	PEAT		1	1		1	1		1							
	ORGANIC SILT		1	1		1	1		1							
	CLAY															
	SAND															
	DISINTEGRATED ROCK															
W-02 - North end of Impound 6 near suspected outfall location																
	SURFACE MATERIAL										1	1	1			
	ALUM-YPS SLUDGE															
	PEAT		1	1												
	ORGANIC SILT		1	1												
	CLAY															
	SAND															
	DISINTEGRATED ROCK															
W-03 - West side of Impound 4																
	SURFACE MATERIAL															
	ALUM-YPS SLUDGE															
	PEAT		1	1												
	ORGANIC SILT		1	1												
	CLAY															
	SAND															
	DISINTEGRATED ROCK															
W-04 -West side of Impound 5																
	SURFACE MATERIAL															
	ALUM-YPS SLUDGE															
	PEAT		1	1		1	1		1							
	ORGANIC SILT		1	1		1	1		1							
	CLAY															
	SAND															
	DISINTEGRATED ROCK															

DRAFT

Rahway Arch Site
Remedial Investigation

Proposed Geotechncial and Environmental Testing Matrix
W Borings - Borings Outside Berms to Top of Bedrock

Boring Number	Anticipated Subsurface Layer	Geotechnical Analyses									Environmental Analyses					
		Dry Density	Water Content	Atterberg Limits	Grain Size Distrabution	Lab Torvane	Consolidation	Unconfined Compressive Strength	Truiaxial Compressive Strength	Fraction Organic Carbon	TAL Metals	Cyanide	PAHs	Petroleum Hydrocarbons	VOCs	S-VOCs
W-05 - Northwest corner of Impound 2																
	SURFACE MATERIAL															
	ALUM-YPS SLUDGE															
	PEAT		1	1												
	ORGANIC SILT		1	1												
	CLAY															
	SAND															
	DISINTEGRATED ROCK															
W-06 - Northwest corner of Impound 1																
	SURFACE MATERIAL															
	ALUM-YPS SLUDGE															
	PEAT		1	1		1	1		1							
	ORGANIC SILT		1	1		1	1		1							
	CLAY															
	SAND															
	DISINTEGRATED ROCK															
	Total Analyses	**0**	**12**	**12**	**0**	**6**	**6**	**0**	**6**	**0**	**1**	**1**	**1**	**0**	**0**	**0**

DRAFT

NOTES:

1. Refer to Rahway Arch Site Geotechnical and Remedial Investigation Boring Location Plan for poposed locations of the borings
2. Boring locations and test matrix subject to change following review by geotechncial engineer
3. Borings drilled with marsh buggy mounted hollow stem auger rig.

APPENDIX C

FEBRUARY 2012 SAMPLE ANALYSIS LABORATORY REPORT

QC Laboratories

Analytical Report

02/24/12 05:25pm

JIM GRANT
SOIL SAFE, INC.
378 ROUTE 130 SOUTH
LOGAN TOWNSHIP, NJ 08085

Regarding:
MAUDE
SOIL SAFE, INC.
378 ROUTE 130 SOUTH
LOGAN TOWNSHIP, NJ 08085

Account No: C00469, SOIL SAFE, INC. SALEM **P.O. No:** **Inv. No:** 1382557
Project No: C00469, SOIL SAFE, INC. SALEM **PWSID No:**

Sample Number	Sample Description	Samp. Date/Time/Temp	Sampled by
L4068367-1	M12-007	02/21/12 02:00pm NA F	Customer

Received Temp: 36.7 F Iced (Y/N): Y

Parameter	Method	Result	RLs	Test Date, Time, Analyst
GENERAL CHEMISTRY				
TOTAL SOLIDS PERCENT	SM 2540G	48.25 %	0.01000 %	02/23/12 05:30PM JEG
GAS CHROMATOGRAPHY MASS SPECTROMETRY; SEMI-VOLATILES				
NAPHTHALENE	EPA 8270C	ND ug/kg DRY	389 ug/kg*	02/23/12 09:19PM MDJ
2-METHYLNAPHTHALENE	EPA 8270C	ND ug/kg DRY	317 ug/kg*	02/23/12 09:19PM MDJ
ACENAPHTHYLENE	EPA 8270C	ND ug/kg DRY	280 ug/kg*	02/23/12 09:19PM MDJ
ACENAPHTHENE	EPA 8270C	ND ug/kg DRY	345 ug/kg*	02/23/12 09:19PM MDJ
FLUORENE	EPA 8270C	ND ug/kg DRY	246 ug/kg*	02/23/12 09:19PM MDJ
PHENANTHRENE	EPA 8270C	ND ug/kg DRY	265 ug/kg*	02/23/12 09:19PM MDJ
ANTHRACENE	EPA 8270C	ND ug/kg DRY	372 ug/kg*	02/23/12 09:19PM MDJ
FLUORANTHENE	EPA 8270C	ND ug/kg DRY	241 ug/kg*	02/23/12 09:19PM MDJ
PYRENE	EPA 8270C	ND ug/kg DRY	296 ug/kg*	02/23/12 09:19PM MDJ
BENZO(A)ANTHRACENE	EPA 8270C	ND ug/kg DRY	268 ug/kg*	02/23/12 09:19PM MDJ
CHRYSENE	EPA 8270C	ND ug/kg DRY	256 ug/kg*	02/23/12 09:19PM MDJ
BENZO(B)FLUORANTHENE	EPA 8270C	ND ug/kg DRY	222 ug/kg*	02/23/12 09:19PM MDJ
BENZO(K)FLUORANTHENE	EPA 8270C	ND ug/kg DRY	285 ug/kg*	02/23/12 09:19PM MDJ
BENZO(A)PYRENE	EPA 8270C	ND ug/kg DRY	264 ug/kg*	02/23/12 09:19PM MDJ
INDENO(1,2,3-CD)PYRENE	EPA 8270C	ND ug/kg DRY	257 ug/kg*	02/23/12 09:19PM MDJ
DIBENZ(A,H)ANTHRACENE	EPA 8270C	ND ug/kg DRY	199 ug/kg*	02/23/12 09:19PM MDJ
BENZO(G,H,I)PERYLENE	EPA 8270C	ND ug/kg DRY	242 ug/kg*	02/23/12 09:19PM MDJ

Serial Number: 2099177

Thomas J. Hines, President

1205 Industrial Blvd., P.O. Box 514, Southampton, PA 18966-0514 Phone: 215-355-3900 Fax: 215-355-7231 www.qclaboratories.com

QC Laboratories

Analytical Report

Account No: C00469, SOIL SAFE, INC. SALEM
Project No: C00469, SOIL SAFE, INC. SALEM

P.O. No:

Inv. No: 1382557
PWSID No:

Sample Number: L4068367-2
Sample Description: M12-008
Samp. Date/Time/Temp: 02/21/12 02:00pm NA F
Sampled by: Customer
Received Temp: 36.7 F Iced (Y/N): Y

Parameter	Method	Result	RLs	Test Date, Time, Analyst
GENERAL CHEMISTRY				
TOTAL SOLIDS PERCENT	SM 2540G	45.55 %	0.01000 %	02/23/12 05:00PM JEG
METALS				
SILVER	EPA 6010C	ND mg/kg DRY	0.134 mg/kg*	02/24/12 07:39AM B B
ALUMINUM	EPA 6010C	42400 mg/kg DRY	7.11 mg/kg*	02/24/12 07:39AM B B
ARSENIC	EPA 6010C	4.54 mg/kg DRY	1.08 mg/kg*	02/24/12 07:39AM B B
BARIUM	EPA 6010C	38.4 mg/kg DRY	0.0334 mg/kg*	02/24/12 07:39AM B B
BERYLLIUM	EPA 6010C	0.0707 B mg/kg DRY	0.0162 mg/kg*	02/24/12 07:39AM B B
CALCIUM	EPA 6010C	212000 mg/kg DRY	5.16 mg/kg*	02/24/12 07:39AM B B
CADMIUM	EPA 6010C	ND mg/kg DRY	0.0692 mg/kg*	02/24/12 07:39AM B B
COBALT	EPA 6010C	8.23 mg/kg DRY	0.108 mg/kg*	02/24/12 07:39AM B B
CHROMIUM	EPA 6010C	36.4 mg/kg DRY	0.0988 mg/kg*	02/24/12 07:39AM B B
COPPER	EPA 6010C	16.4 mg/kg DRY	0.476 mg/kg*	02/24/12 07:39AM B B
IRON	EPA 6010C	9880 mg/kg DRY	1.17 mg/kg*	02/24/12 07:39AM B B
POTASSIUM	EPA 6010C	244 mg/kg DRY	18.2 mg/kg*	02/24/12 07:39AM B B
MAGNESIUM	EPA 6010C	17200 mg/kg DRY	2.39 mg/kg*	02/24/12 07:39AM B B
MANGANESE	EPA 6010C	314 mg/kg DRY	0.0233 mg/kg*	02/24/12 07:39AM B B
SODIUM	EPA 6010C	1300 mg/kg DRY	10.5 mg/kg*	02/24/12 07:39AM B B
NICKEL	EPA 6010C	20.3 mg/kg DRY	0.177 mg/kg*	02/24/12 07:39AM B B
LEAD	EPA 6010C	14.1 mg/kg DRY	0.441 mg/kg*	02/24/12 07:39AM B B
ANTIMONY	EPA 6010C	ND mg/kg DRY	1.45 mg/kg*	02/24/12 07:39AM B B
SELENIUM	EPA 6010C	2.46 B mg/kg DRY	1.63 mg/kg*	02/24/12 07:39AM B B
THALLIUM	EPA 6010C	ND mg/kg DRY	1.08 mg/kg*	02/24/12 07:39AM B B
VANADIUM	EPA 6010C	48.3 mg/kg DRY	0.135 mg/kg*	02/24/12 07:39AM B B
ZINC	EPA 6010C	39.3 mg/kg DRY	0.119 mg/kg*	02/24/12 07:39AM B B
MERCURY	EPA 7471B	0.116 B mg/kg DRY	0.0964 mg/kg*	02/23/12 01:22PM RMP

Sample Number: L4068367-3
Sample Description: M12-009
Samp. Date/Time/Temp: 02/21/12 02:00pm NA F
Sampled by: Customer
Received Temp: 36.7 F Iced (Y/N): Y

Parameter	Method	Result	RLs	Test Date, Time, Analyst
GENERAL CHEMISTRY				
CYANIDE, TOTAL	EPA 9010/9014	1420 mg/kg DRY	261 mg/kg	02/24/12 02:00PM JG
TOTAL SOLIDS PERCENT	SM 2540G	47.91 %	0.01000 %	02/23/12 05:00PM JEG

Serial Number: 2099177

Thomas J. Hines, President

Account No:C00469, SOIL SAFE, INC. SALEM P.O. No: Inv. No: 1382557
Project No: C00469, SOIL SAFE, INC. SALEM PWSID No:

Sample Number Sample Description Samp. Date/Time/Temp Sampled by
L4068367-4 M12-010 02/21/12 02:10pm NA F Customer
Received Temp: 36.7 F Iced (Y/N): Y

Parameter	Method	Result	RLs	Test Date, Time, Analyst
GENERAL CHEMISTRY				
TOTAL SOLIDS PERCENT	SM 2540G	50.63 %	0.01000 %	02/23/12 05:00PM JEG
GAS CHROMATOGRAPHY MASS SPECTROMETRY; SEMI-VOLATILES				
NAPHTHALENE	EPA 8270C	ND ug/kg DRY	371 ug/kg*	02/23/12 10:33PM MDJ
2-METHYLNAPHTHALENE	EPA 8270C	ND ug/kg DRY	302 ug/kg*	02/23/12 10:33PM MDJ
ACENAPHTHYLENE	EPA 8270C	ND ug/kg DRY	267 ug/kg*	02/23/12 10:33PM MDJ
ACENAPHTHENE	EPA 8270C	ND ug/kg DRY	329 ug/kg*	02/23/12 10:33PM MDJ
FLUORENE	EPA 8270C	ND ug/kg DRY	235 ug/kg*	02/23/12 10:33PM MDJ
PHENANTHRENE	EPA 8270C	ND ug/kg DRY	253 ug/kg*	02/23/12 10:33PM MDJ
ANTHRACENE	EPA 8270C	ND ug/kg DRY	355 ug/kg*	02/23/12 10:33PM MDJ
FLUORANTHENE	EPA 8270C	ND ug/kg DRY	230 ug/kg*	02/23/12 10:33PM MDJ
PYRENE	EPA 8270C	ND ug/kg DRY	282 ug/kg*	02/23/12 10:33PM MDJ
BENZO(A)ANTHRACENE	EPA 8270C	ND ug/kg DRY	255 ug/kg*	02/23/12 10:33PM MDJ
CHRYSENE	EPA 8270C	ND ug/kg DRY	244 ug/kg*	02/23/12 10:33PM MDJ
BENZO(B)FLUORANTHENE	EPA 8270C	ND ug/kg DRY	212 ug/kg*	02/23/12 10:33PM MDJ
BENZO(K)FLUORANTHENE	EPA 8270C	ND ug/kg DRY	272 ug/kg*	02/23/12 10:33PM MDJ
BENZO(A)PYRENE	EPA 8270C	ND ug/kg DRY	251 ug/kg*	02/23/12 10:33PM MDJ
INDENO(1,2,3-CD)PYRENE	EPA 8270C	ND ug/kg DRY	245 ug/kg*	02/23/12 10:33PM MDJ
DIBENZ(A,H)ANTHRACENE	EPA 8270C	ND ug/kg DRY	190 ug/kg*	02/23/12 10:33PM MDJ
BENZO(G,H,I)PERYLENE	EPA 8270C	ND ug/kg DRY	231 ug/kg*	02/23/12 10:33PM MDJ

Sample Number Sample Description Samp. Date/Time/Temp Sampled by
L4068367-5 M12-011 02/21/12 02:10pm NA F Customer
Received Temp: 36.7 F Iced (Y/N): Y

Parameter	Method	Result	RLs	Test Date, Time, Analyst
GENERAL CHEMISTRY				
TOTAL SOLIDS PERCENT	SM 2540G	50.93 %	0.01000 %	02/23/12 05:00PM JEG
METALS				
SILVER	EPA 6010C	ND mg/kg DRY	0.120 mg/kg*	02/24/12 07:44AM B B
ALUMINUM	EPA 6010C	21400 mg/kg DRY	6.36 mg/kg*	02/24/12 07:44AM B B
ARSENIC	EPA 6010C	9.92 mg/kg DRY	0.968 mg/kg*	02/24/12 07:44AM B B
BARIUM	EPA 6010C	214 mg/kg DRY	0.0298 mg/kg*	02/24/12 07:44AM B B
BERYLLIUM	EPA 6010C	ND mg/kg DRY	0.0145 mg/kg*	02/24/12 07:44AM B B
CALCIUM	EPA 6010C	717 mg/kg DRY	4.61 mg/kg*	02/24/12 07:44AM B B
CADMIUM	EPA 6010C	0.422 B mg/kg DRY	0.0618 mg/kg*	02/24/12 07:44AM B B
COBALT	EPA 6010C	6.62 mg/kg DRY	0.0970 mg/kg*	02/24/12 07:44AM B B
CHROMIUM	EPA 6010C	7.25 mg/kg DRY	0.0884 mg/kg*	02/24/12 07:44AM B B
COPPER	EPA 6010C	9.80 mg/kg DRY	0.426 mg/kg*	02/24/12 07:44AM B B
IRON	EPA 6010C	3420 mg/kg DRY	1.05 mg/kg*	02/24/12 07:44AM B B
POTASSIUM	EPA 6010C	1470 mg/kg DRY	16.3 mg/kg*	02/24/12 07:44AM B B
MAGNESIUM	EPA 6010C	69.1 mg/kg DRY	2.14 mg/kg*	02/24/12 07:44AM B B
MANGANESE	EPA 6010C	102 mg/kg DRY	0.0208 mg/kg*	02/24/12 07:44AM B B

Thomas J. Hines, President

Account No:C00469, SOIL SAFE, INC. SALEM P.O. No: Inv. No: 1382557
Project No: C00469, SOIL SAFE, INC. SALEM PWSID No:

Sample Number Sample Description Samp. Date/Time/Temp Sampled by
L4068367-5 M12-011 02/21/12 02:10pm NA F Customer
Received Temp: 36.7 F Iced (Y/N): Y

Parameter	Method	Result	RLs	Test Date, Time, Analyst
METALS continued				
SODIUM	EPA 6010C	1330 mg/kg DRY	9.41 mg/kg*	02/24/12 07:44AM B B
NICKEL	EPA 6010C	2.71 mg/kg DRY	0.158 mg/kg*	02/24/12 07:44AM B B
LEAD	EPA 6010C	91.9 mg/kg DRY	0.395 mg/kg*	02/24/12 07:44AM B B
ANTIMONY	EPA 6010C	ND mg/kg DRY	1.29 mg/kg*	02/24/12 07:44AM B B
SELENIUM	EPA 6010C	ND mg/kg DRY	1.46 mg/kg*	02/24/12 07:44AM B B
THALLIUM	EPA 6010C	ND mg/kg DRY	0.968 mg/kg*	02/24/12 07:44AM B B
VANADIUM	EPA 6010C	30.0 mg/kg DRY	0.121 mg/kg*	02/24/12 07:44AM B B
ZINC	EPA 6010C	12.9 mg/kg DRY	0.106 mg/kg*	02/24/12 07:44AM B B
MERCURY	EPA 7471B	0.110 B mg/kg DRY	0.0862 mg/kg*	02/23/12 01:15PM RMP

Sample Number Sample Description Samp. Date/Time/Temp Sampled by
L4068367-6 M12-012 02/21/12 02:10pm NA F Customer
Received Temp: 36.7 F Iced (Y/N): Y

Parameter	Method	Result	RLs	Test Date, Time, Analyst
GENERAL CHEMISTRY				
CYANIDE, TOTAL	EPA 9010/9014	547 mg/kg DRY	243 mg/kg	02/24/12 02:00PM JG
TOTAL SOLIDS PERCENT	SM 2540G	51.43 %	0.01000 %	02/23/12 05:00PM JEG

Sample Number Sample Description Samp. Date/Time/Temp Sampled by
L4068367-7 M12-013 02/21/12 02:25pm NA F Customer
Received Temp: 36.7 F Iced (Y/N): Y

Parameter	Method	Result	RLs	Test Date, Time, Analyst
GENERAL CHEMISTRY				
TOTAL SOLIDS PERCENT	SM 2540G	54.31 %	0.01000 %	02/23/12 05:00PM JEG
GAS CHROMATOGRAPHY MASS SPECTROMETRY; SEMI-VOLATILES				
NAPHTHALENE	EPA 8270C	ND ug/kg DRY	345 ug/kg*	02/23/12 10:58PM MDJ
2-METHYLNAPHTHALENE	EPA 8270C	ND ug/kg DRY	281 ug/kg*	02/23/12 10:58PM MDJ
ACENAPHTHYLENE	EPA 8270C	ND ug/kg DRY	249 ug/kg*	02/23/12 10:58PM MDJ
ACENAPHTHENE	EPA 8270C	ND ug/kg DRY	306 ug/kg*	02/23/12 10:58PM MDJ
FLUORENE	EPA 8270C	ND ug/kg DRY	219 ug/kg*	02/23/12 10:58PM MDJ
PHENANTHRENE	EPA 8270C	ND ug/kg DRY	236 ug/kg*	02/23/12 10:58PM MDJ
ANTHRACENE	EPA 8270C	ND ug/kg DRY	331 ug/kg*	02/23/12 10:58PM MDJ
FLUORANTHENE	EPA 8270C	ND ug/kg DRY	214 ug/kg*	02/23/12 10:58PM MDJ
PYRENE	EPA 8270C	ND ug/kg DRY	263 ug/kg*	02/23/12 10:58PM MDJ
BENZO(A)ANTHRACENE	EPA 8270C	ND ug/kg DRY	238 ug/kg*	02/23/12 10:58PM MDJ
CHRYSENE	EPA 8270C	ND ug/kg DRY	228 ug/kg*	02/23/12 10:58PM MDJ
BENZO(B)FLUORANTHENE	EPA 8270C	ND ug/kg DRY	197 ug/kg*	02/23/12 10:58PM MDJ
BENZO(K)FLUORANTHENE	EPA 8270C	ND ug/kg DRY	253 ug/kg*	02/23/12 10:58PM MDJ
BENZO(A)PYRENE	EPA 8270C	ND ug/kg DRY	234 ug/kg*	02/23/12 10:58PM MDJ
INDENO(1,2,3-CD)PYRENE	EPA 8270C	ND ug/kg DRY	228 ug/kg*	02/23/12 10:58PM MDJ
DIBENZ(A,H)ANTHRACENE	EPA 8270C	ND ug/kg DRY	177 ug/kg*	02/23/12 10:58PM MDJ

Thomas J. Hines, President

Account No: C00469, SOIL SAFE, INC. SALEM P.O. No: Inv. No: 1382557
Project No: C00469, SOIL SAFE, INC. SALEM PWSID No:

Sample Number Sample Description Samp. Date/Time/Temp Sampled by
L4068367-7 M12-013 02/21/12 02:25pm NA F Customer
Received Temp: 36.7 F Iced (Y/N): Y

Parameter	Method	Result	RLs	Test Date, Time, Analyst
GAS CHROMATOGRAPHY MASS SPECTROMETRY; SEMI-VOLATILES continued				
BENZO(G,H,I)PERYLENE	EPA 8270C	ND ug/kg DRY	215 ug/kg*	02/23/12 10:58PM MDJ

Sample Number Sample Description Samp. Date/Time/Temp Sampled by
L4068367-8 M12-014 02/21/12 02:25pm NA F Customer
Received Temp: 36.7 F Iced (Y/N): Y

Parameter	Method	Result	RLs	Test Date, Time, Analyst
GENERAL CHEMISTRY				
TOTAL SOLIDS PERCENT	SM 2540G	56.89 %	0.01000 %	02/23/12 05:00PM JEG
METALS				
SILVER	EPA 6010C	ND mg/kg DRY	0.107 mg/kg*	02/24/12 07:50AM B B
ALUMINUM	EPA 6010C	25000 mg/kg DRY	5.70 mg/kg*	02/24/12 07:50AM B B
ARSENIC	EPA 6010C	9.07 mg/kg DRY	0.867 mg/kg*	02/24/12 07:50AM B B
BARIUM	EPA 6010C	46.6 mg/kg DRY	0.0267 mg/kg*	02/24/12 07:50AM B B
BERYLLIUM	EPA 6010C	0.234 B mg/kg DRY	0.0130 mg/kg*	02/24/12 07:50AM B B
CADMIUM	EPA 6010C	ND mg/kg DRY	0.0554 mg/kg*	02/24/12 07:50AM B B
COBALT	EPA 6010C	6.59 mg/kg DRY	0.0868 mg/kg*	02/24/12 07:50AM B B
CHROMIUM	EPA 6010C	28.3 mg/kg DRY	0.0791 mg/kg*	02/24/12 07:50AM B B
COPPER	EPA 6010C	13.2 mg/kg DRY	0.381 mg/kg*	02/24/12 07:50AM B B
IRON	EPA 6010C	7820 mg/kg DRY	0.939 mg/kg*	02/24/12 07:50AM B B
POTASSIUM	EPA 6010C	200 mg/kg DRY	14.6 mg/kg*	02/24/12 07:50AM B B
MAGNESIUM	EPA 6010C	17000 mg/kg DRY	1.92 mg/kg*	02/24/12 07:50AM B B
MANGANESE	EPA 6010C	332 mg/kg DRY	0.0186 mg/kg*	02/24/12 07:50AM B B
SODIUM	EPA 6010C	1830 mg/kg DRY	8.42 mg/kg*	02/24/12 07:50AM B B
NICKEL	EPA 6010C	10.7 mg/kg DRY	0.142 mg/kg*	02/24/12 07:50AM B B
LEAD	EPA 6010C	17.0 mg/kg DRY	0.353 mg/kg*	02/24/12 07:50AM B B
ANTIMONY	EPA 6010C	ND mg/kg DRY	1.16 mg/kg*	02/24/12 07:50AM B B
SELENIUM	EPA 6010C	1.52 B mg/kg DRY	1.30 mg/kg*	02/24/12 07:50AM B B
THALLIUM	EPA 6010C	ND mg/kg DRY	0.867 mg/kg*	02/24/12 07:50AM B B
VANADIUM	EPA 6010C	39.6 mg/kg DRY	0.108 mg/kg*	02/24/12 07:50AM B B
ZINC	EPA 6010C	42.7 mg/kg DRY	0.0949 mg/kg*	02/24/12 07:50AM B B
CALCIUM	EPA 6010C	253000 mg/kg DRY	41.3 mg/kg*	02/24/12 08:21AM B B
MERCURY	EPA 7471B	0.229 mg/kg DRY	0.0772 mg/kg*	02/23/12 01:24PM RMP

Serial Number: 2099177
Thomas J. Hines, President

QC Laboratories

Analytical Report

Account No: C00469, SOIL SAFE, INC. SALEM
Project No: C00469, SOIL SAFE, INC. SALEM

P.O. No:

Inv. No: 1382557
PWSID No:

Sample Number	Sample Description	Samp. Date/Time/Temp	Sampled by
L4068367-9	M12-015	02/21/12 02:25pm NA F	Customer

Received Temp: 36.7 F Iced (Y/N): Y

Parameter	Method	Result	RLs	Test Date, Time, Analyst
GENERAL CHEMISTRY				
CYANIDE, TOTAL	EPA 9010/9014	1570 mg/kg DRY	218 mg/kg	02/24/12 02:00PM JG
TOTAL SOLIDS PERCENT	SM 2540G	57.36 %	0.01000 %	02/23/12 05:00PM JEG

L4068367-2 :

QUALIFIERS: For metals parameters;"B" indicates a value that is > than the MDL but < than the laboratory quantitation limit. For Organics parameters; "B"is when the compound is found in the blank as well as in the sample;"J"indicates a value that is > than the MDL but < than the lowest standard, it is also used to indicate that a compound is tentatively identified in a library search;"E"(estimated) is when a compound exceeded the calibration range;"N" presumptive evidence of a compound; "D" is when a dilution was required.

L4068367-5 :

QUALIFIERS: For metals parameters;"B" indicates a value that is > than the MDL but < than the laboratory quantitation limit. For Organics parameters; "B"is when the compound is found in the blank as well as in the sample;"J"indicates a value that is > than the MDL but < than the lowest standard, it is also used to indicate that a compound is tentatively identified in a library search;"E"(estimated) is when a compound exceeded the calibration range;"N" presumptive evidence of a compound; "D" is when a dilution was required.

L4068367-8 :

QUALIFIERS: For metals parameters;"B" indicates a value that is > than the MDL but < than the laboratory quantitation limit. For Organics parameters; "B"is when the compound is found in the blank as well as in the sample;"J"indicates a value that is > than the MDL but < than the lowest standard, it is also used to indicate that a compound is tentatively identified in a library search;"E"(estimated) is when a compound exceeded the calibration range;"N" presumptive evidence of a compound; "D" is when a dilution was required.

Notes:

- A result of "ND" indicates the concentration of the analyte tested was either not detected or below the RLs.
- Definitions: ND=not detected; NEG=negative; POS=positive; COL=colonies; RLs=laboratory reporting limits; L/A=laboratory accident; TNTC=too numerous to count
- A result marked with "DRY" indicates that the result was calculated and reported on a dry weight basis.
- All analysis, except field tests are conducted in Southampton, PA unless otherwise identified.
- The reported results relate only to the samples.
- QC NELAP ID's:PA 09-00131,NJ PA166,FL E87954,NY 11223,CT PH-0768,DE PA-018,KY 90228,MD 206,EPA PA00018.Bioassay:PA 09-03574,NJ PA034,FL E87953,KS E10373,SC 89021001.
- QC STATE ID's:Wind Gap,NJ PA001,PA 48-01334;E RUTHERFORD NJ02015;Vineland NJ06005; Reading PA 06-03543.
- All samples are collected as "grab" samples unless otherwise identified.
- MCL= is the EPA recommended "maximum contaminant level" for a parameter. PLs=customer specific permit limits.
- The test results meet all requirements of NELAC unless otherwise specified.
- The report shall not be reproduced except in full without the written consent of the laboratory.

* - The "RLs" represents a reporting/quantitation limit. When an "*" is present in the column identified as the "RLs", it is being reported as a Method Detection Limit (MDL).

Serial Number: 2099177

Thomas J. Hines, President

QC Laboratories

1205 Industrial Blvd.
Southampton, PA 18966-0514
Phone: 215-355-3900
Fax: 215-355-7231

CHAIN OF CUSTODY

Page 1 of 1

Lab LIMS No: L0083607

Bill to/Report to: (if different)

Client/Acct. No. C002269

Address 33T
378 Rt-130 S

Sampling Site Address: (if different)

City/State/Zip Logan Twp. NJ

Phone/Fax 8564678030

P.O. No. ~~NEED~~

Client Contact Maude

QC Contact Rich

(TB) 2/22/12 Samples are SO is per email - in appearance

LAB USE ONLY:

___ Ascorbic/HCl Vials # ___ HCl Vials
___ $Na_2S_2O_3$
___ Na OH/Zn acetate pH
___ HNO_3 pH
___ H_2SO_4 pH
___ NaOH pH
15 Unpreserved 9-VOjars, 6-split cups
___ Hcl pH
___ Temp control ID#

310-7F100 TOBI Iced

MATRIX CODES

DW: DRINKING WATER
GW: GROUND WATER
WW: WASTEWATER
SO: SOIL
SL: SLUDGE
OIL: OIL
SOL: NON SOIL SOLID
W: MISCELLANEOUS
X: OTHER

Field pH, Temp (C or F), DO, Cl_2, S. Cond. etc.

LAB USE ONLY

PROJECT / FIELD ID	Collection Date	Collection Military Time	GRAB	COMP	Matrix Code	Number of Containers Total	H_2SO_4	HCl	VIALS	HNO_3	NaOH	ZnAc	UNPRES	BACT	ANALYSIS REQUESTED
M12-007	2/21	14:00			SO										8270 - PAH
M12-008		14:00													TAL Metals 6020
M12-009		14:00													Cyanide 9010
M12-010		14:10													PAH - 8270
M12-011		"													TAL Metals 6020
M12-012		"													Cyanid 9010
M12-013		1425													PAH - 8270
M12-014		"													TAL Metals 6020
M12-015		"													Cyanide 9010

by noon

FINAL REPORT

SAMPLED BY: (Name/Company)

Verbal/fax data due: 2/27/12

Hardcopy due: ___/___/___

Report Format: ☐ Standard ☐ Forms ☐ Standard + QC ☐ NJ Reduced ☐ Disk

Please call for pricing and availability on rush (<14-21 day) turnaround and on all but standard format.

Field Parameters Analyzed By:

Sig: Date/Time:

SAMPLE CUSTODY EXCHANGES MUST BE DOCUMENTED BELOW. USE FULL LEGAL SIGNATURE, DATE AND MILITARY TIME (24 HOUR CLOCK, I.E. 8AM IS 0800, 4 PM IS 1600)

	RELINQUISHED BY/SAMPLER	DATE	TIME	RECEIVED BY	DATE	TIME
1		2/21	1730		17:30	2/21
2		2/21	1130		022212	1130
3		022212	1530	4021	022212	1530
4	4021	2/22/12	2000		2/22/12	2000.
5		DATE	TIME		DATE	TIME

DELIVERY METHOD: ☐ QC COURIER ☐ CLIENT ☐ UPS ☐ FEDEX ☐ OTHER

Custody Seal Number

COMMENTS:

38F Non-Vice Pour

Hazardous: yes / no

For example to aid completion, see reverse side.

QC Laboratories

1205 Industrial Highway, Southampton, PA 18966

VINELAND

Inter-Laboratory Transport Form: VN022212

Coolers for Transport to Southampton from VINELAND

To be completed by person sealing coolers					Southampton use only	
Cooler ID No.	Custody Seal No.	Date	Time	Initials	Temp °F	Iced Y/N
00	022212-1	02.22.12	1615	JM	36.8	Yes
621	-2				36.7	Yes
4	-3				33.9	Yes
59	-4				39.4	Yes
151	-5				31.0	Yes
773	-6				39.2	Yes
70	-7				31.0	Yes
21	-8				34.7	Yes

JM 22212

Please Note the Following:

Individual sample chains of custody must accompany this form.

Once a cooler is sealed, custody seals may not be broken until samples are received at the Southampton laboratory.

Southampton Laboratory use only

Custody Seals intact upon receipt? (Y)/ N Initials: JM

List ID of any seal found broken upon receipt below:

A full legal signature is required. Record all times in military time (24-HR Clock, 4:00 PM=1600)

Relinquished by:	Date:	Time:		Received by:	Date:	Time:
	02.22.12	2000			02.22.12	1940 JM 22212 2000
Relinquished by:	Date:	Time:		Received by:	Date:	Time:
Relinquished by:	Date:	Time:		Received by:	Date:	Time:
Relinquished by:	Date:	Time:		Received by:	Date:	Time:

QC Laboratories

Analytical Report

02/28/12 05:45pm

JIM GRANT
SOIL SAFE, INC.
378 ROUTE 130 SOUTH
LOGAN TOWNSHIP, NJ 08085

Regarding:
MAUDE
SOIL SAFE, INC.
378 ROUTE 130 SOUTH
LOGAN TOWNSHIP, NJ 08085

Account No: C00469, SOIL SAFE, INC. SALEM
Project No: C00469, SOIL SAFE, INC. SALEM
P.O. No:
Inv. No: 1383116
PWSID No:

Sample Number L4068363-1
Sample Description M12-002
Samp. Date/Time/Temp 02/21/12 01:15pm NA F
Sampled by Customer
Received Temp: 36.7 F **Iced (Y/N):** Y

Parameter	Method	Result	RLs	Test Date, Time, Analyst
METALS				
SILVER	EPA 200.7 Rev 4.4	ND mg/l	0.000780 mg/l*	02/27/12 11:36AM DCP
ALUMINUM	EPA 200.7 Rev 4.4	0.195 mg/l	0.0369 mg/l*	02/27/12 11:36AM DCP
ARSENIC	EPA 200.7 Rev 4.4	ND mg/l	0.00580 mg/l*	02/27/12 11:36AM DCP
BARIUM	EPA 200.7 Rev 4.4	0.0161 mg/l	0.000310 mg/l*	02/27/12 11:36AM DCP
BERYLLIUM	EPA 200.7 Rev 4.4	ND mg/l	0.000120 mg/l*	02/27/12 11:36AM DCP
CALCIUM	EPA 200.7 Rev 4.4	225 mg/l	0.0156 mg/l*	02/27/12 11:36AM DCP
CADMIUM	EPA 200.7 Rev 4.4	ND mg/l	0.000280 mg/l*	02/27/12 11:36AM DCP
COBALT	EPA 200.7 Rev 4.4	0.00190 B mg/l	0.000470 mg/l*	02/27/12 11:36AM DCP
CHROMIUM	EPA 200.7 Rev 4.4	ND mg/l	0.000310 mg/l*	02/27/12 11:36AM DCP
COPPER	EPA 200.7 Rev 4.4	0.00300 mg/l	0.000580 mg/l*	02/27/12 11:36AM DCP
IRON	EPA 200.7 Rev 4.4	0.248 mg/l	0.00220 mg/l*	02/27/12 11:36AM DCP
POTASSIUM	EPA 200.7 Rev 4.4	7.19 mg/l	0.0894 mg/l*	02/27/12 11:36AM DCP
MAGNESIUM	EPA 200.7 Rev 4.4	41.6 mg/l	0.00520 mg/l*	02/27/12 11:36AM DCP
MANGANESE	EPA 200.7 Rev 4.4	0.0456 mg/l	0.0000800 mg/l*	02/27/12 11:36AM DCP
SODIUM	EPA 200.7 Rev 4.4	49.5 mg/l	0.0781 mg/l*	02/27/12 11:36AM DCP
NICKEL	EPA 200.7 Rev 4.4	ND mg/l	0.000770 mg/l*	02/27/12 11:36AM DCP
LEAD	EPA 200.7 Rev 4.4	0.0214 mg/l	0.00380 mg/l*	02/27/12 11:36AM DCP
ANTIMONY	EPA 200.7 Rev 4.4	ND mg/l	0.00530 mg/l*	02/27/12 11:36AM DCP
SELENIUM	EPA 200.7 Rev 4.4	ND mg/l	0.00960 mg/l*	02/27/12 11:36AM DCP
THALLIUM	EPA 200.7 Rev 4.4	0.00650 B mg/l	0.00620 mg/l*	02/27/12 11:36AM DCP
VANADIUM	EPA 200.7 Rev 4.4	ND mg/l	0.000950 mg/l*	02/27/12 11:36AM DCP
ZINC	EPA 200.7 Rev 4.4	0.00850 mg/l	0.000300 mg/l*	02/27/12 11:36AM DCP
MERCURY	EPA 245.1 Rev 3.0	ND mg/l	0.0000470 mg/l*	02/23/12 12:08PM RMP

Serial Number: 2101921

Thomas J. Hines, President

1205 Industrial Blvd., P.O. Box 514, Southampton, PA 18966-0514 Phone: 215-355-3900 Fax: 215-355-7231 www.qclaboratories.com

QC Laboratories

Analytical Report

Account No: C00469, SOIL SAFE, INC. SALEM
Project No: C00469, SOIL SAFE, INC. SALEM

P.O. No:

Inv. No: 1383116
PWSID No:

Sample Number: L4068363-2 | Sample Description: M12-003 | Samp. Date/Time/Temp: 02/21/12 01:15pm NA F | Sampled by: Customer
Received Temp: 36.7 F Iced (Y/N): Y

Parameter	Method	Result	RLs	Test Date, Time, Analyst
GENERAL CHEMISTRY				
CYANIDE, TOTAL	SM 4500CN C,E	0.0290 mg/l	0.0160 mg/l	02/24/12 10:00AM JG

Sample Number: L4068363-3 | Sample Description: M12-004 | Samp. Date/Time/Temp: 02/21/12 01:35pm NA F | Sampled by: Customer
Received Temp: 36.7 F Iced (Y/N): Y

Parameter	Method	Result	RLs	Test Date, Time, Analyst
METALS				
SILVER	EPA 200.7 Rev 4.4	ND mg/l	0.000780 mg/l*	02/27/12 11:42AM DCP
ALUMINUM	EPA 200.7 Rev 4.4	0.280 mg/l	0.0369 mg/l*	02/27/12 11:42AM DCP
ARSENIC	EPA 200.7 Rev 4.4	0.00670 B mg/l	0.00580 mg/l*	02/27/12 11:42AM DCP
BARIUM	EPA 200.7 Rev 4.4	0.0400 mg/l	0.000310 mg/l*	02/27/12 11:42AM DCP
BERYLLIUM	EPA 200.7 Rev 4.4	ND mg/l	0.000120 mg/l*	02/27/12 11:42AM DCP
CALCIUM	EPA 200.7 Rev 4.4	395 mg/l	0.0156 mg/l*	02/27/12 11:42AM DCP
CADMIUM	EPA 200.7 Rev 4.4	ND mg/l	0.000280 mg/l*	02/27/12 11:42AM DCP
COBALT	EPA 200.7 Rev 4.4	0.00760 B mg/l	0.000470 mg/l*	02/27/12 11:42AM DCP
CHROMIUM	EPA 200.7 Rev 4.4	0.00470 B mg/l	0.000310 mg/l*	02/27/12 11:42AM DCP
COPPER	EPA 200.7 Rev 4.4	0.00310 mg/l	0.000580 mg/l*	02/27/12 11:42AM DCP
IRON	EPA 200.7 Rev 4.4	17.9 mg/l	0.00220 mg/l*	02/27/12 11:42AM DCP
POTASSIUM	EPA 200.7 Rev 4.4	43.6 mg/l	0.0894 mg/l*	02/27/12 11:42AM DCP
MAGNESIUM	EPA 200.7 Rev 4.4	312 mg/l	0.00520 mg/l*	02/27/12 11:42AM DCP
MANGANESE	EPA 200.7 Rev 4.4	0.0740 mg/l	0.0000800 mg/l*	02/27/12 11:42AM DCP
NICKEL	EPA 200.7 Rev 4.4	0.000930 B mg/l	0.000770 mg/l*	02/27/12 11:42AM DCP
LEAD	EPA 200.7 Rev 4.4	0.0285 mg/l	0.00380 mg/l*	02/27/12 11:42AM DCP
ANTIMONY	EPA 200.7 Rev 4.4	ND mg/l	0.00530 mg/l*	02/27/12 11:42AM DCP
SELENIUM	EPA 200.7 Rev 4.4	0.0230 mg/l	0.00960 mg/l*	02/27/12 11:42AM DCP
THALLIUM	EPA 200.7 Rev 4.4	0.00940 B mg/l	0.00620 mg/l*	02/27/12 11:42AM DCP
VANADIUM	EPA 200.7 Rev 4.4	0.00110 B mg/l	0.000950 mg/l*	02/27/12 11:42AM DCP
ZINC	EPA 200.7 Rev 4.4	0.0114 mg/l	0.000300 mg/l*	02/27/12 11:42AM DCP
SODIUM	EPA 200.7 Rev 4.4	1170 mg/l	0.781 mg/l*	02/27/12 11:50AM DCP
MERCURY	EPA 245.1 Rev 3.0	ND mg/l	0.0000470 mg/l*	02/23/12 12:14PM RMP

Sample Number: L4068363-4 | Sample Description: M12-005 | Samp. Date/Time/Temp: 02/21/12 01:35pm NA F | Sampled by: Customer
Received Temp: 36.7 F Iced (Y/N): Y

Parameter	Method	Result	RLs	Test Date, Time, Analyst
GENERAL CHEMISTRY				
CYANIDE, TOTAL	SM 4500CN C,E	3.98 mg/l	0.640 mg/l	02/24/12 10:00AM JG

Serial Number: 2101921

Thomas J. Hines, President

QC Laboratories

Analytical Report

Account No: C00469, SOIL SAFE, INC. SALEM
Project No: C00469, SOIL SAFE, INC. SALEM

P.O. No:

Inv. No: 1383116
PWSID No:

Sample Number: L4068363-5
Sample Description: M12-017
Samp. Date/Time/Temp: 02/21/12 02:39pm NA F
Sampled by: Customer
Received Temp: 36.7 F Iced (Y/N): Y

Parameter	Method	Result	RLs	Test Date, Time, Analyst
GENERAL CHEMISTRY				
CYANIDE, TOTAL	SM 4500CN C,E	43.2 mg/l	3.20 mg/l	02/24/12 10:00AM JG

Sample Number: L4068363-6
Sample Description: M12-020
Samp. Date/Time/Temp: 02/21/12 02:39pm NA F
Sampled by: Customer
Received Temp: 36.7 F Iced (Y/N): Y

Parameter	Method	Result	RLs	Test Date, Time, Analyst
METALS				
SILVER	EPA 200.7 Rev 4.4	ND mg/l	0.000780 mg/l*	02/27/12 12:10PM DCP
ALUMINUM	EPA 200.7 Rev 4.4	0.247 mg/l	0.0369 mg/l*	02/27/12 12:10PM DCP
ARSENIC	EPA 200.7 Rev 4.4	ND mg/l	0.00580 mg/l*	02/27/12 12:10PM DCP
BARIUM	EPA 200.7 Rev 4.4	0.0358 mg/l	0.000310 mg/l*	02/27/12 12:10PM DCP
BERYLLIUM	EPA 200.7 Rev 4.4	ND mg/l	0.000120 mg/l*	02/27/12 12:10PM DCP
CALCIUM	EPA 200.7 Rev 4.4	417 mg/l	0.0156 mg/l*	02/27/12 12:10PM DCP
CADMIUM	EPA 200.7 Rev 4.4	ND mg/l	0.000280 mg/l*	02/27/12 12:10PM DCP
COBALT	EPA 200.7 Rev 4.4	0.00710 B mg/l	0.000470 mg/l*	02/27/12 12:10PM DCP
CHROMIUM	EPA 200.7 Rev 4.4	0.00550 mg/l	0.000310 mg/l*	02/27/12 12:10PM DCP
COPPER	EPA 200.7 Rev 4.4	ND mg/l	0.000580 mg/l*	02/27/12 12:10PM DCP
IRON	EPA 200.7 Rev 4.4	18.6 mg/l	0.00220 mg/l*	02/27/12 12:10PM DCP
POTASSIUM	EPA 200.7 Rev 4.4	44.0 mg/l	0.0894 mg/l*	02/27/12 12:10PM DCP
MAGNESIUM	EPA 200.7 Rev 4.4	310 mg/l	0.00520 mg/l*	02/27/12 12:10PM DCP
MANGANESE	EPA 200.7 Rev 4.4	0.0765 mg/l	0.0000800 mg/l*	02/27/12 12:10PM DCP
NICKEL	EPA 200.7 Rev 4.4	0.00110 B mg/l	0.000770 mg/l*	02/27/12 12:10PM DCP
ANTIMONY	EPA 200.7 Rev 4.4	ND mg/l	0.00530 mg/l*	02/27/12 12:10PM DCP
THALLIUM	EPA 200.7 Rev 4.4	ND mg/l	0.00620 mg/l*	02/27/12 12:10PM DCP
VANADIUM	EPA 200.7 Rev 4.4	ND mg/l	0.000950 mg/l*	02/27/12 12:10PM DCP
ZINC	EPA 200.7 Rev 4.4	0.00360 B mg/l	0.000300 mg/l*	02/27/12 12:10PM DCP
LEAD	EPA 200.7 Rev 4.4	0.0212 mg/l	0.00380 mg/l*	02/27/12 12:18PM DCP
SELENIUM	EPA 200.7 Rev 4.4	0.0299 mg/l	0.00960 mg/l*	02/27/12 12:18PM DCP
SODIUM	EPA 200.7 Rev 4.4	1180 mg/l	0.781 mg/l*	02/27/12 12:22PM DCP
MERCURY	EPA 245.1 Rev 3.0	ND mg/l	0.0000470 mg/l*	02/23/12 12:16PM RMP

Sample Number: L4068363-7
Sample Description: M12-016
Samp. Date/Time/Temp: 02/21/12 02:45pm NA F
Sampled by: Customer
Received Temp: 36.7 F Iced (Y/N): Y

Parameter	Method	Result	RLs	Test Date, Time, Analyst
GENERAL CHEMISTRY				
CYANIDE, TOTAL	SM 4500CN C,E	4.03 mg/l	0.640 mg/l	02/24/12 10:00AM JG

Serial Number: 2101921

Thomas J. Hines, President

QC Laboratories

Analytical Report

Account No: C00469, SOIL SAFE, INC. SALEM **P.O. No:** **Inv. No:** 1383116
Project No: C00469, SOIL SAFE, INC. SALEM **PWSID No:**

Sample Number **Sample Description** **Samp. Date/Time/Temp** **Sampled by**
L4068363-8 M12-021 02/21/12 02:45pm NA F Customer
Received Temp: 36.7 F **Iced (Y/N):** Y

Parameter	Method	Result	RLs	Test Date, Time, Analyst
METALS				
SILVER	EPA 200.7 Rev 4.4	ND mg/l	0.000780 mg/l*	02/27/12 12:24PM DCP
ALUMINUM	EPA 200.7 Rev 4.4	0.770 mg/l	0.0369 mg/l*	02/27/12 12:24PM DCP
ARSENIC	EPA 200.7 Rev 4.4	ND mg/l	0.00580 mg/l*	02/27/12 12:24PM DCP
BARIUM	EPA 200.7 Rev 4.4	0.0500 mg/l	0.000310 mg/l*	02/27/12 12:24PM DCP
BERYLLIUM	EPA 200.7 Rev 4.4	ND mg/l	0.000120 mg/l*	02/27/12 12:24PM DCP
CALCIUM	EPA 200.7 Rev 4.4	341 mg/l	0.0156 mg/l*	02/27/12 12:24PM DCP
CADMIUM	EPA 200.7 Rev 4.4	ND mg/l	0.000280 mg/l*	02/27/12 12:24PM DCP
COBALT	EPA 200.7 Rev 4.4	0.00570 B mg/l	0.000470 mg/l*	02/27/12 12:24PM DCP
CHROMIUM	EPA 200.7 Rev 4.4	0.00860 mg/l	0.000310 mg/l*	02/27/12 12:24PM DCP
COPPER	EPA 200.7 Rev 4.4	ND mg/l	0.000580 mg/l*	02/27/12 12:24PM DCP
IRON	EPA 200.7 Rev 4.4	13.7 mg/l	0.00220 mg/l*	02/27/12 12:24PM DCP
POTASSIUM	EPA 200.7 Rev 4.4	102 mg/l	0.0894 mg/l*	02/27/12 12:24PM DCP
MAGNESIUM	EPA 200.7 Rev 4.4	388 mg/l	0.00520 mg/l*	02/27/12 12:24PM DCP
MANGANESE	EPA 200.7 Rev 4.4	0.0927 mg/l	0.0000800 mg/l*	02/27/12 12:24PM DCP
NICKEL	EPA 200.7 Rev 4.4	0.00140 B mg/l	0.000770 mg/l*	02/27/12 12:24PM DCP
LEAD	EPA 200.7 Rev 4.4	0.0310 mg/l	0.00380 mg/l*	02/27/12 12:24PM DCP
ANTIMONY	EPA 200.7 Rev 4.4	ND mg/l	0.00530 mg/l*	02/27/12 12:24PM DCP
THALLIUM	EPA 200.7 Rev 4.4	0.00710 B mg/l	0.00620 mg/l*	02/27/12 12:24PM DCP
VANADIUM	EPA 200.7 Rev 4.4	0.00230 B mg/l	0.000950 mg/l*	02/27/12 12:24PM DCP
ZINC	EPA 200.7 Rev 4.4	0.0105 mg/l	0.000300 mg/l*	02/27/12 12:24PM DCP
SODIUM	EPA 200.7 Rev 4.4	2450 mg/l	0.781 mg/l*	02/27/12 12:35PM DCP
SELENIUM	EPA 200.7 Rev 4.4	ND mg/l	0.0957 mg/l*	02/27/12 12:35PM DCP
MERCURY	EPA 245.1 Rev 3.0	0.0000500 B mg/l	0.0000470 mg/l*	02/23/12 12:18PM RMP

QUALIFIERS: For metals parameters;"B" indicates a value that is > than the MDL but < than the laboratory quantitation limit. For Organics parameters; "B"is when the compound is found in the blank as well as in the sample;"J"indicates a value that is > than the MDL but < than the lowest standard, it is also used to indicate that a compound is tentatively identified in a library search;"E"(estimated) is when a compound exceeded the calibration range;"N" presumptive evidence of a compound; "D" is when a dilution was required.

Notes:
- A result of "ND" indicates the concentration of the analyte tested was either not detected or below the RLs.
- Definitions: ND=not detected; NEG=negative; POS=positive; COL=colonies; RLs=laboratory reporting limits; L/A=laboratory accident; TNTC=too numerous to count
- A result marked with "DRY" indicates that the result was calculated and reported on a dry weight basis.
- All analysis, except field tests are conducted in Southampton, PA unless otherwise identified.
- The reported results relate only to the samples.
- QC NELAP ID's:PA 09-00131,NJ PA166,FL E87954,NY 11223,CT PH-0768,DE PA-018,KY 90228,MD 206,EPA PA00018.Bioassay:PA 09-03574,NJ PA034,FL E87953,KS E10373,SC 89021001.
- QC STATE ID's:Wind Gap,NJ PA001,PA 48-01334;E RUTHERFORD NJ02015;Vineland NJ06005; Reading PA 06-03543.
- All samples are collected as "grab" samples unless otherwise identified.
- MCL= is the EPA recommended "maximum contaminant level" for a parameter. PLs=customer specific permit limits.
- The test results meet all requirements of NELAC unless otherwise specified.
- The report shall not be reproduced except in full without the written consent of the laboratory.

* - The "RLs" represents a reporting/quantitation limit. When an "*" is present in the column identified as the "RLs", it is being reported as a Method Detection Limit (MDL).

Serial Number: 2101921

Thomas J. Hines, President

QC Laboratories

1205 Industrial Blvd.
Southampton, PA 18966-0514
Phone: 215-355-3900
Fax: 215-355-7231

CHAIN OF CUSTODY

Page 1 of 1

Lab LIMS No: L4068363.

Client/Acct. No. C00469
Address SSI
378 Rt. 130 - S
City/State/Zip Logan Twp. NJ
Phone/Fax 8564678030
Client Contact Maude

Bill to/Report to: (if different)

Sampling Site Address: (if different)

P.O. No. [illegible]
QC Contact Rich

LAB USE ONLY:

- # ___ Ascorbic/HCl Vials # ___ HCl Vials
- # ___ $Na_2S_2O_3$
- # ___ Na OH/Zn acetate pH
- # 4 HNO_3 pH <2 1/2 ptpl.
- # ___ H_2SO_4 pH
- # 4 NaOH pH >12 1/2 ptpl
- # ___ Unpreserved
- # ___ Hcl pH
- # ___ Temp control ID#

310.7 F Unpreserved

MATRIX CODES

- DW: DRINKING WATER
- GW: GROUND WATER
- WW: WASTEWATER
- SO: SOIL
- SL: SLUDGE
- OIL: OIL
- SOL: NON SOIL SOLID
- MI: MISCELLANEOUS
- X: OTHER

LAB USE ONLY

PROJECT / FIELD ID	Collection Date	Collection Military Time	GRAB	COMP	Matrix Code	Number of Containers: Total	H_2SO_4	HCl	Vials	HNO_3	NaOH	ZnAc	Unpre	Bact	ANALYSIS REQUESTED	Field pH, Temp (C or F), DO, Cl_2, S. Cond. etc.
M12-002	2/21	1315			GW					1					TAL Metals Method 6020	
M12-003	2/21	1315									1				Cyanide Method 9010	
M12-004	2/21	1335								1					Tal Metals Method 6020	
M12-005	2/21	1335									1				Cyanide Method 9010	
M12-007	2/21	1439									1				Cyanide Method 9010	
M12-020	2/21	1439								1					TAL Metals Method 6020	
M12-016	2/21	1445									1				Cyanide Method 9010	
M12-021	2/21	1445								1					TAL Metals Method 6020	

by NOON

SAMPLED BY: (Name/Company)

Verbal/fax data due: 2/27/12
Hardcopy due: ___/___/___

Report Format: ☐ Standard ☐ Forms ☐ Standard + QC ☐ NJ Reduced ☐ Disk

Please call for pricing and availability on rush (<14-21 day) turnaround and on all but standard format.

Field Parameters Analyzed By:
Sig: Date/Time:

SAMPLE CUSTODY EXCHANGES MUST BE DOCUMENTED BELOW. USE FULL LEGAL SIGNATURE, DATE AND MILITARY TIME (24 HOUR CLOCK, I.E. 8AM IS 0800, 4 PM IS 1600)

RELINQUISHED BY SAMPLER	DATE	TIME	RECEIVED BY	DATE	TIME
1 [signature]	1730	2/21	1 [signature]	17:30	2/21
2 [signature]	2/21	1130	2 [signature]	022212	1130
3 [signature]	022212	1530	3 621	022212	1530
4 621	2/22/12	2000	4 [signature]	2/22/12	2000
5			5		

DELIVERY METHOD: ☐ QC COURIER ☐ CLIENT ☐ UPS ☐ FEDEX ☐ OTHER

Custody Seal Number

COMMENTS:

Hazardous: yes / no

For example to aid completion, see reverse side.

FINAL REPORT

QC Laboratories

1205 Industrial Highway, Southampton, PA 18966

VINELAND

Inter-Laboratory Transport Form: VN022212

Coolers for Transport to Southampton from VINELAND

To be completed by person sealing coolers					Southampton use only	
Cooler ID No.	Custody Seal No.	Date	Time	Initials	Temp °F	Iced Y/N
00	022212-1	02.22.12	1615	JM	36.8	Yes
621	-2				36.7	Yes
4	-3				33.9	Yes
59	-4				39.4	Yes
151	-5				31.0	Yes
773	-6				39.2	Yes
70	-7				31.0	Yes
21	-8				34.7	Yes

JM 22212

Please Note the Following:

Individual sample chains of custody must accompany this form.

Once a cooler is sealed, custody seals may not be broken until samples are received at the Southampton laboratory.

Southampton Laboratory use only

Custody Seals intact upon receipt? (Y)/ N Initials: JM

List ID of any seal found broken upon receipt below:

A full legal signature is required. Record all times in military time (24-HR Clock, 4:00 PM=1600)

Relinquished by:	Date:	Time:		Received by:	Date:	Time:
	02.22.12	2000			02.22.12	1940 JM 22212 2000
Relinquished by:	Date:	Time:		Received by:	Date:	Time:
Relinquished by:	Date:	Time:		Received by:	Date:	Time:
Relinquished by:	Date:	Time:		Received by:	Date:	Time:

QC Laboratories

Analytical Report

ACCREDITED IN ACCORDANCE WITH nelac
02/24/12 05:34pm

JIM GRANT
SOIL SAFE, INC.
378 ROUTE 130 SOUTH
LOGAN TOWNSHIP, NJ 08085

Regarding:
MAUDE
SOIL SAFE, INC.
378 ROUTE 130 SOUTH
LOGAN TOWNSHIP, NJ 08085

Account No: C00469, SOIL SAFE, INC. SALEM **P.O. No:** **Inv. No:** 1382583
Project No: C00469, SOIL SAFE, INC. SALEM **PWSID No:**

Sample Number **Sample Description** **Samp. Date/Time/Temp** **Sampled by**
L4068364-1 M12-001 02/21/12 01:15pm NA F Customer
Received Temp: 36.7 F **Iced (Y/N):** Y

Parameter	Method	Result	RLs	Test Date, Time, Analyst
GAS CHROMATOGRAPHY MASS SPECTROMETRY; SEMI-VOLATILES				
NAPHTHALENE	EPA 8270C	ND ug/l	0.860 ug/l*	02/23/12 07:15PM MDJ
2-METHYLNAPHTHALENE	EPA 8270C	ND ug/l	0.800 ug/l*	02/23/12 07:15PM MDJ
ACENAPHTHYLENE	EPA 8270C	ND ug/l	0.700 ug/l*	02/23/12 07:15PM MDJ
ACENAPHTHENE	EPA 8270C	ND ug/l	0.750 ug/l*	02/23/12 07:15PM MDJ
FLUORENE	EPA 8270C	ND ug/l	0.650 ug/l*	02/23/12 07:15PM MDJ
PHENANTHRENE	EPA 8270C	ND ug/l	0.650 ug/l*	02/23/12 07:15PM MDJ
ANTHRACENE	EPA 8270C	ND ug/l	0.770 ug/l*	02/23/12 07:15PM MDJ
FLUORANTHENE	EPA 8270C	ND ug/l	0.560 ug/l*	02/23/12 07:15PM MDJ
PYRENE	EPA 8270C	ND ug/l	0.670 ug/l*	02/23/12 07:15PM MDJ
BENZO(A)ANTHRACENE	EPA 8270C	ND ug/l	0.750 ug/l*	02/23/12 07:15PM MDJ
CHRYSENE	EPA 8270C	ND ug/l	0.620 ug/l*	02/23/12 07:15PM MDJ
BENZO(B)FLUORANTHENE	EPA 8270C	ND ug/l	0.970 ug/l*	02/23/12 07:15PM MDJ
BENZO(K)FLUORANTHENE	EPA 8270C	ND ug/l	0.680 ug/l*	02/23/12 07:15PM MDJ
BENZO(A)PYRENE	EPA 8270C	ND ug/l	0.630 ug/l*	02/23/12 07:15PM MDJ
INDENO(1,2,3-CD)PYRENE	EPA 8270C	ND ug/l	0.570 ug/l*	02/23/12 07:15PM MDJ
DIBENZ(A,H)ANTHRACENE	EPA 8270C	ND ug/l	0.520 ug/l*	02/23/12 07:15PM MDJ
BENZO(G,H,I)PERYLENE	EPA 8270C	ND ug/l	0.790 ug/l*	02/23/12 07:15PM MDJ

Sample Number **Sample Description** **Samp. Date/Time/Temp** **Sampled by**
L4068364-2 M12-006 02/21/12 01:35pm NA F Customer
Received Temp: 36.7 F **Iced (Y/N):** Y

Parameter	Method	Result	RLs	Test Date, Time, Analyst
GAS CHROMATOGRAPHY MASS SPECTROMETRY; SEMI-VOLATILES				
NAPHTHALENE	EPA 8270C	ND ug/l	0.860 ug/l*	02/23/12 07:40PM MDJ
2-METHYLNAPHTHALENE	EPA 8270C	ND ug/l	0.800 ug/l*	02/23/12 07:40PM MDJ
ACENAPHTHYLENE	EPA 8270C	ND ug/l	0.700 ug/l*	02/23/12 07:40PM MDJ
ACENAPHTHENE	EPA 8270C	ND ug/l	0.750 ug/l*	02/23/12 07:40PM MDJ
FLUORENE	EPA 8270C	ND ug/l	0.650 ug/l*	02/23/12 07:40PM MDJ
PHENANTHRENE	EPA 8270C	ND ug/l	0.650 ug/l*	02/23/12 07:40PM MDJ
ANTHRACENE	EPA 8270C	ND ug/l	0.770 ug/l*	02/23/12 07:40PM MDJ

Thomas J. Hines, President

Serial Number: 2099208

1205 Industrial Blvd., P.O. Box 514, Southampton, PA 18966-0514 Phone: 215-355-3900 Fax: 215-355-7231 www.qclaboratories.com

Account No:C00469, SOIL SAFE, INC. SALEM P.O. No: Inv. No: 1382583
Project No: C00469, SOIL SAFE, INC. SALEM PWSID No:

Sample Number Sample Description Samp. Date/Time/Temp Sampled by
L4068364-2 M12-006 02/21/12 01:35pm NA F Customer
Received Temp: 36.7 F Iced (Y/N): Y

Parameter	Method	Result	RLs	Test Date, Time, Analyst
GAS CHROMATOGRAPHY MASS SPECTROMETRY; SEMI-VOLATILES continued				
FLUORANTHENE	EPA 8270C	ND ug/l	0.560 ug/l*	02/23/12 07:40PM MDJ
PYRENE	EPA 8270C	ND ug/l	0.670 ug/l*	02/23/12 07:40PM MDJ
BENZO(A)ANTHRACENE	EPA 8270C	ND ug/l	0.750 ug/l*	02/23/12 07:40PM MDJ
CHRYSENE	EPA 8270C	ND ug/l	0.620 ug/l*	02/23/12 07:40PM MDJ
BENZO(B)FLUORANTHENE	EPA 8270C	ND ug/l	0.970 ug/l*	02/23/12 07:40PM MDJ
BENZO(K)FLUORANTHENE	EPA 8270C	ND ug/l	0.680 ug/l*	02/23/12 07:40PM MDJ
BENZO(A)PYRENE	EPA 8270C	ND ug/l	0.630 ug/l*	02/23/12 07:40PM MDJ
INDENO(1,2,3-CD)PYRENE	EPA 8270C	ND ug/l	0.570 ug/l*	02/23/12 07:40PM MDJ
DIBENZ(A,H)ANTHRACENE	EPA 8270C	ND ug/l	0.520 ug/l*	02/23/12 07:40PM MDJ
BENZO(G,H,I)PERYLENE	EPA 8270C	ND ug/l	0.790 ug/l*	02/23/12 07:40PM MDJ

Sample Number Sample Description Samp. Date/Time/Temp Sampled by
L4068364-3 M12-018 02/21/12 02:39pm NA F Customer
Received Temp: 36.7 F Iced (Y/N): Y

Parameter	Method	Result	RLs	Test Date, Time, Analyst
GAS CHROMATOGRAPHY MASS SPECTROMETRY; SEMI-VOLATILES				
NAPHTHALENE	EPA 8270C	ND ug/l	0.860 ug/l*	02/23/12 08:29PM MDJ
2-METHYLNAPHTHALENE	EPA 8270C	ND ug/l	0.800 ug/l*	02/23/12 08:29PM MDJ
ACENAPHTHYLENE	EPA 8270C	ND ug/l	0.700 ug/l*	02/23/12 08:29PM MDJ
ACENAPHTHENE	EPA 8270C	ND ug/l	0.750 ug/l*	02/23/12 08:29PM MDJ
FLUORENE	EPA 8270C	ND ug/l	0.650 ug/l*	02/23/12 08:29PM MDJ
PHENANTHRENE	EPA 8270C	ND ug/l	0.650 ug/l*	02/23/12 08:29PM MDJ
ANTHRACENE	EPA 8270C	ND ug/l	0.770 ug/l*	02/23/12 08:29PM MDJ
FLUORANTHENE	EPA 8270C	ND ug/l	0.560 ug/l*	02/23/12 08:29PM MDJ
PYRENE	EPA 8270C	ND ug/l	0.670 ug/l*	02/23/12 08:29PM MDJ
BENZO(A)ANTHRACENE	EPA 8270C	ND ug/l	0.750 ug/l*	02/23/12 08:29PM MDJ
CHRYSENE	EPA 8270C	ND ug/l	0.620 ug/l*	02/23/12 08:29PM MDJ
BENZO(B)FLUORANTHENE	EPA 8270C	ND ug/l	0.970 ug/l*	02/23/12 08:29PM MDJ
BENZO(K)FLUORANTHENE	EPA 8270C	ND ug/l	0.680 ug/l*	02/23/12 08:29PM MDJ
BENZO(A)PYRENE	EPA 8270C	ND ug/l	0.630 ug/l*	02/23/12 08:29PM MDJ
INDENO(1,2,3-CD)PYRENE	EPA 8270C	ND ug/l	0.570 ug/l*	02/23/12 08:29PM MDJ
DIBENZ(A,H)ANTHRACENE	EPA 8270C	ND ug/l	0.520 ug/l*	02/23/12 08:29PM MDJ
BENZO(G,H,I)PERYLENE	EPA 8270C	ND ug/l	0.790 ug/l*	02/23/12 08:29PM MDJ

Serial Number: 2099208
Thomas J. Hines, President

QC Laboratories

Analytical Report

Account No: C00469, SOIL SAFE, INC. SALEM
Project No: C00469, SOIL SAFE, INC. SALEM

P.O. No:

Inv. No: 1382583
PWSID No:

Sample Number L4068364-4
Sample Description M12-019
Received Temp: 36.7 F **Iced (Y/N):** Y

Samp. Date/Time/Temp 02/21/12 02:45pm NA F
Sampled by Customer

GAS CHROMATOGRAPHY MASS SPECTROMETRY; SEMI-VOLATILES

Parameter	Method	Result	RLs	Test Date, Time, Analyst
NAPHTHALENE	EPA 8270C	ND ug/l	0.860 ug/l*	02/23/12 08:54PM MDJ
2-METHYLNAPHTHALENE	EPA 8270C	ND ug/l	0.800 ug/l*	02/23/12 08:54PM MDJ
ACENAPHTHYLENE	EPA 8270C	ND ug/l	0.700 ug/l*	02/23/12 08:54PM MDJ
ACENAPHTHENE	EPA 8270C	ND ug/l	0.750 ug/l*	02/23/12 08:54PM MDJ
FLUORENE	EPA 8270C	ND ug/l	0.650 ug/l*	02/23/12 08:54PM MDJ
PHENANTHRENE	EPA 8270C	ND ug/l	0.650 ug/l*	02/23/12 08:54PM MDJ
ANTHRACENE	EPA 8270C	ND ug/l	0.770 ug/l*	02/23/12 08:54PM MDJ
FLUORANTHENE	EPA 8270C	ND ug/l	0.560 ug/l*	02/23/12 08:54PM MDJ
PYRENE	EPA 8270C	ND ug/l	0.670 ug/l*	02/23/12 08:54PM MDJ
BENZO(A)ANTHRACENE	EPA 8270C	ND ug/l	0.750 ug/l*	02/23/12 08:54PM MDJ
CHRYSENE	EPA 8270C	ND ug/l	0.620 ug/l*	02/23/12 08:54PM MDJ
BENZO(B)FLUORANTHENE	EPA 8270C	ND ug/l	0.970 ug/l*	02/23/12 08:54PM MDJ
BENZO(K)FLUORANTHENE	EPA 8270C	ND ug/l	0.680 ug/l*	02/23/12 08:54PM MDJ
BENZO(A)PYRENE	EPA 8270C	ND ug/l	0.630 ug/l*	02/23/12 08:54PM MDJ
INDENO(1,2,3-CD)PYRENE	EPA 8270C	ND ug/l	0.570 ug/l*	02/23/12 08:54PM MDJ
DIBENZ(A,H)ANTHRACENE	EPA 8270C	ND ug/l	0.520 ug/l*	02/23/12 08:54PM MDJ
BENZO(G,H,I)PERYLENE	EPA 8270C	ND ug/l	0.790 ug/l*	02/23/12 08:54PM MDJ

Notes:
- A result of "ND" indicates the concentration of the analyte tested was either not detected or below the RLs.
- Definitions: ND=not detected; NEG=negative; POS=positive; COL=colonies; RLs=laboratory reporting limits; L/A=laboratory accident; TNTC=too numerous to count
- A result marked with "DRY" indicates that the result was calculated and reported on a dry weight basis.
- All analysis, except field tests are conducted in Southampton, PA unless otherwise identified.
- The reported results relate only to the samples.
- QC NELAP ID's:PA 09-00131,NJ PA166,FL E87954,NY 11223,CT PH-0768,DE PA-018,KY 90228,MD 206,EPA PA00018.Bioassay:PA 09-03574,NJ PA034,FL E87953,KS E10373,SC 89021001.
- QC STATE ID's:Wind Gap,NJ PA001,PA 48-01334;E RUTHERFORD NJ02015;Vineland NJ06005; Reading PA 06-03543.
- All samples are collected as "grab" samples unless otherwise identified.
- MCL= is the EPA recommended "maximum contaminant level" for a parameter. PLs=customer specific permit limits.
- The test results meet all requirements of NELAC unless otherwise specified.
- The report shall not be reproduced except in full without the written consent of the laboratory.

* - The "RLs" represents a reporting/quantitation limit. When an "*" is present in the column identified as the "RLs", it is being reported as a Method Detection Limit (MDL).

Serial Number: 2099208

Thomas J. Hines, President

QC Laboratories

1205 Industrial Blvd.
Southampton, PA 18966-0514
Phone: 215-355-3900
Fax: 215-355-7231

CHAIN OF CUSTODY

Page 1 of 1

Lab LIMS No: L4068364.

Client/Acct. No. C00469
Address SST
378-Rt-130-S.
City/State/Zip Logan. Twp. NJ.
Phone/Fax 856467 8030
Client Contact Maude

Bill to/Report to: (if different)

Sampling Site Address: (if different)

P.O. No. ~~[illegible]~~
QC Contact Rich

LAB USE ONLY:

___ Ascorbic/HCl Vials # ___ HCl Vials
___ $Na_2S_2O_3$
___ Na OH/Zn acetate pH
___ HNO_3 pH
___ H_2SO_4 pH
___ NaOH pH
4 Unpreserved 91 QTS.
___ Hcl pH
___ Temp control ID# 36.7F/100 ITOB Liced.

MATRIX CODES

DW: DRINKING WATER
GW: GROUND WATER
WW: WASTEWATER
SO: SOIL
SL: SLUDGE
OIL: OIL
SOL: NON SOIL SOLID
MI: MISCELLANEOUS
X: OTHER

LAB USE ONLY

PROJECT / FIELD ID	Collection Date	Collection Military Time	GRAB	COMP	Matrix Code	Number of Containers: Total	H_2SO_4	HCl	Vials	HNO_3	NaOH	ZnAc	Unpre	Bact	ANALYSIS REQUESTED	Field pH, Temp (C or F), DO, Cl_2, S. Cond. etc.
M12-001	2/21	1315			GW	1									PAH Method 8270	4°C
M12-004	↓	1335			↓	1									↓	
M12-018	↓	1439			↓	1									↓	
M12-019	↓	1445			↓	1									↓	

SAMPLED BY: (Name/Company)

Verbal/fax data due: 2/27/12 by noon
Hardcopy due: ___/___/___

Report Format: ☐ Standard ☐ Forms ☐ Standard + QC ☐ NJ Reduced ☐ Disk

Please call for pricing and availability on rush (<14-21 day) turnaround and on all but standard format.

Field Parameters Analyzed By:
Sig:
Date/Time:

SAMPLE CUSTODY EXCHANGES MUST BE DOCUMENTED BELOW. USE FULL LEGAL SIGNATURE, DATE AND MILITARY TIME (24 HOUR CLOCK, I.E. 8AM IS 0800, 4 PM IS 1600)

RELINQUISHED BY SAMPLER	DATE	TIME	RECEIVED BY	DATE	TIME
1 [signature]	2/21	1730	1 [signature]	2/21	17:30
2 [signature]	2/21	1130	2 [signature]	022212	1130
3 [signature]	022212	1530	3 621	022212	1530
4 621	2/22/12	2000	4 [signature]	2/22/12	2000
5			5		

DELIVERY METHOD: ☐ QC COURIER ☐ CLIENT ☐ UPS ☐ FEDEX ☐ OTHER ___

Custody Seal Number

COMMENTS:

38F/Vine Liced/ELP

Hazardous: yes / no

For example to aid completion, see reverse side.

FINAL REPORT

QC Laboratories

1205 Industrial Highway, Southampton, PA 18966

VINELAND

Inter-Laboratory Transport Form: VN022212

Coolers for Transport to Southampton from VINELAND

To be completed by person sealing coolers					Southampton use only	
Cooler ID No.	Custody Seal No.	Date	Time	Initials	Temp °F	Iced Y/N
00	022212-1	02.22.12	1615	JM	36.8	Yes
621	-2				36.7	Yes
4	-3				33.9	Yes
59	-4				39.4	Yes
151	-5				31.0	Yes
773	-6				39.2	Yes
70	-7				31.0	Yes
21	-8				34.7	Yes

JM 22212

Please Note the Following:

Individual sample chains of custody must accompany this form.

Once a cooler is sealed, custody seals may not be broken until samples are received at the Southampton laboratory.

Southampton Laboratory use only

Custody Seals intact upon receipt? (Y)/ N Initials: JM

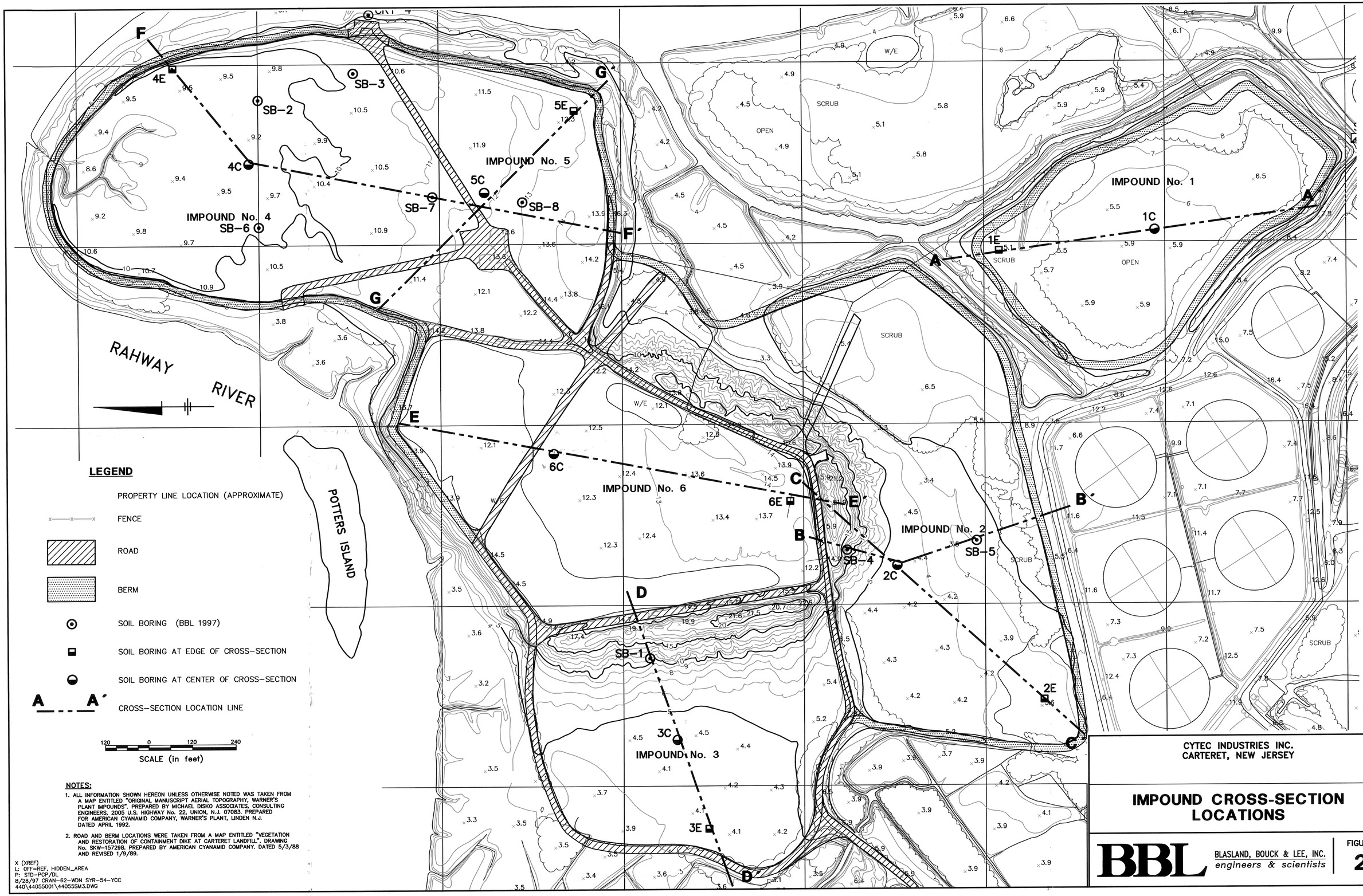
List ID of any seal found broken upon receipt below:

A full legal signature is required. Record all times in military time (24-HR Clock, 4:00 PM=1600)

Relinquished by:	Date:	Time:		Received by:	Date:	Time:
	02.22.12	2000			02.22.12	1940 JM 22212 2000
Relinquished by:	Date:	Time:		Received by:	Date:	Time:
Relinquished by:	Date:	Time:		Received by:	Date:	Time:
Relinquished by:	Date:	Time:		Received by:	Date:	Time:

APPENDIX D

CROSS-SECTIONS OF THE IMPOUNDMENTS BY BBL



LEGEND

- PROPERTY LINE LOCATION (APPROXIMATE)
- FENCE
- ROAD
- BERM
- SOIL BORING (BBL 1997)
- SOIL BORING AT EDGE OF CROSS-SECTION
- SOIL BORING AT CENTER OF CROSS-SECTION
- A — A′ CROSS-SECTION LOCATION LINE

120 0 120 240
SCALE (in feet)

NOTES:

1. ALL INFORMATION SHOWN HEREON UNLESS OTHERWISE NOTED WAS TAKEN FROM A MAP ENTITLED "ORIGINAL MANUSCRIPT AERIAL TOPOGRAPHY, WARNER'S PLANT IMPOUNDS". PREPARED BY MICHAEL DISKO ASSOCIATES, CONSULTING ENGINEERS, 2005 U.S. HIGHWAY No. 22, UNION, N.J. 07083. PREPARED FOR AMERICAN CYANAMID COMPANY, WARNER'S PLANT, LINDEN N.J. DATED APRIL 1992.
2. ROAD AND BERM LOCATIONS WERE TAKEN FROM A MAP ENTITLED "VEGETATION AND RESTORATION OF CONTAINMENT DIKE AT CARTERET LANDFILL". DRAWING No. SKW-157298. PREPARED BY AMERICAN CYANAMID COMPANY. DATED 5/3/88 AND REVISED 1/9/89.

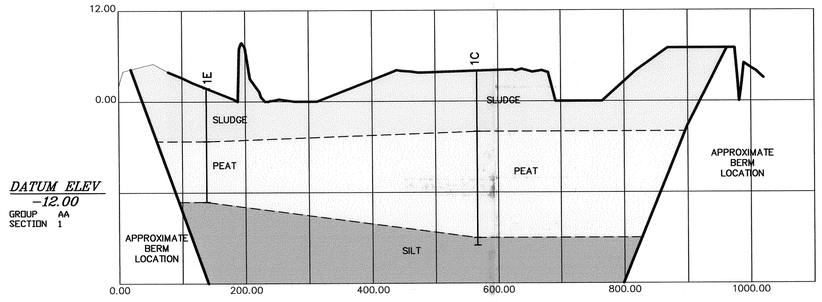
X (XREF)
L: OFF=REF, HIDDEN_AREA
P: STD-PCP/DL
8/28/97 CRAN-62-WDN SYR-54-YCC
440\44055001\44055SM3.DWG

CYTEC INDUSTRIES INC.
CARTERET, NEW JERSEY

IMPOUND CROSS-SECTION LOCATIONS

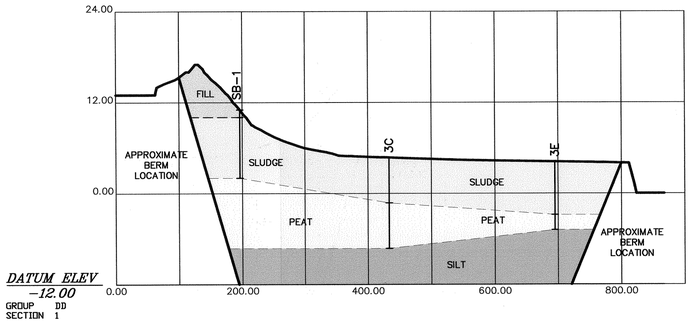
BBL BLASLAND, BOUCK & LEE, INC. *engineers & scientists*

FIGURE 2



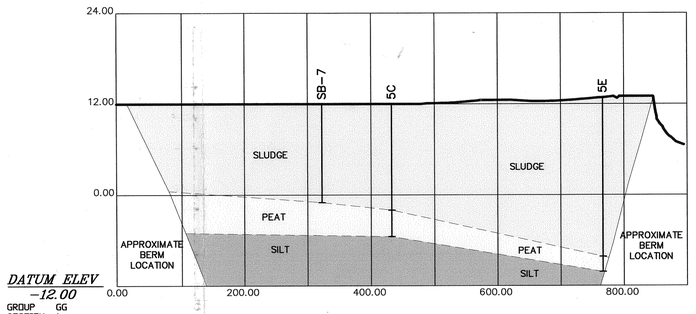
CROSS-SECTION A-A'

VERTICAL SCALE 1" = 10'
HORIZONTAL SCALE 1" = 120'



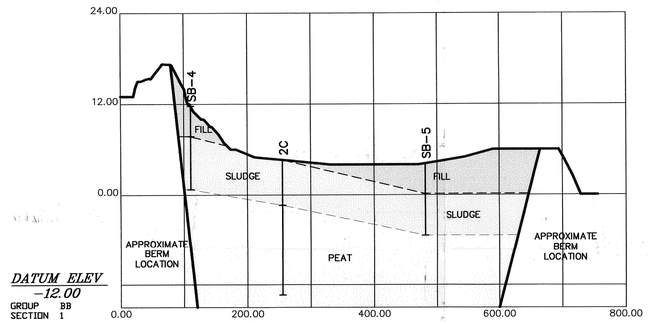
CROSS-SECTION D-D'

VERTICAL SCALE 1" = 10'
HORIZONTAL SCALE 1" = 120'



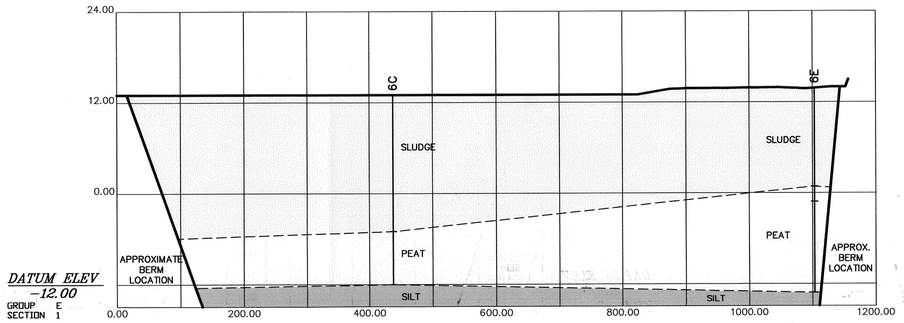
CROSS-SECTION G-G'

VERTICAL SCALE 1" = 10'
HORIZONTAL SCALE 1" = 120'



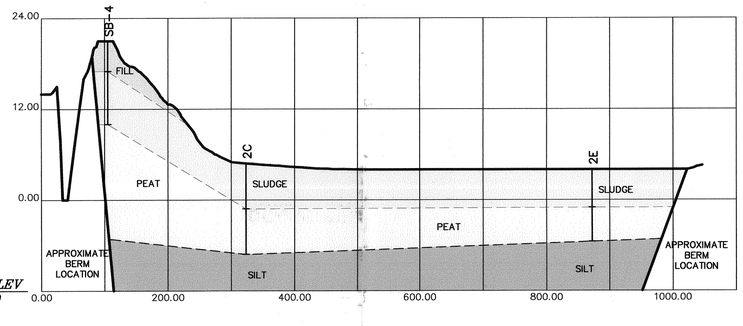
CROSS-SECTION B-B'

VERTICAL SCALE 1" = 10'
HORIZONTAL SCALE 1" = 120'



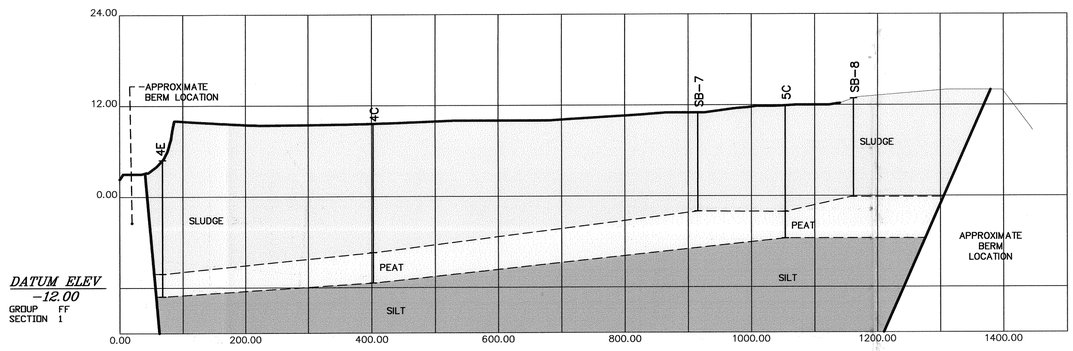
CROSS-SECTION E-E'

VERTICAL SCALE 1" = 10'
HORIZONTAL SCALE 1" = 120'



CROSS-SECTION C-C'

VERTICAL SCALE 1" = 10'
HORIZONTAL SCALE 1" = 120'



CROSS-SECTION F-F'

VERTICAL SCALE 1" = 10'
HORIZONTAL SCALE 1" = 120'

SB-8

LEGEND

BORING LOCATION

FILL (APPROXIMATE LIMITS)

SLUDGE (APPROXIMATE LIMITS)

PEAT (APPROXIMATE LIMITS)

SILT (APPROXIMATE LIMITS)

10' 0 10' 20'

VERTICAL SCALE IN FEET

120' 0 120' 240'

HORIZONTAL SCALE IN FEET

CYTEC INDUSTRIES INC.
CARTERET, NEW JERSEY

IMPOUND CROSS-SECTIONS

BBL BLASLAND, BOUCK & LEE, INC. *engineers & scientists*

FIGURE 3

L: OFF=REF
P: STD-PCP/DL
8/28/97 CRAN-62-WDN SYR-54-YCC
440\44055001\44055XS1.DWG

APPENDIX E

SUBSURFACE SOIL SAMPLE ANALYSIS LABORATORY REPORTS

QC Laboratories

Analytical Report

Printed: 07/25/12 17:48

AL FREE
EASTSTAR ENVIRONMENTAL GROUP, INC.
10632 LITTLE PATUXENT PARKWAY
SUITE 106
COLUMBIA, MD 21044

Regarding:
AL FREE
EASTSTAR ENVIRONMENTAL GROUP, INC.
10632 LITTLE PATUXENT PARKWAY
SUITE 106
COLUMBIA, MD 21044

Account No: SR0117, EASTSTAR ENVIRONMENTAL GROUP, INC. **P.O. No:** **Inv. No:** 1434605
Project No: SR0117, EASTSTAR ENVIRONMENTAL GROUP, INC. **PWSID No:**

Sample Number **Sample Description** **Samp. Date/Time/Temp** **Sampled by**
L4243687-1 RAHWAY ARCH SITE, BS-02-03-05-001 07/11/12 10:12am NA F Customer
Received Date/Time/Temp 07/12/12 08:50pm 39.4 F **Iced (Y/N):** Y

Parameter	Method	Result	RLs	Test Date, Time, Analyst
GENERAL CHEMISTRY				
CYANIDE, TOTAL	EPA 9010/9014	2300 mg/kg DRY	270 mg/kg	07/17/12 12:00PM JG
TOTAL SOLIDS PERCENT	SM 2540G	46.37 %	0.01000 %	07/13/12 02:35PM P P
METALS				
SILVER	EPA 6010C	ND mg/kg DRY	0.170 mg/kg*	07/25/12 10:58AM PG
ALUMINUM	EPA 6010C	7140 mg/kg DRY	4.98 mg/kg*	07/25/12 10:58AM PG
ARSENIC	EPA 6010C	5.33 mg/kg DRY	1.71 mg/kg*	07/25/12 10:58AM PG
BARIUM	EPA 6010C	479 mg/kg DRY	0.0349 mg/kg*	07/25/12 10:58AM PG
BERYLLIUM	EPA 6010C	1.13 mg/kg DRY	0.00582 mg/kg*	07/25/12 10:58AM PG
CALCIUM	EPA 6010C	203000 mg/kg DRY	7.98 mg/kg*	07/25/12 10:58AM PG
CADMIUM	EPA 6010C	4.33 mg/kg DRY	0.0449 mg/kg*	07/25/12 10:58AM PG
COBALT	EPA 6010C	3.69 mg/kg DRY	0.0822 mg/kg*	07/25/12 10:58AM PG
CHROMIUM	EPA 6010C	75.3 mg/kg DRY	0.104 mg/kg*	07/25/12 10:58AM PG
COPPER	EPA 6010C	24.4 mg/kg DRY	0.254 mg/kg*	07/25/12 10:58AM PG
IRON	EPA 6010C	13300 mg/kg DRY	3.32 mg/kg*	07/25/12 10:58AM PG
POTASSIUM	EPA 6010C	1170 mg/kg DRY	25.0 mg/kg*	07/25/12 10:58AM PG
MAGNESIUM	EPA 6010C	4400 mg/kg DRY	0.869 mg/kg*	07/25/12 10:58AM PG
MANGANESE	EPA 6010C	156 mg/kg DRY	0.0830 mg/kg*	07/25/12 10:58AM PG
SODIUM	EPA 6010C	8630 mg/kg DRY	10.1 mg/kg*	07/25/12 10:58AM PG
NICKEL	EPA 6010C	38.4 mg/kg DRY	0.139 mg/kg*	07/25/12 10:58AM PG
LEAD	EPA 6010C	60.2 mg/kg DRY	0.947 mg/kg*	07/25/12 10:58AM PG
ANTIMONY	EPA 6010C	1.79 B mg/kg DRY	1.74 mg/kg*	07/25/12 10:58AM PG
SELENIUM	EPA 6010C	2.46 B mg/kg DRY	0.727 mg/kg*	07/25/12 10:58AM PG
THALLIUM	EPA 6010C	ND mg/kg DRY	2.13 mg/kg*	07/25/12 10:58AM PG
VANADIUM	EPA 6010C	59.1 mg/kg DRY	0.107 mg/kg*	07/25/12 10:58AM PG
ZINC	EPA 6010C	185 mg/kg DRY	0.116 mg/kg*	07/25/12 10:58AM PG
MERCURY	EPA 7471B	ND mg/kg DRY	0.105 mg/kg*	07/18/12 12:09PM RMP

Serial Number: 2281231

Authorized by: Oommen V. Kappil, QA Director

1205 Industrial Blvd., P.O. Box 514, Southampton, PA 18966-0514 Phone: 215-355-3900 Fax: 215-355-7231 www.qclaboratories.com

QC Laboratories

Analytical Report

Account No: SR0117, EASTSTAR ENVIRONMENTAL GROUP, INC. **P.O. No:** **Inv. No:** 1434605
Project No: SR0117, EASTSTAR ENVIRONMENTAL GROUP, INC. **PWSID No:**

Sample Number **Sample Description** **Samp. Date/Time/Temp** **Sampled by**
L4243687-2 BS-02-06-08-002 07/11/12 10:21am NA F Customer
Received Date/Time/Temp 07/12/12 08:50pm 39.4 F **Iced (Y/N):** Y

Parameter	Method	Result	RLs	Test Date, Time, Analyst
GENERAL CHEMISTRY				
CYANIDE, TOTAL	EPA 9010/9014	857 mg/kg DRY	131 mg/kg	07/17/12 12:00PM JG
TOTAL SOLIDS PERCENT	SM 2540G	19.15 %	0.01000 %	07/17/12 10:00PM RCM
METALS				
SILVER	EPA 6010C	ND mg/kg DRY	0.413 mg/kg*	07/25/12 11:05AM PG
ALUMINUM	EPA 6010C	17800 mg/kg DRY	12.1 mg/kg*	07/25/12 11:05AM PG
ARSENIC	EPA 6010C	12.4 mg/kg DRY	4.13 mg/kg*	07/25/12 11:05AM PG
BARIUM	EPA 6010C	351 mg/kg DRY	0.0846 mg/kg*	07/25/12 11:05AM PG
BERYLLIUM	EPA 6010C	0.856 B mg/kg DRY	0.0141 mg/kg*	07/25/12 11:05AM PG
CALCIUM	EPA 6010C	75700 mg/kg DRY	19.3 mg/kg*	07/25/12 11:05AM PG
CADMIUM	EPA 6010C	0.190 B mg/kg DRY	0.109 mg/kg*	07/25/12 11:05AM PG
COBALT	EPA 6010C	13.5 mg/kg DRY	0.199 mg/kg*	07/25/12 11:05AM PG
CHROMIUM	EPA 6010C	67.4 mg/kg DRY	0.251 mg/kg*	07/25/12 11:05AM PG
COPPER	EPA 6010C	150 mg/kg DRY	0.616 mg/kg*	07/25/12 11:05AM PG
IRON	EPA 6010C	23700 mg/kg DRY	8.04 mg/kg*	07/25/12 11:05AM PG
POTASSIUM	EPA 6010C	3840 mg/kg DRY	60.6 mg/kg*	07/25/12 11:05AM PG
MAGNESIUM	EPA 6010C	9090 mg/kg DRY	2.10 mg/kg*	07/25/12 11:05AM PG
MANGANESE	EPA 6010C	254 mg/kg DRY	0.201 mg/kg*	07/25/12 11:05AM PG
SODIUM	EPA 6010C	15900 mg/kg DRY	24.5 mg/kg*	07/25/12 11:05AM PG
NICKEL	EPA 6010C	51.7 mg/kg DRY	0.337 mg/kg*	07/25/12 11:05AM PG
LEAD	EPA 6010C	105 mg/kg DRY	2.29 mg/kg*	07/25/12 11:05AM PG
ANTIMONY	EPA 6010C	ND mg/kg DRY	4.21 mg/kg*	07/25/12 11:05AM PG
SELENIUM	EPA 6010C	2.55 B mg/kg DRY	1.76 mg/kg*	07/25/12 11:05AM PG
THALLIUM	EPA 6010C	ND mg/kg DRY	5.16 mg/kg*	07/25/12 11:05AM PG
VANADIUM	EPA 6010C	54.8 mg/kg DRY	0.258 mg/kg*	07/25/12 11:05AM PG
ZINC	EPA 6010C	194 mg/kg DRY	0.282 mg/kg*	07/25/12 11:05AM PG
MERCURY	EPA 7471B	ND mg/kg DRY	0.254 mg/kg*	07/18/12 12:10PM RMP
GAS CHROMATOGRAPHY MASS SPECTROMETRY; SEMI-VOLATILES				
NAPHTHALENE	EPA 8270C	ND ug/kg DRY	1470 ug/kg*	07/20/12 01:59PM GRM
2-METHYLNAPHTHALENE	EPA 8270C	ND ug/kg DRY	1200 ug/kg*	07/20/12 01:59PM GRM
ACENAPHTHYLENE	EPA 8270C	ND ug/kg DRY	1060 ug/kg*	07/20/12 01:59PM GRM
ACENAPHTHENE	EPA 8270C	ND ug/kg DRY	1300 ug/kg*	07/20/12 01:59PM GRM
FLUORENE	EPA 8270C	ND ug/kg DRY	931 ug/kg*	07/20/12 01:59PM GRM
PHENANTHRENE	EPA 8270C	1030 J ug/kg DRY	1000 ug/kg*	07/20/12 01:59PM GRM
ANTHRACENE	EPA 8270C	ND ug/kg DRY	1410 ug/kg*	07/20/12 01:59PM GRM
FLUORANTHENE	EPA 8270C	ND ug/kg DRY	912 ug/kg*	07/20/12 01:59PM GRM
PYRENE	EPA 8270C	ND ug/kg DRY	1120 ug/kg*	07/20/12 01:59PM GRM
BENZO(A)ANTHRACENE	EPA 8270C	ND ug/kg DRY	1010 ug/kg*	07/20/12 01:59PM GRM
CHRYSENE	EPA 8270C	ND ug/kg DRY	968 ug/kg*	07/20/12 01:59PM GRM
BENZO(B)FLUORANTHENE	EPA 8270C	ND ug/kg DRY	840 ug/kg*	07/20/12 01:59PM GRM
BENZO(K)FLUORANTHENE	EPA 8270C	ND ug/kg DRY	1080 ug/kg*	07/20/12 01:59PM GRM
BENZO(A)PYRENE	EPA 8270C	ND ug/kg DRY	996 ug/kg*	07/20/12 01:59PM GRM
INDENO(1,2,3-CD)PYRENE	EPA 8270C	ND ug/kg DRY	971 ug/kg*	07/20/12 01:59PM GRM
DIBENZ(A,H)ANTHRACENE	EPA 8270C	ND ug/kg DRY	752 ug/kg*	07/20/12 01:59PM GRM
BENZO(G,H,I)PERYLENE	EPA 8270C	ND ug/kg DRY	915 ug/kg*	07/20/12 01:59PM GRM

Serial Number: 2281231

Oommen V. Kappil

Authorized by: Oommen V. Kappil, QA Director

QC Laboratories Analytical Report

Account No: SR0117, EASTSTAR ENVIRONMENTAL GROUP, INC. **P.O. No:** **Inv. No:** 1434605
Project No: SR0117, EASTSTAR ENVIRONMENTAL GROUP, INC. **PWSID No:**

Sample Number **Sample Description** **Samp. Date/Time/Temp** **Sampled by**
L4243687-3 BD-02-07-09-003 07/11/12 02:35pm NA F Customer
Received Date/Time/Temp 07/12/12 08:50pm 39.4 F **Iced (Y/N):** Y

Parameter	Method	Result	RLs	Test Date, Time, Analyst
GENERAL CHEMISTRY				
CYANIDE, TOTAL	EPA 9010/9014	1720 mg/kg DRY	257 mg/kg	07/17/12 12:00PM JG
TOTAL SOLIDS PERCENT	SM 2540G	48.73 %	0.01000 %	07/13/12 02:35PM P P
METALS				
SILVER	EPA 6010C	ND mg/kg DRY	0.162 mg/kg*	07/25/12 11:08AM PG
ALUMINUM	EPA 6010C	3820 mg/kg DRY	4.74 mg/kg*	07/25/12 11:08AM PG
ARSENIC	EPA 6010C	3.49 mg/kg DRY	1.62 mg/kg*	07/25/12 11:08AM PG
BARIUM	EPA 6010C	30.0 mg/kg DRY	0.0332 mg/kg*	07/25/12 11:08AM PG
BERYLLIUM	EPA 6010C	0.347 B mg/kg DRY	0.00554 mg/kg*	07/25/12 11:08AM PG
CALCIUM	EPA 6010C	215000 mg/kg DRY	7.59 mg/kg*	07/25/12 11:08AM PG
CADMIUM	EPA 6010C	ND mg/kg DRY	0.0427 mg/kg*	07/25/12 11:08AM PG
COBALT	EPA 6010C	1.77 B mg/kg DRY	0.0782 mg/kg*	07/25/12 11:08AM PG
CHROMIUM	EPA 6010C	7.22 mg/kg DRY	0.0985 mg/kg*	07/25/12 11:08AM PG
COPPER	EPA 6010C	2.48 mg/kg DRY	0.242 mg/kg*	07/25/12 11:08AM PG
IRON	EPA 6010C	3160 mg/kg DRY	3.16 mg/kg*	07/25/12 11:08AM PG
POTASSIUM	EPA 6010C	371 mg/kg DRY	23.8 mg/kg*	07/25/12 11:08AM PG
MAGNESIUM	EPA 6010C	3820 mg/kg DRY	0.827 mg/kg*	07/25/12 11:08AM PG
MANGANESE	EPA 6010C	55.8 mg/kg DRY	0.0790 mg/kg*	07/25/12 11:08AM PG
SODIUM	EPA 6010C	7020 mg/kg DRY	9.64 mg/kg*	07/25/12 11:08AM PG
NICKEL	EPA 6010C	7.86 mg/kg DRY	0.133 mg/kg*	07/25/12 11:08AM PG
LEAD	EPA 6010C	43.1 mg/kg DRY	0.901 mg/kg*	07/25/12 11:08AM PG
ANTIMONY	EPA 6010C	ND mg/kg DRY	1.66 mg/kg*	07/25/12 11:08AM PG
SELENIUM	EPA 6010C	2.79 B mg/kg DRY	0.692 mg/kg*	07/25/12 11:08AM PG
THALLIUM	EPA 6010C	ND mg/kg DRY	2.03 mg/kg*	07/25/12 11:08AM PG
VANADIUM	EPA 6010C	9.19 mg/kg DRY	0.102 mg/kg*	07/25/12 11:08AM PG
ZINC	EPA 6010C	20.9 mg/kg DRY	0.111 mg/kg*	07/25/12 11:08AM PG
MERCURY	EPA 7471B	ND mg/kg DRY	0.0997 mg/kg*	07/18/12 12:13PM RMP

Sample Number **Sample Description** **Samp. Date/Time/Temp** **Sampled by**
L4243687-4 BD-02-13-14-004 07/12/12 07:55am NA F Customer
Received Date/Time/Temp 07/12/12 08:50pm 39.4 F **Iced (Y/N):** Y

Parameter	Method	Result	RLs	Test Date, Time, Analyst
GENERAL CHEMISTRY				
CYANIDE, TOTAL	EPA 9010/9014	145 mg/kg DRY	20.3 mg/kg	07/17/12 12:00PM JG
TOTAL SOLIDS PERCENT	SM 2540G	24.66 %	0.01000 %	07/17/12 10:00PM RCM
METALS				
SILVER	EPA 6010C	ND mg/kg DRY	0.320 mg/kg*	07/25/12 11:11AM PG
ALUMINUM	EPA 6010C	16900 mg/kg DRY	9.37 mg/kg*	07/25/12 11:11AM PG
ARSENIC	EPA 6010C	14.4 mg/kg DRY	3.21 mg/kg*	07/25/12 11:11AM PG
BARIUM	EPA 6010C	337 mg/kg DRY	0.0657 mg/kg*	07/25/12 11:11AM PG
BERYLLIUM	EPA 6010C	0.961 mg/kg DRY	0.0109 mg/kg*	07/25/12 11:11AM PG
CALCIUM	EPA 6010C	167000 mg/kg DRY	15.0 mg/kg*	07/25/12 11:11AM PG

Serial Number: 2281231

Authorized by: Oommen V. Kappil, QA Director

QC Laboratories

Analytical Report

Account No: SR0117, EASTSTAR ENVIRONMENTAL GROUP, INC. **P.O. No:** **Inv. No:** 1434605
Project No: SR0117, EASTSTAR ENVIRONMENTAL GROUP, INC. **PWSID No:**

Sample Number **Sample Description** **Samp. Date/Time/Temp** **Sampled by**
L4243687-4 BD-02-13-14-004 07/12/12 07:55am NA F Customer
Received Date/Time/Temp 07/12/12 08:50pm 39.4 F **Iced (Y/N):** Y

Parameter	Method	Result	RLs	Test Date, Time, Analyst
METALS continued				
CADMIUM	EPA 6010C	0.333 B mg/kg DRY	0.0843 mg/kg*	07/25/12 11:11AM PG
COBALT	EPA 6010C	12.3 mg/kg DRY	0.155 mg/kg*	07/25/12 11:11AM PG
CHROMIUM	EPA 6010C	47.9 mg/kg DRY	0.195 mg/kg*	07/25/12 11:11AM PG
COPPER	EPA 6010C	21.1 mg/kg DRY	0.479 mg/kg*	07/25/12 11:11AM PG
IRON	EPA 6010C	23800 mg/kg DRY	6.24 mg/kg*	07/25/12 11:11AM PG
POTASSIUM	EPA 6010C	3000 mg/kg DRY	47.0 mg/kg*	07/25/12 11:11AM PG
MAGNESIUM	EPA 6010C	6690 mg/kg DRY	1.63 mg/kg*	07/25/12 11:11AM PG
MANGANESE	EPA 6010C	178 mg/kg DRY	0.156 mg/kg*	07/25/12 11:11AM PG
SODIUM	EPA 6010C	17800 mg/kg DRY	19.1 mg/kg*	07/25/12 11:11AM PG
NICKEL	EPA 6010C	75.0 mg/kg DRY	0.262 mg/kg*	07/25/12 11:11AM PG
LEAD	EPA 6010C	59.2 mg/kg DRY	1.78 mg/kg*	07/25/12 11:11AM PG
ANTIMONY	EPA 6010C	ND mg/kg DRY	3.27 mg/kg*	07/25/12 11:11AM PG
SELENIUM	EPA 6010C	ND mg/kg DRY	1.37 mg/kg*	07/25/12 11:11AM PG
THALLIUM	EPA 6010C	ND mg/kg DRY	4.01 mg/kg*	07/25/12 11:11AM PG
VANADIUM	EPA 6010C	56.0 mg/kg DRY	0.201 mg/kg*	07/25/12 11:11AM PG
ZINC	EPA 6010C	260 mg/kg DRY	0.219 mg/kg*	07/25/12 11:11AM PG
MERCURY	EPA 7471B	0.470 mg/kg DRY	0.197 mg/kg*	07/18/12 12:14PM RMP
GAS CHROMATOGRAPHY MASS SPECTROMETRY; SEMI-VOLATILES				
NAPHTHALENE	EPA 8270C	ND ug/kg DRY	190 ug/kg*	07/20/12 02:24PM GRM
2-METHYLNAPHTHALENE	EPA 8270C	ND ug/kg DRY	155 ug/kg*	07/20/12 02:24PM GRM
ACENAPHTHYLENE	EPA 8270C	ND ug/kg DRY	137 ug/kg*	07/20/12 02:24PM GRM
ACENAPHTHENE	EPA 8270C	ND ug/kg DRY	169 ug/kg*	07/20/12 02:24PM GRM
FLUORENE	EPA 8270C	ND ug/kg DRY	120 ug/kg*	07/20/12 02:24PM GRM
PHENANTHRENE	EPA 8270C	ND ug/kg DRY	130 ug/kg*	07/20/12 02:24PM GRM
ANTHRACENE	EPA 8270C	ND ug/kg DRY	182 ug/kg*	07/20/12 02:24PM GRM
FLUORANTHENE	EPA 8270C	ND ug/kg DRY	118 ug/kg*	07/20/12 02:24PM GRM
PYRENE	EPA 8270C	ND ug/kg DRY	145 ug/kg*	07/20/12 02:24PM GRM
BENZO(A)ANTHRACENE	EPA 8270C	ND ug/kg DRY	131 ug/kg*	07/20/12 02:24PM GRM
CHRYSENE	EPA 8270C	ND ug/kg DRY	125 ug/kg*	07/20/12 02:24PM GRM
BENZO(B)FLUORANTHENE	EPA 8270C	ND ug/kg DRY	109 ug/kg*	07/20/12 02:24PM GRM
BENZO(K)FLUORANTHENE	EPA 8270C	ND ug/kg DRY	139 ug/kg*	07/20/12 02:24PM GRM
BENZO(A)PYRENE	EPA 8270C	ND ug/kg DRY	129 ug/kg*	07/20/12 02:24PM GRM
INDENO(1,2,3-CD)PYRENE	EPA 8270C	ND ug/kg DRY	126 ug/kg*	07/20/12 02:24PM GRM
DIBENZ(A,H)ANTHRACENE	EPA 8270C	ND ug/kg DRY	97.3 ug/kg*	07/20/12 02:24PM GRM
BENZO(G,H,I)PERYLENE	EPA 8270C	ND ug/kg DRY	118 ug/kg*	07/20/12 02:24PM GRM

L4243687-2 :
For the 8270C fraction, a dilution was required to be performed on this sample because of the sample matrix and/or interferences by nontarget compounds. The surrogate recoveries may have been impacted. The RLs have been adjusted to reflect the dilution.

QUALIFIERS: For metals parameters;"B" indicates a value that is > than the MDL but < than the laboratory quantitation limit. For Organics parameters; "B"is when the compound is found in the blank as well as in the sample;"J"indicates a value that is > than the MDL but < than the lowest standard, it is also used to indicate that a compound is tentatively identified in a library search;"E"(estimated) is when a compound exceeded the calibration range;"N" presumptive evidence of a compound; "D" is when a dilution was required.

Serial Number: 2281231

Oommen V. Kappil

Authorized by: Oommen V. Kappil, QA Director

QC Laboratories

Analytical Report

Account No: SR0117, EASTSTAR ENVIRONMENTAL GROUP, INC. **P.O. No:** **Inv. No:** 1434605
Project No: SR0117, EASTSTAR ENVIRONMENTAL GROUP, INC. **PWSID No:**

Notes:
- A result of "ND" indicates the concentration of the analyte tested was either not detected or below the RLs.
- Definitions: ND=not detected; NEG=negative; POS=positive; COL=colonies; RLs=laboratory reporting limits; L/A=laboratory accident; TNTC=too numerous to count
- A result marked with "DRY" indicates that the result was calculated and reported on a dry weight basis.
- All analysis, except field tests are conducted in Southampton, PA unless otherwise identified.
- The reported results relate only to the samples.
- QC NELAP ID's:PA 09-00131,NJ PA166,FL E87954,NY 11223,CT PH-0768,DE PA-018,KY 90228,MD 206,EPA PA00018.Bioassay:PA 09-03574,NJ PA034,FL E87953,KS E10373,SC 89021001.
- QC STATE ID's:Wind Gap,NJ PA001,PA 48-01334;E RUTHERFORD NJ02015;Vineland NJ06005; Reading PA 06-03543.
- All samples are collected as "grab" samples unless otherwise identified.
- MCL= is the EPA recommended "maximum contaminant level" for a parameter. PLs=customer specific permit limits.
- The test results meet all requirements of NELAC unless otherwise specified.
- The report shall not be reproduced except in full without the written consent of the laboratory.

* - The "RLs" represents a reporting/quantitation limit. When an "*" is present in the column identified as the "RLs", it is being reported as a Method Detection Limit (MDL).

Serial Number: 2281231

Authorized by: Oommen V. Kappil, QA Director

QC Laboratories

1205 Industrial Blvd.
Southampton, PA 18966-0514
Phone: 215-355-3900
Fax: 215-355-7231

CHAIN OF CUSTODY

Page 1 of 1

Lab LIMS No: L4243687

LAB USE ONLY:

___ Ascorbic/HCl Vials # ___ HCl Vials
___ $Na_2S_2O_3$
___ Na OH/Zn acetate pH
___ HNO_3 pH
___ H_2SO_4 pH
___ NaOH pH
___ Unpreserved 6-250gl.
___ Hcl pH
___ Temp Control ID# 39.4F 10CUTOBLICED

MATRIX CODES

DW: DRINKING WATER
GW: GROUND WATER
WW: WASTEWATER
SO: SOIL
SL: SLUDGE
OIL: OIL
SOL: NON SOIL SOLID
MI: MISCELLANEOUS
X: OTHER

Client/Acct. No.
Address: 10632 LITTLE PATUXENT PARKWAY 106
City/State/Zip: COLUMBIA MD 21044
Phone/Fax: 410 290 8277
Client Contact: AL FREE

Bill to/Report to: (if different)
RAHWAY ARCH SITE
Sampling Site Address: (if different)
P.O. No.
QC Contact

LAB USE ONLY

PROJECT / FIELD ID	Collection Date	Military Time	GRAB	COMP	Matrix Code	Total	H_2SO_4	HCl	Vials	HNO_3	NaOH	ZnAc	Unpre	BacT	ANALYSIS REQUESTED	Field pH, Temp (C or F), DO, Cl_2, S. Cond. etc.
BS-02-03-05-001	7/11/12	1012			SL	1									TAL METALS CYANIDE	
BS-02-06-08-002	7/11/12	10:21			SO	2									TAL METALS, CYANIDE, PAH	
BD-02-07-09-003	7/11/12	1435			SL	1									TAL METALS, CYANIDE	
BD-02-13-14-004	7/12/12	0755			SO	2									TAL METALS, CYANIDE PAH	

SAMPLED BY: (Name/Company) JOSH CLOUGH EASTSTAR

Verbal/fax data due: ___/___/___
Hardcopy due: ___/___/___

Report Format: ☐ Standard ☐ Forms ☐ Standard + QC ☐ NJ Reduced ☐ Disk

Please call for pricing and availability on rush (<14-21 day) turnaround and on all but standard format.

Field Parameters Analyzed By:
Sig:
Date/Time:

SAMPLE CUSTODY EXCHANGES MUST BE DOCUMENTED BELOW. USE FULL LEGAL SIGNATURE, DATE AND MILITARY TIME (24 HOUR CLOCK, I.E. 8AM IS 0800, 4 PM IS 1600).

RELINQUISHED BY SAMPLER	DATE	TIME	RECEIVED BY	DATE	TIME
1 [signature]	7/12/12	1415	1 [signature]	7/12/12	1415
RELINQUISHED BY 2 [signature]	7/12/12	1630	RECEIVED BY 2 CCQ# 131	7/12/12	1630
RELINQUISHED BY 3 131	7/12/12	2050	RECEIVED BY 3 [signature]	7/12/12	2050
RELINQUISHED BY 4			RECEIVED BY 4		
RELINQUISHED BY 5			RECEIVED BY 5		

DELIVERY METHOD: ☐ QC COURIER ☐ CLIENT ☐ UPS ☐ FEDEX ☐ OTHER

Custody Seal Number: 7/12/12

COMMENTS:

Hazardous: yes / no

[signature]

For example to aid completion, see reverse side.

FINAL REPORT

Laboratory Services Quotation

AL FREE
EASTSTAR ENVIRONMENTAL GROUP, INC
10632 LITTLE PATUXENT PARKWAY
SUITE 106
COLUMBIA, MD 21044

Project RAHWAY ARCH PROPERTY
Quote # Q23184 RMIL
Quote Date 07-06-12
Expiration Date 12-31-12
Phone 410-290-8777 Ext.
Fax 410-290-9055

Deliverables Format: STD

Quantity	Matrix	Analysis	Unit Price	Total Price
45	SOIL	TAL METALS	$164.00	$7,380
32	SOIL	TOTAL CYANIDE	$24.00	$768
23	SOIL	PAH'S	$80.00	$1,840
7	SOIL	EPH	$80.00	$560
4	SOIL	VOC'S	$90.00	$360
4	SOIL	AEBN'S	$220.00	$880
10	MISC	PICK UP FEE	~~$15.00~~ 20.	$150
7	**Analyses**	**Total Quote Amount**	**$673.00**	**$11,938.00**

NOTE: Upgraded deliverables requested after date of sample analysis, subject to surcharge at rate equivalent to two times customary surcharge listed above plus any cost of required re-analysis.

These prices are based on QCL's standard turn around time of two weeks.
Pricing is based on Soil Safe's numbers.

QC Inc:

Ron Milke

CLIENT PROJECT AUTHORIZATION:

(Print Name)

(Signature) **(Date)**

QC LABORATORIES
FIELD SERVICE REQUEST FORM
Jul 09 2012, 12:33 pm

ED FREE
EASTSTAR ENVIRONMENTAL GROUP, INC
10632 LITTLE PATUXENT PARKWAY
SUITE 106
COLUMBIA, MD 21044
Primary Driver: KC

Project No.: NEW ACCOUNT
Phone: ( ) -
Fax: ( ) -
Cell: (240)381-6520

Service Date: 07/11/12 2:00 OR LATER To 07/11/12

PICK-UP, DELIVERY

Delivery Charge:
WE WILL CHARGE THE $20 FOR THE PICK UP.

Day of Week: WED

Sampling Instructions:

Contact: ED FREE

Bottle Prep:

Rush Samples:

Service to be performed at:

SEE INSTRUCTIONS
RAHWAY, NJ

PLEASE DROP OFF 4 LOW LEVEL METHANOL KITS AND PICK UP SOIL SAMPLES. CONTACT ED FREE ON CELL WHEN YOU GET TO SITE. DIRECTIONS: EXIT 12 NJTP...GO TOWARDS INDUSTRIAL HI-WAY...LEFT @ 1ST LITE INTO WAREHOUSE COMPLEX... TAKE 1ST RITE...FOLLOW ROAD TO THE LEFT (NOT INTO KINDER MORGAN)...FOLLOW AROUND BACK OF WAREHOUSE...TURN RITE; BEFORE YOU GET TO AUTO GATES (ROAD IS PAVED, BUT QUICKLY TURNS INTO DIRT/ROCKS)...FOLLOW STRAIGHT BACK. THANKS!

Requested by: Ronald M. Milke Ext:
Entry date: 07/09/12 12:33PM

Call received: 07/09/12 12:26PM

Field Service Request No.: FS176420

QC Laboratories

1205 Industrial Highway, Southampton, PA 18966

EAST RUTHERFORD

Inter-Laboratory Transport Form: ER071212

Coolers for Transport from EAST RUTHERFORD

To be completed by person sealing coolers					Complete Section Upon Delivery	
Cooler ID No.	Custody Seal No.	Date	Time	Initials	Temp °F	Iced Y/N
164	071212-1	7/12/12	1700		32.4	Yes
04	MICRO	7/12/12	1700		39.2	Yes
231	071212-2	7/12/12	1700		38.4	Yes
11	071212-3	7/12/12	1700	DAC	32.7	Yes
B1	071212-4	7/12/12	1700	DAC	39.4	Yes
1126	071212-5	7-12-12	1700	AJ	31.4	Yes
161	7/22/12	7/22/12	1700	RSZ	38.9	Yes
222	7/22/12	7/22/12	1700	RSZ	45.6	Yes
226	071212 8	7-22-12	1800	ACR	49.6	Yes

CM 72212

Please Note the Following:

Individual sample chains of custody must accompany this form.

Once a cooler is sealed, custody seals may not be broken until samples are received at the designated QCL laboratory.

Laboratory use only

Custody Seals intact upon receipt? Y / N Initials: CM

List ID of any seal found broken upon receipt below:

A full legal signature is required. Record all times in military time (24-HR Clock; 4:00 PM=1600)

Relinquished by:	Date:	Time:		Received by:	Date:	Time:
[signature]	7/12/12	1930		RA [signature]	7-12-12	1930
RA [signature]	7-12-12	2050		C. [signature]	71212	2050

QC Laboratories

Analytical Report

ACCREDITED IN ACCORDANCE WITH nelac

Printed: 07/25/12 15:31

AL FREE
EASTSTAR ENVIRONMENTAL GROUP, INC.
10632 LITTLE PATUXENT PARKWAY
SUITE 106
COLUMBIA, MD 21044

Regarding:
AL FREE
EASTSTAR ENVIRONMENTAL GROUP, INC.
10632 LITTLE PATUXENT PARKWAY
SUITE 106
COLUMBIA, MD 21044

Account No: SR0117, EASTSTAR ENVIRONMENTAL GROUP, INC. **P.O. No:** **Inv. No:** 1434479
Project No: SR0117, EASTSTAR ENVIRONMENTAL GROUP, INC. **PWSID No:**

Sample Number **Sample Description** **Samp. Date/Time/Temp** **Sampled by**
L4244054-1 RAHWAY ARCH, BS-01-14-16-005 SOIL 07/13/12 07:00am NA F Customer
Received Date/Time/Temp 07/13/12 05:30pm 41 F **Iced (Y/N):** Y

Parameter	Method	Result	RLs	Test Date, Time, Analyst
GENERAL CHEMISTRY				
CYANIDE, TOTAL	EPA 9010/9014	ND mg/kg DRY	6.13 mg/kg	07/17/12 12:00PM JG
TOTAL SOLIDS PERCENT	SM 2540G	81.55 %	0.01000 %	07/17/12 10:00PM RCM
METALS				
SILVER	EPA 6010C	ND mg/kg DRY	0.0969 mg/kg*	07/24/12 10:54AM PG
ALUMINUM	EPA 6010C	12800 mg/kg DRY	2.83 mg/kg*	07/24/12 10:54AM PG
ARSENIC	EPA 6010C	3.87 mg/kg DRY	0.970 mg/kg*	07/24/12 10:54AM PG
BARIUM	EPA 6010C	141 mg/kg DRY	0.0199 mg/kg*	07/24/12 10:54AM PG
BERYLLIUM	EPA 6010C	0.822 mg/kg DRY	0.00331 mg/kg*	07/24/12 10:54AM PG
CALCIUM	EPA 6010C	15800 mg/kg DRY	4.54 mg/kg*	07/24/12 10:54AM PG
CADMIUM	EPA 6010C	ND mg/kg DRY	0.0255 mg/kg*	07/24/12 10:54AM PG
COBALT	EPA 6010C	13.2 mg/kg DRY	0.0467 mg/kg*	07/24/12 10:54AM PG
CHROMIUM	EPA 6010C	23.4 mg/kg DRY	0.0589 mg/kg*	07/24/12 10:54AM PG
COPPER	EPA 6010C	15.7 mg/kg DRY	0.145 mg/kg*	07/24/12 10:54AM PG
IRON	EPA 6010C	27200 mg/kg DRY	1.89 mg/kg*	07/24/12 10:54AM PG
POTASSIUM	EPA 6010C	3250 mg/kg DRY	14.2 mg/kg*	07/24/12 10:54AM PG
MAGNESIUM	EPA 6010C	7760 mg/kg DRY	0.494 mg/kg*	07/24/12 10:54AM PG
MANGANESE	EPA 6010C	775 mg/kg DRY	0.0472 mg/kg*	07/24/12 10:54AM PG
SODIUM	EPA 6010C	302 mg/kg DRY	5.76 mg/kg*	07/24/12 10:54AM PG
NICKEL	EPA 6010C	26.7 mg/kg DRY	0.0792 mg/kg*	07/24/12 10:54AM PG
LEAD	EPA 6010C	11.4 mg/kg DRY	0.538 mg/kg*	07/24/12 10:54AM PG
ANTIMONY	EPA 6010C	ND mg/kg DRY	1.00 mg/kg*	07/24/12 10:54AM PG
SELENIUM	EPA 6010C	ND mg/kg DRY	0.413 mg/kg*	07/24/12 10:54AM PG
THALLIUM	EPA 6010C	ND mg/kg DRY	1.21 mg/kg*	07/24/12 10:54AM PG
VANADIUM	EPA 6010C	33.1 mg/kg DRY	0.0607 mg/kg*	07/24/12 10:54AM PG
ZINC	EPA 6010C	62.2 mg/kg DRY	0.288 mg/kg*	07/24/12 10:54AM PG
MERCURY	EPA 7471B	0.0681 B mg/kg DRY	0.0596 mg/kg*	07/18/12 12:56PM RMP

Serial Number: 2280850

Authorized by: Oommen V. Kappil, QA Director

1205 Industrial Blvd., P.O. Box 514, Southampton, PA 18966-0514 Phone: 215-355-3900 Fax: 215-355-7231 www.qclaboratories.com

QC Laboratories

Analytical Report

Account No: SR0117, EASTSTAR ENVIRONMENTAL GROUP, INC. **P.O. No:** **Inv. No:** 1434479
Project No: SR0117, EASTSTAR ENVIRONMENTAL GROUP, INC. **PWSID No:**

Sample Number **Sample Description** **Samp. Date/Time/Temp** **Sampled by**
L4244054-2 ID-05-08-10-006 SLUDGE 07/13/12 10:10am NA F Customer
Received Date/Time/Temp 07/13/12 05:30pm 41 F **Iced (Y/N):** Y

Parameter	Method	Result	RLs	Test Date, Time, Analyst
GENERAL CHEMISTRY				
CYANIDE, TOTAL	EPA 9010/9014	123 mg/kg DRY	20.3 mg/kg	07/17/12 12:00PM JG
TOTAL SOLIDS PERCENT	SM 2540G	61.47 %	0.01000 %	07/17/12 01:07PM P P
METALS				
SILVER	EPA 6010C	ND mg/kg DRY	0.129 mg/kg*	07/24/12 10:58AM PG
ALUMINUM	EPA 6010C	14800 mg/kg DRY	3.76 mg/kg*	07/24/12 10:58AM PG
ARSENIC	EPA 6010C	1.90 mg/kg DRY	1.29 mg/kg*	07/24/12 10:58AM PG
BARIUM	EPA 6010C	107 mg/kg DRY	0.0264 mg/kg*	07/24/12 10:58AM PG
BERYLLIUM	EPA 6010C	0.376 mg/kg DRY	0.00439 mg/kg*	07/24/12 10:58AM PG
CALCIUM	EPA 6010C	66000 mg/kg DRY	6.02 mg/kg*	07/24/12 10:58AM PG
CADMIUM	EPA 6010C	0.329 B mg/kg DRY	0.0338 mg/kg*	07/24/12 10:58AM PG
COBALT	EPA 6010C	5.01 mg/kg DRY	0.0620 mg/kg*	07/24/12 10:58AM PG
CHROMIUM	EPA 6010C	19.5 mg/kg DRY	0.0781 mg/kg*	07/24/12 10:58AM PG
COPPER	EPA 6010C	32.0 mg/kg DRY	0.192 mg/kg*	07/24/12 10:58AM PG
IRON	EPA 6010C	18700 mg/kg DRY	2.51 mg/kg*	07/24/12 10:58AM PG
POTASSIUM	EPA 6010C	1270 mg/kg DRY	18.9 mg/kg*	07/24/12 10:58AM PG
MAGNESIUM	EPA 6010C	1740 mg/kg DRY	0.656 mg/kg*	07/24/12 10:58AM PG
MANGANESE	EPA 6010C	123 mg/kg DRY	0.0626 mg/kg*	07/24/12 10:58AM PG
SODIUM	EPA 6010C	2240 mg/kg DRY	7.65 mg/kg*	07/24/12 10:58AM PG
NICKEL	EPA 6010C	13.3 mg/kg DRY	0.105 mg/kg*	07/24/12 10:58AM PG
LEAD	EPA 6010C	56.1 mg/kg DRY	0.714 mg/kg*	07/24/12 10:58AM PG
ANTIMONY	EPA 6010C	ND mg/kg DRY	1.33 mg/kg*	07/24/12 10:58AM PG
SELENIUM	EPA 6010C	ND mg/kg DRY	0.548 mg/kg*	07/24/12 10:58AM PG
THALLIUM	EPA 6010C	ND mg/kg DRY	1.61 mg/kg*	07/24/12 10:58AM PG
VANADIUM	EPA 6010C	28.1 mg/kg DRY	0.0805 mg/kg*	07/24/12 10:58AM PG
ZINC	EPA 6010C	147 mg/kg DRY	0.382 mg/kg*	07/24/12 10:58AM PG
MERCURY	EPA 7471B	0.262 mg/kg DRY	0.0158 mg/kg*	07/18/12 12:58PM RMP

Sample Number **Sample Description** **Samp. Date/Time/Temp** **Sampled by**
L4244054-3 ID-05-12-14-007 SOIL 07/13/12 10:40am NA F Customer
Received Date/Time/Temp 07/13/12 05:30pm 41 F **Iced (Y/N):** Y

Parameter	Method	Result	RLs	Test Date, Time, Analyst
GENERAL CHEMISTRY				
CYANIDE, TOTAL	EPA 9010/9014	286 mg/kg DRY	49.8 mg/kg	07/17/12 12:00PM JG
TOTAL SOLIDS PERCENT	SM 2540G	25.08 %	0.01000 %	07/17/12 10:00PM RCM
METALS				
SILVER	EPA 6010C	ND mg/kg DRY	0.315 mg/kg*	07/24/12 11:02AM PG
ALUMINUM	EPA 6010C	12400 mg/kg DRY	9.21 mg/kg*	07/24/12 11:02AM PG
ARSENIC	EPA 6010C	7.38 mg/kg DRY	3.15 mg/kg*	07/24/12 11:02AM PG
BARIUM	EPA 6010C	714 mg/kg DRY	0.0646 mg/kg*	07/24/12 11:02AM PG
BERYLLIUM	EPA 6010C	0.550 B mg/kg DRY	0.0108 mg/kg*	07/24/12 11:02AM PG
CALCIUM	EPA 6010C	61800 mg/kg DRY	14.8 mg/kg*	07/24/12 11:02AM PG

Serial Number: 2280850

Authorized by: Oommen V. Kappil, QA Director

QC Laboratories

Analytical Report

Account No: SR0117, EASTSTAR ENVIRONMENTAL GROUP, INC. **P.O. No:** **Inv. No:** 1434479
Project No: SR0117, EASTSTAR ENVIRONMENTAL GROUP, INC. **PWSID No:**

Sample Number **Sample Description** **Samp. Date/Time/Temp** **Sampled by**
L4244054-3 ID-05-12-14-007 SOIL 07/13/12 10:40am NA F Customer
Received Date/Time/Temp 07/13/12 05:30pm 41 F **Iced (Y/N):** Y

Parameter	Method	Result	RLs	Test Date, Time, Analyst
METALS continued				
CADMIUM	EPA 6010C	ND mg/kg DRY	0.0829 mg/kg*	07/24/12 11:02AM PG
COBALT	EPA 6010C	5.22 mg/kg DRY	0.152 mg/kg*	07/24/12 11:02AM PG
CHROMIUM	EPA 6010C	56.6 mg/kg DRY	0.191 mg/kg*	07/24/12 11:02AM PG
COPPER	EPA 6010C	319 mg/kg DRY	0.470 mg/kg*	07/24/12 11:02AM PG
IRON	EPA 6010C	11200 mg/kg DRY	6.14 mg/kg*	07/24/12 11:02AM PG
POTASSIUM	EPA 6010C	2760 mg/kg DRY	46.3 mg/kg*	07/24/12 11:02AM PG
MAGNESIUM	EPA 6010C	7140 mg/kg DRY	1.61 mg/kg*	07/24/12 11:02AM PG
MANGANESE	EPA 6010C	76.2 mg/kg DRY	0.154 mg/kg*	07/24/12 11:02AM PG
SODIUM	EPA 6010C	14900 mg/kg DRY	18.7 mg/kg*	07/24/12 11:02AM PG
NICKEL	EPA 6010C	45.9 mg/kg DRY	0.258 mg/kg*	07/24/12 11:02AM PG
LEAD	EPA 6010C	303 mg/kg DRY	1.75 mg/kg*	07/24/12 11:02AM PG
ANTIMONY	EPA 6010C	ND mg/kg DRY	3.26 mg/kg*	07/24/12 11:02AM PG
SELENIUM	EPA 6010C	8.37 mg/kg DRY	1.34 mg/kg*	07/24/12 11:02AM PG
THALLIUM	EPA 6010C	ND mg/kg DRY	3.94 mg/kg*	07/24/12 11:02AM PG
VANADIUM	EPA 6010C	32.7 mg/kg DRY	0.197 mg/kg*	07/24/12 11:02AM PG
ZINC	EPA 6010C	103 mg/kg DRY	0.937 mg/kg*	07/24/12 11:02AM PG
MERCURY	EPA 7471B	ND mg/kg DRY	0.194 mg/kg*	07/18/12 01:00PM RMP
GAS CHROMATOGRAPHY MASS SPECTROMETRY; SEMI-VOLATILES				
NAPHTHALENE	EPA 8270C	ND ug/kg DRY	187 ug/kg*	07/20/12 01:35PM GRM
2-METHYLNAPHTHALENE	EPA 8270C	ND ug/kg DRY	152 ug/kg*	07/20/12 01:35PM GRM
ACENAPHTHYLENE	EPA 8270C	ND ug/kg DRY	135 ug/kg*	07/20/12 01:35PM GRM
ACENAPHTHENE	EPA 8270C	ND ug/kg DRY	166 ug/kg*	07/20/12 01:35PM GRM
FLUORENE	EPA 8270C	ND ug/kg DRY	118 ug/kg*	07/20/12 01:35PM GRM
PHENANTHRENE	EPA 8270C	ND ug/kg DRY	128 ug/kg*	07/20/12 01:35PM GRM
ANTHRACENE	EPA 8270C	ND ug/kg DRY	179 ug/kg*	07/20/12 01:35PM GRM
FLUORANTHENE	EPA 8270C	ND ug/kg DRY	116 ug/kg*	07/20/12 01:35PM GRM
PYRENE	EPA 8270C	ND ug/kg DRY	142 ug/kg*	07/20/12 01:35PM GRM
BENZO(A)ANTHRACENE	EPA 8270C	ND ug/kg DRY	129 ug/kg*	07/20/12 01:35PM GRM
CHRYSENE	EPA 8270C	ND ug/kg DRY	123 ug/kg*	07/20/12 01:35PM GRM
BENZO(B)FLUORANTHENE	EPA 8270C	ND ug/kg DRY	107 ug/kg*	07/20/12 01:35PM GRM
BENZO(K)FLUORANTHENE	EPA 8270C	ND ug/kg DRY	137 ug/kg*	07/20/12 01:35PM GRM
BENZO(A)PYRENE	EPA 8270C	ND ug/kg DRY	127 ug/kg*	07/20/12 01:35PM GRM
INDENO(1,2,3-CD)PYRENE	EPA 8270C	ND ug/kg DRY	124 ug/kg*	07/20/12 01:35PM GRM
DIBENZ(A,H)ANTHRACENE	EPA 8270C	ND ug/kg DRY	95.7 ug/kg*	07/20/12 01:35PM GRM
BENZO(G,H,I)PERYLENE	EPA 8270C	ND ug/kg DRY	116 ug/kg*	07/20/12 01:35PM GRM

L4244054-1 :

QUALIFIERS: For metals parameters;"B" indicates a value that is > than the MDL but < than the laboratory quantitation limit. For Organics parameters; "B"is when the compound is found in the blank as well as in the sample;"J"indicates a value that is > than the MDL but < than the lowest standard, it is also used to indicate that a compound is tentatively identified in a library search;"E"(estimated) is when a compound exceeded the calibration range;"N" presumptive evidence of a compound; "D" is when a dilution was required.

