REMEDIAL ACTION WORK PLAN (RAWP) FOR REMOVAL OF VOC CONTAMINATED SOIL AT FTMM-68

FORT MONMOUTH, OCEANPORT, MONMOUTH COUNTY, NEW JERSEY

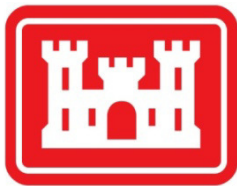
BRAC 05 Facility
Contract W912DY-09-D-0062
Task Order: 0018

Submitted To:

U.S. Army Corps of Engineers New York District

and

U.S. Army Engineering and Support Center Huntsville, Alabama



Prepared By:

PARSONS

401 Diamond Dr. NW, Huntsville, AL 35806

Revision No. 0
October 2018

New Jersey Department of Environmental Protection
Site Remediation Program
Report Certifications for RCRA GPRA 2020, CERCLA, and Federal Facility Sites

These certifications are to be used for reports submitted for RCRA GPRA 2020, CERCLA, and Federal Facility Sites. The Department has developed guidance for report certifications for RCRA GPRA 2020, CERCLA, and Federal Facility Sites under traditional oversight. The "Person Responsible for Conducting the Remediation Information and Certification" is required to be submitted with each report. For those sites that are required or opt to use a Licensed Site Remediation Professional (LSRP) the report must also be certified by the LSRP using the "Licensed Site Remediation Professional Information and Statement". For additional guidance regarding the requirement for LSRPs at RCRA GPRA 2020, CERCLA and Federal Facility Sites see http://www.nj.gov/dep/srp/srra/training/matrix/quick_ref/rcra_cercla_fed_facility_sites.pdf.

Document: Remedial Action Work Plan for Removal of VOC Contaminated Soil at FTMM-68

PERSON RESPONSIBLE FOR CONDUCTING THE REMEDIATION INFORMATION AND CERTIFICATION

Full Legal Name of the Person Responsible for Conducting the Remediation: William R. Colvin
Representative First Name: William Representative Last Name: Colvin
Title: Fort Monmouth BRAC Environmental Coordinator (BEC)
Phone Number: (732) 380-7064 Ext: Fax:
Mailing Address: P.O. Box 148
City/Town: Oceanport State: NJ Zip Code: 07757
Email Address: william.r.colvin18.civ@mail.mil

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: William R Colvin Date: 30 October 2018

Name/Title: William R. Colvin
BRAC Environmental Coordinator

Completed form should be sent to:

Mr. Ashish Joshi
New Jersey Department of Environmental Protection
Division of Remediation Management & Response
Bureau of Northern Field Operations
7 Ridgedale Avenue (2nd Floor)
Cedar Knolls, New Jersey 07927-1112

REMEDIAL ACTION WORK PLAN (RAWP) FOR REMOVAL OF VOC CONTAMINATED SOIL AT FTMM-68

Client Name:	**U.S. Army Engineering & Support Center (CEHNC)**
Contract Name:	**Remedial Investigation/Feasibility Study/Decision Documents, Fort Monmouth, Oceanport, Monmouth County, New Jersey**
Contract Number:	**W912DY-09-D-0062, Task Order 0018**
Contractor:	**Parsons Government Services, Inc.**
Period of Performance:	**30 September 2014 to 30 September 2020**
Date of Original:	**October 2018**
Revision:	**0**

October 2018

Reviewed and Approved by:

Project Manager: _____ 10/30/18
Christina Grill, P.G. Date

Program Manager: _____ 10/30/18
Don Silkebakken, V.P. Date

TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

APPENDICES

LIST OF ACRONYMS

ACRONYM	DEFINITION
AHA	Activity Hazard Analysis
APP	Accident Prevention Plan
Army	United States Army
bgs	Below Ground Surface
BRAC	Base Realignment and Closure
CAFRA	Coastal Area Facility Review Act
CEA	Classification Exception Area
CERCLA	Comprehensive Environmental Response, Compensation and Liability Act
COPCs	Contaminants of Potential Concern
DCE	cis-1,2-dichloroethene
EC	Engineering Controls
ESHARP	Environmental, Safety, Health, and Risk Program
ft	feet
FTMM	Fort Monmouth
GWQS	Groundwater Quality Standards
HPT	Hydraulic Profiling Tool
IC	Institutional Controls
IGW SL	Impact to Groundwater Soil Screening Level
ISCO	In situ chemical oxidation
LUC	Land Use Controls
LUCIP	Land Use Implementation Plan
MP	Main Post
µg/L	Micrograms per liter
mg/kg	Milligrams per kilogram
MIP	Downhole Membrane Interface Probe
N.J.A.C.	New Jersey Administrative Code
NJDEP	New Jersey Department of Protection
NRDCSRS	Non-Residential Direct Contact Soil Remediation Standards
OM&M	Operations, Maintenance and Monitoring
PAMP	Perimeter Air Monitoring Plan

LIST OF ACRONYMS AND ABBREVIATIONS (cont.)

ACRONYM	DEFINITION
PCE	Tetrachloroethene
PID	Photoionization detector
PVC	Polyvinyl Chloride
QAP	Quality Assurance Plan
QC	Quality Control
RAOs	Removal Action Objectives
RAR	Remedial Action Report
RAWP	Remedial Action Workplan
RDCSRS	Residential Direct Contact Soil Remediation Standard
RI	Remedial Investigation
RMLs	Regional Management Levels
RSL	Regional Screening Level
SESCP	Soil Erosion and Sediment Control Plan
SHSP	Site Health and Safety Plan
SRP	Site Remediation Program
TCE	Trichloroethene
TICs	Tentatively Identified Compounds
TRSR	Technical Requirements of Site Remediation
USACE	United States Army Corps of Engineers
UST	Underground Storage Tank
VC	Vinyl Chloride
VOC	Volatile Organic Compound
WRA	Well Restriction Area

SECTION 1
INTRODUCTION

The United States Army (Army) is submitting this Remedial Action Work Plan (RAWP) for a Time Critical Removal Action (TCRA) excavation of volatile organic compound (VOC) contaminated soil at FTMM-68 located on the Main Post (MP) at former Fort Monmouth (FTMM) in Oceanport, Monmouth County, New Jersey. This RAWP was prepared in accordance with the New Jersey Department of Environmental Protection (NJDEP) Technical Requirements for Site Remediation (TRSR) - New Jersey Administrative Code (N.J.A.C.) 7:26E-5.5. Although groundwater has also been impacted by VOCs at FTMM-68, the scope of this RAWP TCRA primarily addresses the higher concentrations of VOC contamination within the soil vadose zone and aquifer located near the contamination source in the vicinity of former Building 700. This RAWP is a contractual requirement for Parsons to proceed with the excavation work. The remainder of this section provides an overview discussion of the following items:

- Site background;
- Regulatory history and relevant documents; and
- RAWP organization.

1.1 Site Background

FTMM-68 is located in the central portion of the MP (**Figure 1**) and encompasses former Building 700. Building 700, which was constructed in 2006, has been vacant since the closure of FTMM in 2011 until demolition in August 2018. It was previously used for office space in connection with Army recruitment. The location of Building 700 was previously occupied by former Building 565, a former dry-cleaning facility (constructed in 1965 and demolished in 2006 or prior) that used tetrachloroethene (PCE) as the cleaning solvent.

FTMM personnel discovered and excavated a 500-gallon solvent underground storage tank (UST) in 2011 (**Figure 2**). The tank, which was located at the southwestern corner of Building 700, was observed to be heavily corroded and leaking in several places. Approximately 450 gallons of liquid were removed and drummed, along with soil that appeared to be impacted by VOCs. Soil samples were collected from the tank excavation and, based on the initial results, additional solvent-contaminated soil was excavated and post-excavation soil samples were collected. The 2011 excavation was constrained to the north due to the presence of Building 700 (**Figure 2**).

1.2 Summary of Investigation Activities

Six initial soil samples were collected in April 2011 from the sidewalls, bottom of the UST excavation, and below the associated buried piping. The excavation depth was approximately 7.5 feet (ft) below ground surface (bgs). Soil samples were analyzed for VOCs and tentatively identified compounds (TICs). A sample from the bottom center of the excavation (7.5 ft bgs) contained PCE at a concentration of 23,889 milligrams per kilogram (mg/kg), which exceeded the NJDEP Residential Direct Contact Soil Remediation Standard (RDCSRS), Non-Residential Direct Contact Soil Remediation Standard (NRDCSRS), and Impact to Ground Water (IGW)

Soil Screening Level (SL) for PCE of 43 mg/kg, 1,500 mg/kg, and 0.005 mg/kg, respectively. Additionally, one soil sample collected from the northeast corner of the excavation near the piping at a depth of 2.5 ft bgs contained PCE at 20.4 mg/kg (U.S. Army, 2011), also above the IGW SL standard.

Additional soil excavation was conducted in May 2011, followed by collection of additional post-excavation soil samples. PCE concentrations in two soil samples collected at the north and south ends of the May 2011 excavation (approximately 9 ft bgs) were lower than the April 2011 sample results (0.26 and 1.58 mg/kg, respectively).

In August 2011, FTMM installed two paired, 2-inch-diameter polyvinyl chloride (PVC) groundwater monitoring wells adjacent to the former UST location at Building 700. Monitor well 565MW01 was screened from 5 to 15 ft bgs, and 565MW01D was screened from 18 to 23 ft bgs. No geologic logs or construction diagrams are available for either well. These wells were subsequently sampled in August and September 2013, when a baseline groundwater sampling event was performed at FTMM that included these two source area wells (565MW01 and 565MW01D). Subsequent quarterly groundwater monitoring was performed through September 2015, during which time, the two wells were sampled for VOCs eight times. Passive diffusion bag samplers were used, and therefore field parameters were not collected. PCE was detected in both wells at concentrations exceeding the NJDEP Ground Water Quality Standards (GWQS) of 1 microgram per liter (µg/L). Other VOCs detected in groundwater at concentrations exceeding the respective GWQS included trichloroethene (TCE), cis-1,2-dichloroethene (DCE), 1,1-DCE, and vinyl chloride (VC) (Parsons, 2014, 2015 and 2016).

In September 2015, a Remedial Investigation (RI) was initiated at FTMM-68. RI activities included the installation of soil borings, soil sample collection, downhole membrane interface probe (MIP)/hydraulic profiling tool (HPT) surveys, groundwater monitoring well installation, well development and groundwater sampling, and slug testing. Two phases of field RI activities were performed. Phase 1 activities were performed from September 2015 to November 2016, and Phase 2 activities were performed from November 2016 to April 2017. Phase 1 results were used to determine the scope of Phase 2 activities.

Soil samples collected in September 2015 had PCE concentrations exceeding the NJDEP RDCSRS and the USEPA Regional Screening Level (RSL) for residential soil. TCE in soil also exceeded the USEPA residential RSL and there were numerous exceedances of NJDEP and USEPA IGW SL criteria (**Tables 1 and 2**).

In January 2017, 46 additional soil samples were collected from nine soil borings (FTMM-68-SB5 through -SB13) that were located based on MIP survey results (**Figure 2**). Soil samples were analyzed for VOCs and TICs. PCE was detected at a maximum concentration of 6.9 mg/kg (**Tables 1 and 2**).

The results of previous groundwater investigations are described briefly herein and will be presented in more detail within a future post TCRA RI Report. Groundwater samples were collected at FTMM-68 from August 2013 to April 2017, including the quarterly sampling described above for two wells from 2013 to 2015, and sampling from additional monitor wells

installed at the Site from 2016 through 2017. During these sampling events, multiple VOCs exceeded NJDEP GWQS and/or USEPA Tapwater RSLs in at least one sample, with PCE being the primary constituent. A groundwater plume of PCE concentrations exceeding 10 µg/L (which is 10 times the GWQS) extends an estimated 700 ft to the east from the former solvent UST, which is the dominant direction of advective groundwater flow. The eastern, northern, southern, and vertical extents of PCE exceeding the 1 µg/L NJDEP GWQS have not been fully defined by the existing monitoring well network. MIP, soil quality, and groundwater quality data indicate that the plume has migrated vertically downward as it migrated to the east (Department of the Army, 2017). The highest concentrations of PCE downgradient (east) of the former UST reside in the Hornerstown Formation, which is present from approximately 20 ft to 47 ft bgs. Much lower concentrations of PCE were encountered in the overlying Cape May Formation Unit 2, and in the underlying Tinton Formation. PCE is the dominant chlorinated VOC throughout the plume, and the highest concentrations of PCE biodegradation products (TCE, DCE, VC) are present in the source area near former Building 700. Downgradient (east) of the source area, concentrations of degradation products are relatively low to non-detect. Contaminants of Potential Concern (COPCs) in groundwater include the VOCs PCE, TCE, cis-1,2-DCE, VC, chloroform, MTBE, naphthalene, 1,2,3-trichlorobenzene, 1,2,4-trimethylbenzene, 1,2-dichloroethane, and benzene. Non-chlorinated COPCs may be related to the former gasoline station at Building 699 (FTMM-53), which is located immediately west of FTMM-68.

Soil sampling results for VOCs obtained in 2011 and 2015 through 2017 were compared to current (September 2017) NJDEP criteria in **Table 1** and to USEPA criteria in **Table 2.** Soil and groundwater sampling locations are shown on **Figure 2**. The soil sample locations with exceedances of NJDEP criteria are shown on **Figure 3**.

1.3 Report Organization

This RAWP is organized into the following sections:

- Section 1 – Introduction;
- Section 2 – Applicable Remedial Action Standards;
- Section 3 – Remedial Action Approach;
- Section 4 – Institutional Controls and Monitoring
- Section 5 – Site and Environmental Controls;
- Section 6 – Soil Fill Use Plan;
- Section 7 – Post Remedial Action Activities;
- Section 8 – Permits and Notification;
- Section 9 – Schedule;
- Section 10 – Reporting; and,
- Section 11 – References.

SECTION 2
APPLICABLE REMOVAL ACTION STANDARDS

The removal action objective (RAO) for the Site is to remove VOC concentrations in soil that pose a significant threat to human health and the environment. It was suspected that VOC-contaminated soil was present beneath the building footprint; however, the excavation and site investigation samples were previously constrained to the north due to the presence of Building 700 (**Figure 2**). Since the building was recently (August 2018) removed for the groundwater treatment pilot test, there is an increased risk of further contamination of groundwater from infiltration of precipitation through the contaminated soil previously covered by the building. Therefore, the RAO is to minimize further contamination of groundwater by removing contaminated soil beneath the former Building 700 that otherwise could migrate to groundwater by infiltration of precipitation through contaminated soils.

Federal cleanup levels have been identified as USEPA Regional Removal Management Levels (RMLs) (**Table 3**). Cleanup levels for VOCs in New Jersey are regulated by the NJDEP Site Remediation Program (SRP). The main VOCs of concern at FTMM-68 include PCE and associated biodegradation products TCE, *cis*-1,2-DCE, and VC. Under the current NJDEP SRP policy, VOC concentrations detected below the State cleanup level on **Table 3** would not require remediation under a residential use scenario. The NJDEP SRP policy allows for contaminants with appropriate institutional and engineering controls (IC and EC) to be non-permanently remediated if the remedy is found to be protective of human health and the environment.

The applicable cleanup standards for COPCs in soil at FTMM-68 are the more stringent of the NJDEP and USEPA criteria, as shown in bold below.

Table -3 Soil Cleanup Levels for COPCs at FTMM-68

COPCs	**NJDEP RDCSRS** (mg/kg) [1/]	**USEPA RMLs** Residential Soil (mg/kg) [2/]
PCE	**43**	81
TCE	**3**	4.1
cis-1,2-DCE [3/]	230	**160**
VC	**0.7**	5.9

Notes:
[1/] The NJDEP Criteria refers to the NJDEP's Sept 18, 2017 Remediation Standards
[2/] The USEPA RMLs refer to the USEPA's May 2018 Summary Table (USEPA, 2018).
[3/] The USEPA RML for *cis*-1.2-DCE is more stringent than the NJDEP criteria and so will be used as the applicable requirement.

The expected future land use at FTMM-68 is a combination of institutional and open space (EDAW, 2008). A residential scenario is not anticipated for the site; however, the applicable remediation standards for FTMM-68 are based on residential land use for conservative comparison to unrestricted land use criteria.

SECTION 3
REMEDIAL ACTION APPROACH

This section presents the approach to implement the removal of VOC-contaminated soil at FTMM-68:

- Soil excavation near the previous 2011 excavation site extending towards the east along the building footing, and
- In situ chemical oxidation (ISCO).

The remedial action approaches are presented in further detail below.

3.1 Soil Excavation of VOC Contaminated Soil

Soil removal will be conducted at FTMM-68 based on historical sampling where VOC concentrations are expected to exceed the cleanup level (Section 2) and where conventional excavation equipment can be used without extensive dewatering. Soil from the ground surface to approximately 2.5 ft bgs is considered clean based on previous sampling results, and so will be stockpiled separately for potential reuse as backfill. During previous investigations, VOC contaminated soil was encountered between 2.5 and 7 feet bgs with the maximum concentrations occurring at a depth of 7 to 7.5 ft bgs. Any soil encountered in contact with groundwater (estimated at a depth of 6 to 7 ft bgs, but can rapidly fluctuate in this area in response to precipitation events) will be considered contaminated. The VOC contaminated soils will be staged in stockpiles for waste characterization sampling (see **Appendix A**). All excavated soils (excluding the clean overburden material) will be disposed off-site at an approved facility. Following collection of post-excavation confirmation soil samples, the excavation will be backfilled and the ground surface will be reseeded. Additional details are presented in the following subsections.

3.1.1 Excavation Limits

The soil excavation will be conducted at FTMM-68 in one area with the lateral and vertical excavation limits as shown on **Figure 4**. Based on historical data results, the soil from ground surface to 2.5 ft bgs is potentially clean. This overburden will be removed and segregated for potential re-use as backfill in the excavation. The field team will then evaluate the material encountered between 2 ft bgs and 7 ft bgs (the anticipated depth to groundwater) using field screening, including visual observations and photoionization detector (PID) readings from excavated soil. If groundwater is shallower than 7 ft bgs, then all soil in contact with groundwater will be considered contaminated and will be segregated as contaminated soil. The target bottom depth of the excavation is 10 ft bgs. Based on field screening results, the material will be separated into two separate types of stockpiles: one for potentially clean soil, and one for contaminated soil. The stockpiled overburden soil will be sampled prior to being used as backfill. It is anticipated that approximately 159 cubic yards of VOC-contaminated soil will be removed from the excavation. The final approximate dimensions of the excavation will be 20 feet wide by 30 feet long at the ground surface, and 10 feet deep.

3.1.2 Management of Saturated Soils

Soil removal activities will encounter saturated soils, which are anticipated from approximately 7 ft bgs to the maximum depth of excavation of 10 ft bgs. Wet soils from the excavation will be allowed to initially free drain within the excavation as it is being removed. For example, saturated soil may be temporarily placed along the excavation side slope to allow soil to drain. Drier contaminated soil may also be blended with saturated soils to manage the soil moisture. Soils will be allowed to drain and dry in a controlled manner to contain free water or saturated material within the excavation, and to prevent soil with free liquids from being transported offsite for disposal.

3.1.3 Stockpiling and Disposal

The excavated material will be segregated and stockpiled adjacent to the excavation. All stockpiled soil will be placed on plastic sheeting, and covered with plastic sheeting, to prevent the spread of VOC contamination. The overburden material will be separated into two types of stockpiles (potentially clean, and contaminated) based on field screening results (such as visual observations, and PID readings elevated above background). The soil determined to be contaminated through field screening, or due to contact with groundwater, will be segregated from potentially clean excavated material. The excavated material will be segregated as follows:

- The overburden material above 2 ft bgs will be stockpiled and potentially used to backfill the excavation areas.
- Soil/debris between 2 ft and 10 bgs containing visual contamination, PID readings above background, or in contact with groundwater will be stockpiled on plastic sheeting for offsite transport and disposal.
- Once groundwater depth is reached, all saturated soil will be allowed to drain, then stockpiled on plastic sheeting, and ultimately transported off-site for disposal.

Excavated soil destined for off-site disposal will be sampled for waste characterization and profiling. Samples for waste characterization will be collected of the stockpiled material in accordance with the Soil Stockpile Sampling Plan provided in **Appendix A**. Upon completion of the waste profiling and acceptance to the respective facilities, the material will be loaded into transportation vehicles for shipment to the disposal facility.

The stockpiled overburden soils that will be used for backfill will be sampled in accordance with the Soil Stockpile Sampling Plan provided in **Appendix A**, and analyzed for VOC+TICs analysis.

3.1.4 Post-Remediation Sampling

Five confirmation soil samples will be collected from the excavation and will be analyzed for VOC+TICs. One bottom sample and four sidewalls samples will be collected and the VOC concentrations will be compared to the criteria listed in **Table 3**. The excavation will be backfilled only after the confirmatory samples are analyzed.

3.1.5 Backfilling

If the analytical results for the excavated overburden material meet the **Table 3** criteria, then this material will be backfilled into the excavation. Additional imported, certified clean common backfill will be placed in the excavation as necessary to restore the original grade. Backfill will be compacted with the bucket of the excavator in 6 to 12-inch loose lifts. The disturbed ground surface will be hydroseeded for mitigation of erosion and to re-establish vegetation.

3.2 In Situ Chemical Oxidation

ISCO pilot testing was initiated at the FTMM-68 site in August 2018 and is ongoing at the time of preparation of this RAWP. The ISCO pilot test consists of injection of RegenOx® near and downgradient (east) of the PCE source area at former Building 700. Two separate RegenOx® pilot test mobilizations are planned. The first event was completed is being performed from 14 August 2018 through 13 September_2018 and consisted of advancing 97 temporary injection points with an estimated average depth of 31 ft using a Geoprobe rig. Each injection point was advanced on a grid pattern spaced approximately 10 ft apart. A solution of RegenOx® ranging in concentration from 3 to 6 percent (average 5 percent) was emplaced within an injection depth interval at each boring ranging from 15 to 24 ft (average 18 ft thick). The target volume of injected solution was 18 gallons per foot of boring, and actual emplaced volume (averaged for each boring) ranged from 2.4 to 44.1 gallons per foot. Multiple parameters including boring spacing, injection pressure, injectant flow rate, and RegenOx® solution concentration were adjusted throughout the pilot test to determine optimum site-specific injection parameters. The second event is planned to be conducted after the soil excavation task (Section 3.1) _in early 2019 and will be designed based on the results of the first injection event. When completed, the results of the pilot testing will be reported under separate cover.

Two additional ISCO injections are proposed under this RAWP. Specific locations, technical parameters and schedule for these additional ISCO injections will be developed in accordance with the site-specific optimization parameters developed from the results of the initial two rounds of pilot test injections. We propose to use the existing Permit By Rule for the additional injections.

SECTION 4
INSTITUTIONAL CONTROLS AND MONITORING

4.1 Institutional Controls

Institutional Controls (ICs), including land use controls (LUCs), will be identified and reported under separate cover as required for the full-scale Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) remedy at FTMM-68. It is anticipated that LUCs will be used to prevent uncontrolled exposure of potential receptors to contaminated media. The FTMM team would prepare a LUC Implementation Plan (LUCIP) to document the ICs and identify procedural responsibilities including inspections, monitoring and reporting, and long-term management requirements. The Army would be responsible for documenting and implementing the LUCs and will also be responsible to conduct regular reviews to ensure that the LUCs remain protective of human health and the environment. It is expected that the LUCs will take the form of a deed notice. When the property is transferred to private ownership, the LUCs will be incorporated into the title and the new owner would be responsible for complying with the LUCs.

4.1.1 Deed Notice

Deed notices, if required, will be identified and reported under separate cover. The Deed Notice would be prepared in a form acceptable to the Army and the NJDEP and would address the presence of contamination (i.e., COPCs) above NJDEP RDCSRS remaining in site soil. The Deed Notice will be recorded upon conveyance of the property out of federal ownership and will address future development of the property and prevent potential exposure to contaminants that remain in-place at the site. Use of the FTMM-68 site will be restricted to non-residential purposes.

4.1.2 Classification Exemption Area and Well Restriction Area

If required, ICs in the form of a Classification Exemption Area and Well Restriction Area (CEA/WRA) will be identified and reported under separate cover. Groundwater at FTMM-68 is not currently used as a source of potable drinking water. Concentrations of PCE and other COPCs have recently been detected in FTMM-68 groundwater at concentrations greater than their NJDEP GWQS. A CEA/WRA will be established and prepared pursuant to N.J.A.C. 7:26C-7.3. The CEA/WRA will include sampling every year, and two sampling rounds during the final year. The CEA/WRA is a groundwater use restriction to protect a hypothetical residential user from potential risk associated with groundwater as a potable water source. The duration of the CEA/WRA will be determined through modeling using BIOSCREEN and BIOCHLOR as required by the NJDEP's CEA/WRA guidance and will remain in place until NJDEP GWQS are achieved at the Site.

4.2 Monitoring

Monitoring of the ICs to ensure they remain protective of human health and the environment, if required, will be identified and reported under separate cover.

SECTION 5
SITE AND ENVIRONMENTAL CONTROLS

5.1 Introduction

Site and environmental controls will be implemented at FTMM-68 before, during, and following the soil removal action. The site and environmental controls will consist of silt fencing located along the down-gradient perimeter of the excavation and lined and bermed temporary stockpiles for the excavated materials.

5.2 Health and Safety

A Site-specific Health and Safety Plan (SHSP) is included as part of the Accident Prevention Plan (APP). The APP was prepared in accordance with United States Army Corps of Engineers (USACE) Safety and Health Requirements Manual EM 385-1-1, Appendix A "Minimum Basic Outline for Accident Prevention Plan", and Parsons Environmental, Safety, Health, and Risk Program (ESHARP) Manual. The APP/SHSP includes information on the following:

- Exclusion zones, decontamination zones, and clean zones (support zones);
- Site access and security;
- Emergency response;
- Action levels;
- Air, dust, and noise monitoring;
- Vehicle and traffic safety around the Site;
- Activity Hazard Analyses (AHA);
- Safety personnel; and
- Dust Control.

Activities associated with the VOC soil excavation consist of:

- Mobilization / demobilization;
- Installation of erosion and sedimentation controls;
- Site preparation activities;
- Earthwork activities;
    - VOC excavations and stockpiling on plastic ;
    - Backfilling of excavations;
    - Loading of excavated material into trucks for shipment to the disposal facility; and
- Temporary seeding and mulching.

A copy of the APP/SHSP will be maintained on site and available for review.

5.3 Perimeter Air Monitoring Plan

NJAC 7:26E-5.5 requires the following in a RAWP:

A perimeter air monitoring and action plan to be implemented during a remedial action, if applicable, designed to monitor and control off-site excursion of dust, vapor and odors.

This section contains the Perimeter Air Monitoring Plan (PAMP) that was developed for the VOC excavation. The PAMP is intended to provide a measure of protection from potential airborne contaminants for downwind receptors from intrusive remedial activities. The downwind receptors include adjacent unoccupied land and other site personnel working within the FTMM facility not associated with this activity. The PAMP is not intended for use in establishing actions levels for workers' respiratory protection; this will be accomplished as discussed in the SHSP.

The soil excavation activities will be of limited duration, and the soil removed from the excavation will be covered with plastic to minimize emissions. Field personnel will utilize real-time PID instrumentation to assess VOC emissions during all field excavation activities. Downwind VOC emissions from the excavation and soil stockpiles will be assessed periodically using the PID during soil excavation activities. Sustained real-time PID readings of 1 to 10 parts per million (ppm) downwind of the excavation or soil stockpile will trigger actions to suppress vapor levels. Such actions may include slowing or ceasing soil removal activities, and placement of plastic sheeting or soil cover over the emissions source.

5.4 Quality Assurance Plan

A Quality Assurance Plan (QAP) was previously developed for the various remedial subsurface investigations conducted at FTMM. This QAP will be used during the excavation as appropriate. A copy of the QAP is maintained on site at Building 563 and will be available for review.

SECTION 6
SOIL FILL USE PLAN

A Soil Fill Use Plan is required under N.J.A.C. 7:26E-5.2(g) whenever alternative or clean fill is proposed as part of a remedial action, and is described below for the excavation resulting from the VOC removal action at the site. Soil Fill Use Plan information not known at the time of the RAWP preparation will be documented in the Post Remedial Action RI Report.

6.1 Reuse of Soil with VOC Concentrations above the NJDEP RDCSRS

The overburden material excavated from FTMM-68 determined not to contain VOC concentrations above the NJDEP RDCSRS will be reused as backfill material. The material removed from each localized area will be placed back into the excavation from where it was removed. As required by N.J.A.C. 7:26E, the location of FTMM-68 is provided as follows: Block 110, Lot 1, Oceanport, New Jersey.

6.2 Clean Fill Use

Imported clean fill will be used to backfill the VOC excavations and the excavated overburden material. The imported soils will be tested to meet offsite clean fill certification requirements per N.J.A.C. 7:26E-1.8 and the NJDEP Fill Materials Guidance for SRP sites (NJDEP, 2015).

SECTION 7
POST REMEDIAL ACTION ACTIVITIES

7.1 Site Restoration

Site restoration and maintenance measures will be performed following remediation activities pursuant to N.J.A.C 7:26E. Site restoration activities will include placement of hydroseed on the disturbed and backfilled surfaces associated with the VOC removal action.

7.3 Seeding and Mulching

Hydroseeding will be performed for the excavation area limits shown on **Figure 4**. The seeding type to be applied to the site soils is contingent upon the season and in accordance with the Standards for Soil Erosion and Sediment Control in New Jersey (January 2014).

7.4 Maintenance Plan for Engineering and Institutional Controls

An Operations, Maintenance and Monitoring (OM&M) Plan is not required for the soil removal action.

SECTION 8
PERMITS AND NOTIFICATION

The VOC contaminated TCRA soil removal at FTMM-68 is being conducted under CERCLA. Therefore, federal, state or local permits are not required for this VOC removal action. Accordingly, no additional permit beyond approval of the RAWP is required.

Since the work is being performed under CERCLA, the following permits under state jurisdiction are considered exempt.

- Coastal Area Facility Review Act (CAFRA) Permit (N.J.A.C. 7:7)
- Freshwater Wetlands Permit (N.J.A.C. 7:7A)
- Construction Activity Stormwater General Permit (5G3)
- Landfill Disruption Permit (N.J.S.A 13:1E-1)
- Soil Conservation District Soil Erosion and Sediment Control Plan (SESCP) (N.J.S.A. 4:24-39 et seq.) when land disturbances are greater than 5,000 square feet (the VOC removal action will disturb only approximately 1,000 square feet)

SECTION 9
SCHEDULE

9.1 Schedule

In accordance with N.J.A.C. 7:26E-5.5, the following schedule for the VOC contaminated soil removal action at FTMM-68 is provided:

Milestone	Date Completed or Duration
Submittal of RAWP	October 2018
Excavation Start	December 2018
Excavation Completion	December 2018
Offsite Disposal of Soil	January 2018
Submit Remedial Action Report	May 2018 (90 days after receipt of disposal documentation)

SECTION 10
REPORTING

10.1 Remedial Action Report

Following the completion of the VOC contaminated soil removal action at FTMM-68, a Post Remedial Action Report (RAR) will be prepared in accordance with N.J.A.C. 7:26E-5.7 and included as an attachment to the future FTMM-68 RI Report. The RAR will include the following items regarding the VOC contaminated soil removal action:

- Description of the physical setting of the site;
- A summary of the findings and recommendations from the previous investigations;
- Summary of the soil removal action completed;
- Summary of remediation standards achieved;
- Tables and figures showing the remaining contaminant levels, volume of excavated soil, and remediation standard achieved;
- Copies of waste disposal manifests;
- Documentation of the effectiveness of the remedial action;
- Documentation of the source, type, quantities and location of clean fill, as applicable;
- Summary of restoration activities; and
- Summary of remediation action costs.

SECTION 11
REFERENCES

Department of the Army. 2017. *Vapor Intrusion Risk Screening Evaluation at Building 114, Fort Monmouth, New Jersey.* Prepared by the Office of Assistant Chief of Staff for Installation Management, U.S. Army Fort Monmouth. May 19.

EDAW, 2008. Fort Monmouth Reuse and Redevelopment Plan. Prepared for Fort Monmouth Economic Revitalization Planning Authority, September.

New Jersey (State of), Technical requirements for Site Remediation, New Jersey Administrative Code, N.J.A.C. 7:26E.

New Jersey (State of) Standards for Soil Erosion and Sediment Control, Stabilized Construction Access July 1999.

New Jersey Department of Environmental Protections Technical Guidance on the Capping of Sites Undergoing Remediation Version 1 March 7, 2014.

New Jersey Department of Environmental Fill Materials Guidance for SRP sites Version 3.0 April 2015.

Parsons. 2014. *Final August 2013 Baseline Groundwater Sampling Report, Fort Monmouth, Oceanport, Monmouth County, New Jersey*. Submitted to the U.S. Army Engineering and Support Center, Huntsville, AL. Revision 0, March.

Parsons. 2015. *Final Annual 2014 Groundwater Sampling Report, Fort Monmouth, Oceanport, Monmouth County, New Jersey*. Submitted to the U.S. Army Engineering and Support Center, Huntsville, AL. December.

Parsons. 2016. *Final Annual 2015 Groundwater Sampling Report, Fort Monmouth, Oceanport, Monmouth County, New Jersey*. Submitted to the U.S. Army Engineering and Support Center, Huntsville, AL. September.

U.S. Army. 2011. *U.S. Army Fort Monmouth Spill Clean Up Report*. April 11.

