

FORT BELVOIR

MASTER SPILL PLAN

Revised September 2014

DEPARTMENT OF THE ARMY

U.S. ARMY GARRISON FORT BELVOIR, VIRGINIA

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CROSS REFERENCE
FOR SPILL PREVENTION, CONTROL, AND
CONTERMEASURE PLAN REQUIREMENTS

Required SPCC Section (40 CFR 112.7 and 112.8)	Master Spill Plan Equivalent Section
112.7(a)(1) – Conformity Discussion	2.0 – Introduction
112.7 (a)(3) – Facility Description, Diagram, Location of Storage Containers	4.0 – General Facility Information 6.0 – Facility Spill Prevention Information Appendix A – Tank System Location Map Appendix C – Facility Descriptions
112.7(a)(3)(i) – Container Contents and Sizes	Same as previous
112.7(a)(3)(ii) – Discharge Prevention Measures	6.6 – Petroleum Transportation and Transfer Operations
112.7(a)(3)(iii) – Discharge Controls	Appendix C – Facility Descriptions
112.7(a)(3)(iv) – Discharge Countermeasures	3.0 – Facility Spill Response Information
112.7(a)(3)(vi) – Contact List	3.11 – Contact List
112.7(a)(4) – Discharge Reporting Procedures Summary	3.8 – Release Reporting Requirements Appendix B – Consolidated Spill Response Guide
112.7(a)(5) – Discharge Response Procedures Summary	Appendix B – Consolidated Spill Response Guide
112.7(d) – Oil Spill Contingency Plan – where applicable	Appendix K – NGA Oil Discharge Contingency Plan
112.7(e) – Inspections, Tests, and Records	7.0 – Inspections, Tests and Records
112.7(f) – Personnel, Training, and Procedures	8.0 – Spill Prevention and Response Training Requirements
112.7(g) – Security	9.0 – Security
112.7 (j) – Conformance With Other Applicable Regulations	2.0 – Introduction 10.0 – RCRA Contingency Plan 11.0 – Petroleum Management Plan
112.7(k) – Qualified Oil-filled Operational Equipment	6.3 – Potential Sources of Petroleum and Hazardous Material/Waste Spills
112.8(b) – Facility Drainage	Appendix C – Facility Descriptions
112.8(c)(1) – Bulk Storage Containers	6.4 – Above Ground Storage Tanks 6.5 – Underground Storage Tanks
112.8(c)(2) and (3) – Secondary Containment	Appendix C – Facility Descriptions
112.8(c)(4) and (5) – UST Corrosion Protection and Leak Testing	6.5 – Underground Storage Tanks Appendix C – Facility Descriptions

CROSS REFERENCE
FOR SPILL PREVENTION, CONTROL, AND
CONTERMEASURE PLAN REQUIREMENTS

Required SPCC Section (40 CFR 112.7 and 112.8)	Master Spill Plan Equivalent Section
112.8(c)(6) – AST Integrity Testing	6.4.5 – Integrity Testing
112.8(c)(7 to 11)	Not Applicable
112.8 (d)	Not Applicable

1.0 APPROVAL AND CERTIFICATION

1.1 Management Approval

This Spill Prevention Control and Countermeasure Plan (SPCCP) has been carefully reviewed by Fort Belvoir's Environmental Management Office. Management concurs and supports the programs and procedures which are to be implemented and periodically reviewed and updated in accordance with Title 40 Code of Federal Regulations (CFR) Part 112 (Oil Pollution Prevention). Management approval has been extended at a level with authority to commit the necessary resources.

Signature: _____

Date: _____

Name: _____

Title: _____

[Handwritten Signature]

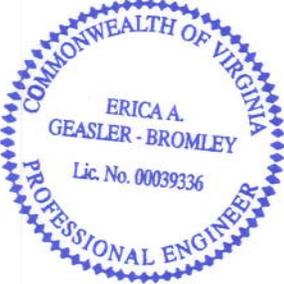
26 Sep 2014

Felix M. Mariawi

Chief, DPW ENRD

1.2 Professional Engineer Certification

"I hereby attest that: (i) I am familiar with the requirements of the SPCC rule; (ii) I or my agent has visited and examined the facility; (iii) the Plan has been prepared in accordance with good engineering practice, including consideration of applicable industry standards, and with the requirements of the SPCC rule; (iv) procedures for required inspections and testing have been established; and, (v) the Plan is adequate for the facility."

Signature:	<i>Erica A. Geasler - Bromley</i>
Date of Plan Certification:	<i>9/18/14</i>
Name:	<i>Erica A. Geasler - Bromley</i>
Professional Engineer Certification Number:	<i>00039336</i>
State of Certification:	Virginia
Date of PE Certification:	<i>9/18/14</i>
PE Seal/Stamp:	

1.3 Certification of the Applicability of the Substantial Harm Criteria

Facility Name: U.S Army Garrison, Fort Belvoir
 Facility Address: Fort Belvoir, Virginia 22060-5130

		Yes	No
1	Does the facility transfer oil over water to or from vessels and does the facility have a total oil storage capacity greater than or equal to 42,000 gallons?		X
2	Does the facility have a total oil storage capacity greater than or equal to 1 million gallons and does the facility lack secondary containment that is sufficiently large to contain the capacity of the largest aboveground oil storage tank plus sufficient freeboard to allow for precipitation within any aboveground storage tank area?		X
3	Does the facility have a total oil storage capacity greater than or equal to 1 million gallons and is the facility located a distance (as calculated using the appropriate formula in Attachment C-III to this appendix or a comparable formula) such that a discharge from the facility could cause injury to fish and wildlife and sensitive environments? For further description of fish and wildlife and sensitive environments, see Appendices I, II, and III to DOC/NOAA's "Guidance for Facility and Vessel Response plans: Fish and Wildlife and Sensitive Environments" (See Appendix E to this part, section 10, for availability) and the applicable Area Contingency Plan.		X
4	Does the facility have a total oil storage capacity greater than or equal to 1 million gallons and is the facility located a distance (as calculated using the appropriate formula in Attachment C-III to this appendix or a comparable formula) such that a discharge from the facility would shut down a public drinking water intake?		X
5	Does the facility have a total oil storage capacity greater than or equal to 1 million gallons and has the facility experienced a reportable oil spill in an amount greater than or equal to 10,000 gallons within the last 5 years?		X

Certification (Attachment C-II, 40 CFR 112.20e)

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document, and that based on my inquiry of those individuals responsible for obtaining this information, I believe that the submitted information is true, accurate, and complete.

Signature: 
 Date: 26 Sep 2014
 Name: Felix M. Mariasi
 Title: Chief, DPW ENRD

2.0 INTRODUCTION

The Fort Belvoir Master Spill Plan (MSP) establishes procedures, methods and equipment, and other requirements to prevent the discharge of oil and hazardous substances from facilities associated with Fort Belvoir. This Plan identifies potential spill sources, preventive measures, control and response procedures, inspection programs, and required training of personnel. The Fort Belvoir site plan in Appendix A identifies the location of each petroleum storage site at Fort Belvoir.

The MSP is the contingency plan referenced in Attachment II.FF of Fort Belvoir's RCRA permit. The Plan is located in the Directorate of Public Works (DPW) Environmental and Natural Resources Division (ENRD) Office, Building 1442. The exact location of this Plan within the office is known and easily accessed by facility personnel who may handle or potentially be involved in handling oil or hazardous substances. This plan is kept current by Fort Belvoir and is reviewed and considered for modification a minimum of once every five years.

In the event of a Fort Belvoir release that require immediate action, the following parts of this MSP should be utilized:

- Appendix B – Consolidated Spill Response Guide, which includes notification tables;
- Appendix A – Tank System Location Map;
- Appendix D – Spill Documentation Forms;
- Appendix H Spill Response Equipment Inventory Lists; and,
- Table 6, Section 4.2.11 – Environmentally Sensitive Areas.

The MSP consists of three main components:

The Spill Prevention, Control, Countermeasures Plan (Sections 1-9) is applicable to all facilities at Fort Belvoir, and key elements to prevent oil discharges from reaching navigable waters. The definition of a facility has been included in Appendix I, and based on language contained in the December 5 2008 Federal Register Final Rule pertaining to 40 CFR 112, it allows an owner or operator of a facility to separate or aggregate containers to determine the facility boundaries, based on such factors as ownership or operation of the buildings, structures, containers, and equipment on the site, and activities being conducted, property boundaries, and other relevant considerations. Fort Belvoir possesses a number of entities within their overall property boundary constituting individual facilities due to their petroleum storage volumes that meet the threshold requirements of 40 CFR 112 for preparing a Spill Prevention, Control, and Countermeasures (SPCC) Plan or proximity to navigable waters. Descriptions for these individual facilities have been prepared in Appendix C.

The Federal Register states further that an owner or operator may also combine multiple facilities into a single SPCC Plan, combining common elements, while retaining facility-specific information (a multi-facility Plan). While the Plan may encompass multiple facilities, the applicability of SPCC and Facility Response Plan (FRP) requirements is determined by the extent of each individual facility. This MSP has been prepared to reduce redundancy by addressing multiple facilities that will utilize common resources for emergency and non-emergency actions.

The RCRA Contingency Plan (Section 10), that supplements the SPCC, is applicable to the RCRA permitted hazardous waste storage facility and all other hazardous waste facilities, and key elements include the following:

- An evacuation plan
- Response equipment
- Responses to fire, explosion, and spills of hazardous wastes.

The RCRA permitted Hazardous Waste Storage Facility and the four <90 day hazardous waste storage facilities are identified in Section 10.

The Petroleum Management Plan (Section 11) outlines the standard operating procedures and protocols used in the Fort Belvoir tank management program in order to keep a current and accurate list of ASTs and USTs, as well as a record of closed sites, and key elements of the Petroleum Management Plan section include the following:

- Pre-installation procedures for state registration and Fort Belvoir permits
- Start-Up procedures for testing and recordkeeping
- Operating procedures for integrity, tightness, and cathodic protection testing
- Closure procedures for removal of regulated or unregulated tanks, and abandonment in place.

2.1 Key Personnel

2.1.1 Spill Prevention and Preparedness

Table 1 – Master Spill Plan Coordinator

Title	Telephone Number
DPW ENRD Petroleum Program and Spill Response Manager	(703) 806-3694 (duty)

The individual responsible for spill prevention and preparedness, as described in 40 CFR 112.7 (f)(2), is indicated in Table 1. Their primary responsibilities include:

- Keeping this Plan updated as changes occur;
- Ensuring copies of the Plan are distributed to appropriate personnel at the facility and authorized emergency response agencies who request it;
- Ensuring facility personnel designated to handle oil and/or hazardous materials, or respond to spills, have been appropriately trained and coordinating training (Section 8);
- Performing inspections; and
- Reviewing/recertifying the Plan once every five years.

2.1.2 Spill Response and Control

The Fire Department/Emergency Operations Center (9-1-1 or (703) 781-1800) shall be contacted first for spills beyond the response ability of the entity causing or discovering the spill. The Fire Department will then contact one of the following Installation On-Scene Coordinators (IOSC) listed in Table 2.

Table 2 - Installation On-Scene Coordinators

	Primary	Alternate	Alternate
Title:	Chief of the DPW ENRD	Chief, Environmental Compliance Branch	DPW ENRD Petroleum Program and Spill Response Manger
Duty:	(703) 806-3193	(703) 806-0020	(703)-806-3694

The primary IOSC or designee (Table 2) is responsible for spill response coordination following a release. Section 5 further defines roles and obligations of Fort Belvoir personnel.

2.2 Material Safety Data Sheets

Material Safety Data Sheets (MSDSs) are available to personnel during working hours, as required by the Occupational Safety and Health Administration (OSHA) Hazardous Communications (HAZCOM) Program. They contain critical information regarding oils and oil-based substances, including toxicity, reactivity, flammability, personal protective equipment (PPE), health and safety hazards, and emergency medical decontamination and treatment procedures. In addition, many MSDSs include information related to spill containment and cleanup. MSDSs are available in buildings where hazardous or regulated substances are used or stored.

2.3 Communications

The (703) 781-1800 telephone numbers will alert personnel in the Operations Center, which can be the North Post Fire Department (Building # 2119) or the South Post Fire Department (Building # 191). Depending on staffing and the spill location, either may serve as the oil discharge response operations center for purposes of directing the coordinated overall response operations. These departments possess land-line telephone service, mobile telephones, and 2-way radios. Operations and response staff utilize these for field communication purposes while on duty and in time of emergency.

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3.0 FACILITY SPILL RESPONSE INFORMATION

This section describes the means by which specific personnel and organizations at Fort Belvoir are notified in the event of a petroleum/hazardous material spill and the actions which those individuals and organizations shall carry out in response to the release. The interaction of the key individuals and organizations at Fort Belvoir during the response to a release of petroleum and hazardous material/waste is illustrated in Figure 1.

3.1 Garrison Commander

Notification - The IOSC shall immediately notify the Garrison Commander in the event of an uncontrolled release to the navigable waters of the United States (i.e., Accotink Creek, Pohick Creek, Dogue Creek, or the Potomac River), a release that is likely to migrate outside Fort Belvoir's boundaries, or if there is a need for additional services, manpower, or equipment to respond to a spill event.

Response Actions - During the course of a spill event, the major response actions of the Garrison Commander are to authorize the IOSC to coordinate and direct Army control and cleanup efforts at the scene of a fire, explosion, or release involving petroleum products, hazardous materials, or hazardous waste and to submit all required written documentation for the release response actions.

3.2 Emergency Operations Center

The Emergency Operation Center has been established by the Fort Belvoir Fire Prevention and Protection Division to provide a centralized communication network for their operations. The Emergency Operations Center receives all incoming notifications of spill incidents, initiates and maintains contact with the Phase I Incident Response Team, initiates and maintains contact with the IOSC, and communicates with the Phase II Incident Response Team and federal, state, local, and Department of the Army agencies as needed. The Emergency Operations Center operates according to Fire Prevention and Protection Division Standard Operating Procedure (SOP) DPW-014-00, which provides detailed information regarding the staffing, operation, and role of the Emergency Operations Center during all incidents.

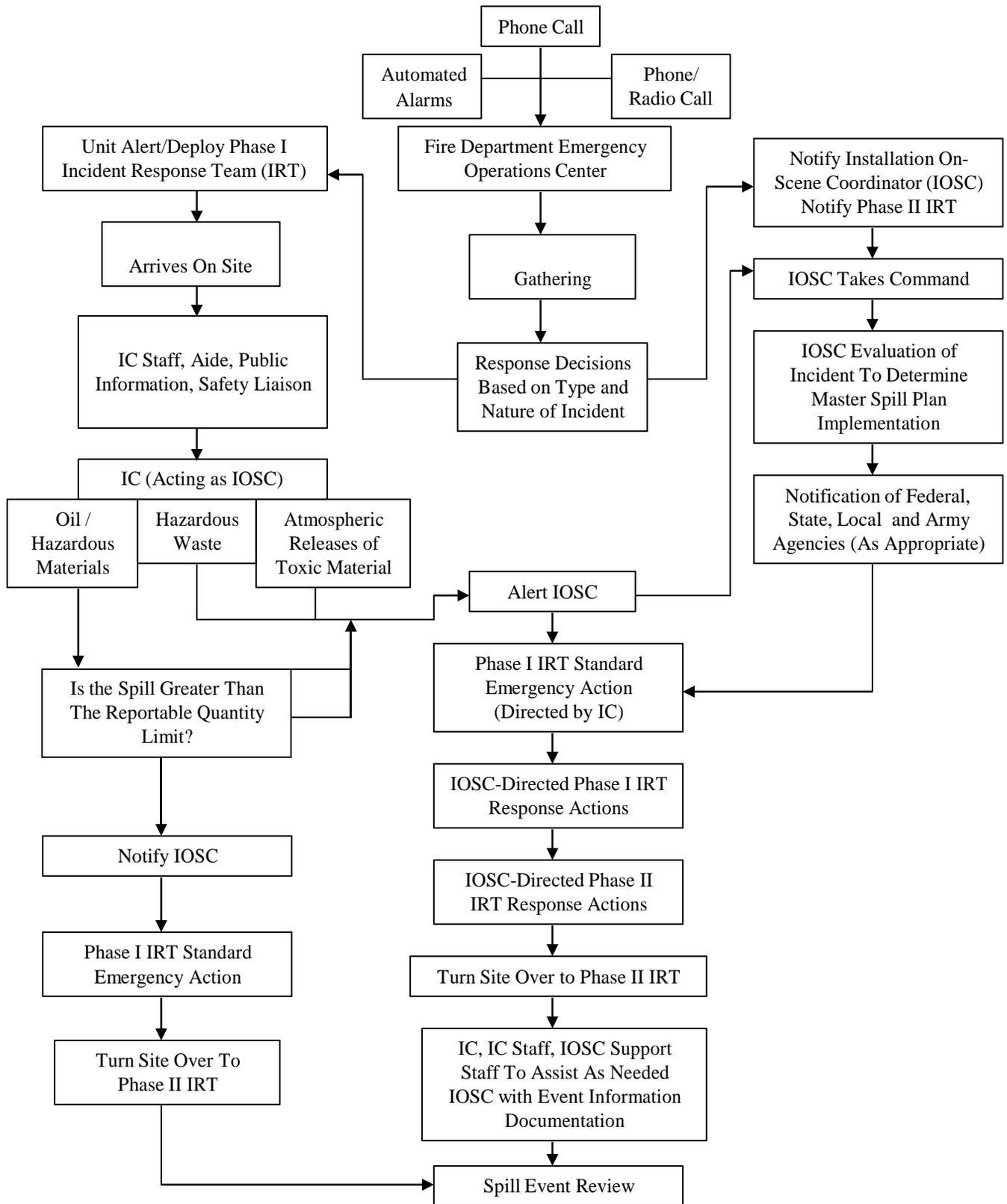
Notification - The Emergency Operations Center is notified of release events by both automated and manual emergency systems, including the following:

- The King-Fisher Computer Aided Dispatching (CAD) automatic fire alarm code receiver;
- The Honeywell Printer (Hospital Fire Alarm Computer System); and
- Radio communication and telephone systems.

Actions - After receiving notification of a release event from one of the emergency systems noted above, the Emergency Operations Center watch officer shall perform the following actions in accordance with the guidelines contained in Fire Prevention and Protection Division SOP DPW-014-00:

Figure 1

Fort Belvoir Master Spill Plan Response Actions



- A. Obtain available information about the release incident, including the following:
- 1) Location of the spill or release, and specific areas affected;
 - 2) Time and date of the incident or time of discovery;
 - 3) Source of the discharge;
 - 4) Description of all affected media (air, soil, water);
 - 5) Any damages caused by the discharge;
 - 6) Any known injuries or personnel requiring rescue assistance;
 - 7) Whether an evacuation may be needed;
 - 8) Type and estimated volume or quantity of materials involved in the incident;
 - 9) Rate of release, if continuing;
 - 10) Estimated extent of affected area;
 - 11) Any known hazards associated with the spilled or released material;
 - 12) Any control measures taken at the time of the notification to stop, remove and mitigate the effects of the discharge;
 - 13) The names of individuals and/or organizations who have also been contacted; and
 - 14) Other relevant information.
- B. Notify and dispatch Phase I Incident Response Team unit(s) to the release site;
- C. Dispatch the appropriate event Alert Tone over the "Belvoir" radio frequency followed by the required location information. This Alert Tone and information shall be simulcast to DPW, Fort Belvoir Community Hospital, and the Military Police; and
- D. Confirm stand-by notification of the IOSC and Phase II Incident Response Team.

After performing the above-referenced actions, the Emergency Operations Center shall function as a communications center for the remainder of the Phase I Incident Response Team operations.

3.3 Phase I Incident Response Team

The Fort Belvoir Phase I Incident Response Team is comprised of all the members of the Fort Belvoir Fire Prevention and Protection Division. Determination of which personnel shall respond to a release event is based on the nature and location of the incident and the individual officers on duty at the time of the incident. The procedures for making this determination are established in various Fort Belvoir Fire Prevention and Protection Division SOPs. Actual deployment of the Phase I Incident Response Team, suppression and/or rescue techniques employed, and immediate Phase I Incident Response Team objectives shall be directed by the Incident Commander. Additional direction concerning actions with installation-wide impacts (i.e., overall containment strategies, approval of waste disposal staging areas, etc.) shall be issued, if required, by the IOSC through the Incident Commander.

Notification - The Phase I Incident Response Team is notified of a release event by the Emergency Operations Center as a "Unit Dispatch".

Actions - After receiving notification of a release event and arrival at the release site, the Phase I Incident Response Team shall begin emergency operations under the direction of the Incident Commander and, as needed, the IOSC. In general, this action shall be directed toward the saving of lives and the protection of both the environment and property endangered by the incident. To accomplish these objectives, the response action shall be performed in accordance with the Incident Command System protocol which is outlined in the Fire Prevention and Protection Division SOP DPW-011-00.

3.4 Phase II Incident Response Team

The installation Facilities Maintenance Contractor shall provide properly trained personnel and equipment to serve as Fort Belvoir's Phase II Incident Response Team. The facilities maintenance contractor shall provide the IOSC with a point of contact (for both duty and off-duty hours). The duties of the Phase II Incident Response Team shall consist of providing support to the Phase I Incident Response Team. The efforts of the Phase II Incident Response Team will be under the direction of the Incident Commander or IOSC.

Notification - The Phase II Incident Response Team point of contact shall receive standby notification from the Emergency Operations Center after the Phase I Incident Response Team is dispatched to a release site. The Phase II Incident Response Team point of contact will then place the Phase II Incident Response Team members on standby status. Activation, notification, and direction for initial deployment for the Phase II Incident Response Team shall be issued by the Incident Commander or IOSC.

Actions - After receiving notification, the Phase II Incident Response Team shall deploy to the release site or to a staging location designated by the IOSC or Incident Commander. Equipment and manpower requirements for deployment will vary depending on the nature of the incident, but may include light industrial operations, heavy equipment and operators, and waste oil containment and collection equipment.

3.5 IOSC Support Resources

The primary support organization for the IOSC is DPW ENRD. DPW ENRD staff shall provide clerical, communication, and specialized assistance to the IOSC on an as needed basis. In addition to DPW ENRD, the following organizations listed below shall provide a point of contact and shall be available to offer specialized assistance during and following a release response incident:

- Provost Marshal's Office;
- Fort Belvoir Community Hospital Preventative Medicine Activity (PMA);
- Installation Safety Office (ISO);
- Office of the Staff Judge Advocate (SJA);
- DPW Accounting Office;
- Mission and Installation Contracting Command (MICC); and
- Logistics Readiness Center (formerly DOL - Directorate of Logistics).