L4244054-2 :

QUALIFIERS: For metals parameters;"B" indicates a value that is > than the MDL but < than the laboratory quantitation limit. For Organics

Serial Number: 2280850

Oommen V. Kappil

Authorized by: Oommen V. Kappil, QA Director

Account No: SR0117, EASTSTAR ENVIRONMENTAL GROUP, INC. **P.O. No:** **Inv. No:** 1434479
Project No: SR0117, EASTSTAR ENVIRONMENTAL GROUP, INC. **PWSID No:**

parameters; "B"is when the compound is found in the blank as well as in the sample;"J"indicates a value that is > than the MDL but < than the lowest standard, it is also used to indicate that a compound is tentatively identified in a library search;"E"(estimated) is when a compound exceeded the calibration range;"N" presumptive evidence of a compound; "D" is when a dilution was required.

L4244054-3 :

QUALIFIERS: For metals parameters;"B" indicates a value that is > than the MDL but < than the laboratory quantitation limit. For Organics parameters; "B"is when the compound is found in the blank as well as in the sample;"J"indicates a value that is > than the MDL but < than the lowest standard, it is also used to indicate that a compound is tentatively identified in a library search;"E"(estimated) is when a compound exceeded the calibration range;"N" presumptive evidence of a compound; "D" is when a dilution was required.

Notes:
- A result of "ND" indicates the concentration of the analyte tested was either not detected or below the RLs.
- Definitions: ND=not detected; NEG=negative; POS=positive; COL=colonies; RLs=laboratory reporting limits; L/A=laboratory accident; TNTC=too numerous to count
- A result marked with "DRY" indicates that the result was calculated and reported on a dry weight basis.
- All analysis, except field tests are conducted in Southampton, PA unless otherwise identified.
- The reported results relate only to the samples.
- QC NELAP ID's:PA 09-00131,NJ PA166,FL E87954,NY 11223,CT PH-0768,DE PA-018,KY 90228,MD 206,EPA PA00018.Bioassay:PA 09-03574,NJ PA034,FL E87953,KS E10373,SC 89021001.
- QC STATE ID's:Wind Gap,NJ PA001,PA 48-01334;E RUTHERFORD NJ02015;Vineland NJ06005; Reading PA 06-03543.
- All samples are collected as "grab" samples unless otherwise identified.
- MCL= is the EPA recommended "maximum contaminant level" for a parameter. PLs=customer specific permit limits.
- The test results meet all requirements of NELAC unless otherwise specified.
- The report shall not be reproduced except in full without the written consent of the laboratory.

* - The "RLs" represents a reporting/quantitation limit. When an "*" is present in the column identified as the "RLs", it is being reported as a Method Detection Limit (MDL).

Serial Number: 2280850

Authorized by: Oommen V. Kappil, QA Director

East Star

QC Laboratories

1205 Industrial Blvd.
Southampton, PA 18966-0514
Phone: 215-355-3900
Fax: 215-355-7231

CHAIN OF CUSTODY

Page 1 of 1

Lab LIMS No: L 4244054

Bill to/Report to: (if different)

Client/Acct. No. EASTSTAR SR 0117

Address 10632 LITTLE PATUXENT PA PARKWAY SUITE 106

Sampling Site Address: (if different)

City/State/Zip COLUMBIA MD 21044

Phone/Fax 410 290 8777

P.O. No.

Client Contact AL FREE

QC Contact

LAB USE ONLY:

- # ___ Ascorbic/HCl Vials # ___ HCl Vials
- # ___ $Na_2S_2O_3$
- # ___ Na OH/Zn acetate pH
- # ___ HNO_3 pH
- # ___ H_2SO_4 pH
- # ___ NaOH pH
- # 7 Unpreserved 4-250g1, 3 split cups
- # ___ Hcl pH
- # ___ Temp control 41 F ID#

iced yes PCD SH

MATRIX CODES

- DW: DRINKING WATER
- GW: GROUND WATER
- WW: WASTEWATER
- SO: SOIL
- SL: SLUDGE
- OIL: OIL
- SOL: NON SOIL SOLID
- MI: MISCELLANEOUS
- X: OTHER

LAB USE ONLY

PROJECT RAHWAY ARCH

FIELD ID	Collection Date	Collection Military Time	GRAB	COMP	Matrix Code	Number of Containers Total	H_2SO_4	HCl	Vials	HNO_3	NaOH	ZnAc	Unpre	BacT	ANALYSIS REQUESTED	Field pH, Temp (C or F), DO, Cl_2, S. Cond. etc.
BS-01-14-16-005	7/13/12	0700	✓		SO	1									TAL METALS + CYANIDE	
ID-05-08-10-006	"	1010	✓		SL	1									TAL METALS + CYANIDE	
ID-05-12-14-007	"	1040	✓		SO	2									TAL METALS + CYANIDE + PAH	

SAMPLED BY: (Name/Company) JOSH CLOUGH EASTSTAR

Verbal/fax data due: ___/___/___

Hardcopy due: ___/___/___

Report Format: ☐ Standard ☐ Forms ☐ Standard + QC ☐ NJ Reduced ☐ Disk

Please call for pricing and availability on rush (<14-21 day) turnaround and on all but standard format.

Field Parameters Analyzed By:

Sig:

Date/Time:

SAMPLE CUSTODY EXCHANGES MUST BE DOCUMENTED BELOW. USE FULL LEGAL SIGNATURE, DATE AND MILITARY TIME (24 HOUR CLOCK, I.E. 8AM IS 0800, 4 PM IS 1600)

RELINQUISHED BY SAMPLER	DATE	TIME	RECEIVED BY	DATE	TIME
1 [signature]	7/13/12	15:19	1 Pat Donahue	7-13-12	15:19
2 Pat Donahue	7/13/12	1730	2 Jara Brunnel	7/13/12	1730
3			3		
4			4		
5			5		

DELIVERY METHOD: ☐ QC COURIER ☐ CLIENT ☐ UPS ☐ FEDEX ☐ OTHER ___

Custody Seal Number

COMMENTS:

DELIVERED TO QC LABS BY CUSTOMER

Hazardous: yes / no

For example to aid completion, see reverse side.

FINAL REPORT

QC Laboratories

Analytical Report

Printed: 07/31/12 18:17

AL FREE
EASTSTAR ENVIRONMENTAL GROUP, INC.
10632 LITTLE PATUXENT PARKWAY
SUITE 106
COLUMBIA, MD 21044

Regarding:
AL FREE
EASTSTAR ENVIRONMENTAL GROUP, INC.
10632 LITTLE PATUXENT PARKWAY
SUITE 106
COLUMBIA, MD 21044

Account No: SR0117, EASTSTAR ENVIRONMENTAL GROUP, INC. **P.O. No:** **Inv. No:** 1436281
Project No: SR0117, EASTSTAR ENVIRONMENTAL GROUP, INC. **PWSID No:**

Sample Number	Sample Description	Samp. Date/Time/Temp	Sampled by
L4246904-1	IS-02-02-04-008 SOIL	07/16/12 12:40pm NA F	Customer

Received Date/Time/Temp 07/17/12 08:20pm 38.9 F **Iced (Y/N):** Y

Parameter	Method	Result	RLs	Test Date, Time, Analyst
GENERAL CHEMISTRY				
CYANIDE, TOTAL	EPA 9010/9014	ND mg/kg DRY	2.96 mg/kg	07/26/12 03:00PM JG
TOTAL SOLIDS PERCENT	SM 2540G	84.51 %	0.01000 %	07/24/12 04:00PM RCM
METALS				
SILVER	EPA 6010C	ND mg/kg DRY	0.0935 mg/kg*	07/26/12 10:48AM PG
ALUMINUM	EPA 6010C	8350 mg/kg DRY	2.73 mg/kg*	07/26/12 10:48AM PG
ARSENIC	EPA 6010C	8.60 mg/kg DRY	0.936 mg/kg*	07/26/12 10:48AM PG
BARIUM	EPA 6010C	90.3 mg/kg DRY	0.0192 mg/kg*	07/26/12 10:48AM PG
BERYLLIUM	EPA 6010C	0.687 mg/kg DRY	0.00319 mg/kg*	07/26/12 10:48AM PG
CALCIUM	EPA 6010C	4180 mg/kg DRY	4.38 mg/kg*	07/26/12 10:48AM PG
CADMIUM	EPA 6010C	ND mg/kg DRY	0.0246 mg/kg*	07/26/12 10:48AM PG
COBALT	EPA 6010C	9.00 mg/kg DRY	0.0451 mg/kg*	07/26/12 10:48AM PG
CHROMIUM	EPA 6010C	28.6 mg/kg DRY	0.0568 mg/kg*	07/26/12 10:48AM PG
COPPER	EPA 6010C	61.3 mg/kg DRY	0.140 mg/kg*	07/26/12 10:48AM PG
IRON	EPA 6010C	20100 mg/kg DRY	1.82 mg/kg*	07/26/12 10:48AM PG
POTASSIUM	EPA 6010C	970 mg/kg DRY	13.7 mg/kg*	07/26/12 10:48AM PG
MAGNESIUM	EPA 6010C	2560 mg/kg DRY	0.477 mg/kg*	07/26/12 10:48AM PG
MANGANESE	EPA 6010C	231 mg/kg DRY	0.0456 mg/kg*	07/26/12 10:48AM PG
SODIUM	EPA 6010C	207 mg/kg DRY	5.56 mg/kg*	07/26/12 10:48AM PG
NICKEL	EPA 6010C	21.2 mg/kg DRY	0.0764 mg/kg*	07/26/12 10:48AM PG
LEAD	EPA 6010C	112 mg/kg DRY	0.519 mg/kg*	07/26/12 10:48AM PG
ANTIMONY	EPA 6010C	1.67 B mg/kg DRY	0.955 mg/kg*	07/26/12 10:48AM PG
SELENIUM	EPA 6010C	ND mg/kg DRY	0.399 mg/kg*	07/26/12 10:48AM PG
THALLIUM	EPA 6010C	ND mg/kg DRY	1.17 mg/kg*	07/26/12 10:48AM PG
VANADIUM	EPA 6010C	36.7 mg/kg DRY	0.0586 mg/kg*	07/26/12 10:48AM PG
ZINC	EPA 6010C	231 mg/kg DRY	0.0639 mg/kg*	07/26/12 10:48AM PG
MERCURY	EPA 7471B	0.317 mg/kg DRY	0.0575 mg/kg*	07/18/12 01:21PM RMP

Serial Number: 2290855

Authorized by: Oommen V. Kappil, QA Director

1205 Industrial Blvd., P.O. Box 514, Southampton, PA 18966-0514 Phone: 215-355-3900 Fax: 215-355-7231 www.qclaboratories.com

Account No: SR0117, EASTSTAR ENVIRONMENTAL GROUP, INC. **P.O. No:** **Inv. No:** 1436281
Project No: SR0117, EASTSTAR ENVIRONMENTAL GROUP, INC. **PWSID No:**

Sample Number **Sample Description** **Samp. Date/Time/Temp** **Sampled by**
L4246904-1 IS-02-02-04-008 SOIL 07/16/12 12:40pm NA F Customer
Received Date/Time/Temp 07/17/12 08:20pm 38.9 F **Iced (Y/N):** Y

Parameter	Method	Result	RLs	Test Date, Time, Analyst
GAS CHROMATOGRAPHY MASS SPECTROMETRY; SEMI-VOLATILES				
NAPHTHALENE	EPA 8270C	ND ug/kg DRY	555 ug/kg*	07/23/12 09:49PM GRM
2-METHYLNAPHTHALENE	EPA 8270C	ND ug/kg DRY	452 ug/kg*	07/23/12 09:49PM GRM
ACENAPHTHYLENE	EPA 8270C	766. J ug/kg DRY	400 ug/kg*	07/23/12 09:49PM GRM
ACENAPHTHENE	EPA 8270C	ND ug/kg DRY	492 ug/kg*	07/23/12 09:49PM GRM
FLUORENE	EPA 8270C	679. J ug/kg DRY	351 ug/kg*	07/23/12 09:49PM GRM
PHENANTHRENE	EPA 8270C	6710 ug/kg DRY	379 ug/kg*	07/23/12 09:49PM GRM
ANTHRACENE	EPA 8270C	1030 J ug/kg DRY	531 ug/kg*	07/23/12 09:49PM GRM
FLUORANTHENE	EPA 8270C	9400 ug/kg DRY	344 ug/kg*	07/23/12 09:49PM GRM
PYRENE	EPA 8270C	8670 ug/kg DRY	422 ug/kg*	07/23/12 09:49PM GRM
BENZO(A)ANTHRACENE	EPA 8270C	4170 ug/kg DRY	382 ug/kg*	07/23/12 09:49PM GRM
CHRYSENE	EPA 8270C	4620 ug/kg DRY	366 ug/kg*	07/23/12 09:49PM GRM
BENZO(B)FLUORANTHENE	EPA 8270C	4690 ug/kg DRY	317 ug/kg*	07/23/12 09:49PM GRM
BENZO(K)FLUORANTHENE	EPA 8270C	4010 ug/kg DRY	407 ug/kg*	07/23/12 09:49PM GRM
BENZO(A)PYRENE	EPA 8270C	4870 ug/kg DRY	376 ug/kg*	07/23/12 09:49PM GRM
INDENO(1,2,3-CD)PYRENE	EPA 8270C	2920 J ug/kg DRY	367 ug/kg*	07/23/12 09:49PM GRM
DIBENZ(A,H)ANTHRACENE	EPA 8270C	1340 J ug/kg DRY	284 ug/kg*	07/23/12 09:49PM GRM
BENZO(G,H,I)PERYLENE	EPA 8270C	3110 ug/kg DRY	346 ug/kg*	07/23/12 09:49PM GRM

Sample Number **Sample Description** **Samp. Date/Time/Temp** **Sampled by**
L4246904-2 BS-07R-02-04-009 SOIL 07/16/12 01:10pm NA F Customer
Received Date/Time/Temp 07/17/12 08:20pm 38.9 F **Iced (Y/N):** Y

Parameter	Method	Result	RLs	Test Date, Time, Analyst
GENERAL CHEMISTRY				
CYANIDE, TOTAL	EPA 9010/9014	ND mg/kg DRY	3.06 mg/kg	07/26/12 03:00PM JG
TOTAL SOLIDS PERCENT	SM 2540G	81.68 %	0.01000 %	07/24/12 04:00PM RCM
METALS				
SILVER	EPA 6010C	ND mg/kg DRY	0.0967 mg/kg*	07/26/12 10:53AM PG
ALUMINUM	EPA 6010C	7140 mg/kg DRY	2.83 mg/kg*	07/26/12 10:53AM PG
ARSENIC	EPA 6010C	2.82 mg/kg DRY	0.968 mg/kg*	07/26/12 10:53AM PG
BARIUM	EPA 6010C	97.2 mg/kg DRY	0.0198 mg/kg*	07/26/12 10:53AM PG
BERYLLIUM	EPA 6010C	0.329 mg/kg DRY	0.00331 mg/kg*	07/26/12 10:53AM PG
CALCIUM	EPA 6010C	14200 mg/kg DRY	4.53 mg/kg*	07/26/12 10:53AM PG
CADMIUM	EPA 6010C	ND mg/kg DRY	0.0255 mg/kg*	07/26/12 10:53AM PG
COBALT	EPA 6010C	7.91 mg/kg DRY	0.0466 mg/kg*	07/26/12 10:53AM PG
CHROMIUM	EPA 6010C	16.5 mg/kg DRY	0.0588 mg/kg*	07/26/12 10:53AM PG
COPPER	EPA 6010C	42.2 mg/kg DRY	0.144 mg/kg*	07/26/12 10:53AM PG
IRON	EPA 6010C	14100 mg/kg DRY	1.89 mg/kg*	07/26/12 10:53AM PG
POTASSIUM	EPA 6010C	1860 mg/kg DRY	14.2 mg/kg*	07/26/12 10:53AM PG
MAGNESIUM	EPA 6010C	4270 mg/kg DRY	0.493 mg/kg*	07/26/12 10:53AM PG
MANGANESE	EPA 6010C	264 mg/kg DRY	0.0471 mg/kg*	07/26/12 10:53AM PG
SODIUM	EPA 6010C	433 mg/kg DRY	5.75 mg/kg*	07/26/12 10:53AM PG
NICKEL	EPA 6010C	14.2 mg/kg DRY	0.0791 mg/kg*	07/26/12 10:53AM PG
LEAD	EPA 6010C	148 mg/kg DRY	0.537 mg/kg*	07/26/12 10:53AM PG

Serial Number: 2290855

Authorized by: Oommen V. Kappil, QA Director

Account No: SR0117, EASTSTAR ENVIRONMENTAL GROUP, INC. **P.O. No:** **Inv. No:** 1436281
Project No: SR0117, EASTSTAR ENVIRONMENTAL GROUP, INC. **PWSID No:**

Sample Number **Sample Description** **Samp. Date/Time/Temp** **Sampled by**
L4246904-2 BS-07R-02-04-009 SOIL 07/16/12 01:10pm NA F Customer
Received Date/Time/Temp 07/17/12 08:20pm 38.9 F **Iced (Y/N):** Y

Parameter	Method	Result	RLs	Test Date, Time, Analyst
METALS continued				
ANTIMONY	EPA 6010C	ND mg/kg DRY	0.988 mg/kg*	07/26/12 10:53AM PG
SELENIUM	EPA 6010C	ND mg/kg DRY	0.413 mg/kg*	07/26/12 10:53AM PG
THALLIUM	EPA 6010C	ND mg/kg DRY	1.21 mg/kg*	07/26/12 10:53AM PG
VANADIUM	EPA 6010C	31.8 mg/kg DRY	0.0606 mg/kg*	07/26/12 10:53AM PG
ZINC	EPA 6010C	124 mg/kg DRY	0.0661 mg/kg*	07/26/12 10:53AM PG
MERCURY	EPA 7471B	0.469 mg/kg DRY	0.0119 mg/kg*	07/18/12 01:23PM RMP
GAS CHROMATOGRAPHY MASS SPECTROMETRY; SEMI-VOLATILES				
N-NITROSODIMETHYLAMINE	EPA 8270C	ND ug/kg DRY	601 ug/kg*	07/23/12 11:04PM GRM
BIS(2-CHLOROETHYL)ETHER	EPA 8270C	ND ug/kg DRY	604 ug/kg*	07/23/12 11:04PM GRM
ANILINE	EPA 8270C	ND ug/kg DRY	447 ug/kg*	07/23/12 11:04PM GRM
PHENOL	EPA 8270C	ND ug/kg DRY	393 ug/kg*	07/23/12 11:04PM GRM
2-CHLOROPHENOL	EPA 8270C	ND ug/kg DRY	427 ug/kg*	07/23/12 11:04PM GRM
1,3-DICHLOROBENZENE	EPA 8270C	ND ug/kg DRY	634 ug/kg*	07/23/12 11:04PM GRM
1,4-DICHLOROBENZENE	EPA 8270C	ND ug/kg DRY	666 ug/kg*	07/23/12 11:04PM GRM
1,2-DICHLOROBENZENE	EPA 8270C	ND ug/kg DRY	645 ug/kg*	07/23/12 11:04PM GRM
BENZYL ALCOHOL	EPA 8270C	ND ug/kg DRY	400 ug/kg*	07/23/12 11:04PM GRM
BIS(2-CHLOROISOPROPYL)ETHER	EPA 8270C	ND ug/kg DRY	632 ug/kg*	07/23/12 11:04PM GRM
2-METHYLPHENOL	EPA 8270C	ND ug/kg DRY	427 ug/kg*	07/23/12 11:04PM GRM
HEXACHLOROETHANE	EPA 8270C	ND ug/kg DRY	469 ug/kg*	07/23/12 11:04PM GRM
N-NITROSO-DI-N-PROPYLAMINE	EPA 8270C	ND ug/kg DRY	342 ug/kg*	07/23/12 11:04PM GRM
3&4-METHYLPHENOL	EPA 8270C	ND ug/kg DRY	649 ug/kg*	07/23/12 11:04PM GRM
NITROBENZENE	EPA 8270C	ND ug/kg DRY	613 ug/kg*	07/23/12 11:04PM GRM
ISOPHORONE	EPA 8270C	ND ug/kg DRY	335 ug/kg*	07/23/12 11:04PM GRM
2-NITROPHENOL	EPA 8270C	ND ug/kg DRY	426 ug/kg*	07/23/12 11:04PM GRM
2,4-DIMETHYLPHENOL	EPA 8270C	ND ug/kg DRY	349 ug/kg*	07/23/12 11:04PM GRM
BIS(2-CHLOROETHOXY)METHANE	EPA 8270C	ND ug/kg DRY	435 ug/kg*	07/23/12 11:04PM GRM
2,4-DICHLOROPHENOL	EPA 8270C	ND ug/kg DRY	739 ug/kg*	07/23/12 11:04PM GRM
BENZOIC ACID	EPA 8270C	ND ug/kg DRY	8020 ug/kg*	07/23/12 11:04PM GRM
1,2,4-TRICHLOROBENZENE	EPA 8270C	ND ug/kg DRY	600 ug/kg*	07/23/12 11:04PM GRM
NAPHTHALENE	EPA 8270C	ND ug/kg DRY	574 ug/kg*	07/23/12 11:04PM GRM
4-CHLOROANILINE	EPA 8270C	ND ug/kg DRY	370 ug/kg*	07/23/12 11:04PM GRM
HEXACHLOROBUTADIENE	EPA 8270C	ND ug/kg DRY	622 ug/kg*	07/23/12 11:04PM GRM
4-CHLORO-3-METHYLPHENOL	EPA 8270C	ND ug/kg DRY	351 ug/kg*	07/23/12 11:04PM GRM
2-METHYLNAPHTHALENE	EPA 8270C	ND ug/kg DRY	468 ug/kg*	07/23/12 11:04PM GRM
HEXACHLOROCYCLOPENTADIENE	EPA 8270C	ND ug/kg DRY	346 ug/kg*	07/23/12 11:04PM GRM
2,4,6-TRICHLOROPHENOL	EPA 8270C	ND ug/kg DRY	371 ug/kg*	07/23/12 11:04PM GRM
2,4,5-TRICHLOROPHENOL	EPA 8270C	ND ug/kg DRY	378 ug/kg*	07/23/12 11:04PM GRM
2-CHLORONAPHTHALENE	EPA 8270C	ND ug/kg DRY	387 ug/kg*	07/23/12 11:04PM GRM
2-NITROANILINE	EPA 8270C	ND ug/kg DRY	427 ug/kg*	07/23/12 11:04PM GRM
ACENAPHTHYLENE	EPA 8270C	ND ug/kg DRY	414 ug/kg*	07/23/12 11:04PM GRM
DIMETHYLPHTHALATE	EPA 8270C	ND ug/kg DRY	1050 ug/kg*	07/23/12 11:04PM GRM
2,6-DINITROTOLUENE	EPA 8270C	ND ug/kg DRY	469 ug/kg*	07/23/12 11:04PM GRM
ACENAPHTHENE	EPA 8270C	ND ug/kg DRY	509 ug/kg*	07/23/12 11:04PM GRM
3-NITROANILINE	EPA 8270C	ND ug/kg DRY	480 ug/kg*	07/23/12 11:04PM GRM
2,4-DINITROPHENOL	EPA 8270C	ND ug/kg DRY	1680 ug/kg*	07/23/12 11:04PM GRM
DIBENZOFURAN	EPA 8270C	ND ug/kg DRY	487 ug/kg*	07/23/12 11:04PM GRM
2,4-DINITROTOLUENE	EPA 8270C	ND ug/kg DRY	484 ug/kg*	07/23/12 11:04PM GRM

Serial Number: 2290855

Authorized by: Oommen V. Kappil, QA Director

Account No: SR0117, EASTSTAR ENVIRONMENTAL GROUP, INC. **P.O. No:** **Inv. No:** 1436281
Project No: SR0117, EASTSTAR ENVIRONMENTAL GROUP, INC. **PWSID No:**

Sample Number **Sample Description** **Samp. Date/Time/Temp** **Sampled by**
L4246904-2 BS-07R-02-04-009 SOIL 07/16/12 01:10pm NA F Customer
Received Date/Time/Temp 07/17/12 08:20pm 38.9 F **Iced (Y/N):** Y

Parameter	Method	Result	RLs	Test Date, Time, Analyst
GAS CHROMATOGRAPHY MASS SPECTROMETRY; SEMI-VOLATILES continued				
4-NITROPHENOL	EPA 8270C	ND ug/kg DRY	409 ug/kg*	07/23/12 11:04PM GRM
FLUORENE	EPA 8270C	ND ug/kg DRY	364 ug/kg*	07/23/12 11:04PM GRM
4-CHLOROPHENYL-PHENYLETHER	EPA 8270C	ND ug/kg DRY	432 ug/kg*	07/23/12 11:04PM GRM
DIETHYLPHTHALATE	EPA 8270C	ND ug/kg DRY	409 ug/kg*	07/23/12 11:04PM GRM
4-NITROANILINE	EPA 8270C	ND ug/kg DRY	384 ug/kg*	07/23/12 11:04PM GRM
4,6-DINITRO-2-METHYLPHENOL	EPA 8270C	ND ug/kg DRY	340 ug/kg*	07/23/12 11:04PM GRM
N-NITROSODIPHENYLAMINE	EPA 8270C	ND ug/kg DRY	692 ug/kg*	07/23/12 11:04PM GRM
1,2-DIPHENYLHYDRAZINE	EPA 8270C	ND ug/kg DRY	373 ug/kg*	07/23/12 11:04PM GRM
4-BROMOPHENYL-PHENYLETHER	EPA 8270C	ND ug/kg DRY	370 ug/kg*	07/23/12 11:04PM GRM
HEXACHLOROBENZENE	EPA 8270C	ND ug/kg DRY	453 ug/kg*	07/23/12 11:04PM GRM
PENTACHLOROPHENOL	EPA 8270C	ND ug/kg DRY	547 ug/kg*	07/23/12 11:04PM GRM
PHENANTHRENE	EPA 8270C	1210 J ug/kg DRY	392 ug/kg*	07/23/12 11:04PM GRM
ANTHRACENE	EPA 8270C	ND ug/kg DRY	550 ug/kg*	07/23/12 11:04PM GRM
CARBAZOLE	EPA 8270C	ND ug/kg DRY	431 ug/kg*	07/23/12 11:04PM GRM
DI-N-BUTYLPHTHALATE	EPA 8270C	ND ug/kg DRY	376 ug/kg*	07/23/12 11:04PM GRM
FLUORANTHENE	EPA 8270C	1520 J ug/kg DRY	356 ug/kg*	07/23/12 11:04PM GRM
BENZIDINE	EPA 8270C	ND ug/kg DRY	4580 ug/kg*	07/23/12 11:04PM GRM
PYRENE	EPA 8270C	1630 J ug/kg DRY	437 ug/kg*	07/23/12 11:04PM GRM
BUTYLBENZYLPHTHALATE	EPA 8270C	ND ug/kg DRY	405 ug/kg*	07/23/12 11:04PM GRM
3,3'-DICHLOROBENZIDINE	EPA 8270C	ND ug/kg DRY	466 ug/kg*	07/23/12 11:04PM GRM
BENZO(A)ANTHRACENE	EPA 8270C	771. J ug/kg DRY	395 ug/kg*	07/23/12 11:04PM GRM
CHRYSENE	EPA 8270C	893. J ug/kg DRY	378 ug/kg*	07/23/12 11:04PM GRM
BIS(2-ETHYLHEXYL)PHTHALATE	EPA 8270C	408. J ug/kg DRY	335 ug/kg*	07/23/12 11:04PM GRM
DI-N-OCTYLPHTHALATE	EPA 8270C	ND ug/kg DRY	322 ug/kg*	07/23/12 11:04PM GRM
BENZO(B)FLUORANTHENE	EPA 8270C	762. J ug/kg DRY	328 ug/kg*	07/23/12 11:04PM GRM
BENZO(K)FLUORANTHENE	EPA 8270C	583. J ug/kg DRY	421 ug/kg*	07/23/12 11:04PM GRM
BENZO(A)PYRENE	EPA 8270C	724. J ug/kg DRY	389 ug/kg*	07/23/12 11:04PM GRM
INDENO(1,2,3-CD)PYRENE	EPA 8270C	397. J ug/kg DRY	380 ug/kg*	07/23/12 11:04PM GRM
DIBENZ(A,H)ANTHRACENE	EPA 8270C	ND ug/kg DRY	294 ug/kg*	07/23/12 11:04PM GRM
BENZO(G,H,I)PERYLENE	EPA 8270C	503. J ug/kg DRY	357 ug/kg*	07/23/12 11:04PM GRM
GAS CHROMATOGRAPHY MASS SPECTROMETRY; VOLATILES				
DICHLORODIFLUOROMETHANE	EPA 8260B	ND ug/kg DRY	1.92 ug/kg*	07/24/12 02:32PM MHA
CHLOROMETHANE	EPA 8260B	ND ug/kg DRY	2.52 ug/kg*	07/24/12 02:32PM MHA
VINYL CHLORIDE	EPA 8260B	ND ug/kg DRY	2.47 ug/kg*	07/24/12 02:32PM MHA
BROMOMETHANE	EPA 8260B	ND ug/kg DRY	2.71 ug/kg*	07/24/12 02:32PM MHA
CHLOROETHANE	EPA 8260B	ND ug/kg DRY	1.68 ug/kg*	07/24/12 02:32PM MHA
TRICHLOROFLUOROMETHANE	EPA 8260B	ND ug/kg DRY	2.32 ug/kg*	07/24/12 02:32PM MHA
1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	EPA 8260B	ND ug/kg DRY	2.45 ug/kg*	07/24/12 02:32PM MHA
METHYL ACETATE	EPA 8260B	ND ug/kg DRY	2.28 ug/kg*	07/24/12 02:32PM MHA
1,1-DICHLOROETHENE	EPA 8260B	ND ug/kg DRY	2.39 ug/kg*	07/24/12 02:32PM MHA
ACETONE	EPA 8260B	33.3 B ug/kg DRY	5.37 ug/kg*	07/24/12 02:32PM MHA
CARBON DISULFIDE	EPA 8260B	10.1 J ug/kg DRY	4.12 ug/kg*	07/24/12 02:32PM MHA
METHYLENE CHLORIDE	EPA 8260B	ND ug/kg DRY	3.22 ug/kg*	07/24/12 02:32PM MHA
TRANS-1,2-DICHLOROETHENE	EPA 8260B	ND ug/kg DRY	2.13 ug/kg*	07/24/12 02:32PM MHA
METHYL TERTIARY BUTYL ETHER	EPA 8260B	ND ug/kg DRY	1.83 ug/kg*	07/24/12 02:32PM MHA
1,1-DICHLOROETHANE	EPA 8260B	ND ug/kg DRY	2.24 ug/kg*	07/24/12 02:32PM MHA

Oommen V Kappil
Authorized by: Oommen V. Kappil, QA Director

Account No: SR0117, EASTSTAR ENVIRONMENTAL GROUP, INC. **P.O. No:** **Inv. No:** 1436281
Project No: SR0117, EASTSTAR ENVIRONMENTAL GROUP, INC. **PWSID No:**

Sample Number **Sample Description** **Samp. Date/Time/Temp** **Sampled by**
L4246904-2 BS-07R-02-04-009 SOIL 07/16/12 01:10pm NA F Customer
Received Date/Time/Temp 07/17/12 08:20pm 38.9 F **Iced (Y/N):** Y

Parameter	Method	Result	RLs	Test Date, Time, Analyst
GAS CHROMATOGRAPHY MASS SPECTROMETRY; VOLATILES continued				
2-BUTANONE	EPA 8260B	5.55 J ug/kg DRY	4.01 ug/kg*	07/24/12 02:32PM MHA
BROMOCHLOROMETHANE	EPA 8260B	ND ug/kg DRY	2.09 ug/kg*	07/24/12 02:32PM MHA
CIS-1,2-DICHLOROETHENE	EPA 8260B	ND ug/kg DRY	1.62 ug/kg*	07/24/12 02:32PM MHA
CHLOROFORM	EPA 8260B	ND ug/kg DRY	1.81 ug/kg*	07/24/12 02:32PM MHA
1,1,1-TRICHLOROETHANE	EPA 8260B	ND ug/kg DRY	2.15 ug/kg*	07/24/12 02:32PM MHA
CYCLOHEXANE	EPA 8260B	ND ug/kg DRY	2.03 ug/kg*	07/24/12 02:32PM MHA
CARBON TETRACHLORIDE	EPA 8260B	ND ug/kg DRY	2.09 ug/kg*	07/24/12 02:32PM MHA
BENZENE	EPA 8260B	ND ug/kg DRY	2.00 ug/kg*	07/24/12 02:32PM MHA
1,2-DICHLOROETHANE	EPA 8260B	ND ug/kg DRY	1.79 ug/kg*	07/24/12 02:32PM MHA
TRICHLOROETHENE	EPA 8260B	ND ug/kg DRY	2.67 ug/kg*	07/24/12 02:32PM MHA
METHYLCYCLOHEXANE	EPA 8260B	ND ug/kg DRY	2.54 ug/kg*	07/24/12 02:32PM MHA
1,2-DICHLOROPROPANE	EPA 8260B	ND ug/kg DRY	1.98 ug/kg*	07/24/12 02:32PM MHA
BROMODICHLOROMETHANE	EPA 8260B	ND ug/kg DRY	2.05 ug/kg*	07/24/12 02:32PM MHA
4-METHYL-2-PENTANONE	EPA 8260B	ND ug/kg DRY	3.60 ug/kg*	07/24/12 02:32PM MHA
CIS-1,3-DICHLOROPROPENE	EPA 8260B	ND ug/kg DRY	1.73 ug/kg*	07/24/12 02:32PM MHA
TOLUENE	EPA 8260B	2.73 J ug/kg DRY	2.45 ug/kg*	07/24/12 02:32PM MHA
TRANS-1,3-DICHLOROPROPENE	EPA 8260B	ND ug/kg DRY	1.86 ug/kg*	07/24/12 02:32PM MHA
1,1,2-TRICHLOROETHANE	EPA 8260B	ND ug/kg DRY	2.11 ug/kg*	07/24/12 02:32PM MHA
2-HEXANONE	EPA 8260B	ND ug/kg DRY	4.18 ug/kg*	07/24/12 02:32PM MHA
TETRACHLOROETHENE	EPA 8260B	ND ug/kg DRY	2.32 ug/kg*	07/24/12 02:32PM MHA
DIBROMOCHLOROMETHANE	EPA 8260B	ND ug/kg DRY	1.58 ug/kg*	07/24/12 02:32PM MHA
1,2-DIBROMOETHANE	EPA 8260B	ND ug/kg DRY	1.88 ug/kg*	07/24/12 02:32PM MHA
CHLOROBENZENE	EPA 8260B	27.3 ug/kg DRY	2.13 ug/kg*	07/24/12 02:32PM MHA
ETHYL BENZENE	EPA 8260B	ND ug/kg DRY	2.43 ug/kg*	07/24/12 02:32PM MHA
M&P-XYLENES	EPA 8260B	ND ug/kg DRY	4.93 ug/kg*	07/24/12 02:32PM MHA
O-XYLENE	EPA 8260B	3.33 J ug/kg DRY	1.98 ug/kg*	07/24/12 02:32PM MHA
STYRENE	EPA 8260B	ND ug/kg DRY	1.90 ug/kg*	07/24/12 02:32PM MHA
BROMOFORM	EPA 8260B	ND ug/kg DRY	1.54 ug/kg*	07/24/12 02:32PM MHA
1,1,2,2-TETRACHLOROETHANE	EPA 8260B	ND ug/kg DRY	1.96 ug/kg*	07/24/12 02:32PM MHA
ISOPROPYLBENZENE	EPA 8260B	ND ug/kg DRY	2.32 ug/kg*	07/24/12 02:32PM MHA
1,3-DICHLOROBENZENE	EPA 8260B	4.59 J ug/kg DRY	2.35 ug/kg*	07/24/12 02:32PM MHA
1,4-DICHLOROBENZENE	EPA 8260B	ND ug/kg DRY	2.50 ug/kg*	07/24/12 02:32PM MHA
1,2-DICHLOROBENZENE	EPA 8260B	ND ug/kg DRY	2.09 ug/kg*	07/24/12 02:32PM MHA
1,2-DIBROMO-3-CHLOROPROPANE	EPA 8260B	ND ug/kg DRY	2.28 ug/kg*	07/24/12 02:32PM MHA
1,2,4-TRICHLOROBENZENE	EPA 8260B	ND ug/kg DRY	2.84 ug/kg*	07/24/12 02:32PM MHA
1,2,3-TRICHLOROBENZENE	EPA 8260B	ND ug/kg DRY	3.67 ug/kg*	07/24/12 02:32PM MHA
1,4-DIOXANE	EPA 8260B	ND ug/kg DRY	91.5 ug/kg*	07/24/12 02:32PM MHA
GAS CHROMATOGRAPHY				
TOTAL PETROLEUM HYDROCARBONS	NJOQA QAM-025	19.5 J mg/kg DRY	7.17 mg/kg*	07/25/12 01:43PM AJG

Serial Number: 2290855

Authorized by: Oommen V. Kappil, QA Director

QC Laboratories

Analytical Report

Account No: SR0117, EASTSTAR ENVIRONMENTAL GROUP, INC. **P.O. No:** **Inv. No:** 1436281
Project No: SR0117, EASTSTAR ENVIRONMENTAL GROUP, INC. **PWSID No:**

Sample Number **Sample Description** **Samp. Date/Time/Temp** **Sampled by**
L4246904-3 BS-07R-14-18-010 SOIL 07/16/12 03:05pm NA F Customer
Received Date/Time/Temp 07/17/12 08:20pm 38.9 F **Iced (Y/N):** Y

Parameter	Method	Result	RLs	Test Date, Time, Analyst
GENERAL CHEMISTRY				
CYANIDE, TOTAL	EPA 9010/9014	1060 mg/kg DRY	122 mg/kg	07/26/12 03:00PM JG
TOTAL SOLIDS PERCENT	SM 2540G	20.46 %	0.01000 %	07/24/12 04:00PM RCM
METALS				
SILVER	EPA 6010C	ND mg/kg DRY	0.386 mg/kg*	07/26/12 10:57AM PG
ALUMINUM	EPA 6010C	10400 mg/kg DRY	11.3 mg/kg*	07/26/12 10:57AM PG
ARSENIC	EPA 6010C	ND mg/kg DRY	3.87 mg/kg*	07/26/12 10:57AM PG
BARIUM	EPA 6010C	34.7 mg/kg DRY	0.0792 mg/kg*	07/26/12 10:57AM PG
BERYLLIUM	EPA 6010C	0.582 B mg/kg DRY	0.0132 mg/kg*	07/26/12 10:57AM PG
CALCIUM	EPA 6010C	10400 mg/kg DRY	18.1 mg/kg*	07/26/12 10:57AM PG
CADMIUM	EPA 6010C	0.151 B mg/kg DRY	0.102 mg/kg*	07/26/12 10:57AM PG
COBALT	EPA 6010C	5.33 mg/kg DRY	0.186 mg/kg*	07/26/12 10:57AM PG
CHROMIUM	EPA 6010C	17.8 mg/kg DRY	0.235 mg/kg*	07/26/12 10:57AM PG
COPPER	EPA 6010C	10.9 mg/kg DRY	0.577 mg/kg*	07/26/12 10:57AM PG
IRON	EPA 6010C	9380 mg/kg DRY	7.53 mg/kg*	07/26/12 10:57AM PG
POTASSIUM	EPA 6010C	2390 mg/kg DRY	56.7 mg/kg*	07/26/12 10:57AM PG
MAGNESIUM	EPA 6010C	6600 mg/kg DRY	1.97 mg/kg*	07/26/12 10:57AM PG
MANGANESE	EPA 6010C	66.5 mg/kg DRY	0.188 mg/kg*	07/26/12 10:57AM PG
SODIUM	EPA 6010C	22400 mg/kg DRY	23.0 mg/kg*	07/26/12 10:57AM PG
NICKEL	EPA 6010C	13.7 mg/kg DRY	0.316 mg/kg*	07/26/12 10:57AM PG
LEAD	EPA 6010C	18.6 mg/kg DRY	2.15 mg/kg*	07/26/12 10:57AM PG
ANTIMONY	EPA 6010C	ND mg/kg DRY	3.94 mg/kg*	07/26/12 10:57AM PG
SELENIUM	EPA 6010C	ND mg/kg DRY	1.65 mg/kg*	07/26/12 10:57AM PG
THALLIUM	EPA 6010C	ND mg/kg DRY	4.83 mg/kg*	07/26/12 10:57AM PG
VANADIUM	EPA 6010C	27.0 mg/kg DRY	0.242 mg/kg*	07/26/12 10:57AM PG
ZINC	EPA 6010C	53.8 mg/kg DRY	0.264 mg/kg*	07/26/12 10:57AM PG
MERCURY	EPA 7471B	ND mg/kg DRY	0.238 mg/kg*	07/18/12 01:25PM RMP
GAS CHROMATOGRAPHY MASS SPECTROMETRY; SEMI-VOLATILES				
NAPHTHALENE	EPA 8270C	ND ug/kg DRY	229 ug/kg*	07/23/12 11:29PM GRM
2-METHYLNAPHTHALENE	EPA 8270C	ND ug/kg DRY	187 ug/kg*	07/23/12 11:29PM GRM
ACENAPHTHYLENE	EPA 8270C	ND ug/kg DRY	165 ug/kg*	07/23/12 11:29PM GRM
ACENAPHTHENE	EPA 8270C	ND ug/kg DRY	203 ug/kg*	07/23/12 11:29PM GRM
FLUORENE	EPA 8270C	ND ug/kg DRY	145 ug/kg*	07/23/12 11:29PM GRM
PHENANTHRENE	EPA 8270C	173. J ug/kg DRY	156 ug/kg*	07/23/12 11:29PM GRM
ANTHRACENE	EPA 8270C	ND ug/kg DRY	219 ug/kg*	07/23/12 11:29PM GRM
FLUORANTHENE	EPA 8270C	144. J ug/kg DRY	142 ug/kg*	07/23/12 11:29PM GRM
PYRENE	EPA 8270C	ND ug/kg DRY	174 ug/kg*	07/23/12 11:29PM GRM
BENZO(A)ANTHRACENE	EPA 8270C	ND ug/kg DRY	158 ug/kg*	07/23/12 11:29PM GRM
CHRYSENE	EPA 8270C	ND ug/kg DRY	151 ug/kg*	07/23/12 11:29PM GRM
BENZO(B)FLUORANTHENE	EPA 8270C	ND ug/kg DRY	131 ug/kg*	07/23/12 11:29PM GRM
BENZO(K)FLUORANTHENE	EPA 8270C	ND ug/kg DRY	168 ug/kg*	07/23/12 11:29PM GRM
BENZO(A)PYRENE	EPA 8270C	ND ug/kg DRY	155 ug/kg*	07/23/12 11:29PM GRM
INDENO(1,2,3-CD)PYRENE	EPA 8270C	ND ug/kg DRY	152 ug/kg*	07/23/12 11:29PM GRM
DIBENZ(A,H)ANTHRACENE	EPA 8270C	ND ug/kg DRY	117 ug/kg*	07/23/12 11:29PM GRM
BENZO(G,H,I)PERYLENE	EPA 8270C	ND ug/kg DRY	143 ug/kg*	07/23/12 11:29PM GRM

Serial Number: 2290855

Authorized by: Oommen V. Kappil, QA Director

QC Laboratories

Analytical Report

Account No: SR0117, EASTSTAR ENVIRONMENTAL GROUP, INC. **P.O. No:** **Inv. No:** 1436281
Project No: SR0117, EASTSTAR ENVIRONMENTAL GROUP, INC. **PWSID No:**

Sample Number **Sample Description** **Samp. Date/Time/Temp** **Sampled by**
L4246904-3 BS-07R-14-18-010 SOIL 07/16/12 03:05pm NA F Customer
Received Date/Time/Temp 07/17/12 08:20pm 38.9 F **Iced (Y/N):** Y

Parameter	Method	Result	RLs	Test Date, Time, Analyst
GAS CHROMATOGRAPHY MASS SPECTROMETRY; VOLATILES				
DICHLORODIFLUOROMETHANE	EPA 8260B	ND ug/kg DRY	5.83 ug/kg*	07/24/12 03:14PM MHA
CHLOROMETHANE	EPA 8260B	ND ug/kg DRY	7.65 ug/kg*	07/24/12 03:14PM MHA
VINYL CHLORIDE	EPA 8260B	ND ug/kg DRY	7.52 ug/kg*	07/24/12 03:14PM MHA
BROMOMETHANE	EPA 8260B	ND ug/kg DRY	8.23 ug/kg*	07/24/12 03:14PM MHA
CHLOROETHANE	EPA 8260B	5.12 J ug/kg DRY	5.12 ug/kg*	07/24/12 03:14PM MHA
TRICHLOROFLUOROMETHANE	EPA 8260B	ND ug/kg DRY	7.07 ug/kg*	07/24/12 03:14PM MHA
1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	EPA 8260B	ND ug/kg DRY	7.45 ug/kg*	07/24/12 03:14PM MHA
METHYL ACETATE	EPA 8260B	23.0 J ug/kg DRY	6.94 ug/kg*	07/24/12 03:14PM MHA
1,1-DICHLOROETHENE	EPA 8260B	ND ug/kg DRY	7.26 ug/kg*	07/24/12 03:14PM MHA
ACETONE	EPA 8260B	71.8 B ug/kg DRY	16.3 ug/kg*	07/24/12 03:14PM MHA
CARBON DISULFIDE	EPA 8260B	391 ug/kg DRY	12.5 ug/kg*	07/24/12 03:14PM MHA
METHYLENE CHLORIDE	EPA 8260B	ND ug/kg DRY	9.79 ug/kg*	07/24/12 03:14PM MHA
TRANS-1,2-DICHLOROETHENE	EPA 8260B	ND ug/kg DRY	6.48 ug/kg*	07/24/12 03:14PM MHA
METHYL TERTIARY BUTYL ETHER	EPA 8260B	ND ug/kg DRY	5.57 ug/kg*	07/24/12 03:14PM MHA
1,1-DICHLOROETHANE	EPA 8260B	ND ug/kg DRY	6.81 ug/kg*	07/24/12 03:14PM MHA
2-BUTANONE	EPA 8260B	ND ug/kg DRY	12.2 ug/kg*	07/24/12 03:14PM MHA
BROMOCHLOROMETHANE	EPA 8260B	ND ug/kg DRY	6.35 ug/kg*	07/24/12 03:14PM MHA
CIS-1,2-DICHLOROETHENE	EPA 8260B	ND ug/kg DRY	4.93 ug/kg*	07/24/12 03:14PM MHA
CHLOROFORM	EPA 8260B	ND ug/kg DRY	5.51 ug/kg*	07/24/12 03:14PM MHA
1,1,1-TRICHLOROETHANE	EPA 8260B	ND ug/kg DRY	6.55 ug/kg*	07/24/12 03:14PM MHA
CYCLOHEXANE	EPA 8260B	ND ug/kg DRY	6.16 ug/kg*	07/24/12 03:14PM MHA
CARBON TETRACHLORIDE	EPA 8260B	ND ug/kg DRY	6.35 ug/kg*	07/24/12 03:14PM MHA
BENZENE	EPA 8260B	ND ug/kg DRY	6.09 ug/kg*	07/24/12 03:14PM MHA
1,2-DICHLOROETHANE	EPA 8260B	ND ug/kg DRY	5.45 ug/kg*	07/24/12 03:14PM MHA
TRICHLOROETHENE	EPA 8260B	ND ug/kg DRY	8.10 ug/kg*	07/24/12 03:14PM MHA
METHYLCYCLOHEXANE	EPA 8260B	ND ug/kg DRY	7.71 ug/kg*	07/24/12 03:14PM MHA
1,2-DICHLOROPROPANE	EPA 8260B	ND ug/kg DRY	6.03 ug/kg*	07/24/12 03:14PM MHA
BROMODICHLOROMETHANE	EPA 8260B	ND ug/kg DRY	6.22 ug/kg*	07/24/12 03:14PM MHA
4-METHYL-2-PENTANONE	EPA 8260B	ND ug/kg DRY	11.0 ug/kg*	07/24/12 03:14PM MHA
CIS-1,3-DICHLOROPROPENE	EPA 8260B	ND ug/kg DRY	5.25 ug/kg*	07/24/12 03:14PM MHA
TOLUENE	EPA 8260B	ND ug/kg DRY	7.45 ug/kg*	07/24/12 03:14PM MHA
TRANS-1,3-DICHLOROPROPENE	EPA 8260B	ND ug/kg DRY	5.64 ug/kg*	07/24/12 03:14PM MHA
1,1,2-TRICHLOROETHANE	EPA 8260B	ND ug/kg DRY	6.42 ug/kg*	07/24/12 03:14PM MHA
2-HEXANONE	EPA 8260B	ND ug/kg DRY	12.7 ug/kg*	07/24/12 03:14PM MHA
TETRACHLOROETHENE	EPA 8260B	ND ug/kg DRY	7.07 ug/kg*	07/24/12 03:14PM MHA
DIBROMOCHLOROMETHANE	EPA 8260B	ND ug/kg DRY	4.80 ug/kg*	07/24/12 03:14PM MHA
1,2-DIBROMOETHANE	EPA 8260B	ND ug/kg DRY	5.70 ug/kg*	07/24/12 03:14PM MHA
CHLOROBENZENE	EPA 8260B	ND ug/kg DRY	6.48 ug/kg*	07/24/12 03:14PM MHA
ETHYL BENZENE	EPA 8260B	ND ug/kg DRY	7.39 ug/kg*	07/24/12 03:14PM MHA
M&P-XYLENES	EPA 8260B	ND ug/kg DRY	15.0 ug/kg*	07/24/12 03:14PM MHA
O-XYLENE	EPA 8260B	ND ug/kg DRY	6.03 ug/kg*	07/24/12 03:14PM MHA
STYRENE	EPA 8260B	ND ug/kg DRY	5.77 ug/kg*	07/24/12 03:14PM MHA
BROMOFORM	EPA 8260B	ND ug/kg DRY	4.67 ug/kg*	07/24/12 03:14PM MHA
1,1,2,2-TETRACHLOROETHANE	EPA 8260B	ND ug/kg DRY	5.96 ug/kg*	07/24/12 03:14PM MHA
ISOPROPYLBENZENE	EPA 8260B	ND ug/kg DRY	7.07 ug/kg*	07/24/12 03:14PM MHA
1,3-DICHLOROBENZENE	EPA 8260B	ND ug/kg DRY	7.13 ug/kg*	07/24/12 03:14PM MHA
1,4-DICHLOROBENZENE	EPA 8260B	ND ug/kg DRY	7.58 ug/kg*	07/24/12 03:14PM MHA

Serial Number: 2290855

Oommen V. Kappil

Authorized by: Oommen V. Kappil, QA Director

Account No: SR0117, EASTSTAR ENVIRONMENTAL GROUP, INC. **P.O. No:** **Inv. No:** 1436281
Project No: SR0117, EASTSTAR ENVIRONMENTAL GROUP, INC. **PWSID No:**

Sample Number **Sample Description** **Samp. Date/Time/Temp** **Sampled by**
L4246904-3 BS-07R-14-18-010 SOIL 07/16/12 03:05pm NA F Customer
Received Date/Time/Temp 07/17/12 08:20pm 38.9 F **Iced (Y/N):** Y

Parameter	Method	Result	RLs	Test Date, Time, Analyst
GAS CHROMATOGRAPHY MASS SPECTROMETRY; VOLATILES continued				
1,2-DICHLOROBENZENE	EPA 8260B	ND ug/kg DRY	6.35 ug/kg*	07/24/12 03:14PM MHA
1,2-DIBROMO-3-CHLOROPROPANE	EPA 8260B	ND ug/kg DRY	6.94 ug/kg*	07/24/12 03:14PM MHA
1,2,4-TRICHLOROBENZENE	EPA 8260B	ND ug/kg DRY	8.62 ug/kg*	07/24/12 03:14PM MHA
1,2,3-TRICHLOROBENZENE	EPA 8260B	ND ug/kg DRY	11.1 ug/kg*	07/24/12 03:14PM MHA
1,4-DIOXANE	EPA 8260B	ND ug/kg DRY	278 ug/kg*	07/24/12 03:14PM MHA
GAS CHROMATOGRAPHY				
TOTAL PETROLEUM HYDROCARBONS	NJOQA QAM-025	107. J mg/kg DRY	28.6 mg/kg*	07/25/12 01:18PM AJG

Sample Number **Sample Description** **Samp. Date/Time/Temp** **Sampled by**
L4246904-4 BD-01R-03-05-011 SLUDGE 07/17/12 07:00am NA F Customer
Received Date/Time/Temp 07/17/12 08:20pm 38.9 F **Iced (Y/N):** Y

Parameter	Method	Result	RLs	Test Date, Time, Analyst
GENERAL CHEMISTRY				
CYANIDE, TOTAL	EPA 9010/9014	405 mg/kg DRY	46.6 mg/kg	07/26/12 03:00PM JG
TOTAL SOLIDS PERCENT	SM 2540G	53.65 %	0.01000 %	07/18/12 02:30PM P P
METALS				
SILVER	EPA 6010C	ND mg/kg DRY	0.147 mg/kg*	07/26/12 11:00AM PG
ALUMINUM	EPA 6010C	6520 mg/kg DRY	4.31 mg/kg*	07/26/12 11:00AM PG
ARSENIC	EPA 6010C	ND mg/kg DRY	1.47 mg/kg*	07/26/12 11:00AM PG
BARIUM	EPA 6010C	23.3 mg/kg DRY	0.0302 mg/kg*	07/26/12 11:00AM PG
BERYLLIUM	EPA 6010C	0.240 B mg/kg DRY	0.00503 mg/kg*	07/26/12 11:00AM PG
CADMIUM	EPA 6010C	ND mg/kg DRY	0.0388 mg/kg*	07/26/12 11:00AM PG
COBALT	EPA 6010C	2.63 mg/kg DRY	0.0710 mg/kg*	07/26/12 11:00AM PG
CHROMIUM	EPA 6010C	14.6 mg/kg DRY	0.0895 mg/kg*	07/26/12 11:00AM PG
COPPER	EPA 6010C	1.70 B mg/kg DRY	0.220 mg/kg*	07/26/12 11:00AM PG
IRON	EPA 6010C	2960 mg/kg DRY	2.87 mg/kg*	07/26/12 11:00AM PG
POTASSIUM	EPA 6010C	248 mg/kg DRY	21.6 mg/kg*	07/26/12 11:00AM PG
MAGNESIUM	EPA 6010C	882 mg/kg DRY	0.751 mg/kg*	07/26/12 11:00AM PG
MANGANESE	EPA 6010C	56.1 mg/kg DRY	0.0718 mg/kg*	07/26/12 11:00AM PG
SODIUM	EPA 6010C	1330 mg/kg DRY	8.76 mg/kg*	07/26/12 11:00AM PG
NICKEL	EPA 6010C	4.77 mg/kg DRY	0.120 mg/kg*	07/26/12 11:00AM PG
LEAD	EPA 6010C	11.3 mg/kg DRY	0.818 mg/kg*	07/26/12 11:00AM PG
ANTIMONY	EPA 6010C	ND mg/kg DRY	1.50 mg/kg*	07/26/12 11:00AM PG
SELENIUM	EPA 6010C	4.45 mg/kg DRY	0.628 mg/kg*	07/26/12 11:00AM PG
THALLIUM	EPA 6010C	ND mg/kg DRY	1.84 mg/kg*	07/26/12 11:00AM PG
VANADIUM	EPA 6010C	13.8 mg/kg DRY	0.0923 mg/kg*	07/26/12 11:00AM PG
ZINC	EPA 6010C	7.98 mg/kg DRY	0.101 mg/kg*	07/26/12 11:00AM PG
CALCIUM	EPA 6010C	276000 mg/kg DRY	69.0 mg/kg*	07/26/12 11:05AM PG
MERCURY	EPA 7471B	ND mg/kg DRY	0.0906 mg/kg*	07/18/12 01:27PM RMP

Serial Number: 2290855

Authorized by: Oommen V. Kappil, QA Director

QC Laboratories

Analytical Report

Account No: SR0117, EASTSTAR ENVIRONMENTAL GROUP, INC. **P.O. No:** **Inv. No:** 1436281
Project No: SR0117, EASTSTAR ENVIRONMENTAL GROUP, INC. **PWSID No:**

Sample Number **Sample Description** **Samp. Date/Time/Temp** **Sampled by**
L4246904-5 BD-01R-19-21-012 SOIL 07/17/12 08:15am NA F Customer
Received Date/Time/Temp 07/17/12 08:20pm 38.9 F **Iced (Y/N):** Y

Parameter	Method	Result	RLs	Test Date, Time, Analyst
GENERAL CHEMISTRY				
CYANIDE, TOTAL	EPA 9010/9014	1130 mg/kg DRY	226 mg/kg	07/26/12 03:00PM JG
TOTAL SOLIDS PERCENT	SM 2540G	27.63 %	0.01000 %	07/24/12 04:00PM RCM
METALS				
SILVER	EPA 6010C	ND mg/kg DRY	0.286 mg/kg*	07/26/12 11:09AM PG
ALUMINUM	EPA 6010C	11900 mg/kg DRY	8.36 mg/kg*	07/26/12 11:09AM PG
ARSENIC	EPA 6010C	28.3 mg/kg DRY	2.86 mg/kg*	07/26/12 11:09AM PG
BARIUM	EPA 6010C	58.3 mg/kg DRY	0.0586 mg/kg*	07/26/12 11:09AM PG
BERYLLIUM	EPA 6010C	0.345 B mg/kg DRY	0.00977 mg/kg*	07/26/12 11:09AM PG
CALCIUM	EPA 6010C	13700 mg/kg DRY	13.4 mg/kg*	07/26/12 11:09AM PG
CADMIUM	EPA 6010C	12.2 mg/kg DRY	0.0753 mg/kg*	07/26/12 11:09AM PG
COBALT	EPA 6010C	5.61 mg/kg DRY	0.138 mg/kg*	07/26/12 11:09AM PG
CHROMIUM	EPA 6010C	23.5 mg/kg DRY	0.174 mg/kg*	07/26/12 11:09AM PG
COPPER	EPA 6010C	57.5 mg/kg DRY	0.427 mg/kg*	07/26/12 11:09AM PG
IRON	EPA 6010C	5650 mg/kg DRY	5.57 mg/kg*	07/26/12 11:09AM PG
POTASSIUM	EPA 6010C	2910 mg/kg DRY	42.0 mg/kg*	07/26/12 11:09AM PG
MAGNESIUM	EPA 6010C	7200 mg/kg DRY	1.46 mg/kg*	07/26/12 11:09AM PG
MANGANESE	EPA 6010C	105 mg/kg DRY	0.139 mg/kg*	07/26/12 11:09AM PG
SODIUM	EPA 6010C	26300 mg/kg DRY	17.0 mg/kg*	07/26/12 11:09AM PG
NICKEL	EPA 6010C	68.8 mg/kg DRY	0.234 mg/kg*	07/26/12 11:09AM PG
LEAD	EPA 6010C	90.8 mg/kg DRY	1.59 mg/kg*	07/26/12 11:09AM PG
ANTIMONY	EPA 6010C	ND mg/kg DRY	2.92 mg/kg*	07/26/12 11:09AM PG
SELENIUM	EPA 6010C	6.23 B mg/kg DRY	1.22 mg/kg*	07/26/12 11:09AM PG
THALLIUM	EPA 6010C	ND mg/kg DRY	3.58 mg/kg*	07/26/12 11:09AM PG
VANADIUM	EPA 6010C	78.2 mg/kg DRY	0.179 mg/kg*	07/26/12 11:09AM PG
ZINC	EPA 6010C	796 mg/kg DRY	0.195 mg/kg*	07/26/12 11:09AM PG
MERCURY	EPA 7471B	ND mg/kg DRY	0.176 mg/kg*	07/18/12 01:28PM RMP
GAS CHROMATOGRAPHY MASS SPECTROMETRY; SEMI-VOLATILES				
NAPHTHALENE	EPA 8270C	537. J ug/kg DRY	170 ug/kg*	07/23/12 11:55PM GRM
2-METHYLNAPHTHALENE	EPA 8270C	169. J ug/kg DRY	138 ug/kg*	07/23/12 11:55PM GRM
ACENAPHTHYLENE	EPA 8270C	ND ug/kg DRY	122 ug/kg*	07/23/12 11:55PM GRM
ACENAPHTHENE	EPA 8270C	192. J ug/kg DRY	151 ug/kg*	07/23/12 11:55PM GRM
FLUORENE	EPA 8270C	169. J ug/kg DRY	107 ug/kg*	07/23/12 11:55PM GRM
PHENANTHRENE	EPA 8270C	528. J ug/kg DRY	116 ug/kg*	07/23/12 11:55PM GRM
ANTHRACENE	EPA 8270C	ND ug/kg DRY	163 ug/kg*	07/23/12 11:55PM GRM
FLUORANTHENE	EPA 8270C	227. J ug/kg DRY	105 ug/kg*	07/23/12 11:55PM GRM
PYRENE	EPA 8270C	202. J ug/kg DRY	129 ug/kg*	07/23/12 11:55PM GRM
BENZO(A)ANTHRACENE	EPA 8270C	ND ug/kg DRY	117 ug/kg*	07/23/12 11:55PM GRM
CHRYSENE	EPA 8270C	ND ug/kg DRY	112 ug/kg*	07/23/12 11:55PM GRM
BENZO(B)FLUORANTHENE	EPA 8270C	ND ug/kg DRY	97.0 ug/kg*	07/23/12 11:55PM GRM
BENZO(K)FLUORANTHENE	EPA 8270C	ND ug/kg DRY	125 ug/kg*	07/23/12 11:55PM GRM
BENZO(A)PYRENE	EPA 8270C	ND ug/kg DRY	115 ug/kg*	07/23/12 11:55PM GRM
INDENO(1,2,3-CD)PYRENE	EPA 8270C	ND ug/kg DRY	112 ug/kg*	07/23/12 11:55PM GRM
DIBENZ(A,H)ANTHRACENE	EPA 8270C	ND ug/kg DRY	86.9 ug/kg*	07/23/12 11:55PM GRM
BENZO(G,H,I)PERYLENE	EPA 8270C	ND ug/kg DRY	106 ug/kg*	07/23/12 11:55PM GRM

Serial Number: 2290855

Authorized by: Oommen V. Kappil, QA Director

Account No: SR0117, EASTSTAR ENVIRONMENTAL GROUP, INC. **P.O. No:** **Inv. No:** 1436281
Project No: SR0117, EASTSTAR ENVIRONMENTAL GROUP, INC. **PWSID No:**

L4246904-1 :
For the 8270C fraction, a dilution was required to be performed on this sample because of the sample matrix and/or interferences by nontarget compounds. The surrogate recoveries may have been impacted. The RLs have been adjusted to reflect the dilution.

QUALIFIERS: For metals parameters;"B" indicates a value that is > than the MDL but < than the laboratory quantitation limit. For Organics parameters; "B"is when the compound is found in the blank as well as in the sample;"J"indicates a value that is > than the MDL but < than the lowest standard, it is also used to indicate that a compound is tentatively identified in a library search;"E"(estimated) is when a compound exceeded the calibration range;"N" presumptive evidence of a compound; "D" is when a dilution was required.

L4246904-2 :
For QAM025, "J" indicates a value that is > the RL but < the lowest standard.

QUALIFIERS: For metals parameters;"B" indicates a value that is > than the MDL but < than the laboratory quantitation limit. For Organics parameters; "B"is when the compound is found in the blank as well as in the sample;"J"indicates a value that is > than the MDL but < than the lowest standard, it is also used to indicate that a compound is tentatively identified in a library search;"E"(estimated) is when a compound exceeded the calibration range;"N" presumptive evidence of a compound; "D" is when a dilution was required.
For the 8270C fraction, a dilution was required to be performed on this sample because of the sample matrix and/or interferences by nontarget compounds. The surrogate recoveries may have been impacted. The RLs have been adjusted to reflect the dilution.

L4246904-3 :

QUALIFIERS: For metals parameters;"B" indicates a value that is > than the MDL but < than the laboratory quantitation limit. For Organics parameters; "B"is when the compound is found in the blank as well as in the sample;"J"indicates a value that is > than the MDL but < than the lowest standard, it is also used to indicate that a compound is tentatively identified in a library search;"E"(estimated) is when a compound exceeded the calibration range;"N" presumptive evidence of a compound; "D" is when a dilution was required.
For QAM025, "J" indicates a value that is > the RL but < the lowest standard.

L4246904-4 :

QUALIFIERS: For metals parameters;"B" indicates a value that is > than the MDL but < than the laboratory quantitation limit. For Organics parameters; "B"is when the compound is found in the blank as well as in the sample;"J"indicates a value that is > than the MDL but < than the lowest standard, it is also used to indicate that a compound is tentatively identified in a library search;"E"(estimated) is when a compound exceeded the calibration range;"N" presumptive evidence of a compound; "D" is when a dilution was required.

L4246904-5 :

QUALIFIERS: For metals parameters;"B" indicates a value that is > than the MDL but < than the laboratory quantitation limit. For Organics parameters; "B"is when the compound is found in the blank as well as in the sample;"J"indicates a value that is > than the MDL but < than the lowest standard, it is also used to indicate that a compound is tentatively identified in a library search;"E"(estimated) is when a compound exceeded the calibration range;"N" presumptive evidence of a compound; "D" is when a dilution was required.

Notes:
- A result of "ND" indicates the concentration of the analyte tested was either not detected or below the RLs.
- Definitions: ND=not detected; NEG=negative; POS=positive; COL=colonies; RLs=laboratory reporting limits; L/A=laboratory accident; TNTC=too numerous to count
- A result marked with "DRY" indicates that the result was calculated and reported on a dry weight basis.
- All analysis, except field tests are conducted in Southampton, PA unless otherwise identified.
- The reported results relate only to the samples.
- QC NELAP ID's:PA 09-00131,NJ PA166,FL E87954,NY 11223,CT PH-0768,DE PA-018,KY 90228,MD 206,EPA PA00018.Bioassay:PA 09-03574,NJ PA034,FL E87953,KS E10373,SC 89021001.
- QC STATE ID's:Wind Gap,NJ PA001,PA 48-01334;E RUTHERFORD NJ02015;Vineland NJ06005; Reading PA 06-03543.
- All samples are collected as "grab" samples unless otherwise identified.

Authorized by: Oommen V. Kappil, QA Director

QC Laboratories

Analytical Report

Account No: SR0117, EASTSTAR ENVIRONMENTAL GROUP, INC. **P.O. No:** **Inv. No:** 1436281
Project No: SR0117, EASTSTAR ENVIRONMENTAL GROUP, INC. **PWSID No:**

- MCL= is the EPA recommended "maximum contaminant level" for a parameter. PLs=customer specific permit limits.
- The test results meet all requirements of NELAC unless otherwise specified.
- The report shall not be reproduced except in full without the written consent of the laboratory.

* - The "RLs" represents a reporting/quantitation limit. When an "*" is present in the column identified as the "RLs", it is being reported as a Method Detection Limit (MDL).

Serial Number: 2290855

Authorized by: Oommen V. Kappil, QA Director

QC Laboratories

1205 Industrial Blvd.
Southampton, PA 18966-0514
Phone: 215-355-3900
Fax: 215-355-7231

CHAIN OF CUSTODY

Page _____ of _____

Lab LIMS No: L4246904.

LAB USE ONLY: 2 methanol vials. 4 na bisulfate vials

____ Ascorbic/HCl Vials # ____ HCl Vials
____ $Na_2S_2O_3$
____ Na OH/Zn acetate pH
____ HNO_3 pH
____ H_2SO_4 pH
____ NaOH pH
16 Unpreserved 10-250g! 2-pl vials. 4-split cups.
____ Hcl pH
____ Temp control ID#
38.9F 100 TOB 1 Ice

MATRIX CODES
DW: DRINKING WATER
GW: GROUND WATER
WW: WASTEWATER
SO: SOIL
SL: SLUDGE
OIL: OIL
SOL: NON SOIL SOLID
MI: MISCELLANEOUS
X: OTHER

Client/Acct. No. EAST STAR
Address 10632 LITTLE PATUXENT PARKWAY SUIT 106
City/State/Zip COLUMBIA MD 21044
Phone/Fax 410 290 8777
Client Contact AL FREE

Bill to/Report to: (if different)
Sampling Site Address: (if different)
P.O. No.
QC Contact

LAB USE ONLY

PROJECT / FIELD ID	Collection Date	Collection Military Time	GRAB	COMP	Matrix Code	Total	H_2SO_4	HCl	Vials	HNO_3	NaOH	ZnAc	Unpre	Bact	ANALYSIS REQUESTED	Field pH, Temp (C or F), DO, Cl_2, S. Cond. etc.
IS-02-02-04-008	7/16	1240	✓		SO	2							2		TAL METAL, CYANIDE, PAH	x
BS-07R-02-04-009	7/16	1310	✓		SO	5			3				2		TAL METALS, CYANIDE, PETRO HYDRO, SVOC VOC	
BS-07R-14-18-010	7/16	1505	✓		SO	5			3				2		TAL METALS, CYANIDE, PETRO HYDRO, PAH, VOC	x
BD-01R-03-05-011	7/17	0700	✓		SL	1							1		TAL METALS, CYANIDE	x
BD-01R-19-21-012	7/17	0815	✓		SO	2							2		TAL METALS, CYANIDE PAH	x

SAMPLED BY: (Name/Company) JOSH CLOUGH EAST STAR

Verbal/fax data due: ___/___/___
Hardcopy due: ___/___/___

Report Format: ☐ Standard ☐ Forms ☐ Standard + QC ☐ NJ Reduced ☐ Disk

Please call for pricing and availability on rush (<14-21 day) turnaround and on all but standard format.

Field Parameters Analyzed By:
Sig:
Date/Time:

SAMPLE CUSTODY EXCHANGES MUST BE DOCUMENTED BELOW. USE FULL LEGAL SIGNATURE, DATE AND MILITARY TIME (24 HOUR CLOCK, I.E. 8AM IS 0800, 4 PM IS 1600)

RELINQUISHED BY SAMPLER	DATE	TIME	RECEIVED BY	DATE	TIME
1 [signature]	7/17/12	1030	1 [signature]	7/17/12	1030
2 [signature]	7/17/12	1630	2 CLA# 82	7/17/12	1630
3 82	7/17/12	2020	3 [signature]	7/17/12	2020
4			4		
5			5		

DELIVERY METHOD: ☐ QC COURIER ☐ CLIENT ☐ UPS ☐ FEDEX ☐ OTHER_____

Custody Seal Number

COMMENTS:

Hazardous: yes / no 39F [illegible]

For example to aid completion, see reverse side.

FINAL REPORT

QC LABORATORIES
FIELD SERVICE REQUEST FORM
Jul 16 2012, 03:33 pm

AL FREE
EASTSTAR ENVIRONMENTAL GROUP, INC.
10632 LITTLE PATUXENT PARKWAY
SUITE 106
COLUMBIA, MD 21044
Primary Driver: DAL

Project No.: SR0117
Phone: (410)290-8777
Fax: (410)290-9055
Cell: ( ) -

Service Date: 07/17/12 To 07/17/12

PICK-UP

Delivery Charge:

Day of Week: TUE

Sampling Instructions:

Contact: ED

Bottle Prep:

Rush Samples:

Service to be performed at:

RAHWAY, NJ 07065

ONTACT ED FREE ON CELL WHEN YOU GET TO SITE. DIRECTIONS: EXIT 12 NJTP... GO TOWARDS INDUSTRIAL HI-WAY...LEFT @ 1ST LITE INTO WAREHOUSE COMPLEX... TAKE 1ST RITE...FOLLOW ROAD TO THE LEFT (NOT INTO KINDER MORGAN)...FOLLOW AROUND BACK OF WAREHOUSE...TURN RITE; BEFORE YOU GET TO AUTO GATES (ROAD IS PAVED, BUT QUICKLY TURNS INTO DIRT/ROCKS)...FOLLOW STRAIGHT BACK. THANKS!

Requested by: Christina L. Auger Ext:
Entry date: 07/16/12 03:32PM

Call received: 07/16/12 03:31PM

Field Service Request No.: FS176963
Service Time: 10 minutes
Equip Code: PU

QC Laboratories

1205 Industrial Highway, Southampton, PA 18966

EAST RUTHERFORD

Inter-Laboratory Transport Form: ER071712

SOUTHAMPTON

Coolers for Transport **from EAST RUTHERFORD**

To be completed by person sealing coolers					Complete Section Upon Delivery	
Cooler ID No.	Custody Seal No.	Date	Time	Initials	Temp °F	Iced Y/N
#22	071712-1	7-17-12	1700	CCA	33.7	Y
545	071712-2	7-17-12	1700	CCA	40.1	Y
81	071712-3	7/17/12	1700	DAC	38.9	Y
# 24	071712-4	7-17-12	1700	AS	34.4	Y
#120	MICRO	7/12/12	1700	CCA	40.4	Y

Please Note the Following:

Individual sample chains of custody must accompany this form.

Once a cooler is sealed, custody seals may not be broken until samples are received at the designated QCL laboratory.

Laboratory use only

Custody Seals intact upon receipt? (Y)/N Initials: TCB

List ID of any seal found broken upon receipt below:

A full legal signature is required. Record all times in military time (24-HR Clock; 4:00 PM=1600)

Relinquished by:	Date:	Time:		Received by:	Date:	Time:
[signature]	7-17-12	1800		RA [signature]	7-17-12	1800
Relinquished by: RA [signature]	Date: 7-17-12	Time: 2020		Received by: [signature]	Date: 7/17/12	Time: 2020
Relinquished by:	Date:	Time:		Received by:	Date:	Time:
Relinquished by:	Date:	Time:		Received by:	Date:	Time:

Analytical Report

AL FREE
EASTSTAR ENVIRONMENTAL GROUP, INC.
10632 LITTLE PATUXENT PARKWAY
SUITE 106
COLUMBIA,MD 21044

Regarding:
AL FREE
EASTSTAR ENVIRONMENTAL GROUP, INC.
10632 LITTLE PATUXENT PARKWAY
SUITE 106
COLUMBIA, MD 21044

PROJECT ID:

SR0117

LABORATORY REPORT NUMBER:

L4252798

Authorized by: Oommen V. Kappil, QA Director

QCL Accreditations: Southampton Div: EPA ID PA00018; NELAP ID's: PA 09-00131, NJ PA166, NY 11223
State ID's: CT PH-0768, DE PA-018, MD 206, SC 89021001; FDA Reg. # : 2515238
ACL Div: NELAP ID's: PA 68-335, NJ DE568; State ID's: DE 00011, MD 138
Vineland Div: State ID: NJ 06005; Reading Div: State ID: PA 06-03543
Wind Gap Div: State ID's: PA 48-01334, NJ PA001
E. Rutherford Div: State ID: NJ 02015

QC Laboratories

Analytical Report

AL FREE
EASTSTAR ENVIRONMENTAL GROUP, INC.
10632 LITTLE PATUXENT PARKWAY
SUITE 106
COLUMBIA, MD 21044

Regarding:
AL FREE
EASTSTAR ENVIRONMENTAL GROUP, INC.
10632 LITTLE PATUXENT PARKWAY
SUITE 106
COLUMBIA, MD 21044

Account No: SR0117, EASTSTAR ENVIRONMENTAL GROUP, INC. **P.O. No:** 1027-03 **Inv. No:** 1439415
Project No: SR0117, EASTSTAR ENVIRONMENTAL GROUP, INC. **PWSID No:**

Sample Number **Sample Description** **Samp. Date/Time/Temp** **Sampled by**
L4252798-1 RAHWAY ARCH* BD-03-06-08-013 SOIL 07/17/12 02:50pm NA F Customer
Received Date/Time/Temp 07/19/12 09:00pm 32.5 F **Iced (Y/N):** Y

Parameter	Method	Result	RLs	Test Date, Time, Analyst
GENERAL CHEMISTRY				
CYANIDE, TOTAL	EPA 9010/9014	825 mg/kg DRY	117 mg/kg	07/26/12 03:00PM JG
TOTAL SOLIDS PERCENT	SM 2540G	53.35 %	0.01000 %	07/25/12 09:30PM RCM
METALS				
SILVER	EPA 6010C	ND mg/kg DRY	0.148 mg/kg*	08/01/12 10:58AM PG
ALUMINUM	EPA 6010C	14200 mg/kg DRY	4.33 mg/kg*	08/01/12 10:58AM PG
ARSENIC	EPA 6010C	ND mg/kg DRY	1.48 mg/kg*	08/01/12 10:58AM PG
BARIUM	EPA 6010C	36.6 mg/kg DRY	0.0304 mg/kg*	08/01/12 10:58AM PG
BERYLLIUM	EPA 6010C	0.246 B mg/kg DRY	0.00506 mg/kg*	08/01/12 10:58AM PG
CALCIUM	EPA 6010C	227000 mg/kg DRY	6.94 mg/kg*	08/01/12 10:58AM PG
CADMIUM	EPA 6010C	ND mg/kg DRY	0.0390 mg/kg*	08/01/12 10:58AM PG
COBALT	EPA 6010C	3.99 mg/kg DRY	0.0714 mg/kg*	08/01/12 10:58AM PG
CHROMIUM	EPA 6010C	24.6 mg/kg DRY	0.0900 mg/kg*	08/01/12 10:58AM PG
COPPER	EPA 6010C	1.60 B mg/kg DRY	0.221 mg/kg*	08/01/12 10:58AM PG
IRON	EPA 6010C	6050 mg/kg DRY	2.89 mg/kg*	08/01/12 10:58AM PG
POTASSIUM	EPA 6010C	800 mg/kg DRY	21.7 mg/kg*	08/01/12 10:58AM PG
MAGNESIUM	EPA 6010C	1240 mg/kg DRY	0.755 mg/kg*	08/01/12 10:58AM PG
MANGANESE	EPA 6010C	96.2 mg/kg DRY	0.0722 mg/kg*	08/01/12 10:58AM PG
SODIUM	EPA 6010C	1010 mg/kg DRY	8.81 mg/kg*	08/01/12 10:58AM PG
NICKEL	EPA 6010C	8.10 mg/kg DRY	0.121 mg/kg*	08/01/12 10:58AM PG
LEAD	EPA 6010C	17.1 mg/kg DRY	0.823 mg/kg*	08/01/12 10:58AM PG
ANTIMONY	EPA 6010C	ND mg/kg DRY	1.53 mg/kg*	08/01/12 10:58AM PG
SELENIUM	EPA 6010C	2.61 B mg/kg DRY	0.632 mg/kg*	08/01/12 10:58AM PG
THALLIUM	EPA 6010C	ND mg/kg DRY	1.85 mg/kg*	08/01/12 10:58AM PG
VANADIUM	EPA 6010C	23.1 mg/kg DRY	0.0928 mg/kg*	08/01/12 10:58AM PG
ZINC	EPA 6010C	16.0 mg/kg DRY	0.440 mg/kg*	08/01/12 10:58AM PG
MERCURY	EPA 7471B	ND mg/kg DRY	0.0911 mg/kg*	07/27/12 12:49PM RMP

Serial Number: 2433205

QC Laboratories Analytical Report

Account No: SR0117, EASTSTAR ENVIRONMENTAL GROUP, INC. **P.O. No:** 1027-03 **Inv. No:** 1439415
Project No: SR0117, EASTSTAR ENVIRONMENTAL GROUP, INC. **PWSID No:**

Sample Number **Sample Description** **Samp. Date/Time/Temp** **Sampled by**
L4252798-2 BD-03-19-20-014 SOIL 07/18/12 07:15am NA F Customer
Received Date/Time/Temp 07/19/12 09:00pm 32.5 F **Iced (Y/N):** Y

Parameter	Method	Result	RLs	Test Date, Time, Analyst
GENERAL CHEMISTRY				
CYANIDE, TOTAL	EPA 9010/9014	92.5 mg/kg DRY	12.2 mg/kg	07/26/12 03:00PM JG
TOTAL SOLIDS PERCENT	SM 2540G	51.37 %	0.01000 %	07/25/12 09:30PM RCM
METALS				
SILVER	EPA 6010C	ND mg/kg DRY	0.154 mg/kg*	08/01/12 11:02AM PG
ALUMINUM	EPA 6010C	16300 mg/kg DRY	4.50 mg/kg*	08/01/12 11:02AM PG
ARSENIC	EPA 6010C	10.2 mg/kg DRY	1.54 mg/kg*	08/01/12 11:02AM PG
BARIUM	EPA 6010C	133 mg/kg DRY	0.0315 mg/kg*	08/01/12 11:02AM PG
BERYLLIUM	EPA 6010C	0.734 mg/kg DRY	0.00526 mg/kg*	08/01/12 11:02AM PG
CALCIUM	EPA 6010C	37000 mg/kg DRY	7.20 mg/kg*	08/01/12 11:02AM PG
CADMIUM	EPA 6010C	ND mg/kg DRY	0.0405 mg/kg*	08/01/12 11:02AM PG
COBALT	EPA 6010C	11.6 mg/kg DRY	0.0742 mg/kg*	08/01/12 11:02AM PG
CHROMIUM	EPA 6010C	43.0 mg/kg DRY	0.0934 mg/kg*	08/01/12 11:02AM PG
COPPER	EPA 6010C	15.4 mg/kg DRY	0.230 mg/kg*	08/01/12 11:02AM PG
IRON	EPA 6010C	28600 mg/kg DRY	3.00 mg/kg*	08/01/12 11:02AM PG
POTASSIUM	EPA 6010C	3410 mg/kg DRY	22.6 mg/kg*	08/01/12 11:02AM PG
MAGNESIUM	EPA 6010C	7090 mg/kg DRY	0.785 mg/kg*	08/01/12 11:02AM PG
MANGANESE	EPA 6010C	413 mg/kg DRY	0.0749 mg/kg*	08/01/12 11:02AM PG
SODIUM	EPA 6010C	7490 mg/kg DRY	9.15 mg/kg*	08/01/12 11:02AM PG
NICKEL	EPA 6010C	25.7 mg/kg DRY	0.126 mg/kg*	08/01/12 11:02AM PG
LEAD	EPA 6010C	17.8 mg/kg DRY	0.855 mg/kg*	08/01/12 11:02AM PG
ANTIMONY	EPA 6010C	ND mg/kg DRY	1.59 mg/kg*	08/01/12 11:02AM PG
SELENIUM	EPA 6010C	ND mg/kg DRY	0.656 mg/kg*	08/01/12 11:02AM PG
THALLIUM	EPA 6010C	ND mg/kg DRY	1.92 mg/kg*	08/01/12 11:02AM PG
VANADIUM	EPA 6010C	38.7 mg/kg DRY	0.0964 mg/kg*	08/01/12 11:02AM PG
ZINC	EPA 6010C	109 mg/kg DRY	0.457 mg/kg*	08/01/12 11:02AM PG
MERCURY	EPA 7471B	ND mg/kg DRY	0.0946 mg/kg*	07/27/12 12:50PM RMP
GAS CHROMATOGRAPHY MASS SPECTROMETRY; SEMI-VOLATILES				
NAPHTHALENE	EPA 8270C	ND ug/kg DRY	91.3 ug/kg*	07/23/12 06:04PM GRM
2-METHYLNAPHTHALENE	EPA 8270C	ND ug/kg DRY	74.4 ug/kg*	07/23/12 06:04PM GRM
ACENAPHTHYLENE	EPA 8270C	ND ug/kg DRY	65.8 ug/kg*	07/23/12 06:04PM GRM
ACENAPHTHENE	EPA 8270C	ND ug/kg DRY	81.0 ug/kg*	07/23/12 06:04PM GRM
FLUORENE	EPA 8270C	ND ug/kg DRY	57.8 ug/kg*	07/23/12 06:04PM GRM
PHENANTHRENE	EPA 8270C	ND ug/kg DRY	62.3 ug/kg*	07/23/12 06:04PM GRM
ANTHRACENE	EPA 8270C	ND ug/kg DRY	87.4 ug/kg*	07/23/12 06:04PM GRM
FLUORANTHENE	EPA 8270C	ND ug/kg DRY	56.6 ug/kg*	07/23/12 06:04PM GRM
PYRENE	EPA 8270C	ND ug/kg DRY	69.5 ug/kg*	07/23/12 06:04PM GRM
BENZO(A)ANTHRACENE	EPA 8270C	ND ug/kg DRY	62.9 ug/kg*	07/23/12 06:04PM GRM
CHRYSENE	EPA 8270C	ND ug/kg DRY	60.2 ug/kg*	07/23/12 06:04PM GRM
BENZO(B)FLUORANTHENE	EPA 8270C	ND ug/kg DRY	52.2 ug/kg*	07/23/12 06:04PM GRM
BENZO(K)FLUORANTHENE	EPA 8270C	ND ug/kg DRY	67.0 ug/kg*	07/23/12 06:04PM GRM
BENZO(A)PYRENE	EPA 8270C	ND ug/kg DRY	61.9 ug/kg*	07/23/12 06:04PM GRM
INDENO(1,2,3-CD)PYRENE	EPA 8270C	ND ug/kg DRY	60.3 ug/kg*	07/23/12 06:04PM GRM
DIBENZ(A,H)ANTHRACENE	EPA 8270C	ND ug/kg DRY	46.7 ug/kg*	07/23/12 06:04PM GRM
BENZO(G,H,I)PERYLENE	EPA 8270C	ND ug/kg DRY	56.8 ug/kg*	07/23/12 06:04PM GRM

QC Laboratories

Analytical Report

Account No: SR0117, EASTSTAR ENVIRONMENTAL GROUP, INC. **P.O. No:** 027-03 **Inv. No:** 1439415
Project No: SR0117, EASTSTAR ENVIRONMENTAL GROUP, INC. **PWSID No:**

Sample Number **Sample Description** **Samp. Date/Time/Temp** **Sampled by**
L4252798-3 BD-04R-04-06-015 SOIL 07/18/12 11:05am NA F Customer
Received Date/Time/Temp 07/19/12 09:00pm 32.5 F **Iced (Y/N):** Y

Parameter	Method	Result	RLs	Test Date, Time, Analyst
GENERAL CHEMISTRY				
CYANIDE, TOTAL	EPA 9010/9014	1180 mg/kg DRY	113 mg/kg	07/26/12 03:00PM JG
TOTAL SOLIDS PERCENT	SM 2540G	55.08 %	0.01000 %	07/25/12 09:30PM RCM
METALS				
SILVER	EPA 6010C	ND mg/kg DRY	0.143 mg/kg*	08/01/12 11:05AM PG
ALUMINUM	EPA 6010C	6320 mg/kg DRY	4.19 mg/kg*	08/01/12 11:05AM PG
ARSENIC	EPA 6010C	ND mg/kg DRY	1.44 mg/kg*	08/01/12 11:05AM PG
BARIUM	EPA 6010C	84.8 mg/kg DRY	0.0294 mg/kg*	08/01/12 11:05AM PG
BERYLLIUM	EPA 6010C	0.203 B mg/kg DRY	0.00490 mg/kg*	08/01/12 11:05AM PG
CALCIUM	EPA 6010C	234000 mg/kg DRY	6.72 mg/kg*	08/01/12 11:05AM PG
CADMIUM	EPA 6010C	ND mg/kg DRY	0.0378 mg/kg*	08/01/12 11:05AM PG
COBALT	EPA 6010C	2.14 mg/kg DRY	0.0692 mg/kg*	08/01/12 11:05AM PG
CHROMIUM	EPA 6010C	12.5 mg/kg DRY	0.0871 mg/kg*	08/01/12 11:05AM PG
COPPER	EPA 6010C	0.837 B mg/kg DRY	0.214 mg/kg*	08/01/12 11:05AM PG
IRON	EPA 6010C	1830 mg/kg DRY	2.80 mg/kg*	08/01/12 11:05AM PG
POTASSIUM	EPA 6010C	110 mg/kg DRY	21.1 mg/kg*	08/01/12 11:05AM PG
MAGNESIUM	EPA 6010C	773 mg/kg DRY	0.732 mg/kg*	08/01/12 11:05AM PG
MANGANESE	EPA 6010C	40.1 mg/kg DRY	0.0699 mg/kg*	08/01/12 11:05AM PG
SODIUM	EPA 6010C	873 mg/kg DRY	8.53 mg/kg*	08/01/12 11:05AM PG
NICKEL	EPA 6010C	4.92 mg/kg DRY	0.117 mg/kg*	08/01/12 11:05AM PG
LEAD	EPA 6010C	11.5 mg/kg DRY	0.797 mg/kg*	08/01/12 11:05AM PG
ANTIMONY	EPA 6010C	ND mg/kg DRY	1.48 mg/kg*	08/01/12 11:05AM PG
SELENIUM	EPA 6010C	1.41 B mg/kg DRY	0.612 mg/kg*	08/01/12 11:05AM PG
THALLIUM	EPA 6010C	ND mg/kg DRY	1.79 mg/kg*	08/01/12 11:05AM PG
VANADIUM	EPA 6010C	12.8 mg/kg DRY	0.0899 mg/kg*	08/01/12 11:05AM PG
ZINC	EPA 6010C	6.48 mg/kg DRY	0.427 mg/kg*	08/01/12 11:05AM PG
MERCURY	EPA 7471B	ND mg/kg DRY	0.0882 mg/kg*	07/27/12 12:52PM RMP

Sample Number **Sample Description** **Samp. Date/Time/Temp** **Sampled by**
L4252798-4 BD-04R-17-19-016 SOIL 07/18/12 12:55pm NA F Customer
Received Date/Time/Temp 07/19/12 09:00pm 32.5 F **Iced (Y/N):** Y

Parameter	Method	Result	RLs	Test Date, Time, Analyst
GENERAL CHEMISTRY				
CYANIDE, TOTAL	EPA 9010/9014	164 mg/kg DRY	17.5 mg/kg	07/26/12 03:00PM JG
TOTAL SOLIDS PERCENT	SM 2540G	35.78 %	0.01000 %	07/25/12 09:30PM RCM
METALS				
SILVER	EPA 6010C	ND mg/kg DRY	0.221 mg/kg*	08/01/12 11:09AM PG
ALUMINUM	EPA 6010C	17800 mg/kg DRY	6.46 mg/kg*	08/01/12 11:09AM PG
ARSENIC	EPA 6010C	5.03 mg/kg DRY	2.21 mg/kg*	08/01/12 11:09AM PG
BARIUM	EPA 6010C	41.4 mg/kg DRY	0.0453 mg/kg*	08/01/12 11:09AM PG
BERYLLIUM	EPA 6010C	0.777 mg/kg DRY	0.00755 mg/kg*	08/01/12 11:09AM PG
CALCIUM	EPA 6010C	5790 mg/kg DRY	10.3 mg/kg*	08/01/12 11:09AM PG

Account No: SR0117, EASTSTAR ENVIRONMENTAL GROUP, INC. **P.O. No:** 1027-03 **Inv. No:** 1439415
Project No: SR0117, EASTSTAR ENVIRONMENTAL GROUP, INC. **PWSID No:**

Sample Number **Sample Description** **Samp. Date/Time/Temp** **Sampled by**
L4252798-4 BD-04R-17-19-016 SOIL 07/18/12 12:55pm NA F Customer
Received Date/Time/Temp 07/19/12 09:00pm 32.5 F **Iced (Y/N):** Y

Parameter	Method	Result	RLs	Test Date, Time, Analyst
METALS continued				
CADMIUM	EPA 6010C	ND mg/kg DRY	0.0581 mg/kg*	08/01/12 11:09AM PG
COBALT	EPA 6010C	6.99 mg/kg DRY	0.106 mg/kg*	08/01/12 11:09AM PG
CHROMIUM	EPA 6010C	40.2 mg/kg DRY	0.134 mg/kg*	08/01/12 11:09AM PG
COPPER	EPA 6010C	11.8 mg/kg DRY	0.330 mg/kg*	08/01/12 11:09AM PG
IRON	EPA 6010C	21200 mg/kg DRY	4.30 mg/kg*	08/01/12 11:09AM PG
POTASSIUM	EPA 6010C	4470 mg/kg DRY	32.4 mg/kg*	08/01/12 11:09AM PG
MAGNESIUM	EPA 6010C	7040 mg/kg DRY	1.13 mg/kg*	08/01/12 11:09AM PG
MANGANESE	EPA 6010C	147 mg/kg DRY	0.108 mg/kg*	08/01/12 11:09AM PG
SODIUM	EPA 6010C	13300 mg/kg DRY	13.1 mg/kg*	08/01/12 11:09AM PG
NICKEL	EPA 6010C	16.7 mg/kg DRY	0.181 mg/kg*	08/01/12 11:09AM PG
LEAD	EPA 6010C	7.38 mg/kg DRY	1.23 mg/kg*	08/01/12 11:09AM PG
ANTIMONY	EPA 6010C	ND mg/kg DRY	2.28 mg/kg*	08/01/12 11:09AM PG
SELENIUM	EPA 6010C	ND mg/kg DRY	0.942 mg/kg*	08/01/12 11:09AM PG
THALLIUM	EPA 6010C	ND mg/kg DRY	2.76 mg/kg*	08/01/12 11:09AM PG
VANADIUM	EPA 6010C	55.1 mg/kg DRY	0.138 mg/kg*	08/01/12 11:09AM PG
ZINC	EPA 6010C	48.1 mg/kg DRY	0.657 mg/kg*	08/01/12 11:09AM PG
MERCURY	EPA 7471B	ND mg/kg DRY	0.136 mg/kg*	07/27/12 12:58PM RMP
GAS CHROMATOGRAPHY MASS SPECTROMETRY; SEMI-VOLATILES				
N-NITROSODIMETHYLAMINE	EPA 8270C	ND ug/kg DRY	137 ug/kg*	07/23/12 06:28PM GRM
BIS(2-CHLOROETHYL)ETHER	EPA 8270C	ND ug/kg DRY	138 ug/kg*	07/23/12 06:28PM GRM
ANILINE	EPA 8270C	ND ug/kg DRY	102 ug/kg*	07/23/12 06:28PM GRM
PHENOL	EPA 8270C	ND ug/kg DRY	89.7 ug/kg*	07/23/12 06:28PM GRM
2-CHLOROPHENOL	EPA 8270C	ND ug/kg DRY	97.5 ug/kg*	07/23/12 06:28PM GRM
1,3-DICHLOROBENZENE	EPA 8270C	ND ug/kg DRY	145 ug/kg*	07/23/12 06:28PM GRM
1,4-DICHLOROBENZENE	EPA 8270C	ND ug/kg DRY	152 ug/kg*	07/23/12 06:28PM GRM
1,2-DICHLOROBENZENE	EPA 8270C	ND ug/kg DRY	147 ug/kg*	07/23/12 06:28PM GRM
BENZYL ALCOHOL	EPA 8270C	ND ug/kg DRY	91.4 ug/kg*	07/23/12 06:28PM GRM
BIS(2-CHLOROISOPROPYL)ETHER	EPA 8270C	ND ug/kg DRY	144 ug/kg*	07/23/12 06:28PM GRM
2-METHYLPHENOL	EPA 8270C	ND ug/kg DRY	97.5 ug/kg*	07/23/12 06:28PM GRM
HEXACHLOROETHANE	EPA 8270C	ND ug/kg DRY	107 ug/kg*	07/23/12 06:28PM GRM
N-NITROSO-DI-N-PROPYLAMINE	EPA 8270C	ND ug/kg DRY	78.0 ug/kg*	07/23/12 06:28PM GRM
3&4-METHYLPHENOL	EPA 8270C	ND ug/kg DRY	148 ug/kg*	07/23/12 06:28PM GRM
NITROBENZENE	EPA 8270C	ND ug/kg DRY	140 ug/kg*	07/23/12 06:28PM GRM
ISOPHORONE	EPA 8270C	ND ug/kg DRY	76.6 ug/kg*	07/23/12 06:28PM GRM
2-NITROPHENOL	EPA 8270C	ND ug/kg DRY	97.3 ug/kg*	07/23/12 06:28PM GRM
2,4-DIMETHYLPHENOL	EPA 8270C	ND ug/kg DRY	79.7 ug/kg*	07/23/12 06:28PM GRM
BIS(2-CHLOROETHOXY)METHANE	EPA 8270C	ND ug/kg DRY	99.2 ug/kg*	07/23/12 06:28PM GRM
2,4-DICHLOROPHENOL	EPA 8270C	ND ug/kg DRY	169 ug/kg*	07/23/12 06:28PM GRM
BENZOIC ACID	EPA 8270C	ND ug/kg DRY	1830 ug/kg*	07/23/12 06:28PM GRM
1,2,4-TRICHLOROBENZENE	EPA 8270C	ND ug/kg DRY	137 ug/kg*	07/23/12 06:28PM GRM
NAPHTHALENE	EPA 8270C	ND ug/kg DRY	131 ug/kg*	07/23/12 06:28PM GRM
4-CHLOROANILINE	EPA 8270C	ND ug/kg DRY	84.4 ug/kg*	07/23/12 06:28PM GRM
HEXACHLOROBUTADIENE	EPA 8270C	ND ug/kg DRY	142 ug/kg*	07/23/12 06:28PM GRM
4-CHLORO-3-METHYLPHENOL	EPA 8270C	ND ug/kg DRY	80.2 ug/kg*	07/23/12 06:28PM GRM
2-METHYLNAPHTHALENE	EPA 8270C	ND ug/kg DRY	107 ug/kg*	07/23/12 06:28PM GRM
HEXACHLOROCYCLOPENTADIENE	EPA 8270C	ND ug/kg DRY	79.1 ug/kg*	07/23/12 06:28PM GRM
2,4,6-TRICHLOROPHENOL	EPA 8270C	ND ug/kg DRY	84.7 ug/kg*	07/23/12 06:28PM GRM

Account No: SR0117, EASTSTAR ENVIRONMENTAL GROUP, INC. **P.O. No:** 027-03 **Inv. No:** 1439415
Project No: SR0117, EASTSTAR ENVIRONMENTAL GROUP, INC. **PWSID No:**

Sample Number **Sample Description** **Samp. Date/Time/Temp** **Sampled by**
L4252798-4 BD-04R-17-19-016 SOIL 07/18/12 12:55pm NA F Customer
Received Date/Time/Temp 07/19/12 09:00pm 32.5 F **Iced (Y/N):** Y

Parameter	Method	Result	RLs	Test Date, Time, Analyst
GAS CHROMATOGRAPHY MASS SPECTROMETRY; SEMI-VOLATILES continued				
2,4,5-TRICHLOROPHENOL	EPA 8270C	ND ug/kg DRY	86.4 ug/kg*	07/23/12 06:28PM GRM
2-CHLORONAPHTHALENE	EPA 8270C	ND ug/kg DRY	88.3 ug/kg*	07/23/12 06:28PM GRM
2-NITROANILINE	EPA 8270C	ND ug/kg DRY	97.5 ug/kg*	07/23/12 06:28PM GRM
ACENAPHTHYLENE	EPA 8270C	ND ug/kg DRY	94.5 ug/kg*	07/23/12 06:28PM GRM
DIMETHYLPHTHALATE	EPA 8270C	ND ug/kg DRY	239 ug/kg*	07/23/12 06:28PM GRM
2,6-DINITROTOLUENE	EPA 8270C	ND ug/kg DRY	107 ug/kg*	07/23/12 06:28PM GRM
ACENAPHTHENE	EPA 8270C	ND ug/kg DRY	116 ug/kg*	07/23/12 06:28PM GRM
3-NITROANILINE	EPA 8270C	ND ug/kg DRY	110 ug/kg*	07/23/12 06:28PM GRM
2,4-DINITROPHENOL	EPA 8270C	ND ug/kg DRY	383 ug/kg*	07/23/12 06:28PM GRM
DIBENZOFURAN	EPA 8270C	ND ug/kg DRY	111 ug/kg*	07/23/12 06:28PM GRM
2,4-DINITROTOLUENE	EPA 8270C	ND ug/kg DRY	110 ug/kg*	07/23/12 06:28PM GRM
4-NITROPHENOL	EPA 8270C	ND ug/kg DRY	93.3 ug/kg*	07/23/12 06:28PM GRM
FLUORENE	EPA 8270C	ND ug/kg DRY	83.0 ug/kg*	07/23/12 06:28PM GRM
4-CHLOROPHENYL-PHENYLETHER	EPA 8270C	ND ug/kg DRY	98.7 ug/kg*	07/23/12 06:28PM GRM
DIETHYLPHTHALATE	EPA 8270C	ND ug/kg DRY	93.3 ug/kg*	07/23/12 06:28PM GRM
4-NITROANILINE	EPA 8270C	ND ug/kg DRY	87.8 ug/kg*	07/23/12 06:28PM GRM
4,6-DINITRO-2-METHYLPHENOL	EPA 8270C	ND ug/kg DRY	77.7 ug/kg*	07/23/12 06:28PM GRM
N-NITROSODIPHENYLAMINE	EPA 8270C	ND ug/kg DRY	158 ug/kg*	07/23/12 06:28PM GRM
1,2-DIPHENYLHYDRAZINE	EPA 8270C	ND ug/kg DRY	85.2 ug/kg*	07/23/12 06:28PM GRM
4-BROMOPHENYL-PHENYLETHER	EPA 8270C	ND ug/kg DRY	84.4 ug/kg*	07/23/12 06:28PM GRM
HEXACHLOROBENZENE	EPA 8270C	ND ug/kg DRY	103 ug/kg*	07/23/12 06:28PM GRM
PENTACHLOROPHENOL	EPA 8270C	ND ug/kg DRY	125 ug/kg*	07/23/12 06:28PM GRM
PHENANTHRENE	EPA 8270C	ND ug/kg DRY	89.4 ug/kg*	07/23/12 06:28PM GRM
ANTHRACENE	EPA 8270C	ND ug/kg DRY	125 ug/kg*	07/23/12 06:28PM GRM
CARBAZOLE	EPA 8270C	ND ug/kg DRY	98.4 ug/kg*	07/23/12 06:28PM GRM
DI-N-BUTYLPHTHALATE	EPA 8270C	198 ug/kg DRY	85.8 ug/kg*	07/23/12 06:28PM GRM
FLUORANTHENE	EPA 8270C	162 ug/kg DRY	81.3 ug/kg*	07/23/12 06:28PM GRM
BENZIDINE	EPA 8270C	ND ug/kg DRY	1050 ug/kg*	07/23/12 06:28PM GRM
PYRENE	EPA 8270C	206 ug/kg DRY	99.8 ug/kg*	07/23/12 06:28PM GRM
BUTYLBENZYLPHTHALATE	EPA 8270C	109 ug/kg DRY	92.5 ug/kg*	07/23/12 06:28PM GRM
3,3'-DICHLOROBENZIDINE	EPA 8270C	ND ug/kg DRY	106 ug/kg*	07/23/12 06:28PM GRM
BENZO(A)ANTHRACENE	EPA 8270C	135 ug/kg DRY	90.3 ug/kg*	07/23/12 06:28PM GRM
CHRYSENE	EPA 8270C	144 ug/kg DRY	86.4 ug/kg*	07/23/12 06:28PM GRM
BIS(2-ETHYLHEXYL)PHTHALATE	EPA 8270C	111 ug/kg DRY	76.6 ug/kg*	07/23/12 06:28PM GRM
DI-N-OCTYLPHTHALATE	EPA 8270C	ND ug/kg DRY	73.5 ug/kg*	07/23/12 06:28PM GRM
BENZO(B)FLUORANTHENE	EPA 8270C	ND ug/kg DRY	74.9 ug/kg*	07/23/12 06:28PM GRM
BENZO(K)FLUORANTHENE	EPA 8270C	169 ug/kg DRY	96.1 ug/kg*	07/23/12 06:28PM GRM
BENZO(A)PYRENE	EPA 8270C	172 ug/kg DRY	88.9 ug/kg*	07/23/12 06:28PM GRM
INDENO(1,2,3-CD)PYRENE	EPA 8270C	ND ug/kg DRY	86.6 ug/kg*	07/23/12 06:28PM GRM
DIBENZ(A,H)ANTHRACENE	EPA 8270C	ND ug/kg DRY	67.1 ug/kg*	07/23/12 06:28PM GRM
BENZO(G,H,I)PERYLENE	EPA 8270C	101 ug/kg DRY	81.6 ug/kg*	07/23/12 06:28PM GRM

Account No: SR0117, EASTSTAR ENVIRONMENTAL GROUP, INC. **P.O. No:** 1027-03 **Inv. No:** 1439415
Project No: SR0117, EASTSTAR ENVIRONMENTAL GROUP, INC. **PWSID No:**

Sample Number **Sample Description** **Samp. Date/Time/Temp** **Sampled by**
L4252798-4 BD-04R-17-19-016 SOIL 07/18/12 12:55pm NA F Customer
Received Date/Time/Temp 07/19/12 09:00pm 32.5 F **Iced (Y/N):** Y

Parameter	Method	Result	RLs	Test Date, Time, Analyst
GAS CHROMATOGRAPHY MASS SPECTROMETRY; VOLATILES				
DICHLORODIFLUOROMETHANE	EPA 8260B	ND ug/kg DRY	2.56 ug/kg*	07/24/12 03:56PM MHA
CHLOROMETHANE	EPA 8260B	ND ug/kg DRY	3.35 ug/kg*	07/24/12 03:56PM MHA
VINYL CHLORIDE	EPA 8260B	ND ug/kg DRY	3.29 ug/kg*	07/24/12 03:56PM MHA
BROMOMETHANE	EPA 8260B	ND ug/kg DRY	3.61 ug/kg*	07/24/12 03:56PM MHA
CHLOROETHANE	EPA 8260B	ND ug/kg DRY	2.24 ug/kg*	07/24/12 03:56PM MHA
TRICHLOROFLUOROMETHANE	EPA 8260B	ND ug/kg DRY	3.10 ug/kg*	07/24/12 03:56PM MHA
1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	EPA 8260B	ND ug/kg DRY	3.27 ug/kg*	07/24/12 03:56PM MHA
METHYL ACETATE	EPA 8260B	40.5 ug/kg DRY	3.04 ug/kg*	07/24/12 03:56PM MHA
1,1-DICHLOROETHENE	EPA 8260B	ND ug/kg DRY	3.18 ug/kg*	07/24/12 03:56PM MHA
ACETONE	EPA 8260B	31.6 ug/kg DRY	7.16 ug/kg*	07/24/12 03:56PM MHA
METHYLENE CHLORIDE	EPA 8260B	ND ug/kg DRY	4.29 ug/kg*	07/24/12 03:56PM MHA
TRANS-1,2-DICHLOROETHENE	EPA 8260B	ND ug/kg DRY	2.84 ug/kg*	07/24/12 03:56PM MHA
METHYL TERTIARY BUTYL ETHER	EPA 8260B	ND ug/kg DRY	2.44 ug/kg*	07/24/12 03:56PM MHA
1,1-DICHLOROETHANE	EPA 8260B	ND ug/kg DRY	2.98 ug/kg*	07/24/12 03:56PM MHA
2-BUTANONE	EPA 8260B	ND ug/kg DRY	5.34 ug/kg*	07/24/12 03:56PM MHA
BROMOCHLOROMETHANE	EPA 8260B	ND ug/kg DRY	2.78 ug/kg*	07/24/12 03:56PM MHA
CIS-1,2-DICHLOROETHENE	EPA 8260B	ND ug/kg DRY	2.16 ug/kg*	07/24/12 03:56PM MHA
CHLOROFORM	EPA 8260B	ND ug/kg DRY	2.41 ug/kg*	07/24/12 03:56PM MHA
1,1,1-TRICHLOROETHANE	EPA 8260B	ND ug/kg DRY	2.87 ug/kg*	07/24/12 03:56PM MHA
CYCLOHEXANE	EPA 8260B	ND ug/kg DRY	2.70 ug/kg*	07/24/12 03:56PM MHA
CARBON TETRACHLORIDE	EPA 8260B	ND ug/kg DRY	2.78 ug/kg*	07/24/12 03:56PM MHA
BENZENE	EPA 8260B	2.73 J ug/kg DRY	2.67 ug/kg*	07/24/12 03:56PM MHA
1,2-DICHLOROETHANE	EPA 8260B	ND ug/kg DRY	2.39 ug/kg*	07/24/12 03:56PM MHA
TRICHLOROETHENE	EPA 8260B	ND ug/kg DRY	3.55 ug/kg*	07/24/12 03:56PM MHA
METHYLCYCLOHEXANE	EPA 8260B	ND ug/kg DRY	3.38 ug/kg*	07/24/12 03:56PM MHA
1,2-DICHLOROPROPANE	EPA 8260B	ND ug/kg DRY	2.64 ug/kg*	07/24/12 03:56PM MHA
BROMODICHLOROMETHANE	EPA 8260B	ND ug/kg DRY	2.73 ug/kg*	07/24/12 03:56PM MHA
4-METHYL-2-PENTANONE	EPA 8260B	ND ug/kg DRY	4.80 ug/kg*	07/24/12 03:56PM MHA
CIS-1,3-DICHLOROPROPENE	EPA 8260B	ND ug/kg DRY	2.30 ug/kg*	07/24/12 03:56PM MHA
TOLUENE	EPA 8260B	ND ug/kg DRY	3.27 ug/kg*	07/24/12 03:56PM MHA
TRANS-1,3-DICHLOROPROPENE	EPA 8260B	ND ug/kg DRY	2.47 ug/kg*	07/24/12 03:56PM MHA
1,1,2-TRICHLOROETHANE	EPA 8260B	ND ug/kg DRY	2.81 ug/kg*	07/24/12 03:56PM MHA
2-HEXANONE	EPA 8260B	ND ug/kg DRY	5.57 ug/kg*	07/24/12 03:56PM MHA
TETRACHLOROETHENE	EPA 8260B	ND ug/kg DRY	3.10 ug/kg*	07/24/12 03:56PM MHA
DIBROMOCHLOROMETHANE	EPA 8260B	ND ug/kg DRY	2.10 ug/kg*	07/24/12 03:56PM MHA
1,2-DIBROMOETHANE	EPA 8260B	ND ug/kg DRY	2.50 ug/kg*	07/24/12 03:56PM MHA
CHLOROBENZENE	EPA 8260B	ND ug/kg DRY	2.84 ug/kg*	07/24/12 03:56PM MHA
ETHYL BENZENE	EPA 8260B	ND ug/kg DRY	3.24 ug/kg*	07/24/12 03:56PM MHA
M&P-XYLENES	EPA 8260B	ND ug/kg DRY	6.56 ug/kg*	07/24/12 03:56PM MHA
O-XYLENE	EPA 8260B	ND ug/kg DRY	2.64 ug/kg*	07/24/12 03:56PM MHA
STYRENE	EPA 8260B	ND ug/kg DRY	2.53 ug/kg*	07/24/12 03:56PM MHA
BROMOFORM	EPA 8260B	ND ug/kg DRY	2.05 ug/kg*	07/24/12 03:56PM MHA
1,1,2,2-TETRACHLOROETHANE	EPA 8260B	ND ug/kg DRY	2.61 ug/kg*	07/24/12 03:56PM MHA
ISOPROPYLBENZENE	EPA 8260B	ND ug/kg DRY	3.10 ug/kg*	07/24/12 03:56PM MHA
1,3-DICHLOROBENZENE	EPA 8260B	ND ug/kg DRY	3.12 ug/kg*	07/24/12 03:56PM MHA
1,4-DICHLOROBENZENE	EPA 8260B	ND ug/kg DRY	3.32 ug/kg*	07/24/12 03:56PM MHA
1,2-DICHLOROBENZENE	EPA 8260B	ND ug/kg DRY	2.78 ug/kg*	07/24/12 03:56PM MHA

Account No: SR0117, EASTSTAR ENVIRONMENTAL GROUP, INC. **P.O. No:** 1027-03 **Inv. No:** 1439415
Project No: SR0117, EASTSTAR ENVIRONMENTAL GROUP, INC. **PWSID No:**

Sample Number L4252798-4 **Sample Description** BD-04R-17-19-016 SOIL **Samp. Date/Time/Temp** 07/18/12 12:55pm NA F **Sampled by** Customer
Received Date/Time/Temp 07/19/12 09:00pm 32.5 F **Iced (Y/N):** Y

Parameter	Method	Result	RLs	Test Date, Time, Analyst
GAS CHROMATOGRAPHY MASS SPECTROMETRY; VOLATILES continued				
1,2-DIBROMO-3-CHLOROPROPANE	EPA 8260B	ND ug/kg DRY	3.04 ug/kg*	07/24/12 03:56PM MHA
1,2,4-TRICHLOROBENZENE	EPA 8260B	ND ug/kg DRY	3.78 ug/kg*	07/24/12 03:56PM MHA
1,2,3-TRICHLOROBENZENE	EPA 8260B	ND ug/kg DRY	4.89 ug/kg*	07/24/12 03:56PM MHA
1,4-DIOXANE	EPA 8260B	ND ug/kg DRY	122 ug/kg*	07/24/12 03:56PM MHA
CARBON DISULFIDE	EPA 8260B	1720 J ug/kg DRY	384 ug/kg*	07/26/12 06:34PM MHA
GAS CHROMATOGRAPHY				
TOTAL EPH	NJDEP EPH 10/08 REV3	202 mg/kg DRY	101 mg/kg	07/24/12 01:35PM RRS

Sample Number L4252798-5 **Sample Description** IS-01-6-8-017 SOIL **Samp. Date/Time/Temp** 07/19/12 08:00am NA F **Sampled by** Customer
Received Date/Time/Temp 07/19/12 09:00pm 32.5 F **Iced (Y/N):** Y

Parameter	Method	Result	RLs	Test Date, Time, Analyst
GENERAL CHEMISTRY				
CYANIDE, TOTAL	EPA 9010/9014	2850 mg/kg DRY	276 mg/kg	07/26/12 03:00PM JG
TOTAL SOLIDS PERCENT	SM 2540G	45.22 %	0.01000 %	07/26/12 09:30PM RCM
METALS				
SILVER	EPA 6010C	ND mg/kg DRY	0.175 mg/kg*	08/01/12 11:13AM PG
ALUMINUM	EPA 6010C	29200 mg/kg DRY	5.11 mg/kg*	08/01/12 11:13AM PG
ARSENIC	EPA 6010C	4.51 mg/kg DRY	1.75 mg/kg*	08/01/12 11:13AM PG
BARIUM	EPA 6010C	48.2 mg/kg DRY	0.0358 mg/kg*	08/01/12 11:13AM PG
BERYLLIUM	EPA 6010C	ND mg/kg DRY	0.00597 mg/kg*	08/01/12 11:13AM PG
CALCIUM	EPA 6010C	226000 mg/kg DRY	8.18 mg/kg*	08/01/12 11:13AM PG
CADMIUM	EPA 6010C	ND mg/kg DRY	0.0460 mg/kg*	08/01/12 11:13AM PG
COBALT	EPA 6010C	7.14 mg/kg DRY	0.0843 mg/kg*	08/01/12 11:13AM PG
CHROMIUM	EPA 6010C	38.0 mg/kg DRY	0.106 mg/kg*	08/01/12 11:13AM PG
COPPER	EPA 6010C	15.0 mg/kg DRY	0.261 mg/kg*	08/01/12 11:13AM PG
IRON	EPA 6010C	9690 mg/kg DRY	3.41 mg/kg*	08/01/12 11:13AM PG
POTASSIUM	EPA 6010C	294 mg/kg DRY	25.7 mg/kg*	08/01/12 11:13AM PG
MAGNESIUM	EPA 6010C	20700 mg/kg DRY	0.891 mg/kg*	08/01/12 11:13AM PG
MANGANESE	EPA 6010C	356 mg/kg DRY	0.0851 mg/kg*	08/01/12 11:13AM PG
SODIUM	EPA 6010C	2960 mg/kg DRY	10.4 mg/kg*	08/01/12 11:13AM PG
NICKEL	EPA 6010C	8.51 mg/kg DRY	0.143 mg/kg*	08/01/12 11:13AM PG
LEAD	EPA 6010C	20.7 mg/kg DRY	0.971 mg/kg*	08/01/12 11:13AM PG
ANTIMONY	EPA 6010C	ND mg/kg DRY	1.81 mg/kg*	08/01/12 11:13AM PG
SELENIUM	EPA 6010C	6.59 mg/kg DRY	0.745 mg/kg*	08/01/12 11:13AM PG
THALLIUM	EPA 6010C	ND mg/kg DRY	2.18 mg/kg*	08/01/12 11:13AM PG
VANADIUM	EPA 6010C	48.0 mg/kg DRY	0.109 mg/kg*	08/01/12 11:13AM PG
ZINC	EPA 6010C	36.9 mg/kg DRY	0.520 mg/kg*	08/01/12 11:13AM PG
MERCURY	EPA 7471B	0.261 mg/kg DRY	0.107 mg/kg*	07/27/12 01:00PM RMP

QC Laboratories

Analytical Report

Account No: SR0117, EASTSTAR ENVIRONMENTAL GROUP, INC. **P.O. No:** 027-03 **Inv. No:** 1439415
Project No: SR0117, EASTSTAR ENVIRONMENTAL GROUP, INC. **PWSID No:**

Sample Number **Sample Description** **Samp. Date/Time/Temp** **Sampled by**
L4252798-6 IS-01-11-13-018 SOIL 07/19/12 08:25am NA F Customer
Received Date/Time/Temp 07/19/12 09:00pm 32.5 F **Iced (Y/N):** Y

Parameter	Method	Result	RLs	Test Date, Time, Analyst
GENERAL CHEMISTRY				
CYANIDE, TOTAL	EPA 9010/9014	40.6 mg/kg DRY	10.5 mg/kg	07/26/12 03:00PM JG
TOTAL SOLIDS PERCENT	SM 2540G	47.69 %	0.01000 %	07/26/12 09:30PM RCM
METALS				
SILVER	EPA 6010C	ND mg/kg DRY	0.166 mg/kg*	08/01/12 11:17AM PG
ALUMINUM	EPA 6010C	20700 mg/kg DRY	4.84 mg/kg*	08/01/12 11:17AM PG
ARSENIC	EPA 6010C	17.6 mg/kg DRY	1.66 mg/kg*	08/01/12 11:17AM PG
BARIUM	EPA 6010C	42.1 mg/kg DRY	0.0340 mg/kg*	08/01/12 11:17AM PG
BERYLLIUM	EPA 6010C	0.956 mg/kg DRY	0.00566 mg/kg*	08/01/12 11:17AM PG
CALCIUM	EPA 6010C	6270 mg/kg DRY	7.76 mg/kg*	08/01/12 11:17AM PG
CADMIUM	EPA 6010C	ND mg/kg DRY	0.0436 mg/kg*	08/01/12 11:17AM PG
COBALT	EPA 6010C	13.3 mg/kg DRY	0.0799 mg/kg*	08/01/12 11:17AM PG
CHROMIUM	EPA 6010C	68.1 mg/kg DRY	0.101 mg/kg*	08/01/12 11:17AM PG
COPPER	EPA 6010C	13.4 mg/kg DRY	0.247 mg/kg*	08/01/12 11:17AM PG
IRON	EPA 6010C	44000 mg/kg DRY	3.23 mg/kg*	08/01/12 11:17AM PG
POTASSIUM	EPA 6010C	4840 mg/kg DRY	24.3 mg/kg*	08/01/12 11:17AM PG
MAGNESIUM	EPA 6010C	8510 mg/kg DRY	0.845 mg/kg*	08/01/12 11:17AM PG
MANGANESE	EPA 6010C	493 mg/kg DRY	0.0807 mg/kg*	08/01/12 11:17AM PG
SODIUM	EPA 6010C	8110 mg/kg DRY	9.86 mg/kg*	08/01/12 11:17AM PG
NICKEL	EPA 6010C	28.5 mg/kg DRY	0.135 mg/kg*	08/01/12 11:17AM PG
LEAD	EPA 6010C	11.7 mg/kg DRY	0.921 mg/kg*	08/01/12 11:17AM PG
ANTIMONY	EPA 6010C	ND mg/kg DRY	1.71 mg/kg*	08/01/12 11:17AM PG
SELENIUM	EPA 6010C	ND mg/kg DRY	0.707 mg/kg*	08/01/12 11:17AM PG
THALLIUM	EPA 6010C	ND mg/kg DRY	2.07 mg/kg*	08/01/12 11:17AM PG
VANADIUM	EPA 6010C	50.1 mg/kg DRY	0.104 mg/kg*	08/01/12 11:17AM PG
ZINC	EPA 6010C	137 mg/kg DRY	0.493 mg/kg*	08/01/12 11:17AM PG
MERCURY	EPA 7471B	ND mg/kg DRY	0.102 mg/kg*	07/27/12 01:02PM RMP
GAS CHROMATOGRAPHY MASS SPECTROMETRY; SEMI-VOLATILES				
NAPHTHALENE	EPA 8270C	ND ug/kg DRY	98.3 ug/kg*	07/23/12 06:53PM GRM
2-METHYLNAPHTHALENE	EPA 8270C	ND ug/kg DRY	80.1 ug/kg*	07/23/12 06:53PM GRM
ACENAPHTHYLENE	EPA 8270C	ND ug/kg DRY	70.9 ug/kg*	07/23/12 06:53PM GRM
ACENAPHTHENE	EPA 8270C	ND ug/kg DRY	87.2 ug/kg*	07/23/12 06:53PM GRM
FLUORENE	EPA 8270C	ND ug/kg DRY	62.3 ug/kg*	07/23/12 06:53PM GRM
PHENANTHRENE	EPA 8270C	ND ug/kg DRY	67.1 ug/kg*	07/23/12 06:53PM GRM
ANTHRACENE	EPA 8270C	ND ug/kg DRY	94.1 ug/kg*	07/23/12 06:53PM GRM
FLUORANTHENE	EPA 8270C	ND ug/kg DRY	61.0 ug/kg*	07/23/12 06:53PM GRM
PYRENE	EPA 8270C	ND ug/kg DRY	74.9 ug/kg*	07/23/12 06:53PM GRM
BENZO(A)ANTHRACENE	EPA 8270C	ND ug/kg DRY	67.7 ug/kg*	07/23/12 06:53PM GRM
CHRYSENE	EPA 8270C	ND ug/kg DRY	64.8 ug/kg*	07/23/12 06:53PM GRM
BENZO(B)FLUORANTHENE	EPA 8270C	ND ug/kg DRY	56.2 ug/kg*	07/23/12 06:53PM GRM
BENZO(K)FLUORANTHENE	EPA 8270C	ND ug/kg DRY	72.1 ug/kg*	07/23/12 06:53PM GRM
BENZO(A)PYRENE	EPA 8270C	ND ug/kg DRY	66.7 ug/kg*	07/23/12 06:53PM GRM
INDENO(1,2,3-CD)PYRENE	EPA 8270C	ND ug/kg DRY	65.0 ug/kg*	07/23/12 06:53PM GRM
DIBENZ(A,H)ANTHRACENE	EPA 8270C	ND ug/kg DRY	50.3 ug/kg*	07/23/12 06:53PM GRM
BENZO(G,H,I)PERYLENE	EPA 8270C	ND ug/kg DRY	61.2 ug/kg*	07/23/12 06:53PM GRM

QC Laboratories Analytical Report

Account No: SR0117, EASTSTAR ENVIRONMENTAL GROUP, INC. **P.O. No:** 027-03 **Inv. No:** 1439415
Project No: SR0117, EASTSTAR ENVIRONMENTAL GROUP, INC. **PWSID No:**

Sample Number L4252798-7 **Sample Description** ID-02-2-4-019 SOIL **Samp. Date/Time/Temp** 07/19/12 11:40am NA F **Sampled by** Customer
Received Date/Time/Temp 07/19/12 09:00pm 32.5 F **Iced (Y/N):** Y

Parameter	Method	Result	RLs	Test Date, Time, Analyst
GENERAL CHEMISTRY				
CYANIDE, TOTAL	EPA 9010/9014	190 mg/kg DRY	20.9 mg/kg	07/26/12 03:00PM JG
TOTAL SOLIDS PERCENT	SM 2540G	59.76 %	0.01000 %	07/26/12 09:30PM RCM
METALS				
SILVER	EPA 6010C	ND mg/kg DRY	0.132 mg/kg*	08/01/12 11:38AM PG
ALUMINUM	EPA 6010C	4330 mg/kg DRY	3.87 mg/kg*	08/01/12 11:38AM PG
ARSENIC	EPA 6010C	ND mg/kg DRY	1.32 mg/kg*	08/01/12 11:38AM PG
BARIUM	EPA 6010C	14.0 mg/kg DRY	0.0271 mg/kg*	08/01/12 11:38AM PG
BERYLLIUM	EPA 6010C	0.103 B mg/kg DRY	0.00452 mg/kg*	08/01/12 11:38AM PG
CADMIUM	EPA 6010C	ND mg/kg DRY	0.0348 mg/kg*	08/01/12 11:38AM PG
COBALT	EPA 6010C	3.56 mg/kg DRY	0.0638 mg/kg*	08/01/12 11:38AM PG
CHROMIUM	EPA 6010C	11.6 mg/kg DRY	0.0803 mg/kg*	08/01/12 11:38AM PG
COPPER	EPA 6010C	0.636 B mg/kg DRY	0.197 mg/kg*	08/01/12 11:38AM PG
IRON	EPA 6010C	2440 mg/kg DRY	2.58 mg/kg*	08/01/12 11:38AM PG
POTASSIUM	EPA 6010C	ND mg/kg DRY	19.4 mg/kg*	08/01/12 11:38AM PG
MAGNESIUM	EPA 6010C	111 mg/kg DRY	0.674 mg/kg*	08/01/12 11:38AM PG
MANGANESE	EPA 6010C	86.8 mg/kg DRY	0.0644 mg/kg*	08/01/12 11:38AM PG
SODIUM	EPA 6010C	634 mg/kg DRY	7.86 mg/kg*	08/01/12 11:38AM PG
NICKEL	EPA 6010C	4.55 mg/kg DRY	0.108 mg/kg*	08/01/12 11:38AM PG
LEAD	EPA 6010C	10.5 mg/kg DRY	0.735 mg/kg*	08/01/12 11:38AM PG
ANTIMONY	EPA 6010C	ND mg/kg DRY	1.37 mg/kg*	08/01/12 11:38AM PG
SELENIUM	EPA 6010C	4.69 mg/kg DRY	0.564 mg/kg*	08/01/12 11:38AM PG
THALLIUM	EPA 6010C	ND mg/kg DRY	1.65 mg/kg*	08/01/12 11:38AM PG
VANADIUM	EPA 6010C	14.4 mg/kg DRY	0.0828 mg/kg*	08/01/12 11:38AM PG
ZINC	EPA 6010C	4.30 mg/kg DRY	0.393 mg/kg*	08/01/12 11:38AM PG
CALCIUM	EPA 6010C	254000 mg/kg DRY	61.9 mg/kg*	08/01/12 11:46AM PG
MERCURY	EPA 7471B	ND mg/kg DRY	0.0813 mg/kg*	07/27/12 01:03PM RMP

Sample Number L4252798-8 **Sample Description** ID-02-14-16-020 SOIL **Samp. Date/Time/Temp** 07/19/12 12:40pm NA F **Sampled by** Customer
Received Date/Time/Temp 07/19/12 09:00pm 32.5 F **Iced (Y/N):** Y

Parameter	Method	Result	RLs	Test Date, Time, Analyst
GENERAL CHEMISTRY				
CYANIDE, TOTAL	EPA 9010/9014	530 mg/kg DRY	65.4 mg/kg	07/26/12 03:00PM JG
TOTAL SOLIDS PERCENT	SM 2540G	38.21 %	0.01000 %	07/26/12 09:30PM RCM
METALS				
SILVER	EPA 6010C	ND mg/kg DRY	0.207 mg/kg*	08/01/12 11:49AM PG
ALUMINUM	EPA 6010C	25200 mg/kg DRY	6.05 mg/kg*	08/01/12 11:49AM PG
ARSENIC	EPA 6010C	10.9 mg/kg DRY	2.07 mg/kg*	08/01/12 11:49AM PG
BARIUM	EPA 6010C	33.0 mg/kg DRY	0.0424 mg/kg*	08/01/12 11:49AM PG
BERYLLIUM	EPA 6010C	0.571 mg/kg DRY	0.00707 mg/kg*	08/01/12 11:49AM PG
CALCIUM	EPA 6010C	30600 mg/kg DRY	9.68 mg/kg*	08/01/12 11:49AM PG

Account No: SR0117, EASTSTAR ENVIRONMENTAL GROUP, INC. **P.O. No:** 1027-03 **Inv. No:** 1439415
Project No: SR0117, EASTSTAR ENVIRONMENTAL GROUP, INC. **PWSID No:**

Sample Number **Sample Description** **Samp. Date/Time/Temp** **Sampled by**
L4252798-8 ID-02-14-16-020 SOIL 07/19/12 12:40pm NA F Customer
Received Date/Time/Temp 07/19/12 09:00pm 32.5 F **Iced (Y/N):** Y

Parameter	Method	Result	RLs	Test Date, Time, Analyst
METALS continued				
CADMIUM	EPA 6010C	ND mg/kg DRY	0.0544 mg/kg*	08/01/12 11:49AM PG
COBALT	EPA 6010C	10.7 mg/kg DRY	0.0997 mg/kg*	08/01/12 11:49AM PG
CHROMIUM	EPA 6010C	29.8 mg/kg DRY	0.126 mg/kg*	08/01/12 11:49AM PG
COPPER	EPA 6010C	5.71 mg/kg DRY	0.309 mg/kg*	08/01/12 11:49AM PG
IRON	EPA 6010C	24400 mg/kg DRY	4.03 mg/kg*	08/01/12 11:49AM PG
POTASSIUM	EPA 6010C	4290 mg/kg DRY	30.4 mg/kg*	08/01/12 11:49AM PG
MAGNESIUM	EPA 6010C	7140 mg/kg DRY	1.05 mg/kg*	08/01/12 11:49AM PG
MANGANESE	EPA 6010C	142 mg/kg DRY	0.101 mg/kg*	08/01/12 11:49AM PG
SODIUM	EPA 6010C	15300 mg/kg DRY	12.3 mg/kg*	08/01/12 11:49AM PG
NICKEL	EPA 6010C	23.1 mg/kg DRY	0.169 mg/kg*	08/01/12 11:49AM PG
LEAD	EPA 6010C	15.8 mg/kg DRY	1.15 mg/kg*	08/01/12 11:49AM PG
ANTIMONY	EPA 6010C	ND mg/kg DRY	2.14 mg/kg*	08/01/12 11:49AM PG
SELENIUM	EPA 6010C	ND mg/kg DRY	0.882 mg/kg*	08/01/12 11:49AM PG
THALLIUM	EPA 6010C	ND mg/kg DRY	2.59 mg/kg*	08/01/12 11:49AM PG
VANADIUM	EPA 6010C	47.1 mg/kg DRY	0.130 mg/kg*	08/01/12 11:49AM PG
ZINC	EPA 6010C	55.2 mg/kg DRY	0.615 mg/kg*	08/01/12 11:49AM PG
MERCURY	EPA 7471B	ND mg/kg DRY	0.127 mg/kg*	07/27/12 01:05PM RMP
GAS CHROMATOGRAPHY MASS SPECTROMETRY; SEMI-VOLATILES				
NAPHTHALENE	EPA 8270C	ND ug/kg DRY	123 ug/kg*	07/23/12 07:18PM GRM
2-METHYLNAPHTHALENE	EPA 8270C	ND ug/kg DRY	100 ug/kg*	07/23/12 07:18PM GRM
ACENAPHTHYLENE	EPA 8270C	ND ug/kg DRY	88.5 ug/kg*	07/23/12 07:18PM GRM
ACENAPHTHENE	EPA 8270C	ND ug/kg DRY	109 ug/kg*	07/23/12 07:18PM GRM
FLUORENE	EPA 8270C	ND ug/kg DRY	77.7 ug/kg*	07/23/12 07:18PM GRM
PHENANTHRENE	EPA 8270C	ND ug/kg DRY	83.7 ug/kg*	07/23/12 07:18PM GRM
ANTHRACENE	EPA 8270C	ND ug/kg DRY	118 ug/kg*	07/23/12 07:18PM GRM
FLUORANTHENE	EPA 8270C	ND ug/kg DRY	76.2 ug/kg*	07/23/12 07:18PM GRM
PYRENE	EPA 8270C	ND ug/kg DRY	93.4 ug/kg*	07/23/12 07:18PM GRM
BENZO(A)ANTHRACENE	EPA 8270C	ND ug/kg DRY	84.5 ug/kg*	07/23/12 07:18PM GRM
CHRYSENE	EPA 8270C	ND ug/kg DRY	80.9 ug/kg*	07/23/12 07:18PM GRM
BENZO(B)FLUORANTHENE	EPA 8270C	ND ug/kg DRY	70.1 ug/kg*	07/23/12 07:18PM GRM
BENZO(K)FLUORANTHENE	EPA 8270C	ND ug/kg DRY	90.0 ug/kg*	07/23/12 07:18PM GRM
BENZO(A)PYRENE	EPA 8270C	ND ug/kg DRY	83.2 ug/kg*	07/23/12 07:18PM GRM
INDENO(1,2,3-CD)PYRENE	EPA 8270C	ND ug/kg DRY	81.1 ug/kg*	07/23/12 07:18PM GRM
DIBENZ(A,H)ANTHRACENE	EPA 8270C	ND ug/kg DRY	62.8 ug/kg*	07/23/12 07:18PM GRM
BENZO(G,H,I)PERYLENE	EPA 8270C	ND ug/kg DRY	76.4 ug/kg*	07/23/12 07:18PM GRM

L4252798-1 :

QUALIFIERS: For metals parameters;"B" indicates a value that is > than the MDL but < than the laboratory quantitation limit. For Organics parameters; "B"is when the compound is found in the blank as well as in the sample;"J"indicates a value that is > than the MDL but < than the lowest standard, it is also used to indicate that a compound is tentatively identified in a library search;"E"(estimated) is when a compound exceeded the calibration range;"N" presumptive evidence of a compound; "D" is when a dilution was required.