TABLES

TABLE 1
SOIL SAMPLING RESULTS - COMPARISON TO NJDEP CRITERIA
SITE FTMM68
FORT MONMOUTH, NEW JERSEY

Loc ID	NJ Residential Direct Contact SRS	NJ Non-Residential Direct Contact SRS	NJ Impact to GW Soil Screening Level	Solvent UST Excavation									FTMM-68-SB1		
Sample ID				565 Duplicate	565-A North Wall	565-B South Wall	565-C East Wall	565-D West Wall	565-E Bottom	565-F Piping	565-PX10	565-PX11	FTMM-68-SB1-1.5-2.0	FTMM-68-SB1-20.5-21.0	FTMM-68-SB1-11.0-11.5
Depth (bgs)				7-7.5	7-7.5	7-7.5	7-7.5	7-7.5	7-7.5	2-2.5	9-9.5	9-9.5	1.5-2	20.5-21	11-11.5
Sample Date				4/9/2011	4/9/2011	4/9/2011	4/9/2011	4/9/2011	4/9/2011	4/9/2011	5/24/2011	5/25/2011	9/16/2015	9/16/2015	9/17/2015
Volatile Organic Compounds (mg/kg)															
1,1,1,2-Tetrachloroethane	NLE	NLE	NLE	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 0.0048	< 0.0063	< 0.0067
1,1,1-Trichloroethane	160,000	NLE	0.3	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 0.0048	< 0.0063	< 0.0067
1,1,2,2-Tetrachloroethane	1	3	0.007	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 0.0048	< 0.0063	< 0.0067
1,1,2-Trichloroethane	2	6	0.02	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 0.0048	< 0.0063	< 0.0067
1,1-Dichloroethane	8	24	0.2	NA	NA	NA	NA	NA	NA	NA	ND	ND	< 0.0048	< 0.0063	< 0.0067
1,1-Dichloroethene	11	150	0.008	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 0.0048	< 0.0063	< 0.0067
1,1-Dichloropropene	NLE	NLE	NLE	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 0.0048	< 0.0063	< 0.0067
1,2,3-Trichlorobenzene	NLE	NLE	NLE	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 0.0048	< 0.0063	< 0.0067
1,2,3-Trichloropropane	NLE	NLE	NLE	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 0.0048	< 0.0063	< 0.0067
1,2,4-Trichlorobenzene	73	820	0.7	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 0.0048	< 0.0063	< 0.0067
1,2,4-Trimethylbenzene	NLE	NLE	NLE	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 0.0048	< 0.0063	< 0.0067
1,2-Dibromo-3-chloropropane	0.08	0.2	0.005	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 0.0048	< 0.0063	< 0.0067
1,2-Dibromoethane	0.008	0.04	0.005	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 0.0048	< 0.0063	< 0.0067
1,2-Dichlorobenzene	5,300	59,000	17	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 0.0048	< 0.0063	< 0.0067
1,2-Dichloroethane	0.9	3	0.005	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 0.0048	< 0.0063	< 0.0067
1,2-Dichloropropane	2	5	0.005	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 0.0048	< 0.0063	< 0.0067
1,3,5-Trimethylbenzene	NLE	NLE	NLE	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 0.0048	< 0.0063	< 0.0067
1,3-Dichlorobenzene	5,300	59,000	19	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 0.0048	< 0.0063	< 0.0067
1,3-Dichloropropane	NLE	NLE	NLE	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 0.0048	< 0.0063	< 0.0067
1,4-Dichlorobenzene	5	13	2	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 0.0048	< 0.0063	< 0.0067
2,2-Dichloropropane	NLE	NLE	NLE	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 0.0048	< 0.0063	< 0.0067
2-Chlorotoluene	NLE	NLE	NLE	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 0.0048	< 0.0063	< 0.0067
Acetone	70,000	NLE	19	NA	NA	NA	NA	NA	NA	NA	NA	NA	**0.013**	**0.095**	**0.013**
Benzene	2	5	0.005	NA	NA	NA	NA	NA	NA	NA	ND	ND	< 0.0048	< 0.0063	< 0.0067
Bromobenzene	NLE	NLE	NLE	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 0.0048	< 0.0063	< 0.0067
Bromochloromethane	NLE	NLE	NLE	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 0.0048	< 0.0063	< 0.0067
Bromodichloromethane	1	3	0.005	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 0.0048	< 0.0063	< 0.0067
Bromoform	81	280	0.03	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 0.0048	< 0.0063	< 0.0067
Carbon tetrachloride	2	4	0.005	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 0.0048	< 0.0063	< 0.0067
Chlorobenzene	510	7,400	0.6	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 0.0048	< 0.0063	< 0.0067
Chlorodibromomethane	3	8	0.005	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 0.0048	< 0.0063	< 0.0067
Chloroethane	220	1,100	NLE	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 0.0048	< 0.0063	< 0.0067
Chloroform	0.6	2	0.4	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 0.0048	< 0.0063	< 0.0067
Cis-1,2-Dichloroethene	230	560	0.3	< 293.81	< 0.281	**0.08 J**	**0.16 J**	< 0.199	< 1084.447	< 1.107	ND	ND	**0.0011 J**	**0.08**	**0.011**
Cis-1,3-Dichloropropene	NLE	NLE	NLE	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 0.0048	< 0.0063	< 0.0067
Cymene	NLE	NLE	NLE	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 0.0048	< 0.0063	< 0.0067
Dichlorodifluoromethane	490	230,000	39	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 0.0048	< 0.0063	< 0.0067
Ethyl benzene	7,800	110,000	13	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 0.0048	< 0.0063	< 0.0067
Hexachlorobutadiene	6	25	0.9	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 0.0048	< 0.0063	< 0.0067
Isopropylbenzene	NLE	NLE	NLE	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 0.0048	< 0.0063	< 0.0067
Meta/Para Xylene	NLE	NLE	NLE	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 0.0095	< 0.013	< 0.013
Methyl bromide	25	59	0.04	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 0.0048	< 0.0063	< 0.0067
Methyl butyl ketone	NLE	NLE	NLE	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 0.0048	< 0.0063	< 0.0067
Methyl chloride	4	12	NLE	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 0.0048	< 0.0063	< 0.0067
Methyl ethyl ketone	3,100	44,000	0.9	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 0.0048	**0.016**	< 0.0067
Methyl isobutyl ketone	NLE	NLE	NLE	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 0.0048	< 0.0063	< 0.0067
Methyl Tertbutyl Ether	110	320	0.2	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 0.0048	< 0.0063	< 0.0067
Methylene chloride	46	230	0.01	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 0.0048	< 0.0063	< 0.0067
Naphthalene	6	17	25	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 0.0048	< 0.0063	< 0.0067
n-Butylbenzene	NLE	NLE	NLE	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 0.0048	< 0.0063	< 0.0067
Ortho Xylene	NLE	NLE	NLE	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 0.0048	< 0.0063	< 0.0067
p-Chlorotoluene	NLE	NLE	NLE	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 0.0048	< 0.0063	< 0.0067
Propylbenzene	NLE	NLE	NLE	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 0.0048	< 0.0063	< 0.0067
sec-Butylbenzene	NLE	NLE	NLE	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 0.0048	< 0.0063	< 0.0067
Styrene	90	260	3	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 0.0048	< 0.0063	< 0.0067
Tert Butyl Alcohol	1,400	11,000	0.3	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 0.095 UJ	< 0.13 UJ	< 0.13 UJ
tert-Butylbenzene	NLE	NLE	NLE	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 0.0048	< 0.0063	< 0.0067
Tetrachloroethene	43	1,500	0.005	**88.41 J**	**1.02**	**0.36**	**0.6**	< 0.199	23,889	**0.77 D**	**1.58**	**0.26**	**0.024**	**28 D**	**18 D**
Toluene	6,300	91,000	7	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 0.0048	< 0.0063	< 0.0067
Trans-1,2-Dichloroethene	300	720	0.6	NA	NA	NA	NA	NA	NA	NA	ND	ND	< 0.0048	**0.0012 J**	< 0.0067
Trans-1,3-Dichloropropene	NLE	NLE	NLE	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 0.0048	< 0.0063	< 0.0067
Trichloroethene	3	10	0.01	17,418 D	< 0.281	< 0.221	< 0.199	< 0.199	< 1084.447	21.41 D	ND	ND	**0.0013 J**	**0.16**	**0.0082**
Trichlorofluoromethane	23,000	340,000	34	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 0.0048	< 0.0063	< 0.0067
Vinyl chloride	0.7	2	0.005	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 0.0048	< 0.0063	< 0.0067
TIC VOCs (mg/kg)															
2,3-Dimethylbutane	NLE	NLE	NLE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Methylbutane	NLE	NLE	NLE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Ethyl acetate	NLE	NLE	NLE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TIC Unknown	NLE	NLE	NLE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TIC VOCs (mg/kg)															
TIC Unknown	NLE	NLE	NLE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	**4.5 J**	NA

TABLE 1
SOIL SAMPLING RESULTS - COMPARISON TO NJDEP CRITERIA
SITE FTMM68
FORT MONMOUTH, NEW JERSEY

Loc ID	NJ Residential Direct Contact SRS	NJ Non-Residential Direct Contact SRS	NJ Impact to GW Soil Screening Level	FTMM-68-SB2			FTMM-68-SB3			FTMM68-SB05		
Sample ID				**FTMM-68-SB2-1.5-2.0**	**FTMM-68-SB2-6.0-6.5**	**FTMM-68-SB2-16.0-16.5**	**FTMM-68-SB3-12.5-13.0**	**FTMM-68-SB3-22.5-23.0**	**FTMM-68-SB3-24.0-24.5**	**FTMM-68-SS-SB5-22.0-23.0**	**FTMM-68-SS-SB5-24.0-24.5**	**FTMM-68-SS-SB5-34.0-34.5**
Depth (bgs)				**1.5-2**	**6-6.5**	**16-16.5**	**12.5-13**	**22.5-23**	**24-24.5**	**22-23**	**24-24.5**	**34-34.5**
Sample Date				**9/17/2015**	**9/17/2015**	**9/17/2015**	**9/17/2015**	**9/17/2015**	**9/17/2015**	**1/3/2017**	**1/3/2017**	**1/3/2017**
Volatile Organic Compounds (mg/kg)												
1,1,1,2-Tetrachloroethane	NLE	NLE	NLE	< 0.53	< 0.0049	< 0.57	< 9.7	< 0.42	< 0.61	NA	< 0.0006	< 0.0005
1,1,1-Trichloroethane	160,000	NLE	0.3	< 0.53	< 0.0049	< 0.57	< 9.7	< 0.42	< 0.61	NA	< 0.0006	< 0.0005
1,1,2,2-Tetrachloroethane	1	3	0.007	< 0.53	< 0.0049	< 0.57	< 9.7	< 0.42	< 0.61	NA	< 0.0006	< 0.0005
1,1,2-Trichloroethane	2	6	0.02	< 0.53	< 0.0049	< 0.57	< 9.7	< 0.42	< 0.61	NA	< 0.0006	< 0.0005
1,1-Dichloroethane	8	24	0.2	< 0.53	< 0.0049	< 0.57	< 9.7	< 0.42	< 0.61	NA	< 0.0006	< 0.0005
1,1-Dichloroethene	11	150	0.008	< 0.53	< 0.0049	< 0.57	< 9.7	< 0.42	< 0.61	NA	< 0.0006	< 0.0005
1,1-Dichloropropene	NLE	NLE	NLE	< 0.53	< 0.0049	< 0.57	< 9.7	< 0.42	< 0.61	NA	< 0.0006	< 0.0005
1,2,3-Trichlorobenzene	NLE	NLE	NLE	< 0.53	< 0.0049	< 0.57	< 9.7	< 0.42	< 0.61	NA	< 0.0006	< 0.0005
1,2,3-Trichloropropane	NLE	NLE	NLE	< 0.53	< 0.0049	< 0.57	< 9.7	< 0.42	< 0.61	NA	< 0.0006	< 0.0005
1,2,4-Trichlorobenzene	73	820	0.7	< 0.53	< 0.0049	< 0.57	< 9.7	< 0.42	< 0.61	NA	< 0.0006	< 0.0005
1,2,4-Trimethylbenzene	NLE	NLE	NLE	< 0.53	< 0.0049	< 0.57	< 9.7	< 0.42	< 0.61	NA	< 0.0006	< 0.0005
1,2-Dibromo-3-chloropropane	0.08	0.2	0.005	< 0.53	< 0.0049	< 0.57	< 9.7	< 0.42	< 0.61	NA	< 0.0015	< 0.0013
1,2-Dibromoethane	0.008	0.04	0.005	< 0.53	< 0.0049	< 0.57	< 9.7	< 0.42	< 0.61	NA	< 0.0006	< 0.0005
1,2-Dichlorobenzene	5,300	59,000	17	< 0.53	< 0.0049	< 0.57	< 9.7	< 0.42	< 0.61	NA	< 0.0006	< 0.0005
1,2-Dichloroethane	0.9	3	0.005	< 0.53	< 0.0049	< 0.57	< 9.7	< 0.42	< 0.61	NA	< 0.0006	< 0.0005
1,2-Dichloropropane	2	5	0.005	< 0.53	< 0.0049	< 0.57	< 9.7	< 0.42	< 0.61	NA	< 0.0006	< 0.0005
1,3,5-Trimethylbenzene	NLE	NLE	NLE	< 0.53	< 0.0049	< 0.57	< 9.7	< 0.42	< 0.61	NA	< 0.0006	< 0.0005
1,3-Dichlorobenzene	5,300	59,000	19	< 0.53	< 0.0049	< 0.57	< 9.7	< 0.42	< 0.61	NA	< 0.0006	< 0.0005
1,3-Dichloropropane	NLE	NLE	NLE	< 0.53	< 0.0049	< 0.57	< 9.7	< 0.42	< 0.61	NA	< 0.0006	< 0.0005
1,4-Dichlorobenzene	5	13	2	< 0.53	< 0.0049	< 0.57	< 9.7	< 0.42	< 0.61	NA	< 0.0006	< 0.0005
2,2-Dichloropropane	NLE	NLE	NLE	< 0.53	< 0.0049	< 0.57	< 9.7	< 0.42	< 0.61	NA	< 0.0006	< 0.0005
2-Chlorotoluene	NLE	NLE	NLE	< 0.53	< 0.0049	< 0.57	< 9.7	< 0.42	< 0.61	NA	< 0.0006	< 0.0005
Acetone	70,000	NLE	19	< 0.53	**0.018**	< 0.57	< 9.7	< 0.42	< 0.61	NA	**0.0063**	**0.0061**
Benzene	2	5	0.005	< 0.53	< 0.0049	< 0.57	< 9.7	< 0.42	< 0.61	NA	< 0.0006	< 0.0005
Bromobenzene	NLE	NLE	NLE	< 0.53	< 0.0049	< 0.57	< 9.7	< 0.42	< 0.61	NA	< 0.0006	< 0.0005
Bromochloromethane	NLE	NLE	NLE	< 0.53	< 0.0049	< 0.57	< 9.7	< 0.42	< 0.61	NA	< 0.0006	< 0.0005
Bromodichloromethane	1	3	0.005	< 0.53	< 0.0049	< 0.57	< 9.7	< 0.42	< 0.61	NA	< 0.0006	< 0.0005
Bromoform	81	280	0.03	< 0.53	< 0.0049	< 0.57	< 9.7	< 0.42	< 0.61	NA	< 0.0006	< 0.0005
Carbon tetrachloride	2	4	0.005	< 0.53	< 0.0049	< 0.57	< 9.7	< 0.42	< 0.61	NA	< 0.0006	< 0.0005
Chlorobenzene	510	7,400	0.6	< 0.53	< 0.0049	< 0.57	< 9.7	< 0.42	< 0.61	NA	< 0.0006	< 0.0005
Chlorodibromomethane	3	8	0.005	< 0.53	< 0.0049	< 0.57	< 9.7	< 0.42	< 0.61	NA	< 0.0006	< 0.0005
Chloroethane	220	1,100	NLE	< 0.53	< 0.0049	< 0.57	< 9.7	< 0.42	< 0.61	NA	< 0.0015	< 0.0013
Chloroform	0.6	2	0.4	< 0.53	< 0.0049	< 0.57	< 9.7	< 0.42	< 0.61	NA	< 0.0006	< 0.0005
Cis-1,2-Dichloroethene	230	560	0.3	**0.27 J**	**0.022**	< 0.57	< 9.7	< 0.42	< 0.61	NA	< 0.0006	< 0.0005
Cis-1,3-Dichloropropene	NLE	NLE	NLE	< 0.53	< 0.0049	< 0.57	< 9.7	< 0.42	< 0.61	NA	< 0.0006	< 0.0005
Cymene	NLE	NLE	NLE	< 0.53	< 0.0049	< 0.57	< 9.7	< 0.42	< 0.61	NA	< 0.0006	< 0.0005
Dichlorodifluoromethane	490	230,000	39	< 0.53	< 0.0049	< 0.57	< 9.7	< 0.42	< 0.61	NA	< 0.0006	< 0.0005
Ethyl benzene	7,800	110,000	13	< 0.53	< 0.0049	< 0.57	< 9.7	< 0.42	< 0.61	NA	< 0.0006	< 0.0005
Hexachlorobutadiene	6	25	0.9	< 0.53	< 0.0049	< 0.57	< 9.7	< 0.42	< 0.61	NA	< 0.0006	< 0.0005
Isopropylbenzene	NLE	NLE	NLE	< 0.53	< 0.0049	< 0.57	< 9.7	< 0.42	< 0.61	NA	< 0.0006	< 0.0005
Meta/Para Xylene	NLE	NLE	NLE	< 1.1	< 0.0098	< 1.1	< 19	< 0.83	< 1.2	NA	< 0.0012	< 0.0011
Methyl bromide	25	59	0.04	< 0.53	< 0.0049	< 0.57	< 9.7	< 0.42	< 0.61	NA	< 0.0006	< 0.0005
Methyl butyl ketone	NLE	NLE	NLE	< 0.53	< 0.0049	< 0.57	< 9.7	< 0.42	< 0.61	NA	< 0.0029	< 0.0026
Methyl chloride	4	12	NLE	< 0.53	< 0.0049	< 0.57	< 9.7	< 0.42	< 0.61	NA	< 0.0006	< 0.0005
Methyl ethyl ketone	3,100	44,000	0.9	< 0.53	**0.0028 J**	< 0.57	< 9.7	< 0.42	< 0.61	NA	< 0.0029	< 0.0026
Methyl isobutyl ketone	NLE	NLE	NLE	< 0.53	< 0.0049	< 0.57	< 9.7	< 0.42	< 0.61	NA	< 0.0029	< 0.0026
Methyl Tertbutyl Ether	110	320	0.2	< 0.53	< 0.0049	< 0.57	< 9.7	< 0.42	< 0.61	NA	< 0.0006	< 0.0005
Methylene chloride	46	230	0.01	< 0.53	< 0.0049	< 0.57	< 9.7	< 0.42	< 0.61	NA	< 0.0006	< 0.0005
Naphthalene	6	17	25	< 0.53	< 0.0049	< 0.57	< 9.7	< 0.42	< 0.61	NA	**0.0003 J**	< 0.0005
n-Butylbenzene	NLE	NLE	NLE	< 0.53	< 0.0049	< 0.57	< 9.7	< 0.42	< 0.61	NA	< 0.0006	< 0.0005
Ortho Xylene	NLE	NLE	NLE	< 0.53	< 0.0049	< 0.57	< 9.7	< 0.42	< 0.61	NA	< 0.0006	< 0.0005
p-Chlorotoluene	NLE	NLE	NLE	< 0.53	< 0.0049	< 0.57	< 9.7	< 0.42	< 0.61	NA	< 0.0006	< 0.0005
Propylbenzene	NLE	NLE	NLE	< 0.53	< 0.0049	< 0.57	< 9.7	< 0.42	< 0.61	NA	< 0.0006	< 0.0005
sec-Butylbenzene	NLE	NLE	NLE	< 0.53	< 0.0049	< 0.57	< 9.7	< 0.42	< 0.61	NA	< 0.0006	< 0.0005
Styrene	90	260	3	< 0.53	< 0.0049	< 0.57	< 9.7	< 0.42	< 0.61	NA	< 0.0006	< 0.0005
Tert Butyl Alcohol	1,400	11,000	0.3	< 11	< 0.098	< 11	< 190	< 8.3	< 12	NA	< 0.0029	< 0.0026
tert-Butylbenzene	NLE	NLE	NLE	< 0.53	< 0.0049	< 0.57	< 9.7	< 0.42	< 0.61	NA	< 0.0006	< 0.0005
Tetrachloroethene	43	1,500	0.005	**2.7**	**0.039**	**1.4**	**360**	**1.6**	**15**	NA	**0.0035**	**0.04**
Toluene	6,300	91,000	7	< 0.53	**0.0013 J**	< 0.57	< 9.7	< 0.42	< 0.61	NA	**0.0018**	**0.0017**
Trans-1,2-Dichloroethene	300	720	0.6	< 0.53	< 0.0049	< 0.57	< 9.7	< 0.42	< 0.61	NA	< 0.0006	< 0.0005
Trans-1,3-Dichloropropene	NLE	NLE	NLE	< 0.53	< 0.0049	< 0.57	< 9.7	< 0.42	< 0.61	NA	< 0.0006	< 0.0005
Trichloroethene	3	10	0.01	**0.43 J**	**0.02**	< 0.57	< 9.7	< 0.42	**0.18 J**	NA	< 0.0006	**0.0015**
Trichlorofluoromethane	23,000	340,000	34	< 0.53	< 0.0049	< 0.57	< 9.7	< 0.42	< 0.61	NA	< 0.0006	< 0.0005
Vinyl chloride	0.7	2	0.005	< 0.53	< 0.0049	< 0.57	< 9.7	< 0.42	< 0.61	NA	< 0.0006	< 0.0005
TIC VOCs (mg/kg)												
2,3-Dimethylbutane	NLE	NLE	NLE	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Methylbutane	NLE	NLE	NLE	NA	NA	NA	NA	NA	NA	NA	NA	NA
Ethyl acetate	NLE	NLE	NLE	NA	NA	NA	NA	NA	NA	NA	NA	NA
TIC Unknown	NLE	NLE	NLE	NA	NA	NA	NA	NA	NA	NA	NA	NA
TIC VOCs (mg/kg)												
TIC Unknown	NLE	NLE	NLE	**0.84 J**	NA	**0.94 J**	NA	**2 J**	**1.72 J**	NA	NA	NA

TABLE 1
SOIL SAMPLING RESULTS - COMPARISON TO NJDEP CRITERIA
SITE FTMM68
FORT MONMOUTH, NEW JERSEY

Loc ID	NJ Residential Direct Contact SRS	NJ Non-Residential Direct Contact SRS	NJ Impact to GW Soil Screening Level	FTMM68-SB05	FTMM68-SB06			FTMM68-SB07		
Sample ID				**FTMM-68-SS-SB5-39.0-39.5**	**FTMM-68-SS-SB6-17.0-17.5**	**FTMM-68-SS-SB6-24.5-25.0**	**FTMM-68-SS-SB6-27.5-28.0**	**FTMM-68-SS-SB7-8.0-8.5**	**FTMM-68-SS-SB7-16.5-17.0**	**FTMM-68-SS-SB7-21.0-21.5**
Depth (bgs)				**39-39.5**	**17-17.5**	**24.5-25**	**27.5-28**	**8-8.5**	**16.5-17**	**21-21.5**
Sample Date				**1/3/2017**	**1/3/2017**	**1/3/2017**	**1/3/2017**	**1/3/2017**	**1/3/2017**	**1/3/2017**
Volatile Organic Compounds (mg/kg)										
1,1,1,2-Tetrachloroethane	NLE	NLE	NLE	< 0.0005	< 0.0008	< 0.0005	< 0.0006 UJ	< 0.0006	< 0.0005	< 0.0005
1,1,1-Trichloroethane	160,000	NLE	0.3	< 0.0005	< 0.0008	< 0.0005	< 0.0006 UJ	< 0.0006	< 0.0005	< 0.0005
1,1,2,2-Tetrachloroethane	1	3	0.007	< 0.0005	< 0.0008	< 0.0005	< 0.0006 UJ	< 0.0006	< 0.0005	< 0.0005
1,1,2-Trichloroethane	2	6	0.02	< 0.0005	< 0.0008	< 0.0005	< 0.0006 UJ	< 0.0006	< 0.0005	< 0.0005
1,1-Dichloroethane	8	24	0.2	< 0.0005	< 0.0008	< 0.0005	< 0.0006 UJ	< 0.0006	< 0.0005	< 0.0005
1,1-Dichloroethene	11	150	0.008	< 0.0005	< 0.0008	< 0.0005	< 0.0006 UJ	< 0.0006	< 0.0005	< 0.0005
1,1-Dichloropropene	NLE	NLE	NLE	< 0.0005	< 0.0008	< 0.0005	< 0.0006 UJ	< 0.0006	< 0.0005	< 0.0005
1,2,3-Trichlorobenzene	NLE	NLE	NLE	< 0.0005	< 0.0008	< 0.0005	< 0.0006 UJ	< 0.0006	< 0.0005	< 0.0005
1,2,3-Trichloropropane	NLE	NLE	NLE	< 0.0005	< 0.0008	< 0.0005	< 0.0006 UJ	< 0.0006	< 0.0005	< 0.0005
1,2,4-Trichlorobenzene	73	820	0.7	< 0.0005	< 0.0008	< 0.0005	< 0.0006 UJ	< 0.0006	< 0.0005	< 0.0005
1,2,4-Trimethylbenzene	NLE	NLE	NLE	< 0.0005	< 0.0008	< 0.0005	< 0.0006 UJ	< 0.0006	< 0.0005	< 0.0005
1,2-Dibromo-3-chloropropane	0.08	0.2	0.005	< 0.0012	< 0.0021	< 0.0013	< 0.0015 UJ	< 0.0014	< 0.0014	< 0.0013
1,2-Dibromoethane	0.008	0.04	0.005	< 0.0005	< 0.0008	< 0.0005	< 0.0006 UJ	< 0.0006	< 0.0005	< 0.0005
1,2-Dichlorobenzene	5,300	59,000	17	< 0.0005	< 0.0008	< 0.0005	< 0.0006 UJ	< 0.0006	< 0.0005	< 0.0005
1,2-Dichloroethane	0.9	3	0.005	< 0.0005	< 0.0008	< 0.0005	< 0.0006 UJ	< 0.0006	< 0.0005	< 0.0005
1,2-Dichloropropane	2	5	0.005	< 0.0005	< 0.0008	< 0.0005	< 0.0006 UJ	< 0.0006	< 0.0005	< 0.0005
1,3,5-Trimethylbenzene	NLE	NLE	NLE	< 0.0005	< 0.0008	< 0.0005	< 0.0006 UJ	< 0.0006	< 0.0005	< 0.0005
1,3-Dichlorobenzene	5,300	59,000	19	< 0.0005	< 0.0008	< 0.0005	< 0.0006 UJ	< 0.0006	< 0.0005	< 0.0005
1,3-Dichloropropane	NLE	NLE	NLE	< 0.0005	< 0.0008	< 0.0005	< 0.0006 UJ	< 0.0006	< 0.0005	< 0.0005
1,4-Dichlorobenzene	5	13	2	< 0.0005	< 0.0008	< 0.0005	< 0.0006 UJ	< 0.0006	< 0.0005	< 0.0005
2,2-Dichloropropane	NLE	NLE	NLE	< 0.0005	< 0.0008	< 0.0005	< 0.0006 UJ	< 0.0006	< 0.0005	< 0.0005
2-Chlorotoluene	NLE	NLE	NLE	< 0.0005	< 0.0008	< 0.0005	< 0.0006 UJ	< 0.0006	< 0.0005	< 0.0005
Acetone	70,000	NLE	19	**0.018**	**0.054**	**0.007**	**0.015 J-**	< 0.0029	**0.025**	**0.015**
Benzene	2	5	0.005	< 0.0005	< 0.0008	< 0.0005	< 0.0006 UJ	< 0.0006	< 0.0005	< 0.0005
Bromobenzene	NLE	NLE	NLE	< 0.0005	< 0.0008	< 0.0005	< 0.0006 UJ	< 0.0006	< 0.0005	< 0.0005
Bromochloromethane	NLE	NLE	NLE	< 0.0005	< 0.0008	< 0.0005	< 0.0006 UJ	< 0.0006	< 0.0005	< 0.0005
Bromodichloromethane	1	3	0.005	< 0.0005	< 0.0008	< 0.0005	< 0.0006 UJ	< 0.0006	< 0.0005	< 0.0005
Bromoform	81	280	0.03	< 0.0005	< 0.0008	< 0.0005	< 0.0006 UJ	< 0.0006	< 0.0005	< 0.0005
Carbon tetrachloride	2	4	0.005	< 0.0005	< 0.0008	< 0.0005	< 0.0006 UJ	< 0.0006	< 0.0005	< 0.0005
Chlorobenzene	510	7,400	0.6	< 0.0005	< 0.0008	< 0.0005	< 0.0006 UJ	< 0.0006	< 0.0005	< 0.0005
Chlorodibromomethane	3	8	0.005	< 0.0005	< 0.0008	< 0.0005	< 0.0006 UJ	< 0.0006	< 0.0005	< 0.0005
Chloroethane	220	1,100	NLE	< 0.0012	< 0.0021	< 0.0013	< 0.0015 UJ	< 0.0014	< 0.0014	< 0.0013
Chloroform	0.6	2	0.4	< 0.0005	< 0.0008	< 0.0005	< 0.0006 UJ	< 0.0006	< 0.0005	< 0.0005
Cis-1,2-Dichloroethene	230	560	0.3	< 0.0005	< 0.0008	< 0.0005	< 0.0006 UJ	< 0.0006	< 0.0005	< 0.0005
Cis-1,3-Dichloropropene	NLE	NLE	NLE	< 0.0005	< 0.0008	< 0.0005	< 0.0006 UJ	< 0.0006	< 0.0005	< 0.0005
Cymene	NLE	NLE	NLE	< 0.0005	< 0.0008	< 0.0005	< 0.0006 UJ	< 0.0006	< 0.0005	< 0.0005
Dichlorodifluoromethane	490	230,000	39	< 0.0005	< 0.0008	< 0.0005	< 0.0006 UJ	< 0.0006	< 0.0005	< 0.0005
Ethyl benzene	7,800	110,000	13	< 0.0005	< 0.0008	< 0.0005	< 0.0006 UJ	< 0.0006	< 0.0005	< 0.0005
Hexachlorobutadiene	6	25	0.9	< 0.0005	< 0.0008	< 0.0005	< 0.0006 UJ	< 0.0006	< 0.0005	< 0.0005
Isopropylbenzene	NLE	NLE	NLE	< 0.0005	< 0.0008	< 0.0005	< 0.0006 UJ	< 0.0006	< 0.0005	< 0.0005
Meta/Para Xylene	NLE	NLE	NLE	< 0.001	< 0.0016	< 0.001	< 0.0012 UJ	< 0.0012	< 0.0011	< 0.001
Methyl bromide	25	59	0.04	< 0.0005	< 0.0008	< 0.0005	< 0.0006 UJ	< 0.0006	< 0.0005	< 0.0005
Methyl butyl ketone	NLE	NLE	NLE	< 0.0025	< 0.0041	< 0.0026	< 0.0029 UJ	< 0.0029	< 0.0027	< 0.0026
Methyl chloride	4	12	NLE	< 0.0005	< 0.0008	< 0.0005	< 0.0006 UJ	< 0.0006	< 0.0005	< 0.0005
Methyl ethyl ketone	3,100	44,000	0.9	< 0.0025	< 0.0041	< 0.0026	< 0.0029 UJ	< 0.0029	**0.0026 J**	< 0.0026
Methyl isobutyl ketone	NLE	NLE	NLE	< 0.0025	< 0.0041	< 0.0026	< 0.0029 UJ	< 0.0029	< 0.0027	< 0.0026
Methyl Tertbutyl Ether	110	320	0.2	< 0.0005	< 0.0008	< 0.0005	< 0.0006 UJ	< 0.0006	**0.0003 J**	< 0.0005
Methylene chloride	46	230	0.01	< 0.0005	< 0.0008	< 0.0005	< 0.0006 UJ	< 0.0006	< 0.0005	< 0.0005
Naphthalene	6	17	25	< 0.0005	< 0.0008	< 0.0005	< 0.0006 UJ	< 0.0006	< 0.0005	< 0.0005
n-Butylbenzene	NLE	NLE	NLE	< 0.0005	< 0.0008	< 0.0005	< 0.0006 UJ	< 0.0006	< 0.0005	< 0.0005
Ortho Xylene	NLE	NLE	NLE	< 0.0005	< 0.0008	< 0.0005	< 0.0006 UJ	< 0.0006	< 0.0005	< 0.0005
p-Chlorotoluene	NLE	NLE	NLE	< 0.0005	< 0.0008	< 0.0005	< 0.0006 UJ	< 0.0006	< 0.0005	< 0.0005
Propylbenzene	NLE	NLE	NLE	< 0.0005	< 0.0008	< 0.0005	< 0.0006 UJ	< 0.0006	< 0.0005	< 0.0005
sec-Butylbenzene	NLE	NLE	NLE	< 0.0005	< 0.0008	< 0.0005	< 0.0006 UJ	< 0.0006	< 0.0005	< 0.0005
Styrene	90	260	3	< 0.0005	< 0.0008	< 0.0005	< 0.0006 UJ	< 0.0006	< 0.0005	< 0.0005
Tert Butyl Alcohol	1,400	11,000	0.3	< 0.0025	< 0.0041	< 0.0026	< 0.0029 UJ	< 0.0029	< 0.0027	< 0.0026
tert-Butylbenzene	NLE	NLE	NLE	< 0.0005	< 0.0008	< 0.0005	< 0.0006 UJ	< 0.0006	< 0.0005	< 0.0005
Tetrachloroethene	43	1,500	0.005	**0.072**	< 0.0008	**2.1**	**1.5**	< 0.0006	**0.0007 J**	**0.0015**
Toluene	6,300	91,000	7	**0.0028**	**0.0027**	**0.0024**	**0.0023 J-**	**0.0061**	**0.0028**	**0.0008 J**
Trans-1,2-Dichloroethene	300	720	0.6	< 0.0005	< 0.0008	< 0.0005	< 0.0006 UJ	< 0.0006	< 0.0005	< 0.0005
Trans-1,3-Dichloropropene	NLE	NLE	NLE	< 0.0005	< 0.0008	< 0.0005	< 0.0006 UJ	< 0.0006	< 0.0005	< 0.0005
Trichloroethene	3	10	0.01	**0.001 J**	< 0.0008	**0.0036**	**0.0018 J-**	< 0.0006	< 0.0005	< 0.0005
Trichlorofluoromethane	23,000	340,000	34	< 0.0005	< 0.0008	< 0.0005	< 0.0006 UJ	< 0.0006	< 0.0005	< 0.0005
Vinyl chloride	0.7	2	0.005	< 0.0005	< 0.0008	< 0.0005	< 0.0006 UJ	< 0.0006	< 0.0005	< 0.0005
TIC VOCs (mg/kg)										
2,3-Dimethylbutane	NLE	NLE	NLE	NA	NA	NA	NA	NA	NA	NA
2-Methylbutane	NLE	NLE	NLE	NA	NA	NA	NA	NA	NA	NA
Ethyl acetate	NLE	NLE	NLE	NA	NA	NA	NA	NA	NA	NA
TIC Unknown	NLE	NLE	NLE	NA	NA	NA	NA	NA	NA	NA
TIC VOCs (mg/kg)										
TIC Unknown	NLE	NLE	NLE	NA	NA	NA	NA	NA	NA	NA