Notification - Notification and activation of each of the above-referenced organizations shall be made by the IOSC on an as-needed basis.

Actions - The services of each of the above-referenced organizations shall be requested by the IOSC on an as-needed basis.

3.6 Incident Commander

The Incident Commander is a command and control position developed as part of the Fort Belvoir Fire Prevention and Protection Division's Incident Command System. The overall objective of the Incident Command System is to enable Fire Prevention and Protection Division officers to effectively manage any incident, whether of routine or major disaster proportions, by ensuring the early establishment of a command system. In the event of a petroleum or hazardous material/waste spill, the Incident Commander

shall direct the Phase I Incident Response Team actions and serve as the IOSC until the command-designated IOSC arrives at the release site.

Notification - The Incident Commander is notified of a release event by the Emergency Operations Center as a "Unit Dispatch".

Incident Command System Organization - The first arriving company officer shall automatically assume command of an incident scene. However, command may be passed to an officer arriving with him/her or close behind his/her company when incident conditions require the officer to become involved in operational tasks. In situations where command is passed from the first-arriving officer, the transfer shall be confirmed by both officers via the radio. Command may be passed only once at the company officer level.

The first-arriving officer assuming the role of Incident Commander shall advise the Emergency Operations Center that the Incident Command System is formally implemented by the use of the term "command" together with the number of the battalion responding to the incident. The Incident Commander should also provide the Emergency Operations Center with the exact location of the incident. The designated name of command should not change during an incident.

The standard radio designation of "command" stays with the Incident Commander throughout an incident regardless of whether the Incident Commander is a company officer or a chief officer, and is automatically transferred as the position of Incident Commander is transferred. The responsibilities of the first-arriving officer are as follows:

- Evaluate the incident situation and relay a report of initial incident observations and conditions through the Emergency Operations Center;
- Establish objectives, determine the course of action, and begin operations to mitigate the situation;
- Assign assisting units and initiate request for additional aid as determined during the size-up;
- Activate additional positions in the Incident Command System as the first-arriving officer's span of control becomes saturated and functions need to be delegated in order to manage the incident effectively. The first component functions filled will generally be those which manage operational resources, such as apparatus and personnel working at the incident; and
- Set operational objective for managing the incident.

In conducting the initial evaluation and setting operational objectives, the Incident Commander must be concerned with the possibility of incident acceleration (i.e., increased seriousness or complexity) and shall formulate a plan to meet this potential situation. When acceleration occurs, the Incident Commander shall activate additional component functions of the Incident Command System as required. This system will also assist the Incident Commander to use available resources most effectively to accomplish the primary operational objectives.

After completing evaluation of and setting of operational objectives for an incident, the first-arriving company officer must select an appropriate commitment for the responding resources. This will usually fall into one of the following general modes:

- 1) Offensive Mode: Situation which requires immediate action to be stabilized and requires the officer to decide quickly how to commit initial resources;
- 2) Defensive Mode: This is essentially a holding action used to keep the incident from

spreading until additional resources arrive; and

- 3) Command Mode: This situation is clearly beyond the control of the initial assignment of resources. The first-arriving officer shall assume a command position and maintain control until relieved by a higher-ranking officer.

After selecting the mode of operation, the Incident Commander shall continually monitor the developing incident, alter objectives or strategies, as needed, and direct the Phase I Incident Response Team efforts accordingly.

When emergency operations (i.e., control and containment, mitigation of immediate hazards, rescues/evacuations, equipment repairs, etc.) are complete, the Incident Commander shall release the Phase I and II Incident Response Teams from the site.

Installation On-Scene Coordinator Operations - While acting as the IOSC, the Incident Commander shall deploy the Phase I Incident Response Team and take all reasonable measures necessary to ensure that fires, explosions, and releases do not occur, reoccur, or spread to other areas at the facility. These measures may include, where applicable, stopping processes and operations and containing and collecting the released materials.

If the release involves a petroleum product in amounts less than 25 gallons, a non-reportable quantity of a hazardous material, or a non-threatening quantity of hazardous waste, does not impact surface water or groundwater, and can be efficiently cleaned-up by the on-site facility personnel, then the Incident Commander shall:

- Direct the Phase I Incident Response Team to mitigate any immediate hazards;
- Notify the IOSC of the de minimus nature of the release; and
- Release the site to either the on-site facility personnel or the Phase II Incident Response Team, as recommended by the command-designated IOSC.

If the release involves a petroleum product in amounts greater than 25 gallons, a reportable quantity of a hazardous material, or a quantity of hazardous waste which may threaten the environment or human health, is impacting surface water or groundwater, and cannot be effectively controlled by facility personnel, then the Incident Commander shall:

- Direct the Phase I Incident Response Team to mitigate any immediate hazards;
- Begin efforts to contain/control the released material and conduct other emergency operations deemed necessary; and
- Place the IOSC and Phase II Incident Response Team on active alert.

After the arrival of the command-designated IOSC, the Incident Commander shall relinquish the IOSC position to him/her. Although this transfer of command places the command-designated IOSC in charge of the overall incident response event, it does not alter the Incident Commander's role in relationship to the Phase I Incident Response Team. All Incident Commander command functions remain in place, and any IOSC directive shall be issued to Phase I Incident Response Team personnel only through the Incident Commander.

3.7 IOSC

The IOSC is responsible for coordinating the efforts of the Phase I/II Incident Response Teams and environmental remediation contractors, arranging and contracting for additional release control and cleanup support, notification of the Fort Belvoir Garrison Commander, notification of various federal, state, local, and Army agencies, and providing the agencies with all required written documentation of the spill incident and response actions. Notification to regulatory agencies is to be performed only by the command-designated IOSC or by authorized DPW Public Works personnel.

The command-designated IOSC is the Chief, DPW ENRD. In the absence of the Chief, DPW ENRD, the Chief of the Environmental Branch of DPW ENRD or DPW ENRD Environmental Specialists will serve as the IOSC. In the absence of these individuals, the Deputy Director of DPW shall serve as the IOSC until relieved by either the Chief, DPW ENRD, Chief, Environmental Branch of DPW ENRD, or the DPW ENRD Environmental Specialists. As noted in Section 3.6, the Fire Prevention and Protection Division Incident Commander is authorized to act as the IOSC until relieved by one of the above-referenced individuals.

Notification - The command-designated IOSC is notified of the occurrence of a release event by the Fort Belvoir Fire Prevention and Protection Division Emergency Operation Center. The IOSC's presence at a release incident is requested by the Incident Commander or Incident Commander Staff Liaison after the Incident Commander has ascertained the nature and extent of the release event.

Installation On-Scene Coordinator Operations - Upon arrival at the spill site, the command-designated IOSC shall release the Incident Commander from his IOSC-related duties and take control of the release event. The Incident Commander shall inform the IOSC of the current situation status, the assignment of resources, and tactical strategy needs. The IOSC shall utilize the information provided by the Incident Commander to assess additional spill response actions to be implemented at the site. The IOSC shall coordinate the spill control and containment efforts of the Phase I Incident Response Team through communication with the Incident Commander, who shall directly command the Phase I Incident Response Team. The IOSC and Incident Commander shall also direct the Phase II Incident Response Team to perform spill control and containment efforts as needed. The IOSC and Incident Commander may utilize a variety of spill response reference materials maintained by the Fire Prevention and Protection Division and DPW ENRD to assist them in the spill response effort. The IOSC may also request additional assistance for the spill response effort from environmental remediation contractors, federal, state, and local emergency response organizations, or other Fort Belvoir organizations if the magnitude and complexity of the release warrants such actions. In the event that the release creates conditions that warrant evacuation of the area affected by the release, the IOSC shall implement the Evacuation Plan outlined in Appendix G.

Several private emergency response or environmental remediation contractors have been pre-qualified to assist Fort Belvoir in the event of an emergency. If private emergency response or environmental remediation contractors are required, the IOSC will contact them to describe their task(s) and receive an estimated cost for each task. The IOSC will then contact a Fort Belvoir DPW accounting office representative to have them initiate internal paperwork to fund them for their tasks, in conjunction with the MICC office.

The IOSC shall also direct the remediation of petroleum/hazardous materials contamination at the spill site by an environmental remediation contractor.

3.8 Release Reporting Requirements

All appropriate federal, state, local, and Army agencies shall be notified by the command-designated IOSC or authorized DPW personnel when the release event meets the notification criteria summarized in Table 3. Listed hazardous materials and their reportable quantity thresholds are also provided in Appendix H of this MSP. The IOSC shall prepare all written documentation regarding the spill incident and response efforts which the contacted agencies may require. To complete all appropriate notifications, the IOSC may request assistance from the Incident Commander, DPW ENRD, SJA and any other IOSC support personnel involved in the release response effort. Additionally, the IOSC shall notify representatives of nearby environmentally sensitive areas listed in Table 1 of this MSP that could potentially be impacted by the release event at Fort Belvoir.

The IOSC shall document all spill incidents occurring at Fort Belvoir in the Initial Abatement Measures Report (IAMR) maintained by DPW ENRD at their office in Building 1442. A record of communication form shall also be prepared for each release event requiring notification of federal, state, local, and Army agencies and/or representatives of nearby environmentally sensitive areas. The IOSC shall note the date and time that each agency is notified by telephone and the date(s) on which written reports are submitted to the appropriate agencies. The completed form shall be maintained with all other documentation pertaining to each release event at DPW ENRD's office in Building 1442.

Table 3 - Petroleum/Hazardous Material Spill Reporting Criteria and Schedule		
Compound Released	Agencies To Be Notified By The Command-Designated IOSC and/or Authorized DPW Personnel	Agencies To Be Notified With Follow-Up Written Documentation By The Command-Designated IOSC and/or Authorized DPW Personnel
PETROLEUM - Surface Release		
Release is less than 25 gallons but does <u>not</u> go into water	None (as long as cleanup is completed within 24 hours)	DPW ENRD shall record the release incident in its IAMR
Release is greater than 25 gallons but does <u>not</u> go into water	VDEQ (immediate)	VDEQ requires documentation within 10 days of the release DPW ENRD shall also record the release incident in its IAMR
Release (no minimum quantity) which (a) violates applicable water quality standards, or (b) causes a film or sheen upon or discoloration of the surface of the waters of the United States or adjoining shorelines or causes a sludge or emulsion to be deposited beneath the surface of the waters of the United States	(i) National Response Center (NRC) - (immediate) (ii) United States Coast Guard (USCG) - (immediate) (iii) Virginia Department of Environmental Quality (VDEQ) - (immediate) (iv) Maryland Department of the Environment (MDE) - (immediate, if spill enters Potomac River) (v) Army Environmental Command (AEC) - (immediate)	VDEQ and AEC require documentation within 10 days of the release USEPA Region III, USCG, and MDE will notify Fort Belvoir if documentation is required DPW ENRD shall also record the release incident in its IAMR
Release enters sanitary sewer system which will flow to a water treatment facility	VDEQ Fairfax County Lower Potomac Pollution Control Plant [FCLPPCP] (Trouble Response Center for the Industrial Waste Section)	VDEQ requires documentation within 10 days of the release Fairfax County Lower Potomac Pollution Control Plant requires documentation within five days of the release DPW ENRD shall also record the release incident in its IAMR

Table 3 - Petroleum/Hazardous Material Spill Reporting Criteria and Schedule		
Compound Released	Agencies To Be Notified By The Command-Designated IOSC and/or Authorized DPW Personnel	Agencies To Be Notified With Follow-Up Written Documentation By The Command-Designated IOSC and/or Authorized DPW Personnel
Facility has discharged more than 1,000 gallons of oil into or upon the navigable waters of the United States or adjoining shorelines in a single spill event, or discharged oil in harmful quantities, as defined in 40 CFR, Part 110, into or upon the navigable waters of the United States or adjoining shorelines in two spill events occurring within any 12 month period	No additional notification required	USEPA Region III Regional Administrator wants report within 60 days from the time the subject facility becomes subject to this reporting requirement
PETROLEUM - Subsurface Release		
Release from a UST has been detected	VDEQ (within 24 hours of release discovery)	VDEQ requires report within 30 days DPW ENRD shall also record the release incident in its IAMR
HAZARDOUS MATERIALS/WASTES		
Hazardous material/waste release of a quantity less than the Reportable Quantity (RQ) amount listed in 40 CFR, Part 302.4	None	DPW ENRD shall record the release incident on an IAMR for future reference.
Hazardous material/waste release of a quantity greater than the reportable quantity (RQ) listed in 40 CFR, Part 302.4	(i) NRC - (immediate) (ii) VDEQ - (immediate) (iii) Local Public Safety Communications Center (PSCC) - (immediate) (iv) AEC - (immediate) (v) USCG - (immediate, if release reaches water) (vi) MDE - (immediate, if release enters Potomac River) (vii) FCLPPCP - (immediate, if release enters sanitary sewer system leading to water treatment facility)	USEPA Region III, VDEQ, Local Emergency Planning Committee, AEC, USCG, and MDE require documentation within 15 days of the release FCLPPCP requires documentation within 5 days of release DPW ENRD shall also record the release incident in the IAMR.
Hazardous material/waste release, fire, or explosion which could threaten human health or the environment at the facility	(i) NRC - (immediate) (ii) VDEQ - (immediate) (iii) Local Public Safety Communications Center (PSCC) - (immediate) (iv) AEC - (immediate) (v) USCG - (immediate, if release reaches water) (vi) MDE - (immediate, if release enters Potomac River) (vii) FCLPPCP - (immediate, if release enters sanitary sewer system leading to water treatment facility)	USEPA Region III, VDEQ, Local Emergency Planning Committee, AEC, USCG, and MDE require documentation within 15 days of the release FCLPPCP will notify Fort Belvoir if documentation is required DPW ENRD shall also record the release incident in its IAMR

3.9 Spill Incident Review

As noted later in Section 7.2 of this MSP, DPW ENRD shall review the response effort within 90 days of the release in order to determine if the MSP should be modified in light of lessons learned during the release event. If changes in the MSP spill prevention and/or response measures are deemed necessary, the document shall be revised to reflect those changes. All Fort Belvoir individuals or organizations that may be affected by the revisions shall be notified of the changes.

Beginning in 2015, DPW ENRD and the Fire Prevention and Protection Division shall meet annually to discuss spill response incidents and the adequacy of the responses to those incidents which occurred during the previous twelve months.

3.10 Spill Response Materials and Equipment

3.10.1 Fort Belvoir Spill Response Materials and Equipment

Significant spill response materials at Fort Belvoir are stored in DPW ENRDs storage repository at Building 1495 and in the Fire Prevention and Protection Division's mobile hazardous materials response trailer at Building 2119 (North Post). Additional spill response materials and equipment are located at Buildings 191 (South Post), and 3242 (Davison Army Airfield Fire Department), as well as Buildings 1109 and 1114, occupied by Fort Belvoir facilities maintenance contractor ALEUT. An inventory of these items is presented in Appendix H of this MSP. Sorbent materials are also stored at the potential sources of petroleum, hazardous material, and hazardous waste releases at Fort Belvoir.

Inspections of spill response materials in Buildings 1495 and 2119 shall be performed by DPW ENRD and Fire Prevention and Protection Division personnel on a monthly basis. Replacement materials shall be ordered as needed to maintain the proper inventory volume.

The Fire Prevention and Protection Division's equipment is used regularly for fire-fighting events, and the equipment operated by ALEUT is used regularly for construction activities. Accordingly, the operational status of this equipment is monitored on a daily basis.

Fort Belvoir also uses the services of remediation contractors to assist in the response to spills on the installation.

3.10.2 Outside Assistance

Upon request from Fort Belvoir, Fairfax County's Fire Prevention and Protection Division, Fairfax County's Police Department, the Commonwealth of Virginia's Regional Response Teams (RRTs) in Alexandria and Fredericksburg, Virginia, the United States Coast Guard (USCG), and the Maryland Department of the Environment (MDE) may also provide additional spill control materials, equipment, and personnel to contain a petroleum, hazardous material, or hazardous waste release at Fort Belvoir. Memorandums of Agreement between Fort Belvoir and Fairfax County Emergency Response Agencies are at Appendix F.

3.11 Contact List

Tables 4 and 5 are contact lists and phone numbers for Fort Belvoir staff and cleanup contractors, and all appropriate Federal, State and local agencies to be contacted in the event of a spill. Fort Belvoir's EOC has additional 24 hour contact information for Fort Belvoir Staff.

Table 4 – Fort Belvoir Emergency Telephone Numbers

ORGANIZATION	CONTACT PERSON	TELEPHONE NUMBER
DPW Fire Prevention and Protection Division Emergency Operations Center Bldg. 2119.	<u>Emergency</u>	(703) 781-1800 (On-Post) (703) 806-6911 (On-Post)
	Incident Commander: Fire Chief	(703) 806-6916 (Duty)
	Incident Commander Alternate: Assistant Fire Chief	(703) 805-4911 (Duty)
DPW Environmental and Natural Resource Division, Bldg. 1442.	<u>Installation On-Scene Coordinator:</u> Chief, DPW ENRD	(703) 806-3193 (Duty)
	<u>DPW ENRD Environmental Specialists (Installation On-Scene Coordinator Alternates):</u> Chief, Environmental Compliance Branch	(703) 806-0020 (Duty)
	Petroleum Manager	(703) 806-3694 (Duty)
	Hazardous Waste Manager	(703) 806-2119 (Duty)
	<u>DPW, Deputy Director (Installation On-Scene Coordinator Alternate):</u>	(703) 806-4194 (Duty)
	<u>Chief, Natural Resources Branch:</u>	(703) 806-0049 (Duty)
DPW Facilities Management Contractor (ALEUT), Bldg. 1420.	<u>Roads and Grounds Manager/Phase II Incident Response Team Point of Contact:</u> Mr. Austin Bolling, Manager Mr. Sean Morrison, Grounds Maintenance Mr. Ronnie Barnes, Pump Truck Drive	(703) 498-9555 (Cell) (703) 595-7698 (Cell) (703) 498-9379 (Cell)
	<u>Additional Points of Contact:</u> Mr. Peter Seufert, Project Manager Mr. Paul Meyer, Deputy Project Manager Mr. Mike Smoot, IJO Coordinator Mr. Steve Pitts, ES&H Manager Mr. Johnny Roberts, Environmental QC Mr. Brad Cassise, Environmental QC	(719) 433-5324 (Cell) (719) 596-3164 (Cell) (703) 357-8510 (Cell) (703) 376-4132 (Cell) (703) 296-7071 (Cell) (703) 357-0948 (Cell)
Logistics Readiness Center, Bldg. 766, 9910 Tracy Loop.	Plans and Operations Branch Transportation Branch Supply Division/Property Book	(703) 805-5505 (Duty) (703) 805-5674 (Duty) (703) 805-2836/3264 (Duty)
Provost Marshal's Office, Bldg. 1131.	MP Desk Sergeant (Emergency) Military Police (Emergency)	(703) 806-3104,3105, 3106 (703) 805-1104
Fort Belvoir Community Hospital, Bldg. 1230, 9300 DeWitt Loop.	Ambulance Shelter Bldg 1233 Emergency Room (Wing C), Bldg 1230 General Hospital, Bldg 1230	None as of Oct 2011 (571) 231-3124/3162 (571) 231-3066/3067
Installation Safety Office, Bldg. 1469.	Manager	(703) 806-3270 (Duty)
Office of the Staff Judge Advocate, Bldg. 257.	Staff Judge Advocate Ms. Susie Gillett	(703) 805-4389 (Duty)
Mission & Installation Contracting Command, Bldg. 1425.	Manager	(703) 806-4459 (Duty)
EMERGENCY SPILL RESPONSE/REMEDIAION CONTRACTORS		
Clean Harbors, Inc.	Emergency Attendant	(800) 622-3360 (800) 645-8265 (24-Hour)
IMS/HEPACO	Emergency Attendant	(800) 229-4671 (540) 372-9890 (24-Hour)

Table 5 – External Emergency Telephone Numbers

RELEASE NOTIFICATION PHONE NUMBERS	
(Notifications to Regulatory Agencies will ONLY be made by Command Designated Installation On-Scene Coordinator and/or authorized DPW Public Works personnel)	
ORGANIZATION	TELEPHONE NUMBER
National Response Center (NRC): The NRC will notify USEPA Region III, the U.S. Coast Guard (USCG), and, if applicable, the Maryland Department of the Environment (MDE) and/or other federal and state agencies as needed.	(800) 424-8802 (24-Hour)
VDEQ's Valley Regional Office shall be contacted if a spill occurs during normal daytime hours at Fort Belvoir Rivanna Station. Virginia Department of Environmental Quality (VDEQ), P.O. Box 10009, Richmond, VA 23240: Virginia's Dept. of Emergency Management (VDEM) shall be contacted if a spill occurs during evening or weekend hours. VDES, in turn, will notify VDEQ's Valley Regional Office of the reported release.	(540) 574-7800 (540) 574-7878 (fax) (804) 698-4000 or (800) 468-8892 (800) 468-8892 (24-Hour) (804) 674-2400
Fairfax County Public Safety Communications Center (PSCC): In the case of a spill event, the PSCC shall notify the Local Emergency Planning Committee (Local Emergency Planning Committee)-designated Emergency Response Coordinator.	9-1-1 (Emergency) (703) 691-2131 (Non-Emergency)
Fairfax County Lower Pollution Control Plant (Trouble Response Center)	(703) 323-1211 (Emergency)
Department of the Army U.S. Army Environmental Command (AEC), Attn.: Darren Corbiere, CETHA-EC-S, Fort Sam Houston, San Antonio TX.	(210) 466-0564 (210) 792-6723 (Cell)
Environmentally Sensitive Areas in the Vicinity of Fort Belvoir	
Fairfax County Park Authority	(703) 324-8700
Huntley Meadows Park Superintendent	(703) 768-2525
Mason Neck State Park Superintendent	(703) 550-0362 or (703) 550-0960
Mason Neck National Wildlife Refuge Superintendent	(703) 491-6255
Pohick Bay Regional Park Superintendent	(703) 339-6100

4.0 GENERAL FACILITY INFORMATION

4.1 Mission and Location

Fort Belvoir's mission has changed over the years, from a training camp to an engineer training operation, and with the implementation of the Base Realignment and Closure (BRAC) Act of 1988, the installation has transitioned into a multi-mission center for the U.S. Army in the National Capital Region.

The current mission of Fort Belvoir is to provide support service to activities and tenants located at Fort Belvoir and throughout National Capital Region. The mission contains the following elements:

- Contingency Military Support;
- Regional Logistics Support Center;
- Regional Classroom Center;
- Regional Military Community Support; and
- Regional Administrative Center;
- Regional Recreation Center;
- Regional Housing;
- Regional Environmental Stewardship.