L4252798-3 :

QUALIFIERS: For metals parameters;"B" indicates a value that is > than the MDL but < than the laboratory quantitation limit. For Organics

parameters; "B"is when the compound is found in the blank as well as in the sample;"J"indicates a value that is > than the MDL but < than the lowest standard, it is also used to indicate that a compound is tentatively identified in a library search;"E"(estimated) is when a compound exceeded the calibration range;"N" presumptive evidence of a compound; "D" is when a dilution was required.

L4252798-4 :

QUALIFIERS: For metals parameters;"B" indicates a value that is > than the MDL but < than the laboratory quantitation limit. For Organics parameters; "B"is when the compound is found in the blank as well as in the sample;"J"indicates a value that is > than the MDL but < than the lowest standard, it is also used to indicate that a compound is tentatively identified in a library search;"E"(estimated) is when a compound exceeded the calibration range;"N" presumptive evidence of a compound; "D" is when a dilution was required.

L4252798-7 :

QUALIFIERS: For metals parameters;"B" indicates a value that is > than the MDL but < than the laboratory quantitation limit. For Organics parameters; "B"is when the compound is found in the blank as well as in the sample;"J"indicates a value that is > than the MDL but < than the lowest standard, it is also used to indicate that a compound is tentatively identified in a library search;"E"(estimated) is when a compound exceeded the calibration range;"N" presumptive evidence of a compound; "D" is when a dilution was required.

Pursuant to NJAC 7:26, Appendix A 1(E), unless otherwise noted, all sample holding times and preservation requirements were met.

Notes:

A result of "ND" indicates that the analyte tested was either not detected or the concentration was below the RLs.
Definitions: NEG=negative; POS=positive; COL=colonies; RLs=laboratory reporting limits; L/A=laboratory accident; TNTC= Too numerous to count; pres=presumptive
A result marked with "DRY" indicates that the result was calculated and reported on a dry weight basis.
MCL= EPA recommended "maximum contaminant level", PLs = Customer-specific permit limits.
The test results meet all requirements of NELAC unless otherwise specified.
The report shall not be reproduced except in full without the written consent of the laboratory.
Unless otherwise specified, the Environmental and Food Chemistry testing except Field Parameters were performed by QC Inc. located at 1205 Industrial Blvd., Southampton, PA 18966; Pharmaceutical, Dairy and Food Microbiological tests were performed by QC Inc. located at 702 Electronic Dr., Horsham, PA 19044.
QCL Accreditations: Southampton Div: EPA ID PA00018; NELAP ID's: PA 09-00131, NJ PA166, NY 11223
State ID's: CT PH-0768, DE PA-018, MD 206, SC 89021001; FDA Reg. # : 2515238
ACL Div: NELAP ID's: PA 68-335, NJ DE568; State ID's: DE 00011, MD 138; Wind Gap Div: State ID's: PA 48-01334, NJ PA001
E. Rutherford Div: State ID: NJ 02015; Vineland Div: State ID: NJ 06005; Reading Div: State ID: PA 06-03543
The reported results relate only to the samples.
All samples are collected as "grab" samples unless otherwise identified.

* - The "RLs" represents a reporting/quantitation limit. When an "*" is present in the column identified as the "RLs", it is being reported as a Method Detection Limit (MDL).

QC Laboratories

Analytical Report

ACCREDITED IN ACCORDANCE WITH nelac

Printed: 08/08/12 17:26

AL FREE
EASTSTAR ENVIRONMENTAL GROUP, INC.
10632 LITTLE PATUXENT PARKWAY
SUITE 106
COLUMBIA, MD 21044

Regarding:
AL FREE
EASTSTAR ENVIRONMENTAL GROUP, INC.
10632 LITTLE PATUXENT PARKWAY
SUITE 106
COLUMBIA, MD 21044

Account No: SR0117, EASTSTAR ENVIRONMENTAL GROUP, INC. **P.O. No:** **Inv. No:** 1440941
Project No: SR0117, EASTSTAR ENVIRONMENTAL GROUP, INC. **PWSID No:**

Sample Number	Sample Description	Samp. Date/Time/Temp	Sampled by
L4259528-1	RAHWAY ARCH SITE, ID-01-04-06-021 SOIL	07/23/12 08:25am NA F	Customer

Received Date/Time/Temp 07/25/12 07:50pm 32.4 F **Iced (Y/N):** Y

Parameter	Method	Result	RLs	Test Date, Time, Analyst
GENERAL CHEMISTRY				
CYANIDE, TOTAL	EPA 9010/9014	1120 mg/kg DRY	109 mg/kg	08/03/12 12:00PM JG
TOTAL SOLIDS PERCENT	SM 2540G	57.24 %	0.01000 %	07/31/12 03:45PM RCM
METALS				
SILVER	EPA 6010C	ND mg/kg DRY	0.138 mg/kg*	08/07/12 10:56AM PG
ALUMINUM	EPA 6010C	8860 mg/kg DRY	4.04 mg/kg*	08/07/12 10:56AM PG
ARSENIC	EPA 6010C	ND mg/kg DRY	1.38 mg/kg*	08/07/12 10:56AM PG
BARIUM	EPA 6010C	48.0 mg/kg DRY	0.0283 mg/kg*	08/07/12 10:56AM PG
BERYLLIUM	EPA 6010C	0.156 B mg/kg DRY	0.00472 mg/kg*	08/07/12 10:56AM PG
CADMIUM	EPA 6010C	ND mg/kg DRY	0.0363 mg/kg*	08/07/12 10:56AM PG
COBALT	EPA 6010C	2.57 mg/kg DRY	0.0666 mg/kg*	08/07/12 10:56AM PG
CHROMIUM	EPA 6010C	13.5 mg/kg DRY	0.0839 mg/kg*	08/07/12 10:56AM PG
COPPER	EPA 6010C	1.85 mg/kg DRY	0.206 mg/kg*	08/07/12 10:56AM PG
IRON	EPA 6010C	2150 mg/kg DRY	2.69 mg/kg*	08/07/12 10:56AM PG
POTASSIUM	EPA 6010C	166 mg/kg DRY	20.3 mg/kg*	08/07/12 10:56AM PG
MAGNESIUM	EPA 6010C	1040 mg/kg DRY	0.704 mg/kg*	08/07/12 10:56AM PG
MANGANESE	EPA 6010C	37.4 mg/kg DRY	0.0673 mg/kg*	08/07/12 10:56AM PG
SODIUM	EPA 6010C	1330 mg/kg DRY	8.21 mg/kg*	08/07/12 10:56AM PG
NICKEL	EPA 6010C	3.74 mg/kg DRY	0.113 mg/kg*	08/07/12 10:56AM PG
LEAD	EPA 6010C	11.0 mg/kg DRY	0.767 mg/kg*	08/07/12 10:56AM PG
ANTIMONY	EPA 6010C	ND mg/kg DRY	1.43 mg/kg*	08/07/12 10:56AM PG
SELENIUM	EPA 6010C	2.18 B mg/kg DRY	0.589 mg/kg*	08/07/12 10:56AM PG
THALLIUM	EPA 6010C	ND mg/kg DRY	1.73 mg/kg*	08/07/12 10:56AM PG
VANADIUM	EPA 6010C	14.8 mg/kg DRY	0.0865 mg/kg*	08/07/12 10:56AM PG
ZINC	EPA 6010C	4.21 mg/kg DRY	0.411 mg/kg*	08/07/12 10:56AM PG
CALCIUM	EPA 6010C	280000 mg/kg DRY	64.6 mg/kg*	08/07/12 11:03AM PG
MERCURY	EPA 7471B	ND mg/kg DRY	0.0169 mg/kg*	07/31/12 02:06PM RMP

Serial Number: 2302625

Authorized by: Oommen V. Kappil, QA Director

1205 Industrial Blvd., P.O. Box 514, Southampton, PA 18966-0514 Phone: 215-355-3900 Fax: 215-355-7231 www.qclaboratories.com

QC Laboratories

Analytical Report

Account No: SR0117, EASTSTAR ENVIRONMENTAL GROUP, INC. **P.O. No:** **Inv. No:** 1440941
Project No: SR0117, EASTSTAR ENVIRONMENTAL GROUP, INC. **PWSID No:**

Sample Number **Sample Description** **Samp. Date/Time/Temp** **Sampled by**
L4259528-2 ID-01-18-20-022 SOIL 07/23/12 09:45am NA F Customer
Received Date/Time/Temp 07/25/12 07:50pm 32.4 F **Iced (Y/N):** Y

Parameter	Method	Result	RLs	Test Date, Time, Analyst
GENERAL CHEMISTRY				
CYANIDE, TOTAL	EPA 9010/9014	210 mg/kg DRY	42.5 mg/kg	08/03/12 12:00PM JG
TOTAL SOLIDS PERCENT	SM 2540G	29.44 %	0.01000 %	07/31/12 03:45PM RCM
METALS				
SILVER	EPA 6010C	ND mg/kg DRY	0.268 mg/kg*	08/07/12 11:09AM PG
ALUMINUM	EPA 6010C	6830 mg/kg DRY	7.85 mg/kg*	08/07/12 11:09AM PG
ARSENIC	EPA 6010C	ND mg/kg DRY	2.69 mg/kg*	08/07/12 11:09AM PG
BARIUM	EPA 6010C	20.9 mg/kg DRY	0.0550 mg/kg*	08/07/12 11:09AM PG
BERYLLIUM	EPA 6010C	0.319 B mg/kg DRY	0.00917 mg/kg*	08/07/12 11:09AM PG
CALCIUM	EPA 6010C	58100 mg/kg DRY	12.6 mg/kg*	08/07/12 11:09AM PG
CADMIUM	EPA 6010C	ND mg/kg DRY	0.0707 mg/kg*	08/07/12 11:09AM PG
COBALT	EPA 6010C	4.99 mg/kg DRY	0.129 mg/kg*	08/07/12 11:09AM PG
CHROMIUM	EPA 6010C	12.9 mg/kg DRY	0.163 mg/kg*	08/07/12 11:09AM PG
COPPER	EPA 6010C	7.57 mg/kg DRY	0.401 mg/kg*	08/07/12 11:09AM PG
IRON	EPA 6010C	5880 mg/kg DRY	5.23 mg/kg*	08/07/12 11:09AM PG
POTASSIUM	EPA 6010C	1780 mg/kg DRY	39.4 mg/kg*	08/07/12 11:09AM PG
MAGNESIUM	EPA 6010C	4990 mg/kg DRY	1.37 mg/kg*	08/07/12 11:09AM PG
MANGANESE	EPA 6010C	46.2 mg/kg DRY	0.131 mg/kg*	08/07/12 11:09AM PG
SODIUM	EPA 6010C	20400 mg/kg DRY	16.0 mg/kg*	08/07/12 11:09AM PG
NICKEL	EPA 6010C	10.9 mg/kg DRY	0.219 mg/kg*	08/07/12 11:09AM PG
LEAD	EPA 6010C	12.7 mg/kg DRY	1.49 mg/kg*	08/07/12 11:09AM PG
ANTIMONY	EPA 6010C	ND mg/kg DRY	2.78 mg/kg*	08/07/12 11:09AM PG
SELENIUM	EPA 6010C	2.08 B mg/kg DRY	1.14 mg/kg*	08/07/12 11:09AM PG
THALLIUM	EPA 6010C	ND mg/kg DRY	3.36 mg/kg*	08/07/12 11:09AM PG
VANADIUM	EPA 6010C	22.7 mg/kg DRY	0.168 mg/kg*	08/07/12 11:09AM PG
ZINC	EPA 6010C	14.1 mg/kg DRY	0.798 mg/kg*	08/07/12 11:09AM PG
MERCURY	EPA 7471B	ND mg/kg DRY	0.165 mg/kg*	07/31/12 02:08PM RMP
GAS CHROMATOGRAPHY MASS SPECTROMETRY; SEMI-VOLATILES				
NAPHTHALENE	EPA 8270C	ND ug/kg DRY	1590 ug/kg*	07/27/12 11:31PM GRM
2-METHYLNAPHTHALENE	EPA 8270C	ND ug/kg DRY	1300 ug/kg*	07/27/12 11:31PM GRM
ACENAPHTHYLENE	EPA 8270C	ND ug/kg DRY	1150 ug/kg*	07/27/12 11:31PM GRM
ACENAPHTHENE	EPA 8270C	ND ug/kg DRY	1410 ug/kg*	07/27/12 11:31PM GRM
FLUORENE	EPA 8270C	ND ug/kg DRY	1010 ug/kg*	07/27/12 11:31PM GRM
PHENANTHRENE	EPA 8270C	ND ug/kg DRY	1090 ug/kg*	07/27/12 11:31PM GRM
ANTHRACENE	EPA 8270C	ND ug/kg DRY	1530 ug/kg*	07/27/12 11:31PM GRM
FLUORANTHENE	EPA 8270C	ND ug/kg DRY	988 ug/kg*	07/27/12 11:31PM GRM
PYRENE	EPA 8270C	ND ug/kg DRY	1210 ug/kg*	07/27/12 11:31PM GRM
BENZO(A)ANTHRACENE	EPA 8270C	ND ug/kg DRY	1100 ug/kg*	07/27/12 11:31PM GRM
CHRYSENE	EPA 8270C	ND ug/kg DRY	1050 ug/kg*	07/27/12 11:31PM GRM
BENZO(B)FLUORANTHENE	EPA 8270C	ND ug/kg DRY	910 ug/kg*	07/27/12 11:31PM GRM
BENZO(K)FLUORANTHENE	EPA 8270C	ND ug/kg DRY	1170 ug/kg*	07/27/12 11:31PM GRM
BENZO(A)PYRENE	EPA 8270C	ND ug/kg DRY	1080 ug/kg*	07/27/12 11:31PM GRM
INDENO(1,2,3-CD)PYRENE	EPA 8270C	ND ug/kg DRY	1050 ug/kg*	07/27/12 11:31PM GRM
DIBENZ(A,H)ANTHRACENE	EPA 8270C	ND ug/kg DRY	815 ug/kg*	07/27/12 11:31PM GRM
BENZO(G,H,I)PERYLENE	EPA 8270C	ND ug/kg DRY	992 ug/kg*	07/27/12 11:31PM GRM

Serial Number: 2302625

Authorized by: Oommen V. Kappil, QA Director

QC Laboratories

Analytical Report

Account No: SR0117, EASTSTAR ENVIRONMENTAL GROUP, INC. **P.O. No:** **Inv. No:** 1440941
Project No: SR0117, EASTSTAR ENVIRONMENTAL GROUP, INC. **PWSID No:**

Sample Number **Sample Description** **Samp. Date/Time/Temp** **Sampled by**
L4259528-3 ID-08-0-02-023 SOIL 07/24/12 10:15am NA F Customer
Received Date/Time/Temp 07/25/12 07:50pm 32.4 F **Iced (Y/N):** Y

Parameter	Method	Result	RLs	Test Date, Time, Analyst
GENERAL CHEMISTRY				
TOTAL SOLIDS PERCENT	SM 2540G	86.73 %	0.01000 %	07/31/12 03:45PM RCM
METALS				
SILVER	EPA 6010C	ND mg/kg DRY	0.0911 mg/kg*	08/07/12 11:13AM PG
ALUMINUM	EPA 6010C	10700 mg/kg DRY	2.66 mg/kg*	08/07/12 11:13AM PG
ARSENIC	EPA 6010C	48.5 mg/kg DRY	0.912 mg/kg*	08/07/12 11:13AM PG
BARIUM	EPA 6010C	63.0 mg/kg DRY	0.0187 mg/kg*	08/07/12 11:13AM PG
BERYLLIUM	EPA 6010C	0.382 mg/kg DRY	0.00311 mg/kg*	08/07/12 11:13AM PG
CALCIUM	EPA 6010C	13300 mg/kg DRY	4.27 mg/kg*	08/07/12 11:13AM PG
CADMIUM	EPA 6010C	ND mg/kg DRY	0.0240 mg/kg*	08/07/12 11:13AM PG
COBALT	EPA 6010C	7.89 mg/kg DRY	0.0439 mg/kg*	08/07/12 11:13AM PG
CHROMIUM	EPA 6010C	19.9 mg/kg DRY	0.0553 mg/kg*	08/07/12 11:13AM PG
COPPER	EPA 6010C	28.4 mg/kg DRY	0.136 mg/kg*	08/07/12 11:13AM PG
IRON	EPA 6010C	18100 mg/kg DRY	1.78 mg/kg*	08/07/12 11:13AM PG
POTASSIUM	EPA 6010C	1380 mg/kg DRY	13.4 mg/kg*	08/07/12 11:13AM PG
MAGNESIUM	EPA 6010C	4930 mg/kg DRY	0.465 mg/kg*	08/07/12 11:13AM PG
MANGANESE	EPA 6010C	294 mg/kg DRY	0.0444 mg/kg*	08/07/12 11:13AM PG
SODIUM	EPA 6010C	534 mg/kg DRY	5.42 mg/kg*	08/07/12 11:13AM PG
NICKEL	EPA 6010C	15.6 mg/kg DRY	0.0745 mg/kg*	08/07/12 11:13AM PG
LEAD	EPA 6010C	45.8 mg/kg DRY	0.506 mg/kg*	08/07/12 11:13AM PG
ANTIMONY	EPA 6010C	0.956 B mg/kg DRY	0.942 mg/kg*	08/07/12 11:13AM PG
SELENIUM	EPA 6010C	ND mg/kg DRY	0.389 mg/kg*	08/07/12 11:13AM PG
THALLIUM	EPA 6010C	ND mg/kg DRY	1.14 mg/kg*	08/07/12 11:13AM PG
VANADIUM	EPA 6010C	39.1 mg/kg DRY	0.0571 mg/kg*	08/07/12 11:13AM PG
ZINC	EPA 6010C	68.4 mg/kg DRY	0.271 mg/kg*	08/07/12 11:13AM PG
MERCURY	EPA 7471B	0.0605 B mg/kg DRY	0.0560 mg/kg*	07/31/12 02:10PM RMP
GAS CHROMATOGRAPHY MASS SPECTROMETRY; SEMI-VOLATILES				
BENZO(B)FLUORANTHENE	EPA 8270C	1030 J ug/kg DRY	618 ug/kg*	08/01/12 07:56PM GRM
BENZO(K)FLUORANTHENE	EPA 8270C	800. J ug/kg DRY	793 ug/kg*	08/01/12 07:56PM GRM
BENZO(A)PYRENE	EPA 8270C	1030 J ug/kg DRY	733 ug/kg*	08/01/12 07:56PM GRM
INDENO(1,2,3-CD)PYRENE	EPA 8270C	ND ug/kg DRY	715 ug/kg*	08/01/12 07:56PM GRM
DIBENZ(A,H)ANTHRACENE	EPA 8270C	ND ug/kg DRY	553 ug/kg*	08/01/12 07:56PM GRM
BENZO(G,H,I)PERYLENE	EPA 8270C	ND ug/kg DRY	673 ug/kg*	08/01/12 07:56PM GRM
NAPHTHALENE	EPA 8270C	ND ug/kg DRY	541 ug/kg*	08/03/12 06:20PM MDJ
2-METHYLNAPHTHALENE	EPA 8270C	ND ug/kg DRY	440 ug/kg*	08/03/12 06:20PM MDJ
ACENAPHTHYLENE	EPA 8270C	ND ug/kg DRY	390 ug/kg*	08/03/12 06:20PM MDJ
ACENAPHTHENE	EPA 8270C	ND ug/kg DRY	480 ug/kg*	08/03/12 06:20PM MDJ
FLUORENE	EPA 8270C	ND ug/kg DRY	342 ug/kg*	08/03/12 06:20PM MDJ
PHENANTHRENE	EPA 8270C	1110 J ug/kg DRY	369 ug/kg*	08/03/12 06:20PM MDJ
ANTHRACENE	EPA 8270C	ND ug/kg DRY	518 ug/kg*	08/03/12 06:20PM MDJ
FLUORANTHENE	EPA 8270C	1950 J ug/kg DRY	336 ug/kg*	08/03/12 06:20PM MDJ
PYRENE	EPA 8270C	2080 J ug/kg DRY	412 ug/kg*	08/03/12 06:20PM MDJ
BENZO(A)ANTHRACENE	EPA 8270C	1000 J ug/kg DRY	372 ug/kg*	08/03/12 06:20PM MDJ
CHRYSENE	EPA 8270C	967. J ug/kg DRY	356 ug/kg*	08/03/12 06:20PM MDJ

Serial Number: 2302625

Authorized by: Oommen V. Kappil, QA Director

QC Laboratories

Analytical Report

Account No: SR0117, EASTSTAR ENVIRONMENTAL GROUP, INC. **P.O. No:** **Inv. No:** 1440941
Project No: SR0117, EASTSTAR ENVIRONMENTAL GROUP, INC. **PWSID No:**

Sample Number **Sample Description** **Samp. Date/Time/Temp** **Sampled by**
L4259528-4 ID-05-08-10-024 SOIL 07/24/12 11:05am NA F Customer
Received Date/Time/Temp 07/25/12 07:50pm 32.4 F **Iced (Y/N):** Y

Parameter	Method	Result	RLs	Test Date, Time, Analyst
GENERAL CHEMISTRY				
CYANIDE, TOTAL	EPA 9010/9014	69.8 mg/kg DRY	15.3 mg/kg	08/03/12 12:00PM JG
TOTAL SOLIDS PERCENT	SM 2540G	32.71 %	0.01000 %	07/31/12 03:45PM RCM
METALS				
SILVER	EPA 6010C	ND mg/kg DRY	0.242 mg/kg*	08/07/12 11:18AM PG
ALUMINUM	EPA 6010C	13800 mg/kg DRY	7.06 mg/kg*	08/07/12 11:18AM PG
ARSENIC	EPA 6010C	12.7 mg/kg DRY	2.42 mg/kg*	08/07/12 11:18AM PG
BARIUM	EPA 6010C	74.9 mg/kg DRY	0.0495 mg/kg*	08/07/12 11:18AM PG
BERYLLIUM	EPA 6010C	0.648 mg/kg DRY	0.00825 mg/kg*	08/07/12 11:18AM PG
CALCIUM	EPA 6010C	7210 mg/kg DRY	11.3 mg/kg*	08/07/12 11:18AM PG
CADMIUM	EPA 6010C	ND mg/kg DRY	0.0636 mg/kg*	08/07/12 11:18AM PG
COBALT	EPA 6010C	9.48 mg/kg DRY	0.116 mg/kg*	08/07/12 11:18AM PG
CHROMIUM	EPA 6010C	30.4 mg/kg DRY	0.147 mg/kg*	08/07/12 11:18AM PG
COPPER	EPA 6010C	70.9 mg/kg DRY	0.361 mg/kg*	08/07/12 11:18AM PG
IRON	EPA 6010C	27800 mg/kg DRY	4.71 mg/kg*	08/07/12 11:18AM PG
POTASSIUM	EPA 6010C	3180 mg/kg DRY	35.5 mg/kg*	08/07/12 11:18AM PG
MAGNESIUM	EPA 6010C	5530 mg/kg DRY	1.23 mg/kg*	08/07/12 11:18AM PG
MANGANESE	EPA 6010C	260 mg/kg DRY	0.118 mg/kg*	08/07/12 11:18AM PG
SODIUM	EPA 6010C	11000 mg/kg DRY	14.4 mg/kg*	08/07/12 11:18AM PG
NICKEL	EPA 6010C	31.2 mg/kg DRY	0.197 mg/kg*	08/07/12 11:18AM PG
LEAD	EPA 6010C	40.7 mg/kg DRY	1.34 mg/kg*	08/07/12 11:18AM PG
ANTIMONY	EPA 6010C	ND mg/kg DRY	2.50 mg/kg*	08/07/12 11:18AM PG
SELENIUM	EPA 6010C	ND mg/kg DRY	1.03 mg/kg*	08/07/12 11:18AM PG
THALLIUM	EPA 6010C	ND mg/kg DRY	3.02 mg/kg*	08/07/12 11:18AM PG
VANADIUM	EPA 6010C	41.9 mg/kg DRY	0.151 mg/kg*	08/07/12 11:18AM PG
ZINC	EPA 6010C	138 mg/kg DRY	0.718 mg/kg*	08/07/12 11:18AM PG
MERCURY	EPA 7471B	0.495 mg/kg DRY	0.149 mg/kg*	07/31/12 02:11PM RMP
GAS CHROMATOGRAPHY				
TOTAL PETROLEUM HYDROCARBONS	NJOQA QAM-025	51.4 J mg/kg DRY	17.9 mg/kg*	07/30/12 05:32PM AJG

L4259528-1 :

QUALIFIERS: For metals parameters;"B" indicates a value that is > than the MDL but < than the laboratory quantitation limit. For Organics parameters; "B"is when the compound is found in the blank as well as in the sample;"J"indicates a value that is > than the MDL but < than the lowest standard, it is also used to indicate that a compound is tentatively identified in a library search;"E"(estimated) is when a compound exceeded the calibration range;"N" presumptive evidence of a compound; "D" is when a dilution was required.

L4259528-2 :

QUALIFIERS: For metals parameters;"B" indicates a value that is > than the MDL but < than the laboratory quantitation limit. For Organics parameters; "B"is when the compound is found in the blank as well as in the sample;"J"indicates a value that is > than the MDL but < than the lowest standard, it is also used to indicate that a compound is tentatively identified in a library search;"E"(estimated) is when a compound exceeded the calibration range;"N" presumptive evidence of a compound; "D" is when a dilution was required.

Serial Number: 2302625

Authorized by: Oommen V. Kappil, QA Director

Account No: SR0117, EASTSTAR ENVIRONMENTAL GROUP, INC. **P.O. No:** **Inv. No:** 1440941
Project No: SR0117, EASTSTAR ENVIRONMENTAL GROUP, INC. **PWSID No:**

L4259528-3 :

QUALIFIERS: For metals parameters;"B" indicates a value that is > than the MDL but < than the laboratory quantitation limit. For Organics parameters; "B"is when the compound is found in the blank as well as in the sample;"J"indicates a value that is > than the MDL but < than the lowest standard, it is also used to indicate that a compound is tentatively identified in a library search;"E"(estimated) is when a compound exceeded the calibration range;"N" presumptive evidence of a compound; "D" is when a dilution was required.
For the 8270 PAH fraction, the surrogate terphenyl d14 (128%) was recovered above the laboratory control limit (50% to 126%).

For the 8270C fraction, a dilution was required to be performed on this sample because of the sample matrix and/or interferences by nontarget compounds. The surrogate recoveries may have been impacted. The RLs have been adjusted to reflect the dilution.

L4259528-4 :

QUALIFIERS: For metals parameters;"B" indicates a value that is > than the MDL but < than the laboratory quantitation limit. For Organics parameters; "B"is when the compound is found in the blank as well as in the sample;"J"indicates a value that is > than the MDL but < than the lowest standard, it is also used to indicate that a compound is tentatively identified in a library search;"E"(estimated) is when a compound exceeded the calibration range;"N" presumptive evidence of a compound; "D" is when a dilution was required.
For QAM025, "J" indicates a value that is > the RL but < the lowest standard.

Notes:

A result of "ND" indicates that the analyte tested was either not detected or the concentration was below the RLs.
Definitions: NEG=negative; POS=positive; COL=colonies; RLs=laboratory reporting limits; L/A=laboratory accident; TNTC= Too numerous to count; pres=presumptive
A result marked with "DRY" indicates that the result was calculated and reported on a dry weight basis.
MCL= EPA recommended "maximum contaminant level", PLs = Customer-specific permit limits.
The test results meet all requirements of NELAC unless otherwise specified.
The report shall not be reproduced except in full without the written consent of the laboratory.
Unless otherwise specified, the Environmental and Food Chemistry testing except Field Parameters were performed by QC Inc. located at 1205 Industrial Blvd., Southampton, PA 18966; Pharmaceutical, Dairy and Food Microbiological tests were performed by QC Inc. located at 702 Electronic Dr., Horsham, PA 19044.
QCL Accreditations: Southampton Div: EPA ID PA00018; NELAP ID's: PA 09-00131, NJ PA166, NY 11223 State ID's: CT PH-0768, DE PA-018, MD 206, SC 89021001; FDA Reg. # : 2515238
ACL Div: NELAP ID's: PA 68-335, NJ DE568; State ID's: DE 00011, MD 138; Wind Gap Div: State ID's: PA 48-01334, NJ PA001
E. Rutherford Div: State ID: NJ 02015; Vineland Div: State ID: NJ 06005; Reading Div: State ID: PA 06-03543
The reported results relate only to the samples.
All samples are collected as "grab" samples unless otherwise identified.

* - The "RLs" represents a reporting/quantitation limit. When an "*" is present in the column identified as the "RLs", it is being reported as a Method Detection Limit (MDL).

Serial Number: 2302625

Authorized by: Oommen V. Kappil, QA Director

QC Laboratories

1205 Industrial Blvd.
Southampton, PA 18966-0514
Phone: 215-355-3900
Fax: 215-355-7231

CHAIN OF CUSTODY

Page 1 of 1

Lab LIMS No: L42595 28

LAB USE ONLY:

___ Ascorbic/HCl Vials # ___ HCl Vials
___ $Na_2S_2O_3$ ___
___ Na OH/Zn acetate pH ___
___ HNO_3 pH ___
___ H_2SO_4 pH ___
___ NaOH pH ___
10 Unpreserved 4-250gl, 4-Split, MS
___ Hcl pH
___ Temp control 32.4 ID# QCCM12

MATRIX CODES

DW: DRINKING WATER
GW: GROUND WATER
WW: WASTEWATER
SO: SOIL
SL: SLUDGE
OIL: OIL
SOL: NON SOIL SOLID
MI: MISCELLANEOUS
X: OTHER

Client/Acct. No. ___ Bill to/Report to: (if different) ___

Address 10632 Little Patuxent Parkway — Sampling Site Address: (if different) Parkway Arch Site

City/State/Zip Columbia MD 21044

Phone/Fax 410 290-8777 — P.O. No. ___

Client Contact Al Frue — QC Contact ___

LAB USE ONLY

PROJECT / FIELD ID	Collection Date	Collection Military Time	GRAB	COMP	Matrix Code	Number of Containers Total	H_2SO_4	HCl	Vials	HNO_3	NaOH	ZnAc	Unpres	Bact	ANALYSIS REQUESTED	Field pH, Temp (C or F), DO, Cl_2, S. Cond. etc.
ID-01-04-06-021	7/23	08:25			SO	1									TAL Metals, Cyanide	
ID-01-18-20-022	7/23	09:45			SO	2									TAL Metals, Cyanide, PAH	
BS-05-0-02-023	7/24	10:15			SO	1									TAL Metals, PAH	
BS-05-08-10-024	7/24	11:05			SO	2									TAL Metals, Cyanide, Pct. Hydro	

SAMPLED BY: (Name/Company)

Verbal/fax data due: ___/___/___
Hardcopy due: ___/___/___

Report Format: ☐ Standard ☐ Forms ☐ Standard + QC ☐ NJ Reduced ☐ Disk

Please call for pricing and availability on rush (<14-21 day) turnaround and on all but standard format.

Field Parameters Analyzed By:
Sig: ___ Date/Time: ___

SAMPLE CUSTODY EXCHANGES MUST BE DOCUMENTED BELOW. USE FULL LEGAL SIGNATURE, DATE AND MILITARY TIME (24 HOUR CLOCK, I.E. 8AM IS 0800, 4 PM IS 1600)

	RELINQUISHED BY	DATE	TIME	RECEIVED BY	DATE	TIME
1	[signature] SAMPLER	7/25/12	3:49	[signature]	7/25/12	1549
2	[signature]	7/25/12	1630	[signature] CQA1625	7/25/12	1630
3	[signature] C&S	7/25/12	1950	[signature] Murdu	7/25/12	1950
4		DATE 7/25/12	TIME			
5						

DELIVERY METHOD: ☐ QC COURIER ☐ CLIENT ☐ UPS ☐ FEDEX ☐ OTHER ___

Custody Seal Number 7/25/12

COMMENTS:

Hazardous: yes / no 3978 IA 1 MS/MSD

For example to aid completion, see reverse side.

FINAL REPORT

QC LABORATORIES
FIELD SERVICE REQUEST FORM
Jul 24 2012, 12:09 pm

AL FREE
EASTSTAR ENVIRONMENTAL GROUP, INC.
10632 LITTLE PATUXENT PARKWAY
SUITE 106
COLUMBIA, MD 21044
Primary Driver: DAL

Project No.: SR0117
Phone: (410)290-8777
Fax: (410)290-9055
Cell: ( ) -

Service Date: 07/25/12 3:00-4:00 ***REVISED To 07/25/12

PICK-UP

Delivery Charge:

Day of Week: WED

Sampling Instructions:

Contact: AL FREE 240-381-6520

Bottle Prep:

Rush Samples: Josh 443-618-3381

Service to be performed at:

OFF EXIT 12
RAHWAY
CARTERET, NJ

PICK UP SAMPLES WEDNESDAY BETWEEN 2:00-3:00 AT THE RAHWAY SITE. THANKS!!

Requested by: Ronald M. Milke Ext:
Entry date: 07/24/12 12:09PM

Call received: 07/24/12 12:08PM

Field Service Request No.: FS177499 07241208
Service Time: 10 minutes
Equip Code: PU

QC Laboratories

1205 Industrial Highway, Southampton, PA 18966

EAST RUTHERFORD

Inter-Laboratory Transport Form: ER072512

SOUTHAMPTON

Coolers for Transport **from EAST RUTHERFORD**

To be completed by person sealing coolers					Complete Section Upon Delivery	
Cooler ID No.	Custody Seal No.	Date	Time	Initials	Temp °F	Iced Y/N
222	072512-1	7/25/12	1700	CA	32.6	Yes
1	072512-2	7/25/12	1700	CA	33.6	Yes
~~F23181~~	MICRO	7/25/12	1700	CA CW 7/25/12	~~32.1~~ 48.8	Yes
C25.1	072512-3	7/25/12	1700	DH	32.4	Yes
16 in	072512-4	7/25/12	1700	FB	39.1	Yes
432+	MICRO	7-25-12	1700	AS	42.9	Yes
621	7/25/12	7/25/12	1700	RS2	34.8	Yes
Box #2	Pb + Cu	7-25-12	1700	AS	57.2	NO

CW 7-25-12

Please Note the Following:

Individual sample chains of custody must accompany this form.

Once a cooler is sealed, custody seals may not be broken until samples are received at the designated QCL laboratory.

Laboratory use only

Custody Seals intact upon receipt? (Y) N Initials: CB

List ID of any seal found broken upon receipt below:

A full legal signature is required. Record all times in military time (24-HR Clock; 4:00 PM=1600)

Relinquished by:	Date:	Time:		Received by:	Date:	Time:
Christine Auger	7/25/12	1700		RA	7-25-12	1700
Relinquished by:	Date:	Time:		Received by:	Date:	Time:
RA	7-25-12	1950		Sara Bruno	7/25/12	1950
Relinquished by:	Date:	Time:		Received by:	Date:	Time:
Relinquished by:	Date:	Time:		Received by:	Date:	Time:

QC Laboratories

Analytical Report

ACCREDITED IN ACCORDANCE WITH nelac

Printed: 08/10/12 15:45

AL FREE
EASTSTAR ENVIRONMENTAL GROUP, INC.
10632 LITTLE PATUXENT PARKWAY
SUITE 106
COLUMBIA, MD 21044

Regarding:
AL FREE
EASTSTAR ENVIRONMENTAL GROUP, INC.
10632 LITTLE PATUXENT PARKWAY
SUITE 106
COLUMBIA, MD 21044

Account No: SR0117, EASTSTAR ENVIRONMENTAL GROUP, INC. **P.O. No:** **Inv. No:** 1440941
Project No: SR0117, EASTSTAR ENVIRONMENTAL GROUP, INC. **PWSID No:**

Sample Number **Sample Description** **Samp. Date/Time/Temp** **Sampled by**
L4259528-1 RAHWAY ARCH SITE, ID-01-04-06-021 SOIL 07/23/12 08:25am NA F Customer
Received Date/Time/Temp 07/25/12 07:50pm 32.4 F **Iced (Y/N):** Y

Parameter	Method	Result	RLs	Test Date, Time, Analyst
GENERAL CHEMISTRY				
CYANIDE, TOTAL	EPA 9010/9014	1120 mg/kg DRY	109 mg/kg	08/03/12 12:00PM JG
TOTAL SOLIDS PERCENT	SM 2540G	57.24 %	0.01000 %	07/31/12 03:45PM RCM
METALS				
SILVER	EPA 6010C	ND mg/kg DRY	0.138 mg/kg*	08/07/12 10:56AM PG
ALUMINUM	EPA 6010C	8860 mg/kg DRY	4.04 mg/kg*	08/07/12 10:56AM PG
ARSENIC	EPA 6010C	ND mg/kg DRY	1.38 mg/kg*	08/07/12 10:56AM PG
BARIUM	EPA 6010C	48.0 mg/kg DRY	0.0283 mg/kg*	08/07/12 10:56AM PG
BERYLLIUM	EPA 6010C	0.156 B mg/kg DRY	0.00472 mg/kg*	08/07/12 10:56AM PG
CADMIUM	EPA 6010C	ND mg/kg DRY	0.0363 mg/kg*	08/07/12 10:56AM PG
COBALT	EPA 6010C	2.57 mg/kg DRY	0.0666 mg/kg*	08/07/12 10:56AM PG
CHROMIUM	EPA 6010C	13.5 mg/kg DRY	0.0839 mg/kg*	08/07/12 10:56AM PG
COPPER	EPA 6010C	1.85 mg/kg DRY	0.206 mg/kg*	08/07/12 10:56AM PG
IRON	EPA 6010C	2150 mg/kg DRY	2.69 mg/kg*	08/07/12 10:56AM PG
POTASSIUM	EPA 6010C	166 mg/kg DRY	20.3 mg/kg*	08/07/12 10:56AM PG
MAGNESIUM	EPA 6010C	1040 mg/kg DRY	0.704 mg/kg*	08/07/12 10:56AM PG
MANGANESE	EPA 6010C	37.4 mg/kg DRY	0.0673 mg/kg*	08/07/12 10:56AM PG
SODIUM	EPA 6010C	1330 mg/kg DRY	8.21 mg/kg*	08/07/12 10:56AM PG
NICKEL	EPA 6010C	3.74 mg/kg DRY	0.113 mg/kg*	08/07/12 10:56AM PG
LEAD	EPA 6010C	11.0 mg/kg DRY	0.767 mg/kg*	08/07/12 10:56AM PG
ANTIMONY	EPA 6010C	ND mg/kg DRY	1.43 mg/kg*	08/07/12 10:56AM PG
SELENIUM	EPA 6010C	2.18 B mg/kg DRY	0.589 mg/kg*	08/07/12 10:56AM PG
THALLIUM	EPA 6010C	ND mg/kg DRY	1.73 mg/kg*	08/07/12 10:56AM PG
VANADIUM	EPA 6010C	14.8 mg/kg DRY	0.0865 mg/kg*	08/07/12 10:56AM PG
ZINC	EPA 6010C	4.21 mg/kg DRY	0.411 mg/kg*	08/07/12 10:56AM PG
CALCIUM	EPA 6010C	280000 mg/kg DRY	64.6 mg/kg*	08/07/12 11:03AM PG
MERCURY	EPA 7471B	ND mg/kg DRY	0.0169 mg/kg*	07/31/12 02:06PM RMP

This report is a revision of report number 2302625
Serial Number: 2306425

Authorized by: Oommen V. Kappil, QA Director

1205 Industrial Blvd., P.O. Box 514, Southampton, PA 18966-0514 Phone: 215-355-3900 Fax: 215-355-7231 www.qclaboratories.com

QC Laboratories

Analytical Report

Account No: SR0117, EASTSTAR ENVIRONMENTAL GROUP, INC. **P.O. No:** **Inv. No:** 1440941
Project No: SR0117, EASTSTAR ENVIRONMENTAL GROUP, INC. **PWSID No:**

Sample Number **Sample Description** **Samp. Date/Time/Temp** **Sampled by**
L4259528-2 ID-01-18-20-022 SOIL 07/23/12 09:45am NA F Customer
Received Date/Time/Temp 07/25/12 07:50pm 32.4 F **Iced (Y/N):** Y

Parameter	Method	Result	RLs	Test Date, Time, Analyst
GENERAL CHEMISTRY				
CYANIDE, TOTAL	EPA 9010/9014	210 mg/kg DRY	42.5 mg/kg	08/03/12 12:00PM JG
TOTAL SOLIDS PERCENT	SM 2540G	29.44 %	0.01000 %	07/31/12 03:45PM RCM
METALS				
SILVER	EPA 6010C	ND mg/kg DRY	0.268 mg/kg*	08/07/12 11:09AM PG
ALUMINUM	EPA 6010C	6830 mg/kg DRY	7.85 mg/kg*	08/07/12 11:09AM PG
ARSENIC	EPA 6010C	ND mg/kg DRY	2.69 mg/kg*	08/07/12 11:09AM PG
BARIUM	EPA 6010C	20.9 mg/kg DRY	0.0550 mg/kg*	08/07/12 11:09AM PG
BERYLLIUM	EPA 6010C	0.319 B mg/kg DRY	0.00917 mg/kg*	08/07/12 11:09AM PG
CALCIUM	EPA 6010C	58100 mg/kg DRY	12.6 mg/kg*	08/07/12 11:09AM PG
CADMIUM	EPA 6010C	ND mg/kg DRY	0.0707 mg/kg*	08/07/12 11:09AM PG
COBALT	EPA 6010C	4.99 mg/kg DRY	0.129 mg/kg*	08/07/12 11:09AM PG
CHROMIUM	EPA 6010C	12.9 mg/kg DRY	0.163 mg/kg*	08/07/12 11:09AM PG
COPPER	EPA 6010C	7.57 mg/kg DRY	0.401 mg/kg*	08/07/12 11:09AM PG
IRON	EPA 6010C	5880 mg/kg DRY	5.23 mg/kg*	08/07/12 11:09AM PG
POTASSIUM	EPA 6010C	1780 mg/kg DRY	39.4 mg/kg*	08/07/12 11:09AM PG
MAGNESIUM	EPA 6010C	4990 mg/kg DRY	1.37 mg/kg*	08/07/12 11:09AM PG
MANGANESE	EPA 6010C	46.2 mg/kg DRY	0.131 mg/kg*	08/07/12 11:09AM PG
SODIUM	EPA 6010C	20400 mg/kg DRY	16.0 mg/kg*	08/07/12 11:09AM PG
NICKEL	EPA 6010C	10.9 mg/kg DRY	0.219 mg/kg*	08/07/12 11:09AM PG
LEAD	EPA 6010C	12.7 mg/kg DRY	1.49 mg/kg*	08/07/12 11:09AM PG
ANTIMONY	EPA 6010C	ND mg/kg DRY	2.78 mg/kg*	08/07/12 11:09AM PG
SELENIUM	EPA 6010C	2.08 B mg/kg DRY	1.14 mg/kg*	08/07/12 11:09AM PG
THALLIUM	EPA 6010C	ND mg/kg DRY	3.36 mg/kg*	08/07/12 11:09AM PG
VANADIUM	EPA 6010C	22.7 mg/kg DRY	0.168 mg/kg*	08/07/12 11:09AM PG
ZINC	EPA 6010C	14.1 mg/kg DRY	0.798 mg/kg*	08/07/12 11:09AM PG
MERCURY	EPA 7471B	ND mg/kg DRY	0.165 mg/kg*	07/31/12 02:08PM RMP
GAS CHROMATOGRAPHY MASS SPECTROMETRY; SEMI-VOLATILES				
NAPHTHALENE	EPA 8270C	ND ug/kg DRY	1590 ug/kg*	07/27/12 11:31PM GRM
2-METHYLNAPHTHALENE	EPA 8270C	ND ug/kg DRY	1300 ug/kg*	07/27/12 11:31PM GRM
ACENAPHTHYLENE	EPA 8270C	ND ug/kg DRY	1150 ug/kg*	07/27/12 11:31PM GRM
ACENAPHTHENE	EPA 8270C	ND ug/kg DRY	1410 ug/kg*	07/27/12 11:31PM GRM
FLUORENE	EPA 8270C	ND ug/kg DRY	1010 ug/kg*	07/27/12 11:31PM GRM
PHENANTHRENE	EPA 8270C	ND ug/kg DRY	1090 ug/kg*	07/27/12 11:31PM GRM
ANTHRACENE	EPA 8270C	ND ug/kg DRY	1530 ug/kg*	07/27/12 11:31PM GRM
FLUORANTHENE	EPA 8270C	ND ug/kg DRY	988 ug/kg*	07/27/12 11:31PM GRM
PYRENE	EPA 8270C	ND ug/kg DRY	1210 ug/kg*	07/27/12 11:31PM GRM
BENZO(A)ANTHRACENE	EPA 8270C	ND ug/kg DRY	1100 ug/kg*	07/27/12 11:31PM GRM
CHRYSENE	EPA 8270C	ND ug/kg DRY	1050 ug/kg*	07/27/12 11:31PM GRM
BENZO(B)FLUORANTHENE	EPA 8270C	ND ug/kg DRY	910 ug/kg*	07/27/12 11:31PM GRM
BENZO(K)FLUORANTHENE	EPA 8270C	ND ug/kg DRY	1170 ug/kg*	07/27/12 11:31PM GRM
BENZO(A)PYRENE	EPA 8270C	ND ug/kg DRY	1080 ug/kg*	07/27/12 11:31PM GRM
INDENO(1,2,3-CD)PYRENE	EPA 8270C	ND ug/kg DRY	1050 ug/kg*	07/27/12 11:31PM GRM
DIBENZ(A,H)ANTHRACENE	EPA 8270C	ND ug/kg DRY	815 ug/kg*	07/27/12 11:31PM GRM
BENZO(G,H,I)PERYLENE	EPA 8270C	ND ug/kg DRY	992 ug/kg*	07/27/12 11:31PM GRM

This report is a revision of report number 2302625
Serial Number: 2306425

Authorized by: Oommen V. Kappil, QA Director

QC Laboratories

Analytical Report

Account No: SR0117, EASTSTAR ENVIRONMENTAL GROUP, INC. **P.O. No:** **Inv. No:** 1440941
Project No: SR0117, EASTSTAR ENVIRONMENTAL GROUP, INC. **PWSID No:**

Sample Number **Sample Description** **Samp. Date/Time/Temp** **Sampled by**
L4259528-3 BS-08-0-02-023 SOIL 07/24/12 10:15am NA F Customer
Received Date/Time/Temp 07/25/12 07:50pm 32.4 F **Iced (Y/N):** Y

Parameter	Method	Result	RLs	Test Date, Time, Analyst
GENERAL CHEMISTRY				
TOTAL SOLIDS PERCENT	SM 2540G	86.73 %	0.01000 %	07/31/12 03:45PM RCM
METALS				
SILVER	EPA 6010C	ND mg/kg DRY	0.0911 mg/kg*	08/07/12 11:13AM PG
ALUMINUM	EPA 6010C	10700 mg/kg DRY	2.66 mg/kg*	08/07/12 11:13AM PG
ARSENIC	EPA 6010C	48.5 mg/kg DRY	0.912 mg/kg*	08/07/12 11:13AM PG
BARIUM	EPA 6010C	63.0 mg/kg DRY	0.0187 mg/kg*	08/07/12 11:13AM PG
BERYLLIUM	EPA 6010C	0.382 mg/kg DRY	0.00311 mg/kg*	08/07/12 11:13AM PG
CALCIUM	EPA 6010C	13300 mg/kg DRY	4.27 mg/kg*	08/07/12 11:13AM PG
CADMIUM	EPA 6010C	ND mg/kg DRY	0.0240 mg/kg*	08/07/12 11:13AM PG
COBALT	EPA 6010C	7.89 mg/kg DRY	0.0439 mg/kg*	08/07/12 11:13AM PG
CHROMIUM	EPA 6010C	19.9 mg/kg DRY	0.0553 mg/kg*	08/07/12 11:13AM PG
COPPER	EPA 6010C	28.4 mg/kg DRY	0.136 mg/kg*	08/07/12 11:13AM PG
IRON	EPA 6010C	18100 mg/kg DRY	1.78 mg/kg*	08/07/12 11:13AM PG
POTASSIUM	EPA 6010C	1380 mg/kg DRY	13.4 mg/kg*	08/07/12 11:13AM PG
MAGNESIUM	EPA 6010C	4930 mg/kg DRY	0.465 mg/kg*	08/07/12 11:13AM PG
MANGANESE	EPA 6010C	294 mg/kg DRY	0.0444 mg/kg*	08/07/12 11:13AM PG
SODIUM	EPA 6010C	534 mg/kg DRY	5.42 mg/kg*	08/07/12 11:13AM PG
NICKEL	EPA 6010C	15.6 mg/kg DRY	0.0745 mg/kg*	08/07/12 11:13AM PG
LEAD	EPA 6010C	45.8 mg/kg DRY	0.506 mg/kg*	08/07/12 11:13AM PG
ANTIMONY	EPA 6010C	0.956 B mg/kg DRY	0.942 mg/kg*	08/07/12 11:13AM PG
SELENIUM	EPA 6010C	ND mg/kg DRY	0.389 mg/kg*	08/07/12 11:13AM PG
THALLIUM	EPA 6010C	ND mg/kg DRY	1.14 mg/kg*	08/07/12 11:13AM PG
VANADIUM	EPA 6010C	39.1 mg/kg DRY	0.0571 mg/kg*	08/07/12 11:13AM PG
ZINC	EPA 6010C	68.4 mg/kg DRY	0.271 mg/kg*	08/07/12 11:13AM PG
MERCURY	EPA 7471B	0.0605 B mg/kg DRY	0.0560 mg/kg*	07/31/12 02:10PM RMP
GAS CHROMATOGRAPHY MASS SPECTROMETRY; SEMI-VOLATILES				
BENZO(B)FLUORANTHENE	EPA 8270C	1030 J ug/kg DRY	618 ug/kg*	08/01/12 07:56PM GRM
BENZO(K)FLUORANTHENE	EPA 8270C	800. J ug/kg DRY	793 ug/kg*	08/01/12 07:56PM GRM
BENZO(A)PYRENE	EPA 8270C	1030 J ug/kg DRY	733 ug/kg*	08/01/12 07:56PM GRM
INDENO(1,2,3-CD)PYRENE	EPA 8270C	ND ug/kg DRY	715 ug/kg*	08/01/12 07:56PM GRM
DIBENZ(A,H)ANTHRACENE	EPA 8270C	ND ug/kg DRY	553 ug/kg*	08/01/12 07:56PM GRM
BENZO(G,H,I)PERYLENE	EPA 8270C	ND ug/kg DRY	673 ug/kg*	08/01/12 07:56PM GRM
NAPHTHALENE	EPA 8270C	ND ug/kg DRY	541 ug/kg*	08/03/12 06:20PM MDJ
2-METHYLNAPHTHALENE	EPA 8270C	ND ug/kg DRY	440 ug/kg*	08/03/12 06:20PM MDJ
ACENAPHTHYLENE	EPA 8270C	ND ug/kg DRY	390 ug/kg*	08/03/12 06:20PM MDJ
ACENAPHTHENE	EPA 8270C	ND ug/kg DRY	480 ug/kg*	08/03/12 06:20PM MDJ
FLUORENE	EPA 8270C	ND ug/kg DRY	342 ug/kg*	08/03/12 06:20PM MDJ
PHENANTHRENE	EPA 8270C	1110 J ug/kg DRY	369 ug/kg*	08/03/12 06:20PM MDJ
ANTHRACENE	EPA 8270C	ND ug/kg DRY	518 ug/kg*	08/03/12 06:20PM MDJ
FLUORANTHENE	EPA 8270C	1950 J ug/kg DRY	336 ug/kg*	08/03/12 06:20PM MDJ
PYRENE	EPA 8270C	2080 J ug/kg DRY	412 ug/kg*	08/03/12 06:20PM MDJ
BENZO(A)ANTHRACENE	EPA 8270C	1000 J ug/kg DRY	372 ug/kg*	08/03/12 06:20PM MDJ
CHRYSENE	EPA 8270C	967. J ug/kg DRY	356 ug/kg*	08/03/12 06:20PM MDJ

This report is a revision of report number 2302625
Serial Number: 2306425

Authorized by: Oommen V. Kappil, QA Director

QC Laboratories

Analytical Report

Account No: SR0117, EASTSTAR ENVIRONMENTAL GROUP, INC. **P.O. No:** **Inv. No:** 1440941
Project No: SR0117, EASTSTAR ENVIRONMENTAL GROUP, INC. **PWSID No:**

Sample Number **Sample Description** **Samp. Date/Time/Temp** **Sampled by**
L4259528-4 BS-05-08-10-024 SOIL 07/24/12 11:05am NA F Customer
Received Date/Time/Temp 07/25/12 07:50pm 32.4 F **Iced (Y/N):** Y

Parameter	Method	Result	RLs	Test Date, Time, Analyst
GENERAL CHEMISTRY				
CYANIDE, TOTAL	EPA 9010/9014	69.8 mg/kg DRY	15.3 mg/kg	08/03/12 12:00PM JG
TOTAL SOLIDS PERCENT	SM 2540G	32.71 %	0.01000 %	07/31/12 03:45PM RCM
METALS				
SILVER	EPA 6010C	ND mg/kg DRY	0.242 mg/kg*	08/07/12 11:18AM PG
ALUMINUM	EPA 6010C	13800 mg/kg DRY	7.06 mg/kg*	08/07/12 11:18AM PG
ARSENIC	EPA 6010C	12.7 mg/kg DRY	2.42 mg/kg*	08/07/12 11:18AM PG
BARIUM	EPA 6010C	74.9 mg/kg DRY	0.0495 mg/kg*	08/07/12 11:18AM PG
BERYLLIUM	EPA 6010C	0.648 mg/kg DRY	0.00825 mg/kg*	08/07/12 11:18AM PG
CALCIUM	EPA 6010C	7210 mg/kg DRY	11.3 mg/kg*	08/07/12 11:18AM PG
CADMIUM	EPA 6010C	ND mg/kg DRY	0.0636 mg/kg*	08/07/12 11:18AM PG
COBALT	EPA 6010C	9.48 mg/kg DRY	0.116 mg/kg*	08/07/12 11:18AM PG
CHROMIUM	EPA 6010C	30.4 mg/kg DRY	0.147 mg/kg*	08/07/12 11:18AM PG
COPPER	EPA 6010C	70.9 mg/kg DRY	0.361 mg/kg*	08/07/12 11:18AM PG
IRON	EPA 6010C	27800 mg/kg DRY	4.71 mg/kg*	08/07/12 11:18AM PG
POTASSIUM	EPA 6010C	3180 mg/kg DRY	35.5 mg/kg*	08/07/12 11:18AM PG
MAGNESIUM	EPA 6010C	5530 mg/kg DRY	1.23 mg/kg*	08/07/12 11:18AM PG
MANGANESE	EPA 6010C	260 mg/kg DRY	0.118 mg/kg*	08/07/12 11:18AM PG
SODIUM	EPA 6010C	11000 mg/kg DRY	14.4 mg/kg*	08/07/12 11:18AM PG
NICKEL	EPA 6010C	31.2 mg/kg DRY	0.197 mg/kg*	08/07/12 11:18AM PG
LEAD	EPA 6010C	40.7 mg/kg DRY	1.34 mg/kg*	08/07/12 11:18AM PG
ANTIMONY	EPA 6010C	ND mg/kg DRY	2.50 mg/kg*	08/07/12 11:18AM PG
SELENIUM	EPA 6010C	ND mg/kg DRY	1.03 mg/kg*	08/07/12 11:18AM PG
THALLIUM	EPA 6010C	ND mg/kg DRY	3.02 mg/kg*	08/07/12 11:18AM PG
VANADIUM	EPA 6010C	41.9 mg/kg DRY	0.151 mg/kg*	08/07/12 11:18AM PG
ZINC	EPA 6010C	138 mg/kg DRY	0.718 mg/kg*	08/07/12 11:18AM PG
MERCURY	EPA 7471B	0.495 mg/kg DRY	0.149 mg/kg*	07/31/12 02:11PM RMP
GAS CHROMATOGRAPHY				
TOTAL PETROLEUM HYDROCARBONS	NJOQA QAM-025	51.4 J mg/kg DRY	17.9 mg/kg*	07/30/12 05:32PM AJG

L4259528-1 :

QUALIFIERS: For metals parameters;"B" indicates a value that is > than the MDL but < than the laboratory quantitation limit. For Organics parameters; "B"is when the compound is found in the blank as well as in the sample;"J"indicates a value that is > than the MDL but < than the lowest standard, it is also used to indicate that a compound is tentatively identified in a library search;"E"(estimated) is when a compound exceeded the calibration range;"N" presumptive evidence of a compound; "D" is when a dilution was required.

L4259528-2 :

QUALIFIERS: For metals parameters;"B" indicates a value that is > than the MDL but < than the laboratory quantitation limit. For Organics parameters; "B"is when the compound is found in the blank as well as in the sample;"J"indicates a value that is > than the MDL but < than the lowest standard, it is also used to indicate that a compound is tentatively identified in a library search;"E"(estimated) is when a compound exceeded the calibration range;"N" presumptive evidence of a compound; "D" is when a dilution was required.

This report is a revision of report number 2302625
Serial Number: 2306425

Authorized by: Oommen V. Kappil, QA Director

Account No: SR0117, EASTSTAR ENVIRONMENTAL GROUP, INC. **P.O. No:** **Inv. No:** 1440941
Project No: SR0117, EASTSTAR ENVIRONMENTAL GROUP, INC. **PWSID No:**

L4259528-3 :

QUALIFIERS: For metals parameters;"B" indicates a value that is > than the MDL but < than the laboratory quantitation limit. For Organics parameters; "B"is when the compound is found in the blank as well as in the sample;"J"indicates a value that is > than the MDL but < than the lowest standard, it is also used to indicate that a compound is tentatively identified in a library search;"E"(estimated) is when a compound exceeded the calibration range;"N" presumptive evidence of a compound; "D" is when a dilution was required.
For the 8270 PAH fraction, the surrogate terphenyl d14 (128%) was recovered above the laboratory control limit (50% to 126%).

For the 8270C fraction, a dilution was required to be performed on this sample because of the sample matrix and/or interferences by nontarget compounds. The surrogate recoveries may have been impacted. The RLs have been adjusted to reflect the dilution.

L4259528-4 :

QUALIFIERS: For metals parameters;"B" indicates a value that is > than the MDL but < than the laboratory quantitation limit. For Organics parameters; "B"is when the compound is found in the blank as well as in the sample;"J"indicates a value that is > than the MDL but < than the lowest standard, it is also used to indicate that a compound is tentatively identified in a library search;"E"(estimated) is when a compound exceeded the calibration range;"N" presumptive evidence of a compound; "D" is when a dilution was required.
For QAM025, "J" indicates a value that is > the RL but < the lowest standard.

Notes:

A result of "ND" indicates that the analyte tested was either not detected or the concentration was below the RLs.
Definitions: NEG=negative; POS=positive; COL=colonies; RLs=laboratory reporting limits; L/A=laboratory accident; TNTC= Too numerous to count; pres=presumptive
A result marked with "DRY" indicates that the result was calculated and reported on a dry weight basis.
MCL= EPA recommended "maximum contaminant level", PLs = Customer-specific permit limits.
The test results meet all requirements of NELAC unless otherwise specified.
The report shall not be reproduced except in full without the written consent of the laboratory.
Unless otherwise specified, the Environmental and Food Chemistry testing except Field Parameters were performed by QC Inc. located at 1205 Industrial Blvd., Southampton, PA 18966; Pharmaceutical, Dairy and Food Microbiological tests were performed by QC Inc. located at 702 Electronic Dr., Horsham, PA 19044.
QCL Accreditations: Southampton Div: EPA ID PA00018; NELAP ID's: PA 09-00131, NJ PA166, NY 11223
State ID's: CT PH-0768, DE PA-018, MD 206, SC 89021001; FDA Reg. # : 2515238
ACL Div: NELAP ID's: PA 68-335, NJ DE568; State ID's: DE 00011, MD 138; Wind Gap Div: State ID's: PA 48-01334, NJ PA001
E. Rutherford Div: State ID: NJ 02015; Vineland Div: State ID: NJ 06005; Reading Div: State ID: PA 06-03543
The reported results relate only to the samples.
All samples are collected as "grab" samples unless otherwise identified.

* - The "RLs" represents a reporting/quantitation limit. When an "*" is present in the column identified as the "RLs", it is being reported as a Method Detection Limit (MDL).

This report is a revision of report number 2302625
Serial Number: 2306425

Authorized by: Oommen V. Kappil, QA Director

QC Laboratories

1205 Industrial Blvd.
Southampton, PA 18966-0514
Phone: 215-355-3900
Fax: 215-355-7231

CHAIN OF CUSTODY

Page 1 of 1

Lab LIMS No: L42595 28

LAB USE ONLY:

___ Ascorbic/HCl Vials # ___ HCl Vials
___ $Na_2S_2O_3$ ___
___ Na OH/Zn acetate pH ___
___ HNO_3 pH ___
___ H_2SO_4 pH ___
___ NaOH pH ___
10 Unpreserved 4-250gl, 4-Split, MS
___ Hcl pH
___ Temp control 32.4 ID# QCCM12

MATRIX CODES

DW: DRINKING WATER
GW: GROUND WATER
WW: WASTEWATER
SO: SOIL
SL: SLUDGE
OIL: OIL
SOL: NON SOIL SOLID
MI: MISCELLANEOUS
X: OTHER

Client/Acct. No. ___ Bill to/Report to: (if different) ___

Address 10632 Little Patuxent Parkway — Sampling Site Address: (if different) Parkway Arch Site

City/State/Zip Columbia MD 21044

Phone/Fax 410 290-8777 — P.O. No. ___

Client Contact Al Frue — QC Contact ___

LAB USE ONLY

PROJECT / FIELD ID	Collection Date	Collection Military Time	GRAB	COMP	Matrix Code	Number of Containers Total	H_2SO_4	HCl	Vials	HNO_3	NaOH	ZnAc	Unpres	Bact	ANALYSIS REQUESTED	Field pH, Temp (C or F), DO, Cl_2, S. Cond. etc.
ID-01-04-06-021	7/23	08:25			SO	1									TAL Metals, Cyanide	
ID-01-18-20-022	7/23	09:45			SO	2									TAL Metals, Cyanide, PAH	
BS-05-0-02-023	7/24	10:15			SO	1									TAL Metals, PAH	
BS-05-08-10-024	7/24	11:05			SO	2									TAL Metals, Cyanide, Pct. Hydro	

SAMPLED BY: (Name/Company)

Verbal/fax data due: ___/___/___
Hardcopy due: ___/___/___

Report Format: ☐ Standard ☐ Forms ☐ Standard + QC ☐ NJ Reduced ☐ Disk

Please call for pricing and availability on rush (<14-21 day) turnaround and on all but standard format.

Field Parameters Analyzed By:
Sig: ___ Date/Time: ___

SAMPLE CUSTODY EXCHANGES MUST BE DOCUMENTED BELOW. USE FULL LEGAL SIGNATURE, DATE AND MILITARY TIME (24 HOUR CLOCK, I.E. 8AM IS 0800, 4 PM IS 1600)

	RELINQUISHED BY	DATE	TIME	RECEIVED BY	DATE	TIME
1	[signature] SAMPLER	7/25/12	3:49	[signature]	7/25/12	1549
2	[signature]	7/25/12	1630	[signature] CQA1625	7/25/12	1630
3	[signature] C&S	7/25/12	1950	[signature] Murdu	7/25/12	1950
4		DATE 7/25/12	TIME			
5						

DELIVERY METHOD: ☐ QC COURIER ☐ CLIENT ☐ UPS ☐ FEDEX ☐ OTHER ___

Custody Seal Number 7/25/12

COMMENTS:

Hazardous: yes / no 3978 IA 1 MS/MSD

For example to aid completion, see reverse side.

FINAL REPORT

QC LABORATORIES
FIELD SERVICE REQUEST FORM
Jul 24 2012, 12:09 pm

AL FREE
EASTSTAR ENVIRONMENTAL GROUP, INC.
10632 LITTLE PATUXENT PARKWAY
SUITE 106
COLUMBIA, MD 21044
Primary Driver: DAL

Project No.: SR0117
Phone: (410)290-8777
Fax: (410)290-9055
Cell: ( ) -

Service Date: 07/25/12 3:00-4:00 ***REVISED To 07/25/12

PICK-UP

Delivery Charge:

Day of Week: WED

Sampling Instructions:

Contact: AL FREE 240-381-6520

Bottle Prep:

Rush Samples: Josh 443-618-3381

Service to be performed at:

OFF EXIT 12
RAHWAY
CARTERET, NJ

PICK UP SAMPLES WEDNESDAY BETWEEN 2:00-3:00 AT THE RAHWAY SITE. THANKS!!

Requested by: Ronald M. Milke Ext:
Entry date: 07/24/12 12:09PM

Call received: 07/24/12 12:08PM

Field Service Request No.: FS177499 07241208
Service Time: 10 minutes
Equip Code: PU

QC Laboratories

1205 Industrial Highway, Southampton, PA 18966

EAST RUTHERFORD

Inter-Laboratory Transport Form: ER072512

SOUTHAMPTON

Coolers for Transport **from EAST RUTHERFORD**

To be completed by person sealing coolers					Complete Section Upon Delivery	
Cooler ID No.	Custody Seal No.	Date	Time	Initials	Temp °F	Iced Y/N
222	072512-1	7/25/12	1700	CA	32.6	Yes
1	072512-2	7/25/12	1700	CA	33.6	Yes
~~F23181~~	MICRO	7/25/12	1700	CA CW 7/25/12	~~32.1~~ 48.8	Yes
C25.1	072512-3	7/25/12	1700	DH	32.4	Yes
16 in	072512-4	7/25/12	1700	FB	39.1	Yes
432+	MICRO	7-25-12	1700	AS	42.9	Yes
621	7/25/12	7/25/12	1700	RS2	34.8	Yes
Box #2	Pb + Cu	7-25-12	1700	AS	57.2	NO

CW 7-25-12

Please Note the Following:

Individual sample chains of custody must accompany this form.

Once a cooler is sealed, custody seals may not be broken until samples are received at the designated QCL laboratory.

Laboratory use only

Custody Seals intact upon receipt? (Y) N Initials: CB

List ID of any seal found broken upon receipt below:

A full legal signature is required. Record all times in military time (24-HR Clock; 4:00 PM=1600)

Relinquished by:	Date:	Time:		Received by:	Date:	Time:
Christine Auger	7/25/12	1700		RA	7-25-12	1700
Relinquished by:	Date:	Time:		Received by:	Date:	Time:
RA	7-25-12	1950		Sara Bruno	7/25/12	1950
Relinquished by:	Date:	Time:		Received by:	Date:	Time:
Relinquished by:	Date:	Time:		Received by:	Date:	Time:

QC Laboratories

Analytical Report

Printed: 08/13/12 17:42

AL FREE
EASTSTAR ENVIRONMENTAL GROUP, INC.
10632 LITTLE PATUXENT PARKWAY
SUITE 106
COLUMBIA, MD 21044

Regarding:
AL FREE
EASTSTAR ENVIRONMENTAL GROUP, INC.
10632 LITTLE PATUXENT PARKWAY
SUITE 106
COLUMBIA, MD 21044

Account No: SR0117, EASTSTAR ENVIRONMENTAL GROUP, INC. **P.O. No:** **Inv. No:** 1442189
Project No: SR0117, EASTSTAR ENVIRONMENTAL GROUP, INC. **PWSID No:**

Sample Number	Sample Description	Samp. Date/Time/Temp	Sampled by
L4263770-1	RAHWAY ARCH SITE, ID-06-02-04-025	07/26/12 11:20am NA F	Customer

Received Date/Time/Temp 07/30/12 11:40am 34 F **Iced (Y/N):** Y

Parameter	Method	Result	RLs	Test Date, Time, Analyst
GENERAL CHEMISTRY				
CYANIDE, TOTAL	EPA 9010/9014	1820 mg/kg DRY	292 mg/kg	08/03/12 12:00PM JG
TOTAL SOLIDS PERCENT	SM 2540G	42.88 %	0.01000 %	07/31/12 06:00PM RCM
METALS				
SILVER	EPA 6010C	ND mg/kg DRY	0.184 mg/kg*	08/10/12 11:14AM PG
ALUMINUM	EPA 6010C	3430 mg/kg DRY	5.39 mg/kg*	08/10/12 11:14AM PG
ARSENIC	EPA 6010C	7.44 mg/kg DRY	1.84 mg/kg*	08/10/12 11:14AM PG
BARIUM	EPA 6010C	18.8 mg/kg DRY	0.0378 mg/kg*	08/10/12 11:14AM PG
BERYLLIUM	EPA 6010C	0.326 B mg/kg DRY	0.00630 mg/kg*	08/10/12 11:14AM PG
CALCIUM	EPA 6010C	278000 mg/kg DRY	8.63 mg/kg*	08/10/12 11:14AM PG
CADMIUM	EPA 6010C	ND mg/kg DRY	0.0485 mg/kg*	08/10/12 11:14AM PG
COBALT	EPA 6010C	2.19 B mg/kg DRY	0.0889 mg/kg*	08/10/12 11:14AM PG
CHROMIUM	EPA 6010C	27.3 mg/kg DRY	0.112 mg/kg*	08/10/12 11:14AM PG
COPPER	EPA 6010C	14.1 mg/kg DRY	0.275 mg/kg*	08/10/12 11:14AM PG
IRON	EPA 6010C	6860 mg/kg DRY	3.59 mg/kg*	08/10/12 11:14AM PG
POTASSIUM	EPA 6010C	306 mg/kg DRY	27.1 mg/kg*	08/10/12 11:14AM PG
MAGNESIUM	EPA 6010C	19400 mg/kg DRY	0.940 mg/kg*	08/10/12 11:14AM PG
MANGANESE	EPA 6010C	233 mg/kg DRY	0.0898 mg/kg*	08/10/12 11:14AM PG
SODIUM	EPA 6010C	9470 mg/kg DRY	11.0 mg/kg*	08/10/12 11:14AM PG
NICKEL	EPA 6010C	16.4 mg/kg DRY	0.151 mg/kg*	08/10/12 11:14AM PG
LEAD	EPA 6010C	28.7 mg/kg DRY	1.02 mg/kg*	08/10/12 11:14AM PG
ANTIMONY	EPA 6010C	ND mg/kg DRY	1.91 mg/kg*	08/10/12 11:14AM PG
SELENIUM	EPA 6010C	3.19 B mg/kg DRY	0.786 mg/kg*	08/10/12 11:14AM PG
THALLIUM	EPA 6010C	ND mg/kg DRY	2.30 mg/kg*	08/10/12 11:14AM PG
VANADIUM	EPA 6010C	8.02 mg/kg DRY	0.115 mg/kg*	08/10/12 11:14AM PG
ZINC	EPA 6010C	141 mg/kg DRY	0.548 mg/kg*	08/10/12 11:14AM PG
MERCURY	EPA 7471B	0.131 B mg/kg DRY	0.113 mg/kg*	08/01/12 05:21PM RMP

Serial Number: 2310411

Authorized by: Oommen V. Kappil, QA Director

1205 Industrial Blvd., P.O. Box 514, Southampton, PA 18966-0514 Phone: 215-355-3900 Fax: 215-355-7231 www.qclaboratories.com

QC Laboratories

Analytical Report

Account No: SR0117, EASTSTAR ENVIRONMENTAL GROUP, INC. **P.O. No:** **Inv. No:** 1442189
Project No: SR0117, EASTSTAR ENVIRONMENTAL GROUP, INC. **PWSID No:**

Sample Number **Sample Description** **Samp. Date/Time/Temp** **Sampled by**
L4263770-2 ID-06-06-08-026 07/26/12 11:45am NA F Customer
Received Date/Time/Temp 07/30/12 11:40am 34 F **Iced (Y/N):** Y

Parameter	Method	Result	RLs	Test Date, Time, Analyst
GENERAL CHEMISTRY				
CYANIDE, TOTAL	EPA 9010/9014	207 mg/kg DRY	24.0 mg/kg	08/03/12 12:00PM JG
TOTAL SOLIDS PERCENT	SM 2540G	20.80 %	0.01000 %	07/31/12 06:00PM RCM
METALS				
SILVER	EPA 6010C	ND mg/kg DRY	0.380 mg/kg*	08/10/12 10:25AM PG
ALUMINUM	EPA 6010C	10500 mg/kg DRY	11.1 mg/kg*	08/10/12 10:25AM PG
ARSENIC	EPA 6010C	10.8 mg/kg DRY	3.80 mg/kg*	08/10/12 10:25AM PG
BARIUM	EPA 6010C	22.5 mg/kg DRY	0.0779 mg/kg*	08/10/12 10:25AM PG
BERYLLIUM	EPA 6010C	0.386 B mg/kg DRY	0.0130 mg/kg*	08/10/12 10:25AM PG
CALCIUM	EPA 6010C	25000 mg/kg DRY	17.8 mg/kg*	08/10/12 10:25AM PG
CADMIUM	EPA 6010C	ND mg/kg DRY	0.100 mg/kg*	08/10/12 10:25AM PG
COBALT	EPA 6010C	3.64 B mg/kg DRY	0.183 mg/kg*	08/10/12 10:25AM PG
CHROMIUM	EPA 6010C	16.6 mg/kg DRY	0.231 mg/kg*	08/10/12 10:25AM PG
COPPER	EPA 6010C	5.43 mg/kg DRY	0.567 mg/kg*	08/10/12 10:25AM PG
IRON	EPA 6010C	15700 mg/kg DRY	7.40 mg/kg*	08/10/12 10:25AM PG
POTASSIUM	EPA 6010C	2230 mg/kg DRY	55.8 mg/kg*	08/10/12 10:25AM PG
MAGNESIUM	EPA 6010C	3330 mg/kg DRY	1.94 mg/kg*	08/10/12 10:25AM PG
MANGANESE	EPA 6010C	44.9 mg/kg DRY	0.185 mg/kg*	08/10/12 10:25AM PG
SODIUM	EPA 6010C	28800 mg/kg DRY	22.6 mg/kg*	08/10/12 10:25AM PG
NICKEL	EPA 6010C	13.8 mg/kg DRY	0.311 mg/kg*	08/10/12 10:25AM PG
LEAD	EPA 6010C	5.43 B mg/kg DRY	2.11 mg/kg*	08/10/12 10:25AM PG
ANTIMONY	EPA 6010C	ND mg/kg DRY	3.93 mg/kg*	08/10/12 10:25AM PG
SELENIUM	EPA 6010C	ND mg/kg DRY	1.62 mg/kg*	08/10/12 10:25AM PG
THALLIUM	EPA 6010C	ND mg/kg DRY	4.75 mg/kg*	08/10/12 10:25AM PG
VANADIUM	EPA 6010C	31.3 mg/kg DRY	0.238 mg/kg*	08/10/12 10:25AM PG
ZINC	EPA 6010C	36.5 mg/kg DRY	1.13 mg/kg*	08/10/12 10:25AM PG
MERCURY	EPA 7471B	ND mg/kg DRY	0.234 mg/kg*	08/01/12 05:23PM RMP
GAS CHROMATOGRAPHY MASS SPECTROMETRY; SEMI-VOLATILES				
NAPHTHALENE	EPA 8270C	ND ug/kg DRY	225 ug/kg*	08/03/12 04:14PM MDJ
2-METHYLNAPHTHALENE	EPA 8270C	ND ug/kg DRY	184 ug/kg*	08/03/12 04:14PM MDJ
ACENAPHTHYLENE	EPA 8270C	ND ug/kg DRY	162 ug/kg*	08/03/12 04:14PM MDJ
ACENAPHTHENE	EPA 8270C	ND ug/kg DRY	200 ug/kg*	08/03/12 04:14PM MDJ
FLUORENE	EPA 8270C	ND ug/kg DRY	143 ug/kg*	08/03/12 04:14PM MDJ
PHENANTHRENE	EPA 8270C	ND ug/kg DRY	154 ug/kg*	08/03/12 04:14PM MDJ
ANTHRACENE	EPA 8270C	ND ug/kg DRY	216 ug/kg*	08/03/12 04:14PM MDJ
FLUORANTHENE	EPA 8270C	ND ug/kg DRY	140 ug/kg*	08/03/12 04:14PM MDJ
PYRENE	EPA 8270C	ND ug/kg DRY	172 ug/kg*	08/03/12 04:14PM MDJ
BENZO(A)ANTHRACENE	EPA 8270C	ND ug/kg DRY	155 ug/kg*	08/03/12 04:14PM MDJ
CHRYSENE	EPA 8270C	ND ug/kg DRY	149 ug/kg*	08/03/12 04:14PM MDJ
BENZO(B)FLUORANTHENE	EPA 8270C	ND ug/kg DRY	129 ug/kg*	08/03/12 04:14PM MDJ
BENZO(K)FLUORANTHENE	EPA 8270C	ND ug/kg DRY	165 ug/kg*	08/03/12 04:14PM MDJ
BENZO(A)PYRENE	EPA 8270C	ND ug/kg DRY	153 ug/kg*	08/03/12 04:14PM MDJ
INDENO(1,2,3-CD)PYRENE	EPA 8270C	ND ug/kg DRY	149 ug/kg*	08/03/12 04:14PM MDJ
DIBENZ(A,H)ANTHRACENE	EPA 8270C	ND ug/kg DRY	115 ug/kg*	08/03/12 04:14PM MDJ
BENZO(G,H,I)PERYLENE	EPA 8270C	ND ug/kg DRY	140 ug/kg*	08/03/12 04:14PM MDJ

Serial Number: 2310411

Oommen V. Kappil

Authorized by: Oommen V. Kappil, QA Director

QC Laboratories

Analytical Report

Account No: SR0117, EASTSTAR ENVIRONMENTAL GROUP, INC. **P.O. No:** **Inv. No:** 1442189
Project No: SR0117, EASTSTAR ENVIRONMENTAL GROUP, INC. **PWSID No:**

Sample Number **Sample Description** **Samp. Date/Time/Temp** **Sampled by**
L4263770-3 BD-05-02-04-027 07/26/12 02:20pm NA F Customer
Received Date/Time/Temp 07/30/12 11:40am 34 F **Iced (Y/N):** Y

Parameter	Method	Result	RLs	Test Date, Time, Analyst
GENERAL CHEMISTRY				
CYANIDE, TOTAL	EPA 9010/9014	66.4 mg/kg DRY	14.5 mg/kg	08/03/12 12:00PM JG
TOTAL SOLIDS PERCENT	SM 2540G	34.46 %	0.01000 %	07/31/12 06:00PM RCM
METALS				
SILVER	EPA 6010C	0.311 B mg/kg DRY	0.229 mg/kg*	08/10/12 11:22AM PG
ALUMINUM	EPA 6010C	10900 mg/kg DRY	6.70 mg/kg*	08/10/12 11:22AM PG
ARSENIC	EPA 6010C	18.0 mg/kg DRY	2.30 mg/kg*	08/10/12 11:22AM PG
BARIUM	EPA 6010C	176 mg/kg DRY	0.0470 mg/kg*	08/10/12 11:22AM PG
BERYLLIUM	EPA 6010C	0.929 mg/kg DRY	0.00784 mg/kg*	08/10/12 11:22AM PG
CALCIUM	EPA 6010C	214000 mg/kg DRY	10.7 mg/kg*	08/10/12 11:22AM PG
CADMIUM	EPA 6010C	1.95 mg/kg DRY	0.0604 mg/kg*	08/10/12 11:22AM PG
COBALT	EPA 6010C	5.17 mg/kg DRY	0.111 mg/kg*	08/10/12 11:22AM PG
CHROMIUM	EPA 6010C	38.3 mg/kg DRY	0.139 mg/kg*	08/10/12 11:22AM PG
COPPER	EPA 6010C	186 mg/kg DRY	0.342 mg/kg*	08/10/12 11:22AM PG
IRON	EPA 6010C	11900 mg/kg DRY	4.47 mg/kg*	08/10/12 11:22AM PG
POTASSIUM	EPA 6010C	1160 mg/kg DRY	33.7 mg/kg*	08/10/12 11:22AM PG
MAGNESIUM	EPA 6010C	2250 mg/kg DRY	1.17 mg/kg*	08/10/12 11:22AM PG
MANGANESE	EPA 6010C	194 mg/kg DRY	0.112 mg/kg*	08/10/12 11:22AM PG
SODIUM	EPA 6010C	5280 mg/kg DRY	13.6 mg/kg*	08/10/12 11:22AM PG
NICKEL	EPA 6010C	50.2 mg/kg DRY	0.187 mg/kg*	08/10/12 11:22AM PG
LEAD	EPA 6010C	236 mg/kg DRY	1.27 mg/kg*	08/10/12 11:22AM PG
ANTIMONY	EPA 6010C	4.90 B mg/kg DRY	2.37 mg/kg*	08/10/12 11:22AM PG
SELENIUM	EPA 6010C	ND mg/kg DRY	0.978 mg/kg*	08/10/12 11:22AM PG
THALLIUM	EPA 6010C	ND mg/kg DRY	2.87 mg/kg*	08/10/12 11:22AM PG
VANADIUM	EPA 6010C	87.6 mg/kg DRY	0.144 mg/kg*	08/10/12 11:22AM PG
ZINC	EPA 6010C	389 mg/kg DRY	0.682 mg/kg*	08/10/12 11:22AM PG
MERCURY	EPA 7471B	0.226 B mg/kg DRY	0.141 mg/kg*	08/01/12 05:25PM RMP
GAS CHROMATOGRAPHY MASS SPECTROMETRY; SEMI-VOLATILES				
NAPHTHALENE	EPA 8270C	ND ug/kg DRY	136 ug/kg*	08/03/12 04:40PM MDJ
2-METHYLNAPHTHALENE	EPA 8270C	ND ug/kg DRY	111 ug/kg*	08/03/12 04:40PM MDJ
ACENAPHTHYLENE	EPA 8270C	ND ug/kg DRY	98.1 ug/kg*	08/03/12 04:40PM MDJ
ACENAPHTHENE	EPA 8270C	ND ug/kg DRY	121 ug/kg*	08/03/12 04:40PM MDJ
FLUORENE	EPA 8270C	ND ug/kg DRY	86.2 ug/kg*	08/03/12 04:40PM MDJ
PHENANTHRENE	EPA 8270C	ND ug/kg DRY	92.9 ug/kg*	08/03/12 04:40PM MDJ
ANTHRACENE	EPA 8270C	ND ug/kg DRY	130 ug/kg*	08/03/12 04:40PM MDJ
FLUORANTHENE	EPA 8270C	ND ug/kg DRY	84.4 ug/kg*	08/03/12 04:40PM MDJ
PYRENE	EPA 8270C	ND ug/kg DRY	104 ug/kg*	08/03/12 04:40PM MDJ
BENZO(A)ANTHRACENE	EPA 8270C	ND ug/kg DRY	93.7 ug/kg*	08/03/12 04:40PM MDJ
CHRYSENE	EPA 8270C	ND ug/kg DRY	89.7 ug/kg*	08/03/12 04:40PM MDJ
BENZO(B)FLUORANTHENE	EPA 8270C	ND ug/kg DRY	77.8 ug/kg*	08/03/12 04:40PM MDJ
BENZO(K)FLUORANTHENE	EPA 8270C	ND ug/kg DRY	99.8 ug/kg*	08/03/12 04:40PM MDJ
BENZO(A)PYRENE	EPA 8270C	ND ug/kg DRY	92.3 ug/kg*	08/03/12 04:40PM MDJ
INDENO(1,2,3-CD)PYRENE	EPA 8270C	ND ug/kg DRY	90.0 ug/kg*	08/03/12 04:40PM MDJ
DIBENZ(A,H)ANTHRACENE	EPA 8270C	ND ug/kg DRY	69.6 ug/kg*	08/03/12 04:40PM MDJ
BENZO(G,H,I)PERYLENE	EPA 8270C	ND ug/kg DRY	84.7 ug/kg*	08/03/12 04:40PM MDJ

Serial Number: 2310411

Authorized by: Oommen V. Kappil, QA Director

QC Laboratories

Analytical Report

Account No: SR0117, EASTSTAR ENVIRONMENTAL GROUP, INC. **P.O. No:** **Inv. No:** 1442189
Project No: SR0117, EASTSTAR ENVIRONMENTAL GROUP, INC. **PWSID No:**

Sample Number **Sample Description** **Samp. Date/Time/Temp** **Sampled by**
L4263770-4 BD-05-08-10-028 07/26/12 03:30pm NA F Customer
Received Date/Time/Temp 07/30/12 11:40am 34 F **Iced (Y/N):** Y

Parameter	Method	Result	RLs	Test Date, Time, Analyst
GENERAL CHEMISTRY				
CYANIDE, TOTAL	EPA 9010/9014	21.3 mg/kg DRY	12.9 mg/kg	08/03/12 12:00PM JG
TOTAL SOLIDS PERCENT	SM 2540G	38.84 %	0.01000 %	07/31/12 06:00PM RCM
METALS				
SILVER	EPA 6010C	ND mg/kg DRY	0.203 mg/kg*	08/10/12 11:26AM PG
ALUMINUM	EPA 6010C	21300 mg/kg DRY	5.95 mg/kg*	08/10/12 11:26AM PG
ARSENIC	EPA 6010C	20.3 mg/kg DRY	2.04 mg/kg*	08/10/12 11:26AM PG
BARIUM	EPA 6010C	58.2 mg/kg DRY	0.0417 mg/kg*	08/10/12 11:26AM PG
BERYLLIUM	EPA 6010C	0.973 mg/kg DRY	0.00695 mg/kg*	08/10/12 11:26AM PG
CALCIUM	EPA 6010C	5690 mg/kg DRY	9.53 mg/kg*	08/10/12 11:26AM PG
CADMIUM	EPA 6010C	ND mg/kg DRY	0.0536 mg/kg*	08/10/12 11:26AM PG
COBALT	EPA 6010C	12.0 mg/kg DRY	0.0981 mg/kg*	08/10/12 11:26AM PG
CHROMIUM	EPA 6010C	42.0 mg/kg DRY	0.124 mg/kg*	08/10/12 11:26AM PG
COPPER	EPA 6010C	28.8 mg/kg DRY	0.304 mg/kg*	08/10/12 11:26AM PG
IRON	EPA 6010C	39100 mg/kg DRY	3.96 mg/kg*	08/10/12 11:26AM PG
POTASSIUM	EPA 6010C	5070 mg/kg DRY	29.9 mg/kg*	08/10/12 11:26AM PG
MAGNESIUM	EPA 6010C	7050 mg/kg DRY	1.04 mg/kg*	08/10/12 11:26AM PG
MANGANESE	EPA 6010C	324 mg/kg DRY	0.0991 mg/kg*	08/10/12 11:26AM PG
SODIUM	EPA 6010C	9370 mg/kg DRY	12.1 mg/kg*	08/10/12 11:26AM PG
NICKEL	EPA 6010C	28.6 mg/kg DRY	0.166 mg/kg*	08/10/12 11:26AM PG
LEAD	EPA 6010C	43.5 mg/kg DRY	1.13 mg/kg*	08/10/12 11:26AM PG
ANTIMONY	EPA 6010C	3.04 B mg/kg DRY	2.10 mg/kg*	08/10/12 11:26AM PG
SELENIUM	EPA 6010C	ND mg/kg DRY	0.868 mg/kg*	08/10/12 11:26AM PG
THALLIUM	EPA 6010C	ND mg/kg DRY	2.54 mg/kg*	08/10/12 11:26AM PG
VANADIUM	EPA 6010C	53.8 mg/kg DRY	0.127 mg/kg*	08/10/12 11:26AM PG
ZINC	EPA 6010C	81.9 mg/kg DRY	0.605 mg/kg*	08/10/12 11:26AM PG
MERCURY	EPA 7471B	0.991 mg/kg DRY	0.125 mg/kg*	08/01/12 05:27PM RMP
GAS CHROMATOGRAPHY MASS SPECTROMETRY; SEMI-VOLATILES				
NAPHTHALENE	EPA 8270C	ND ug/kg DRY	121 ug/kg*	08/03/12 05:05PM MDJ
2-METHYLNAPHTHALENE	EPA 8270C	ND ug/kg DRY	98.4 ug/kg*	08/03/12 05:05PM MDJ
ACENAPHTHYLENE	EPA 8270C	ND ug/kg DRY	87.0 ug/kg*	08/03/12 05:05PM MDJ
ACENAPHTHENE	EPA 8270C	ND ug/kg DRY	107 ug/kg*	08/03/12 05:05PM MDJ
FLUORENE	EPA 8270C	ND ug/kg DRY	76.5 ug/kg*	08/03/12 05:05PM MDJ
PHENANTHRENE	EPA 8270C	ND ug/kg DRY	82.4 ug/kg*	08/03/12 05:05PM MDJ
ANTHRACENE	EPA 8270C	ND ug/kg DRY	116 ug/kg*	08/03/12 05:05PM MDJ
FLUORANTHENE	EPA 8270C	ND ug/kg DRY	74.9 ug/kg*	08/03/12 05:05PM MDJ
PYRENE	EPA 8270C	ND ug/kg DRY	91.9 ug/kg*	08/03/12 05:05PM MDJ
BENZO(A)ANTHRACENE	EPA 8270C	ND ug/kg DRY	83.2 ug/kg*	08/03/12 05:05PM MDJ
CHRYSENE	EPA 8270C	ND ug/kg DRY	79.6 ug/kg*	08/03/12 05:05PM MDJ
BENZO(B)FLUORANTHENE	EPA 8270C	ND ug/kg DRY	69.0 ug/kg*	08/03/12 05:05PM MDJ
BENZO(K)FLUORANTHENE	EPA 8270C	ND ug/kg DRY	88.6 ug/kg*	08/03/12 05:05PM MDJ
BENZO(A)PYRENE	EPA 8270C	ND ug/kg DRY	81.9 ug/kg*	08/03/12 05:05PM MDJ
INDENO(1,2,3-CD)PYRENE	EPA 8270C	ND ug/kg DRY	79.8 ug/kg*	08/03/12 05:05PM MDJ
DIBENZ(A,H)ANTHRACENE	EPA 8270C	ND ug/kg DRY	61.8 ug/kg*	08/03/12 05:05PM MDJ
BENZO(G,H,I)PERYLENE	EPA 8270C	ND ug/kg DRY	75.2 ug/kg*	08/03/12 05:05PM MDJ

Serial Number: 2310411

Oommen V. Kappil

Authorized by: Oommen V. Kappil, QA Director

QC Laboratories

Analytical Report

Account No: SR0117, EASTSTAR ENVIRONMENTAL GROUP, INC. **P.O. No:** **Inv. No:** 1442189
Project No: SR0117, EASTSTAR ENVIRONMENTAL GROUP, INC. **PWSID No:**

Sample Number **Sample Description** **Samp. Date/Time/Temp** **Sampled by**
L4263770-5 BS-06-06-08-029 07/27/12 02:05pm NA F Customer
Received Date/Time/Temp 07/30/12 11:40am 34 F **Iced (Y/N):** Y

Parameter	Method	Result	RLs	Test Date, Time, Analyst
GENERAL CHEMISTRY				
CYANIDE, TOTAL	EPA 9010/9014	255 mg/kg DRY	33.3 mg/kg	08/08/12 01:00PM JG
TOTAL SOLIDS PERCENT	SM 2540G	37.56 %	0.01000 %	07/31/12 06:00PM RCM
METALS				
SILVER	EPA 6010C	ND mg/kg DRY	0.210 mg/kg*	08/10/12 11:29AM PG
ALUMINUM	EPA 6010C	22300 mg/kg DRY	6.15 mg/kg*	08/10/12 11:29AM PG
ARSENIC	EPA 6010C	14.2 mg/kg DRY	2.11 mg/kg*	08/10/12 11:29AM PG
BARIUM	EPA 6010C	351 mg/kg DRY	0.0431 mg/kg*	08/10/12 11:29AM PG
BERYLLIUM	EPA 6010C	1.39 mg/kg DRY	0.00719 mg/kg*	08/10/12 11:29AM PG
CALCIUM	EPA 6010C	29800 mg/kg DRY	9.85 mg/kg*	08/10/12 11:29AM PG
CADMIUM	EPA 6010C	ND mg/kg DRY	0.0554 mg/kg*	08/10/12 11:29AM PG
COBALT	EPA 6010C	16.5 mg/kg DRY	0.101 mg/kg*	08/10/12 11:29AM PG
CHROMIUM	EPA 6010C	103 mg/kg DRY	0.128 mg/kg*	08/10/12 11:29AM PG
COPPER	EPA 6010C	254 mg/kg DRY	0.314 mg/kg*	08/10/12 11:29AM PG
IRON	EPA 6010C	43400 mg/kg DRY	4.10 mg/kg*	08/10/12 11:29AM PG
POTASSIUM	EPA 6010C	5670 mg/kg DRY	30.9 mg/kg*	08/10/12 11:29AM PG
MAGNESIUM	EPA 6010C	11100 mg/kg DRY	1.07 mg/kg*	08/10/12 11:29AM PG
MANGANESE	EPA 6010C	255 mg/kg DRY	0.103 mg/kg*	08/10/12 11:29AM PG
SODIUM	EPA 6010C	7930 mg/kg DRY	12.5 mg/kg*	08/10/12 11:29AM PG
NICKEL	EPA 6010C	52.4 mg/kg DRY	0.172 mg/kg*	08/10/12 11:29AM PG
LEAD	EPA 6010C	242 mg/kg DRY	1.17 mg/kg*	08/10/12 11:29AM PG
ANTIMONY	EPA 6010C	6.04 mg/kg DRY	2.18 mg/kg*	08/10/12 11:29AM PG
SELENIUM	EPA 6010C	1.80 B mg/kg DRY	0.897 mg/kg*	08/10/12 11:29AM PG
THALLIUM	EPA 6010C	ND mg/kg DRY	2.63 mg/kg*	08/10/12 11:29AM PG
VANADIUM	EPA 6010C	55.6 mg/kg DRY	0.132 mg/kg*	08/10/12 11:29AM PG
ZINC	EPA 6010C	152 mg/kg DRY	0.626 mg/kg*	08/10/12 11:29AM PG
MERCURY	EPA 7471B	0.674 mg/kg DRY	0.129 mg/kg*	08/01/12 05:29PM RMP
GAS CHROMATOGRAPHY MASS SPECTROMETRY; SEMI-VOLATILES				
NAPHTHALENE	EPA 8270C	ND ug/kg DRY	125 ug/kg*	08/03/12 05:30PM MDJ
2-METHYLNAPHTHALENE	EPA 8270C	ND ug/kg DRY	102 ug/kg*	08/03/12 05:30PM MDJ
ACENAPHTHYLENE	EPA 8270C	ND ug/kg DRY	90.0 ug/kg*	08/03/12 05:30PM MDJ
ACENAPHTHENE	EPA 8270C	ND ug/kg DRY	111 ug/kg*	08/03/12 05:30PM MDJ
FLUORENE	EPA 8270C	ND ug/kg DRY	79.1 ug/kg*	08/03/12 05:30PM MDJ
PHENANTHRENE	EPA 8270C	ND ug/kg DRY	85.2 ug/kg*	08/03/12 05:30PM MDJ
ANTHRACENE	EPA 8270C	ND ug/kg DRY	120 ug/kg*	08/03/12 05:30PM MDJ
FLUORANTHENE	EPA 8270C	ND ug/kg DRY	77.5 ug/kg*	08/03/12 05:30PM MDJ
PYRENE	EPA 8270C	ND ug/kg DRY	95.0 ug/kg*	08/03/12 05:30PM MDJ
BENZO(A)ANTHRACENE	EPA 8270C	ND ug/kg DRY	86.0 ug/kg*	08/03/12 05:30PM MDJ
CHRYSENE	EPA 8270C	ND ug/kg DRY	82.3 ug/kg*	08/03/12 05:30PM MDJ
BENZO(B)FLUORANTHENE	EPA 8270C	ND ug/kg DRY	71.4 ug/kg*	08/03/12 05:30PM MDJ
BENZO(K)FLUORANTHENE	EPA 8270C	ND ug/kg DRY	91.6 ug/kg*	08/03/12 05:30PM MDJ
BENZO(A)PYRENE	EPA 8270C	ND ug/kg DRY	84.7 ug/kg*	08/03/12 05:30PM MDJ
INDENO(1,2,3-CD)PYRENE	EPA 8270C	ND ug/kg DRY	82.5 ug/kg*	08/03/12 05:30PM MDJ
DIBENZ(A,H)ANTHRACENE	EPA 8270C	ND ug/kg DRY	63.9 ug/kg*	08/03/12 05:30PM MDJ
BENZO(G,H,I)PERYLENE	EPA 8270C	ND ug/kg DRY	77.7 ug/kg*	08/03/12 05:30PM MDJ

Serial Number: 2310411

Authorized by: Oommen V. Kappil, QA Director

Account No: SR0117, EASTSTAR ENVIRONMENTAL GROUP, INC. **P.O. No:** **Inv. No:** 1442189
Project No: SR0117, EASTSTAR ENVIRONMENTAL GROUP, INC. **PWSID No:**

L4263770-1 :

QUALIFIERS: For metals parameters;"B" indicates a value that is > than the MDL but < than the laboratory quantitation limit. For Organics parameters; "B"is when the compound is found in the blank as well as in the sample;"J"indicates a value that is > than the MDL but < than the lowest standard, it is also used to indicate that a compound is tentatively identified in a library search;"E"(estimated) is when a compound exceeded the calibration range;"N" presumptive evidence of a compound; "D" is when a dilution was required.

L4263770-2 :

QUALIFIERS: For metals parameters;"B" indicates a value that is > than the MDL but < than the laboratory quantitation limit. For Organics parameters; "B"is when the compound is found in the blank as well as in the sample;"J"indicates a value that is > than the MDL but < than the lowest standard, it is also used to indicate that a compound is tentatively identified in a library search;"E"(estimated) is when a compound exceeded the calibration range;"N" presumptive evidence of a compound; "D" is when a dilution was required.

L4263770-3 :

QUALIFIERS: For metals parameters;"B" indicates a value that is > than the MDL but < than the laboratory quantitation limit. For Organics parameters; "B"is when the compound is found in the blank as well as in the sample;"J"indicates a value that is > than the MDL but < than the lowest standard, it is also used to indicate that a compound is tentatively identified in a library search;"E"(estimated) is when a compound exceeded the calibration range;"N" presumptive evidence of a compound; "D" is when a dilution was required.

L4263770-4 :

QUALIFIERS: For metals parameters;"B" indicates a value that is > than the MDL but < than the laboratory quantitation limit. For Organics parameters; "B"is when the compound is found in the blank as well as in the sample;"J"indicates a value that is > than the MDL but < than the lowest standard, it is also used to indicate that a compound is tentatively identified in a library search;"E"(estimated) is when a compound exceeded the calibration range;"N" presumptive evidence of a compound; "D" is when a dilution was required.

L4263770-5 :

QUALIFIERS: For metals parameters;"B" indicates a value that is > than the MDL but < than the laboratory quantitation limit. For Organics parameters; "B"is when the compound is found in the blank as well as in the sample;"J"indicates a value that is > than the MDL but < than the lowest standard, it is also used to indicate that a compound is tentatively identified in a library search;"E"(estimated) is when a compound exceeded the calibration range;"N" presumptive evidence of a compound; "D" is when a dilution was required.

Notes:

A result of "ND" indicates that the analyte tested was either not detected or the concentration was below the RLs.
Definitions: NEG=negative; POS=positive; COL=colonies; RLs=laboratory reporting limits; L/A=laboratory accident; TNTC= Too numerous to count; pres=presumptive
A result marked with "DRY" indicates that the result was calculated and reported on a dry weight basis.
MCL= EPA recommended "maximum contaminant level", PLs = Customer-specific permit limits.
The test results meet all requirements of NELAC unless otherwise specified.
The report shall not be reproduced except in full without the written consent of the laboratory.
Unless otherwise specified, the Environmental and Food Chemistry testing except Field Parameters were performed by QC Inc. located at 1205 Industrial Blvd., Southampton, PA 18966; Pharmaceutical, Dairy and Food Microbiological tests were performed by QC Inc. located at 702 Electronic Dr., Horsham, PA 19044.
QCL Accreditations: Southampton Div: EPA ID PA00018; NELAP ID's: PA 09-00131, NJ PA166, NY 11223 State ID's: CT PH-0768, DE PA-018, MD 206, SC 89021001; FDA Reg. # : 2515238
ACL Div: NELAP ID's: PA 68-335, NJ DE568; State ID's: DE 00011, MD 138; Wind Gap Div: State ID's: PA 48-01334, NJ PA001 E. Rutherford Div: State ID: NJ 02015; Vineland Div: State ID: NJ 06005; Reading Div: State ID: PA 06-03543
The reported results relate only to the samples.
All samples are collected as "grab" samples unless otherwise identified.

* - The "RLs" represents a reporting/quantitation limit. When an "*" is present in the column identified as the "RLs", it is being reported as a Method Detection Limit (MDL).

Serial Number: 2310411

Authorized by: Oommen V. Kappil, QA Director

QC Laboratories

Analytical Report

Printed: 08/14/12 17:19

AL FREE
EASTSTAR ENVIRONMENTAL GROUP, INC.
10632 LITTLE PATUXENT PARKWAY
SUITE 106
COLUMBIA, MD 21044

Regarding:
AL FREE
EASTSTAR ENVIRONMENTAL GROUP, INC.
10632 LITTLE PATUXENT PARKWAY
SUITE 106
COLUMBIA, MD 21044

Account No: SR0117, EASTSTAR ENVIRONMENTAL GROUP, INC. **P.O. No:** **Inv. No:** 1442478
Project No: SR0117, EASTSTAR ENVIRONMENTAL GROUP, INC. **PWSID No:**

Sample Number **Sample Description** **Samp. Date/Time/Temp** **Sampled by**
L4264327-1 ID-04-02-04-030 SOIL 07/30/12 09:00am NA F Customer
Received Date/Time/Temp 07/31/12 07:50pm 30.9 F **Iced (Y/N):** Y

Parameter	Method	Result	RLs	Test Date, Time, Analyst
GENERAL CHEMISTRY				
TOTAL SOLIDS PERCENT	SM 2540G	75.82 %	0.01000 %	08/02/12 07:50PM MRP
METALS				
SILVER	EPA 6010C	ND mg/kg DRY	0.104 mg/kg*	08/13/12 01:33PM PG
ALUMINUM	EPA 6010C	10100 mg/kg DRY	3.05 mg/kg*	08/13/12 01:33PM PG
ARSENIC	EPA 6010C	4.34 mg/kg DRY	1.04 mg/kg*	08/13/12 01:33PM PG
BARIUM	EPA 6010C	75.8 mg/kg DRY	0.0214 mg/kg*	08/13/12 01:33PM PG
BERYLLIUM	EPA 6010C	0.504 mg/kg DRY	0.00356 mg/kg*	08/13/12 01:33PM PG
CALCIUM	EPA 6010C	26100 mg/kg DRY	4.88 mg/kg*	08/13/12 01:33PM PG
CADMIUM	EPA 6010C	ND mg/kg DRY	0.0274 mg/kg*	08/13/12 01:33PM PG
COBALT	EPA 6010C	9.15 mg/kg DRY	0.0503 mg/kg*	08/13/12 01:33PM PG
CHROMIUM	EPA 6010C	34.7 mg/kg DRY	0.0633 mg/kg*	08/13/12 01:33PM PG
COPPER	EPA 6010C	31.7 mg/kg DRY	0.156 mg/kg*	08/13/12 01:33PM PG
IRON	EPA 6010C	22900 mg/kg DRY	2.03 mg/kg*	08/13/12 01:33PM PG
POTASSIUM	EPA 6010C	1560 mg/kg DRY	15.3 mg/kg*	08/13/12 01:33PM PG
MAGNESIUM	EPA 6010C	7230 mg/kg DRY	0.532 mg/kg*	08/13/12 01:33PM PG
MANGANESE	EPA 6010C	415 mg/kg DRY	0.0508 mg/kg*	08/13/12 01:33PM PG
SODIUM	EPA 6010C	1130 mg/kg DRY	6.20 mg/kg*	08/13/12 01:33PM PG
NICKEL	EPA 6010C	20.0 mg/kg DRY	0.0852 mg/kg*	08/13/12 01:33PM PG
LEAD	EPA 6010C	112 mg/kg DRY	0.579 mg/kg*	08/13/12 01:33PM PG
ANTIMONY	EPA 6010C	ND mg/kg DRY	1.08 mg/kg*	08/13/12 01:33PM PG
SELENIUM	EPA 6010C	ND mg/kg DRY	0.444 mg/kg*	08/13/12 01:33PM PG
THALLIUM	EPA 6010C	ND mg/kg DRY	1.30 mg/kg*	08/13/12 01:33PM PG
VANADIUM	EPA 6010C	28.5 mg/kg DRY	0.0653 mg/kg*	08/13/12 01:33PM PG
ZINC	EPA 6010C	168 mg/kg DRY	0.310 mg/kg*	08/13/12 01:33PM PG
MERCURY	EPA 7471B	0.0785 B mg/kg DRY	0.0641 mg/kg*	08/08/12 02:20PM RMP

Serial Number: 2311926

Authorized by: Oommen V. Kappil, QA Director

1205 Industrial Blvd., P.O. Box 514, Southampton, PA 18966-0514 Phone: 215-355-3900 Fax: 215-355-7231 www.qclaboratories.com

QC Laboratories

Analytical Report

Account No: SR0117, EASTSTAR ENVIRONMENTAL GROUP, INC. **P.O. No:** **Inv. No:** 1442478
Project No: SR0117, EASTSTAR ENVIRONMENTAL GROUP, INC. **PWSID No:**

Sample Number **Sample Description** **Samp. Date/Time/Temp** **Sampled by**
L4264327-1 ID-04-02-04-030 SOIL 07/30/12 09:00am NA F Customer
Received Date/Time/Temp 07/31/12 07:50pm 30.9 F **Iced (Y/N):** Y

Parameter	Method	Result	RLs	Test Date, Time, Analyst
GAS CHROMATOGRAPHY MASS SPECTROMETRY; SEMI-VOLATILES				
NAPHTHALENE	EPA 8270C	ND ug/kg DRY	61.9 ug/kg*	08/09/12 06:18PM GRM
2-METHYLNAPHTHALENE	EPA 8270C	ND ug/kg DRY	50.4 ug/kg*	08/09/12 06:18PM GRM
ACENAPHTHYLENE	EPA 8270C	ND ug/kg DRY	44.6 ug/kg*	08/09/12 06:18PM GRM
ACENAPHTHENE	EPA 8270C	ND ug/kg DRY	54.9 ug/kg*	08/09/12 06:18PM GRM
FLUORENE	EPA 8270C	50.8 J ug/kg DRY	39.2 ug/kg*	08/09/12 06:18PM GRM
PHENANTHRENE	EPA 8270C	523 ug/kg DRY	42.2 ug/kg*	08/09/12 06:18PM GRM
ANTHRACENE	EPA 8270C	138. J ug/kg DRY	59.2 ug/kg*	08/09/12 06:18PM GRM
FLUORANTHENE	EPA 8270C	915 ug/kg DRY	38.4 ug/kg*	08/09/12 06:18PM GRM
PYRENE	EPA 8270C	1040 ug/kg DRY	47.1 ug/kg*	08/09/12 06:18PM GRM
BENZO(A)ANTHRACENE	EPA 8270C	506 ug/kg DRY	42.6 ug/kg*	08/09/12 06:18PM GRM
CHRYSENE	EPA 8270C	523 ug/kg DRY	40.8 ug/kg*	08/09/12 06:18PM GRM
BENZO(B)FLUORANTHENE	EPA 8270C	413 ug/kg DRY	35.3 ug/kg*	08/09/12 06:18PM GRM
BENZO(K)FLUORANTHENE	EPA 8270C	398 ug/kg DRY	45.4 ug/kg*	08/09/12 06:18PM GRM
BENZO(A)PYRENE	EPA 8270C	482 ug/kg DRY	41.9 ug/kg*	08/09/12 06:18PM GRM
INDENO(1,2,3-CD)PYRENE	EPA 8270C	270. J ug/kg DRY	40.9 ug/kg*	08/09/12 06:18PM GRM
DIBENZ(A,H)ANTHRACENE	EPA 8270C	115. J ug/kg DRY	31.7 ug/kg*	08/09/12 06:18PM GRM
BENZO(G,H,I)PERYLENE	EPA 8270C	295. J ug/kg DRY	38.5 ug/kg*	08/09/12 06:18PM GRM

Sample Number **Sample Description** **Samp. Date/Time/Temp** **Sampled by**
L4264327-2 ID-04-06-08-031 SLUDGE 07/30/12 09:40am NA F Customer
Received Date/Time/Temp 07/31/12 07:50pm 30.9 F **Iced (Y/N):** Y

Parameter	Method	Result	RLs	Test Date, Time, Analyst
GENERAL CHEMISTRY				
CYANIDE, TOTAL	EPA 9010/9014	1420 mg/kg DRY	264 mg/kg	08/13/12 12:00PM JG
TOTAL SOLIDS PERCENT	SM 2540G	47.26 %	0.01000 %	08/01/12 03:30PM P P
METALS				
SILVER	EPA 6010C	ND mg/kg DRY	0.00677 mg/kg*	08/13/12 01:39PM PG
ALUMINUM	EPA 6010C	3980 mg/kg DRY	0.196 mg/kg*	08/13/12 01:39PM PG
ARSENIC	EPA 6010C	4.10 mg/kg DRY	0.0669 mg/kg*	08/13/12 01:39PM PG
BARIUM	EPA 6010C	6.01 mg/kg DRY	0.00127 mg/kg*	08/13/12 01:39PM PG
BERYLLIUM	EPA 6010C	0.264 mg/kg DRY	0.000233 mg/kg*	08/13/12 01:39PM PG
CADMIUM	EPA 6010C	0.990 mg/kg DRY	0.00169 mg/kg*	08/13/12 01:39PM PG
COBALT	EPA 6010C	1.68 mg/kg DRY	0.00317 mg/kg*	08/13/12 01:39PM PG
CHROMIUM	EPA 6010C	17.7 mg/kg DRY	0.00402 mg/kg*	08/13/12 01:39PM PG
COPPER	EPA 6010C	17.3 mg/kg DRY	0.00994 mg/kg*	08/13/12 01:39PM PG
POTASSIUM	EPA 6010C	1070 mg/kg DRY	0.982 mg/kg*	08/13/12 01:39PM PG
MAGNESIUM	EPA 6010C	2240 mg/kg DRY	0.0341 mg/kg*	08/13/12 01:39PM PG
MANGANESE	EPA 6010C	76.8 mg/kg DRY	0.00317 mg/kg*	08/13/12 01:39PM PG
SODIUM	EPA 6010C	2840 mg/kg DRY	0.398 mg/kg*	08/13/12 01:39PM PG
NICKEL	EPA 6010C	9.16 mg/kg DRY	0.00550 mg/kg*	08/13/12 01:39PM PG
LEAD	EPA 6010C	22.2 mg/kg DRY	0.0372 mg/kg*	08/13/12 01:39PM PG
ANTIMONY	EPA 6010C	1.13 mg/kg DRY	0.0692 mg/kg*	08/13/12 01:39PM PG
SELENIUM	EPA 6010C	ND mg/kg DRY	0.0286 mg/kg*	08/13/12 01:39PM PG

Serial Number: 2311926

Authorized by: Oommen V. Kappil, QA Director

Account No: SR0117, EASTSTAR ENVIRONMENTAL GROUP, INC. **P.O. No:** **Inv. No:** 1442478
Project No: SR0117, EASTSTAR ENVIRONMENTAL GROUP, INC. **PWSID No:**

Sample Number **Sample Description** **Samp. Date/Time/Temp** **Sampled by**
L4264327-2 ID-04-06-08-031 SLUDGE 07/30/12 09:40am NA F Customer
Received Date/Time/Temp 07/31/12 07:50pm 30.9 F **Iced (Y/N):** Y

Parameter	Method	Result	RLs	Test Date, Time, Analyst
METALS continued				
THALLIUM	EPA 6010C	ND mg/kg DRY	0.0836 mg/kg*	08/13/12 01:39PM PG
VANADIUM	EPA 6010C	12.9 mg/kg DRY	0.00423 mg/kg*	08/13/12 01:39PM PG
ZINC	EPA 6010C	85.5 mg/kg DRY	0.0199 mg/kg*	08/13/12 01:39PM PG
CALCIUM	EPA 6010C	86800 mg/kg DRY	3.13 mg/kg*	08/13/12 01:47PM PG
IRON	EPA 6010C	14500 mg/kg DRY	1.30 mg/kg*	08/13/12 01:47PM PG
MERCURY	EPA 7471B	0.0937 mg/kg DRY	0.0205 mg/kg*	08/08/12 02:22PM RMP

Sample Number **Sample Description** **Samp. Date/Time/Temp** **Sampled by**
L4264327-3 ID-04-10-12-032 SLUDGE 07/30/12 10:20am NA F Customer
Received Date/Time/Temp 07/31/12 07:50pm 30.9 F **Iced (Y/N):** Y

Parameter	Method	Result	RLs	Test Date, Time, Analyst
GENERAL CHEMISTRY				
CYANIDE, TOTAL	EPA 9010/9014	61.5 mg/kg DRY	16.3 mg/kg	08/03/12 12:00PM JG
TOTAL SOLIDS PERCENT	SM 2540G	30.59 %	0.01000 %	08/01/12 03:30PM P P
METALS				
SILVER	EPA 6010C	ND mg/kg DRY	0.258 mg/kg*	08/13/12 02:09PM PG
ALUMINUM	EPA 6010C	10000 mg/kg DRY	7.55 mg/kg*	08/13/12 02:09PM PG
ARSENIC	EPA 6010C	5.69 mg/kg DRY	2.59 mg/kg*	08/13/12 02:09PM PG
BARIUM	EPA 6010C	54.9 mg/kg DRY	0.0530 mg/kg*	08/13/12 02:09PM PG
BERYLLIUM	EPA 6010C	0.425 B mg/kg DRY	0.00883 mg/kg*	08/13/12 02:09PM PG
CALCIUM	EPA 6010C	21600 mg/kg DRY	12.1 mg/kg*	08/13/12 02:09PM PG
CADMIUM	EPA 6010C	ND mg/kg DRY	0.0680 mg/kg*	08/13/12 02:09PM PG
COBALT	EPA 6010C	5.43 mg/kg DRY	0.125 mg/kg*	08/13/12 02:09PM PG
CHROMIUM	EPA 6010C	36.9 mg/kg DRY	0.157 mg/kg*	08/13/12 02:09PM PG
COPPER	EPA 6010C	16.8 mg/kg DRY	0.386 mg/kg*	08/13/12 02:09PM PG
IRON	EPA 6010C	17300 mg/kg DRY	5.03 mg/kg*	08/13/12 02:09PM PG
POTASSIUM	EPA 6010C	2500 mg/kg DRY	37.9 mg/kg*	08/13/12 02:09PM PG
MAGNESIUM	EPA 6010C	5300 mg/kg DRY	1.32 mg/kg*	08/13/12 02:09PM PG
MANGANESE	EPA 6010C	78.5 mg/kg DRY	0.126 mg/kg*	08/13/12 02:09PM PG
SODIUM	EPA 6010C	14200 mg/kg DRY	15.4 mg/kg*	08/13/12 02:09PM PG
NICKEL	EPA 6010C	15.0 mg/kg DRY	0.211 mg/kg*	08/13/12 02:09PM PG
LEAD	EPA 6010C	7.13 mg/kg DRY	1.44 mg/kg*	08/13/12 02:09PM PG
ANTIMONY	EPA 6010C	ND mg/kg DRY	2.67 mg/kg*	08/13/12 02:09PM PG
SELENIUM	EPA 6010C	ND mg/kg DRY	1.10 mg/kg*	08/13/12 02:09PM PG
THALLIUM	EPA 6010C	ND mg/kg DRY	3.23 mg/kg*	08/13/12 02:09PM PG
VANADIUM	EPA 6010C	37.9 mg/kg DRY	0.162 mg/kg*	08/13/12 02:09PM PG
ZINC	EPA 6010C	39.6 mg/kg DRY	0.768 mg/kg*	08/13/12 02:09PM PG
MERCURY	EPA 7471B	ND mg/kg DRY	0.159 mg/kg*	08/08/12 02:24PM RMP

Serial Number: 2311926

Oommen V. Kappil

Authorized by: Oommen V. Kappil, QA Director

Account No: SR0117, EASTSTAR ENVIRONMENTAL GROUP, INC. **P.O. No:** **Inv. No:** 1442478
Project No: SR0117, EASTSTAR ENVIRONMENTAL GROUP, INC. **PWSID No:**

Sample Number **Sample Description** **Samp. Date/Time/Temp** **Sampled by**
L4264327-3 ID-04-10-12-032 SLUDGE 07/30/12 10:20am NA F Customer
Received Date/Time/Temp 07/31/12 07:50pm 30.9 F **Iced (Y/N):** Y

Parameter	Method	Result	RLs	Test Date, Time, Analyst
GAS CHROMATOGRAPHY MASS SPECTROMETRY; SEMI-VOLATILES				
NAPHTHALENE	EPA 8270C	ND ug/kg DRY	307 ug/kg*	08/06/12 07:09PM GRM
2-METHYLNAPHTHALENE	EPA 8270C	ND ug/kg DRY	250 ug/kg*	08/06/12 07:09PM GRM
ACENAPHTHYLENE	EPA 8270C	ND ug/kg DRY	221 ug/kg*	08/06/12 07:09PM GRM
ACENAPHTHENE	EPA 8270C	ND ug/kg DRY	272 ug/kg*	08/06/12 07:09PM GRM
FLUORENE	EPA 8270C	ND ug/kg DRY	194 ug/kg*	08/06/12 07:09PM GRM
PHENANTHRENE	EPA 8270C	ND ug/kg DRY	209 ug/kg*	08/06/12 07:09PM GRM
ANTHRACENE	EPA 8270C	ND ug/kg DRY	294 ug/kg*	08/06/12 07:09PM GRM
FLUORANTHENE	EPA 8270C	ND ug/kg DRY	190 ug/kg*	08/06/12 07:09PM GRM
PYRENE	EPA 8270C	ND ug/kg DRY	233 ug/kg*	08/06/12 07:09PM GRM
BENZO(A)ANTHRACENE	EPA 8270C	ND ug/kg DRY	211 ug/kg*	08/06/12 07:09PM GRM
CHRYSENE	EPA 8270C	ND ug/kg DRY	202 ug/kg*	08/06/12 07:09PM GRM
BENZO(B)FLUORANTHENE	EPA 8270C	ND ug/kg DRY	175 ug/kg*	08/06/12 07:09PM GRM
BENZO(K)FLUORANTHENE	EPA 8270C	ND ug/kg DRY	225 ug/kg*	08/06/12 07:09PM GRM
BENZO(A)PYRENE	EPA 8270C	ND ug/kg DRY	208 ug/kg*	08/06/12 07:09PM GRM
INDENO(1,2,3-CD)PYRENE	EPA 8270C	ND ug/kg DRY	203 ug/kg*	08/06/12 07:09PM GRM
DIBENZ(A,H)ANTHRACENE	EPA 8270C	ND ug/kg DRY	157 ug/kg*	08/06/12 07:09PM GRM
BENZO(G,H,I)PERYLENE	EPA 8270C	ND ug/kg DRY	191 ug/kg*	08/06/12 07:09PM GRM

Sample Number **Sample Description** **Samp. Date/Time/Temp** **Sampled by**
L4264327-4 ID-03R-00-02-033 GRAB 07/30/12 01:20pm NA F Customer
Received Date/Time/Temp 07/31/12 07:50pm 30.9 F **Iced (Y/N):** Y

Parameter	Method	Result	RLs	Test Date, Time, Analyst
GENERAL CHEMISTRY				
CYANIDE, TOTAL	EPA 9010/9014	2420 mg/kg DRY	289 mg/kg	08/03/12 12:00PM JG
TOTAL SOLIDS PERCENT	SM 2540G	43.27 %	0.01000 %	08/01/12 03:30PM P P
METALS				
SILVER	EPA 6010C	ND mg/kg DRY	0.183 mg/kg*	08/13/12 02:12PM PG
ALUMINUM	EPA 6010C	15000 mg/kg DRY	5.34 mg/kg*	08/13/12 02:12PM PG
ARSENIC	EPA 6010C	4.53 mg/kg DRY	1.83 mg/kg*	08/13/12 02:12PM PG
BARIUM	EPA 6010C	31.7 mg/kg DRY	0.0374 mg/kg*	08/13/12 02:12PM PG
BERYLLIUM	EPA 6010C	0.0534 B mg/kg DRY	0.00624 mg/kg*	08/13/12 02:12PM PG
CALCIUM	EPA 6010C	197000 mg/kg DRY	8.55 mg/kg*	08/13/12 02:12PM PG
CADMIUM	EPA 6010C	ND mg/kg DRY	0.0481 mg/kg*	08/13/12 02:12PM PG
COBALT	EPA 6010C	5.96 mg/kg DRY	0.0881 mg/kg*	08/13/12 02:12PM PG
CHROMIUM	EPA 6010C	17.4 mg/kg DRY	0.111 mg/kg*	08/13/12 02:12PM PG
COPPER	EPA 6010C	14.3 mg/kg DRY	0.273 mg/kg*	08/13/12 02:12PM PG
IRON	EPA 6010C	9820 mg/kg DRY	3.56 mg/kg*	08/13/12 02:12PM PG
POTASSIUM	EPA 6010C	102. B mg/kg DRY	26.8 mg/kg*	08/13/12 02:12PM PG
MAGNESIUM	EPA 6010C	27700 mg/kg DRY	0.931 mg/kg*	08/13/12 02:12PM PG
MANGANESE	EPA 6010C	307 mg/kg DRY	0.0890 mg/kg*	08/13/12 02:12PM PG
SODIUM	EPA 6010C	2430 mg/kg DRY	10.9 mg/kg*	08/13/12 02:12PM PG
NICKEL	EPA 6010C	10.4 mg/kg DRY	0.149 mg/kg*	08/13/12 02:12PM PG
LEAD	EPA 6010C	2.91 B mg/kg DRY	1.01 mg/kg*	08/13/12 02:12PM PG

Serial Number: 2311926

Authorized by: Oommen V. Kappil, QA Director

Account No: SR0117, EASTSTAR ENVIRONMENTAL GROUP, INC. **P.O. No:** **Inv. No:** 1442478
Project No: SR0117, EASTSTAR ENVIRONMENTAL GROUP, INC. **PWSID No:**

Sample Number **Sample Description** **Samp. Date/Time/Temp** **Sampled by**
L4264327-4 ID-03R-00-02-033 GRAB 07/30/12 01:20pm NA F Customer
Received Date/Time/Temp 07/31/12 07:50pm 30.9 F **Iced (Y/N):** Y

Parameter	Method	Result	RLs	Test Date, Time, Analyst
METALS continued				
ANTIMONY	EPA 6010C	ND mg/kg DRY	1.89 mg/kg*	08/13/12 02:12PM PG
SELENIUM	EPA 6010C	ND mg/kg DRY	0.779 mg/kg*	08/13/12 02:12PM PG
THALLIUM	EPA 6010C	ND mg/kg DRY	2.28 mg/kg*	08/13/12 02:12PM PG
VANADIUM	EPA 6010C	30.7 mg/kg DRY	0.114 mg/kg*	08/13/12 02:12PM PG
ZINC	EPA 6010C	24.7 mg/kg DRY	0.543 mg/kg*	08/13/12 02:12PM PG
MERCURY	EPA 7471B	0.135 B mg/kg DRY	0.112 mg/kg*	08/08/12 02:26PM RMP

Sample Number **Sample Description** **Samp. Date/Time/Temp** **Sampled by**
L4264327-5 ID-03R-14-16-034 SOIL 07/30/12 02:30pm NA F Customer
Received Date/Time/Temp 07/31/12 07:50pm 30.9 F **Iced (Y/N):** Y

Parameter	Method	Result	RLs	Test Date, Time, Analyst
GENERAL CHEMISTRY				
CYANIDE, TOTAL	EPA 9010/9014	857 mg/kg DRY	161 mg/kg	08/08/12 01:00PM JG
TOTAL SOLIDS PERCENT	SM 2540G	30.97 %	0.01000 %	08/09/12 06:45PM JAZ
METALS				
SILVER	EPA 6010C	ND mg/kg DRY	0.255 mg/kg*	08/13/12 02:17PM PG
ALUMINUM	EPA 6010C	20100 mg/kg DRY	7.46 mg/kg*	08/13/12 02:17PM PG
ARSENIC	EPA 6010C	14.9 mg/kg DRY	2.55 mg/kg*	08/13/12 02:17PM PG
BARIUM	EPA 6010C	53.0 mg/kg DRY	0.0523 mg/kg*	08/13/12 02:17PM PG
BERYLLIUM	EPA 6010C	0.798 mg/kg DRY	0.00872 mg/kg*	08/13/12 02:17PM PG
CALCIUM	EPA 6010C	72700 mg/kg DRY	11.9 mg/kg*	08/13/12 02:17PM PG
CADMIUM	EPA 6010C	ND mg/kg DRY	0.0672 mg/kg*	08/13/12 02:17PM PG
COBALT	EPA 6010C	9.07 mg/kg DRY	0.123 mg/kg*	08/13/12 02:17PM PG
CHROMIUM	EPA 6010C	39.4 mg/kg DRY	0.155 mg/kg*	08/13/12 02:17PM PG
COPPER	EPA 6010C	22.4 mg/kg DRY	0.381 mg/kg*	08/13/12 02:17PM PG
IRON	EPA 6010C	20700 mg/kg DRY	4.97 mg/kg*	08/13/12 02:17PM PG
POTASSIUM	EPA 6010C	2860 mg/kg DRY	37.5 mg/kg*	08/13/12 02:17PM PG
MAGNESIUM	EPA 6010C	8620 mg/kg DRY	1.30 mg/kg*	08/13/12 02:17PM PG
MANGANESE	EPA 6010C	257 mg/kg DRY	0.124 mg/kg*	08/13/12 02:17PM PG
SODIUM	EPA 6010C	21000 mg/kg DRY	15.2 mg/kg*	08/13/12 02:17PM PG
NICKEL	EPA 6010C	24.2 mg/kg DRY	0.209 mg/kg*	08/13/12 02:17PM PG
LEAD	EPA 6010C	26.5 mg/kg DRY	1.42 mg/kg*	08/13/12 02:17PM PG
ANTIMONY	EPA 6010C	ND mg/kg DRY	2.64 mg/kg*	08/13/12 02:17PM PG
SELENIUM	EPA 6010C	ND mg/kg DRY	1.09 mg/kg*	08/13/12 02:17PM PG
THALLIUM	EPA 6010C	ND mg/kg DRY	3.19 mg/kg*	08/13/12 02:17PM PG
VANADIUM	EPA 6010C	46.8 mg/kg DRY	0.160 mg/kg*	08/13/12 02:17PM PG
ZINC	EPA 6010C	69.7 mg/kg DRY	0.759 mg/kg*	08/13/12 02:17PM PG
MERCURY	EPA 7471B	0.195 B mg/kg DRY	0.157 mg/kg*	08/08/12 02:28PM RMP

Serial Number: 2311926

Authorized by: Oommen V. Kappil, QA Director

QC Laboratories

Analytical Report

Account No: SR0117, EASTSTAR ENVIRONMENTAL GROUP, INC. **P.O. No:** **Inv. No:** 1442478
Project No: SR0117, EASTSTAR ENVIRONMENTAL GROUP, INC. **PWSID No:**

Sample Number **Sample Description** **Samp. Date/Time/Temp** **Sampled by**
L4264327-6 ID-03R-22-24-035 SOIL 07/30/12 03:20pm NA F Customer
Received Date/Time/Temp 07/31/12 07:50pm 30.9 F **Iced (Y/N):** Y

Parameter	Method	Result	RLs	Test Date, Time, Analyst
GENERAL CHEMISTRY				
TOTAL SOLIDS PERCENT	SM 2540G	67.38 %	0.01000 %	08/03/12 09:25PM MRP
METALS				
SILVER	EPA 6010C	ND mg/kg DRY	0.117 mg/kg*	08/13/12 02:21PM PG
ALUMINUM	EPA 6010C	9780 mg/kg DRY	3.43 mg/kg*	08/13/12 02:21PM PG
ARSENIC	EPA 6010C	1.28 B mg/kg DRY	1.17 mg/kg*	08/13/12 02:21PM PG
BARIUM	EPA 6010C	20.5 mg/kg DRY	0.0240 mg/kg*	08/13/12 02:21PM PG
BERYLLIUM	EPA 6010C	0.332 mg/kg DRY	0.00401 mg/kg*	08/13/12 02:21PM PG
CALCIUM	EPA 6010C	2880 mg/kg DRY	5.49 mg/kg*	08/13/12 02:21PM PG
CADMIUM	EPA 6010C	ND mg/kg DRY	0.0309 mg/kg*	08/13/12 02:21PM PG
COBALT	EPA 6010C	4.91 mg/kg DRY	0.0565 mg/kg*	08/13/12 02:21PM PG
CHROMIUM	EPA 6010C	13.0 mg/kg DRY	0.0712 mg/kg*	08/13/12 02:21PM PG
COPPER	EPA 6010C	3.99 mg/kg DRY	0.175 mg/kg*	08/13/12 02:21PM PG
IRON	EPA 6010C	12900 mg/kg DRY	2.29 mg/kg*	08/13/12 02:21PM PG
POTASSIUM	EPA 6010C	1100 mg/kg DRY	17.2 mg/kg*	08/13/12 02:21PM PG
MAGNESIUM	EPA 6010C	2890 mg/kg DRY	0.598 mg/kg*	08/13/12 02:21PM PG
MANGANESE	EPA 6010C	97.8 mg/kg DRY	0.0571 mg/kg*	08/13/12 02:21PM PG
SODIUM	EPA 6010C	4070 mg/kg DRY	6.98 mg/kg*	08/13/12 02:21PM PG
NICKEL	EPA 6010C	7.82 mg/kg DRY	0.0959 mg/kg*	08/13/12 02:21PM PG
LEAD	EPA 6010C	5.80 mg/kg DRY	0.652 mg/kg*	08/13/12 02:21PM PG
ANTIMONY	EPA 6010C	ND mg/kg DRY	1.21 mg/kg*	08/13/12 02:21PM PG
SELENIUM	EPA 6010C	ND mg/kg DRY	0.500 mg/kg*	08/13/12 02:21PM PG
THALLIUM	EPA 6010C	ND mg/kg DRY	1.47 mg/kg*	08/13/12 02:21PM PG
VANADIUM	EPA 6010C	24.9 mg/kg DRY	0.0735 mg/kg*	08/13/12 02:21PM PG
ZINC	EPA 6010C	20.8 mg/kg DRY	0.349 mg/kg*	08/13/12 02:21PM PG
MERCURY	EPA 7471B	ND mg/kg DRY	0.0721 mg/kg*	08/08/12 02:31PM RMP

Sample Number **Sample Description** **Samp. Date/Time/Temp** **Sampled by**
L4264327-7 W-02-00-04-036 SOIL 07/31/12 09:15am NA F Customer
Received Date/Time/Temp 07/31/12 07:50pm 30.9 F **Iced (Y/N):** Y