TABLE 1
SOIL SAMPLING RESULTS - COMPARISON TO NJDEP CRITERIA
SITE FTMM68
FORT MONMOUTH, NEW JERSEY

Loc ID	NJ Residential Direct Contact SRS	NJ Non-Residential Direct Contact SRS	NJ Impact to GW Soil Screening Level	FTMM68-SB07	FTMM68-SB08				FTMM68-SB09	
Sample ID				**FTMM-68-SS-SB7-41.0-41.5**	**FTMM-68-SS-SB8-8.0-8.5**	**FTMM-68-SS-SB8-13.5-14.0**	**FTMM-68-SS-SB8-26.0-26.5**	**FTMM-68-SS-SB8-40.0-40.5**	**FTMM-68-SS-SB9-18.0-18.5**	**FTMM-68-SS-SB9-28.0-28.5**
Depth (bgs)				**41-41.5**	**8-8.5**	**13.5-14**	**26-26.5**	**40-40.5**	**18-18.5**	**28-28.5**
Sample Date				**1/3/2017**	**1/4/2017**	**1/4/2017**	**1/4/2017**	**1/4/2017**	**1/4/2017**	**1/4/2017**
Volatile Organic Compounds (mg/kg)										
1,1,1,2-Tetrachloroethane	NLE	NLE	NLE	< 0.0004	< 0.0004	< 0.0006	< 0.0005	< 0.0004	< 0.0005	< 0.0006
1,1,1-Trichloroethane	160,000	NLE	0.3	< 0.0004	< 0.0004	< 0.0006	< 0.0005	< 0.0004	< 0.0005	< 0.0006
1,1,2,2-Tetrachloroethane	1	3	0.007	< 0.0004	< 0.0004	< 0.0006	< 0.0005	< 0.0004	< 0.0005	< 0.0006
1,1,2-Trichloroethane	2	6	0.02	< 0.0004	< 0.0004	< 0.0006	< 0.0005	< 0.0004	< 0.0005	< 0.0006
1,1-Dichloroethane	8	24	0.2	< 0.0004	< 0.0004	< 0.0006	< 0.0005	< 0.0004	< 0.0005	< 0.0006
1,1-Dichloroethene	11	150	0.008	< 0.0004	< 0.0004	< 0.0006	< 0.0005	< 0.0004	< 0.0005	< 0.0006
1,1-Dichloropropene	NLE	NLE	NLE	< 0.0004	< 0.0004	< 0.0006	< 0.0005	< 0.0004	< 0.0005	< 0.0006
1,2,3-Trichlorobenzene	NLE	NLE	NLE	< 0.0004	< 0.0004	< 0.0006	< 0.0005	< 0.0004	< 0.0005	< 0.0006
1,2,3-Trichloropropane	NLE	NLE	NLE	< 0.0004	< 0.0004	< 0.0006	< 0.0005	< 0.0004	< 0.0005	< 0.0006
1,2,4-Trichlorobenzene	73	820	0.7	< 0.0004	< 0.0004	< 0.0006	< 0.0005	< 0.0004	< 0.0005	< 0.0006
1,2,4-Trimethylbenzene	NLE	NLE	NLE	< 0.0004	< 0.0004	< 0.0006	< 0.0005	< 0.0004	< 0.0005	< 0.0006
1,2-Dibromo-3-chloropropane	0.08	0.2	0.005	< 0.001	< 0.001	< 0.0014	< 0.0012	< 0.0009	< 0.0013	< 0.0016
1,2-Dibromoethane	0.008	0.04	0.005	< 0.0004	< 0.0004	< 0.0006	< 0.0005	< 0.0004	< 0.0005	< 0.0006
1,2-Dichlorobenzene	5,300	59,000	17	< 0.0004	< 0.0004	< 0.0006	< 0.0005	< 0.0004	< 0.0005	< 0.0006
1,2-Dichloroethane	0.9	3	0.005	**0.0023**	< 0.0004	< 0.0006	< 0.0005	**0.0008**	< 0.0005	< 0.0006
1,2-Dichloropropane	2	5	0.005	< 0.0004	< 0.0004	< 0.0006	< 0.0005	< 0.0004	< 0.0005	< 0.0006
1,3,5-Trimethylbenzene	NLE	NLE	NLE	< 0.0004	< 0.0004	< 0.0006	< 0.0005	< 0.0004	< 0.0005	< 0.0006
1,3-Dichlorobenzene	5,300	59,000	19	< 0.0004	< 0.0004	< 0.0006	< 0.0005	< 0.0004	< 0.0005	< 0.0006
1,3-Dichloropropane	NLE	NLE	NLE	< 0.0004	< 0.0004	< 0.0006	< 0.0005	< 0.0004	< 0.0005	< 0.0006
1,4-Dichlorobenzene	5	13	2	< 0.0004	< 0.0004	< 0.0006	< 0.0005	< 0.0004	< 0.0005	< 0.0006
2,2-Dichloropropane	NLE	NLE	NLE	< 0.0004	< 0.0004	< 0.0006	< 0.0005	< 0.0004	< 0.0005	< 0.0006
2-Chlorotoluene	NLE	NLE	NLE	< 0.0004	< 0.0004	< 0.0006	< 0.0005	< 0.0004	< 0.0005	< 0.0006
Acetone	70,000	NLE	19	**0.034**	**0.0059**	**0.095**	**0.014**	**0.0059**	**0.029**	**0.049**
Benzene	2	5	0.005	< 0.0004	< 0.0004	< 0.0006	< 0.0005	< 0.0004	< 0.0005	< 0.0006
Bromobenzene	NLE	NLE	NLE	< 0.0004	< 0.0004	< 0.0006	< 0.0005	< 0.0004	< 0.0005	< 0.0006
Bromochloromethane	NLE	NLE	NLE	< 0.0004	< 0.0004	< 0.0006	< 0.0005	< 0.0004	< 0.0005	< 0.0006
Bromodichloromethane	1	3	0.005	< 0.0004	< 0.0004	< 0.0006	< 0.0005	< 0.0004	< 0.0005	< 0.0006
Bromoform	81	280	0.03	< 0.0004	< 0.0004	< 0.0006	< 0.0005	< 0.0004	< 0.0005	< 0.0006
Carbon tetrachloride	2	4	0.005	< 0.0004	< 0.0004	< 0.0006	< 0.0005	< 0.0004	< 0.0005	< 0.0006
Chlorobenzene	510	7,400	0.6	< 0.0004	< 0.0004	< 0.0006	< 0.0005	< 0.0004	< 0.0005	< 0.0006
Chlorodibromomethane	3	8	0.005	< 0.0004	< 0.0004	< 0.0006	< 0.0005	< 0.0004	< 0.0005	< 0.0006
Chloroethane	220	1,100	NLE	< 0.001	< 0.001	< 0.0014	< 0.0012	< 0.0009	< 0.0013	< 0.0016
Chloroform	0.6	2	0.4	< 0.0004	< 0.0004	< 0.0006	< 0.0005	< 0.0004	< 0.0005	< 0.0006
Cis-1,2-Dichloroethene	230	560	0.3	< 0.0004	< 0.0004	< 0.0006	< 0.0005	< 0.0004	< 0.0005	< 0.0006
Cis-1,3-Dichloropropene	NLE	NLE	NLE	< 0.0004	< 0.0004	< 0.0006	< 0.0005	< 0.0004	< 0.0005	< 0.0006
Cymene	NLE	NLE	NLE	< 0.0004	< 0.0004	< 0.0006	< 0.0005	< 0.0004	< 0.0005	< 0.0006
Dichlorodifluoromethane	490	230,000	39	< 0.0004	< 0.0004	< 0.0006	< 0.0005	< 0.0004	< 0.0005	< 0.0006
Ethyl benzene	7,800	110,000	13	< 0.0004	< 0.0004	< 0.0006	< 0.0005	< 0.0004	< 0.0005	< 0.0006
Hexachlorobutadiene	6	25	0.9	< 0.0004	< 0.0004	< 0.0006	< 0.0005	< 0.0004	< 0.0005	< 0.0006
Isopropylbenzene	NLE	NLE	NLE	**0.0003 J**	< 0.0004	< 0.0006	< 0.0005	< 0.0004	**0.0006 J**	< 0.0006
Meta/Para Xylene	NLE	NLE	NLE	< 0.0008	< 0.0008	< 0.0011	< 0.001	< 0.0007	< 0.001	< 0.0013
Methyl bromide	25	59	0.04	< 0.0004	< 0.0004	< 0.0006	< 0.0005	< 0.0004	< 0.0005	< 0.0006
Methyl butyl ketone	NLE	NLE	NLE	< 0.002	< 0.002	< 0.0028	< 0.0024	< 0.0019	< 0.0026	< 0.0032
Methyl chloride	4	12	NLE	< 0.0004	< 0.0004	< 0.0006	< 0.0005	< 0.0004	< 0.0005	< 0.0006
Methyl ethyl ketone	3,100	44,000	0.9	< 0.002	< 0.002	< 0.0028	< 0.0024	< 0.0019	**0.0042 J**	**0.0022 J**
Methyl isobutyl ketone	NLE	NLE	NLE	< 0.002	< 0.002	< 0.0028	< 0.0024	< 0.0019	< 0.0026	< 0.0032
Methyl Tertbutyl Ether	110	320	0.2	**0.0005 J**	< 0.0004	< 0.0006	< 0.0005	< 0.0004	< 0.0005	**0.0005 J**
Methylene chloride	46	230	0.01	< 0.0004	**0.0006 J**	< 0.0006	< 0.0005	< 0.0004	< 0.0005	**0.0054**
Naphthalene	6	17	25	**0.0004 J**	< 0.0004	< 0.0006	< 0.0005	< 0.0004	< 0.0005	< 0.0006
n-Butylbenzene	NLE	NLE	NLE	< 0.0004	< 0.0004	< 0.0006	< 0.0005	< 0.0004	< 0.0005	< 0.0006
Ortho Xylene	NLE	NLE	NLE	< 0.0004	< 0.0004	< 0.0006	< 0.0005	< 0.0004	< 0.0005	< 0.0006
p-Chlorotoluene	NLE	NLE	NLE	< 0.0004	< 0.0004	< 0.0006	< 0.0005	< 0.0004	< 0.0005	< 0.0006
Propylbenzene	NLE	NLE	NLE	< 0.0004	< 0.0004	< 0.0006	< 0.0005	< 0.0004	< 0.0005	< 0.0006
sec-Butylbenzene	NLE	NLE	NLE	< 0.0004	< 0.0004	< 0.0006	< 0.0005	< 0.0004	< 0.0005	< 0.0006
Styrene	90	260	3	< 0.0004	< 0.0004	< 0.0006	< 0.0005	< 0.0004	< 0.0005	< 0.0006
Tert Butyl Alcohol	1,400	11,000	0.3	**0.011**	< 0.002	< 0.0028	< 0.0024	< 0.0019	< 0.0026	< 0.0032
tert-Butylbenzene	NLE	NLE	NLE	< 0.0004	< 0.0004	< 0.0006	< 0.0005	< 0.0004	< 0.0005	< 0.0006
Tetrachloroethene	43	1,500	0.005	**0.0003 J**	< 0.0004	**0.0006 J**	< 0.0005	< 0.0004	**0.0043**	< 0.0006
Toluene	6,300	91,000	7	**0.0049**	**0.0023**	**0.0007 J**	**0.0022**	**0.0011**	**0.0033**	**0.0004 J**
Trans-1,2-Dichloroethene	300	720	0.6	< 0.0004	< 0.0004	< 0.0006	< 0.0005	< 0.0004	< 0.0005	< 0.0006
Trans-1,3-Dichloropropene	NLE	NLE	NLE	< 0.0004	< 0.0004	< 0.0006	< 0.0005	< 0.0004	< 0.0005	< 0.0006
Trichloroethene	3	10	0.01	< 0.0004	< 0.0004	< 0.0006	< 0.0005	< 0.0004	< 0.0005	< 0.0006
Trichlorofluoromethane	23,000	340,000	34	< 0.0004	< 0.0004	< 0.0006	< 0.0005	< 0.0004	< 0.0005	**0.0022**
Vinyl chloride	0.7	2	0.005	< 0.0004	< 0.0004	< 0.0006	< 0.0005	< 0.0004	< 0.0005	< 0.0006
TIC VOCs (mg/kg)										
2,3-Dimethylbutane	NLE	NLE	NLE	NA	NA	NA	NA	NA	**0.0032 JN**	NA
2-Methylbutane	NLE	NLE	NLE	NA	NA	NA	NA	NA	NA	NA
Ethyl acetate	NLE	NLE	NLE	NA	NA	**0.0021 JN**	NA	NA	NA	NA
TIC Unknown	NLE	NLE	NLE	NA	NA	NA	NA	NA	NA	NA
TIC VOCs (mg/kg)										
TIC Unknown	NLE	NLE	NLE	NA	NA	NA	NA	NA	NA	NA

TABLE 1
SOIL SAMPLING RESULTS - COMPARISON TO NJDEP CRITERIA
SITE FTMM68
FORT MONMOUTH, NEW JERSEY

Loc ID	NJ Residential Direct Contact SRS	NJ Non-Residential Direct Contact SRS	NJ Impact to GW Soil Screening Level	FTMM68-SB09	FTMM68-SB10					
Sample ID				**FTMM-68-SS-SB9-38.0-38.5**	**FTMM-68-SS-SB10-0.75-1.25**	**FTMM-68-SS-SB10-8.0-8.5**	**FTMM-68-SS-SB10-19.0-19.5**	**FTMM-68-SS-SB10-26.0-26.5**	**FTMM-68-SS-SB10-34.0-34.5**	**FTMM-68-SS-SB10-36.5-37.0**
Depth (bgs)				**38-38.5**	**0.75-1.25**	**8-8.5**	**19-19.5**	**26-26.5**	**34-34.5**	**36.5-37**
Sample Date				**1/4/2017**	**1/4/2017**	**1/4/2017**	**1/4/2017**	**1/4/2017**	**1/4/2017**	**1/4/2017**
Volatile Organic Compounds (mg/kg)										
1,1,1,2-Tetrachloroethane	NLE	NLE	NLE	< 0.0004	< 0.0004	< 0.0005	< 0.0008	< 0.0005	< 0.0007 UJ	< 0.0004
1,1,1-Trichloroethane	160,000	NLE	0.3	< 0.0004	< 0.0004	< 0.0005	< 0.0008	< 0.0005	< 0.0007 UJ	< 0.0004
1,1,2,2-Tetrachloroethane	1	3	0.007	< 0.0004	< 0.0004	< 0.0005	< 0.0008	< 0.0005	< 0.0007 UJ	< 0.0004
1,1,2-Trichloroethane	2	6	0.02	< 0.0004	< 0.0004	< 0.0005	< 0.0008	< 0.0005	< 0.0007 UJ	< 0.0004
1,1-Dichloroethane	8	24	0.2	< 0.0004	< 0.0004	< 0.0005	< 0.0008	< 0.0005	< 0.0007 UJ	< 0.0004
1,1-Dichloroethene	11	150	0.008	< 0.0004	< 0.0004	< 0.0005	**0.0012 J**	**0.001 J**	< 0.0007 UJ	< 0.0004
1,1-Dichloropropene	NLE	NLE	NLE	< 0.0004	< 0.0004	< 0.0005	< 0.0008	< 0.0005	< 0.0007 UJ	< 0.0004
1,2,3-Trichlorobenzene	NLE	NLE	NLE	< 0.0004	< 0.0004	< 0.0005	< 0.0008	< 0.0005	< 0.0007 UJ	< 0.0004
1,2,3-Trichloropropane	NLE	NLE	NLE	< 0.0004	< 0.0004	< 0.0005	< 0.0008	< 0.0005	< 0.0007 UJ	< 0.0004
1,2,4-Trichlorobenzene	73	820	0.7	< 0.0004	< 0.0004	< 0.0005	< 0.0008	< 0.0005	< 0.0007 UJ	< 0.0004
1,2,4-Trimethylbenzene	NLE	NLE	NLE	< 0.0004	< 0.0004	< 0.0005	< 0.0008	< 0.0005	< 0.0007 UJ	< 0.0004
1,2-Dibromo-3-chloropropane	0.08	0.2	0.005	< 0.0011	< 0.0011	< 0.0012	< 0.002	< 0.0014	< 0.0016 UJ	< 0.0011
1,2-Dibromoethane	0.008	0.04	0.005	< 0.0004	< 0.0004	< 0.0005	< 0.0008	< 0.0005	< 0.0007 UJ	< 0.0004
1,2-Dichlorobenzene	5,300	59,000	17	< 0.0004	< 0.0004	< 0.0005	< 0.0008	< 0.0005	< 0.0007 UJ	< 0.0004
1,2-Dichloroethane	0.9	3	0.005	**0.0002 J**	< 0.0004	< 0.0005	< 0.0008	< 0.0005	< 0.0007 UJ	< 0.0004
1,2-Dichloropropane	2	5	0.005	< 0.0004	< 0.0004	< 0.0005	< 0.0008	< 0.0005	< 0.0007 UJ	< 0.0004
1,3,5-Trimethylbenzene	NLE	NLE	NLE	< 0.0004	< 0.0004	< 0.0005	< 0.0008	< 0.0005	< 0.0007 UJ	< 0.0004
1,3-Dichlorobenzene	5,300	59,000	19	< 0.0004	< 0.0004	< 0.0005	< 0.0008	< 0.0005	< 0.0007 UJ	< 0.0004
1,3-Dichloropropane	NLE	NLE	NLE	< 0.0004	< 0.0004	< 0.0005	< 0.0008	< 0.0005	< 0.0007 UJ	< 0.0004
1,4-Dichlorobenzene	5	13	2	< 0.0004	< 0.0004	< 0.0005	< 0.0008	< 0.0005	< 0.0007 UJ	< 0.0004
2,2-Dichloropropane	NLE	NLE	NLE	< 0.0004	< 0.0004	< 0.0005	< 0.0008	< 0.0005	< 0.0007 UJ	< 0.0004
2-Chlorotoluene	NLE	NLE	NLE	< 0.0004	< 0.0004	< 0.0005	< 0.0008	< 0.0005	< 0.0007 UJ	< 0.0004
Acetone	70,000	NLE	19	< 0.0022	< 0.0022	**0.034**	**0.054 J+**	**0.032**	**0.0051 J**	**0.0032 J**
Benzene	2	5	0.005	**0.0013**	< 0.0004	< 0.0005	< 0.0008	< 0.0005	< 0.0007 UJ	< 0.0004
Bromobenzene	NLE	NLE	NLE	< 0.0004	< 0.0004	< 0.0005	< 0.0008	< 0.0005	< 0.0007 UJ	< 0.0004
Bromochloromethane	NLE	NLE	NLE	< 0.0004	< 0.0004	< 0.0005	< 0.0008	< 0.0005	< 0.0007 UJ	< 0.0004
Bromodichloromethane	1	3	0.005	< 0.0004	< 0.0004	< 0.0005	< 0.0008	< 0.0005	< 0.0007 UJ	< 0.0004
Bromoform	81	280	0.03	< 0.0004	< 0.0004	< 0.0005	< 0.0008	< 0.0005	< 0.0007 UJ	< 0.0004
Carbon tetrachloride	2	4	0.005	< 0.0004	< 0.0004	< 0.0005	< 0.0008	< 0.0005	< 0.0007 UJ	< 0.0004
Chlorobenzene	510	7,400	0.6	< 0.0004	< 0.0004	< 0.0005	< 0.0008	< 0.0005	< 0.0007 UJ	< 0.0004
Chlorodibromomethane	3	8	0.005	< 0.0004	< 0.0004	< 0.0005	< 0.0008	< 0.0005	< 0.0007 UJ	< 0.0004
Chloroethane	220	1,100	NLE	< 0.0011	< 0.0011	< 0.0012	< 0.002	< 0.0014	< 0.0016 UJ	< 0.0011
Chloroform	0.6	2	0.4	< 0.0004	< 0.0004	< 0.0005	< 0.0008	< 0.0005	< 0.0007 UJ	< 0.0004
Cis-1,2-Dichloroethene	230	560	0.3	< 0.0004	< 0.0004	< 0.0005	< 0.0008	< 0.0005	**0.0008 J**	**0.0005 J**
Cis-1,3-Dichloropropene	NLE	NLE	NLE	< 0.0004	< 0.0004	< 0.0005	< 0.0008	< 0.0005	< 0.0007 UJ	< 0.0004
Cymene	NLE	NLE	NLE	< 0.0004	< 0.0004	< 0.0005	< 0.0008	< 0.0005	< 0.0007 UJ	< 0.0004
Dichlorodifluoromethane	490	230,000	39	< 0.0004	< 0.0004	< 0.0005	< 0.0008	< 0.0005	< 0.0007 UJ	< 0.0004
Ethyl benzene	7,800	110,000	13	< 0.0004	< 0.0004	< 0.0005	< 0.0008	< 0.0005	< 0.0007 UJ	< 0.0004
Hexachlorobutadiene	6	25	0.9	< 0.0004	< 0.0004	< 0.0005	< 0.0008	< 0.0005	< 0.0007 UJ	< 0.0004
Isopropylbenzene	NLE	NLE	NLE	**0.0011**	< 0.0004	< 0.0005	< 0.0008	< 0.0005	< 0.0007 UJ	< 0.0004
Meta/Para Xylene	NLE	NLE	NLE	< 0.0009	< 0.0009	< 0.0009	< 0.0016	< 0.0011	< 0.0013 UJ	< 0.0009
Methyl bromide	25	59	0.04	< 0.0004	< 0.0004	< 0.0005	< 0.0008	< 0.0005	< 0.0007 UJ	< 0.0004
Methyl butyl ketone	NLE	NLE	NLE	< 0.0022	< 0.0022	< 0.0024	< 0.0039	< 0.0027	< 0.0033 UJ	< 0.0021
Methyl chloride	4	12	NLE	< 0.0004	< 0.0004	< 0.0005	< 0.0008	< 0.0005	< 0.0007 UJ	< 0.0004
Methyl ethyl ketone	3,100	44,000	0.9	< 0.0022	< 0.0022	< 0.0024	< 0.0039	< 0.0027	< 0.0033 UJ	< 0.0021
Methyl isobutyl ketone	NLE	NLE	NLE	< 0.0022	< 0.0022	< 0.0024	< 0.0039	< 0.0027	< 0.0033 UJ	< 0.0021
Methyl Tertbutyl Ether	110	320	0.2	< 0.0004	< 0.0004	< 0.0005	< 0.0008	< 0.0005	< 0.0007 UJ	< 0.0004
Methylene chloride	46	230	0.01	< 0.0004	< 0.0004	< 0.0005	< 0.0008	< 0.0005	< 0.0007 UJ	< 0.0004
Naphthalene	6	17	25	< 0.0004	< 0.0004	< 0.0005	< 0.0008	< 0.0005	< 0.0007 UJ	< 0.0004
n-Butylbenzene	NLE	NLE	NLE	< 0.0004	< 0.0004	< 0.0005	< 0.0008	< 0.0005	< 0.0007 UJ	< 0.0004
Ortho Xylene	NLE	NLE	NLE	< 0.0004	< 0.0004	< 0.0005	< 0.0008	< 0.0005	< 0.0007 UJ	< 0.0004
p-Chlorotoluene	NLE	NLE	NLE	< 0.0004	< 0.0004	< 0.0005	< 0.0008	< 0.0005	< 0.0007 UJ	< 0.0004
Propylbenzene	NLE	NLE	NLE	**0.0006 J**	< 0.0004	< 0.0005	< 0.0008	< 0.0005	< 0.0007 UJ	< 0.0004
sec-Butylbenzene	NLE	NLE	NLE	< 0.0004	< 0.0004	< 0.0005	< 0.0008	< 0.0005	< 0.0007 UJ	< 0.0004
Styrene	90	260	3	< 0.0004	< 0.0004	< 0.0005	< 0.0008	< 0.0005	< 0.0007 UJ	< 0.0004
Tert Butyl Alcohol	1,400	11,000	0.3	**0.0032 J**	< 0.0022	< 0.0024	< 0.0039	< 0.0027	< 0.0033 UJ	< 0.0021
tert-Butylbenzene	NLE	NLE	NLE	< 0.0004	< 0.0004	< 0.0005	< 0.0008	< 0.0005	< 0.0007 UJ	< 0.0004
Tetrachloroethene	43	1,500	0.005	**0.0021**	< 0.0004	**0.0004 J**	**2.2**	**2.5**	**0.14**	**0.14**
Toluene	6,300	91,000	7	**0.0033**	**0.001**	**0.0055**	**0.0009 J**	**0.0038**	**0.0016 J-**	**0.0027**
Trans-1,2-Dichloroethene	300	720	0.6	< 0.0004	< 0.0004	< 0.0005	< 0.0008	< 0.0005	< 0.0007 UJ	< 0.0004
Trans-1,3-Dichloropropene	NLE	NLE	NLE	< 0.0004	< 0.0004	< 0.0005	< 0.0008	< 0.0005	< 0.0007 UJ	< 0.0004
Trichloroethene	3	10	0.01	**0.0004 J**	< 0.0004	< 0.0005	**0.0069 J+**	**0.0087**	**0.0034 J-**	**0.0016**
Trichlorofluoromethane	23,000	340,000	34	< 0.0004	< 0.0004	< 0.0005	< 0.0008	< 0.0005	< 0.0007 UJ	< 0.0004
Vinyl chloride	0.7	2	0.005	< 0.0004	< 0.0004	< 0.0005	< 0.0008	< 0.0005	< 0.0007 UJ	< 0.0004
TIC VOCs (mg/kg)										
2,3-Dimethylbutane	NLE	NLE	NLE	**0.0071 JN**	NA	NA	NA	NA	NA	NA
2-Methylbutane	NLE	NLE	NLE	**0.0085 JN**	NA	NA	NA	NA	NA	NA
Ethyl acetate	NLE	NLE	NLE	NA	NA	NA	NA	NA	NA	NA
TIC Unknown	NLE	NLE	NLE	NA	NA	NA	NA	NA	**0.1466 J**	NA
TIC VOCs (mg/kg)										
TIC Unknown	NLE	NLE	NLE	NA	NA	NA	NA	NA	NA	NA