Fort Belvoir is an approximately 8,700-acre installation located in Fairfax County, Virginia along the western bank of the Potomac River. The installation is situated 11 miles southwest of the City of Alexandria, 14 miles southwest of Washington, D.C., and 95 miles north of Richmond. The major roadway access to Fort Belvoir is from U.S. Route 1 (Richmond Highway) and Fairfax County Parkway. U.S. Route 1 bisects the installation into North and South Posts. The main entrances to Fort Belvoir are at the intersections of U.S. Route 1 with Belvoir and Pohick Roads. Fairfax County Parkway provides access to Richmond Highway from U.S. Interstate Route 95.

Fort Belvoir is surrounded on its western, northern, and eastern sides by Fairfax County. The eastern and southern sides of Fort Belvoir are bounded by the Potomac River and its associated Gunston Cove and Dogue Creek waterways. The Lower Potomac Planning District of Fairfax County includes Fort Belvoir and the Lorton and Mason Neck areas southwest of the installation. The Springfield and Rose Hill Planning Districts are situated northwest and north of the installation, respectively, and the Mount Vernon Planning District borders the northeastern edge of Fort Belvoir.

4.2 Fort Belvoir Environmental Setting

4.2.1 Climate

Fort Belvoir is located in the transition zone between the northern and southern climates of the United States. In this zone, average winter temperatures recorded as degrees Fahrenheit range from the 20s to the 40s, and average summer temperatures range from the low 60s to the upper 80s. October usually brings the first frost, and the last freezing temperatures occur during April.

Average annual precipitation is 37 inches, with the majority of rainfall occurring during the summer months when low-pressure systems move up the East Coast of the United States. Snowfalls of three inches or more occur approximately two to three times per year. The prevailing winds in the area come from the southwest during the summer and the northwest during the winter but in the immediate vicinity of Fort Belvoir the winds typically come from the north/northwest.

4.2.2 Topography

Most of South Post is flat to gently rolling, with steep slopes bordering the Potomac River and forming the valley sides of the short streams that flow into Accotink Bay, Gunston Cove, and the Potomac River. Elevations at the South Post range from roughly mean sea level (MSL) along the above-referenced waterways to a maximum of approximately 146 feet MSL throughout the central portion of the South Post. Flat ground borders the adjacent water courses, but there are some relatively steep slopes inland, where the land reaches higher elevations of up to 240 feet MSL. The southern half of the North Post is relatively flat, while the northern half is comprised primarily of gently rolling hills. Elevations on the North Post range from approximately 10 feet above MSL at the juncture of Accotink Creek and U.S. Route 1 to approximately 240 feet above MSL near the intersection of Telegraph Road and Beulah Street.

4.2.3 Geology

Fort Belvoir lies on the Atlantic Coastal Plain in Fairfax County, Virginia, which consists of a wedge of unconsolidated sediments containing lenticular deposits of inter-bedded sand, silt, clay and gravel of non-marine, fluvial origin. A northeast trendline, roughly paralleling U.S. Interstate Route 95, is the physiographic boundary separating the Piedmont province to the west from the Atlantic Coastal Plain province. Foliated metamorphic and igneous rocks of Precambrian and early Paleozoic strata dip to the southeast from the trendline at an approximate two-percent slope. Saprolite, usually a residual clay-rich material derived by the chemical weathering of the crystalline bedrock and retaining the structure and fabric of the bedrock, is typically five to 10 meters thick below the Coastal Plain sediments. Unconsolidated and poorly consolidated sediments of the Coastal Plain are part of a sedimentary wedge that thickens eastward from the trendline to more than 200 meters thick at the Potomac River. There is little evidence of structural disturbance (i.e., no important folds, faults, or joint systems) in the vicinity of Fort Belvoir. Furthermore, the area is located in Seismic Zone I, which is a zone of low seismic activity.

4.2.4 Surface Water

The Fort Belvoir peninsula is bordered on the northeast by Dogue Creek, on the east by the Potomac River, and on the south by Gunston Cove. Accotink, Dogue, and Pohick Creeks make up the watersheds through which surface drainage flows at Fort Belvoir. The waterways are freshwater tidal systems with tidal fluctuations of approximately one foot. The upper limits of the tidal changes extend northward up the creek channels to the vicinity of U.S. Route 1. In the vicinity of Fort Belvoir, the normal downstream flow of the waterways is interrupted by the incoming flood tide, and the direction of water movement is then upstream until the receding ebb tide begins.

Accotink is the largest of the three creeks running through Fort Belvoir and originates near the cities of Vienna and Fairfax, Virginia. The creek flows to the southeast through Fort Belvoir (near Accotink Village) and discharges into Accotink Bay and Gunston Cove.

Pohick Creek forms much of the southwestern boundary of Fort Belvoir and discharges into Pohick Bay and Gunston Cove. Accotink Bay and Pohick Bay are small embayments that connect Accotink and Pohick Creeks with Gunston Cove. Gunston Cove, in turn, opens into the Potomac River. Both Accotink and Pohick Bays are shallow, with an average reported depth of approximately 0.5 to 2.0 feet, while Gunston Cove has an average reported depth of approximately 5.0 to 7.0 feet.

Dogue Creek begins near Rose Hill, Virginia, and flows south through Fort Belvoir, near the Woodlawn Village and River Village housing areas, before entering the Potomac River.

At Fort Belvoir, the Potomac River is approximately 4,500 feet wide, with the navigation channel lying approximately 300 feet from Fort Belvoir's shoreline. This channel is approximately 600 feet wide and 30 to 60 feet deep.

4.2.5 Groundwater

Groundwater at Fort Belvoir typically exists in the lower 100 feet of the Potomac Group, a sand unit known as the "lower aquifer". This aquifer recharges in the outcrop areas as well as from vertical water movement from the overlying water-bearing sand bodies of the Potomac Group. Water within this saturated zone generally moves to the southeast and is located at a depth of approximately 40 feet below ground surface.

The shallower, perched water table, approximately 2 to 15 feet below ground surface, can be found in various locations of Fort Belvoir because varying amounts of water become trapped in the permeable Tertiary and Quaternary strata that overlie impermeable clays. Springs occur in the vicinity of Accotink Creek, Pohick Creek, and Dogue Creek. Fresh water generated at these springs flows into the adjoining streams and ultimately into the Potomac River.

Several housing developments adjacent to and in the vicinity of Fort Belvoir use private groundwater as drinking water sources. Groundwater is used for recreational purposes at the Pohick Bay Regional Park. Wells supplying non-potable water for irrigation are located at the Andrew T. McNamara Headquarters Complex, North Post and South Post golf courses. No active wells used to supply potable water at Fort Belvoir. There are no federal or state-listed groundwater wellhead protection areas in the vicinity of Fort Belvoir.

4.2.6 Wetlands

Wetlands at Fort Belvoir are principally associated with Dogue Creek, Accotink Creek, Pohick Creek, Gunston Cove, and the Potomac River and constitute approximately 25 percent of the undeveloped area at the installation. Wetlands maps are in the Fort Belvoir Integrated Natural Resources Management Plan.

Forested wetlands on Fort Belvoir occur as two forms, bottom land hardwoods and riparian forested wetlands. Bottomland hardwoods are found in the flood plains of Accotink and Dogue Creeks. Riparian forested wetlands are found along the upland drainage system and are not structurally distinguishable from the more mesic upland hardwoods surrounding them.

Fort Belvoir's emergent wetlands include both wet meadows and tidal-freshwater marshes. These are primarily distributed at the mouths of Dogue Creek, Accotink Creek, and Pohick Creek.

4.2.7 Wildlife Refuges

A significant effort to preserve the natural wildlife habitat of Fort Belvoir and the region has been the establishment of two wildlife refuges comprising a combined area of 1,461 acres. The Jackson Miles Abbott Wetland Refuge comprises 146 acres in the Dogue Creek watershed at the northeastern corner of the installation. This refuge includes a large surface water impoundment and a portion of an extensive wetland system that extends from Huntley Meadows to the north down to the mouth of Dogue Creek. The Jackson Miles Abbott Wetland Refuge, in concert with the adjacent wetland area, provides important wildlife habitat and supports a number of rare plant and animal species.

The Accotink Bay Wildlife Refuge covers approximately 1,315 acres in the Accotink Creek and Pohick Creek watersheds in the south central portion of Fort Belvoir. The refuge encompasses the extensive marsh area of Accotink and Pohick Bays (within the installation boundaries) and extends upslope to include portions of the forested plateaus. The refuge has a variety of habitat types, including freshwater tidal wetlands, bottomland hardwood forest, and upland hardwood forest. The Accotink Bay Wildlife Refuge supports a number of rare plant and animal species. The refuge has an active bald eagle nest, and the mudflats and shorelines are important eagle feeding and roosting areas. The marsh and adjacent bottomland areas support a large number and variety of waterbirds and waterfowl. The contiguous forested areas provide vital stopover and nesting habitat for various neotropical migratory birds.

Both the Jackson Miles Abbott Wetland Refuge and the Accotink Bay Wildlife Refuge are considered permanently preserved and therefore are not available for development. In addition to avian species occupying the refuges, various fish, reptile, amphibian, and mammalian species also reside in the lands and waters comprising the above-referenced refuges. Additionally, each of these areas provides significant outdoor recreation opportunities. An active bow-hunting program for deer and small game exists at the installation. Fishing is popular at the Jackson Miles Abbott Wetland Refuge (Mulligan Pond) and along the shorelines of Dogue Creek, Accotink Bay, and Gunston Cove. Several miles of hiking trails, boardwalks in marshes, and observation points are situated in both refuges.

4.2.8 Forest and Wildlife Corridor

As another effort to preserve the integrity of the wildlife habitat and wildlife population of Fort Belvoir and the region, the Fort Belvoir natural resources managers designated a continuous forested corridor, with a minimum width of 250 yards, through the installation. The purpose of this Forest and Wildlife Corridor is to prevent genetic isolation of animal populations by allowing the natural movement of wildlife and plant life between the habitats of Jackson Miles Abbott Wetland Refuge and the Huntley Meadows Park north of the installation and the Accotink Bay Wildlife Refuge and Mason Neck National Wildlife Refuge south of Fort Belvoir. The Corridor is actively managed to provide for a continuous area of forest cover. Where dissections of the Corridor are unavoidable (i.e., roads crossing the Corridor), Fort Belvoir has a policy to implement measures to mitigate the effect on wildlife movement. For example, construction of the Fairfax Parkway through the Corridor was required to include several wildlife crossing structures beneath the roadway.

A summary of the environmentally sensitive areas (i.e., water bodies, wetlands, and wildlife significant habitats) at or in the vicinity of Fort Belvoir and the means by which Fort Belvoir would protect them in the event of a petroleum, hazardous material, or hazardous waste release into the waterways at Fort Belvoir is provided in Table 6.

4.2.9 Potable Water Supply System

Fairfax Water supplies potable water for the northern Virginia region. Water is withdrawn from the Occoquan Reservoir, the Potomac River, and 18 wells within Fairfax County. These surface water intake and subsurface water extraction wells are all located at least five miles from Fort Belvoir. None of these locations are situated immediately downstream of Fort Belvoir along the Potomac River. Water is supplied to Fort Belvoir by Fairfax Water. The Fairfax Water line along Telegraph Road services two connections into Fort Belvoir. A third service connection with Fairfax Water exists at Mulligan Road (also known as Pole Road). An existing contract between Fort Belvoir and Fairfax County specifies how water is to be purchased. The total average water consumption is approximately 1.9 million gallons per day (MGD).

4.2.10 Sanitary Sewage System

Fort Belvoir has 38 sewage pumping stations connected to a system that discharges into a Fairfax County 42-inch main line. This sewage line proceeds west to the Fairfax County Noman M. Cole, Jr. Pollution Control Plant, which is situated at the western edge of the installation on Pohick Creek. An existing contract between Fort Belvoir and Fairfax County specifies that Fort Belvoir pay a flat rate regardless of discharge volume. The installation is authorized to discharge 3.0 MGD of sewage and currently discharges approximately 1.3 MGD.

4.2.11 Stormwater Drainage System

Stormwater runoff at Fort Belvoir originates primarily from the highly developed peninsula between Accotink and Dogue Creeks. Virtually all developed areas on installation, including roadways and parking lots, are served by a series of stormwater drainage systems. These stormwater collection systems discharge into intermittent and/or perennial stream channels which ultimately lead to Dogue Creek, Accotink Creek, Pohick Creek, Pohick Bay, Accotink Bay, Gunston Cove, and the Potomac River. Stormwater in undeveloped portions of the installation follows natural surface drainage patterns and discharges into the same stream channels noted above. For more details see the Storm Water Pollution Prevention Plan.

Table 6 - Environmentally Sensitive Areas Situated At or Near Fort Belvoir

Watershed	Site(s)	Location	Means of Spill Protection
Dogue Creek	Huntley Meadows Park and the waters of Dogue Creek	Lands situated approximately 1,500 ft. east of the Humphrey Engineering Center and adjoining the Jackson Miles Abbott Wildlife Refuge	<ul style="list-style-type: none"> i. Placement of sorbent booms and/or other spill control materials, excavation, collection trenches, dikes ii. Notification of Huntley Meadows Park personnel iii. Notification of appropriate regulatory agencies, which may include the National Response Center (NRC), the Virginia Department of Environmental Quality (VDEQ), the United States Coast Guard (USCG), and the Army Environmental Command (AEC)
Dogue Creek	Jackson Miles Abbott Wetland Refuge and the waters of Dogue Creek	Lands situated in the northeastern section of the Fort Belvoir facility	<ul style="list-style-type: none"> i. Placement of sorbent booms and/or other spill control materials ii. Notification of appropriate regulatory agencies, which may include the NRC, VDEQ, USCG, and AEC
Dogue Creek	Floodplain and wetlands areas and the waters of Dogue Creek and the Potomac River	Lands situated along the Dogue Creek channel, extending south from the Jackson Miles Abbott Wetland Refuge to a point approximately one mile south of the intersection between Dogue Creek and Mount Vernon Road	<ul style="list-style-type: none"> i. Placement of sorbent booms and/or other spill control materials ii. Notification of appropriate regulatory agencies, which may include the NRC, VDEQ, MDE, USCG, and AEC
Accotink Creek	Accotink Bay Wildlife Refuge, the Forest and Wildlife Corridor, and the waters of Accotink Creek, Accotink Bay, Gunston Cove, and the Potomac River	Lands situated along the Accotink Creek channel, extending south from Telegraph Road to Accotink Bay, and along the eastern and western sides of Accotink Bay	<ul style="list-style-type: none"> i. Placement of sorbent booms and/or other spill control materials ii. Notification of appropriate regulatory agencies, which may include the NRC, VDEQ, MDE, USCG, and AEC
Pohick Creek	Pohick Bay Regional Park and the waters of Pohick Creek, Pohick Bay, Gunston Cove, and the Potomac River	Lands situated on the northeastern side of the Mason Neck peninsula, adjacent to Pohick Creek and Pohick Bay	<ul style="list-style-type: none"> i. Placement of sorbent booms and/or other spill control materials ii. Notification of Pohick Bay Regional Park personnel iii. Notification of appropriate regulatory agencies, which may include the NRC, VDEQ, MDE, USCG, and AEC
Potomac River	Mason Neck National Wildlife Refuge, Mason Neck State Park, Potomac Shoreline Regional Park, and the waters of the Potomac River	Lands situated on the eastern side of the Mason Neck peninsula, adjacent to the Potomac River	<ul style="list-style-type: none"> i. Placement of sorbent booms and/or other spill control materials ii. Notification of Mason Neck National Wildlife Refuge, Mason Neck State Park, and Potomac Shoreline Regional Park personnel iii. Notification of appropriate regulatory agencies, which may include the NRC, VDEQ, MDE, USCG, and AEC

5.0 AUTHORITY AND RESPONSIBILITIES

The command structure at Fort Belvoir includes multiple Directorates and Tenant Activities. While the DPW ENRD maintains the primary responsibility for environmental regulatory compliance at Fort Belvoir, including compliance with the provisions of the MSP, authority and responsibilities for the MSP and spill prevention and response are maintained by additional personnel and Directorates at Fort Belvoir. Fort Belvoir personnel and Directorates with spill prevention and response authority and responsibilities are described in this section of the MSP and are also summarized in Figure 2.

5.1 Garrison Commander (GC)

- 1) The GC ensures that petroleum, hazardous materials, and hazardous wastes at Fort Belvoir are used, generated, transported, stored, handled, and disposed of in accordance with applicable federal, state, local, and Department of the Army environmental regulations.
- 2) Makes available the resources for programs and budgets for personnel, training, materials, and equipment required for petroleum, hazardous material, and hazardous waste spill prevention, containment, and clean-up of Fort Belvoir-related releases.
- 3) Institutes necessary measures to ensure effective response to petroleum, hazardous material, and hazardous waste releases at Fort Belvoir by establishing this installation MSP which minimizes hazards to human health and the environment.
- 4) Designates an IOSC to manage spill response events.
- 5) Assigns the Fort Belvoir Fire Prevention and Protection Division to serve as the Phase I Incident Response Team.
- 6) Designates the Fort Belvoir Fire Prevention and Protection Division Fire Chief or his designated alternate to serve as the Incident Commander at spill incidents, to lead the Phase I Incident Response Team, and to serve as the acting IOSC in the absence of the Command-Designated IOSC.
- 7) Designates the Fort Belvoir facilities maintenance contractor to serve as the Phase II Incident Response Team.
- 8) Identifies the Fort Belvoir resources that could be made available to the federal Regional Response Team if Department of the Army agencies are requested to assist in the containment and/or clean-up of a non-Department of the Army-caused spill.
- 9) Ensures cooperation with other federal, state, regional, and local agencies to ensure that public health and welfare are adequately protected from releases of petroleum, hazardous materials, and hazardous wastes.
- 10) Ensures compliance with the requirements of the Emergency Planning and Community Right-To-Know Act of 1986, Sections 301 (c), 303 (d) (1), and 304, to the maximum extent consistent with security-related limitations on public disclosure.
- 11) Ensures compliance with other applicable federal, state, regional and local regulations, and international agreements.

- 12) Ensures that the MSP is updated in accordance with federal and state environmental regulations.
- 13) Informs Staff Judge Advocate of any legal action to be taken to recover expenses from liable parties as a result of a spill or release of petroleum product, hazardous materials or hazardous waste.

5.2 Installation On-Scene Coordinator (IOSC)

- 1) The IOSC is designated by the GC to coordinate and direct Army control and cleanup efforts at the scene of a fire, explosion or release involving petroleum products, hazardous materials or hazardous waste. The IOSC has the authority to commit resources and personnel to respond to incidents that could endanger human health and the environment. In this regard, the IOSC has complete authority over all installation personnel involved or partially involved in the containment or cleanup of a spill incident.
- 2) The command-designated IOSC is the Chief of the DPW ENRD. In the absence of the Chief of the DPW ENRD, the Chief of the Environmental Branch of ENRD serves as the IOSC. In the absence of these two individuals, a DPW ENRD Environmental Specialist serves as the IOSC until relieved by either the Chief of the DPW ENRD or the Chief of the Environmental Branch of ENRD. These individuals are the Emergency Coordinators included in Section 10, as required in 40 CFR 264.55 and 265.55 when hazardous wastes are involved.
- 3) The Fort Belvoir Fire Prevention and Protection Division Incident Commander at a spill incident serves as the IOSC until relieved by one of the designated IOSC individuals noted above.
- 4) The IOSC coordinates the efforts of the Phase I Incident Response Team through communication with the Fort Belvoir Fire Prevention and Protection Division Incident Commander, who directly commands the Phase I Incident Response Team.
- 5) The IOSC notifies all appropriate federal, state, local and Department of the Army agencies in the event of a petroleum, hazardous material or hazardous waste release involving a reportable quantity of material. Notification of any regulatory agencies is done by the command designated IOSC or authorized DPW personnel only. Additionally, the IOSC prepares all required spill response documentation required by the contacted federal, state, local or Department of the Army agencies.
- 6) The IOSC directs the efforts of the Phase II Incident Response Team and any additional contractor providing remediation services at a spill incident. The IOSC keeps detailed chronological notes of all cleanup site activities, including weather and site conditions, arrival and departure times for all personnel (government personnel, contractors, and inspectors), comments made by such personnel, authorizations given to the contractor, and work progress.
- 7) The IOSC provides for the proper treatment, storage, and disposal of recovered wastes, sorbent materials, and contaminated soil or waters (including surface water and/or groundwater) resulting from spill incidents.

5.3 Fort Belvoir Fire Prevention and Protection Division

- 1) The Fort Belvoir Fire Prevention and Protection Division provides a Point-of-Contact to the IOSC to ensure timely and efficient response for emergency operations.
- 2) Serve as the Phase I Incident Response Team. The Phase I Incident Response Team provides emergency "first on the scene" response for all petroleum and hazardous substances incidents and coordinates follow-up response requirements with the DPW ENRD.
- 3) Maintains an Emergency Operations Center which receives all incoming notifications of spill incidents, initiates and maintains contact with the Phase I Incident Response Team, initiates and maintains contact with the IOSC, and communicates with federal, state, local, and Department of the Army agencies, as needed.
- 4) The Fort Belvoir Fire Prevention and Protection Division Fire Chief or alternate is designated as the Incident Commander at a spill incident. The Incident Commander serves as the IOSC until relieved by one of the designated IOSC individuals noted in Table 2, Section 2.1.2.
- 5) The Incident Commander provides direct command of the Phase I Incident Response Team and communicates the IOSC's instructions to the Phase I Incident Response Team.
- 6) The Emergency Operations Center dispatches initial response units and alert key officials.
- 7) The Fire Chief ensures fire department personnel are properly trained and equipped to respond to incidents involving fires, explosions and releases of petroleum products, hazardous materials and hazardous substances.
- 8) The Fire Chief ensures the development of Fire and Rescue response actions (i.e., "Pre-Plans") for each petroleum, hazardous material and hazardous waste storage facility at Fort Belvoir.
- 9) The Fire Prevention and Protection Division conducts facility inspections to ensure that petroleum products, hazardous materials and hazardous waste are being stored in accordance with Building Officials and Code Administrators (BOCA) and National Fire Prevention Association (NFPA) guidelines.
- 10) The Fire Chief conducts spill response training exercises and spill incident response critiques with the IOSC and DPW ENRD to maintain the spill response capabilities of the Fort Belvoir Fire Prevention and Protection Division Phase I Incident Response Team.
- 11) The Fire Prevention and Protection Division maintains documentation of all incoming reports of spill incidents occurring at Fort Belvoir.
- 12) The Fire Prevention and Protection Division maintains immediate access to a complete, updated set of relevant Material Safety Data Sheets (MSDS's) for chemical products used at Fort Belvoir so that fire, rescue, and response requirements for a spilled material can be properly evaluated. The MSDS may be supplemented by a current, electronic chemical product database, such as the Hazardous Material Information System (HMIS) or other similar database.