Parameter	Method	Result	RLs	Test Date, Time, Analyst
GENERAL CHEMISTRY				
CYANIDE, TOTAL	EPA 9010/9014	334 mg/kg DRY	43.6 mg/kg	08/08/12 01:00PM JG
TOTAL SOLIDS PERCENT	SM 2540G	28.67 %	0.01000 %	08/03/12 09:25PM MRP
METALS				
SILVER	EPA 6010C	ND mg/kg DRY	0.276 mg/kg*	08/13/12 02:26PM PG
ALUMINUM	EPA 6010C	20500 mg/kg DRY	8.06 mg/kg*	08/13/12 02:26PM PG
ARSENIC	EPA 6010C	248 mg/kg DRY	2.76 mg/kg*	08/13/12 02:26PM PG
BARIUM	EPA 6010C	495 mg/kg DRY	0.0565 mg/kg*	08/13/12 02:26PM PG
BERYLLIUM	EPA 6010C	1.13 mg/kg DRY	0.00942 mg/kg*	08/13/12 02:26PM PG
CALCIUM	EPA 6010C	4190 mg/kg DRY	12.9 mg/kg*	08/13/12 02:26PM PG
CADMIUM	EPA 6010C	ND mg/kg DRY	0.0725 mg/kg*	08/13/12 02:26PM PG

Serial Number: 2311926

Authorized by: Oommen V. Kappil, QA Director

QC Laboratories

Analytical Report

Account No: SR0117, EASTSTAR ENVIRONMENTAL GROUP, INC. **P.O. No:** **Inv. No:** 1442478
Project No: SR0117, EASTSTAR ENVIRONMENTAL GROUP, INC. **PWSID No:**

Sample Number **Sample Description** **Samp. Date/Time/Temp** **Sampled by**
L4264327-7 W-02-00-04-036 SOIL 07/31/12 09:15am NA F Customer
Received Date/Time/Temp 07/31/12 07:50pm 30.9 F **Iced (Y/N):** Y

Parameter	Method	Result	RLs	Test Date, Time, Analyst
METALS continued				
COBALT	EPA 6010C	21.4 mg/kg DRY	0.133 mg/kg*	08/13/12 02:26PM PG
CHROMIUM	EPA 6010C	314 mg/kg DRY	0.167 mg/kg*	08/13/12 02:26PM PG
COPPER	EPA 6010C	677 mg/kg DRY	0.412 mg/kg*	08/13/12 02:26PM PG
IRON	EPA 6010C	35200 mg/kg DRY	5.37 mg/kg*	08/13/12 02:26PM PG
POTASSIUM	EPA 6010C	4220 mg/kg DRY	40.5 mg/kg*	08/13/12 02:26PM PG
MAGNESIUM	EPA 6010C	7120 mg/kg DRY	1.41 mg/kg*	08/13/12 02:26PM PG
MANGANESE	EPA 6010C	270 mg/kg DRY	0.134 mg/kg*	08/13/12 02:26PM PG
SODIUM	EPA 6010C	15900 mg/kg DRY	16.4 mg/kg*	08/13/12 02:26PM PG
NICKEL	EPA 6010C	118 mg/kg DRY	0.225 mg/kg*	08/13/12 02:26PM PG
LEAD	EPA 6010C	757 mg/kg DRY	1.53 mg/kg*	08/13/12 02:26PM PG
ANTIMONY	EPA 6010C	7.64 mg/kg DRY	2.85 mg/kg*	08/13/12 02:26PM PG
SELENIUM	EPA 6010C	5.55 B mg/kg DRY	1.18 mg/kg*	08/13/12 02:26PM PG
THALLIUM	EPA 6010C	ND mg/kg DRY	3.45 mg/kg*	08/13/12 02:26PM PG
VANADIUM	EPA 6010C	91.7 mg/kg DRY	0.173 mg/kg*	08/13/12 02:26PM PG
ZINC	EPA 6010C	652 mg/kg DRY	0.820 mg/kg*	08/13/12 02:26PM PG
MERCURY	EPA 7471B	31.6 mg/kg DRY	1.70 mg/kg*	08/08/12 02:53PM RMP
GAS CHROMATOGRAPHY MASS SPECTROMETRY; SEMI-VOLATILES				
NAPHTHALENE	EPA 8270C	ND ug/kg DRY	164 ug/kg*	08/06/12 07:34PM GRM
2-METHYLNAPHTHALENE	EPA 8270C	ND ug/kg DRY	133 ug/kg*	08/06/12 07:34PM GRM
ACENAPHTHYLENE	EPA 8270C	ND ug/kg DRY	118 ug/kg*	08/06/12 07:34PM GRM
ACENAPHTHENE	EPA 8270C	ND ug/kg DRY	145 ug/kg*	08/06/12 07:34PM GRM
FLUORENE	EPA 8270C	ND ug/kg DRY	104 ug/kg*	08/06/12 07:34PM GRM
PHENANTHRENE	EPA 8270C	132. J ug/kg DRY	112 ug/kg*	08/06/12 07:34PM GRM
ANTHRACENE	EPA 8270C	ND ug/kg DRY	157 ug/kg*	08/06/12 07:34PM GRM
FLUORANTHENE	EPA 8270C	142. J ug/kg DRY	101 ug/kg*	08/06/12 07:34PM GRM
PYRENE	EPA 8270C	144. J ug/kg DRY	125 ug/kg*	08/06/12 07:34PM GRM
BENZO(A)ANTHRACENE	EPA 8270C	ND ug/kg DRY	113 ug/kg*	08/06/12 07:34PM GRM
CHRYSENE	EPA 8270C	112. J ug/kg DRY	108 ug/kg*	08/06/12 07:34PM GRM
BENZO(B)FLUORANTHENE	EPA 8270C	ND ug/kg DRY	93.5 ug/kg*	08/06/12 07:34PM GRM
BENZO(K)FLUORANTHENE	EPA 8270C	ND ug/kg DRY	120 ug/kg*	08/06/12 07:34PM GRM
BENZO(A)PYRENE	EPA 8270C	ND ug/kg DRY	111 ug/kg*	08/06/12 07:34PM GRM
INDENO(1,2,3-CD)PYRENE	EPA 8270C	ND ug/kg DRY	108 ug/kg*	08/06/12 07:34PM GRM
DIBENZ(A,H)ANTHRACENE	EPA 8270C	ND ug/kg DRY	83.7 ug/kg*	08/06/12 07:34PM GRM
BENZO(G,H,I)PERYLENE	EPA 8270C	ND ug/kg DRY	102 ug/kg*	08/06/12 07:34PM GRM

Serial Number: 2311926

Oommen V. Kappil

Authorized by: Oommen V. Kappil, QA Director

QC Laboratories

Analytical Report

Account No: SR0117, EASTSTAR ENVIRONMENTAL GROUP, INC. **P.O. No:** **Inv. No:** 1442478
Project No: SR0117, EASTSTAR ENVIRONMENTAL GROUP, INC. **PWSID No:**

Sample Number **Sample Description** **Samp. Date/Time/Temp** **Sampled by**
L4264327-8 BS-03R-02-04-037 SLUDGE 07/31/12 12:55pm NA F Customer
Received Date/Time/Temp 07/31/12 07:50pm 30.9 F **Iced (Y/N):** Y

Parameter	Method	Result	RLs	Test Date, Time, Analyst
GENERAL CHEMISTRY				
TOTAL SOLIDS PERCENT	SM 2540G	67.54 %	0.01000 %	08/02/12 04:20PM MRP
METALS				
SILVER	EPA 6010C	ND mg/kg DRY	0.117 mg/kg*	08/13/12 02:30PM PG
ALUMINUM	EPA 6010C	2990 mg/kg DRY	3.42 mg/kg*	08/13/12 02:30PM PG
ARSENIC	EPA 6010C	ND mg/kg DRY	1.17 mg/kg*	08/13/12 02:30PM PG
BARIUM	EPA 6010C	28.9 mg/kg DRY	0.0240 mg/kg*	08/13/12 02:30PM PG
BERYLLIUM	EPA 6010C	0.232 B mg/kg DRY	0.00400 mg/kg*	08/13/12 02:30PM PG
CADMIUM	EPA 6010C	ND mg/kg DRY	0.0308 mg/kg*	08/13/12 02:30PM PG
COBALT	EPA 6010C	1.64 mg/kg DRY	0.0564 mg/kg*	08/13/12 02:30PM PG
CHROMIUM	EPA 6010C	7.51 mg/kg DRY	0.0711 mg/kg*	08/13/12 02:30PM PG
COPPER	EPA 6010C	1.54 mg/kg DRY	0.175 mg/kg*	08/13/12 02:30PM PG
IRON	EPA 6010C	1900 mg/kg DRY	2.28 mg/kg*	08/13/12 02:30PM PG
POTASSIUM	EPA 6010C	82.3 mg/kg DRY	17.2 mg/kg*	08/13/12 02:30PM PG
MAGNESIUM	EPA 6010C	919 mg/kg DRY	0.597 mg/kg*	08/13/12 02:30PM PG
MANGANESE	EPA 6010C	39.7 mg/kg DRY	0.0570 mg/kg*	08/13/12 02:30PM PG
SODIUM	EPA 6010C	748 mg/kg DRY	6.96 mg/kg*	08/13/12 02:30PM PG
NICKEL	EPA 6010C	4.49 mg/kg DRY	0.0956 mg/kg*	08/13/12 02:30PM PG
LEAD	EPA 6010C	ND mg/kg DRY	0.650 mg/kg*	08/13/12 02:30PM PG
ANTIMONY	EPA 6010C	ND mg/kg DRY	1.21 mg/kg*	08/13/12 02:30PM PG
SELENIUM	EPA 6010C	ND mg/kg DRY	0.499 mg/kg*	08/13/12 02:30PM PG
VANADIUM	EPA 6010C	7.39 mg/kg DRY	0.0733 mg/kg*	08/13/12 02:30PM PG
ZINC	EPA 6010C	3.44 mg/kg DRY	0.348 mg/kg*	08/13/12 02:30PM PG
THALLIUM	EPA 6010C	ND mg/kg DRY	1.46 mg/kg*	08/13/12 02:33PM PG
CALCIUM	EPA 6010C	256000 mg/kg DRY	54.8 mg/kg*	08/13/12 02:35PM PG
MERCURY	EPA 7471B	ND mg/kg DRY	0.0720 mg/kg*	08/08/12 02:34PM RMP

Sample Number **Sample Description** **Samp. Date/Time/Temp** **Sampled by**
L4264327-9 BS-03R-13-15-038 SOIL 07/31/12 02:00pm NA F Customer
Received Date/Time/Temp 07/31/12 07:50pm 30.9 F **Iced (Y/N):** Y

Parameter	Method	Result	RLs	Test Date, Time, Analyst
GENERAL CHEMISTRY				
CYANIDE, TOTAL	EPA 9010/9014	977 mg/kg DRY	126 mg/kg	08/13/12 12:00PM JG
TOTAL SOLIDS PERCENT	SM 2540G	49.74 %	0.01000 %	08/03/12 09:25PM MRP
METALS				
SILVER	EPA 6010C	ND mg/kg DRY	0.159 mg/kg*	08/13/12 02:37PM PG
ALUMINUM	EPA 6010C	19200 mg/kg DRY	4.64 mg/kg*	08/13/12 02:37PM PG
ARSENIC	EPA 6010C	14.4 mg/kg DRY	1.59 mg/kg*	08/13/12 02:37PM PG
BARIUM	EPA 6010C	43.2 mg/kg DRY	0.0326 mg/kg*	08/13/12 02:37PM PG
BERYLLIUM	EPA 6010C	0.911 mg/kg DRY	0.00543 mg/kg*	08/13/12 02:37PM PG
CALCIUM	EPA 6010C	14200 mg/kg DRY	7.44 mg/kg*	08/13/12 02:37PM PG
CADMIUM	EPA 6010C	ND mg/kg DRY	0.0418 mg/kg*	08/13/12 02:37PM PG

Serial Number: 2311926

Authorized by: Oommen V. Kappil, QA Director

Account No: SR0117, EASTSTAR ENVIRONMENTAL GROUP, INC. **P.O. No:** **Inv. No:** 1442478
Project No: SR0117, EASTSTAR ENVIRONMENTAL GROUP, INC. **PWSID No:**

Sample Number **Sample Description** **Samp. Date/Time/Temp** **Sampled by**
L4264327-9 BS-03R-13-15-038 SOIL 07/31/12 02:00pm NA F Customer
Received Date/Time/Temp 07/31/12 07:50pm 30.9 F **Iced (Y/N):** Y

Parameter	Method	Result	RLs	Test Date, Time, Analyst
METALS continued				
COBALT	EPA 6010C	11.5 mg/kg DRY	0.0766 mg/kg*	08/13/12 02:37PM PG
CHROMIUM	EPA 6010C	32.4 mg/kg DRY	0.0965 mg/kg*	08/13/12 02:37PM PG
COPPER	EPA 6010C	12.9 mg/kg DRY	0.237 mg/kg*	08/13/12 02:37PM PG
IRON	EPA 6010C	35000 mg/kg DRY	3.10 mg/kg*	08/13/12 02:37PM PG
POTASSIUM	EPA 6010C	4280 mg/kg DRY	23.3 mg/kg*	08/13/12 02:37PM PG
MAGNESIUM	EPA 6010C	8200 mg/kg DRY	0.810 mg/kg*	08/13/12 02:37PM PG
MANGANESE	EPA 6010C	354 mg/kg DRY	0.0774 mg/kg*	08/13/12 02:37PM PG
SODIUM	EPA 6010C	12900 mg/kg DRY	9.45 mg/kg*	08/13/12 02:37PM PG
NICKEL	EPA 6010C	25.5 mg/kg DRY	0.130 mg/kg*	08/13/12 02:37PM PG
LEAD	EPA 6010C	9.49 mg/kg DRY	0.883 mg/kg*	08/13/12 02:37PM PG
ANTIMONY	EPA 6010C	ND mg/kg DRY	1.64 mg/kg*	08/13/12 02:37PM PG
SELENIUM	EPA 6010C	ND mg/kg DRY	0.678 mg/kg*	08/13/12 02:37PM PG
THALLIUM	EPA 6010C	ND mg/kg DRY	1.99 mg/kg*	08/13/12 02:37PM PG
VANADIUM	EPA 6010C	46.2 mg/kg DRY	0.0995 mg/kg*	08/13/12 02:37PM PG
ZINC	EPA 6010C	68.0 mg/kg DRY	0.472 mg/kg*	08/13/12 02:37PM PG
MERCURY	EPA 7471B	ND mg/kg DRY	0.0977 mg/kg*	08/08/12 02:42PM RMP
GAS CHROMATOGRAPHY MASS SPECTROMETRY; SEMI-VOLATILES				
N-NITROSODIMETHYLAMINE	EPA 8270C	ND ug/kg DRY	98.7 ug/kg*	08/06/12 07:59PM GRM
BIS(2-CHLOROETHYL)ETHER	EPA 8270C	ND ug/kg DRY	99.1 ug/kg*	08/06/12 07:59PM GRM
ANILINE	EPA 8270C	ND ug/kg DRY	73.4 ug/kg*	08/06/12 07:59PM GRM
PHENOL	EPA 8270C	ND ug/kg DRY	64.5 ug/kg*	08/06/12 07:59PM GRM
2-CHLOROPHENOL	EPA 8270C	ND ug/kg DRY	70.2 ug/kg*	08/06/12 07:59PM GRM
1,3-DICHLOROBENZENE	EPA 8270C	ND ug/kg DRY	104 ug/kg*	08/06/12 07:59PM GRM
1,4-DICHLOROBENZENE	EPA 8270C	ND ug/kg DRY	109 ug/kg*	08/06/12 07:59PM GRM
1,2-DICHLOROBENZENE	EPA 8270C	ND ug/kg DRY	106 ug/kg*	08/06/12 07:59PM GRM
BENZYL ALCOHOL	EPA 8270C	ND ug/kg DRY	65.7 ug/kg*	08/06/12 07:59PM GRM
BIS(2-CHLOROISOPROPYL)ETHER	EPA 8270C	ND ug/kg DRY	104 ug/kg*	08/06/12 07:59PM GRM
2-METHYLPHENOL	EPA 8270C	ND ug/kg DRY	70.2 ug/kg*	08/06/12 07:59PM GRM
HEXACHLOROETHANE	EPA 8270C	ND ug/kg DRY	77.0 ug/kg*	08/06/12 07:59PM GRM
N-NITROSO-DI-N-PROPYLAMINE	EPA 8270C	ND ug/kg DRY	56.1 ug/kg*	08/06/12 07:59PM GRM
3&4-METHYLPHENOL	EPA 8270C	ND ug/kg DRY	107 ug/kg*	08/06/12 07:59PM GRM
NITROBENZENE	EPA 8270C	ND ug/kg DRY	101 ug/kg*	08/06/12 07:59PM GRM
ISOPHORONE	EPA 8270C	ND ug/kg DRY	55.1 ug/kg*	08/06/12 07:59PM GRM
2-NITROPHENOL	EPA 8270C	ND ug/kg DRY	70.0 ug/kg*	08/06/12 07:59PM GRM
2,4-DIMETHYLPHENOL	EPA 8270C	ND ug/kg DRY	57.3 ug/kg*	08/06/12 07:59PM GRM
BIS(2-CHLOROETHOXY)METHANE	EPA 8270C	ND ug/kg DRY	71.4 ug/kg*	08/06/12 07:59PM GRM
2,4-DICHLOROPHENOL	EPA 8270C	ND ug/kg DRY	121 ug/kg*	08/06/12 07:59PM GRM
BENZOIC ACID	EPA 8270C	ND ug/kg DRY	1320 ug/kg*	08/06/12 07:59PM GRM
1,2,4-TRICHLOROBENZENE	EPA 8270C	ND ug/kg DRY	98.5 ug/kg*	08/06/12 07:59PM GRM
NAPHTHALENE	EPA 8270C	ND ug/kg DRY	94.3 ug/kg*	08/06/12 07:59PM GRM
4-CHLOROANILINE	EPA 8270C	ND ug/kg DRY	60.7 ug/kg*	08/06/12 07:59PM GRM
HEXACHLOROBUTADIENE	EPA 8270C	ND ug/kg DRY	102 ug/kg*	08/06/12 07:59PM GRM
4-CHLORO-3-METHYLPHENOL	EPA 8270C	ND ug/kg DRY	57.7 ug/kg*	08/06/12 07:59PM GRM
2-METHYLNAPHTHALENE	EPA 8270C	ND ug/kg DRY	76.8 ug/kg*	08/06/12 07:59PM GRM
HEXACHLOROCYCLOPENTADIENE	EPA 8270C	ND ug/kg DRY	56.9 ug/kg*	08/06/12 07:59PM GRM
2,4,6-TRICHLOROPHENOL	EPA 8270C	ND ug/kg DRY	60.9 ug/kg*	08/06/12 07:59PM GRM
2,4,5-TRICHLOROPHENOL	EPA 8270C	ND ug/kg DRY	62.1 ug/kg*	08/06/12 07:59PM GRM

Authorized by: Oommen V. Kappil, QA Director

Account No: SR0117, EASTSTAR ENVIRONMENTAL GROUP, INC. **P.O. No:** **Inv. No:** 1442478
Project No: SR0117, EASTSTAR ENVIRONMENTAL GROUP, INC. **PWSID No:**

Sample Number **Sample Description** **Samp. Date/Time/Temp** **Sampled by**
L4264327-9 BS-03R-13-15-038 SOIL 07/31/12 02:00pm NA F Customer
Received Date/Time/Temp 07/31/12 07:50pm 30.9 F **Iced (Y/N):** Y

Parameter	Method	Result	RLs	Test Date, Time, Analyst
GAS CHROMATOGRAPHY MASS SPECTROMETRY; SEMI-VOLATILES continued				
2-CHLORONAPHTHALENE	EPA 8270C	ND ug/kg DRY	63.5 ug/kg*	08/06/12 07:59PM GRM
2-NITROANILINE	EPA 8270C	ND ug/kg DRY	70.2 ug/kg*	08/06/12 07:59PM GRM
ACENAPHTHYLENE	EPA 8270C	ND ug/kg DRY	68.0 ug/kg*	08/06/12 07:59PM GRM
DIMETHYLPHTHALATE	EPA 8270C	ND ug/kg DRY	172 ug/kg*	08/06/12 07:59PM GRM
2,6-DINITROTOLUENE	EPA 8270C	ND ug/kg DRY	77.0 ug/kg*	08/06/12 07:59PM GRM
ACENAPHTHENE	EPA 8270C	ND ug/kg DRY	83.6 ug/kg*	08/06/12 07:59PM GRM
3-NITROANILINE	EPA 8270C	ND ug/kg DRY	78.8 ug/kg*	08/06/12 07:59PM GRM
2,4-DINITROPHENOL	EPA 8270C	ND ug/kg DRY	275 ug/kg*	08/06/12 07:59PM GRM
DIBENZOFURAN	EPA 8270C	ND ug/kg DRY	80.0 ug/kg*	08/06/12 07:59PM GRM
2,4-DINITROTOLUENE	EPA 8270C	ND ug/kg DRY	79.4 ug/kg*	08/06/12 07:59PM GRM
4-NITROPHENOL	EPA 8270C	ND ug/kg DRY	67.1 ug/kg*	08/06/12 07:59PM GRM
FLUORENE	EPA 8270C	ND ug/kg DRY	59.7 ug/kg*	08/06/12 07:59PM GRM
4-CHLOROPHENYL-PHENYLETHER	EPA 8270C	ND ug/kg DRY	71.0 ug/kg*	08/06/12 07:59PM GRM
DIETHYLPHTHALATE	EPA 8270C	ND ug/kg DRY	67.1 ug/kg*	08/06/12 07:59PM GRM
4-NITROANILINE	EPA 8270C	ND ug/kg DRY	63.1 ug/kg*	08/06/12 07:59PM GRM
4,6-DINITRO-2-METHYLPHENOL	EPA 8270C	ND ug/kg DRY	55.9 ug/kg*	08/06/12 07:59PM GRM
N-NITROSODIPHENYLAMINE	EPA 8270C	ND ug/kg DRY	114 ug/kg*	08/06/12 07:59PM GRM
1,2-DIPHENYLHYDRAZINE	EPA 8270C	ND ug/kg DRY	61.3 ug/kg*	08/06/12 07:59PM GRM
4-BROMOPHENYL-PHENYLETHER	EPA 8270C	ND ug/kg DRY	60.7 ug/kg*	08/06/12 07:59PM GRM
HEXACHLOROBENZENE	EPA 8270C	ND ug/kg DRY	74.4 ug/kg*	08/06/12 07:59PM GRM
PENTACHLOROPHENOL	EPA 8270C	ND ug/kg DRY	89.9 ug/kg*	08/06/12 07:59PM GRM
PHENANTHRENE	EPA 8270C	ND ug/kg DRY	64.3 ug/kg*	08/06/12 07:59PM GRM
ANTHRACENE	EPA 8270C	ND ug/kg DRY	90.3 ug/kg*	08/06/12 07:59PM GRM
CARBAZOLE	EPA 8270C	ND ug/kg DRY	70.8 ug/kg*	08/06/12 07:59PM GRM
DI-N-BUTYLPHTHALATE	EPA 8270C	ND ug/kg DRY	61.7 ug/kg*	08/06/12 07:59PM GRM
FLUORANTHENE	EPA 8270C	ND ug/kg DRY	58.5 ug/kg*	08/06/12 07:59PM GRM
BENZIDINE	EPA 8270C	ND ug/kg DRY	752 ug/kg*	08/06/12 07:59PM GRM
PYRENE	EPA 8270C	ND ug/kg DRY	71.8 ug/kg*	08/06/12 07:59PM GRM
BUTYLBENZYLPHTHALATE	EPA 8270C	ND ug/kg DRY	66.5 ug/kg*	08/06/12 07:59PM GRM
3,3'-DICHLOROBENZIDINE	EPA 8270C	ND ug/kg DRY	76.6 ug/kg*	08/06/12 07:59PM GRM
BENZO(A)ANTHRACENE	EPA 8270C	ND ug/kg DRY	64.9 ug/kg*	08/06/12 07:59PM GRM
CHRYSENE	EPA 8270C	ND ug/kg DRY	62.1 ug/kg*	08/06/12 07:59PM GRM
BIS(2-ETHYLHEXYL)PHTHALATE	EPA 8270C	ND ug/kg DRY	55.1 ug/kg*	08/06/12 07:59PM GRM
DI-N-OCTYLPHTHALATE	EPA 8270C	ND ug/kg DRY	52.9 ug/kg*	08/06/12 07:59PM GRM
BENZO(B)FLUORANTHENE	EPA 8270C	ND ug/kg DRY	53.9 ug/kg*	08/06/12 07:59PM GRM
BENZO(K)FLUORANTHENE	EPA 8270C	ND ug/kg DRY	69.2 ug/kg*	08/06/12 07:59PM GRM
BENZO(A)PYRENE	EPA 8270C	ND ug/kg DRY	63.9 ug/kg*	08/06/12 07:59PM GRM
INDENO(1,2,3-CD)PYRENE	EPA 8270C	ND ug/kg DRY	62.3 ug/kg*	08/06/12 07:59PM GRM
DIBENZ(A,H)ANTHRACENE	EPA 8270C	ND ug/kg DRY	48.3 ug/kg*	08/06/12 07:59PM GRM
BENZO(G,H,I)PERYLENE	EPA 8270C	ND ug/kg DRY	58.7 ug/kg*	08/06/12 07:59PM GRM
GAS CHROMATOGRAPHY MASS SPECTROMETRY; VOLATILES				
DICHLORODIFLUOROMETHANE	EPA 8260B	ND ug/kg DRY	1.59 ug/kg*	08/10/12 04:47PM MHA
CHLOROMETHANE	EPA 8260B	ND ug/kg DRY	2.08 ug/kg*	08/10/12 04:47PM MHA
VINYL CHLORIDE	EPA 8260B	ND ug/kg DRY	2.05 ug/kg*	08/10/12 04:47PM MHA
BROMOMETHANE	EPA 8260B	ND ug/kg DRY	2.24 ug/kg*	08/10/12 04:47PM MHA
CHLOROETHANE	EPA 8260B	ND ug/kg DRY	1.40 ug/kg*	08/10/12 04:47PM MHA
TRICHLOROFLUOROMETHANE	EPA 8260B	ND ug/kg DRY	1.93 ug/kg*	08/10/12 04:47PM MHA

Serial Number: 2311926

Authorized by: Oommen V. Kappil, QA Director

Account No: SR0117, EASTSTAR ENVIRONMENTAL GROUP, INC. **P.O. No:** **Inv. No:** 1442478
Project No: SR0117, EASTSTAR ENVIRONMENTAL GROUP, INC. **PWSID No:**

Sample Number **Sample Description** **Samp. Date/Time/Temp** **Sampled by**
L4264327-9 BS-03R-13-15-038 SOIL 07/31/12 02:00pm NA F Customer
Received Date/Time/Temp 07/31/12 07:50pm 30.9 F **Iced (Y/N):** Y

Parameter	Method	Result	RLs	Test Date, Time, Analyst
GAS CHROMATOGRAPHY MASS SPECTROMETRY; VOLATILES continued				
1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	EPA 8260B	ND ug/kg DRY	2.03 ug/kg*	08/10/12 04:47PM MHA
METHYL ACETATE	EPA 8260B	ND ug/kg DRY	1.89 ug/kg*	08/10/12 04:47PM MHA
1,1-DICHLOROETHENE	EPA 8260B	ND ug/kg DRY	1.98 ug/kg*	08/10/12 04:47PM MHA
ACETONE	EPA 8260B	38.4 B ug/kg DRY	4.45 ug/kg*	08/10/12 04:47PM MHA
CARBON DISULFIDE	EPA 8260B	21.2 ug/kg DRY	3.41 ug/kg*	08/10/12 04:47PM MHA
METHYLENE CHLORIDE	EPA 8260B	ND ug/kg DRY	2.67 ug/kg*	08/10/12 04:47PM MHA
TRANS-1,2-DICHLOROETHENE	EPA 8260B	ND ug/kg DRY	1.77 ug/kg*	08/10/12 04:47PM MHA
METHYL TERTIARY BUTYL ETHER	EPA 8260B	ND ug/kg DRY	1.52 ug/kg*	08/10/12 04:47PM MHA
1,1-DICHLOROETHANE	EPA 8260B	ND ug/kg DRY	1.85 ug/kg*	08/10/12 04:47PM MHA
2-BUTANONE	EPA 8260B	ND ug/kg DRY	3.32 ug/kg*	08/10/12 04:47PM MHA
BROMOCHLOROMETHANE	EPA 8260B	ND ug/kg DRY	1.73 ug/kg*	08/10/12 04:47PM MHA
CIS-1,2-DICHLOROETHENE	EPA 8260B	ND ug/kg DRY	1.34 ug/kg*	08/10/12 04:47PM MHA
CHLOROFORM	EPA 8260B	ND ug/kg DRY	1.50 ug/kg*	08/10/12 04:47PM MHA
1,1,1-TRICHLOROETHANE	EPA 8260B	ND ug/kg DRY	1.78 ug/kg*	08/10/12 04:47PM MHA
CYCLOHEXANE	EPA 8260B	ND ug/kg DRY	1.68 ug/kg*	08/10/12 04:47PM MHA
CARBON TETRACHLORIDE	EPA 8260B	ND ug/kg DRY	1.73 ug/kg*	08/10/12 04:47PM MHA
BENZENE	EPA 8260B	ND ug/kg DRY	1.66 ug/kg*	08/10/12 04:47PM MHA
1,2-DICHLOROETHANE	EPA 8260B	ND ug/kg DRY	1.48 ug/kg*	08/10/12 04:47PM MHA
TRICHLOROETHENE	EPA 8260B	ND ug/kg DRY	2.21 ug/kg*	08/10/12 04:47PM MHA
METHYLCYCLOHEXANE	EPA 8260B	ND ug/kg DRY	2.10 ug/kg*	08/10/12 04:47PM MHA
1,2-DICHLOROPROPANE	EPA 8260B	ND ug/kg DRY	1.64 ug/kg*	08/10/12 04:47PM MHA
BROMODICHLOROMETHANE	EPA 8260B	ND ug/kg DRY	1.70 ug/kg*	08/10/12 04:47PM MHA
4-METHYL-2-PENTANONE	EPA 8260B	ND ug/kg DRY	2.99 ug/kg*	08/10/12 04:47PM MHA
CIS-1,3-DICHLOROPROPENE	EPA 8260B	ND ug/kg DRY	1.43 ug/kg*	08/10/12 04:47PM MHA
TOLUENE	EPA 8260B	ND ug/kg DRY	2.03 ug/kg*	08/10/12 04:47PM MHA
TRANS-1,3-DICHLOROPROPENE	EPA 8260B	ND ug/kg DRY	1.54 ug/kg*	08/10/12 04:47PM MHA
1,1,2-TRICHLOROETHANE	EPA 8260B	ND ug/kg DRY	1.75 ug/kg*	08/10/12 04:47PM MHA
2-HEXANONE	EPA 8260B	ND ug/kg DRY	3.46 ug/kg*	08/10/12 04:47PM MHA
TETRACHLOROETHENE	EPA 8260B	ND ug/kg DRY	1.93 ug/kg*	08/10/12 04:47PM MHA
DIBROMOCHLOROMETHANE	EPA 8260B	ND ug/kg DRY	1.31 ug/kg*	08/10/12 04:47PM MHA
1,2-DIBROMOETHANE	EPA 8260B	ND ug/kg DRY	1.55 ug/kg*	08/10/12 04:47PM MHA
CHLOROBENZENE	EPA 8260B	ND ug/kg DRY	1.77 ug/kg*	08/10/12 04:47PM MHA
ETHYL BENZENE	EPA 8260B	ND ug/kg DRY	2.01 ug/kg*	08/10/12 04:47PM MHA
M&P-XYLENES	EPA 8260B	ND ug/kg DRY	4.08 ug/kg*	08/10/12 04:47PM MHA
O-XYLENE	EPA 8260B	ND ug/kg DRY	1.64 ug/kg*	08/10/12 04:47PM MHA
STYRENE	EPA 8260B	ND ug/kg DRY	1.57 ug/kg*	08/10/12 04:47PM MHA
BROMOFORM	EPA 8260B	ND ug/kg DRY	1.27 ug/kg*	08/10/12 04:47PM MHA
1,1,2,2-TETRACHLOROETHANE	EPA 8260B	ND ug/kg DRY	1.63 ug/kg*	08/10/12 04:47PM MHA
ISOPROPYLBENZENE	EPA 8260B	ND ug/kg DRY	1.93 ug/kg*	08/10/12 04:47PM MHA
1,3-DICHLOROBENZENE	EPA 8260B	ND ug/kg DRY	1.94 ug/kg*	08/10/12 04:47PM MHA
1,4-DICHLOROBENZENE	EPA 8260B	ND ug/kg DRY	2.07 ug/kg*	08/10/12 04:47PM MHA
1,2-DICHLOROBENZENE	EPA 8260B	ND ug/kg DRY	1.73 ug/kg*	08/10/12 04:47PM MHA
1,2-DIBROMO-3-CHLOROPROPANE	EPA 8260B	ND ug/kg DRY	1.89 ug/kg*	08/10/12 04:47PM MHA
1,2,4-TRICHLOROBENZENE	EPA 8260B	ND ug/kg DRY	2.35 ug/kg*	08/10/12 04:47PM MHA
1,2,3-TRICHLOROBENZENE	EPA 8260B	ND ug/kg DRY	3.04 ug/kg*	08/10/12 04:47PM MHA
1,4-DIOXANE	EPA 8260B	ND ug/kg DRY	75.8 ug/kg*	08/10/12 04:47PM MHA

Serial Number: 2311926

Authorized by: Oommen V. Kappil, QA Director

QC Laboratories

Analytical Report

Account No: SR0117, EASTSTAR ENVIRONMENTAL GROUP, INC. **P.O. No:** **Inv. No:** 1442478
Project No: SR0117, EASTSTAR ENVIRONMENTAL GROUP, INC. **PWSID No:**

Sample Number	Sample Description	Samp. Date/Time/Temp	Sampled by
L4264327-9	BS-03R-13-15-038 SOIL	07/31/12 02:00pm NA F	Customer

Received Date/Time/Temp 07/31/12 07:50pm 30.9 F **Iced (Y/N):** Y

Parameter	Method	Result	RLs	Test Date, Time, Analyst
GAS CHROMATOGRAPHY				
TOTAL EPH	NJDEP EPH 10/08 REV3	ND mg/kg DRY	72.4 mg/kg	08/07/12 05:34PM RRS

QUALIFIERS: For metals parameters;"B" indicates a value that is > than the MDL but < than the laboratory quantitation limit. For Organics parameters; "B"is when the compound is found in the blank as well as in the sample;"J"indicates a value that is > than the MDL but < than the lowest standard, it is also used to indicate that a compound is tentatively identified in a library search;"E"(estimated) is when a compound exceeded the calibration range;"N" presumptive evidence of a compound; "D" is when a dilution was required.

Notes:

A result of "ND" indicates that the analyte tested was either not detected or the concentration was below the RLs.
Definitions: NEG=negative; POS=positive; COL=colonies; RLs=laboratory reporting limits; L/A=laboratory accident; TNTC= Too numerous to count; pres=presumptive
A result marked with "DRY" indicates that the result was calculated and reported on a dry weight basis.
MCL= EPA recommended "maximum contaminant level", PLs = Customer-specific permit limits.
The test results meet all requirements of NELAC unless otherwise specified.
The report shall not be reproduced except in full without the written consent of the laboratory.
Unless otherwise specified, the Environmental and Food Chemistry testing except Field Parameters were performed by QC Inc. located at 1205 Industrial Blvd., Southampton, PA 18966; Pharmaceutical, Dairy and Food Microbiological tests were performed by QC Inc. located at 702 Electronic Dr., Horsham, PA 19044.
QCL Accreditations: Southampton Div: EPA ID PA00018; NELAP ID's: PA 09-00131, NJ PA166, NY 11223
State ID's: CT PH-0768, DE PA-018, MD 206, SC 89021001; FDA Reg. # : 2515238
ACL Div: NELAP ID's: PA 68-335, NJ DE568; State ID's: DE 00011, MD 138; Wind Gap Div: State ID's: PA 48-01334, NJ PA001
E. Rutherford Div: State ID: NJ 02015; Vineland Div: State ID: NJ 06005; Reading Div: State ID: PA 06-03543
The reported results relate only to the samples.
All samples are collected as "grab" samples unless otherwise identified.

* - The "RLs" represents a reporting/quantitation limit. When an "*" is present in the column identified as the "RLs", it is being reported as a Method Detection Limit (MDL).

Serial Number: 2311926

Authorized by: Oommen V. Kappil, QA Director

QC Laboratories

1205 Industrial Blvd.
Southampton, PA 18966-0514
Phone: 215-355-3900
Fax: 215-355-7231

CHAIN OF CUSTODY

Page 1 of 1

Lab LIMS No: L4264327

LAB USE ONLY: 1 MeOH vial, 2 Nabisulfate vial

___ Ascorbic/HCl Vials # ___ HCl Vials
___ $Na_2S_2O_3$
___ Na OH/Zn acetate pH
___ HNO_3 pH
___ H_2SO_4 pH
___ NaOH pH
23 Unpreserved 1 Pl vial 1 OG 12 SO 2 split cups
___ Hcl pH
___ Temp control 30.9 ID# QCCMFY

CM 73112

Client/Acct. No. EASTSTAR
Address 10632 LITTLE PATUXENT PARKWAY
City/State/Zip COLUMBIA MD 21044
Phone/Fax 410 290 8777
Client Contact AL FREE

Bill to/Report to: (if different)

Sampling Site Address: (if different)

P.O. No.

QC Contact

MATRIX CODES
DW: DRINKING WATER
GW: GROUND WATER
WW: WASTEWATER
SO: SOIL
SL: SLUDGE
OIL: OIL
SOL: NON SOIL SOLID
MI: MISCELLANEOUS
X: OTHER

PROJECT

FIELD ID	Collection Date	Collection Military Time	GRAB	COMP	Matrix Code	Number of Containers: Total	H_2SO_4	HCl	Vials	HNO_3	NaOH	ZnAc	Unpre	Bact	ANALYSIS REQUESTED	Field pH, Temp (C or F), DO, Cl_2, S. Cond. etc.
ID-04-02-04-030	7/30	0900	X		SO	1							1		TAL METALS, PAH	2
ID-04-06-08-031	7/30	0940	X		SL	1							1		TAL METALS, CYANIDE	1
ID-04-10-12-032	7/30	1020	X		SL	1							1		TAL METALS, CYANIDE, PAH	2
ID-03R-00-02-033	7/30	1320	X		SL	1							1		TAL METALS, CYANIDE	1
ID-03R-14-16-034	7/30	1430	X		SO	1							1		TAL METALS, CYANIDE	1
ID-03R-22-24-035	7/30	1530	X		SO	1							1		TAL METALS	1
W-02-00-04-036	7/31	0915	X		SO	1							1		TAL METALS, CYANIDE, PAH	2
BS-03R-02-04-037	7/31	1255	X		SL	1							1		TAL METALS	1
BS-03R-13-15-038	7/31	1400	X		SO	2			1				1		TAL METALS, CYANIDE, SVOC, VOC, PETRO HYDRO	2

SAMPLED BY: (Name/Company) JOSH CLOUGH EASTSTAR

Verbal/fax data due: ___/___/___
Hardcopy due: ___/___/___

Report Format: ☐ Standard ☐ Forms ☐ Standard + QC ☐ NJ Reduced ☐ Disk

Please call for pricing and availability on rush (<14-21 day) turnaround and on all but standard format.

Field Parameters Analyzed By:
Sig: EPH previously as 7/31/12
Date/Time: Method? as 7/31/12

SAMPLE CUSTODY EXCHANGES MUST BE DOCUMENTED BELOW. USE FULL LEGAL SIGNATURE, DATE AND MILITARY TIME (24 HOUR CLOCK, I.E. 8AM IS 0800, 4 PM IS 1600).

RELINQUISHED BY SAMPLER	DATE	TIME	RECEIVED BY	DATE	TIME
1 [signature]	7/31/12	1550	1 [signature]	7/31/12	1550
2 [signature]	7/31/12	1630	2 CQA 79	7/31/12	1630
3 79	73112	1950	3 [signature]	73112	1950
4			4		
5			5		

DELIVERY METHOD: ☐ QC COURIER ☐ CLIENT ☐ UPS ☐ FEDEX ☐ OTHER

Custody Seal Number 7/31/12

COMMENTS:

Hazardous: yes / no

42°F [illegible]

For example to aid completion, see reverse side.

FINAL REPORT

QC Laboratories

1205 Industrial Highway, Southampton, PA 18966

EAST RUTHERFORD

Inter-Laboratory Transport Form: ER073112

Coolers for Transport **from EAST RUTHERFORD** Southampton

To be completed by person sealing coolers					Complete Section Upon Delivery	
Cooler ID No.	Custody Seal No.	Date	Time	Initials	Temp °F	Iced Y/N
414	MICRO	7/31/12	1630	CA	32.6	Yes
120	073112-1	7/31/12	1630	CA	31.4	Yes
743	073112-2	7-31-12	1630	AS	31.0	Yes
8	073112-3	7/31/12	1630	AB	31.6	Yes
15	073112-4	7/31/12	1630	DAC	36.0	Yes
39	073112-5	7/31/12	1630	DAC	30.9	Yes

CMA 73112

Please Note the Following:

Individual sample chains of custody must accompany this form.

Once a cooler is sealed, custody seals may not be broken until samples are received at the designated QCL laboratory.

Laboratory use only

Custody Seals intact upon receipt? (Y) N Initials CM

List ID of any seal found broken upon receipt below:

A full legal signature is required. Record all times in military time (24-HR Clock; 4:00 PM=1600)

Relinquished by:	Date:	Time:		Received by:	Date:	Time:
Christina Cuger	7/31/12	1700		RA	7-31-12	1800
Relinquished by:	Date:	Time:		Received by:	Date:	Time:
RA	7-31-12	1950		C. Mullen	73112	1950
Relinquished by:	Date:	Time:		Received by:	Date:	Time:
Relinquished by:	Date:	Time:		Received by:	Date:	Time:

SR0117

QC Laboratories

1205 Industrial Blvd.
Southampton, PA 18966-0514
Phone: 215-355-3900
Fax: 215-355-7231

CHAIN OF CUSTODY

Page 1 of 1

Lab LIMS No: L426377O

Bill to/Report to: (if different) Railway Arch Site

Client/Acct. No.

Address 10632 Little Patuxent Pkwy 106

Sampling Site Address: (if different)

City/State/Zip Columbia MD 21044

Phone/Fax 410 290 8777

P.O. No.

Client Contact Al Free

QC Contact

LAB USE ONLY:

- # ___ Ascorbic/HCl Vials # ___ HCl Vials
- # ___ $Na_2S_2O_3$
- # ___ Na OH/Zn acetate pH
- # ___ HNO_3 pH
- # ___ H_2SO_4 pH
- # ___ NaOH pH
- # 14 Unpreserved 7-250 & 5-Splitcup
- # ___ Hcl pH 2 VOA for split
- # ___ Temp control 3°F ID# [illegible]

MATRIX CODES

DW: DRINKING WATER
GW: GROUND WATER
WW: WASTEWATER
SO: SOIL
SL: SLUDGE
OIL: OIL
SOL: NON SOIL SOLID
MI: MISCELLANEOUS
X: OTHER

Field pH, Temp (C or F), DO, Cl_2, S. Cond. etc.

LAB USE ONLY

PROJECT / FIELD ID	Collection Date	Collection Military Time	GRAB	COMP	Matrix Code	Number of Containers Total	H_2SO_4	HCl	Vials	HNO_3	NaOH	ZnAc	Unpre	Bact	ANALYSIS REQUESTED
~~BD-02-04-027~~															
ID-06-02-04-025	7/26	11:20			SO	1									TAL Metals, Cyanide
ID-06-06-08-026	7/26	11:45			SO	2									TAL Metals, Cyanide, PAH
BD-05-02-04-027	7/26	14:20			SO	1									TAL Metals, Cyanide, PAH
BD-05-08-10-028	7/26	15:30			SO	1									TAL Metals, Cyanide, PAH
BS-06-06-08-029	7/27	14:05			SO	2									TAL Metals, Cyanide, PAH

SAMPLED BY: (Name/Company) Jim Grant SJI Safe

Verbal/fax data due: ___/___/___

Hardcopy due: ___/___/___

Report Format: ☐ Standard ☐ Forms ☐ Standard + QC ☐ NJ Reduced ☐ Disk

Please call for pricing and availability on rush (<14-21 day) turnaround and on all but standard format.

Field Parameters Analyzed By:

Sig: Date/Time:

FINAL REPORT

SAMPLE CUSTODY EXCHANGES MUST BE DOCUMENTED BELOW. USE FULL LEGAL SIGNATURE, DATE AND MILITARY TIME (24 HOUR CLOCK, I.E. 8AM IS 0800, 4 PM IS 1600)

	RELINQUISHED BY SAMPLER	DATE	TIME	RECEIVED BY	DATE	TIME
1	[signature]	17:50	7/27	[signature]	7/27/12	1750
2	[signature]	7/28/12	1345	[signature] Walker	7/28/12	134
3	Walker	7/30/12	1140	[signature]	7/30/12	1141
4						
5						

DELIVERY METHOD: ☐ QC COURIER ☐ CLIENT ☐ UPS ☐ FEDEX ☐ OTHER___

Custody Seal Number

COMMENTS:

Hazardous: yes / no

For example to aid completion, see reverse side.

QC Laboratories

Analytical Report

ACCREDITED IN ACCORDANCE WITH nelac

Printed: 08/17/12 10:01

AL FREE
EASTSTAR ENVIRONMENTAL GROUP, INC.
10632 LITTLE PATUXENT PARKWAY
SUITE 106
COLUMBIA, MD 21044

Regarding:
AL FREE
EASTSTAR ENVIRONMENTAL GROUP, INC.
10632 LITTLE PATUXENT PARKWAY
SUITE 106
COLUMBIA, MD 21044

Account No: SR0117, EASTSTAR ENVIRONMENTAL GROUP, INC. **P.O. No:** **Inv. No:** 1443086
Project No: SR0117, EASTSTAR ENVIRONMENTAL GROUP, INC. **PWSID No:**

Sample Number	Sample Description	Samp. Date/Time/Temp	Sampled by
L4279395-1	W-08-00-04-039 SLUDGE	08/01/12 08:50am NA F	Customer

Received Date/Time/Temp 08/06/12 09:00pm 36.6 F **Iced (Y/N):** Y

Parameter	Method	Result	RLs	Test Date, Time, Analyst
GENERAL CHEMISTRY				
CYANIDE, TOTAL	EPA 9010/9014	1330 mg/kg DRY	161 mg/kg	08/13/12 12:00PM JG
TOTAL SOLIDS PERCENT	SM 2540G	38.79 %	0.01000 %	08/07/12 02:15PM MRP
METALS				
SILVER	EPA 6010C	ND mg/kg DRY	0.0204 mg/kg*	08/16/12 11:31AM PG
ALUMINUM	EPA 6010C	9380 mg/kg DRY	0.596 mg/kg*	08/16/12 11:31AM PG
ARSENIC	EPA 6010C	7.50 mg/kg DRY	0.204 mg/kg*	08/16/12 11:31AM PG
BARIUM	EPA 6010C	63.9 mg/kg DRY	0.00412 mg/kg*	08/16/12 11:31AM PG
BERYLLIUM	EPA 6010C	0.410 mg/kg DRY	0.000773 mg/kg*	08/16/12 11:31AM PG
CADMIUM	EPA 6010C	ND mg/kg DRY	0.00541 mg/kg*	08/16/12 11:31AM PG
COBALT	EPA 6010C	4.23 mg/kg DRY	0.00980 mg/kg*	08/16/12 11:31AM PG
CHROMIUM	EPA 6010C	20.7 mg/kg DRY	0.0124 mg/kg*	08/16/12 11:31AM PG
COPPER	EPA 6010C	41.2 mg/kg DRY	0.0304 mg/kg*	08/16/12 11:31AM PG
IRON	EPA 6010C	10700 mg/kg DRY	0.397 mg/kg*	08/16/12 11:31AM PG
POTASSIUM	EPA 6010C	2300 mg/kg DRY	2.99 mg/kg*	08/16/12 11:31AM PG
MAGNESIUM	EPA 6010C	2840 mg/kg DRY	0.104 mg/kg*	08/16/12 11:31AM PG
MANGANESE	EPA 6010C	142 mg/kg DRY	0.00980 mg/kg*	08/16/12 11:31AM PG
SODIUM	EPA 6010C	7710 mg/kg DRY	1.21 mg/kg*	08/16/12 11:31AM PG
NICKEL	EPA 6010C	13.1 mg/kg DRY	0.0168 mg/kg*	08/16/12 11:31AM PG
LEAD	EPA 6010C	36.3 mg/kg DRY	0.113 mg/kg*	08/16/12 11:31AM PG
ANTIMONY	EPA 6010C	1.16 mg/kg DRY	0.211 mg/kg*	08/16/12 11:31AM PG
SELENIUM	EPA 6010C	ND mg/kg DRY	0.0869 mg/kg*	08/16/12 11:31AM PG
THALLIUM	EPA 6010C	ND mg/kg DRY	0.255 mg/kg*	08/16/12 11:31AM PG
VANADIUM	EPA 6010C	23.5 mg/kg DRY	0.0126 mg/kg*	08/16/12 11:31AM PG
ZINC	EPA 6010C	75.3 mg/kg DRY	0.0606 mg/kg*	08/16/12 11:31AM PG
CALCIUM	EPA 6010C	59300 mg/kg DRY	9.54 mg/kg*	08/16/12 11:39AM PG
MERCURY	EPA 7471B	1.03 mg/kg DRY	0.125 mg/kg*	08/13/12 02:38PM RMP

Notes:
A result of "ND" indicates that the analyte tested was either not detected or the concentration was below the RLs.
Definitions: NEG=negative; POS=positive; COL=colonies; RLs=laboratory reporting limits; L/A=laboratory accident; TNTC= Too numerous to

Serial Number: 2315906

Authorized by: Oommen V. Kappil, QA Director

1205 Industrial Blvd., P.O. Box 514, Southampton, PA 18966-0514 Phone: 215-355-3900 Fax: 215-355-7231 www.qclaboratories.com

Account No: SR0117, EASTSTAR ENVIRONMENTAL GROUP, INC. **P.O. No:** **Inv. No:** 1443086
Project No: SR0117, EASTSTAR ENVIRONMENTAL GROUP, INC. **PWSID No:**

count; pres=presumptive
A result marked with "DRY" indicates that the result was calculated and reported on a dry weight basis.
MCL= EPA recommended "maximum contaminant level", PLs = Customer-specific permit limits.
The test results meet all requirements of NELAC unless otherwise specified.
The report shall not be reproduced except in full without the written consent of the laboratory.
Unless otherwise specified, the Environmental and Food Chemistry testing except Field Parameters
were performed by QC Inc. located at 1205 Industrial Blvd., Southampton, PA 18966; Pharmaceutical, Dairy
and Food Microbiological tests were performed by QC Inc. located at 702 Electronic Dr., Horsham, PA 19044.
QCL Accreditations: Southampton Div: EPA ID PA00018; NELAP ID's: PA 09-00131, NJ PA166, NY 11223
State ID's: CT PH-0768, DE PA-018, MD 206, SC 89021001; FDA Reg. # : 2515238
ACL Div: NELAP ID's: PA 68-335, NJ DE568; State ID's: DE 00011, MD 138; Wind Gap Div: State ID's: PA 48-01334, NJ PA001
E. Rutherford Div: State ID: NJ 02015; Vineland Div: State ID: NJ 06005; Reading Div: State ID: PA 06-03543
The reported results relate only to the samples.
All samples are collected as "grab" samples unless otherwise identified.
* - The "RLs" represents a reporting/quantitation limit. When an "*" is present in the column identified as the "RLs", it is being reported as a Method Detection Limit (MDL).

Serial Number: 2315906

Authorized by: Oommen V. Kappil, QA Director

QC Laboratories

1205 Industrial Blvd.
Southampton, PA 18966-0514
Phone: 215-355-3900
Fax: 215-355-7231

CHAIN OF CUSTODY

Page _____ of _____

Lab LIMS No: L4279395

Client/Acct. No. East Star
Address 10032 Little PATUXENT Parkway
City/State/Zip Columbia, MD. 21044
Phone/Fax 410 290 8777
Client Contact AL Free

Bill to/Report to: (if different)

Sampling Site Address: (if different)

P.O. No.

QC Contact

LAB USE ONLY:

___ Ascorbic/HCl Vials # ___ HCl Vials
___ $Na_2S_2O_3$
___ Na OH/Zn acetate pH
___ HNO_3 pH
___ H_2SO_4 pH
___ NaOH pH
2 Unpreserved 1GVZSO1 split cup
___ Hcl pH
___ Temp control 36.6 ID# QC COURIER

MATRIX CODES

DW: DRINKING WATER
GW: GROUND WATER
WW: WASTEWATER
SO: SOIL
SL: SLUDGE
OIL: OIL
SOL: NON SOIL SOLID
MI: MISCELLANEOUS
X: OTHER

PROJECT / FIELD ID	Collection Date	Collection Military Time	GRAB	COMP	Matrix Code	Number of Containers: Total	H_2SO_4	HCl	Vials	HNO_3	NaOH	ZnAc	Unpre	BacT	ANALYSIS REQUESTED	Field pH, Temp (C or F), DO, Cl_2, S. Cond. etc.
W-08-00-04-039	8/1	0850	X		SL	1							1		Total Metal, CYANIDE	
															"TOTAL Metals" – ?	
															Specific Metals NOT listed by client.	
																CAS 8/6/12
																CAS

SAMPLED BY: (Name/Company) JOSH Clouden East Star

Verbal/fax data due: ___/___/___
Hardcopy due: ___/___/___

Report Format: ☐ Standard ☐ Forms ☐ Standard + QC ☐ NJ Reduced ☐ Disk

Please call for pricing and availability on rush (<14-21 day) turnaround and on all but standard format.

Field Parameters Analyzed By:
Sig:
Date/Time:

SAMPLE CUSTODY EXCHANGES MUST BE DOCUMENTED BELOW. USE FULL LEGAL SIGNATURE, DATE AND MILITARY TIME (24 HOUR CLOCK, I.E. 8AM IS 0800, 4 PM IS 1600).

RELINQUISHED BY SAMPLER	DATE	TIME	RECEIVED BY	DATE	TIME
1 [signature]	8/3	16:30	1 [signature]	8-6-12	1055
RELINQUISHED BY 2 [signature]	8-6-12	1700	RECEIVED BY 2 Cedar 4984	8-6-12	1700
RELINQUISHED BY 3 4984	8612	2100	RECEIVED BY 3 [signature]	8612	2100
RELINQUISHED BY 4			RECEIVED BY 4		
RELINQUISHED BY 5			RECEIVED BY 5		

DELIVERY METHOD: ☒ QC COURIER ☐ CLIENT ☐ UPS ☐ FEDEX ☐ OTHER _____

Custody Seal Number 8-6-12

COMMENTS:

Hazardous: yes / no 36°F/AT/AS/ICED

For example to aid completion, see reverse side.

FINAL REPORT

QC LABORATORIES
FIELD SERVICE REQUEST FORM
Aug 04 2012, 10:52 pm

AL FREE
EASTSTAR ENVIRONMENTAL GROUP, INC.
10632 LITTLE PATUXENT PARKWAY
SUITE 106
COLUMBIA, MD 21044
Primary Driver: DAL

Project No.: SR0117
Phone: (410)290-8777
Fax: (410)290-9055
Cell: ( ) -

Service Date: 08/06/12 ANYTIME To 08/06/12

PICK-UP

Delivery Charge:

Day of Week: MON

Sampling Instructions:

Contact: GONG 201-314-1419

Bottle Prep:

Rush Samples:

Service to be performed at:

GONG'S HOME RESIDENCE
35 CEDAR ST
EDISON, NJ 08820

PICK UP SOIL SAMPLES FROM GONG'S HOME RESIDENCE. ALL TEST COULDN'T MOVE THE ORIGINAL PICK UP TIME ON FRIDAY FROM 2 TO 4:30. RON MILKE WAS GOING TO PICK UP THE SAMPLES, BUT THE TRAFFIC WAS SO BAD, HE COULDN'T GET THERE IN TIME. GONG THEN TOOK THE SAMPLES BACK TO HIS HOUSE IN EDISON. SAMPLES WILL BE IN THE MAILBOX.

Requested by: Ronald M. Milke Ext:
Entry date: 08/04/12 10:52PM

Call received: 08/04/12 10:49PM

Field Service Request No.: FS178269
Service Time: 10 minutes
Equip Code: PU

QC Laboratories

1205 Industrial Highway, Southampton, PA 18966

EAST RUTHERFORD

Inter-Laboratory Transport Form: ER080612

Southampton

Coolers for Transport **from EAST RUTHERFORD**

To be completed by person sealing coolers					Complete Section Upon Delivery	
Cooler ID No.	**Custody Seal No.**	**Date**	**Time**	**Initials**	**Temp °F**	**Iced Y/N**
419	[illegible]	8-6-12	1230	SMR	52.8	Yes
15	15 -1	8/6/12	1700	DAC	38.8	Yes
A-6	080612-2	8/6/12	1700	FB	37.0	Yes
V-32	080612-3	8/6/12	1700	FB	33.1	Yes
4984	080612-4	8-6-12	1700	AS	36.6	Yes
11	080612	8-6-12	1700	ACN	34.8	Yes
1043	080612	8-6-12	1700	ACN	37.5	Yes
Box #3	080612	8-6-12	1700	ACN	67.3	NO

CM 8612

Please Note the Following:

Individual sample chains of custody must accompany this form.

Once a cooler is sealed, custody seals may not be broken until samples are received at the designated QCL laboratory.

Laboratory use only

Custody Seals intact upon receipt? Y / N Initials: CM

List ID of any seal found broken upon receipt below:

A full legal signature is required. Record all times in military time (24-HR Clock; 4:00 PM=1600)

Relinquished by:	Date:	Time:		Received by:	Date:	Time:
[signature]	8-6-12	1700		RA [signature]	8-6-12	1900
RA [signature]	8-6-12	2100		C Murphy	8612	2100

APPENDIX F

GROUNDWATER SAMPLE ANALYSIS LABORATORY REPORTS

QC Laboratories

Analytical Report

ACCREDITED IN ACCORDANCE WITH nelac

Printed: 09/14/12 17:22

AL FREE
EASTSTAR ENVIRONMENTAL GROUP, INC.
10632 LITTLE PATUXENT PARKWAY
SUITE 106
COLUMBIA, MD 21044

Regarding:
AL FREE
EASTSTAR ENVIRONMENTAL GROUP, INC.
10632 LITTLE PATUXENT PARKWAY
SUITE 106
COLUMBIA, MD 21044

Account No: SR0117, EASTSTAR ENVIRONMENTAL GROUP, INC. **P.O. No:** **Inv. No:** 1453096
Project No: SR0117, EASTSTAR ENVIRONMENTAL GROUP, INC. **PWSID No:**

Sample Number	Sample Description	Samp. Date/Time/Temp	Sampled by
L4297938-1	RAHWAY ARCH, I027-8S-001	08/22/12 11:40am NA F	Customer

Received Date/Time/Temp 08/23/12 08:30pm 35 F **Iced (Y/N):** Y

Parameter	Method	Result	RLs	Test Date, Time, Analyst
GENERAL CHEMISTRY				
HEXANE EXTR.-SGT (NON POLAR O+G)	1664ASGT@PHC	ND mg/l	5.00 mg/l	09/04/12 08:30AM RHB
CYANIDE, TOTAL	SM 4500CN C,E	0.0580 mg/l	0.0200 mg/l	08/30/12 01:00PM JG
METALS				
SILVER	EPA 200.7 Rev 4.4	0.00640 B mg/l	0.00510 mg/l*	09/07/12 10:31AM B B
ALUMINUM	EPA 200.7 Rev 4.4	ND mg/l	0.175 mg/l*	09/07/12 10:31AM B B
BARIUM	EPA 200.7 Rev 4.4	0.472 mg/l	0.00170 mg/l*	09/07/12 10:31AM B B
BERYLLIUM	EPA 200.7 Rev 4.4	0.00110 B mg/l	0.000353 mg/l*	09/07/12 10:31AM B B
CALCIUM	EPA 200.7 Rev 4.4	255 mg/l	0.0460 mg/l*	09/07/12 10:31AM B B
CADMIUM	EPA 200.7 Rev 4.4	ND mg/l	0.00110 mg/l*	09/07/12 10:31AM B B
COBALT	EPA 200.7 Rev 4.4	0.0175 B mg/l	0.00400 mg/l*	09/07/12 10:31AM B B
CHROMIUM	EPA 200.7 Rev 4.4	0.0104 B mg/l	0.00220 mg/l*	09/07/12 10:31AM B B
COPPER	EPA 200.7 Rev 4.4	0.0125 B mg/l	0.00310 mg/l*	09/07/12 10:31AM B B
IRON	EPA 200.7 Rev 4.4	2.31 mg/l	0.0359 mg/l*	09/07/12 10:31AM B B
POTASSIUM	EPA 200.7 Rev 4.4	172 mg/l	0.559 mg/l*	09/07/12 10:31AM B B
MAGNESIUM	EPA 200.7 Rev 4.4	786 mg/l	0.441 mg/l*	09/07/12 10:31AM B B
MANGANESE	EPA 200.7 Rev 4.4	5.33 mg/l	0.000786 mg/l*	09/07/12 10:31AM B B
NICKEL	EPA 200.7 Rev 4.4	ND mg/l	0.00340 mg/l*	09/07/12 10:31AM B B
LEAD	EPA 200.7 Rev 4.4	ND mg/l	0.0175 mg/l*	09/07/12 10:31AM B B
ANTIMONY	EPA 200.7 Rev 4.4	ND mg/l	0.0220 mg/l*	09/07/12 10:31AM B B
SELENIUM	EPA 200.7 Rev 4.4	ND mg/l	0.0517 mg/l*	09/07/12 10:31AM B B
THALLIUM	EPA 200.7 Rev 4.4	ND mg/l	0.0324 mg/l*	09/07/12 10:31AM B B
VANADIUM	EPA 200.7 Rev 4.4	ND mg/l	0.00260 mg/l*	09/07/12 10:31AM B B
ZINC	EPA 200.7 Rev 4.4	0.0322 B mg/l	0.00260 mg/l*	09/07/12 10:31AM B B
ARSENIC	EPA 200.7 Rev 4.4	0.0981 mg/l	0.0283 mg/l*	09/07/12 10:35AM B B
SODIUM	EPA 200.7 Rev 4.4	6540 mg/l	1.06 mg/l*	09/07/12 11:15AM B B
MERCURY	EPA 245.1 Rev 3.0	ND mg/l	0.0000130 mg/l*	09/01/12 02:33PM RBK

Serial Number: 2353060

Authorized by: Oommen V. Kappil, QA Director

1205 Industrial Blvd., P.O. Box 514, Southampton, PA 18966-0514 Phone: 215-355-3900 Fax: 215-355-7231 www.qclaboratories.com

QC Laboratories

Analytical Report

Account No: SR0117, EASTSTAR ENVIRONMENTAL GROUP, INC. **P.O. No:** **Inv. No:** 1453096
Project No: SR0117, EASTSTAR ENVIRONMENTAL GROUP, INC. **PWSID No:**

Sample Number **Sample Description** **Samp. Date/Time/Temp** **Sampled by**
L4297938-1 RAHWAY ARCH, I027-8S-001 08/22/12 11:40am NA F Customer
Received Date/Time/Temp 08/23/12 08:30pm 35 F **Iced (Y/N):** Y

Parameter	Method	Result	RLs	Test Date, Time, Analyst
GAS CHROMATOGRAPHY MASS SPECTROMETRY; SEMI-VOLATILES				
NAPHTHALENE	EPA 8270C	ND ug/l	0.01 ug/l*	09/05/12 02:12PM GRM
2-METHYLNAPHTHALENE	EPA 8270C	ND ug/l	0.01 ug/l*	09/05/12 02:12PM GRM
ACENAPHTHYLENE	EPA 8270C	ND ug/l	0.01 ug/l*	09/05/12 02:12PM GRM
ACENAPHTHENE	EPA 8270C	ND ug/l	0.01 ug/l*	09/05/12 02:12PM GRM
FLUORENE	EPA 8270C	ND ug/l	0.02 ug/l*	09/05/12 02:12PM GRM
PHENANTHRENE	EPA 8270C	ND ug/l	0.01 ug/l*	09/05/12 02:12PM GRM
ANTHRACENE	EPA 8270C	ND ug/l	0.01 ug/l*	09/05/12 02:12PM GRM
FLUORANTHENE	EPA 8270C	ND ug/l	0.02 ug/l*	09/05/12 02:12PM GRM
PYRENE	EPA 8270C	ND ug/l	0.02 ug/l*	09/05/12 02:12PM GRM
BENZO(A)ANTHRACENE	EPA 8270C	ND ug/l	0.01 ug/l*	09/05/12 02:12PM GRM
CHRYSENE	EPA 8270C	ND ug/l	0.01 ug/l*	09/05/12 02:12PM GRM
BENZO(B)FLUORANTHENE	EPA 8270C	ND ug/l	0.02 ug/l*	09/05/12 02:12PM GRM
BENZO(K)FLUORANTHENE	EPA 8270C	ND ug/l	0.02 ug/l*	09/05/12 02:12PM GRM
BENZO(A)PYRENE	EPA 8270C	ND ug/l	0.02 ug/l*	09/05/12 02:12PM GRM
INDENO(1,2,3-CD)PYRENE	EPA 8270C	ND ug/l	0.02 ug/l*	09/05/12 02:12PM GRM
DIBENZ(A,H)ANTHRACENE	EPA 8270C	ND ug/l	0.02 ug/l*	09/05/12 02:12PM GRM
BENZO(G,H,I)PERYLENE	EPA 8270C	ND ug/l	0.02 ug/l*	09/05/12 02:12PM GRM
GAS CHROMATOGRAPHY MASS SPECTROMETRY; VOLATILES				
DICHLORODIFLUOROMETHANE	EPA 8260B	ND ug/l	0.430 ug/l*	08/31/12 09:08PM JSH
CHLOROMETHANE	EPA 8260B	ND ug/l	0.320 ug/l*	08/31/12 09:08PM JSH
VINYL CHLORIDE	EPA 8260B	ND ug/l	0.240 ug/l*	08/31/12 09:08PM JSH
BROMOMETHANE	EPA 8260B	ND ug/l	0.460 ug/l*	08/31/12 09:08PM JSH
CHLOROETHANE	EPA 8260B	ND ug/l	0.340 ug/l*	08/31/12 09:08PM JSH
TRICHLOROFLUOROMETHANE	EPA 8260B	ND ug/l	0.380 ug/l*	08/31/12 09:08PM JSH
1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	EPA 8260B	ND ug/l	0.470 ug/l*	08/31/12 09:08PM JSH
METHYL ACETATE	EPA 8260B	ND ug/l	0.360 ug/l*	08/31/12 09:08PM JSH
1,1-DICHLOROETHENE	EPA 8260B	ND ug/l	0.310 ug/l*	08/31/12 09:08PM JSH
ACETONE	EPA 8260B	ND ug/l	3.26 ug/l*	08/31/12 09:08PM JSH
CARBON DISULFIDE	EPA 8260B	ND ug/l	0.640 ug/l*	08/31/12 09:08PM JSH
METHYLENE CHLORIDE	EPA 8260B	ND ug/l	0.500 ug/l*	08/31/12 09:08PM JSH
TRANS-1,2-DICHLOROETHENE	EPA 8260B	ND ug/l	0.140 ug/l*	08/31/12 09:08PM JSH
METHYL TERTIARY BUTYL ETHER	EPA 8260B	ND ug/l	0.200 ug/l*	08/31/12 09:08PM JSH
1,1-DICHLOROETHANE	EPA 8260B	ND ug/l	0.240 ug/l*	08/31/12 09:08PM JSH
2-BUTANONE	EPA 8260B	ND ug/l	1.44 ug/l*	08/31/12 09:08PM JSH
BROMOCHLOROMETHANE	EPA 8260B	ND ug/l	0.300 ug/l*	08/31/12 09:08PM JSH
CIS-1,2-DICHLOROETHENE	EPA 8260B	ND ug/l	0.280 ug/l*	08/31/12 09:08PM JSH
CHLOROFORM	EPA 8260B	ND ug/l	0.230 ug/l*	08/31/12 09:08PM JSH
1,1,1-TRICHLOROETHANE	EPA 8260B	ND ug/l	0.210 ug/l*	08/31/12 09:08PM JSH
CYCLOHEXANE	EPA 8260B	ND ug/l	0.440 ug/l*	08/31/12 09:08PM JSH
CARBON TETRACHLORIDE	EPA 8260B	ND ug/l	0.280 ug/l*	08/31/12 09:08PM JSH
BENZENE	EPA 8260B	ND ug/l	0.220 ug/l*	08/31/12 09:08PM JSH
1,2-DICHLOROETHANE	EPA 8260B	ND ug/l	0.240 ug/l*	08/31/12 09:08PM JSH
TRICHLOROETHENE	EPA 8260B	ND ug/l	0.250 ug/l*	08/31/12 09:08PM JSH
METHYLCYCLOHEXANE	EPA 8260B	ND ug/l	0.360 ug/l*	08/31/12 09:08PM JSH
1,2-DICHLOROPROPANE	EPA 8260B	ND ug/l	0.200 ug/l*	08/31/12 09:08PM JSH

Serial Number: 2353060

Authorized by: Oommen V. Kappil, QA Director

QC Laboratories

Analytical Report

Account No: SR0117, EASTSTAR ENVIRONMENTAL GROUP, INC. **P.O. No:** **Inv. No:** 1453096
Project No: SR0117, EASTSTAR ENVIRONMENTAL GROUP, INC. **PWSID No:**

Sample Number **Sample Description** **Samp. Date/Time/Temp** **Sampled by**
L4297938-1 RAHWAY ARCH, I027-8S-001 08/22/12 11:40am NA F Customer
Received Date/Time/Temp 08/23/12 08:30pm 35 F **Iced (Y/N):** Y

Parameter	Method	Result	RLs	Test Date, Time, Analyst
GAS CHROMATOGRAPHY MASS SPECTROMETRY; VOLATILES continued				
BROMODICHLOROMETHANE	EPA 8260B	ND ug/l	0.210 ug/l*	08/31/12 09:08PM JSH
4-METHYL-2-PENTANONE	EPA 8260B	ND ug/l	0.440 ug/l*	08/31/12 09:08PM JSH
CIS-1,3-DICHLOROPROPENE	EPA 8260B	ND ug/l	0.220 ug/l*	08/31/12 09:08PM JSH
TOLUENE	EPA 8260B	ND ug/l	0.190 ug/l*	08/31/12 09:08PM JSH
TRANS-1,3-DICHLOROPROPENE	EPA 8260B	ND ug/l	0.220 ug/l*	08/31/12 09:08PM JSH
1,1,2-TRICHLOROETHANE	EPA 8260B	ND ug/l	0.240 ug/l*	08/31/12 09:08PM JSH
2-HEXANONE	EPA 8260B	ND ug/l	0.830 ug/l*	08/31/12 09:08PM JSH
TETRACHLOROETHENE	EPA 8260B	ND ug/l	0.370 ug/l*	08/31/12 09:08PM JSH
DIBROMOCHLOROMETHANE	EPA 8260B	ND ug/l	0.140 ug/l*	08/31/12 09:08PM JSH
1,2-DIBROMOETHANE	EPA 8260B	ND ug/l	0.210 ug/l*	08/31/12 09:08PM JSH
CHLOROBENZENE	EPA 8260B	ND ug/l	0.230 ug/l*	08/31/12 09:08PM JSH
ETHYLBENZENE	EPA 8260B	ND ug/l	0.230 ug/l*	08/31/12 09:08PM JSH
M&P-XYLENES	EPA 8260B	ND ug/l	0.460 ug/l*	08/31/12 09:08PM JSH
O-XYLENE	EPA 8260B	ND ug/l	0.240 ug/l*	08/31/12 09:08PM JSH
STYRENE	EPA 8260B	ND ug/l	0.200 ug/l*	08/31/12 09:08PM JSH
BROMOFORM	EPA 8260B	ND ug/l	0.310 ug/l*	08/31/12 09:08PM JSH
1,1,2,2-TETRACHLOROETHANE	EPA 8260B	ND ug/l	0.320 ug/l*	08/31/12 09:08PM JSH
ISOPROPYLBENZENE	EPA 8260B	ND ug/l	0.270 ug/l*	08/31/12 09:08PM JSH
1,3-DICHLOROBENZENE	EPA 8260B	ND ug/l	0.210 ug/l*	08/31/12 09:08PM JSH
1,4-DICHLOROBENZENE	EPA 8260B	ND ug/l	0.170 ug/l*	08/31/12 09:08PM JSH
1,2-DICHLOROBENZENE	EPA 8260B	ND ug/l	0.200 ug/l*	08/31/12 09:08PM JSH
1,2-DIBROMO-3-CHLOROPROPANE	EPA 8260B	ND ug/l	0.470 ug/l*	08/31/12 09:08PM JSH
1,2,4-TRICHLOROBENZENE	EPA 8260B	ND ug/l	0.360 ug/l*	08/31/12 09:08PM JSH
1,2,3-TRICHLOROBENZENE	EPA 8260B	ND ug/l	0.310 ug/l*	08/31/12 09:08PM JSH
1,4-DIOXANE	EPA 8260B	ND ug/l	129 ug/l*	08/31/12 09:08PM JSH

Sample Number **Sample Description** **Samp. Date/Time/Temp** **Sampled by**
L4297938-2 I027-8S-002 08/22/12 01:15pm NA F Customer
Received Date/Time/Temp 08/23/12 08:30pm 35 F **Iced (Y/N):** Y

Parameter	Method	Result	RLs	Test Date, Time, Analyst
GENERAL CHEMISTRY				
CYANIDE, TOTAL	SM 4500CN C,E	ND mg/l	0.0200 mg/l	08/30/12 01:00PM JG
METALS				
SILVER	EPA 200.7 Rev 4.4	0.0112 B mg/l	0.00510 mg/l*	09/07/12 11:35AM B B
ALUMINUM	EPA 200.7 Rev 4.4	ND mg/l	0.175 mg/l*	09/07/12 11:35AM B B
ARSENIC	EPA 200.7 Rev 4.4	0.138 mg/l	0.0283 mg/l*	09/07/12 11:35AM B B
BARIUM	EPA 200.7 Rev 4.4	0.0660 B mg/l	0.00170 mg/l*	09/07/12 11:35AM B B
BERYLLIUM	EPA 200.7 Rev 4.4	0.00180 B mg/l	0.000353 mg/l*	09/07/12 11:35AM B B
CALCIUM	EPA 200.7 Rev 4.4	396 mg/l	0.0460 mg/l*	09/07/12 11:35AM B B
CADMIUM	EPA 200.7 Rev 4.4	ND mg/l	0.00110 mg/l*	09/07/12 11:35AM B B
COBALT	EPA 200.7 Rev 4.4	0.00410 B mg/l	0.00400 mg/l*	09/07/12 11:35AM B B
CHROMIUM	EPA 200.7 Rev 4.4	0.00290 B mg/l	0.00220 mg/l*	09/07/12 11:35AM B B
COPPER	EPA 200.7 Rev 4.4	0.0113 B mg/l	0.00310 mg/l*	09/07/12 11:35AM B B
IRON	EPA 200.7 Rev 4.4	5.84 mg/l	0.0359 mg/l*	09/07/12 11:35AM B B

Serial Number: 2353060

Authorized by: Oommen V. Kappil, QA Director

Account No: SR0117, EASTSTAR ENVIRONMENTAL GROUP, INC. **P.O. No:** **Inv. No:** 1453096
Project No: SR0117, EASTSTAR ENVIRONMENTAL GROUP, INC. **PWSID No:**

Sample Number **Sample Description** **Samp. Date/Time/Temp** **Sampled by**
L4297938-2 I027-8S-002 08/22/12 01:15pm NA F Customer
Received Date/Time/Temp 08/23/12 08:30pm 35 F **Iced (Y/N):** Y

Parameter	Method	Result	RLs	Test Date, Time, Analyst
METALS continued				
POTASSIUM	EPA 200.7 Rev 4.4	104 mg/l	0.559 mg/l*	09/07/12 11:35AM B B
MAGNESIUM	EPA 200.7 Rev 4.4	640 mg/l	0.441 mg/l*	09/07/12 11:35AM B B
MANGANESE	EPA 200.7 Rev 4.4	0.608 mg/l	0.000786 mg/l*	09/07/12 11:35AM B B
NICKEL	EPA 200.7 Rev 4.4	ND mg/l	0.00340 mg/l*	09/07/12 11:35AM B B
LEAD	EPA 200.7 Rev 4.4	ND mg/l	0.0175 mg/l*	09/07/12 11:35AM B B
ANTIMONY	EPA 200.7 Rev 4.4	0.0529 B mg/l	0.0220 mg/l*	09/07/12 11:35AM B B
SELENIUM	EPA 200.7 Rev 4.4	0.0717 B mg/l	0.0517 mg/l*	09/07/12 11:35AM B B
THALLIUM	EPA 200.7 Rev 4.4	ND mg/l	0.0324 mg/l*	09/07/12 11:35AM B B
VANADIUM	EPA 200.7 Rev 4.4	ND mg/l	0.00260 mg/l*	09/07/12 11:35AM B B
ZINC	EPA 200.7 Rev 4.4	0.0331 B mg/l	0.00260 mg/l*	09/07/12 11:35AM B B
SODIUM	EPA 200.7 Rev 4.4	6430 mg/l	1.06 mg/l*	09/07/12 01:12PM B B
MERCURY	EPA 245.1 Rev 3.0	0.0000210 B mg/l	0.0000130 mg/l*	09/01/12 02:35PM RBK
GAS CHROMATOGRAPHY MASS SPECTROMETRY; SEMI-VOLATILES				
NAPHTHALENE	EPA 8270C	0.02 ug/l	0.01 ug/l*	09/05/12 02:37PM GRM
2-METHYLNAPHTHALENE	EPA 8270C	0.02 ug/l	0.01 ug/l*	09/05/12 02:37PM GRM
ACENAPHTHYLENE	EPA 8270C	ND ug/l	0.01 ug/l*	09/05/12 02:37PM GRM
ACENAPHTHENE	EPA 8270C	0.02 ug/l	0.01 ug/l*	09/05/12 02:37PM GRM
FLUORENE	EPA 8270C	ND ug/l	0.02 ug/l*	09/05/12 02:37PM GRM
PHENANTHRENE	EPA 8270C	0.03 ug/l	0.01 ug/l*	09/05/12 02:37PM GRM
ANTHRACENE	EPA 8270C	0.02 ug/l	0.01 ug/l*	09/05/12 02:37PM GRM
FLUORANTHENE	EPA 8270C	ND ug/l	0.02 ug/l*	09/05/12 02:37PM GRM
PYRENE	EPA 8270C	ND ug/l	0.02 ug/l*	09/05/12 02:37PM GRM
BENZO(A)ANTHRACENE	EPA 8270C	0.02 ug/l	0.01 ug/l*	09/05/12 02:37PM GRM
CHRYSENE	EPA 8270C	0.01 ug/l	0.01 ug/l*	09/05/12 02:37PM GRM
BENZO(B)FLUORANTHENE	EPA 8270C	ND ug/l	0.02 ug/l*	09/05/12 02:37PM GRM
BENZO(K)FLUORANTHENE	EPA 8270C	ND ug/l	0.02 ug/l*	09/05/12 02:37PM GRM
BENZO(A)PYRENE	EPA 8270C	ND ug/l	0.02 ug/l*	09/05/12 02:37PM GRM
INDENO(1,2,3-CD)PYRENE	EPA 8270C	ND ug/l	0.02 ug/l*	09/05/12 02:37PM GRM
DIBENZ(A,H)ANTHRACENE	EPA 8270C	ND ug/l	0.02 ug/l*	09/05/12 02:37PM GRM
BENZO(G,H,I)PERYLENE	EPA 8270C	ND ug/l	0.02 ug/l*	09/05/12 02:37PM GRM
GAS CHROMATOGRAPHY MASS SPECTROMETRY; VOLATILES				
DICHLORODIFLUOROMETHANE	EPA 8260B	ND ug/l	0.430 ug/l*	09/01/12 03:32AM JSH
CHLOROMETHANE	EPA 8260B	ND ug/l	0.320 ug/l*	09/01/12 03:32AM JSH
VINYL CHLORIDE	EPA 8260B	ND ug/l	0.240 ug/l*	09/01/12 03:32AM JSH
BROMOMETHANE	EPA 8260B	0.610 JB ug/l	0.460 ug/l*	09/01/12 03:32AM JSH
CHLOROETHANE	EPA 8260B	ND ug/l	0.340 ug/l*	09/01/12 03:32AM JSH
TRICHLOROFLUOROMETHANE	EPA 8260B	ND ug/l	0.380 ug/l*	09/01/12 03:32AM JSH
1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	EPA 8260B	ND ug/l	0.470 ug/l*	09/01/12 03:32AM JSH
METHYL ACETATE	EPA 8260B	ND ug/l	0.360 ug/l*	09/01/12 03:32AM JSH
1,1-DICHLOROETHENE	EPA 8260B	ND ug/l	0.310 ug/l*	09/01/12 03:32AM JSH
ACETONE	EPA 8260B	ND ug/l	3.26 ug/l*	09/01/12 03:32AM JSH
CARBON DISULFIDE	EPA 8260B	ND ug/l	0.640 ug/l*	09/01/12 03:32AM JSH
METHYLENE CHLORIDE	EPA 8260B	ND ug/l	0.500 ug/l*	09/01/12 03:32AM JSH
TRANS-1,2-DICHLOROETHENE	EPA 8260B	ND ug/l	0.140 ug/l*	09/01/12 03:32AM JSH

Serial Number: 2353060

Authorized by: Oommen V. Kappil, QA Director

Account No: SR0117, EASTSTAR ENVIRONMENTAL GROUP, INC. **P.O. No:** **Inv. No:** 1453096
Project No: SR0117, EASTSTAR ENVIRONMENTAL GROUP, INC. **PWSID No:**

Sample Number **Sample Description** **Samp. Date/Time/Temp** **Sampled by**
L4297938-2 I027-8S-002 08/22/12 01:15pm NA F Customer
Received Date/Time/Temp 08/23/12 08:30pm 35 F **Iced (Y/N):** Y

Parameter	Method	Result	RLs	Test Date, Time, Analyst
GAS CHROMATOGRAPHY MASS SPECTROMETRY; VOLATILES continued				
METHYL TERTIARY BUTYL ETHER	EPA 8260B	ND ug/l	0.200 ug/l*	09/01/12 03:32AM JSH
1,1-DICHLOROETHANE	EPA 8260B	ND ug/l	0.240 ug/l*	09/01/12 03:32AM JSH
2-BUTANONE	EPA 8260B	ND ug/l	1.44 ug/l*	09/01/12 03:32AM JSH
BROMOCHLOROMETHANE	EPA 8260B	ND ug/l	0.300 ug/l*	09/01/12 03:32AM JSH
CIS-1,2-DICHLOROETHENE	EPA 8260B	ND ug/l	0.280 ug/l*	09/01/12 03:32AM JSH
CHLOROFORM	EPA 8260B	ND ug/l	0.230 ug/l*	09/01/12 03:32AM JSH
1,1,1-TRICHLOROETHANE	EPA 8260B	ND ug/l	0.210 ug/l*	09/01/12 03:32AM JSH
CYCLOHEXANE	EPA 8260B	ND ug/l	0.440 ug/l*	09/01/12 03:32AM JSH
CARBON TETRACHLORIDE	EPA 8260B	ND ug/l	0.280 ug/l*	09/01/12 03:32AM JSH
BENZENE	EPA 8260B	ND ug/l	0.220 ug/l*	09/01/12 03:32AM JSH
1,2-DICHLOROETHANE	EPA 8260B	ND ug/l	0.240 ug/l*	09/01/12 03:32AM JSH
TRICHLOROETHENE	EPA 8260B	ND ug/l	0.250 ug/l*	09/01/12 03:32AM JSH
METHYLCYCLOHEXANE	EPA 8260B	ND ug/l	0.360 ug/l*	09/01/12 03:32AM JSH
1,2-DICHLOROPROPANE	EPA 8260B	ND ug/l	0.200 ug/l*	09/01/12 03:32AM JSH
BROMODICHLOROMETHANE	EPA 8260B	ND ug/l	0.210 ug/l*	09/01/12 03:32AM JSH
4-METHYL-2-PENTANONE	EPA 8260B	ND ug/l	0.440 ug/l*	09/01/12 03:32AM JSH
CIS-1,3-DICHLOROPROPENE	EPA 8260B	ND ug/l	0.220 ug/l*	09/01/12 03:32AM JSH
TOLUENE	EPA 8260B	ND ug/l	0.190 ug/l*	09/01/12 03:32AM JSH
TRANS-1,3-DICHLOROPROPENE	EPA 8260B	ND ug/l	0.220 ug/l*	09/01/12 03:32AM JSH
1,1,2-TRICHLOROETHANE	EPA 8260B	ND ug/l	0.240 ug/l*	09/01/12 03:32AM JSH
2-HEXANONE	EPA 8260B	ND ug/l	0.830 ug/l*	09/01/12 03:32AM JSH
TETRACHLOROETHENE	EPA 8260B	ND ug/l	0.370 ug/l*	09/01/12 03:32AM JSH
DIBROMOCHLOROMETHANE	EPA 8260B	ND ug/l	0.140 ug/l*	09/01/12 03:32AM JSH
1,2-DIBROMOETHANE	EPA 8260B	ND ug/l	0.210 ug/l*	09/01/12 03:32AM JSH
CHLOROBENZENE	EPA 8260B	ND ug/l	0.230 ug/l*	09/01/12 03:32AM JSH
ETHYLBENZENE	EPA 8260B	ND ug/l	0.230 ug/l*	09/01/12 03:32AM JSH
M&P-XYLENES	EPA 8260B	ND ug/l	0.460 ug/l*	09/01/12 03:32AM JSH
O-XYLENE	EPA 8260B	ND ug/l	0.240 ug/l*	09/01/12 03:32AM JSH
STYRENE	EPA 8260B	ND ug/l	0.200 ug/l*	09/01/12 03:32AM JSH
BROMOFORM	EPA 8260B	ND ug/l	0.310 ug/l*	09/01/12 03:32AM JSH
1,1,2,2-TETRACHLOROETHANE	EPA 8260B	ND ug/l	0.320 ug/l*	09/01/12 03:32AM JSH
ISOPROPYLBENZENE	EPA 8260B	ND ug/l	0.270 ug/l*	09/01/12 03:32AM JSH
1,3-DICHLOROBENZENE	EPA 8260B	ND ug/l	0.210 ug/l*	09/01/12 03:32AM JSH
1,4-DICHLOROBENZENE	EPA 8260B	ND ug/l	0.170 ug/l*	09/01/12 03:32AM JSH
1,2-DICHLOROBENZENE	EPA 8260B	ND ug/l	0.200 ug/l*	09/01/12 03:32AM JSH
1,2-DIBROMO-3-CHLOROPROPANE	EPA 8260B	ND ug/l	0.470 ug/l*	09/01/12 03:32AM JSH
1,2,4-TRICHLOROBENZENE	EPA 8260B	ND ug/l	0.360 ug/l*	09/01/12 03:32AM JSH
1,2,3-TRICHLOROBENZENE	EPA 8260B	ND ug/l	0.310 ug/l*	09/01/12 03:32AM JSH
1,4-DIOXANE	EPA 8260B	ND ug/l	129 ug/l*	09/01/12 03:32AM JSH

Serial Number: 2353060

Authorized by: Oommen V. Kappil, QA Director

QC Laboratories

Analytical Report

Account No: SR0117, EASTSTAR ENVIRONMENTAL GROUP, INC. **P.O. No:** **Inv. No:** 1453096
Project No: SR0117, EASTSTAR ENVIRONMENTAL GROUP, INC. **PWSID No:**

Sample Number **Sample Description** **Samp. Date/Time/Temp** **Sampled by**
L4297938-3 I027-1D-003 08/22/12 03:20pm NA F Customer
Received Date/Time/Temp 08/23/12 08:30pm 35 F **Iced (Y/N):** Y

Parameter	Method	Result	RLs	Test Date, Time, Analyst
GENERAL CHEMISTRY				
CYANIDE, TOTAL	SM 4500CN C,E	ND mg/l	0.0200 mg/l	08/30/12 01:00PM JG
METALS				
SILVER	EPA 200.7 Rev 4.4	0.0347 mg/l	0.00510 mg/l*	09/07/12 11:38AM B B
ALUMINUM	EPA 200.7 Rev 4.4	ND mg/l	0.175 mg/l*	09/07/12 11:38AM B B
ARSENIC	EPA 200.7 Rev 4.4	0.287 mg/l	0.0283 mg/l*	09/07/12 11:38AM B B
BARIUM	EPA 200.7 Rev 4.4	0.0612 B mg/l	0.00170 mg/l*	09/07/12 11:38AM B B
BERYLLIUM	EPA 200.7 Rev 4.4	0.00140 B mg/l	0.000353 mg/l*	09/07/12 11:38AM B B
CALCIUM	EPA 200.7 Rev 4.4	2040 mg/l	0.0460 mg/l*	09/07/12 11:38AM B B
CADMIUM	EPA 200.7 Rev 4.4	ND mg/l	0.00110 mg/l*	09/07/12 11:38AM B B
COBALT	EPA 200.7 Rev 4.4	0.00670 B mg/l	0.00400 mg/l*	09/07/12 11:38AM B B
CHROMIUM	EPA 200.7 Rev 4.4	ND mg/l	0.00220 mg/l*	09/07/12 11:38AM B B
COPPER	EPA 200.7 Rev 4.4	0.00580 B mg/l	0.00310 mg/l*	09/07/12 11:38AM B B
IRON	EPA 200.7 Rev 4.4	34.2 mg/l	0.0359 mg/l*	09/07/12 11:38AM B B
POTASSIUM	EPA 200.7 Rev 4.4	29.1 mg/l	0.559 mg/l*	09/07/12 11:38AM B B
MAGNESIUM	EPA 200.7 Rev 4.4	535 mg/l	0.441 mg/l*	09/07/12 11:38AM B B
MANGANESE	EPA 200.7 Rev 4.4	4.60 mg/l	0.000786 mg/l*	09/07/12 11:38AM B B
SODIUM	EPA 200.7 Rev 4.4	3450 mg/l	0.106 mg/l*	09/07/12 11:38AM B B
NICKEL	EPA 200.7 Rev 4.4	ND mg/l	0.00340 mg/l*	09/07/12 11:38AM B B
LEAD	EPA 200.7 Rev 4.4	ND mg/l	0.0175 mg/l*	09/07/12 11:38AM B B
ANTIMONY	EPA 200.7 Rev 4.4	ND mg/l	0.0220 mg/l*	09/07/12 11:38AM B B
SELENIUM	EPA 200.7 Rev 4.4	0.148 mg/l	0.0517 mg/l*	09/07/12 11:38AM B B
THALLIUM	EPA 200.7 Rev 4.4	ND mg/l	0.0324 mg/l*	09/07/12 11:38AM B B
VANADIUM	EPA 200.7 Rev 4.4	ND mg/l	0.00260 mg/l*	09/07/12 11:38AM B B
ZINC	EPA 200.7 Rev 4.4	0.0758 mg/l	0.00260 mg/l*	09/07/12 11:38AM B B
MERCURY	EPA 245.1 Rev 3.0	0.0000230 B mg/l	0.0000130 mg/l*	09/01/12 02:37PM RBK
GAS CHROMATOGRAPHY MASS SPECTROMETRY; SEMI-VOLATILES				
NAPHTHALENE	EPA 8270C	0.02 ug/l	0.01 ug/l*	09/05/12 03:01PM GRM
2-METHYLNAPHTHALENE	EPA 8270C	0.03 ug/l	0.01 ug/l*	09/05/12 03:01PM GRM
ACENAPHTHYLENE	EPA 8270C	0.03 ug/l	0.01 ug/l*	09/05/12 03:01PM GRM
ACENAPHTHENE	EPA 8270C	0.03 ug/l	0.01 ug/l*	09/05/12 03:01PM GRM
FLUORENE	EPA 8270C	0.03 ug/l	0.02 ug/l*	09/05/12 03:01PM GRM
PHENANTHRENE	EPA 8270C	0.04 ug/l	0.01 ug/l*	09/05/12 03:01PM GRM
ANTHRACENE	EPA 8270C	0.03 ug/l	0.01 ug/l*	09/05/12 03:01PM GRM
FLUORANTHENE	EPA 8270C	0.03 ug/l	0.02 ug/l*	09/05/12 03:01PM GRM
PYRENE	EPA 8270C	0.03 ug/l	0.02 ug/l*	09/05/12 03:01PM GRM
BENZO(A)ANTHRACENE	EPA 8270C	0.03 ug/l	0.01 ug/l*	09/05/12 03:01PM GRM
CHRYSENE	EPA 8270C	0.03 ug/l	0.01 ug/l*	09/05/12 03:01PM GRM
BENZO(B)FLUORANTHENE	EPA 8270C	0.02 ug/l	0.02 ug/l*	09/05/12 03:01PM GRM
BENZO(K)FLUORANTHENE	EPA 8270C	0.02 ug/l	0.02 ug/l*	09/05/12 03:01PM GRM
BENZO(A)PYRENE	EPA 8270C	0.02 ug/l	0.02 ug/l*	09/05/12 03:01PM GRM
INDENO(1,2,3-CD)PYRENE	EPA 8270C	ND ug/l	0.02 ug/l*	09/05/12 03:01PM GRM
DIBENZ(A,H)ANTHRACENE	EPA 8270C	0.02 ug/l	0.02 ug/l*	09/05/12 03:01PM GRM
BENZO(G,H,I)PERYLENE	EPA 8270C	ND ug/l	0.02 ug/l*	09/05/12 03:01PM GRM

Serial Number: 2353060

Authorized by: Oommen V. Kappil, QA Director

QC Laboratories

Analytical Report

Account No: SR0117, EASTSTAR ENVIRONMENTAL GROUP, INC. **P.O. No:** **Inv. No:** 1453096
Project No: SR0117, EASTSTAR ENVIRONMENTAL GROUP, INC. **PWSID No:**

Sample Number **Sample Description** **Samp. Date/Time/Temp** **Sampled by**
L4297938-3 I027-1D-003 08/22/12 03:20pm NA F Customer
Received Date/Time/Temp 08/23/12 08:30pm 35 F **Iced (Y/N):** Y

Parameter	Method	Result	RLs	Test Date, Time, Analyst
GAS CHROMATOGRAPHY MASS SPECTROMETRY; VOLATILES				
DICHLORODIFLUOROMETHANE	EPA 8260B	ND ug/l	0.430 ug/l*	09/01/12 04:07AM JSH
CHLOROMETHANE	EPA 8260B	ND ug/l	0.320 ug/l*	09/01/12 04:07AM JSH
VINYL CHLORIDE	EPA 8260B	ND ug/l	0.240 ug/l*	09/01/12 04:07AM JSH
BROMOMETHANE	EPA 8260B	ND ug/l	0.460 ug/l*	09/01/12 04:07AM JSH
CHLOROETHANE	EPA 8260B	ND ug/l	0.340 ug/l*	09/01/12 04:07AM JSH
TRICHLOROFLUOROMETHANE	EPA 8260B	ND ug/l	0.380 ug/l*	09/01/12 04:07AM JSH
1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	EPA 8260B	ND ug/l	0.470 ug/l*	09/01/12 04:07AM JSH
METHYL ACETATE	EPA 8260B	ND ug/l	0.360 ug/l*	09/01/12 04:07AM JSH
1,1-DICHLOROETHENE	EPA 8260B	ND ug/l	0.310 ug/l*	09/01/12 04:07AM JSH
ACETONE	EPA 8260B	ND ug/l	3.26 ug/l*	09/01/12 04:07AM JSH
CARBON DISULFIDE	EPA 8260B	ND ug/l	0.640 ug/l*	09/01/12 04:07AM JSH
METHYLENE CHLORIDE	EPA 8260B	ND ug/l	0.500 ug/l*	09/01/12 04:07AM JSH
TRANS-1,2-DICHLOROETHENE	EPA 8260B	ND ug/l	0.140 ug/l*	09/01/12 04:07AM JSH
METHYL TERTIARY BUTYL ETHER	EPA 8260B	ND ug/l	0.200 ug/l*	09/01/12 04:07AM JSH
1,1-DICHLOROETHANE	EPA 8260B	ND ug/l	0.240 ug/l*	09/01/12 04:07AM JSH
2-BUTANONE	EPA 8260B	ND ug/l	1.44 ug/l*	09/01/12 04:07AM JSH
BROMOCHLOROMETHANE	EPA 8260B	ND ug/l	0.300 ug/l*	09/01/12 04:07AM JSH
CIS-1,2-DICHLOROETHENE	EPA 8260B	ND ug/l	0.280 ug/l*	09/01/12 04:07AM JSH
CHLOROFORM	EPA 8260B	ND ug/l	0.230 ug/l*	09/01/12 04:07AM JSH
1,1,1-TRICHLOROETHANE	EPA 8260B	ND ug/l	0.210 ug/l*	09/01/12 04:07AM JSH
CYCLOHEXANE	EPA 8260B	ND ug/l	0.440 ug/l*	09/01/12 04:07AM JSH
CARBON TETRACHLORIDE	EPA 8260B	ND ug/l	0.280 ug/l*	09/01/12 04:07AM JSH
BENZENE	EPA 8260B	ND ug/l	0.220 ug/l*	09/01/12 04:07AM JSH
1,2-DICHLOROETHANE	EPA 8260B	ND ug/l	0.240 ug/l*	09/01/12 04:07AM JSH
TRICHLOROETHENE	EPA 8260B	ND ug/l	0.250 ug/l*	09/01/12 04:07AM JSH
METHYLCYCLOHEXANE	EPA 8260B	ND ug/l	0.360 ug/l*	09/01/12 04:07AM JSH
1,2-DICHLOROPROPANE	EPA 8260B	ND ug/l	0.200 ug/l*	09/01/12 04:07AM JSH
BROMODICHLOROMETHANE	EPA 8260B	ND ug/l	0.210 ug/l*	09/01/12 04:07AM JSH
4-METHYL-2-PENTANONE	EPA 8260B	ND ug/l	0.440 ug/l*	09/01/12 04:07AM JSH
CIS-1,3-DICHLOROPROPENE	EPA 8260B	ND ug/l	0.220 ug/l*	09/01/12 04:07AM JSH
TOLUENE	EPA 8260B	ND ug/l	0.190 ug/l*	09/01/12 04:07AM JSH
TRANS-1,3-DICHLOROPROPENE	EPA 8260B	ND ug/l	0.220 ug/l*	09/01/12 04:07AM JSH
1,1,2-TRICHLOROETHANE	EPA 8260B	ND ug/l	0.240 ug/l*	09/01/12 04:07AM JSH
2-HEXANONE	EPA 8260B	ND ug/l	0.830 ug/l*	09/01/12 04:07AM JSH
TETRACHLOROETHENE	EPA 8260B	ND ug/l	0.370 ug/l*	09/01/12 04:07AM JSH
DIBROMOCHLOROMETHANE	EPA 8260B	ND ug/l	0.140 ug/l*	09/01/12 04:07AM JSH
1,2-DIBROMOETHANE	EPA 8260B	ND ug/l	0.210 ug/l*	09/01/12 04:07AM JSH
CHLOROBENZENE	EPA 8260B	ND ug/l	0.230 ug/l*	09/01/12 04:07AM JSH
ETHYLBENZENE	EPA 8260B	ND ug/l	0.230 ug/l*	09/01/12 04:07AM JSH
M&P-XYLENES	EPA 8260B	ND ug/l	0.460 ug/l*	09/01/12 04:07AM JSH
O-XYLENE	EPA 8260B	ND ug/l	0.240 ug/l*	09/01/12 04:07AM JSH
STYRENE	EPA 8260B	ND ug/l	0.200 ug/l*	09/01/12 04:07AM JSH
BROMOFORM	EPA 8260B	ND ug/l	0.310 ug/l*	09/01/12 04:07AM JSH
1,1,2,2-TETRACHLOROETHANE	EPA 8260B	ND ug/l	0.320 ug/l*	09/01/12 04:07AM JSH
ISOPROPYLBENZENE	EPA 8260B	ND ug/l	0.270 ug/l*	09/01/12 04:07AM JSH
1,3-DICHLOROBENZENE	EPA 8260B	ND ug/l	0.210 ug/l*	09/01/12 04:07AM JSH
1,4-DICHLOROBENZENE	EPA 8260B	ND ug/l	0.170 ug/l*	09/01/12 04:07AM JSH

Serial Number: 2353060

Authorized by: Oommen V. Kappil, QA Director

Account No: SR0117, EASTSTAR ENVIRONMENTAL GROUP, INC. **P.O. No:** **Inv. No:** 1453096
Project No: SR0117, EASTSTAR ENVIRONMENTAL GROUP, INC. **PWSID No:**

Sample Number **Sample Description** **Samp. Date/Time/Temp** **Sampled by**
L4297938-3 I027-1D-003 08/22/12 03:20pm NA F Customer
Received Date/Time/Temp 08/23/12 08:30pm 35 F **Iced (Y/N):** Y

Parameter	Method	Result	RLs	Test Date, Time, Analyst
GAS CHROMATOGRAPHY MASS SPECTROMETRY; VOLATILES continued				
1,2-DICHLOROBENZENE	EPA 8260B	ND ug/l	0.200 ug/l*	09/01/12 04:07AM JSH
1,2-DIBROMO-3-CHLOROPROPANE	EPA 8260B	ND ug/l	0.470 ug/l*	09/01/12 04:07AM JSH
1,2,4-TRICHLOROBENZENE	EPA 8260B	ND ug/l	0.360 ug/l*	09/01/12 04:07AM JSH
1,2,3-TRICHLOROBENZENE	EPA 8260B	ND ug/l	0.310 ug/l*	09/01/12 04:07AM JSH
1,4-DIOXANE	EPA 8260B	ND ug/l	129 ug/l*	09/01/12 04:07AM JSH

Sample Number **Sample Description** **Samp. Date/Time/Temp** **Sampled by**
L4297938-4 I027-1S-004 08/22/12 04:25pm NA F Customer
Received Date/Time/Temp 08/23/12 08:30pm 35 F **Iced (Y/N):** Y

Parameter	Method	Result	RLs	Test Date, Time, Analyst
GENERAL CHEMISTRY				
HEXANE EXTR.-SGT (NON POLAR O+G)	1664ASGT@PHC	ND mg/l	5.00 mg/l	09/04/12 08:30AM RHB
CYANIDE, TOTAL	SM 4500CN C,E	ND mg/l	0.0200 mg/l	08/30/12 01:00PM JG
METALS				
SILVER	EPA 200.7 Rev 4.4	0.00690 B mg/l	0.00510 mg/l*	09/07/12 11:42AM B B
ALUMINUM	EPA 200.7 Rev 4.4	ND mg/l	0.175 mg/l*	09/07/12 11:42AM B B
ARSENIC	EPA 200.7 Rev 4.4	0.0669 B mg/l	0.0283 mg/l*	09/07/12 11:42AM B B
BARIUM	EPA 200.7 Rev 4.4	0.588 mg/l	0.00170 mg/l*	09/07/12 11:42AM B B
BERYLLIUM	EPA 200.7 Rev 4.4	0.00130 B mg/l	0.000353 mg/l*	09/07/12 11:42AM B B
CALCIUM	EPA 200.7 Rev 4.4	308 mg/l	0.0460 mg/l*	09/07/12 11:42AM B B
CADMIUM	EPA 200.7 Rev 4.4	ND mg/l	0.00110 mg/l*	09/07/12 11:42AM B B
COBALT	EPA 200.7 Rev 4.4	0.00550 B mg/l	0.00400 mg/l*	09/07/12 11:42AM B B
CHROMIUM	EPA 200.7 Rev 4.4	0.0118 B mg/l	0.00220 mg/l*	09/07/12 11:42AM B B
COPPER	EPA 200.7 Rev 4.4	0.0149 B mg/l	0.00310 mg/l*	09/07/12 11:42AM B B
IRON	EPA 200.7 Rev 4.4	2.75 mg/l	0.0359 mg/l*	09/07/12 11:42AM B B
POTASSIUM	EPA 200.7 Rev 4.4	218 mg/l	0.559 mg/l*	09/07/12 11:42AM B B
MAGNESIUM	EPA 200.7 Rev 4.4	797 mg/l	0.441 mg/l*	09/07/12 11:42AM B B
MANGANESE	EPA 200.7 Rev 4.4	2.40 mg/l	0.000786 mg/l*	09/07/12 11:42AM B B
NICKEL	EPA 200.7 Rev 4.4	ND mg/l	0.00340 mg/l*	09/07/12 11:42AM B B
LEAD	EPA 200.7 Rev 4.4	ND mg/l	0.0175 mg/l*	09/07/12 11:42AM B B
ANTIMONY	EPA 200.7 Rev 4.4	ND mg/l	0.0220 mg/l*	09/07/12 11:42AM B B
SELENIUM	EPA 200.7 Rev 4.4	ND mg/l	0.0517 mg/l*	09/07/12 11:42AM B B
THALLIUM	EPA 200.7 Rev 4.4	ND mg/l	0.0324 mg/l*	09/07/12 11:42AM B B
VANADIUM	EPA 200.7 Rev 4.4	0.0106 B mg/l	0.00260 mg/l*	09/07/12 11:42AM B B
ZINC	EPA 200.7 Rev 4.4	0.101 mg/l	0.00260 mg/l*	09/07/12 11:42AM B B
SODIUM	EPA 200.7 Rev 4.4	6590 mg/l	1.06 mg/l*	09/07/12 01:14PM B B
MERCURY	EPA 245.1 Rev 3.0	0.0000220 B mg/l	0.0000130 mg/l*	09/01/12 02:39PM RBK

Serial Number: 2353060

Authorized by: Oommen V. Kappil, QA Director

QC Laboratories

Analytical Report

Account No: SR0117, EASTSTAR ENVIRONMENTAL GROUP, INC. **P.O. No:** **Inv. No:** 1453096
Project No: SR0117, EASTSTAR ENVIRONMENTAL GROUP, INC. **PWSID No:**

Sample Number **Sample Description** **Samp. Date/Time/Temp** **Sampled by**
L4297938-4 I027-1S-004 08/22/12 04:25pm NA F Customer
Received Date/Time/Temp 08/23/12 08:30pm 35 F **Iced (Y/N):** Y

Parameter	Method	Result	RLs	Test Date, Time, Analyst
GAS CHROMATOGRAPHY MASS SPECTROMETRY; SEMI-VOLATILES				
NAPHTHALENE	EPA 8270C	0.02 ug/l	0.01 ug/l*	09/05/12 03:26PM GRM
2-METHYLNAPHTHALENE	EPA 8270C	0.02 ug/l	0.01 ug/l*	09/05/12 03:26PM GRM
ACENAPHTHYLENE	EPA 8270C	ND ug/l	0.01 ug/l*	09/05/12 03:26PM GRM
ACENAPHTHENE	EPA 8270C	ND ug/l	0.01 ug/l*	09/05/12 03:26PM GRM
FLUORENE	EPA 8270C	ND ug/l	0.02 ug/l*	09/05/12 03:26PM GRM
PHENANTHRENE	EPA 8270C	0.02 ug/l	0.01 ug/l*	09/05/12 03:26PM GRM
ANTHRACENE	EPA 8270C	ND ug/l	0.01 ug/l*	09/05/12 03:26PM GRM
FLUORANTHENE	EPA 8270C	ND ug/l	0.02 ug/l*	09/05/12 03:26PM GRM
PYRENE	EPA 8270C	ND ug/l	0.02 ug/l*	09/05/12 03:26PM GRM
BENZO(A)ANTHRACENE	EPA 8270C	ND ug/l	0.01 ug/l*	09/05/12 03:26PM GRM
CHRYSENE	EPA 8270C	ND ug/l	0.01 ug/l*	09/05/12 03:26PM GRM
BENZO(B)FLUORANTHENE	EPA 8270C	ND ug/l	0.02 ug/l*	09/05/12 03:26PM GRM
BENZO(K)FLUORANTHENE	EPA 8270C	ND ug/l	0.02 ug/l*	09/05/12 03:26PM GRM
BENZO(A)PYRENE	EPA 8270C	ND ug/l	0.02 ug/l*	09/05/12 03:26PM GRM
INDENO(1,2,3-CD)PYRENE	EPA 8270C	ND ug/l	0.02 ug/l*	09/05/12 03:26PM GRM
DIBENZ(A,H)ANTHRACENE	EPA 8270C	ND ug/l	0.02 ug/l*	09/05/12 03:26PM GRM
BENZO(G,H,I)PERYLENE	EPA 8270C	ND ug/l	0.02 ug/l*	09/05/12 03:26PM GRM
GAS CHROMATOGRAPHY MASS SPECTROMETRY; VOLATILES				
DICHLORODIFLUOROMETHANE	EPA 8260B	ND ug/l	2.15 ug/l*	09/04/12 09:45PM JSH
CHLOROMETHANE	EPA 8260B	ND ug/l	1.60 ug/l*	09/04/12 09:45PM JSH
VINYL CHLORIDE	EPA 8260B	ND ug/l	1.20 ug/l*	09/04/12 09:45PM JSH
BROMOMETHANE	EPA 8260B	ND ug/l	2.30 ug/l*	09/04/12 09:45PM JSH
CHLOROETHANE	EPA 8260B	ND ug/l	1.70 ug/l*	09/04/12 09:45PM JSH
TRICHLOROFLUOROMETHANE	EPA 8260B	ND ug/l	1.90 ug/l*	09/04/12 09:45PM JSH
1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	EPA 8260B	ND ug/l	2.35 ug/l*	09/04/12 09:45PM JSH
METHYL ACETATE	EPA 8260B	ND ug/l	1.80 ug/l*	09/04/12 09:45PM JSH
1,1-DICHLOROETHENE	EPA 8260B	ND ug/l	1.55 ug/l*	09/04/12 09:45PM JSH
ACETONE	EPA 8260B	ND ug/l	16.3 ug/l*	09/04/12 09:45PM JSH
CARBON DISULFIDE	EPA 8260B	ND ug/l	3.20 ug/l*	09/04/12 09:45PM JSH
METHYLENE CHLORIDE	EPA 8260B	3.60 J ug/l	2.50 ug/l*	09/04/12 09:45PM JSH
TRANS-1,2-DICHLOROETHENE	EPA 8260B	ND ug/l	0.700 ug/l*	09/04/12 09:45PM JSH
METHYL TERTIARY BUTYL ETHER	EPA 8260B	ND ug/l	1.00 ug/l*	09/04/12 09:45PM JSH
1,1-DICHLOROETHANE	EPA 8260B	ND ug/l	1.20 ug/l*	09/04/12 09:45PM JSH
2-BUTANONE	EPA 8260B	ND ug/l	7.20 ug/l*	09/04/12 09:45PM JSH
BROMOCHLOROMETHANE	EPA 8260B	ND ug/l	1.50 ug/l*	09/04/12 09:45PM JSH
CIS-1,2-DICHLOROETHENE	EPA 8260B	ND ug/l	1.40 ug/l*	09/04/12 09:45PM JSH
CHLOROFORM	EPA 8260B	ND ug/l	1.15 ug/l*	09/04/12 09:45PM JSH
1,1,1-TRICHLOROETHANE	EPA 8260B	ND ug/l	1.05 ug/l*	09/04/12 09:45PM JSH
CYCLOHEXANE	EPA 8260B	ND ug/l	2.20 ug/l*	09/04/12 09:45PM JSH
CARBON TETRACHLORIDE	EPA 8260B	ND ug/l	1.40 ug/l*	09/04/12 09:45PM JSH
BENZENE	EPA 8260B	ND ug/l	1.10 ug/l*	09/04/12 09:45PM JSH
1,2-DICHLOROETHANE	EPA 8260B	ND ug/l	1.20 ug/l*	09/04/12 09:45PM JSH
TRICHLOROETHENE	EPA 8260B	ND ug/l	1.25 ug/l*	09/04/12 09:45PM JSH
METHYLCYCLOHEXANE	EPA 8260B	ND ug/l	1.80 ug/l*	09/04/12 09:45PM JSH
1,2-DICHLOROPROPANE	EPA 8260B	ND ug/l	1.00 ug/l*	09/04/12 09:45PM JSH

Serial Number: 2353060

Authorized by: Oommen V. Kappil, QA Director

Account No: SR0117, EASTSTAR ENVIRONMENTAL GROUP, INC. **P.O. No:** **Inv. No:** 1453096
Project No: SR0117, EASTSTAR ENVIRONMENTAL GROUP, INC. **PWSID No:**

Sample Number **Sample Description** **Samp. Date/Time/Temp** **Sampled by**
L4297938-4 I027-1S-004 08/22/12 04:25pm NA F Customer
Received Date/Time/Temp 08/23/12 08:30pm 35 F **Iced (Y/N):** Y

Parameter	Method	Result	RLs	Test Date, Time, Analyst
GAS CHROMATOGRAPHY MASS SPECTROMETRY; VOLATILES continued				
BROMODICHLOROMETHANE	EPA 8260B	ND ug/l	1.05 ug/l*	09/04/12 09:45PM JSH
4-METHYL-2-PENTANONE	EPA 8260B	ND ug/l	2.20 ug/l*	09/04/12 09:45PM JSH
CIS-1,3-DICHLOROPROPENE	EPA 8260B	ND ug/l	1.10 ug/l*	09/04/12 09:45PM JSH
TOLUENE	EPA 8260B	ND ug/l	0.950 ug/l*	09/04/12 09:45PM JSH
TRANS-1,3-DICHLOROPROPENE	EPA 8260B	ND ug/l	1.10 ug/l*	09/04/12 09:45PM JSH
1,1,2-TRICHLOROETHANE	EPA 8260B	ND ug/l	1.20 ug/l*	09/04/12 09:45PM JSH
2-HEXANONE	EPA 8260B	ND ug/l	4.15 ug/l*	09/04/12 09:45PM JSH
TETRACHLOROETHENE	EPA 8260B	ND ug/l	1.85 ug/l*	09/04/12 09:45PM JSH
DIBROMOCHLOROMETHANE	EPA 8260B	ND ug/l	0.700 ug/l*	09/04/12 09:45PM JSH
1,2-DIBROMOETHANE	EPA 8260B	ND ug/l	1.05 ug/l*	09/04/12 09:45PM JSH
CHLOROBENZENE	EPA 8260B	ND ug/l	1.15 ug/l*	09/04/12 09:45PM JSH
ETHYLBENZENE	EPA 8260B	ND ug/l	1.15 ug/l*	09/04/12 09:45PM JSH
M&P-XYLENES	EPA 8260B	ND ug/l	2.30 ug/l*	09/04/12 09:45PM JSH
O-XYLENE	EPA 8260B	ND ug/l	1.20 ug/l*	09/04/12 09:45PM JSH
STYRENE	EPA 8260B	ND ug/l	1.00 ug/l*	09/04/12 09:45PM JSH
BROMOFORM	EPA 8260B	ND ug/l	1.55 ug/l*	09/04/12 09:45PM JSH
1,1,2,2-TETRACHLOROETHANE	EPA 8260B	ND ug/l	1.60 ug/l*	09/04/12 09:45PM JSH
ISOPROPYLBENZENE	EPA 8260B	ND ug/l	1.35 ug/l*	09/04/12 09:45PM JSH
1,3-DICHLOROBENZENE	EPA 8260B	ND ug/l	1.05 ug/l*	09/04/12 09:45PM JSH
1,4-DICHLOROBENZENE	EPA 8260B	ND ug/l	0.850 ug/l*	09/04/12 09:45PM JSH
1,2-DICHLOROBENZENE	EPA 8260B	ND ug/l	1.00 ug/l*	09/04/12 09:45PM JSH
1,2-DIBROMO-3-CHLOROPROPANE	EPA 8260B	ND ug/l	2.35 ug/l*	09/04/12 09:45PM JSH
1,2,4-TRICHLOROBENZENE	EPA 8260B	ND ug/l	1.80 ug/l*	09/04/12 09:45PM JSH
1,2,3-TRICHLOROBENZENE	EPA 8260B	ND ug/l	1.55 ug/l*	09/04/12 09:45PM JSH
1,4-DIOXANE	EPA 8260B	ND ug/l	643 ug/l*	09/04/12 09:45PM JSH

Sample Number **Sample Description** **Samp. Date/Time/Temp** **Sampled by**
L4297938-5 I027-5D-005 08/23/12 07:30am NA F Customer
Received Date/Time/Temp 08/23/12 08:30pm 35 F **Iced (Y/N):** Y

Parameter	Method	Result	RLs	Test Date, Time, Analyst
GENERAL CHEMISTRY				
HEXANE EXTR.-SGT (NON POLAR O+G)	1664ASGT@PHC	ND mg/l	5.00 mg/l	09/04/12 08:30AM RHB
CYANIDE, TOTAL	SM 4500CN C,E	ND mg/l	0.0200 mg/l	08/30/12 01:00PM JG
METALS				
SILVER	EPA 200.7 Rev 4.4	0.00740 B mg/l	0.00510 mg/l*	09/07/12 11:46AM B B
ALUMINUM	EPA 200.7 Rev 4.4	ND mg/l	0.175 mg/l*	09/07/12 11:46AM B B
BARIUM	EPA 200.7 Rev 4.4	0.141 mg/l	0.00170 mg/l*	09/07/12 11:46AM B B
BERYLLIUM	EPA 200.7 Rev 4.4	0.00120 B mg/l	0.000353 mg/l*	09/07/12 11:46AM B B
CALCIUM	EPA 200.7 Rev 4.4	420 mg/l	0.0460 mg/l*	09/07/12 11:46AM B B
CADMIUM	EPA 200.7 Rev 4.4	ND mg/l	0.00110 mg/l*	09/07/12 11:46AM B B
COBALT	EPA 200.7 Rev 4.4	ND mg/l	0.00400 mg/l*	09/07/12 11:46AM B B
CHROMIUM	EPA 200.7 Rev 4.4	0.00490 B mg/l	0.00220 mg/l*	09/07/12 11:46AM B B
COPPER	EPA 200.7 Rev 4.4	0.0107 B mg/l	0.00310 mg/l*	09/07/12 11:46AM B B

Authorized by: Oommen V. Kappil, QA Director

Account No: SR0117, EASTSTAR ENVIRONMENTAL GROUP, INC. **P.O. No:** **Inv. No:** 1453096
Project No: SR0117, EASTSTAR ENVIRONMENTAL GROUP, INC. **PWSID No:**

Sample Number **Sample Description** **Samp. Date/Time/Temp** **Sampled by**
L4297938-5 I027-5D-005 08/23/12 07:30am NA F Customer
Received Date/Time/Temp 08/23/12 08:30pm 35 F **Iced (Y/N):** Y

Parameter	Method	Result	RLs	Test Date, Time, Analyst
METALS continued				
IRON	EPA 200.7 Rev 4.4	28.6 mg/l	0.0359 mg/l*	09/07/12 11:46AM B B
POTASSIUM	EPA 200.7 Rev 4.4	190 mg/l	0.559 mg/l*	09/07/12 11:46AM B B
MAGNESIUM	EPA 200.7 Rev 4.4	733 mg/l	0.441 mg/l*	09/07/12 11:46AM B B
MANGANESE	EPA 200.7 Rev 4.4	1.04 mg/l	0.000786 mg/l*	09/07/12 11:46AM B B
NICKEL	EPA 200.7 Rev 4.4	ND mg/l	0.00340 mg/l*	09/07/12 11:46AM B B
LEAD	EPA 200.7 Rev 4.4	ND mg/l	0.0175 mg/l*	09/07/12 11:46AM B B
ANTIMONY	EPA 200.7 Rev 4.4	ND mg/l	0.0220 mg/l*	09/07/12 11:46AM B B
SELENIUM	EPA 200.7 Rev 4.4	0.119 mg/l	0.0517 mg/l*	09/07/12 11:46AM B B
THALLIUM	EPA 200.7 Rev 4.4	ND mg/l	0.0324 mg/l*	09/07/12 11:46AM B B
VANADIUM	EPA 200.7 Rev 4.4	ND mg/l	0.00260 mg/l*	09/07/12 11:46AM B B
ZINC	EPA 200.7 Rev 4.4	0.0345 B mg/l	0.00260 mg/l*	09/07/12 11:46AM B B
ARSENIC	EPA 200.7 Rev 4.4	0.139 mg/l	0.0283 mg/l*	09/07/12 11:50AM B B
SODIUM	EPA 200.7 Rev 4.4	6310 mg/l	1.06 mg/l*	09/07/12 01:16PM B B
MERCURY	EPA 245.1 Rev 3.0	0.0000210 B mg/l	0.0000130 mg/l*	09/01/12 02:40PM RBK
GAS CHROMATOGRAPHY MASS SPECTROMETRY; SEMI-VOLATILES				
NAPHTHALENE	EPA 8270C	ND ug/l	0.01 ug/l*	09/05/12 03:51PM GRM
2-METHYLNAPHTHALENE	EPA 8270C	ND ug/l	0.01 ug/l*	09/05/12 03:51PM GRM
ACENAPHTHYLENE	EPA 8270C	ND ug/l	0.01 ug/l*	09/05/12 03:51PM GRM
ACENAPHTHENE	EPA 8270C	ND ug/l	0.01 ug/l*	09/05/12 03:51PM GRM
FLUORENE	EPA 8270C	ND ug/l	0.02 ug/l*	09/05/12 03:51PM GRM
PHENANTHRENE	EPA 8270C	ND ug/l	0.01 ug/l*	09/05/12 03:51PM GRM
ANTHRACENE	EPA 8270C	ND ug/l	0.01 ug/l*	09/05/12 03:51PM GRM
FLUORANTHENE	EPA 8270C	ND ug/l	0.02 ug/l*	09/05/12 03:51PM GRM
PYRENE	EPA 8270C	0.04 ug/l	0.02 ug/l*	09/05/12 03:51PM GRM
BENZO(A)ANTHRACENE	EPA 8270C	ND ug/l	0.01 ug/l*	09/05/12 03:51PM GRM
CHRYSENE	EPA 8270C	ND ug/l	0.01 ug/l*	09/05/12 03:51PM GRM
BENZO(B)FLUORANTHENE	EPA 8270C	ND ug/l	0.02 ug/l*	09/05/12 03:51PM GRM
BENZO(K)FLUORANTHENE	EPA 8270C	ND ug/l	0.02 ug/l*	09/05/12 03:51PM GRM
BENZO(A)PYRENE	EPA 8270C	ND ug/l	0.02 ug/l*	09/05/12 03:51PM GRM
INDENO(1,2,3-CD)PYRENE	EPA 8270C	ND ug/l	0.02 ug/l*	09/05/12 03:51PM GRM
DIBENZ(A,H)ANTHRACENE	EPA 8270C	ND ug/l	0.02 ug/l*	09/05/12 03:51PM GRM
BENZO(G,H,I)PERYLENE	EPA 8270C	ND ug/l	0.02 ug/l*	09/05/12 03:51PM GRM
GAS CHROMATOGRAPHY MASS SPECTROMETRY; VOLATILES				
DICHLORODIFLUOROMETHANE	EPA 8260B	ND ug/l	0.430 ug/l*	09/01/12 04:42AM JSH
CHLOROMETHANE	EPA 8260B	ND ug/l	0.320 ug/l*	09/01/12 04:42AM JSH
VINYL CHLORIDE	EPA 8260B	ND ug/l	0.240 ug/l*	09/01/12 04:42AM JSH
BROMOMETHANE	EPA 8260B	ND ug/l	0.460 ug/l*	09/01/12 04:42AM JSH
CHLOROETHANE	EPA 8260B	ND ug/l	0.340 ug/l*	09/01/12 04:42AM JSH
TRICHLOROFLUOROMETHANE	EPA 8260B	ND ug/l	0.380 ug/l*	09/01/12 04:42AM JSH
1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	EPA 8260B	ND ug/l	0.470 ug/l*	09/01/12 04:42AM JSH
METHYL ACETATE	EPA 8260B	ND ug/l	0.360 ug/l*	09/01/12 04:42AM JSH
1,1-DICHLOROETHENE	EPA 8260B	ND ug/l	0.310 ug/l*	09/01/12 04:42AM JSH
ACETONE	EPA 8260B	ND ug/l	3.26 ug/l*	09/01/12 04:42AM JSH
CARBON DISULFIDE	EPA 8260B	ND ug/l	0.640 ug/l*	09/01/12 04:42AM JSH

Authorized by: Oommen V. Kappil, QA Director

QC Laboratories

Analytical Report

Account No: SR0117, EASTSTAR ENVIRONMENTAL GROUP, INC. **P.O. No:** **Inv. No:** 1453096
Project No: SR0117, EASTSTAR ENVIRONMENTAL GROUP, INC. **PWSID No:**

Sample Number **Sample Description** **Samp. Date/Time/Temp** **Sampled by**
L4297938-5 I027-5D-005 08/23/12 07:30am NA F Customer
Received Date/Time/Temp 08/23/12 08:30pm 35 F **Iced (Y/N):** Y

Parameter	Method	Result	RLs	Test Date, Time, Analyst
GAS CHROMATOGRAPHY MASS SPECTROMETRY; VOLATILES continued				
METHYLENE CHLORIDE	EPA 8260B	ND ug/l	0.500 ug/l*	09/01/12 04:42AM JSH
TRANS-1,2-DICHLOROETHENE	EPA 8260B	ND ug/l	0.140 ug/l*	09/01/12 04:42AM JSH
METHYL TERTIARY BUTYL ETHER	EPA 8260B	ND ug/l	0.200 ug/l*	09/01/12 04:42AM JSH
1,1-DICHLOROETHANE	EPA 8260B	ND ug/l	0.240 ug/l*	09/01/12 04:42AM JSH
2-BUTANONE	EPA 8260B	ND ug/l	1.44 ug/l*	09/01/12 04:42AM JSH
BROMOCHLOROMETHANE	EPA 8260B	ND ug/l	0.300 ug/l*	09/01/12 04:42AM JSH
CIS-1,2-DICHLOROETHENE	EPA 8260B	ND ug/l	0.280 ug/l*	09/01/12 04:42AM JSH
CHLOROFORM	EPA 8260B	ND ug/l	0.230 ug/l*	09/01/12 04:42AM JSH
1,1,1-TRICHLOROETHANE	EPA 8260B	ND ug/l	0.210 ug/l*	09/01/12 04:42AM JSH
CYCLOHEXANE	EPA 8260B	ND ug/l	0.440 ug/l*	09/01/12 04:42AM JSH
CARBON TETRACHLORIDE	EPA 8260B	ND ug/l	0.280 ug/l*	09/01/12 04:42AM JSH
BENZENE	EPA 8260B	ND ug/l	0.220 ug/l*	09/01/12 04:42AM JSH
1,2-DICHLOROETHANE	EPA 8260B	ND ug/l	0.240 ug/l*	09/01/12 04:42AM JSH
TRICHLOROETHENE	EPA 8260B	ND ug/l	0.250 ug/l*	09/01/12 04:42AM JSH
METHYLCYCLOHEXANE	EPA 8260B	ND ug/l	0.360 ug/l*	09/01/12 04:42AM JSH
1,2-DICHLOROPROPANE	EPA 8260B	ND ug/l	0.200 ug/l*	09/01/12 04:42AM JSH
BROMODICHLOROMETHANE	EPA 8260B	ND ug/l	0.210 ug/l*	09/01/12 04:42AM JSH
4-METHYL-2-PENTANONE	EPA 8260B	ND ug/l	0.440 ug/l*	09/01/12 04:42AM JSH
CIS-1,3-DICHLOROPROPENE	EPA 8260B	ND ug/l	0.220 ug/l*	09/01/12 04:42AM JSH
TOLUENE	EPA 8260B	ND ug/l	0.190 ug/l*	09/01/12 04:42AM JSH
TRANS-1,3-DICHLOROPROPENE	EPA 8260B	ND ug/l	0.220 ug/l*	09/01/12 04:42AM JSH
1,1,2-TRICHLOROETHANE	EPA 8260B	ND ug/l	0.240 ug/l*	09/01/12 04:42AM JSH
2-HEXANONE	EPA 8260B	ND ug/l	0.830 ug/l*	09/01/12 04:42AM JSH
TETRACHLOROETHENE	EPA 8260B	ND ug/l	0.370 ug/l*	09/01/12 04:42AM JSH
DIBROMOCHLOROMETHANE	EPA 8260B	ND ug/l	0.140 ug/l*	09/01/12 04:42AM JSH
1,2-DIBROMOETHANE	EPA 8260B	ND ug/l	0.210 ug/l*	09/01/12 04:42AM JSH
CHLOROBENZENE	EPA 8260B	ND ug/l	0.230 ug/l*	09/01/12 04:42AM JSH
ETHYLBENZENE	EPA 8260B	ND ug/l	0.230 ug/l*	09/01/12 04:42AM JSH
M&P-XYLENES	EPA 8260B	ND ug/l	0.460 ug/l*	09/01/12 04:42AM JSH
O-XYLENE	EPA 8260B	ND ug/l	0.240 ug/l*	09/01/12 04:42AM JSH
STYRENE	EPA 8260B	ND ug/l	0.200 ug/l*	09/01/12 04:42AM JSH
BROMOFORM	EPA 8260B	ND ug/l	0.310 ug/l*	09/01/12 04:42AM JSH
1,1,2,2-TETRACHLOROETHANE	EPA 8260B	ND ug/l	0.320 ug/l*	09/01/12 04:42AM JSH
ISOPROPYLBENZENE	EPA 8260B	ND ug/l	0.270 ug/l*	09/01/12 04:42AM JSH
1,3-DICHLOROBENZENE	EPA 8260B	ND ug/l	0.210 ug/l*	09/01/12 04:42AM JSH
1,4-DICHLOROBENZENE	EPA 8260B	ND ug/l	0.170 ug/l*	09/01/12 04:42AM JSH
1,2-DICHLOROBENZENE	EPA 8260B	ND ug/l	0.200 ug/l*	09/01/12 04:42AM JSH
1,2-DIBROMO-3-CHLOROPROPANE	EPA 8260B	ND ug/l	0.470 ug/l*	09/01/12 04:42AM JSH
1,2,4-TRICHLOROBENZENE	EPA 8260B	ND ug/l	0.360 ug/l*	09/01/12 04:42AM JSH
1,2,3-TRICHLOROBENZENE	EPA 8260B	ND ug/l	0.310 ug/l*	09/01/12 04:42AM JSH
1,4-DIOXANE	EPA 8260B	ND ug/l	129 ug/l*	09/01/12 04:42AM JSH

Serial Number: 2353060

Oommen V. Kappil

Authorized by: Oommen V. Kappil, QA Director

QC Laboratories

Analytical Report

Account No: SR0117, EASTSTAR ENVIRONMENTAL GROUP, INC. **P.O. No:** **Inv. No:** 1453096
Project No: SR0117, EASTSTAR ENVIRONMENTAL GROUP, INC. **PWSID No:**

Sample Number **Sample Description** **Samp. Date/Time/Temp** **Sampled by**
L4297938-6 I027-5S-006 08/23/12 08:20am NA F Customer