TABLE 1
SOIL SAMPLING RESULTS - COMPARISON TO NJDEP CRITERIA
SITE FTMM68
FORT MONMOUTH, NEW JERSEY

Loc ID	NJ Residential Direct Contact SRS	NJ Non-Residential Direct Contact SRS	NJ Impact to GW Soil Screening Level	FTMM68-SB11						
Sample ID				**FTMM-68-SS-SB11-2.5-3.0**	**FTMM-68-SS-SB11-7.5-8.0**	**FTMM-68-SS-SB11-13.5-14.0**	**FTMM-68-SS-SB11-17.5-18.0**	**FTMM-68-SS-SB11-23.5-24.0**	**FTMM-68-SS-SB110-23.5-24.0**	**FTMM-68-SS-SB11-36.0-36.5**
Depth (bgs)				**2.5-3**	**7.5-8**	**13.5-14**	**17.5-18**	**23.5-24**	**23.5-24**	**36-36.5**
Sample Date				**1/4/2017**	**1/4/2017**	**1/4/2017**	**1/4/2017**	**1/4/2017**	**1/4/2017**	**1/4/2017**
Volatile Organic Compounds (mg/kg)										
1,1,1,2-Tetrachloroethane	NLE	NLE	NLE	< 0.0004	< 0.0004	< 0.0006 UJ	< 0.0004	< 0.0005 UJ	< 0.0007 UJ	< 0.0006
1,1,1-Trichloroethane	160,000	NLE	0.3	< 0.0004	< 0.0004	< 0.0006 UJ	< 0.0004	< 0.0005 UJ	< 0.0007 UJ	< 0.0006
1,1,2,2-Tetrachloroethane	1	3	0.007	< 0.0004	< 0.0004	< 0.0006 UJ	< 0.0004	< 0.0005 UJ	< 0.0007 UJ	< 0.0006
1,1,2-Trichloroethane	2	6	0.02	< 0.0004	< 0.0004	< 0.0006 UJ	< 0.0004	< 0.0005 UJ	< 0.0007 UJ	< 0.0006
1,1-Dichloroethane	8	24	0.2	< 0.0004	< 0.0004	< 0.0006 UJ	< 0.0004	< 0.0005 UJ	< 0.0007 UJ	< 0.0006
1,1-Dichloroethene	11	150	0.008	< 0.0004	< 0.0004	< 0.0006 UJ	< 0.0004	< 0.0005 UJ	**0.0012 J**	< 0.0006
1,1-Dichloropropene	NLE	NLE	NLE	< 0.0004	< 0.0004	< 0.0006 UJ	< 0.0004	< 0.0005 UJ	< 0.0007 UJ	< 0.0006
1,2,3-Trichlorobenzene	NLE	NLE	NLE	< 0.0004	< 0.0004	< 0.0006 UJ	< 0.0004	< 0.0005 UJ	< 0.0007 UJ	< 0.0006
1,2,3-Trichloropropane	NLE	NLE	NLE	< 0.0004	< 0.0004	< 0.0006 UJ	< 0.0004	< 0.0005 UJ	< 0.0007 UJ	< 0.0006
1,2,4-Trichlorobenzene	73	820	0.7	< 0.0004	< 0.0004	< 0.0006 UJ	< 0.0004	< 0.0005 UJ	< 0.0007 UJ	< 0.0006
1,2,4-Trimethylbenzene	NLE	NLE	NLE	< 0.0004	< 0.0004	< 0.0006 UJ	< 0.0004	< 0.0005 UJ	< 0.0007 UJ	< 0.0006
1,2-Dibromo-3-chloropropane	0.08	0.2	0.005	< 0.0009	< 0.001	< 0.0015 UJ	< 0.001	< 0.0012 UJ	< 0.0018 UJ	< 0.0016
1,2-Dibromoethane	0.008	0.04	0.005	< 0.0004	< 0.0004	< 0.0006 UJ	< 0.0004	< 0.0005 UJ	< 0.0007 UJ	< 0.0006
1,2-Dichlorobenzene	5,300	59,000	17	< 0.0004	< 0.0004	< 0.0006 UJ	< 0.0004	< 0.0005 UJ	< 0.0007 UJ	< 0.0006
1,2-Dichloroethane	0.9	3	0.005	< 0.0004	< 0.0004	< 0.0006 UJ	< 0.0004	< 0.0005 UJ	< 0.0007 UJ	**0.0025**
1,2-Dichloropropane	2	5	0.005	< 0.0004	< 0.0004	< 0.0006 UJ	< 0.0004	< 0.0005 UJ	< 0.0007 UJ	< 0.0006
1,3,5-Trimethylbenzene	NLE	NLE	NLE	< 0.0004	< 0.0004	< 0.0006 UJ	< 0.0004	< 0.0005 UJ	< 0.0007 UJ	< 0.0006
1,3-Dichlorobenzene	5,300	59,000	19	< 0.0004	< 0.0004	< 0.0006 UJ	< 0.0004	< 0.0005 UJ	< 0.0007 UJ	< 0.0006
1,3-Dichloropropane	NLE	NLE	NLE	< 0.0004	< 0.0004	< 0.0006 UJ	< 0.0004	< 0.0005 UJ	< 0.0007 UJ	< 0.0006
1,4-Dichlorobenzene	5	13	2	< 0.0004	< 0.0004	< 0.0006 UJ	< 0.0004	< 0.0005 UJ	< 0.0007 UJ	< 0.0006
2,2-Dichloropropane	NLE	NLE	NLE	< 0.0004	< 0.0004	< 0.0006 UJ	< 0.0004	< 0.0005 UJ	< 0.0007 UJ	< 0.0006
2-Chlorotoluene	NLE	NLE	NLE	< 0.0004	< 0.0004	< 0.0006 UJ	< 0.0004	< 0.0005 UJ	< 0.0007 UJ	< 0.0006
Acetone	70,000	NLE	19	**0.0084**	**0.0038 J**	**0.0033 J**	**0.0049**	**0.01 J**	**0.12 J**	**0.036**
Benzene	2	5	0.005	< 0.0004	< 0.0004	< 0.0006 UJ	< 0.0004	< 0.0005 UJ	< 0.0007 UJ	< 0.0006
Bromobenzene	NLE	NLE	NLE	< 0.0004	< 0.0004	< 0.0006 UJ	< 0.0004	< 0.0005 UJ	< 0.0007 UJ	< 0.0006
Bromochloromethane	NLE	NLE	NLE	< 0.0004	< 0.0004	< 0.0006 UJ	< 0.0004	< 0.0005 UJ	< 0.0007 UJ	< 0.0006
Bromodichloromethane	1	3	0.005	< 0.0004	< 0.0004	< 0.0006 UJ	< 0.0004	< 0.0005 UJ	< 0.0007 UJ	< 0.0006
Bromoform	81	280	0.03	< 0.0004	< 0.0004	< 0.0006 UJ	< 0.0004	< 0.0005 UJ	< 0.0007 UJ	< 0.0006
Carbon tetrachloride	2	4	0.005	< 0.0004	< 0.0004	< 0.0006 UJ	< 0.0004	< 0.0005 UJ	< 0.0007 UJ	< 0.0006
Chlorobenzene	510	7,400	0.6	< 0.0004	< 0.0004	< 0.0006 UJ	< 0.0004	< 0.0005 UJ	< 0.0007 UJ	< 0.0006
Chlorodibromomethane	3	8	0.005	< 0.0004	< 0.0004	< 0.0006 UJ	< 0.0004	< 0.0005 UJ	< 0.0007 UJ	< 0.0006
Chloroethane	220	1,100	NLE	< 0.0009	< 0.001	< 0.0015 UJ	< 0.001	< 0.0012 UJ	< 0.0018 UJ	< 0.0016
Chloroform	0.6	2	0.4	< 0.0004	< 0.0004	< 0.0006 UJ	< 0.0004	< 0.0005 UJ	< 0.0007 UJ	< 0.0006
Cis-1,2-Dichloroethene	230	560	0.3	< 0.0004	**0.0003 J**	< 0.0006 UJ	**0.0019**	**0.0013 J-**	**0.0011 J**	< 0.0006
Cis-1,3-Dichloropropene	NLE	NLE	NLE	< 0.0004	< 0.0004	< 0.0006 UJ	< 0.0004	< 0.0005 UJ	< 0.0007 UJ	< 0.0006
Cymene	NLE	NLE	NLE	< 0.0004	< 0.0004	< 0.0006 UJ	< 0.0004	< 0.0005 UJ	< 0.0007 UJ	< 0.0006
Dichlorodifluoromethane	490	230,000	39	< 0.0004	< 0.0004	< 0.0006 UJ	< 0.0004	< 0.0005 UJ	< 0.0007 UJ	< 0.0006
Ethyl benzene	7,800	110,000	13	< 0.0004	< 0.0004	< 0.0006 UJ	< 0.0004	< 0.0005 UJ	< 0.0007 UJ	< 0.0006
Hexachlorobutadiene	6	25	0.9	< 0.0004	< 0.0004	< 0.0006 UJ	< 0.0004	< 0.0005 UJ	< 0.0007 UJ	< 0.0006
Isopropylbenzene	NLE	NLE	NLE	< 0.0004	< 0.0004	< 0.0006 UJ	< 0.0004	< 0.0005 UJ	< 0.0007 UJ	< 0.0006
Meta/Para Xylene	NLE	NLE	NLE	< 0.0007	< 0.0008	< 0.0012 UJ	< 0.0008	< 0.001 UJ	< 0.0014 UJ	< 0.0013
Methyl bromide	25	59	0.04	< 0.0004	< 0.0004	< 0.0006 UJ	< 0.0004	< 0.0005 UJ	< 0.0007 UJ	< 0.0006
Methyl butyl ketone	NLE	NLE	NLE	< 0.0018	< 0.0019	< 0.0029 UJ	< 0.002	< 0.0024 UJ	< 0.0036 UJ	< 0.0032
Methyl chloride	4	12	NLE	< 0.0004	< 0.0004	< 0.0006 UJ	< 0.0004	< 0.0005 UJ	< 0.0007 UJ	< 0.0006
Methyl ethyl ketone	3,100	44,000	0.9	< 0.0018	< 0.0019	< 0.0029 UJ	< 0.002	< 0.0024 UJ	< 0.0036 UJ	**0.0022 J**
Methyl isobutyl ketone	NLE	NLE	NLE	< 0.0018	< 0.0019	< 0.0029 UJ	< 0.002	< 0.0024 UJ	< 0.0036 UJ	< 0.0032
Methyl Tertbutyl Ether	110	320	0.2	< 0.0004	< 0.0004	< 0.0006 UJ	< 0.0004	< 0.0005 UJ	< 0.0007 UJ	**0.02**
Methylene chloride	46	230	0.01	< 0.0004	< 0.0004	< 0.0006 UJ	< 0.0004	< 0.0005 UJ	< 0.0007 UJ	< 0.0006
Naphthalene	6	17	25	< 0.0004	**0.0003 J**	< 0.0006 UJ	< 0.0004	< 0.0005 UJ	< 0.0007 UJ	< 0.0006
n-Butylbenzene	NLE	NLE	NLE	< 0.0004	< 0.0004	< 0.0006 UJ	< 0.0004	< 0.0005 UJ	< 0.0007 UJ	< 0.0006
Ortho Xylene	NLE	NLE	NLE	< 0.0004	< 0.0004	< 0.0006 UJ	< 0.0004	< 0.0005 UJ	< 0.0007 UJ	< 0.0006
p-Chlorotoluene	NLE	NLE	NLE	< 0.0004	< 0.0004	< 0.0006 UJ	< 0.0004	< 0.0005 UJ	< 0.0007 UJ	< 0.0006
Propylbenzene	NLE	NLE	NLE	< 0.0004	< 0.0004	< 0.0006 UJ	< 0.0004	< 0.0005 UJ	< 0.0007 UJ	< 0.0006
sec-Butylbenzene	NLE	NLE	NLE	< 0.0004	< 0.0004	< 0.0006 UJ	< 0.0004	< 0.0005 UJ	< 0.0007 UJ	< 0.0006
Styrene	90	260	3	< 0.0004	< 0.0004	< 0.0006 UJ	< 0.0004	< 0.0005 UJ	< 0.0007 UJ	< 0.0006
Tert Butyl Alcohol	1,400	11,000	0.3	< 0.0018	< 0.0019	< 0.0029 UJ	< 0.002	< 0.0024 UJ	< 0.0036 UJ	**0.016**
tert-Butylbenzene	NLE	NLE	NLE	< 0.0004	< 0.0004	< 0.0006 UJ	< 0.0004	< 0.0005 UJ	< 0.0007 UJ	< 0.0006
Tetrachloroethene	43	1,500	0.005	**0.0047**	**0.0059**	**0.0009 J**	**0.036**	**3.5**	**3**	< 0.0006
Toluene	6,300	91,000	7	**0.0016**	**0.0025**	**0.0043 J-**	**0.0039**	**0.0025 J**	**0.0098 J**	**0.0047**
Trans-1,2-Dichloroethene	300	720	0.6	< 0.0004	< 0.0004	< 0.0006 UJ	< 0.0004	< 0.0005 UJ	< 0.0007 UJ	< 0.0006
Trans-1,3-Dichloropropene	NLE	NLE	NLE	< 0.0004	< 0.0004	< 0.0006 UJ	< 0.0004	< 0.0005 UJ	< 0.0007 UJ	< 0.0006
Trichloroethene	3	10	0.01	< 0.0004	< 0.0004	< 0.0006 UJ	**0.0027**	**0.0085 J-**	**0.014 J-**	< 0.0006
Trichlorofluoromethane	23,000	340,000	34	< 0.0004	< 0.0004	< 0.0006 UJ	< 0.0004	< 0.0005 UJ	< 0.0007 UJ	< 0.0006
Vinyl chloride	0.7	2	0.005	< 0.0004	< 0.0004	< 0.0006 UJ	< 0.0004	< 0.0005 UJ	< 0.0007 UJ	< 0.0006
TIC VOCs (mg/kg)										
2,3-Dimethylbutane	NLE	NLE	NLE	NA	NA	NA	NA	NA	NA	NA
2-Methylbutane	NLE	NLE	NLE	NA	NA	NA	NA	NA	NA	NA
Ethyl acetate	NLE	NLE	NLE	NA	NA	NA	NA	NA	NA	NA
TIC Unknown	NLE	NLE	NLE	NA	NA	NA	NA	NA	NA	NA
TIC VOCs (mg/kg)										
TIC Unknown	NLE	NLE	NLE	NA	NA	NA	NA	NA	NA	NA

TABLE 1
SOIL SAMPLING RESULTS - COMPARISON TO NJDEP CRITERIA
SITE FTMM68
FORT MONMOUTH, NEW JERSEY

Loc ID	NJ Residential Direct Contact SRS	NJ Non-Residential Direct Contact SRS	NJ Impact to GW Soil Screening Level	FTMM68-SB12					FTMM68-SB13	
Sample ID				**FTMM-68-SS-SB12-8.0-8.5**	**FTMM-68-SS-SB12-18.0-18.5**	**FTMM-68-SS-SB12-23.0-23.5**	**FTMM-68-SS-SB12-32.0-32.5**	**FTMM-68-SS-SB12-42.0-42.5**	**FTMM-68-SS-SB13-2.0-2.5**	**FTMM-68-SS-SB13-8.0-8.5**
Depth (bgs)				**8-8.5**	**18-18.5**	**23-23.5**	**32-32.5**	**42-42.5**	**2-2.5**	**8-8.5**
Sample Date				**1/5/2017**	**1/5/2017**	**1/5/2017**	**1/5/2017**	**1/5/2017**	**1/5/2017**	**1/5/2017**
Volatile Organic Compounds (mg/kg)										
1,1,1,2-Tetrachloroethane	NLE	NLE	NLE	< 0.0004	< 0.0006 UJ	< 0.0004 UJ	< 0.0006	< 0.0005	< 0.0007	< 0.0004 UJ
1,1,1-Trichloroethane	160,000	NLE	0.3	< 0.0004	< 0.0006 UJ	< 0.0004 UJ	< 0.0006	< 0.0005	< 0.0007	< 0.0004 UJ
1,1,2,2-Tetrachloroethane	1	3	0.007	< 0.0004	< 0.0006 UJ	< 0.0004 UJ	< 0.0006	< 0.0005	< 0.0007	< 0.0004 UJ
1,1,2-Trichloroethane	2	6	0.02	< 0.0004	< 0.0006 UJ	< 0.0004 UJ	< 0.0006	< 0.0005	< 0.0007	< 0.0004 UJ
1,1-Dichloroethane	8	24	0.2	< 0.0004	< 0.0006 UJ	< 0.0004 UJ	< 0.0006	< 0.0005	< 0.0007	< 0.0004 UJ
1,1-Dichloroethene	11	150	0.008	< 0.0004	< 0.0006 UJ	< 0.0004 UJ	< 0.0006	< 0.0005	< 0.0007	**0.0037 J**
1,1-Dichloropropene	NLE	NLE	NLE	< 0.0004	< 0.0006 UJ	< 0.0004 UJ	< 0.0006	< 0.0005	< 0.0007	< 0.0004 UJ
1,2,3-Trichlorobenzene	NLE	NLE	NLE	< 0.0004	< 0.0006 UJ	< 0.0004 UJ	< 0.0006	< 0.0005	< 0.0007	< 0.0004 UJ
1,2,3-Trichloropropane	NLE	NLE	NLE	< 0.0004	< 0.0006 UJ	< 0.0004 UJ	< 0.0006	< 0.0005	< 0.0007	< 0.0004 UJ
1,2,4-Trichlorobenzene	73	820	0.7	< 0.0004	< 0.0006 UJ	< 0.0004 UJ	< 0.0006	< 0.0005	< 0.0007	< 0.0004 UJ
1,2,4-Trimethylbenzene	NLE	NLE	NLE	< 0.0004	< 0.0006 UJ	< 0.0004 UJ	< 0.0006	< 0.0005	< 0.0007	< 0.0004 UJ
1,2-Dibromo-3-chloropropane	0.08	0.2	0.005	< 0.0011	< 0.0016 UJ	< 0.0011 UJ	< 0.0016	< 0.0012	< 0.0016	< 0.0011 UJ
1,2-Dibromoethane	0.008	0.04	0.005	< 0.0004	< 0.0006 UJ	< 0.0004 UJ	< 0.0006	< 0.0005	< 0.0007	< 0.0004 UJ
1,2-Dichlorobenzene	5,300	59,000	17	< 0.0004	< 0.0006 UJ	< 0.0004 UJ	< 0.0006	< 0.0005	< 0.0007	< 0.0004 UJ
1,2-Dichloroethane	0.9	3	0.005	< 0.0004	< 0.0006 UJ	< 0.0004 UJ	< 0.0006	**0.0086**	< 0.0007	< 0.0004 UJ
1,2-Dichloropropane	2	5	0.005	< 0.0004	< 0.0006 UJ	< 0.0004 UJ	< 0.0006	< 0.0005	< 0.0007	< 0.0004 UJ
1,3,5-Trimethylbenzene	NLE	NLE	NLE	< 0.0004	< 0.0006 UJ	< 0.0004 UJ	< 0.0006	< 0.0005	< 0.0007	< 0.0004 UJ
1,3-Dichlorobenzene	5,300	59,000	19	< 0.0004	< 0.0006 UJ	< 0.0004 UJ	< 0.0006	< 0.0005	< 0.0007	< 0.0004 UJ
1,3-Dichloropropane	NLE	NLE	NLE	< 0.0004	< 0.0006 UJ	< 0.0004 UJ	< 0.0006	< 0.0005	< 0.0007	< 0.0004 UJ
1,4-Dichlorobenzene	5	13	2	< 0.0004	< 0.0006 UJ	< 0.0004 UJ	< 0.0006	< 0.0005	< 0.0007	< 0.0004 UJ
2,2-Dichloropropane	NLE	NLE	NLE	< 0.0004	< 0.0006 UJ	< 0.0004 UJ	< 0.0006	< 0.0005	< 0.0007	< 0.0004 UJ
2-Chlorotoluene	NLE	NLE	NLE	< 0.0004	< 0.0006 UJ	< 0.0004 UJ	< 0.0006	< 0.0005	< 0.0007	< 0.0004 UJ
Acetone	70,000	NLE	19	**0.0066**	**0.047 J-**	**0.018 J-**	**0.035**	**0.014**	**0.026**	**0.014 J-**
Benzene	2	5	0.005	< 0.0004	< 0.0006 UJ	< 0.0004 UJ	< 0.0006	< 0.0005	< 0.0007	< 0.0004 UJ
Bromobenzene	NLE	NLE	NLE	< 0.0004	< 0.0006 UJ	< 0.0004 UJ	< 0.0006	< 0.0005	< 0.0007	< 0.0004 UJ
Bromochloromethane	NLE	NLE	NLE	< 0.0004	< 0.0006 UJ	< 0.0004 UJ	< 0.0006	< 0.0005	< 0.0007	< 0.0004 UJ
Bromodichloromethane	1	3	0.005	< 0.0004	< 0.0006 UJ	< 0.0004 UJ	< 0.0006	< 0.0005	< 0.0007	< 0.0004 UJ
Bromoform	81	280	0.03	< 0.0004	< 0.0006 UJ	< 0.0004 UJ	< 0.0006	< 0.0005	< 0.0007	< 0.0004 UJ
Carbon tetrachloride	2	4	0.005	< 0.0004	< 0.0006 UJ	< 0.0004 UJ	< 0.0006	< 0.0005	< 0.0007	< 0.0004 UJ
Chlorobenzene	510	7,400	0.6	< 0.0004	< 0.0006 UJ	< 0.0004 UJ	< 0.0006	< 0.0005	< 0.0007	< 0.0004 UJ
Chlorodibromomethane	3	8	0.005	< 0.0004	< 0.0006 UJ	< 0.0004 UJ	< 0.0006	< 0.0005	< 0.0007	< 0.0004 UJ
Chloroethane	220	1,100	NLE	< 0.0011	< 0.0016 UJ	< 0.0011 UJ	< 0.0016	< 0.0012	< 0.0016	< 0.0011 UJ
Chloroform	0.6	2	0.4	< 0.0004	< 0.0006 UJ	< 0.0004 UJ	< 0.0006	< 0.0005	< 0.0007	< 0.0004 UJ
Cis-1,2-Dichloroethene	230	560	0.3	< 0.0004	**0.017 J-**	**0.014 J-**	< 0.0006	< 0.0005	**0.0081**	**0.059 J-**
Cis-1,3-Dichloropropene	NLE	NLE	NLE	< 0.0004	< 0.0006 UJ	< 0.0004 UJ	< 0.0006	< 0.0005	< 0.0007	< 0.0004 UJ
Cymene	NLE	NLE	NLE	< 0.0004	< 0.0006 UJ	< 0.0004 UJ	< 0.0006	< 0.0005	< 0.0007	< 0.0004 UJ
Dichlorodifluoromethane	490	230,000	39	< 0.0004	< 0.0006 UJ	< 0.0004 UJ	< 0.0006	< 0.0005	< 0.0007	< 0.0004 UJ
Ethyl benzene	7,800	110,000	13	< 0.0004	< 0.0006 UJ	< 0.0004 UJ	< 0.0006	< 0.0005	< 0.0007	< 0.0004 UJ
Hexachlorobutadiene	6	25	0.9	< 0.0004	< 0.0006 UJ	< 0.0004 UJ	< 0.0006	< 0.0005	< 0.0007	< 0.0004 UJ
Isopropylbenzene	NLE	NLE	NLE	< 0.0004	< 0.0006 UJ	< 0.0004 UJ	< 0.0006	**0.0009 J**	< 0.0007	< 0.0004 UJ
Meta/Para Xylene	NLE	NLE	NLE	< 0.0009	< 0.0013 UJ	< 0.0009 UJ	< 0.0012	< 0.001	< 0.0013	< 0.0009 UJ
Methyl bromide	25	59	0.04	< 0.0004	< 0.0006 UJ	< 0.0004 UJ	< 0.0006	< 0.0005	< 0.0007	< 0.0004 UJ
Methyl butyl ketone	NLE	NLE	NLE	< 0.0022	< 0.0032 UJ	< 0.0022 UJ	< 0.0031	< 0.0024	< 0.0033	< 0.0022 UJ
Methyl chloride	4	12	NLE	< 0.0004	< 0.0006 UJ	< 0.0004 UJ	< 0.0006	< 0.0005	< 0.0007	< 0.0004 UJ
Methyl ethyl ketone	3,100	44,000	0.9	< 0.0022	**0.0035 J**	< 0.0022 UJ	**0.0082**	**0.0035 J**	< 0.0033	< 0.0022 UJ
Methyl isobutyl ketone	NLE	NLE	NLE	< 0.0022	< 0.0032 UJ	< 0.0022 UJ	< 0.0031	< 0.0024	< 0.0033	< 0.0022 UJ
Methyl Tertbutyl Ether	110	320	0.2	< 0.0004	< 0.0006 UJ	< 0.0004	**0.0072**	< 0.0005	< 0.0007	< 0.0004 UJ
Methylene chloride	46	230	0.01	**0.0009 J**	< 0.0006 UJ	< 0.0004 UJ	< 0.0006	< 0.0005	**0.0009 J**	< 0.0004 UJ
Naphthalene	6	17	25	< 0.0004	< 0.0006 UJ	< 0.0004 UJ	< 0.0006	< 0.0005	< 0.0007	< 0.0004 UJ
n-Butylbenzene	NLE	NLE	NLE	< 0.0004	< 0.0006 UJ	< 0.0004 UJ	< 0.0006	< 0.0005	< 0.0007	< 0.0004 UJ
Ortho Xylene	NLE	NLE	NLE	< 0.0004	< 0.0006 UJ	< 0.0004 UJ	< 0.0006	< 0.0005	< 0.0007	< 0.0004 UJ
p-Chlorotoluene	NLE	NLE	NLE	< 0.0004	< 0.0006 UJ	< 0.0004 UJ	< 0.0006	< 0.0005	< 0.0007	< 0.0004 UJ
Propylbenzene	NLE	NLE	NLE	< 0.0004	< 0.0006 UJ	< 0.0004 UJ	< 0.0006	**0.0004 J**	< 0.0007	< 0.0004 UJ
sec-Butylbenzene	NLE	NLE	NLE	< 0.0004	< 0.0006 UJ	< 0.0004 UJ	< 0.0006	< 0.0005	< 0.0007	< 0.0004 UJ
Styrene	90	260	3	< 0.0004	< 0.0006 UJ	< 0.0004 UJ	< 0.0006	< 0.0005	< 0.0007	< 0.0004 UJ
Tert Butyl Alcohol	1,400	11,000	0.3	< 0.0022	< 0.0032 UJ	< 0.0022 UJ	**0.025**	**0.026**	< 0.0033	< 0.0022 UJ
tert-Butylbenzene	NLE	NLE	NLE	< 0.0004	< 0.0006 UJ	< 0.0004 UJ	< 0.0006	< 0.0005	< 0.0007	< 0.0004 UJ
Tetrachloroethene	43	1,500	0.005	< 0.0004	**4.3**	**1.5**	< 0.0006	**0.0008 J**	**0.013**	**0.32 J**
Toluene	6,300	91,000	7	**0.0046**	**0.0041 J-**	**0.0041 J-**	**0.0055**	**0.0042**	**0.0019**	**0.0053 J-**
Trans-1,2-Dichloroethene	300	720	0.6	< 0.0004	< 0.0006 UJ	< 0.0004 UJ	< 0.0006	< 0.0005	**0.0006 J**	**0.0023 J**
Trans-1,3-Dichloropropene	NLE	NLE	NLE	< 0.0004	< 0.0006 UJ	< 0.0004 UJ	< 0.0006	< 0.0005	< 0.0007	< 0.0004 UJ
Trichloroethene	3	10	0.01	< 0.0004	**0.062 J-**	**0.021 J-**	< 0.0006	< 0.0005	**0.002**	**0.052 J-**
Trichlorofluoromethane	23,000	340,000	34	< 0.0004	< 0.0006 UJ	< 0.0004 UJ	< 0.0006	< 0.0005	< 0.0007	**0.0008 J**
Vinyl chloride	0.7	2	0.005	< 0.0004	< 0.0006 UJ	< 0.0004 UJ	< 0.0006	< 0.0005	< 0.0007	**0.023 J**
TIC VOCs (mg/kg)										
2,3-Dimethylbutane	NLE	NLE	NLE	NA	NA	NA	NA	**0.0032 JN**	NA	NA
2-Methylbutane	NLE	NLE	NLE	NA	NA	NA	NA	NA	NA	NA
Ethyl acetate	NLE	NLE	NLE	NA	NA	NA	NA	NA	NA	NA
TIC Unknown	NLE	NLE	NLE	NA	NA	NA	NA	NA	NA	NA
TIC VOCs (mg/kg)										
TIC Unknown	NLE	NLE	NLE	NA	NA	NA	NA	NA	NA	NA

TABLE 1
SOIL SAMPLING RESULTS - COMPARISON TO NJDEP CRITERIA
SITE FTMM68
FORT MONMOUTH, NEW JERSEY

Loc ID	NJ Residential Direct Contact SRS	NJ Non-Residential Direct Contact SRS	NJ Impact to GW Soil Screening Level	FTMM68-SB13				
Sample ID				**FTMM-68-SS-SB130-8.0-8.5**	**FTMM-68-SS-SB13-13.5-14.0**	**FTMM-68-SS-SB13-20.0-20.5**	**FTMM-68-SS-SB13-26.0-26.5**	**FTMM-68-SS-SB13-38.0-38.5**
Depth (bgs)				**8-8.5**	**13.5-14**	**20-20.5**	**26-26.5**	**38-38.5**
Sample Date				**1/5/2017**	**1/5/2017**	**1/5/2017**	**1/5/2017**	**1/5/2017**
Volatile Organic Compounds (mg/kg)								
1,1,1,2-Tetrachloroethane	NLE	NLE	NLE	< 0.0004	< 0.0005	< 0.0005	< 0.0006 UJ	< 0.0005
1,1,1-Trichloroethane	160,000	NLE	0.3	< 0.0004	< 0.0005	< 0.0005	< 0.0006 UJ	< 0.0005
1,1,2,2-Tetrachloroethane	1	3	0.007	< 0.0004	< 0.0005	< 0.0005	< 0.0006 UJ	< 0.0005
1,1,2-Trichloroethane	2	6	0.02	< 0.0004	< 0.0005	< 0.0005	< 0.0006 UJ	< 0.0005
1,1-Dichloroethane	8	24	0.2	< 0.0004	< 0.0005	< 0.0005	< 0.0006 UJ	< 0.0005
1,1-Dichloroethene	11	150	0.008	< 0.0004 UJ	< 0.0005	< 0.0005	< 0.0006 UJ	< 0.0005
1,1-Dichloropropene	NLE	NLE	NLE	< 0.0004	< 0.0005	< 0.0005	< 0.0006 UJ	< 0.0005
1,2,3-Trichlorobenzene	NLE	NLE	NLE	< 0.0004	< 0.0005	< 0.0005	< 0.0006 UJ	< 0.0005
1,2,3-Trichloropropane	NLE	NLE	NLE	< 0.0004	< 0.0005	< 0.0005	< 0.0006 UJ	< 0.0005
1,2,4-Trichlorobenzene	73	820	0.7	< 0.0004	< 0.0005	< 0.0005	< 0.0006 UJ	< 0.0005
1,2,4-Trimethylbenzene	NLE	NLE	NLE	< 0.0004	< 0.0005	< 0.0005	< 0.0006 UJ	< 0.0005
1,2-Dibromo-3-chloropropane	0.08	0.2	0.005	< 0.001	< 0.0012	< 0.0012	< 0.0014 UJ	< 0.0013
1,2-Dibromoethane	0.008	0.04	0.005	< 0.0004	< 0.0005	< 0.0005	< 0.0006 UJ	< 0.0005
1,2-Dichlorobenzene	5,300	59,000	17	< 0.0004	< 0.0005	< 0.0005	< 0.0006 UJ	< 0.0005
1,2-Dichloroethane	0.9	3	0.005	< 0.0004	< 0.0005	< 0.0005	< 0.0006 UJ	**0.0008 J**
1,2-Dichloropropane	2	5	0.005	< 0.0004	< 0.0005	< 0.0005	< 0.0006 UJ	< 0.0005
1,3,5-Trimethylbenzene	NLE	NLE	NLE	< 0.0004	< 0.0005	< 0.0005	< 0.0006 UJ	< 0.0005
1,3-Dichlorobenzene	5,300	59,000	19	< 0.0004	< 0.0005	< 0.0005	< 0.0006 UJ	< 0.0005
1,3-Dichloropropane	NLE	NLE	NLE	< 0.0004	< 0.0005	< 0.0005	< 0.0006 UJ	< 0.0005
1,4-Dichlorobenzene	5	13	2	< 0.0004	< 0.0005	< 0.0005	< 0.0006 UJ	< 0.0005
2,2-Dichloropropane	NLE	NLE	NLE	< 0.0004	< 0.0005	< 0.0005	< 0.0006 UJ	< 0.0005
2-Chlorotoluene	NLE	NLE	NLE	< 0.0004	< 0.0005	< 0.0005	< 0.0006 UJ	< 0.0005
Acetone	70,000	NLE	19	**0.024**	**0.0035 J**	**0.022**	**0.02 J-**	**0.011**
Benzene	2	5	0.005	< 0.0004	< 0.0005	< 0.0005	< 0.0006 UJ	< 0.0005
Bromobenzene	NLE	NLE	NLE	< 0.0004	< 0.0005	< 0.0005	< 0.0006 UJ	< 0.0005
Bromochloromethane	NLE	NLE	NLE	< 0.0004	< 0.0005	< 0.0005	< 0.0006 UJ	< 0.0005
Bromodichloromethane	1	3	0.005	< 0.0004	< 0.0005	< 0.0005	< 0.0006 UJ	< 0.0005
Bromoform	81	280	0.03	< 0.0004	< 0.0005	< 0.0005	< 0.0006 UJ	< 0.0005
Carbon tetrachloride	2	4	0.005	< 0.0004	< 0.0005	< 0.0005	< 0.0006 UJ	< 0.0005
Chlorobenzene	510	7,400	0.6	< 0.0004	< 0.0005	< 0.0005	< 0.0006 UJ	< 0.0005
Chlorodibromomethane	3	8	0.005	< 0.0004	< 0.0005	< 0.0005	< 0.0006 UJ	< 0.0005
Chloroethane	220	1,100	NLE	< 0.001	< 0.0012	< 0.0012	< 0.0014 UJ	< 0.0013
Chloroform	0.6	2	0.4	< 0.0004	< 0.0005	< 0.0005	< 0.0006 UJ	< 0.0005
Cis-1,2-Dichloroethene	230	560	0.3	**0.075**	**0.011**	**0.019**	**0.018 J-**	< 0.0005
Cis-1,3-Dichloropropene	NLE	NLE	NLE	< 0.0004	< 0.0005	< 0.0005	< 0.0006 UJ	< 0.0005
Cymene	NLE	NLE	NLE	< 0.0004	< 0.0005	< 0.0005	< 0.0006 UJ	< 0.0005
Dichlorodifluoromethane	490	230,000	39	< 0.0004	< 0.0005	< 0.0005	< 0.0006 UJ	< 0.0005
Ethyl benzene	7,800	110,000	13	< 0.0004	< 0.0005	< 0.0005	< 0.0006 UJ	< 0.0005
Hexachlorobutadiene	6	25	0.9	< 0.0004	< 0.0005	< 0.0005	< 0.0006 UJ	< 0.0005
Isopropylbenzene	NLE	NLE	NLE	< 0.0004	< 0.0005	< 0.0005	< 0.0006 UJ	< 0.0005
Meta/Para Xylene	NLE	NLE	NLE	< 0.0008	< 0.001	< 0.0009	< 0.0012 UJ	< 0.001
Methyl bromide	25	59	0.04	< 0.0004	< 0.0005	< 0.0005	< 0.0006 UJ	< 0.0005
Methyl butyl ketone	NLE	NLE	NLE	< 0.0021	< 0.0024	< 0.0023	< 0.0029 UJ	< 0.0025
Methyl chloride	4	12	NLE	< 0.0004	< 0.0005	< 0.0005	< 0.0006 UJ	< 0.0005
Methyl ethyl ketone	3,100	44,000	0.9	< 0.0021	< 0.0024	**0.0029 J**	< 0.0029 UJ	**0.002 J**
Methyl isobutyl ketone	NLE	NLE	NLE	< 0.0021	< 0.0024	< 0.0023	< 0.0029 UJ	< 0.0025
Methyl Tertbutyl Ether	110	320	0.2	< 0.0004	< 0.0005	< 0.0005	< 0.0006	**0.0055**
Methylene chloride	46	230	0.01	**0.001 J**	< 0.0005	< 0.0005	**0.0028 J+**	< 0.0005
Naphthalene	6	17	25	**0.0003 J**	< 0.0005	< 0.0005	< 0.0006 UJ	< 0.0005
n-Butylbenzene	NLE	NLE	NLE	< 0.0004	< 0.0005	< 0.0005	< 0.0006 UJ	< 0.0005
Ortho Xylene	NLE	NLE	NLE	< 0.0004	< 0.0005	< 0.0005	< 0.0006 UJ	< 0.0005
p-Chlorotoluene	NLE	NLE	NLE	< 0.0004	< 0.0005	< 0.0005	< 0.0006 UJ	< 0.0005
Propylbenzene	NLE	NLE	NLE	< 0.0004	< 0.0005	< 0.0005	< 0.0006 UJ	< 0.0005
sec-Butylbenzene	NLE	NLE	NLE	< 0.0004	< 0.0005	< 0.0005	< 0.0006 UJ	< 0.0005
Styrene	90	260	3	< 0.0004	< 0.0005	< 0.0005	< 0.0006 UJ	< 0.0005
Tert Butyl Alcohol	1,400	11,000	0.3	< 0.0021	< 0.0024	< 0.0023	< 0.0029 UJ	**0.0047 J**
tert-Butylbenzene	NLE	NLE	NLE	< 0.0004	< 0.0005	< 0.0005	< 0.0006 UJ	< 0.0005
Tetrachloroethene	43	1,500	0.005	**0.61 J**	**0.36**	**6.9**	**1.7**	**0.0023**
Toluene	6,300	91,000	7	**0.0049**	**0.009**	**0.0042**	**0.0023 J-**	**0.0023**
Trans-1,2-Dichloroethene	300	720	0.6	< 0.0004 UJ	< 0.0005	< 0.0005	< 0.0006 UJ	< 0.0005
Trans-1,3-Dichloropropene	NLE	NLE	NLE	< 0.0004	< 0.0005	< 0.0005	< 0.0006 UJ	< 0.0005
Trichloroethene	3	10	0.01	**0.063**	**0.0096**	**0.049**	**0.0097 J-**	< 0.0005
Trichlorofluoromethane	23,000	340,000	34	< 0.0004	**0.0015**	< 0.0005	< 0.0006 UJ	< 0.0005
Vinyl chloride	0.7	2	0.005	**0.0021 J**	< 0.0005	< 0.0005	< 0.0006 UJ	< 0.0005
TIC VOCs (mg/kg)								
2,3-Dimethylbutane	NLE	NLE	NLE	NA	NA	NA	NA	NA
2-Methylbutane	NLE	NLE	NLE	NA	NA	NA	NA	NA
Ethyl acetate	NLE	NLE	NLE	NA	NA	NA	NA	NA
TIC Unknown	NLE	NLE	NLE	NA	NA	NA	NA	NA
TIC VOCs (mg/kg)								
TIC Unknown	NLE	NLE	NLE	NA	NA	NA	NA	NA