- 13) The Fire Prevention and Protection Division maintains and inspects their inventory of spill response sorbent materials and equipment and coordinate the replacement of spent materials with DPW ENRD.
- 14) The Fire Prevention and Protection Division provides backup support to the Fairfax County Fire and Rescue Department upon request from the Fairfax County Emergency Coordinator.

5.4 Directorate of Public Works Environmental and Natural Resources Division

- 1) DPW ENRD provides a Point-of-Contact to the IOSC to ensure timely and efficient response for emergency operations.
- 2) Maintains the primary responsibility for environmental regulatory compliance at Fort Belvoir, including compliance with the provisions of the MSP, and ensures that the information contained within the MSP is updated in accordance with federal, state, local, and Department of the Army requirements.
- 3) Maintains updated copies of the MSP at DPW ENRD's Office at Bldg. 1442, and appropriate sections at the Fort Belvoir Fire Prevention and Protection Division, Fort Belvoir Community Hospital, Public Affairs Office, Installation Safety Office, Legal Office, Provost Marshal's Office, and Fairfax County. Notification of amendments to the list of IOSC and Incident Response Team personnel shall be made immediately upon such implemented changes.
- 4) Assists the IOSC in performing required regulatory notifications and spill response documentation.
- 5) Assists the IOSC in the coordination and management of remediation activities associated with spill response incidents.
- 6) Performs inspections of petroleum product, hazardous material, and hazardous waste storage locations at Fort Belvoir to ensure that the stored materials are being maintained in accordance with federal, state, local, and Department of the Army regulations. Maintains documentation of these inspections, and also maintains documentation of preventive maintenance performed at the storage locations.
- 7) Ensures that Fort Belvoir personnel, tenant Activities, and Directorates with authority and responsibilities identified in this MSP receive the appropriate training necessary to properly perform their duties.
- 8) Conducts release prevention and spill response training exercises and spill incident response critiques with the IOSC and Phase I Incident Response Team.
- 9) Maintains documentation of all reported spill incidents occurring at Fort Belvoir.
- 10) Maintains and inspects their spill response sorbent material and replaces spent materials, as needed.
- 11) Maintains either a current, electronic copy of the HMIS (or other similar database) or hard copies of relevant MSDS's so that response requirements for a spilled material can be properly evaluated.

5.5 Provost Marshal's Office

- 1) The Provost Marshal's Office provides a Point-of-Contact to the IOSC to ensure timely and efficient response for emergency operations.
- 2) Dispatches initial response units and alerts key officials.
- 3) Provides assistance to the IOSC as needed.
- 4) Provides assistance to the Incident Commander to control access to the area and provides traffic control, notifies and evacuates Installation personnel as required, and provides security for evacuated areas.
- 5) Provides emergency communications on the Military Police (MP) radio network.
- 6) Coordinates actions with county and state police if the spill response incident or emergency situation, as required.
- 7) Solicits support from Fairfax County Police Department as necessary.

5.6 Fort Belvoir Community Hospital

- 1) The Fort Belvoir Community Hospital provides a Point-of-Contact to the IOSC to ensure timely and efficient response for emergency operations.
- 2) Provides the IOSC with personnel with expertise regarding health effects of pollutant discharges.
- 3) Maintains either a current, electronic copy of the HMIS (or similar database) or hard copies of relevant MSDS, so that toxicological, first aid, and treatment requirements for a spilled material can be properly evaluated.
- 4) Provides emergency medical services for personnel involved in spill response incidents.
- 5) Provides emergency medical services to Fairfax County upon request.
- 6) Ensures water supplies and food supplies have not been impacted by the spill incident.

5.7 Installation Safety Office

- 1) The Installation Safety Office provides a Point-of-Contact to the IOSC to ensure timely and efficient response for emergency operations.
- 2) Assists the IOSC and Incident Commander in determining the magnitude of safety hazards resulting from fires, explosions, or releases associated with petroleum products or hazardous materials, and ensures that the required safety reports are submitted to the appropriate federal, state, local and Department of the Army agencies.
- 3) Maintains either a current, electronic copy of the HMIS (or similar database) or hard copies of relevant MSDS's, so that response requirements and hazard information for a spilled

material can be properly evaluated.

5.8 Office of the Staff Judge Advocate

- 1) The Staff Judge Advocate (SJA) provides a Point-of-Contact to the IOSC to ensure timely and efficient response for emergency operations.
- 2) When the potential exists for migration of a release or spill beyond the boundary of the installation, the SJA develops instructions for the IOSC to assist in creating a record of costs to substantiate claims against any third party who may be liable to the U.S. Government.
- 3) Reviews legality of all spill response plans and programs.
- 4) Advises command on tenant liability under interservice support agreements and/or individual liability for any and all spill incidents.
- 5) Institutes legal actions, as directed by the Garrison Commander, to recover expenses from liable parties for spill incidents.

5.9 Logistics Readiness Center (formerly Directorate of Logistics)

- 1) The Logistics Readiness Center (LRC) provides a Point-of-Contact to the IOSC to ensure timely and efficient response for updates and amendments to this MSP.
- 2) Ensures that all personnel (i.e., military, Department of the Army civilians, and contractors) at Fort Belvoir involved with the handling and transportation of petroleum products, hazardous materials, and hazardous wastes are familiar with the spill response, notification, and reporting requirements identified in this MSP.
- 3) Ensures that petroleum, hazardous material, and hazardous waste transportation and transfer operations at Fort Belvoir comply with the spill prevention measures described in USEPA, VDEQ, Department of Transportation (DOT), and Department of the Army regulations.

5.10 Installation Facilities Maintenance Contractor

- 1) The installation Facilities Maintenance Contractor provides a Duty Hours and Off-Duty Hours Point-of-contact to the IOSC to ensure efficient response for emergency operations.
- 2) Provides properly trained personnel and equipment to serve as Fort Belvoir's Phase II Incident Response Team. At the request of the IOSC, the Phase II Incident Response Team assists the Phase I Incident Response Team in containing a petroleum/hazardous material spill. After the Phase II Incident Response Team has completed its assigned tasks, environmental remediation contractors continue the containment activities and complete remediation of the spill site (if needed).

5.11 Fairfax County

Fort Belvoir and Fairfax County maintain formal arrangements for mutual emergency service assistance between their fire and rescue departments, police departments, and hospitals. The Incident Commander and/or IOSC makes requests for these services on an as needed basis. Copies of the Memorandums of Agreement between Fort Belvoir and Fairfax County are presented in Appendix F of this MSP. The Fairfax County Local Emergency Planning Committee-designated Emergency Response Coordinator is notified by Fort Belvoir in the event that a reportable quantity of an extremely hazardous substance is released. Upon request from Fort Belvoir's Incident Commander and/or IOSC, the Fairfax County Emergency Response Coordinator may coordinate the usage of Fairfax County emergency response personnel and equipment to respond to the release incident at Fort Belvoir.

The Local Emergency Planning Committee is provided with a copy of this MSP.

5.12 Commonwealth of Virginia

If there is a spill event involving a reportable quantity of petroleum, hazardous material or hazardous waste and it is after normal business hours or Fort Belvoir is requesting assistance, then Fort Belvoir should notify the Commonwealth of Virginia Department of Emergency Management (VDEM).

If a spill involving a reportable quantity of petroleum, hazardous material or hazardous waste occurs during normal business hours, then Fort Belvoir must notify the Commonwealth of Virginia Department of Environmental Quality (VDEQ). VDEQ establishes files for these spills and assigns Points-of-Contact to which Fort Belvoir submits required documentation regarding the spill incidents, control measures, and any associated remediation. VDEQ periodically conducts audits of Fort Belvoir's environmental compliance programs, including spill prevention and response programs.

5.13 Federal Agencies

The National Response Center (NRC), which is operated by the United States Coast Guard (USCG), is notified by Fort Belvoir in the event of a spill incident involving a reportable quantity of hazardous material or hazardous waste, or a petroleum spill incident that enters or threatens to enter navigable waters (refer to Attachment 1, Spill Response Guide, Appendix B). Upon request from Fort Belvoir's IOSC, the NRC may implement the National Contingency Plan (NCP) and coordinate the usage of additional federal, state, and local emergency response personnel and equipment to respond to a large-scale release incident at Fort Belvoir.

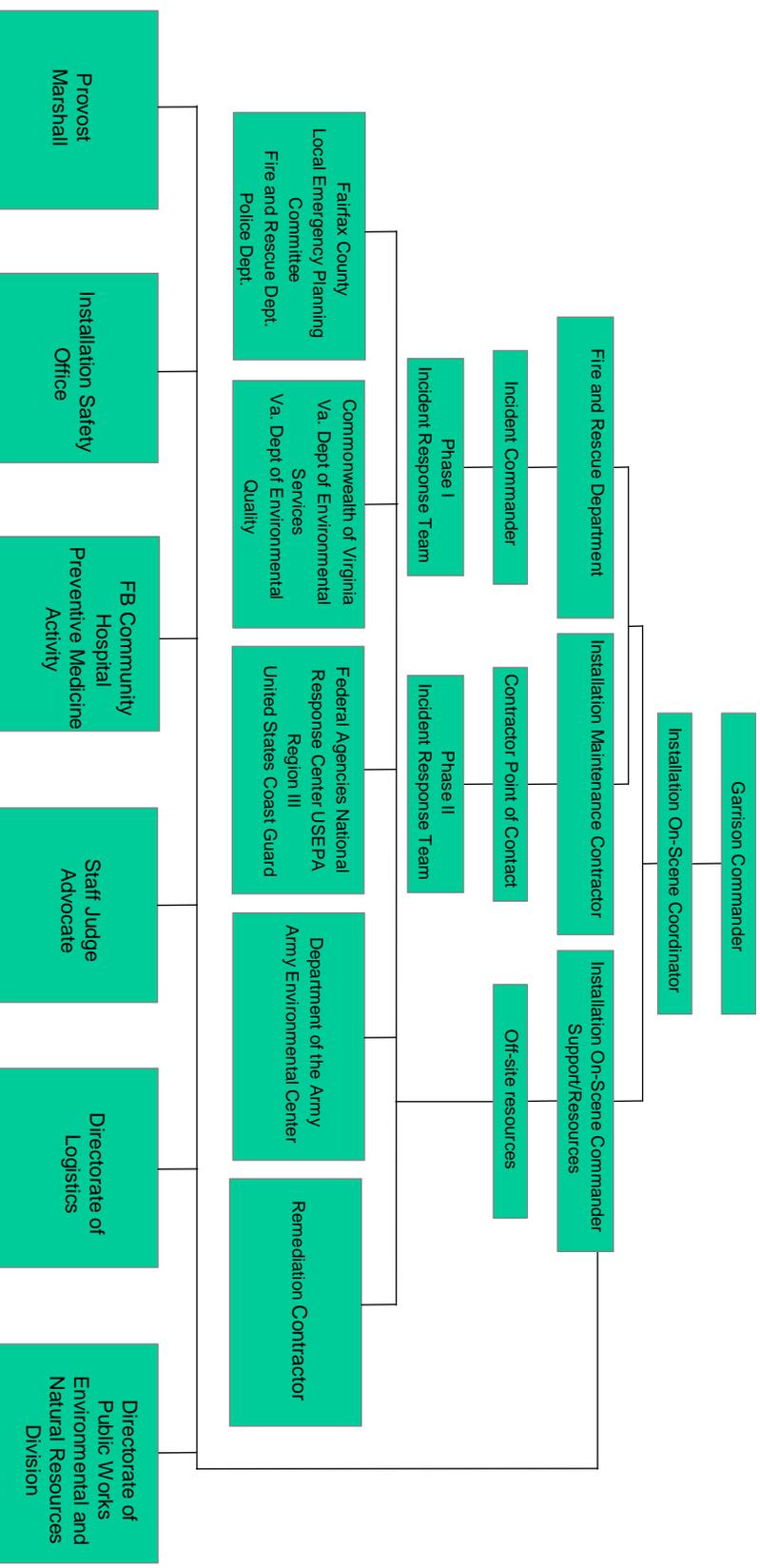
USEPA Region III's office in Philadelphia, Pennsylvania is notified by the NRC of spill incidents reported by Fort Belvoir. USEPA Region III establishes files for these incidents and provides Points-of-Contact to whom Fort Belvoir submits required documentation regarding the spill incidents, control measures, and any associated remediation. USEPA Region III also periodically conducts audits of Fort Belvoir's environmental compliance programs, including spill prevention and response programs.

5.14 Department of the Army

The Army Environmental Command (AEC) is notified by Fort Belvoir in the event of a spill incident involving a reportable quantity of petroleum, hazardous material, or hazardous waste. AEC establishes files for these incidents and provides a Point-of-Contact to whom Fort Belvoir submits required documentation regarding the spill incidents, control measures, and any associated remediation. AEC also periodically conducts audits of Fort Belvoir's environmental compliance programs, including spill prevention and response procedures.

Figure 2

Fort Belvoir Master Spill Plan Organization



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6.0 FACILITY SPILL PREVENTION INFORMATION

6.1 Introduction

Successful prevention of petroleum and hazardous material/waste spills and response actions for spill events require properly trained personnel, identification of potential release sources, access to readily available supplies of spill control materials and equipment, and implementation of inspection, inventory control, leak detection, preventive maintenance, and self-audit procedures. The elements of Fort Belvoir's spill prevention procedures are described in the following sections of this MSP.

6.2 Regulatory Requirements

This MSP has been prepared to be consistent with federal, state, and United States Department of the Army environmental and health and safety regulations for petroleum and hazardous material/waste release prevention and response programs which are summarized in this section.

Federal regulations providing petroleum and hazardous material/waste release prevention and response program requirements include:

- National Pollution Discharge Elimination System (NPDES) permits at 40 CFR 122;
- Clean Water Act (CWA) at 33 USC 1251 to 1387 (see USC 1321, oil and hazardous substances);
- Discharge of Oil Regulations at 40 CFR 110;
- Oil Pollution Act of 1990 (OPA) at 33 USC 2701 to 2761;
- Oil Pollution Prevention regulations at 40 Code of Federal Regulations (CFR), Part 112.7 (Spill Prevention Control and Countermeasure [SPCC] Plan);
- Oil Pollution Prevention regulations at 40 CFR, Part 112.20 (Facility Response Plan);
- Oil Pollution Prevention Inspection and Training regulations at 40 CFR, Parts 112.7 and 112.20;
- Oil and Hazardous Substance Pollution Contingency Plan regulations at 40 CFR, Part 300.210 (National Oil and Hazardous Substance Pollution Contingency Plan);
- Hazardous Waste Contingency Plan regulations at 40 CFR, Part 265.52;
- Hazardous Waste Emergency Procedure regulations at 40 CFR, Parts 262.34, 265.56, and 265.196;
- Hazardous Material and Waste Inspection regulations at 40 CFR, Parts 165.10, 262.34, 265.15, 265.174, 265.195, 265.1101, and 761.65;
- Hazardous Waste Training regulations at 29 CFR, Part 1910.120 and 40 CFR, Part 264.16;
- Emergency Response Plan regulations at 29 CFR, Part 1910.120;
- Hazard Communication Program regulations at 29 CFR, Part 1910.1200;
- Hazardous Substance Designation, Reportable Quantities, and Notification regulations at 40 CFR, Part 302;
- RCRA Contingency Plan, 40 CFR 264, 265.50-264.56, 264.52(b), and 262.34(a)(4).
- United State Coast Guard Oil Pollution Regulations at 33 CFR 136 (oil spill liability trust fund); 33 CFR 151 to 156
- Emergency Planning and Notification regulations at 40 CFR, Part 355;
- Hazardous and Toxic Chemical Release Reporting and Community Right-to-Know regulations at 40 CFR, Parts 370 and 372;
- Underground Storage Tank (UST) Inspection regulations at 40 CFR, Part 280-281 (Subparts C and D);
- Flammable and Combustible Liquid Storage Inspection regulations at 29 CFR, Part 1910.106; and

- Emergency Planning and Community Right To Know Act of 1986 – Section 301(c), 303(d)(1), 304.

Commonwealth of Virginia regulations providing petroleum and hazardous material/waste release prevention and response program requirements include:

- Virginia contingency plan requirements: Virginia Code Annotated 62.1-44.34:15;
- 9 VAC 25-91-10 et seq. Facility & AST Regulations;
- Facility and Aboveground Storage Tank Registration regulations at 9 VAC 25-91-100;
- Underground Storage Tank regulations at 9 VAC 25-580-(10 through 360);
- Hazardous Waste Management regulations at 9 VAC 20-60, Part XI; and,
- Plan Contents: 9 VAC 25-91-170.

United States Department of the Army regulations providing petroleum and hazardous material/waste release prevention and response program requirements include:

- Army Regulation (AR) 200-1 (Environmental Protection and Enhancement), Chapter 11 (Oil and Hazardous Substances Spills) 28 August 2007,
- Department of the Army Pamphlet (DA PAM) 200-1 (Environmental Protection and Enhancement), Chapter 3 (Oil and Hazardous Substances Spills) 17 January 2002,
- US Army Guide for USTs, USAEC 12/00.

6.3 Potential Sources of Petroleum and Hazardous Material/Waste Spills at Fort Belvoir

Potential sources of petroleum and hazardous material/waste releases at Fort Belvoir include aboveground storage tanks (ASTs) which are used to store petroleum and hazardous materials, underground storage tanks (USTs) used to store petroleum, mobile tanks, and hazardous material/waste storage areas. The locations of the potential sources of petroleum are maintained in a Fort Belvoir automated database, the Petroleum Management Program (PMP), further described in Section 11. Locations where significant volumes of these substances are stored have been identified in Section 10 (hazardous waste) and Appendix C (petroleum products). Spill prevention and response information for the facilities presented in Appendix C typically include the following data:

- A facility plan providing detailed site characteristic information for each potential release site at Fort Belvoir;
- Facility name and building number;
- Name(s) and phone numbers of the facility points-of-contact;
- Type and volume of extremely hazardous substance, petroleum, or hazardous material/waste stored at the facility;
- Process/use of materials stored at the facility and a general description of the facility, including surface water drainage patterns and nearby storm drainage inlets;
- Notification procedures to be followed in the event of a release at the facility;
- Method(s) of leak detection at the facility;
- Spill prevention measures at the facility, including inspections, training, maintenance, and security; and
- Spill control measures at the facility, including containment structures, spill control materials, equipment, and personnel.

A list of hazardous wastes which Fort Belvoir is permitted to generate and store in accordance with its RCRA Part B treatment, storage, and disposal (TSD) facility operating permits is included in the RCRA permit and in the HMIS. A copy of the RCRA permit is maintained at the DPW ENRD in Building 1442.

Fort Belvoir no longer owns or operates Qualified Oil-filled Operational Equipment (PCB or non-PCB containing transformers). The electrical distribution system at Fort Belvoir was privatized to Dominion Virginia Power (DVP) in 2008. All transformers on Fort Belvoir are the property of DVP and are subject to their regional SPCC plan.

6.4 Aboveground Storage Tanks

Table 7 summarizes critical information regarding the AST systems at Fort Belvoir. AST materials and construction are compatible with material stored and conditions of storage such as pressure and temperature. AST systems for petroleum and/or hazardous material storage at Fort Belvoir operate in accordance with applicable federal and state regulatory requirements, industry standards, and manufacturer guidelines, including, but not limited to, the following:

- Commonwealth of Virginia AST regulations (9 VAC 25-91-10 et seq.)
- Clean Water Act/Oil Pollution Prevention regulations (40 CFR, Part 112);
- Occupational Safety and Health Act (OSHA) (29 CFR, Parts 1910.106 and 1910.1200);
- National Fire Protection Association (NFPA) Code 30, Flammable and Combustible Liquids Code, and Code 704, Identification of the Fire Hazards of Materials;
- Building Officials and Code Administrators (BOCA) Standards for hazardous materials (F-2301.0 through F-2320.0) and flammable and combustible liquids (F-3201.0 through F-3210.0);
- Underwriter Laboratories (UL) Standard 142, Standard for Safety for Steel Aboveground Tanks for Flammable and Combustible Liquids; and
- American Petroleum Institute (API) 653 AST standards and specifications.