Received Date/Time/Temp 08/23/12 08:30pm 35 F **Iced (Y/N):** Y

Parameter	Method	Result	RLs	Test Date, Time, Analyst
GENERAL CHEMISTRY				
CYANIDE, TOTAL	SM 4500CN C,E	0.0810 mg/l	0.0250 mg/l	08/30/12 01:00PM JG
METALS				
SILVER	EPA 200.7 Rev 4.4	0.00750 B mg/l	0.00510 mg/l*	09/07/12 11:53AM B B
ALUMINUM	EPA 200.7 Rev 4.4	ND mg/l	0.175 mg/l*	09/07/12 11:53AM B B
ARSENIC	EPA 200.7 Rev 4.4	0.0655 B mg/l	0.0283 mg/l*	09/07/12 11:53AM B B
BARIUM	EPA 200.7 Rev 4.4	0.248 mg/l	0.00170 mg/l*	09/07/12 11:53AM B B
BERYLLIUM	EPA 200.7 Rev 4.4	0.00140 B mg/l	0.000353 mg/l*	09/07/12 11:53AM B B
CALCIUM	EPA 200.7 Rev 4.4	298 mg/l	0.0460 mg/l*	09/07/12 11:53AM B B
CADMIUM	EPA 200.7 Rev 4.4	ND mg/l	0.00110 mg/l*	09/07/12 11:53AM B B
COBALT	EPA 200.7 Rev 4.4	0.00670 B mg/l	0.00400 mg/l*	09/07/12 11:53AM B B
CHROMIUM	EPA 200.7 Rev 4.4	0.0191 B mg/l	0.00220 mg/l*	09/07/12 11:53AM B B
COPPER	EPA 200.7 Rev 4.4	0.0390 mg/l	0.00310 mg/l*	09/07/12 11:53AM B B
IRON	EPA 200.7 Rev 4.4	1.30 mg/l	0.0359 mg/l*	09/07/12 11:53AM B B
POTASSIUM	EPA 200.7 Rev 4.4	233 mg/l	0.559 mg/l*	09/07/12 11:53AM B B
MAGNESIUM	EPA 200.7 Rev 4.4	777 mg/l	0.441 mg/l*	09/07/12 11:53AM B B
MANGANESE	EPA 200.7 Rev 4.4	0.00230 B mg/l	0.000786 mg/l*	09/07/12 11:53AM B B
NICKEL	EPA 200.7 Rev 4.4	ND mg/l	0.00340 mg/l*	09/07/12 11:53AM B B
LEAD	EPA 200.7 Rev 4.4	ND mg/l	0.0175 mg/l*	09/07/12 11:53AM B B
ANTIMONY	EPA 200.7 Rev 4.4	ND mg/l	0.0220 mg/l*	09/07/12 11:53AM B B
SELENIUM	EPA 200.7 Rev 4.4	0.0647 B mg/l	0.0517 mg/l*	09/07/12 11:53AM B B
THALLIUM	EPA 200.7 Rev 4.4	ND mg/l	0.0324 mg/l*	09/07/12 11:53AM B B
VANADIUM	EPA 200.7 Rev 4.4	0.00750 B mg/l	0.00260 mg/l*	09/07/12 11:53AM B B
ZINC	EPA 200.7 Rev 4.4	0.0472 B mg/l	0.00260 mg/l*	09/07/12 11:53AM B B
SODIUM	EPA 200.7 Rev 4.4	6710 mg/l	1.06 mg/l*	09/07/12 01:18PM B B
MERCURY	EPA 245.1 Rev 3.0	0.0000330 B mg/l	0.0000130 mg/l*	09/01/12 02:42PM RBK
GAS CHROMATOGRAPHY MASS SPECTROMETRY; SEMI-VOLATILES				
NAPHTHALENE	EPA 8270C	0.02 ug/l	0.01 ug/l*	09/05/12 04:16PM GRM
2-METHYLNAPHTHALENE	EPA 8270C	0.01 J ug/l	0.01 ug/l*	09/05/12 04:16PM GRM
ACENAPHTHYLENE	EPA 8270C	ND ug/l	0.01 ug/l*	09/05/12 04:16PM GRM
ACENAPHTHENE	EPA 8270C	0.02 ug/l	0.01 ug/l*	09/05/12 04:16PM GRM
FLUORENE	EPA 8270C	0.02 ug/l	0.02 ug/l*	09/05/12 04:16PM GRM
PHENANTHRENE	EPA 8270C	0.02 ug/l	0.01 ug/l*	09/05/12 04:16PM GRM
ANTHRACENE	EPA 8270C	ND ug/l	0.01 ug/l*	09/05/12 04:16PM GRM
FLUORANTHENE	EPA 8270C	0.02 ug/l	0.02 ug/l*	09/05/12 04:16PM GRM
PYRENE	EPA 8270C	ND ug/l	0.02 ug/l*	09/05/12 04:16PM GRM
BENZO(A)ANTHRACENE	EPA 8270C	ND ug/l	0.01 ug/l*	09/05/12 04:16PM GRM
CHRYSENE	EPA 8270C	ND ug/l	0.01 ug/l*	09/05/12 04:16PM GRM
BENZO(B)FLUORANTHENE	EPA 8270C	ND ug/l	0.02 ug/l*	09/05/12 04:16PM GRM
BENZO(K)FLUORANTHENE	EPA 8270C	ND ug/l	0.02 ug/l*	09/05/12 04:16PM GRM
BENZO(A)PYRENE	EPA 8270C	ND ug/l	0.02 ug/l*	09/05/12 04:16PM GRM
INDENO(1,2,3-CD)PYRENE	EPA 8270C	ND ug/l	0.02 ug/l*	09/05/12 04:16PM GRM
DIBENZ(A,H)ANTHRACENE	EPA 8270C	ND ug/l	0.02 ug/l*	09/05/12 04:16PM GRM
BENZO(G,H,I)PERYLENE	EPA 8270C	ND ug/l	0.02 ug/l*	09/05/12 04:16PM GRM

Serial Number: 2353060

Authorized by: Oommen V. Kappil, QA Director

Account No: SR0117, EASTSTAR ENVIRONMENTAL GROUP, INC. **P.O. No:** **Inv. No:** 1453096
Project No: SR0117, EASTSTAR ENVIRONMENTAL GROUP, INC. **PWSID No:**

Sample Number **Sample Description** **Samp. Date/Time/Temp** **Sampled by**
L4297938-6 I027-5S-006 08/23/12 08:20am NA F Customer
Received Date/Time/Temp 08/23/12 08:30pm 35 F **Iced (Y/N):** Y

Parameter	Method	Result	RLs	Test Date, Time, Analyst
GAS CHROMATOGRAPHY MASS SPECTROMETRY; VOLATILES				
DICHLORODIFLUOROMETHANE	EPA 8260B	ND ug/l	0.430 ug/l*	09/04/12 05:04PM JSH
CHLOROMETHANE	EPA 8260B	ND ug/l	0.320 ug/l*	09/04/12 05:04PM JSH
VINYL CHLORIDE	EPA 8260B	ND ug/l	0.240 ug/l*	09/04/12 05:04PM JSH
BROMOMETHANE	EPA 8260B	ND ug/l	0.460 ug/l*	09/04/12 05:04PM JSH
CHLOROETHANE	EPA 8260B	ND ug/l	0.340 ug/l*	09/04/12 05:04PM JSH
TRICHLOROFLUOROMETHANE	EPA 8260B	ND ug/l	0.380 ug/l*	09/04/12 05:04PM JSH
1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	EPA 8260B	ND ug/l	0.470 ug/l*	09/04/12 05:04PM JSH
METHYL ACETATE	EPA 8260B	ND ug/l	0.360 ug/l*	09/04/12 05:04PM JSH
1,1-DICHLOROETHENE	EPA 8260B	ND ug/l	0.310 ug/l*	09/04/12 05:04PM JSH
ACETONE	EPA 8260B	ND ug/l	3.26 ug/l*	09/04/12 05:04PM JSH
CARBON DISULFIDE	EPA 8260B	2.39 ug/l	0.640 ug/l*	09/04/12 05:04PM JSH
METHYLENE CHLORIDE	EPA 8260B	ND ug/l	0.500 ug/l*	09/04/12 05:04PM JSH
TRANS-1,2-DICHLOROETHENE	EPA 8260B	ND ug/l	0.140 ug/l*	09/04/12 05:04PM JSH
METHYL TERTIARY BUTYL ETHER	EPA 8260B	ND ug/l	0.200 ug/l*	09/04/12 05:04PM JSH
1,1-DICHLOROETHANE	EPA 8260B	ND ug/l	0.240 ug/l*	09/04/12 05:04PM JSH
2-BUTANONE	EPA 8260B	ND ug/l	1.44 ug/l*	09/04/12 05:04PM JSH
BROMOCHLOROMETHANE	EPA 8260B	ND ug/l	0.300 ug/l*	09/04/12 05:04PM JSH
CIS-1,2-DICHLOROETHENE	EPA 8260B	ND ug/l	0.280 ug/l*	09/04/12 05:04PM JSH
CHLOROFORM	EPA 8260B	ND ug/l	0.230 ug/l*	09/04/12 05:04PM JSH
1,1,1-TRICHLOROETHANE	EPA 8260B	ND ug/l	0.210 ug/l*	09/04/12 05:04PM JSH
CYCLOHEXANE	EPA 8260B	ND ug/l	0.440 ug/l*	09/04/12 05:04PM JSH
CARBON TETRACHLORIDE	EPA 8260B	ND ug/l	0.280 ug/l*	09/04/12 05:04PM JSH
BENZENE	EPA 8260B	ND ug/l	0.220 ug/l*	09/04/12 05:04PM JSH
1,2-DICHLOROETHANE	EPA 8260B	ND ug/l	0.240 ug/l*	09/04/12 05:04PM JSH
TRICHLOROETHENE	EPA 8260B	ND ug/l	0.250 ug/l*	09/04/12 05:04PM JSH
METHYLCYCLOHEXANE	EPA 8260B	ND ug/l	0.360 ug/l*	09/04/12 05:04PM JSH
1,2-DICHLOROPROPANE	EPA 8260B	ND ug/l	0.200 ug/l*	09/04/12 05:04PM JSH
BROMODICHLOROMETHANE	EPA 8260B	ND ug/l	0.210 ug/l*	09/04/12 05:04PM JSH
4-METHYL-2-PENTANONE	EPA 8260B	ND ug/l	0.440 ug/l*	09/04/12 05:04PM JSH
CIS-1,3-DICHLOROPROPENE	EPA 8260B	ND ug/l	0.220 ug/l*	09/04/12 05:04PM JSH
TOLUENE	EPA 8260B	ND ug/l	0.190 ug/l*	09/04/12 05:04PM JSH
TRANS-1,3-DICHLOROPROPENE	EPA 8260B	ND ug/l	0.220 ug/l*	09/04/12 05:04PM JSH
1,1,2-TRICHLOROETHANE	EPA 8260B	ND ug/l	0.240 ug/l*	09/04/12 05:04PM JSH
2-HEXANONE	EPA 8260B	ND ug/l	0.830 ug/l*	09/04/12 05:04PM JSH
TETRACHLOROETHENE	EPA 8260B	ND ug/l	0.370 ug/l*	09/04/12 05:04PM JSH
DIBROMOCHLOROMETHANE	EPA 8260B	ND ug/l	0.140 ug/l*	09/04/12 05:04PM JSH
1,2-DIBROMOETHANE	EPA 8260B	ND ug/l	0.210 ug/l*	09/04/12 05:04PM JSH
CHLOROBENZENE	EPA 8260B	ND ug/l	0.230 ug/l*	09/04/12 05:04PM JSH
ETHYLBENZENE	EPA 8260B	ND ug/l	0.230 ug/l*	09/04/12 05:04PM JSH
M&P-XYLENES	EPA 8260B	ND ug/l	0.460 ug/l*	09/04/12 05:04PM JSH
O-XYLENE	EPA 8260B	ND ug/l	0.240 ug/l*	09/04/12 05:04PM JSH
STYRENE	EPA 8260B	ND ug/l	0.200 ug/l*	09/04/12 05:04PM JSH
BROMOFORM	EPA 8260B	ND ug/l	0.310 ug/l*	09/04/12 05:04PM JSH
1,1,2,2-TETRACHLOROETHANE	EPA 8260B	ND ug/l	0.320 ug/l*	09/04/12 05:04PM JSH
ISOPROPYLBENZENE	EPA 8260B	ND ug/l	0.270 ug/l*	09/04/12 05:04PM JSH
1,3-DICHLOROBENZENE	EPA 8260B	ND ug/l	0.210 ug/l*	09/04/12 05:04PM JSH
1,4-DICHLOROBENZENE	EPA 8260B	ND ug/l	0.170 ug/l*	09/04/12 05:04PM JSH

Serial Number: 2353060

Authorized by: Oommen V. Kappil, QA Director

Account No: SR0117, EASTSTAR ENVIRONMENTAL GROUP, INC. **P.O. No:** **Inv. No:** 1453096
Project No: SR0117, EASTSTAR ENVIRONMENTAL GROUP, INC. **PWSID No:**

Sample Number **Sample Description** **Samp. Date/Time/Temp** **Sampled by**
L4297938-6 I027-5S-006 08/23/12 08:20am NA F Customer
Received Date/Time/Temp 08/23/12 08:30pm 35 F **Iced (Y/N):** Y

Parameter	Method	Result	RLs	Test Date, Time, Analyst
GAS CHROMATOGRAPHY MASS SPECTROMETRY; VOLATILES continued				
1,2-DICHLOROBENZENE	EPA 8260B	ND ug/l	0.200 ug/l*	09/04/12 05:04PM JSH
1,2-DIBROMO-3-CHLOROPROPANE	EPA 8260B	ND ug/l	0.470 ug/l*	09/04/12 05:04PM JSH
1,2,4-TRICHLOROBENZENE	EPA 8260B	ND ug/l	0.360 ug/l*	09/04/12 05:04PM JSH
1,2,3-TRICHLOROBENZENE	EPA 8260B	ND ug/l	0.310 ug/l*	09/04/12 05:04PM JSH
1,4-DIOXANE	EPA 8260B	ND ug/l	129 ug/l*	09/04/12 05:04PM JSH

Sample Number **Sample Description** **Samp. Date/Time/Temp** **Sampled by**
L4297938-7 I027-4D-007 08/23/12 08:20am NA F Customer
Received Date/Time/Temp 08/23/12 08:30pm 35 F **Iced (Y/N):** Y

Parameter	Method	Result	RLs	Test Date, Time, Analyst
GENERAL CHEMISTRY				
CYANIDE, TOTAL	SM 4500CN C,E	0.391 mg/l	0.0800 mg/l	08/30/12 01:00PM JG
METALS				
SILVER	EPA 200.7 Rev 4.4	0.0295 mg/l	0.00510 mg/l*	09/07/12 11:57AM B B
ALUMINUM	EPA 200.7 Rev 4.4	0.207 B mg/l	0.175 mg/l*	09/07/12 11:57AM B B
BARIUM	EPA 200.7 Rev 4.4	0.0535 B mg/l	0.00170 mg/l*	09/07/12 11:57AM B B
BERYLLIUM	EPA 200.7 Rev 4.4	0.00140 B mg/l	0.000353 mg/l*	09/07/12 11:57AM B B
CALCIUM	EPA 200.7 Rev 4.4	1810 mg/l	0.0460 mg/l*	09/07/12 11:57AM B B
CADMIUM	EPA 200.7 Rev 4.4	ND mg/l	0.00110 mg/l*	09/07/12 11:57AM B B
COBALT	EPA 200.7 Rev 4.4	0.00760 B mg/l	0.00400 mg/l*	09/07/12 11:57AM B B
CHROMIUM	EPA 200.7 Rev 4.4	ND mg/l	0.00220 mg/l*	09/07/12 11:57AM B B
COPPER	EPA 200.7 Rev 4.4	0.00700 B mg/l	0.00310 mg/l*	09/07/12 11:57AM B B
IRON	EPA 200.7 Rev 4.4	17.8 mg/l	0.0359 mg/l*	09/07/12 11:57AM B B
POTASSIUM	EPA 200.7 Rev 4.4	47.8 mg/l	0.559 mg/l*	09/07/12 11:57AM B B
MAGNESIUM	EPA 200.7 Rev 4.4	576 mg/l	0.441 mg/l*	09/07/12 11:57AM B B
MANGANESE	EPA 200.7 Rev 4.4	0.835 mg/l	0.000786 mg/l*	09/07/12 11:57AM B B
SODIUM	EPA 200.7 Rev 4.4	4550 mg/l	0.106 mg/l*	09/07/12 11:57AM B B
NICKEL	EPA 200.7 Rev 4.4	ND mg/l	0.00340 mg/l*	09/07/12 11:57AM B B
LEAD	EPA 200.7 Rev 4.4	ND mg/l	0.0175 mg/l*	09/07/12 11:57AM B B
ANTIMONY	EPA 200.7 Rev 4.4	ND mg/l	0.0220 mg/l*	09/07/12 11:57AM B B
SELENIUM	EPA 200.7 Rev 4.4	0.183 mg/l	0.0517 mg/l*	09/07/12 11:57AM B B
THALLIUM	EPA 200.7 Rev 4.4	ND mg/l	0.0324 mg/l*	09/07/12 11:57AM B B
VANADIUM	EPA 200.7 Rev 4.4	ND mg/l	0.00260 mg/l*	09/07/12 11:57AM B B
ZINC	EPA 200.7 Rev 4.4	0.0658 mg/l	0.00260 mg/l*	09/07/12 11:57AM B B
ARSENIC	EPA 200.7 Rev 4.4	0.425 mg/l	0.0566 mg/l*	09/07/12 12:13PM B B
MERCURY	EPA 245.1 Rev 3.0	0.0000300 B mg/l	0.0000130 mg/l*	09/01/12 02:47PM RBK

Serial Number: 2353060

Authorized by: Oommen V. Kappil, QA Director

QC Laboratories

Analytical Report

Account No: SR0117, EASTSTAR ENVIRONMENTAL GROUP, INC. **P.O. No:** **Inv. No:** 1453096
Project No: SR0117, EASTSTAR ENVIRONMENTAL GROUP, INC. **PWSID No:**

Sample Number **Sample Description** **Samp. Date/Time/Temp** **Sampled by**
L4297938-7 I027-4D-007 08/23/12 08:20am NA F Customer
Received Date/Time/Temp 08/23/12 08:30pm 35 F **Iced (Y/N):** Y

Parameter	Method	Result	RLs	Test Date, Time, Analyst
GAS CHROMATOGRAPHY MASS SPECTROMETRY; SEMI-VOLATILES				
NAPHTHALENE	EPA 8270C	ND ug/l	0.01 ug/l*	09/05/12 04:41PM GRM
2-METHYLNAPHTHALENE	EPA 8270C	ND ug/l	0.01 ug/l*	09/05/12 04:41PM GRM
ACENAPHTHYLENE	EPA 8270C	ND ug/l	0.01 ug/l*	09/05/12 04:41PM GRM
ACENAPHTHENE	EPA 8270C	ND ug/l	0.01 ug/l*	09/05/12 04:41PM GRM
FLUORENE	EPA 8270C	ND ug/l	0.02 ug/l*	09/05/12 04:41PM GRM
PHENANTHRENE	EPA 8270C	ND ug/l	0.01 ug/l*	09/05/12 04:41PM GRM
ANTHRACENE	EPA 8270C	ND ug/l	0.01 ug/l*	09/05/12 04:41PM GRM
FLUORANTHENE	EPA 8270C	ND ug/l	0.02 ug/l*	09/05/12 04:41PM GRM
PYRENE	EPA 8270C	ND ug/l	0.02 ug/l*	09/05/12 04:41PM GRM
BENZO(A)ANTHRACENE	EPA 8270C	ND ug/l	0.01 ug/l*	09/05/12 04:41PM GRM
CHRYSENE	EPA 8270C	ND ug/l	0.01 ug/l*	09/05/12 04:41PM GRM
BENZO(B)FLUORANTHENE	EPA 8270C	ND ug/l	0.02 ug/l*	09/05/12 04:41PM GRM
BENZO(K)FLUORANTHENE	EPA 8270C	ND ug/l	0.02 ug/l*	09/05/12 04:41PM GRM
BENZO(A)PYRENE	EPA 8270C	ND ug/l	0.02 ug/l*	09/05/12 04:41PM GRM
INDENO(1,2,3-CD)PYRENE	EPA 8270C	ND ug/l	0.02 ug/l*	09/05/12 04:41PM GRM
DIBENZ(A,H)ANTHRACENE	EPA 8270C	ND ug/l	0.02 ug/l*	09/05/12 04:41PM GRM
BENZO(G,H,I)PERYLENE	EPA 8270C	ND ug/l	0.02 ug/l*	09/05/12 04:41PM GRM
GAS CHROMATOGRAPHY MASS SPECTROMETRY; VOLATILES				
DICHLORODIFLUOROMETHANE	EPA 8260B	ND ug/l	0.430 ug/l*	09/01/12 05:17AM JSH
CHLOROMETHANE	EPA 8260B	ND ug/l	0.320 ug/l*	09/01/12 05:17AM JSH
VINYL CHLORIDE	EPA 8260B	ND ug/l	0.240 ug/l*	09/01/12 05:17AM JSH
BROMOMETHANE	EPA 8260B	ND ug/l	0.460 ug/l*	09/01/12 05:17AM JSH
CHLOROETHANE	EPA 8260B	ND ug/l	0.340 ug/l*	09/01/12 05:17AM JSH
TRICHLOROFLUOROMETHANE	EPA 8260B	ND ug/l	0.380 ug/l*	09/01/12 05:17AM JSH
1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	EPA 8260B	ND ug/l	0.470 ug/l*	09/01/12 05:17AM JSH
METHYL ACETATE	EPA 8260B	ND ug/l	0.360 ug/l*	09/01/12 05:17AM JSH
1,1-DICHLOROETHENE	EPA 8260B	ND ug/l	0.310 ug/l*	09/01/12 05:17AM JSH
ACETONE	EPA 8260B	ND ug/l	3.26 ug/l*	09/01/12 05:17AM JSH
CARBON DISULFIDE	EPA 8260B	ND ug/l	0.640 ug/l*	09/01/12 05:17AM JSH
METHYLENE CHLORIDE	EPA 8260B	ND ug/l	0.500 ug/l*	09/01/12 05:17AM JSH
TRANS-1,2-DICHLOROETHENE	EPA 8260B	ND ug/l	0.140 ug/l*	09/01/12 05:17AM JSH
METHYL TERTIARY BUTYL ETHER	EPA 8260B	ND ug/l	0.200 ug/l*	09/01/12 05:17AM JSH
1,1-DICHLOROETHANE	EPA 8260B	ND ug/l	0.240 ug/l*	09/01/12 05:17AM JSH
2-BUTANONE	EPA 8260B	ND ug/l	1.44 ug/l*	09/01/12 05:17AM JSH
BROMOCHLOROMETHANE	EPA 8260B	ND ug/l	0.300 ug/l*	09/01/12 05:17AM JSH
CIS-1,2-DICHLOROETHENE	EPA 8260B	ND ug/l	0.280 ug/l*	09/01/12 05:17AM JSH
CHLOROFORM	EPA 8260B	ND ug/l	0.230 ug/l*	09/01/12 05:17AM JSH
1,1,1-TRICHLOROETHANE	EPA 8260B	ND ug/l	0.210 ug/l*	09/01/12 05:17AM JSH
CYCLOHEXANE	EPA 8260B	ND ug/l	0.440 ug/l*	09/01/12 05:17AM JSH
CARBON TETRACHLORIDE	EPA 8260B	ND ug/l	0.280 ug/l*	09/01/12 05:17AM JSH
BENZENE	EPA 8260B	ND ug/l	0.220 ug/l*	09/01/12 05:17AM JSH
1,2-DICHLOROETHANE	EPA 8260B	ND ug/l	0.240 ug/l*	09/01/12 05:17AM JSH
TRICHLOROETHENE	EPA 8260B	ND ug/l	0.250 ug/l*	09/01/12 05:17AM JSH
METHYLCYCLOHEXANE	EPA 8260B	ND ug/l	0.360 ug/l*	09/01/12 05:17AM JSH
1,2-DICHLOROPROPANE	EPA 8260B	ND ug/l	0.200 ug/l*	09/01/12 05:17AM JSH

Serial Number: 2353060

Oommen V. Kappil

Authorized by: Oommen V. Kappil, QA Director

Account No: SR0117, EASTSTAR ENVIRONMENTAL GROUP, INC. **P.O. No:** **Inv. No:** 1453096
Project No: SR0117, EASTSTAR ENVIRONMENTAL GROUP, INC. **PWSID No:**

Sample Number **Sample Description** **Samp. Date/Time/Temp** **Sampled by**
L4297938-7 I027-4D-007 08/23/12 08:20am NA F Customer
Received Date/Time/Temp 08/23/12 08:30pm 35 F **Iced (Y/N):** Y

Parameter	Method	Result	RLs	Test Date, Time, Analyst
GAS CHROMATOGRAPHY MASS SPECTROMETRY; VOLATILES continued				
BROMODICHLOROMETHANE	EPA 8260B	ND ug/l	0.210 ug/l*	09/01/12 05:17AM JSH
4-METHYL-2-PENTANONE	EPA 8260B	ND ug/l	0.440 ug/l*	09/01/12 05:17AM JSH
CIS-1,3-DICHLOROPROPENE	EPA 8260B	ND ug/l	0.220 ug/l*	09/01/12 05:17AM JSH
TOLUENE	EPA 8260B	ND ug/l	0.190 ug/l*	09/01/12 05:17AM JSH
TRANS-1,3-DICHLOROPROPENE	EPA 8260B	ND ug/l	0.220 ug/l*	09/01/12 05:17AM JSH
1,1,2-TRICHLOROETHANE	EPA 8260B	ND ug/l	0.240 ug/l*	09/01/12 05:17AM JSH
2-HEXANONE	EPA 8260B	ND ug/l	0.830 ug/l*	09/01/12 05:17AM JSH
TETRACHLOROETHENE	EPA 8260B	ND ug/l	0.370 ug/l*	09/01/12 05:17AM JSH
DIBROMOCHLOROMETHANE	EPA 8260B	ND ug/l	0.140 ug/l*	09/01/12 05:17AM JSH
1,2-DIBROMOETHANE	EPA 8260B	ND ug/l	0.210 ug/l*	09/01/12 05:17AM JSH
CHLOROBENZENE	EPA 8260B	ND ug/l	0.230 ug/l*	09/01/12 05:17AM JSH
ETHYLBENZENE	EPA 8260B	ND ug/l	0.230 ug/l*	09/01/12 05:17AM JSH
M&P-XYLENES	EPA 8260B	ND ug/l	0.460 ug/l*	09/01/12 05:17AM JSH
O-XYLENE	EPA 8260B	ND ug/l	0.240 ug/l*	09/01/12 05:17AM JSH
STYRENE	EPA 8260B	ND ug/l	0.200 ug/l*	09/01/12 05:17AM JSH
BROMOFORM	EPA 8260B	ND ug/l	0.310 ug/l*	09/01/12 05:17AM JSH
1,1,2,2-TETRACHLOROETHANE	EPA 8260B	ND ug/l	0.320 ug/l*	09/01/12 05:17AM JSH
ISOPROPYLBENZENE	EPA 8260B	ND ug/l	0.270 ug/l*	09/01/12 05:17AM JSH
1,3-DICHLOROBENZENE	EPA 8260B	ND ug/l	0.210 ug/l*	09/01/12 05:17AM JSH
1,4-DICHLOROBENZENE	EPA 8260B	ND ug/l	0.170 ug/l*	09/01/12 05:17AM JSH
1,2-DICHLOROBENZENE	EPA 8260B	ND ug/l	0.200 ug/l*	09/01/12 05:17AM JSH
1,2-DIBROMO-3-CHLOROPROPANE	EPA 8260B	ND ug/l	0.470 ug/l*	09/01/12 05:17AM JSH
1,2,4-TRICHLOROBENZENE	EPA 8260B	ND ug/l	0.360 ug/l*	09/01/12 05:17AM JSH
1,2,3-TRICHLOROBENZENE	EPA 8260B	ND ug/l	0.310 ug/l*	09/01/12 05:17AM JSH
1,4-DIOXANE	EPA 8260B	ND ug/l	129 ug/l*	09/01/12 05:17AM JSH

Sample Number **Sample Description** **Samp. Date/Time/Temp** **Sampled by**
L4297938-8 I027-4S-008 08/23/12 10:25am NA F Customer
Received Date/Time/Temp 08/23/12 08:30pm 35 F **Iced (Y/N):** Y

Parameter	Method	Result	RLs	Test Date, Time, Analyst
GENERAL CHEMISTRY				
HEXANE EXTR.-SGT (NON POLAR O+G)	1664ASGT@PHC	ND mg/l	5.00 mg/l	09/04/12 08:30AM RHB
CYANIDE, TOTAL	SM 4500CN C,E	12.4 mg/l	2.00 mg/l	09/04/12 12:00PM JG
METALS				
SILVER	EPA 200.7 Rev 4.4	0.0250 mg/l	0.00510 mg/l*	09/07/12 12:15PM B B
ALUMINUM	EPA 200.7 Rev 4.4	0.260 B mg/l	0.175 mg/l*	09/07/12 12:15PM B B
ARSENIC	EPA 200.7 Rev 4.4	0.332 mg/l	0.0283 mg/l*	09/07/12 12:15PM B B
BARIUM	EPA 200.7 Rev 4.4	0.0319 B mg/l	0.00170 mg/l*	09/07/12 12:15PM B B
BERYLLIUM	EPA 200.7 Rev 4.4	0.00190 B mg/l	0.000353 mg/l*	09/07/12 12:15PM B B
CALCIUM	EPA 200.7 Rev 4.4	1150 mg/l	0.0460 mg/l*	09/07/12 12:15PM B B
CADMIUM	EPA 200.7 Rev 4.4	ND mg/l	0.00110 mg/l*	09/07/12 12:15PM B B
COBALT	EPA 200.7 Rev 4.4	0.0375 B mg/l	0.00400 mg/l*	09/07/12 12:15PM B B
CHROMIUM	EPA 200.7 Rev 4.4	0.00270 B mg/l	0.00220 mg/l*	09/07/12 12:15PM B B

Authorized by: Oommen V. Kappil, QA Director

Account No: SR0117, EASTSTAR ENVIRONMENTAL GROUP, INC. **P.O. No:** **Inv. No:** 1453096
Project No: SR0117, EASTSTAR ENVIRONMENTAL GROUP, INC. **PWSID No:**

Sample Number **Sample Description** **Samp. Date/Time/Temp** **Sampled by**
L4297938-8 I027-4S-008 08/23/12 10:25am NA F Customer
Received Date/Time/Temp 08/23/12 08:30pm 35 F **Iced (Y/N):** Y

Parameter	Method	Result	RLs	Test Date, Time, Analyst
METALS continued				
COPPER	EPA 200.7 Rev 4.4	0.0757 mg/l	0.00310 mg/l*	09/07/12 12:15PM B B
IRON	EPA 200.7 Rev 4.4	4.78 mg/l	0.0359 mg/l*	09/07/12 12:15PM B B
POTASSIUM	EPA 200.7 Rev 4.4	164 mg/l	0.559 mg/l*	09/07/12 12:15PM B B
MAGNESIUM	EPA 200.7 Rev 4.4	159 mg/l	0.441 mg/l*	09/07/12 12:15PM B B
MANGANESE	EPA 200.7 Rev 4.4	0.0514 B mg/l	0.000786 mg/l*	09/07/12 12:15PM B B
NICKEL	EPA 200.7 Rev 4.4	0.0231 B mg/l	0.00340 mg/l*	09/07/12 12:15PM B B
LEAD	EPA 200.7 Rev 4.4	ND mg/l	0.0175 mg/l*	09/07/12 12:15PM B B
ANTIMONY	EPA 200.7 Rev 4.4	0.0239 B mg/l	0.0220 mg/l*	09/07/12 12:15PM B B
SELENIUM	EPA 200.7 Rev 4.4	0.169 mg/l	0.0517 mg/l*	09/07/12 12:15PM B B
THALLIUM	EPA 200.7 Rev 4.4	ND mg/l	0.0324 mg/l*	09/07/12 12:15PM B B
VANADIUM	EPA 200.7 Rev 4.4	ND mg/l	0.00260 mg/l*	09/07/12 12:15PM B B
ZINC	EPA 200.7 Rev 4.4	0.120 mg/l	0.00260 mg/l*	09/07/12 12:15PM B B
SODIUM	EPA 200.7 Rev 4.4	9070 mg/l	1.06 mg/l*	09/07/12 01:19PM B B
MERCURY	EPA 245.1 Rev 3.0	0.0000420 B mg/l	0.0000130 mg/l*	09/01/12 02:49PM RBK
GAS CHROMATOGRAPHY MASS SPECTROMETRY; SEMI-VOLATILES				
NAPHTHALENE	EPA 8270C	0.49 ug/l	0.01 ug/l*	09/05/12 05:05PM GRM
2-METHYLNAPHTHALENE	EPA 8270C	0.81 ug/l	0.01 ug/l*	09/05/12 05:05PM GRM
ACENAPHTHYLENE	EPA 8270C	0.06 ug/l	0.01 ug/l*	09/05/12 05:05PM GRM
ACENAPHTHENE	EPA 8270C	0.04 ug/l	0.01 ug/l*	09/05/12 05:05PM GRM
FLUORENE	EPA 8270C	0.06 ug/l	0.02 ug/l*	09/05/12 05:05PM GRM
PHENANTHRENE	EPA 8270C	0.07 ug/l	0.01 ug/l*	09/05/12 05:05PM GRM
ANTHRACENE	EPA 8270C	0.03 ug/l	0.01 ug/l*	09/05/12 05:05PM GRM
FLUORANTHENE	EPA 8270C	0.05 ug/l	0.02 ug/l*	09/05/12 05:05PM GRM
PYRENE	EPA 8270C	0.04 ug/l	0.02 ug/l*	09/05/12 05:05PM GRM
BENZO(A)ANTHRACENE	EPA 8270C	0.02 ug/l	0.01 ug/l*	09/05/12 05:05PM GRM
CHRYSENE	EPA 8270C	0.02 ug/l	0.01 ug/l*	09/05/12 05:05PM GRM
BENZO(B)FLUORANTHENE	EPA 8270C	0.02 ug/l	0.02 ug/l*	09/05/12 05:05PM GRM
BENZO(K)FLUORANTHENE	EPA 8270C	0.02 ug/l	0.02 ug/l*	09/05/12 05:05PM GRM
BENZO(A)PYRENE	EPA 8270C	0.02 ug/l	0.02 ug/l*	09/05/12 05:05PM GRM
INDENO(1,2,3-CD)PYRENE	EPA 8270C	ND ug/l	0.02 ug/l*	09/05/12 05:05PM GRM
DIBENZ(A,H)ANTHRACENE	EPA 8270C	ND ug/l	0.02 ug/l*	09/05/12 05:05PM GRM
BENZO(G,H,I)PERYLENE	EPA 8270C	ND ug/l	0.02 ug/l*	09/05/12 05:05PM GRM
GAS CHROMATOGRAPHY MASS SPECTROMETRY; VOLATILES				
DICHLORODIFLUOROMETHANE	EPA 8260B	ND ug/l	2.15 ug/l*	09/04/12 09:10PM JSH
CHLOROMETHANE	EPA 8260B	ND ug/l	1.60 ug/l*	09/04/12 09:10PM JSH
VINYL CHLORIDE	EPA 8260B	ND ug/l	1.20 ug/l*	09/04/12 09:10PM JSH
BROMOMETHANE	EPA 8260B	ND ug/l	2.30 ug/l*	09/04/12 09:10PM JSH
CHLOROETHANE	EPA 8260B	ND ug/l	1.70 ug/l*	09/04/12 09:10PM JSH
TRICHLOROFLUOROMETHANE	EPA 8260B	ND ug/l	1.90 ug/l*	09/04/12 09:10PM JSH
1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	EPA 8260B	ND ug/l	2.35 ug/l*	09/04/12 09:10PM JSH
METHYL ACETATE	EPA 8260B	ND ug/l	1.80 ug/l*	09/04/12 09:10PM JSH
1,1-DICHLOROETHENE	EPA 8260B	ND ug/l	1.55 ug/l*	09/04/12 09:10PM JSH
ACETONE	EPA 8260B	24.4 ug/l	16.3 ug/l*	09/04/12 09:10PM JSH
CARBON DISULFIDE	EPA 8260B	25.7 ug/l	3.20 ug/l*	09/04/12 09:10PM JSH

Authorized by: Oommen V. Kappil, QA Director

Account No: SR0117, EASTSTAR ENVIRONMENTAL GROUP, INC. **P.O. No:** **Inv. No:** 1453096
Project No: SR0117, EASTSTAR ENVIRONMENTAL GROUP, INC. **PWSID No:**

Sample Number **Sample Description** **Samp. Date/Time/Temp** **Sampled by**
L4297938-8 I027-4S-008 08/23/12 10:25am NA F Customer
Received Date/Time/Temp 08/23/12 08:30pm 35 F **Iced (Y/N):** Y

GAS CHROMATOGRAPHY MASS SPECTROMETRY; VOLATILES continued

Parameter	Method	Result	RLs	Test Date, Time, Analyst
METHYLENE CHLORIDE	EPA 8260B	3.00 J ug/l	2.50 ug/l*	09/04/12 09:10PM JSH
TRANS-1,2-DICHLOROETHENE	EPA 8260B	ND ug/l	0.700 ug/l*	09/04/12 09:10PM JSH
METHYL TERTIARY BUTYL ETHER	EPA 8260B	ND ug/l	1.00 ug/l*	09/04/12 09:10PM JSH
1,1-DICHLOROETHANE	EPA 8260B	ND ug/l	1.20 ug/l*	09/04/12 09:10PM JSH
2-BUTANONE	EPA 8260B	ND ug/l	7.20 ug/l*	09/04/12 09:10PM JSH
BROMOCHLOROMETHANE	EPA 8260B	ND ug/l	1.50 ug/l*	09/04/12 09:10PM JSH
CIS-1,2-DICHLOROETHENE	EPA 8260B	ND ug/l	1.40 ug/l*	09/04/12 09:10PM JSH
CHLOROFORM	EPA 8260B	ND ug/l	1.15 ug/l*	09/04/12 09:10PM JSH
1,1,1-TRICHLOROETHANE	EPA 8260B	ND ug/l	1.05 ug/l*	09/04/12 09:10PM JSH
CYCLOHEXANE	EPA 8260B	ND ug/l	2.20 ug/l*	09/04/12 09:10PM JSH
CARBON TETRACHLORIDE	EPA 8260B	ND ug/l	1.40 ug/l*	09/04/12 09:10PM JSH
BENZENE	EPA 8260B	ND ug/l	1.10 ug/l*	09/04/12 09:10PM JSH
1,2-DICHLOROETHANE	EPA 8260B	ND ug/l	1.20 ug/l*	09/04/12 09:10PM JSH
TRICHLOROETHENE	EPA 8260B	ND ug/l	1.25 ug/l*	09/04/12 09:10PM JSH
METHYLCYCLOHEXANE	EPA 8260B	ND ug/l	1.80 ug/l*	09/04/12 09:10PM JSH
1,2-DICHLOROPROPANE	EPA 8260B	ND ug/l	1.00 ug/l*	09/04/12 09:10PM JSH
BROMODICHLOROMETHANE	EPA 8260B	ND ug/l	1.05 ug/l*	09/04/12 09:10PM JSH
4-METHYL-2-PENTANONE	EPA 8260B	ND ug/l	2.20 ug/l*	09/04/12 09:10PM JSH
CIS-1,3-DICHLOROPROPENE	EPA 8260B	ND ug/l	1.10 ug/l*	09/04/12 09:10PM JSH
TOLUENE	EPA 8260B	ND ug/l	0.950 ug/l*	09/04/12 09:10PM JSH
TRANS-1,3-DICHLOROPROPENE	EPA 8260B	ND ug/l	1.10 ug/l*	09/04/12 09:10PM JSH
1,1,2-TRICHLOROETHANE	EPA 8260B	ND ug/l	1.20 ug/l*	09/04/12 09:10PM JSH
2-HEXANONE	EPA 8260B	ND ug/l	4.15 ug/l*	09/04/12 09:10PM JSH
TETRACHLOROETHENE	EPA 8260B	ND ug/l	1.85 ug/l*	09/04/12 09:10PM JSH
DIBROMOCHLOROMETHANE	EPA 8260B	ND ug/l	0.700 ug/l*	09/04/12 09:10PM JSH
1,2-DIBROMOETHANE	EPA 8260B	ND ug/l	1.05 ug/l*	09/04/12 09:10PM JSH
CHLOROBENZENE	EPA 8260B	ND ug/l	1.15 ug/l*	09/04/12 09:10PM JSH
ETHYLBENZENE	EPA 8260B	ND ug/l	1.15 ug/l*	09/04/12 09:10PM JSH
M&P-XYLENES	EPA 8260B	ND ug/l	2.30 ug/l*	09/04/12 09:10PM JSH
O-XYLENE	EPA 8260B	ND ug/l	1.20 ug/l*	09/04/12 09:10PM JSH
STYRENE	EPA 8260B	ND ug/l	1.00 ug/l*	09/04/12 09:10PM JSH
BROMOFORM	EPA 8260B	ND ug/l	1.55 ug/l*	09/04/12 09:10PM JSH
1,1,2,2-TETRACHLOROETHANE	EPA 8260B	ND ug/l	1.60 ug/l*	09/04/12 09:10PM JSH
ISOPROPYLBENZENE	EPA 8260B	ND ug/l	1.35 ug/l*	09/04/12 09:10PM JSH
1,3-DICHLOROBENZENE	EPA 8260B	ND ug/l	1.05 ug/l*	09/04/12 09:10PM JSH
1,4-DICHLOROBENZENE	EPA 8260B	ND ug/l	0.850 ug/l*	09/04/12 09:10PM JSH
1,2-DICHLOROBENZENE	EPA 8260B	ND ug/l	1.00 ug/l*	09/04/12 09:10PM JSH
1,2-DIBROMO-3-CHLOROPROPANE	EPA 8260B	ND ug/l	2.35 ug/l*	09/04/12 09:10PM JSH
1,2,4-TRICHLOROBENZENE	EPA 8260B	ND ug/l	1.80 ug/l*	09/04/12 09:10PM JSH
1,2,3-TRICHLOROBENZENE	EPA 8260B	ND ug/l	1.55 ug/l*	09/04/12 09:10PM JSH
1,4-DIOXANE	EPA 8260B	ND ug/l	643 ug/l*	09/04/12 09:10PM JSH

Serial Number: 2353060

Authorized by: Oommen V. Kappil, QA Director

QC Laboratories

Analytical Report

Account No: SR0117, EASTSTAR ENVIRONMENTAL GROUP, INC. **P.O. No:** **Inv. No:** 1453096
Project No: SR0117, EASTSTAR ENVIRONMENTAL GROUP, INC. **PWSID No:**

Sample Number **Sample Description** **Samp. Date/Time/Temp** **Sampled by**
L4297938-9 I027-7D-009 08/23/12 11:30am NA F Customer
Received Date/Time/Temp 08/23/12 08:30pm 35 F **Iced (Y/N):** Y

Parameter	Method	Result	RLs	Test Date, Time, Analyst
GENERAL CHEMISTRY				
CYANIDE, TOTAL	SM 4500CN C,E	ND mg/l	0.0250 mg/l	08/30/12 01:00PM JG
METALS				
SILVER	EPA 200.7 Rev 4.4	0.0279 mg/l	0.00510 mg/l*	09/07/12 12:19PM B B
ALUMINUM	EPA 200.7 Rev 4.4	ND mg/l	0.175 mg/l*	09/07/12 12:19PM B B
BARIUM	EPA 200.7 Rev 4.4	0.0728 B mg/l	0.00170 mg/l*	09/07/12 12:19PM B B
BERYLLIUM	EPA 200.7 Rev 4.4	0.00120 B mg/l	0.000353 mg/l*	09/07/12 12:19PM B B
CALCIUM	EPA 200.7 Rev 4.4	1490 mg/l	0.0460 mg/l*	09/07/12 12:19PM B B
CADMIUM	EPA 200.7 Rev 4.4	ND mg/l	0.00110 mg/l*	09/07/12 12:19PM B B
COBALT	EPA 200.7 Rev 4.4	0.00600 B mg/l	0.00400 mg/l*	09/07/12 12:19PM B B
CHROMIUM	EPA 200.7 Rev 4.4	ND mg/l	0.00220 mg/l*	09/07/12 12:19PM B B
COPPER	EPA 200.7 Rev 4.4	0.00930 B mg/l	0.00310 mg/l*	09/07/12 12:19PM B B
IRON	EPA 200.7 Rev 4.4	39.6 mg/l	0.0359 mg/l*	09/07/12 12:19PM B B
POTASSIUM	EPA 200.7 Rev 4.4	33.2 mg/l	0.559 mg/l*	09/07/12 12:19PM B B
MAGNESIUM	EPA 200.7 Rev 4.4	569 mg/l	0.441 mg/l*	09/07/12 12:19PM B B
MANGANESE	EPA 200.7 Rev 4.4	1.24 mg/l	0.000786 mg/l*	09/07/12 12:19PM B B
SODIUM	EPA 200.7 Rev 4.4	3970 mg/l	0.106 mg/l*	09/07/12 12:19PM B B
NICKEL	EPA 200.7 Rev 4.4	ND mg/l	0.00340 mg/l*	09/07/12 12:19PM B B
LEAD	EPA 200.7 Rev 4.4	ND mg/l	0.0175 mg/l*	09/07/12 12:19PM B B
ANTIMONY	EPA 200.7 Rev 4.4	ND mg/l	0.0220 mg/l*	09/07/12 12:19PM B B
SELENIUM	EPA 200.7 Rev 4.4	0.112 mg/l	0.0517 mg/l*	09/07/12 12:19PM B B
THALLIUM	EPA 200.7 Rev 4.4	ND mg/l	0.0324 mg/l*	09/07/12 12:19PM B B
VANADIUM	EPA 200.7 Rev 4.4	ND mg/l	0.00260 mg/l*	09/07/12 12:19PM B B
ZINC	EPA 200.7 Rev 4.4	0.0748 mg/l	0.00260 mg/l*	09/07/12 12:19PM B B
ARSENIC	EPA 200.7 Rev 4.4	0.208 mg/l	0.0566 mg/l*	09/07/12 12:27PM B B
MERCURY	EPA 245.1 Rev 3.0	0.0000210 B mg/l	0.0000130 mg/l*	09/01/12 02:51PM RBK
GAS CHROMATOGRAPHY MASS SPECTROMETRY; SEMI-VOLATILES				
NAPHTHALENE	EPA 8270C	0.01 J ug/l	0.01 ug/l*	09/05/12 05:30PM GRM
2-METHYLNAPHTHALENE	EPA 8270C	ND ug/l	0.01 ug/l*	09/05/12 05:30PM GRM
ACENAPHTHYLENE	EPA 8270C	ND ug/l	0.01 ug/l*	09/05/12 05:30PM GRM
ACENAPHTHENE	EPA 8270C	ND ug/l	0.01 ug/l*	09/05/12 05:30PM GRM
FLUORENE	EPA 8270C	ND ug/l	0.02 ug/l*	09/05/12 05:30PM GRM
PHENANTHRENE	EPA 8270C	0.02 ug/l	0.01 ug/l*	09/05/12 05:30PM GRM
ANTHRACENE	EPA 8270C	ND ug/l	0.01 ug/l*	09/05/12 05:30PM GRM
FLUORANTHENE	EPA 8270C	ND ug/l	0.02 ug/l*	09/05/12 05:30PM GRM
PYRENE	EPA 8270C	ND ug/l	0.02 ug/l*	09/05/12 05:30PM GRM
BENZO(A)ANTHRACENE	EPA 8270C	ND ug/l	0.01 ug/l*	09/05/12 05:30PM GRM
CHRYSENE	EPA 8270C	ND ug/l	0.01 ug/l*	09/05/12 05:30PM GRM
BENZO(B)FLUORANTHENE	EPA 8270C	ND ug/l	0.02 ug/l*	09/05/12 05:30PM GRM
BENZO(K)FLUORANTHENE	EPA 8270C	ND ug/l	0.02 ug/l*	09/05/12 05:30PM GRM
BENZO(A)PYRENE	EPA 8270C	ND ug/l	0.02 ug/l*	09/05/12 05:30PM GRM
INDENO(1,2,3-CD)PYRENE	EPA 8270C	ND ug/l	0.02 ug/l*	09/05/12 05:30PM GRM
DIBENZ(A,H)ANTHRACENE	EPA 8270C	ND ug/l	0.02 ug/l*	09/05/12 05:30PM GRM
BENZO(G,H,I)PERYLENE	EPA 8270C	ND ug/l	0.02 ug/l*	09/05/12 05:30PM GRM

Serial Number: 2353060

Oommen V. Kappil

Authorized by: Oommen V. Kappil, QA Director

QC Laboratories

Analytical Report

Account No: SR0117, EASTSTAR ENVIRONMENTAL GROUP, INC. **P.O. No:** **Inv. No:** 1453096
Project No: SR0117, EASTSTAR ENVIRONMENTAL GROUP, INC. **PWSID No:**

Sample Number **Sample Description** **Samp. Date/Time/Temp** **Sampled by**
L4297938-9 I027-7D-009 08/23/12 11:30am NA F Customer
Received Date/Time/Temp 08/23/12 08:30pm 35 F **Iced (Y/N):** Y

Parameter	Method	Result	RLs	Test Date, Time, Analyst
GAS CHROMATOGRAPHY MASS SPECTROMETRY; VOLATILES				
DICHLORODIFLUOROMETHANE	EPA 8260B	ND ug/l	0.430 ug/l*	09/01/12 05:52AM JSH
CHLOROMETHANE	EPA 8260B	ND ug/l	0.320 ug/l*	09/01/12 05:52AM JSH
VINYL CHLORIDE	EPA 8260B	ND ug/l	0.240 ug/l*	09/01/12 05:52AM JSH
BROMOMETHANE	EPA 8260B	ND ug/l	0.460 ug/l*	09/01/12 05:52AM JSH
CHLOROETHANE	EPA 8260B	ND ug/l	0.340 ug/l*	09/01/12 05:52AM JSH
TRICHLOROFLUOROMETHANE	EPA 8260B	ND ug/l	0.380 ug/l*	09/01/12 05:52AM JSH
1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	EPA 8260B	ND ug/l	0.470 ug/l*	09/01/12 05:52AM JSH
METHYL ACETATE	EPA 8260B	ND ug/l	0.360 ug/l*	09/01/12 05:52AM JSH
1,1-DICHLOROETHENE	EPA 8260B	ND ug/l	0.310 ug/l*	09/01/12 05:52AM JSH
ACETONE	EPA 8260B	ND ug/l	3.26 ug/l*	09/01/12 05:52AM JSH
CARBON DISULFIDE	EPA 8260B	ND ug/l	0.640 ug/l*	09/01/12 05:52AM JSH
METHYLENE CHLORIDE	EPA 8260B	ND ug/l	0.500 ug/l*	09/01/12 05:52AM JSH
TRANS-1,2-DICHLOROETHENE	EPA 8260B	ND ug/l	0.140 ug/l*	09/01/12 05:52AM JSH
METHYL TERTIARY BUTYL ETHER	EPA 8260B	ND ug/l	0.200 ug/l*	09/01/12 05:52AM JSH
1,1-DICHLOROETHANE	EPA 8260B	ND ug/l	0.240 ug/l*	09/01/12 05:52AM JSH
2-BUTANONE	EPA 8260B	ND ug/l	1.44 ug/l*	09/01/12 05:52AM JSH
BROMOCHLOROMETHANE	EPA 8260B	ND ug/l	0.300 ug/l*	09/01/12 05:52AM JSH
CIS-1,2-DICHLOROETHENE	EPA 8260B	ND ug/l	0.280 ug/l*	09/01/12 05:52AM JSH
CHLOROFORM	EPA 8260B	ND ug/l	0.230 ug/l*	09/01/12 05:52AM JSH
1,1,1-TRICHLOROETHANE	EPA 8260B	ND ug/l	0.210 ug/l*	09/01/12 05:52AM JSH
CYCLOHEXANE	EPA 8260B	ND ug/l	0.440 ug/l*	09/01/12 05:52AM JSH
CARBON TETRACHLORIDE	EPA 8260B	ND ug/l	0.280 ug/l*	09/01/12 05:52AM JSH
BENZENE	EPA 8260B	ND ug/l	0.220 ug/l*	09/01/12 05:52AM JSH
1,2-DICHLOROETHANE	EPA 8260B	ND ug/l	0.240 ug/l*	09/01/12 05:52AM JSH
TRICHLOROETHENE	EPA 8260B	ND ug/l	0.250 ug/l*	09/01/12 05:52AM JSH
METHYLCYCLOHEXANE	EPA 8260B	ND ug/l	0.360 ug/l*	09/01/12 05:52AM JSH
1,2-DICHLOROPROPANE	EPA 8260B	ND ug/l	0.200 ug/l*	09/01/12 05:52AM JSH
BROMODICHLOROMETHANE	EPA 8260B	ND ug/l	0.210 ug/l*	09/01/12 05:52AM JSH
4-METHYL-2-PENTANONE	EPA 8260B	ND ug/l	0.440 ug/l*	09/01/12 05:52AM JSH
CIS-1,3-DICHLOROPROPENE	EPA 8260B	ND ug/l	0.220 ug/l*	09/01/12 05:52AM JSH
TOLUENE	EPA 8260B	ND ug/l	0.190 ug/l*	09/01/12 05:52AM JSH
TRANS-1,3-DICHLOROPROPENE	EPA 8260B	ND ug/l	0.220 ug/l*	09/01/12 05:52AM JSH
1,1,2-TRICHLOROETHANE	EPA 8260B	ND ug/l	0.240 ug/l*	09/01/12 05:52AM JSH
2-HEXANONE	EPA 8260B	ND ug/l	0.830 ug/l*	09/01/12 05:52AM JSH
TETRACHLOROETHENE	EPA 8260B	ND ug/l	0.370 ug/l*	09/01/12 05:52AM JSH
DIBROMOCHLOROMETHANE	EPA 8260B	ND ug/l	0.140 ug/l*	09/01/12 05:52AM JSH
1,2-DIBROMOETHANE	EPA 8260B	ND ug/l	0.210 ug/l*	09/01/12 05:52AM JSH
CHLOROBENZENE	EPA 8260B	ND ug/l	0.230 ug/l*	09/01/12 05:52AM JSH
ETHYLBENZENE	EPA 8260B	ND ug/l	0.230 ug/l*	09/01/12 05:52AM JSH
M&P-XYLENES	EPA 8260B	ND ug/l	0.460 ug/l*	09/01/12 05:52AM JSH
O-XYLENE	EPA 8260B	ND ug/l	0.240 ug/l*	09/01/12 05:52AM JSH
STYRENE	EPA 8260B	ND ug/l	0.200 ug/l*	09/01/12 05:52AM JSH
BROMOFORM	EPA 8260B	ND ug/l	0.310 ug/l*	09/01/12 05:52AM JSH
1,1,2,2-TETRACHLOROETHANE	EPA 8260B	ND ug/l	0.320 ug/l*	09/01/12 05:52AM JSH
ISOPROPYLBENZENE	EPA 8260B	ND ug/l	0.270 ug/l*	09/01/12 05:52AM JSH
1,3-DICHLOROBENZENE	EPA 8260B	ND ug/l	0.210 ug/l*	09/01/12 05:52AM JSH
1,4-DICHLOROBENZENE	EPA 8260B	ND ug/l	0.170 ug/l*	09/01/12 05:52AM JSH

Serial Number: 2353060

Authorized by: Oommen V. Kappil, QA Director

Account No: SR0117, EASTSTAR ENVIRONMENTAL GROUP, INC. **P.O. No:** **Inv. No:** 1453096
Project No: SR0117, EASTSTAR ENVIRONMENTAL GROUP, INC. **PWSID No:**

Sample Number L4297938-9 **Sample Description** I027-7D-009 **Samp. Date/Time/Temp** 08/23/12 11:30am NA F **Sampled by** Customer
Received Date/Time/Temp 08/23/12 08:30pm 35 F **Iced (Y/N):** Y

Parameter	Method	Result	RLs	Test Date, Time, Analyst
GAS CHROMATOGRAPHY MASS SPECTROMETRY; VOLATILES continued				
1,2-DICHLOROBENZENE	EPA 8260B	ND ug/l	0.200 ug/l*	09/01/12 05:52AM JSH
1,2-DIBROMO-3-CHLOROPROPANE	EPA 8260B	ND ug/l	0.470 ug/l*	09/01/12 05:52AM JSH
1,2,4-TRICHLOROBENZENE	EPA 8260B	ND ug/l	0.360 ug/l*	09/01/12 05:52AM JSH
1,2,3-TRICHLOROBENZENE	EPA 8260B	ND ug/l	0.310 ug/l*	09/01/12 05:52AM JSH
1,4-DIOXANE	EPA 8260B	ND ug/l	129 ug/l*	09/01/12 05:52AM JSH

Sample Number L4297938-10 **Sample Description** I027-7D-010 **Samp. Date/Time/Temp** 08/23/12 11:30am NA F **Sampled by** Customer
Received Date/Time/Temp 08/23/12 08:30pm 35 F **Iced (Y/N):** Y

Parameter	Method	Result	RLs	Test Date, Time, Analyst
GENERAL CHEMISTRY				
CYANIDE, TOTAL	SM 4500CN C,E	ND mg/l	0.0200 mg/l	08/30/12 01:00PM JG
METALS				
ALUMINUM	EPA 200.7 Rev 4.4	ND mg/l	0.175 mg/l*	09/07/12 12:29PM B B
ARSENIC	EPA 200.7 Rev 4.4	0.145 mg/l	0.0283 mg/l*	09/07/12 12:29PM B B
BARIUM	EPA 200.7 Rev 4.4	0.0717 B mg/l	0.00170 mg/l*	09/07/12 12:29PM B B
BERYLLIUM	EPA 200.7 Rev 4.4	0.00180 B mg/l	0.000353 mg/l*	09/07/12 12:29PM B B
CALCIUM	EPA 200.7 Rev 4.4	1460 mg/l	0.0460 mg/l*	09/07/12 12:29PM B B
CADMIUM	EPA 200.7 Rev 4.4	ND mg/l	0.00110 mg/l*	09/07/12 12:29PM B B
COBALT	EPA 200.7 Rev 4.4	0.00670 B mg/l	0.00400 mg/l*	09/07/12 12:29PM B B
CHROMIUM	EPA 200.7 Rev 4.4	ND mg/l	0.00220 mg/l*	09/07/12 12:29PM B B
COPPER	EPA 200.7 Rev 4.4	0.00440 B mg/l	0.00310 mg/l*	09/07/12 12:29PM B B
IRON	EPA 200.7 Rev 4.4	35.3 mg/l	0.0359 mg/l*	09/07/12 12:29PM B B
POTASSIUM	EPA 200.7 Rev 4.4	32.8 mg/l	0.559 mg/l*	09/07/12 12:29PM B B
MAGNESIUM	EPA 200.7 Rev 4.4	559 mg/l	0.441 mg/l*	09/07/12 12:29PM B B
MANGANESE	EPA 200.7 Rev 4.4	1.15 mg/l	0.000786 mg/l*	09/07/12 12:29PM B B
SODIUM	EPA 200.7 Rev 4.4	3860 mg/l	0.106 mg/l*	09/07/12 12:29PM B B
NICKEL	EPA 200.7 Rev 4.4	ND mg/l	0.00340 mg/l*	09/07/12 12:29PM B B
LEAD	EPA 200.7 Rev 4.4	ND mg/l	0.0175 mg/l*	09/07/12 12:29PM B B
ANTIMONY	EPA 200.7 Rev 4.4	ND mg/l	0.0220 mg/l*	09/07/12 12:29PM B B
SELENIUM	EPA 200.7 Rev 4.4	ND mg/l	0.0517 mg/l*	09/07/12 12:29PM B B
THALLIUM	EPA 200.7 Rev 4.4	ND mg/l	0.0324 mg/l*	09/07/12 12:29PM B B
VANADIUM	EPA 200.7 Rev 4.4	ND mg/l	0.00260 mg/l*	09/07/12 12:29PM B B
ZINC	EPA 200.7 Rev 4.4	0.0664 mg/l	0.00260 mg/l*	09/07/12 12:29PM B B
SILVER	EPA 200.7 Rev 4.4	0.0246 mg/l	0.00510 mg/l*	09/07/12 12:38PM B B
MERCURY	EPA 245.1 Rev 3.0	0.0000300 B mg/l	0.0000130 mg/l*	09/01/12 02:52PM RBK

Serial Number: 2353060

Authorized by: Oommen V. Kappil, QA Director

QC Laboratories

Analytical Report

Account No: SR0117, EASTSTAR ENVIRONMENTAL GROUP, INC. **P.O. No:** **Inv. No:** 1453096
Project No: SR0117, EASTSTAR ENVIRONMENTAL GROUP, INC. **PWSID No:**

Sample Number **Sample Description** **Samp. Date/Time/Temp** **Sampled by**
L4297938-10 I027-7D-010 08/23/12 11:30am NA F Customer
Received Date/Time/Temp 08/23/12 08:30pm 35 F **Iced (Y/N):** Y

Parameter	Method	Result	RLs	Test Date, Time, Analyst
GAS CHROMATOGRAPHY MASS SPECTROMETRY; SEMI-VOLATILES				
NAPHTHALENE	EPA 8270C	ND ug/l	0.01 ug/l*	09/05/12 05:55PM GRM
2-METHYLNAPHTHALENE	EPA 8270C	0.03 ug/l	0.01 ug/l*	09/05/12 05:55PM GRM
ACENAPHTHYLENE	EPA 8270C	ND ug/l	0.01 ug/l*	09/05/12 05:55PM GRM
ACENAPHTHENE	EPA 8270C	ND ug/l	0.01 ug/l*	09/05/12 05:55PM GRM
FLUORENE	EPA 8270C	ND ug/l	0.02 ug/l*	09/05/12 05:55PM GRM
PHENANTHRENE	EPA 8270C	0.03 ug/l	0.01 ug/l*	09/05/12 05:55PM GRM
ANTHRACENE	EPA 8270C	ND ug/l	0.01 ug/l*	09/05/12 05:55PM GRM
FLUORANTHENE	EPA 8270C	ND ug/l	0.02 ug/l*	09/05/12 05:55PM GRM
PYRENE	EPA 8270C	ND ug/l	0.02 ug/l*	09/05/12 05:55PM GRM
BENZO(A)ANTHRACENE	EPA 8270C	ND ug/l	0.01 ug/l*	09/05/12 05:55PM GRM
CHRYSENE	EPA 8270C	ND ug/l	0.01 ug/l*	09/05/12 05:55PM GRM
BENZO(B)FLUORANTHENE	EPA 8270C	ND ug/l	0.02 ug/l*	09/05/12 05:55PM GRM
BENZO(K)FLUORANTHENE	EPA 8270C	ND ug/l	0.02 ug/l*	09/05/12 05:55PM GRM
BENZO(A)PYRENE	EPA 8270C	ND ug/l	0.02 ug/l*	09/05/12 05:55PM GRM
INDENO(1,2,3-CD)PYRENE	EPA 8270C	ND ug/l	0.02 ug/l*	09/05/12 05:55PM GRM
DIBENZ(A,H)ANTHRACENE	EPA 8270C	ND ug/l	0.02 ug/l*	09/05/12 05:55PM GRM
BENZO(G,H,I)PERYLENE	EPA 8270C	ND ug/l	0.02 ug/l*	09/05/12 05:55PM GRM
GAS CHROMATOGRAPHY MASS SPECTROMETRY; VOLATILES				
DICHLORODIFLUOROMETHANE	EPA 8260B	ND ug/l	0.430 ug/l*	09/01/12 06:26AM JSH
CHLOROMETHANE	EPA 8260B	ND ug/l	0.320 ug/l*	09/01/12 06:26AM JSH
VINYL CHLORIDE	EPA 8260B	ND ug/l	0.240 ug/l*	09/01/12 06:26AM JSH
BROMOMETHANE	EPA 8260B	ND ug/l	0.460 ug/l*	09/01/12 06:26AM JSH
CHLOROETHANE	EPA 8260B	ND ug/l	0.340 ug/l*	09/01/12 06:26AM JSH
TRICHLOROFLUOROMETHANE	EPA 8260B	ND ug/l	0.380 ug/l*	09/01/12 06:26AM JSH
1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	EPA 8260B	ND ug/l	0.470 ug/l*	09/01/12 06:26AM JSH
METHYL ACETATE	EPA 8260B	ND ug/l	0.360 ug/l*	09/01/12 06:26AM JSH
1,1-DICHLOROETHENE	EPA 8260B	ND ug/l	0.310 ug/l*	09/01/12 06:26AM JSH
ACETONE	EPA 8260B	ND ug/l	3.26 ug/l*	09/01/12 06:26AM JSH
CARBON DISULFIDE	EPA 8260B	ND ug/l	0.640 ug/l*	09/01/12 06:26AM JSH
METHYLENE CHLORIDE	EPA 8260B	ND ug/l	0.500 ug/l*	09/01/12 06:26AM JSH
TRANS-1,2-DICHLOROETHENE	EPA 8260B	ND ug/l	0.140 ug/l*	09/01/12 06:26AM JSH
METHYL TERTIARY BUTYL ETHER	EPA 8260B	ND ug/l	0.200 ug/l*	09/01/12 06:26AM JSH
1,1-DICHLOROETHANE	EPA 8260B	ND ug/l	0.240 ug/l*	09/01/12 06:26AM JSH
2-BUTANONE	EPA 8260B	ND ug/l	1.44 ug/l*	09/01/12 06:26AM JSH
BROMOCHLOROMETHANE	EPA 8260B	ND ug/l	0.300 ug/l*	09/01/12 06:26AM JSH
CIS-1,2-DICHLOROETHENE	EPA 8260B	ND ug/l	0.280 ug/l*	09/01/12 06:26AM JSH
CHLOROFORM	EPA 8260B	ND ug/l	0.230 ug/l*	09/01/12 06:26AM JSH
1,1,1-TRICHLOROETHANE	EPA 8260B	ND ug/l	0.210 ug/l*	09/01/12 06:26AM JSH
CYCLOHEXANE	EPA 8260B	ND ug/l	0.440 ug/l*	09/01/12 06:26AM JSH
CARBON TETRACHLORIDE	EPA 8260B	ND ug/l	0.280 ug/l*	09/01/12 06:26AM JSH
BENZENE	EPA 8260B	ND ug/l	0.220 ug/l*	09/01/12 06:26AM JSH
1,2-DICHLOROETHANE	EPA 8260B	ND ug/l	0.240 ug/l*	09/01/12 06:26AM JSH
TRICHLOROETHENE	EPA 8260B	ND ug/l	0.250 ug/l*	09/01/12 06:26AM JSH
METHYLCYCLOHEXANE	EPA 8260B	ND ug/l	0.360 ug/l*	09/01/12 06:26AM JSH
1,2-DICHLOROPROPANE	EPA 8260B	ND ug/l	0.200 ug/l*	09/01/12 06:26AM JSH

Serial Number: 2353060

Authorized by: Oommen V. Kappil, QA Director

Account No: SR0117, EASTSTAR ENVIRONMENTAL GROUP, INC. **P.O. No:** **Inv. No:** 1453096
Project No: SR0117, EASTSTAR ENVIRONMENTAL GROUP, INC. **PWSID No:**

Sample Number **Sample Description** **Samp. Date/Time/Temp** **Sampled by**
L4297938-10 I027-7D-010 08/23/12 11:30am NA F Customer
Received Date/Time/Temp 08/23/12 08:30pm 35 F **Iced (Y/N):** Y

Parameter	Method	Result	RLs	Test Date, Time, Analyst
GAS CHROMATOGRAPHY MASS SPECTROMETRY; VOLATILES continued				
BROMODICHLOROMETHANE	EPA 8260B	ND ug/l	0.210 ug/l*	09/01/12 06:26AM JSH
4-METHYL-2-PENTANONE	EPA 8260B	ND ug/l	0.440 ug/l*	09/01/12 06:26AM JSH
CIS-1,3-DICHLOROPROPENE	EPA 8260B	ND ug/l	0.220 ug/l*	09/01/12 06:26AM JSH
TOLUENE	EPA 8260B	ND ug/l	0.190 ug/l*	09/01/12 06:26AM JSH
TRANS-1,3-DICHLOROPROPENE	EPA 8260B	ND ug/l	0.220 ug/l*	09/01/12 06:26AM JSH
1,1,2-TRICHLOROETHANE	EPA 8260B	ND ug/l	0.240 ug/l*	09/01/12 06:26AM JSH
2-HEXANONE	EPA 8260B	ND ug/l	0.830 ug/l*	09/01/12 06:26AM JSH
TETRACHLOROETHENE	EPA 8260B	ND ug/l	0.370 ug/l*	09/01/12 06:26AM JSH
DIBROMOCHLOROMETHANE	EPA 8260B	ND ug/l	0.140 ug/l*	09/01/12 06:26AM JSH
1,2-DIBROMOETHANE	EPA 8260B	ND ug/l	0.210 ug/l*	09/01/12 06:26AM JSH
CHLOROBENZENE	EPA 8260B	ND ug/l	0.230 ug/l*	09/01/12 06:26AM JSH
ETHYLBENZENE	EPA 8260B	ND ug/l	0.230 ug/l*	09/01/12 06:26AM JSH
M&P-XYLENES	EPA 8260B	ND ug/l	0.460 ug/l*	09/01/12 06:26AM JSH
O-XYLENE	EPA 8260B	ND ug/l	0.240 ug/l*	09/01/12 06:26AM JSH
STYRENE	EPA 8260B	ND ug/l	0.200 ug/l*	09/01/12 06:26AM JSH
BROMOFORM	EPA 8260B	ND ug/l	0.310 ug/l*	09/01/12 06:26AM JSH
1,1,2,2-TETRACHLOROETHANE	EPA 8260B	ND ug/l	0.320 ug/l*	09/01/12 06:26AM JSH
ISOPROPYLBENZENE	EPA 8260B	ND ug/l	0.270 ug/l*	09/01/12 06:26AM JSH
1,3-DICHLOROBENZENE	EPA 8260B	ND ug/l	0.210 ug/l*	09/01/12 06:26AM JSH
1,4-DICHLOROBENZENE	EPA 8260B	ND ug/l	0.170 ug/l*	09/01/12 06:26AM JSH
1,2-DICHLOROBENZENE	EPA 8260B	ND ug/l	0.200 ug/l*	09/01/12 06:26AM JSH
1,2-DIBROMO-3-CHLOROPROPANE	EPA 8260B	ND ug/l	0.470 ug/l*	09/01/12 06:26AM JSH
1,2,4-TRICHLOROBENZENE	EPA 8260B	ND ug/l	0.360 ug/l*	09/01/12 06:26AM JSH
1,2,3-TRICHLOROBENZENE	EPA 8260B	ND ug/l	0.310 ug/l*	09/01/12 06:26AM JSH
1,4-DIOXANE	EPA 8260B	ND ug/l	129 ug/l*	09/01/12 06:26AM JSH

Sample Number **Sample Description** **Samp. Date/Time/Temp** **Sampled by**
L4297938-11 I027-7S-011 08/23/12 12:15pm NA F Customer
Received Date/Time/Temp 08/23/12 08:30pm 35 F **Iced (Y/N):** Y

Parameter	Method	Result	RLs	Test Date, Time, Analyst
GENERAL CHEMISTRY				
HEXANE EXTR.-SGT (NON POLAR O+G)	1664ASGT@PHC	ND mg/l	5.00 mg/l	09/04/12 08:30AM RHB
CYANIDE, TOTAL	SM 4500CN C,E	ND mg/l	0.0250 mg/l	08/30/12 01:00PM JG
METALS				
SILVER	EPA 200.7 Rev 4.4	0.0128 B mg/l	0.00510 mg/l*	09/07/12 12:40PM B B
ALUMINUM	EPA 200.7 Rev 4.4	ND mg/l	0.175 mg/l*	09/07/12 12:40PM B B
ARSENIC	EPA 200.7 Rev 4.4	0.0655 B mg/l	0.0283 mg/l*	09/07/12 12:40PM B B
BARIUM	EPA 200.7 Rev 4.4	0.510 mg/l	0.00170 mg/l*	09/07/12 12:40PM B B
BERYLLIUM	EPA 200.7 Rev 4.4	0.00130 B mg/l	0.000353 mg/l*	09/07/12 12:40PM B B
CALCIUM	EPA 200.7 Rev 4.4	241 mg/l	0.0460 mg/l*	09/07/12 12:40PM B B
CADMIUM	EPA 200.7 Rev 4.4	ND mg/l	0.00110 mg/l*	09/07/12 12:40PM B B
COBALT	EPA 200.7 Rev 4.4	0.00600 B mg/l	0.00400 mg/l*	09/07/12 12:40PM B B
CHROMIUM	EPA 200.7 Rev 4.4	0.00670 B mg/l	0.00220 mg/l*	09/07/12 12:40PM B B

Serial Number: 2353060

Authorized by: Oommen V. Kappil, QA Director

Account No: SR0117, EASTSTAR ENVIRONMENTAL GROUP, INC. **P.O. No:** **Inv. No:** 1453096
Project No: SR0117, EASTSTAR ENVIRONMENTAL GROUP, INC. **PWSID No:**

Sample Number **Sample Description** **Samp. Date/Time/Temp** **Sampled by**
L4297938-11 I027-7S-011 08/23/12 12:15pm NA F Customer
Received Date/Time/Temp 08/23/12 08:30pm 35 F **Iced (Y/N):** Y

Parameter	Method	Result	RLs	Test Date, Time, Analyst
METALS continued				
COPPER	EPA 200.7 Rev 4.4	0.0100 B mg/l	0.00310 mg/l*	09/07/12 12:40PM B B
IRON	EPA 200.7 Rev 4.4	8.24 mg/l	0.0359 mg/l*	09/07/12 12:40PM B B
POTASSIUM	EPA 200.7 Rev 4.4	169 mg/l	0.559 mg/l*	09/07/12 12:40PM B B
MAGNESIUM	EPA 200.7 Rev 4.4	641 mg/l	0.441 mg/l*	09/07/12 12:40PM B B
MANGANESE	EPA 200.7 Rev 4.4	0.461 mg/l	0.000786 mg/l*	09/07/12 12:40PM B B
NICKEL	EPA 200.7 Rev 4.4	ND mg/l	0.00340 mg/l*	09/07/12 12:40PM B B
LEAD	EPA 200.7 Rev 4.4	ND mg/l	0.0175 mg/l*	09/07/12 12:40PM B B
ANTIMONY	EPA 200.7 Rev 4.4	ND mg/l	0.0220 mg/l*	09/07/12 12:40PM B B
SELENIUM	EPA 200.7 Rev 4.4	ND mg/l	0.0517 mg/l*	09/07/12 12:40PM B B
THALLIUM	EPA 200.7 Rev 4.4	ND mg/l	0.0324 mg/l*	09/07/12 12:40PM B B
VANADIUM	EPA 200.7 Rev 4.4	0.00930 B mg/l	0.00260 mg/l*	09/07/12 12:40PM B B
ZINC	EPA 200.7 Rev 4.4	0.0245 B mg/l	0.00260 mg/l*	09/07/12 12:40PM B B
SODIUM	EPA 200.7 Rev 4.4	5730 mg/l	1.06 mg/l*	09/07/12 01:21PM B B
MERCURY	EPA 245.1 Rev 3.0	0.0000250 B mg/l	0.0000130 mg/l*	09/01/12 02:54PM RBK
GAS CHROMATOGRAPHY MASS SPECTROMETRY; SEMI-VOLATILES				
NAPHTHALENE	EPA 8270C	ND ug/l	0.01 ug/l*	09/05/12 06:20PM GRM
2-METHYLNAPHTHALENE	EPA 8270C	ND ug/l	0.01 ug/l*	09/05/12 06:20PM GRM
ACENAPHTHYLENE	EPA 8270C	ND ug/l	0.01 ug/l*	09/05/12 06:20PM GRM
ACENAPHTHENE	EPA 8270C	0.02 ug/l	0.01 ug/l*	09/05/12 06:20PM GRM
FLUORENE	EPA 8270C	ND ug/l	0.02 ug/l*	09/05/12 06:20PM GRM
PHENANTHRENE	EPA 8270C	ND ug/l	0.01 ug/l*	09/05/12 06:20PM GRM
ANTHRACENE	EPA 8270C	ND ug/l	0.01 ug/l*	09/05/12 06:20PM GRM
FLUORANTHENE	EPA 8270C	ND ug/l	0.02 ug/l*	09/05/12 06:20PM GRM
PYRENE	EPA 8270C	ND ug/l	0.02 ug/l*	09/05/12 06:20PM GRM
BENZO(A)ANTHRACENE	EPA 8270C	ND ug/l	0.01 ug/l*	09/05/12 06:20PM GRM
CHRYSENE	EPA 8270C	ND ug/l	0.01 ug/l*	09/05/12 06:20PM GRM
BENZO(B)FLUORANTHENE	EPA 8270C	ND ug/l	0.02 ug/l*	09/05/12 06:20PM GRM
BENZO(K)FLUORANTHENE	EPA 8270C	ND ug/l	0.02 ug/l*	09/05/12 06:20PM GRM
BENZO(A)PYRENE	EPA 8270C	ND ug/l	0.02 ug/l*	09/05/12 06:20PM GRM
INDENO(1,2,3-CD)PYRENE	EPA 8270C	ND ug/l	0.02 ug/l*	09/05/12 06:20PM GRM
DIBENZ(A,H)ANTHRACENE	EPA 8270C	ND ug/l	0.02 ug/l*	09/05/12 06:20PM GRM
BENZO(G,H,I)PERYLENE	EPA 8270C	ND ug/l	0.02 ug/l*	09/05/12 06:20PM GRM
GAS CHROMATOGRAPHY MASS SPECTROMETRY; VOLATILES				
DICHLORODIFLUOROMETHANE	EPA 8260B	ND ug/l	0.430 ug/l*	09/04/12 03:54PM JSH
CHLOROMETHANE	EPA 8260B	ND ug/l	0.320 ug/l*	09/04/12 03:54PM JSH
VINYL CHLORIDE	EPA 8260B	ND ug/l	0.240 ug/l*	09/04/12 03:54PM JSH
BROMOMETHANE	EPA 8260B	ND ug/l	0.460 ug/l*	09/04/12 03:54PM JSH
CHLOROETHANE	EPA 8260B	ND ug/l	0.340 ug/l*	09/04/12 03:54PM JSH
TRICHLOROFLUOROMETHANE	EPA 8260B	ND ug/l	0.380 ug/l*	09/04/12 03:54PM JSH
1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	EPA 8260B	ND ug/l	0.470 ug/l*	09/04/12 03:54PM JSH
METHYL ACETATE	EPA 8260B	ND ug/l	0.360 ug/l*	09/04/12 03:54PM JSH
1,1-DICHLOROETHENE	EPA 8260B	ND ug/l	0.310 ug/l*	09/04/12 03:54PM JSH
ACETONE	EPA 8260B	ND ug/l	3.26 ug/l*	09/04/12 03:54PM JSH
CARBON DISULFIDE	EPA 8260B	1.02 J ug/l	0.640 ug/l*	09/04/12 03:54PM JSH

Authorized by: Oommen V. Kappil, QA Director

Account No: SR0117, EASTSTAR ENVIRONMENTAL GROUP, INC. **P.O. No:** **Inv. No:** 1453096
Project No: SR0117, EASTSTAR ENVIRONMENTAL GROUP, INC. **PWSID No:**

Sample Number **Sample Description** **Samp. Date/Time/Temp** **Sampled by**
L4297938-11 I027-7S-011 08/23/12 12:15pm NA F Customer
Received Date/Time/Temp 08/23/12 08:30pm 35 F **Iced (Y/N):** Y

Parameter	Method	Result	RLs	Test Date, Time, Analyst
GAS CHROMATOGRAPHY MASS SPECTROMETRY; VOLATILES continued				
METHYLENE CHLORIDE	EPA 8260B	ND ug/l	0.500 ug/l*	09/04/12 03:54PM JSH
TRANS-1,2-DICHLOROETHENE	EPA 8260B	ND ug/l	0.140 ug/l*	09/04/12 03:54PM JSH
METHYL TERTIARY BUTYL ETHER	EPA 8260B	ND ug/l	0.200 ug/l*	09/04/12 03:54PM JSH
1,1-DICHLOROETHANE	EPA 8260B	ND ug/l	0.240 ug/l*	09/04/12 03:54PM JSH
2-BUTANONE	EPA 8260B	ND ug/l	1.44 ug/l*	09/04/12 03:54PM JSH
BROMOCHLOROMETHANE	EPA 8260B	ND ug/l	0.300 ug/l*	09/04/12 03:54PM JSH
CIS-1,2-DICHLOROETHENE	EPA 8260B	ND ug/l	0.280 ug/l*	09/04/12 03:54PM JSH
CHLOROFORM	EPA 8260B	ND ug/l	0.230 ug/l*	09/04/12 03:54PM JSH
1,1,1-TRICHLOROETHANE	EPA 8260B	ND ug/l	0.210 ug/l*	09/04/12 03:54PM JSH
CYCLOHEXANE	EPA 8260B	ND ug/l	0.440 ug/l*	09/04/12 03:54PM JSH
CARBON TETRACHLORIDE	EPA 8260B	ND ug/l	0.280 ug/l*	09/04/12 03:54PM JSH
BENZENE	EPA 8260B	ND ug/l	0.220 ug/l*	09/04/12 03:54PM JSH
1,2-DICHLOROETHANE	EPA 8260B	ND ug/l	0.240 ug/l*	09/04/12 03:54PM JSH
TRICHLOROETHENE	EPA 8260B	ND ug/l	0.250 ug/l*	09/04/12 03:54PM JSH
METHYLCYCLOHEXANE	EPA 8260B	ND ug/l	0.360 ug/l*	09/04/12 03:54PM JSH
1,2-DICHLOROPROPANE	EPA 8260B	ND ug/l	0.200 ug/l*	09/04/12 03:54PM JSH
BROMODICHLOROMETHANE	EPA 8260B	ND ug/l	0.210 ug/l*	09/04/12 03:54PM JSH
4-METHYL-2-PENTANONE	EPA 8260B	ND ug/l	0.440 ug/l*	09/04/12 03:54PM JSH
CIS-1,3-DICHLOROPROPENE	EPA 8260B	ND ug/l	0.220 ug/l*	09/04/12 03:54PM JSH
TOLUENE	EPA 8260B	ND ug/l	0.190 ug/l*	09/04/12 03:54PM JSH
TRANS-1,3-DICHLOROPROPENE	EPA 8260B	ND ug/l	0.220 ug/l*	09/04/12 03:54PM JSH
1,1,2-TRICHLOROETHANE	EPA 8260B	ND ug/l	0.240 ug/l*	09/04/12 03:54PM JSH
2-HEXANONE	EPA 8260B	ND ug/l	0.830 ug/l*	09/04/12 03:54PM JSH
TETRACHLOROETHENE	EPA 8260B	ND ug/l	0.370 ug/l*	09/04/12 03:54PM JSH
DIBROMOCHLOROMETHANE	EPA 8260B	ND ug/l	0.140 ug/l*	09/04/12 03:54PM JSH
1,2-DIBROMOETHANE	EPA 8260B	ND ug/l	0.210 ug/l*	09/04/12 03:54PM JSH
CHLOROBENZENE	EPA 8260B	ND ug/l	0.230 ug/l*	09/04/12 03:54PM JSH
ETHYLBENZENE	EPA 8260B	ND ug/l	0.230 ug/l*	09/04/12 03:54PM JSH
M&P-XYLENES	EPA 8260B	ND ug/l	0.460 ug/l*	09/04/12 03:54PM JSH
O-XYLENE	EPA 8260B	ND ug/l	0.240 ug/l*	09/04/12 03:54PM JSH
STYRENE	EPA 8260B	ND ug/l	0.200 ug/l*	09/04/12 03:54PM JSH
BROMOFORM	EPA 8260B	ND ug/l	0.310 ug/l*	09/04/12 03:54PM JSH
1,1,2,2-TETRACHLOROETHANE	EPA 8260B	ND ug/l	0.320 ug/l*	09/04/12 03:54PM JSH
ISOPROPYLBENZENE	EPA 8260B	ND ug/l	0.270 ug/l*	09/04/12 03:54PM JSH
1,3-DICHLOROBENZENE	EPA 8260B	ND ug/l	0.210 ug/l*	09/04/12 03:54PM JSH
1,4-DICHLOROBENZENE	EPA 8260B	ND ug/l	0.170 ug/l*	09/04/12 03:54PM JSH
1,2-DICHLOROBENZENE	EPA 8260B	ND ug/l	0.200 ug/l*	09/04/12 03:54PM JSH
1,2-DIBROMO-3-CHLOROPROPANE	EPA 8260B	ND ug/l	0.470 ug/l*	09/04/12 03:54PM JSH
1,2,4-TRICHLOROBENZENE	EPA 8260B	ND ug/l	0.360 ug/l*	09/04/12 03:54PM JSH
1,2,3-TRICHLOROBENZENE	EPA 8260B	ND ug/l	0.310 ug/l*	09/04/12 03:54PM JSH
1,4-DIOXANE	EPA 8260B	ND ug/l	129 ug/l*	09/04/12 03:54PM JSH

Serial Number: 2353060

Authorized by: Oommen V. Kappil, QA Director

QC Laboratories

Analytical Report

Account No: SR0117, EASTSTAR ENVIRONMENTAL GROUP, INC. **P.O. No:** **Inv. No:** 1453096
Project No: SR0117, EASTSTAR ENVIRONMENTAL GROUP, INC. **PWSID No:**

Sample Number **Sample Description** **Samp. Date/Time/Temp** **Sampled by**
L4297938-12 I027-6S-012 08/23/12 01:15pm NA F Customer

Received Date/Time/Temp 08/23/12 08:30pm 35 F **Iced (Y/N):** Y

Parameter	Method	Result	RLs	Test Date, Time, Analyst
GENERAL CHEMISTRY				
HEXANE EXTR.-SGT (NON POLAR O+G)	1664ASGT@PHC	ND mg/l	5.00 mg/l	09/04/12 08:30AM RHB
CYANIDE, TOTAL	SM 4500CN C,E	ND mg/l	0.0400 mg/l	09/04/12 12:00PM JG
METALS				
SILVER	EPA 200.7 Rev 4.4	0.00730 B mg/l	0.00510 mg/l*	09/07/12 12:56PM B B
ALUMINUM	EPA 200.7 Rev 4.4	ND mg/l	0.175 mg/l*	09/07/12 12:56PM B B
ARSENIC	EPA 200.7 Rev 4.4	0.0522 B mg/l	0.0283 mg/l*	09/07/12 12:56PM B B
BARIUM	EPA 200.7 Rev 4.4	0.359 mg/l	0.00170 mg/l*	09/07/12 12:56PM B B
BERYLLIUM	EPA 200.7 Rev 4.4	0.00150 B mg/l	0.000353 mg/l*	09/07/12 12:56PM B B
CALCIUM	EPA 200.7 Rev 4.4	330 mg/l	0.0460 mg/l*	09/07/12 12:56PM B B
CADMIUM	EPA 200.7 Rev 4.4	ND mg/l	0.00110 mg/l*	09/07/12 12:56PM B B
COBALT	EPA 200.7 Rev 4.4	ND mg/l	0.00400 mg/l*	09/07/12 12:56PM B B
CHROMIUM	EPA 200.7 Rev 4.4	0.00930 B mg/l	0.00220 mg/l*	09/07/12 12:56PM B B
COPPER	EPA 200.7 Rev 4.4	0.0182 B mg/l	0.00310 mg/l*	09/07/12 12:56PM B B
IRON	EPA 200.7 Rev 4.4	3.89 mg/l	0.0359 mg/l*	09/07/12 12:56PM B B
POTASSIUM	EPA 200.7 Rev 4.4	162 mg/l	0.559 mg/l*	09/07/12 12:56PM B B
MAGNESIUM	EPA 200.7 Rev 4.4	725 mg/l	0.441 mg/l*	09/07/12 12:56PM B B
MANGANESE	EPA 200.7 Rev 4.4	0.197 mg/l	0.000786 mg/l*	09/07/12 12:56PM B B
NICKEL	EPA 200.7 Rev 4.4	ND mg/l	0.00340 mg/l*	09/07/12 12:56PM B B
LEAD	EPA 200.7 Rev 4.4	ND mg/l	0.0175 mg/l*	09/07/12 12:56PM B B
ANTIMONY	EPA 200.7 Rev 4.4	ND mg/l	0.0220 mg/l*	09/07/12 12:56PM B B
SELENIUM	EPA 200.7 Rev 4.4	ND mg/l	0.0517 mg/l*	09/07/12 12:56PM B B
THALLIUM	EPA 200.7 Rev 4.4	ND mg/l	0.0324 mg/l*	09/07/12 12:56PM B B
VANADIUM	EPA 200.7 Rev 4.4	0.00610 B mg/l	0.00260 mg/l*	09/07/12 12:56PM B B
ZINC	EPA 200.7 Rev 4.4	0.0818 mg/l	0.00260 mg/l*	09/07/12 12:56PM B B
SODIUM	EPA 200.7 Rev 4.4	5760 mg/l	1.06 mg/l*	09/07/12 01:28PM B B
MERCURY	EPA 245.1 Rev 3.0	0.0000210 B mg/l	0.0000130 mg/l*	09/05/12 02:28PM RMP
GAS CHROMATOGRAPHY MASS SPECTROMETRY; SEMI-VOLATILES				
NAPHTHALENE	EPA 8270C	0.02 ug/l	0.01 ug/l*	09/05/12 06:45PM GRM
2-METHYLNAPHTHALENE	EPA 8270C	0.01 J ug/l	0.01 ug/l*	09/05/12 06:45PM GRM
ACENAPHTHYLENE	EPA 8270C	ND ug/l	0.01 ug/l*	09/05/12 06:45PM GRM
ACENAPHTHENE	EPA 8270C	ND ug/l	0.01 ug/l*	09/05/12 06:45PM GRM
FLUORENE	EPA 8270C	ND ug/l	0.02 ug/l*	09/05/12 06:45PM GRM
PHENANTHRENE	EPA 8270C	0.02 ug/l	0.01 ug/l*	09/05/12 06:45PM GRM
ANTHRACENE	EPA 8270C	ND ug/l	0.01 ug/l*	09/05/12 06:45PM GRM
FLUORANTHENE	EPA 8270C	ND ug/l	0.02 ug/l*	09/05/12 06:45PM GRM
PYRENE	EPA 8270C	ND ug/l	0.02 ug/l*	09/05/12 06:45PM GRM
BENZO(A)ANTHRACENE	EPA 8270C	ND ug/l	0.01 ug/l*	09/05/12 06:45PM GRM
CHRYSENE	EPA 8270C	ND ug/l	0.01 ug/l*	09/05/12 06:45PM GRM
BENZO(B)FLUORANTHENE	EPA 8270C	ND ug/l	0.02 ug/l*	09/05/12 06:45PM GRM
BENZO(K)FLUORANTHENE	EPA 8270C	ND ug/l	0.02 ug/l*	09/05/12 06:45PM GRM
BENZO(A)PYRENE	EPA 8270C	ND ug/l	0.02 ug/l*	09/05/12 06:45PM GRM
INDENO(1,2,3-CD)PYRENE	EPA 8270C	ND ug/l	0.02 ug/l*	09/05/12 06:45PM GRM
DIBENZ(A,H)ANTHRACENE	EPA 8270C	ND ug/l	0.02 ug/l*	09/05/12 06:45PM GRM

Serial Number: 2353060

Authorized by: Oommen V. Kappil, QA Director

Account No: SR0117, EASTSTAR ENVIRONMENTAL GROUP, INC. **P.O. No:** **Inv. No:** 1453096
Project No: SR0117, EASTSTAR ENVIRONMENTAL GROUP, INC. **PWSID No:**

Sample Number **Sample Description** **Samp. Date/Time/Temp** **Sampled by**
L4297938-12 I027-6S-012 08/23/12 01:15pm NA F Customer
Received Date/Time/Temp 08/23/12 08:30pm 35 F **Iced (Y/N):** Y

Parameter	Method	Result	RLs	Test Date, Time, Analyst
GAS CHROMATOGRAPHY MASS SPECTROMETRY; SEMI-VOLATILES continued				
BENZO(G,H,I)PERYLENE	EPA 8270C	ND ug/l	0.02 ug/l*	09/05/12 06:45PM GRM
GAS CHROMATOGRAPHY MASS SPECTROMETRY; VOLATILES				
DICHLORODIFLUOROMETHANE	EPA 8260B	ND ug/l	2.15 ug/l*	09/04/12 03:19PM JSH
CHLOROMETHANE	EPA 8260B	ND ug/l	1.60 ug/l*	09/04/12 03:19PM JSH
VINYL CHLORIDE	EPA 8260B	ND ug/l	1.20 ug/l*	09/04/12 03:19PM JSH
BROMOMETHANE	EPA 8260B	ND ug/l	2.30 ug/l*	09/04/12 03:19PM JSH
CHLOROETHANE	EPA 8260B	ND ug/l	1.70 ug/l*	09/04/12 03:19PM JSH
TRICHLOROFLUOROMETHANE	EPA 8260B	ND ug/l	1.90 ug/l*	09/04/12 03:19PM JSH
1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	EPA 8260B	ND ug/l	2.35 ug/l*	09/04/12 03:19PM JSH
METHYL ACETATE	EPA 8260B	ND ug/l	1.80 ug/l*	09/04/12 03:19PM JSH
1,1-DICHLOROETHENE	EPA 8260B	ND ug/l	1.55 ug/l*	09/04/12 03:19PM JSH
ACETONE	EPA 8260B	ND ug/l	16.3 ug/l*	09/04/12 03:19PM JSH
CARBON DISULFIDE	EPA 8260B	ND ug/l	3.20 ug/l*	09/04/12 03:19PM JSH
METHYLENE CHLORIDE	EPA 8260B	3.10 J ug/l	2.50 ug/l*	09/04/12 03:19PM JSH
TRANS-1,2-DICHLOROETHENE	EPA 8260B	ND ug/l	0.700 ug/l*	09/04/12 03:19PM JSH
METHYL TERTIARY BUTYL ETHER	EPA 8260B	ND ug/l	1.00 ug/l*	09/04/12 03:19PM JSH
1,1-DICHLOROETHANE	EPA 8260B	ND ug/l	1.20 ug/l*	09/04/12 03:19PM JSH
2-BUTANONE	EPA 8260B	ND ug/l	7.20 ug/l*	09/04/12 03:19PM JSH
BROMOCHLOROMETHANE	EPA 8260B	ND ug/l	1.50 ug/l*	09/04/12 03:19PM JSH
CIS-1,2-DICHLOROETHENE	EPA 8260B	ND ug/l	1.40 ug/l*	09/04/12 03:19PM JSH
CHLOROFORM	EPA 8260B	ND ug/l	1.15 ug/l*	09/04/12 03:19PM JSH
1,1,1-TRICHLOROETHANE	EPA 8260B	ND ug/l	1.05 ug/l*	09/04/12 03:19PM JSH
CYCLOHEXANE	EPA 8260B	ND ug/l	2.20 ug/l*	09/04/12 03:19PM JSH
CARBON TETRACHLORIDE	EPA 8260B	ND ug/l	1.40 ug/l*	09/04/12 03:19PM JSH
BENZENE	EPA 8260B	ND ug/l	1.10 ug/l*	09/04/12 03:19PM JSH
1,2-DICHLOROETHANE	EPA 8260B	ND ug/l	1.20 ug/l*	09/04/12 03:19PM JSH
TRICHLOROETHENE	EPA 8260B	ND ug/l	1.25 ug/l*	09/04/12 03:19PM JSH
METHYLCYCLOHEXANE	EPA 8260B	ND ug/l	1.80 ug/l*	09/04/12 03:19PM JSH
1,2-DICHLOROPROPANE	EPA 8260B	ND ug/l	1.00 ug/l*	09/04/12 03:19PM JSH
BROMODICHLOROMETHANE	EPA 8260B	ND ug/l	1.05 ug/l*	09/04/12 03:19PM JSH
4-METHYL-2-PENTANONE	EPA 8260B	ND ug/l	2.20 ug/l*	09/04/12 03:19PM JSH
CIS-1,3-DICHLOROPROPENE	EPA 8260B	ND ug/l	1.10 ug/l*	09/04/12 03:19PM JSH
TOLUENE	EPA 8260B	ND ug/l	0.950 ug/l*	09/04/12 03:19PM JSH
TRANS-1,3-DICHLOROPROPENE	EPA 8260B	ND ug/l	1.10 ug/l*	09/04/12 03:19PM JSH
1,1,2-TRICHLOROETHANE	EPA 8260B	ND ug/l	1.20 ug/l*	09/04/12 03:19PM JSH
2-HEXANONE	EPA 8260B	ND ug/l	4.15 ug/l*	09/04/12 03:19PM JSH
TETRACHLOROETHENE	EPA 8260B	ND ug/l	1.85 ug/l*	09/04/12 03:19PM JSH
DIBROMOCHLOROMETHANE	EPA 8260B	ND ug/l	0.700 ug/l*	09/04/12 03:19PM JSH
1,2-DIBROMOETHANE	EPA 8260B	ND ug/l	1.05 ug/l*	09/04/12 03:19PM JSH
CHLOROBENZENE	EPA 8260B	ND ug/l	1.15 ug/l*	09/04/12 03:19PM JSH
ETHYLBENZENE	EPA 8260B	ND ug/l	1.15 ug/l*	09/04/12 03:19PM JSH
M&P-XYLENES	EPA 8260B	ND ug/l	2.30 ug/l*	09/04/12 03:19PM JSH
O-XYLENE	EPA 8260B	ND ug/l	1.20 ug/l*	09/04/12 03:19PM JSH
STYRENE	EPA 8260B	ND ug/l	1.00 ug/l*	09/04/12 03:19PM JSH
BROMOFORM	EPA 8260B	ND ug/l	1.55 ug/l*	09/04/12 03:19PM JSH
1,1,2,2-TETRACHLOROETHANE	EPA 8260B	ND ug/l	1.60 ug/l*	09/04/12 03:19PM JSH

Authorized by: Oommen V. Kappil, QA Director

Account No: SR0117, EASTSTAR ENVIRONMENTAL GROUP, INC. **P.O. No:** **Inv. No:** 1453096
Project No: SR0117, EASTSTAR ENVIRONMENTAL GROUP, INC. **PWSID No:**

Sample Number **Sample Description** **Samp. Date/Time/Temp** **Sampled by**
L4297938-12 I027-6S-012 08/23/12 01:15pm NA F Customer
Received Date/Time/Temp 08/23/12 08:30pm 35 F **Iced (Y/N):** Y

Parameter	Method	Result	RLs	Test Date, Time, Analyst
GAS CHROMATOGRAPHY MASS SPECTROMETRY; VOLATILES continued				
ISOPROPYLBENZENE	EPA 8260B	ND ug/l	1.35 ug/l*	09/04/12 03:19PM JSH
1,3-DICHLOROBENZENE	EPA 8260B	ND ug/l	1.05 ug/l*	09/04/12 03:19PM JSH
1,4-DICHLOROBENZENE	EPA 8260B	ND ug/l	0.850 ug/l*	09/04/12 03:19PM JSH
1,2-DICHLOROBENZENE	EPA 8260B	ND ug/l	1.00 ug/l*	09/04/12 03:19PM JSH
1,2-DIBROMO-3-CHLOROPROPANE	EPA 8260B	ND ug/l	2.35 ug/l*	09/04/12 03:19PM JSH
1,2,4-TRICHLOROBENZENE	EPA 8260B	ND ug/l	1.80 ug/l*	09/04/12 03:19PM JSH
1,2,3-TRICHLOROBENZENE	EPA 8260B	ND ug/l	1.55 ug/l*	09/04/12 03:19PM JSH
1,4-DIOXANE	EPA 8260B	ND ug/l	643 ug/l*	09/04/12 03:19PM JSH

Sample Number **Sample Description** **Samp. Date/Time/Temp** **Sampled by**
L4297938-13 I027-6D-013 08/23/12 02:00pm NA F Customer
Received Date/Time/Temp 08/23/12 08:30pm 35 F **Iced (Y/N):** Y

Parameter	Method	Result	RLs	Test Date, Time, Analyst
GENERAL CHEMISTRY				
CYANIDE, TOTAL	SM 4500CN C,E	ND mg/l	0.0400 mg/l	09/04/12 12:00PM JG
METALS				
SILVER	EPA 200.7 Rev 4.4	0.0195 B mg/l	0.00510 mg/l*	09/07/12 01:00PM B B
ALUMINUM	EPA 200.7 Rev 4.4	ND mg/l	0.175 mg/l*	09/07/12 01:00PM B B
BARIUM	EPA 200.7 Rev 4.4	0.0416 B mg/l	0.00170 mg/l*	09/07/12 01:00PM B B
BERYLLIUM	EPA 200.7 Rev 4.4	0.00150 B mg/l	0.000353 mg/l*	09/07/12 01:00PM B B
CALCIUM	EPA 200.7 Rev 4.4	897 mg/l	0.0460 mg/l*	09/07/12 01:00PM B B
CADMIUM	EPA 200.7 Rev 4.4	ND mg/l	0.00110 mg/l*	09/07/12 01:00PM B B
COBALT	EPA 200.7 Rev 4.4	0.00410 B mg/l	0.00400 mg/l*	09/07/12 01:00PM B B
CHROMIUM	EPA 200.7 Rev 4.4	0.00280 B mg/l	0.00220 mg/l*	09/07/12 01:00PM B B
COPPER	EPA 200.7 Rev 4.4	0.00910 B mg/l	0.00310 mg/l*	09/07/12 01:00PM B B
IRON	EPA 200.7 Rev 4.4	10.4 mg/l	0.0359 mg/l*	09/07/12 01:00PM B B
POTASSIUM	EPA 200.7 Rev 4.4	67.0 mg/l	0.559 mg/l*	09/07/12 01:00PM B B
MAGNESIUM	EPA 200.7 Rev 4.4	677 mg/l	0.441 mg/l*	09/07/12 01:00PM B B
MANGANESE	EPA 200.7 Rev 4.4	0.663 mg/l	0.000786 mg/l*	09/07/12 01:00PM B B
SODIUM	EPA 200.7 Rev 4.4	4630 mg/l	0.106 mg/l*	09/07/12 01:00PM B B
NICKEL	EPA 200.7 Rev 4.4	ND mg/l	0.00340 mg/l*	09/07/12 01:00PM B B
LEAD	EPA 200.7 Rev 4.4	ND mg/l	0.0175 mg/l*	09/07/12 01:00PM B B
ANTIMONY	EPA 200.7 Rev 4.4	ND mg/l	0.0220 mg/l*	09/07/12 01:00PM B B
SELENIUM	EPA 200.7 Rev 4.4	0.0642 B mg/l	0.0517 mg/l*	09/07/12 01:00PM B B
THALLIUM	EPA 200.7 Rev 4.4	ND mg/l	0.0324 mg/l*	09/07/12 01:00PM B B
VANADIUM	EPA 200.7 Rev 4.4	ND mg/l	0.00260 mg/l*	09/07/12 01:00PM B B
ZINC	EPA 200.7 Rev 4.4	0.0582 mg/l	0.00260 mg/l*	09/07/12 01:00PM B B
ARSENIC	EPA 200.7 Rev 4.4	0.180 mg/l	0.0283 mg/l*	09/07/12 01:07PM B B
MERCURY	EPA 245.1 Rev 3.0	0.0000270 B mg/l	0.0000130 mg/l*	09/05/12 02:29PM RMP

Oommen V. Kappil
Authorized by: Oommen V. Kappil, QA Director

QC Laboratories

Analytical Report

Account No: SR0117, EASTSTAR ENVIRONMENTAL GROUP, INC. **P.O. No:** **Inv. No:** 1453096
Project No: SR0117, EASTSTAR ENVIRONMENTAL GROUP, INC. **PWSID No:**

Sample Number **Sample Description** **Samp. Date/Time/Temp** **Sampled by**
L4297938-13 I027-6D-013 08/23/12 02:00pm NA F Customer
Received Date/Time/Temp 08/23/12 08:30pm 35 F **Iced (Y/N):** Y

Parameter	Method	Result	RLs	Test Date, Time, Analyst
GAS CHROMATOGRAPHY MASS SPECTROMETRY; SEMI-VOLATILES				
NAPHTHALENE	EPA 8270C	ND ug/l	0.01 ug/l*	09/05/12 07:10PM GRM
2-METHYLNAPHTHALENE	EPA 8270C	ND ug/l	0.01 ug/l*	09/05/12 07:10PM GRM
ACENAPHTHYLENE	EPA 8270C	ND ug/l	0.01 ug/l*	09/05/12 07:10PM GRM
ACENAPHTHENE	EPA 8270C	ND ug/l	0.01 ug/l*	09/05/12 07:10PM GRM
FLUORENE	EPA 8270C	ND ug/l	0.02 ug/l*	09/05/12 07:10PM GRM
PHENANTHRENE	EPA 8270C	0.02 ug/l	0.01 ug/l*	09/05/12 07:10PM GRM
ANTHRACENE	EPA 8270C	ND ug/l	0.01 ug/l*	09/05/12 07:10PM GRM
FLUORANTHENE	EPA 8270C	ND ug/l	0.02 ug/l*	09/05/12 07:10PM GRM
PYRENE	EPA 8270C	ND ug/l	0.02 ug/l*	09/05/12 07:10PM GRM
BENZO(A)ANTHRACENE	EPA 8270C	ND ug/l	0.01 ug/l*	09/05/12 07:10PM GRM
CHRYSENE	EPA 8270C	ND ug/l	0.01 ug/l*	09/05/12 07:10PM GRM
BENZO(B)FLUORANTHENE	EPA 8270C	ND ug/l	0.02 ug/l*	09/05/12 07:10PM GRM
BENZO(K)FLUORANTHENE	EPA 8270C	ND ug/l	0.02 ug/l*	09/05/12 07:10PM GRM
BENZO(A)PYRENE	EPA 8270C	ND ug/l	0.02 ug/l*	09/05/12 07:10PM GRM
INDENO(1,2,3-CD)PYRENE	EPA 8270C	ND ug/l	0.02 ug/l*	09/05/12 07:10PM GRM
DIBENZ(A,H)ANTHRACENE	EPA 8270C	ND ug/l	0.02 ug/l*	09/05/12 07:10PM GRM
BENZO(G,H,I)PERYLENE	EPA 8270C	ND ug/l	0.02 ug/l*	09/05/12 07:10PM GRM
GAS CHROMATOGRAPHY MASS SPECTROMETRY; VOLATILES				
DICHLORODIFLUOROMETHANE	EPA 8260B	ND ug/l	0.430 ug/l*	09/05/12 03:00PM JSH
CHLOROMETHANE	EPA 8260B	ND ug/l	0.320 ug/l*	09/05/12 03:00PM JSH
VINYL CHLORIDE	EPA 8260B	ND ug/l	0.240 ug/l*	09/05/12 03:00PM JSH
CHLOROETHANE	EPA 8260B	ND ug/l	0.340 ug/l*	09/05/12 03:00PM JSH
TRICHLOROFLUOROMETHANE	EPA 8260B	ND ug/l	0.380 ug/l*	09/05/12 03:00PM JSH
1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	EPA 8260B	ND ug/l	0.470 ug/l*	09/05/12 03:00PM JSH
METHYL ACETATE	EPA 8260B	ND ug/l	0.360 ug/l*	09/05/12 03:00PM JSH
1,1-DICHLOROETHENE	EPA 8260B	ND ug/l	0.310 ug/l*	09/05/12 03:00PM JSH
ACETONE	EPA 8260B	ND ug/l	3.26 ug/l*	09/05/12 03:00PM JSH
CARBON DISULFIDE	EPA 8260B	ND ug/l	0.640 ug/l*	09/05/12 03:00PM JSH
METHYLENE CHLORIDE	EPA 8260B	ND ug/l	0.500 ug/l*	09/05/12 03:00PM JSH
TRANS-1,2-DICHLOROETHENE	EPA 8260B	ND ug/l	0.140 ug/l*	09/05/12 03:00PM JSH
METHYL TERTIARY BUTYL ETHER	EPA 8260B	ND ug/l	0.200 ug/l*	09/05/12 03:00PM JSH
1,1-DICHLOROETHANE	EPA 8260B	ND ug/l	0.240 ug/l*	09/05/12 03:00PM JSH
2-BUTANONE	EPA 8260B	ND ug/l	1.44 ug/l*	09/05/12 03:00PM JSH
BROMOCHLOROMETHANE	EPA 8260B	ND ug/l	0.300 ug/l*	09/05/12 03:00PM JSH
CIS-1,2-DICHLOROETHENE	EPA 8260B	ND ug/l	0.280 ug/l*	09/05/12 03:00PM JSH
CHLOROFORM	EPA 8260B	ND ug/l	0.230 ug/l*	09/05/12 03:00PM JSH
1,1,1-TRICHLOROETHANE	EPA 8260B	ND ug/l	0.210 ug/l*	09/05/12 03:00PM JSH
CYCLOHEXANE	EPA 8260B	ND ug/l	0.440 ug/l*	09/05/12 03:00PM JSH
CARBON TETRACHLORIDE	EPA 8260B	ND ug/l	0.280 ug/l*	09/05/12 03:00PM JSH
BENZENE	EPA 8260B	ND ug/l	0.220 ug/l*	09/05/12 03:00PM JSH
1,2-DICHLOROETHANE	EPA 8260B	ND ug/l	0.240 ug/l*	09/05/12 03:00PM JSH
TRICHLOROETHENE	EPA 8260B	ND ug/l	0.250 ug/l*	09/05/12 03:00PM JSH
METHYLCYCLOHEXANE	EPA 8260B	ND ug/l	0.360 ug/l*	09/05/12 03:00PM JSH
1,2-DICHLOROPROPANE	EPA 8260B	ND ug/l	0.200 ug/l*	09/05/12 03:00PM JSH
BROMODICHLOROMETHANE	EPA 8260B	ND ug/l	0.210 ug/l*	09/05/12 03:00PM JSH

Serial Number: 2353060

Authorized by: Oommen V. Kappil, QA Director

Account No: SR0117, EASTSTAR ENVIRONMENTAL GROUP, INC. **P.O. No:** **Inv. No:** 1453096
Project No: SR0117, EASTSTAR ENVIRONMENTAL GROUP, INC. **PWSID No:**

Sample Number **Sample Description** **Samp. Date/Time/Temp** **Sampled by**
L4297938-13 I027-6D-013 08/23/12 02:00pm NA F Customer
Received Date/Time/Temp 08/23/12 08:30pm 35 F **Iced (Y/N):** Y

Parameter	Method	Result	RLs	Test Date, Time, Analyst
GAS CHROMATOGRAPHY MASS SPECTROMETRY; VOLATILES continued				
4-METHYL-2-PENTANONE	EPA 8260B	ND ug/l	0.440 ug/l*	09/05/12 03:00PM JSH
CIS-1,3-DICHLOROPROPENE	EPA 8260B	ND ug/l	0.220 ug/l*	09/05/12 03:00PM JSH
TOLUENE	EPA 8260B	ND ug/l	0.190 ug/l*	09/05/12 03:00PM JSH
1,1,2-TRICHLOROETHANE	EPA 8260B	ND ug/l	0.240 ug/l*	09/05/12 03:00PM JSH
2-HEXANONE	EPA 8260B	ND ug/l	0.830 ug/l*	09/05/12 03:00PM JSH
TETRACHLOROETHENE	EPA 8260B	ND ug/l	0.370 ug/l*	09/05/12 03:00PM JSH
DIBROMOCHLOROMETHANE	EPA 8260B	ND ug/l	0.140 ug/l*	09/05/12 03:00PM JSH
1,2-DIBROMOETHANE	EPA 8260B	ND ug/l	0.210 ug/l*	09/05/12 03:00PM JSH
CHLOROBENZENE	EPA 8260B	ND ug/l	0.230 ug/l*	09/05/12 03:00PM JSH
ETHYLBENZENE	EPA 8260B	ND ug/l	0.230 ug/l*	09/05/12 03:00PM JSH
M&P-XYLENES	EPA 8260B	ND ug/l	0.460 ug/l*	09/05/12 03:00PM JSH
O-XYLENE	EPA 8260B	ND ug/l	0.240 ug/l*	09/05/12 03:00PM JSH
STYRENE	EPA 8260B	ND ug/l	0.200 ug/l*	09/05/12 03:00PM JSH
BROMOFORM	EPA 8260B	ND ug/l	0.310 ug/l*	09/05/12 03:00PM JSH
1,1,2,2-TETRACHLOROETHANE	EPA 8260B	ND ug/l	0.320 ug/l*	09/05/12 03:00PM JSH
ISOPROPYLBENZENE	EPA 8260B	ND ug/l	0.270 ug/l*	09/05/12 03:00PM JSH
1,3-DICHLOROBENZENE	EPA 8260B	ND ug/l	0.210 ug/l*	09/05/12 03:00PM JSH
1,4-DICHLOROBENZENE	EPA 8260B	ND ug/l	0.170 ug/l*	09/05/12 03:00PM JSH
1,2-DICHLOROBENZENE	EPA 8260B	ND ug/l	0.200 ug/l*	09/05/12 03:00PM JSH
1,2-DIBROMO-3-CHLOROPROPANE	EPA 8260B	ND ug/l	0.470 ug/l*	09/05/12 03:00PM JSH
1,2,4-TRICHLOROBENZENE	EPA 8260B	ND ug/l	0.360 ug/l*	09/05/12 03:00PM JSH
1,2,3-TRICHLOROBENZENE	EPA 8260B	ND ug/l	0.310 ug/l*	09/05/12 03:00PM JSH
1,4-DIOXANE	EPA 8260B	ND ug/l	129 ug/l*	09/05/12 03:00PM JSH
BROMOMETHANE	EPA 8260B	ND ug/l	0.430 ug/l*	09/06/12 01:14PM EEW
TRANS-1,3-DICHLOROPROPENE	EPA 8260B	ND ug/l	0.270 ug/l*	09/06/12 01:14PM EEW

Sample Number **Sample Description** **Samp. Date/Time/Temp** **Sampled by**
L4297938-14 TRIP BLANK 08/23/12 00:00pm NA F Customer
Received Date/Time/Temp 08/23/12 08:30pm 35 F **Iced (Y/N):** Y

Parameter	Method	Result	RLs	Test Date, Time, Analyst
GAS CHROMATOGRAPHY MASS SPECTROMETRY; VOLATILES				
DICHLORODIFLUOROMETHANE	EPA 8260B	ND ug/l	0.430 ug/l*	09/01/12 02:57AM JSH
CHLOROMETHANE	EPA 8260B	ND ug/l	0.320 ug/l*	09/01/12 02:57AM JSH
VINYL CHLORIDE	EPA 8260B	ND ug/l	0.240 ug/l*	09/01/12 02:57AM JSH
BROMOMETHANE	EPA 8260B	ND ug/l	0.460 ug/l*	09/01/12 02:57AM JSH
CHLOROETHANE	EPA 8260B	ND ug/l	0.340 ug/l*	09/01/12 02:57AM JSH
TRICHLOROFLUOROMETHANE	EPA 8260B	ND ug/l	0.380 ug/l*	09/01/12 02:57AM JSH
1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	EPA 8260B	ND ug/l	0.470 ug/l*	09/01/12 02:57AM JSH
METHYL ACETATE	EPA 8260B	ND ug/l	0.360 ug/l*	09/01/12 02:57AM JSH
1,1-DICHLOROETHENE	EPA 8260B	ND ug/l	0.310 ug/l*	09/01/12 02:57AM JSH
ACETONE	EPA 8260B	7.78 ug/l	3.26 ug/l*	09/01/12 02:57AM JSH
CARBON DISULFIDE	EPA 8260B	ND ug/l	0.640 ug/l*	09/01/12 02:57AM JSH
METHYLENE CHLORIDE	EPA 8260B	ND ug/l	0.500 ug/l*	09/01/12 02:57AM JSH
TRANS-1,2-DICHLOROETHENE	EPA 8260B	ND ug/l	0.140 ug/l*	09/01/12 02:57AM JSH
METHYL TERTIARY BUTYL ETHER	EPA 8260B	ND ug/l	0.200 ug/l*	09/01/12 02:57AM JSH

Oommen V. Kappil
Authorized by: Oommen V. Kappil, QA Director

QC Laboratories

Analytical Report

Account No: SR0117, EASTSTAR ENVIRONMENTAL GROUP, INC. **P.O. No:** **Inv. No:** 1453096
Project No: SR0117, EASTSTAR ENVIRONMENTAL GROUP, INC. **PWSID No:**

Sample Number **Sample Description** **Samp. Date/Time/Temp** **Sampled by**
L4297938-14 TRIP BLANK 08/23/12 00:00pm NA F Customer
Received Date/Time/Temp 08/23/12 08:30pm 35 F **Iced (Y/N):** Y

Parameter	Method	Result	RLs	Test Date, Time, Analyst
GAS CHROMATOGRAPHY MASS SPECTROMETRY; VOLATILES continued				
1,1-DICHLOROETHANE	EPA 8260B	ND ug/l	0.240 ug/l*	09/01/12 02:57AM JSH
2-BUTANONE	EPA 8260B	ND ug/l	1.44 ug/l*	09/01/12 02:57AM JSH
BROMOCHLOROMETHANE	EPA 8260B	ND ug/l	0.300 ug/l*	09/01/12 02:57AM JSH
CIS-1,2-DICHLOROETHENE	EPA 8260B	ND ug/l	0.280 ug/l*	09/01/12 02:57AM JSH
CHLOROFORM	EPA 8260B	ND ug/l	0.230 ug/l*	09/01/12 02:57AM JSH
1,1,1-TRICHLOROETHANE	EPA 8260B	ND ug/l	0.210 ug/l*	09/01/12 02:57AM JSH
CYCLOHEXANE	EPA 8260B	ND ug/l	0.440 ug/l*	09/01/12 02:57AM JSH
CARBON TETRACHLORIDE	EPA 8260B	ND ug/l	0.280 ug/l*	09/01/12 02:57AM JSH
BENZENE	EPA 8260B	ND ug/l	0.220 ug/l*	09/01/12 02:57AM JSH
1,2-DICHLOROETHANE	EPA 8260B	ND ug/l	0.240 ug/l*	09/01/12 02:57AM JSH
TRICHLOROETHENE	EPA 8260B	ND ug/l	0.250 ug/l*	09/01/12 02:57AM JSH
METHYLCYCLOHEXANE	EPA 8260B	ND ug/l	0.360 ug/l*	09/01/12 02:57AM JSH
1,2-DICHLOROPROPANE	EPA 8260B	ND ug/l	0.200 ug/l*	09/01/12 02:57AM JSH
BROMODICHLOROMETHANE	EPA 8260B	ND ug/l	0.210 ug/l*	09/01/12 02:57AM JSH
4-METHYL-2-PENTANONE	EPA 8260B	ND ug/l	0.440 ug/l*	09/01/12 02:57AM JSH
CIS-1,3-DICHLOROPROPENE	EPA 8260B	ND ug/l	0.220 ug/l*	09/01/12 02:57AM JSH
TOLUENE	EPA 8260B	ND ug/l	0.190 ug/l*	09/01/12 02:57AM JSH
TRANS-1,3-DICHLOROPROPENE	EPA 8260B	ND ug/l	0.220 ug/l*	09/01/12 02:57AM JSH
1,1,2-TRICHLOROETHANE	EPA 8260B	ND ug/l	0.240 ug/l*	09/01/12 02:57AM JSH
2-HEXANONE	EPA 8260B	ND ug/l	0.830 ug/l*	09/01/12 02:57AM JSH
TETRACHLOROETHENE	EPA 8260B	ND ug/l	0.370 ug/l*	09/01/12 02:57AM JSH
DIBROMOCHLOROMETHANE	EPA 8260B	ND ug/l	0.140 ug/l*	09/01/12 02:57AM JSH
1,2-DIBROMOETHANE	EPA 8260B	ND ug/l	0.210 ug/l*	09/01/12 02:57AM JSH
CHLOROBENZENE	EPA 8260B	ND ug/l	0.230 ug/l*	09/01/12 02:57AM JSH
ETHYLBENZENE	EPA 8260B	ND ug/l	0.230 ug/l*	09/01/12 02:57AM JSH
M&P-XYLENES	EPA 8260B	ND ug/l	0.460 ug/l*	09/01/12 02:57AM JSH
O-XYLENE	EPA 8260B	ND ug/l	0.240 ug/l*	09/01/12 02:57AM JSH
STYRENE	EPA 8260B	ND ug/l	0.200 ug/l*	09/01/12 02:57AM JSH
BROMOFORM	EPA 8260B	ND ug/l	0.310 ug/l*	09/01/12 02:57AM JSH
1,1,2,2-TETRACHLOROETHANE	EPA 8260B	ND ug/l	0.320 ug/l*	09/01/12 02:57AM JSH
ISOPROPYLBENZENE	EPA 8260B	ND ug/l	0.270 ug/l*	09/01/12 02:57AM JSH
1,3-DICHLOROBENZENE	EPA 8260B	ND ug/l	0.210 ug/l*	09/01/12 02:57AM JSH
1,4-DICHLOROBENZENE	EPA 8260B	ND ug/l	0.170 ug/l*	09/01/12 02:57AM JSH
1,2-DICHLOROBENZENE	EPA 8260B	ND ug/l	0.200 ug/l*	09/01/12 02:57AM JSH
1,2-DIBROMO-3-CHLOROPROPANE	EPA 8260B	ND ug/l	0.470 ug/l*	09/01/12 02:57AM JSH
1,2,4-TRICHLOROBENZENE	EPA 8260B	ND ug/l	0.360 ug/l*	09/01/12 02:57AM JSH
1,2,3-TRICHLOROBENZENE	EPA 8260B	ND ug/l	0.310 ug/l*	09/01/12 02:57AM JSH
1,4-DIOXANE	EPA 8260B	ND ug/l	129 ug/l*	09/01/12 02:57AM JSH

L4297938-1 :

@1664 SGT/PHC=non-polar materials of petroleum origin >C12.

QUALIFIERS: For metals parameters;"B" indicates a value that is > than the MDL but < than the laboratory quantitation limit. For Organics parameters; "B"is when the compound is found in the blank as well as in the sample;"J"indicates a value that is > than the MDL but < than the lowest standard, it is also used to indicate that a compound is tentatively identified in a library search;"E"(estimated) is when a compound exceeded the calibration range;"N" presumptive evidence of a compound; "D" is when a dilution was required.

Serial Number: 2353060

Authorized by: Oommen V. Kappil, QA Director

Account No: SR0117, EASTSTAR ENVIRONMENTAL GROUP, INC. **P.O. No:** **Inv. No:** 1453096
Project No: SR0117, EASTSTAR ENVIRONMENTAL GROUP, INC. **PWSID No:**

L4297938-2 :

@1664 SGT/PHC=non-polar materials of petroleum origin >C12.

L4297938-4 :

@1664 SGT/PHC=non-polar materials of petroleum origin >C12.

L4297938-5 :

@1664 SGT/PHC=non-polar materials of petroleum origin >C12.

L4297938-6 :

@1664 SGT/PHC=non-polar materials of petroleum origin >C12.

Method 8260 requires that samples be preserved to a pH of <2. The submitted sample had a pH >2 and was not analyzed within the 7 day holding time requirement. Consult with your regulatory agency for further guidance on the use of this data.

L4297938-8 :

@1664 SGT/PHC=non-polar materials of petroleum origin >C12.

L4297938-11 :

@1664 SGT/PHC=non-polar materials of petroleum origin >C12.

Method 8260 requires that samples be preserved to a pH of <2. The submitted sample had a pH >2 and was not analyzed within the 7 day holding time requirement. Consult with your regulatory agency for further guidance on the use of this data.

L4297938-12 :

@1664 SGT/PHC=non-polar materials of petroleum origin >C12.

: The reported value for Method 1664 SGT (ND) is based on the result found in Method 1664 HEM. HEM was not detected in this sample and by definition, SGT is not greater than HEM for samples -1, -4, -5, -11 and -12.

QUALIFIERS: For metals parameters;"B" indicates a value that is > than the MDL but < than the laboratory quantitation limit. For Organics parameters; "B"is when the compound is found in the blank as well as in the sample;"J"indicates a value that is > than the MDL but < than the lowest standard, it is also used to indicate that a compound is tentatively identified in a library search;"E"(estimated) is when a compound exceeded the calibration range;"N" presumptive evidence of a compound; "D" is when a dilution was required.

Notes:

A result of "ND" indicates that the analyte tested was either not detected or the concentration was below the RLs.
Definitions: NEG=negative; POS=positive; COL=colonies; RLs=laboratory reporting limits; L/A=laboratory accident; TNTC= Too numerous to count; pres=presumptive
A result marked with "DRY" indicates that the result was calculated and reported on a dry weight basis.
MCL= EPA recommended "maximum contaminant level", PLs = Customer-specific permit limits.
The test results meet all requirements of NELAC unless otherwise specified.
The report shall not be reproduced except in full without the written consent of the laboratory.
Unless otherwise specified, the Environmental and Food Chemistry testing except Field Parameters were performed by QC Inc. located at 1205 Industrial Blvd., Southampton, PA 18966; Pharmaceutical, Dairy and Food Microbiological tests were performed by QC Inc. located at 702 Electronic Dr., Horsham, PA 19044.
QCL Accreditations: Southampton Div: EPA ID PA00018; NELAP ID's: PA 09-00131, NJ PA166, NY 11223
State ID's: CT PH-0768, DE PA-018, MD 206, SC 89021001; FDA Reg. # : 2515238
ACL Div: NELAP ID's: PA 68-335, NJ DE568; State ID's: DE 00011, MD 138; Wind Gap Div: State ID's: PA 48-01334, NJ PA001
E. Rutherford Div: State ID: NJ 02015; Vineland Div: State ID: NJ 06005; Reading Div: State ID: PA 06-03543
The reported results relate only to the samples.

Serial Number: 2353060

Authorized by: Oommen V. Kappil, QA Director

QC Laboratories

Analytical Report

Account No: SR0117, EASTSTAR ENVIRONMENTAL GROUP, INC. **P.O. No:** **Inv. No:** 1453096
Project No: SR0117, EASTSTAR ENVIRONMENTAL GROUP, INC. **PWSID No:**

All samples are collected as "grab" samples unless otherwise identified.
* - The "RLs" represents a reporting/quantitation limit. When an "*" is present in the column identified as the "RLs", it is being reported as a Method Detection Limit (MDL).

Serial Number: 2353060

Authorized by: Oommen V. Kappil, QA Director

QC Laboratories

1205 Industrial Blvd.
Southampton, PA 18966-0514
Phone: 215-355-3900
Fax: 215-355-7231

CHAIN OF CUSTODY

Page 1 of 2

Lab LIMS No: L 4297938

Bill to/Report to: (if different)

Client/Acct. No. EASTSTAR

Address 10632 LITTLE PATUXENT PARKWAY ST 106

Sampling Site Address: (if different)

City/State/Zip COLUMBIA MD 21044

Phone/Fax 410 290 8777

P.O. No.

Client Contact AL FREE

QC Contact

CND 8/24/12

LAB USE ONLY:

- # ___ Ascorbic/HCl Vials
- # 24 TB HCl Vials
- # ___ $Na_2S_2O_3$
- # ___ Na OH/Zn acetate pH
- # 8 HNO_3 pH <2 1/2 PH
- # ___ H_2SO_4 pH
- # 8 NaOH pH >12 1/2 PH
- # 8 Unpreserved Qt gl
- # ~~12~~ 4 Hcl pH <2 GLT
- # 36.0 Temp control 42.1 ID# QCCM12

MATRIX CODES

- DW: DRINKING WATER
- GW: GROUND WATER
- WW: WASTEWATER
- SO: SOIL
- SL: SLUDGE
- OIL: OIL
- SOL: NON SOIL SOLID
- MI: MISCELLANEOUS
- X: OTHER

PROJECT RAHWAY ARCH

FIELD ID	Collection Date	Collection Military Time	GRAB	COMP	Matrix Code	Number of Containers: Total	H_2SO_4	HCl	Vials	HNO_3	NaOH	ZnAc	Unpre	BacT	ANALYSIS REQUESTED	Field pH, Temp (C or F), DO, Cl_2, S. Cond. etc.
I027-8D-001	8/22/12	1140	X		GW	6			X	X	X		X		VOC, PAH, METALS, CYANIDE	1
I027-8S-002	8/22/12	1315				7		X	X	X	X		X		VOC, PAH, METALS, CYANIDE, 1664	2
I027-1D-003	8/22/12	1520				6			X	X	X		X		VOC, PAH, METALS, CYANIDE	1
I027-1S-004	8/22/12	1625				7		X	X	X	X		X		VOC, PAH, METALS, CYANIDE, 1664	2
I027-5D-005	8/23/12	0730				6			X	X	X		X		VOC, PAH, METALS, CYANIDE	1
I027-5S-006	8/23/12	0820				7		X	X	X	X		X		VOC, PAH, METALS, CYANIDE, 1664	2
I027-4D-007	8/23/12	0925				6			X	X	X		X		VOC, PAH, METALS, CYANIDE	1
I027-4S-008	8/23/12	1025				7		X	X	X	X		X		VOC, PAH, METALS, CYANIDE, 1664	2
~~I027~~																

SAMPLED BY: (Name/Company) JOSH CLOUDY EASTSTAR

Verbal/fax data due: ___/___/___

Hardcopy due: ___/___/___

Report Format: ☐ Standard ☐ Forms ☐ Standard + QC ☐ NJ Reduced ☐ Disk

Please call for pricing and availability on rush (<14-21 day) turnaround and on all but standard format.

Field Parameters Analyzed By:

Sig:

Date/Time:

SAMPLE CUSTODY EXCHANGES MUST BE DOCUMENTED BELOW. USE FULL LEGAL SIGNATURE, DATE AND MILITARY TIME (24 HOUR CLOCK, I.E. 8AM IS 0800, 4 PM IS 1600)

RELINQUISHED BY SAMPLER	DATE	TIME	RECEIVED BY	DATE	TIME
1 [signature]	8/23/12	1540	1 [signature]	8/23/12	1540
2 [signature]	8/23/12	1700	2 CLR# 1,406	8/23/12	1700
3 1,406	82312	2030	3 [signature]	82312	2030
4			4		
5			5		

DELIVERY METHOD: ☐ QC COURIER ☐ CLIENT ☐ UPS ☐ FEDEX ☐ OTHER ___

Custody Seal Number 8/23/12

COMMENTS:

Analysis per Quote Q 23184.
"Metal" = TAL Metals
1664 Recd for 001 + 005
1664 NOT recd for 002, 006
CND 8/24/12

Hazardous: yes / no

41°F IAT 1 DAL Wood

FINAL REPORT

For example to aid completion, see reverse side.

QC Laboratories

1205 Industrial Blvd.
Southampton, PA 18966-0514
Phone: 215-355-3900
Fax: 215-355-7231

CHAIN OF CUSTODY

Page 2 of 2

Lab LIMS No: L4297938

Bill to/Report to: (if different)

Client/Acct. No. EASTSTAR

Address 10632 LITTLE PATUXENT PARKWAY SUIT 106

Sampling Site Address: (if different)

City/State/Zip COLUMBIA MD 21044

Phone/Fax 410290 8777

P.O. No.

Client Contact AL FREE

QC Contact

LAB USE ONLY:

___ Ascorbic/HCl Vials # 15 TD HCl Vials
___ $Na_2S_2O_3$
___ Na OH/Zn acetate pH
5 HNO_3 pH <2 1/2 PIPH
___ H_2SO_4 pH
5 NaOH pH >12 1/2 PIPH
~~5~~ CM 82312 Unpreserved 5-Qtgl
7 (2) Hcl pH <2 GIGT
35.0 Temp control 42 ID# QCCMR

MATRIX CODES

DW: DRINKING WATER
GW: GROUND WATER
WW: WASTEWATER
SO: SOIL
SL: SLUDGE
OIL: OIL
SOL: NON SOIL SOLID
MI: MISCELLANEOUS
X: OTHER

PROJECT / FIELD ID	Collection Date	Collection Military Time	GRAB	COMP	Matrix Code	Number of Containers: Total	H_2SO_4	HCl	Vials	HNO_3	NaOH	ZnAc	Unpre	BacT	ANALYSIS REQUESTED	Field pH, Temp (C or F), DO, Cl_2, S. Cond. etc.
I027-7D-009	8/23	1130	X		GW	6			X	X	X		X		VOC'S, PAH, METALS, CYANIDE	1
I027-7D-010		1130				6			X	X	X		X		VOC'S PAH, METALS, CYANIDE	1
I027-7S-011		1215				7		X	X	X	X		X		VOCs, PAH, METALS, CYANIDE, 1664	2
I027-6S-012		1315				7		X	X	X	X		X		VOCs, PAH, METALS CYANIDE, 1664	2
I027-6D-013		1400				6			X	X	X		X		VOC'S, PAH, METALS, CYANIDE	1

SAMPLED BY: (Name/Company) Josh Clough EASTSTAR

Verbal/fax data due: ___/___/___

Hardcopy due: ___/___/___

Report Format: ☐ Standard ☐ Forms ☐ Standard + QC ☐ NJ Reduced ☐ Disk

Please call for pricing and availability on rush (<14-21 day) turnaround and on all but standard format.

Field Parameters Analyzed By:

Sig:

Date/Time:

SAMPLE CUSTODY EXCHANGES MUST BE DOCUMENTED BELOW. USE FULL LEGAL SIGNATURE, DATE AND MILITARY TIME (24 HOUR CLOCK, I.E. 8AM IS 0800, 4 PM IS 1600)

RELINQUISHED BY SAMPLER	DATE	TIME	RECEIVED BY	DATE	TIME
1 [signature]	8/23/12	1540	1 [signature]	8/23/12	1540
2 [signature]	8/23/12	1700	2 CCR# 1,406	8/23/12	1700
3 1406	82312	2030	3 [signature]	82312	2030
4			4		
5			5		

DELIVERY METHOD: ☐ QC COURIER ☐ CLIENT ☐ UPS ☐ FEDEX ☐ OTHER

Custody Seal Number 8/23/12

COMMENTS:

Hazardous: yes / no

41° FLAT IDENTIFIED

For example to aid completion, see reverse side.

FINAL REPORT

QC Laboratories

1205 Industrial Highway, Southampton, PA 18966

EAST RUTHERFORD

Inter-Laboratory Transport Form: ER082312

Coolers for Transport **from EAST RUTHERFORD**

To be completed by person sealing coolers					Complete Section Upon Delivery	
Cooler ID No.	Custody Seal No.	Date	Time	Initials	Temp °F	Iced Y/N
Qa2.	0823/2-1	8/23/12	0715	SM2	31.0	Yes
224	1M,V6K	8/23/12	1300	SM2	45.7	Yes
17	0823/2-2	8/23/12	1400	SM2	31.6	Yes
1	0823/2-3	8/23/12	1630	DAC	35.0	Yes
X5	0823/2-4	8/23/12	1630	DAC	35.4	Yes
406	0823/2-5	8/23/12	1630	DAC	42.1	Yes
3	0823/2-6	8/23/12	1630	DAC	53.7	Yes
807	8/23/12	8/23/12	1700	RJ2	33.7	Yes
19	8/23/12-7	8/23/12	1700	MP	31.0	Yes
E9	082312	8-23-12	1800	ACA	32.9	Yes
	CM 82312					

Please Note the Following:

Individual sample chains of custody must accompany this form.