TABLE 2
SOIL SAMPLING RESULTS - COMPARISON TO USEPA CRITERIA
SITE FTMM68
FORT MONMOUTH, NEW JERSEY

Loc ID	2017-06 RSL Residential Soil (HQ=0.1)	2017-06 RSL Industrial Soil (HQ=0.1)	2017-06 RSL Protect GW Risk-Based (HQ=0.1)	SOLVENT UST ECCAVATION									FTMM-68-SB1		
Sample ID				565 Duplicate	565-A North Wall	565-B South Wall	565-C East Wall	565-D West Wall	565-E Bottom	565-F Piping	565-PX10	565-PX11	FTMM-68-SB1-1.5-2.0	FTMM-68-SB1-20.5-21.0	FTMM-68-SB1-11.0-11.5
epth (bgs)				7-7.5	7-7.5	7-7.5	7-7.5	7-7.5	7-7.5	2-2.5	9-9.5	9-9.5	1.5-2	20.5-21	11-11.5
Sample Date				4/9/2011	4/9/2011	4/9/2011	4/9/2011	4/9/2011	4/9/2011	4/9/2011	5/24/2011	5/25/2011	9/16/2015	9/16/2015	9/17/2015
Volatile Organic Compounds (mg/kg)															
1,1,1,2-Tetrachloroethane	2	8.8	0.00022	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 0.0048	< 0.0063	< 0.0067
1,1,1-Trichloroethane	810	3,600	0.28	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 0.0048	< 0.0063	< 0.0067
1,1,2,2-Tetrachloroethane	0.6	2.7	0.00003	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 0.0048	< 0.0063	< 0.0067
1,1,2-Trichloroethane	0.15	0.63	0.000013	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 0.0048	< 0.0063	< 0.0067
1,1-Dichloroethane	3.6	16	0.00078	NA	NA	NA	NA	NA	NA	NA	ND	ND	< 0.0048	< 0.0063	< 0.0067
1,1-Dichloroethene	23	100	0.01	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 0.0048	< 0.0063	< 0.0067
1,1-Dichloropropene	NLE	NLE	NLE	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 0.0048	< 0.0063	< 0.0067
1,2,3-Trichlorobenzene	6.3	93	0.0021	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 0.0048	< 0.0063	< 0.0067
1,2,3-Trichloropropane	0.0051	0.11	0.00000032	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 0.0048	< 0.0063	< 0.0067
1,2,4-Trichlorobenzene	5.8	26	0.0012	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 0.0048	< 0.0063	< 0.0067
1,2,4-Trimethylbenzene	30	180	0.0081	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 0.0048	< 0.0063	< 0.0067
1,2-Dibromo-3-chloropropane	0.0053	0.064	0.00000014	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 0.0048	< 0.0063	< 0.0067
1,2-Dibromoethane	0.036	0.16	0.0000021	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 0.0048	< 0.0063	< 0.0067
1,2-Dichlorobenzene	180	930	0.03	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 0.0048	< 0.0063	< 0.0067
1,2-Dichloroethane	0.46	2	0.000048	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 0.0048	< 0.0063	< 0.0067
1,2-Dichloropropane	0.28	1.2	0.000047	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 0.0048	< 0.0063	< 0.0067
1,3,5-Trimethylbenzene	27	150	0.0087	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 0.0048	< 0.0063	< 0.0067
1,3-Dichlorobenzene	NLE	NLE	NLE	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 0.0048	< 0.0063	< 0.0067
1,3-Dichloropropane	160	2,300	0.013	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 0.0048	< 0.0063	< 0.0067
1,4-Dichlorobenzene	2.6	11	0.00046	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 0.0048	< 0.0063	< 0.0067
2,2-Dichloropropane	NLE	NLE	NLE	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 0.0048	< 0.0063	< 0.0067
2-Chlorotoluene	160	2,300	0.023	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 0.0048	< 0.0063	< 0.0067
Acetone	6,100	67,000	0.29	NA	NA	NA	NA	NA	NA	NA	NA	NA	**0.013**	**0.095**	**0.013**
Benzene	1.2	5.1	0.00023	NA	NA	NA	NA	NA	NA	NA	ND	ND	< 0.0048	< 0.0063	< 0.0067
Bromobenzene	29	180	0.0042	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 0.0048	< 0.0063	< 0.0067
Bromochloromethane	15	63	0.0021	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 0.0048	< 0.0063	< 0.0067
Bromodichloromethane	0.29	1.3	0.000036	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 0.0048	< 0.0063	< 0.0067
Bromoform	19	86	0.00087	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 0.0048	< 0.0063	< 0.0067
Carbon tetrachloride	0.65	2.9	0.00018	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 0.0048	< 0.0063	< 0.0067
Chlorobenzene	28	130	0.0053	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 0.0048	< 0.0063	< 0.0067
Chlorodibromomethane	8.3	39	0.00023	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 0.0048	< 0.0063	< 0.0067
Chloroethane	1,400	5,700	0.59	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 0.0048	< 0.0063	< 0.0067
Chloroform	0.32	1.4	0.000061	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 0.0048	< 0.0063	< 0.0067
Cis-1,2-Dichloroethene	16	230	0.0011	< 293.81	< 0.281	**0.08 J**	**0.16 J**	< 0.199	< 1084.447	< 1.107	ND	ND	**0.0011 J**	**0.08**	**0.011**
Cis-1,3-Dichloropropene	NLE	NLE	NLE	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 0.0048	< 0.0063	< 0.0067
Cymene	NLE	NLE	NLE	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 0.0048	< 0.0063	< 0.0067
Dichlorodifluoromethane	8.7	37	0.03	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 0.0048	< 0.0063	< 0.0067
Ethyl benzene	5.8	25	0.0017	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 0.0048	< 0.0063	< 0.0067
Hexachlorobutadiene	1.2	5.3	0.00027	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 0.0048	< 0.0063	< 0.0067
Isopropylbenzene	190	990	0.074	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 0.0048	< 0.0063	< 0.0067
Meta/Para Xylene	55	240	0.019	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 0.0095	< 0.013	< 0.013
Methyl bromide	0.68	3	0.00019	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 0.0048	< 0.0063	< 0.0067
Methyl butyl ketone	20	130	0.00088	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 0.0048	< 0.0063	< 0.0067
Methyl chloride	11	46	0.0049	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 0.0048	< 0.0063	< 0.0067
Methyl ethyl ketone	2,700	19,000	0.12	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 0.0048	**0.016**	< 0.0067
Methyl isobutyl ketone	3,300	14,000	0.14	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 0.0048	< 0.0063	< 0.0067
Methyl Tertbutyl Ether	47	210	0.0032	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 0.0048	< 0.0063	< 0.0067
Methylene chloride	35	320	0.0027	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 0.0048	< 0.0063	< 0.0067
Naphthalene	3.8	17	0.00054	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 0.0048	< 0.0063	< 0.0067
n-Butylbenzene	390	5,800	0.32	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 0.0048	< 0.0063	< 0.0067
Ortho Xylene	65	280	0.019	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 0.0048	< 0.0063	< 0.0067
p-Chlorotoluene	160	2,300	0.024	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 0.0048	< 0.0063	< 0.0067
Propylbenzene	380	2,400	0.12	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 0.0048	< 0.0063	< 0.0067
sec-Butylbenzene	780	12,000	0.59	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 0.0048	< 0.0063	< 0.0067
Styrene	600	3,500	0.13	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 0.0048	< 0.0063	< 0.0067
Tert Butyl Alcohol	NLE	NLE	NLE	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 0.095 UJ	< 0.13 UJ	< 0.13 UJ
tert-Butylbenzene	780	12,000	0.16	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 0.0048	< 0.0063	< 0.0067
Tetrachloroethene	8.1	39	0.0018	**88.41 J**	**1.02**	**0.36**	**0.6**	< 0.199	**23,889**	**0.77 D**	**1.58**	**0.26**	**0.024**	**28 D**	**18 D**
Toluene	490	4,700	0.076	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 0.0048	< 0.0063	< 0.0067
Trans-1,2-Dichloroethene	160	2,300	0.011	NA	NA	NA	NA	NA	NA	NA	ND	ND	< 0.0048	**0.0012 J**	< 0.0067
Trans-1,3-Dichloropropene	NLE	NLE	NLE	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 0.0048	< 0.0063	< 0.0067
Trichloroethene	0.41	1.9	0.0001	**17,418 D**	< 0.281	< 0.221	< 0.199	< 0.199	< 1084.447	**21.41 D**	ND	ND	**0.0013 J**	**0.16**	**0.0082**
Trichlorofluoromethane	2,300	35,000	0.33	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 0.0048	< 0.0063	< 0.0067
Vinyl chloride	0.059	1.7	0.0000065	NA	NA	NA	NA	NA	NA	NA	NA	NA	< 0.0048	< 0.0063	< 0.0067
TIC VOCs (mg/kg)															
2,3-Dimethylbutane	NLE	NLE	NLE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Methylbutane	NLE	NLE	NLE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Ethyl acetate	62	260	0.0031	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TIC Unknown	NLE	NLE	NLE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TIC VOCs (mg/kg)															
TIC Unknown	NLE	NLE	NLE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	**4.5 J**	NA

TABLE 2
SOIL SAMPLING RESULTS - COMPARISON TO USEPA CRITERIA
SITE FTMM68
FORT MONMOUTH, NEW JERSEY

Loc ID	2017-06 RSL Residential Soil (HQ=0.1)	2017-06 RSL Industrial Soil (HQ=0.1)	2017-06 RSL Protect GW Risk-Based (HQ=0.1)	FTMM-68-SB2			FTMM-68-SB3			FTMM68-SB05
Sample ID				FTMM-68-SB2-1.5-2.0	FTMM-68-SB2-6.0-6.5	FTMM-68-SB2-16.0-16.5	FTMM-68-SB3-12.5-13.0	FTMM-68-SB3-22.5-23.0	FTMM-68-SB3-24.0-24.5	FTMM-68-SS-SB5-24.0-24.5
epth (bgs)				1.5-2	6-6.5	16-16.5	12.5-13	22.5-23	24-24.5	24-24.5
Sample Date				9/17/2015	9/17/2015	9/17/2015	9/17/2015	9/17/2015	9/17/2015	1/3/2017
Volatile Organic Compounds (mg/kg)										
1,1,1,2-Tetrachloroethane	2	8.8	0.00022	< 0.53	< 0.0049	< 0.57	< 9.7	< 0.42	< 0.61	< 0.0006
1,1,1-Trichloroethane	810	3,600	0.28	< 0.53	< 0.0049	< 0.57	< 9.7	< 0.42	< 0.61	< 0.0006
1,1,2,2-Tetrachloroethane	0.6	2.7	0.00003	< 0.53	< 0.0049	< 0.57	< 9.7	< 0.42	< 0.61	< 0.0006
1,1,2-Trichloroethane	0.15	0.63	0.000013	< 0.53	< 0.0049	< 0.57	< 9.7	< 0.42	< 0.61	< 0.0006
1,1-Dichloroethane	3.6	16	0.00078	< 0.53	< 0.0049	< 0.57	< 9.7	< 0.42	< 0.61	< 0.0006
1,1-Dichloroethene	23	100	0.01	< 0.53	< 0.0049	< 0.57	< 9.7	< 0.42	< 0.61	< 0.0006
1,1-Dichloropropene	NLE	NLE	NLE	< 0.53	< 0.0049	< 0.57	< 9.7	< 0.42	< 0.61	< 0.0006
1,2,3-Trichlorobenzene	6.3	93	0.0021	< 0.53	< 0.0049	< 0.57	< 9.7	< 0.42	< 0.61	< 0.0006
1,2,3-Trichloropropane	0.0051	0.11	0.00000032	< 0.53	< 0.0049	< 0.57	< 9.7	< 0.42	< 0.61	< 0.0006
1,2,4-Trichlorobenzene	5.8	26	0.0012	< 0.53	< 0.0049	< 0.57	< 9.7	< 0.42	< 0.61	< 0.0006
1,2,4-Trimethylbenzene	30	180	0.0081	< 0.53	< 0.0049	< 0.57	< 9.7	< 0.42	< 0.61	< 0.0006
1,2-Dibromo-3-chloropropane	0.0053	0.064	0.00000014	< 0.53	< 0.0049	< 0.57	< 9.7	< 0.42	< 0.61	< 0.0015
1,2-Dibromoethane	0.036	0.16	0.0000021	< 0.53	< 0.0049	< 0.57	< 9.7	< 0.42	< 0.61	< 0.0006
1,2-Dichlorobenzene	180	930	0.03	< 0.53	< 0.0049	< 0.57	< 9.7	< 0.42	< 0.61	< 0.0006
1,2-Dichloroethane	0.46	2	0.000048	< 0.53	< 0.0049	< 0.57	< 9.7	< 0.42	< 0.61	< 0.0006
1,2-Dichloropropane	0.28	1.2	0.000047	< 0.53	< 0.0049	< 0.57	< 9.7	< 0.42	< 0.61	< 0.0006
1,3,5-Trimethylbenzene	27	150	0.0087	< 0.53	< 0.0049	< 0.57	< 9.7	< 0.42	< 0.61	< 0.0006
1,3-Dichlorobenzene	NLE	NLE	NLE	< 0.53	< 0.0049	< 0.57	< 9.7	< 0.42	< 0.61	< 0.0006
1,3-Dichloropropane	160	2,300	0.013	< 0.53	< 0.0049	< 0.57	< 9.7	< 0.42	< 0.61	< 0.0006
1,4-Dichlorobenzene	2.6	11	0.00046	< 0.53	< 0.0049	< 0.57	< 9.7	< 0.42	< 0.61	< 0.0006
2,2-Dichloropropane	NLE	NLE	NLE	< 0.53	< 0.0049	< 0.57	< 9.7	< 0.42	< 0.61	< 0.0006
2-Chlorotoluene	160	2,300	0.023	< 0.53	< 0.0049	< 0.57	< 9.7	< 0.42	< 0.61	< 0.0006
Acetone	6,100	67,000	0.29	< 0.53	**0.018**	< 0.57	< 9.7	< 0.42	< 0.61	**0.0063**
Benzene	1.2	5.1	0.00023	< 0.53	< 0.0049	< 0.57	< 9.7	< 0.42	< 0.61	< 0.0006
Bromobenzene	29	180	0.0042	< 0.53	< 0.0049	< 0.57	< 9.7	< 0.42	< 0.61	< 0.0006
Bromochloromethane	15	63	0.0021	< 0.53	< 0.0049	< 0.57	< 9.7	< 0.42	< 0.61	< 0.0006
Bromodichloromethane	0.29	1.3	0.000036	< 0.53	< 0.0049	< 0.57	< 9.7	< 0.42	< 0.61	< 0.0006
Bromoform	19	86	0.00087	< 0.53	< 0.0049	< 0.57	< 9.7	< 0.42	< 0.61	< 0.0006
Carbon tetrachloride	0.65	2.9	0.00018	< 0.53	< 0.0049	< 0.57	< 9.7	< 0.42	< 0.61	< 0.0006
Chlorobenzene	28	130	0.0053	< 0.53	< 0.0049	< 0.57	< 9.7	< 0.42	< 0.61	< 0.0006
Chlorodibromomethane	8.3	39	0.00023	< 0.53	< 0.0049	< 0.57	< 9.7	< 0.42	< 0.61	< 0.0006
Chloroethane	1,400	5,700	0.59	< 0.53	< 0.0049	< 0.57	< 9.7	< 0.42	< 0.61	< 0.0015
Chloroform	0.32	1.4	0.000061	< 0.53	< 0.0049	< 0.57	< 9.7	< 0.42	< 0.61	< 0.0006
Cis-1,2-Dichloroethene	16	230	0.0011	**0.27** J	**0.022**	< 0.57	< 9.7	< 0.42	< 0.61	< 0.0006
Cis-1,3-Dichloropropene	NLE	NLE	NLE	< 0.53	< 0.0049	< 0.57	< 9.7	< 0.42	< 0.61	< 0.0006
Cymene	NLE	NLE	NLE	< 0.53	< 0.0049	< 0.57	< 9.7	< 0.42	< 0.61	< 0.0006
Dichlorodifluoromethane	8.7	37	0.03	< 0.53	< 0.0049	< 0.57	< 9.7	< 0.42	< 0.61	< 0.0006
Ethyl benzene	5.8	25	0.0017	< 0.53	< 0.0049	< 0.57	< 9.7	< 0.42	< 0.61	< 0.0006
Hexachlorobutadiene	1.2	5.3	0.00027	< 0.53	< 0.0049	< 0.57	< 9.7	< 0.42	< 0.61	< 0.0006
Isopropylbenzene	190	990	0.074	< 0.53	< 0.0049	< 0.57	< 9.7	< 0.42	< 0.61	< 0.0006
Meta/Para Xylene	55	240	0.019	< 1.1	< 0.0098	< 1.1	< 19	< 0.83	< 1.2	< 0.0012
Methyl bromide	0.68	3	0.00019	< 0.53	< 0.0049	< 0.57	< 9.7	< 0.42	< 0.61	< 0.0006
Methyl butyl ketone	20	130	0.00088	< 0.53	< 0.0049	< 0.57	< 9.7	< 0.42	< 0.61	< 0.0029
Methyl chloride	11	46	0.0049	< 0.53	< 0.0049	< 0.57	< 9.7	< 0.42	< 0.61	< 0.0006
Methyl ethyl ketone	2,700	19,000	0.12	< 0.53	**0.0028** J	< 0.57	< 9.7	< 0.42	< 0.61	< 0.0029
Methyl isobutyl ketone	3,300	14,000	0.14	< 0.53	< 0.0049	< 0.57	< 9.7	< 0.42	< 0.61	< 0.0029
Methyl Tertbutyl Ether	47	210	0.0032	< 0.53	< 0.0049	< 0.57	< 9.7	< 0.42	< 0.61	< 0.0006
Methylene chloride	35	320	0.0027	< 0.53	< 0.0049	< 0.57	< 9.7	< 0.42	< 0.61	< 0.0006
Naphthalene	3.8	17	0.00054	< 0.53	< 0.0049	< 0.57	< 9.7	< 0.42	< 0.61	**0.0003** J
n-Butylbenzene	390	5,800	0.32	< 0.53	< 0.0049	< 0.57	< 9.7	< 0.42	< 0.61	< 0.0006
Ortho Xylene	65	280	0.019	< 0.53	< 0.0049	< 0.57	< 9.7	< 0.42	< 0.61	< 0.0006
p-Chlorotoluene	160	2,300	0.024	< 0.53	< 0.0049	< 0.57	< 9.7	< 0.42	< 0.61	< 0.0006
Propylbenzene	380	2,400	0.12	< 0.53	< 0.0049	< 0.57	< 9.7	< 0.42	< 0.61	< 0.0006
sec-Butylbenzene	780	12,000	0.59	< 0.53	< 0.0049	< 0.57	< 9.7	< 0.42	< 0.61	< 0.0006
Styrene	600	3,500	0.13	< 0.53	< 0.0049	< 0.57	< 9.7	< 0.42	< 0.61	< 0.0006
Tert Butyl Alcohol	NLE	NLE	NLE	< 11	< 0.098	< 11	< 190	< 8.3	< 12	< 0.0029
tert-Butylbenzene	780	12,000	0.16	< 0.53	< 0.0049	< 0.57	< 9.7	< 0.42	< 0.61	< 0.0006
Tetrachloroethene	8.1	39	0.0018	**2.7**	**0.039**	**1.4**	**360**	**1.6**	**15**	**0.0035**
Toluene	490	4,700	0.076	< 0.53	**0.0013** J	< 0.57	< 9.7	< 0.42	< 0.61	**0.0018**
Trans-1,2-Dichloroethene	160	2,300	0.011	< 0.53	< 0.0049	< 0.57	< 9.7	< 0.42	< 0.61	< 0.0006
Trans-1,3-Dichloropropene	NLE	NLE	NLE	< 0.53	< 0.0049	< 0.57	< 9.7	< 0.42	< 0.61	< 0.0006
Trichloroethene	0.41	1.9	0.0001	**0.43** J	**0.02**	< 0.57	< 9.7	< 0.42	**0.18** J	< 0.0006
Trichlorofluoromethane	2,300	35,000	0.33	< 0.53	< 0.0049	< 0.57	< 9.7	< 0.42	< 0.61	< 0.0006
Vinyl chloride	0.059	1.7	0.0000065	< 0.53	< 0.0049	< 0.57	< 9.7	< 0.42	< 0.61	< 0.0006
TIC VOCs (mg/kg)										
2,3-Dimethylbutane	NLE	NLE	NLE	NA	NA	NA	NA	NA	NA	NA
2-Methylbutane	NLE	NLE	NLE	NA	NA	NA	NA	NA	NA	NA
Ethyl acetate	62	260	0.0031	NA	NA	NA	NA	NA	NA	NA
TIC Unknown	NLE	NLE	NLE	NA	NA	NA	NA	NA	NA	NA
TIC VOCs (mg/kg)										
TIC Unknown	NLE	NLE	NLE	**0.84** J	NA	**0.94** J	NA	**2** J	**1.72** J	NA

TABLE 2
SOIL SAMPLING RESULTS - COMPARISON TO USEPA CRITERIA
SITE FTMM68
FORT MONMOUTH, NEW JERSEY

Loc ID	2017-06 RSL Residential Soil (HQ=0.1)	2017-06 RSL Industrial Soil (HQ=0.1)	2017-06 RSL Protect GW Risk-Based (HQ=0.1)	FTMM68-SB05		FTMM68-SB06				FTMM68-SB07
Sample ID				FTMM-68-SS-SB5-34.0-34.5	FTMM-68-SS-SB5-39.0-39.5	FTMM-68-SS-SB6-15.0-16.0	FTMM-68-SS-SB6-17.0-17.5	FTMM-68-SS-SB6-24.5-25.0	FTMM-68-SS-SB6-27.5-28.0	FTMM-68-SS-SB7-8.0-8.5
epth (bgs)				34-34.5	39-39.5	15-16	17-17.5	24.5-25	27.5-28	8-8.5
Sample Date				1/3/2017	1/3/2017	1/3/2017	1/3/2017	1/3/2017	1/3/2017	1/3/2017
Volatile Organic Compounds (mg/kg)										
1,1,1,2-Tetrachloroethane	2	8.8	0.00022	< 0.0005	< 0.0005	NA	< 0.0008	< 0.0005	< 0.0006 UJ	< 0.0006
1,1,1-Trichloroethane	810	3,600	0.28	< 0.0005	< 0.0005	NA	< 0.0008	< 0.0005	< 0.0006 UJ	< 0.0006
1,1,2,2-Tetrachloroethane	0.6	2.7	0.00003	< 0.0005	< 0.0005	NA	< 0.0008	< 0.0005	< 0.0006 UJ	< 0.0006
1,1,2-Trichloroethane	0.15	0.63	0.000013	< 0.0005	< 0.0005	NA	< 0.0008	< 0.0005	< 0.0006 UJ	< 0.0006
1,1-Dichloroethane	3.6	16	0.00078	< 0.0005	< 0.0005	NA	< 0.0008	< 0.0005	< 0.0006 UJ	< 0.0006
1,1-Dichloroethene	23	100	0.01	< 0.0005	< 0.0005	NA	< 0.0008	< 0.0005	< 0.0006 UJ	< 0.0006
1,1-Dichloropropene	NLE	NLE	NLE	< 0.0005	< 0.0005	NA	< 0.0008	< 0.0005	< 0.0006 UJ	< 0.0006
1,2,3-Trichlorobenzene	6.3	93	0.0021	< 0.0005	< 0.0005	NA	< 0.0008	< 0.0005	< 0.0006 UJ	< 0.0006
1,2,3-Trichloropropane	0.0051	0.11	0.00000032	< 0.0005	< 0.0005	NA	< 0.0008	< 0.0005	< 0.0006 UJ	< 0.0006
1,2,4-Trichlorobenzene	5.8	26	0.0012	< 0.0005	< 0.0005	NA	< 0.0008	< 0.0005	< 0.0006 UJ	< 0.0006
1,2,4-Trimethylbenzene	30	180	0.0081	< 0.0005	< 0.0005	NA	< 0.0008	< 0.0005	< 0.0006 UJ	< 0.0006
1,2-Dibromo-3-chloropropane	0.0053	0.064	0.00000014	< 0.0013	< 0.0012	NA	< 0.0021	< 0.0013	< 0.0015 UJ	< 0.0014
1,2-Dibromoethane	0.036	0.16	0.0000021	< 0.0005	< 0.0005	NA	< 0.0008	< 0.0005	< 0.0006 UJ	< 0.0006
1,2-Dichlorobenzene	180	930	0.03	< 0.0005	< 0.0005	NA	< 0.0008	< 0.0005	< 0.0006 UJ	< 0.0006
1,2-Dichloroethane	0.46	2	0.000048	< 0.0005	< 0.0005	NA	< 0.0008	< 0.0005	< 0.0006 UJ	< 0.0006
1,2-Dichloropropane	0.28	1.2	0.000047	< 0.0005	< 0.0005	NA	< 0.0008	< 0.0005	< 0.0006 UJ	< 0.0006
1,3,5-Trimethylbenzene	27	150	0.0087	< 0.0005	< 0.0005	NA	< 0.0008	< 0.0005	< 0.0006 UJ	< 0.0006
1,3-Dichlorobenzene	NLE	NLE	NLE	< 0.0005	< 0.0005	NA	< 0.0008	< 0.0005	< 0.0006 UJ	< 0.0006
1,3-Dichloropropane	160	2,300	0.013	< 0.0005	< 0.0005	NA	< 0.0008	< 0.0005	< 0.0006 UJ	< 0.0006
1,4-Dichlorobenzene	2.6	11	0.00046	< 0.0005	< 0.0005	NA	< 0.0008	< 0.0005	< 0.0006 UJ	< 0.0006
2,2-Dichloropropane	NLE	NLE	NLE	< 0.0005	< 0.0005	NA	< 0.0008	< 0.0005	< 0.0006 UJ	< 0.0006
2-Chlorotoluene	160	2,300	0.023	< 0.0005	< 0.0005	NA	< 0.0008	< 0.0005	< 0.0006 UJ	< 0.0006
Acetone	6,100	67,000	0.29	**0.0061**	**0.018**	NA	**0.054**	**0.007**	**0.015 J-**	< 0.0029
Benzene	1.2	5.1	0.00023	< 0.0005	< 0.0005	NA	< 0.0008	< 0.0005	< 0.0006 UJ	< 0.0006
Bromobenzene	29	180	0.0042	< 0.0005	< 0.0005	NA	< 0.0008	< 0.0005	< 0.0006 UJ	< 0.0006
Bromochloromethane	15	63	0.0021	< 0.0005	< 0.0005	NA	< 0.0008	< 0.0005	< 0.0006 UJ	< 0.0006
Bromodichloromethane	0.29	1.3	0.000036	< 0.0005	< 0.0005	NA	< 0.0008	< 0.0005	< 0.0006 UJ	< 0.0006
Bromoform	19	86	0.00087	< 0.0005	< 0.0005	NA	< 0.0008	< 0.0005	< 0.0006 UJ	< 0.0006
Carbon tetrachloride	0.65	2.9	0.00018	< 0.0005	< 0.0005	NA	< 0.0008	< 0.0005	< 0.0006 UJ	< 0.0006
Chlorobenzene	28	130	0.0053	< 0.0005	< 0.0005	NA	< 0.0008	< 0.0005	< 0.0006 UJ	< 0.0006
Chlorodibromomethane	8.3	39	0.00023	< 0.0005	< 0.0005	NA	< 0.0008	< 0.0005	< 0.0006 UJ	< 0.0006
Chloroethane	1,400	5,700	0.59	< 0.0013	< 0.0012	NA	< 0.0021	< 0.0013	< 0.0015 UJ	< 0.0014
Chloroform	0.32	1.4	0.000061	< 0.0005	< 0.0005	NA	< 0.0008	< 0.0005	< 0.0006 UJ	< 0.0006
Cis-1,2-Dichloroethene	16	230	0.0011	< 0.0005	< 0.0005	NA	< 0.0008	< 0.0005	< 0.0006 UJ	< 0.0006
Cis-1,3-Dichloropropene	NLE	NLE	NLE	< 0.0005	< 0.0005	NA	< 0.0008	< 0.0005	< 0.0006 UJ	< 0.0006
Cymene	NLE	NLE	NLE	< 0.0005	< 0.0005	NA	< 0.0008	< 0.0005	< 0.0006 UJ	< 0.0006
Dichlorodifluoromethane	8.7	37	0.03	< 0.0005	< 0.0005	NA	< 0.0008	< 0.0005	< 0.0006 UJ	< 0.0006
Ethyl benzene	5.8	25	0.0017	< 0.0005	< 0.0005	NA	< 0.0008	< 0.0005	< 0.0006 UJ	< 0.0006
Hexachlorobutadiene	1.2	5.3	0.00027	< 0.0005	< 0.0005	NA	< 0.0008	< 0.0005	< 0.0006 UJ	< 0.0006
Isopropylbenzene	190	990	0.074	< 0.0005	< 0.0005	NA	< 0.0008	< 0.0005	< 0.0006 UJ	< 0.0006
Meta/Para Xylene	55	240	0.019	< 0.0011	< 0.001	NA	< 0.0016	< 0.001	< 0.0012 UJ	< 0.0012
Methyl bromide	0.68	3	0.00019	< 0.0005	< 0.0005	NA	< 0.0008	< 0.0005	< 0.0006 UJ	< 0.0006
Methyl butyl ketone	20	130	0.00088	< 0.0026	< 0.0025	NA	< 0.0041	< 0.0026	< 0.0029 UJ	< 0.0029
Methyl chloride	11	46	0.0049	< 0.0005	< 0.0005	NA	< 0.0008	< 0.0005	< 0.0006 UJ	< 0.0006
Methyl ethyl ketone	2,700	19,000	0.12	< 0.0026	< 0.0025	NA	< 0.0041	< 0.0026	< 0.0029 UJ	< 0.0029
Methyl isobutyl ketone	3,300	14,000	0.14	< 0.0026	< 0.0025	NA	< 0.0041	< 0.0026	< 0.0029 UJ	< 0.0029
Methyl Tertbutyl Ether	47	210	0.0032	< 0.0005	< 0.0005	NA	< 0.0008	< 0.0005	< 0.0006 UJ	< 0.0006
Methylene chloride	35	320	0.0027	< 0.0005	< 0.0005	NA	< 0.0008	< 0.0005	< 0.0006 UJ	< 0.0006
Naphthalene	3.8	17	0.00054	< 0.0005	< 0.0005	NA	< 0.0008	< 0.0005	< 0.0006 UJ	< 0.0006
n-Butylbenzene	390	5,800	0.32	< 0.0005	< 0.0005	NA	< 0.0008	< 0.0005	< 0.0006 UJ	< 0.0006
Ortho Xylene	65	280	0.019	< 0.0005	< 0.0005	NA	< 0.0008	< 0.0005	< 0.0006 UJ	< 0.0006
p-Chlorotoluene	160	2,300	0.024	< 0.0005	< 0.0005	NA	< 0.0008	< 0.0005	< 0.0006 UJ	< 0.0006
Propylbenzene	380	2,400	0.12	< 0.0005	< 0.0005	NA	< 0.0008	< 0.0005	< 0.0006 UJ	< 0.0006
sec-Butylbenzene	780	12,000	0.59	< 0.0005	< 0.0005	NA	< 0.0008	< 0.0005	< 0.0006 UJ	< 0.0006
Styrene	600	3,500	0.13	< 0.0005	< 0.0005	NA	< 0.0008	< 0.0005	< 0.0006 UJ	< 0.0006
Tert Butyl Alcohol	NLE	NLE	NLE	< 0.0026	< 0.0025	NA	< 0.0041	< 0.0026	< 0.0029 UJ	< 0.0029
tert-Butylbenzene	780	12,000	0.16	< 0.0005	< 0.0005	NA	< 0.0008	< 0.0005	< 0.0006 UJ	< 0.0006
Tetrachloroethene	8.1	39	0.0018	**0.04**	**0.072**	NA	< 0.0008	**2.1**	**1.5**	< 0.0006
Toluene	490	4,700	0.076	**0.0017**	**0.0028**	NA	**0.0027**	**0.0024**	**0.0023 J-**	**0.0061**
Trans-1,2-Dichloroethene	160	2,300	0.011	< 0.0005	< 0.0005	NA	< 0.0008	< 0.0005	< 0.0006 UJ	< 0.0006
Trans-1,3-Dichloropropene	NLE	NLE	NLE	< 0.0005	< 0.0005	NA	< 0.0008	< 0.0005	< 0.0006 UJ	< 0.0006
Trichloroethene	0.41	1.9	0.0001	**0.0015**	**0.001 J**	NA	< 0.0008	**0.0036**	**0.0018 J-**	< 0.0006
Trichlorofluoromethane	2,300	35,000	0.33	< 0.0005	< 0.0005	NA	< 0.0008	< 0.0005	< 0.0006 UJ	< 0.0006
Vinyl chloride	0.059	1.7	0.0000065	< 0.0005	< 0.0005	NA	< 0.0008	< 0.0005	< 0.0006 UJ	< 0.0006
TIC VOCs (mg/kg)										
2,3-Dimethylbutane	NLE	NLE	NLE	NA	NA	NA	NA	NA	NA	NA
2-Methylbutane	NLE	NLE	NLE	NA	NA	NA	NA	NA	NA	NA
Ethyl acetate	62	260	0.0031	NA	NA	NA	NA	NA	NA	NA
TIC Unknown	NLE	NLE	NLE	NA	NA	NA	NA	NA	NA	NA
TIC VOCs (mg/kg)										
TIC Unknown	NLE	NLE	NLE	NA	NA	NA	NA	NA	NA	NA