Table 7 - Aboveground Storage Tanks					
Location (Building#)	tank_id	Capacity	Contents	Function	Containment
000097	00097C	1000	Diesel	EG	Double Wall
000191	00191A	275	No 2 Heating Oil	Heat/Hot Water	Indoors/Floor
000191	00191B	275	No 2 Heating Oil	Heat/Hot Water	Indoors/Floor
000193	00193B	500	Diesel	EG	Double Wall
000246	00246D	1000	Diesel	EG	Dike/Indoors
000324	00324R	1000	Diesel	Dispense	Double Wall
000324	00324T	1000	JP-8	Dispense	Double Wall
000324	00324V	250	Other	Used Oil	Dike/Shelter
000331	00331B	550	No 2 Heating Oil	Heat	None
000363	00363C	250	Diesel	EG	Double Wall
000366	00366C	550	No 2 Heating Oil	Heat/Hot Water	None
000375	00375A	275	No 2 Heating Oil	Heat/Hot Water	None
000375	00375B	275	No 2 Heating Oil	Heat/Hot Water	None
000584	00584A	250	Diesel	EG	Double Wall
000594	00594B	250	Diesel	EG	Double Wall

Table 7 - Aboveground Storage Tanks

Location (Building#)	tank_id	Capacity	Contents	Function	Containment
000606	00606A	250	Diesel	EG	Double Wall
000687	00687B	500	Diesel	EG	Double Wall
000705	00705B	500	No 2 Heating Oil	heat/hot water	Double Wall
000705	00707B	500	Used Oil	Used Oil	Double Wall
Museum Support Ctr	00765A	3000	Diesel	EG	Double Wall
Museum Support Ctr	00765B	5000	Diesel	EG	Double Wall
000780	00780B	550	Diesel	EG	None
000952	00952A	250	Diesel	EG	Double Wall
001031	01031B	250	Diesel	EG	Double Wall
Recycle Center	01089C	500	Used Oil	Waste	Double Wall
Aleut Roads Grounds	01109D	500	Diesel	Dispense	Dike
Aleut Roads Grounds	01109E	500	Diesel	Dispense	Dike
Aleut Roads Grounds	01109F	500	Kerosene	Dispense	Dike
Aleut Roads Grounds	01114A	6000	Gasoline	Dispense	Dike/Rain Shield
Gov't Fuel Facility	01124	1,000	Diesel	Tanker Truck	Containment Basin
Gov't Fuel Facility	01124	3,000	Diesel	Tanker Truck	Containment Basin
001128	01128B	500	Diesel	Dispense	Double Wall
001141	01141A	275	No 2 Heating Oil	Heat/Hot Water	Double Wall
001142	01142A	275	No 2 Heating Oil	Heat/Hot Water	Double Wall
001143	01143A	275	No 2 Heating Oil	Heat/Hot Water	Double Wall
001143	01143B	275	No 2 Heating Oil	Heat/Hot Water	Double Wall
001144	01144A	275	No 2 Heating Oil	Heat/Hot Water	Double Wall
001157	01157A	275	Diesel	Heat/Hot Water	Double Wall
001234	1234A	500	Diesel	EG	Double Wall
001234	1234B	500	Diesel	EG	Double Wall
001234	1234C	500	Diesel	EG	Double Wall
001234	1234D	500	Diesel	EG	Double Wall
001412	01412A	550	No 2 Heating Oil	Heat	None
001412	01412B	550	No 2 Heating Oil	Heat	None
001416	01416B	500	Used Oil	Used Oil	Double Wall
001416	01416	M@ 55	New Oils	Various POL	Haz Mat Buildings
Aleut vehicle maint.	01420A	275	Other	Dispense	Dike/Indoors
Aleut vehicle maint.	01420B	275	Other	Dispense	Dike/Indoors
Aleut vehicle maint.	01420C	275	Used Oil	Waste	Dike/Indoors
Aleut vehicle maint.	01420D	55	Other	Various POL	Dike/Indoors
Aleut vehicle maint.	01420E	55	Other	Various POL	Dike/Indoors
Aleut vehicle maint.	01420F	55	Other	Various POL	Dike/Indoors
Aleut vehicle maint.	01420G	55	Other	Various POL	Dike/Indoors
001421	01421B	250	Diesel	EG	Double Wall
001436	01436D	2000	No 2 Heating Oil	Heat/Hot Water	Double Wall
001462	01462C	500	Used Oil	Waste	Double Wall
001465	01465A	350	Diesel	EG	None
001575	01575C	250	Diesel	EG	Double Wall
001695	01695A	250	Diesel	EG	Double Wall
Marina	01696B	500	Used Oil	Waste	Double Wall
001822	01822B	275	Diesel	EG	None
001822	01822D	500	Diesel	EG	Dike
001832	01832B	250	Diesel	EG	Double Wall
001906	01906C	500	Used Oil	Used Oil	Double Wall
001906	01906E	500	No 2 Heating Oil	Heat/Hot Water	Double Wall
001949	01949	500	Used Oil	Used Oil	Double Wall

Table 7 - Aboveground Storage Tanks

Location (Building#)	tank_id	Capacity	Contents	Function	Containment
001949	01949	M @ 55	New Oils	Various POL	Indoors/Floor
001949	01949	M @ 55	Used Oil	Used Oil	Dike/Shelter
001950	01950B	250	Used Oil	Used Oil	Double Wall
001950	01950	M @ 55	New Oils	Various POL	Shelter/Spill Pallets
001950	01950	M @ 55	Used Fuel	Used Oil	Shelter/Spill Pallets
001956	01956A	6 @ 60	New Oils	Various POL	Double Wall
001956	01956	M @ 55	New Oils	Various POL	Double Wall
001956	01956	500	Used Oil	Used Oil	Double Wall
001970	01970D	500	No 2 Heating Oil	Heat/Hot Water	Double Wall
001979	01979A	275	No 2 Heating Oil	Heat/Hot Water	Double Wall
001980	01980A	275	No 2 Heating Oil	Heat/Hot Water	Double Wall
PX	02303	200	Used Cook Oil	Collection	None
AAFES North Post	02304	200	Used Cook Oil	Collection	None
Earth Satellite	02310B	500	Diesel	EG	Double Wall
002454	02454A	250	Diesel	EG	Double Wall
HECSA	02590A	500	Diesel	EG	Dike/Rain Shield
HECSA	02591B	500	Diesel	EG	Double Wall
HECSA	02592E	500	Diesel	EG	Double Wall
HECSA	02593C	500	Diesel	EG	Double Wall
HECSA	02594C	500	Diesel	EG	Double Wall
Remote Delivery Fac	02849	100	Diesel	Day Tank/EG	Indoors
Remote Delivery Fac	02849	500	Diesel	EG	ConVault
CPP Gen Room	02857A	140	Diesel	Day Tanks/EGs	Dike/Indoors
CPP Gen Room	02857B	140	Diesel	Day Tanks/EGs	Dike/Indoors
CPP Gen Room	02857C	140	Diesel	Day Tanks/EGs	Dike/Indoors
CPP Gen Room	02857D	140	Diesel	Day Tanks/EGs	Dike/Indoors
CPP Gen Room	02857E	140	Diesel	Day Tanks/EGs	Dike/Indoors
CPP Gen Room	02857F	140	Diesel	Day Tanks/EGs	Dike/Indoors
CPP Gen Room	02857G	140	Diesel	Day Tanks/EGs	Dike/Indoors
CPP Gen Room	02857H	140	Diesel	Day Tanks/EGs	Dike/Indoors
CPP Gen Room	02857I	140	Diesel	Day Tanks/EGs	Dike/Indoors
CPP Gen Room	02857J	140	Diesel	Day Tanks/EGs	Dike/Indoors
CPP Gen Room	02857K	140	Diesel	Day Tanks/EGs	Dike/Indoors
CPP Gen Room	02857L	140	Diesel	Day Tanks/EGs	Dike/Indoors
CPP Gen Room	02857M	140	Diesel	Day Tanks/EGs	Dike/Indoors
CPP Gen Room	02857N	140	Diesel	Day Tanks/EGs	Dike/Indoors
Warehouse	02827A	640	Diesel	Heat/Hot Water	Double Wall
Old Golf Maint.	02907A	275	No 2 Heating Oil	Heat/Hot Water	None
Old Golf Maint.	02907B	275	No 2 Heating Oil	Heat/Hot Water	None
Golf Cart Bldg	02909A	500	Gasoline	Dispense	Dike
Golf Cart Bldg	02909B	500	Gasoline	Dispense	Dike
Golf course maint.	02990B	275	Used Oil	waste	Indoors/Floor
Golf course maint.	02990E	55	Other	Various POL	Indoors/Floor
Golf course maint.	02990F	55	Other	Various POL	Indoors/Floor
Golf course maint.	02990G	55	Other	Various POL	Indoors/Floor
Golf course maint.	02990H	55	Other	Various POL	Indoors/Floor
Golf course maint.	02990I	55	Other	Various POL	Indoors/Floor
Golf course maint.	02990J	55	Other	Various POL	Indoors/Floor
Golf course maint.	02990K	55	Other	Various POL	Indoors/Floor
Golf course maint.	02990L	55	Other	Various POL	Indoors/Floor
Golf course maint.	02990M	55	Other	Various POL	Indoors/Floor

Table 7 - Aboveground Storage Tanks					
Location (Building#)	tank_id	Capacity	Contents	Function	Containment
Golf course maint.	02993C	500	Gasoline	Dispense	Double Wall
Golf course maint.	02993D	500	Diesel	Dispense	Double Wall
DAAF heat plt.	03138J	1000	Diesel	EG	Double Wall
DAAF ATC Tower	03153A	550	No 2 Heating Oil	Heat/Hot Water	Double Wall
DAAF Fuel Yard	03162A	500	Gasoline	Dispense	Containment Basin
DAAF Fuel Yard	03162B	500	Diesel	Dispense	Containment Basin
DAAF Fuel Yard	03162M1	1,000	JP-8	Tanker Truck	Containment Basin
DAAF Fuel Yard	03162M2	2,000	JP-8	Tanker Truck	Containment Basin
DAAF Fuel Yard	03162M3	2,000	JP-8	Tanker Truck	Containment Basin
DAAF Fuel Yard	03162M4	2,000	JP-8	Tanker Truck	Containment Basin
DAAF	03165A	500	Diesel	EG	Double Wall
DAAF	03238	105	Diesel	EG	Double Wall
DAAF	03239A	250	Diesel	EG	Double Wall
DAAF Fire Dept	03242A	500	Diesel	EG	Double Wall
NGA-CUP	05104A	10000	Diesel	EG	Double Wall
NGA-CUP	05104B	30000	Diesel	EG	Double Wall
NGA-CUP	05104C	30000	Diesel	EG	Double Wall
NGA-CUP	05104D	30000	Diesel	EG	Double Wall
NGA-CUP	05104E	30000	Diesel	EG	Double Wall
NGA-CUP	05104F	30000	Diesel	EG	Double Wall
NGA-CUP	05104G	30000	Diesel	EG	Double Wall
007336	07336A	250	Diesel	EG	Double Wall
Nuclear Plant	07350A	250	Diesel	EG	Double Wall
Tulley Gate	01409A	112	Diesel	EG	Double Wall
Tulley Gate	01409B	500	Kerosene	Dispense	Dike/Rain Shield
Pence Gate	01492A	525	Diesel	EG	Double Wall
Walker Gate	01589A	112	Diesel	EG	Double Wall
Kingman Gate	02494A	112	Diesel	EG	Double Wall
Telegraph Gate	02935A	112	Diesel	EG	Double Wall
TMP-04	0TMP4A	600	JP-8	EG	Single
TMP-04	0TMP4B	600	JP	EG	Single
TMP-04	0TMP4C	600	JP	EG	Single
TMP-04	0TMP4D	600	JP	EG	Single
TMP-04	0TMP4E	600	JP	EG	Single
M = Multiple					

6.4.1 Inspections

The installation is required by federal SPCC (40 CFR 112) and Army (DA PAM 200-1, Chapter 3-3) regulations to establish and perform routine AST inspections, testing, and training procedures. Although Fort Belvoir is presently exempt from AST inspection procedures outlined in 9 VAC 25-91-10, et seq., the installation will implement these regular inspection measures for its ASTs as a standard engineering practice. The frequency of inspection and items to be inspected (as defined by “Steps”, are summarized in Table 8, 8A and 9.

shall be properly trained in AST evaluation procedures during the annual Spill and Release Prevention Training described in section 8.2.

Table 8 - Aboveground Storage Tank Inspection Guide and Schedule				
Inspector	Frequency of Visual Inspection & Inspection Items from 9 VAC 25-91-10			
	Every ½ Month	Every Month	Every 12 Months	Every 18 Months
Activity Personnel, Point-of-Contact, Environmental Coordinator, or DPW ENRD Personnel	Step 3 for all ASTs >55 gallons with open secondary containment	Steps 1 and 2 for all ASTs >55 gallons		
DPW Environmental and Natural Resources Dept. Personnel				Steps 1 - 9 for all ASTs > 55 gallons.
Fire Prevention and Protection Division Personnel			Step 9 for AST facilities	

Table 8A - Aboveground Storage Tank Inspection Steps	
Step	9 VAC 25-91-10 Action
1	Aboveground tank system components, steps, supports, including tank walls, access ports, dispensers, valves, fill ports, caps, gaskets, gauges, and piping shall be visually examined for evidence of deterioration and product releases
2	Secondary containment system components, including containment floor, concrete berms, walls, liners, and release valves, shall be visually examined for evidence of deterioration and product releases and overfills
3	Rainwater trapped in the secondary containment system shall be visually examined for evidence of petroleum. Clean water may be released from the containment area and discharged to the surface. Free-phase petroleum product or water containing a petroleum sheen shall be pumped out and delivered to one of the operating oil/water separator units at Fort Belvoir. All discharges and pump outs will be documented in the Secondary Containment Drainage Log, located in the PMP, Section 11
4	Confirmation that the tank is still active/in use
5	Interstitial spaces shall be visually gauged/dipstick for water/product, examined or monitored with detection equipment for evidence of product releases
6	Overfill prevention controls, including manual gauging, float gauging, or electronic gauging of tank content level, high level alarms, and automatic feed cutoffs, shall be examined to ensure they are being performed or operating properly
7	Security equipment, including locks on fill/withdrawal ports, interstitial ports, containment release valves, and fenced enclosures shall be examined to ensure controlled access to the tank systems is maintained
8	The presence and adequacy of spill control materials, spill packs, drums, in the immediate vicinity of the tank systems shall be confirmed
9	The presence and adequacy of posted legible emergency response information, including spill response procedures, names and telephone numbers of the Fort Belvoir Fire Prevention and Protection Division, and the location of telephones, fire extinguishers, spill control materials, and fire alarms or automatic cutoffs, shall be confirmed; and

Inspections of ASTs are to be recorded on the sample AST Inspection Form found in Appendix E. Inspection records and records documenting required repairs or corrective actions shall be signed, dated, and maintained for a minimum of five years at the DPW ENRD office in Building 1442. Fort Belvoir

shall remedy any deterioration or malfunction of equipment or structures on a schedule which ensures that the problem does not lead to an environmental or human health hazard.

In addition to the scheduled periodic inspections noted above, the ASTs shall be visually examined by installation facilities maintenance contractor personnel and petroleum/hazardous material transportation and delivery contractors for evidence of release during product transfer activities. Also, installation personnel who observe evidence of a release shall report their observations to the appropriate Activity Point-of-Contact or DPW ENRD or the number listed on the yellow emergency placard on the AST.

6.4.2 Inventory Control

Commonwealth of Virginia regulation 9 VAC 25-91-130 has established requirements for inventory control and testing for significant variations, as well as safe fill and shutdown procedures, pressure testing of piping, visual daily and weekly inspections of AST facilities (Section 11, Procedure No. 4), and training requirements for personnel conducting inspections. The installation has implemented these inventory control measures as a standard engineering practice. Product levels inside ASTs, except heating oil ASTs with storage capacities less than 660 gallons in volume, are visually examined or gauged and recorded every 18 months, as well as prior to the receipt or transfer of more than 25 gallons of oil. Heating oil ASTs with storage capacities less than 660 gallons shall be gauged and recorded by the fuel supply contractor prior to each delivery of petroleum. The contractor's records shall be made available to Fort Belvoir's facilities maintenance contractor (currently ALEUT) upon request and shall be maintained for a period of at least five years.

6.4.3 Leak Detection

Fort Belvoir personnel shall operate, maintain, monitor and document records of the system established for early detection of a discharge to groundwater. To meet the SPCC and Army requirements regarding AST leak detection, Fort Belvoir shall implement the procedures outlined in Commonwealth of Virginia regulation 9 VAC 25-91-170. This regulation requires the implementation of acceptable leak detection procedures at all ASTs with storage volumes greater than 660 gallons in order to identify discharges to groundwater. Acceptable leak detection options are described in VDEQ's [Oil Discharge Contingency Plan Program Leak Detection Guidelines](#) include groundwater monitoring, vapor monitoring, interstitial monitoring, and visual monitoring for elevated tanks.

As noted in Section 6.4.1, all ASTs at Fort Belvoir shall be inspected by Activity Points-of-Contact, Activity Environmental Coordinators, or DPW ENRD personnel on a regularly scheduled basis for evidence of petroleum/hazardous materials releases. Aboveground tank system components, including tank walls, access ports, dispensers, valves, gauges, and piping shall be visually examined for evidence of deterioration and product release. Secondary containment system components, including containment floor, walls, and release valves, shall be visually examined for evidence of deterioration and product release. Interstitial spaces shall be visually examined, gauged, or monitored with detection equipment for evidence of product release. In addition, two of the ASTs and 33 of the USTs have Veeder-Root automatic tank gauging (ATG) systems associated with them. These ATGs perform a monthly tank tightness test on the tanks.

DPW ENRD shall visually inspect heating oil ASTs with storage capacities less than 660 gallons every 18 months for evidence of product releases.

As noted in Section 6.4.1, all ASTs at Fort Belvoir shall be visually inspected by installation facilities maintenance contractor personnel and petroleum/hazardous material transportation and delivery contractors for evidence of petroleum/hazardous material releases or spills during product transfer activities at the tanks. Documentation of the visual examinations shall be recorded by the fuel supply contractor as part of his inventory and delivery log. Installation personnel who visually observe evidence of a release shall report their observations to the appropriate Activity Point-of-Contact or DPW ENRD.

6.4.4 Preventive Maintenance Activities

Fort Belvoir's DPW shall include, within the installation operations/maintenance contract, preventive maintenance procedures for critical AST storage and transfer equipment. The preventive maintenance procedures shall be based on preventive maintenance information contained in the industry standards identified in Section 6.4 of this MSP and on manufacturer guidelines. Typical preventive maintenance procedures include equipment lubrication, light painting and/or rust removal, small valve replacement, tightening leaky fittings, and minor adjustments to electrical, mechanical and other equipment.

Personnel performing preventive maintenance shall be properly trained in AST preventive maintenance procedures. DPW shall oversee Fort Belvoir's AST preventive maintenance activities and maintain records of preventive maintenance, along with required repairs or corrective actions, for a minimum of five years.

Fort Belvoir shall provide refresher training to facility personnel (in accordance with section 8.2) upon any changes to the contents of the initial AST preventive maintenance training, or at least every three years, and shall document the training in the facility records.

6.4.5 Integrity Testing

Bulk storage containers are defined in 40 CFR 122.2 as:

“any container used to store oil. These containers are used for purposes including, but not limited to, the storage of oil prior to use, while being used, or prior to further distribution in commerce. Oil-filled electrical, operating, or manufacturing equipment is not a bulk storage container.”

Integrity testing of these containers was initially required by 40 CFR 112.8(c)(6), which entailed a visual examination plus a non-destructive evaluation (NDE) testing technique on a regular schedule. However, on March 31, 2004, a settlement with EPA was reached on several SPCC-specific issues included in the 2002 rule, including integrity testing. The EPA generally believes that for well-designed shop-built containers with a shell capacity of 30,000 gallons or under, combining appropriate visual inspection with the measures described below would generally provide environmental protection equivalent (as allowed by 40 CFR 112.7(a)(2)) to that provided by visual inspection plus another form of testing. Included in this settlement was the following language:

“We generally believe that visual inspection plus elevation of a shop-built container in a manner that decreases corrosion potential (as compared to a container in contact with soil) and makes all sides of the container, including the bottom, visible during inspection (e.g., where the containers are mounted on structural supports, saddles, or some forms of grillage) would be considered “equivalent.” In a similar vein, we generally believe an approach that combines visual inspection with placement of a barrier between the container and the ground, designed and operated in a way that ensures that any leaks are immediately detected, to be considered “equivalent.” For example, we believe it would generally provide equivalent environmental protection to place a shop-built container on an adequately designed, maintained, and inspected synthetic liner.”

USAG Fort Belvoir is deviating from the integrity testing provision of 40 CFR 112.8(c)(6) and establishing this “equivalent environmental protection” for two bulk storage containers (believed to be well-designed shop-built containers with shell capacities of less than 30,000 gallons) based on the 2004 EPA settlement guidance, which allows such after considering the tank installation, the requirements of Steel Tank Institute (STI) Standard SP-001, and alternative measures (i.e. good engineering practices) implemented by the facility. One of the two Fort Belvoir’s bulk fuel storage containers features double-walled construction, and the other one does not. Under STI’s SP-001 standard, the double-walled tank (dual compartment AST 324 R and T), with spill bucket that is elevated 6” off the ground, is considered a Category 2 tank. Since it does not have a continuous release detection (CRDM), it can not be a category 1 tank. The single-walled tank (3138J) is 2-3” off of a concrete pad, has no CRDM or spill bucket, but is located within a painted concrete section of a Lube Cube. Since no portion of the tank is exposed to the elements, Fort Belvoir is determining this to be a Category 2 tank as well. Table 9 summarizes this information, and provides periodic and formal inspection information.

The personnel performing these inspections are knowledgeable of storage facility operations, characteristics of the liquid stored, the type of aboveground storage tank and its associated components. Facility personnel perform periodic inspections as described in Section 6.2.1 of the Plan. The scope of inspections and procedures is covered in the training provided to employees involved in handling oil at the facility. The routine inspections focus specifically on detecting any change in conditions or evidence of product leakage from the tank, piping system, and appurtenances.

In accordance with inspection procedures outlined in this Plan, if evidence of leakage from the tank or deterioration of the tank system is observed by facility personnel, the tank is to be inspected by a tank inspector certified by the American Petroleum Institute or STI to assess its suitability for continued service, according to SP-001.

The tank’s physical configuration, combined with inspections identified in Section 6.2.1, ensures that any small leak that could develop in the tank inner shell will be detected before it can become significant, escape secondary containment, and reach the environment. This approach provides environmental protection equivalent to the non-destructive shell evaluation component of integrity testing required under 40 CFR 112.8(c)(6) since it provides an appropriate and effective means of assessing the condition of the tank and its suitability for continued service.

Tank ID	Construction or In Service Date	STI SP001 Tank Category	Formal External Inspection
324R, 324T	1998	2	October 14, 2015
3138J	Unknown	2	October 14, 2015

Additional notes:

AST 324R and 324T are each 1,000 gallon in size, and located at Fort Belvoir Facility 1. The tanks are inspected monthly using the expanded inspection documents from Section 6.2.1. All sides of the 15 year

old Convault tanks are visible, as specially-made concrete girders elevate the ASTs six inches off of a concrete pad. The ASTs are located at an office where employees work every day, and know who to contact should a release occur. A formal inspection of both these tanks will be completed by Oct, 2015.

AST 3138J is 1,000 gallon in size, and located at Fort Belvoir Facility 11. The tank is inspected monthly using the expanded inspection documents from Section 6.2.1. All sides of the Lube Cube of unknown age are visible, as steel girders elevate the AST 2-3 inches off of a concrete pad. The AST is located at boiler plant where employees work every day, and they know who to contact should a release occur. A formal inspection of this tank will be completed by Oct, 2015.

6.5 Underground Storage Tanks

Table 10 summarizes critical information regarding the UST systems at Fort Belvoir. The installation's UST inventory is currently being updated. An inventory update will be completed by Oct, 2015. UST materials and construction are compatible with material stored and conditions of storage such as pressure and temperature. UST systems for petroleum product and/or hazardous material/waste storage at Fort Belvoir operate in accordance with applicable federal and state regulatory requirements, industry standards, and manufacturer guidelines, including but not limited to the following:

- OSHA (29 CFR, Parts 1910.106 and 1910.1200);
- NFPA Code 30, Flammable and Combustible Liquids, 30A, Automotive and Marine Service Station, and Code 704, Identification of the Fire Hazards of Materials;
- BOCA Standards for hazardous materials (F-2301.0 through F-2320.0) and flammable and combustible liquids (F-3201.0 through F-3210.0);
- UL Standard 58, Standard for Safety for Steel Underground Tanks for Flammable and Combustible Liquids, Standard 1316, Standard for Safety for Glass-Fiber-Reinforced Plastic Underground Storage Tanks for Petroleum Products, and Standard 1746, External Corrosion Protection Systems for Steel Underground Storage Tanks; and
- API UST standards and specifications.