Once a cooler is sealed, custody seals may not be broken until samples are received at the designated QCL laboratory.

Laboratory use only

Custody Seals intact upon receipt? (Y) / N Initials: CM

List ID of any seal found broken upon receipt below:

A full legal signature is required. Record all times in military time (24-HR Clock; 4:00 PM=1600)

Relinquished by:	Date:	Time:		Received by:	Date:	Time:
	8-23-12	1800		RA	8-23-12	1800
Relinquished by:	Date:	Time:		Received by:	Date:	Time:
RA	8-23-12	2030		CM	82312	2030
Relinquished by:	Date:	Time:		Received by:	Date:	Time:
Relinquished by:	Date:	Time:		Received by:	Date:	Time:

QC Laboratories

Analytical Report

ACCREDITED IN ACCORDANCE WITH nelac

Printed: 09/12/12 11:24

AL FREE
EASTSTAR ENVIRONMENTAL GROUP, INC.
10632 LITTLE PATUXENT PARKWAY
SUITE 106
COLUMBIA, MD 21044

Regarding:
AL FREE
EASTSTAR ENVIRONMENTAL GROUP, INC.
10632 LITTLE PATUXENT PARKWAY
SUITE 106
COLUMBIA, MD 21044

Account No: SR0117, EASTSTAR ENVIRONMENTAL GROUP, INC. **P.O. No:** **Inv. No:**
Project No: SR0117, EASTSTAR ENVIRONMENTAL GROUP, INC. **PWSID No:**

Sample Number	Sample Description	Samp. Date/Time/Temp	Sampled by
L4297938-1	RAHWAY ARCH, I027-8S-001	08/22/12 11:40am NA F	Customer

Received Date/Time/Temp 08/23/12 08:30pm 35 F **Iced (Y/N):** Y

Parameter	Method	Result	RLs	Test Date, Time, Analyst
GENERAL CHEMISTRY				
HEXANE EXTR.-SGT (NON POLAR O+G)	1664ASGT@PHC	ND mg/l	5.00 mg/l	09/04/12 08:30AM RHB
CYANIDE, TOTAL	SM 4500CN C,E	0.0580 mg/l	0.0200 mg/l	08/30/12 01:00PM JG
METALS				
SILVER	EPA 200.7 Rev 4.4	0.00640 B mg/l	0.00510 mg/l*	09/07/12 10:31AM B B
ALUMINUM	EPA 200.7 Rev 4.4	ND mg/l	0.175 mg/l*	09/07/12 10:31AM B B
BARIUM	EPA 200.7 Rev 4.4	0.472 mg/l	0.00170 mg/l*	09/07/12 10:31AM B B
BERYLLIUM	EPA 200.7 Rev 4.4	0.00110 B mg/l	0.000353 mg/l*	09/07/12 10:31AM B B
CALCIUM	EPA 200.7 Rev 4.4	255 mg/l	0.0460 mg/l*	09/07/12 10:31AM B B
CADMIUM	EPA 200.7 Rev 4.4	ND mg/l	0.00110 mg/l*	09/07/12 10:31AM B B
COBALT	EPA 200.7 Rev 4.4	0.0175 B mg/l	0.00400 mg/l*	09/07/12 10:31AM B B
CHROMIUM	EPA 200.7 Rev 4.4	0.0104 B mg/l	0.00220 mg/l*	09/07/12 10:31AM B B
COPPER	EPA 200.7 Rev 4.4	0.0125 B mg/l	0.00310 mg/l*	09/07/12 10:31AM B B
IRON	EPA 200.7 Rev 4.4	2.31 mg/l	0.0359 mg/l*	09/07/12 10:31AM B B
POTASSIUM	EPA 200.7 Rev 4.4	172 mg/l	0.559 mg/l*	09/07/12 10:31AM B B
MAGNESIUM	EPA 200.7 Rev 4.4	786 mg/l	0.441 mg/l*	09/07/12 10:31AM B B
MANGANESE	EPA 200.7 Rev 4.4	5.33 mg/l	0.000786 mg/l*	09/07/12 10:31AM B B
NICKEL	EPA 200.7 Rev 4.4	ND mg/l	0.00340 mg/l*	09/07/12 10:31AM B B
LEAD	EPA 200.7 Rev 4.4	ND mg/l	0.0175 mg/l*	09/07/12 10:31AM B B
ANTIMONY	EPA 200.7 Rev 4.4	ND mg/l	0.0220 mg/l*	09/07/12 10:31AM B B
SELENIUM	EPA 200.7 Rev 4.4	ND mg/l	0.0517 mg/l*	09/07/12 10:31AM B B
THALLIUM	EPA 200.7 Rev 4.4	ND mg/l	0.0324 mg/l*	09/07/12 10:31AM B B
VANADIUM	EPA 200.7 Rev 4.4	ND mg/l	0.00260 mg/l*	09/07/12 10:31AM B B
ZINC	EPA 200.7 Rev 4.4	0.0322 B mg/l	0.00260 mg/l*	09/07/12 10:31AM B B
ARSENIC	EPA 200.7 Rev 4.4	0.0981 mg/l	0.0283 mg/l*	09/07/12 10:35AM B B
SODIUM	EPA 200.7 Rev 4.4	6540 mg/l	1.06 mg/l*	09/07/12 11:15AM B B
MERCURY	EPA 245.1 Rev 3.0	ND mg/l	0.0000130 mg/l*	09/01/12 02:33PM RBK

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Authorized by: Oommen V. Kappil, QA Director

1205 Industrial Blvd., P.O. Box 514, Southampton, PA 18966-0514 Phone: 215-355-3900 Fax: 215-355-7231 www.qclaboratories.com

QC Laboratories

Analytical Report

Account No: SR0117, EASTSTAR ENVIRONMENTAL GROUP, INC. **P.O. No:** **Inv. No:**
Project No: SR0117, EASTSTAR ENVIRONMENTAL GROUP, INC. **PWSID No:**

Sample Number **Sample Description** **Samp. Date/Time/Temp** **Sampled by**
L4297938-1 RAHWAY ARCH, I027-8S-001 08/22/12 11:40am NA F Customer
Received Date/Time/Temp 08/23/12 08:30pm 35 F **Iced (Y/N):** Y

Parameter	Method	Result	RLs	Test Date, Time, Analyst
GAS CHROMATOGRAPHY MASS SPECTROMETRY; SEMI-VOLATILES				
NAPHTHALENE	EPA 8270C	ND ug/l	0.01 ug/l*	09/05/12 02:12PM GRM
2-METHYLNAPHTHALENE	EPA 8270C	ND ug/l	0.01 ug/l*	09/05/12 02:12PM GRM
ACENAPHTHYLENE	EPA 8270C	ND ug/l	0.01 ug/l*	09/05/12 02:12PM GRM
ACENAPHTHENE	EPA 8270C	ND ug/l	0.01 ug/l*	09/05/12 02:12PM GRM
FLUORENE	EPA 8270C	ND ug/l	0.02 ug/l*	09/05/12 02:12PM GRM
PHENANTHRENE	EPA 8270C	ND ug/l	0.01 ug/l*	09/05/12 02:12PM GRM
ANTHRACENE	EPA 8270C	ND ug/l	0.01 ug/l*	09/05/12 02:12PM GRM
FLUORANTHENE	EPA 8270C	ND ug/l	0.02 ug/l*	09/05/12 02:12PM GRM
PYRENE	EPA 8270C	ND ug/l	0.02 ug/l*	09/05/12 02:12PM GRM
BENZO(A)ANTHRACENE	EPA 8270C	ND ug/l	0.01 ug/l*	09/05/12 02:12PM GRM
CHRYSENE	EPA 8270C	ND ug/l	0.01 ug/l*	09/05/12 02:12PM GRM
BENZO(B)FLUORANTHENE	EPA 8270C	ND ug/l	0.02 ug/l*	09/05/12 02:12PM GRM
BENZO(K)FLUORANTHENE	EPA 8270C	ND ug/l	0.02 ug/l*	09/05/12 02:12PM GRM
BENZO(A)PYRENE	EPA 8270C	ND ug/l	0.02 ug/l*	09/05/12 02:12PM GRM
INDENO(1,2,3-CD)PYRENE	EPA 8270C	ND ug/l	0.02 ug/l*	09/05/12 02:12PM GRM
DIBENZ(A,H)ANTHRACENE	EPA 8270C	ND ug/l	0.02 ug/l*	09/05/12 02:12PM GRM
BENZO(G,H,I)PERYLENE	EPA 8270C	ND ug/l	0.02 ug/l*	09/05/12 02:12PM GRM
GAS CHROMATOGRAPHY MASS SPECTROMETRY; VOLATILES				
DICHLORODIFLUOROMETHANE	EPA 8260B	ND ug/l	0.430 ug/l*	08/31/12 09:08PM JSH
CHLOROMETHANE	EPA 8260B	ND ug/l	0.320 ug/l*	08/31/12 09:08PM JSH
VINYL CHLORIDE	EPA 8260B	ND ug/l	0.240 ug/l*	08/31/12 09:08PM JSH
BROMOMETHANE	EPA 8260B	ND ug/l	0.460 ug/l*	08/31/12 09:08PM JSH
CHLOROETHANE	EPA 8260B	ND ug/l	0.340 ug/l*	08/31/12 09:08PM JSH
TRICHLOROFLUOROMETHANE	EPA 8260B	ND ug/l	0.380 ug/l*	08/31/12 09:08PM JSH
1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	EPA 8260B	ND ug/l	0.470 ug/l*	08/31/12 09:08PM JSH
METHYL ACETATE	EPA 8260B	ND ug/l	0.360 ug/l*	08/31/12 09:08PM JSH
1,1-DICHLOROETHENE	EPA 8260B	ND ug/l	0.310 ug/l*	08/31/12 09:08PM JSH
ACETONE	EPA 8260B	ND ug/l	3.26 ug/l*	08/31/12 09:08PM JSH
CARBON DISULFIDE	EPA 8260B	ND ug/l	0.640 ug/l*	08/31/12 09:08PM JSH
METHYLENE CHLORIDE	EPA 8260B	ND ug/l	0.500 ug/l*	08/31/12 09:08PM JSH
TRANS-1,2-DICHLOROETHENE	EPA 8260B	ND ug/l	0.140 ug/l*	08/31/12 09:08PM JSH
METHYL TERTIARY BUTYL ETHER	EPA 8260B	ND ug/l	0.200 ug/l*	08/31/12 09:08PM JSH
1,1-DICHLOROETHANE	EPA 8260B	ND ug/l	0.240 ug/l*	08/31/12 09:08PM JSH
2-BUTANONE	EPA 8260B	ND ug/l	1.44 ug/l*	08/31/12 09:08PM JSH
BROMOCHLOROMETHANE	EPA 8260B	ND ug/l	0.300 ug/l*	08/31/12 09:08PM JSH
CIS-1,2-DICHLOROETHENE	EPA 8260B	ND ug/l	0.280 ug/l*	08/31/12 09:08PM JSH
CHLOROFORM	EPA 8260B	ND ug/l	0.230 ug/l*	08/31/12 09:08PM JSH
1,1,1-TRICHLOROETHANE	EPA 8260B	ND ug/l	0.210 ug/l*	08/31/12 09:08PM JSH
CYCLOHEXANE	EPA 8260B	ND ug/l	0.440 ug/l*	08/31/12 09:08PM JSH
CARBON TETRACHLORIDE	EPA 8260B	ND ug/l	0.280 ug/l*	08/31/12 09:08PM JSH
BENZENE	EPA 8260B	ND ug/l	0.220 ug/l*	08/31/12 09:08PM JSH
1,2-DICHLOROETHANE	EPA 8260B	ND ug/l	0.240 ug/l*	08/31/12 09:08PM JSH
TRICHLOROETHENE	EPA 8260B	ND ug/l	0.250 ug/l*	08/31/12 09:08PM JSH
METHYLCYCLOHEXANE	EPA 8260B	ND ug/l	0.360 ug/l*	08/31/12 09:08PM JSH
1,2-DICHLOROPROPANE	EPA 8260B	ND ug/l	0.200 ug/l*	08/31/12 09:08PM JSH

Unserialized Copy

Oommen V. Kappil

Authorized by: Oommen V. Kappil, QA Director

Account No: SR0117, EASTSTAR ENVIRONMENTAL GROUP, INC. **P.O. No:** **Inv. No:**
Project No: SR0117, EASTSTAR ENVIRONMENTAL GROUP, INC. **PWSID No:**

Sample Number **Sample Description** **Samp. Date/Time/Temp** **Sampled by**
L4297938-1 RAHWAY ARCH, I027-8S-001 08/22/12 11:40am NA F Customer
Received Date/Time/Temp 08/23/12 08:30pm 35 F **Iced (Y/N):** Y

Parameter	Method	Result	RLs	Test Date, Time, Analyst
GAS CHROMATOGRAPHY MASS SPECTROMETRY; VOLATILES continued				
BROMODICHLOROMETHANE	EPA 8260B	ND ug/l	0.210 ug/l*	08/31/12 09:08PM JSH
4-METHYL-2-PENTANONE	EPA 8260B	ND ug/l	0.440 ug/l*	08/31/12 09:08PM JSH
CIS-1,3-DICHLOROPROPENE	EPA 8260B	ND ug/l	0.220 ug/l*	08/31/12 09:08PM JSH
TOLUENE	EPA 8260B	ND ug/l	0.190 ug/l*	08/31/12 09:08PM JSH
TRANS-1,3-DICHLOROPROPENE	EPA 8260B	ND ug/l	0.220 ug/l*	08/31/12 09:08PM JSH
1,1,2-TRICHLOROETHANE	EPA 8260B	ND ug/l	0.240 ug/l*	08/31/12 09:08PM JSH
2-HEXANONE	EPA 8260B	ND ug/l	0.830 ug/l*	08/31/12 09:08PM JSH
TETRACHLOROETHENE	EPA 8260B	ND ug/l	0.370 ug/l*	08/31/12 09:08PM JSH
DIBROMOCHLOROMETHANE	EPA 8260B	ND ug/l	0.140 ug/l*	08/31/12 09:08PM JSH
1,2-DIBROMOETHANE	EPA 8260B	ND ug/l	0.210 ug/l*	08/31/12 09:08PM JSH
CHLOROBENZENE	EPA 8260B	ND ug/l	0.230 ug/l*	08/31/12 09:08PM JSH
ETHYLBENZENE	EPA 8260B	ND ug/l	0.230 ug/l*	08/31/12 09:08PM JSH
M&P-XYLENES	EPA 8260B	ND ug/l	0.460 ug/l*	08/31/12 09:08PM JSH
O-XYLENE	EPA 8260B	ND ug/l	0.240 ug/l*	08/31/12 09:08PM JSH
STYRENE	EPA 8260B	ND ug/l	0.200 ug/l*	08/31/12 09:08PM JSH
BROMOFORM	EPA 8260B	ND ug/l	0.310 ug/l*	08/31/12 09:08PM JSH
1,1,2,2-TETRACHLOROETHANE	EPA 8260B	ND ug/l	0.320 ug/l*	08/31/12 09:08PM JSH
ISOPROPYLBENZENE	EPA 8260B	ND ug/l	0.270 ug/l*	08/31/12 09:08PM JSH
1,3-DICHLOROBENZENE	EPA 8260B	ND ug/l	0.210 ug/l*	08/31/12 09:08PM JSH
1,4-DICHLOROBENZENE	EPA 8260B	ND ug/l	0.170 ug/l*	08/31/12 09:08PM JSH
1,2-DICHLOROBENZENE	EPA 8260B	ND ug/l	0.200 ug/l*	08/31/12 09:08PM JSH
1,2-DIBROMO-3-CHLOROPROPANE	EPA 8260B	ND ug/l	0.470 ug/l*	08/31/12 09:08PM JSH
1,2,4-TRICHLOROBENZENE	EPA 8260B	ND ug/l	0.360 ug/l*	08/31/12 09:08PM JSH
1,2,3-TRICHLOROBENZENE	EPA 8260B	ND ug/l	0.310 ug/l*	08/31/12 09:08PM JSH
1,4-DIOXANE	EPA 8260B	ND ug/l	129 ug/l*	08/31/12 09:08PM JSH

Sample Number **Sample Description** **Samp. Date/Time/Temp** **Sampled by**
L4297938-2 I027-8S-002 08/22/12 01:15pm NA F Customer
Received Date/Time/Temp 08/23/12 08:30pm 35 F **Iced (Y/N):** Y

Parameter	Method	Result	RLs	Test Date, Time, Analyst
GENERAL CHEMISTRY				
CYANIDE, TOTAL	SM 4500CN C,E	ND mg/l	0.0200 mg/l	08/30/12 01:00PM JG
METALS				
SILVER	EPA 200.7 Rev 4.4	0.0112 B mg/l	0.00510 mg/l*	09/07/12 11:35AM B B
ALUMINUM	EPA 200.7 Rev 4.4	ND mg/l	0.175 mg/l*	09/07/12 11:35AM B B
ARSENIC	EPA 200.7 Rev 4.4	0.138 mg/l	0.0283 mg/l*	09/07/12 11:35AM B B
BARIUM	EPA 200.7 Rev 4.4	0.0660 B mg/l	0.00170 mg/l*	09/07/12 11:35AM B B
BERYLLIUM	EPA 200.7 Rev 4.4	0.00180 B mg/l	0.000353 mg/l*	09/07/12 11:35AM B B
CALCIUM	EPA 200.7 Rev 4.4	396 mg/l	0.0460 mg/l*	09/07/12 11:35AM B B
CADMIUM	EPA 200.7 Rev 4.4	ND mg/l	0.00110 mg/l*	09/07/12 11:35AM B B
COBALT	EPA 200.7 Rev 4.4	0.00410 B mg/l	0.00400 mg/l*	09/07/12 11:35AM B B
CHROMIUM	EPA 200.7 Rev 4.4	0.00290 B mg/l	0.00220 mg/l*	09/07/12 11:35AM B B
COPPER	EPA 200.7 Rev 4.4	0.0113 B mg/l	0.00310 mg/l*	09/07/12 11:35AM B B
IRON	EPA 200.7 Rev 4.4	5.84 mg/l	0.0359 mg/l*	09/07/12 11:35AM B B

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Authorized by: Oommen V. Kappil, QA Director

Account No: SR0117, EASTSTAR ENVIRONMENTAL GROUP, INC. **P.O. No:** **Inv. No:**
Project No: SR0117, EASTSTAR ENVIRONMENTAL GROUP, INC. **PWSID No:**

Sample Number **Sample Description** **Samp. Date/Time/Temp** **Sampled by**
L4297938-2 I027-8S-002 08/22/12 01:15pm NA F Customer
Received Date/Time/Temp 08/23/12 08:30pm 35 F **Iced (Y/N):** Y

Parameter	Method	Result	RLs	Test Date, Time, Analyst
METALS continued				
POTASSIUM	EPA 200.7 Rev 4.4	104 mg/l	0.559 mg/l*	09/07/12 11:35AM B B
MAGNESIUM	EPA 200.7 Rev 4.4	640 mg/l	0.441 mg/l*	09/07/12 11:35AM B B
MANGANESE	EPA 200.7 Rev 4.4	0.608 mg/l	0.000786 mg/l*	09/07/12 11:35AM B B
NICKEL	EPA 200.7 Rev 4.4	ND mg/l	0.00340 mg/l*	09/07/12 11:35AM B B
LEAD	EPA 200.7 Rev 4.4	ND mg/l	0.0175 mg/l*	09/07/12 11:35AM B B
ANTIMONY	EPA 200.7 Rev 4.4	0.0529 B mg/l	0.0220 mg/l*	09/07/12 11:35AM B B
SELENIUM	EPA 200.7 Rev 4.4	0.0717 B mg/l	0.0517 mg/l*	09/07/12 11:35AM B B
THALLIUM	EPA 200.7 Rev 4.4	ND mg/l	0.0324 mg/l*	09/07/12 11:35AM B B
VANADIUM	EPA 200.7 Rev 4.4	ND mg/l	0.00260 mg/l*	09/07/12 11:35AM B B
ZINC	EPA 200.7 Rev 4.4	0.0331 B mg/l	0.00260 mg/l*	09/07/12 11:35AM B B
SODIUM	EPA 200.7 Rev 4.4	6430 mg/l	1.06 mg/l*	09/07/12 01:12PM B B
MERCURY	EPA 245.1 Rev 3.0	0.0000210 B mg/l	0.0000130 mg/l*	09/01/12 02:35PM RBK
GAS CHROMATOGRAPHY MASS SPECTROMETRY; SEMI-VOLATILES				
NAPHTHALENE	EPA 8270C	0.02 ug/l	0.01 ug/l*	09/05/12 02:37PM GRM
2-METHYLNAPHTHALENE	EPA 8270C	0.02 ug/l	0.01 ug/l*	09/05/12 02:37PM GRM
ACENAPHTHYLENE	EPA 8270C	ND ug/l	0.01 ug/l*	09/05/12 02:37PM GRM
ACENAPHTHENE	EPA 8270C	0.02 ug/l	0.01 ug/l*	09/05/12 02:37PM GRM
FLUORENE	EPA 8270C	ND ug/l	0.02 ug/l*	09/05/12 02:37PM GRM
PHENANTHRENE	EPA 8270C	0.03 ug/l	0.01 ug/l*	09/05/12 02:37PM GRM
ANTHRACENE	EPA 8270C	0.02 ug/l	0.01 ug/l*	09/05/12 02:37PM GRM
FLUORANTHENE	EPA 8270C	ND ug/l	0.02 ug/l*	09/05/12 02:37PM GRM
PYRENE	EPA 8270C	ND ug/l	0.02 ug/l*	09/05/12 02:37PM GRM
BENZO(A)ANTHRACENE	EPA 8270C	0.02 ug/l	0.01 ug/l*	09/05/12 02:37PM GRM
CHRYSENE	EPA 8270C	0.01 ug/l	0.01 ug/l*	09/05/12 02:37PM GRM
BENZO(B)FLUORANTHENE	EPA 8270C	ND ug/l	0.02 ug/l*	09/05/12 02:37PM GRM
BENZO(K)FLUORANTHENE	EPA 8270C	ND ug/l	0.02 ug/l*	09/05/12 02:37PM GRM
BENZO(A)PYRENE	EPA 8270C	ND ug/l	0.02 ug/l*	09/05/12 02:37PM GRM
INDENO(1,2,3-CD)PYRENE	EPA 8270C	ND ug/l	0.02 ug/l*	09/05/12 02:37PM GRM
DIBENZ(A,H)ANTHRACENE	EPA 8270C	ND ug/l	0.02 ug/l*	09/05/12 02:37PM GRM
BENZO(G,H,I)PERYLENE	EPA 8270C	ND ug/l	0.02 ug/l*	09/05/12 02:37PM GRM
GAS CHROMATOGRAPHY MASS SPECTROMETRY; VOLATILES				
DICHLORODIFLUOROMETHANE	EPA 8260B	ND ug/l	0.430 ug/l*	09/01/12 03:32AM JSH
CHLOROMETHANE	EPA 8260B	ND ug/l	0.320 ug/l*	09/01/12 03:32AM JSH
VINYL CHLORIDE	EPA 8260B	ND ug/l	0.240 ug/l*	09/01/12 03:32AM JSH
BROMOMETHANE	EPA 8260B	0.610 JB ug/l	0.460 ug/l*	09/01/12 03:32AM JSH
CHLOROETHANE	EPA 8260B	ND ug/l	0.340 ug/l*	09/01/12 03:32AM JSH
TRICHLOROFLUOROMETHANE	EPA 8260B	ND ug/l	0.380 ug/l*	09/01/12 03:32AM JSH
1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	EPA 8260B	ND ug/l	0.470 ug/l*	09/01/12 03:32AM JSH
METHYL ACETATE	EPA 8260B	ND ug/l	0.360 ug/l*	09/01/12 03:32AM JSH
1,1-DICHLOROETHENE	EPA 8260B	ND ug/l	0.310 ug/l*	09/01/12 03:32AM JSH
ACETONE	EPA 8260B	ND ug/l	3.26 ug/l*	09/01/12 03:32AM JSH
CARBON DISULFIDE	EPA 8260B	ND ug/l	0.640 ug/l*	09/01/12 03:32AM JSH
METHYLENE CHLORIDE	EPA 8260B	ND ug/l	0.500 ug/l*	09/01/12 03:32AM JSH
TRANS-1,2-DICHLOROETHENE	EPA 8260B	ND ug/l	0.140 ug/l*	09/01/12 03:32AM JSH

Unserialized Copy

Authorized by: Oommen V. Kappil, QA Director

Account No: SR0117, EASTSTAR ENVIRONMENTAL GROUP, INC. **P.O. No:** **Inv. No:**
Project No: SR0117, EASTSTAR ENVIRONMENTAL GROUP, INC. **PWSID No:**

Sample Number **Sample Description** **Samp. Date/Time/Temp** **Sampled by**
L4297938-2 I027-8S-002 08/22/12 01:15pm NA F Customer
Received Date/Time/Temp 08/23/12 08:30pm 35 F **Iced (Y/N):** Y

Parameter	Method	Result	RLs	Test Date, Time, Analyst
GAS CHROMATOGRAPHY MASS SPECTROMETRY; VOLATILES continued				
METHYL TERTIARY BUTYL ETHER	EPA 8260B	ND ug/l	0.200 ug/l*	09/01/12 03:32AM JSH
1,1-DICHLOROETHANE	EPA 8260B	ND ug/l	0.240 ug/l*	09/01/12 03:32AM JSH
2-BUTANONE	EPA 8260B	ND ug/l	1.44 ug/l*	09/01/12 03:32AM JSH
BROMOCHLOROMETHANE	EPA 8260B	ND ug/l	0.300 ug/l*	09/01/12 03:32AM JSH
CIS-1,2-DICHLOROETHENE	EPA 8260B	ND ug/l	0.280 ug/l*	09/01/12 03:32AM JSH
CHLOROFORM	EPA 8260B	ND ug/l	0.230 ug/l*	09/01/12 03:32AM JSH
1,1,1-TRICHLOROETHANE	EPA 8260B	ND ug/l	0.210 ug/l*	09/01/12 03:32AM JSH
CYCLOHEXANE	EPA 8260B	ND ug/l	0.440 ug/l*	09/01/12 03:32AM JSH
CARBON TETRACHLORIDE	EPA 8260B	ND ug/l	0.280 ug/l*	09/01/12 03:32AM JSH
BENZENE	EPA 8260B	ND ug/l	0.220 ug/l*	09/01/12 03:32AM JSH
1,2-DICHLOROETHANE	EPA 8260B	ND ug/l	0.240 ug/l*	09/01/12 03:32AM JSH
TRICHLOROETHENE	EPA 8260B	ND ug/l	0.250 ug/l*	09/01/12 03:32AM JSH
METHYLCYCLOHEXANE	EPA 8260B	ND ug/l	0.360 ug/l*	09/01/12 03:32AM JSH
1,2-DICHLOROPROPANE	EPA 8260B	ND ug/l	0.200 ug/l*	09/01/12 03:32AM JSH
BROMODICHLOROMETHANE	EPA 8260B	ND ug/l	0.210 ug/l*	09/01/12 03:32AM JSH
4-METHYL-2-PENTANONE	EPA 8260B	ND ug/l	0.440 ug/l*	09/01/12 03:32AM JSH
CIS-1,3-DICHLOROPROPENE	EPA 8260B	ND ug/l	0.220 ug/l*	09/01/12 03:32AM JSH
TOLUENE	EPA 8260B	ND ug/l	0.190 ug/l*	09/01/12 03:32AM JSH
TRANS-1,3-DICHLOROPROPENE	EPA 8260B	ND ug/l	0.220 ug/l*	09/01/12 03:32AM JSH
1,1,2-TRICHLOROETHANE	EPA 8260B	ND ug/l	0.240 ug/l*	09/01/12 03:32AM JSH
2-HEXANONE	EPA 8260B	ND ug/l	0.830 ug/l*	09/01/12 03:32AM JSH
TETRACHLOROETHENE	EPA 8260B	ND ug/l	0.370 ug/l*	09/01/12 03:32AM JSH
DIBROMOCHLOROMETHANE	EPA 8260B	ND ug/l	0.140 ug/l*	09/01/12 03:32AM JSH
1,2-DIBROMOETHANE	EPA 8260B	ND ug/l	0.210 ug/l*	09/01/12 03:32AM JSH
CHLOROBENZENE	EPA 8260B	ND ug/l	0.230 ug/l*	09/01/12 03:32AM JSH
ETHYLBENZENE	EPA 8260B	ND ug/l	0.230 ug/l*	09/01/12 03:32AM JSH
M&P-XYLENES	EPA 8260B	ND ug/l	0.460 ug/l*	09/01/12 03:32AM JSH
O-XYLENE	EPA 8260B	ND ug/l	0.240 ug/l*	09/01/12 03:32AM JSH
STYRENE	EPA 8260B	ND ug/l	0.200 ug/l*	09/01/12 03:32AM JSH
BROMOFORM	EPA 8260B	ND ug/l	0.310 ug/l*	09/01/12 03:32AM JSH
1,1,2,2-TETRACHLOROETHANE	EPA 8260B	ND ug/l	0.320 ug/l*	09/01/12 03:32AM JSH
ISOPROPYLBENZENE	EPA 8260B	ND ug/l	0.270 ug/l*	09/01/12 03:32AM JSH
1,3-DICHLOROBENZENE	EPA 8260B	ND ug/l	0.210 ug/l*	09/01/12 03:32AM JSH
1,4-DICHLOROBENZENE	EPA 8260B	ND ug/l	0.170 ug/l*	09/01/12 03:32AM JSH
1,2-DICHLOROBENZENE	EPA 8260B	ND ug/l	0.200 ug/l*	09/01/12 03:32AM JSH
1,2-DIBROMO-3-CHLOROPROPANE	EPA 8260B	ND ug/l	0.470 ug/l*	09/01/12 03:32AM JSH
1,2,4-TRICHLOROBENZENE	EPA 8260B	ND ug/l	0.360 ug/l*	09/01/12 03:32AM JSH
1,2,3-TRICHLOROBENZENE	EPA 8260B	ND ug/l	0.310 ug/l*	09/01/12 03:32AM JSH
1,4-DIOXANE	EPA 8260B	ND ug/l	129 ug/l*	09/01/12 03:32AM JSH

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QC Laboratories

Analytical Report

Account No: SR0117, EASTSTAR ENVIRONMENTAL GROUP, INC. **P.O. No:** **Inv. No:**
Project No: SR0117, EASTSTAR ENVIRONMENTAL GROUP, INC. **PWSID No:**

Sample Number **Sample Description** **Samp. Date/Time/Temp** **Sampled by**
L4297938-3 I027-1D-003 08/22/12 03:20pm NA F Customer
Received Date/Time/Temp 08/23/12 08:30pm 35 F **Iced (Y/N):** Y

Parameter	Method	Result	RLs	Test Date, Time, Analyst
GENERAL CHEMISTRY				
CYANIDE, TOTAL	SM 4500CN C,E	ND mg/l	0.0200 mg/l	08/30/12 01:00PM JG
METALS				
SILVER	EPA 200.7 Rev 4.4	0.0347 mg/l	0.00510 mg/l*	09/07/12 11:38AM B B
ALUMINUM	EPA 200.7 Rev 4.4	ND mg/l	0.175 mg/l*	09/07/12 11:38AM B B
ARSENIC	EPA 200.7 Rev 4.4	0.287 mg/l	0.0283 mg/l*	09/07/12 11:38AM B B
BARIUM	EPA 200.7 Rev 4.4	0.0612 B mg/l	0.00170 mg/l*	09/07/12 11:38AM B B
BERYLLIUM	EPA 200.7 Rev 4.4	0.00140 B mg/l	0.000353 mg/l*	09/07/12 11:38AM B B
CALCIUM	EPA 200.7 Rev 4.4	2040 mg/l	0.0460 mg/l*	09/07/12 11:38AM B B
CADMIUM	EPA 200.7 Rev 4.4	ND mg/l	0.00110 mg/l*	09/07/12 11:38AM B B
COBALT	EPA 200.7 Rev 4.4	0.00670 B mg/l	0.00400 mg/l*	09/07/12 11:38AM B B
CHROMIUM	EPA 200.7 Rev 4.4	ND mg/l	0.00220 mg/l*	09/07/12 11:38AM B B
COPPER	EPA 200.7 Rev 4.4	0.00580 B mg/l	0.00310 mg/l*	09/07/12 11:38AM B B
IRON	EPA 200.7 Rev 4.4	34.2 mg/l	0.0359 mg/l*	09/07/12 11:38AM B B
POTASSIUM	EPA 200.7 Rev 4.4	29.1 mg/l	0.559 mg/l*	09/07/12 11:38AM B B
MAGNESIUM	EPA 200.7 Rev 4.4	535 mg/l	0.441 mg/l*	09/07/12 11:38AM B B
MANGANESE	EPA 200.7 Rev 4.4	4.60 mg/l	0.000786 mg/l*	09/07/12 11:38AM B B
SODIUM	EPA 200.7 Rev 4.4	3450 mg/l	0.106 mg/l*	09/07/12 11:38AM B B
NICKEL	EPA 200.7 Rev 4.4	ND mg/l	0.00340 mg/l*	09/07/12 11:38AM B B
LEAD	EPA 200.7 Rev 4.4	ND mg/l	0.0175 mg/l*	09/07/12 11:38AM B B
ANTIMONY	EPA 200.7 Rev 4.4	ND mg/l	0.0220 mg/l*	09/07/12 11:38AM B B
SELENIUM	EPA 200.7 Rev 4.4	0.148 mg/l	0.0517 mg/l*	09/07/12 11:38AM B B
THALLIUM	EPA 200.7 Rev 4.4	ND mg/l	0.0324 mg/l*	09/07/12 11:38AM B B
VANADIUM	EPA 200.7 Rev 4.4	ND mg/l	0.00260 mg/l*	09/07/12 11:38AM B B
ZINC	EPA 200.7 Rev 4.4	0.0758 mg/l	0.00260 mg/l*	09/07/12 11:38AM B B
MERCURY	EPA 245.1 Rev 3.0	0.0000230 B mg/l	0.0000130 mg/l*	09/01/12 02:37PM RBK
GAS CHROMATOGRAPHY MASS SPECTROMETRY; SEMI-VOLATILES				
NAPHTHALENE	EPA 8270C	0.02 ug/l	0.01 ug/l*	09/05/12 03:01PM GRM
2-METHYLNAPHTHALENE	EPA 8270C	0.03 ug/l	0.01 ug/l*	09/05/12 03:01PM GRM
ACENAPHTHYLENE	EPA 8270C	0.03 ug/l	0.01 ug/l*	09/05/12 03:01PM GRM
ACENAPHTHENE	EPA 8270C	0.03 ug/l	0.01 ug/l*	09/05/12 03:01PM GRM
FLUORENE	EPA 8270C	0.03 ug/l	0.02 ug/l*	09/05/12 03:01PM GRM
PHENANTHRENE	EPA 8270C	0.04 ug/l	0.01 ug/l*	09/05/12 03:01PM GRM
ANTHRACENE	EPA 8270C	0.03 ug/l	0.01 ug/l*	09/05/12 03:01PM GRM
FLUORANTHENE	EPA 8270C	0.03 ug/l	0.02 ug/l*	09/05/12 03:01PM GRM
PYRENE	EPA 8270C	0.03 ug/l	0.02 ug/l*	09/05/12 03:01PM GRM
BENZO(A)ANTHRACENE	EPA 8270C	0.03 ug/l	0.01 ug/l*	09/05/12 03:01PM GRM
CHRYSENE	EPA 8270C	0.03 ug/l	0.01 ug/l*	09/05/12 03:01PM GRM
BENZO(B)FLUORANTHENE	EPA 8270C	0.02 ug/l	0.02 ug/l*	09/05/12 03:01PM GRM
BENZO(K)FLUORANTHENE	EPA 8270C	0.02 ug/l	0.02 ug/l*	09/05/12 03:01PM GRM
BENZO(A)PYRENE	EPA 8270C	0.02 ug/l	0.02 ug/l*	09/05/12 03:01PM GRM
INDENO(1,2,3-CD)PYRENE	EPA 8270C	ND ug/l	0.02 ug/l*	09/05/12 03:01PM GRM
DIBENZ(A,H)ANTHRACENE	EPA 8270C	0.02 ug/l	0.02 ug/l*	09/05/12 03:01PM GRM
BENZO(G,H,I)PERYLENE	EPA 8270C	ND ug/l	0.02 ug/l*	09/05/12 03:01PM GRM

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Authorized by: Oommen V. Kappil, QA Director

Account No: SR0117, EASTSTAR ENVIRONMENTAL GROUP, INC. **P.O. No:** **Inv. No:**
Project No: SR0117, EASTSTAR ENVIRONMENTAL GROUP, INC. **PWSID No:**

Sample Number **Sample Description** **Samp. Date/Time/Temp** **Sampled by**
L4297938-3 I027-1D-003 08/22/12 03:20pm NA F Customer
Received Date/Time/Temp 08/23/12 08:30pm 35 F **Iced (Y/N):** Y

Parameter	Method	Result	RLs	Test Date, Time, Analyst
GAS CHROMATOGRAPHY MASS SPECTROMETRY; VOLATILES				
DICHLORODIFLUOROMETHANE	EPA 8260B	ND ug/l	0.430 ug/l*	09/01/12 04:07AM JSH
CHLOROMETHANE	EPA 8260B	ND ug/l	0.320 ug/l*	09/01/12 04:07AM JSH
VINYL CHLORIDE	EPA 8260B	ND ug/l	0.240 ug/l*	09/01/12 04:07AM JSH
BROMOMETHANE	EPA 8260B	ND ug/l	0.460 ug/l*	09/01/12 04:07AM JSH
CHLOROETHANE	EPA 8260B	ND ug/l	0.340 ug/l*	09/01/12 04:07AM JSH
TRICHLOROFLUOROMETHANE	EPA 8260B	ND ug/l	0.380 ug/l*	09/01/12 04:07AM JSH
1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	EPA 8260B	ND ug/l	0.470 ug/l*	09/01/12 04:07AM JSH
METHYL ACETATE	EPA 8260B	ND ug/l	0.360 ug/l*	09/01/12 04:07AM JSH
1,1-DICHLOROETHENE	EPA 8260B	ND ug/l	0.310 ug/l*	09/01/12 04:07AM JSH
ACETONE	EPA 8260B	ND ug/l	3.26 ug/l*	09/01/12 04:07AM JSH
CARBON DISULFIDE	EPA 8260B	ND ug/l	0.640 ug/l*	09/01/12 04:07AM JSH
METHYLENE CHLORIDE	EPA 8260B	ND ug/l	0.500 ug/l*	09/01/12 04:07AM JSH
TRANS-1,2-DICHLOROETHENE	EPA 8260B	ND ug/l	0.140 ug/l*	09/01/12 04:07AM JSH
METHYL TERTIARY BUTYL ETHER	EPA 8260B	ND ug/l	0.200 ug/l*	09/01/12 04:07AM JSH
1,1-DICHLOROETHANE	EPA 8260B	ND ug/l	0.240 ug/l*	09/01/12 04:07AM JSH
2-BUTANONE	EPA 8260B	ND ug/l	1.44 ug/l*	09/01/12 04:07AM JSH
BROMOCHLOROMETHANE	EPA 8260B	ND ug/l	0.300 ug/l*	09/01/12 04:07AM JSH
CIS-1,2-DICHLOROETHENE	EPA 8260B	ND ug/l	0.280 ug/l*	09/01/12 04:07AM JSH
CHLOROFORM	EPA 8260B	ND ug/l	0.230 ug/l*	09/01/12 04:07AM JSH
1,1,1-TRICHLOROETHANE	EPA 8260B	ND ug/l	0.210 ug/l*	09/01/12 04:07AM JSH
CYCLOHEXANE	EPA 8260B	ND ug/l	0.440 ug/l*	09/01/12 04:07AM JSH
CARBON TETRACHLORIDE	EPA 8260B	ND ug/l	0.280 ug/l*	09/01/12 04:07AM JSH
BENZENE	EPA 8260B	ND ug/l	0.220 ug/l*	09/01/12 04:07AM JSH
1,2-DICHLOROETHANE	EPA 8260B	ND ug/l	0.240 ug/l*	09/01/12 04:07AM JSH
TRICHLOROETHENE	EPA 8260B	ND ug/l	0.250 ug/l*	09/01/12 04:07AM JSH
METHYLCYCLOHEXANE	EPA 8260B	ND ug/l	0.360 ug/l*	09/01/12 04:07AM JSH
1,2-DICHLOROPROPANE	EPA 8260B	ND ug/l	0.200 ug/l*	09/01/12 04:07AM JSH
BROMODICHLOROMETHANE	EPA 8260B	ND ug/l	0.210 ug/l*	09/01/12 04:07AM JSH
4-METHYL-2-PENTANONE	EPA 8260B	ND ug/l	0.440 ug/l*	09/01/12 04:07AM JSH
CIS-1,3-DICHLOROPROPENE	EPA 8260B	ND ug/l	0.220 ug/l*	09/01/12 04:07AM JSH
TOLUENE	EPA 8260B	ND ug/l	0.190 ug/l*	09/01/12 04:07AM JSH
TRANS-1,3-DICHLOROPROPENE	EPA 8260B	ND ug/l	0.220 ug/l*	09/01/12 04:07AM JSH
1,1,2-TRICHLOROETHANE	EPA 8260B	ND ug/l	0.240 ug/l*	09/01/12 04:07AM JSH
2-HEXANONE	EPA 8260B	ND ug/l	0.830 ug/l*	09/01/12 04:07AM JSH
TETRACHLOROETHENE	EPA 8260B	ND ug/l	0.370 ug/l*	09/01/12 04:07AM JSH
DIBROMOCHLOROMETHANE	EPA 8260B	ND ug/l	0.140 ug/l*	09/01/12 04:07AM JSH
1,2-DIBROMOETHANE	EPA 8260B	ND ug/l	0.210 ug/l*	09/01/12 04:07AM JSH
CHLOROBENZENE	EPA 8260B	ND ug/l	0.230 ug/l*	09/01/12 04:07AM JSH
ETHYLBENZENE	EPA 8260B	ND ug/l	0.230 ug/l*	09/01/12 04:07AM JSH
M&P-XYLENES	EPA 8260B	ND ug/l	0.460 ug/l*	09/01/12 04:07AM JSH
O-XYLENE	EPA 8260B	ND ug/l	0.240 ug/l*	09/01/12 04:07AM JSH
STYRENE	EPA 8260B	ND ug/l	0.200 ug/l*	09/01/12 04:07AM JSH
BROMOFORM	EPA 8260B	ND ug/l	0.310 ug/l*	09/01/12 04:07AM JSH
1,1,2,2-TETRACHLOROETHANE	EPA 8260B	ND ug/l	0.320 ug/l*	09/01/12 04:07AM JSH
ISOPROPYLBENZENE	EPA 8260B	ND ug/l	0.270 ug/l*	09/01/12 04:07AM JSH
1,3-DICHLOROBENZENE	EPA 8260B	ND ug/l	0.210 ug/l*	09/01/12 04:07AM JSH
1,4-DICHLOROBENZENE	EPA 8260B	ND ug/l	0.170 ug/l*	09/01/12 04:07AM JSH

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Authorized by: Oommen V. Kappil, QA Director

Account No: SR0117, EASTSTAR ENVIRONMENTAL GROUP, INC. **P.O. No:** **Inv. No:**
Project No: SR0117, EASTSTAR ENVIRONMENTAL GROUP, INC. **PWSID No:**

Sample Number L4297938-3 **Sample Description** I027-1D-003 **Samp. Date/Time/Temp** 08/22/12 03:20pm NA F **Sampled by** Customer
Received Date/Time/Temp 08/23/12 08:30pm 35 F **Iced (Y/N):** Y

Parameter	Method	Result	RLs	Test Date, Time, Analyst
GAS CHROMATOGRAPHY MASS SPECTROMETRY; VOLATILES continued				
1,2-DICHLOROBENZENE	EPA 8260B	ND ug/l	0.200 ug/l*	09/01/12 04:07AM JSH
1,2-DIBROMO-3-CHLOROPROPANE	EPA 8260B	ND ug/l	0.470 ug/l*	09/01/12 04:07AM JSH
1,2,4-TRICHLOROBENZENE	EPA 8260B	ND ug/l	0.360 ug/l*	09/01/12 04:07AM JSH
1,2,3-TRICHLOROBENZENE	EPA 8260B	ND ug/l	0.310 ug/l*	09/01/12 04:07AM JSH
1,4-DIOXANE	EPA 8260B	ND ug/l	129 ug/l*	09/01/12 04:07AM JSH

Sample Number L4297938-4 **Sample Description** I027-1S-004 **Samp. Date/Time/Temp** 08/22/12 04:25pm NA F **Sampled by** Customer
Received Date/Time/Temp 08/23/12 08:30pm 35 F **Iced (Y/N):** Y

Parameter	Method	Result	RLs	Test Date, Time, Analyst
GENERAL CHEMISTRY				
HEXANE EXTR.-SGT (NON POLAR O+G)	1664ASGT@PHC	ND mg/l	5.00 mg/l	09/04/12 08:30AM RHB
CYANIDE, TOTAL	SM 4500CN C,E	ND mg/l	0.0200 mg/l	08/30/12 01:00PM JG
METALS				
SILVER	EPA 200.7 Rev 4.4	0.00690 B mg/l	0.00510 mg/l*	09/07/12 11:42AM B B
ALUMINUM	EPA 200.7 Rev 4.4	ND mg/l	0.175 mg/l*	09/07/12 11:42AM B B
ARSENIC	EPA 200.7 Rev 4.4	0.0669 B mg/l	0.0283 mg/l*	09/07/12 11:42AM B B
BARIUM	EPA 200.7 Rev 4.4	0.588 mg/l	0.00170 mg/l*	09/07/12 11:42AM B B
BERYLLIUM	EPA 200.7 Rev 4.4	0.00130 B mg/l	0.000353 mg/l*	09/07/12 11:42AM B B
CALCIUM	EPA 200.7 Rev 4.4	308 mg/l	0.0460 mg/l*	09/07/12 11:42AM B B
CADMIUM	EPA 200.7 Rev 4.4	ND mg/l	0.00110 mg/l*	09/07/12 11:42AM B B
COBALT	EPA 200.7 Rev 4.4	0.00550 B mg/l	0.00400 mg/l*	09/07/12 11:42AM B B
CHROMIUM	EPA 200.7 Rev 4.4	0.0118 B mg/l	0.00220 mg/l*	09/07/12 11:42AM B B
COPPER	EPA 200.7 Rev 4.4	0.0149 B mg/l	0.00310 mg/l*	09/07/12 11:42AM B B
IRON	EPA 200.7 Rev 4.4	2.75 mg/l	0.0359 mg/l*	09/07/12 11:42AM B B
POTASSIUM	EPA 200.7 Rev 4.4	218 mg/l	0.559 mg/l*	09/07/12 11:42AM B B
MAGNESIUM	EPA 200.7 Rev 4.4	797 mg/l	0.441 mg/l*	09/07/12 11:42AM B B
MANGANESE	EPA 200.7 Rev 4.4	2.40 mg/l	0.000786 mg/l*	09/07/12 11:42AM B B
NICKEL	EPA 200.7 Rev 4.4	ND mg/l	0.00340 mg/l*	09/07/12 11:42AM B B
LEAD	EPA 200.7 Rev 4.4	ND mg/l	0.0175 mg/l*	09/07/12 11:42AM B B
ANTIMONY	EPA 200.7 Rev 4.4	ND mg/l	0.0220 mg/l*	09/07/12 11:42AM B B
SELENIUM	EPA 200.7 Rev 4.4	ND mg/l	0.0517 mg/l*	09/07/12 11:42AM B B
THALLIUM	EPA 200.7 Rev 4.4	ND mg/l	0.0324 mg/l*	09/07/12 11:42AM B B
VANADIUM	EPA 200.7 Rev 4.4	0.0106 B mg/l	0.00260 mg/l*	09/07/12 11:42AM B B
ZINC	EPA 200.7 Rev 4.4	0.101 mg/l	0.00260 mg/l*	09/07/12 11:42AM B B
SODIUM	EPA 200.7 Rev 4.4	6590 mg/l	1.06 mg/l*	09/07/12 01:14PM B B
MERCURY	EPA 245.1 Rev 3.0	0.0000220 B mg/l	0.0000130 mg/l*	09/01/12 02:39PM RBK

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Authorized by: Oommen V. Kappil, QA Director

Account No: SR0117, EASTSTAR ENVIRONMENTAL GROUP, INC. **P.O. No:** **Inv. No:**
Project No: SR0117, EASTSTAR ENVIRONMENTAL GROUP, INC. **PWSID No:**

Sample Number **Sample Description** **Samp. Date/Time/Temp** **Sampled by**
L4297938-4 I027-1S-004 08/22/12 04:25pm NA F Customer
Received Date/Time/Temp 08/23/12 08:30pm 35 F **Iced (Y/N):** Y

Parameter	Method	Result	RLs	Test Date, Time, Analyst
GAS CHROMATOGRAPHY MASS SPECTROMETRY; SEMI-VOLATILES				
NAPHTHALENE	EPA 8270C	0.02 ug/l	0.01 ug/l*	09/05/12 03:26PM GRM
2-METHYLNAPHTHALENE	EPA 8270C	0.02 ug/l	0.01 ug/l*	09/05/12 03:26PM GRM
ACENAPHTHYLENE	EPA 8270C	ND ug/l	0.01 ug/l*	09/05/12 03:26PM GRM
ACENAPHTHENE	EPA 8270C	ND ug/l	0.01 ug/l*	09/05/12 03:26PM GRM
FLUORENE	EPA 8270C	ND ug/l	0.02 ug/l*	09/05/12 03:26PM GRM
PHENANTHRENE	EPA 8270C	0.02 ug/l	0.01 ug/l*	09/05/12 03:26PM GRM
ANTHRACENE	EPA 8270C	ND ug/l	0.01 ug/l*	09/05/12 03:26PM GRM
FLUORANTHENE	EPA 8270C	ND ug/l	0.02 ug/l*	09/05/12 03:26PM GRM
PYRENE	EPA 8270C	ND ug/l	0.02 ug/l*	09/05/12 03:26PM GRM
BENZO(A)ANTHRACENE	EPA 8270C	ND ug/l	0.01 ug/l*	09/05/12 03:26PM GRM
CHRYSENE	EPA 8270C	ND ug/l	0.01 ug/l*	09/05/12 03:26PM GRM
BENZO(B)FLUORANTHENE	EPA 8270C	ND ug/l	0.02 ug/l*	09/05/12 03:26PM GRM
BENZO(K)FLUORANTHENE	EPA 8270C	ND ug/l	0.02 ug/l*	09/05/12 03:26PM GRM
BENZO(A)PYRENE	EPA 8270C	ND ug/l	0.02 ug/l*	09/05/12 03:26PM GRM
INDENO(1,2,3-CD)PYRENE	EPA 8270C	ND ug/l	0.02 ug/l*	09/05/12 03:26PM GRM
DIBENZ(A,H)ANTHRACENE	EPA 8270C	ND ug/l	0.02 ug/l*	09/05/12 03:26PM GRM
BENZO(G,H,I)PERYLENE	EPA 8270C	ND ug/l	0.02 ug/l*	09/05/12 03:26PM GRM
GAS CHROMATOGRAPHY MASS SPECTROMETRY; VOLATILES				
DICHLORODIFLUOROMETHANE	EPA 8260B	ND ug/l	2.15 ug/l*	09/04/12 09:45PM JSH
CHLOROMETHANE	EPA 8260B	ND ug/l	1.60 ug/l*	09/04/12 09:45PM JSH
VINYL CHLORIDE	EPA 8260B	ND ug/l	1.20 ug/l*	09/04/12 09:45PM JSH
BROMOMETHANE	EPA 8260B	ND ug/l	2.30 ug/l*	09/04/12 09:45PM JSH
CHLOROETHANE	EPA 8260B	ND ug/l	1.70 ug/l*	09/04/12 09:45PM JSH
TRICHLOROFLUOROMETHANE	EPA 8260B	ND ug/l	1.90 ug/l*	09/04/12 09:45PM JSH
1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	EPA 8260B	ND ug/l	2.35 ug/l*	09/04/12 09:45PM JSH
METHYL ACETATE	EPA 8260B	ND ug/l	1.80 ug/l*	09/04/12 09:45PM JSH
1,1-DICHLOROETHENE	EPA 8260B	ND ug/l	1.55 ug/l*	09/04/12 09:45PM JSH
ACETONE	EPA 8260B	ND ug/l	16.3 ug/l*	09/04/12 09:45PM JSH
CARBON DISULFIDE	EPA 8260B	ND ug/l	3.20 ug/l*	09/04/12 09:45PM JSH
METHYLENE CHLORIDE	EPA 8260B	3.60 J ug/l	2.50 ug/l*	09/04/12 09:45PM JSH
TRANS-1,2-DICHLOROETHENE	EPA 8260B	ND ug/l	0.700 ug/l*	09/04/12 09:45PM JSH
METHYL TERTIARY BUTYL ETHER	EPA 8260B	ND ug/l	1.00 ug/l*	09/04/12 09:45PM JSH
1,1-DICHLOROETHANE	EPA 8260B	ND ug/l	1.20 ug/l*	09/04/12 09:45PM JSH
2-BUTANONE	EPA 8260B	ND ug/l	7.20 ug/l*	09/04/12 09:45PM JSH
BROMOCHLOROMETHANE	EPA 8260B	ND ug/l	1.50 ug/l*	09/04/12 09:45PM JSH
CIS-1,2-DICHLOROETHENE	EPA 8260B	ND ug/l	1.40 ug/l*	09/04/12 09:45PM JSH
CHLOROFORM	EPA 8260B	ND ug/l	1.15 ug/l*	09/04/12 09:45PM JSH
1,1,1-TRICHLOROETHANE	EPA 8260B	ND ug/l	1.05 ug/l*	09/04/12 09:45PM JSH
CYCLOHEXANE	EPA 8260B	ND ug/l	2.20 ug/l*	09/04/12 09:45PM JSH
CARBON TETRACHLORIDE	EPA 8260B	ND ug/l	1.40 ug/l*	09/04/12 09:45PM JSH
BENZENE	EPA 8260B	ND ug/l	1.10 ug/l*	09/04/12 09:45PM JSH
1,2-DICHLOROETHANE	EPA 8260B	ND ug/l	1.20 ug/l*	09/04/12 09:45PM JSH
TRICHLOROETHENE	EPA 8260B	ND ug/l	1.25 ug/l*	09/04/12 09:45PM JSH
METHYLCYCLOHEXANE	EPA 8260B	ND ug/l	1.80 ug/l*	09/04/12 09:45PM JSH
1,2-DICHLOROPROPANE	EPA 8260B	ND ug/l	1.00 ug/l*	09/04/12 09:45PM JSH

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Oommen V. Kappil

Authorized by: Oommen V. Kappil, QA Director

Account No: SR0117, EASTSTAR ENVIRONMENTAL GROUP, INC. **P.O. No:** **Inv. No:**
Project No: SR0117, EASTSTAR ENVIRONMENTAL GROUP, INC. **PWSID No:**

Sample Number **Sample Description** **Samp. Date/Time/Temp** **Sampled by**
L4297938-4 I027-1S-004 08/22/12 04:25pm NA F Customer
Received Date/Time/Temp 08/23/12 08:30pm 35 F **Iced (Y/N):** Y

Parameter	Method	Result	RLs	Test Date, Time, Analyst
GAS CHROMATOGRAPHY MASS SPECTROMETRY; VOLATILES continued				
BROMODICHLOROMETHANE	EPA 8260B	ND ug/l	1.05 ug/l*	09/04/12 09:45PM JSH
4-METHYL-2-PENTANONE	EPA 8260B	ND ug/l	2.20 ug/l*	09/04/12 09:45PM JSH
CIS-1,3-DICHLOROPROPENE	EPA 8260B	ND ug/l	1.10 ug/l*	09/04/12 09:45PM JSH
TOLUENE	EPA 8260B	ND ug/l	0.950 ug/l*	09/04/12 09:45PM JSH
TRANS-1,3-DICHLOROPROPENE	EPA 8260B	ND ug/l	1.10 ug/l*	09/04/12 09:45PM JSH
1,1,2-TRICHLOROETHANE	EPA 8260B	ND ug/l	1.20 ug/l*	09/04/12 09:45PM JSH
2-HEXANONE	EPA 8260B	ND ug/l	4.15 ug/l*	09/04/12 09:45PM JSH
TETRACHLOROETHENE	EPA 8260B	ND ug/l	1.85 ug/l*	09/04/12 09:45PM JSH
DIBROMOCHLOROMETHANE	EPA 8260B	ND ug/l	0.700 ug/l*	09/04/12 09:45PM JSH
1,2-DIBROMOETHANE	EPA 8260B	ND ug/l	1.05 ug/l*	09/04/12 09:45PM JSH
CHLOROBENZENE	EPA 8260B	ND ug/l	1.15 ug/l*	09/04/12 09:45PM JSH
ETHYLBENZENE	EPA 8260B	ND ug/l	1.15 ug/l*	09/04/12 09:45PM JSH
M&P-XYLENES	EPA 8260B	ND ug/l	2.30 ug/l*	09/04/12 09:45PM JSH
O-XYLENE	EPA 8260B	ND ug/l	1.20 ug/l*	09/04/12 09:45PM JSH
STYRENE	EPA 8260B	ND ug/l	1.00 ug/l*	09/04/12 09:45PM JSH
BROMOFORM	EPA 8260B	ND ug/l	1.55 ug/l*	09/04/12 09:45PM JSH
1,1,2,2-TETRACHLOROETHANE	EPA 8260B	ND ug/l	1.60 ug/l*	09/04/12 09:45PM JSH
ISOPROPYLBENZENE	EPA 8260B	ND ug/l	1.35 ug/l*	09/04/12 09:45PM JSH
1,3-DICHLOROBENZENE	EPA 8260B	ND ug/l	1.05 ug/l*	09/04/12 09:45PM JSH
1,4-DICHLOROBENZENE	EPA 8260B	ND ug/l	0.850 ug/l*	09/04/12 09:45PM JSH
1,2-DICHLOROBENZENE	EPA 8260B	ND ug/l	1.00 ug/l*	09/04/12 09:45PM JSH
1,2-DIBROMO-3-CHLOROPROPANE	EPA 8260B	ND ug/l	2.35 ug/l*	09/04/12 09:45PM JSH
1,2,4-TRICHLOROBENZENE	EPA 8260B	ND ug/l	1.80 ug/l*	09/04/12 09:45PM JSH
1,2,3-TRICHLOROBENZENE	EPA 8260B	ND ug/l	1.55 ug/l*	09/04/12 09:45PM JSH
1,4-DIOXANE	EPA 8260B	ND ug/l	643 ug/l*	09/04/12 09:45PM JSH

Sample Number **Sample Description** **Samp. Date/Time/Temp** **Sampled by**
L4297938-5 I027-5D-005 08/23/12 07:30am NA F Customer
Received Date/Time/Temp 08/23/12 08:30pm 35 F **Iced (Y/N):** Y

Parameter	Method	Result	RLs	Test Date, Time, Analyst
GENERAL CHEMISTRY				
HEXANE EXTR.-SGT (NON POLAR O+G)	1664ASGT@PHC	ND mg/l	5.00 mg/l	09/04/12 08:30AM RHB
CYANIDE, TOTAL	SM 4500CN C,E	ND mg/l	0.0200 mg/l	08/30/12 01:00PM JG
METALS				
SILVER	EPA 200.7 Rev 4.4	0.00740 B mg/l	0.00510 mg/l*	09/07/12 11:46AM B B
ALUMINUM	EPA 200.7 Rev 4.4	ND mg/l	0.175 mg/l*	09/07/12 11:46AM B B
BARIUM	EPA 200.7 Rev 4.4	0.141 mg/l	0.00170 mg/l*	09/07/12 11:46AM B B
BERYLLIUM	EPA 200.7 Rev 4.4	0.00120 B mg/l	0.000353 mg/l*	09/07/12 11:46AM B B
CALCIUM	EPA 200.7 Rev 4.4	420 mg/l	0.0460 mg/l*	09/07/12 11:46AM B B
CADMIUM	EPA 200.7 Rev 4.4	ND mg/l	0.00110 mg/l*	09/07/12 11:46AM B B
COBALT	EPA 200.7 Rev 4.4	ND mg/l	0.00400 mg/l*	09/07/12 11:46AM B B
CHROMIUM	EPA 200.7 Rev 4.4	0.00490 B mg/l	0.00220 mg/l*	09/07/12 11:46AM B B
COPPER	EPA 200.7 Rev 4.4	0.0107 B mg/l	0.00310 mg/l*	09/07/12 11:46AM B B

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Authorized by: Oommen V. Kappil, QA Director

Account No: SR0117, EASTSTAR ENVIRONMENTAL GROUP, INC. **P.O. No:** **Inv. No:**
Project No: SR0117, EASTSTAR ENVIRONMENTAL GROUP, INC. **PWSID No:**

Sample Number **Sample Description** **Samp. Date/Time/Temp** **Sampled by**
L4297938-5 I027-5D-005 08/23/12 07:30am NA F Customer

Received Date/Time/Temp 08/23/12 08:30pm 35 F **Iced (Y/N):** Y

Parameter	Method	Result	RLs	Test Date, Time, Analyst
METALS continued				
IRON	EPA 200.7 Rev 4.4	28.6 mg/l	0.0359 mg/l*	09/07/12 11:46AM B B
POTASSIUM	EPA 200.7 Rev 4.4	190 mg/l	0.559 mg/l*	09/07/12 11:46AM B B
MAGNESIUM	EPA 200.7 Rev 4.4	733 mg/l	0.441 mg/l*	09/07/12 11:46AM B B
MANGANESE	EPA 200.7 Rev 4.4	1.04 mg/l	0.000786 mg/l*	09/07/12 11:46AM B B
NICKEL	EPA 200.7 Rev 4.4	ND mg/l	0.00340 mg/l*	09/07/12 11:46AM B B
LEAD	EPA 200.7 Rev 4.4	ND mg/l	0.0175 mg/l*	09/07/12 11:46AM B B
ANTIMONY	EPA 200.7 Rev 4.4	ND mg/l	0.0220 mg/l*	09/07/12 11:46AM B B
SELENIUM	EPA 200.7 Rev 4.4	0.119 mg/l	0.0517 mg/l*	09/07/12 11:46AM B B
THALLIUM	EPA 200.7 Rev 4.4	ND mg/l	0.0324 mg/l*	09/07/12 11:46AM B B
VANADIUM	EPA 200.7 Rev 4.4	ND mg/l	0.00260 mg/l*	09/07/12 11:46AM B B
ZINC	EPA 200.7 Rev 4.4	0.0345 B mg/l	0.00260 mg/l*	09/07/12 11:46AM B B
ARSENIC	EPA 200.7 Rev 4.4	0.139 mg/l	0.0283 mg/l*	09/07/12 11:50AM B B
SODIUM	EPA 200.7 Rev 4.4	6310 mg/l	1.06 mg/l*	09/07/12 01:16PM B B
MERCURY	EPA 245.1 Rev 3.0	0.0000210 B mg/l	0.0000130 mg/l*	09/01/12 02:40PM RBK
GAS CHROMATOGRAPHY MASS SPECTROMETRY; SEMI-VOLATILES				
NAPHTHALENE	EPA 8270C	ND ug/l	0.01 ug/l*	09/05/12 03:51PM GRM
2-METHYLNAPHTHALENE	EPA 8270C	ND ug/l	0.01 ug/l*	09/05/12 03:51PM GRM
ACENAPHTHYLENE	EPA 8270C	ND ug/l	0.01 ug/l*	09/05/12 03:51PM GRM
ACENAPHTHENE	EPA 8270C	ND ug/l	0.01 ug/l*	09/05/12 03:51PM GRM
FLUORENE	EPA 8270C	ND ug/l	0.02 ug/l*	09/05/12 03:51PM GRM
PHENANTHRENE	EPA 8270C	ND ug/l	0.01 ug/l*	09/05/12 03:51PM GRM
ANTHRACENE	EPA 8270C	ND ug/l	0.01 ug/l*	09/05/12 03:51PM GRM
FLUORANTHENE	EPA 8270C	ND ug/l	0.02 ug/l*	09/05/12 03:51PM GRM
PYRENE	EPA 8270C	0.04 ug/l	0.02 ug/l*	09/05/12 03:51PM GRM
BENZO(A)ANTHRACENE	EPA 8270C	ND ug/l	0.01 ug/l*	09/05/12 03:51PM GRM
CHRYSENE	EPA 8270C	ND ug/l	0.01 ug/l*	09/05/12 03:51PM GRM
BENZO(B)FLUORANTHENE	EPA 8270C	ND ug/l	0.02 ug/l*	09/05/12 03:51PM GRM
BENZO(K)FLUORANTHENE	EPA 8270C	ND ug/l	0.02 ug/l*	09/05/12 03:51PM GRM
BENZO(A)PYRENE	EPA 8270C	ND ug/l	0.02 ug/l*	09/05/12 03:51PM GRM
INDENO(1,2,3-CD)PYRENE	EPA 8270C	ND ug/l	0.02 ug/l*	09/05/12 03:51PM GRM
DIBENZ(A,H)ANTHRACENE	EPA 8270C	ND ug/l	0.02 ug/l*	09/05/12 03:51PM GRM
BENZO(G,H,I)PERYLENE	EPA 8270C	ND ug/l	0.02 ug/l*	09/05/12 03:51PM GRM
GAS CHROMATOGRAPHY MASS SPECTROMETRY; VOLATILES				
DICHLORODIFLUOROMETHANE	EPA 8260B	ND ug/l	0.430 ug/l*	09/01/12 04:42AM JSH
CHLOROMETHANE	EPA 8260B	ND ug/l	0.320 ug/l*	09/01/12 04:42AM JSH
VINYL CHLORIDE	EPA 8260B	ND ug/l	0.240 ug/l*	09/01/12 04:42AM JSH
BROMOMETHANE	EPA 8260B	ND ug/l	0.460 ug/l*	09/01/12 04:42AM JSH
CHLOROETHANE	EPA 8260B	ND ug/l	0.340 ug/l*	09/01/12 04:42AM JSH
TRICHLOROFLUOROMETHANE	EPA 8260B	ND ug/l	0.380 ug/l*	09/01/12 04:42AM JSH
1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	EPA 8260B	ND ug/l	0.470 ug/l*	09/01/12 04:42AM JSH
METHYL ACETATE	EPA 8260B	ND ug/l	0.360 ug/l*	09/01/12 04:42AM JSH
1,1-DICHLOROETHENE	EPA 8260B	ND ug/l	0.310 ug/l*	09/01/12 04:42AM JSH
ACETONE	EPA 8260B	ND ug/l	3.26 ug/l*	09/01/12 04:42AM JSH
CARBON DISULFIDE	EPA 8260B	ND ug/l	0.640 ug/l*	09/01/12 04:42AM JSH

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Authorized by: Oommen V. Kappil, QA Director

Account No: SR0117, EASTSTAR ENVIRONMENTAL GROUP, INC. **P.O. No:** **Inv. No:**
Project No: SR0117, EASTSTAR ENVIRONMENTAL GROUP, INC. **PWSID No:**

Sample Number **Sample Description** **Samp. Date/Time/Temp** **Sampled by**
L4297938-5 I027-5D-005 08/23/12 07:30am NA F Customer

Received Date/Time/Temp 08/23/12 08:30pm 35 F **Iced (Y/N):** Y

GAS CHROMATOGRAPHY MASS SPECTROMETRY; VOLATILES continued

Parameter	Method	Result	RLs	Test Date, Time, Analyst
METHYLENE CHLORIDE	EPA 8260B	ND ug/l	0.500 ug/l*	09/01/12 04:42AM JSH
TRANS-1,2-DICHLOROETHENE	EPA 8260B	ND ug/l	0.140 ug/l*	09/01/12 04:42AM JSH
METHYL TERTIARY BUTYL ETHER	EPA 8260B	ND ug/l	0.200 ug/l*	09/01/12 04:42AM JSH
1,1-DICHLOROETHANE	EPA 8260B	ND ug/l	0.240 ug/l*	09/01/12 04:42AM JSH
2-BUTANONE	EPA 8260B	ND ug/l	1.44 ug/l*	09/01/12 04:42AM JSH
BROMOCHLOROMETHANE	EPA 8260B	ND ug/l	0.300 ug/l*	09/01/12 04:42AM JSH
CIS-1,2-DICHLOROETHENE	EPA 8260B	ND ug/l	0.280 ug/l*	09/01/12 04:42AM JSH
CHLOROFORM	EPA 8260B	ND ug/l	0.230 ug/l*	09/01/12 04:42AM JSH
1,1,1-TRICHLOROETHANE	EPA 8260B	ND ug/l	0.210 ug/l*	09/01/12 04:42AM JSH
CYCLOHEXANE	EPA 8260B	ND ug/l	0.440 ug/l*	09/01/12 04:42AM JSH
CARBON TETRACHLORIDE	EPA 8260B	ND ug/l	0.280 ug/l*	09/01/12 04:42AM JSH
BENZENE	EPA 8260B	ND ug/l	0.220 ug/l*	09/01/12 04:42AM JSH
1,2-DICHLOROETHANE	EPA 8260B	ND ug/l	0.240 ug/l*	09/01/12 04:42AM JSH
TRICHLOROETHENE	EPA 8260B	ND ug/l	0.250 ug/l*	09/01/12 04:42AM JSH
METHYLCYCLOHEXANE	EPA 8260B	ND ug/l	0.360 ug/l*	09/01/12 04:42AM JSH
1,2-DICHLOROPROPANE	EPA 8260B	ND ug/l	0.200 ug/l*	09/01/12 04:42AM JSH
BROMODICHLOROMETHANE	EPA 8260B	ND ug/l	0.210 ug/l*	09/01/12 04:42AM JSH
4-METHYL-2-PENTANONE	EPA 8260B	ND ug/l	0.440 ug/l*	09/01/12 04:42AM JSH
CIS-1,3-DICHLOROPROPENE	EPA 8260B	ND ug/l	0.220 ug/l*	09/01/12 04:42AM JSH
TOLUENE	EPA 8260B	ND ug/l	0.190 ug/l*	09/01/12 04:42AM JSH
TRANS-1,3-DICHLOROPROPENE	EPA 8260B	ND ug/l	0.220 ug/l*	09/01/12 04:42AM JSH
1,1,2-TRICHLOROETHANE	EPA 8260B	ND ug/l	0.240 ug/l*	09/01/12 04:42AM JSH
2-HEXANONE	EPA 8260B	ND ug/l	0.830 ug/l*	09/01/12 04:42AM JSH
TETRACHLOROETHENE	EPA 8260B	ND ug/l	0.370 ug/l*	09/01/12 04:42AM JSH
DIBROMOCHLOROMETHANE	EPA 8260B	ND ug/l	0.140 ug/l*	09/01/12 04:42AM JSH
1,2-DIBROMOETHANE	EPA 8260B	ND ug/l	0.210 ug/l*	09/01/12 04:42AM JSH
CHLOROBENZENE	EPA 8260B	ND ug/l	0.230 ug/l*	09/01/12 04:42AM JSH
ETHYLBENZENE	EPA 8260B	ND ug/l	0.230 ug/l*	09/01/12 04:42AM JSH
M&P-XYLENES	EPA 8260B	ND ug/l	0.460 ug/l*	09/01/12 04:42AM JSH
O-XYLENE	EPA 8260B	ND ug/l	0.240 ug/l*	09/01/12 04:42AM JSH
STYRENE	EPA 8260B	ND ug/l	0.200 ug/l*	09/01/12 04:42AM JSH
BROMOFORM	EPA 8260B	ND ug/l	0.310 ug/l*	09/01/12 04:42AM JSH
1,1,2,2-TETRACHLOROETHANE	EPA 8260B	ND ug/l	0.320 ug/l*	09/01/12 04:42AM JSH
ISOPROPYLBENZENE	EPA 8260B	ND ug/l	0.270 ug/l*	09/01/12 04:42AM JSH
1,3-DICHLOROBENZENE	EPA 8260B	ND ug/l	0.210 ug/l*	09/01/12 04:42AM JSH
1,4-DICHLOROBENZENE	EPA 8260B	ND ug/l	0.170 ug/l*	09/01/12 04:42AM JSH
1,2-DICHLOROBENZENE	EPA 8260B	ND ug/l	0.200 ug/l*	09/01/12 04:42AM JSH
1,2-DIBROMO-3-CHLOROPROPANE	EPA 8260B	ND ug/l	0.470 ug/l*	09/01/12 04:42AM JSH
1,2,4-TRICHLOROBENZENE	EPA 8260B	ND ug/l	0.360 ug/l*	09/01/12 04:42AM JSH
1,2,3-TRICHLOROBENZENE	EPA 8260B	ND ug/l	0.310 ug/l*	09/01/12 04:42AM JSH
1,4-DIOXANE	EPA 8260B	ND ug/l	129 ug/l*	09/01/12 04:42AM JSH

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Authorized by: Oommen V. Kappil, QA Director

QC Laboratories

Analytical Report

Account No: SR0117, EASTSTAR ENVIRONMENTAL GROUP, INC. **P.O. No:** **Inv. No:**
Project No: SR0117, EASTSTAR ENVIRONMENTAL GROUP, INC. **PWSID No:**

Sample Number **Sample Description** **Samp. Date/Time/Temp** **Sampled by**
L4297938-6 I027-5S-006 08/23/12 08:20am NA F Customer
Received Date/Time/Temp 08/23/12 08:30pm 35 F **Iced (Y/N):** Y

Parameter	Method	Result	RLs	Test Date, Time, Analyst
GENERAL CHEMISTRY				
CYANIDE, TOTAL	SM 4500CN C,E	0.0810 mg/l	0.0250 mg/l	08/30/12 01:00PM JG
METALS				
SILVER	EPA 200.7 Rev 4.4	0.00750 B mg/l	0.00510 mg/l*	09/07/12 11:53AM B B
ALUMINUM	EPA 200.7 Rev 4.4	ND mg/l	0.175 mg/l*	09/07/12 11:53AM B B
ARSENIC	EPA 200.7 Rev 4.4	0.0655 B mg/l	0.0283 mg/l*	09/07/12 11:53AM B B
BARIUM	EPA 200.7 Rev 4.4	0.248 mg/l	0.00170 mg/l*	09/07/12 11:53AM B B
BERYLLIUM	EPA 200.7 Rev 4.4	0.00140 B mg/l	0.000353 mg/l*	09/07/12 11:53AM B B
CALCIUM	EPA 200.7 Rev 4.4	298 mg/l	0.0460 mg/l*	09/07/12 11:53AM B B
CADMIUM	EPA 200.7 Rev 4.4	ND mg/l	0.00110 mg/l*	09/07/12 11:53AM B B
COBALT	EPA 200.7 Rev 4.4	0.00670 B mg/l	0.00400 mg/l*	09/07/12 11:53AM B B
CHROMIUM	EPA 200.7 Rev 4.4	0.0191 B mg/l	0.00220 mg/l*	09/07/12 11:53AM B B
COPPER	EPA 200.7 Rev 4.4	0.0390 mg/l	0.00310 mg/l*	09/07/12 11:53AM B B
IRON	EPA 200.7 Rev 4.4	1.30 mg/l	0.0359 mg/l*	09/07/12 11:53AM B B
POTASSIUM	EPA 200.7 Rev 4.4	233 mg/l	0.559 mg/l*	09/07/12 11:53AM B B
MAGNESIUM	EPA 200.7 Rev 4.4	777 mg/l	0.441 mg/l*	09/07/12 11:53AM B B
MANGANESE	EPA 200.7 Rev 4.4	0.00230 B mg/l	0.000786 mg/l*	09/07/12 11:53AM B B
NICKEL	EPA 200.7 Rev 4.4	ND mg/l	0.00340 mg/l*	09/07/12 11:53AM B B
LEAD	EPA 200.7 Rev 4.4	ND mg/l	0.0175 mg/l*	09/07/12 11:53AM B B
ANTIMONY	EPA 200.7 Rev 4.4	ND mg/l	0.0220 mg/l*	09/07/12 11:53AM B B
SELENIUM	EPA 200.7 Rev 4.4	0.0647 B mg/l	0.0517 mg/l*	09/07/12 11:53AM B B
THALLIUM	EPA 200.7 Rev 4.4	ND mg/l	0.0324 mg/l*	09/07/12 11:53AM B B
VANADIUM	EPA 200.7 Rev 4.4	0.00750 B mg/l	0.00260 mg/l*	09/07/12 11:53AM B B
ZINC	EPA 200.7 Rev 4.4	0.0472 B mg/l	0.00260 mg/l*	09/07/12 11:53AM B B
SODIUM	EPA 200.7 Rev 4.4	6710 mg/l	1.06 mg/l*	09/07/12 01:18PM B B
MERCURY	EPA 245.1 Rev 3.0	0.0000330 B mg/l	0.0000130 mg/l*	09/01/12 02:42PM RBK
GAS CHROMATOGRAPHY MASS SPECTROMETRY; SEMI-VOLATILES				
NAPHTHALENE	EPA 8270C	0.02 ug/l	0.01 ug/l*	09/05/12 04:16PM GRM
2-METHYLNAPHTHALENE	EPA 8270C	0.01 J ug/l	0.01 ug/l*	09/05/12 04:16PM GRM
ACENAPHTHYLENE	EPA 8270C	ND ug/l	0.01 ug/l*	09/05/12 04:16PM GRM
ACENAPHTHENE	EPA 8270C	0.02 ug/l	0.01 ug/l*	09/05/12 04:16PM GRM
FLUORENE	EPA 8270C	0.02 ug/l	0.02 ug/l*	09/05/12 04:16PM GRM
PHENANTHRENE	EPA 8270C	0.02 ug/l	0.01 ug/l*	09/05/12 04:16PM GRM
ANTHRACENE	EPA 8270C	ND ug/l	0.01 ug/l*	09/05/12 04:16PM GRM
FLUORANTHENE	EPA 8270C	0.02 ug/l	0.02 ug/l*	09/05/12 04:16PM GRM
PYRENE	EPA 8270C	ND ug/l	0.02 ug/l*	09/05/12 04:16PM GRM
BENZO(A)ANTHRACENE	EPA 8270C	ND ug/l	0.01 ug/l*	09/05/12 04:16PM GRM
CHRYSENE	EPA 8270C	ND ug/l	0.01 ug/l*	09/05/12 04:16PM GRM
BENZO(B)FLUORANTHENE	EPA 8270C	ND ug/l	0.02 ug/l*	09/05/12 04:16PM GRM
BENZO(K)FLUORANTHENE	EPA 8270C	ND ug/l	0.02 ug/l*	09/05/12 04:16PM GRM
BENZO(A)PYRENE	EPA 8270C	ND ug/l	0.02 ug/l*	09/05/12 04:16PM GRM
INDENO(1,2,3-CD)PYRENE	EPA 8270C	ND ug/l	0.02 ug/l*	09/05/12 04:16PM GRM
DIBENZ(A,H)ANTHRACENE	EPA 8270C	ND ug/l	0.02 ug/l*	09/05/12 04:16PM GRM
BENZO(G,H,I)PERYLENE	EPA 8270C	ND ug/l	0.02 ug/l*	09/05/12 04:16PM GRM

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Authorized by: Oommen V. Kappil, QA Director

Account No: SR0117, EASTSTAR ENVIRONMENTAL GROUP, INC. **P.O. No:** **Inv. No:**
Project No: SR0117, EASTSTAR ENVIRONMENTAL GROUP, INC. **PWSID No:**

Sample Number **Sample Description** **Samp. Date/Time/Temp** **Sampled by**
L4297938-6 I027-5S-006 08/23/12 08:20am NA F Customer
Received Date/Time/Temp 08/23/12 08:30pm 35 F **Iced (Y/N):** Y

Parameter	Method	Result	RLs	Test Date, Time, Analyst
GAS CHROMATOGRAPHY MASS SPECTROMETRY; VOLATILES				
DICHLORODIFLUOROMETHANE	EPA 8260B	ND ug/l	0.430 ug/l*	09/04/12 05:04PM JSH
CHLOROMETHANE	EPA 8260B	ND ug/l	0.320 ug/l*	09/04/12 05:04PM JSH
VINYL CHLORIDE	EPA 8260B	ND ug/l	0.240 ug/l*	09/04/12 05:04PM JSH
BROMOMETHANE	EPA 8260B	ND ug/l	0.460 ug/l*	09/04/12 05:04PM JSH
CHLOROETHANE	EPA 8260B	ND ug/l	0.340 ug/l*	09/04/12 05:04PM JSH
TRICHLOROFLUOROMETHANE	EPA 8260B	ND ug/l	0.380 ug/l*	09/04/12 05:04PM JSH
1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	EPA 8260B	ND ug/l	0.470 ug/l*	09/04/12 05:04PM JSH
METHYL ACETATE	EPA 8260B	ND ug/l	0.360 ug/l*	09/04/12 05:04PM JSH
1,1-DICHLOROETHENE	EPA 8260B	ND ug/l	0.310 ug/l*	09/04/12 05:04PM JSH
ACETONE	EPA 8260B	ND ug/l	3.26 ug/l*	09/04/12 05:04PM JSH
CARBON DISULFIDE	EPA 8260B	2.39 ug/l	0.640 ug/l*	09/04/12 05:04PM JSH
METHYLENE CHLORIDE	EPA 8260B	ND ug/l	0.500 ug/l*	09/04/12 05:04PM JSH
TRANS-1,2-DICHLOROETHENE	EPA 8260B	ND ug/l	0.140 ug/l*	09/04/12 05:04PM JSH
METHYL TERTIARY BUTYL ETHER	EPA 8260B	ND ug/l	0.200 ug/l*	09/04/12 05:04PM JSH
1,1-DICHLOROETHANE	EPA 8260B	ND ug/l	0.240 ug/l*	09/04/12 05:04PM JSH
2-BUTANONE	EPA 8260B	ND ug/l	1.44 ug/l*	09/04/12 05:04PM JSH
BROMOCHLOROMETHANE	EPA 8260B	ND ug/l	0.300 ug/l*	09/04/12 05:04PM JSH
CIS-1,2-DICHLOROETHENE	EPA 8260B	ND ug/l	0.280 ug/l*	09/04/12 05:04PM JSH
CHLOROFORM	EPA 8260B	ND ug/l	0.230 ug/l*	09/04/12 05:04PM JSH
1,1,1-TRICHLOROETHANE	EPA 8260B	ND ug/l	0.210 ug/l*	09/04/12 05:04PM JSH
CYCLOHEXANE	EPA 8260B	ND ug/l	0.440 ug/l*	09/04/12 05:04PM JSH
CARBON TETRACHLORIDE	EPA 8260B	ND ug/l	0.280 ug/l*	09/04/12 05:04PM JSH
BENZENE	EPA 8260B	ND ug/l	0.220 ug/l*	09/04/12 05:04PM JSH
1,2-DICHLOROETHANE	EPA 8260B	ND ug/l	0.240 ug/l*	09/04/12 05:04PM JSH
TRICHLOROETHENE	EPA 8260B	ND ug/l	0.250 ug/l*	09/04/12 05:04PM JSH
METHYLCYCLOHEXANE	EPA 8260B	ND ug/l	0.360 ug/l*	09/04/12 05:04PM JSH
1,2-DICHLOROPROPANE	EPA 8260B	ND ug/l	0.200 ug/l*	09/04/12 05:04PM JSH
BROMODICHLOROMETHANE	EPA 8260B	ND ug/l	0.210 ug/l*	09/04/12 05:04PM JSH
4-METHYL-2-PENTANONE	EPA 8260B	ND ug/l	0.440 ug/l*	09/04/12 05:04PM JSH
CIS-1,3-DICHLOROPROPENE	EPA 8260B	ND ug/l	0.220 ug/l*	09/04/12 05:04PM JSH
TOLUENE	EPA 8260B	ND ug/l	0.190 ug/l*	09/04/12 05:04PM JSH
TRANS-1,3-DICHLOROPROPENE	EPA 8260B	ND ug/l	0.220 ug/l*	09/04/12 05:04PM JSH
1,1,2-TRICHLOROETHANE	EPA 8260B	ND ug/l	0.240 ug/l*	09/04/12 05:04PM JSH
2-HEXANONE	EPA 8260B	ND ug/l	0.830 ug/l*	09/04/12 05:04PM JSH
TETRACHLOROETHENE	EPA 8260B	ND ug/l	0.370 ug/l*	09/04/12 05:04PM JSH
DIBROMOCHLOROMETHANE	EPA 8260B	ND ug/l	0.140 ug/l*	09/04/12 05:04PM JSH
1,2-DIBROMOETHANE	EPA 8260B	ND ug/l	0.210 ug/l*	09/04/12 05:04PM JSH
CHLOROBENZENE	EPA 8260B	ND ug/l	0.230 ug/l*	09/04/12 05:04PM JSH
ETHYLBENZENE	EPA 8260B	ND ug/l	0.230 ug/l*	09/04/12 05:04PM JSH
M&P-XYLENES	EPA 8260B	ND ug/l	0.460 ug/l*	09/04/12 05:04PM JSH
O-XYLENE	EPA 8260B	ND ug/l	0.240 ug/l*	09/04/12 05:04PM JSH
STYRENE	EPA 8260B	ND ug/l	0.200 ug/l*	09/04/12 05:04PM JSH
BROMOFORM	EPA 8260B	ND ug/l	0.310 ug/l*	09/04/12 05:04PM JSH
1,1,2,2-TETRACHLOROETHANE	EPA 8260B	ND ug/l	0.320 ug/l*	09/04/12 05:04PM JSH
ISOPROPYLBENZENE	EPA 8260B	ND ug/l	0.270 ug/l*	09/04/12 05:04PM JSH
1,3-DICHLOROBENZENE	EPA 8260B	ND ug/l	0.210 ug/l*	09/04/12 05:04PM JSH
1,4-DICHLOROBENZENE	EPA 8260B	ND ug/l	0.170 ug/l*	09/04/12 05:04PM JSH

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Authorized by: Oommen V. Kappil, QA Director

Account No: SR0117, EASTSTAR ENVIRONMENTAL GROUP, INC. **P.O. No:** **Inv. No:**
Project No: SR0117, EASTSTAR ENVIRONMENTAL GROUP, INC. **PWSID No:**

Sample Number L4297938-6 **Sample Description** I027-5S-006 **Samp. Date/Time/Temp** 08/23/12 08:20am NA F **Sampled by** Customer
Received Date/Time/Temp 08/23/12 08:30pm 35 F **Iced (Y/N):** Y

Parameter	Method	Result	RLs	Test Date, Time, Analyst
GAS CHROMATOGRAPHY MASS SPECTROMETRY; VOLATILES continued				
1,2-DICHLOROBENZENE	EPA 8260B	ND ug/l	0.200 ug/l*	09/04/12 05:04PM JSH
1,2-DIBROMO-3-CHLOROPROPANE	EPA 8260B	ND ug/l	0.470 ug/l*	09/04/12 05:04PM JSH
1,2,4-TRICHLOROBENZENE	EPA 8260B	ND ug/l	0.360 ug/l*	09/04/12 05:04PM JSH
1,2,3-TRICHLOROBENZENE	EPA 8260B	ND ug/l	0.310 ug/l*	09/04/12 05:04PM JSH
1,4-DIOXANE	EPA 8260B	ND ug/l	129 ug/l*	09/04/12 05:04PM JSH

Sample Number L4297938-7 **Sample Description** I027-4D-007 **Samp. Date/Time/Temp** 08/23/12 08:20am NA F **Sampled by** Customer
Received Date/Time/Temp 08/23/12 08:30pm 35 F **Iced (Y/N):** Y

Parameter	Method	Result	RLs	Test Date, Time, Analyst
GENERAL CHEMISTRY				
CYANIDE, TOTAL	SM 4500CN C,E	0.391 mg/l	0.0800 mg/l	08/30/12 01:00PM JG
METALS				
SILVER	EPA 200.7 Rev 4.4	0.0295 mg/l	0.00510 mg/l*	09/07/12 11:57AM B B
ALUMINUM	EPA 200.7 Rev 4.4	0.207 B mg/l	0.175 mg/l*	09/07/12 11:57AM B B
BARIUM	EPA 200.7 Rev 4.4	0.0535 B mg/l	0.00170 mg/l*	09/07/12 11:57AM B B
BERYLLIUM	EPA 200.7 Rev 4.4	0.00140 B mg/l	0.000353 mg/l*	09/07/12 11:57AM B B
CALCIUM	EPA 200.7 Rev 4.4	1810 mg/l	0.0460 mg/l*	09/07/12 11:57AM B B
CADMIUM	EPA 200.7 Rev 4.4	ND mg/l	0.00110 mg/l*	09/07/12 11:57AM B B
COBALT	EPA 200.7 Rev 4.4	0.00760 B mg/l	0.00400 mg/l*	09/07/12 11:57AM B B
CHROMIUM	EPA 200.7 Rev 4.4	ND mg/l	0.00220 mg/l*	09/07/12 11:57AM B B
COPPER	EPA 200.7 Rev 4.4	0.00700 B mg/l	0.00310 mg/l*	09/07/12 11:57AM B B
IRON	EPA 200.7 Rev 4.4	17.8 mg/l	0.0359 mg/l*	09/07/12 11:57AM B B
POTASSIUM	EPA 200.7 Rev 4.4	47.8 mg/l	0.559 mg/l*	09/07/12 11:57AM B B
MAGNESIUM	EPA 200.7 Rev 4.4	576 mg/l	0.441 mg/l*	09/07/12 11:57AM B B
MANGANESE	EPA 200.7 Rev 4.4	0.835 mg/l	0.000786 mg/l*	09/07/12 11:57AM B B
SODIUM	EPA 200.7 Rev 4.4	4550 mg/l	0.106 mg/l*	09/07/12 11:57AM B B
NICKEL	EPA 200.7 Rev 4.4	ND mg/l	0.00340 mg/l*	09/07/12 11:57AM B B
LEAD	EPA 200.7 Rev 4.4	ND mg/l	0.0175 mg/l*	09/07/12 11:57AM B B
ANTIMONY	EPA 200.7 Rev 4.4	ND mg/l	0.0220 mg/l*	09/07/12 11:57AM B B
SELENIUM	EPA 200.7 Rev 4.4	0.183 mg/l	0.0517 mg/l*	09/07/12 11:57AM B B
THALLIUM	EPA 200.7 Rev 4.4	ND mg/l	0.0324 mg/l*	09/07/12 11:57AM B B
VANADIUM	EPA 200.7 Rev 4.4	ND mg/l	0.00260 mg/l*	09/07/12 11:57AM B B
ZINC	EPA 200.7 Rev 4.4	0.0658 mg/l	0.00260 mg/l*	09/07/12 11:57AM B B
ARSENIC	EPA 200.7 Rev 4.4	0.425 mg/l	0.0566 mg/l*	09/07/12 12:13PM B B
MERCURY	EPA 245.1 Rev 3.0	0.0000300 B mg/l	0.0000130 mg/l*	09/01/12 02:47PM RBK

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Authorized by: Oommen V. Kappil, QA Director

Account No: SR0117, EASTSTAR ENVIRONMENTAL GROUP, INC. **P.O. No:** **Inv. No:**
Project No: SR0117, EASTSTAR ENVIRONMENTAL GROUP, INC. **PWSID No:**

Sample Number **Sample Description** **Samp. Date/Time/Temp** **Sampled by**
L4297938-7 I027-4D-007 08/23/12 08:20am NA F Customer
Received Date/Time/Temp 08/23/12 08:30pm 35 F **Iced (Y/N):** Y

Parameter	Method	Result	RLs	Test Date, Time, Analyst
GAS CHROMATOGRAPHY MASS SPECTROMETRY; SEMI-VOLATILES				
NAPHTHALENE	EPA 8270C	ND ug/l	0.01 ug/l*	09/05/12 04:41PM GRM
2-METHYLNAPHTHALENE	EPA 8270C	ND ug/l	0.01 ug/l*	09/05/12 04:41PM GRM
ACENAPHTHYLENE	EPA 8270C	ND ug/l	0.01 ug/l*	09/05/12 04:41PM GRM
ACENAPHTHENE	EPA 8270C	ND ug/l	0.01 ug/l*	09/05/12 04:41PM GRM
FLUORENE	EPA 8270C	ND ug/l	0.02 ug/l*	09/05/12 04:41PM GRM
PHENANTHRENE	EPA 8270C	ND ug/l	0.01 ug/l*	09/05/12 04:41PM GRM
ANTHRACENE	EPA 8270C	ND ug/l	0.01 ug/l*	09/05/12 04:41PM GRM
FLUORANTHENE	EPA 8270C	ND ug/l	0.02 ug/l*	09/05/12 04:41PM GRM
PYRENE	EPA 8270C	ND ug/l	0.02 ug/l*	09/05/12 04:41PM GRM
BENZO(A)ANTHRACENE	EPA 8270C	ND ug/l	0.01 ug/l*	09/05/12 04:41PM GRM
CHRYSENE	EPA 8270C	ND ug/l	0.01 ug/l*	09/05/12 04:41PM GRM
BENZO(B)FLUORANTHENE	EPA 8270C	ND ug/l	0.02 ug/l*	09/05/12 04:41PM GRM
BENZO(K)FLUORANTHENE	EPA 8270C	ND ug/l	0.02 ug/l*	09/05/12 04:41PM GRM
BENZO(A)PYRENE	EPA 8270C	ND ug/l	0.02 ug/l*	09/05/12 04:41PM GRM
INDENO(1,2,3-CD)PYRENE	EPA 8270C	ND ug/l	0.02 ug/l*	09/05/12 04:41PM GRM
DIBENZ(A,H)ANTHRACENE	EPA 8270C	ND ug/l	0.02 ug/l*	09/05/12 04:41PM GRM
BENZO(G,H,I)PERYLENE	EPA 8270C	ND ug/l	0.02 ug/l*	09/05/12 04:41PM GRM
GAS CHROMATOGRAPHY MASS SPECTROMETRY; VOLATILES				
DICHLORODIFLUOROMETHANE	EPA 8260B	ND ug/l	0.430 ug/l*	09/01/12 05:17AM JSH
CHLOROMETHANE	EPA 8260B	ND ug/l	0.320 ug/l*	09/01/12 05:17AM JSH
VINYL CHLORIDE	EPA 8260B	ND ug/l	0.240 ug/l*	09/01/12 05:17AM JSH
BROMOMETHANE	EPA 8260B	ND ug/l	0.460 ug/l*	09/01/12 05:17AM JSH
CHLOROETHANE	EPA 8260B	ND ug/l	0.340 ug/l*	09/01/12 05:17AM JSH
TRICHLOROFLUOROMETHANE	EPA 8260B	ND ug/l	0.380 ug/l*	09/01/12 05:17AM JSH
1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	EPA 8260B	ND ug/l	0.470 ug/l*	09/01/12 05:17AM JSH
METHYL ACETATE	EPA 8260B	ND ug/l	0.360 ug/l*	09/01/12 05:17AM JSH
1,1-DICHLOROETHENE	EPA 8260B	ND ug/l	0.310 ug/l*	09/01/12 05:17AM JSH
ACETONE	EPA 8260B	ND ug/l	3.26 ug/l*	09/01/12 05:17AM JSH
CARBON DISULFIDE	EPA 8260B	ND ug/l	0.640 ug/l*	09/01/12 05:17AM JSH
METHYLENE CHLORIDE	EPA 8260B	ND ug/l	0.500 ug/l*	09/01/12 05:17AM JSH
TRANS-1,2-DICHLOROETHENE	EPA 8260B	ND ug/l	0.140 ug/l*	09/01/12 05:17AM JSH
METHYL TERTIARY BUTYL ETHER	EPA 8260B	ND ug/l	0.200 ug/l*	09/01/12 05:17AM JSH
1,1-DICHLOROETHANE	EPA 8260B	ND ug/l	0.240 ug/l*	09/01/12 05:17AM JSH
2-BUTANONE	EPA 8260B	ND ug/l	1.44 ug/l*	09/01/12 05:17AM JSH
BROMOCHLOROMETHANE	EPA 8260B	ND ug/l	0.300 ug/l*	09/01/12 05:17AM JSH
CIS-1,2-DICHLOROETHENE	EPA 8260B	ND ug/l	0.280 ug/l*	09/01/12 05:17AM JSH
CHLOROFORM	EPA 8260B	ND ug/l	0.230 ug/l*	09/01/12 05:17AM JSH
1,1,1-TRICHLOROETHANE	EPA 8260B	ND ug/l	0.210 ug/l*	09/01/12 05:17AM JSH
CYCLOHEXANE	EPA 8260B	ND ug/l	0.440 ug/l*	09/01/12 05:17AM JSH
CARBON TETRACHLORIDE	EPA 8260B	ND ug/l	0.280 ug/l*	09/01/12 05:17AM JSH
BENZENE	EPA 8260B	ND ug/l	0.220 ug/l*	09/01/12 05:17AM JSH
1,2-DICHLOROETHANE	EPA 8260B	ND ug/l	0.240 ug/l*	09/01/12 05:17AM JSH
TRICHLOROETHENE	EPA 8260B	ND ug/l	0.250 ug/l*	09/01/12 05:17AM JSH
METHYLCYCLOHEXANE	EPA 8260B	ND ug/l	0.360 ug/l*	09/01/12 05:17AM JSH
1,2-DICHLOROPROPANE	EPA 8260B	ND ug/l	0.200 ug/l*	09/01/12 05:17AM JSH

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Authorized by: Oommen V. Kappil, QA Director

Account No: SR0117, EASTSTAR ENVIRONMENTAL GROUP, INC. **P.O. No:** **Inv. No:**
Project No: SR0117, EASTSTAR ENVIRONMENTAL GROUP, INC. **PWSID No:**

Sample Number **Sample Description** **Samp. Date/Time/Temp** **Sampled by**
L4297938-7 I027-4D-007 08/23/12 08:20am NA F Customer
Received Date/Time/Temp 08/23/12 08:30pm 35 F **Iced (Y/N):** Y

Parameter	Method	Result	RLs	Test Date, Time, Analyst
GAS CHROMATOGRAPHY MASS SPECTROMETRY; VOLATILES continued				
BROMODICHLOROMETHANE	EPA 8260B	ND ug/l	0.210 ug/l*	09/01/12 05:17AM JSH
4-METHYL-2-PENTANONE	EPA 8260B	ND ug/l	0.440 ug/l*	09/01/12 05:17AM JSH
CIS-1,3-DICHLOROPROPENE	EPA 8260B	ND ug/l	0.220 ug/l*	09/01/12 05:17AM JSH
TOLUENE	EPA 8260B	ND ug/l	0.190 ug/l*	09/01/12 05:17AM JSH
TRANS-1,3-DICHLOROPROPENE	EPA 8260B	ND ug/l	0.220 ug/l*	09/01/12 05:17AM JSH
1,1,2-TRICHLOROETHANE	EPA 8260B	ND ug/l	0.240 ug/l*	09/01/12 05:17AM JSH
2-HEXANONE	EPA 8260B	ND ug/l	0.830 ug/l*	09/01/12 05:17AM JSH
TETRACHLOROETHENE	EPA 8260B	ND ug/l	0.370 ug/l*	09/01/12 05:17AM JSH
DIBROMOCHLOROMETHANE	EPA 8260B	ND ug/l	0.140 ug/l*	09/01/12 05:17AM JSH
1,2-DIBROMOETHANE	EPA 8260B	ND ug/l	0.210 ug/l*	09/01/12 05:17AM JSH
CHLOROBENZENE	EPA 8260B	ND ug/l	0.230 ug/l*	09/01/12 05:17AM JSH
ETHYLBENZENE	EPA 8260B	ND ug/l	0.230 ug/l*	09/01/12 05:17AM JSH
M&P-XYLENES	EPA 8260B	ND ug/l	0.460 ug/l*	09/01/12 05:17AM JSH
O-XYLENE	EPA 8260B	ND ug/l	0.240 ug/l*	09/01/12 05:17AM JSH
STYRENE	EPA 8260B	ND ug/l	0.200 ug/l*	09/01/12 05:17AM JSH
BROMOFORM	EPA 8260B	ND ug/l	0.310 ug/l*	09/01/12 05:17AM JSH
1,1,2,2-TETRACHLOROETHANE	EPA 8260B	ND ug/l	0.320 ug/l*	09/01/12 05:17AM JSH
ISOPROPYLBENZENE	EPA 8260B	ND ug/l	0.270 ug/l*	09/01/12 05:17AM JSH
1,3-DICHLOROBENZENE	EPA 8260B	ND ug/l	0.210 ug/l*	09/01/12 05:17AM JSH
1,4-DICHLOROBENZENE	EPA 8260B	ND ug/l	0.170 ug/l*	09/01/12 05:17AM JSH
1,2-DICHLOROBENZENE	EPA 8260B	ND ug/l	0.200 ug/l*	09/01/12 05:17AM JSH
1,2-DIBROMO-3-CHLOROPROPANE	EPA 8260B	ND ug/l	0.470 ug/l*	09/01/12 05:17AM JSH
1,2,4-TRICHLOROBENZENE	EPA 8260B	ND ug/l	0.360 ug/l*	09/01/12 05:17AM JSH
1,2,3-TRICHLOROBENZENE	EPA 8260B	ND ug/l	0.310 ug/l*	09/01/12 05:17AM JSH
1,4-DIOXANE	EPA 8260B	ND ug/l	129 ug/l*	09/01/12 05:17AM JSH

Sample Number **Sample Description** **Samp. Date/Time/Temp** **Sampled by**
L4297938-8 I027-4S-008 08/23/12 10:25am NA F Customer
Received Date/Time/Temp 08/23/12 08:30pm 35 F **Iced (Y/N):** Y

Parameter	Method	Result	RLs	Test Date, Time, Analyst
GENERAL CHEMISTRY				
HEXANE EXTR.-SGT (NON POLAR O+G)	1664ASGT@PHC	ND mg/l	5.00 mg/l	09/04/12 08:30AM RHB
CYANIDE, TOTAL	SM 4500CN C,E	12.4 mg/l	2.00 mg/l	09/04/12 12:00PM JG
METALS				
SILVER	EPA 200.7 Rev 4.4	0.0250 mg/l	0.00510 mg/l*	09/07/12 12:15PM B B
ALUMINUM	EPA 200.7 Rev 4.4	0.260 B mg/l	0.175 mg/l*	09/07/12 12:15PM B B
ARSENIC	EPA 200.7 Rev 4.4	0.332 mg/l	0.0283 mg/l*	09/07/12 12:15PM B B
BARIUM	EPA 200.7 Rev 4.4	0.0319 B mg/l	0.00170 mg/l*	09/07/12 12:15PM B B
BERYLLIUM	EPA 200.7 Rev 4.4	0.00190 B mg/l	0.000353 mg/l*	09/07/12 12:15PM B B
CALCIUM	EPA 200.7 Rev 4.4	1150 mg/l	0.0460 mg/l*	09/07/12 12:15PM B B
CADMIUM	EPA 200.7 Rev 4.4	ND mg/l	0.00110 mg/l*	09/07/12 12:15PM B B
COBALT	EPA 200.7 Rev 4.4	0.0375 B mg/l	0.00400 mg/l*	09/07/12 12:15PM B B
CHROMIUM	EPA 200.7 Rev 4.4	0.00270 B mg/l	0.00220 mg/l*	09/07/12 12:15PM B B

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Authorized by: Oommen V. Kappil, QA Director

Account No: SR0117, EASTSTAR ENVIRONMENTAL GROUP, INC. **P.O. No:** **Inv. No:**
Project No: SR0117, EASTSTAR ENVIRONMENTAL GROUP, INC. **PWSID No:**

Sample Number **Sample Description** **Samp. Date/Time/Temp** **Sampled by**
L4297938-8 I027-4S-008 08/23/12 10:25am NA F Customer

Received Date/Time/Temp 08/23/12 08:30pm 35 F **Iced (Y/N):** Y

Parameter	Method	Result	RLs	Test Date, Time, Analyst
METALS continued				
COPPER	EPA 200.7 Rev 4.4	0.0757 mg/l	0.00310 mg/l*	09/07/12 12:15PM B B
IRON	EPA 200.7 Rev 4.4	4.78 mg/l	0.0359 mg/l*	09/07/12 12:15PM B B
POTASSIUM	EPA 200.7 Rev 4.4	164 mg/l	0.559 mg/l*	09/07/12 12:15PM B B
MAGNESIUM	EPA 200.7 Rev 4.4	159 mg/l	0.441 mg/l*	09/07/12 12:15PM B B
MANGANESE	EPA 200.7 Rev 4.4	0.0514 B mg/l	0.000786 mg/l*	09/07/12 12:15PM B B
NICKEL	EPA 200.7 Rev 4.4	0.0231 B mg/l	0.00340 mg/l*	09/07/12 12:15PM B B
LEAD	EPA 200.7 Rev 4.4	ND mg/l	0.0175 mg/l*	09/07/12 12:15PM B B
ANTIMONY	EPA 200.7 Rev 4.4	0.0239 B mg/l	0.0220 mg/l*	09/07/12 12:15PM B B
SELENIUM	EPA 200.7 Rev 4.4	0.169 mg/l	0.0517 mg/l*	09/07/12 12:15PM B B
THALLIUM	EPA 200.7 Rev 4.4	ND mg/l	0.0324 mg/l*	09/07/12 12:15PM B B
VANADIUM	EPA 200.7 Rev 4.4	ND mg/l	0.00260 mg/l*	09/07/12 12:15PM B B
ZINC	EPA 200.7 Rev 4.4	0.120 mg/l	0.00260 mg/l*	09/07/12 12:15PM B B
SODIUM	EPA 200.7 Rev 4.4	9070 mg/l	1.06 mg/l*	09/07/12 01:19PM B B
MERCURY	EPA 245.1 Rev 3.0	0.0000420 B mg/l	0.0000130 mg/l*	09/01/12 02:49PM RBK
GAS CHROMATOGRAPHY MASS SPECTROMETRY; SEMI-VOLATILES				
NAPHTHALENE	EPA 8270C	0.49 ug/l	0.01 ug/l*	09/05/12 05:05PM GRM
2-METHYLNAPHTHALENE	EPA 8270C	0.81 ug/l	0.01 ug/l*	09/05/12 05:05PM GRM
ACENAPHTHYLENE	EPA 8270C	0.06 ug/l	0.01 ug/l*	09/05/12 05:05PM GRM
ACENAPHTHENE	EPA 8270C	0.04 ug/l	0.01 ug/l*	09/05/12 05:05PM GRM
FLUORENE	EPA 8270C	0.06 ug/l	0.02 ug/l*	09/05/12 05:05PM GRM
PHENANTHRENE	EPA 8270C	0.07 ug/l	0.01 ug/l*	09/05/12 05:05PM GRM
ANTHRACENE	EPA 8270C	0.03 ug/l	0.01 ug/l*	09/05/12 05:05PM GRM
FLUORANTHENE	EPA 8270C	0.05 ug/l	0.02 ug/l*	09/05/12 05:05PM GRM
PYRENE	EPA 8270C	0.04 ug/l	0.02 ug/l*	09/05/12 05:05PM GRM
BENZO(A)ANTHRACENE	EPA 8270C	0.02 ug/l	0.01 ug/l*	09/05/12 05:05PM GRM
CHRYSENE	EPA 8270C	0.02 ug/l	0.01 ug/l*	09/05/12 05:05PM GRM
BENZO(B)FLUORANTHENE	EPA 8270C	0.02 ug/l	0.02 ug/l*	09/05/12 05:05PM GRM
BENZO(K)FLUORANTHENE	EPA 8270C	0.02 ug/l	0.02 ug/l*	09/05/12 05:05PM GRM
BENZO(A)PYRENE	EPA 8270C	0.02 ug/l	0.02 ug/l*	09/05/12 05:05PM GRM
INDENO(1,2,3-CD)PYRENE	EPA 8270C	ND ug/l	0.02 ug/l*	09/05/12 05:05PM GRM
DIBENZ(A,H)ANTHRACENE	EPA 8270C	ND ug/l	0.02 ug/l*	09/05/12 05:05PM GRM
BENZO(G,H,I)PERYLENE	EPA 8270C	ND ug/l	0.02 ug/l*	09/05/12 05:05PM GRM
GAS CHROMATOGRAPHY MASS SPECTROMETRY; VOLATILES				
DICHLORODIFLUOROMETHANE	EPA 8260B	ND ug/l	2.15 ug/l*	09/04/12 09:10PM JSH
CHLOROMETHANE	EPA 8260B	ND ug/l	1.60 ug/l*	09/04/12 09:10PM JSH
VINYL CHLORIDE	EPA 8260B	ND ug/l	1.20 ug/l*	09/04/12 09:10PM JSH
BROMOMETHANE	EPA 8260B	ND ug/l	2.30 ug/l*	09/04/12 09:10PM JSH
CHLOROETHANE	EPA 8260B	ND ug/l	1.70 ug/l*	09/04/12 09:10PM JSH
TRICHLOROFLUOROMETHANE	EPA 8260B	ND ug/l	1.90 ug/l*	09/04/12 09:10PM JSH
1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	EPA 8260B	ND ug/l	2.35 ug/l*	09/04/12 09:10PM JSH
METHYL ACETATE	EPA 8260B	ND ug/l	1.80 ug/l*	09/04/12 09:10PM JSH
1,1-DICHLOROETHENE	EPA 8260B	ND ug/l	1.55 ug/l*	09/04/12 09:10PM JSH
ACETONE	EPA 8260B	24.4 ug/l	16.3 ug/l*	09/04/12 09:10PM JSH
CARBON DISULFIDE	EPA 8260B	25.7 ug/l	3.20 ug/l*	09/04/12 09:10PM JSH

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Authorized by: Oommen V. Kappil, QA Director

Account No: SR0117, EASTSTAR ENVIRONMENTAL GROUP, INC. **P.O. No:** **Inv. No:**
Project No: SR0117, EASTSTAR ENVIRONMENTAL GROUP, INC. **PWSID No:**

Sample Number **Sample Description** **Samp. Date/Time/Temp** **Sampled by**
L4297938-8 I027-4S-008 08/23/12 10:25am NA F Customer
Received Date/Time/Temp 08/23/12 08:30pm 35 F **Iced (Y/N):** Y

GAS CHROMATOGRAPHY MASS SPECTROMETRY; VOLATILES continued

Parameter	Method	Result	RLs	Test Date, Time, Analyst
METHYLENE CHLORIDE	EPA 8260B	3.00 J ug/l	2.50 ug/l*	09/04/12 09:10PM JSH
TRANS-1,2-DICHLOROETHENE	EPA 8260B	ND ug/l	0.700 ug/l*	09/04/12 09:10PM JSH
METHYL TERTIARY BUTYL ETHER	EPA 8260B	ND ug/l	1.00 ug/l*	09/04/12 09:10PM JSH
1,1-DICHLOROETHANE	EPA 8260B	ND ug/l	1.20 ug/l*	09/04/12 09:10PM JSH
2-BUTANONE	EPA 8260B	ND ug/l	7.20 ug/l*	09/04/12 09:10PM JSH
BROMOCHLOROMETHANE	EPA 8260B	ND ug/l	1.50 ug/l*	09/04/12 09:10PM JSH
CIS-1,2-DICHLOROETHENE	EPA 8260B	ND ug/l	1.40 ug/l*	09/04/12 09:10PM JSH
CHLOROFORM	EPA 8260B	ND ug/l	1.15 ug/l*	09/04/12 09:10PM JSH
1,1,1-TRICHLOROETHANE	EPA 8260B	ND ug/l	1.05 ug/l*	09/04/12 09:10PM JSH
CYCLOHEXANE	EPA 8260B	ND ug/l	2.20 ug/l*	09/04/12 09:10PM JSH
CARBON TETRACHLORIDE	EPA 8260B	ND ug/l	1.40 ug/l*	09/04/12 09:10PM JSH
BENZENE	EPA 8260B	ND ug/l	1.10 ug/l*	09/04/12 09:10PM JSH
1,2-DICHLOROETHANE	EPA 8260B	ND ug/l	1.20 ug/l*	09/04/12 09:10PM JSH
TRICHLOROETHENE	EPA 8260B	ND ug/l	1.25 ug/l*	09/04/12 09:10PM JSH
METHYLCYCLOHEXANE	EPA 8260B	ND ug/l	1.80 ug/l*	09/04/12 09:10PM JSH
1,2-DICHLOROPROPANE	EPA 8260B	ND ug/l	1.00 ug/l*	09/04/12 09:10PM JSH
BROMODICHLOROMETHANE	EPA 8260B	ND ug/l	1.05 ug/l*	09/04/12 09:10PM JSH
4-METHYL-2-PENTANONE	EPA 8260B	ND ug/l	2.20 ug/l*	09/04/12 09:10PM JSH
CIS-1,3-DICHLOROPROPENE	EPA 8260B	ND ug/l	1.10 ug/l*	09/04/12 09:10PM JSH
TOLUENE	EPA 8260B	ND ug/l	0.950 ug/l*	09/04/12 09:10PM JSH
TRANS-1,3-DICHLOROPROPENE	EPA 8260B	ND ug/l	1.10 ug/l*	09/04/12 09:10PM JSH
1,1,2-TRICHLOROETHANE	EPA 8260B	ND ug/l	1.20 ug/l*	09/04/12 09:10PM JSH
2-HEXANONE	EPA 8260B	ND ug/l	4.15 ug/l*	09/04/12 09:10PM JSH
TETRACHLOROETHENE	EPA 8260B	ND ug/l	1.85 ug/l*	09/04/12 09:10PM JSH
DIBROMOCHLOROMETHANE	EPA 8260B	ND ug/l	0.700 ug/l*	09/04/12 09:10PM JSH
1,2-DIBROMOETHANE	EPA 8260B	ND ug/l	1.05 ug/l*	09/04/12 09:10PM JSH
CHLOROBENZENE	EPA 8260B	ND ug/l	1.15 ug/l*	09/04/12 09:10PM JSH
ETHYLBENZENE	EPA 8260B	ND ug/l	1.15 ug/l*	09/04/12 09:10PM JSH
M&P-XYLENES	EPA 8260B	ND ug/l	2.30 ug/l*	09/04/12 09:10PM JSH
O-XYLENE	EPA 8260B	ND ug/l	1.20 ug/l*	09/04/12 09:10PM JSH
STYRENE	EPA 8260B	ND ug/l	1.00 ug/l*	09/04/12 09:10PM JSH
BROMOFORM	EPA 8260B	ND ug/l	1.55 ug/l*	09/04/12 09:10PM JSH
1,1,2,2-TETRACHLOROETHANE	EPA 8260B	ND ug/l	1.60 ug/l*	09/04/12 09:10PM JSH
ISOPROPYLBENZENE	EPA 8260B	ND ug/l	1.35 ug/l*	09/04/12 09:10PM JSH
1,3-DICHLOROBENZENE	EPA 8260B	ND ug/l	1.05 ug/l*	09/04/12 09:10PM JSH
1,4-DICHLOROBENZENE	EPA 8260B	ND ug/l	0.850 ug/l*	09/04/12 09:10PM JSH
1,2-DICHLOROBENZENE	EPA 8260B	ND ug/l	1.00 ug/l*	09/04/12 09:10PM JSH
1,2-DIBROMO-3-CHLOROPROPANE	EPA 8260B	ND ug/l	2.35 ug/l*	09/04/12 09:10PM JSH
1,2,4-TRICHLOROBENZENE	EPA 8260B	ND ug/l	1.80 ug/l*	09/04/12 09:10PM JSH
1,2,3-TRICHLOROBENZENE	EPA 8260B	ND ug/l	1.55 ug/l*	09/04/12 09:10PM JSH
1,4-DIOXANE	EPA 8260B	ND ug/l	643 ug/l*	09/04/12 09:10PM JSH

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Authorized by: Oommen V. Kappil, QA Director

QC Laboratories

Analytical Report

Account No: SR0117, EASTSTAR ENVIRONMENTAL GROUP, INC. **P.O. No:** **Inv. No:**
Project No: SR0117, EASTSTAR ENVIRONMENTAL GROUP, INC. **PWSID No:**

Sample Number **Sample Description** **Samp. Date/Time/Temp** **Sampled by**
L4297938-9 I027-7D-009 08/23/12 11:30am NA F Customer
Received Date/Time/Temp 08/23/12 08:30pm 35 F **Iced (Y/N):** Y

Parameter	Method	Result	RLs	Test Date, Time, Analyst
GENERAL CHEMISTRY				
CYANIDE, TOTAL	SM 4500CN C,E	ND mg/l	0.0250 mg/l	08/30/12 01:00PM JG
METALS				
SILVER	EPA 200.7 Rev 4.4	0.0279 mg/l	0.00510 mg/l*	09/07/12 12:19PM B B
ALUMINUM	EPA 200.7 Rev 4.4	ND mg/l	0.175 mg/l*	09/07/12 12:19PM B B
BARIUM	EPA 200.7 Rev 4.4	0.0728 B mg/l	0.00170 mg/l*	09/07/12 12:19PM B B
BERYLLIUM	EPA 200.7 Rev 4.4	0.00120 B mg/l	0.000353 mg/l*	09/07/12 12:19PM B B
CALCIUM	EPA 200.7 Rev 4.4	1490 mg/l	0.0460 mg/l*	09/07/12 12:19PM B B
CADMIUM	EPA 200.7 Rev 4.4	ND mg/l	0.00110 mg/l*	09/07/12 12:19PM B B
COBALT	EPA 200.7 Rev 4.4	0.00600 B mg/l	0.00400 mg/l*	09/07/12 12:19PM B B
CHROMIUM	EPA 200.7 Rev 4.4	ND mg/l	0.00220 mg/l*	09/07/12 12:19PM B B
COPPER	EPA 200.7 Rev 4.4	0.00930 B mg/l	0.00310 mg/l*	09/07/12 12:19PM B B
IRON	EPA 200.7 Rev 4.4	39.6 mg/l	0.0359 mg/l*	09/07/12 12:19PM B B
POTASSIUM	EPA 200.7 Rev 4.4	33.2 mg/l	0.559 mg/l*	09/07/12 12:19PM B B
MAGNESIUM	EPA 200.7 Rev 4.4	569 mg/l	0.441 mg/l*	09/07/12 12:19PM B B
MANGANESE	EPA 200.7 Rev 4.4	1.24 mg/l	0.000786 mg/l*	09/07/12 12:19PM B B
SODIUM	EPA 200.7 Rev 4.4	3970 mg/l	0.106 mg/l*	09/07/12 12:19PM B B
NICKEL	EPA 200.7 Rev 4.4	ND mg/l	0.00340 mg/l*	09/07/12 12:19PM B B
LEAD	EPA 200.7 Rev 4.4	ND mg/l	0.0175 mg/l*	09/07/12 12:19PM B B
ANTIMONY	EPA 200.7 Rev 4.4	ND mg/l	0.0220 mg/l*	09/07/12 12:19PM B B
SELENIUM	EPA 200.7 Rev 4.4	0.112 mg/l	0.0517 mg/l*	09/07/12 12:19PM B B
THALLIUM	EPA 200.7 Rev 4.4	ND mg/l	0.0324 mg/l*	09/07/12 12:19PM B B
VANADIUM	EPA 200.7 Rev 4.4	ND mg/l	0.00260 mg/l*	09/07/12 12:19PM B B
ZINC	EPA 200.7 Rev 4.4	0.0748 mg/l	0.00260 mg/l*	09/07/12 12:19PM B B
ARSENIC	EPA 200.7 Rev 4.4	0.208 mg/l	0.0566 mg/l*	09/07/12 12:27PM B B
MERCURY	EPA 245.1 Rev 3.0	0.0000210 B mg/l	0.0000130 mg/l*	09/01/12 02:51PM RBK
GAS CHROMATOGRAPHY MASS SPECTROMETRY; SEMI-VOLATILES				
NAPHTHALENE	EPA 8270C	0.01 J ug/l	0.01 ug/l*	09/05/12 05:30PM GRM
2-METHYLNAPHTHALENE	EPA 8270C	ND ug/l	0.01 ug/l*	09/05/12 05:30PM GRM
ACENAPHTHYLENE	EPA 8270C	ND ug/l	0.01 ug/l*	09/05/12 05:30PM GRM
ACENAPHTHENE	EPA 8270C	ND ug/l	0.01 ug/l*	09/05/12 05:30PM GRM
FLUORENE	EPA 8270C	ND ug/l	0.02 ug/l*	09/05/12 05:30PM GRM
PHENANTHRENE	EPA 8270C	0.02 ug/l	0.01 ug/l*	09/05/12 05:30PM GRM
ANTHRACENE	EPA 8270C	ND ug/l	0.01 ug/l*	09/05/12 05:30PM GRM
FLUORANTHENE	EPA 8270C	ND ug/l	0.02 ug/l*	09/05/12 05:30PM GRM
PYRENE	EPA 8270C	ND ug/l	0.02 ug/l*	09/05/12 05:30PM GRM
BENZO(A)ANTHRACENE	EPA 8270C	ND ug/l	0.01 ug/l*	09/05/12 05:30PM GRM
CHRYSENE	EPA 8270C	ND ug/l	0.01 ug/l*	09/05/12 05:30PM GRM
BENZO(B)FLUORANTHENE	EPA 8270C	ND ug/l	0.02 ug/l*	09/05/12 05:30PM GRM
BENZO(K)FLUORANTHENE	EPA 8270C	ND ug/l	0.02 ug/l*	09/05/12 05:30PM GRM
BENZO(A)PYRENE	EPA 8270C	ND ug/l	0.02 ug/l*	09/05/12 05:30PM GRM
INDENO(1,2,3-CD)PYRENE	EPA 8270C	ND ug/l	0.02 ug/l*	09/05/12 05:30PM GRM
DIBENZ(A,H)ANTHRACENE	EPA 8270C	ND ug/l	0.02 ug/l*	09/05/12 05:30PM GRM
BENZO(G,H,I)PERYLENE	EPA 8270C	ND ug/l	0.02 ug/l*	09/05/12 05:30PM GRM

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Authorized by: Oommen V. Kappil, QA Director

Account No: SR0117, EASTSTAR ENVIRONMENTAL GROUP, INC. **P.O. No:** **Inv. No:**
Project No: SR0117, EASTSTAR ENVIRONMENTAL GROUP, INC. **PWSID No:**

Sample Number **Sample Description** **Samp. Date/Time/Temp** **Sampled by**
L4297938-9 I027-7D-009 08/23/12 11:30am NA F Customer
Received Date/Time/Temp 08/23/12 08:30pm 35 F **Iced (Y/N):** Y

Parameter	Method	Result	RLs	Test Date, Time, Analyst
GAS CHROMATOGRAPHY MASS SPECTROMETRY; VOLATILES				
DICHLORODIFLUOROMETHANE	EPA 8260B	ND ug/l	0.430 ug/l*	09/01/12 05:52AM JSH
CHLOROMETHANE	EPA 8260B	ND ug/l	0.320 ug/l*	09/01/12 05:52AM JSH
VINYL CHLORIDE	EPA 8260B	ND ug/l	0.240 ug/l*	09/01/12 05:52AM JSH
BROMOMETHANE	EPA 8260B	ND ug/l	0.460 ug/l*	09/01/12 05:52AM JSH
CHLOROETHANE	EPA 8260B	ND ug/l	0.340 ug/l*	09/01/12 05:52AM JSH
TRICHLOROFLUOROMETHANE	EPA 8260B	ND ug/l	0.380 ug/l*	09/01/12 05:52AM JSH
1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	EPA 8260B	ND ug/l	0.470 ug/l*	09/01/12 05:52AM JSH
METHYL ACETATE	EPA 8260B	ND ug/l	0.360 ug/l*	09/01/12 05:52AM JSH
1,1-DICHLOROETHENE	EPA 8260B	ND ug/l	0.310 ug/l*	09/01/12 05:52AM JSH
ACETONE	EPA 8260B	ND ug/l	3.26 ug/l*	09/01/12 05:52AM JSH
CARBON DISULFIDE	EPA 8260B	ND ug/l	0.640 ug/l*	09/01/12 05:52AM JSH
METHYLENE CHLORIDE	EPA 8260B	ND ug/l	0.500 ug/l*	09/01/12 05:52AM JSH
TRANS-1,2-DICHLOROETHENE	EPA 8260B	ND ug/l	0.140 ug/l*	09/01/12 05:52AM JSH
METHYL TERTIARY BUTYL ETHER	EPA 8260B	ND ug/l	0.200 ug/l*	09/01/12 05:52AM JSH
1,1-DICHLOROETHANE	EPA 8260B	ND ug/l	0.240 ug/l*	09/01/12 05:52AM JSH
2-BUTANONE	EPA 8260B	ND ug/l	1.44 ug/l*	09/01/12 05:52AM JSH
BROMOCHLOROMETHANE	EPA 8260B	ND ug/l	0.300 ug/l*	09/01/12 05:52AM JSH
CIS-1,2-DICHLOROETHENE	EPA 8260B	ND ug/l	0.280 ug/l*	09/01/12 05:52AM JSH
CHLOROFORM	EPA 8260B	ND ug/l	0.230 ug/l*	09/01/12 05:52AM JSH
1,1,1-TRICHLOROETHANE	EPA 8260B	ND ug/l	0.210 ug/l*	09/01/12 05:52AM JSH
CYCLOHEXANE	EPA 8260B	ND ug/l	0.440 ug/l*	09/01/12 05:52AM JSH
CARBON TETRACHLORIDE	EPA 8260B	ND ug/l	0.280 ug/l*	09/01/12 05:52AM JSH
BENZENE	EPA 8260B	ND ug/l	0.220 ug/l*	09/01/12 05:52AM JSH
1,2-DICHLOROETHANE	EPA 8260B	ND ug/l	0.240 ug/l*	09/01/12 05:52AM JSH
TRICHLOROETHENE	EPA 8260B	ND ug/l	0.250 ug/l*	09/01/12 05:52AM JSH
METHYLCYCLOHEXANE	EPA 8260B	ND ug/l	0.360 ug/l*	09/01/12 05:52AM JSH
1,2-DICHLOROPROPANE	EPA 8260B	ND ug/l	0.200 ug/l*	09/01/12 05:52AM JSH
BROMODICHLOROMETHANE	EPA 8260B	ND ug/l	0.210 ug/l*	09/01/12 05:52AM JSH
4-METHYL-2-PENTANONE	EPA 8260B	ND ug/l	0.440 ug/l*	09/01/12 05:52AM JSH
CIS-1,3-DICHLOROPROPENE	EPA 8260B	ND ug/l	0.220 ug/l*	09/01/12 05:52AM JSH
TOLUENE	EPA 8260B	ND ug/l	0.190 ug/l*	09/01/12 05:52AM JSH
TRANS-1,3-DICHLOROPROPENE	EPA 8260B	ND ug/l	0.220 ug/l*	09/01/12 05:52AM JSH
1,1,2-TRICHLOROETHANE	EPA 8260B	ND ug/l	0.240 ug/l*	09/01/12 05:52AM JSH
2-HEXANONE	EPA 8260B	ND ug/l	0.830 ug/l*	09/01/12 05:52AM JSH
TETRACHLOROETHENE	EPA 8260B	ND ug/l	0.370 ug/l*	09/01/12 05:52AM JSH
DIBROMOCHLOROMETHANE	EPA 8260B	ND ug/l	0.140 ug/l*	09/01/12 05:52AM JSH
1,2-DIBROMOETHANE	EPA 8260B	ND ug/l	0.210 ug/l*	09/01/12 05:52AM JSH
CHLOROBENZENE	EPA 8260B	ND ug/l	0.230 ug/l*	09/01/12 05:52AM JSH
ETHYLBENZENE	EPA 8260B	ND ug/l	0.230 ug/l*	09/01/12 05:52AM JSH
M&P-XYLENES	EPA 8260B	ND ug/l	0.460 ug/l*	09/01/12 05:52AM JSH
O-XYLENE	EPA 8260B	ND ug/l	0.240 ug/l*	09/01/12 05:52AM JSH
STYRENE	EPA 8260B	ND ug/l	0.200 ug/l*	09/01/12 05:52AM JSH
BROMOFORM	EPA 8260B	ND ug/l	0.310 ug/l*	09/01/12 05:52AM JSH
1,1,2,2-TETRACHLOROETHANE	EPA 8260B	ND ug/l	0.320 ug/l*	09/01/12 05:52AM JSH
ISOPROPYLBENZENE	EPA 8260B	ND ug/l	0.270 ug/l*	09/01/12 05:52AM JSH
1,3-DICHLOROBENZENE	EPA 8260B	ND ug/l	0.210 ug/l*	09/01/12 05:52AM JSH
1,4-DICHLOROBENZENE	EPA 8260B	ND ug/l	0.170 ug/l*	09/01/12 05:52AM JSH

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Oommen V. Kappil

Authorized by: Oommen V. Kappil, QA Director

Account No: SR0117, EASTSTAR ENVIRONMENTAL GROUP, INC. **P.O. No:** **Inv. No:**
Project No: SR0117, EASTSTAR ENVIRONMENTAL GROUP, INC. **PWSID No:**

Sample Number L4297938-9 **Sample Description** I027-7D-009 **Samp. Date/Time/Temp** 08/23/12 11:30am NA F **Sampled by** Customer
Received Date/Time/Temp 08/23/12 08:30pm 35 F **Iced (Y/N):** Y

Parameter	Method	Result	RLs	Test Date, Time, Analyst
GAS CHROMATOGRAPHY MASS SPECTROMETRY; VOLATILES continued				
1,2-DICHLOROBENZENE	EPA 8260B	ND ug/l	0.200 ug/l*	09/01/12 05:52AM JSH
1,2-DIBROMO-3-CHLOROPROPANE	EPA 8260B	ND ug/l	0.470 ug/l*	09/01/12 05:52AM JSH
1,2,4-TRICHLOROBENZENE	EPA 8260B	ND ug/l	0.360 ug/l*	09/01/12 05:52AM JSH
1,2,3-TRICHLOROBENZENE	EPA 8260B	ND ug/l	0.310 ug/l*	09/01/12 05:52AM JSH
1,4-DIOXANE	EPA 8260B	ND ug/l	129 ug/l*	09/01/12 05:52AM JSH

Sample Number L4297938-10 **Sample Description** I027-7D-010 **Samp. Date/Time/Temp** 08/23/12 11:30am NA F **Sampled by** Customer
Received Date/Time/Temp 08/23/12 08:30pm 35 F **Iced (Y/N):** Y

Parameter	Method	Result	RLs	Test Date, Time, Analyst
GENERAL CHEMISTRY				
CYANIDE, TOTAL	SM 4500CN C,E	ND mg/l	0.0200 mg/l	08/30/12 01:00PM JG
METALS				
ALUMINUM	EPA 200.7 Rev 4.4	ND mg/l	0.175 mg/l*	09/07/12 12:29PM B B
ARSENIC	EPA 200.7 Rev 4.4	0.145 mg/l	0.0283 mg/l*	09/07/12 12:29PM B B
BARIUM	EPA 200.7 Rev 4.4	0.0717 B mg/l	0.00170 mg/l*	09/07/12 12:29PM B B
BERYLLIUM	EPA 200.7 Rev 4.4	0.00180 B mg/l	0.000353 mg/l*	09/07/12 12:29PM B B
CALCIUM	EPA 200.7 Rev 4.4	1460 mg/l	0.0460 mg/l*	09/07/12 12:29PM B B
CADMIUM	EPA 200.7 Rev 4.4	ND mg/l	0.00110 mg/l*	09/07/12 12:29PM B B
COBALT	EPA 200.7 Rev 4.4	0.00670 B mg/l	0.00400 mg/l*	09/07/12 12:29PM B B
CHROMIUM	EPA 200.7 Rev 4.4	ND mg/l	0.00220 mg/l*	09/07/12 12:29PM B B
COPPER	EPA 200.7 Rev 4.4	0.00440 B mg/l	0.00310 mg/l*	09/07/12 12:29PM B B
IRON	EPA 200.7 Rev 4.4	35.3 mg/l	0.0359 mg/l*	09/07/12 12:29PM B B
POTASSIUM	EPA 200.7 Rev 4.4	32.8 mg/l	0.559 mg/l*	09/07/12 12:29PM B B
MAGNESIUM	EPA 200.7 Rev 4.4	559 mg/l	0.441 mg/l*	09/07/12 12:29PM B B
MANGANESE	EPA 200.7 Rev 4.4	1.15 mg/l	0.000786 mg/l*	09/07/12 12:29PM B B
SODIUM	EPA 200.7 Rev 4.4	3860 mg/l	0.106 mg/l*	09/07/12 12:29PM B B
NICKEL	EPA 200.7 Rev 4.4	ND mg/l	0.00340 mg/l*	09/07/12 12:29PM B B
LEAD	EPA 200.7 Rev 4.4	ND mg/l	0.0175 mg/l*	09/07/12 12:29PM B B
ANTIMONY	EPA 200.7 Rev 4.4	ND mg/l	0.0220 mg/l*	09/07/12 12:29PM B B
SELENIUM	EPA 200.7 Rev 4.4	ND mg/l	0.0517 mg/l*	09/07/12 12:29PM B B
THALLIUM	EPA 200.7 Rev 4.4	ND mg/l	0.0324 mg/l*	09/07/12 12:29PM B B
VANADIUM	EPA 200.7 Rev 4.4	ND mg/l	0.00260 mg/l*	09/07/12 12:29PM B B
ZINC	EPA 200.7 Rev 4.4	0.0664 mg/l	0.00260 mg/l*	09/07/12 12:29PM B B
SILVER	EPA 200.7 Rev 4.4	0.0246 mg/l	0.00510 mg/l*	09/07/12 12:38PM B B
MERCURY	EPA 245.1 Rev 3.0	0.0000300 B mg/l	0.0000130 mg/l*	09/01/12 02:52PM RBK