TABLE 2
SOIL SAMPLING RESULTS - COMPARISON TO USEPA CRITERIA
SITE FTMM68
FORT MONMOUTH, NEW JERSEY

Loc ID	2017-06 RSL Residential Soil (HQ=0.1)	2017-06 RSL Industrial Soil (HQ=0.1)	2017-06 RSL Protect GW Risk-Based (HQ=0.1)	FTMM68-SB07			FTMM68-SB08			
Sample ID				FTMM-68-SS-SB7-16.5-17.0	FTMM-68-SS-SB7-21.0-21.5	FTMM-68-SS-SB7-41.0-41.5	FTMM-68-SS-SB8-8.0-8.5	FTMM-68-SS-SB8-13.5-14.0	FTMM-68-SS-SB8-26.0-26.5	FTMM-68-SS-SB8-40.0-40.5
epth (bgs)				16.5-17	21-21.5	41-41.5	8-8.5	13.5-14	26-26.5	40-40.5
Sample Date				1/3/2017	1/3/2017	1/3/2017	1/4/2017	1/4/2017	1/4/2017	1/4/2017
Volatile Organic Compounds (mg/kg)										
1,1,1,2-Tetrachloroethane	2	8.8	0.00022	< 0.0005	< 0.0005	< 0.0004	< 0.0004	< 0.0006	< 0.0005	< 0.0004
1,1,1-Trichloroethane	810	3,600	0.28	< 0.0005	< 0.0005	< 0.0004	< 0.0004	< 0.0006	< 0.0005	< 0.0004
1,1,2,2-Tetrachloroethane	0.6	2.7	0.00003	< 0.0005	< 0.0005	< 0.0004	< 0.0004	< 0.0006	< 0.0005	< 0.0004
1,1,2-Trichloroethane	0.15	0.63	0.000013	< 0.0005	< 0.0005	< 0.0004	< 0.0004	< 0.0006	< 0.0005	< 0.0004
1,1-Dichloroethane	3.6	16	0.00078	< 0.0005	< 0.0005	< 0.0004	< 0.0004	< 0.0006	< 0.0005	< 0.0004
1,1-Dichloroethene	23	100	0.01	< 0.0005	< 0.0005	< 0.0004	< 0.0004	< 0.0006	< 0.0005	< 0.0004
1,1-Dichloropropene	NLE	NLE	NLE	< 0.0005	< 0.0005	< 0.0004	< 0.0004	< 0.0006	< 0.0005	< 0.0004
1,2,3-Trichlorobenzene	6.3	93	0.0021	< 0.0005	< 0.0005	< 0.0004	< 0.0004	< 0.0006	< 0.0005	< 0.0004
1,2,3-Trichloropropane	0.0051	0.11	0.00000032	< 0.0005	< 0.0005	< 0.0004	< 0.0004	< 0.0006	< 0.0005	< 0.0004
1,2,4-Trichlorobenzene	5.8	26	0.0012	< 0.0005	< 0.0005	< 0.0004	< 0.0004	< 0.0006	< 0.0005	< 0.0004
1,2,4-Trimethylbenzene	30	180	0.0081	< 0.0005	< 0.0005	< 0.0004	< 0.0004	< 0.0006	< 0.0005	< 0.0004
1,2-Dibromo-3-chloropropane	0.0053	0.064	0.00000014	< 0.0014	< 0.0013	< 0.001	< 0.001	< 0.0014	< 0.0012	< 0.0009
1,2-Dibromoethane	0.036	0.16	0.0000021	< 0.0005	< 0.0005	< 0.0004	< 0.0004	< 0.0006	< 0.0005	< 0.0004
1,2-Dichlorobenzene	180	930	0.03	< 0.0005	< 0.0005	< 0.0004	< 0.0004	< 0.0006	< 0.0005	< 0.0004
1,2-Dichloroethane	0.46	2	0.000048	< 0.0005	< 0.0005	**0.0023**	< 0.0004	< 0.0006	< 0.0005	**0.0008**
1,2-Dichloropropane	0.28	1.2	0.000047	< 0.0005	< 0.0005	< 0.0004	< 0.0004	< 0.0006	< 0.0005	< 0.0004
1,3,5-Trimethylbenzene	27	150	0.0087	< 0.0005	< 0.0005	< 0.0004	< 0.0004	< 0.0006	< 0.0005	< 0.0004
1,3-Dichlorobenzene	NLE	NLE	NLE	< 0.0005	< 0.0005	< 0.0004	< 0.0004	< 0.0006	< 0.0005	< 0.0004
1,3-Dichloropropane	160	2,300	0.013	< 0.0005	< 0.0005	< 0.0004	< 0.0004	< 0.0006	< 0.0005	< 0.0004
1,4-Dichlorobenzene	2.6	11	0.00046	< 0.0005	< 0.0005	< 0.0004	< 0.0004	< 0.0006	< 0.0005	< 0.0004
2,2-Dichloropropane	NLE	NLE	NLE	< 0.0005	< 0.0005	< 0.0004	< 0.0004	< 0.0006	< 0.0005	< 0.0004
2-Chlorotoluene	160	2,300	0.023	< 0.0005	< 0.0005	< 0.0004	< 0.0004	< 0.0006	< 0.0005	< 0.0004
Acetone	6,100	67,000	0.29	**0.025**	**0.015**	**0.034**	**0.0059**	**0.095**	**0.014**	**0.0059**
Benzene	1.2	5.1	0.00023	< 0.0005	< 0.0005	< 0.0004	< 0.0004	< 0.0006	< 0.0005	< 0.0004
Bromobenzene	29	180	0.0042	< 0.0005	< 0.0005	< 0.0004	< 0.0004	< 0.0006	< 0.0005	< 0.0004
Bromochloromethane	15	63	0.0021	< 0.0005	< 0.0005	< 0.0004	< 0.0004	< 0.0006	< 0.0005	< 0.0004
Bromodichloromethane	0.29	1.3	0.000036	< 0.0005	< 0.0005	< 0.0004	< 0.0004	< 0.0006	< 0.0005	< 0.0004
Bromoform	19	86	0.00087	< 0.0005	< 0.0005	< 0.0004	< 0.0004	< 0.0006	< 0.0005	< 0.0004
Carbon tetrachloride	0.65	2.9	0.00018	< 0.0005	< 0.0005	< 0.0004	< 0.0004	< 0.0006	< 0.0005	< 0.0004
Chlorobenzene	28	130	0.0053	< 0.0005	< 0.0005	< 0.0004	< 0.0004	< 0.0006	< 0.0005	< 0.0004
Chlorodibromomethane	8.3	39	0.00023	< 0.0005	< 0.0005	< 0.0004	< 0.0004	< 0.0006	< 0.0005	< 0.0004
Chloroethane	1,400	5,700	0.59	< 0.0014	< 0.0013	< 0.001	< 0.001	< 0.0014	< 0.0012	< 0.0009
Chloroform	0.32	1.4	0.000061	< 0.0005	< 0.0005	< 0.0004	< 0.0004	< 0.0006	< 0.0005	< 0.0004
Cis-1,2-Dichloroethene	16	230	0.0011	< 0.0005	< 0.0005	< 0.0004	< 0.0004	< 0.0006	< 0.0005	< 0.0004
Cis-1,3-Dichloropropene	NLE	NLE	NLE	< 0.0005	< 0.0005	< 0.0004	< 0.0004	< 0.0006	< 0.0005	< 0.0004
Cymene	NLE	NLE	NLE	< 0.0005	< 0.0005	< 0.0004	< 0.0004	< 0.0006	< 0.0005	< 0.0004
Dichlorodifluoromethane	8.7	37	0.03	< 0.0005	< 0.0005	< 0.0004	< 0.0004	< 0.0006	< 0.0005	< 0.0004
Ethyl benzene	5.8	25	0.0017	< 0.0005	< 0.0005	< 0.0004	< 0.0004	< 0.0006	< 0.0005	< 0.0004
Hexachlorobutadiene	1.2	5.3	0.00027	< 0.0005	< 0.0005	< 0.0004	< 0.0004	< 0.0006	< 0.0005	< 0.0004
Isopropylbenzene	190	990	0.074	< 0.0005	< 0.0005	**0.0003 J**	< 0.0004	< 0.0006	< 0.0005	< 0.0004
Meta/Para Xylene	55	240	0.019	< 0.0011	< 0.001	< 0.0008	< 0.0008	< 0.0011	< 0.001	< 0.0007
Methyl bromide	0.68	3	0.00019	< 0.0005	< 0.0005	< 0.0004	< 0.0004	< 0.0006	< 0.0005	< 0.0004
Methyl butyl ketone	20	130	0.00088	< 0.0027	< 0.0026	< 0.002	< 0.002	< 0.0028	< 0.0024	< 0.0019
Methyl chloride	11	46	0.0049	< 0.0005	< 0.0005	< 0.0004	< 0.0004	< 0.0006	< 0.0005	< 0.0004
Methyl ethyl ketone	2,700	19,000	0.12	**0.0026 J**	< 0.0026	< 0.002	< 0.002	< 0.0028	< 0.0024	< 0.0019
Methyl isobutyl ketone	3,300	14,000	0.14	< 0.0027	< 0.0026	< 0.002	< 0.002	< 0.0028	< 0.0024	< 0.0019
Methyl Tertbutyl Ether	47	210	0.0032	**0.0003 J**	< 0.0005	**0.0005 J**	< 0.0004	< 0.0006	< 0.0005	< 0.0004
Methylene chloride	35	320	0.0027	< 0.0005	< 0.0005	< 0.0004	**0.0006 J**	< 0.0006	< 0.0005	< 0.0004
Naphthalene	3.8	17	0.00054	< 0.0005	< 0.0005	**0.0004 J**	< 0.0004	< 0.0006	< 0.0005	< 0.0004
n-Butylbenzene	390	5,800	0.32	< 0.0005	< 0.0005	< 0.0004	< 0.0004	< 0.0006	< 0.0005	< 0.0004
Ortho Xylene	65	280	0.019	< 0.0005	< 0.0005	< 0.0004	< 0.0004	< 0.0006	< 0.0005	< 0.0004
p-Chlorotoluene	160	2,300	0.024	< 0.0005	< 0.0005	< 0.0004	< 0.0004	< 0.0006	< 0.0005	< 0.0004
Propylbenzene	380	2,400	0.12	< 0.0005	< 0.0005	< 0.0004	< 0.0004	< 0.0006	< 0.0005	< 0.0004
sec-Butylbenzene	780	12,000	0.59	< 0.0005	< 0.0005	< 0.0004	< 0.0004	< 0.0006	< 0.0005	< 0.0004
Styrene	600	3,500	0.13	< 0.0005	< 0.0005	< 0.0004	< 0.0004	< 0.0006	< 0.0005	< 0.0004
Tert Butyl Alcohol	NLE	NLE	NLE	< 0.0027	< 0.0026	**0.011**	< 0.002	< 0.0028	< 0.0024	< 0.0019
tert-Butylbenzene	780	12,000	0.16	< 0.0005	< 0.0005	< 0.0004	< 0.0004	< 0.0006	< 0.0005	< 0.0004
Tetrachloroethene	8.1	39	0.0018	**0.0007 J**	**0.0015**	**0.0003 J**	< 0.0004	**0.0006 J**	< 0.0005	< 0.0004
Toluene	490	4,700	0.076	**0.0028**	**0.0008 J**	**0.0049**	**0.0023**	**0.0007 J**	**0.0022**	**0.0011**
Trans-1,2-Dichloroethene	160	2,300	0.011	< 0.0005	< 0.0005	< 0.0004	< 0.0004	< 0.0006	< 0.0005	< 0.0004
Trans-1,3-Dichloropropene	NLE	NLE	NLE	< 0.0005	< 0.0005	< 0.0004	< 0.0004	< 0.0006	< 0.0005	< 0.0004
Trichloroethene	0.41	1.9	0.0001	< 0.0005	< 0.0005	< 0.0004	< 0.0004	< 0.0006	< 0.0005	< 0.0004
Trichlorofluoromethane	2,300	35,000	0.33	< 0.0005	< 0.0005	< 0.0004	< 0.0004	< 0.0006	< 0.0005	< 0.0004
Vinyl chloride	0.059	1.7	0.0000065	< 0.0005	< 0.0005	< 0.0004	< 0.0004	< 0.0006	< 0.0005	< 0.0004
TIC VOCs (mg/kg)										
2,3-Dimethylbutane	NLE	NLE	NLE	NA	NA	NA	NA	NA	NA	NA
2-Methylbutane	NLE	NLE	NLE	NA	NA	NA	NA	NA	NA	NA
Ethyl acetate	62	260	0.0031	NA	NA	NA	NA	**0.0021 JN**	NA	NA
TIC Unknown	NLE	NLE	NLE	NA	NA	NA	NA	NA	NA	NA
TIC VOCs (mg/kg)										
TIC Unknown	NLE	NLE	NLE	NA	NA	NA	NA	NA	NA	NA

TABLE 2
SOIL SAMPLING RESULTS - COMPARISON TO USEPA CRITERIA
SITE FTMM68
FORT MONMOUTH, NEW JERSEY

Loc ID	2017-06 RSL Residential Soil (HQ=0.1)	2017-06 RSL Industrial Soil (HQ=0.1)	2017-06 RSL Protect GW Risk-Based (HQ=0.1)	FTMM68-SB09			FTMM68-SB10			
Sample ID				FTMM-68-SS-SB9-18.0-18.5	FTMM-68-SS-SB9-28.0-28.5	FTMM-68-SS-SB9-38.0-38.5	FTMM-68-SS-SB10-0.75-1.25	FTMM-68-SS-SB10-8.0-8.5	FTMM-68-SS-SB10-19.0-19.5	FTMM-68-SS-SB10-26.0-26.5
epth (bgs)				18-18.5	28-28.5	38-38.5	0.75-1.25	8-8.5	19-19.5	26-26.5
Sample Date				1/4/2017	1/4/2017	1/4/2017	1/4/2017	1/4/2017	1/4/2017	1/4/2017
Volatile Organic Compounds (mg/kg)										
1,1,1,2-Tetrachloroethane	2	8.8	0.00022	< 0.0005	< 0.0006	< 0.0004	< 0.0004	< 0.0005	< 0.0008	< 0.0005
1,1,1-Trichloroethane	810	3,600	0.28	< 0.0005	< 0.0006	< 0.0004	< 0.0004	< 0.0005	< 0.0008	< 0.0005
1,1,2,2-Tetrachloroethane	0.6	2.7	0.00003	< 0.0005	< 0.0006	< 0.0004	< 0.0004	< 0.0005	< 0.0008	< 0.0005
1,1,2-Trichloroethane	0.15	0.63	0.000013	< 0.0005	< 0.0006	< 0.0004	< 0.0004	< 0.0005	< 0.0008	< 0.0005
1,1-Dichloroethane	3.6	16	0.00078	< 0.0005	< 0.0006	< 0.0004	< 0.0004	< 0.0005	< 0.0008	< 0.0005
1,1-Dichloroethene	23	100	0.01	< 0.0005	< 0.0006	< 0.0004	< 0.0004	< 0.0005	**0.0012** J	**0.001** J
1,1-Dichloropropene	NLE	NLE	NLE	< 0.0005	< 0.0006	< 0.0004	< 0.0004	< 0.0005	< 0.0008	< 0.0005
1,2,3-Trichlorobenzene	6.3	93	0.0021	< 0.0005	< 0.0006	< 0.0004	< 0.0004	< 0.0005	< 0.0008	< 0.0005
1,2,3-Trichloropropane	0.0051	0.11	0.00000032	< 0.0005	< 0.0006	< 0.0004	< 0.0004	< 0.0005	< 0.0008	< 0.0005
1,2,4-Trichlorobenzene	5.8	26	0.0012	< 0.0005	< 0.0006	< 0.0004	< 0.0004	< 0.0005	< 0.0008	< 0.0005
1,2,4-Trimethylbenzene	30	180	0.0081	< 0.0005	< 0.0006	< 0.0004	< 0.0004	< 0.0005	< 0.0008	< 0.0005
1,2-Dibromo-3-chloropropane	0.0053	0.064	0.00000014	< 0.0013	< 0.0016	< 0.0011	< 0.0011	< 0.0012	< 0.002	< 0.0014
1,2-Dibromoethane	0.036	0.16	0.0000021	< 0.0005	< 0.0006	< 0.0004	< 0.0004	< 0.0005	< 0.0008	< 0.0005
1,2-Dichlorobenzene	180	930	0.03	< 0.0005	< 0.0006	< 0.0004	< 0.0004	< 0.0005	< 0.0008	< 0.0005
1,2-Dichloroethane	0.46	2	0.000048	< 0.0005	< 0.0006	**0.0002** J	< 0.0004	< 0.0005	< 0.0008	< 0.0005
1,2-Dichloropropane	0.28	1.2	0.000047	< 0.0005	< 0.0006	< 0.0004	< 0.0004	< 0.0005	< 0.0008	< 0.0005
1,3,5-Trimethylbenzene	27	150	0.0087	< 0.0005	< 0.0006	< 0.0004	< 0.0004	< 0.0005	< 0.0008	< 0.0005
1,3-Dichlorobenzene	NLE	NLE	NLE	< 0.0005	< 0.0006	< 0.0004	< 0.0004	< 0.0005	< 0.0008	< 0.0005
1,3-Dichloropropane	160	2,300	0.013	< 0.0005	< 0.0006	< 0.0004	< 0.0004	< 0.0005	< 0.0008	< 0.0005
1,4-Dichlorobenzene	2.6	11	0.00046	< 0.0005	< 0.0006	< 0.0004	< 0.0004	< 0.0005	< 0.0008	< 0.0005
2,2-Dichloropropane	NLE	NLE	NLE	< 0.0005	< 0.0006	< 0.0004	< 0.0004	< 0.0005	< 0.0008	< 0.0005
2-Chlorotoluene	160	2,300	0.023	< 0.0005	< 0.0006	< 0.0004	< 0.0004	< 0.0005	< 0.0008	< 0.0005
Acetone	6,100	67,000	0.29	**0.029**	**0.049**	< 0.0022	< 0.0022	**0.034**	**0.054** J+	**0.032**
Benzene	1.2	5.1	0.00023	< 0.0005	< 0.0006	**0.0013**	< 0.0004	< 0.0005	< 0.0008	< 0.0005
Bromobenzene	29	180	0.0042	< 0.0005	< 0.0006	< 0.0004	< 0.0004	< 0.0005	< 0.0008	< 0.0005
Bromochloromethane	15	63	0.0021	< 0.0005	< 0.0006	< 0.0004	< 0.0004	< 0.0005	< 0.0008	< 0.0005
Bromodichloromethane	0.29	1.3	0.000036	< 0.0005	< 0.0006	< 0.0004	< 0.0004	< 0.0005	< 0.0008	< 0.0005
Bromoform	19	86	0.00087	< 0.0005	< 0.0006	< 0.0004	< 0.0004	< 0.0005	< 0.0008	< 0.0005
Carbon tetrachloride	0.65	2.9	0.00018	< 0.0005	< 0.0006	< 0.0004	< 0.0004	< 0.0005	< 0.0008	< 0.0005
Chlorobenzene	28	130	0.0053	< 0.0005	< 0.0006	< 0.0004	< 0.0004	< 0.0005	< 0.0008	< 0.0005
Chlorodibromomethane	8.3	39	0.00023	< 0.0005	< 0.0006	< 0.0004	< 0.0004	< 0.0005	< 0.0008	< 0.0005
Chloroethane	1,400	5,700	0.59	< 0.0013	< 0.0016	< 0.0011	< 0.0011	< 0.0012	< 0.002	< 0.0014
Chloroform	0.32	1.4	0.000061	< 0.0005	< 0.0006	< 0.0004	< 0.0004	< 0.0005	< 0.0008	< 0.0005
Cis-1,2-Dichloroethene	16	230	0.0011	< 0.0005	< 0.0006	< 0.0004	< 0.0004	< 0.0005	< 0.0008	< 0.0005
Cis-1,3-Dichloropropene	NLE	NLE	NLE	< 0.0005	< 0.0006	< 0.0004	< 0.0004	< 0.0005	< 0.0008	< 0.0005
Cymene	NLE	NLE	NLE	< 0.0005	< 0.0006	< 0.0004	< 0.0004	< 0.0005	< 0.0008	< 0.0005
Dichlorodifluoromethane	8.7	37	0.03	< 0.0005	< 0.0006	< 0.0004	< 0.0004	< 0.0005	< 0.0008	< 0.0005
Ethyl benzene	5.8	25	0.0017	< 0.0005	< 0.0006	< 0.0004	< 0.0004	< 0.0005	< 0.0008	< 0.0005
Hexachlorobutadiene	1.2	5.3	0.00027	< 0.0005	< 0.0006	< 0.0004	< 0.0004	< 0.0005	< 0.0008	< 0.0005
Isopropylbenzene	190	990	0.074	**0.0006** J	< 0.0006	**0.0011**	< 0.0004	< 0.0005	< 0.0008	< 0.0005
Meta/Para Xylene	55	240	0.019	< 0.001	< 0.0013	< 0.0009	< 0.0009	< 0.0009	< 0.0016	< 0.0011
Methyl bromide	0.68	3	0.00019	< 0.0005	< 0.0006	< 0.0004	< 0.0004	< 0.0005	< 0.0008	< 0.0005
Methyl butyl ketone	20	130	0.00088	< 0.0026	< 0.0032	< 0.0022	< 0.0022	< 0.0024	< 0.0039	< 0.0027
Methyl chloride	11	46	0.0049	< 0.0005	< 0.0006	< 0.0004	< 0.0004	< 0.0005	< 0.0008	< 0.0005
Methyl ethyl ketone	2,700	19,000	0.12	**0.0042** J	**0.0022** J	< 0.0022	< 0.0022	< 0.0024	< 0.0039	< 0.0027
Methyl isobutyl ketone	3,300	14,000	0.14	< 0.0026	< 0.0032	< 0.0022	< 0.0022	< 0.0024	< 0.0039	< 0.0027
Methyl Tertbutyl Ether	47	210	0.0032	< 0.0005	**0.0005** J	< 0.0004	< 0.0004	< 0.0005	< 0.0008	< 0.0005
Methylene chloride	35	320	0.0027	< 0.0005	**0.0054**	< 0.0004	< 0.0004	< 0.0005	< 0.0008	< 0.0005
Naphthalene	3.8	17	0.00054	< 0.0005	< 0.0006	< 0.0004	< 0.0004	< 0.0005	< 0.0008	< 0.0005
n-Butylbenzene	390	5,800	0.32	< 0.0005	< 0.0006	< 0.0004	< 0.0004	< 0.0005	< 0.0008	< 0.0005
Ortho Xylene	65	280	0.019	< 0.0005	< 0.0006	< 0.0004	< 0.0004	< 0.0005	< 0.0008	< 0.0005
p-Chlorotoluene	160	2,300	0.024	< 0.0005	< 0.0006	< 0.0004	< 0.0004	< 0.0005	< 0.0008	< 0.0005
Propylbenzene	380	2,400	0.12	< 0.0005	< 0.0006	**0.0006** J	< 0.0004	< 0.0005	< 0.0008	< 0.0005
sec-Butylbenzene	780	12,000	0.59	< 0.0005	< 0.0006	< 0.0004	< 0.0004	< 0.0005	< 0.0008	< 0.0005
Styrene	600	3,500	0.13	< 0.0005	< 0.0006	< 0.0004	< 0.0004	< 0.0005	< 0.0008	< 0.0005
Tert Butyl Alcohol	NLE	NLE	NLE	< 0.0026	< 0.0032	**0.0032** J	< 0.0022	< 0.0024	< 0.0039	< 0.0027
tert-Butylbenzene	780	12,000	0.16	< 0.0005	< 0.0006	< 0.0004	< 0.0004	< 0.0005	< 0.0008	< 0.0005
Tetrachloroethene	8.1	39	0.0018	**0.0043**	< 0.0006	**0.0021**	< 0.0004	**0.0004** J	**2.2**	**2.5**
Toluene	490	4,700	0.076	**0.0033**	**0.0004** J	**0.0033**	**0.001**	**0.0055**	**0.0009** J	**0.0038**
Trans-1,2-Dichloroethene	160	2,300	0.011	< 0.0005	< 0.0006	< 0.0004	< 0.0004	< 0.0005	< 0.0008	< 0.0005
Trans-1,3-Dichloropropene	NLE	NLE	NLE	< 0.0005	< 0.0006	< 0.0004	< 0.0004	< 0.0005	< 0.0008	< 0.0005
Trichloroethene	0.41	1.9	0.0001	< 0.0005	< 0.0006	**0.0004** J	< 0.0004	< 0.0005	**0.0069** J+	**0.0087**
Trichlorofluoromethane	2,300	35,000	0.33	< 0.0005	**0.0022**	< 0.0004	< 0.0004	< 0.0005	< 0.0008	< 0.0005
Vinyl chloride	0.059	1.7	0.0000065	< 0.0005	< 0.0006	< 0.0004	< 0.0004	< 0.0005	< 0.0008	< 0.0005
TIC VOCs (mg/kg)										
2,3-Dimethylbutane	NLE	NLE	NLE	**0.0032** JN	NA	**0.0071** JN	NA	NA	NA	NA
2-Methylbutane	NLE	NLE	NLE	NA	NA	**0.0085** JN	NA	NA	NA	NA
Ethyl acetate	62	260	0.0031	NA	NA	NA	NA	NA	NA	NA
TIC Unknown	NLE	NLE	NLE	NA	NA	NA	NA	NA	NA	NA
TIC VOCs (mg/kg)										
TIC Unknown	NLE	NLE	NLE	NA	NA	NA	NA	NA	NA	NA