USTs (defined as completely buried tanks) currently subject to all of the technical requirements of 40 CFR part 280 or of an approved State program under 40 CFR part 281 (i.e., Commonwealth of Virginia UST regulations 9 VAC 25-580) are exempt from the SPCC regulations other than identification of their locations on SPCC mapping. These USTs have been identified in Table 10.

Table 10 – Regulated Underground Storage Tanks

Location	tank_id	Capacity	Contents	Function	Leak Detection
DeWitt Hospital	00808A	5,000	Diesel	EG	Yes
New Community Hospital	001250	25,000	Diesel	EG	Yes
New Community Hospital	001251	25,000	Diesel	EG	Yes
New Community Hospital	001252	20,000	Diesel	EG	Yes
New Community Hospital	001253	20,000	Diesel	EG	Yes
New Community Hospital	001254	20,000	Diesel	EG	Yes
Main Fuel Yard	01124C	12000	used oil	Waste	Yes
Main Fuel Yard	01124D	12000	gasoline	Dispense	Yes
Main Fuel Yard	01124H	30000	gasoline	Dispense	Yes
Main Fuel Yard	01124I	30000	diesel	Dispense	Yes
New AAFES - South Post	1136AC	12000	gasoline	Dispense	Yes
New AAFES - South Post	1137AA	20000	gasoline	Dispense	Yes
New AAFES – South Post	1136BC	10,000	Gasoline	Dispense	Yes
North Post Fire Department	02119A	550	Diesel	EG	Yes
AAFES - North Post	02304A	12000	gasoline	Dispense	Yes
AAFES - North Post	02304B	12000	gasoline	Dispense	Yes
AAFES - North Post	02304C	12000	gasoline	Dispense	Yes
AAFES - North Post	02304D	12000	gasoline	Dispense	Yes
Earth Satellite	02310A	25,000	Diesel	EG	Yes
INSCOM	02444C	25,000	Diesel	EG	Yes
DLA	02462B	25,000	Diesel	EG	Yes
HECSA	02594A	5,000	Diesel	EG	Yes
ADF-E	02800A	15,000	Diesel	Heat/Hot Water	Yes
ADF-E	02800B	6,000	Diesel	Heat/Hot Water	Yes
ADF-E	02855A	1,000	Diesel	Heat/Hot Water	Yes
ADF-E-UTB	02803A	25,000	Diesel	Dispense	Yes
ADF-E-WDF	02838A	5,000	Gasoline	Dispense	Yes
ADF-E-UGFS	02851A	50,000	Diesel	Dispense	Yes
ADF-E-UGFS	02851B	50,000	Diesel	Dispense	Yes
ADF-E-UGFS	02851C	50,000	Diesel	Dispense	Yes
ADF-E-UGFS	02851D	50,000	Diesel	Dispense	Yes
ADF-E-UGFS	02851E	50,000	Diesel	Dispense	Yes
ADF-E-UGFS	02851F	50,000	Diesel	Dispense	Yes
ADF-E-WDF	02856B	15,000	Diesel	EG	Yes
Davison Airfield Fuel Yard	03162A	13000	JP-8	Dispense	Yes
Davison Airfield Fuel Yard	03162B	13000	JP-8	Dispense	Yes

Non-regulated USTs (Table 11) are not subject to all of the technical requirements of 40 CFR part 280 or of an approved State program under 40 CFR part 281 (i.e., Commonwealth of Virginia UST regulations 9 VAC 25-580), but are subject to the requirements of 40 CFR 112.

Table 11 – Non-Regulated Underground Storage Tanks

Location	tank_id	Capacity	Contents	Function	Leak Detection
Motor Pool	00193C	1,000	No 2 Heating Oil	Heat/Hot Water	Yes
00380	00380A	1,000	No 2 heating oil	Heat/Hot Water	No
Heating Plant	00332H	25,000	No 2 heating oil	Heat/Hot Water	Yes
Heating Plant	00332I	25,000	No 2 heating oil	Heat/Hot Water	Yes
Heating Plant	00332J	25,000	No 2 heating oil	Heat/Hot Water	Yes
New Community Hospital	001250	25,000	Diesel	EG	Yes
New Community Hospital	001251	25,000	Diesel	EG	Yes
Boiler/Heating Plant	01422P	25000	No 2 heating oil	Heat/Hot Water	Yes
Boiler/Heating Plant	01422Q	25000	No 2 heating oil	Heat/Hot Water	Yes
Boiler/Heating Plant	01422R	25000	No 2 heating oil	Heat/Hot Water	Yes
Boiler/Heating Plant	01422S	25000	No 2 heating oil	Heat/Hot Water	Yes
Boiler/Heating Plant	01422T	25000	No 2 heating oil	Heat/Hot Water	Yes
01436	01436C	1,500	No 2 heating oil	Heat/Hot Water	No
USACE	01444A	1,000	No 2 heating oil	Heat/Hot Water	No
90-day haz mat storage bldg	01495G	2000	No 2 heating oil	Heat/Hot Water	No
Dogue Creek Marina	01696C	1000	No 2 heating oil	Heat/Hot Water	No
01700	01700A	4,000	No 2 heating oil	Heat/Hot Water	No
01810	01810A	8,000	No 2 heating oil	Heat/Hot Water	No
01906	01906B	2,000	No 2 heating oil	Heat/Hot Water	No
01950	01950A	3,000	No 2 heating oil	Heat/Hot Water	No
01981	01981A	550	No 2 heating oil	Heat/Hot Water	No
02117	02117C	25,000	No 2 heating oil	Heat/Hot Water	No
02473	02473B	5,000	No 2 heating oil	Heat/Hot Water	No
02476	02476A	1,000	No 2 heating oil	Heat/Hot Water	No
HECSA	02582B	2,500	No 2 heating oil	Heat/Hot Water	Yes
HECSA	02584B	5,000	No 2 heating oil	Heat/Hot Water	Yes
HECSA	02592D	5,000	No 2 heating oil	Heat/Hot Water	Yes
HECSA	02593D	5,000	No 2 heating oil	Heat/Hot Water	Yes
03128	03128A	1,000	No 2 heating oil	Heat/Hot Water	No
DAAF heating plant	03138H	30000	No 2 heating oil	Heat/Hot Water	Yes
DAAF heating plant	03138I	30000	No 2 heating oil	Heat/Hot Water	Yes
93233	03233B	5,000	No 2 heating oil	Heat/Hot Water	No

6.5.1 Inspections

All UST inspections shall be coordinated through DPW ENRD. The UST inspections outlined in this section of the spill plan shall be implemented by Oct, 2015. All USTs at Fort Belvoir are regarded as either regulated or non-regulated USTs according to the Commonwealth of Virginia Administrative Code (9 VAC 25-580-10 et seq.). Inspections of the USTs and associated corrosion protection, leak detection, and spill control/overflow systems, and the immediate surrounding areas shall be performed to assess the status of the pertinent steps, when present, as enumerated below.

Step	Action
1	Aboveground portions of the tank system, including dispensers, piping, and valves, shall be examined for evidence of corrosion or releases from the tank;
2	Spill and overflow prevention equipment, including catch basins, manual gauging, high level alarms, and

	automatic feed cutoffs, shall be examined to ensure that the tank system is being operated according to its design;
3	Release detection equipment, including pressure or temperature gauges, interstitial sensors and ground-water monitoring wells, shall be examined to ensure that the tank system is being operated according to its design;
4	Release detection monitoring, including tightness testing, automatic tank gauging, interstitial monitoring of double-walled tanks and piping, ground-water monitoring, and inventory control, shall be performed and documented at a frequency specified in federal and state UST regulations;
5	Security equipment, including locks on fill/withdrawal ports, interstitial ports, dispensers, and fenced enclosures, shall be examined to ensure controlled access to the tank system is maintained;
6	The presence and adequacy of spill control materials in the immediate vicinity of the tank system shall be confirmed;
7	The presence and adequacy of posted emergency response information, including spill response procedures, names and telephone numbers of Fire Prevention and Protection Division, and the location of telephones, fire extinguishers, spill control materials, and fire alarms or automatic cutoffs, shall be confirmed; and
8	The presence and adequacy of hazard communication information, including tank content labels and site warning labels for the tank system shall be confirmed.

Regulated USTs at Fort Belvoir are equipped with a Veeder-Root TLS 350 automatic tank gauging (ATG) system. Operation and maintenance of these systems shall be in accordance with the manufacturer's recommendations. Fort Belvoir shall use qualified professionals for annual maintenance of ATG systems and to troubleshoot and correct ATG alarms as needed. Annual and periodic ATG maintenance shall be documented. On a monthly basis, DPW ENRD shall printout and maintain a status report from the ATG for every regulated UST, to confirm the status of secondary containment. This monthly status report will include a list of tank tightness testing results and any alarms that were on during the month. Regulated USTs shall be inspected by DPW ENRD personnel every month.

Non-regulated USTs shall be inspected and tightness tested under the following guidelines:

- At least ten percent of the USTs at Fort Belvoir shall be inspected and tightness tested annually.
- The length of time between tightness tests shall not exceed 10 years for any UST.
- The criteria for selecting which USTs to test shall include age, size, presence of automatic tank gauging systems, and planned tank usage (e.g. is the tank scheduled for removal or replacement?).
- All non-regulated USTs will be visually inspected every 18 months (Steps 1, 2, and 5).

Personnel performing inspections shall be properly trained in UST evaluation procedures. Inspection records and records documenting repairs or corrective actions shall be signed, dated, and maintained for a minimum of five years. Refresher training shall be offered to facility personnel upon any changes to the contents of the initial UST inspection training program or at least every three years, and the refresher training shall be documented in the facility records.

The frequency and steps of inspections are summarized in the Table 5 on the following page.

Inspections of USTs are to be recorded by DPW ENRD personnel on the Sample UST Inspection Form found in Appendix E. These records shall be maintained at the DPW ENRD office in building 1442. Fort Belvoir shall remedy any deterioration or malfunction of equipment or structures on a schedule that ensures that the problem does not lead to an environmental or human health hazard.

Table 12 - Regulated And Non-Regulated Underground Storage Tank Inspection Guide and Schedule			
Inspector	Frequency of Inspection & Inspection Items from Above List		
	Every 1 Month	Every 12 Months	Every 18 Months
DPW Environmental and Natural Resources Dept. Personnel	Document the satisfaction of release detection requirement for regulated USTs. Step 4	Visual inspection of all regulated USTs. Steps 1, 2, 3, 5, and 6.	Visual inspection of all non-regulated USTs. Steps 1, 2, 3, 5, and 6.
Third party UST tightness testing agency		Minimum of 10% of non-regulated USTs to be tested annually. Step 4	
Fire Prevention and Protection Division Personnel		Steps 7 and 8 for all tanks as needed.	
Veeder-Root Certified Technician		Inspection of all ATGs as specified by manufacturer.	

6.5.2 Corrosion Protection

New UST systems scheduled for installation at Fort Belvoir shall consist of double-walled fiberglass-reinforced plastic (FRP). Existing cathodic protection systems, if present, must be inspected by a qualified cathodic protection inspector (a) within six months after initial installation and annually thereafter for tanks storing hazardous materials/wastes and (b) within six months of installation and at least every three years thereafter for tanks storing petroleum products, to ensure that they are functioning properly. All sources of impressed current must be inspected and/or tested at least every other month (bimonthly) for tanks storing hazardous materials and petroleum products.

6.5.3 Leak Detection

UST systems scheduled for installation at Fort Belvoir shall include one or more methods of leak detection, including temperature and pressure gauges, interstitial monitors, audible and visual leak detection alarms, and observation wells.

6.5.4 Spill Control and Overfill Prevention Systems

UST systems scheduled for installation at Fort Belvoir shall include spill devices, consisting of spill containment sumps, and overfill prevention systems, consisting of overfill prevention valves and audible and visual alarms.

6.5.5 Preventive Maintenance Activities

Fort Belvoir's DPW shall include, within the installation operations/maintenance contract, preventive maintenance procedures for critical UST storage and transfer equipment. The preventive maintenance procedures shall be based on manufacturer guidelines and preventive maintenance information contained in the industry standards identified in Section 6.5 of this MSP. Typical preventive maintenance procedures include equipment lubrication, light painting and/or rust removal, small valve replacement,

tightening leaky fittings, and minor adjustments to electrical, mechanical and other equipment, including release detection equipment, and spill and overfill prevention equipment.

Personnel performing preventive maintenance shall be properly trained and certified in UST preventive maintenance procedures. DPW shall oversee Fort Belvoir's UST preventive maintenance activities and maintain records of preventive maintenance, along with required repairs or corrective actions, for a minimum of five years.

Fort Belvoir shall provide refresher training to facility oil-handling personnel upon any changes to the contents of the initial UST preventive maintenance and operation training, or at least every three years, and shall document the training in the facility records.

6.6 Petroleum Transportation and Transfer Operations

Petroleum transportation and transfer operations at Fort Belvoir are performed in accordance with applicable federal regulatory requirements and industry standards, including, but not limited to, the following:

- Federal Department of Transportation (DOT) regulations (49 CFR, Parts 130, 171, 172, and 177);
- OSHA (29 CFR, Parts 1910.106 and 1910.1200);
- NFPA Code 30, Flammable and Combustible Liquids, Code, 385, Tank Vehicles for Flammable and Combustible Liquids, and Code 407, Aircraft Fuel Servicing;
- BOCA Standards for flammable and combustible liquids (F-3201.0 through F-3210.0);
- Clean Water Act/Oil Pollution Prevention regulations (40 CFR, Part 112); and;
- API petroleum transportation and transfer operations standards and specifications.

None of the ASTs at Fort Belvoir have transfer areas in which petroleum or hazardous materials are placed in or withdrawn from the tanks through piping extending from the ASTs by any distance that endangers the piping due to vehicular traffic or significantly increases the likelihood of a release. Two transfer areas (Building 1124 and Davison Airfield Building 3162) associated with USTs have loading or unloading equipment meeting the definition of a "loading/unloading rack" in 40 CFR 112.2. These areas containment systems are designed to hold at least the maximum capacity of any single compartment of a tank car or tank truck loaded or unloaded at the facility.

Many releases at UST and AST sites occur from spills. Often the spills occur at the fill port when the delivery truck's hose is disconnected. To meet the discharge prevention measures included in 40 CFR 112.7(a)(3)(ii), each petroleum transportation contractor used by Fort Belvoir shall institute safe fill and shutdown procedures that will ensure overfilling of both USTs and ASTs does not occur. All tanks shall be filled to no more than 90 percent of their maximum volume. All petroleum transfer areas for ASTs greater than 55 gallons in capacity and USTs where filling/withdrawal connections are made shall be equipped with a spill containment system, including catchment basins or temporary containment barriers

installed by either Fort Belvoir or the transporter that is capable of containing and collecting any spills that may occur during the transfer operation.

Prior to initiating the transfer, the transporter measures the level of petroleum product in a tank before adding/removing product. The transporter's loading rack has an automatic shutdown system easily accessible at each loading point. This shutdown system is tested weekly by the transporter. Test records shall be made available to Fort Belvoir upon request. For flammables, the delivery vehicle must be shut off and the area double checked for other sources of ignition. The transporter shall verify that the vehicle is grounded, that the handbrake is set on the delivery vehicle, and shall place wheel chocks at the front and rear tires to prevent roll-away. The transporter shall remain at the loading rack during all phases of any transfer operation. Tank vehicles are equipped with brake interlock and secondary automatic shutoff control. Prior to filling/withdrawal and departure of any tank truck, the lowermost drain and all outlets of such vehicles are closely examined by the transporter for leakage and, if necessary, tightened, adjusted, or replaced to prevent liquid leakage while in transit.

6.6.1 Inspections

DPW shall oversee Fort Belvoir's petroleum transportation and transfer operation inspections and maintain records of inspections, corrective actions, and inspector training for a minimum of five years. Fort Belvoir shall provide refresher training to facility personnel (in accordance with section 8.2) upon any changes to the contents of the initial petroleum transportation and transfer operations inspection training, or at least every three years, and shall document the training in the facility records. All training activities shall be coordinated through DPW ENRD.

Inspections of transportation and transfer operations shall be performed as identified in Table 13.

Table 13 - Petroleum Transfer Operations Inspection Guide and Schedule		
Inspector	Frequency	Inspection Items
ALEUT Personnel	Per Delivery	Provide personnel to accompany each petroleum transportation contractor during transfer operations. The facilities management contractor personnel's duties shall include verification that petroleum transfer operations proceed as noted above. Noncompliance with the referenced procedures shall be reported to DPW
DPW Personnel	Annually	Assess petroleum transfer operations for each vendor contracted by Fort Belvoir and request and review transporter loading rack test reports and transporter emergency response plans, as needed.

6.7 Hazardous Substance and Waste Storage Areas

Hazardous substance and waste storage areas currently in use at Fort Belvoir shall operate in accordance with applicable federal and state regulatory requirements, industry standards, and, if applicable, manufacturer guidelines, including, but not limited to, the following:

- Commonwealth of Virginia Hazardous Waste Management Regulation (9 VAC 20-60-10 et seq.);
- Comprehensive Environmental Responses, Compensation, and Liability Act (40 CFR 302);
- Federal hazardous waste storage regulations for treatment, storage, and disposal (TSD) facilities

(40 CFR, Part 264.174), pesticide compound storage regulations (40 CFR, Part 165.10), polychlorinated biphenyl compound (PCB) storage regulations (40 CFR, Part 761.65);

- OSHA regulations (29 CFR, Parts 1910.106 , 1910.120, and 1910.1200);
- NFPA Code 30, Flammable and Combustible Liquids, Code 43D, Storage of Pesticides in Portable Containers, Code 45, Fire Protection for Laboratories Using Chemicals, and Code 704, Identification of the Fire Hazards of Materials; and
- BOCA Standards for hazardous materials (F-2301.0 through F-2320.0) and flammable and combustible liquids (F-3201.0 through F-3210.0).

Hazardous substance storage sites (including hazardous waste accumulation points) are located throughout Fort Belvoir. Table 14 identifies storage locations not included in previous tables (i.e., non-bulk storage containers). This table is not intended to reflect exact quantities, types, and locations of all hazardous substances stored on the Post, since daily usage will change these parameters. Fort Belvoir DPW-ENRD maintains a current list of non-bulk hazardous waste/material storage locations. These sites are typically comprised of one or more 55-gallon drums, one or more self-contained flammables cabinets, or a hazardous substance storage building. Sites have been included in this plan as a safety and good housekeeping measure, since many liquids containing hazardous substances need to be cautiously removed and carefully disposed of following a release. Additionally, many of the hazardous substances or chemicals contained in these liquids are listed in federal or state regulation and have a reportable quantity (RQ) threshold in the event of a major release. RQ thresholds are generally based on the potential hazards (i.e. physical, chemical, biological) posed by the hazardous substances or chemicals in the liquid. Following the release of a liquid considered to be or containing a hazardous substance or chemical, the appropriate Material Safety Data Sheet (MSDS) should be consulted to identify and/or calculate whether the volume of the release is greater than the RQ for the hazardous substance or chemical.

Table 14 – Hazardous Substance & Waste Storage Sites				
Building #	Container	Capacity (gal)	Product(s)	Containment
1414	HazMat Cabinets	6 @ 45		Cabinet trays & indoors
1450 (Garage)	Elevator Reservoir	30	Hydraulic Fluid	Indoors
1490				Bermed floor/indoors
1495	Cans & Drums	M @ 5 & 55	Hazardous Waste	Overpack containers & indoors
1949	Bottles & Cans	M @ 1 & 5	Oils, Transmission Fluid, Grease	Spill pallets & indoors
1950	Drums	7 @ 55	Hazardous Waste	Spill pallets & indoors
1950	Bottles & Cans	M @ 1 & 5	Methanol, Grease Oils, Transmission Fluid	Spill pallets & indoors
1956	HazMat Cabinets	3 @ 45		Cabinet trays & indoors
1956	Drums	4 @ 55	Hazardous Waste	Spill pallets & indoors
2834			Hazardous Waste	Bermed floor/indoors
7367 A & B			Hazardous Waste	Bermed floor/indoors

6.7.1 Inspections

Hazardous substance and waste storage areas shall be inspected by Fort Belvoir Activity Points-of-Contact or Environmental Coordinators, DPW ENRD personnel, or Fire Prevention and Protection Division personnel on a weekly, semiannual, and annual basis, respectively and all inspections shall be

coordinated through DPW ENRD. DPW ENRD shall oversee Fort Belvoir's hazardous waste storage area inspection activities. Personnel performing inspections shall be properly trained in hazardous substance and waste storage evaluation procedures. Inspection records and records documenting required repairs or corrective actions shall be signed, dated, and maintained for a minimum of five years. Fort Belvoir shall provide refresher training to facility personnel upon any changes to the contents of the initial hazardous substance and waste storage area inspection training, or at least every three years, and shall document the training in the facility records.

Inspections of hazardous substance and waste storage locations, their associated containment systems, and the immediately surrounding areas shall be performed to assess the status of the pertinent steps, when present, as enumerated below.

Step	Action
1	Containers shall be examined regularly for evidence of corrosion and releases;
2	Secondary containment system components, including containment floor, walls, chemically-resistant coatings, shall be examined for evidence of deterioration, releases, and water infiltration. Released hazardous wastes or precipitation must be removed from the containment areas immediately upon detection;
3	Air monitoring equipment, if present, shall be used to ensure that the stored materials do not represent a health and safety hazard;
4	Overfill preventive measures such as manual gauging of container product level shall be implemented to minimize the potential of a release from the containers;
5	Security equipment, including locks on storage area building entrances and hazardous waste containment structures, and fenced enclosures shall be examined to ensure controlled access to the storage areas;
6	The presence and adequacy of spill control materials in the immediate vicinity of the hazardous waste storage location shall be confirmed;
7	The presence and adequacy of posted emergency response information, including spill response procedures, names and telephone numbers of Fire Prevention and Protection Division and Activity Environmental Coordinator or Point-of-Contact, and the location of telephones, fire extinguishers, spill control materials, and fire alarms or automatic cutoffs, shall be confirmed; and
8	The presence and adequacy of hazard communication information, including container content labels, site warning labels, and Material Safety Data Sheets (MSDSs), for the hazardous waste storage locations shall be confirmed.

The frequency and steps of inspection are summarized in Table 15 below.