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Authorized by: Oommen V. Kappil, QA Director

QC Laboratories

Analytical Report

Account No: SR0117, EASTSTAR ENVIRONMENTAL GROUP, INC. **P.O. No:** **Inv. No:**
Project No: SR0117, EASTSTAR ENVIRONMENTAL GROUP, INC. **PWSID No:**

Sample Number **Sample Description** **Samp. Date/Time/Temp** **Sampled by**
L4297938-10 I027-7D-010 08/23/12 11:30am NA F Customer
Received Date/Time/Temp 08/23/12 08:30pm 35 F **Iced (Y/N):** Y

Parameter	Method	Result	RLs	Test Date, Time, Analyst
GAS CHROMATOGRAPHY MASS SPECTROMETRY; SEMI-VOLATILES				
NAPHTHALENE	EPA 8270C	ND ug/l	0.01 ug/l*	09/05/12 05:55PM GRM
2-METHYLNAPHTHALENE	EPA 8270C	0.03 ug/l	0.01 ug/l*	09/05/12 05:55PM GRM
ACENAPHTHYLENE	EPA 8270C	ND ug/l	0.01 ug/l*	09/05/12 05:55PM GRM
ACENAPHTHENE	EPA 8270C	ND ug/l	0.01 ug/l*	09/05/12 05:55PM GRM
FLUORENE	EPA 8270C	ND ug/l	0.02 ug/l*	09/05/12 05:55PM GRM
PHENANTHRENE	EPA 8270C	0.03 ug/l	0.01 ug/l*	09/05/12 05:55PM GRM
ANTHRACENE	EPA 8270C	ND ug/l	0.01 ug/l*	09/05/12 05:55PM GRM
FLUORANTHENE	EPA 8270C	ND ug/l	0.02 ug/l*	09/05/12 05:55PM GRM
PYRENE	EPA 8270C	ND ug/l	0.02 ug/l*	09/05/12 05:55PM GRM
BENZO(A)ANTHRACENE	EPA 8270C	ND ug/l	0.01 ug/l*	09/05/12 05:55PM GRM
CHRYSENE	EPA 8270C	ND ug/l	0.01 ug/l*	09/05/12 05:55PM GRM
BENZO(B)FLUORANTHENE	EPA 8270C	ND ug/l	0.02 ug/l*	09/05/12 05:55PM GRM
BENZO(K)FLUORANTHENE	EPA 8270C	ND ug/l	0.02 ug/l*	09/05/12 05:55PM GRM
BENZO(A)PYRENE	EPA 8270C	ND ug/l	0.02 ug/l*	09/05/12 05:55PM GRM
INDENO(1,2,3-CD)PYRENE	EPA 8270C	ND ug/l	0.02 ug/l*	09/05/12 05:55PM GRM
DIBENZ(A,H)ANTHRACENE	EPA 8270C	ND ug/l	0.02 ug/l*	09/05/12 05:55PM GRM
BENZO(G,H,I)PERYLENE	EPA 8270C	ND ug/l	0.02 ug/l*	09/05/12 05:55PM GRM
GAS CHROMATOGRAPHY MASS SPECTROMETRY; VOLATILES				
DICHLORODIFLUOROMETHANE	EPA 8260B	ND ug/l	0.430 ug/l*	09/01/12 06:26AM JSH
CHLOROMETHANE	EPA 8260B	ND ug/l	0.320 ug/l*	09/01/12 06:26AM JSH
VINYL CHLORIDE	EPA 8260B	ND ug/l	0.240 ug/l*	09/01/12 06:26AM JSH
BROMOMETHANE	EPA 8260B	ND ug/l	0.460 ug/l*	09/01/12 06:26AM JSH
CHLOROETHANE	EPA 8260B	ND ug/l	0.340 ug/l*	09/01/12 06:26AM JSH
TRICHLOROFLUOROMETHANE	EPA 8260B	ND ug/l	0.380 ug/l*	09/01/12 06:26AM JSH
1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	EPA 8260B	ND ug/l	0.470 ug/l*	09/01/12 06:26AM JSH
METHYL ACETATE	EPA 8260B	ND ug/l	0.360 ug/l*	09/01/12 06:26AM JSH
1,1-DICHLOROETHENE	EPA 8260B	ND ug/l	0.310 ug/l*	09/01/12 06:26AM JSH
ACETONE	EPA 8260B	ND ug/l	3.26 ug/l*	09/01/12 06:26AM JSH
CARBON DISULFIDE	EPA 8260B	ND ug/l	0.640 ug/l*	09/01/12 06:26AM JSH
METHYLENE CHLORIDE	EPA 8260B	ND ug/l	0.500 ug/l*	09/01/12 06:26AM JSH
TRANS-1,2-DICHLOROETHENE	EPA 8260B	ND ug/l	0.140 ug/l*	09/01/12 06:26AM JSH
METHYL TERTIARY BUTYL ETHER	EPA 8260B	ND ug/l	0.200 ug/l*	09/01/12 06:26AM JSH
1,1-DICHLOROETHANE	EPA 8260B	ND ug/l	0.240 ug/l*	09/01/12 06:26AM JSH
2-BUTANONE	EPA 8260B	ND ug/l	1.44 ug/l*	09/01/12 06:26AM JSH
BROMOCHLOROMETHANE	EPA 8260B	ND ug/l	0.300 ug/l*	09/01/12 06:26AM JSH
CIS-1,2-DICHLOROETHENE	EPA 8260B	ND ug/l	0.280 ug/l*	09/01/12 06:26AM JSH
CHLOROFORM	EPA 8260B	ND ug/l	0.230 ug/l*	09/01/12 06:26AM JSH
1,1,1-TRICHLOROETHANE	EPA 8260B	ND ug/l	0.210 ug/l*	09/01/12 06:26AM JSH
CYCLOHEXANE	EPA 8260B	ND ug/l	0.440 ug/l*	09/01/12 06:26AM JSH
CARBON TETRACHLORIDE	EPA 8260B	ND ug/l	0.280 ug/l*	09/01/12 06:26AM JSH
BENZENE	EPA 8260B	ND ug/l	0.220 ug/l*	09/01/12 06:26AM JSH
1,2-DICHLOROETHANE	EPA 8260B	ND ug/l	0.240 ug/l*	09/01/12 06:26AM JSH
TRICHLOROETHENE	EPA 8260B	ND ug/l	0.250 ug/l*	09/01/12 06:26AM JSH
METHYLCYCLOHEXANE	EPA 8260B	ND ug/l	0.360 ug/l*	09/01/12 06:26AM JSH
1,2-DICHLOROPROPANE	EPA 8260B	ND ug/l	0.200 ug/l*	09/01/12 06:26AM JSH

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Authorized by: Oommen V. Kappil, QA Director

Account No: SR0117, EASTSTAR ENVIRONMENTAL GROUP, INC. **P.O. No:** **Inv. No:**
Project No: SR0117, EASTSTAR ENVIRONMENTAL GROUP, INC. **PWSID No:**

Sample Number **Sample Description** **Samp. Date/Time/Temp** **Sampled by**
L4297938-10 I027-7D-010 08/23/12 11:30am NA F Customer
Received Date/Time/Temp 08/23/12 08:30pm 35 F **Iced (Y/N):** Y

Parameter	Method	Result	RLs	Test Date, Time, Analyst
GAS CHROMATOGRAPHY MASS SPECTROMETRY; VOLATILES continued				
BROMODICHLOROMETHANE	EPA 8260B	ND ug/l	0.210 ug/l*	09/01/12 06:26AM JSH
4-METHYL-2-PENTANONE	EPA 8260B	ND ug/l	0.440 ug/l*	09/01/12 06:26AM JSH
CIS-1,3-DICHLOROPROPENE	EPA 8260B	ND ug/l	0.220 ug/l*	09/01/12 06:26AM JSH
TOLUENE	EPA 8260B	ND ug/l	0.190 ug/l*	09/01/12 06:26AM JSH
TRANS-1,3-DICHLOROPROPENE	EPA 8260B	ND ug/l	0.220 ug/l*	09/01/12 06:26AM JSH
1,1,2-TRICHLOROETHANE	EPA 8260B	ND ug/l	0.240 ug/l*	09/01/12 06:26AM JSH
2-HEXANONE	EPA 8260B	ND ug/l	0.830 ug/l*	09/01/12 06:26AM JSH
TETRACHLOROETHENE	EPA 8260B	ND ug/l	0.370 ug/l*	09/01/12 06:26AM JSH
DIBROMOCHLOROMETHANE	EPA 8260B	ND ug/l	0.140 ug/l*	09/01/12 06:26AM JSH
1,2-DIBROMOETHANE	EPA 8260B	ND ug/l	0.210 ug/l*	09/01/12 06:26AM JSH
CHLOROBENZENE	EPA 8260B	ND ug/l	0.230 ug/l*	09/01/12 06:26AM JSH
ETHYLBENZENE	EPA 8260B	ND ug/l	0.230 ug/l*	09/01/12 06:26AM JSH
M&P-XYLENES	EPA 8260B	ND ug/l	0.460 ug/l*	09/01/12 06:26AM JSH
O-XYLENE	EPA 8260B	ND ug/l	0.240 ug/l*	09/01/12 06:26AM JSH
STYRENE	EPA 8260B	ND ug/l	0.200 ug/l*	09/01/12 06:26AM JSH
BROMOFORM	EPA 8260B	ND ug/l	0.310 ug/l*	09/01/12 06:26AM JSH
1,1,2,2-TETRACHLOROETHANE	EPA 8260B	ND ug/l	0.320 ug/l*	09/01/12 06:26AM JSH
ISOPROPYLBENZENE	EPA 8260B	ND ug/l	0.270 ug/l*	09/01/12 06:26AM JSH
1,3-DICHLOROBENZENE	EPA 8260B	ND ug/l	0.210 ug/l*	09/01/12 06:26AM JSH
1,4-DICHLOROBENZENE	EPA 8260B	ND ug/l	0.170 ug/l*	09/01/12 06:26AM JSH
1,2-DICHLOROBENZENE	EPA 8260B	ND ug/l	0.200 ug/l*	09/01/12 06:26AM JSH
1,2-DIBROMO-3-CHLOROPROPANE	EPA 8260B	ND ug/l	0.470 ug/l*	09/01/12 06:26AM JSH
1,2,4-TRICHLOROBENZENE	EPA 8260B	ND ug/l	0.360 ug/l*	09/01/12 06:26AM JSH
1,2,3-TRICHLOROBENZENE	EPA 8260B	ND ug/l	0.310 ug/l*	09/01/12 06:26AM JSH
1,4-DIOXANE	EPA 8260B	ND ug/l	129 ug/l*	09/01/12 06:26AM JSH

Sample Number **Sample Description** **Samp. Date/Time/Temp** **Sampled by**
L4297938-11 I027-7S-011 08/23/12 12:15pm NA F Customer
Received Date/Time/Temp 08/23/12 08:30pm 35 F **Iced (Y/N):** Y

Parameter	Method	Result	RLs	Test Date, Time, Analyst
GENERAL CHEMISTRY				
HEXANE EXTR.-SGT (NON POLAR O+G)	1664ASGT@PHC	ND mg/l	5.00 mg/l	09/04/12 08:30AM RHB
CYANIDE, TOTAL	SM 4500CN C,E	ND mg/l	0.0250 mg/l	08/30/12 01:00PM JG
METALS				
SILVER	EPA 200.7 Rev 4.4	0.0128 B mg/l	0.00510 mg/l*	09/07/12 12:40PM B B
ALUMINUM	EPA 200.7 Rev 4.4	ND mg/l	0.175 mg/l*	09/07/12 12:40PM B B
ARSENIC	EPA 200.7 Rev 4.4	0.0655 B mg/l	0.0283 mg/l*	09/07/12 12:40PM B B
BARIUM	EPA 200.7 Rev 4.4	0.510 mg/l	0.00170 mg/l*	09/07/12 12:40PM B B
BERYLLIUM	EPA 200.7 Rev 4.4	0.00130 B mg/l	0.000353 mg/l*	09/07/12 12:40PM B B
CALCIUM	EPA 200.7 Rev 4.4	241 mg/l	0.0460 mg/l*	09/07/12 12:40PM B B
CADMIUM	EPA 200.7 Rev 4.4	ND mg/l	0.00110 mg/l*	09/07/12 12:40PM B B
COBALT	EPA 200.7 Rev 4.4	0.00600 B mg/l	0.00400 mg/l*	09/07/12 12:40PM B B
CHROMIUM	EPA 200.7 Rev 4.4	0.00670 B mg/l	0.00220 mg/l*	09/07/12 12:40PM B B

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Authorized by: Oommen V. Kappil, QA Director

Account No: SR0117, EASTSTAR ENVIRONMENTAL GROUP, INC. **P.O. No:** **Inv. No:**
Project No: SR0117, EASTSTAR ENVIRONMENTAL GROUP, INC. **PWSID No:**

Sample Number **Sample Description** **Samp. Date/Time/Temp** **Sampled by**
L4297938-11 I027-7S-011 08/23/12 12:15pm NA F Customer
Received Date/Time/Temp 08/23/12 08:30pm 35 F **Iced (Y/N):** Y

Parameter	Method	Result	RLs	Test Date, Time, Analyst
METALS continued				
COPPER	EPA 200.7 Rev 4.4	0.0100 B mg/l	0.00310 mg/l*	09/07/12 12:40PM B B
IRON	EPA 200.7 Rev 4.4	8.24 mg/l	0.0359 mg/l*	09/07/12 12:40PM B B
POTASSIUM	EPA 200.7 Rev 4.4	169 mg/l	0.559 mg/l*	09/07/12 12:40PM B B
MAGNESIUM	EPA 200.7 Rev 4.4	641 mg/l	0.441 mg/l*	09/07/12 12:40PM B B
MANGANESE	EPA 200.7 Rev 4.4	0.461 mg/l	0.000786 mg/l*	09/07/12 12:40PM B B
NICKEL	EPA 200.7 Rev 4.4	ND mg/l	0.00340 mg/l*	09/07/12 12:40PM B B
LEAD	EPA 200.7 Rev 4.4	ND mg/l	0.0175 mg/l*	09/07/12 12:40PM B B
ANTIMONY	EPA 200.7 Rev 4.4	ND mg/l	0.0220 mg/l*	09/07/12 12:40PM B B
SELENIUM	EPA 200.7 Rev 4.4	ND mg/l	0.0517 mg/l*	09/07/12 12:40PM B B
THALLIUM	EPA 200.7 Rev 4.4	ND mg/l	0.0324 mg/l*	09/07/12 12:40PM B B
VANADIUM	EPA 200.7 Rev 4.4	0.00930 B mg/l	0.00260 mg/l*	09/07/12 12:40PM B B
ZINC	EPA 200.7 Rev 4.4	0.0245 B mg/l	0.00260 mg/l*	09/07/12 12:40PM B B
SODIUM	EPA 200.7 Rev 4.4	5730 mg/l	1.06 mg/l*	09/07/12 01:21PM B B
MERCURY	EPA 245.1 Rev 3.0	0.0000250 B mg/l	0.0000130 mg/l*	09/01/12 02:54PM RBK
GAS CHROMATOGRAPHY MASS SPECTROMETRY; SEMI-VOLATILES				
NAPHTHALENE	EPA 8270C	ND ug/l	0.01 ug/l*	09/05/12 06:20PM GRM
2-METHYLNAPHTHALENE	EPA 8270C	ND ug/l	0.01 ug/l*	09/05/12 06:20PM GRM
ACENAPHTHYLENE	EPA 8270C	ND ug/l	0.01 ug/l*	09/05/12 06:20PM GRM
ACENAPHTHENE	EPA 8270C	0.02 ug/l	0.01 ug/l*	09/05/12 06:20PM GRM
FLUORENE	EPA 8270C	ND ug/l	0.02 ug/l*	09/05/12 06:20PM GRM
PHENANTHRENE	EPA 8270C	ND ug/l	0.01 ug/l*	09/05/12 06:20PM GRM
ANTHRACENE	EPA 8270C	ND ug/l	0.01 ug/l*	09/05/12 06:20PM GRM
FLUORANTHENE	EPA 8270C	ND ug/l	0.02 ug/l*	09/05/12 06:20PM GRM
PYRENE	EPA 8270C	ND ug/l	0.02 ug/l*	09/05/12 06:20PM GRM
BENZO(A)ANTHRACENE	EPA 8270C	ND ug/l	0.01 ug/l*	09/05/12 06:20PM GRM
CHRYSENE	EPA 8270C	ND ug/l	0.01 ug/l*	09/05/12 06:20PM GRM
BENZO(B)FLUORANTHENE	EPA 8270C	ND ug/l	0.02 ug/l*	09/05/12 06:20PM GRM
BENZO(K)FLUORANTHENE	EPA 8270C	ND ug/l	0.02 ug/l*	09/05/12 06:20PM GRM
BENZO(A)PYRENE	EPA 8270C	ND ug/l	0.02 ug/l*	09/05/12 06:20PM GRM
INDENO(1,2,3-CD)PYRENE	EPA 8270C	ND ug/l	0.02 ug/l*	09/05/12 06:20PM GRM
DIBENZ(A,H)ANTHRACENE	EPA 8270C	ND ug/l	0.02 ug/l*	09/05/12 06:20PM GRM
BENZO(G,H,I)PERYLENE	EPA 8270C	ND ug/l	0.02 ug/l*	09/05/12 06:20PM GRM
GAS CHROMATOGRAPHY MASS SPECTROMETRY; VOLATILES				
DICHLORODIFLUOROMETHANE	EPA 8260B	ND ug/l	0.430 ug/l*	09/04/12 03:54PM JSH
CHLOROMETHANE	EPA 8260B	ND ug/l	0.320 ug/l*	09/04/12 03:54PM JSH
VINYL CHLORIDE	EPA 8260B	ND ug/l	0.240 ug/l*	09/04/12 03:54PM JSH
BROMOMETHANE	EPA 8260B	ND ug/l	0.460 ug/l*	09/04/12 03:54PM JSH
CHLOROETHANE	EPA 8260B	ND ug/l	0.340 ug/l*	09/04/12 03:54PM JSH
TRICHLOROFLUOROMETHANE	EPA 8260B	ND ug/l	0.380 ug/l*	09/04/12 03:54PM JSH
1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	EPA 8260B	ND ug/l	0.470 ug/l*	09/04/12 03:54PM JSH
METHYL ACETATE	EPA 8260B	ND ug/l	0.360 ug/l*	09/04/12 03:54PM JSH
1,1-DICHLOROETHENE	EPA 8260B	ND ug/l	0.310 ug/l*	09/04/12 03:54PM JSH
ACETONE	EPA 8260B	ND ug/l	3.26 ug/l*	09/04/12 03:54PM JSH
CARBON DISULFIDE	EPA 8260B	1.02 J ug/l	0.640 ug/l*	09/04/12 03:54PM JSH

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Authorized by: Oommen V. Kappil, QA Director

Account No: SR0117, EASTSTAR ENVIRONMENTAL GROUP, INC. **P.O. No:** **Inv. No:**
Project No: SR0117, EASTSTAR ENVIRONMENTAL GROUP, INC. **PWSID No:**

Sample Number **Sample Description** **Samp. Date/Time/Temp** **Sampled by**
L4297938-11 I027-7S-011 08/23/12 12:15pm NA F Customer

Received Date/Time/Temp 08/23/12 08:30pm 35 F **Iced (Y/N):** Y

GAS CHROMATOGRAPHY MASS SPECTROMETRY; VOLATILES continued

Parameter	Method	Result	RLs	Test Date, Time, Analyst
METHYLENE CHLORIDE	EPA 8260B	ND ug/l	0.500 ug/l*	09/04/12 03:54PM JSH
TRANS-1,2-DICHLOROETHENE	EPA 8260B	ND ug/l	0.140 ug/l*	09/04/12 03:54PM JSH
METHYL TERTIARY BUTYL ETHER	EPA 8260B	ND ug/l	0.200 ug/l*	09/04/12 03:54PM JSH
1,1-DICHLOROETHANE	EPA 8260B	ND ug/l	0.240 ug/l*	09/04/12 03:54PM JSH
2-BUTANONE	EPA 8260B	ND ug/l	1.44 ug/l*	09/04/12 03:54PM JSH
BROMOCHLOROMETHANE	EPA 8260B	ND ug/l	0.300 ug/l*	09/04/12 03:54PM JSH
CIS-1,2-DICHLOROETHENE	EPA 8260B	ND ug/l	0.280 ug/l*	09/04/12 03:54PM JSH
CHLOROFORM	EPA 8260B	ND ug/l	0.230 ug/l*	09/04/12 03:54PM JSH
1,1,1-TRICHLOROETHANE	EPA 8260B	ND ug/l	0.210 ug/l*	09/04/12 03:54PM JSH
CYCLOHEXANE	EPA 8260B	ND ug/l	0.440 ug/l*	09/04/12 03:54PM JSH
CARBON TETRACHLORIDE	EPA 8260B	ND ug/l	0.280 ug/l*	09/04/12 03:54PM JSH
BENZENE	EPA 8260B	ND ug/l	0.220 ug/l*	09/04/12 03:54PM JSH
1,2-DICHLOROETHANE	EPA 8260B	ND ug/l	0.240 ug/l*	09/04/12 03:54PM JSH
TRICHLOROETHENE	EPA 8260B	ND ug/l	0.250 ug/l*	09/04/12 03:54PM JSH
METHYLCYCLOHEXANE	EPA 8260B	ND ug/l	0.360 ug/l*	09/04/12 03:54PM JSH
1,2-DICHLOROPROPANE	EPA 8260B	ND ug/l	0.200 ug/l*	09/04/12 03:54PM JSH
BROMODICHLOROMETHANE	EPA 8260B	ND ug/l	0.210 ug/l*	09/04/12 03:54PM JSH
4-METHYL-2-PENTANONE	EPA 8260B	ND ug/l	0.440 ug/l*	09/04/12 03:54PM JSH
CIS-1,3-DICHLOROPROPENE	EPA 8260B	ND ug/l	0.220 ug/l*	09/04/12 03:54PM JSH
TOLUENE	EPA 8260B	ND ug/l	0.190 ug/l*	09/04/12 03:54PM JSH
TRANS-1,3-DICHLOROPROPENE	EPA 8260B	ND ug/l	0.220 ug/l*	09/04/12 03:54PM JSH
1,1,2-TRICHLOROETHANE	EPA 8260B	ND ug/l	0.240 ug/l*	09/04/12 03:54PM JSH
2-HEXANONE	EPA 8260B	ND ug/l	0.830 ug/l*	09/04/12 03:54PM JSH
TETRACHLOROETHENE	EPA 8260B	ND ug/l	0.370 ug/l*	09/04/12 03:54PM JSH
DIBROMOCHLOROMETHANE	EPA 8260B	ND ug/l	0.140 ug/l*	09/04/12 03:54PM JSH
1,2-DIBROMOETHANE	EPA 8260B	ND ug/l	0.210 ug/l*	09/04/12 03:54PM JSH
CHLOROBENZENE	EPA 8260B	ND ug/l	0.230 ug/l*	09/04/12 03:54PM JSH
ETHYLBENZENE	EPA 8260B	ND ug/l	0.230 ug/l*	09/04/12 03:54PM JSH
M&P-XYLENES	EPA 8260B	ND ug/l	0.460 ug/l*	09/04/12 03:54PM JSH
O-XYLENE	EPA 8260B	ND ug/l	0.240 ug/l*	09/04/12 03:54PM JSH
STYRENE	EPA 8260B	ND ug/l	0.200 ug/l*	09/04/12 03:54PM JSH
BROMOFORM	EPA 8260B	ND ug/l	0.310 ug/l*	09/04/12 03:54PM JSH
1,1,2,2-TETRACHLOROETHANE	EPA 8260B	ND ug/l	0.320 ug/l*	09/04/12 03:54PM JSH
ISOPROPYLBENZENE	EPA 8260B	ND ug/l	0.270 ug/l*	09/04/12 03:54PM JSH
1,3-DICHLOROBENZENE	EPA 8260B	ND ug/l	0.210 ug/l*	09/04/12 03:54PM JSH
1,4-DICHLOROBENZENE	EPA 8260B	ND ug/l	0.170 ug/l*	09/04/12 03:54PM JSH
1,2-DICHLOROBENZENE	EPA 8260B	ND ug/l	0.200 ug/l*	09/04/12 03:54PM JSH
1,2-DIBROMO-3-CHLOROPROPANE	EPA 8260B	ND ug/l	0.470 ug/l*	09/04/12 03:54PM JSH
1,2,4-TRICHLOROBENZENE	EPA 8260B	ND ug/l	0.360 ug/l*	09/04/12 03:54PM JSH
1,2,3-TRICHLOROBENZENE	EPA 8260B	ND ug/l	0.310 ug/l*	09/04/12 03:54PM JSH
1,4-DIOXANE	EPA 8260B	ND ug/l	129 ug/l*	09/04/12 03:54PM JSH

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Authorized by: Oommen V. Kappil, QA Director

QC Laboratories

Analytical Report

Account No: SR0117, EASTSTAR ENVIRONMENTAL GROUP, INC. **P.O. No:** **Inv. No:**
Project No: SR0117, EASTSTAR ENVIRONMENTAL GROUP, INC. **PWSID No:**

Sample Number **Sample Description** **Samp. Date/Time/Temp** **Sampled by**
L4297938-12 I027-6S-012 08/23/12 01:15pm NA F Customer

Received Date/Time/Temp 08/23/12 08:30pm 35 F **Iced (Y/N):** Y

Parameter	Method	Result	RLs	Test Date, Time, Analyst
GENERAL CHEMISTRY				
HEXANE EXTR.-SGT (NON POLAR O+G)	1664ASGT@PHC	ND mg/l	5.00 mg/l	09/04/12 08:30AM RHB
CYANIDE, TOTAL	SM 4500CN C,E	ND mg/l	0.0400 mg/l	09/04/12 12:00PM JG
METALS				
SILVER	EPA 200.7 Rev 4.4	0.00730 B mg/l	0.00510 mg/l*	09/07/12 12:56PM B B
ALUMINUM	EPA 200.7 Rev 4.4	ND mg/l	0.175 mg/l*	09/07/12 12:56PM B B
ARSENIC	EPA 200.7 Rev 4.4	0.0522 B mg/l	0.0283 mg/l*	09/07/12 12:56PM B B
BARIUM	EPA 200.7 Rev 4.4	0.359 mg/l	0.00170 mg/l*	09/07/12 12:56PM B B
BERYLLIUM	EPA 200.7 Rev 4.4	0.00150 B mg/l	0.000353 mg/l*	09/07/12 12:56PM B B
CALCIUM	EPA 200.7 Rev 4.4	330 mg/l	0.0460 mg/l*	09/07/12 12:56PM B B
CADMIUM	EPA 200.7 Rev 4.4	ND mg/l	0.00110 mg/l*	09/07/12 12:56PM B B
COBALT	EPA 200.7 Rev 4.4	ND mg/l	0.00400 mg/l*	09/07/12 12:56PM B B
CHROMIUM	EPA 200.7 Rev 4.4	0.00930 B mg/l	0.00220 mg/l*	09/07/12 12:56PM B B
COPPER	EPA 200.7 Rev 4.4	0.0182 B mg/l	0.00310 mg/l*	09/07/12 12:56PM B B
IRON	EPA 200.7 Rev 4.4	3.89 mg/l	0.0359 mg/l*	09/07/12 12:56PM B B
POTASSIUM	EPA 200.7 Rev 4.4	162 mg/l	0.559 mg/l*	09/07/12 12:56PM B B
MAGNESIUM	EPA 200.7 Rev 4.4	725 mg/l	0.441 mg/l*	09/07/12 12:56PM B B
MANGANESE	EPA 200.7 Rev 4.4	0.197 mg/l	0.000786 mg/l*	09/07/12 12:56PM B B
NICKEL	EPA 200.7 Rev 4.4	ND mg/l	0.00340 mg/l*	09/07/12 12:56PM B B
LEAD	EPA 200.7 Rev 4.4	ND mg/l	0.0175 mg/l*	09/07/12 12:56PM B B
ANTIMONY	EPA 200.7 Rev 4.4	ND mg/l	0.0220 mg/l*	09/07/12 12:56PM B B
SELENIUM	EPA 200.7 Rev 4.4	ND mg/l	0.0517 mg/l*	09/07/12 12:56PM B B
THALLIUM	EPA 200.7 Rev 4.4	ND mg/l	0.0324 mg/l*	09/07/12 12:56PM B B
VANADIUM	EPA 200.7 Rev 4.4	0.00610 B mg/l	0.00260 mg/l*	09/07/12 12:56PM B B
ZINC	EPA 200.7 Rev 4.4	0.0818 mg/l	0.00260 mg/l*	09/07/12 12:56PM B B
SODIUM	EPA 200.7 Rev 4.4	5760 mg/l	1.06 mg/l*	09/07/12 01:28PM B B
MERCURY	EPA 245.1 Rev 3.0	0.0000210 B mg/l	0.0000130 mg/l*	09/05/12 02:28PM RMP
GAS CHROMATOGRAPHY MASS SPECTROMETRY; SEMI-VOLATILES				
NAPHTHALENE	EPA 8270C	0.02 ug/l	0.01 ug/l*	09/05/12 06:45PM GRM
2-METHYLNAPHTHALENE	EPA 8270C	0.01 J ug/l	0.01 ug/l*	09/05/12 06:45PM GRM
ACENAPHTHYLENE	EPA 8270C	ND ug/l	0.01 ug/l*	09/05/12 06:45PM GRM
ACENAPHTHENE	EPA 8270C	ND ug/l	0.01 ug/l*	09/05/12 06:45PM GRM
FLUORENE	EPA 8270C	ND ug/l	0.02 ug/l*	09/05/12 06:45PM GRM
PHENANTHRENE	EPA 8270C	0.02 ug/l	0.01 ug/l*	09/05/12 06:45PM GRM
ANTHRACENE	EPA 8270C	ND ug/l	0.01 ug/l*	09/05/12 06:45PM GRM
FLUORANTHENE	EPA 8270C	ND ug/l	0.02 ug/l*	09/05/12 06:45PM GRM
PYRENE	EPA 8270C	ND ug/l	0.02 ug/l*	09/05/12 06:45PM GRM
BENZO(A)ANTHRACENE	EPA 8270C	ND ug/l	0.01 ug/l*	09/05/12 06:45PM GRM
CHRYSENE	EPA 8270C	ND ug/l	0.01 ug/l*	09/05/12 06:45PM GRM
BENZO(B)FLUORANTHENE	EPA 8270C	ND ug/l	0.02 ug/l*	09/05/12 06:45PM GRM
BENZO(K)FLUORANTHENE	EPA 8270C	ND ug/l	0.02 ug/l*	09/05/12 06:45PM GRM
BENZO(A)PYRENE	EPA 8270C	ND ug/l	0.02 ug/l*	09/05/12 06:45PM GRM
INDENO(1,2,3-CD)PYRENE	EPA 8270C	ND ug/l	0.02 ug/l*	09/05/12 06:45PM GRM
DIBENZ(A,H)ANTHRACENE	EPA 8270C	ND ug/l	0.02 ug/l*	09/05/12 06:45PM GRM

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Oommen V. Kappil

Authorized by: Oommen V. Kappil, QA Director

Account No: SR0117, EASTSTAR ENVIRONMENTAL GROUP, INC. **P.O. No:** **Inv. No:**
Project No: SR0117, EASTSTAR ENVIRONMENTAL GROUP, INC. **PWSID No:**

Sample Number **Sample Description** **Samp. Date/Time/Temp** **Sampled by**
L4297938-12 I027-6S-012 08/23/12 01:15pm NA F Customer
Received Date/Time/Temp 08/23/12 08:30pm 35 F **Iced (Y/N):** Y

Parameter	Method	Result	RLs	Test Date, Time, Analyst
GAS CHROMATOGRAPHY MASS SPECTROMETRY; SEMI-VOLATILES continued				
BENZO(G,H,I)PERYLENE	EPA 8270C	ND ug/l	0.02 ug/l*	09/05/12 06:45PM GRM
GAS CHROMATOGRAPHY MASS SPECTROMETRY; VOLATILES				
DICHLORODIFLUOROMETHANE	EPA 8260B	ND ug/l	2.15 ug/l*	09/04/12 03:19PM JSH
CHLOROMETHANE	EPA 8260B	ND ug/l	1.60 ug/l*	09/04/12 03:19PM JSH
VINYL CHLORIDE	EPA 8260B	ND ug/l	1.20 ug/l*	09/04/12 03:19PM JSH
BROMOMETHANE	EPA 8260B	ND ug/l	2.30 ug/l*	09/04/12 03:19PM JSH
CHLOROETHANE	EPA 8260B	ND ug/l	1.70 ug/l*	09/04/12 03:19PM JSH
TRICHLOROFLUOROMETHANE	EPA 8260B	ND ug/l	1.90 ug/l*	09/04/12 03:19PM JSH
1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	EPA 8260B	ND ug/l	2.35 ug/l*	09/04/12 03:19PM JSH
METHYL ACETATE	EPA 8260B	ND ug/l	1.80 ug/l*	09/04/12 03:19PM JSH
1,1-DICHLOROETHENE	EPA 8260B	ND ug/l	1.55 ug/l*	09/04/12 03:19PM JSH
ACETONE	EPA 8260B	ND ug/l	16.3 ug/l*	09/04/12 03:19PM JSH
CARBON DISULFIDE	EPA 8260B	ND ug/l	3.20 ug/l*	09/04/12 03:19PM JSH
METHYLENE CHLORIDE	EPA 8260B	3.10 J ug/l	2.50 ug/l*	09/04/12 03:19PM JSH
TRANS-1,2-DICHLOROETHENE	EPA 8260B	ND ug/l	0.700 ug/l*	09/04/12 03:19PM JSH
METHYL TERTIARY BUTYL ETHER	EPA 8260B	ND ug/l	1.00 ug/l*	09/04/12 03:19PM JSH
1,1-DICHLOROETHANE	EPA 8260B	ND ug/l	1.20 ug/l*	09/04/12 03:19PM JSH
2-BUTANONE	EPA 8260B	ND ug/l	7.20 ug/l*	09/04/12 03:19PM JSH
BROMOCHLOROMETHANE	EPA 8260B	ND ug/l	1.50 ug/l*	09/04/12 03:19PM JSH
CIS-1,2-DICHLOROETHENE	EPA 8260B	ND ug/l	1.40 ug/l*	09/04/12 03:19PM JSH
CHLOROFORM	EPA 8260B	ND ug/l	1.15 ug/l*	09/04/12 03:19PM JSH
1,1,1-TRICHLOROETHANE	EPA 8260B	ND ug/l	1.05 ug/l*	09/04/12 03:19PM JSH
CYCLOHEXANE	EPA 8260B	ND ug/l	2.20 ug/l*	09/04/12 03:19PM JSH
CARBON TETRACHLORIDE	EPA 8260B	ND ug/l	1.40 ug/l*	09/04/12 03:19PM JSH
BENZENE	EPA 8260B	ND ug/l	1.10 ug/l*	09/04/12 03:19PM JSH
1,2-DICHLOROETHANE	EPA 8260B	ND ug/l	1.20 ug/l*	09/04/12 03:19PM JSH
TRICHLOROETHENE	EPA 8260B	ND ug/l	1.25 ug/l*	09/04/12 03:19PM JSH
METHYLCYCLOHEXANE	EPA 8260B	ND ug/l	1.80 ug/l*	09/04/12 03:19PM JSH
1,2-DICHLOROPROPANE	EPA 8260B	ND ug/l	1.00 ug/l*	09/04/12 03:19PM JSH
BROMODICHLOROMETHANE	EPA 8260B	ND ug/l	1.05 ug/l*	09/04/12 03:19PM JSH
4-METHYL-2-PENTANONE	EPA 8260B	ND ug/l	2.20 ug/l*	09/04/12 03:19PM JSH
CIS-1,3-DICHLOROPROPENE	EPA 8260B	ND ug/l	1.10 ug/l*	09/04/12 03:19PM JSH
TOLUENE	EPA 8260B	ND ug/l	0.950 ug/l*	09/04/12 03:19PM JSH
TRANS-1,3-DICHLOROPROPENE	EPA 8260B	ND ug/l	1.10 ug/l*	09/04/12 03:19PM JSH
1,1,2-TRICHLOROETHANE	EPA 8260B	ND ug/l	1.20 ug/l*	09/04/12 03:19PM JSH
2-HEXANONE	EPA 8260B	ND ug/l	4.15 ug/l*	09/04/12 03:19PM JSH
TETRACHLOROETHENE	EPA 8260B	ND ug/l	1.85 ug/l*	09/04/12 03:19PM JSH
DIBROMOCHLOROMETHANE	EPA 8260B	ND ug/l	0.700 ug/l*	09/04/12 03:19PM JSH
1,2-DIBROMOETHANE	EPA 8260B	ND ug/l	1.05 ug/l*	09/04/12 03:19PM JSH
CHLOROBENZENE	EPA 8260B	ND ug/l	1.15 ug/l*	09/04/12 03:19PM JSH
ETHYLBENZENE	EPA 8260B	ND ug/l	1.15 ug/l*	09/04/12 03:19PM JSH
M&P-XYLENES	EPA 8260B	ND ug/l	2.30 ug/l*	09/04/12 03:19PM JSH
O-XYLENE	EPA 8260B	ND ug/l	1.20 ug/l*	09/04/12 03:19PM JSH
STYRENE	EPA 8260B	ND ug/l	1.00 ug/l*	09/04/12 03:19PM JSH
BROMOFORM	EPA 8260B	ND ug/l	1.55 ug/l*	09/04/12 03:19PM JSH
1,1,2,2-TETRACHLOROETHANE	EPA 8260B	ND ug/l	1.60 ug/l*	09/04/12 03:19PM JSH

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Oommen V. Kappil

Authorized by: Oommen V. Kappil, QA Director

Account No: SR0117, EASTSTAR ENVIRONMENTAL GROUP, INC. **P.O. No:** **Inv. No:**
Project No: SR0117, EASTSTAR ENVIRONMENTAL GROUP, INC. **PWSID No:**

Sample Number **Sample Description** **Samp. Date/Time/Temp** **Sampled by**
L4297938-12 I027-6S-012 08/23/12 01:15pm NA F Customer
Received Date/Time/Temp 08/23/12 08:30pm 35 F **Iced (Y/N):** Y

Parameter	Method	Result	RLs	Test Date, Time, Analyst
GAS CHROMATOGRAPHY MASS SPECTROMETRY; VOLATILES continued				
ISOPROPYLBENZENE	EPA 8260B	ND ug/l	1.35 ug/l*	09/04/12 03:19PM JSH
1,3-DICHLOROBENZENE	EPA 8260B	ND ug/l	1.05 ug/l*	09/04/12 03:19PM JSH
1,4-DICHLOROBENZENE	EPA 8260B	ND ug/l	0.850 ug/l*	09/04/12 03:19PM JSH
1,2-DICHLOROBENZENE	EPA 8260B	ND ug/l	1.00 ug/l*	09/04/12 03:19PM JSH
1,2-DIBROMO-3-CHLOROPROPANE	EPA 8260B	ND ug/l	2.35 ug/l*	09/04/12 03:19PM JSH
1,2,4-TRICHLOROBENZENE	EPA 8260B	ND ug/l	1.80 ug/l*	09/04/12 03:19PM JSH
1,2,3-TRICHLOROBENZENE	EPA 8260B	ND ug/l	1.55 ug/l*	09/04/12 03:19PM JSH
1,4-DIOXANE	EPA 8260B	ND ug/l	643 ug/l*	09/04/12 03:19PM JSH

Sample Number **Sample Description** **Samp. Date/Time/Temp** **Sampled by**
L4297938-13 I027-6D-013 08/23/12 02:00pm NA F Customer
Received Date/Time/Temp 08/23/12 08:30pm 35 F **Iced (Y/N):** Y

Parameter	Method	Result	RLs	Test Date, Time, Analyst
GENERAL CHEMISTRY				
CYANIDE, TOTAL	SM 4500CN C,E	ND mg/l	0.0400 mg/l	09/04/12 12:00PM JG
METALS				
SILVER	EPA 200.7 Rev 4.4	0.0195 B mg/l	0.00510 mg/l*	09/07/12 01:00PM B B
ALUMINUM	EPA 200.7 Rev 4.4	ND mg/l	0.175 mg/l*	09/07/12 01:00PM B B
BARIUM	EPA 200.7 Rev 4.4	0.0416 B mg/l	0.00170 mg/l*	09/07/12 01:00PM B B
BERYLLIUM	EPA 200.7 Rev 4.4	0.00150 B mg/l	0.000353 mg/l*	09/07/12 01:00PM B B
CALCIUM	EPA 200.7 Rev 4.4	897 mg/l	0.0460 mg/l*	09/07/12 01:00PM B B
CADMIUM	EPA 200.7 Rev 4.4	ND mg/l	0.00110 mg/l*	09/07/12 01:00PM B B
COBALT	EPA 200.7 Rev 4.4	0.00410 B mg/l	0.00400 mg/l*	09/07/12 01:00PM B B
CHROMIUM	EPA 200.7 Rev 4.4	0.00280 B mg/l	0.00220 mg/l*	09/07/12 01:00PM B B
COPPER	EPA 200.7 Rev 4.4	0.00910 B mg/l	0.00310 mg/l*	09/07/12 01:00PM B B
IRON	EPA 200.7 Rev 4.4	10.4 mg/l	0.0359 mg/l*	09/07/12 01:00PM B B
POTASSIUM	EPA 200.7 Rev 4.4	67.0 mg/l	0.559 mg/l*	09/07/12 01:00PM B B
MAGNESIUM	EPA 200.7 Rev 4.4	677 mg/l	0.441 mg/l*	09/07/12 01:00PM B B
MANGANESE	EPA 200.7 Rev 4.4	0.663 mg/l	0.000786 mg/l*	09/07/12 01:00PM B B
SODIUM	EPA 200.7 Rev 4.4	4630 mg/l	0.106 mg/l*	09/07/12 01:00PM B B
NICKEL	EPA 200.7 Rev 4.4	ND mg/l	0.00340 mg/l*	09/07/12 01:00PM B B
LEAD	EPA 200.7 Rev 4.4	ND mg/l	0.0175 mg/l*	09/07/12 01:00PM B B
ANTIMONY	EPA 200.7 Rev 4.4	ND mg/l	0.0220 mg/l*	09/07/12 01:00PM B B
SELENIUM	EPA 200.7 Rev 4.4	0.0642 B mg/l	0.0517 mg/l*	09/07/12 01:00PM B B
THALLIUM	EPA 200.7 Rev 4.4	ND mg/l	0.0324 mg/l*	09/07/12 01:00PM B B
VANADIUM	EPA 200.7 Rev 4.4	ND mg/l	0.00260 mg/l*	09/07/12 01:00PM B B
ZINC	EPA 200.7 Rev 4.4	0.0582 mg/l	0.00260 mg/l*	09/07/12 01:00PM B B
ARSENIC	EPA 200.7 Rev 4.4	0.180 mg/l	0.0283 mg/l*	09/07/12 01:07PM B B
MERCURY	EPA 245.1 Rev 3.0	0.0000270 B mg/l	0.0000130 mg/l*	09/05/12 02:29PM RMP

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Authorized by: Oommen V. Kappil, QA Director

QC Laboratories

Analytical Report

Account No: SR0117, EASTSTAR ENVIRONMENTAL GROUP, INC. **P.O. No:** **Inv. No:**
Project No: SR0117, EASTSTAR ENVIRONMENTAL GROUP, INC. **PWSID No:**

Sample Number **Sample Description** **Samp. Date/Time/Temp** **Sampled by**
L4297938-13 I027-6D-013 08/23/12 02:00pm NA F Customer

Received Date/Time/Temp 08/23/12 08:30pm 35 F **Iced (Y/N):** Y

Parameter	Method	Result	RLs	Test Date, Time, Analyst
GAS CHROMATOGRAPHY MASS SPECTROMETRY; SEMI-VOLATILES				
NAPHTHALENE	EPA 8270C	ND ug/l	0.01 ug/l*	09/05/12 07:10PM GRM
2-METHYLNAPHTHALENE	EPA 8270C	ND ug/l	0.01 ug/l*	09/05/12 07:10PM GRM
ACENAPHTHYLENE	EPA 8270C	ND ug/l	0.01 ug/l*	09/05/12 07:10PM GRM
ACENAPHTHENE	EPA 8270C	ND ug/l	0.01 ug/l*	09/05/12 07:10PM GRM
FLUORENE	EPA 8270C	ND ug/l	0.02 ug/l*	09/05/12 07:10PM GRM
PHENANTHRENE	EPA 8270C	0.02 ug/l	0.01 ug/l*	09/05/12 07:10PM GRM
ANTHRACENE	EPA 8270C	ND ug/l	0.01 ug/l*	09/05/12 07:10PM GRM
FLUORANTHENE	EPA 8270C	ND ug/l	0.02 ug/l*	09/05/12 07:10PM GRM
PYRENE	EPA 8270C	ND ug/l	0.02 ug/l*	09/05/12 07:10PM GRM
BENZO(A)ANTHRACENE	EPA 8270C	ND ug/l	0.01 ug/l*	09/05/12 07:10PM GRM
CHRYSENE	EPA 8270C	ND ug/l	0.01 ug/l*	09/05/12 07:10PM GRM
BENZO(B)FLUORANTHENE	EPA 8270C	ND ug/l	0.02 ug/l*	09/05/12 07:10PM GRM
BENZO(K)FLUORANTHENE	EPA 8270C	ND ug/l	0.02 ug/l*	09/05/12 07:10PM GRM
BENZO(A)PYRENE	EPA 8270C	ND ug/l	0.02 ug/l*	09/05/12 07:10PM GRM
INDENO(1,2,3-CD)PYRENE	EPA 8270C	ND ug/l	0.02 ug/l*	09/05/12 07:10PM GRM
DIBENZ(A,H)ANTHRACENE	EPA 8270C	ND ug/l	0.02 ug/l*	09/05/12 07:10PM GRM
BENZO(G,H,I)PERYLENE	EPA 8270C	ND ug/l	0.02 ug/l*	09/05/12 07:10PM GRM
GAS CHROMATOGRAPHY MASS SPECTROMETRY; VOLATILES				
DICHLORODIFLUOROMETHANE	EPA 8260B	ND ug/l	0.430 ug/l*	09/05/12 03:00PM JSH
CHLOROMETHANE	EPA 8260B	ND ug/l	0.320 ug/l*	09/05/12 03:00PM JSH
VINYL CHLORIDE	EPA 8260B	ND ug/l	0.240 ug/l*	09/05/12 03:00PM JSH
CHLOROETHANE	EPA 8260B	ND ug/l	0.340 ug/l*	09/05/12 03:00PM JSH
TRICHLOROFLUOROMETHANE	EPA 8260B	ND ug/l	0.380 ug/l*	09/05/12 03:00PM JSH
1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	EPA 8260B	ND ug/l	0.470 ug/l*	09/05/12 03:00PM JSH
METHYL ACETATE	EPA 8260B	ND ug/l	0.360 ug/l*	09/05/12 03:00PM JSH
1,1-DICHLOROETHENE	EPA 8260B	ND ug/l	0.310 ug/l*	09/05/12 03:00PM JSH
ACETONE	EPA 8260B	ND ug/l	3.26 ug/l*	09/05/12 03:00PM JSH
CARBON DISULFIDE	EPA 8260B	ND ug/l	0.640 ug/l*	09/05/12 03:00PM JSH
METHYLENE CHLORIDE	EPA 8260B	ND ug/l	0.500 ug/l*	09/05/12 03:00PM JSH
TRANS-1,2-DICHLOROETHENE	EPA 8260B	ND ug/l	0.140 ug/l*	09/05/12 03:00PM JSH
METHYL TERTIARY BUTYL ETHER	EPA 8260B	ND ug/l	0.200 ug/l*	09/05/12 03:00PM JSH
1,1-DICHLOROETHANE	EPA 8260B	ND ug/l	0.240 ug/l*	09/05/12 03:00PM JSH
2-BUTANONE	EPA 8260B	ND ug/l	1.44 ug/l*	09/05/12 03:00PM JSH
BROMOCHLOROMETHANE	EPA 8260B	ND ug/l	0.300 ug/l*	09/05/12 03:00PM JSH
CIS-1,2-DICHLOROETHENE	EPA 8260B	ND ug/l	0.280 ug/l*	09/05/12 03:00PM JSH
CHLOROFORM	EPA 8260B	ND ug/l	0.230 ug/l*	09/05/12 03:00PM JSH
1,1,1-TRICHLOROETHANE	EPA 8260B	ND ug/l	0.210 ug/l*	09/05/12 03:00PM JSH
CYCLOHEXANE	EPA 8260B	ND ug/l	0.440 ug/l*	09/05/12 03:00PM JSH
CARBON TETRACHLORIDE	EPA 8260B	ND ug/l	0.280 ug/l*	09/05/12 03:00PM JSH
BENZENE	EPA 8260B	ND ug/l	0.220 ug/l*	09/05/12 03:00PM JSH
1,2-DICHLOROETHANE	EPA 8260B	ND ug/l	0.240 ug/l*	09/05/12 03:00PM JSH
TRICHLOROETHENE	EPA 8260B	ND ug/l	0.250 ug/l*	09/05/12 03:00PM JSH
METHYLCYCLOHEXANE	EPA 8260B	ND ug/l	0.360 ug/l*	09/05/12 03:00PM JSH
1,2-DICHLOROPROPANE	EPA 8260B	ND ug/l	0.200 ug/l*	09/05/12 03:00PM JSH
BROMODICHLOROMETHANE	EPA 8260B	ND ug/l	0.210 ug/l*	09/05/12 03:00PM JSH

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Authorized by: Oommen V. Kappil, QA Director

Account No: SR0117, EASTSTAR ENVIRONMENTAL GROUP, INC. **P.O. No:** **Inv. No:**
Project No: SR0117, EASTSTAR ENVIRONMENTAL GROUP, INC. **PWSID No:**

Sample Number **Sample Description** **Samp. Date/Time/Temp** **Sampled by**
L4297938-13 I027-6D-013 08/23/12 02:00pm NA F Customer
Received Date/Time/Temp 08/23/12 08:30pm 35 F **Iced (Y/N):** Y

Parameter	Method	Result	RLs	Test Date, Time, Analyst
GAS CHROMATOGRAPHY MASS SPECTROMETRY; VOLATILES continued				
4-METHYL-2-PENTANONE	EPA 8260B	ND ug/l	0.440 ug/l*	09/05/12 03:00PM JSH
CIS-1,3-DICHLOROPROPENE	EPA 8260B	ND ug/l	0.220 ug/l*	09/05/12 03:00PM JSH
TOLUENE	EPA 8260B	ND ug/l	0.190 ug/l*	09/05/12 03:00PM JSH
1,1,2-TRICHLOROETHANE	EPA 8260B	ND ug/l	0.240 ug/l*	09/05/12 03:00PM JSH
2-HEXANONE	EPA 8260B	ND ug/l	0.830 ug/l*	09/05/12 03:00PM JSH
TETRACHLOROETHENE	EPA 8260B	ND ug/l	0.370 ug/l*	09/05/12 03:00PM JSH
DIBROMOCHLOROMETHANE	EPA 8260B	ND ug/l	0.140 ug/l*	09/05/12 03:00PM JSH
1,2-DIBROMOETHANE	EPA 8260B	ND ug/l	0.210 ug/l*	09/05/12 03:00PM JSH
CHLOROBENZENE	EPA 8260B	ND ug/l	0.230 ug/l*	09/05/12 03:00PM JSH
ETHYLBENZENE	EPA 8260B	ND ug/l	0.230 ug/l*	09/05/12 03:00PM JSH
M&P-XYLENES	EPA 8260B	ND ug/l	0.460 ug/l*	09/05/12 03:00PM JSH
O-XYLENE	EPA 8260B	ND ug/l	0.240 ug/l*	09/05/12 03:00PM JSH
STYRENE	EPA 8260B	ND ug/l	0.200 ug/l*	09/05/12 03:00PM JSH
BROMOFORM	EPA 8260B	ND ug/l	0.310 ug/l*	09/05/12 03:00PM JSH
1,1,2,2-TETRACHLOROETHANE	EPA 8260B	ND ug/l	0.320 ug/l*	09/05/12 03:00PM JSH
ISOPROPYLBENZENE	EPA 8260B	ND ug/l	0.270 ug/l*	09/05/12 03:00PM JSH
1,3-DICHLOROBENZENE	EPA 8260B	ND ug/l	0.210 ug/l*	09/05/12 03:00PM JSH
1,4-DICHLOROBENZENE	EPA 8260B	ND ug/l	0.170 ug/l*	09/05/12 03:00PM JSH
1,2-DICHLOROBENZENE	EPA 8260B	ND ug/l	0.200 ug/l*	09/05/12 03:00PM JSH
1,2-DIBROMO-3-CHLOROPROPANE	EPA 8260B	ND ug/l	0.470 ug/l*	09/05/12 03:00PM JSH
1,2,4-TRICHLOROBENZENE	EPA 8260B	ND ug/l	0.360 ug/l*	09/05/12 03:00PM JSH
1,2,3-TRICHLOROBENZENE	EPA 8260B	ND ug/l	0.310 ug/l*	09/05/12 03:00PM JSH
1,4-DIOXANE	EPA 8260B	ND ug/l	129 ug/l*	09/05/12 03:00PM JSH
BROMOMETHANE	EPA 8260B	ND ug/l	0.430 ug/l*	09/06/12 01:14PM EEW
TRANS-1,3-DICHLOROPROPENE	EPA 8260B	ND ug/l	0.270 ug/l*	09/06/12 01:14PM EEW

Sample Number **Sample Description** **Samp. Date/Time/Temp** **Sampled by**
L4297938-14 TRIP BLANK 08/23/12 00:00pm NA F Customer
Received Date/Time/Temp 08/23/12 08:30pm 35 F **Iced (Y/N):** Y

Parameter	Method	Result	RLs	Test Date, Time, Analyst
GAS CHROMATOGRAPHY MASS SPECTROMETRY; VOLATILES				
DICHLORODIFLUOROMETHANE	EPA 8260B	ND ug/l	0.430 ug/l*	09/01/12 02:57AM JSH
CHLOROMETHANE	EPA 8260B	ND ug/l	0.320 ug/l*	09/01/12 02:57AM JSH
VINYL CHLORIDE	EPA 8260B	ND ug/l	0.240 ug/l*	09/01/12 02:57AM JSH
BROMOMETHANE	EPA 8260B	ND ug/l	0.460 ug/l*	09/01/12 02:57AM JSH
CHLOROETHANE	EPA 8260B	ND ug/l	0.340 ug/l*	09/01/12 02:57AM JSH
TRICHLOROFLUOROMETHANE	EPA 8260B	ND ug/l	0.380 ug/l*	09/01/12 02:57AM JSH
1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	EPA 8260B	ND ug/l	0.470 ug/l*	09/01/12 02:57AM JSH
METHYL ACETATE	EPA 8260B	ND ug/l	0.360 ug/l*	09/01/12 02:57AM JSH
1,1-DICHLOROETHENE	EPA 8260B	ND ug/l	0.310 ug/l*	09/01/12 02:57AM JSH
ACETONE	EPA 8260B	7.78 ug/l	3.26 ug/l*	09/01/12 02:57AM JSH
CARBON DISULFIDE	EPA 8260B	ND ug/l	0.640 ug/l*	09/01/12 02:57AM JSH
METHYLENE CHLORIDE	EPA 8260B	ND ug/l	0.500 ug/l*	09/01/12 02:57AM JSH
TRANS-1,2-DICHLOROETHENE	EPA 8260B	ND ug/l	0.140 ug/l*	09/01/12 02:57AM JSH
METHYL TERTIARY BUTYL ETHER	EPA 8260B	ND ug/l	0.200 ug/l*	09/01/12 02:57AM JSH

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Authorized by: Oommen V. Kappil, QA Director

Account No: SR0117, EASTSTAR ENVIRONMENTAL GROUP, INC. **P.O. No:** **Inv. No:**
Project No: SR0117, EASTSTAR ENVIRONMENTAL GROUP, INC. **PWSID No:**

Sample Number **Sample Description** **Samp. Date/Time/Temp** **Sampled by**
L4297938-14 TRIP BLANK 08/23/12 00:00pm NA F Customer
Received Date/Time/Temp 08/23/12 08:30pm 35 F **Iced (Y/N):** Y

Parameter	Method	Result	RLs	Test Date, Time, Analyst
GAS CHROMATOGRAPHY MASS SPECTROMETRY; VOLATILES continued				
1,1-DICHLOROETHANE	EPA 8260B	ND ug/l	0.240 ug/l*	09/01/12 02:57AM JSH
2-BUTANONE	EPA 8260B	ND ug/l	1.44 ug/l*	09/01/12 02:57AM JSH
BROMOCHLOROMETHANE	EPA 8260B	ND ug/l	0.300 ug/l*	09/01/12 02:57AM JSH
CIS-1,2-DICHLOROETHENE	EPA 8260B	ND ug/l	0.280 ug/l*	09/01/12 02:57AM JSH
CHLOROFORM	EPA 8260B	ND ug/l	0.230 ug/l*	09/01/12 02:57AM JSH
1,1,1-TRICHLOROETHANE	EPA 8260B	ND ug/l	0.210 ug/l*	09/01/12 02:57AM JSH
CYCLOHEXANE	EPA 8260B	ND ug/l	0.440 ug/l*	09/01/12 02:57AM JSH
CARBON TETRACHLORIDE	EPA 8260B	ND ug/l	0.280 ug/l*	09/01/12 02:57AM JSH
BENZENE	EPA 8260B	ND ug/l	0.220 ug/l*	09/01/12 02:57AM JSH
1,2-DICHLOROETHANE	EPA 8260B	ND ug/l	0.240 ug/l*	09/01/12 02:57AM JSH
TRICHLOROETHENE	EPA 8260B	ND ug/l	0.250 ug/l*	09/01/12 02:57AM JSH
METHYLCYCLOHEXANE	EPA 8260B	ND ug/l	0.360 ug/l*	09/01/12 02:57AM JSH
1,2-DICHLOROPROPANE	EPA 8260B	ND ug/l	0.200 ug/l*	09/01/12 02:57AM JSH
BROMODICHLOROMETHANE	EPA 8260B	ND ug/l	0.210 ug/l*	09/01/12 02:57AM JSH
4-METHYL-2-PENTANONE	EPA 8260B	ND ug/l	0.440 ug/l*	09/01/12 02:57AM JSH
CIS-1,3-DICHLOROPROPENE	EPA 8260B	ND ug/l	0.220 ug/l*	09/01/12 02:57AM JSH
TOLUENE	EPA 8260B	ND ug/l	0.190 ug/l*	09/01/12 02:57AM JSH
TRANS-1,3-DICHLOROPROPENE	EPA 8260B	ND ug/l	0.220 ug/l*	09/01/12 02:57AM JSH
1,1,2-TRICHLOROETHANE	EPA 8260B	ND ug/l	0.240 ug/l*	09/01/12 02:57AM JSH
2-HEXANONE	EPA 8260B	ND ug/l	0.830 ug/l*	09/01/12 02:57AM JSH
TETRACHLOROETHENE	EPA 8260B	ND ug/l	0.370 ug/l*	09/01/12 02:57AM JSH
DIBROMOCHLOROMETHANE	EPA 8260B	ND ug/l	0.140 ug/l*	09/01/12 02:57AM JSH
1,2-DIBROMOETHANE	EPA 8260B	ND ug/l	0.210 ug/l*	09/01/12 02:57AM JSH
CHLOROBENZENE	EPA 8260B	ND ug/l	0.230 ug/l*	09/01/12 02:57AM JSH
ETHYLBENZENE	EPA 8260B	ND ug/l	0.230 ug/l*	09/01/12 02:57AM JSH
M&P-XYLENES	EPA 8260B	ND ug/l	0.460 ug/l*	09/01/12 02:57AM JSH
O-XYLENE	EPA 8260B	ND ug/l	0.240 ug/l*	09/01/12 02:57AM JSH
STYRENE	EPA 8260B	ND ug/l	0.200 ug/l*	09/01/12 02:57AM JSH
BROMOFORM	EPA 8260B	ND ug/l	0.310 ug/l*	09/01/12 02:57AM JSH
1,1,2,2-TETRACHLOROETHANE	EPA 8260B	ND ug/l	0.320 ug/l*	09/01/12 02:57AM JSH
ISOPROPYLBENZENE	EPA 8260B	ND ug/l	0.270 ug/l*	09/01/12 02:57AM JSH
1,3-DICHLOROBENZENE	EPA 8260B	ND ug/l	0.210 ug/l*	09/01/12 02:57AM JSH
1,4-DICHLOROBENZENE	EPA 8260B	ND ug/l	0.170 ug/l*	09/01/12 02:57AM JSH
1,2-DICHLOROBENZENE	EPA 8260B	ND ug/l	0.200 ug/l*	09/01/12 02:57AM JSH
1,2-DIBROMO-3-CHLOROPROPANE	EPA 8260B	ND ug/l	0.470 ug/l*	09/01/12 02:57AM JSH
1,2,4-TRICHLOROBENZENE	EPA 8260B	ND ug/l	0.360 ug/l*	09/01/12 02:57AM JSH
1,2,3-TRICHLOROBENZENE	EPA 8260B	ND ug/l	0.310 ug/l*	09/01/12 02:57AM JSH
1,4-DIOXANE	EPA 8260B	ND ug/l	129 ug/l*	09/01/12 02:57AM JSH

L4297938-1 :

@1664 SGT/PHC=non-polar materials of petroleum origin >C12.

QUALIFIERS: For metals parameters;"B" indicates a value that is > than the MDL but < than the laboratory quantitation limit. For Organics parameters; "B"is when the compound is found in the blank as well as in the sample;"J"indicates a value that is > than the MDL but < than the lowest standard, it is also used to indicate that a compound is tentatively identified in a library search;"E"(estimated) is when a compound exceeded the calibration range;"N" presumptive evidence of a compound; "D" is when a dilution was required.

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Oommen V. Kappil

Authorized by: Oommen V. Kappil, QA Director

Account No: SR0117, EASTSTAR ENVIRONMENTAL GROUP, INC. **P.O. No:** **Inv. No:**
Project No: SR0117, EASTSTAR ENVIRONMENTAL GROUP, INC. **PWSID No:**

L4297938-2 :

@1664 SGT/PHC=non-polar materials of petroleum origin >C12.

L4297938-4 :

@1664 SGT/PHC=non-polar materials of petroleum origin >C12.

L4297938-5 :

@1664 SGT/PHC=non-polar materials of petroleum origin >C12.

L4297938-6 :

@1664 SGT/PHC=non-polar materials of petroleum origin >C12.

Method 8260 requires that samples be preserved to a pH of <2. The submitted sample had a pH >2 and was not analyzed within the 7 day holding time requirement. Consult with your regulatory agency for further guidance on the use of this data.

L4297938-8 :

@1664 SGT/PHC=non-polar materials of petroleum origin >C12.

L4297938-11 :

@1664 SGT/PHC=non-polar materials of petroleum origin >C12.

Method 8260 requires that samples be preserved to a pH of <2. The submitted sample had a pH >2 and was not analyzed within the 7 day holding time requirement. Consult with your regulatory agency for further guidance on the use of this data.

L4297938-12 :

@1664 SGT/PHC=non-polar materials of petroleum origin >C12.

: The reported value for Method 1664 SGT (ND) is based on the result found in Method 1664 HEM. HEM was not detected in this sample and by definition, SGT is not greater than HEM for samples -1, -4, -5, -11 and -12.

Notes:

A result of "ND" indicates that the analyte tested was either not detected or the concentration was below the RLs.
Definitions: NEG=negative; POS=positive; COL=colonies; RLs=laboratory reporting limits; L/A=laboratory accident; TNTC= Too numerous to count; pres=presumptive
A result marked with "DRY" indicates that the result was calculated and reported on a dry weight basis.
MCL= EPA recommended "maximum contaminant level", PLs = Customer-specific permit limits.
The test results meet all requirements of NELAC unless otherwise specified.
The report shall not be reproduced except in full without the written consent of the laboratory.
Unless otherwise specified, the Environmental and Food Chemistry testing except Field Parameters were performed by QC Inc. located at 1205 Industrial Blvd., Southampton, PA 18966; Pharmaceutical, Dairy and Food Microbiological tests were performed by QC Inc. located at 702 Electronic Dr., Horsham, PA 19044.
QCL Accreditations: Southampton Div: EPA ID PA00018; NELAP ID's: PA 09-00131, NJ PA166, NY 11223 State ID's: CT PH-0768, DE PA-018, MD 206, SC 89021001; FDA Reg. # : 2515238
ACL Div: NELAP ID's: PA 68-335, NJ DE568; State ID's: DE 00011, MD 138; Wind Gap Div: State ID's: PA 48-01334, NJ PA001
E. Rutherford Div: State ID: NJ 02015; Vineland Div: State ID: NJ 06005; Reading Div: State ID: PA 06-03543
The reported results relate only to the samples.
All samples are collected as "grab" samples unless otherwise identified.

* - The "RLs" represents a reporting/quantitation limit. When an "*" is present in the column identified as the "RLs", it is being reported as a Method Detection Limit (MDL).

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Authorized by: Oommen V. Kappil, QA Director

QC Laboratories

Analytical Report

ACCREDITED IN ACCORDANCE WITH nelac

Printed: 09/07/12 16:38

AL FREE
EASTSTAR ENVIRONMENTAL GROUP, INC.
10632 LITTLE PATUXENT PARKWAY
SUITE 106
COLUMBIA, MD 21044

Regarding:
AL FREE
EASTSTAR ENVIRONMENTAL GROUP, INC.
10632 LITTLE PATUXENT PARKWAY
SUITE 106
COLUMBIA, MD 21044

Account No: SR0117, EASTSTAR ENVIRONMENTAL GROUP, INC. **P.O. No:** **Inv. No:**
Project No: SR0117, EASTSTAR ENVIRONMENTAL GROUP, INC. **PWSID No:**

Sample Number **Sample Description** **Samp. Date/Time/Temp** **Sampled by**
L4298168-1 I027-3S-013 08/24/12 08:25am NA F Customer

Received Date/Time/Temp 08/24/12 01:30pm 34 F **Iced (Y/N):** Y

Parameter	Method	Result	RLs	Test Date, Time, Analyst
GENERAL CHEMISTRY				
CYANIDE, TOTAL	SM 4500CN C,E	0.0960 mg/l	0.0400 mg/l	09/05/12 12:00PM JG
METALS				
SILVER	EPA 200.7 Rev 4.4	0.0172 B mg/l	0.00510 mg/l*	09/07/12 02:05PM B B
ALUMINUM	EPA 200.7 Rev 4.4	ND mg/l	0.175 mg/l*	09/07/12 02:05PM B B
ARSENIC	EPA 200.7 Rev 4.4	0.151 mg/l	0.0283 mg/l*	09/07/12 02:05PM B B
BARIUM	EPA 200.7 Rev 4.4	0.0938 B mg/l	0.00170 mg/l*	09/07/12 02:05PM B B
BERYLLIUM	EPA 200.7 Rev 4.4	0.00140 B mg/l	0.000353 mg/l*	09/07/12 02:05PM B B
CALCIUM	EPA 200.7 Rev 4.4	726 mg/l	0.0460 mg/l*	09/07/12 02:05PM B B
CADMIUM	EPA 200.7 Rev 4.4	ND mg/l	0.00110 mg/l*	09/07/12 02:05PM B B
COBALT	EPA 200.7 Rev 4.4	0.00570 B mg/l	0.00400 mg/l*	09/07/12 02:05PM B B
CHROMIUM	EPA 200.7 Rev 4.4	0.00950 B mg/l	0.00220 mg/l*	09/07/12 02:05PM B B
COPPER	EPA 200.7 Rev 4.4	0.0187 B mg/l	0.00310 mg/l*	09/07/12 02:05PM B B
IRON	EPA 200.7 Rev 4.4	7.13 mg/l	0.0359 mg/l*	09/07/12 02:05PM B B
POTASSIUM	EPA 200.7 Rev 4.4	143 mg/l	0.559 mg/l*	09/07/12 02:05PM B B
MAGNESIUM	EPA 200.7 Rev 4.4	648 mg/l	0.441 mg/l*	09/07/12 02:05PM B B
MANGANESE	EPA 200.7 Rev 4.4	0.708 mg/l	0.000786 mg/l*	09/07/12 02:05PM B B
NICKEL	EPA 200.7 Rev 4.4	ND mg/l	0.00340 mg/l*	09/07/12 02:05PM B B
LEAD	EPA 200.7 Rev 4.4	ND mg/l	0.0175 mg/l*	09/07/12 02:05PM B B
ANTIMONY	EPA 200.7 Rev 4.4	0.0927 B mg/l	0.0220 mg/l*	09/07/12 02:05PM B B
SELENIUM	EPA 200.7 Rev 4.4	0.101 mg/l	0.0517 mg/l*	09/07/12 02:05PM B B
THALLIUM	EPA 200.7 Rev 4.4	ND mg/l	0.0324 mg/l*	09/07/12 02:05PM B B
VANADIUM	EPA 200.7 Rev 4.4	0.00430 B mg/l	0.00260 mg/l*	09/07/12 02:05PM B B
ZINC	EPA 200.7 Rev 4.4	0.0784 mg/l	0.00260 mg/l*	09/07/12 02:05PM B B
SODIUM	EPA 200.7 Rev 4.4	5640 mg/l	1.06 mg/l*	09/07/12 02:26PM B B
MERCURY	EPA 245.1 Rev 3.0	0.0000330 B mg/l	0.0000130 mg/l*	09/05/12 03:30PM RMP

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Authorized by: Oommen V. Kappil, QA Director

1205 Industrial Blvd., P.O. Box 514, Southampton, PA 18966-0514 Phone: 215-355-3900 Fax: 215-355-7231 www.qclaboratories.com

QC Laboratories

Analytical Report

Account No: SR0117, EASTSTAR ENVIRONMENTAL GROUP, INC. **P.O. No:** **Inv. No:**
Project No: SR0117, EASTSTAR ENVIRONMENTAL GROUP, INC. **PWSID No:**

Sample Number **Sample Description** **Samp. Date/Time/Temp** **Sampled by**
L4298168-1 I027-3S-013 08/24/12 08:25am NA F Customer
Received Date/Time/Temp 08/24/12 01:30pm 34 F **Iced (Y/N):** Y

Parameter	Method	Result	RLs	Test Date, Time, Analyst
GAS CHROMATOGRAPHY MASS SPECTROMETRY; SEMI-VOLATILES				
NAPHTHALENE	EPA 8270C	0.03 ug/l	0.01 ug/l*	09/06/12 05:56PM GRM
2-METHYLNAPHTHALENE	EPA 8270C	0.03 ug/l	0.01 ug/l*	09/06/12 05:56PM GRM
ACENAPHTHYLENE	EPA 8270C	ND ug/l	0.01 ug/l*	09/06/12 05:56PM GRM
ACENAPHTHENE	EPA 8270C	0.02 ug/l	0.01 ug/l*	09/06/12 05:56PM GRM
FLUORENE	EPA 8270C	0.02 ug/l	0.02 ug/l*	09/06/12 05:56PM GRM
PHENANTHRENE	EPA 8270C	0.02 ug/l	0.01 ug/l*	09/06/12 05:56PM GRM
ANTHRACENE	EPA 8270C	ND ug/l	0.01 ug/l*	09/06/12 05:56PM GRM
FLUORANTHENE	EPA 8270C	ND ug/l	0.02 ug/l*	09/06/12 05:56PM GRM
PYRENE	EPA 8270C	ND ug/l	0.02 ug/l*	09/06/12 05:56PM GRM
BENZO(A)ANTHRACENE	EPA 8270C	ND ug/l	0.01 ug/l*	09/06/12 05:56PM GRM
CHRYSENE	EPA 8270C	ND ug/l	0.01 ug/l*	09/06/12 05:56PM GRM
BENZO(B)FLUORANTHENE	EPA 8270C	ND ug/l	0.02 ug/l*	09/06/12 05:56PM GRM
BENZO(K)FLUORANTHENE	EPA 8270C	ND ug/l	0.02 ug/l*	09/06/12 05:56PM GRM
BENZO(A)PYRENE	EPA 8270C	ND ug/l	0.02 ug/l*	09/06/12 05:56PM GRM
INDENO(1,2,3-CD)PYRENE	EPA 8270C	ND ug/l	0.02 ug/l*	09/06/12 05:56PM GRM
DIBENZ(A,H)ANTHRACENE	EPA 8270C	ND ug/l	0.02 ug/l*	09/06/12 05:56PM GRM
BENZO(G,H,I)PERYLENE	EPA 8270C	ND ug/l	0.02 ug/l*	09/06/12 05:56PM GRM
GAS CHROMATOGRAPHY MASS SPECTROMETRY; VOLATILES				
DICHLORODIFLUOROMETHANE	EPA 8260B	ND ug/l	3.60 ug/l*	09/06/12 01:51PM EEW
CHLOROMETHANE	EPA 8260B	ND ug/l	4.30 ug/l*	09/06/12 01:51PM EEW
VINYL CHLORIDE	EPA 8260B	ND ug/l	3.90 ug/l*	09/06/12 01:51PM EEW
BROMOMETHANE	EPA 8260B	ND ug/l	4.30 ug/l*	09/06/12 01:51PM EEW
CHLOROETHANE	EPA 8260B	ND ug/l	5.90 ug/l*	09/06/12 01:51PM EEW
TRICHLOROFLUOROMETHANE	EPA 8260B	ND ug/l	4.30 ug/l*	09/06/12 01:51PM EEW
1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	EPA 8260B	ND ug/l	4.90 ug/l*	09/06/12 01:51PM EEW
METHYL ACETATE	EPA 8260B	ND ug/l	9.10 ug/l*	09/06/12 01:51PM EEW
1,1-DICHLOROETHENE	EPA 8260B	ND ug/l	3.20 ug/l*	09/06/12 01:51PM EEW
ACETONE	EPA 8260B	ND ug/l	22.6 ug/l*	09/06/12 01:51PM EEW
CARBON DISULFIDE	EPA 8260B	ND ug/l	6.20 ug/l*	09/06/12 01:51PM EEW
METHYLENE CHLORIDE	EPA 8260B	ND ug/l	4.00 ug/l*	09/06/12 01:51PM EEW
TRANS-1,2-DICHLOROETHENE	EPA 8260B	ND ug/l	4.10 ug/l*	09/06/12 01:51PM EEW
METHYL TERTIARY BUTYL ETHER	EPA 8260B	ND ug/l	3.10 ug/l*	09/06/12 01:51PM EEW
1,1-DICHLOROETHANE	EPA 8260B	ND ug/l	4.00 ug/l*	09/06/12 01:51PM EEW
2-BUTANONE	EPA 8260B	ND ug/l	20.1 ug/l*	09/06/12 01:51PM EEW
BROMOCHLOROMETHANE	EPA 8260B	ND ug/l	4.60 ug/l*	09/06/12 01:51PM EEW
CIS-1,2-DICHLOROETHENE	EPA 8260B	ND ug/l	3.30 ug/l*	09/06/12 01:51PM EEW
CHLOROFORM	EPA 8260B	ND ug/l	3.40 ug/l*	09/06/12 01:51PM EEW
1,1,1-TRICHLOROETHANE	EPA 8260B	ND ug/l	3.40 ug/l*	09/06/12 01:51PM EEW
CYCLOHEXANE	EPA 8260B	ND ug/l	3.20 ug/l*	09/06/12 01:51PM EEW
CARBON TETRACHLORIDE	EPA 8260B	ND ug/l	4.50 ug/l*	09/06/12 01:51PM EEW
BENZENE	EPA 8260B	ND ug/l	3.80 ug/l*	09/06/12 01:51PM EEW
1,2-DICHLOROETHANE	EPA 8260B	ND ug/l	4.40 ug/l*	09/06/12 01:51PM EEW
TRICHLOROETHENE	EPA 8260B	ND ug/l	2.60 ug/l*	09/06/12 01:51PM EEW
METHYLCYCLOHEXANE	EPA 8260B	ND ug/l	7.10 ug/l*	09/06/12 01:51PM EEW
1,2-DICHLOROPROPANE	EPA 8260B	ND ug/l	5.70 ug/l*	09/06/12 01:51PM EEW

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Authorized by: Oommen V. Kappil, QA Director

Account No: SR0117, EASTSTAR ENVIRONMENTAL GROUP, INC. **P.O. No:** **Inv. No:**
Project No: SR0117, EASTSTAR ENVIRONMENTAL GROUP, INC. **PWSID No:**

Sample Number L4298168-1 **Sample Description** I027-3S-013 **Samp. Date/Time/Temp** 08/24/12 08:25am NA F **Sampled by** Customer
Received Date/Time/Temp 08/24/12 01:30pm 34 F **Iced (Y/N):** Y

Parameter	Method	Result	RLs	Test Date, Time, Analyst
GAS CHROMATOGRAPHY MASS SPECTROMETRY; VOLATILES continued				
BROMODICHLOROMETHANE	EPA 8260B	ND ug/l	3.50 ug/l*	09/06/12 01:51PM EEW
4-METHYL-2-PENTANONE	EPA 8260B	ND ug/l	5.80 ug/l*	09/06/12 01:51PM EEW
CIS-1,3-DICHLOROPROPENE	EPA 8260B	ND ug/l	3.40 ug/l*	09/06/12 01:51PM EEW
TOLUENE	EPA 8260B	ND ug/l	3.70 ug/l*	09/06/12 01:51PM EEW
TRANS-1,3-DICHLOROPROPENE	EPA 8260B	ND ug/l	2.70 ug/l*	09/06/12 01:51PM EEW
1,1,2-TRICHLOROETHANE	EPA 8260B	ND ug/l	3.80 ug/l*	09/06/12 01:51PM EEW
2-HEXANONE	EPA 8260B	ND ug/l	5.30 ug/l*	09/06/12 01:51PM EEW
TETRACHLOROETHENE	EPA 8260B	ND ug/l	3.60 ug/l*	09/06/12 01:51PM EEW
DIBROMOCHLOROMETHANE	EPA 8260B	ND ug/l	3.70 ug/l*	09/06/12 01:51PM EEW
1,2-DIBROMOETHANE	EPA 8260B	ND ug/l	3.70 ug/l*	09/06/12 01:51PM EEW
CHLOROBENZENE	EPA 8260B	ND ug/l	3.20 ug/l*	09/06/12 01:51PM EEW
ETHYLBENZENE	EPA 8260B	ND ug/l	3.40 ug/l*	09/06/12 01:51PM EEW
M&P-XYLENES	EPA 8260B	ND ug/l	6.20 ug/l*	09/06/12 01:51PM EEW
O-XYLENE	EPA 8260B	ND ug/l	2.90 ug/l*	09/06/12 01:51PM EEW
STYRENE	EPA 8260B	ND ug/l	3.30 ug/l*	09/06/12 01:51PM EEW
BROMOFORM	EPA 8260B	ND ug/l	2.80 ug/l*	09/06/12 01:51PM EEW
1,1,2,2-TETRACHLOROETHANE	EPA 8260B	ND ug/l	3.50 ug/l*	09/06/12 01:51PM EEW
ISOPROPYLBENZENE	EPA 8260B	ND ug/l	2.90 ug/l*	09/06/12 01:51PM EEW
1,3-DICHLOROBENZENE	EPA 8260B	ND ug/l	3.50 ug/l*	09/06/12 01:51PM EEW
1,4-DICHLOROBENZENE	EPA 8260B	ND ug/l	3.70 ug/l*	09/06/12 01:51PM EEW
1,2-DICHLOROBENZENE	EPA 8260B	ND ug/l	3.50 ug/l*	09/06/12 01:51PM EEW
1,2-DIBROMO-3-CHLOROPROPANE	EPA 8260B	ND ug/l	6.60 ug/l*	09/06/12 01:51PM EEW
1,2,4-TRICHLOROBENZENE	EPA 8260B	ND ug/l	1.60 ug/l*	09/06/12 01:51PM EEW
1,2,3-TRICHLOROBENZENE	EPA 8260B	ND ug/l	3.80 ug/l*	09/06/12 01:51PM EEW

Sample Number L4298168-2 **Sample Description** I027-3S-014 **Samp. Date/Time/Temp** 08/24/12 09:15am NA F **Sampled by** Customer
Received Date/Time/Temp 08/24/12 01:30pm 34 F **Iced (Y/N):** Y

Parameter	Method	Result	RLs	Test Date, Time, Analyst
GENERAL CHEMISTRY				
HEXANE EXTR.-SGT (NON POLAR O+G)	1664ASGT@PHC	ND mg/l	5.00 mg/l	09/05/12 08:20AM RHB
CYANIDE, TOTAL	SM 4500CN C,E	ND mg/l	0.0200 mg/l	09/05/12 12:00PM JG
METALS				
SILVER	EPA 200.7 Rev 4.4	0.00600 B mg/l	0.00510 mg/l*	09/07/12 02:09PM B B
ALUMINUM	EPA 200.7 Rev 4.4	ND mg/l	0.175 mg/l*	09/07/12 02:09PM B B
ARSENIC	EPA 200.7 Rev 4.4	ND mg/l	0.0283 mg/l*	09/07/12 02:09PM B B
BARIUM	EPA 200.7 Rev 4.4	0.196 mg/l	0.00170 mg/l*	09/07/12 02:09PM B B
BERYLLIUM	EPA 200.7 Rev 4.4	0.00120 B mg/l	0.000353 mg/l*	09/07/12 02:09PM B B
CALCIUM	EPA 200.7 Rev 4.4	251 mg/l	0.0460 mg/l*	09/07/12 02:09PM B B
CADMIUM	EPA 200.7 Rev 4.4	ND mg/l	0.00110 mg/l*	09/07/12 02:09PM B B
COBALT	EPA 200.7 Rev 4.4	0.00490 B mg/l	0.00400 mg/l*	09/07/12 02:09PM B B
CHROMIUM	EPA 200.7 Rev 4.4	0.0101 B mg/l	0.00220 mg/l*	09/07/12 02:09PM B B
COPPER	EPA 200.7 Rev 4.4	0.0224 B mg/l	0.00310 mg/l*	09/07/12 02:09PM B B

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Oommen V. Kappil

Authorized by: Oommen V. Kappil, QA Director

Account No: SR0117, EASTSTAR ENVIRONMENTAL GROUP, INC. **P.O. No:** **Inv. No:**
Project No: SR0117, EASTSTAR ENVIRONMENTAL GROUP, INC. **PWSID No:**

Sample Number **Sample Description** **Samp. Date/Time/Temp** **Sampled by**
L4298168-2 I027-3S-014 08/24/12 09:15am NA F Customer
Received Date/Time/Temp 08/24/12 01:30pm 34 F **Iced (Y/N):** Y

Parameter	Method	Result	RLs	Test Date, Time, Analyst
METALS continued				
IRON	EPA 200.7 Rev 4.4	0.696 mg/l	0.0359 mg/l*	09/07/12 02:09PM B B
POTASSIUM	EPA 200.7 Rev 4.4	221 mg/l	0.559 mg/l*	09/07/12 02:09PM B B
MAGNESIUM	EPA 200.7 Rev 4.4	686 mg/l	0.441 mg/l*	09/07/12 02:09PM B B
MANGANESE	EPA 200.7 Rev 4.4	0.0364 B mg/l	0.000786 mg/l*	09/07/12 02:09PM B B
NICKEL	EPA 200.7 Rev 4.4	ND mg/l	0.00340 mg/l*	09/07/12 02:09PM B B
LEAD	EPA 200.7 Rev 4.4	ND mg/l	0.0175 mg/l*	09/07/12 02:09PM B B
ANTIMONY	EPA 200.7 Rev 4.4	ND mg/l	0.0220 mg/l*	09/07/12 02:09PM B B
SELENIUM	EPA 200.7 Rev 4.4	0.0558 B mg/l	0.0517 mg/l*	09/07/12 02:09PM B B
THALLIUM	EPA 200.7 Rev 4.4	ND mg/l	0.0324 mg/l*	09/07/12 02:09PM B B
VANADIUM	EPA 200.7 Rev 4.4	0.00290 B mg/l	0.00260 mg/l*	09/07/12 02:09PM B B
ZINC	EPA 200.7 Rev 4.4	0.0442 B mg/l	0.00260 mg/l*	09/07/12 02:09PM B B
SODIUM	EPA 200.7 Rev 4.4	5880 mg/l	1.06 mg/l*	09/07/12 02:27PM B B
MERCURY	EPA 245.1 Rev 3.0	0.0000330 B mg/l	0.0000130 mg/l*	09/05/12 03:32PM RMP
GAS CHROMATOGRAPHY MASS SPECTROMETRY; SEMI-VOLATILES				
NAPHTHALENE	EPA 8270C	0.02 ug/l	0.01 ug/l*	09/06/12 06:46PM GRM
2-METHYLNAPHTHALENE	EPA 8270C	0.01 J ug/l	0.01 ug/l*	09/06/12 06:46PM GRM
ACENAPHTHYLENE	EPA 8270C	ND ug/l	0.01 ug/l*	09/06/12 06:46PM GRM
ACENAPHTHENE	EPA 8270C	0.05 ug/l	0.01 ug/l*	09/06/12 06:46PM GRM
FLUORENE	EPA 8270C	0.02 ug/l	0.02 ug/l*	09/06/12 06:46PM GRM
PHENANTHRENE	EPA 8270C	0.04 ug/l	0.01 ug/l*	09/06/12 06:46PM GRM
ANTHRACENE	EPA 8270C	0.02 ug/l	0.01 ug/l*	09/06/12 06:46PM GRM
FLUORANTHENE	EPA 8270C	0.03 ug/l	0.02 ug/l*	09/06/12 06:46PM GRM
PYRENE	EPA 8270C	0.02 ug/l	0.02 ug/l*	09/06/12 06:46PM GRM
BENZO(A)ANTHRACENE	EPA 8270C	ND ug/l	0.01 ug/l*	09/06/12 06:46PM GRM
CHRYSENE	EPA 8270C	ND ug/l	0.01 ug/l*	09/06/12 06:46PM GRM
BENZO(B)FLUORANTHENE	EPA 8270C	ND ug/l	0.02 ug/l*	09/06/12 06:46PM GRM
BENZO(K)FLUORANTHENE	EPA 8270C	ND ug/l	0.02 ug/l*	09/06/12 06:46PM GRM
BENZO(A)PYRENE	EPA 8270C	ND ug/l	0.02 ug/l*	09/06/12 06:46PM GRM
INDENO(1,2,3-CD)PYRENE	EPA 8270C	ND ug/l	0.02 ug/l*	09/06/12 06:46PM GRM
DIBENZ(A,H)ANTHRACENE	EPA 8270C	ND ug/l	0.02 ug/l*	09/06/12 06:46PM GRM
BENZO(G,H,I)PERYLENE	EPA 8270C	ND ug/l	0.02 ug/l*	09/06/12 06:46PM GRM
GAS CHROMATOGRAPHY MASS SPECTROMETRY; VOLATILES				
DICHLORODIFLUOROMETHANE	EPA 8260B	ND ug/l	0.430 ug/l*	09/04/12 06:43PM JSH
CHLOROMETHANE	EPA 8260B	ND ug/l	0.320 ug/l*	09/04/12 06:43PM JSH
VINYL CHLORIDE	EPA 8260B	ND ug/l	0.240 ug/l*	09/04/12 06:43PM JSH
BROMOMETHANE	EPA 8260B	ND ug/l	0.460 ug/l*	09/04/12 06:43PM JSH
CHLOROETHANE	EPA 8260B	ND ug/l	0.340 ug/l*	09/04/12 06:43PM JSH
TRICHLOROFLUOROMETHANE	EPA 8260B	ND ug/l	0.380 ug/l*	09/04/12 06:43PM JSH
1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	EPA 8260B	ND ug/l	0.470 ug/l*	09/04/12 06:43PM JSH
METHYL ACETATE	EPA 8260B	ND ug/l	0.360 ug/l*	09/04/12 06:43PM JSH
1,1-DICHLOROETHENE	EPA 8260B	ND ug/l	0.310 ug/l*	09/04/12 06:43PM JSH
ACETONE	EPA 8260B	ND ug/l	3.26 ug/l*	09/04/12 06:43PM JSH
CARBON DISULFIDE	EPA 8260B	3.00 ug/l	0.640 ug/l*	09/04/12 06:43PM JSH
METHYLENE CHLORIDE	EPA 8260B	ND ug/l	0.500 ug/l*	09/04/12 06:43PM JSH

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Oommen V. Kappil

Authorized by: Oommen V. Kappil, QA Director

Account No: SR0117, EASTSTAR ENVIRONMENTAL GROUP, INC. **P.O. No:** **Inv. No:**
Project No: SR0117, EASTSTAR ENVIRONMENTAL GROUP, INC. **PWSID No:**

Sample Number **Sample Description** **Samp. Date/Time/Temp** **Sampled by**
L4298168-2 I027-3S-014 08/24/12 09:15am NA F Customer
Received Date/Time/Temp 08/24/12 01:30pm 34 F **Iced (Y/N):** Y

Parameter	Method	Result	RLs	Test Date, Time, Analyst
GAS CHROMATOGRAPHY MASS SPECTROMETRY; VOLATILES continued				
TRANS-1,2-DICHLOROETHENE	EPA 8260B	ND ug/l	0.140 ug/l*	09/04/12 06:43PM JSH
METHYL TERTIARY BUTYL ETHER	EPA 8260B	ND ug/l	0.200 ug/l*	09/04/12 06:43PM JSH
1,1-DICHLOROETHANE	EPA 8260B	ND ug/l	0.240 ug/l*	09/04/12 06:43PM JSH
2-BUTANONE	EPA 8260B	ND ug/l	1.44 ug/l*	09/04/12 06:43PM JSH
BROMOCHLOROMETHANE	EPA 8260B	ND ug/l	0.300 ug/l*	09/04/12 06:43PM JSH
CIS-1,2-DICHLOROETHENE	EPA 8260B	ND ug/l	0.280 ug/l*	09/04/12 06:43PM JSH
CHLOROFORM	EPA 8260B	ND ug/l	0.230 ug/l*	09/04/12 06:43PM JSH
1,1,1-TRICHLOROETHANE	EPA 8260B	ND ug/l	0.210 ug/l*	09/04/12 06:43PM JSH
CYCLOHEXANE	EPA 8260B	ND ug/l	0.440 ug/l*	09/04/12 06:43PM JSH
CARBON TETRACHLORIDE	EPA 8260B	ND ug/l	0.280 ug/l*	09/04/12 06:43PM JSH
BENZENE	EPA 8260B	ND ug/l	0.220 ug/l*	09/04/12 06:43PM JSH
1,2-DICHLOROETHANE	EPA 8260B	ND ug/l	0.240 ug/l*	09/04/12 06:43PM JSH
TRICHLOROETHENE	EPA 8260B	ND ug/l	0.250 ug/l*	09/04/12 06:43PM JSH
METHYLCYCLOHEXANE	EPA 8260B	ND ug/l	0.360 ug/l*	09/04/12 06:43PM JSH
1,2-DICHLOROPROPANE	EPA 8260B	ND ug/l	0.200 ug/l*	09/04/12 06:43PM JSH
BROMODICHLOROMETHANE	EPA 8260B	ND ug/l	0.210 ug/l*	09/04/12 06:43PM JSH
4-METHYL-2-PENTANONE	EPA 8260B	ND ug/l	0.440 ug/l*	09/04/12 06:43PM JSH
CIS-1,3-DICHLOROPROPENE	EPA 8260B	ND ug/l	0.220 ug/l*	09/04/12 06:43PM JSH
TOLUENE	EPA 8260B	ND ug/l	0.190 ug/l*	09/04/12 06:43PM JSH
TRANS-1,3-DICHLOROPROPENE	EPA 8260B	ND ug/l	0.220 ug/l*	09/04/12 06:43PM JSH
1,1,2-TRICHLOROETHANE	EPA 8260B	ND ug/l	0.240 ug/l*	09/04/12 06:43PM JSH
2-HEXANONE	EPA 8260B	ND ug/l	0.830 ug/l*	09/04/12 06:43PM JSH
TETRACHLOROETHENE	EPA 8260B	ND ug/l	0.370 ug/l*	09/04/12 06:43PM JSH
DIBROMOCHLOROMETHANE	EPA 8260B	ND ug/l	0.140 ug/l*	09/04/12 06:43PM JSH
1,2-DIBROMOETHANE	EPA 8260B	ND ug/l	0.210 ug/l*	09/04/12 06:43PM JSH
CHLOROBENZENE	EPA 8260B	ND ug/l	0.230 ug/l*	09/04/12 06:43PM JSH
ETHYLBENZENE	EPA 8260B	ND ug/l	0.230 ug/l*	09/04/12 06:43PM JSH
M&P-XYLENES	EPA 8260B	ND ug/l	0.460 ug/l*	09/04/12 06:43PM JSH
O-XYLENE	EPA 8260B	ND ug/l	0.240 ug/l*	09/04/12 06:43PM JSH
STYRENE	EPA 8260B	ND ug/l	0.200 ug/l*	09/04/12 06:43PM JSH
BROMOFORM	EPA 8260B	ND ug/l	0.310 ug/l*	09/04/12 06:43PM JSH
1,1,2,2-TETRACHLOROETHANE	EPA 8260B	ND ug/l	0.320 ug/l*	09/04/12 06:43PM JSH
ISOPROPYLBENZENE	EPA 8260B	ND ug/l	0.270 ug/l*	09/04/12 06:43PM JSH
1,3-DICHLOROBENZENE	EPA 8260B	ND ug/l	0.210 ug/l*	09/04/12 06:43PM JSH
1,4-DICHLOROBENZENE	EPA 8260B	ND ug/l	0.170 ug/l*	09/04/12 06:43PM JSH
1,2-DICHLOROBENZENE	EPA 8260B	ND ug/l	0.200 ug/l*	09/04/12 06:43PM JSH
1,2-DIBROMO-3-CHLOROPROPANE	EPA 8260B	ND ug/l	0.470 ug/l*	09/04/12 06:43PM JSH
1,2,4-TRICHLOROBENZENE	EPA 8260B	ND ug/l	0.360 ug/l*	09/04/12 06:43PM JSH
1,2,3-TRICHLOROBENZENE	EPA 8260B	ND ug/l	0.310 ug/l*	09/04/12 06:43PM JSH

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Oommen V. Kappil

Authorized by: Oommen V. Kappil, QA Director

QC Laboratories

Analytical Report

Account No: SR0117, EASTSTAR ENVIRONMENTAL GROUP, INC. **P.O. No:** **Inv. No:**
Project No: SR0117, EASTSTAR ENVIRONMENTAL GROUP, INC. **PWSID No:**

Sample Number **Sample Description** **Samp. Date/Time/Temp** **Sampled by**
L4298168-3 I027-3S-015 08/24/12 09:15am NA F Customer
Received Date/Time/Temp 08/24/12 01:30pm 34 F **Iced (Y/N):** Y

Parameter	Method	Result	RLs	Test Date, Time, Analyst
GENERAL CHEMISTRY				
HEXANE EXTR.-SGT (NON POLAR O+G)	1664ASGT@PHC	ND mg/l	5.00 mg/l	09/05/12 08:20AM RHB
CYANIDE, TOTAL	SM 4500CN C,E	ND mg/l	0.0200 mg/l	09/05/12 12:00PM JG
METALS				
SILVER	EPA 200.7 Rev 4.4	ND mg/l	0.00510 mg/l*	09/07/12 02:12PM B B
ALUMINUM	EPA 200.7 Rev 4.4	ND mg/l	0.175 mg/l*	09/07/12 02:12PM B B
ARSENIC	EPA 200.7 Rev 4.4	0.0789 B mg/l	0.0283 mg/l*	09/07/12 02:12PM B B
BARIUM	EPA 200.7 Rev 4.4	0.200 mg/l	0.00170 mg/l*	09/07/12 02:12PM B B
BERYLLIUM	EPA 200.7 Rev 4.4	0.00120 B mg/l	0.000353 mg/l*	09/07/12 02:12PM B B
CALCIUM	EPA 200.7 Rev 4.4	261 mg/l	0.0460 mg/l*	09/07/12 02:12PM B B
CADMIUM	EPA 200.7 Rev 4.4	ND mg/l	0.00110 mg/l*	09/07/12 02:12PM B B
COBALT	EPA 200.7 Rev 4.4	0.00580 B mg/l	0.00400 mg/l*	09/07/12 02:12PM B B
CHROMIUM	EPA 200.7 Rev 4.4	0.0127 B mg/l	0.00220 mg/l*	09/07/12 02:12PM B B
COPPER	EPA 200.7 Rev 4.4	0.0221 B mg/l	0.00310 mg/l*	09/07/12 02:12PM B B
IRON	EPA 200.7 Rev 4.4	0.565 mg/l	0.0359 mg/l*	09/07/12 02:12PM B B
POTASSIUM	EPA 200.7 Rev 4.4	231 mg/l	0.559 mg/l*	09/07/12 02:12PM B B
MAGNESIUM	EPA 200.7 Rev 4.4	704 mg/l	0.441 mg/l*	09/07/12 02:12PM B B
MANGANESE	EPA 200.7 Rev 4.4	0.0368 B mg/l	0.000786 mg/l*	09/07/12 02:12PM B B
NICKEL	EPA 200.7 Rev 4.4	ND mg/l	0.00340 mg/l*	09/07/12 02:12PM B B
LEAD	EPA 200.7 Rev 4.4	ND mg/l	0.0175 mg/l*	09/07/12 02:12PM B B
ANTIMONY	EPA 200.7 Rev 4.4	ND mg/l	0.0220 mg/l*	09/07/12 02:12PM B B
SELENIUM	EPA 200.7 Rev 4.4	ND mg/l	0.0517 mg/l*	09/07/12 02:12PM B B
THALLIUM	EPA 200.7 Rev 4.4	ND mg/l	0.0324 mg/l*	09/07/12 02:12PM B B
VANADIUM	EPA 200.7 Rev 4.4	0.00320 B mg/l	0.00260 mg/l*	09/07/12 02:12PM B B
ZINC	EPA 200.7 Rev 4.4	0.0355 B mg/l	0.00260 mg/l*	09/07/12 02:12PM B B
SODIUM	EPA 200.7 Rev 4.4	6180 mg/l	1.06 mg/l*	09/07/12 02:28PM B B
MERCURY	EPA 245.1 Rev 3.0	0.0000370 B mg/l	0.0000130 mg/l*	09/05/12 03:34PM RMP
GAS CHROMATOGRAPHY MASS SPECTROMETRY; SEMI-VOLATILES				
NAPHTHALENE	EPA 8270C	0.02 ug/l	0.01 ug/l*	09/06/12 07:36PM GRM
2-METHYLNAPHTHALENE	EPA 8270C	0.01 J ug/l	0.01 ug/l*	09/06/12 07:36PM GRM
ACENAPHTHYLENE	EPA 8270C	ND ug/l	0.01 ug/l*	09/06/12 07:36PM GRM
ACENAPHTHENE	EPA 8270C	0.04 ug/l	0.01 ug/l*	09/06/12 07:36PM GRM
FLUORENE	EPA 8270C	0.02 ug/l	0.02 ug/l*	09/06/12 07:36PM GRM
PHENANTHRENE	EPA 8270C	0.03 ug/l	0.01 ug/l*	09/06/12 07:36PM GRM
ANTHRACENE	EPA 8270C	0.01 J ug/l	0.01 ug/l*	09/06/12 07:36PM GRM
FLUORANTHENE	EPA 8270C	0.03 ug/l	0.02 ug/l*	09/06/12 07:36PM GRM
PYRENE	EPA 8270C	ND ug/l	0.02 ug/l*	09/06/12 07:36PM GRM
BENZO(A)ANTHRACENE	EPA 8270C	ND ug/l	0.01 ug/l*	09/06/12 07:36PM GRM
CHRYSENE	EPA 8270C	ND ug/l	0.01 ug/l*	09/06/12 07:36PM GRM
BENZO(B)FLUORANTHENE	EPA 8270C	ND ug/l	0.02 ug/l*	09/06/12 07:36PM GRM
BENZO(K)FLUORANTHENE	EPA 8270C	ND ug/l	0.02 ug/l*	09/06/12 07:36PM GRM
BENZO(A)PYRENE	EPA 8270C	ND ug/l	0.02 ug/l*	09/06/12 07:36PM GRM
INDENO(1,2,3-CD)PYRENE	EPA 8270C	ND ug/l	0.02 ug/l*	09/06/12 07:36PM GRM
DIBENZ(A,H)ANTHRACENE	EPA 8270C	ND ug/l	0.02 ug/l*	09/06/12 07:36PM GRM

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Authorized by: Oommen V. Kappil, QA Director

Account No: SR0117, EASTSTAR ENVIRONMENTAL GROUP, INC. **P.O. No:** **Inv. No:**
Project No: SR0117, EASTSTAR ENVIRONMENTAL GROUP, INC. **PWSID No:**

Sample Number **Sample Description** **Samp. Date/Time/Temp** **Sampled by**
L4298168-3 I027-3S-015 08/24/12 09:15am NA F Customer
Received Date/Time/Temp 08/24/12 01:30pm 34 F **Iced (Y/N):** Y

Parameter	Method	Result	RLs	Test Date, Time, Analyst
GAS CHROMATOGRAPHY MASS SPECTROMETRY; SEMI-VOLATILES continued				
BENZO(G,H,I)PERYLENE	EPA 8270C	ND ug/l	0.02 ug/l*	09/06/12 07:36PM GRM
GAS CHROMATOGRAPHY MASS SPECTROMETRY; VOLATILES				
DICHLORODIFLUOROMETHANE	EPA 8260B	ND ug/l	3.60 ug/l*	09/06/12 02:27PM EEW
CHLOROMETHANE	EPA 8260B	ND ug/l	4.30 ug/l*	09/06/12 02:27PM EEW
VINYL CHLORIDE	EPA 8260B	ND ug/l	3.90 ug/l*	09/06/12 02:27PM EEW
BROMOMETHANE	EPA 8260B	ND ug/l	4.30 ug/l*	09/06/12 02:27PM EEW
CHLOROETHANE	EPA 8260B	ND ug/l	5.90 ug/l*	09/06/12 02:27PM EEW
TRICHLOROFLUOROMETHANE	EPA 8260B	ND ug/l	4.30 ug/l*	09/06/12 02:27PM EEW
1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	EPA 8260B	ND ug/l	4.90 ug/l*	09/06/12 02:27PM EEW
METHYL ACETATE	EPA 8260B	ND ug/l	9.10 ug/l*	09/06/12 02:27PM EEW
1,1-DICHLOROETHENE	EPA 8260B	ND ug/l	3.20 ug/l*	09/06/12 02:27PM EEW
ACETONE	EPA 8260B	ND ug/l	22.6 ug/l*	09/06/12 02:27PM EEW
CARBON DISULFIDE	EPA 8260B	ND ug/l	6.20 ug/l*	09/06/12 02:27PM EEW
METHYLENE CHLORIDE	EPA 8260B	ND ug/l	4.00 ug/l*	09/06/12 02:27PM EEW
TRANS-1,2-DICHLOROETHENE	EPA 8260B	ND ug/l	4.10 ug/l*	09/06/12 02:27PM EEW
METHYL TERTIARY BUTYL ETHER	EPA 8260B	ND ug/l	3.10 ug/l*	09/06/12 02:27PM EEW
1,1-DICHLOROETHANE	EPA 8260B	ND ug/l	4.00 ug/l*	09/06/12 02:27PM EEW
2-BUTANONE	EPA 8260B	ND ug/l	20.1 ug/l*	09/06/12 02:27PM EEW
BROMOCHLOROMETHANE	EPA 8260B	ND ug/l	4.60 ug/l*	09/06/12 02:27PM EEW
CIS-1,2-DICHLOROETHENE	EPA 8260B	ND ug/l	3.30 ug/l*	09/06/12 02:27PM EEW
CHLOROFORM	EPA 8260B	ND ug/l	3.40 ug/l*	09/06/12 02:27PM EEW
1,1,1-TRICHLOROETHANE	EPA 8260B	ND ug/l	3.40 ug/l*	09/06/12 02:27PM EEW
CYCLOHEXANE	EPA 8260B	ND ug/l	3.20 ug/l*	09/06/12 02:27PM EEW
CARBON TETRACHLORIDE	EPA 8260B	ND ug/l	4.50 ug/l*	09/06/12 02:27PM EEW
BENZENE	EPA 8260B	ND ug/l	3.80 ug/l*	09/06/12 02:27PM EEW
1,2-DICHLOROETHANE	EPA 8260B	ND ug/l	4.40 ug/l*	09/06/12 02:27PM EEW
TRICHLOROETHENE	EPA 8260B	ND ug/l	2.60 ug/l*	09/06/12 02:27PM EEW
METHYLCYCLOHEXANE	EPA 8260B	ND ug/l	7.10 ug/l*	09/06/12 02:27PM EEW
1,2-DICHLOROPROPANE	EPA 8260B	ND ug/l	5.70 ug/l*	09/06/12 02:27PM EEW
BROMODICHLOROMETHANE	EPA 8260B	ND ug/l	3.50 ug/l*	09/06/12 02:27PM EEW
4-METHYL-2-PENTANONE	EPA 8260B	ND ug/l	5.80 ug/l*	09/06/12 02:27PM EEW
CIS-1,3-DICHLOROPROPENE	EPA 8260B	ND ug/l	3.40 ug/l*	09/06/12 02:27PM EEW
TOLUENE	EPA 8260B	ND ug/l	3.70 ug/l*	09/06/12 02:27PM EEW
TRANS-1,3-DICHLOROPROPENE	EPA 8260B	ND ug/l	2.70 ug/l*	09/06/12 02:27PM EEW
1,1,2-TRICHLOROETHANE	EPA 8260B	ND ug/l	3.80 ug/l*	09/06/12 02:27PM EEW
2-HEXANONE	EPA 8260B	ND ug/l	5.30 ug/l*	09/06/12 02:27PM EEW
TETRACHLOROETHENE	EPA 8260B	ND ug/l	3.60 ug/l*	09/06/12 02:27PM EEW
DIBROMOCHLOROMETHANE	EPA 8260B	ND ug/l	3.70 ug/l*	09/06/12 02:27PM EEW
1,2-DIBROMOETHANE	EPA 8260B	ND ug/l	3.70 ug/l*	09/06/12 02:27PM EEW
CHLOROBENZENE	EPA 8260B	ND ug/l	3.20 ug/l*	09/06/12 02:27PM EEW
ETHYLBENZENE	EPA 8260B	ND ug/l	3.40 ug/l*	09/06/12 02:27PM EEW
M&P-XYLENES	EPA 8260B	ND ug/l	6.20 ug/l*	09/06/12 02:27PM EEW
O-XYLENE	EPA 8260B	ND ug/l	2.90 ug/l*	09/06/12 02:27PM EEW
STYRENE	EPA 8260B	ND ug/l	3.30 ug/l*	09/06/12 02:27PM EEW
BROMOFORM	EPA 8260B	ND ug/l	2.80 ug/l*	09/06/12 02:27PM EEW
1,1,2,2-TETRACHLOROETHANE	EPA 8260B	ND ug/l	3.50 ug/l*	09/06/12 02:27PM EEW

Unserialized Copy

Oommen V. Kappil

Authorized by: Oommen V. Kappil, QA Director

Account No: SR0117, EASTSTAR ENVIRONMENTAL GROUP, INC. **P.O. No:** **Inv. No:**
Project No: SR0117, EASTSTAR ENVIRONMENTAL GROUP, INC. **PWSID No:**

Sample Number **Sample Description** **Samp. Date/Time/Temp** **Sampled by**
L4298168-3 I027-3S-015 08/24/12 09:15am NA F Customer
Received Date/Time/Temp 08/24/12 01:30pm 34 F **Iced (Y/N):** Y

Parameter	Method	Result	RLs	Test Date, Time, Analyst
GAS CHROMATOGRAPHY MASS SPECTROMETRY; VOLATILES continued				
ISOPROPYLBENZENE	EPA 8260B	ND ug/l	2.90 ug/l*	09/06/12 02:27PM EEW
1,3-DICHLOROBENZENE	EPA 8260B	ND ug/l	3.50 ug/l*	09/06/12 02:27PM EEW
1,4-DICHLOROBENZENE	EPA 8260B	ND ug/l	3.70 ug/l*	09/06/12 02:27PM EEW
1,2-DICHLOROBENZENE	EPA 8260B	ND ug/l	3.50 ug/l*	09/06/12 02:27PM EEW
1,2-DIBROMO-3-CHLOROPROPANE	EPA 8260B	ND ug/l	6.60 ug/l*	09/06/12 02:27PM EEW
1,2,4-TRICHLOROBENZENE	EPA 8260B	ND ug/l	1.60 ug/l*	09/06/12 02:27PM EEW
1,2,3-TRICHLOROBENZENE	EPA 8260B	ND ug/l	3.80 ug/l*	09/06/12 02:27PM EEW

Sample Number **Sample Description** **Samp. Date/Time/Temp** **Sampled by**
L4298168-4 I027-3S-016 08/24/12 10:25am NA F Customer
Received Date/Time/Temp 08/24/12 01:30pm 34 F **Iced (Y/N):** Y

Parameter	Method	Result	RLs	Test Date, Time, Analyst
GENERAL CHEMISTRY				
HEXANE EXTR.-SGT (NON POLAR O+G)	1664ASGT@PHC	ND mg/l	5.00 mg/l	09/05/12 08:20AM RHB
CYANIDE, TOTAL	SM 4500CN C,E	1.70 mg/l	0.320 mg/l	09/05/12 12:00PM JG
METALS				
SILVER	EPA 200.7 Rev 4.4	0.0128 B mg/l	0.00510 mg/l*	09/07/12 02:15PM B B
ALUMINUM	EPA 200.7 Rev 4.4	ND mg/l	0.175 mg/l*	09/07/12 02:15PM B B
ARSENIC	EPA 200.7 Rev 4.4	0.267 mg/l	0.0283 mg/l*	09/07/12 02:15PM B B
BARIUM	EPA 200.7 Rev 4.4	0.0263 B mg/l	0.00170 mg/l*	09/07/12 02:15PM B B
BERYLLIUM	EPA 200.7 Rev 4.4	0.00140 B mg/l	0.000353 mg/l*	09/07/12 02:15PM B B
CALCIUM	EPA 200.7 Rev 4.4	870 mg/l	0.0460 mg/l*	09/07/12 02:15PM B B
CADMIUM	EPA 200.7 Rev 4.4	ND mg/l	0.00110 mg/l*	09/07/12 02:15PM B B
COBALT	EPA 200.7 Rev 4.4	0.00890 B mg/l	0.00400 mg/l*	09/07/12 02:15PM B B
CHROMIUM	EPA 200.7 Rev 4.4	0.00990 B mg/l	0.00220 mg/l*	09/07/12 02:15PM B B
COPPER	EPA 200.7 Rev 4.4	0.0137 B mg/l	0.00310 mg/l*	09/07/12 02:15PM B B
IRON	EPA 200.7 Rev 4.4	12.5 mg/l	0.0359 mg/l*	09/07/12 02:15PM B B
POTASSIUM	EPA 200.7 Rev 4.4	98.4 mg/l	0.559 mg/l*	09/07/12 02:15PM B B
MAGNESIUM	EPA 200.7 Rev 4.4	890 mg/l	0.441 mg/l*	09/07/12 02:15PM B B
MANGANESE	EPA 200.7 Rev 4.4	0.636 mg/l	0.000786 mg/l*	09/07/12 02:15PM B B
SODIUM	EPA 200.7 Rev 4.4	4670 mg/l	0.106 mg/l*	09/07/12 02:15PM B B
NICKEL	EPA 200.7 Rev 4.4	ND mg/l	0.00340 mg/l*	09/07/12 02:15PM B B
LEAD	EPA 200.7 Rev 4.4	ND mg/l	0.0175 mg/l*	09/07/12 02:15PM B B
ANTIMONY	EPA 200.7 Rev 4.4	ND mg/l	0.0220 mg/l*	09/07/12 02:15PM B B
THALLIUM	EPA 200.7 Rev 4.4	ND mg/l	0.0324 mg/l*	09/07/12 02:15PM B B
VANADIUM	EPA 200.7 Rev 4.4	ND mg/l	0.00260 mg/l*	09/07/12 02:15PM B B
ZINC	EPA 200.7 Rev 4.4	0.0592 mg/l	0.00260 mg/l*	09/07/12 02:15PM B B
SELENIUM	EPA 200.7 Rev 4.4	0.0636 B mg/l	0.0517 mg/l*	09/07/12 02:19PM B B
MERCURY	EPA 245.1 Rev 3.0	0.0000460 B mg/l	0.0000130 mg/l*	09/05/12 03:36PM RMP

Unserialized Copy

Oommen V. Kappil

Authorized by: Oommen V. Kappil, QA Director

QC Laboratories

Analytical Report

Account No: SR0117, EASTSTAR ENVIRONMENTAL GROUP, INC. **P.O. No:** **Inv. No:**
Project No: SR0117, EASTSTAR ENVIRONMENTAL GROUP, INC. **PWSID No:**

Sample Number **Sample Description** **Samp. Date/Time/Temp** **Sampled by**
L4298168-4 I027-3S-016 08/24/12 10:25am NA F Customer
Received Date/Time/Temp 08/24/12 01:30pm 34 F **Iced (Y/N):** Y

Parameter	Method	Result	RLs	Test Date, Time, Analyst
GAS CHROMATOGRAPHY MASS SPECTROMETRY; SEMI-VOLATILES				
NAPHTHALENE	EPA 8270C	0.01 J ug/l	0.01 ug/l*	09/06/12 08:26PM GRM
2-METHYLNAPHTHALENE	EPA 8270C	ND ug/l	0.01 ug/l*	09/06/12 08:26PM GRM
ACENAPHTHYLENE	EPA 8270C	ND ug/l	0.01 ug/l*	09/06/12 08:26PM GRM
ACENAPHTHENE	EPA 8270C	ND ug/l	0.01 ug/l*	09/06/12 08:26PM GRM
FLUORENE	EPA 8270C	ND ug/l	0.02 ug/l*	09/06/12 08:26PM GRM
PHENANTHRENE	EPA 8270C	0.02 ug/l	0.01 ug/l*	09/06/12 08:26PM GRM
ANTHRACENE	EPA 8270C	ND ug/l	0.01 ug/l*	09/06/12 08:26PM GRM
FLUORANTHENE	EPA 8270C	ND ug/l	0.02 ug/l*	09/06/12 08:26PM GRM
PYRENE	EPA 8270C	ND ug/l	0.02 ug/l*	09/06/12 08:26PM GRM
BENZO(A)ANTHRACENE	EPA 8270C	ND ug/l	0.01 ug/l*	09/06/12 08:26PM GRM
CHRYSENE	EPA 8270C	ND ug/l	0.01 ug/l*	09/06/12 08:26PM GRM
BENZO(B)FLUORANTHENE	EPA 8270C	ND ug/l	0.02 ug/l*	09/06/12 08:26PM GRM
BENZO(K)FLUORANTHENE	EPA 8270C	ND ug/l	0.02 ug/l*	09/06/12 08:26PM GRM
BENZO(A)PYRENE	EPA 8270C	ND ug/l	0.02 ug/l*	09/06/12 08:26PM GRM
INDENO(1,2,3-CD)PYRENE	EPA 8270C	ND ug/l	0.02 ug/l*	09/06/12 08:26PM GRM
DIBENZ(A,H)ANTHRACENE	EPA 8270C	ND ug/l	0.02 ug/l*	09/06/12 08:26PM GRM
BENZO(G,H,I)PERYLENE	EPA 8270C	ND ug/l	0.02 ug/l*	09/06/12 08:26PM GRM
GAS CHROMATOGRAPHY MASS SPECTROMETRY; VOLATILES				
DICHLORODIFLUOROMETHANE	EPA 8260B	ND ug/l	3.60 ug/l*	09/06/12 03:04PM EEW
CHLOROMETHANE	EPA 8260B	ND ug/l	4.30 ug/l*	09/06/12 03:04PM EEW
VINYL CHLORIDE	EPA 8260B	ND ug/l	3.90 ug/l*	09/06/12 03:04PM EEW
BROMOMETHANE	EPA 8260B	ND ug/l	4.30 ug/l*	09/06/12 03:04PM EEW
CHLOROETHANE	EPA 8260B	ND ug/l	5.90 ug/l*	09/06/12 03:04PM EEW
TRICHLOROFLUOROMETHANE	EPA 8260B	ND ug/l	4.30 ug/l*	09/06/12 03:04PM EEW
1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	EPA 8260B	ND ug/l	4.90 ug/l*	09/06/12 03:04PM EEW
METHYL ACETATE	EPA 8260B	ND ug/l	9.10 ug/l*	09/06/12 03:04PM EEW
1,1-DICHLOROETHENE	EPA 8260B	ND ug/l	3.20 ug/l*	09/06/12 03:04PM EEW
ACETONE	EPA 8260B	ND ug/l	22.6 ug/l*	09/06/12 03:04PM EEW
CARBON DISULFIDE	EPA 8260B	ND ug/l	6.20 ug/l*	09/06/12 03:04PM EEW
METHYLENE CHLORIDE	EPA 8260B	ND ug/l	4.00 ug/l*	09/06/12 03:04PM EEW
TRANS-1,2-DICHLOROETHENE	EPA 8260B	ND ug/l	4.10 ug/l*	09/06/12 03:04PM EEW
METHYL TERTIARY BUTYL ETHER	EPA 8260B	ND ug/l	3.10 ug/l*	09/06/12 03:04PM EEW
1,1-DICHLOROETHANE	EPA 8260B	ND ug/l	4.00 ug/l*	09/06/12 03:04PM EEW
2-BUTANONE	EPA 8260B	ND ug/l	20.1 ug/l*	09/06/12 03:04PM EEW
BROMOCHLOROMETHANE	EPA 8260B	ND ug/l	4.60 ug/l*	09/06/12 03:04PM EEW
CIS-1,2-DICHLOROETHENE	EPA 8260B	ND ug/l	3.30 ug/l*	09/06/12 03:04PM EEW
CHLOROFORM	EPA 8260B	ND ug/l	3.40 ug/l*	09/06/12 03:04PM EEW
1,1,1-TRICHLOROETHANE	EPA 8260B	ND ug/l	3.40 ug/l*	09/06/12 03:04PM EEW
CYCLOHEXANE	EPA 8260B	ND ug/l	3.20 ug/l*	09/06/12 03:04PM EEW
CARBON TETRACHLORIDE	EPA 8260B	ND ug/l	4.50 ug/l*	09/06/12 03:04PM EEW
BENZENE	EPA 8260B	ND ug/l	3.80 ug/l*	09/06/12 03:04PM EEW
1,2-DICHLOROETHANE	EPA 8260B	ND ug/l	4.40 ug/l*	09/06/12 03:04PM EEW
TRICHLOROETHENE	EPA 8260B	ND ug/l	2.60 ug/l*	09/06/12 03:04PM EEW
METHYLCYCLOHEXANE	EPA 8260B	ND ug/l	7.10 ug/l*	09/06/12 03:04PM EEW
1,2-DICHLOROPROPANE	EPA 8260B	ND ug/l	5.70 ug/l*	09/06/12 03:04PM EEW

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Authorized by: Oommen V. Kappil, QA Director

Account No: SR0117, EASTSTAR ENVIRONMENTAL GROUP, INC. **P.O. No:** **Inv. No:**
Project No: SR0117, EASTSTAR ENVIRONMENTAL GROUP, INC. **PWSID No:**

Sample Number L4298168-4 **Sample Description** I027-3S-016 **Samp. Date/Time/Temp** 08/24/12 10:25am NA F **Sampled by** Customer
Received Date/Time/Temp 08/24/12 01:30pm 34 F **Iced (Y/N):** Y

Parameter	Method	Result	RLs	Test Date, Time, Analyst
GAS CHROMATOGRAPHY MASS SPECTROMETRY; VOLATILES continued				
BROMODICHLOROMETHANE	EPA 8260B	ND ug/l	3.50 ug/l*	09/06/12 03:04PM EEW
4-METHYL-2-PENTANONE	EPA 8260B	ND ug/l	5.80 ug/l*	09/06/12 03:04PM EEW
CIS-1,3-DICHLOROPROPENE	EPA 8260B	ND ug/l	3.40 ug/l*	09/06/12 03:04PM EEW
TOLUENE	EPA 8260B	ND ug/l	3.70 ug/l*	09/06/12 03:04PM EEW
TRANS-1,3-DICHLOROPROPENE	EPA 8260B	ND ug/l	2.70 ug/l*	09/06/12 03:04PM EEW
1,1,2-TRICHLOROETHANE	EPA 8260B	ND ug/l	3.80 ug/l*	09/06/12 03:04PM EEW
2-HEXANONE	EPA 8260B	ND ug/l	5.30 ug/l*	09/06/12 03:04PM EEW
TETRACHLOROETHENE	EPA 8260B	ND ug/l	3.60 ug/l*	09/06/12 03:04PM EEW
DIBROMOCHLOROMETHANE	EPA 8260B	ND ug/l	3.70 ug/l*	09/06/12 03:04PM EEW
1,2-DIBROMOETHANE	EPA 8260B	ND ug/l	3.70 ug/l*	09/06/12 03:04PM EEW
CHLOROBENZENE	EPA 8260B	ND ug/l	3.20 ug/l*	09/06/12 03:04PM EEW
ETHYLBENZENE	EPA 8260B	ND ug/l	3.40 ug/l*	09/06/12 03:04PM EEW
M&P-XYLENES	EPA 8260B	ND ug/l	6.20 ug/l*	09/06/12 03:04PM EEW
O-XYLENE	EPA 8260B	ND ug/l	2.90 ug/l*	09/06/12 03:04PM EEW
STYRENE	EPA 8260B	ND ug/l	3.30 ug/l*	09/06/12 03:04PM EEW
BROMOFORM	EPA 8260B	ND ug/l	2.80 ug/l*	09/06/12 03:04PM EEW
1,1,2,2-TETRACHLOROETHANE	EPA 8260B	ND ug/l	3.50 ug/l*	09/06/12 03:04PM EEW
ISOPROPYLBENZENE	EPA 8260B	ND ug/l	2.90 ug/l*	09/06/12 03:04PM EEW
1,3-DICHLOROBENZENE	EPA 8260B	ND ug/l	3.50 ug/l*	09/06/12 03:04PM EEW
1,4-DICHLOROBENZENE	EPA 8260B	ND ug/l	3.70 ug/l*	09/06/12 03:04PM EEW
1,2-DICHLOROBENZENE	EPA 8260B	ND ug/l	3.50 ug/l*	09/06/12 03:04PM EEW
1,2-DIBROMO-3-CHLOROPROPANE	EPA 8260B	ND ug/l	6.60 ug/l*	09/06/12 03:04PM EEW
1,2,4-TRICHLOROBENZENE	EPA 8260B	ND ug/l	1.60 ug/l*	09/06/12 03:04PM EEW
1,2,3-TRICHLOROBENZENE	EPA 8260B	ND ug/l	3.80 ug/l*	09/06/12 03:04PM EEW

Sample Number L4298168-5 **Sample Description** I027-3S-017 **Samp. Date/Time/Temp** 08/24/12 11:15am NA F **Sampled by** Customer
Received Date/Time/Temp 08/24/12 01:30pm 34 F **Iced (Y/N):** Y

Parameter	Method	Result	RLs	Test Date, Time, Analyst
GENERAL CHEMISTRY				
CYANIDE, TOTAL	SM 4500CN C,E	ND mg/l	0.0400 mg/l	09/05/12 12:00PM JG
METALS				
SILVER	EPA 200.7 Rev 4.4	0.0189 B mg/l	0.00510 mg/l*	09/07/12 02:21PM B B
ALUMINUM	EPA 200.7 Rev 4.4	ND mg/l	0.175 mg/l*	09/07/12 02:21PM B B
ARSENIC	EPA 200.7 Rev 4.4	0.133 mg/l	0.0283 mg/l*	09/07/12 02:21PM B B
BARIUM	EPA 200.7 Rev 4.4	0.0444 B mg/l	0.00170 mg/l*	09/07/12 02:21PM B B
BERYLLIUM	EPA 200.7 Rev 4.4	0.00140 B mg/l	0.000353 mg/l*	09/07/12 02:21PM B B
CALCIUM	EPA 200.7 Rev 4.4	866 mg/l	0.0460 mg/l*	09/07/12 02:21PM B B
CADMIUM	EPA 200.7 Rev 4.4	ND mg/l	0.00110 mg/l*	09/07/12 02:21PM B B
COBALT	EPA 200.7 Rev 4.4	0.00720 B mg/l	0.00400 mg/l*	09/07/12 02:21PM B B
CHROMIUM	EPA 200.7 Rev 4.4	ND mg/l	0.00220 mg/l*	09/07/12 02:21PM B B
COPPER	EPA 200.7 Rev 4.4	0.00630 B mg/l	0.00310 mg/l*	09/07/12 02:21PM B B
IRON	EPA 200.7 Rev 4.4	12.8 mg/l	0.0359 mg/l*	09/07/12 02:21PM B B
POTASSIUM	EPA 200.7 Rev 4.4	56.6 mg/l	0.559 mg/l*	09/07/12 02:21PM B B

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Authorized by: Oommen V. Kappil, QA Director

Account No: SR0117, EASTSTAR ENVIRONMENTAL GROUP, INC. **P.O. No:** **Inv. No:**
Project No: SR0117, EASTSTAR ENVIRONMENTAL GROUP, INC. **PWSID No:**

Sample Number **Sample Description** **Samp. Date/Time/Temp** **Sampled by**
L4298168-5 I027-3S-017 08/24/12 11:15am NA F Customer
Received Date/Time/Temp 08/24/12 01:30pm 34 F **Iced (Y/N):** Y

Parameter	Method	Result	RLs	Test Date, Time, Analyst
METALS continued				
MAGNESIUM	EPA 200.7 Rev 4.4	593 mg/l	0.441 mg/l*	09/07/12 02:21PM B B
MANGANESE	EPA 200.7 Rev 4.4	1.19 mg/l	0.000786 mg/l*	09/07/12 02:21PM B B
NICKEL	EPA 200.7 Rev 4.4	ND mg/l	0.00340 mg/l*	09/07/12 02:21PM B B
LEAD	EPA 200.7 Rev 4.4	ND mg/l	0.0175 mg/l*	09/07/12 02:21PM B B
ANTIMONY	EPA 200.7 Rev 4.4	0.0280 B mg/l	0.0220 mg/l*	09/07/12 02:21PM B B
SELENIUM	EPA 200.7 Rev 4.4	ND mg/l	0.0517 mg/l*	09/07/12 02:21PM B B
THALLIUM	EPA 200.7 Rev 4.4	ND mg/l	0.0324 mg/l*	09/07/12 02:21PM B B
VANADIUM	EPA 200.7 Rev 4.4	ND mg/l	0.00260 mg/l*	09/07/12 02:21PM B B
ZINC	EPA 200.7 Rev 4.4	0.0532 mg/l	0.00260 mg/l*	09/07/12 02:21PM B B
SODIUM	EPA 200.7 Rev 4.4	5740 mg/l	1.06 mg/l*	09/07/12 02:36PM B B
MERCURY	EPA 245.1 Rev 3.0	0.0000200 B mg/l	0.0000130 mg/l*	09/05/12 03:38PM RMP
GAS CHROMATOGRAPHY MASS SPECTROMETRY; SEMI-VOLATILES				
NAPHTHALENE	EPA 8270C	0.01 J ug/l	0.01 ug/l*	09/06/12 09:16PM GRM
2-METHYLNAPHTHALENE	EPA 8270C	ND ug/l	0.01 ug/l*	09/06/12 09:16PM GRM
ACENAPHTHYLENE	EPA 8270C	ND ug/l	0.01 ug/l*	09/06/12 09:16PM GRM
ACENAPHTHENE	EPA 8270C	ND ug/l	0.01 ug/l*	09/06/12 09:16PM GRM
FLUORENE	EPA 8270C	ND ug/l	0.02 ug/l*	09/06/12 09:16PM GRM
PHENANTHRENE	EPA 8270C	0.04 ug/l	0.01 ug/l*	09/06/12 09:16PM GRM
ANTHRACENE	EPA 8270C	ND ug/l	0.01 ug/l*	09/06/12 09:16PM GRM
FLUORANTHENE	EPA 8270C	ND ug/l	0.02 ug/l*	09/06/12 09:16PM GRM
PYRENE	EPA 8270C	ND ug/l	0.02 ug/l*	09/06/12 09:16PM GRM
BENZO(A)ANTHRACENE	EPA 8270C	ND ug/l	0.01 ug/l*	09/06/12 09:16PM GRM
CHRYSENE	EPA 8270C	ND ug/l	0.01 ug/l*	09/06/12 09:16PM GRM
BENZO(B)FLUORANTHENE	EPA 8270C	ND ug/l	0.02 ug/l*	09/06/12 09:16PM GRM
BENZO(K)FLUORANTHENE	EPA 8270C	ND ug/l	0.02 ug/l*	09/06/12 09:16PM GRM
BENZO(A)PYRENE	EPA 8270C	ND ug/l	0.02 ug/l*	09/06/12 09:16PM GRM
INDENO(1,2,3-CD)PYRENE	EPA 8270C	ND ug/l	0.02 ug/l*	09/06/12 09:16PM GRM
DIBENZ(A,H)ANTHRACENE	EPA 8270C	ND ug/l	0.02 ug/l*	09/06/12 09:16PM GRM
BENZO(G,H,I)PERYLENE	EPA 8270C	ND ug/l	0.02 ug/l*	09/06/12 09:16PM GRM
GAS CHROMATOGRAPHY MASS SPECTROMETRY; VOLATILES				
DICHLORODIFLUOROMETHANE	EPA 8260B	ND ug/l	3.60 ug/l*	09/06/12 04:14PM EEW
CHLOROMETHANE	EPA 8260B	ND ug/l	4.30 ug/l*	09/06/12 04:14PM EEW
VINYL CHLORIDE	EPA 8260B	ND ug/l	3.90 ug/l*	09/06/12 04:14PM EEW
BROMOMETHANE	EPA 8260B	ND ug/l	4.30 ug/l*	09/06/12 04:14PM EEW
CHLOROETHANE	EPA 8260B	ND ug/l	5.90 ug/l*	09/06/12 04:14PM EEW
TRICHLOROFLUOROMETHANE	EPA 8260B	ND ug/l	4.30 ug/l*	09/06/12 04:14PM EEW
1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	EPA 8260B	ND ug/l	4.90 ug/l*	09/06/12 04:14PM EEW
METHYL ACETATE	EPA 8260B	ND ug/l	9.10 ug/l*	09/06/12 04:14PM EEW
1,1-DICHLOROETHENE	EPA 8260B	ND ug/l	3.20 ug/l*	09/06/12 04:14PM EEW
ACETONE	EPA 8260B	ND ug/l	22.6 ug/l*	09/06/12 04:14PM EEW
CARBON DISULFIDE	EPA 8260B	ND ug/l	6.20 ug/l*	09/06/12 04:14PM EEW
METHYLENE CHLORIDE	EPA 8260B	ND ug/l	4.00 ug/l*	09/06/12 04:14PM EEW
TRANS-1,2-DICHLOROETHENE	EPA 8260B	ND ug/l	4.10 ug/l*	09/06/12 04:14PM EEW
METHYL TERTIARY BUTYL ETHER	EPA 8260B	ND ug/l	3.10 ug/l*	09/06/12 04:14PM EEW

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Oommen V. Kappil

Authorized by: Oommen V. Kappil, QA Director

Account No: SR0117, EASTSTAR ENVIRONMENTAL GROUP, INC. **P.O. No:** **Inv. No:**
Project No: SR0117, EASTSTAR ENVIRONMENTAL GROUP, INC. **PWSID No:**

Sample Number **Sample Description** **Samp. Date/Time/Temp** **Sampled by**
L4298168-5 I027-3S-017 08/24/12 11:15am NA F Customer
Received Date/Time/Temp 08/24/12 01:30pm 34 F **Iced (Y/N):** Y

Parameter	Method	Result	RLs	Test Date, Time, Analyst
GAS CHROMATOGRAPHY MASS SPECTROMETRY; VOLATILES continued				
1,1-DICHLOROETHANE	EPA 8260B	ND ug/l	4.00 ug/l*	09/06/12 04:14PM EEW
2-BUTANONE	EPA 8260B	ND ug/l	20.1 ug/l*	09/06/12 04:14PM EEW
BROMOCHLOROMETHANE	EPA 8260B	ND ug/l	4.60 ug/l*	09/06/12 04:14PM EEW
CIS-1,2-DICHLOROETHENE	EPA 8260B	ND ug/l	3.30 ug/l*	09/06/12 04:14PM EEW
CHLOROFORM	EPA 8260B	ND ug/l	3.40 ug/l*	09/06/12 04:14PM EEW
1,1,1-TRICHLOROETHANE	EPA 8260B	ND ug/l	3.40 ug/l*	09/06/12 04:14PM EEW
CYCLOHEXANE	EPA 8260B	ND ug/l	3.20 ug/l*	09/06/12 04:14PM EEW
CARBON TETRACHLORIDE	EPA 8260B	ND ug/l	4.50 ug/l*	09/06/12 04:14PM EEW
BENZENE	EPA 8260B	ND ug/l	3.80 ug/l*	09/06/12 04:14PM EEW
1,2-DICHLOROETHANE	EPA 8260B	ND ug/l	4.40 ug/l*	09/06/12 04:14PM EEW
TRICHLOROETHENE	EPA 8260B	ND ug/l	2.60 ug/l*	09/06/12 04:14PM EEW
METHYLCYCLOHEXANE	EPA 8260B	ND ug/l	7.10 ug/l*	09/06/12 04:14PM EEW
1,2-DICHLOROPROPANE	EPA 8260B	ND ug/l	5.70 ug/l*	09/06/12 04:14PM EEW
BROMODICHLOROMETHANE	EPA 8260B	ND ug/l	3.50 ug/l*	09/06/12 04:14PM EEW
4-METHYL-2-PENTANONE	EPA 8260B	ND ug/l	5.80 ug/l*	09/06/12 04:14PM EEW
CIS-1,3-DICHLOROPROPENE	EPA 8260B	ND ug/l	3.40 ug/l*	09/06/12 04:14PM EEW
TOLUENE	EPA 8260B	ND ug/l	3.70 ug/l*	09/06/12 04:14PM EEW
TRANS-1,3-DICHLOROPROPENE	EPA 8260B	ND ug/l	2.70 ug/l*	09/06/12 04:14PM EEW
1,1,2-TRICHLOROETHANE	EPA 8260B	ND ug/l	3.80 ug/l*	09/06/12 04:14PM EEW
2-HEXANONE	EPA 8260B	ND ug/l	5.30 ug/l*	09/06/12 04:14PM EEW
TETRACHLOROETHENE	EPA 8260B	ND ug/l	3.60 ug/l*	09/06/12 04:14PM EEW
DIBROMOCHLOROMETHANE	EPA 8260B	ND ug/l	3.70 ug/l*	09/06/12 04:14PM EEW
1,2-DIBROMOETHANE	EPA 8260B	ND ug/l	3.70 ug/l*	09/06/12 04:14PM EEW
CHLOROBENZENE	EPA 8260B	ND ug/l	3.20 ug/l*	09/06/12 04:14PM EEW
ETHYLBENZENE	EPA 8260B	ND ug/l	3.40 ug/l*	09/06/12 04:14PM EEW
M&P-XYLENES	EPA 8260B	ND ug/l	6.20 ug/l*	09/06/12 04:14PM EEW
O-XYLENE	EPA 8260B	ND ug/l	2.90 ug/l*	09/06/12 04:14PM EEW
STYRENE	EPA 8260B	ND ug/l	3.30 ug/l*	09/06/12 04:14PM EEW
BROMOFORM	EPA 8260B	ND ug/l	2.80 ug/l*	09/06/12 04:14PM EEW
1,1,2,2-TETRACHLOROETHANE	EPA 8260B	ND ug/l	3.50 ug/l*	09/06/12 04:14PM EEW
ISOPROPYLBENZENE	EPA 8260B	ND ug/l	2.90 ug/l*	09/06/12 04:14PM EEW
1,3-DICHLOROBENZENE	EPA 8260B	ND ug/l	3.50 ug/l*	09/06/12 04:14PM EEW
1,4-DICHLOROBENZENE	EPA 8260B	ND ug/l	3.70 ug/l*	09/06/12 04:14PM EEW
1,2-DICHLOROBENZENE	EPA 8260B	ND ug/l	3.50 ug/l*	09/06/12 04:14PM EEW
1,2-DIBROMO-3-CHLOROPROPANE	EPA 8260B	ND ug/l	6.60 ug/l*	09/06/12 04:14PM EEW
1,2,4-TRICHLOROBENZENE	EPA 8260B	ND ug/l	1.60 ug/l*	09/06/12 04:14PM EEW
1,2,3-TRICHLOROBENZENE	EPA 8260B	ND ug/l	3.80 ug/l*	09/06/12 04:14PM EEW

L4298168-2 :

@1664 SGT/PHC=non-polar materials of petroleum origin >C12.