TABLE 2
SOIL SAMPLING RESULTS - COMPARISON TO USEPA CRITERIA
SITE FTMM68
FORT MONMOUTH, NEW JERSEY

Loc ID	2017-06 RSL Residential Soil (HQ=0.1)	2017-06 RSL Industrial Soil (HQ=0.1)	2017-06 RSL Protect GW Risk-Based (HQ=0.1)	FTMM68-SB10		FTMM68-SB11				
Sample ID				**FTMM-68-SS-SB10-34.0-34.5**	**FTMM-68-SS-SB10-36.5-37.0**	**FTMM-68-SS-SB11-2.5-3.0**	**FTMM-68-SS-SB11-7.5-8.0**	**FTMM-68-SS-SB11-13.5-14.0**	**FTMM-68-SS-SB11-17.5-18.0**	**FTMM-68-SS-SB11-23.5-24.0**
epth (bgs)				**34-34.5**	**36.5-37**	**2.5-3**	**7.5-8**	**13.5-14**	**17.5-18**	**23.5-24**
Sample Date				**1/4/2017**	**1/4/2017**	**1/4/2017**	**1/4/2017**	**1/4/2017**	**1/4/2017**	**1/4/2017**
Volatile Organic Compounds (mg/kg)										
1,1,1,2-Tetrachloroethane	2	8.8	0.00022	< 0.0007 UJ	< 0.0004	< 0.0004	< 0.0004	< 0.0006 UJ	< 0.0004	< 0.0005 UJ
1,1,1-Trichloroethane	810	3,600	0.28	< 0.0007 UJ	< 0.0004	< 0.0004	< 0.0004	< 0.0006 UJ	< 0.0004	< 0.0005 UJ
1,1,2,2-Tetrachloroethane	0.6	2.7	0.00003	< 0.0007 UJ	< 0.0004	< 0.0004	< 0.0004	< 0.0006 UJ	< 0.0004	< 0.0005 UJ
1,1,2-Trichloroethane	0.15	0.63	0.000013	< 0.0007 UJ	< 0.0004	< 0.0004	< 0.0004	< 0.0006 UJ	< 0.0004	< 0.0005 UJ
1,1-Dichloroethane	3.6	16	0.00078	< 0.0007 UJ	< 0.0004	< 0.0004	< 0.0004	< 0.0006 UJ	< 0.0004	< 0.0005 UJ
1,1-Dichloroethene	23	100	0.01	< 0.0007 UJ	< 0.0004	< 0.0004	< 0.0004	< 0.0006 UJ	< 0.0004	< 0.0005 UJ
1,1-Dichloropropene	NLE	NLE	NLE	< 0.0007 UJ	< 0.0004	< 0.0004	< 0.0004	< 0.0006 UJ	< 0.0004	< 0.0005 UJ
1,2,3-Trichlorobenzene	6.3	93	0.0021	< 0.0007 UJ	< 0.0004	< 0.0004	< 0.0004	< 0.0006 UJ	< 0.0004	< 0.0005 UJ
1,2,3-Trichloropropane	0.0051	0.11	0.00000032	< 0.0007 UJ	< 0.0004	< 0.0004	< 0.0004	< 0.0006 UJ	< 0.0004	< 0.0005 UJ
1,2,4-Trichlorobenzene	5.8	26	0.0012	< 0.0007 UJ	< 0.0004	< 0.0004	< 0.0004	< 0.0006 UJ	< 0.0004	< 0.0005 UJ
1,2,4-Trimethylbenzene	30	180	0.0081	< 0.0007 UJ	< 0.0004	< 0.0004	< 0.0004	< 0.0006 UJ	< 0.0004	< 0.0005 UJ
1,2-Dibromo-3-chloropropane	0.0053	0.064	0.00000014	< 0.0016 UJ	< 0.0011	< 0.0009	< 0.001	< 0.0015 UJ	< 0.001	< 0.0012 UJ
1,2-Dibromoethane	0.036	0.16	0.0000021	< 0.0007 UJ	< 0.0004	< 0.0004	< 0.0004	< 0.0006 UJ	< 0.0004	< 0.0005 UJ
1,2-Dichlorobenzene	180	930	0.03	< 0.0007 UJ	< 0.0004	< 0.0004	< 0.0004	< 0.0006 UJ	< 0.0004	< 0.0005 UJ
1,2-Dichloroethane	0.46	2	0.000048	< 0.0007 UJ	< 0.0004	< 0.0004	< 0.0004	< 0.0006 UJ	< 0.0004	< 0.0005 UJ
1,2-Dichloropropane	0.28	1.2	0.000047	< 0.0007 UJ	< 0.0004	< 0.0004	< 0.0004	< 0.0006 UJ	< 0.0004	< 0.0005 UJ
1,3,5-Trimethylbenzene	27	150	0.0087	< 0.0007 UJ	< 0.0004	< 0.0004	< 0.0004	< 0.0006 UJ	< 0.0004	< 0.0005 UJ
1,3-Dichlorobenzene	NLE	NLE	NLE	< 0.0007 UJ	< 0.0004	< 0.0004	< 0.0004	< 0.0006 UJ	< 0.0004	< 0.0005 UJ
1,3-Dichloropropane	160	2,300	0.013	< 0.0007 UJ	< 0.0004	< 0.0004	< 0.0004	< 0.0006 UJ	< 0.0004	< 0.0005 UJ
1,4-Dichlorobenzene	2.6	11	0.00046	< 0.0007 UJ	< 0.0004	< 0.0004	< 0.0004	< 0.0006 UJ	< 0.0004	< 0.0005 UJ
2,2-Dichloropropane	NLE	NLE	NLE	< 0.0007 UJ	< 0.0004	< 0.0004	< 0.0004	< 0.0006 UJ	< 0.0004	< 0.0005 UJ
2-Chlorotoluene	160	2,300	0.023	< 0.0007 UJ	< 0.0004	< 0.0004	< 0.0004	< 0.0006 UJ	< 0.0004	< 0.0005 UJ
Acetone	6,100	67,000	0.29	**0.0051 J**	**0.0032 J**	**0.0084**	**0.0038 J**	**0.0033 J**	**0.0049**	**0.01 J**
Benzene	1.2	5.1	0.00023	< 0.0007 UJ	< 0.0004	< 0.0004	< 0.0004	< 0.0006 UJ	< 0.0004	< 0.0005 UJ
Bromobenzene	29	180	0.0042	< 0.0007 UJ	< 0.0004	< 0.0004	< 0.0004	< 0.0006 UJ	< 0.0004	< 0.0005 UJ
Bromochloromethane	15	63	0.0021	< 0.0007 UJ	< 0.0004	< 0.0004	< 0.0004	< 0.0006 UJ	< 0.0004	< 0.0005 UJ
Bromodichloromethane	0.29	1.3	0.000036	< 0.0007 UJ	< 0.0004	< 0.0004	< 0.0004	< 0.0006 UJ	< 0.0004	< 0.0005 UJ
Bromoform	19	86	0.00087	< 0.0007 UJ	< 0.0004	< 0.0004	< 0.0004	< 0.0006 UJ	< 0.0004	< 0.0005 UJ
Carbon tetrachloride	0.65	2.9	0.00018	< 0.0007 UJ	< 0.0004	< 0.0004	< 0.0004	< 0.0006 UJ	< 0.0004	< 0.0005 UJ
Chlorobenzene	28	130	0.0053	< 0.0007 UJ	< 0.0004	< 0.0004	< 0.0004	< 0.0006 UJ	< 0.0004	< 0.0005 UJ
Chlorodibromomethane	8.3	39	0.00023	< 0.0007 UJ	< 0.0004	< 0.0004	< 0.0004	< 0.0006 UJ	< 0.0004	< 0.0005 UJ
Chloroethane	1,400	5,700	0.59	< 0.0016 UJ	< 0.0011	< 0.0009	< 0.001	< 0.0015 UJ	< 0.001	< 0.0012 UJ
Chloroform	0.32	1.4	0.000061	< 0.0007 UJ	< 0.0004	< 0.0004	< 0.0004	< 0.0006 UJ	< 0.0004	< 0.0005 UJ
Cis-1,2-Dichloroethene	16	230	0.0011	**0.0008 J**	**0.0005 J**	< 0.0004	**0.0003 J**	< 0.0006 UJ	**0.0019**	**0.0013 J-**
Cis-1,3-Dichloropropene	NLE	NLE	NLE	< 0.0007 UJ	< 0.0004	< 0.0004	< 0.0004	< 0.0006 UJ	< 0.0004	< 0.0005 UJ
Cymene	NLE	NLE	NLE	< 0.0007 UJ	< 0.0004	< 0.0004	< 0.0004	< 0.0006 UJ	< 0.0004	< 0.0005 UJ
Dichlorodifluoromethane	8.7	37	0.03	< 0.0007 UJ	< 0.0004	< 0.0004	< 0.0004	< 0.0006 UJ	< 0.0004	< 0.0005 UJ
Ethyl benzene	5.8	25	0.0017	< 0.0007 UJ	< 0.0004	< 0.0004	< 0.0004	< 0.0006 UJ	< 0.0004	< 0.0005 UJ
Hexachlorobutadiene	1.2	5.3	0.00027	< 0.0007 UJ	< 0.0004	< 0.0004	< 0.0004	< 0.0006 UJ	< 0.0004	< 0.0005 UJ
Isopropylbenzene	190	990	0.074	< 0.0007 UJ	< 0.0004	< 0.0004	< 0.0004	< 0.0006 UJ	< 0.0004	< 0.0005 UJ
Meta/Para Xylene	55	240	0.019	< 0.0013 UJ	< 0.0009	< 0.0007	< 0.0008	< 0.0012 UJ	< 0.0008	< 0.001 UJ
Methyl bromide	0.68	3	0.00019	< 0.0007 UJ	< 0.0004	< 0.0004	< 0.0004	< 0.0006 UJ	< 0.0004	< 0.0005 UJ
Methyl butyl ketone	20	130	0.00088	< 0.0033 UJ	< 0.0021	< 0.0018	< 0.0019	< 0.0029 UJ	< 0.002	< 0.0024 UJ
Methyl chloride	11	46	0.0049	< 0.0007 UJ	< 0.0004	< 0.0004	< 0.0004	< 0.0006 UJ	< 0.0004	< 0.0005 UJ
Methyl ethyl ketone	2,700	19,000	0.12	< 0.0033 UJ	< 0.0021	< 0.0018	< 0.0019	< 0.0029 UJ	< 0.002	< 0.0024 UJ
Methyl isobutyl ketone	3,300	14,000	0.14	< 0.0033 UJ	< 0.0021	< 0.0018	< 0.0019	< 0.0029 UJ	< 0.002	< 0.0024 UJ
Methyl Tertbutyl Ether	47	210	0.0032	< 0.0007 UJ	< 0.0004	< 0.0004	< 0.0004	< 0.0006 UJ	< 0.0004	< 0.0005 UJ
Methylene chloride	35	320	0.0027	< 0.0007 UJ	< 0.0004	< 0.0004	< 0.0004	< 0.0006 UJ	< 0.0004	< 0.0005 UJ
Naphthalene	3.8	17	0.00054	< 0.0007 UJ	< 0.0004	< 0.0004	**0.0003 J**	< 0.0006 UJ	< 0.0004	< 0.0005 UJ
n-Butylbenzene	390	5,800	0.32	< 0.0007 UJ	< 0.0004	< 0.0004	< 0.0004	< 0.0006 UJ	< 0.0004	< 0.0005 UJ
Ortho Xylene	65	280	0.019	< 0.0007 UJ	< 0.0004	< 0.0004	< 0.0004	< 0.0006 UJ	< 0.0004	< 0.0005 UJ
p-Chlorotoluene	160	2,300	0.024	< 0.0007 UJ	< 0.0004	< 0.0004	< 0.0004	< 0.0006 UJ	< 0.0004	< 0.0005 UJ
Propylbenzene	380	2,400	0.12	< 0.0007 UJ	< 0.0004	< 0.0004	< 0.0004	< 0.0006 UJ	< 0.0004	< 0.0005 UJ
sec-Butylbenzene	780	12,000	0.59	< 0.0007 UJ	< 0.0004	< 0.0004	< 0.0004	< 0.0006 UJ	< 0.0004	< 0.0005 UJ
Styrene	600	3,500	0.13	< 0.0007 UJ	< 0.0004	< 0.0004	< 0.0004	< 0.0006 UJ	< 0.0004	< 0.0005 UJ
Tert Butyl Alcohol	NLE	NLE	NLE	< 0.0033 UJ	< 0.0021	< 0.0018	< 0.0019	< 0.0029 UJ	< 0.002	< 0.0024 UJ
tert-Butylbenzene	780	12,000	0.16	< 0.0007 UJ	< 0.0004	< 0.0004	< 0.0004	< 0.0006 UJ	< 0.0004	< 0.0005 UJ
Tetrachloroethene	8.1	39	0.0018	**0.14**	**0.14**	**0.0047**	**0.0059**	**0.0009 J**	**0.036**	**3.5**
Toluene	490	4,700	0.076	**0.0016 J-**	**0.0027**	**0.0016**	**0.0025**	**0.0043 J-**	**0.0039**	**0.0025 J**
Trans-1,2-Dichloroethene	160	2,300	0.011	< 0.0007 UJ	< 0.0004	< 0.0004	< 0.0004	< 0.0006 UJ	< 0.0004	< 0.0005 UJ
Trans-1,3-Dichloropropene	NLE	NLE	NLE	< 0.0007 UJ	< 0.0004	< 0.0004	< 0.0004	< 0.0006 UJ	< 0.0004	< 0.0005 UJ
Trichloroethene	0.41	1.9	0.0001	**0.0034 J-**	**0.0016**	< 0.0004	< 0.0004	< 0.0006 UJ	**0.0027**	**0.0085 J-**
Trichlorofluoromethane	2,300	35,000	0.33	< 0.0007 UJ	< 0.0004	< 0.0004	< 0.0004	< 0.0006 UJ	< 0.0004	< 0.0005 UJ
Vinyl chloride	0.059	1.7	0.0000065	< 0.0007 UJ	< 0.0004	< 0.0004	< 0.0004	< 0.0006 UJ	< 0.0004	< 0.0005 UJ
TIC VOCs (mg/kg)										
2,3-Dimethylbutane	NLE	NLE	NLE	NA	NA	NA	NA	NA	NA	NA
2-Methylbutane	NLE	NLE	NLE	NA	NA	NA	NA	NA	NA	NA
Ethyl acetate	62	260	0.0031	NA	NA	NA	NA	NA	NA	NA
TIC Unknown	NLE	NLE	NLE	**0.1466 J**	NA	NA	NA	NA	NA	NA
TIC VOCs (mg/kg)										
TIC Unknown	NLE	NLE	NLE	NA	NA	NA	NA	NA	NA	NA

TABLE 2
SOIL SAMPLING RESULTS - COMPARISON TO USEPA CRITERIA
SITE FTMM68
FORT MONMOUTH, NEW JERSEY

Loc ID	2017-06 RSL Residential Soil (HQ=0.1)	2017-06 RSL Industrial Soil (HQ=0.1)	2017-06 RSL Protect GW Risk-Based (HQ=0.1)	FTMM68-SB11		FTMM68-SB12				
Sample ID				FTMM-68-SS-SB110-23.5-24.0	FTMM-68-SS-SB11-36.0-36.5	FTMM-68-SS-SB12-8.0-8.5	FTMM-68-SS-SB12-18.0-18.5	FTMM-68-SS-SB12-23.0-23.5	FTMM-68-SS-SB12-32.0-32.5	FTMM-68-SS-SB12-42.0-42.5
epth (bgs)				23.5-24	36-36.5	8-8.5	18-18.5	23-23.5	32-32.5	42-42.5
Sample Date				1/4/2017	1/4/2017	1/5/2017	1/5/2017	1/5/2017	1/5/2017	1/5/2017
Volatile Organic Compounds (mg/kg)										
1,1,1,2-Tetrachloroethane	2	8.8	0.00022	< 0.0007 UJ	< 0.0006	< 0.0004	< 0.0006 UJ	< 0.0004 UJ	< 0.0006	< 0.0005
1,1,1-Trichloroethane	810	3,600	0.28	< 0.0007 UJ	< 0.0006	< 0.0004	< 0.0006 UJ	< 0.0004 UJ	< 0.0006	< 0.0005
1,1,2,2-Tetrachloroethane	0.6	2.7	0.00003	< 0.0007 UJ	< 0.0006	< 0.0004	< 0.0006 UJ	< 0.0004 UJ	< 0.0006	< 0.0005
1,1,2-Trichloroethane	0.15	0.63	0.000013	< 0.0007 UJ	< 0.0006	< 0.0004	< 0.0006 UJ	< 0.0004 UJ	< 0.0006	< 0.0005
1,1-Dichloroethane	3.6	16	0.00078	< 0.0007 UJ	< 0.0006	< 0.0004	< 0.0006 UJ	< 0.0004 UJ	< 0.0006	< 0.0005
1,1-Dichloroethene	23	100	0.01	**0.0012 J**	< 0.0006	< 0.0004	< 0.0006 UJ	< 0.0004 UJ	< 0.0006	< 0.0005
1,1-Dichloropropene	NLE	NLE	NLE	< 0.0007 UJ	< 0.0006	< 0.0004	< 0.0006 UJ	< 0.0004 UJ	< 0.0006	< 0.0005
1,2,3-Trichlorobenzene	6.3	93	0.0021	< 0.0007 UJ	< 0.0006	< 0.0004	< 0.0006 UJ	< 0.0004 UJ	< 0.0006	< 0.0005
1,2,3-Trichloropropane	0.0051	0.11	0.00000032	< 0.0007 UJ	< 0.0006	< 0.0004	< 0.0006 UJ	< 0.0004 UJ	< 0.0006	< 0.0005
1,2,4-Trichlorobenzene	5.8	26	0.0012	< 0.0007 UJ	< 0.0006	< 0.0004	< 0.0006 UJ	< 0.0004 UJ	< 0.0006	< 0.0005
1,2,4-Trimethylbenzene	30	180	0.0081	< 0.0007 UJ	< 0.0006	< 0.0004	< 0.0006 UJ	< 0.0004 UJ	< 0.0006	< 0.0005
1,2-Dibromo-3-chloropropane	0.0053	0.064	0.00000014	< 0.0018 UJ	< 0.0016	< 0.0011	< 0.0016 UJ	< 0.0011 UJ	< 0.0016	< 0.0012
1,2-Dibromoethane	0.036	0.16	0.0000021	< 0.0007 UJ	< 0.0006	< 0.0004	< 0.0006 UJ	< 0.0004 UJ	< 0.0006	< 0.0005
1,2-Dichlorobenzene	180	930	0.03	< 0.0007 UJ	< 0.0006	< 0.0004	< 0.0006 UJ	< 0.0004 UJ	< 0.0006	< 0.0005
1,2-Dichloroethane	0.46	2	0.000048	< 0.0007 UJ	**0.0025**	< 0.0004	< 0.0006 UJ	< 0.0004 UJ	< 0.0006	**0.0086**
1,2-Dichloropropane	0.28	1.2	0.000047	< 0.0007 UJ	< 0.0006	< 0.0004	< 0.0006 UJ	< 0.0004 UJ	< 0.0006	< 0.0005
1,3,5-Trimethylbenzene	27	150	0.0087	< 0.0007 UJ	< 0.0006	< 0.0004	< 0.0006 UJ	< 0.0004 UJ	< 0.0006	< 0.0005
1,3-Dichlorobenzene	NLE	NLE	NLE	< 0.0007 UJ	< 0.0006	< 0.0004	< 0.0006 UJ	< 0.0004 UJ	< 0.0006	< 0.0005
1,3-Dichloropropane	160	2,300	0.013	< 0.0007 UJ	< 0.0006	< 0.0004	< 0.0006 UJ	< 0.0004 UJ	< 0.0006	< 0.0005
1,4-Dichlorobenzene	2.6	11	0.00046	< 0.0007 UJ	< 0.0006	< 0.0004	< 0.0006 UJ	< 0.0004 UJ	< 0.0006	< 0.0005
2,2-Dichloropropane	NLE	NLE	NLE	< 0.0007 UJ	< 0.0006	< 0.0004	< 0.0006 UJ	< 0.0004 UJ	< 0.0006	< 0.0005
2-Chlorotoluene	160	2,300	0.023	< 0.0007 UJ	< 0.0006	< 0.0004	< 0.0006 UJ	< 0.0004 UJ	< 0.0006	< 0.0005
Acetone	6,100	67,000	0.29	**0.12 J**	**0.036**	**0.0066**	**0.047 J-**	**0.018 J-**	**0.035**	**0.014**
Benzene	1.2	5.1	0.00023	< 0.0007 UJ	< 0.0006	< 0.0004	< 0.0006 UJ	< 0.0004 UJ	< 0.0006	< 0.0005
Bromobenzene	29	180	0.0042	< 0.0007 UJ	< 0.0006	< 0.0004	< 0.0006 UJ	< 0.0004 UJ	< 0.0006	< 0.0005
Bromochloromethane	15	63	0.0021	< 0.0007 UJ	< 0.0006	< 0.0004	< 0.0006 UJ	< 0.0004 UJ	< 0.0006	< 0.0005
Bromodichloromethane	0.29	1.3	0.000036	< 0.0007 UJ	< 0.0006	< 0.0004	< 0.0006 UJ	< 0.0004 UJ	< 0.0006	< 0.0005
Bromoform	19	86	0.00087	< 0.0007 UJ	< 0.0006	< 0.0004	< 0.0006 UJ	< 0.0004 UJ	< 0.0006	< 0.0005
Carbon tetrachloride	0.65	2.9	0.00018	< 0.0007 UJ	< 0.0006	< 0.0004	< 0.0006 UJ	< 0.0004 UJ	< 0.0006	< 0.0005
Chlorobenzene	28	130	0.0053	< 0.0007 UJ	< 0.0006	< 0.0004	< 0.0006 UJ	< 0.0004 UJ	< 0.0006	< 0.0005
Chlorodibromomethane	8.3	39	0.00023	< 0.0007 UJ	< 0.0006	< 0.0004	< 0.0006 UJ	< 0.0004 UJ	< 0.0006	< 0.0005
Chloroethane	1,400	5,700	0.59	< 0.0018 UJ	< 0.0016	< 0.0011	< 0.0016 UJ	< 0.0011 UJ	< 0.0016	< 0.0012
Chloroform	0.32	1.4	0.000061	< 0.0007 UJ	< 0.0006	< 0.0004	< 0.0006 UJ	< 0.0004 UJ	< 0.0006	< 0.0005
Cis-1,2-Dichloroethene	16	230	0.0011	**0.0011 J**	< 0.0006	< 0.0004	**0.017 J-**	**0.014 J-**	< 0.0006	< 0.0005
Cis-1,3-Dichloropropene	NLE	NLE	NLE	< 0.0007 UJ	< 0.0006	< 0.0004	< 0.0006 UJ	< 0.0004 UJ	< 0.0006	< 0.0005
Cymene	NLE	NLE	NLE	< 0.0007 UJ	< 0.0006	< 0.0004	< 0.0006 UJ	< 0.0004 UJ	< 0.0006	< 0.0005
Dichlorodifluoromethane	8.7	37	0.03	< 0.0007 UJ	< 0.0006	< 0.0004	< 0.0006 UJ	< 0.0004 UJ	< 0.0006	< 0.0005
Ethyl benzene	5.8	25	0.0017	< 0.0007 UJ	< 0.0006	< 0.0004	< 0.0006 UJ	< 0.0004 UJ	< 0.0006	< 0.0005
Hexachlorobutadiene	1.2	5.3	0.00027	< 0.0007 UJ	< 0.0006	< 0.0004	< 0.0006 UJ	< 0.0004 UJ	< 0.0006	< 0.0005
Isopropylbenzene	190	990	0.074	< 0.0007 UJ	< 0.0006	< 0.0004	< 0.0006 UJ	< 0.0004 UJ	< 0.0006	**0.0009 J**
Meta/Para Xylene	55	240	0.019	< 0.0014 UJ	< 0.0013	< 0.0009	< 0.0013 UJ	< 0.0009 UJ	< 0.0012	< 0.001
Methyl bromide	0.68	3	0.00019	< 0.0007 UJ	< 0.0006	< 0.0004	< 0.0006 UJ	< 0.0004 UJ	< 0.0006	< 0.0005
Methyl butyl ketone	20	130	0.00088	< 0.0036 UJ	< 0.0032	< 0.0022	< 0.0032 UJ	< 0.0022 UJ	< 0.0031	< 0.0024
Methyl chloride	11	46	0.0049	< 0.0007 UJ	< 0.0006	< 0.0004	< 0.0006 UJ	< 0.0004 UJ	< 0.0006	< 0.0005
Methyl ethyl ketone	2,700	19,000	0.12	< 0.0036 UJ	**0.0022 J**	< 0.0022	**0.0035 J**	< 0.0022 UJ	**0.0082**	**0.0035 J**
Methyl isobutyl ketone	3,300	14,000	0.14	< 0.0036 UJ	< 0.0032	< 0.0022	< 0.0032 UJ	< 0.0022 UJ	< 0.0031	< 0.0024
Methyl Tertbutyl Ether	47	210	0.0032	< 0.0007 UJ	**0.02**	< 0.0004	< 0.0006 UJ	< 0.0004	**0.0072**	< 0.0005
Methylene chloride	35	320	0.0027	< 0.0007 UJ	< 0.0006	**0.0009 J**	< 0.0006 UJ	< 0.0004 UJ	< 0.0006	< 0.0005
Naphthalene	3.8	17	0.00054	< 0.0007 UJ	< 0.0006	< 0.0004	< 0.0006 UJ	< 0.0004 UJ	< 0.0006	< 0.0005
n-Butylbenzene	390	5,800	0.32	< 0.0007 UJ	< 0.0006	< 0.0004	< 0.0006 UJ	< 0.0004 UJ	< 0.0006	< 0.0005
Ortho Xylene	65	280	0.019	< 0.0007 UJ	< 0.0006	< 0.0004	< 0.0006 UJ	< 0.0004 UJ	< 0.0006	< 0.0005
p-Chlorotoluene	160	2,300	0.024	< 0.0007 UJ	< 0.0006	< 0.0004	< 0.0006 UJ	< 0.0004 UJ	< 0.0006	< 0.0005
Propylbenzene	380	2,400	0.12	< 0.0007 UJ	< 0.0006	< 0.0004	< 0.0006 UJ	< 0.0004 UJ	< 0.0006	**0.0004 J**
sec-Butylbenzene	780	12,000	0.59	< 0.0007 UJ	< 0.0006	< 0.0004	< 0.0006 UJ	< 0.0004 UJ	< 0.0006	< 0.0005
Styrene	600	3,500	0.13	< 0.0007 UJ	< 0.0006	< 0.0004	< 0.0006 UJ	< 0.0004 UJ	< 0.0006	< 0.0005
Tert Butyl Alcohol	NLE	NLE	NLE	< 0.0036 UJ	**0.016**	< 0.0022	< 0.0032 UJ	< 0.0022 UJ	**0.025**	**0.026**
tert-Butylbenzene	780	12,000	0.16	< 0.0007 UJ	< 0.0006	< 0.0004	< 0.0006 UJ	< 0.0004 UJ	< 0.0006	< 0.0005
Tetrachloroethene	8.1	39	0.0018	**3**	< 0.0006	< 0.0004	**4.3**	**1.5**	< 0.0006	**0.0008 J**
Toluene	490	4,700	0.076	**0.0098 J**	**0.0047**	**0.0046**	**0.0041 J-**	**0.0041 J-**	**0.0055**	**0.0042**
Trans-1,2-Dichloroethene	160	2,300	0.011	< 0.0007 UJ	< 0.0006	< 0.0004	< 0.0006 UJ	< 0.0004 UJ	< 0.0006	< 0.0005
Trans-1,3-Dichloropropene	NLE	NLE	NLE	< 0.0007 UJ	< 0.0006	< 0.0004	< 0.0006 UJ	< 0.0004 UJ	< 0.0006	< 0.0005
Trichloroethene	0.41	1.9	0.0001	**0.014 J-**	< 0.0006	< 0.0004	**0.062 J-**	**0.021 J-**	< 0.0006	< 0.0005
Trichlorofluoromethane	2,300	35,000	0.33	< 0.0007 UJ	< 0.0006	< 0.0004	< 0.0006 UJ	< 0.0004 UJ	< 0.0006	< 0.0005
Vinyl chloride	0.059	1.7	0.0000065	< 0.0007 UJ	< 0.0006	< 0.0004	< 0.0006 UJ	< 0.0004 UJ	< 0.0006	< 0.0005
TIC VOCs (mg/kg)										
2,3-Dimethylbutane	NLE	NLE	NLE	NA	NA	NA	NA	NA	NA	**0.0032 JN**
2-Methylbutane	NLE	NLE	NLE	NA	NA	NA	NA	NA	NA	NA
Ethyl acetate	62	260	0.0031	NA	NA	NA	NA	NA	NA	NA
TIC Unknown	NLE	NLE	NLE	NA	NA	NA	NA	NA	NA	NA
TIC VOCs (mg/kg)										
TIC Unknown	NLE	NLE	NLE	NA	NA	NA	NA	NA	NA	NA

TABLE 2
SOIL SAMPLING RESULTS - COMPARISON TO USEPA CRITERIA
SITE FTMM68
FORT MONMOUTH, NEW JERSEY

Loc ID	2017-06 RSL Residential Soil (HQ=0.1)	2017-06 RSL Industrial Soil (HQ=0.1)	2017-06 RSL Protect GW Risk-Based (HQ=0.1)	FTMM68-SB13						
Sample ID				FTMM-68-SS-SB13-2.0-2.5	FTMM-68-SS-SB13-8.0-8.5	FTMM-68-SS-SB130-8.0-8.5	FTMM-68-SS-SB13-13.5-14.0	FTMM-68-SS-SB13-20.0-20.5	FTMM-68-SS-SB13-26.0-26.5	FTMM-68-SS-SB13-38.0-38.5
epth (bgs)				2-2.5	8-8.5	8-8.5	13.5-14	20-20.5	26-26.5	38-38.5
Sample Date				1/5/2017	1/5/2017	1/5/2017	1/5/2017	1/5/2017	1/5/2017	1/5/2017
Volatile Organic Compounds (mg/kg)										
1,1,1,2-Tetrachloroethane	2	8.8	0.00022	< 0.0007	< 0.0004 UJ	< 0.0004	< 0.0005	< 0.0005	< 0.0006 UJ	< 0.0005
1,1,1-Trichloroethane	810	3,600	0.28	< 0.0007	< 0.0004 UJ	< 0.0004	< 0.0005	< 0.0005	< 0.0006 UJ	< 0.0005
1,1,2,2-Tetrachloroethane	0.6	2.7	0.00003	< 0.0007	< 0.0004 UJ	< 0.0004	< 0.0005	< 0.0005	< 0.0006 UJ	< 0.0005
1,1,2-Trichloroethane	0.15	0.63	0.000013	< 0.0007	< 0.0004 UJ	< 0.0004	< 0.0005	< 0.0005	< 0.0006 UJ	< 0.0005
1,1-Dichloroethane	3.6	16	0.00078	< 0.0007	< 0.0004 UJ	< 0.0004	< 0.0005	< 0.0005	< 0.0006 UJ	< 0.0005
1,1-Dichloroethene	23	100	0.01	< 0.0007	**0.0037 J**	< 0.0004 UJ	< 0.0005	< 0.0005	< 0.0006 UJ	< 0.0005
1,1-Dichloropropene	NLE	NLE	NLE	< 0.0007	< 0.0004 UJ	< 0.0004	< 0.0005	< 0.0005	< 0.0006 UJ	< 0.0005
1,2,3-Trichlorobenzene	6.3	93	0.0021	< 0.0007	< 0.0004 UJ	< 0.0004	< 0.0005	< 0.0005	< 0.0006 UJ	< 0.0005
1,2,3-Trichloropropane	0.0051	0.11	0.00000032	< 0.0007	< 0.0004 UJ	< 0.0004	< 0.0005	< 0.0005	< 0.0006 UJ	< 0.0005
1,2,4-Trichlorobenzene	5.8	26	0.0012	< 0.0007	< 0.0004 UJ	< 0.0004	< 0.0005	< 0.0005	< 0.0006 UJ	< 0.0005
1,2,4-Trimethylbenzene	30	180	0.0081	< 0.0007	< 0.0004 UJ	< 0.0004	< 0.0005	< 0.0005	< 0.0006 UJ	< 0.0005
1,2-Dibromo-3-chloropropane	0.0053	0.064	0.00000014	< 0.0016	< 0.0011 UJ	< 0.001	< 0.0012	< 0.0012	< 0.0014 UJ	< 0.0013
1,2-Dibromoethane	0.036	0.16	0.0000021	< 0.0007	< 0.0004 UJ	< 0.0004	< 0.0005	< 0.0005	< 0.0006 UJ	< 0.0005
1,2-Dichlorobenzene	180	930	0.03	< 0.0007	< 0.0004 UJ	< 0.0004	< 0.0005	< 0.0005	< 0.0006 UJ	< 0.0005
1,2-Dichloroethane	0.46	2	0.000048	< 0.0007	< 0.0004 UJ	< 0.0004	< 0.0005	< 0.0005	< 0.0006 UJ	**0.0008 J**
1,2-Dichloropropane	0.28	1.2	0.000047	< 0.0007	< 0.0004 UJ	< 0.0004	< 0.0005	< 0.0005	< 0.0006 UJ	< 0.0005
1,3,5-Trimethylbenzene	27	150	0.0087	< 0.0007	< 0.0004 UJ	< 0.0004	< 0.0005	< 0.0005	< 0.0006 UJ	< 0.0005
1,3-Dichlorobenzene	NLE	NLE	NLE	< 0.0007	< 0.0004 UJ	< 0.0004	< 0.0005	< 0.0005	< 0.0006 UJ	< 0.0005
1,3-Dichloropropane	160	2,300	0.013	< 0.0007	< 0.0004 UJ	< 0.0004	< 0.0005	< 0.0005	< 0.0006 UJ	< 0.0005
1,4-Dichlorobenzene	2.6	11	0.00046	< 0.0007	< 0.0004 UJ	< 0.0004	< 0.0005	< 0.0005	< 0.0006 UJ	< 0.0005
2,2-Dichloropropane	NLE	NLE	NLE	< 0.0007	< 0.0004 UJ	< 0.0004	< 0.0005	< 0.0005	< 0.0006 UJ	< 0.0005
2-Chlorotoluene	160	2,300	0.023	< 0.0007	< 0.0004 UJ	< 0.0004	< 0.0005	< 0.0005	< 0.0006 UJ	< 0.0005
Acetone	6,100	67,000	0.29	**0.026**	**0.014 J-**	**0.024**	**0.0035 J**	**0.022**	**0.02 J-**	**0.011**
Benzene	1.2	5.1	0.00023	< 0.0007	< 0.0004 UJ	< 0.0004	< 0.0005	< 0.0005	< 0.0006 UJ	< 0.0005
Bromobenzene	29	180	0.0042	< 0.0007	< 0.0004 UJ	< 0.0004	< 0.0005	< 0.0005	< 0.0006 UJ	< 0.0005
Bromochloromethane	15	63	0.0021	< 0.0007	< 0.0004 UJ	< 0.0004	< 0.0005	< 0.0005	< 0.0006 UJ	< 0.0005
Bromodichloromethane	0.29	1.3	0.000036	< 0.0007	< 0.0004 UJ	< 0.0004	< 0.0005	< 0.0005	< 0.0006 UJ	< 0.0005
Bromoform	19	86	0.00087	< 0.0007	< 0.0004 UJ	< 0.0004	< 0.0005	< 0.0005	< 0.0006 UJ	< 0.0005
Carbon tetrachloride	0.65	2.9	0.00018	< 0.0007	< 0.0004 UJ	< 0.0004	< 0.0005	< 0.0005	< 0.0006 UJ	< 0.0005
Chlorobenzene	28	130	0.0053	< 0.0007	< 0.0004 UJ	< 0.0004	< 0.0005	< 0.0005	< 0.0006 UJ	< 0.0005
Chlorodibromomethane	8.3	39	0.00023	< 0.0007	< 0.0004 UJ	< 0.0004	< 0.0005	< 0.0005	< 0.0006 UJ	< 0.0005
Chloroethane	1,400	5,700	0.59	< 0.0016	< 0.0011 UJ	< 0.001	< 0.0012	< 0.0012	< 0.0014 UJ	< 0.0013
Chloroform	0.32	1.4	0.000061	< 0.0007	< 0.0004 UJ	< 0.0004	< 0.0005	< 0.0005	< 0.0006 UJ	< 0.0005
Cis-1,2-Dichloroethene	16	230	0.0011	**0.0081**	**0.059 J-**	**0.075**	**0.011**	**0.019**	**0.018 J-**	< 0.0005
Cis-1,3-Dichloropropene	NLE	NLE	NLE	< 0.0007	< 0.0004 UJ	< 0.0004	< 0.0005	< 0.0005	< 0.0006 UJ	< 0.0005
Cymene	NLE	NLE	NLE	< 0.0007	< 0.0004 UJ	< 0.0004	< 0.0005	< 0.0005	< 0.0006 UJ	< 0.0005
Dichlorodifluoromethane	8.7	37	0.03	< 0.0007	< 0.0004 UJ	< 0.0004	< 0.0005	< 0.0005	< 0.0006 UJ	< 0.0005
Ethyl benzene	5.8	25	0.0017	< 0.0007	< 0.0004 UJ	< 0.0004	< 0.0005	< 0.0005	< 0.0006 UJ	< 0.0005
Hexachlorobutadiene	1.2	5.3	0.00027	< 0.0007	< 0.0004 UJ	< 0.0004	< 0.0005	< 0.0005	< 0.0006 UJ	< 0.0005
Isopropylbenzene	190	990	0.074	< 0.0007	< 0.0004 UJ	< 0.0004	< 0.0005	< 0.0005	< 0.0006 UJ	< 0.0005
Meta/Para Xylene	55	240	0.019	< 0.0013	< 0.0009 UJ	< 0.0008	< 0.001	< 0.0009	< 0.0012 UJ	< 0.001
Methyl bromide	0.68	3	0.00019	< 0.0007	< 0.0004 UJ	< 0.0004	< 0.0005	< 0.0005	< 0.0006 UJ	< 0.0005
Methyl butyl ketone	20	130	0.00088	< 0.0033	< 0.0022 UJ	< 0.0021	< 0.0024	< 0.0023	< 0.0029 UJ	< 0.0025
Methyl chloride	11	46	0.0049	< 0.0007	< 0.0004 UJ	< 0.0004	< 0.0005	< 0.0005	< 0.0006 UJ	< 0.0005
Methyl ethyl ketone	2,700	19,000	0.12	< 0.0033	< 0.0022 UJ	< 0.0021	< 0.0024	**0.0029 J**	< 0.0029 UJ	**0.002 J**
Methyl isobutyl ketone	3,300	14,000	0.14	< 0.0033	< 0.0022 UJ	< 0.0021	< 0.0024	< 0.0023	< 0.0029 UJ	< 0.0025
Methyl Tertbutyl Ether	47	210	0.0032	< 0.0007	< 0.0004 UJ	< 0.0004	< 0.0005	< 0.0005	< 0.0006	**0.0055**
Methylene chloride	35	320	0.0027	**0.0009 J**	< 0.0004 UJ	**0.001 J**	< 0.0005	< 0.0005	**0.0028 J+**	< 0.0005
Naphthalene	3.8	17	0.00054	< 0.0007	< 0.0004 UJ	**0.0003 J**	< 0.0005	< 0.0005	< 0.0006 UJ	< 0.0005
n-Butylbenzene	390	5,800	0.32	< 0.0007	< 0.0004 UJ	< 0.0004	< 0.0005	< 0.0005	< 0.0006 UJ	< 0.0005
Ortho Xylene	65	280	0.019	< 0.0007	< 0.0004 UJ	< 0.0004	< 0.0005	< 0.0005	< 0.0006 UJ	< 0.0005
p-Chlorotoluene	160	2,300	0.024	< 0.0007	< 0.0004 UJ	< 0.0004	< 0.0005	< 0.0005	< 0.0006 UJ	< 0.0005
Propylbenzene	380	2,400	0.12	< 0.0007	< 0.0004 UJ	< 0.0004	< 0.0005	< 0.0005	< 0.0006 UJ	< 0.0005
sec-Butylbenzene	780	12,000	0.59	< 0.0007	< 0.0004 UJ	< 0.0004	< 0.0005	< 0.0005	< 0.0006 UJ	< 0.0005
Styrene	600	3,500	0.13	< 0.0007	< 0.0004 UJ	< 0.0004	< 0.0005	< 0.0005	< 0.0006 UJ	< 0.0005
Tert Butyl Alcohol	NLE	NLE	NLE	< 0.0033	< 0.0022 UJ	< 0.0021	< 0.0024	< 0.0023	< 0.0029 UJ	**0.0047 J**
tert-Butylbenzene	780	12,000	0.16	< 0.0007	< 0.0004 UJ	< 0.0004	< 0.0005	< 0.0005	< 0.0006 UJ	< 0.0005
Tetrachloroethene	8.1	39	0.0018	**0.013**	**0.32 J**	**0.61 J**	**0.36**	**6.9**	**1.7**	**0.0023**
Toluene	490	4,700	0.076	**0.0019**	**0.0053 J-**	**0.0049**	**0.009**	**0.0042**	**0.0023 J-**	**0.0023**
Trans-1,2-Dichloroethene	160	2,300	0.011	**0.0006 J**	**0.0023 J**	< 0.0004 UJ	< 0.0005	< 0.0005	< 0.0006 UJ	< 0.0005
Trans-1,3-Dichloropropene	NLE	NLE	NLE	< 0.0007	< 0.0004 UJ	< 0.0004	< 0.0005	< 0.0005	< 0.0006 UJ	< 0.0005
Trichloroethene	0.41	1.9	0.0001	**0.002**	**0.052 J-**	**0.063**	**0.0096**	**0.049**	**0.0097 J-**	< 0.0005
Trichlorofluoromethane	2,300	35,000	0.33	< 0.0007	**0.0008 J**	< 0.0004	**0.0015**	< 0.0005	< 0.0006 UJ	< 0.0005
Vinyl chloride	0.059	1.7	0.0000065	< 0.0007	**0.023 J**	**0.0021 J**	< 0.0005	< 0.0005	< 0.0006 UJ	< 0.0005
TIC VOCs (mg/kg)										
2,3-Dimethylbutane	NLE	NLE	NLE	NA	NA	NA	NA	NA	NA	NA
2-Methylbutane	NLE	NLE	NLE	NA	NA	NA	NA	NA	NA	NA
Ethyl acetate	62	260	0.0031	NA	NA	NA	NA	NA	NA	NA
TIC Unknown	NLE	NLE	NLE	NA	NA	NA	NA	NA	NA	NA
TIC VOCs (mg/kg)										
TIC Unknown	NLE	NLE	NLE	NA	NA	NA	NA	NA	NA	NA

Footnote:

1) All historical data collected prior to 2013 are reported as provided by others.