Table 15 - Hazardous Substance/Waste Storage Location Inspection Guide and Schedule			
Inspector	Frequency of Inspection & Inspection Items from Above List		
	Weekly	Semiannual	Annual
Activity Personnel, Point-of-contact or Environmental Coordinator	Steps 1 - 6		
DPW ENRD Personnel		Steps 1 - 8	
Fire Prevention and Protection Division Personnel			Steps 7, 8

Inspections of hazardous substance and waste storage areas are to be recorded on the specific hazardous material/waste storage unit inspection form needed for that building, found in Appendix E. These records shall be maintained at the DPW ENRD office in Building 1442. Fort Belvoir shall remedy any

deterioration or malfunction of equipment or structures that the inspection reveals on a schedule that ensures that the problem does not lead to an environmental or human health hazard.

6.7.2 Preventive Maintenance Activities

Fort Belvoir's DPW shall implement preventive maintenance procedures for critical hazardous substance and waste storage area components. The preventive maintenance procedures shall be based on manufacturer guidelines, if applicable, and preventive maintenance information contained in the industry standards and regulatory mandates identified in Section 6.7 of this MSP. The hazardous substance and waste storage area components to be addressed in the preventive maintenance procedures shall include, but not be limited to, storage area floors and walls, chemically resistant floor and wall coatings, polyethylene storage containers, and release detection equipment.

Personnel performing preventive maintenance shall be properly trained in hazardous substance and waste storage area preventive maintenance procedures. DPW shall oversee Fort Belvoir's preventive maintenance program and maintain records of preventive maintenance, along with required repairs or corrective actions, for a minimum of five years. Fort Belvoir shall provide refresher training to facility personnel upon any changes to the contents of the initial hazardous substance and waste storage area preventive maintenance training, or at least every three years, and shall document the training in the facility records.

7.0 INSPECTIONS, TESTS AND RECORDS

7.1 Facility Self-Audit Procedures

Fort Belvoir possesses self-audit procedures in order to assess the effectiveness of the installation's capability to respond effectively to petroleum and hazardous material/waste release events and to identify opportunities to improve the installation's spill prevention and response practices. These self-audit procedures consist of the facility inspections summarized in Sections 6.4 through 6.7 of this MSP, review of spill incidents occurring at Fort Belvoir and the associated responses for those releases, implementation of spill response drill/exercise procedures, and scheduled examination and amendment of the MSP. DPW ENRD and the Fire Prevention and Protection Division have worked jointly to develop and implement these self-audit procedures. DPW ENRD maintains all records associated with these self-audit activities for a minimum of five years.

7.2 Spill Release and Response Review Procedures

Spills involving reportable quantities of petroleum, hazardous substances/materials, or hazardous wastes at Fort Belvoir must be/are reported to various federal, state, and Army agencies and, in some cases, local agencies. Fort Belvoir reports both surface and subsurface releases that occur at the installation. Information which Fort Belvoir must submit to the appropriate agencies may include, but is not limited to, the following:

- Date of discharge;
- List of discharge causes;
- Materials discharged;
- Volume or quantity discharged in gallons;
- Volume or quantity of discharge that reached navigable waters, if applicable;
- Effectiveness and capacity of secondary containment;
- Cleanup actions taken;
- Steps taken to reduce possibility of recurrence;
- Total petroleum or hazardous material/waste storage capacity of the containers or tanks from which the material discharged;
- Enforcement actions;
- Effectiveness of monitoring equipment, if applicable; and
- Description of how each petroleum or hazardous material/waste spill was detected.

Summaries of reported surface spill incidents occurring since 1980 and subsurface spill incidents occurring since 1988 at Fort Belvoir are maintained as part of the Petroleum Management Program Database.

Within 90 days of each reportable release incident, DPW ENRD shall review the response effort to determine if this MSP should be modified based on the experience gained from that incident. These reviews shall be performed in addition to spill plan reviews scheduled every five (5) years or whenever there is a change in facility design, construction, operation, or maintenance that materially affects the potential for discharges of oil or hazardous substances. If changes in the MSP spill prevention and/or response measures are deemed necessary, the document shall be revised to reflect those changes. A registered professional engineer shall certify that the amendments to the MSP have been prepared in

accordance with sound engineering practices. All Fort Belvoir personnel, Directorate, or tenant activities possessing a complete copy or portion (i.e., the Spill Response Guide) of this MSP shall be provided with the amended sections or revised plan.

Fort Belvoir DPW ENRD shall maintain updated records of all surface spill incidents, including those not involving reportable quantities of petroleum, hazardous material, or hazardous waste, and all subsurface spill incidents occurring each year at Fort Belvoir. Beginning in 2015, DPW ENRD and the Fire Prevention and Protection Division shall meet annually to discuss the characteristics of the spill incidents and the adequacy of the responses to those incidents which occurred during the previous twelve months. Additionally, the results of the annual and/or semiannual facility inspections conducted by DPW ENRD and the Fire Prevention and Protection Division shall be discussed by both parties to ensure that petroleum, hazardous materials, and hazardous wastes are being stored properly at the installation and that deficiencies identified during the inspections will be corrected. This meeting shall be conducted concurrently with the spill response drill/exercise program requirements described below in Section 7.3. Documentation of these meetings shall be maintained at DPW ENRD's office in Building 1442.

7.3 Spill Response Drill/Exercise Requirements

As part of training, Fort Belvoir DPW ENRD and the Fire Prevention and Protection Division shall develop and implement spill response drill/exercise procedures to assess Fort Belvoir's preparedness with regard to the following spill response actions:

1. Notifications
2. Staff Mobilization
3. Discharge Control
4. Assessment
5. Containment
6. Recovery
7. Protection
8. Disposal
9. Communications
10. Transportation
11. Personnel Support
12. Equipment Maintenance and Support
13. Procurement
14. Documentation
15. Ability to Operate Within the Response Management System Described in this MSP

The program shall follow those identified in the National Preparedness for Response Exercise Program (PREP), prepared by the USCG, USEPA, and Department of the Interior (DOI), or an acceptable alternative program. The program shall consist of both tabletop exercises and personnel/equipment deployment exercises. Beginning in 2015, these drills/exercises shall be conducted at a minimum of once per year. All drills/exercises shall be documented, and the documentation shall be maintained at DPW ENRDs office in Building 1442.

Participants in the tabletop exercises shall include the IOSC, the Incident Commander, and representatives of the Phase I and II Incident Response Teams, DPW ENRD, and the environmental contractor firm(s) who may provide remediation services in response to major spill incidents at the installation. At the request of the IOSC and Incident Commander, other individuals or Activities at Fort Belvoir or federal, state, county, or Army representatives listed in Section 3.11 of this MSP may also attend the tabletop exercises. The objective of the tabletop exercises shall be to assess the spill management team's organization, communication, and decision-making in managing a spill response at Fort Belvoir. At the completion of the exercise, the adequacy of the response efforts shall be discussed, deficiencies shall be identified, and provisions for remedying the deficiencies shall be implemented.

As part of the tabletop exercises, worst case discharge scenarios at the installation and the responses to those discharges shall be discussed. Discharge scenarios to be discussed include releases from ASTs, USTs, hazardous material/waste storage areas, and transportation incidents.

Personnel/equipment deployment exercises shall be performed to assess the installation's capabilities to respond to both an average, most probable type of discharge to be expected at the facility as well as the worst case discharges formulated in the tabletop exercises. Participants in the personnel/equipment deployment exercises shall be the same as those who participate in the tabletop exercises. At the request of the IOSC and Incident Commander, other Fort Belvoir personnel, Directorate, or tenant activities or federal, state, local, or Department of the Army agency representatives may also be asked to participate and/or observe the exercises. At the completion of each exercise, the adequacy of the response efforts shall be discussed, deficiencies shall be identified, and provisions for remedying the deficiencies shall be implemented.

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8.0 SPILL PREVENTION AND RESPONSE TRAINING REQUIREMENTS

8.1 Introduction

DPW ENRD maintains the primary responsibility for coordinating spill prevention and response training requirements for Fort Belvoir personnel. This section of the MSP addresses requirements for both prevention training and response training associated with a potential spill or release at Fort Belvoir. The following individuals or entities shall ensure that all personnel engaged in spill response activities are properly trained as noted in this section: the IOSC and the designated alternates; the Fort Belvoir Fire Chief and the designated alternates who may serve as Incident Commander for the Phase I Incident Response Team; the installation facilities maintenance contractor, which serves as Fort Belvoir's Phase II Incident Response Team; designated environmental response contractors with whom Fort Belvoir has arranged to provide remediation services at spill sites; and all other individuals, Directorates, and contractors who may perform spill prevention and/or response activities at Fort Belvoir.

8.2 Spill and Release Prevention Training

Fort Belvoir shall establish spill and release prevention training requirements for those facility personnel involved in daily facility operations, daily, weekly, monthly, semiannual, or annual inspections, and preventive maintenance activities. The required training shall be coordinated through DPW ENRD and may be conducted by Fort Belvoir or by a third party. Personnel who complete this training shall also receive spill and release prevention refresher training on an annual basis. Fort Belvoir Directorates, tenant activities, and contractor personnel shall maintain their own documentation identifying their personnel who have received release prevention training.

Prevention training requirements shall include the latest information regarding oil and hazardous material/waste spill prevention and control procedures and shall address, at a minimum, the following subject areas:

- Federal, state, and Department of the Army spill prevention program elements, including SPCC, and Integrated Spill Contingency Plan (ISCP) requirements;
- Fort Belvoir's MSP program elements;
- Hazard Communication Training in accordance with 29 CFR, Part 1910.1200;
- Health and safety requirements for normal operations, maintenance, and spill response activities;
- Inspection procedures for ASTs, USTs, and hazardous material/waste storage areas;
- Operation procedures for ASTs, USTs, and hazardous material/waste storage areas, including inventory volume monitoring and leak detection;
- Petroleum and hazardous material/waste transfer procedures;
- Preventive maintenance procedures for ASTs, USTs, and hazardous material/waste storage areas;
- Over water activities (recreational activities at Dogue Creek Marina);
- Notification procedures for spill and release events at Fort Belvoir; and

- Containment methods for small and large spills or releases.

8.3 Spill and Release Response Training

Fort Belvoir shall establish training requirements for those facility personnel involved in the response to or management of petroleum and hazardous material/waste spills or releases. This section of the MSP identifies the various levels of spill response training and the training course elements required for each level. The required training shall be coordinated through DPW ENRD and may be conducted by Fort Belvoir or by a third party. Personnel who complete this training shall also receive refresher training on an annual basis. Fort Belvoir Directorates, tenant activities, and contractor personnel shall maintain their own documentation identifying their personnel who have received this training.

Training shall be based on the duties and function of response personnel and shall be conducted in accordance with OSHA health and safety regulations. The skill and knowledge levels required for all response personnel shall be conveyed to them through training before they are permitted to take part in actual emergency operations. Table 16 summarizes the required levels of spill response training for Fort Belvoir individuals, Directorates, tenant activities, and contractors who may be involved with spill and release response activities.

8.3.1 Spill Response Training Levels

First Responder Awareness Level - Individuals who are likely to witness or discover a spill or release and who have been trained to initiate an emergency response sequence by notifying the proper authorities of the incident. Individuals at this level would take no further action beyond notifying the appropriate authorities of the spill or release. To qualify as a first responder at the awareness level, one shall have sufficient training or have had sufficient experience to objectively demonstrate competency in the following areas:

- Understanding the potential outcomes associated with an emergency created when hazardous substances are present;
- Understanding what hazardous substances are and what risks are associated with them in the event of a spill;
- Recognizing the presence of hazardous substances in an emergency;
- Identifying the hazardous substances, if possible;
- The individual at the first responder awareness level understanding his or her role in the employer's emergency response plan, including site security, spill control, and, if applicable, usage of the U.S. DOT Emergency Response Guidebook; and
- Recognizing the need for additional resources and making appropriate notification to the communication center.

First Responder Operation Level - Individuals who respond to petroleum or hazardous material/waste releases. They are trained to respond in a defensive fashion without actually trying to stop the release. Their function is to contain the release from a safe distance, keep it from spreading, and prevent exposure

to the released material. OSHA regulations (29 CFR, Part 1910.120) require that first responders at the operational level receive at least eight hours of training or have had sufficient experience to objectively demonstrate competency in the following areas, in addition to those listed for the awareness level:

- Basic hazard and risk assessment techniques;
- Selection and use of proper personal protective equipment provided to first responder operational level personnel;
- Use of basic hazardous material terms;
- Performance of basic control, containment and/or confinement operations within the capabilities of the resources and personal protective equipment available with their unit;
- Implementation of basic decontamination procedures; and
- Relevant standard operating procedures and release response termination procedures.

Hazardous Materials Technician - Individuals who respond to petroleum or hazardous material/waste spills or releases for the purpose of stopping the release. These individuals assume a more aggressive role than a first responder at the operations level in that they will approach the point of release in order to plug, patch or otherwise stop the release of a hazardous substance. OSHA regulations (29 CFR, Part 1910.120) require that hazardous materials technicians receive at least 24 hours of training equal to the first responder operations level and have competency in the following areas:

- Implementation of the employer's emergency response plan;
- Classification, identification and verification of known and unknown materials by using field survey instruments and equipment;
- Functioning within an assigned role in the Incident Command System;
- Selection and use of the proper specialized chemical personal protective equipment required for a hazardous materials technician in the event of a spill or release;
- Hazard and risk assessment techniques;
- Perform of advance control, containment, and/or confinement operations within the capabilities of the resources and personal protective equipment available with the unit;
- Implementation of decontamination procedures;
- Release response termination procedures; and
- Basic chemical and toxicological terminology and characteristics.

Hazardous Materials Specialist - Individuals who respond with and provide support to hazardous materials technicians. Their duties parallel those of the hazardous materials technician; however, those duties require a more directed or specific knowledge of the various substances they may be called upon to contain. The hazardous materials specialist would also act as the site liaison with federal, state, local and

other government authorities in regards to site activities. Hazardous materials specialists shall receive at least 24 hours of training equal to the hazardous materials technician level and have competency in the following areas:

- Implementation of the employer's emergency response plan and the local emergency response plan;
- Classification, identification and verification of known and unknown materials by using advanced survey instruments and equipment;
- The requirements of the state emergency response plan;
- Selection and use of proper specialized chemical personal protective equipment provided to the hazardous materials specialist;
- Hazard and risk assessment techniques;
- The advance control, containment, and/or confinement operations within the capabilities of the resources and personal protective equipment available with the unit;
- Implementation of decontamination procedures;
- Release response termination procedures; and
- Basic chemical and toxicological terminology and characteristics.

Incident Commander and IOSC - Incident Commanders and/or IOSCs, who shall assume control of the incident scene beyond the first responder awareness level, are required by OSHA regulations (29 CFR, Part 1910.120) to receive at least 24 hours of training equal to the first responder operations level and have competency in the following areas:

- Implementing the Incident Command System;
- Implementing the employer's emergency response plan;
- Understanding the hazards and risks associated with employees working in chemical protective clothing;
- Implementing the local emergency response plan;
- Requirements of the state emergency response plan and of the Federal Regional Response Team (RRT); and
- Understanding the importance of decontamination procedures.

Table 16 - Fort Belvoir Spill Response Training Level Requirements

	OSHA 1910.120 First Responder Awareness Level	OSHA 1910.120 First Responder Operations Level	OSHA 1910.120 Hazardous Materials Technician & Specialist	OSHA 1910.120 Incident Commander	Release Event Management Training
Installation On-Scene Coordinator and Alternates				✓	✓
Incident Commander and Alternates				✓	✓
Environmental Remediation Contractor Employees			✓		
Phase II Incident Response Team Members			✓		
Phase I Incident Response Team Members		✓			
DPW ENRD Personnel		✓			
Tenant Activity Environ. Coordinators, Points of Contact, and Personnel	✓	✓			
Provost Marshal Point of Contact and Personnel	✓				
Fort Belvoir Community Hospital Point of Contact	✓				
Installation Safety Office Point of Contact	✓				
Logistics Readiness Center Point of Contact	✓				
Directorate of Personnel & Community Activities Point of Contact	✓				

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9.0 SECURITY

Fort Belvoir is a military installation, and is surrounded by a security fence. Security personnel are present at access gates when they are open, and perform daily mobile inspections throughout the installation. Certain areas within Fort Belvoir possess additional security measures, including fencing, access gates, and dedicated security personnel. Additional security measures have been described in the additional sections.

9.1 Fencing and Gates

Buildings, gated fences, and enclosures that encompass ASTs, USTs and containers storing petroleum or hazardous material/waste are closed and locked when not being accessed by authorized personnel.

9.2 Master Flow and Drain Valves

The master flow and drain valves and any other valves that will permit direct outward flow of the tank's contents or a secondary containment system's liquid to the environment are securely locked in the closed position when in non-operating or standby status.

9.3 Pump Locks

The starter control on all petroleum and hazardous material/waste pumps are locked in the "off" position or located at a site accessible only to authorized personnel when the pumps are in a non-operating or standby status.

9.4 Fill/Drain Connections

The loading/unloading connections of oil pipelines are securely capped or blank-flanged when not in service of standby service for an extended time. This security practice shall also apply to pipelines that are emptied of liquid content by either draining or inert gas pressure. All fill ports are locked when not in use.

9.5 Facility Lighting

Facility lighting is commensurate with the type and location of the facility. Consideration has been given to: (a) Discovery of spills occurring during hours of darkness, both by operating personnel, if present, and by non-operating personnel (the general public, Military Police, etc.) and (b) prevention of spills occurring through acts of vandalism.

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10.0 RCRA CONTINGENCY PLAN

This section describes specific information relative to the sites at Fort Belvoir that handle RCRA wastes as permitted (through the installation's RCRA Part B Permit) or less than 90 day sites. The referenced information serves to meet the requirements for a RCRA Contingency plan as outlined within 40 CFR 262.34(a), 264, or 265.16 (training), and Subparts C and D of 265 (as referenced by 262.34(a)(4)). The intent of this plan is to minimize hazards to human health and the environment in the event that there is a spill or release of hazardous waste or hazardous waste constituents. General information related to emergency response is enclosed herein with references to other parts of the MSP document, as necessary, followed by site-specific information. A description of the roles and responsibilities of the emergency responders is contained within Section 3.0 of this document.

The statement of authorization allowing the commitment of funds necessary to respond to spills is contained within Section 5.2 of this document.

10.1 Emergency Contacts

The following contacts are to be notified whenever there is an imminent or actual hazardous waste emergency situation, such as fires, explosions, or any unplanned sudden or non-sudden release of hazardous waste or hazardous waste constituents to air, soil, or surface water at the installation. The EOC has additional 24 hour contact information for Fort Belvoir Staff. See Appendix F for mutual aid agreements between Fort Belvoir and local emergency responders

Title	Name	Telephone Number
Emergency Responder	Fort Belvoir Fire Prevention and Protection Division	(703) 781-1800/1074
Primary Emergency Coordinator (IOSC)	Chief, DPW-ENRD Department of the Army U.S. Army Garrison, Fort Belvoir Building 1442 9430 Jackson Loop, Suite 107 Fort Belvoir, Virginia 22060-5130	(703) 806-3193 duty

10.2 Implementation and Spill/Fire/Emergency Response Procedures

In the event of a hazardous waste spill or an emergency, the procedures as outlined below and within Appendix B of this document will be implemented immediately.

Upon detecting a spill or release, the site operator shall initiate the following general actions (order of activity may be adjusted as required):

- Assess the severity of the release (see discussion on assessment below);
- Contact personnel identified in Section 10.1 and provide assistance as requested;
- Don appropriate protective equipment;
- Stop the flow or migration of the release by eliminating or containing the source (applying pads, booms, or directional devices; covering all drains or inlets; etc.);
- Relocate adjacent waste to prevent inadvertent mixing or introduction of incompatible wastes;
- Capture existing released material (application of absorbent materials, utilization of mechanical capture devices such as vacuum pumps);

- Properly containerize captured material, label, and process as appropriate for disposal;
- Inspect remaining spill supplies and equipment for replenishing as necessary; and
- Document spill event in a report to the IOSC, site point of contact, or general incident report form; maintain within site records for a 3-year period unless otherwise dictated by regulatory agencies.

If a fire is detected or is suspected the site operator shall initiate the following general actions (order of activity may be adjusted as required):

- Evacuate all personnel;
- Activate nearest fire alarm pull station;
- Contact personnel identified in Section 10.1 and provide assistance as requested;
- Send one person to a visible location to meet the emergency response team and guide them to the site;
- Don appropriate protective equipment;
- Assess the severity of the fire;
- Extinguish fire if possible; otherwise,
- Close access doors to confine the fire
- Check to ensure all personnel are accounted for;

If an explosive device is detected or suspected the site operator shall initiate the following general actions (order of activity may be adjusted as required):

- Evacuate all personnel;
- Close access doors to confine the explosion;
- Contact personnel identified in Section 10.1 and provide assistance as requested.

In the event that the IOSC determines that there may be an environmental or health affect outside the site he or she will take immediate actions to notify additional local authorities and responders and to assist by providing as much data as possible. The IOSC may also provide assistance to local authorities in determining if evacuation of surrounding areas and communities is necessary.

As appropriate, the IOSC will also notify the applicable on-scene coordinator for the region and/or the National Response Center at 1-800-424-8802 (24-hr). The following information will be available for relay at the time of the notification:

- Name and Telephone number of the IOSC (as the reporter)
- Name and Address of the site
- Time and type of incident
- Name and quantity of the material involved (as much as is known)
- Extent of injuries
- Possible hazards to human health or the environment (outside of the site)

See additional notification forms in Appendix B.

Fire and Rescue personnel from Fort Belvoir, Fairfax County, or other local or state emergency response units will follow standard operating procedures for responses to emergencies involving chemicals at the RCRA waste accumulation sites. The Fort Belvoir Fire Prevention and Protection Division maintains a installation-wide data management system which provides information regarding the quantity and type of

petroleum products, chemical compounds, health hazards associated with the stored materials, spill response materials, fire extinguishers, water supply sources, access/egress routes, and site plans for facilities located at Fort Belvoir. Further, material safety data sheets (MSDS) or analytical data for all incoming wastes stored at the Sites are available within the site offices, at the Hazardous Materials/Wastes Communication stations, or upon request from site operators.

Following any such emergency incident, the site operator will participate in an informal investigation process under the direction of the IOSC to identify causes for the incident. This identification will provide a means to prevent recurrences of the incident. Further, the site operator will assist the IOSC or his or her designee in completing all necessary documentation and notification actions required by the type and severity of the event. Finally, the site operator, at the direction of the IOSC, will facilitate mitigation or corrective action implementation in response to investigation findings.

10.3 Identification Or Detection Of Hazardous Waste Releases

As required by 40 CFR 264.35 and 265.35, aisle space associated with hazardous waste storage areas is maintained to allow detection of releases and the unobstructed movement of personnel, fire protection equipment, spill control equipment, and decontamination equipment to any area of facility operation in an emergency. Release detection shall be achieved by visual confirmation during daily usage of the buildings and/or during scheduled inspections. Identification of the released material will be based upon the observations and upon review of site waste log-in sheets, and review of the MSDS or analytical results provided or maintained with the stored waste. In the event that further analytical testing is required, the IOSC may authorize the collection of samples for characterization purposes as necessary.