L4298168-3 :

@1664 SGT/PHC=non-polar materials of petroleum origin >C12.

L4298168-4 :

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Authorized by: Oommen V. Kappil, QA Director

Account No: SR0117, EASTSTAR ENVIRONMENTAL GROUP, INC. **P.O. No:** **Inv. No:**
Project No: SR0117, EASTSTAR ENVIRONMENTAL GROUP, INC. **PWSID No:**

@1664 SGT/PHC=non-polar materials of petroleum origin >C12.

: The reported value for Method 1664 SGT (ND) is based on the result found in Method 1664 HEM. HEM was not detected in this sample and by definition, SGT is not greater than HEM for samples -2, -3, and -4.

Notes:

A result of "ND" indicates that the analyte tested was either not detected or the concentration was below the RLs.
Definitions: NEG=negative; POS=positive; COL=colonies; RLs=laboratory reporting limits; L/A=laboratory accident; TNTC= Too numerous to count; pres=presumptive
A result marked with "DRY" indicates that the result was calculated and reported on a dry weight basis.
MCL= EPA recommended "maximum contaminant level", PLs = Customer-specific permit limits.
The test results meet all requirements of NELAC unless otherwise specified.
The report shall not be reproduced except in full without the written consent of the laboratory.
Unless otherwise specified, the Environmental and Food Chemistry testing except Field Parameters were performed by QC Inc. located at 1205 Industrial Blvd., Southampton, PA 18966; Pharmaceutical, Dairy and Food Microbiological tests were performed by QC Inc. located at 702 Electronic Dr., Horsham, PA 19044.
QCL Accreditations: Southampton Div: EPA ID PA00018; NELAP ID's: PA 09-00131, NJ PA166, NY 11223
State ID's: CT PH-0768, DE PA-018, MD 206, SC 89021001; FDA Reg. # : 2515238
ACL Div: NELAP ID's: PA 68-335, NJ DE568; State ID's: DE 00011, MD 138; Wind Gap Div: State ID's: PA 48-01334, NJ PA001
E. Rutherford Div: State ID: NJ 02015; Vineland Div: State ID: NJ 06005; Reading Div: State ID: PA 06-03543
The reported results relate only to the samples.
All samples are collected as "grab" samples unless otherwise identified.

* - The "RLs" represents a reporting/quantitation limit. When an "*" is present in the column identified as the "RLs", it is being reported as a Method Detection Limit (MDL).

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APPENDIX G

EASTSTAR HYDROLOGIC BUDGET CALCULATIONS

EastStar

Soil Safe Incorporated
Rahway Arch Site Water Model

HELP Model Analysis Results

	Units	Existing Conditions	Proposed Conditions
Fill Layer 1			Low Permeability Soil Safe Product
Average Thickness	(ft)		1.0
Fill Layer 2			Compacted Soil Safe Product
Average Thickness			ranges from 10 to 16 feet
Base Layer		Alum Sludge	Alum Sludge
Average Thickness	(ft)	varies from 8 to 13 feet	varies from 8 to 13 feet
Surface Drainage Slope	(%)	0.5%	1.0%
Runoff Curve Number		69.2	96.7

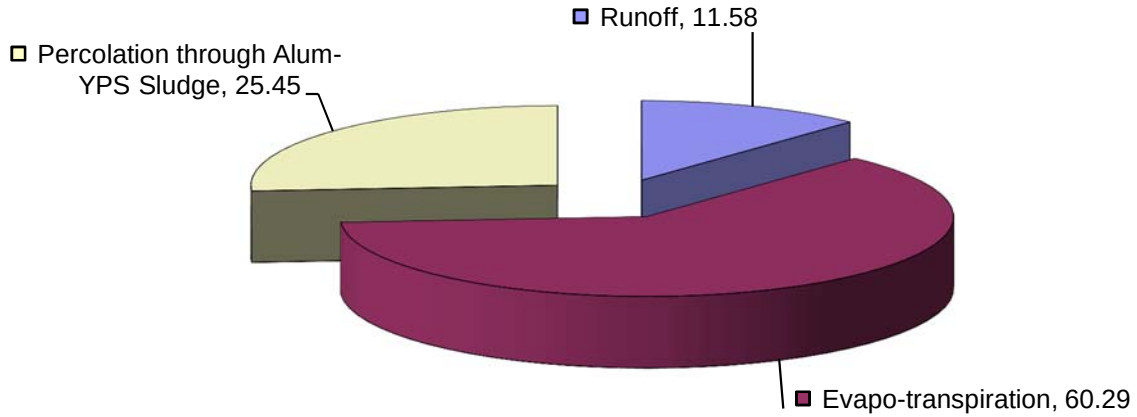
Average Annual Results - 5 year Simulation

	Result		Results		% of Existing
	(in/yr)	(MG/yr)	(in/yr)	(MG/yr)	
Precipitation	42.80	96.1	42.80	96.1	100%
Runoff	5.16	11.6	30.27	68.0	587%
Evapo-transpiration	26.84	60.3	12.54	28.2	46.7%
Percolation through Cap			0.0171	0.0383	
Percolation through Alum-YPS Sludge	11.331	25.5	0.455	1.02	4.0%
Change in Water Storage	0.525	1.18	-0.534	-1.20	-102%

Assumptions

1. Existing soil is alum sludge estimated HELP Type 13, behaving like a low plasticity silty clay (CL) soil. Saturated hydraulic conductivity = 3.30x10-5 cm/s. Permeability = 0.43.
2. Compacted Soil Safe Product is HELP Type 26, compacted CL soil, Saturated hydraulic conductivity = 1.9x10-6 cm/s
3. Surface Treatment Layer is Soil Safe Product, HELP Type 26, compacted CL soil, Saturated hydraulic conductivity = 1.9x10-6 cm/s

Rahway Arch Site
Water Balance using HELP Model



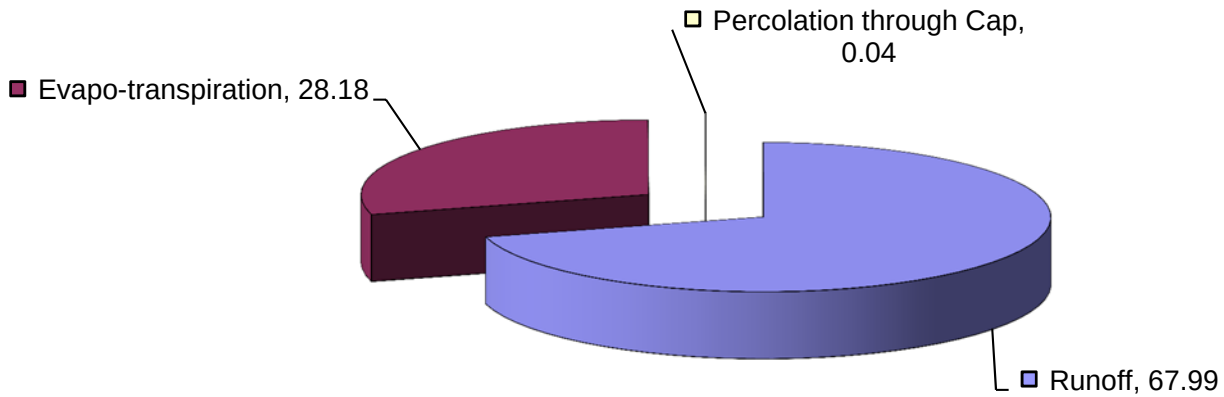
Values are annual averages, in million gallons per year, from a 5 year simulation

EastStar Environmental Group, Inc.
www.EastStarEnv.com

10632 Little Patuxent Parkway, Suite 106, Columbia, MD 21044
Ph: (410) 290-8777 Fax: (410) 290-9055

Rahway Arch Site
Water Balance using HELP Model

Remediated Site



Values are annual averages, in million gallons per year, from a 5 year simulation

EastStar Environmental Group, Inc
www.EastStarEnv.com

10632 Little Patuxent Parkway, Suite 106, Columbia, MD 21044
Ph: (410) 290-8777 Fax: (410) 290-9055

APPENDIX H

QUALITY ASSURANCE PROJECT PLAN

QUALITY ASSURANCE PROJECT PLAN

for the

REMEDIAL INVESTIGATION

of the

Rahway Arch Properties Site

Block 9.03, Lot 21; Block 10, Lots 8-10 and 12-21 and
Block 11.01, Lots 8, 10-14 and 28
Carteret, New Jersey

Plan Issued: July 5, 2012

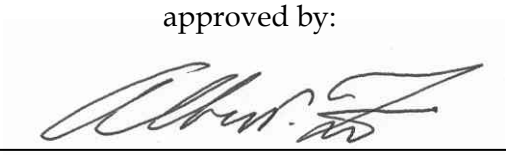
prepared for:

Rahway Arch Properties, LLC
7 Nottingham Drive
Florham Park, New Jersey 07932

prepared by:

EastStar Environmental Group, Inc.
10632 Little Patuxent Parkway
Suite 106
Columbia, Maryland 21044

approved by:



Albert P. Free, P.E. CSP, LSRP
LSRP Number 562386
President

Project No. I027

TABLE OF CONTENTS

1. INTRODUCTION 1

2. PROJECT DESCRIPTION 4
   2.1 Historic Site Use 4
   2.2 Current Site Conditions 4
   2.3 Areas of Concern 5

3. SAMPLE DESIGN AND RATIONALE 7
   3.1 Project Scope 7
   3.2 Project Implementation 7
   3.3 Geotechnical Engineering Requirements 9

4. ENVIRONMENTAL SAMPLING 10
   4.1 Soil Borings 10
   4.2 Monitoring Wells 10
      4.2.1 Well Development 12
      4.2.2 Well Sampling Procedures 12
      4.2.3 Calibration 12

5. PROJECT PERSONNEL 13

6. HEALTH AND SAFETY 14

7. LABORATORY CERTIFICATION 15

8. SAMPLE HANDLING AND CUSTODY PROCEDURES 16

9. ANALYTICAL METHODS AND SAMPLING REQUIREMENTS 17
   9.1 Analytical Methods 17
   9.2 Sample Requirements 17

10. QUALITY ASSURANCE AND CONTROL 19

11. DOCUMENTATION AND RECORDS 20

12. REFERENCES 21

APPENDICES

APPENDIX A GEOTECHNICAL TESTING MATRIX

APPENDIX B ENVIRONMENTAL TESTING MATRIX

APPENDIX C SITE SPECIFIC HEALTH AND SAFETY PLAN

LIST OF FIGURES

Figure 1.1 General Location Map of the Rahway Arch Site 2

Figure 1.2 Aerial Photo Showing the Rahway Arch Site 3

Figure 2.1 Scaled Site Map of the Impoundments 6

Figure 3.1 Boring Locations 8

Figure 4.1 Monitoring Well Locations 11

LIST OF TABLES

Table 5.1 Project Personnel 13

Table 9.1 Sample Requirements Matrix 18

1. INTRODUCTION

Rahway Arch Properties, LLC has contracted with EastStar to provide LSRP services for remediation of the Rahway Arch Properties site in Carteret, New Jersey. The site is a 124.7 acre property located at the terminus of Driftway Street. It is more precisely defined as Block 9.03, Lot 21; Block 10, Lots 8-10 and 12-21 and Block 11.01, Lots 8, 10-14 and 28. The general location of the site is shown on Figure 1.1. The specific location of the site and its boundaries are shown on Figure 1.2.

Remediation of the site is being performed in accordance with the requirements of the Site Remediation Reform Act (SRRA), the Administrative Requirements for Remediation of Contaminated Sites (ARRCS) {NJAC 7:26C} and the Technical Requirements for Site Remediation (Tech Rule) {NJAC 7:26E}. Rahway Arch Properties opted-in to the Licensed Site Remediation Program on December 5, 2011 by submitting the LSRP Notification of Retention or Dismissal form to New Jersey Department of Environmental Protection (NJDEP). Albert P. Free of EastStar was retained as the Licensed Site Remediation Professional (LSRP) for the site.

This document will serve as the Quality Assurance Project Plan (QAPP) for the remedial investigations that need to be performed on the site and any subsequent sampling and analysis required prior to the start of the remedial action. A separate QAPP will be developed for the remedial action.

This QAPP will ensure that all of the data quality needs of the project are met during the sampling analysis. This QAPP complies with Section 7:26E-2.2 of the Tech Rule.

FIGURE 1.1

General Location Map of the Rahway Arch Site

EastStar Environmental Group, Inc.
Consulting and Field Services

10632 Little Patuxent Parkway, Suite 106
Columbia, Maryland 21044

Scale:	AS SHOWN	Date:	April 2012
Drawn By:	JAC	Checked By:	APF

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Graphic Scale

1,000 500 0 1,000

1 inch = 1,000 feet

Compass

N W E S

FIGURE 1.2
AERIAL PHOTO AND VICINITY MAP

RAHWAY ARCH PROPERTY

BLOCK 9.03, LOT 21; BLOCK 10 LOTS 8-10, 12-21 AND
BLOCK 11.01 LOTS 8, 10-14 AND 28
BOROUGH OF CARTERET
MIDDLESEX COUNTY, NEW JERSEY

Source: Google Imagery, 2011

Project	Date	Scale
1027	4/16/12	1 IN = 1,000 FT

2. PROJECT DESCRIPTION

2.1 Historic Site Use

The project site is the old Cytec Impoundments site, a former industrial waste disposal facility operated by American Cyanamid Company (now Cytec Incorporated) from the mid-1930s through 1974 to dispose of a mixture of acidic sludge from an alum manufacturing process and alkaline sludge from a yellow prussiate of soda (YPS) manufacturing process.

American Cyanamid Company owned and operated a chemical manufacturing plant, known as the Warner Plant, located on 30 acres of property in Tremley Point, at the confluence of the Rahway River with the Arthur Kill in Linden, New Jersey, from 1917 to 1998. The plant produced a number of organic and inorganic products.

While it was operating, waste alum and YPS sludges from the Warner plant were slurried and pumped across the Rahway River to the project site. It is not known if any other waste products from the Warner Plant were included in the slurry. Demolition debris from work performed at the Warner Plant were used on the project site for road and berm reconstruction.

The 124.7 acre site contains six impoundments, encompassing approximately 85 acres, located on the Rahway River. The impoundments were constructed above existing grade with wooden and earthen dikes. They contain approximately 2,000,000 tons of the cyanide containing alum-YPS sludge. The size and capacity of each of the impoundments varies, as does the thickness of the sludge, which ranges from 5 to 20 feet. A scaled site map showing the location of the six impoundments is provided in Figure 2.1.

Evidence indicates that undocumented fill material has been imported and used on the site over the years to maintain the dikes and to stabilize the surface in several of the impoundments. This fill material was imported from various sites over the years for operations and maintenance of the disposal areas. Because it was imported to the site for the operations of the impoundments, the fill may not be considered historic fill, as defined by the Technical Requirements for Site Remediation (Tech Rule), NJAC 7:26.E. However, the fill has the physical and chemical characteristics of historic fill.

From the time that waste from the Warner Plant was no longer placed in the impoundments, until 2005 the site was unused. Various activities were performed during that time to maintain the berms, prevent nuisance dusting, characterize the environmental conditions and monitor the groundwater. These activities are described in the next section of this PA. In 2005, a portion of the site in Impoundment 2 was leased by Dauman Recycling Company to operate a class B recycling facility for wood waste and pallets.

2.2 Current Site Conditions

At the present time, the site consists of the six sludge impoundments surrounded by the containment berms. Several pathways have been built through the impoundments to allow access for maintenance or access to the eight existing monitoring well clusters. The berm between Impoundments 4 and 5 was not visible, merging these two impoundments into a single larger impoundment.

In its current condition, the project site is unusable. Most of Impoundment 6 is filled with standing water. Vegetative cover is non-existent over most of the area of the remaining impoundments, with the exception of Impoundment 1 and the low areas of Impoundment 3. The 12 inch cover of soil and sewage sludge has been eroded away in most other locations on the impoundments leaving exposed alum-YPS sludge. Phragmites have grown in the soil on the berms and the roadways surrounding the impoundments.

These impoundments are impassable because the sludge has no strength and cannot bear any weight. A pole or rod can be pushed by hand its full length into the sludge with minimal effort. Impoundment 3 appears to be the lowest area on the site and appears to have been inundated regularly by the Rahway River. Trash and debris consistent with river water flowing onto the impoundment were visible.

Impoundment 2 has been covered with several feet of soil (undocumented fill) and was used for a wood waste recycling operation. That operation was halted in 2008, although wood waste from the operation remains on-site. A portion of the soil surface is covered with wood chips and there are several piles of wood chips remaining on the site.

2.3 Areas of Concern

In 2012, EastStar performed a preliminary assessment (PA) on the site. The PA identified14 areas of concern on the site, consisting of:

- AOC 1 - Sludge Chemical Constituents
- AOC 2 – Residue Sludge Extent
- AOC 3 - Residue Sludge and Containment Berm Stability
- AOC 4 - Impacts to Surface Water Quality
- AOC 5 - Fill Used to Construct Access Roads
- AOC 6 - Indoor Vapor Intrusion
- AOC 7 - Ecological Evaluation
- AOC 8 - Solid Waste
- AOC 9 - Natural Resource Damages
- AOC 10 - Undocumented Fill
- AOC 11 – Contaminated Water in Impoundments
- AOC 12 - Groundwater Contamination
- AOC 13 – Public Safety from Exposed Sludge
- AOC 14 – Former Wood Waste Recycling Facility

The PA determined that the limits of contamination were well defined by the berms that formed the six impoundments. Therefore, a Site Investigation (SI) will not be performed on this site. The objectives of the SI will be combined with the objectives of a Remedial Investigation (RI). This RI will be performed starting in July 2012. The RI results will determine which of the above listed AOCs are considered Contaminated AOCs requiring further remedial action.

This RI will also be combined with a geotechnical investigation of the site. The results of the geotechnical investigation will be used to develop the design for the remedial action. The objective of the remedial action will be to cap the site and make a portion of the site viable for future development, as required by SRRA.

Graphic Scale for Plan View

400 200 0 400

1 inch = 400 feet

RAHWAY RIVER

RAHWAY RIVER

IMPOUND NO. 4

IMPOUND NO. 5

IMPOUND NO. 6

IMPOUND NO. 3

IMPOUND NO. 2

IMPOUND NO. 1

MEAN HIGH WATER (3.5 FT MSL) (TYP.)

PERIMETER BERM

INTERNAL BERMS AND ROADWAYS (TYP)

FRESHWATER WETLAND AND STATE OPEN WATER BOUNDARY LINES, AS VERIFIED BY NJDEP FILE NO. 1201-03-003.1 FWW 080001 (TYP.)

NORTH

Rahway Arch

RAHWAY ARCH PROPERTIES, LLC

7 Nottingham Drive
Florham Park, New Jersey 07932

PRELIMINARY ASSESSMENT OF THE RAHWAY ARCH SITE

BLOCK 9.03 LOT 21
BLOCK 10 LOTS 8-10 & 12-21
BLOCK 11.01 LOTS 8, 10-14 & 28

BOROUGH OF CARTERET
MIDDLESEX COUNTY, NJ

General Notes and Legend

1. BASE MAP INFORMATION OBTAINED FROM CREST ENGINEERING, INC. PLAN ENTITLED WETLAND LOCATION MAP, DATED 8/7/97.

Engineer

Albert P. Free, P.E., CSP, LSRP
NJ PE Number 24GE03816200

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FIGURE 2.1
SCALED SITE MAP OF THE IMPOUNDMENTS

File Name: Impoundments.dwg	Scale: 1 Inch = 400 feet
Date: April 14, 2012	Project Number: 1027
Drawn by: MAY	
Checked by: APF	

Sheet 1 of 1 Sheets

3. SAMPLE DESIGN AND RATIONALE

3.1 Project Scope

The scope of the Geotechnical and Remedial Investigation is to characterize the subsurface conditions on the site and develop the design parameters needed to design the cap. The alum-YPS sludge contained within the six site impoundments is very soft, saturated and compressible with negligible shear strength. Past tests performed on this sludge indicate that it has low to no plasticity, and that it is highly sensitive. In a 1999 report to NJDEP, BBL, a consultant to the previous owner stated: "While the material may initially appear to be firm, disturbance will cause the material to behave like a highly viscous liquid".

The berms that contain the sludge in the six impoundments consist of undocumented soil fill that was placed to form the impoundments. The depth of the berms is not known, although BBL reported in 1999 that the berms may have been constructed directly on the peat layer. Additional investigations indicate that the berms do not contain clay cutoff walls. Some historic boring logs indicate that a layer of sludge was encountered beneath the berms. The structural stability of the berms has not been evaluated.

The access road onto the site contains a steel bridge over a small creek. The adequacy of the bridge foundation to withstand the anticipated truck traffic has not been determined

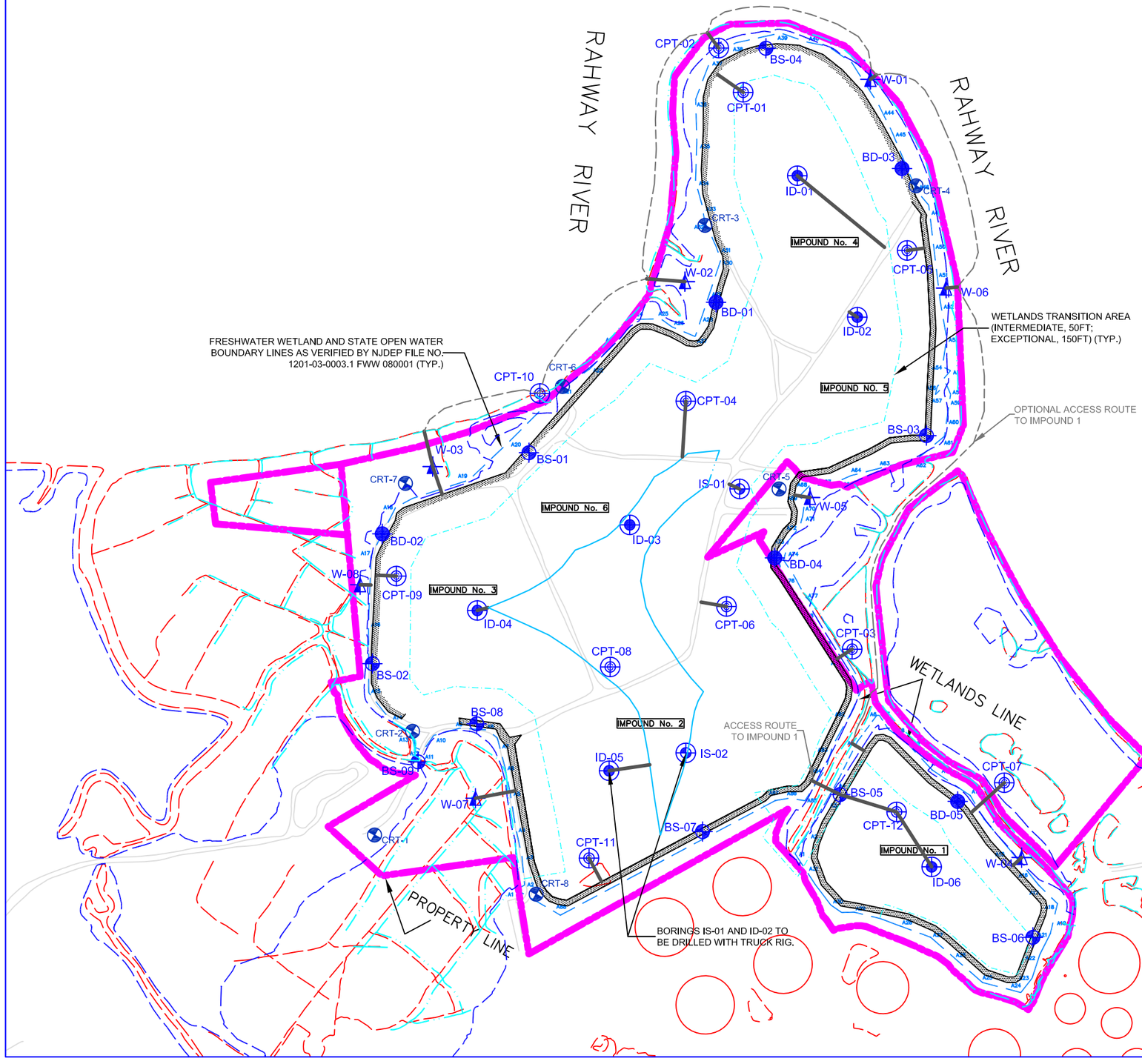
The objective of the project will be to complete the following tasks:

- Characterize the subsurface conditions in the impoundments, berms and the adjacent wetlands outside the berms
- Determine the stability of the berms for the existing conditions and placement of an engineered fill cap over the impoundments
- Evaluate the geotechnical conditions in the proposed areas for the Class B facility, the scale and the steel bridge that accesses the site.
- Evaluate the stability of the impoundments to support the engineered fill cap
- Perform slope stability analyses to ensure that adequate factors of safety can be maintained in the final cap design
- Estimate the settlement that will occur in the impoundments and develop a geotechnical monitoring program to be implemented during construction

3.2 Project Implementation

EastStar has developed a draft boring location plan and testing matrix. The boring location plan is shown in Figure 3.1, and the geotechnical testing matrix is contained in Appendix A. Six categories of borings are proposed:

- Shallow borings on the berms to the bottom of the organic silt and clay (BS borings)



GRAPHIC SCALE FOR PLAN VIEW

400 200 0 400

1 inch = 400 feet

LEGEND

- BS-01 — BERM BORING TO BOTTOM OF ORGANIC CLAY (APPX 25 FT) - TRUCK RIG
- BD-01 — BERM BORING TO TOP OF ROCK (APPX 40 FT) - TRUCK RIG
- IS-01 — IMPOUND BORING TO BOTTOM OF ORGANIC CLAY (APPX 25 FT) - MARSH BUGGY
- ID-01 — IMPOUND BORING TO TOP OF ROCK (APPX 40 FT) - MARSH BUGGY
- W-01 — WETLAND BORING TO TOP OF ROCK (APPX 40 FT) - MARSH BUGGY
- CP-01 — CONE PENETROMETER BORING TO BOTTOM OF ORGANIC CLAY (APPX 25 FT) - MARSH BUGGY
- PROPERTY LINE
- WETLAND
- WETLANDS TRANSITION AREA (INTERMEDIATE 50FT; EXCEPTIONAL, 150FT)
- MEAN HIGH WATER (3.5FT MSL)
- SPRING HIGH WATER (3.9FT MSL)
- COASTAL WATERFRONT ZONE (500FT)
- WETLAND, BUFFER AND COASTAL AREAS IMPACTED BY PONTOON MARSH BUGGY
- PONTOON MARSH BUGGY PATH
- CRT-01 — EXISTING MONITORING WELL CLUSTER

Rahway Arch

RAHWAY ARCH PROPERTIES, LLC

7 Nottingham Drive
Florham Park, New Jersey 07932

REMEDIAL INVESTIGATION OF THE RAHWAY ARCH SITE

BLOCK 9.03 LOT 21
BLOCK 10 LOTS 8-10 & 12-21
BLOCK 11.01 LOTS 8, 10-14 & 28

BOROUGH OF CARTERET
MIDDLESEX COUNTY, NJ

BASE MAP NOTES

BASE MAP INFORMATION OBTAINED FROM THE FOLLOWING SOURCES:

1. ALTA/ACSM LAND TITLE SURVEY BLOCK9.03 LOT 21, BLOCK 10 LOTS 8-21 AND BLOCK 11.01 LOTS 6-15, 27 & 28, BOROUGH OF CARTERET, MIDDLESEX COUNTY, NEW JERSEY PREPARED BY KELLER & KITKPATRICK CONSULTING ENGINEERS AND LAND SURVEYORS, DATED 9/29/06
2. CREST ENGINEERING, INC. PLAN ENTITLED WETLAND LOCATION MAP, DATED 8/7/97.
3. WETLAND DELINEATION IS BASED UPON MAP PREPARED BY BLASLAND, BOUCK AND LEE, INC., DATED APRIL 4, 2003.
4. MEAN HIGH WATER OBTAINED FROM DRAWING ENTITLED 'SURFACE INSIDE WETLAND BUFFERS' PREPARED BY ARCADIS, Existing Monitoring Well Cluster

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RAHWAY ARCH SITE
GEOTECHNICAL AND REMEDIAL INVESTIGATION
BORING LOCATION PLAN

File Name:	Scale:
Geotech Investigation Plan2.dwg	1 Inch = 400 feet
Date: JUNE 22, 2012	Project Number: 1027
Drawn by: MAY	
Checked by: APF	

Sheet 1 of 1 Sheets

- Deep borings on the berms to top of bedrock (BD borings)
- Shallow borings to the bottom of the organic silt and clay (IS borings)
- Deep borings in the impoundments to top of bedrock (ID borings)
- Deep borings in the wetlands outside the berms (W borings)
- Cone Penetrometer Borings (CPT borings)

The borings on the berms and the two borings in Impoundment 2 are accessible by truck and will be drilled with a truck mounted drill rig. The remaining borings in the impoundments and the wetland and cone penetrometer borings will not be truck accessible and will be drilled using equipment mounted on a marsh buggy.

Warren-George of Jersey City, New Jersey will perform the drilling services. A permit to perform the drilling in the wetland areas has been obtained from NJDEP-LURP by Soil Safe. Samples for environmental analyses will be collected by EastStar.

3.3 Geotechnical Engineering Requirements

The following services will need to be provided by the geotechnical engineer:

- Review and comment on the draft boring location plan and geotechnical testing matrix
- Provide field oversight of the geotechnical investigation including logging the borings, characterizing the subsurface conditions and obtaining and preserving the samples required for geotechnical analyses
- Perform the requisite geotechnical analyses. Geotechnical laboratory services may be sub-contracted, however, EastStar reserves the right to review and approve the selected laboratory
- Prepare a comprehensive data report on the field investigations and laboratory testing
- Perform slope stability and settlement analyses and prepare recommendations for use in the final remediation plan design
- Provide recommendations of bearing capacities and foundations for the proposed Class B facility, scale foundation and steel bridge.
- Prepare a geotechnical monitoring program to monitor settlement and berm movement during construction
- Review and comment on the final remedial plan design for consistency with the findings of the geotechnical investigation

4. ENVIRONMENTAL SAMPLING

4.1 Soil Borings

EastStar will collect samples from all of the geotechnical borings, except the CPT borings. The CPT borings are direct push and do not bring soil to the surface that can be sampled. Samples will be collected from each of the layers on the site, with particular emphasis given to the undocumented surface fill and the alum-YPS sludge, both of which have been shown to contain contaminants. The peat layer under the alum-YPS sludge is also a concern, anticipating that contamination may have leached from the upper layers and migrated into this peat layer.

Samples collected from the soil borings will be analyzed for potential contaminants, following the analytical matrix in the Investigation Plan, also contained in Appendix B. The following analytical methods were used to analyze the samples:

- Petroleum hydrocarbons by NJDEP Method EPH
- Semi-volatile organic compounds (S-VOCs) by EPA Method 8270C
- Polynuclear aromatic hydrocarbons (PAHs) by EPA Method 8270C
- TAL metals by EPA Method Methods 6010B and Method 7071A
- Cyanide by EPA Method 9091/9014.

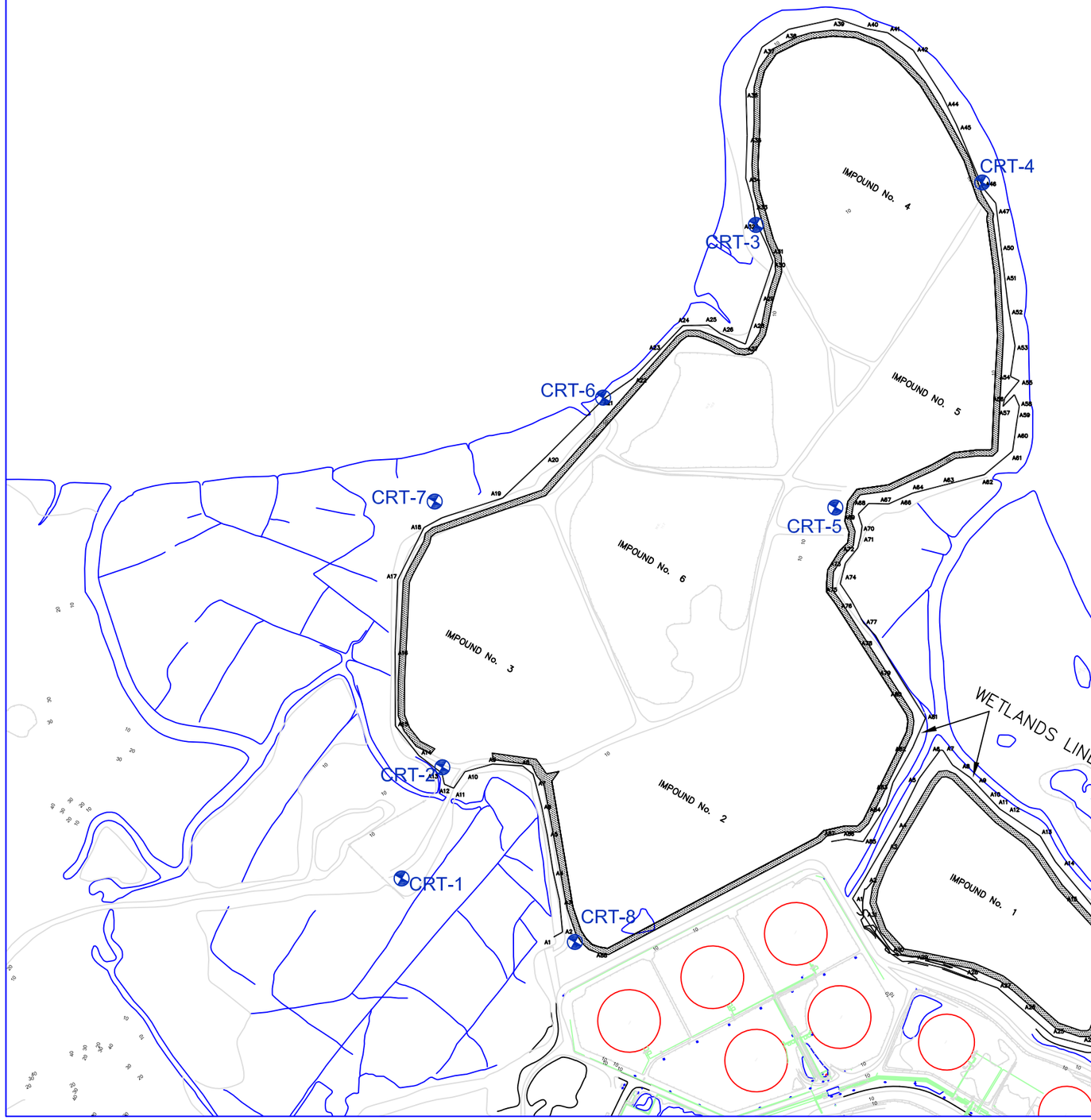
Samples will be collected from the split spoons and will be placed directly into the appropriate sampling container as dictated by the prescribed sampling methods discussed in Section ??? of this plan. Care will be taken during all sample collection to ensure that the soil samples are representative of the conditions at the sample locations and to prevent cross-contamination of the samples.

The spilt spoon sampler will be decontaminated after each sample by scrubbing with a phosphate-free detergent followed by a potable water rinse and a distilled water rinse. Dedicated, disposable surgical gloves will be worn by the sampler during each sample collection.

4.2 Monitoring Wells

Five monitoring well pairs were installed at the site in the mid-1980s for NJPDES - DGW Permit No. NJ0061611. The wells were installed to monitor the groundwater quality within the two groundwater zones. All of the wells are 4 inch diameter wells. The shallow monitoring wells ranged from 15 to 31 feet deep. The deep monitoring wells ranged from 38 to 54 feet deep.

Three additional monitoring well pairs were installed on the site in 1994. The shallow wells in these three clusters are 2 inch diameter wells. The deep wells are 4 inch diameter wells. The monitoring well locations are shown on Figure 4.1.



Graphic Scale for Plan View

400 200 0 400

1 inch = 400 feet

Rahway Arch

RAHWAY ARCH PROPERTIES, LLC

7 Nottingham Drive
Florham Park, New Jersey 07932

PRELIMINARY ASSESSMENT OF THE RAHWAY ARCH SITE

BLOCK 9.03 LOT 21
BLOCK 10 LOTS 8-10 & 12-21
BLOCK 11.01 LOTS 8, 10-14 & 28

BOROUGH OF CARTERET
MIDDLESEX COUNTY, NJ

LEGEND

- CRT-4 Existing Monitoring Well Cluster
- Road with Fill over RR Ties
- Road with Fill
- Mixed Fill over RR Ties
- Mixed Fill
- RR Ties
- Construction Fill

Engineer

Albert P. Free, P.E., CSP, LSRP
NJ PE Number 24GE03816200

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Figure 4.1
Monitoring Well Locations on the Rahway Arch Site

File Name:	Scale:
PA Sect 4-5 Figures.dwg	1 Inch = 400 feet
Date:	Project Number:
April 16, 2012	1027
Drawn by:	
MAY	
Checked by:	
APF	

Sheet 1 of 1 Sheets

4.2.1 Well Development

According to the data reviewed for the PA, the monitoring wells were last sampled in June 1999. Since the wells had been dormant for the past 13 years, they need to be redeveloped prior to sampling.

Redevelopment of each well will consist of alternately purging and surcharging the well. A variable flow submersible pump was used for purging, and the pumping rate was monitored. The purge water was collected in a bucket. After each well volume of water is purged, the well will be surcharged with 2-3 gallons of previously purged water.

The purge water will monitored for pH, temperature and dissolved oxygen using a multi-meter and for color, suspended solids and clarity by visual inspection. Unless the well is pumped dry, development will continue until at least three well volumes are pumped from the well, all of the parameters are stable and the water is clear. If the well is pumped dry, it will be allowed to re-charge before continuing purging. Development will be considered complete if the well is pumped dry three times.

4.2.2 Well Sampling Procedures

The groundwater monitoring wells will be sampled with a variable flow rate submersible pump using low flow purging and sampling techniques. For the shallow monitoring wells, the pump will be placed approximately 5 feet below the groundwater surface. For the deep wells, the pump will be placed approximately 5 feet below the estimated top of the screen interval.

Sampling at each well will consist of:

- Measurement of depth to groundwater from the survey mark at the top of the well casing
- Purging the well using the low flow pump
- Measurement of water quality parameters as the well was being purged
- Visual observation of the water
- Collection of samples using low-flow sampling techniques into the appropriate pre-preserved sample containers

The submersible pump will be decontaminated before it was placed in each well. New, dedicated polyethylene tubing will be used for each well and will be discarded following the completion of sampling for that well.

Once the monitored parameters are stable, a sample will collected from the well directly into the appropriate laboratory pre-cleaned containers. Preservatives required for the analytical methods will have been added to the containers by the analytical laboratory.

4.2.3 Calibration

The field meter used for monitoring the groundwater during development and sampling will be calibrated daily in conformance with the manufacturer's instructions. A detailed log of the calibration activities will be maintained in the field log book.

5. PROJECT PERSONNEL

Table 5.1 – Project Personnel

Assignment	Name	Organization	Phone	E-mail
Property Owner	Chet Pucillo	Rahway Arch Properties, LLC	201-400-6878	maritimellc@aol.com
Licensed Site Remediation Professional (LSRP)	Al Free	EastStar Environmental Group, Inc.	410-290-8777	afree@eaststarenv.com
QA Coordinator	Al Free	EastStar Environmental Group, Inc.	410-290-8777	afree@eaststarenv.com
On-site H&S Manager	Josh Clough	EastStar Environmental Group, Inc.	443-618-3381	cloughj@eaststarenv.com
Analytical Laboratory	Ron Milke	QC Laboratories	215-499-4578	rmilke@qclaboratories.com
Driller	Robert Ware	Warren-George	201-443-9797	rware@warrengeorge.com
Geotechnical Consultant	Tris Madden	Michael Baker, Jr. Inc.	443-286-4478	tmadden@mbakercorp.com
Reclamation Contractor	Bill Roberts	Soil Safe Incorporated	610-716 5608	warolite@aol.com

6. HEALTH AND SAFETY

EastStar has prepared a site specific health and safety plan (HASP) to address potential safety issues associated with the remedial investigation. This plan has been reviewed and approved by EastStar's corporate health and safety officer. It has also been reviewed and approved by the property owners, reclamation contractor and geotechnical engineer.

A copy of this HASP has been provided to all on-site personnel. A review of the plan and health and safety procedures will be performed in the field at the start of the RI. On-site safety talks and briefings will be held on site, weekly, or as needed.

A copy of this HASP is contained in Appendix C.

7. LABORATORY CERTIFICATION

The QC Laboratories is a State of New Jersey certified laboratory for drinking water analyses, Solid and Hazardous Waste and Waste Water for Chemical and Microbiological Analyses with Aquatic Bioassay. QC is also a participant in the National Environmental Laboratory Accreditation Program (NELAP) for all of the analyses performed for this project.

8. SAMPLE HANDLING AND CUSTODY PROCEDURES

The sampling plan calls for collection of 46 soil samples and 16 groundwater samples. If site conditions dictate, additional sampling may be performed in order to develop a more thorough understanding of the current environmental conditions on the site.

Immediately after collection, each sample will be properly labeled and then placed in a cooler on ice and chilled to 4°C $\pm$ 2°C. The samples will be maintained at 4°C with ice until receipt by the lab.

The samples will be picked up by courier or hand delivered to QC Laboratories, using strict chain of custody procedures. Samples will be sent to the lab within two days of collection to ensure that the samples can be properly maintained and the analyses could be performed within the prescribed holding times. All laboratory reports will contain a sample checklist that will document that the samples were received in acceptable condition and within the prescribed temperature range.

All samples will be collected by the guidelines as dictated by the NJDEP 2005 Field Sampling Procedures Manual. All field instruments will be properly calibrated in conformance with the manufacturer's instructions and the NJDEP.

Samples will be collected directly into the appropriate sampling container as dictated by the prescribed sampling methods discussed in Section 9 of this report. All sampling equipment will be decontaminated between sampling phases. Care will be taken during all sample collection to ensure that the soil/water samples are representative of the conditions at the sample locations and to prevent cross-contamination of the samples. Dedicated, disposable surgical gloves will be worn by the sampler during each sample collection.

9. ANALYTICAL METHODS AND SAMPLING REQUIREMENTS

9.1 Analytical Methods

The soil and water samples will be analyzed for potential contaminants using the following analytical methods:

- Target Analyte List Metals (TAL Metals) by EPA Method 6020
- Cyanide by EPA Method 9010
- Polynuclear aromatic hydrocarbons (PAH) by EPA Methods 8270C
- Extractable petroleum hydrocarbons (EPH) by NJDEP Method NJDEP EPH
- Semi volatile organic compounds (SVOCs) by EPA Method 8270
- Volatile organic compounds (VOCs) by EPA Methods 8260B

A detailed description of all planned sampling by location and by analysis is located in Appendix B.

9.2 Sample Requirements

The analytical methods to be used for soil and water analyses are shown in Table 9.1. This table describes the sampling bottles, preservatives, holding times and minimum sample volumes needed for laboratory analysis. All of the sample methods being used as part of the field activities described in this QAPP require the samples to be maintained at 4°C with ice until delivery to the laboratory.

Table 9.1 - Sample Requirements Matrix

Analysis	Method	Sample Container	Preservative	Holding Time	Minimum Sample Volume
Water Samples					
Target Analyte List (except mercury)	EPA 6020	250ml Plastic	HNO3 pH<2	6 months	50ml
Mercury	EPA 7471	250ml Plastic	HNO3 pH<2	28 days	50ml
Cyanide	EPA 9010	250ml Plastic	NaOH pH>12	14 days	50ml
Extractable Petroleum hydrocarbons (EPH)	NJDEP EPH	1L Amber Glass	HCl pH <2	28 days	1000ml
Volatile organic compounds (VOCs)	EPA 8260B	3x 40ml VOA	None	7 days	100ml
Polynuclear aromatic hydrocarbons (PAH)	EPA 8270C	1L Amber Glass	None	7 days	1000ml
Semi volatile organic compounds (SVOCs)	EPA 8270	1L Amber Glass	None	7 days	1000ml
Soil Samples					
Target Analyte List (except mercury)	EPA 6020	4 oz Glass Wide Mouth	None	6 months	10 Grams
Mercury	EPA 7471	4 oz Glass Wide Mouth	None	28 days	10 Grams
Cyanide	EPA 9010	4 oz Glass Wide Mouth	None	6 months	10 Grams
Extractable petroleum hydrocarbons (EPH)	NJDEP EPH	8 oz Glass Wide Mouth	None	28 Days	50 Grams
Volatile organic compounds (VOCs)	EPA 8260B	Terra Core Kit	included	14 days	1 Kit
Polynuclear aromatic hydrocarbons (PAH)	EPA 8270C	4 oz Glass Wide Mouth	None	14 Days	30 mg
Semi volatile organic compounds (SVOCs)	EPA 8270	4 oz Glass Wide Mouth	None	14 Days	50 Grams

10. QUALITY ASSURANCE AND CONTROL

EastStar has established, in conjunction with QC Laboratories, a Quality Assurance and Control plan to ensure that all the analytical results accurately represent the current conditions of the project site.

EastStar's responsibilities in the plan include:

- Performing a 10% duplicate sampling
- Including trip blanks with the samples
- Ensure all samples are delivered to the lab within their prescribed holding times
- Ensure all samples are placed in the proper sampling containers as dictated by the sample method
- Fill out the sample labels with accurate times and dates
- Ensure that proper chain of custody procedures are used

QC Laboratories responsibilities in the plan include:

- Following the prescribed sampling methods for all analysis
- Analyzing trip blanks
- Preforming matrix spike and matrix spike duplicate analysis
- Perform surrogate analysis
- Ensure all samples are received with the acceptable standards for the sample methods

11. DOCUMENTATION AND RECORDS

Upon completion of all field activities and sample analysis, EastStar will submit a Remedial Investigation Report (RIR) detailing the findings of the field activities described in this QAPP.

EastStar's RIR will include the following:

- Summary of all field activities
- On-site observations
- Analytical Data
- Site Drawing
- Conclusions based on analytical data
- Recommendations for remediation based upon analytical data and site observations

EastStar will also include appendices in the RIR which provide further detail of the observations and findings discussed in the RIR. These appendices include:

- Boring Logs
- Analytical Reports
- Field Notes
- Calibration Logs
- Site Photographs

12. REFERENCES

1. *Technical Requirements for Site Remediation*, NJAC 7:26E, last amended February 21, 2011.

2. New Jersey Department of Environmental Protection, *Field Sampling Procedures Manual,* August 2005

3. EastStar Environmental Group, Inc., *Preliminary Assessment of the Rahway Arch Properties Site*, August 7, 2012.

APPENDICES

APPENDIX A

GEOTECHNICAL TESTING MATRIX

Rahway Arch Site
Remedial Investigation

Proposed Geotechncial and Environmental Testing Matrix
BD Borings - Borings on Berms to Top of Bedrock

Boring Number	Anticipated Subsurface Layer	Geotechnical Analyses								
		Dry Density	Water Content	Atterberg Limits	Grain Size Distrabution	Lab Torvane	Consolidation	Unconfined Compressive Strength	Truiaxial Compressive Strength	Fraction Organic Carbon
BD-01 - Berm at north end of Impound 6 near suspected outfall location										
	SURFACE FILL									
	ALUM-YPS SLUDGE									
	PEAT		1				1	1	1	
	ORGANIC SILT		1				1	1	1	
	CLAY									
	SAND									
	DISINTEGRATED ROCK									
BD-02 - Berm on NW corner of Impound 3										
	SURFACE FILL									
	ALUM-YPS SLUDGE	1	1	1		1	1	1	1	
	PEAT	1	1	1		1	1	1	1	
	ORGANIC SILT	1	1	1		1	1	1	1	
	CLAY	1	1	1						
	SAND	1	1		1					
	DISINTEGRATED ROCK									
BD-03 - Berm at east side of Impound 4										
	SURFACE FILL									
	ALUM-YPS SLUDGE									
	PEAT		1	1				1		
	ORGANIC SILT		1	1				1		
	CLAY									
	SAND									
	DISINTEGRATED ROCK									
BD-04 - Berm at northeast corner of Impound 2										
	SURFACE FILL									
	ALUM-YPS SLUDGE									
	PEAT		1	1						
	ORGANIC SILT		1	1						
	CLAY									
	SAND									
	DISINTEGRATED ROCK									

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Rahway Arch Site
Remedial Investigation

Proposed Geotechncial and Environmental Testing Matrix
BD Borings - Borings on Berms to Top of Bedrock

Boring Number	Anticipated Subsurface Layer	Geotechnical Analyses								
		Dry Density	Water Content	Atterberg Limits	Grain Size Distrabution	Lab Torvane	Consolidation	Unconfined Compressive Strength	Truiaxial Compressive Strength	Fraction Organic Carbon
BD-05 - Berm on north side of Impound 1										
	SURFACE FILL									
	ALUM-YPS SLUDGE	1	1	1						
	PEAT	1	1	1		1	1	1	1	
	ORGANIC SILT	1	1	1		1	1	1	1	
	CLAY	1	1	1						
	SAND				1					
	DISINTEGRATED ROCK									
	Total Analyses	**9**	**15**	**12**	**2**	**5**	**7**	**9**	**7**	**0**

NOTES:

1. Refer to Rahway Arch Site Geotechnical and Remedial Investigation Boring Location Plan for poposed locations of the borings
2. Boring locations and test matrix subject to change following review by geotechncial engineer
3. Borings drilled with truck mounted mud rotary rig.

Rahway Arch Site
Remedial Investigation

Proposed Geotechncial and Environmental Testing Matrix
BS Borings - Borings on Berms to Bottom of Organic Silt

Boring Number	Anticipated Subsurface Layer	Geotechnical Analyses								
		Dry Density	Water Content	Atterberg Limits	Grain Size Distrabution	Lab Torvane	Consolidation	Unconfined Compressive Strength	Truiaxial Compressive Strength	Fraction Organic Carbon
BS-01 - Berm near southwest corner of Impound 6										
	SURFACE FILL									
	ALUM-YPS SLUDGE		1	1						
	PEAT		1	1						
	ORGANIC SILT		1	1						
BS-02 - Berm on SW corner of Impound 3										
	SURFACE FILL									
	ALUM-YPS SLUDGE									
	PEAT		1	1						
	ORGANIC SILT		1	1						
BS-03 - Berm at southeast corner of Impound 5										
	SURFACE FILL									
	ALUM-YPS SLUDGE									
	PEAT		1	1						
	ORGANIC SILT		1	1						
BS-04 - Berm at north side of Impound 4										
	SURFACE FILL									
	ALUM-YPS SLUDGE									
	PEAT	1	1	1		1	1	1	1	
	ORGANIC SILT	1	1	1		1	1	1	1	
BS-05 - Berm on west side of Impound 1										
	SURFACE FILL									
	ALUM-YPS SLUDGE									
	PEAT		1	1						
	ORGANIC SILT		1	1						
BS-06 - Berm on east side of Impound 1										
	SURFACE FILL									
	ALUM-YPS SLUDGE									
	PEAT	1	1	1		1	1	1	1	
	ORGANIC SILT	1	1	1		1	1	1	1	
BS-07 - Berm on south side of Impound 2										
	SURFACE FILL									
	ALUM-YPS SLUDGE									
	PEAT		1	1						
	ORGANIC SILT		1	1						

Rahway Arch Site
Remedial Investigation

Proposed Geotechncial and Environmental Testing Matrix
BS Borings - Borings on Berms to Bottom of Organic Silt

Boring Number	Anticipated Subsurface Layer	Geotechnical Analyses								
		Dry Density	Water Content	Atterberg Limits	Grain Size Distrabution	Lab Torvane	Consolidation	Unconfined Compressive Strength	Truiaxial Compressive Strength	Fraction Organic Carbon
BS-08 - Proposed Scale Location on south side of Impound 2										
	SURFACE FILL									
	ALUM-YPS SLUDGE									
	PEAT	1	1	1	1			1	1	
	ORGANIC SILT	1	1	1	1			1	1	
BS-09 - Steel bridge										
	SURFACE FILL									
	ALUM-YPS SLUDGE									
	PEAT	1	1	1	1			1	1	
	ORGANIC SILT	1	1	1	1			1	1	
	Total Analyses	**8**	**19**	**19**	**4**	**4**	**4**	**8**	**8**	**0**

NOTES:

1. Refer to Rahway Arch Site Geotechnical and Remedial Investigation Boring Location Plan for poposed locations of the borings
2. Boring locations and test matrix subject to change following review by geotechncial engineer
3. Borings drilled with truck mounted mud rotary rig.

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Rahway Arch Site
Remedial Investigation

Proposed Geotechncial and Environmental Testing Matrix
ID Borings - Borings Inside Impounds to Top of Bedrock

Boring Number	Anticipated Subsurface Layer	Geotechnical Analyses								
		Dry Density	Water Content	Atterberg Limits	Grain Size Distrabution	Lab Torvane	Consolidation	Unconfined Compressive Strength	Truiaxial Compressive Strength	Fraction Organic Carbon
ID-01 - Center of Impound 4										
	SURFACE FILL									
	ALUM-YPS SLUDGE		1	1		1	1		1	
	PEAT		1	1		1	1		1	1
	ORGANIC SILT		1	1		1	1		1	1
	CLAY									
	SAND									
	DISINTEGRATED ROCK									
ID-02 - Northwest side of Impound 5, north of RR tie stockpile										
	SURFACE FILL									
	ALUM-YPS SLUDGE		1	1						
	PEAT		1	1						
	ORGANIC SILT		1	1						
	CLAY									
	SAND									
	DISINTEGRATED ROCK									
ID-03 - Center of southern half of Impound 6										
	SURFACE FILL									
	ALUM-YPS SLUDGE		1	1		1	1		1	
	PEAT		1	1		1	1		1	1
	ORGANIC SILT		1	1		1	1		1	1
	CLAY									
	SAND									
	DISINTEGRATED ROCK									
ID-04 - Center of Impound 3										
	SURFACE FILL									
	ALUM-YPS SLUDGE		1	1		1				
	PEAT		1	1		1				1
	ORGANIC SILT		1	1		1				1
	CLAY									
	SAND									
	DISINTEGRATED ROCK									

Rahway Arch Site
Remedial Investigation

Proposed Geotechncial and Environmental Testing Matrix
ID Borings - Borings Inside Impounds to Top of Bedrock

Boring Number	Anticipated Subsurface Layer	Geotechnical Analyses								
		Dry Density	Water Content	Atterberg Limits	Grain Size Distrabution	Lab Torvane	Consolidation	Unconfined Compressive Strength	Truiaxial Compressive Strength	Fraction Organic Carbon
ID-05 - Impound 2 at proposed pre-process stockpile										
	SURFACE FILL									
	ALUM-YPS SLUDGE		1	1		1	1	1	1	
	PEAT		1	1		1	1	1	1	1
	ORGANIC SILT		1	1		1	1	1	1	1
	CLAY									
	SAND									
	DISINTEGRATED ROCK									
ID-06 - Center in Impound 1										
	SURFACE FILL									
	ALUM-YPS SLUDGE		1	1		1	1		1	
	PEAT		1	1		1	1		1	1
	ORGANIC SILT		1	1		1	1		1	1
	CLAY									
	SAND									
	DISINTEGRATED ROCK									
	Total Analyses	**0**	**18**	**18**	**0**	**15**	**12**	**3**	**12**	**10**

NOTES:

1. Refer to Rahway Arch Site Geotechnical and Remedial Investigation Boring Location Plan for poposed locations of the borings
2. Boring locations and test matrix subject to change following review by geotechncial engineer
3. Boring ID-02 drilled with truck mounted mud rotary rig. All other borings drilled with marsh buggy mounted mud rotary rig.

Rahway Arch Site
Remedial Investigation

Proposed Geotechncial and Environmental Testing Matrix
IS Borings - Borings Inside Impounds to Bottom of Organic Silt

Boring Number	Anticipated Subsurface Layer	Geotechnical Analyses								
		Dry Density	Water Content	Atterberg Limits	Grain Size Distrabution	Lab Torvane	Consolidation	Unconfined Compressive Strength	Truiaxial Compressive Strength	Fraction Organic Carbon
IS-01 - North end of Impound 2										
	SURFACE FILL									
	ALUM-YPS SLUDGE		1	1			1	1	1	
	PEAT		1	1			1	1	1	1
	ORGANIC SILT		1	1			1	1	1	1
IS-02 - Proposed Equipment Location in Impound 2										
	SURFACE FILL									
	ALUM-YPS SLUDGE		1	1			1		1	
	PEAT		1	1			1		1	
	ORGANIC SILT		1	1			1		1	
	Total Analyses	**0**	**6**	**6**	**0**	**0**	**6**	**3**	**6**	**2**

NOTES:

1. Refer to Rahway Arch Site Geotechnical and Remedial Investigation Boring Location Plan for poposed locations of the borings
2. Boring locations and test matrix subject to change following review by geotechncial engineer
3. Boring IS-01 drilled with truck mounted mud rotary rig.
4. Boring IS-02 drilled with marsh buggy mounted mud rotary rig.

Rahway Arch Site
Remedial Investigation

Proposed Geotechncial and Environmental Testing Matrix
W Borings - Borings Outside Berms to Top of Bedrock

Boring Number	Anticipated Subsurface Layer	Geotechnical Analyses								
		Dry Density	Water Content	Atterberg Limits	Grain Size Distrabution	Lab Torvane	Consolidation	Unconfined Compressive Strength	Truiaxial Compressive Strength	Fraction Organic Carbon
W-01 - NE of Impound 4										
	SURFACE MATERIAL									
	ALUM-YPS SLUDGE									
	PEAT		1	1						
	ORGANIC SILT		1	1						
	CLAY									
	SAND									
	DISINTEGRATED ROCK									
W-02 - North of Impound 6 near suspected outfall location										
	SURFACE MATERIAL									
	ALUM-YPS SLUDGE									
	PEAT		1	1						
	ORGANIC SILT		1	1						
	CLAY									
	SAND									
	DISINTEGRATED ROCK									
W-03 - North of Impound 3										
	SURFACE MATERIAL									
	ALUM-YPS SLUDGE									
	PEAT		1	1		1	1		1	
	ORGANIC SILT		1	1		1	1		1	
	CLAY									
	SAND									
	DISINTEGRATED ROCK									
W-04 - North of Impound 1										
	SURFACE MATERIAL									
	ALUM-YPS SLUDGE									
	PEAT		1	1		1	1		1	
	ORGANIC SILT		1	1		1	1		1	
	CLAY									
	SAND									
	DISINTEGRATED ROCK									

Rahway Arch Site
Remedial Investigation

Proposed Geotechncial and Environmental Testing Matrix
W Borings - Borings Outside Berms to Top of Bedrock

Boring Number	Anticipated Subsurface Layer	Geotechnical Analyses								
		Dry Density	Water Content	Atterberg Limits	Grain Size Distrabution	Lab Torvane	Consolidation	Unconfined Compressive Strength	Truiaxial Compressive Strength	Fraction Organic Carbon
W-05 - NE corner of Impound 2										
	SURFACE MATERIAL									
	ALUM-YPS SLUDGE									
	PEAT		1	1						
	ORGANIC SILT		1	1						
	CLAY									
	SAND									
	DISINTEGRATED ROCK									
W-06 - East of Impound 5										
	SURFACE MATERIAL									
	ALUM-YPS SLUDGE									
	PEAT		1	1		1	1		1	
	ORGANIC SILT		1	1		1	1		1	
	CLAY									
	SAND									
	DISINTEGRATED ROCK									
W-07 - West of Impound 2										
	SURFACE MATERIAL									
	ALUM-YPS SLUDGE									
	PEAT									
	ORGANIC SILT									
	CLAY									
	SAND									
	DISINTEGRATED ROCK									
W-08 - West of Impound 3										
	SURFACE MATERIAL									
	ALUM-YPS SLUDGE									
	PEAT									
	ORGANIC SILT									
	CLAY									
	SAND									
	DISINTEGRATED ROCK									
	Total Analyses	**0**	**12**	**12**	**0**	**6**	**6**	**0**	**6**	**0**

NOTES:

1. Refer to Rahway Arch Site Geotechnical and Remedial Investigation Boring
2. Boring locations and test matrix subject to change following review by geotechncial engineer
3. Borings drilled with marsh buggy mounted mud rotary rig.

APPENDIX B

ENVIRONMENTAL TESTING MATRIX

Rahway Arch Site
Remedial Investigation

Proposed Geotechncial and Environmental Testing Matrix
Summary of Environmental Sample Analyses

Boring Number	Anticipated Subsurface Layer	Environmental Analyses					
		TAL Metals	Cyanide	PAHs	Petroleum Hydrocarbons	VOCs	S-VOCs
BD-01 - Berm at north end of Impound 6 near suspected outfall location							
	ALUM-YPS SLUDGE	1	1				
	PEAT	1	1	1			
BD-02 - Berm on NW corner of Impound 3							
	ALUM-YPS SLUDGE	1	1				
	PEAT	1	1	1			
BD-03 - Berm at east side of Impound 4							
	ALUM-YPS SLUDGE	1	1				
	PEAT	1	1	1			
BD-04 - Berm at northeast corner of Impound 2							
	ALUM-YPS SLUDGE	1					
	PEAT	1	1		1	1	1
BD-05 - Berm on north side of Impound 1							
	SURFACE FILL	1		1			
	ALUM-YPS SLUDGE	1					
	PEAT	1	1		1		
BS-01 - Berm near southwest corner of Impound 6							
	ALUM-YPS SLUDGE	1	1				
	PEAT	1	1	1			
BS-02 - Berm on SW corner of Impound 3							
	ALUM-YPS SLUDGE	1	1				
	PEAT	1	1	1			
BS-03 - Berm at southeast corner of Impound 5							
	ALUM-YPS SLUDGE	1					
	PEAT	1	1		1	1	1
BS-05 - Berm on west side of Impound 1							
	SURFACE FILL	1		1			
	ALUM-YPS SLUDGE	1					
	PEAT	1	1		1		
	ORGANIC SILT						
BS-06 - Berm on east side of Impound 1							
	SURFACE FILL	1		1			
	ALUM-YPS SLUDGE	1	1				
	PEAT	1	1		1		

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Rahway Arch Site
Remedial Investigation

Proposed Geotechncial and Environmental Testing Matrix
Summary of Environmental Sample Analyses

Boring Number	Anticipated Subsurface Layer	Environmental Analyses					
		TAL Metals	Cyanide	PAHs	Petroleum Hydrocarbons	VOCs	S-VOCs
BS-07R - Berm on south side of Impound 2							
	SURFACE FILL	1	1	1	1		
	PEAT	1	1		1	1	1
ID-01 - Center of Impound 4							
	SURFACE FILL	1		1			
	ALUM-YPS SLUDGE	1	1				
	PEAT	1	1	1			
ID-02 - Northwest side of Impound 5, north of RR tie stockpile							
	SURFACE FILL	1		1			
	ALUM-YPS SLUDGE	1	1				
	PEAT	1	1	1			
ID-03 - Center of southern half of Impound 6							
	SURFACE FILL	1		1			
	ALUM-YPS SLUDGE	1	1				
	PEAT	1	1				
	ORGANIC SILT	1					
ID-04 - Center of Impound 3							
	SURFACE FILL	1		1			
	ALUM-YPS SLUDGE	1	1				
	PEAT	1	1	1			
ID-05 - Impound 2 at proposed pre-process stockpile							
	ALUM-YPS SLUDGE	1	1				
	PEAT	1	1	1			
ID-06 - Center in Impound 1							
	SURFACE FILL	1			1	1	1
	ALUM-YPS SLUDGE	1	1				
	PEAT	1	1	1			
IS-01 - North end of Impound 2							
	ALUM-YPS SLUDGE	1	1				
	PEAT	1	1	1			
IS-02 - Proposed Equipment Location in Impound 2							
	SURFACE FILL	1	1	1			
W-02 - North of Impound 6 near suspected outfall location							
	SURFACE MATERIAL	1	1	1			
Total Analyses		**47**	**34**	**21**	**8**	**4**	**4**

Rahway Arch Site
Remedial Investigation

Proposed Geotechncial and Environmental Testing Matrix
Summary of Environmental Sample Analyses

Boring Number	Anticipated Subsurface Layer	Environmental Analyses					
		TAL Metals	Cyanide	PAHs	Petroleum Hydrocarbons	VOCs	S-VOCs

NOTES:

1. Refer to Rahway Arch Site Geotechnical and Remedial Investigation Boring Location Plan for poposed locations of the borings
2. Boring locations and test matrix subject to change following review by geotechncial engineer

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APPENDIX C

SITE SPECIFIC HEALTH AND SAFETY PLAN

SITE SPECIFIC HEALTH AND SAFETY PLAN

for the

REMEDIAL INVESTIGATION

of the

Rahway Arch Properties Site

Block 9.03, Lot 21; Block 10, Lots 8-10 and 12-21 and
Block 11.01, Lots 8, 10-14 and 28
Carteret, New Jersey

Plan Issued: July 2, 2012

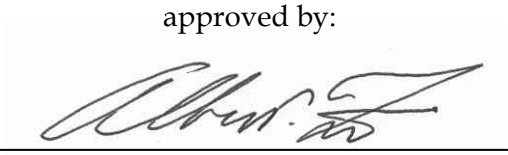
prepared for:

Rahway Arch Properties, LLC
7 Nottingham Drive
Florham Park, New Jersey 07932

prepared by:

EastStar Environmental Group, Inc.
10632 Little Patuxent Parkway
Suite 106
Columbia, Maryland 21044

approved by:



Albert P. Free, P.E. CSP, LSRP
LSRP Number 562386
President

Project No. I027

TABLE OF CONTENTS

1. INTRODUCTION 1
1.1 Background 1
1.2 Site Description 1
1.2.1 Historic Site Use 1
1.2.2 Current Site Conditions 4
1.2.3 Subsurface Conditions 6
1.3 Project Description 6
1.3.1 Borings 7
1.3.2 Geotechnical Subsurface Sampling 7
1.3.3 Environmental Subsurface Sampling 7
1.3.4 Groundwater Sampling 7
1.3.5 Surface Water Sampling 9

2. ACTIVITY HAZARD ANALYSIS 10

3. PROJECT PERSONNEL 13
3.1 Safety and Health Manager 13
3.2 Site Safety and Health Officer 13
3.3 Project Managers 13
3.3.1 Geotechnical Project Manager 13
3.3.2 Environmental Project Manager 14
3.4 Drilling Personnel 14
3.5 Surveyor 14
3.6 Reclamation Contractor 15
3.7 Property Owner 15
3.8 Site Visitors 15

4. TRAINING 16
4.1 HazWOPER Training 16
4.2 Site Specific Training 16

5. LEVELS OF PROTECTION AND PERSONNEL PROTECTIVE EQUIPMENT 17
5.1 Levels of Protection 17
5.2 Personnel Protective Equipment (PPE) 17

6. MEDICAL SURVEILLANCE 18

7. AIR MONITORING PROCEDURES 19
7.1 Atmospheric Hazards 19
7.2 Airborne Contaminated Dust 19

8. HEAT STRESS AND COLD EXPOSURE 20
8.1 Heat Stress 20
8.2 Sunburn 20

9. HAZARDS AND SAFETY PROCEDURES 21
9.1 General Project Safety Requirements 21

9.2 Site Specific Hazards 21
9.2.1 Sinking and Engulfment 21
9.2.2 Standing Water 22
9.2.3 Direct Contact 22
9.2.4 Slopes 22
9.3 Physical Hazards 23
9.3.1 Head Protection 23
9.3.2 Eye/Face Protection 23
9.3.3 Foot Protection 23
9.3.4 Personal Protective Clothing 23
9.3.5 Heavy Equipment Operation 23
9.3.6 Equipment Failure 23
9.3.7 Underground/Aboveground Utility Lines 24
9.3.8 Protection from Moving Machinery/Parts 24
9.3.9 Slips, Trips and Falls 24
9.3.10 Back Injury 24
9.3.11 Fire 24
9.3.12 Power Tools 24
9.3.13 Noise 25
9.4 Biological Hazards 25
9.4.1 Insects 25
9.4.2 Poison Plants 25
9.4.3 Blood Borne Pathogens 25
9.5 Communications 25
9.5.1 On-site Communications 25
9.5.2 Off-site Communications 26

10. SITE CONTROL 27

11. DECONTAMINATION 28

12. EMERGENCY RESPONSE 29
12.1 Accident Prevention 29
12.2 Emergency Response Requirements 29
12.3 General First Aid Guidelines 29
12.4 Immediate Reporting 29

APPENDICES

APPENDIX A EMERGENCY CONTACT INFORMATION

APPENDIX B HOSPITAL DIRECTIONS AND MAP

APPENDIX C FIELD SIGN OFF

LIST OF FIGURES

Figure 1.1 General Site Location Map 2

Figure 1.2 Aerial Photo of Site and Boundaries 3

Figure 1.3 Impoundment Locations 5

Figure 1.4 Boring Locations 8

LIST OF TABLES

Table 2.1 Activity Hazard Analysis 11

1. INTRODUCTION

1.1 Background

Rahway Arch Properties, LLC has contracted with EastStar to provide LSRP and environmental engineering services for remediation of the Rahway Arch Properties site in Carteret, New Jersey. The site is a 124.7 acre property located at the terminus of Driftway Street. It is more precisely defined as Block 9.03, Lot 21; Block 10, Lots 8-10 and 12-21 and Block 11.01, Lots 8, 10-14 and 28. The general location of the site is shown on Figure 1.1. The specific location of the site and its boundaries are shown on Figure 1.2.

Remediation of the site is being performed in accordance with the requirements of the Site Remediation Reform Act (SRRA), the Administrative Requirements for Remediation of Contaminated Sites (ARRCS) {NJAC 7:26C} and the Technical Requirements for Site Remediation (Tech Rule) {NJAC 7:26E}. Rahway Arch Properties opted-in to the Licensed Site Remediation Program on December 5, 2011 by submitting the LSRP Notification of Retention or Dismissal form to New Jersey Department of Environmental Protection (NJDEP). Albert P. Free of EastStar was retained as the Licensed Site Remediation Professional (LSRP) for the site.

This document will serve as the Site Specific Health and Safety Plan (HASP) for the remedial investigations that need to be performed on the site and any subsequent sampling and analysis required prior to the start of the remedial action. A separate HASP will be developed for the remedial action.

This plan complies with the requirements of OSHA regulations (29 CFR 1910.120) and EastStar's corporate health and safety program. It addresses the potential health and safety issues associated with the surface and subsurface contamination and the general health and safety issues associated with the planned remedial investigation activities.

The procedures and protocols presented in this plan have been established to ensure that a mechanism is in place in the event that potential hazards are encountered during the work activities. Compliance with this HASP is required for all authorized EastStar personnel, all subcontractors and all visitors who enter the work site.

The content of this HASP may change or undergo revision based upon field monitoring results, modifications to the scope of work or additional information made available to health and safety personnel. Any proposed changes will be reviewed and approved by the EastStar Corporate Health and Safety Officer before they are implemented and before any work activities impacted by these changes are begun.

1.2 Site Description

1.2.1 Historic Site Use

The project site is the old Cytec Impoundments site, a former industrial waste disposal facility operated by American Cyanamid Company (now Cytec Incorporated) from the mid-1930s through 1974 to dispose of a mixture of acidic sludge from an alum manufacturing process and alkaline sludge from a yellow prussiate of soda (YPS) manufacturing process.

FIGURE 1.1

General Location Map of the Rahway Arch Site

EastStar Environmental Group, Inc.
Consulting and Field Services

10632 Little Patuxent Parkway, Suite 106
Columbia, Maryland 21044

Scale:	AS SHOWN	Date:	April 2012
Drawn By:	JAC	Checked By:	APF

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10632 Little Patuxent Parkway, Suite 106
Columbia, Maryland 21044
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Graphic Scale
1000 500 0 1000
1 inch = 1000 feet

Compass
N W E S

FIGURE 1.2
AERIAL PHOTO OF SITE AND BOUNDRIES

PROPOSED SOIL SAFE METRO12
CLASS B RECYCLING FACILITY

BLOCK 10 LOTS 10, 16-21
BLOCK 11.01 LOTS 8, 10, 14, 16
BOROUGH OF CARTERET
MIDDLESEX COUNTY, NEW JERSEY

Source: Google Imagery, 2011

Project	Date	Scale
1028	1/16/12	1 IN = 1000 FT

American Cyanamid Company owned and operated a chemical manufacturing plant, known as the Warner Plant, located on 30 acres of property in Tremley Point, at the confluence of the Rahway River with the Arthur Kill in Linden, New Jersey, from 1917 to 1998. The plant produced a number of organic and inorganic products.

While it was operating, waste alum and YPS sludges from the Warner plant were slurried and pumped across the Rahway River to the project site. It is not known if any other waste products from the Warner Plant were included in the slurry. Demolition debris from work performed at the Warner Plant were used on the project site for road and berm reconstruction.

The 124.7 acre site contains six impoundments, encompassing approximately 85 acres, located on the Rahway River. The impoundments were constructed above existing grade with wooden and earthen dikes. They contain approximately 2,000,000 tons of the cyanide containing alum-YPS sludge. The size and capacity of each of the impoundments varies, as does the thickness of the sludge, which ranges from 5 to 20 feet. A scaled site map showing the location of the six impoundments is provided in Figure 1.3.

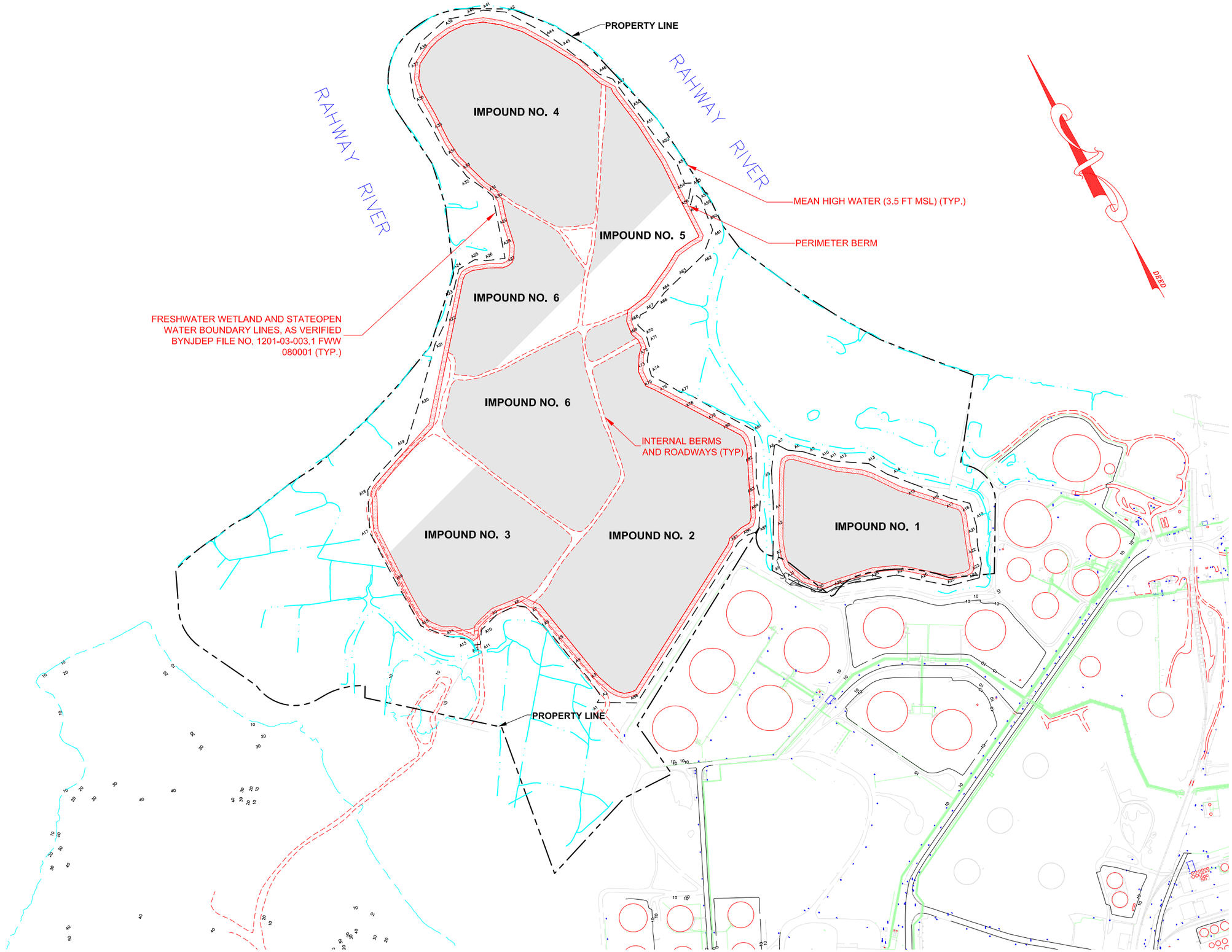
Evidence indicates that undocumented fill material has been imported and used on the site over the years to maintain the dikes and to stabilize the surface in several of the impoundments. This fill material was imported from various sites over the years for operations and maintenance of the disposal areas. Because it was imported to the site for the operations of the impoundments, the fill may not be considered historic fill, as defined by the Technical Requirements for Site Remediation (Tech Rule), NJAC 7:26.E. However, the fill has the physical and chemical characteristics of historic fill.

From the time that waste from the Warner Plant was no longer placed in the impoundments, until 2005 the site was unused. Various activities were performed during that time to maintain the berms, prevent nuisance dusting, characterize the environmental conditions and monitor the groundwater. These activities are described in the next section of this PA. In 2005, a portion of the site in Impoundment 2 was leased by Dauman Recycling Company to operate a class B recycling facility for wood waste and pallets.

1.2.2 Current Site Conditions

At the present time, the site consists of the six sludge impoundments surrounded by the containment berms. Several pathways have been built through the impoundments to allow access for maintenance or access to the eight existing monitoring well clusters. The berm between Impoundments 4 and 5 was not visible, merging these two impoundments into a single larger impoundment.

In its current condition, the project site is unusable. Most of Impoundment 6 is filled with standing water. Vegetative cover is non-existent over most of the area of the remaining impoundments, with the exception of Impoundment 1 and the low areas of Impoundment 3. The 12 inch cover of soil and sewage sludge has been eroded away in most other locations on the impoundments leaving exposed alum-YPS sludge. Phragmites have grown in the soil on the berms and the roadways surrounding the impoundments.



General Notes and Legend

1. BASE MAP INFORMATION OBTAINED FROM CREST ENGINEERING, INC. PLAN ENTITLED WETLAND LOCATION MAP, DATED 8/7/97.
2. MEAN HIGH WATER AND FRESH WATER WETLAND LINES, AS SHOWN.

PERMIT REVIEW

NOT FOR CONSTRUCTION

Revision/Issue	Date

Graphic Scale for Plan View
200 100 0 200
1 inch = 200 feet

Compass

SOIL SAFE, INCORPORATED
6700 Alexander Bell Drive
Suite 300
Columbia, Maryland 21046

RAHWAY ARCH PROPERTY
EXISTING IMPOUNDMENTS

BLOCK 9.03 LOT 21
BLOCK 10 LOTS 8-21
BLOCK 11.01 LOTS 6-15, 27 & 28

BOROUGH OF CARTERET
MIDDLESEX COUNTY, NJ

EastStar Environmental Group, Incorporated
10632 Little Patuxent Parkway, Suite 106
Columbia, Maryland 21044

Engineer
Albert P. Free, P.E., CSP, LSRP
NJ PE Number 24GE03816200

Project: I-028	Filename: Metro12 Site Plan
Date: 3/5/2012	Last Revised
Designed by: SMA	Approved by: APF
Drawn by: SMA	Checked by
Plan View Scale: 1" = 200'	Sheet: 1 of 1

These impoundments are impassable because the sludge has no strength and cannot bear any weight. A pole or rod can be pushed by hand its full length into the sludge with minimal effort.

Impoundment 3 appears to be the lowest area on the site and appears to have been inundated regularly by the Rahway River. Trash and debris consistent with river water flowing onto the impoundment were visible.

Impoundment 2 has been covered with several feet of soil (undocumented fill) and was used for a wood waste recycling operation. That operation was halted in 2008, although wood waste from the operation remains on-site. A portion of the soil surface is covered with wood chips and there are several piles of wood chips remaining on the site.

1.2.3 Subsurface Conditions

Based upon historic data, the existing conditions on the site are expected to be comprised of the following layers, starting from the surface.

- Surface fill – soil used to form, repair and maintain the berms and thin cover placed over the sludge (may not exist in all locations)
- Alum-YPS sludge – ranges from 5 to 21 feet thick in the impoundments, may also exist under the berms
- Peat – soft, compressible, meadow mat layer upon which the berms and impoundments were constructed
- Organic silt/clay - soft organic clay, a recent river deposit up to 20 feet thick near the Rahway River
- Sand - alluvial and glacial clay, silt, sand and gravel
- Bedrock - red-brown siltstone/shale (Brunswick Formation) with a weathered surface layer, typically between 30 and 40 feet below grade

1.3 Project Description

The remedial investigation project will consist of geotechnical and environmental investigations of the site for the purposes of designing the remedial action and developing the remedial action workplan (RAW). The field activities associated with this project will consist of:

- Drilling borings using mud rotary and cone penetrometer techniques
- Collecting geotechnical and environmental samples from the mud rotary borings
- Sampling groundwater using the existing groundwater monitoring wells
- Collecting surface soil and water samples

1.3.1 Borings

Six categories of borings will be installed:

- Shallow mud rotary borings on the berms to the bottom of the organic silt and clay (BS borings)
- Deep mud rotary borings on the berms to top of bedrock (BD borings)
- Shallow mud rotary borings in the impoundments to the bottom of the organic silt and clay (IS borings)
- Deep mud rotary borings on the berms to top of bedrock (ID borings)
- Deep mud rotary borings in the wetlands outside the berms (W borings)
- Cone penetrometer borings (CPT borings)

The borings on the berms and the two borings in Impoundment 2 are accessible by truck and will be drilled with a truck mounted drill rig. The remaining borings in the impoundments, the borings in the wetland areas and cone penetrometer borings will not be truck accessible and will be drilled using equipment mounted on a marsh buggy. The boring location plan is shown in Figure 1.4.

Warren-George of Jersey City, New Jersey will perform the drilling services. A permit to perform the drilling in the wetland areas has been obtained from NJDEP-LURP by Soil Safe. The geotechnical investigation and sampling portion of the project will be managed and implemented by Michael Baker Jr. Incorporated. The environmental investigation and sampling portion of the project will be managed and implemented by EastStar Environmental.

1.3.2 Geotechnical Subsurface Sampling

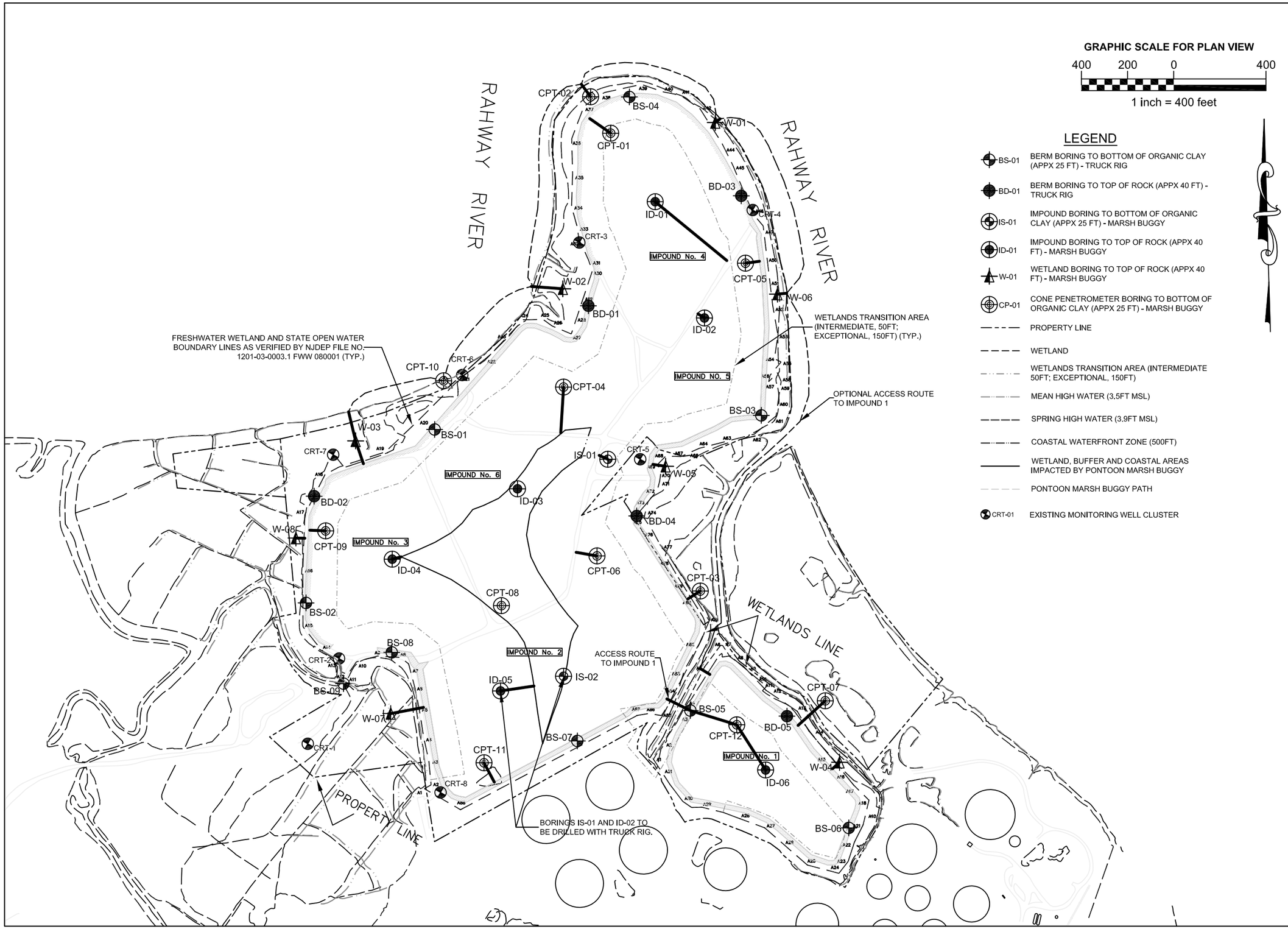
Samples of subsurface materials will be collected for analysis offsite in a geotechnical laboratory. The samples will be collected using split spoon samplers in standard penetration tests and Shelby tubes for undisturbed samples. The split spoon samples will be collected in driller's sample jars and bulk sample bags.

1.3.3 Environmental Subsurface Sampling

Samples of subsurface materials will also be collected for environmental analysis at an offsite analytical laboratory. These samples will be collected using split spoon samplers in standard penetration tests. The samples will be collected into the appropriate sample containers as described in the Quality Assurance Project Plan (QAPP).

1.3.4 Groundwater Sampling

Sixteen groundwater monitoring wells are located on the site in eight two well clusters. Each cluster consists of a shallow well screened in the surface aquifer and a deep well screened in the lower Brunswick Formation aquifer.



GRAPHIC SCALE FOR PLAN VIEW

400 200 0 400

1 inch = 400 feet

LEGEND

- BS-01 — BERM BORING TO BOTTOM OF ORGANIC CLAY (APPX 25 FT) - TRUCK RIG
- BD-01 — BERM BORING TO TOP OF ROCK (APPX 40 FT) - TRUCK RIG
- IS-01 — IMPOUND BORING TO BOTTOM OF ORGANIC CLAY (APPX 25 FT) - MARSH BUGGY
- ID-01 — IMPOUND BORING TO TOP OF ROCK (APPX 40 FT) - MARSH BUGGY
- W-01 — WETLAND BORING TO TOP OF ROCK (APPX 40 FT) - MARSH BUGGY
- CP-01 — CONE PENETROMETER BORING TO BOTTOM OF ORGANIC CLAY (APPX 25 FT) - MARSH BUGGY
- PROPERTY LINE
- WETLAND
- WETLANDS TRANSITION AREA (INTERMEDIATE 50FT; EXCEPTIONAL, 150FT)
- MEAN HIGH WATER (3.5FT MSL)
- SPRING HIGH WATER (3.9FT MSL)
- COASTAL WATERFRONT ZONE (500FT)
- WETLAND, BUFFER AND COASTAL AREAS IMPACTED BY PONTOON MARSH BUGGY
- PONTOON MARSH BUGGY PATH
- CRT-01 — EXISTING MONITORING WELL CLUSTER

Rahway Arch

RAHWAY ARCH PROPERTIES, LLC

7 Nottingham Drive
Florham Park, New Jersey 07932

REMEDIAL INVESTIGATION OF THE RAHWAY ARCH SITE

BLOCK 9.03 LOT 21
BLOCK 10 LOTS 8-10 & 12-21
BLOCK 11.01 LOTS 8, 10-14 & 28

BOROUGH OF CARTERET
MIDDLESEX COUNTY, NJ

BASE MAP NOTES

BASE MAP INFORMATION OBTAINED FROM THE FOLLOWING SOURCES:

1. ALTA/ACSM LAND TITLE SURVEY BLOCK9.03 LOT 21, BLOCK 10 LOTS 8-21 AND BLOCK 11.01 LOTS 6-15, 27 & 28, BOROUGH OF CARTERET, MIDDLESEX COUNTY, NEW JERSEY PREPARED BY KELLER & KITKPATRICK CONSULTING ENGINEERS AND LAND SURVEYORS, DATED 9/29/06
2. CREST ENGINEERING, INC. PLAN ENTITLED WETLAND LOCATION MAP, DATED 8/7/97.
3. WETLAND DELINEATION IS BASED UPON MAP PREPARED BY BLASLAND, BOUCK AND LEE, INC., DATED APRIL 4, 2003.
4. MEAN HIGH WATER OBTAINED FROM DRAWING ENTITLED 'SURFACE INSIDE WETLAND BUFFERS' PREPARED BY CRT-01 Existing Monitoring Well Cluster

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RAHWAY ARCH SITE
GEOTECHNICAL AND REMEDIAL INVESTIGATION
BORING LOCATION PLAN

File Name: Geotech Investigation Plan2.dwg	Scale: 1 Inch = 400 feet
Date: JUNE 22, 2012	Project Number: I027
Drawn by: MAY	
Checked by: APF	

Sheet 1 of 1 Sheets

The wells were installed in the 1980s and 1990s. None of the wells have been sampled since 1999. Prior to sampling, the wells will be re-developed by pumping and surcharging.

Samples will be collected from each of the groundwater monitoring wells for environmental analysis at an offsite analytical laboratory. The samples will be collected using a submersible sampling pump using low flow sampling techniques. The samples will be placed directly into the appropriate sampling containers as is outlined in the QAPP.

1.3.5 Surface Water Sampling

Samples will be collected from the standing water contained within the impoundments and the surface water in the surrounding ditches for environmental analysis at an offsite analytical laboratory.. These samples will be collected using a dipper. The samples will be placed directly into the appropriate sampling containers as is outlined in the QAPP.

2. ACTIVITY HAZARD ANALYSIS

An Activity Hazard Analysis (AHA) has been performed for this project. This AHA addresses all hazards associated with the planned project including the general safety hazards associated with geotechnical drilling, physical site hazards, weather related hazards and chemical hazards from the potential contamination.

The AHA is presented in Table 2.1 to this HASP.

TABLE 2.1 - ACTIVITY HAZARD ANALYSIS (AHA)

Principal Steps of Operation		Safety and/or Occupational Health	Precautionary Actions or Controls
1.	Site Hazards	Engulfment and sinking	Stay out of impounds and unknown areas
			Do not cross standing water areas
			Keep vehicles out of impounds
		Site Slopes	Keep vehicles off of berm slopes
		Chemical Hazards	Minimize contact with alum-YPS sludge
			Minimuze contact with undocumented fill soil
			No smoking or eating in work area
			No smoking, drinking or eating without washing-up
			Follow good personal hygiene practices
		Heat Stress	Drink plenty of water
			Take frequent rest breaks
		Sunburn	Use sunblock
2.	Drill geotechnical and environmental soil borings	Underground utilities	Have utilities marked by One Call
			Use private locator if necessary
			Respect all utility markings
		Overhead utilities	Watch for visible utilities
			Maintain safe distances
		Slips, trips and falls	Good housekeeping
			Wear quality safety shoes
		Head impacts	Wear hardhat
		Eye impact	Wear safety glasses
		Noise	Wear hearing protection
		Foot impacts	Wear safety shoes
		Hand impacts	Wear work gloves
			Maintain constant awareness of work activities
		Back injury	Keep back straight
			Use proper lifting techniques
		Lightening	Stop drilling if lightening likely
			Lower rig boom
			Evacuate to safe area
		Poisionous plants	Be aware of appearance
			Do not touch
			Wear long pants
		Ticks and biting insects	Wear long pants
			Use repellant with DEET
		Chemical hazards	Perform continuous atmospheric monitoring
			Minimize dust generation
			Wear surfical gloves during sampling
		Chemical exposure	Use safe work practices
			Employ good personal hygiene
			No smoking, drinking or eating without washing-up
		Traffic hazards	Wear high visibility vest

TABLE 2.1 - ACTIVITY HAZARD ANALYSIS (AHA)

	Principal Steps of Operation	Safety and/or Occupational Health	Precautionary Actions or Controls
		Driving hazards	Use good defensive driving practices to and from work area
		see also Site Hazards listed above	
3.	Groundwater sampling from existing monitoring wells and sampling of sludge, soil, standing water and surface water and	Slips, trips and falls	Good housekeeping
			Wear quality safety shoes
		Eye impact	Wear safety glasses
		Foot impacts	Wear safety shoes
		Back injury	Keep back straight
			Use proper lifting techniques
		Hand impacts	Wear work gloves
			Maintain constant awareness of work activities
		Heat Stress	Drink plenty of water
			Take frequent rest breaks
		Sunburn	Use sunblock
		Lightening	Evacuate to safe area
		Poisionous plants	Be aware of appearance
			Do not touch
			Wear long pants
		Ticks and biting insects	Wear long pants
			Use repellant with DEET
		Chemical hazards	Perform continuous atmospheric monitoring
			Minimize dust generation
			Wear surfical gloves during sampling
		Chemical exposure	Use safe work practices
			Employ good personal hygiene
			No smoking, drinking or eating without washing-up
		Traffic hazards	Wear high visibility vest
		Driving hazards	Use good defensive driving practices to and from work area
		see also Site Hazards listed above	
4.	Surveying	Slips, trips and falls	Good housekeeping
			Wear quality safety shoes
		see also Site Hazards listed above	

3. PROJECT PERSONNEL

3.1 Safety and Health Manager

The project Safety and Health Manager (SHM) is responsible for the development, implementation and enforcement of this HASP. The SHM will also approve any changes to this plan due to modification of procedures or newly proposed site activities.

SHM is responsible for the review of safety protocols and procedures, consistent with the contaminated fill and waste aspects of this project, also assessing outstanding health and safety issues that arise during the conduct of site work. Health and safety-related duties and responsibilities will be assigned only to qualified individuals by SHM.

SHM will provide technical assistance as required. The SHM may periodically conduct audits of the health and safety procedures implemented on site and will be available for any project emergencies that may arise. The SHM will review the monitoring data and will determine if site conditions warrant modifications to the monitoring plan.

This HASP has been approved and signed by the SHM

3.2 Site Safety and Health Officer

The Site Safety and Health Officer (SSHO) will report directly to the SHM. The SSHO will be on-site throughout the project and will be responsible for ensuring that the requirements of this HASP are properly implemented.

The SSHO will be responsible for monitoring site conditions, including all air and environmental sampling. If modifications to the levels of protection are required, the SSHO will implement these modifications, in consultation with the SHM.

The SSHO will be responsible for ensuring that all project personnel have been properly training. The SSHO will conduct daily tool box safety briefings prior to the start of work.

3.3 Project Managers

Two Project Managers, a Geotechnical Project Manager (GPM) and an Environmental Project Manager (EPM), will be responsible for the performance and technical quality of this investigation.

3.3.1 Geotechnical Project Manager

The GPM will be responsible for ensuring that the borings are performed in a technically sound manner that achieves the geotechnical engineering objectives. The GPM will be responsible for proper collection, storage and handling of the split spoon and Shelby tube samples and delivery of these samples to the geotechnical testing laboratory.

The GPM will consult with the SHM and the SSHO regarding any safety issues or concerns that arise during the project.

3.3.2 Environmental Project Manager

The EPM will be responsible for ensuring that the borings are performed in a technically sound manner that achieves the environmental engineering and site remediation objectives. The EPM will be responsible for proper collection, storage and handling of the environmental samples from the soil borings and delivery of these samples to the analytical laboratory.

The EPM will be responsible for location and stake-out of the borings, as shown on the Boring Location Plan. The EPM will also direct the driller to the approved access routes to the boring locations for compliance with the Wetlands Disturbance and Coastal Zone permits to minimize disturbance in the wetlands, wetland buffer and coastal zone areas.

The EPM will also be responsible for collection of sludge, surface water and groundwater samples. These will include re-development and groundwater sampling from the 16 existing groundwater monitoring wells and collection of sludge and surface water samples from the surfaces of the berms and impoundments. These responsibilities also include proper storage and handling of the samples and delivery of these samples to the analytical laboratory.

The EPM will consult with the SHM and the SSHO regarding any safety issues or concerns that arise during the project.

3.4 Drilling Personnel

Drilling will be performed by personnel from Warren-George and will be managed by a New Jersey Licensed Well Driller. The well driller will coordinate with the Environmental and Geotechnical Project Managers. The driller and drilling personnel are responsible for drilling the soil borings in accordance with the project scope of work. All drilling personnel must read and understand this HASP prior to working on this project and take direction from the SSHO regarding and health and safety issues that may arise during the performance of the work.

3.5 Surveyor

Surveying will be performed by personnel from Kernan Consulting Engineers. The majority of the topographic surveying will be performed using aerial photography. However, on-site surveying will be required for:

- Setting targets for the aerial photography
- Locating fence and property lines
- Locating the actual boring locations(after drilling) and the existing monitoring well locations
- Additional field verification of survey, as needed.

All surveying personnel must read and understand this HASP prior to working on this project and take direction from the SSHO regarding and health and safety issues that may arise during the performance of the work.

3.6 Reclamation Contractor

Soil Safe Incorporated will be the reclamation contractor for the remediation of the project site. To perform the remediation, Soil Safe will be constructing a Class B soil recycling facility on Impound 2. Personnel from Soil Safe may be on site during the remedial investigation to observe the site investigations and borings and to assist in the collection of the environmental samples from the borings, monitoring wells, impoundments and berms.

The Soil Safe personnel on site will report to the EPM during any sampling activities. All Soil Safe personnel on the site must read and understand this HASP prior to working on this project and take direction from the SSHO regarding and health and safety issues that may arise during the performance of the work.

3.7 Property Owner

The site is owned by Rahway Arch Properties, LLC. Personnel from Rahway Arch Properties may be on site during the remedial investigation to observe the site investigations.

All Rahway Arch Properties personnel on the site must read and understand this HASP and take direction from the SSHO regarding and health and safety issues that may arise during the project.

3.8 Site Visitors

Site visitors are not anticipated during this project. If visitors do appear on the site during this remedial investigation, they should be challenged by any on-site personnel and should not be allowed unescorted access to the site. The SSHO should be contacted immediately if a visitor is observed on the site. The SSHO shall meet the visitor and shall determine if the visitor may remain on the site.

All site visitors should be expected to act in a safe manner while on site. Visitors shall remain on the berms and shall be escorted at all times. Visitors shall remain at least 50 feet from all drill rigs or other operating equipment. All visitors will be required to wear appropriate safety equipment, as described in this plan, while on-site.

All personnel should be cognizant of site visitors and shall take precautions to ensure the safety of the visitors, and that the visitors do not compromise the safety of project personnel.

4. TRAINING

4.1 HazWOPER Training

All personnel working on this project must have been trained in the safe operation with or around the drilling and sampling equipment in accordance with the requirements of the companies' respective corporate health and safety programs.

All personnel who have the potential to be exposed to the possible contaminants or the hazards associated with this site shall also have completed the Hazardous Waste Operations and Emergency Response (HazWOPER) requirements contained in 29 CFR 1910.120 consisting of the 40 hour training course and three days of on the job training. If the 40-hour course was completed more than 12 months prior to the start of this project, the worker shall also have completed an 8-hour refresher training course within the past 12 months. The SSHO shall have completed the 8-hour HazWoper supervisor training course.

The SSHO shall verify that all personnel have met this training requirement prior to the start of the project.

4.2 Site Specific Training

All personnel working on this project shall be given a copy of this HASP prior to the start of the project and shall be given sufficient time to review and understand its requirements. The SHM and the SSHO will review the HASP requirements with all project personnel prior to the start of the project.

The SSHO will conduct a tool box safety talk with all on-site personnel each day, prior to the start of the work. This tool box safety talk will identify the tasks that will be performed that day and will address the procedures to ensure that they will be accomplished safely. Any recent incidents, near misses and at-risk behaviors observed during the project will also be discussed.

A sign-off sheet for all site personnel has been provided in Appendix C.

5. LEVELS OF PROTECTION AND PERSONNEL PROTECTIVE EQUIPMENT

5.1 Levels of Protection

Based upon the results of the AHA, all of the on-site activities will be performed in Level D protection. Basic work clothing for these work activities will consist of:

- Work gloves when handling drilling equipment (cotton with no-slip palms)
- Waterproof gloves when decontaminating equipment
- Surgical gloves while collecting environmental samples
- Safety shoes
- Safety glasses (clear or tinted, worker preference)
- Hearing protection while working on or near the drilling rig
- Visibility vests
- Hardhat for head protection while working on or near the drilling rig or near any overhead hazard

The contaminants of concern on this site are generally inorganic. As a result, atmospheric hazards are not considered a significant risk and atmospheric monitoring will not be performed during the work, unless unforeseen conditions contusive to atmospheric hazards are encountered. If observations indicate the potential for atmospheric hazards, work will stop immediately, the area will be evacuated a safe distance and the SSHO will determine the safe course of action. The need for monitoring to identify atmospheric hazards and the need for respiratory protection will be evaluated. If necessary, the level of protection will be upgraded to Level C using air purifying respirators.

5.2 Personnel Protective Equipment (PPE)

All personal protective equipment (PPE) used on this project shall meet the applicable OSHA, ANSI or NIOSH standards. In addition, the PPE shall be approved by the SHM as appropriate and applicable to the project.

The minimum PPE requirements for the project are included in the Level D equipment list provided above. Based upon the possible level of contact with contaminated soil or groundwater, the SHM may also recommend use of disposable protective clothing, disposable over boots and/or disposable gloves. This determination will be made on site based upon the conditions encountered and the recommendation of the SSHO.

If air monitoring results indicate that atmospheric hazards are encountered that exceed one half the permissible exposure limit, air purifying respirators will be required. The respirators shall be equipped with new NIOSH approved cartridges selected based upon the hazard encountered. All personnel wearing respirators shall have been properly trained on their use and care and the donning and doffing procedures, shall have been fit tested within the past 12 months and shall have been approved to wear a respirator under their corporate medical monitoring programs.

6. MEDICAL SURVEILLANCE

There are no medical surveillance requirements for this project beyond the requirements of the respective corporate Health & Safety programs.

If any employee is required to wear a respirator, this use must be approved by a licensed health care provider as defined in the OSHA Respiratory Standard 29 CFR 1910.134. Employee must be fit-tested prior to use. Workers who voluntarily wear filtering face pieces do not need medical clearance or fit-testing prior to use.

Each employer will establish and maintain an accurate record for each employee who was either offered or provided with medical surveillance. These records are considered to be medical records, and each employer will maintain them and make them available in accordance with OSHA Access to Medical Records Standard, 29 CFR 1910.1020.

7. AIR MONITORING PROCEDURES

7.1 Atmospheric Hazards

Based upon the results of the AHA, potential atmospheric hazards exist on the site from:

- Airborne contaminated dust containing cyanide salts and/or semi-volatile organic compounds

Airborne dust will be monitored visually. If visual monitoring identifies significant releases of airborne dust that could result in exposure above the safe thresholds described below; the following procedures will be implemented:

- All work will be halted
- Procedures to minimize dust generation will be implemented
- Personnel will be reminded to minimize dust exposure

If dust exposure cannot be controlled, the SSHO may make the determination to increase the level of protection to Level C for impacted personnel using air purifying respirators with HEPA cartridges.

Work will not resume until approved procedures have been implemented to properly control the atmospheric hazard.

7.2 Airborne Contaminated Dust

Dust control will be implemented when needed to limit dust generation and prevent exposure to contaminants that may be contained in the dust. Dust will be monitored visually by the SSHO. Dust control measures will be implemented if sustained visible amounts of dust are being generated by the drilling operation. Dust control will consist of wetting the areas of loose soil that are being disturbed by the drilling.

8. HEAT STRESS AND COLD EXPOSURE

8.1 Heat Stress

This work will be performed in the summer. As a result, heat stress is a potential hazard to workers. Cold weather will not be encountered during the planned work; therefore a discussion on cold exposure has been omitted from this HASP.

The potential for heat stress exists at summer temperatures or when personnel are wearing protective clothing. Symptoms of heat stress are heat rash, heat cramps, heat exhaustion and heat stroke.

Heat related illnesses will be prevented by monitoring the on-site conditions including the temperature and relative humidity. Workers will be provided plenty of water and encouraged to drink enough water to prevent thirst. Periodic rest breaks in cooler or shady areas will be taken.

Early recognition of heat stress symptoms can prevent serious illness. Characteristics for each heat related illness are:

- Heat Rash – localized red skin rash similar to small red pimples and reduced perspiration. It is most common under protective clothing.
- Heat Cramps – muscle spasms and pain in the extremities or in the abdomen
- Heat Exhaustion – weak pulse, shallow breathing, pail cool moist skin, profuse perspiration, dizziness and fatigue
- Heat Stroke – red hot dry skin with an elevated body temperature (105F or greater), no perspiration, nausea, dizziness and confusion, strong rapid pulse, coma, death

Treatments for heat related illnesses are:

- Heat rash - cleaning the skin and drying it thoroughly after removing protective clothing.
- Heat Cramps and Heat Exhaustion - rest in a cool location, drink water and liquids that will replace electrolytes, such as Gatorade.
- Heat Stroke – obtain emergency medical aid, move victim to shady or cool area, remove protective clothing, wrap victim in water soaked towels or immerse in water, apply cold pacts under arms and around neck.

8.2 Sunburn

Exposure to sunlight for prolonged periods of time may cause sunburn in some individuals. All field personnel should carry sunblock with a sun protection factor (SPF) of 15 or greater and use the sunblock as needed.

9. HAZARDS AND SAFETY PROCEDURES

9.1 General Project Safety Requirements

Project activities will be conducted in accordance with the following minimum safety requirements:

- The work area will be restricted to authorized personnel and authorized, escorted visitors. These individual are required to attend a tailgate safety meeting prior to entering the work area. The tailgate safety meeting will discuss general project safety requirements, personal protective requirements, anticipated contaminants and emergency response procedures. Tailgate safety meetings will be held daily, at the beginning of the work day, and attendance will be recorded. All authorized personnel must have completed HazWOPER training.
- All personnel entering the site must check in with the Driller, GPM or EPM, depending upon their work assignment.
- Eating, drinking, chewing and the application of makeup are restricted to the Support Zone.
- All skin contact with contaminated or potentially contaminated material or equipment should be avoided.
- Personnel should use the "Buddy System" when performing site duties. Communication should be established and maintained between team members at all times.
- All personnel entering the exclusion zone shall wear the appropriate personal protective equipment.
- A fire extinguisher shall be available for use at all times. The fire extinguisher will be located in the drill rig cab.
- A portable eyewash station or bottle should be available in the drill rig cab at all times.
- A first aid kit shall be located in the drill rig cab at all times.
- Shaking or blowing potentially contaminated clothing or equipment to remove dust or other material is prohibited.

9.2 Site Specific Hazards

9.2.1 Sinking and Engulfment

The alum-YPS sludge in the impoundments is a soft thixotropic material with no appreciable shear strength. It behaves as soft, sensitive clay and will not support any load. The sludge is in this condition or is covered with water on Impounds 1, 3, 4, 5 and 6. Impound 2 was previously stabilized with fill soil and is generally safe for personnel and vehicles.

To prevent a potential sinking or engulfment hazard, personnel and vehicles should not enter Impounds 1, 3, 4, 5 or 6. Borings and sample collection on these impoundments will be performed on the marsh buggy.

9.2.2 Standing Water

Portions of Impound 1, 3, 4 and 6 are covered with standing water. In addition to its lack of shear strength, the alum-YPS sludge has low permeability trapping water on the surface as it slowly percolates through the sludge to the groundwater. This standing water saturates the sludge, further degrading its strength and increasing the potential for sinking into, and being trapped by, the sludge. Further, the depth of the standing water is unknown.

Similar to the sinking and engulfment hazard, to prevent a potential a potential hazard from the standing water, personnel and vehicles should not enter Impounds 1, 3, 4, 5 or 6. Borings and sample collection on these impoundments will be performed on the marsh buggy. At no time should any person or vehicle attempt to cross standing water on the site.

9.2.3 Direct Contact

The alum-YPS sludge contains cyanide salts and metals. Concentrations of some of these contaminants may exceed safe direct contact standards. The sludge is light gray in color and has a silty-clayey appearance.

The standing water in the impoundments contains cyanide salts and metals. Concentrations of some of these contaminants exceed safe ingestion standards and may exceed safe direct contact standards.

The soil in the berms and any existing soil cover over the alum-YPS sludge is undocumented fill. Tests performed on this soil have shown concentrations of poly-nuclear aromatic hydrocarbons (PAHs), metals and petroleum hydrocarbons. Benzo(a)pyrene, a carcinogenic PAH, has been measured at concentrations up to 60 mg/kg, which is 300 times the non-residential direct contact soil remediation standard.

Good personal hygiene, work practices and PPE are required to limit the potential for direct contact exposure. All personnel handling samples should wear surgical gloves to limit the amount of contamination on the hands. Activities that increase the potential for exposure, such as smoking, eating and handling contact lenses are prohibited in the work area.

All workers should wash hands thoroughly following exposure and prior to any activity that could increase the potential for exposure.

9.2.4 Slopes

The impoundment berms, especially along the perimeter of the site around the Rahway River, have relatively steep slopes, typically 1:2 or 1:3 slopes. These slopes may be mounted by the marsh buggy, but personnel should not attempt to mount or traverse these slopes with a motor vehicle.

Use extreme caution when trying to mount or decent these slopes by foot. The surfaces of the slopes are irregular and the soil conditions at the bases of the slopes are likely soft clays that may not be able to support any weight.

9.3 Physical Hazards

This section discusses physical hazards that may be encountered in the work environment during this project. A brief description of each hazard and the appropriate engineering controls, personal protective equipment or control devices that should be used to prevent injury are described.

9.3.1 Head Protection

Hard hats (ANSI-approved) are to be worn during all drilling activities, when on or near the drill rig or when there are potential overhead or head impact hazards.

9.3.2 Eye/Face Protection

Impact resistant safety glasses shall be worn as necessary to protect against airborne particles or projectiles. Appropriately shaded lenses shall be worn to protect against excessive sunlight exposure and damaging rays such as those encountered during welding.

9.3.3 Foot Protection

Work boots with a steel reinforced toe shall be worn during all field activity. Steel reinforcing shanks may be required in special situations where protection of the bottom of the foot is a concern.

9.3.4 Personal Protective Clothing

All personnel involved in field activities at the site shall wear long pants, a shirt, steel toe boots, and eye protection. Hardhats are required, as described above. Gloves are required when necessary for drilling activities and to limit contact with potentially contaminated soil, sludge or water on the site.

9.3.5 Heavy Equipment Operation

All employees must be aware of the dangers associated with heavy equipment and other vehicles onsite. These equipment and vehicles may include but are not limited to drill rigs, marsh buggy, backhoes, loaders and excavators. Due to the nature of the equipment, the operator's vision may be compromised. All on-site personnel including the equipment operators must exercise caution. Only those individuals trained and certified in the safe operation of heavy equipment are authorized to operate this equipment.

9.3.6 Equipment Failure

All equipment used onsite is to be good working order before being used onsite. Equipment is to be inspected and tested before use. The use of malfunctioning equipment is prohibited. Any malfunctioning equipment is to be tagged until repaired.

9.3.7 Underground/Aboveground Utility Lines

Forty-eight hours prior to the start of drilling, New Jersey One Call will be contacted to mark on-site utilities. Additional subsurface line locating by a private utility locator may also be required if site conditions warrant.

The driller shall observe all overhead utility line locations, and inform all personnel whose equipment or vehicles may come in close proximity to these lines. Drill rigs, other vehicles and equipment must remain a minimum of 10 feet from these utility lines. If humid conditions exist this distance may be extended.

9.3.8 Protection from Moving Machinery/Parts

Personnel shall secure loose clothing, jewelry and long hair to prevent entanglement. All unused machinery or equipment capable of movement shall be stopped and/or de-energized to prevent inadvertent movement or shock during storage, cleaning, or servicing.

9.3.9 Slips, Trips and Falls

All employees should be aware of water, oil, machinery, mud and tools that may be present throughout the site that pose a potential slip, trip and fall hazard. All employees should assist in minimizing this potential by using good housekeeping procedures. Walkways, working areas and roadways should be kept clear of all non-essential tools, machinery and supplies.

9.3.10 Back Injury

All employees should be extremely cautious when lifting or handling heavy materials. Back supports and proper lifting techniques should be utilized whenever possible.

9.3.11 Fire

Smoking is prohibited at all sites, unless a designated smoking area has been established. Smoking and hot work procedures are prohibited during fueling operations including those involving portable equipment. Hot work will not be performed in potentially explosive environments until approval has been granted and a combustible gas indicator has indicated that the atmosphere is appropriate. Instrumentation used in potentially flammable locations must be rated intrinsically safe for Class I atmosphere.

9.3.12 Power Tools

All power tools must be in good working conditions prior to being used onsite. Safety glasses with side shields are required to prevent possible impact by airborne particulate and projectiles. Electrical equipment should be plugged in to ground fault interrupt (GFI) circuits whenever possible. Care should be exercise in wet environments and if equipment or extension cords become faulty. Failure to do so may result in electrocution. Any damaged or defective extension cords are to be discarded.

9.3.13 Noise

All employees are required to carry hearing protection at all times. Hearing protection is to be worn when working in close proximity to heavy equipment or other sources of potentially damaging noise.

9.4 Biological Hazards

9.4.1 Insects

Biting insects may pose a nuisance and a health hazard. These insects include ticks, mosquitos, bees and wasps. In addition to being a nuisance, these insects may transmit diseases or cause allergic reactions.

Proper clothing is the first line of defense against these insects. All workers should wear long pants. In areas where exposure is likely, pants legs should be tucked inside socks. Lighter colored clothing also makes it easier to spot ticks.

Insect repellents containing DEET are generally effective in preventing insect bites. Bee and wasp spray should be available in the event the work needs to be performed near a nest.

9.4.2 Poison Plants

Poison plants such as poison ivy and poison oak can cause an allergic reaction to many individuals, resulting in an itchy rash. The irritants contained in the plants may also be carried on clothing off of the job site, and the rash can be spread through contact.

To avoid impact of poison plants, all workers should recognize the plants and avoid contact when possible. Protective clothing should be worn when working around these plants. This clothing should be handled and washed separately or properly disposed. Workers should wash any skin areas that come in contact with these plants thoroughly in soapy water as soon as possible following contact.

9.4.3 Blood Borne Pathogens

Personnel administering first aid or CPR should avoid contact with blood or other potentially infectious fluids. Latex gloves and CPR mouth-to-mouth isolation devices should be utilized whenever possible.

9.5 Communications

9.5.1 On-site Communications

During operations workers may have difficulty communicating. The following standard hand signals will be used as standard communications:

Hand gripping throat	Out of air, can't breathe
Grip partner's wrist or both hands around waist	Leave area immediately
Hands on top of head	Need assistance
Thumbs up	OK, I am all right, I understand
Thumbs down	No, negative

9.5.2 Off-site Communications

A means of communication will be provided at this project site. This may include two-way radios, portable telephones or existing nearby telephones. All authorized personnel will be informed of the communication procedures during site briefings.

Each employer shall provide information on how its employees, subcontractors and visitors will be notified of an emergency. An audible alarm, prolonged sounding of the drill rig horn, will be used to signal an emergency.

When notifying outside emergency response agencies of the emergency, it is important to ensure the rapid and accurate transfer of information. When calling the police, fire department or medical emergency personnel, the following information should be provided to the dispatcher:

- Caller's full name
- The nature of the incident (i.e. "Fire")
- The location of the incident. (i.e. "Street location and nearest intersection" The more specific the better.)
- What you need (i.e. "Fire Department and First Aid")
- If you are able, where you will meet emergency responders (i.e. at end of West Street, near train tracks)
- If applicable, a call back number (e.g. "I'll be at the scene; my cell phone number is (555) 123-4567").
- Status of the situation. (e.g., is the situation stabilized or "I have the fire under control")
- If anyone is injured or in need of emergency assistance (e.g. "A mechanic working on a pump was burned.")

Emergency contact information for State and local governments, the nearest hospital and EastStar are provided in Appendix A.

10. SITE CONTROL

The SSHO has been designated to coordinate access, control and security on site. A safe perimeter will be established around each boring location.

The onsite Command Post and staging area will be established at the northwest corner (entrance) of Impound 2. This location will be upwind of most of the planned work under the prevailing wind conditions. Anyone entering the work area must enter though this area and must check-in with the SSHO.

During drilling activities, an Exclusion Zone will be established for fifty (50) feet around the drill rig. No unauthorized person should be within this area. The prevailing wind conditions are from the west. The Exclusion Zone should be approached from the upwind direction.

Control boundaries have been established. The Exclusion Zone (the potentially contaminated area), hotline, Contamination Reduction Zone and Support Zone (clean area) have been identified as follows:

- The area surrounding the drill rig for a 50 foot radius should be considered an exclusion zone for physical hazards, such as drilling equipment hazards and trip and fall hazards.

The need for an exclusion zone for chemical hazards is not anticipated at this time unless a hazard is encountered while drilling. If that occurs, the exclusion zone will be set an appropriate distance from the drilling equipment. If an exclusion zone is required for chemical hazards, it will be delineated with yellow caution tape and warning signs.

11. DECONTAMINATION

To prevent or reduce the transfer of contaminants by people and/or equipment leaving the Exclusion Zone, decontamination measures will be implemented. Decontamination measures may become necessary if chemical hazards are encountered during drilling. These decontamination measures include:

- Use a brush to remove all foreign material from boots;
- Remove outer gloves, dispose or wash gloves;
- Remove protective clothing (if used), dispose if appropriate;
- Wash respirator bodies in warm water, dispose of cartridges;
- Remove inner gloves, wash hands and face thoroughly with soap and water, remove work clothes and shower as soon as possible;
- Brush or wash all equipment that was within the exclusion zone;
- Dispose of all decontamination equipment (brushes, sponges, etc.) and disposal personal protective gear into an appropriate container.

All decontamination liquids and contaminated disposable equipment and PPE will be contained and properly disposed.

12. EMERGENCY RESPONSE

12.1 Accident Prevention

All field personnel will receive health and safety training prior to the initiation of any site activities. On a day-to-day basis, individual personnel should be constantly alert for indicators of potentially hazardous situations and for signs and symptoms in themselves and others that warn of hazardous conditions and exposures. Rapid recognition of dangerous situations can avert an emergency.

Before daily work assignments, regular toolbox safety meetings should be held. Discussions at these meetings should include:

- Tasks to be performed, including review of Activity Hazard Analysis
- Time constraints (e.g. rest breaks, cartridge changes)
- Hazardous materials that may be encountered, including their effects, how to recognize symptoms or monitor them, concentration limits or other danger signals
- Wearing, use and fitting requirements of site personnel protective equipment review
- Emergency procedures
- Weather conditions
- Recent incidents, near misses and at-risk behaviors.

An Emergency Contingency Plan has been developed to take into account any potential emergency situations that may occur. Potential emergencies include:

- Medical emergency
- Chemical exposure
- Structural failure
- Hazardous materials release
- Fire or explosion
- Severe weather
- Civil disturbance

When an emergency occurs, decisive action is required. Delays of minutes can increase life-threatening situations. The response needs to be immediate and accurate.

12.2 Emergency Response Requirements

All personnel will be trained in the emergency response/contingency plan. In the event of a fire, explosion or other emergency condition requiring evacuation, all employees will proceed to the nearest upwind staging area identified during the tool box safety talk. Decontamination procedures may be abandoned in the case of emergency evacuation. The SSHO, or any other field personnel, shall contact the appropriate fire or response agency. After emergency response personnel are contacted, the field personnel shall also contact corporate management. Phone numbers of appropriate emergency response personnel are shown on the following page.

In the event that a worker must be transported to a hospital or other medical facility, the SSHO shall ensure that any chemical contaminant information is provided to the medical facility

personnel. The emergency care facility located closest to the site is listed, along with a map and driving directions, in Appendix B.

Emergency and non-emergency accidents/injuries will be documented by the SSHO or other management personnel in accordance with applicable rules and regulations.

12.3 General First Aid Guidelines

The general guidelines to follow in the event of an accident or injury are:

- Inhalation Exposure - Remove victim to fresh air, give rescue breathing or CPR as necessary. Decontaminate and transport to emergency hospital if necessary.
- Skin/Eye Contact - Remove contaminated clothing, flush affected area with copious amounts of water for at least 15 minutes; if eyes are affected, hold eyelids open to assure adequate flushing. Decontaminate and transport to emergency hospital, if necessary.
- Ingestion - Decontaminate and transport to emergency hospital
- Puncture/Laceration - Decontaminate and transport to emergency hospital

Written directions and a map to the nearest hospital can be found in Appendix B.

12.4 Immediate Reporting

The SSHO shall immediately call the appropriate corporate office in the event of an emergency. The following situations require immediate reporting:

- Any employee suffers a fatality or serious injury or illness. Serious injuries or illnesses shall include those that involve amputation, crushing injury, hospitalization or work-related toxic material exposure, even if no lost workdays are experienced.
- Damage from fires, explosions or natural disasters occur to buildings or equipment
- Spills or releases of hazardous substances that require government agency notification.

A listing of all emergency contact information is contained in Appendix A.

APPENDIX A – EMERGENCY CONTACT INFORMATION

EMERGENCY CONTACT NUMBERS

Fire and Rescue	
Borough of Carteret Fire and Rescue	911 or 732-541-8000
Borough of Carteret Police	911
Hospital/Medical Assistance	
RWJ University Hospital 60 Cooke Avenue, Carteret, NJ 07008	(732) 969-8020
Poison Control Center	(800) 876-4766
Environmental Emergencies	
New Jersey Department of Environmental Protection Spill Hotline	(877) WARN DEP (877) 927-6337
National Response Center (NRC) for Oil/Chemical Spills	(800) 424-8802 or (202) 267-2675
Chemical Transportation Emergency Center (CHEMTREC)	(800) 424-9300
Utilities	
New Jersey One Call	(800) 272-1000 or 811
PSE&G – New Jersey	(800) 436-PSEG (800) 436-7734
Rahway Arch Properties	
Chet Pucillo	(201) 400-6878 (cell)
Ron D'Arginio	(201) 888-6155 (cell)
EastStar Environmental Group, Inc.	
Corporate Office	(410) 290-8777
Al Free – Safety and Health Manager and Environmental Project Manager	(240) 381-6520 (cell)
Josh Clough – Site Safety and Health Officer	(443) 618-3381 (cell)
Soil Safe Incorporated	
Corporate Office	(410) 872-3990
Bill Roberts - Project Manager	(610) 716-5608 (cell)
Jim Grant – Facility Development Manager	(410) 409-1772 (cell)
Michael Baker, Jr., Inc.	
Tris Madden – Geotechnical Project Manager	(443) 286-4478 (cell)
Warren George Incorporated	
Corporate Office	(201) 433-9797
Robert Ware – Project Manager	(201) 433-9797
Mike McCarthy - Driller	(201) 704-8847
Kernan Consulting Engineers	
Corporate Office	(856) 251-9500
Pam Pellegrini – Project Manager	(856) 251-9500 x114

APPENDIX B – HOSPITAL MAP AND DIRECTIONS

HOSPITAL DIRECTIONS

RWJ University Hospital

60 Cooke Avenue
Carteret, New Jersey 07008
(732) 969-8080

1. Exit site and make a left onto the warehouse access road (Driftway Street)
2. Follow roadway to the right to intersection with (Salt Meadow Road)
3. Bear left onto Salt Meadow. Follow 0.02 miles. Stay in left lane at the traffic light.
4. Make left onto Industrial Road/Industrial Highway. Follow 1.2 miles.
5. Make right onto Randolph Street. Follow 0.1 miles
6. Take first left onto Pershing Avenue. Follow 0.1 miles.
7. Stay straight and proceed onto Cooke Avenue. Follow 0.09 miles.
8. Hospital is on the left at 60 Cooke Avenue.

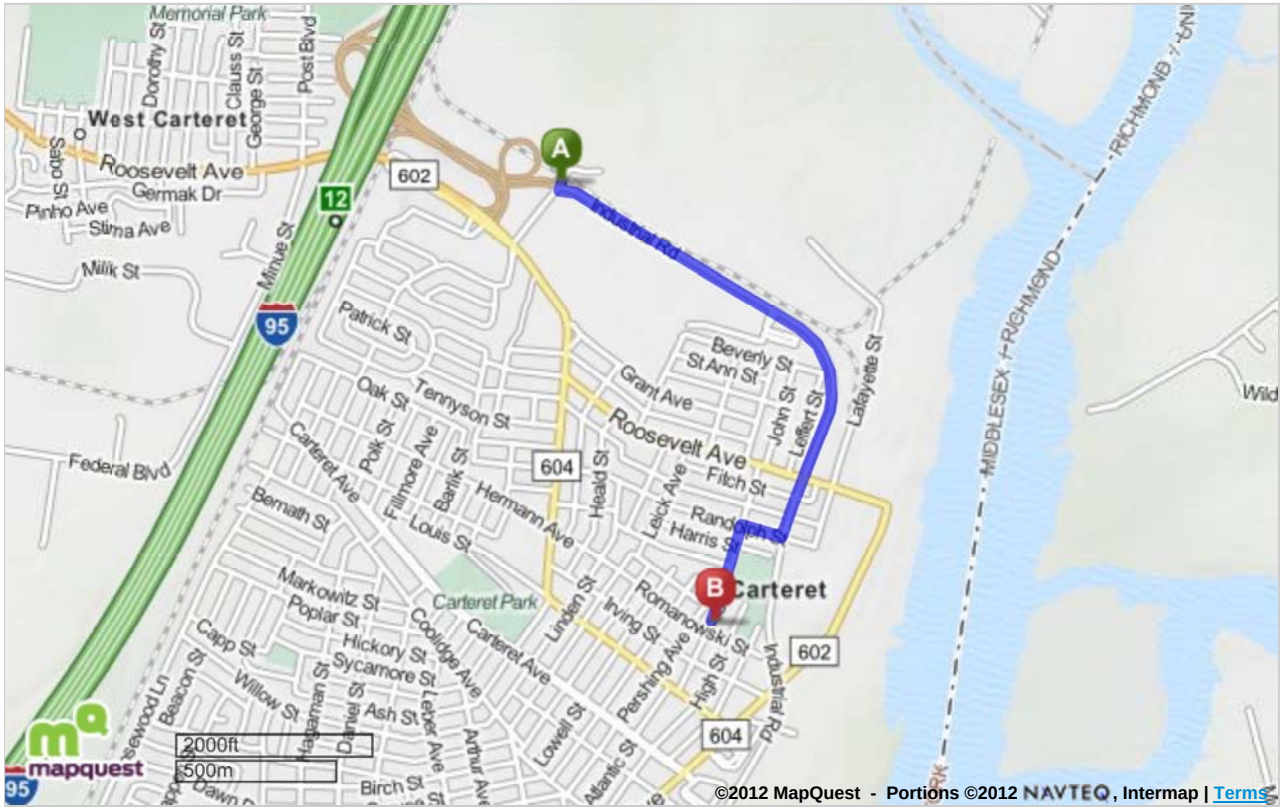
Estimated Travel Time: 3 minutes

mapquest

Trip to:

Rwj University Hospital
60 Cooke Ave
Carteret, NJ 07008
(732) 969-8020
1.49 miles / 3 minutes

Notes



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APPENDIX C - FIELD SIGN OFF

Each employee shall sign this section after the site-specific training has been completed and before being permitted to work on site.

I have read and understand this Site-Specific Health and Safety Plan. I will comply with all of its provisions.

Location: Rahway Arch Property Carteret, New Jersey

Name (Print)	Signature	Date