2) Number of Analyses is the number of detected and non-detected results excluding rejected results. Sample duplicate pairs have not been averaged.

3) NLE = no limit established.

4) ND = not detected in any background sample, no background concentration available.

5) Bold chemical dectection

6) SS = Site Specific action level, see "Specific Chemical Class (or Parameter)" footnote for details.

7) Chemical result qualifiers are assigned by the laboratory and are evaluated and modified (if necessary) during the data validation.

[blank] = detect, i.e. detected chemical result value.	E (or ER) = Estimated result.
B =Compound detected in the sample at a concentration less than or equal to 5 times (10 times for common lab contaminants) the blank concentration.	D = Results from dilution of sample.
R = Rejected, data validation rejected the results.	J-DL = Elevated sample detection limit due to difficult sample matrix.
U = non-detect, i.e. not detected at or above this value.	JN = Tentatively identified compound, estimated concentration.
U-DL = Elevated sample detection limit due to difficult sample matrix.	UJ=The compound was not detected: however, the results is estimated because of discrepancies in meeting certain analyte-specific QC criteria.
U-ND = Analyte not detected in sample, but no detection or reporting limit provided.	J+ = The result is an estimated quantity, but the result may be biased high.
J = estimated detected value due to a concetration below the reporting limit or due to discrepancies in meeting certain analyte-specific quality control.	J- = The result is an estimated quantity, but the result may be biased low.

8) Specific Chemical Classes (or Parameters) comments or notes regarding how data is displayed, compared to Action Levels, or represented in this table.

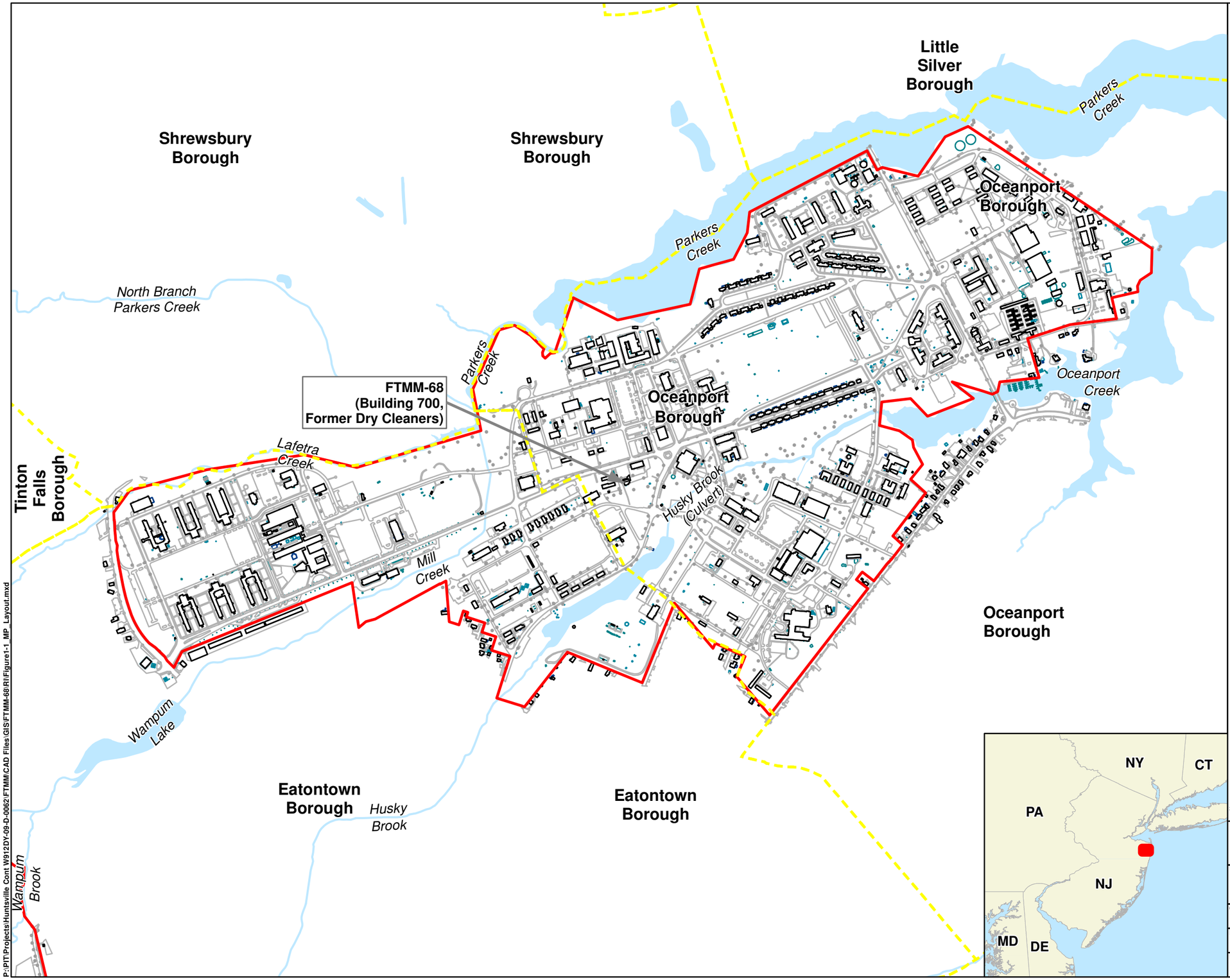
9) Chemical results greater than or equal to the action level (depending on criteria) are highlighted based on the Criteria that are present.

- Cell Shade values represent a result that is above the USEPA 2017-06 RSL Residential Soil (HQ=0.1).	####
- Cell Shade values represent a result that is above the USEPA 2017-06 RSL Industrial Soil (HQ=0.1).	###
- Cell Shade values represent a result that is above the USEPA 2017-06 RSL Protect GW Risk-Based (HQ=0.1).	###
- Cell Shade values represent a result that is above both the USEPA RSL Residential and Industrial Soil (HQ=0.1), 2017-06.	###
- Cell Shade values represent a result that is above the USEPA RSL Residential, Industrial, Protect GW Risk-Based Soil (HQ=0.1), 2017-06.	###

10) Criteria action level source document and web address.

- The 2017-06 USEPA RSL Residential Soil (HQ=0.1) refers to the EPA's Regional Screening Levels (HQ=0.1)
  https://www.epa.gov/risk/regional-screening-levels-rsls-generic-tables-november-2017
- The 2017-06 USEPA RSL Industrial Soil (HQ=0.1) refers to the EPA's Regional Screening Levels (HQ=0.1)
  https://www.epa.gov/risk/regional-screening-levels-rsls-generic-tables-november-2017
- The 2017-06 USEPA RSL Protect GW Risk-Based (HQ=0.1) refers to the EPA's Regional Screening Levels (HQ=0.1)
  https://www.epa.gov/risk/regional-screening-levels-rsls-generic-tables-november-2017

FIGURES



LEGEND:

- Surface Water Feature
- Municipal Boundary
- Installation Boundary

N

1 inch = 1,000 feet

0 500 1,000 2,000 Feet

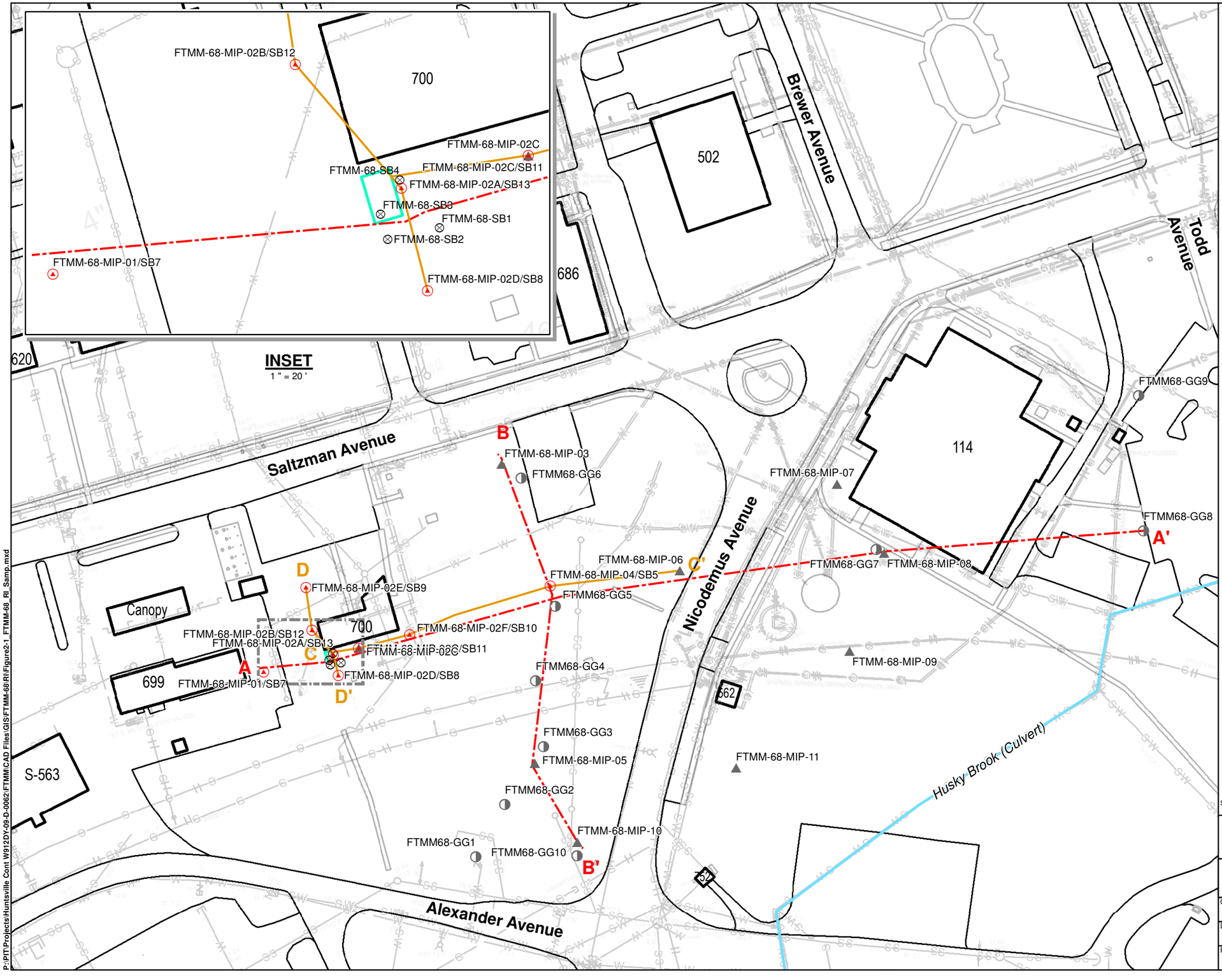
Source: Bing Maps online imagery; ESRI Data and Maps 2011; USGS NHD.

PARSONS 401 Diamond Drive NW, Huntsville AL	**Fort Monmouth** **New Jersey**

FTMM-68 SITE LOCATION

CREATED BY: RR	REVIEWED BY: KW
DATE: JUN. 2017	FIGURE NUMBER: FIGURE 1.2
PROJECT NUMBER: 748810-02180	FILE: Figure1-1_MP_Layout.mxd

P:\PIT\Projects\Huntsville Cont W912DY-09-D-0062\FTMM\CAD Files\GIS\FTMM-68\RI\Figure1-1_MP_Layout.mxd



LEGEND:

- Phase 2 MIP/HPT (2016) & Soil Boring (2017) Location
- Phase 2 MIP/HPT Location (2016)
- Phase 1 Groundwater Grab Sample (2015)
- Phase 1 Soil Boring (2015)
- W Water Line
- S Sanitary Sewer Line
- SW Storm Sewer Line
- G Gas Line
- UST Excavation Footprint
- Geologic Cross-Section Line (Figures 3.1 & 3.2)
- MIP/ECD Cross-Section Line (Figures 4.1 & 4.2)

NOTES:

1. MIP/HPT - Membrane Interface Probe/Hydraulic Profiling Tool
2. ECD - Electron Capture Detector

N

1 inch = 100 feet

0 50 100 200 Feet

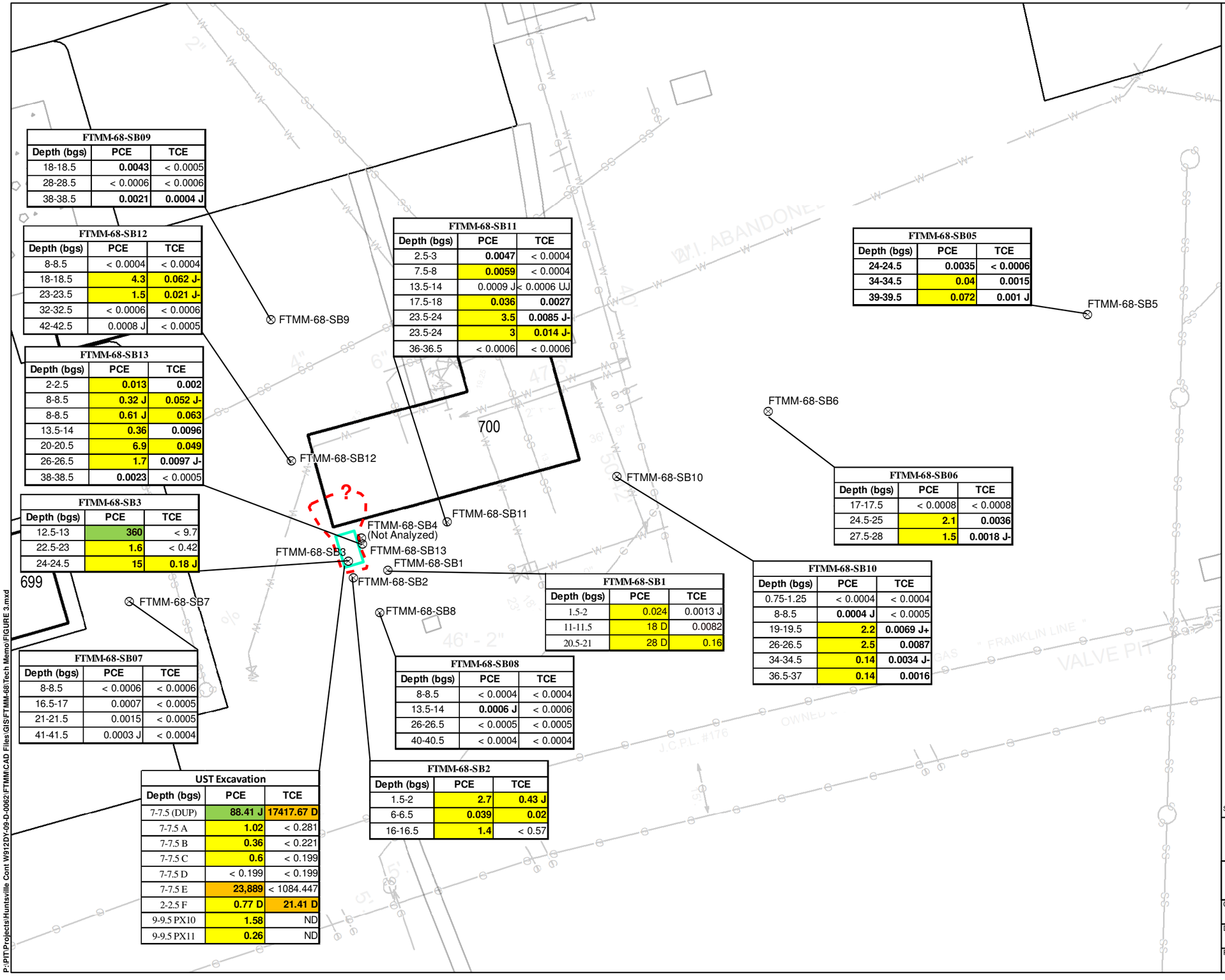
Source: FTMM Supplied CAD

PARSONS 401 Diamond Drive NW, Huntsville AL	**Fort Monmouth** **New Jersey**

FTMM-68 SOIL BORING, MIP/HPT, AND GROUNDWATER GRAB SAMPLE LOCATIONS

CREATED BY: RR	REVIEWED BY: KW
DATE: NOV. 2017	FIGURE NUMBER: FIGURE 2
PROJECT NUMBER: 748810-02180	FILE: Figure2-1_FTMM-68_RI_Samp.mxd

P:\PIT\Projects\Huntsville Cont W912DY-09-D-0062\FTMM\CAD Files\GIS\FTMM-68\RI\Figure2-1_FTMM-68_RI_Samp.mxd



LEGEND:

- RI Soil Boring
- W Water Line
- S Sanitary Sewer Line
- SW Storm Sewer Line
- G Gas Line
- UST Excavation Footprint
- Estimated Extent of PCE Exceeding NJDEP RDCSRS (43 mg/kg)
- Value exceeds the NJDEP RDCSRS
- Value exceeds the NJDEP NRDDCSRS
- Value exceeds the NJDEP IGW SL

NOTES:

1. All results are in miligrams per kilogram (mg/kg)
2. J- = Value biased low
3. J+ = Value biased high
4. J = Estimated Value
5. ND = Not Detected
6. D = Sample diluted prior to analysis
7. Data from April 2011 were obtained prior to additional soil excavation, and are no longer representative of site conditions.

NJDEP Soil Remediation Standards	PCE	TCE
RDCSRS	43	3
NRDCSRS	1500	10
IGW SL	0.005	0.01

N

1 inch = 30 feet

0 15 30 60 Feet

Source: FTMM Supplied CAD

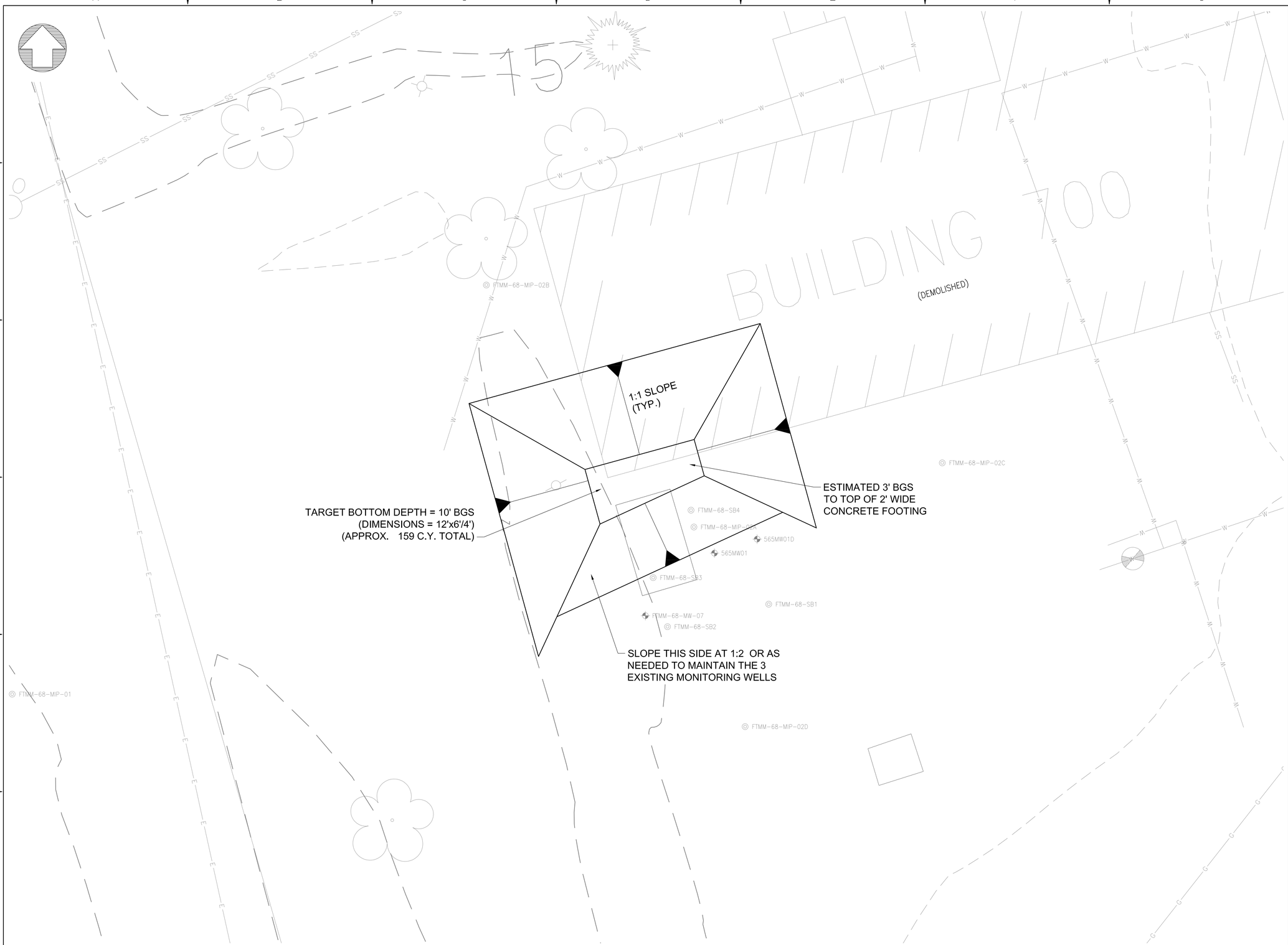
P:\PIT\Projects\Huntsville Cont W912DY-09-D-0062\FTMM\CAD Files\GIS\FTMM-68\Tech Memo\FIGURE 3.mxd

PARSONS
401 Diamond Drive NW, Huntsville AL

Fort Monmouth New Jersey

EXCEEDANCES OF NJDEP DIRECT CONTACT SOIL REMEDIATION STANDARDS

CREATED BY: RR	REVIEWED BY: AM
DATE: OCT. 2018	FIGURE NUMBER: FIGURE 3
PROJECT NUMBER: 748810-02180	FILE: FIGURE 3.mxd



NOTES:

1. EXISTING MONITORING WELLS TO BE PROTECTED FROM DAMAGE.

LEGEND:

- PROPOSED EXCAVATION
- PREVIOUS SAMPLE LOCATION
- EXISTING MONITORING WELL (SEE NOTE 1)

5 2.5 0 5 10

SCALE: 1" = 10'

DRAFT

NOT FOR CONSTRUCTION

NO.	DESCRIPTION	DATE	DRAWN	CHK'D	APPV'D
A	ISSUED FOR COMMENT	08/13/18	RR	KF	CG

DRAWN BY	RR	DATE 08/13/18
CHECKED BY		DATE
APPROVED BY		DATE
PROJECT MGR.		DATE

STAMP

PARSONS
ENVIRONMENT & INFRASTRUCTURE GROUP INC.

OFFICE
401 DIAMON DR. NW
HUNTSVILLE, AL 35806
(256) 837-5200

JOB 110006

WBS 06035

PROJECT TITLE

FORT MONMOUTH
OCEANPORT, NEW JERSEY
BUILDING
DEMOLITION

DRAWING TITLE

FTMM-68
EXCAVATION PLAN

SCALE 1" = 10'

DRAWING NO. FIGURE 4

REV. A

FILE: P:\PIT\PROJECTS\HUNTSVILLE CONT W912DY-09-D-0062\FTMM\CAD FILES\GIS\FTMM-68\TECH MEMO\FIGURE 4.DWG, DATE: 10/16/2018 02:13:26PM, p0018397

APPENDIX A

Soil Stockpile Sampling Plan

Appendix A
Soil Stockpile Sampling Plan
VOC Contaminated Soil Removal at FTMM-68
Fort Monmouth, Oceanport, New Jersey

Revision 0; October 2018

Introduction

The Fort Monmouth (FTMM) team will be conducting a soil removal action to address volatile organic compounds (VOCs) in soil at FTMM-68, specifically tetrachloroethene (PCE) and PCE associated degradation by-products trichloroethene (TCE), *cis*-1,2-dicholoroethene (DCE), and vinyl chloride (VC).

Based on historical data results, the material (soil/debris) from surface to 2.5 ft bgs is considered clean. Therefore, the overburden at the excavation areas will be stockpiled separately and analyzed prior to being used as backfill for the excavations. Any soil encountered in contact with groundwater (estimated at a depth of 6 to 7 ft bgs, but that depth can rapidly fluctuate in this area in response to precipitation events) will be considered contaminated. When groundwater is reached, all soil encountered will be considered contaminated and stockpiled separately.

The VOC impacted soil will be excavated, staged in piles and sampled for waste characterization to determine the appropriate off-site approved facility.

This sampling plan has been developed for the collection of representative soil samples to determine the following:

- Suitability of stockpiled overburden soil for backfill, and
- Waste characterization of stockpiled material based on disposal facility requirements.

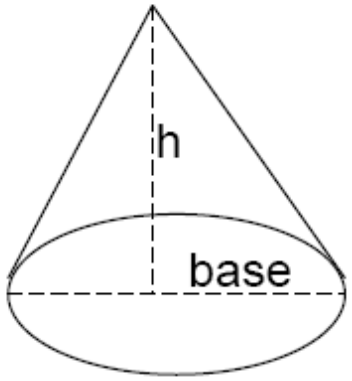
Sampling Procedures

Soil samples will be obtained from a stockpile using the following methods. **Figure 1** presents some relevant calculations for determining the volume of a stockpile. A Soil Stockpile Worksheet included in **Attachment A** will be used for calculating volume and the number of samples needed for each stockpile sampled.

Determine the approximate volume (cubic yards) of the stockpile to be sampled. Figure 1 describes how to calculate the volume of the stockpile.

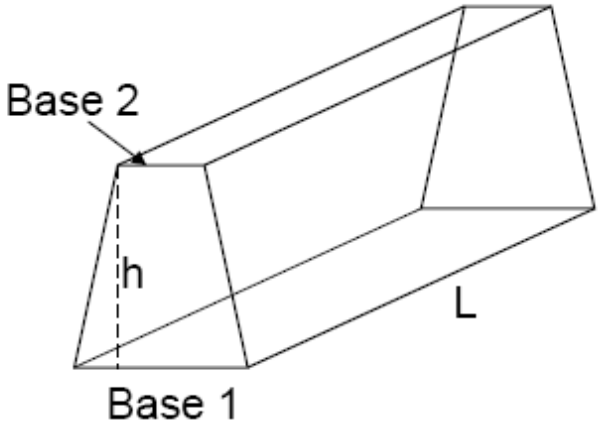
Figure 1 – Establishing the volume of a stockpile

If the stockpile looks more like a "cone":



Volume (cu yd) = 0.0145 x base^2(feet) x height(feet)

If the stockpile looks more like a "ridge":



Volume (cu yd) = 0.0185 x [base1(feet) + base2(feet)] x height (feet) x length (feet)

Grab samples will be collected from at least 1 foot inside the stockpile. The number of total grab samples will be equal to the total volume of the stockpile divided by 10 (e.g., a 500 cu yd stockpile would require 50 total grab samples).

The samples collected for waste characterization purposes will be submitted to a lab that possess a Department of Defense (DOD) Environmental Laboratory Accreditation Program (ELAP) certification and a state of New Jersey certification. The number of samples collected for waste characterization as shown in Table 2 is only estimated and may change based on the disposal facility requirements. The stockpile will be divided evenly to represent the number of samples that need to be collected for laboratory analysis. An even amount of grab samples will be collected from each "part" and will be

composited to form the sample sent to the laboratory (except that VOC grab samples will not be composited).

Table 2 – Number of Soil Samples per Volume of Soil

Volume of Soil Stockpile (cubic yards)	Number of Soil Samples for Laboratory Analysis
0-60	1
60-240	2
240-480	3
480-720	4
720-960	5

A new pair of clean disposable latex or nitrile gloves will be donned by the field sample technician for each sampling event.

Soil collected for the samples will be placed into a decontaminated stainless-steel bowl. After a sufficient sample volume has been collected into the stainless-steel bowl and a VOC sample has been collected (if required), the remaining sample will be homogenized during the quartering method and then placed into the appropriate sample containers. Soil for VOC analysis will be collected from an undisturbed grab sample. After the sample containers are filled, the caps will be placed on the containers and they will be immediately placed on ice.

Field Measurement Procedures and Criteria

Information regarding each stockpile sampled will be appropriately documented. In addition to the completion of the soil stockpile work sheet the following will be recorded in the site field book: a description of the sample location and soil, name of sample ID collected, parameters sampled, a sketch indicating the time and location of sample collected, and screening results/visual observations, if appropriate. A picture of the sample location will be taken.

Decontamination

The stainless-steel spoons, shovels, and bowls, or any other equipment used for collected soil samples will be thoroughly washed with soap (e.g., LiquiNox®, Alconox®) and potable water (tap water from a municipal supply is acceptable) and scrubbed with a brush or scrub pad to remove any particulate matter or surface film. Equipment will be rinsed thoroughly using potable water and then analyte-free water. The equipment will then be allowed to dry. Once equipment is dry, it will be wrapped in one layer of aluminum foil.

Sample Handling and Shipment

Samples for laboratory analysis will be placed in pre-cleaned containers. The containers will be clearly labeled with the sample identification, date of collection, and analysis to be performed. Samples are to be stored on ice and shipped under chain-of-custody to the lab for analytical analysis. Field blanks and field duplicates are not required for waste classification sampling. Each sample will be analyzed for

the parameters required by the receiving disposal facility for TSCA PBC material. The following are a list of the anticipated parameters:

- Full TCLP Waste Classification (Method SW846/EPA),
- RCRA characteristics (Method SW846/EPA),
- Polychlorinated Biphenyls (Method SW846 8082),
- Volatile Organics (Method SW846 8260B),
- Target Analyte List Metals (Method SW846/EPA),
- Paint Filter Test;
- pH
- Total Petroleum Hydrocarbons, and
- Total Solids.

ATTACHMENT A
Soil Stockpile Worksheet

1. **Determine Volume**

Cone Volume: _____cu yd = 0.0145 x_____ base^2(ft^2) x _____height(ft)

Ridge Volume: cu yd =

0.0185 x [_____ base1(ft) +_____base2(ft)] x _____ height (ft) x _____ length (ft)

2. **Number of Grab Samples:**

Volume divided by 10 =_____ volume ÷ 10 = _____ grab samples

3. **Number of Sections:**

Volume of Soil Stockpile (cubic yards)	Split Pile into this many sections: (this is also the number of samples you will need)
0-60	1
60-240	2
240-480	3
480-720	4

4. **Number of Grab Samples per Section:**

Total number of grab samples_____ divided by_____ number of sections = _____

Example:
A stockpile is ridge-shaped, with a height of 20 feet, base1 of 25ft, base 2 of 10 feet, and length of 50 feet.

1. **Volume =** 0.0185 x [25ft + 10ft] x 20ft x 50 **=** 0.0185 x 35 x 20 x 50 **= 647.5 cu yd**
2. **# Grab Samples =** 647.5 ÷ 10 **= 65**
3. **Number of Sections =** using chart above, 647.5 cu yd = **4 sections**, and 4 total samples
4. **Number of Grab Samples per Section =** 65 ÷ 4 **= 16 grab samples per section, randomly spaced**

Conclusion: The above stockpile will be visually split into 4 sections. From each section, 16 grab samples will be randomly collected and consolidated to form one composite sample for each section, or four total samples.