10.4 Assessment of Release

Once a release has been identified by the site operator or his or her designee, he or she will determine the severity of the release. If the release is of sufficiently small volume the site operator shall address the release following standard industry practices and in accordance with all proper health and safety protocols, federal, state, and local regulations, and the spill control portions of this plan. If at any time the site operator has question of his or her ability to handle the release, he or she will contact the IOSC and/or the first responders immediately. The IOSC will immediately respond to the site to determine the potential implications of the release and ascertain the probable concerns to the environment and to nearby personnel. The IOSC shall review toxic information within the MSDS, material manufacturers' warning, analytical data, and other sources of information; evaluate environmental conditions such as wind direction, precipitation, etc; estimate the volume of the release and consider this in conjunction with the release migratory path and potential sensitive areas; determine the relative risk to the environment of mitigating the release such as the generation of rinse water or application of chemical fire suppressants; and determine if the release is contained within the site or will likely affect areas beyond the site.

10.5 Waste Handling and Storage

All waste is handled in accordance with federal, state, and local regulations. Waste addition to any of the hazardous waste accumulation sites is performed under supervised conditions. Wastes are signed-in and signed-out and tracked through the Fort Belvoir Hazardous Waste Management program. In the event of a spill/release/explosion, no additional waste will be accepted into the incident area until it has been determined by the IOSC and site operator that the additional waste can be appropriately contained and controlled and will not be vulnerable to further release/spill/explosion. Further, various methods are utilized to determine waste volumes for reporting purposes against Fort Belvoir goals and environmental

standards. Fort Belvoir has a commitment to pollution prevention and waste minimization (reference Fort Belvoir Environmental Policy Letter PL 200-14-03).

Incompatible wastes are segregated (i.e., stored within separate containers, locations, cabinets, etc.) to avoid potential reactions from leaks or spills. In the event of a spill/release/explosion of hazardous waste, the site operator will assist the IOSC or first responders in relocating incompatible wastes to appropriate locations away from the incident area.

Fort Belvoir does not currently utilize tanks for accumulation of hazardous wastes.

10.6 Storage/Treatment and Disposal of Waste and Released Waste

In the event of a spill/release/explosion of hazardous waste, the waste will be contained and re-accumulated using appropriate means that are protective of both human health and the environment and will be processed in the standard fashion unless otherwise dictated by the IOSC. If required, the IOSC has the authority to procure emergency waste removal services from a certified and licensed waste transporter, handler, and reclamation or disposal site.

10.7 Spill Prevention Measures

10.7.1 Inspections and Security

The hazardous waste accumulation sites shall be inspected on a regular basis by the site operator or site employees for evidence of hazardous waste releases. These inspections are performed weekly or as otherwise indicated by permits, safety regulations, best management practices, contracted scopes of work or the hazardous waste management plan. Inspection logs shall be prepared by the site operator or designated representative and maintained on-site or at a secure designated location. These records shall be made readily available to the IOSC, regulators, or other authorized personnel as requested. Copies of the inspection documentation shall be provided by the site operator to the DPW-ENRD on a quarterly basis or as otherwise requested.

The DPW-ENRD performs an inspection of each site on a semi-annual basis. Inspection records are maintained at the DPW-ENRD office, located in Building 01442 at Fort Belvoir.

Access to the hazardous waste accumulation sites is restricted and the sites are locked at all times. All visitors must sign-in upon arrival and sign-out upon leaving or the site operator must ensure that the visitor's name and contact information is recorded within the inspection log.

10.7.2 Training

Personnel training is been performed to meet the requirements 40 CFR 264.16 and 265.16. Training records on current personnel will be kept until closure of the installation. Training records on former employees will be kept for at least three years from the date the employee last worked at the installation.

10.7.3 Testing and Maintenance

Facility communications or alarm systems, fire protection equipment, spill control equipment, and decontamination equipment, where required, is tested and maintained as necessary to assure its proper operation in time of emergency. Fort Belvoir Fire Prevention and Protection Division follows established procedures and protocols to ensure that all of their response vehicles and equipment are in appropriate

condition for efficient, reliable performance during emergency situations. Preventive maintenance of the hazardous waste accumulation sites and associated permanent secondary containment structures are performed on a regularly scheduled basis and/or as required, at the request of the DPW-ENRD or the site operator, by the facilities management contractor (ALEUT) or other designated contractor.

Non-permanent secondary containment structures such as spill containment pallets and drums will be repaired or replaced depending on the magnitude of the required maintenance based upon period of use, inspection results, or following spill/release/explosion incident investigation.

10.8 Spill Control Measures

Site specific data sheets in Section 10.10 identify inventories of the emergency equipment available at each site for immediate spill response. Additionally, the Fort Belvoir Fire Prevention and Protection Division maintain additional spill response equipment at the fire stations and within the spill response room at Building 1495 (see Appendix H).

Following a spill response or mitigation event, the site operator replenishes the site spill stock as necessary to ensure adequate materials to address any future spill or release events. Fire extinguishers, telephones, emergency eyewash and shower stations are inspected on a regular basis (minimum quarterly or as otherwise dictated by applicable fire and safety regulations or site specific protocols) for operability.

10.9 Environmentally Sensitive Areas

Environmentally sensitive areas that could potentially be impacted are identified in Section 4, Table 6. In the event of a release which, in the opinion of the IOSC, threatens any of these areas, the IOSC shall initiate activities to protect these areas and notify the authorities with responsibilities over them using the telephone contact numbers included in Section 3.11, Table 5.

10.10 Evacuation Plan

This evacuation plan addresses the requirements outlined in 40 CFR 264.52(f) for a hazardous waste site to include in its contingency plan “an evacuation plan for all site personnel where there is a possibility that evacuation could be necessary”. Currently, Fort Belvoir’s evacuation plan requires individual site managers to contact tenants and instruct them to evacuate. Fort Belvoir does have an active web-site and an information line that can be utilized for mass-release information. Further, the Fort Belvoir e-mail system has a variety of user groups that allow mass-mailings of critical information.

Should evacuation of any of the hazardous waste accumulation sites be necessary, the IOSC or the Fort Belvoir Fire Prevention and Protection Division will direct the site operators and any spill response personnel to evacuate the buildings either directly or by telephone. In the event of evacuation, personnel will exit buildings at one of the designated exits (see Site Data Sheets in Section 10.10 for individual building evacuation routes).

The map in Appendix G shows the location of the RCRA waste accumulation sites in relation to the office of the Provost Marshall and the locations of the three Fort Belvoir Fire Prevention and Protection Divisions on Fort Belvoir, and the access points listed below. Emergency medical help is available at the Inova Mount Vernon Hospital located on Route 1, approximately 2.5 miles north. Fort Belvoir Community Hospital located on Belvoir Drive is available only to treat critical life-threatening injuries.

Should evacuation of Fort Belvoir or any part thereof be deemed necessary, determination of the most effective route off the installation shall be determined in consideration of material involved, the amount of material, the toxicity of the material, the wind direction and personnel protection required for handling the material. Once the downwind hazard area is established the most expeditious evacuation route will be used if evacuation becomes necessary. Fort Belvoir is divided into two distinct areas, North Post and South Post, with US Route 1 running between these two areas. In the event of a Hazardous Waste spill/release/explosion on Fort Belvoir the least dangerous and most appropriate route based on evacuation area will be used to evacuate personnel. In the event evacuation of part or all of Fort Belvoir is ordered, the Military Police will direct traffic for the evacuation. Appropriate representatives of Fairfax County will be notified of the evacuation, as appropriate, in accordance with Military Police and Public Affairs procedures by authorized Fort Belvoir representatives.

The North Post area of Fort Belvoir has four main arteries for entrance and exit to the installation. These points of entrance/exit are:

- Kingman Gate on JJ Kingman Road off the Fairfax County Parkway State Route 7100 (open 7-days a week, 0500 to 2100*),
- Telegraph Gate on Beulah Street (State Route 613) off Telegraph Road (State Route 611) (open Monday through Friday, 0500 to 2100; closed on holidays*),
- Woodlawn Village Gate at Pole Road (open 24-hrs a day, 7-days a week*), and
- Woodlawn Gate at Woodlawn and US Route 1 (closed*).

The South Post area of Fort Belvoir has three main arteries for entrance and exit to the installation. These points of entrance/exit are:

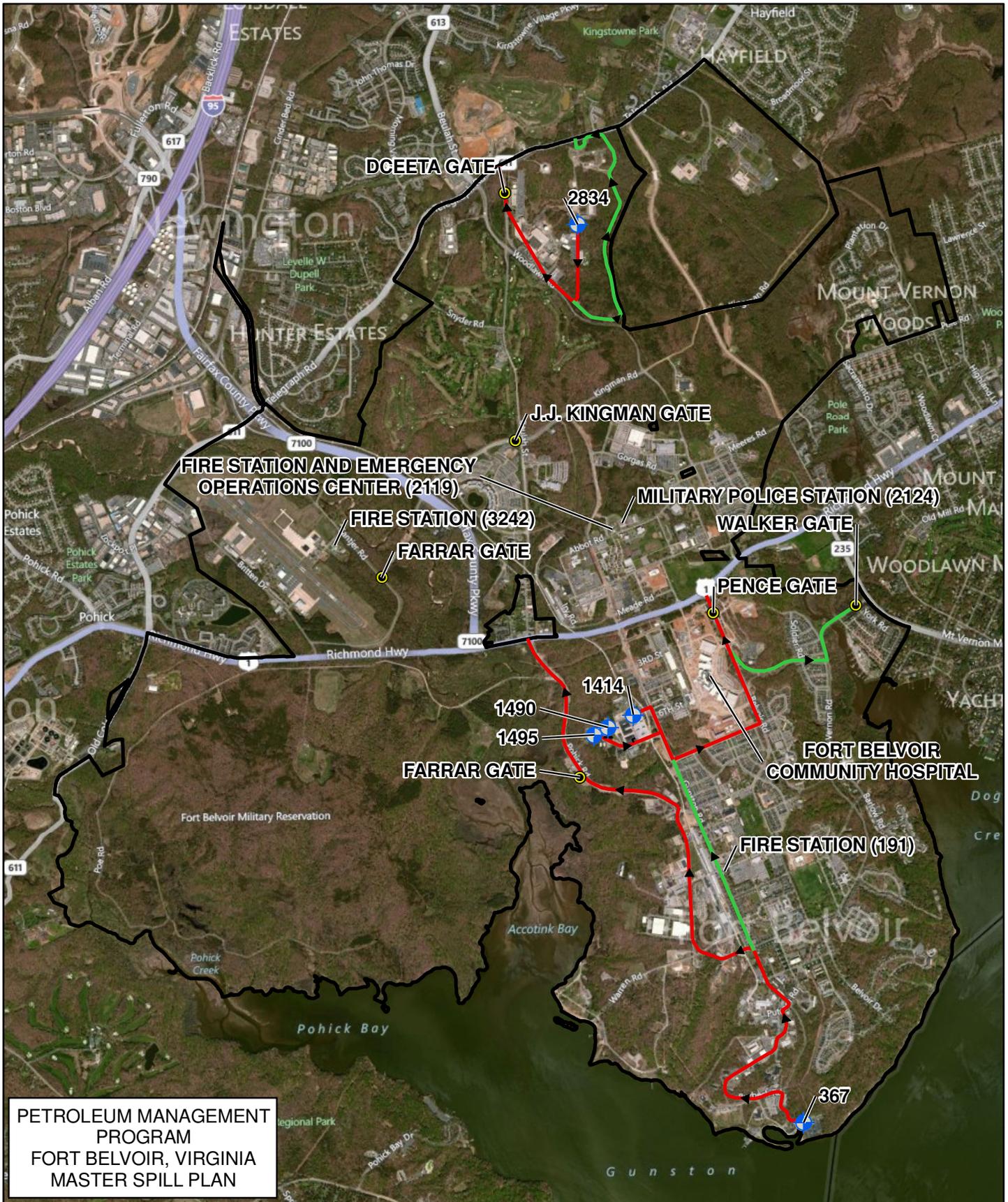
- Pence Gate on Belvoir Road at US Route 1 (open 24-hrs a day, 7-days a week*),
- Tulley Gate on Pohick Road at US Route 1 (open 7-days a week, 0500 to 2100*; with an associated Visitor Processing Center),
- Walker Gate on Mount Vernon Road (open 7-days a week, 0500 to 2100*).

All commercial traffic and visitors without DOD ID must enter at Tulley Gate and procure appropriate passes at the Visitor Control and Processing Centers in order to enter the installation from any of the other gates. Visitors may enter at Pence Gate after hours, but no commercial traffic is permitted entry.

* - Information current as of August 2013. Please check the Fort Belvoir Web-site at <http://www.belvoir.army.mil/> for updated information.

10.11 Required Reports

Please refer to Appendices B, D and E within this document for report forms for notification, initial abatement, inspection logs, etc.



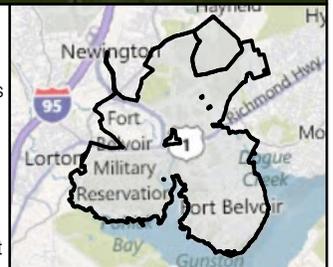
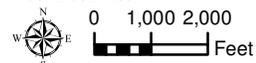
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FORT BELVOIR, VIRGINIA
MASTER SPILL PLAN**

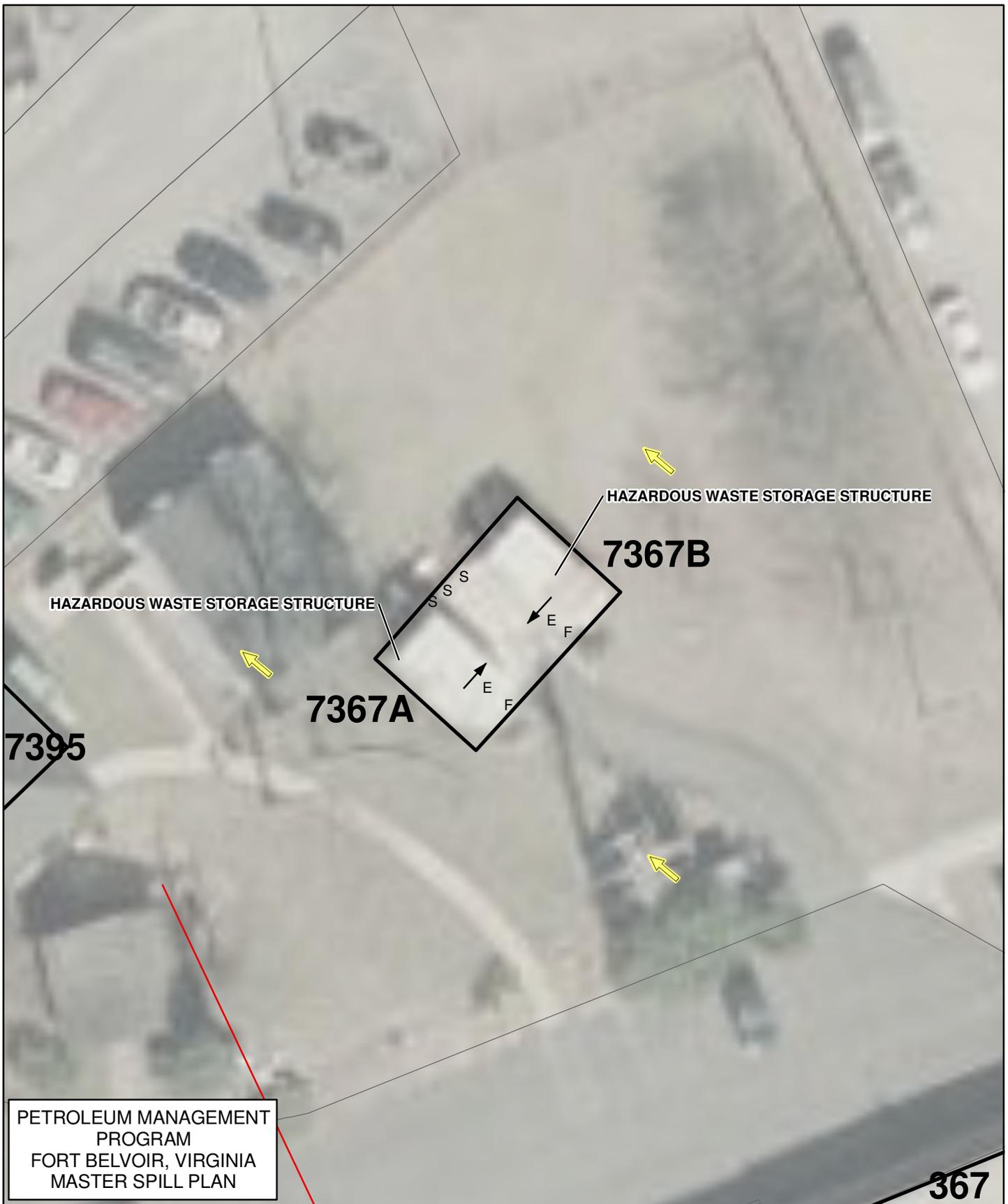
MAP 2: EVACUATION PLAN ROUTES

Legend

- Gates
- Control Area: Hazardous Waste Storage Area
- Primary Evacuation Route
- Secondary Evacuation Route

SOURCE NOTE:
ALL BASE MAP INFORMATION IS FROM THE FORT BELVOIR GIS, JUNE 2004.
ALL UNDERGROUND FEATURES ARE APPROXIMATE AND ARE SHOWN FOR VISUALIZATION PURPOSES ONLY.
SPILL PLAN FEATURES ARE FROM FIELD INSPECTIONS, JUNE-JULY 2004.



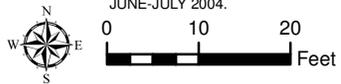


PETROLEUM MANAGEMENT PROGRAM
 FORT BELVOIR, VIRGINIA
 MASTER SPILL PLAN

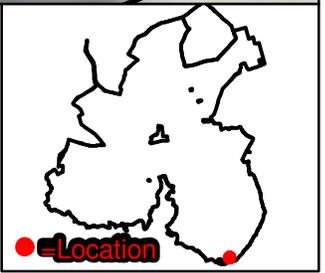
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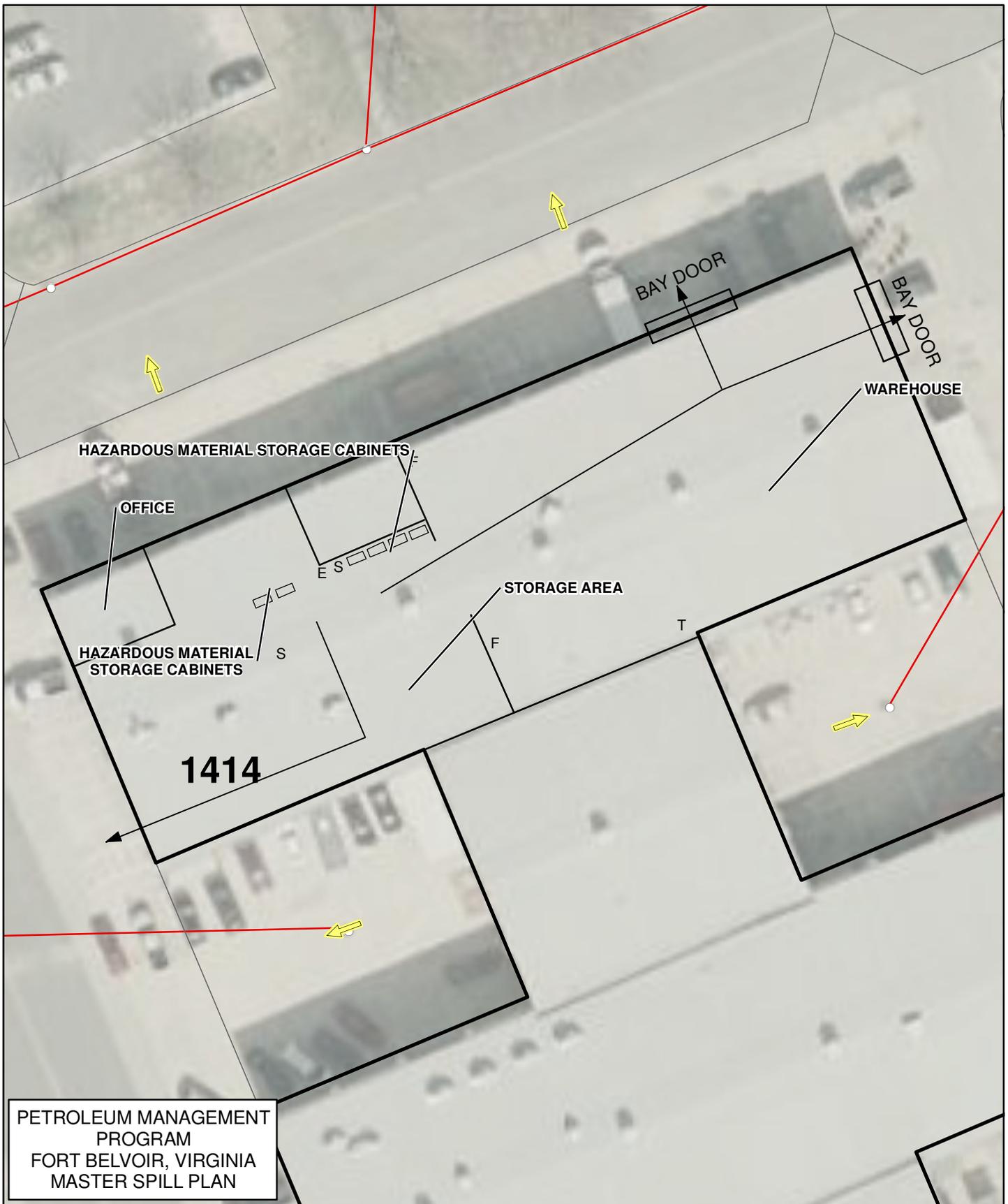
- 1462 BUILDING
- EVACUATION ROUTE
- STORM LINE
- ↑ DIRECTION OF SURFICIAL FLOW
- E EMERGENCY SHOWER
- F FIRE EXTINGUISHER
- S SPILL CONTROL MATERIALS

BLDG #7367



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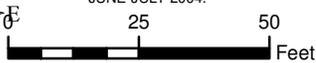


**PETROLEUM MANAGEMENT PROGRAM
FORT BELVOIR, VIRGINIA
MASTER SPILL PLAN**

Legend

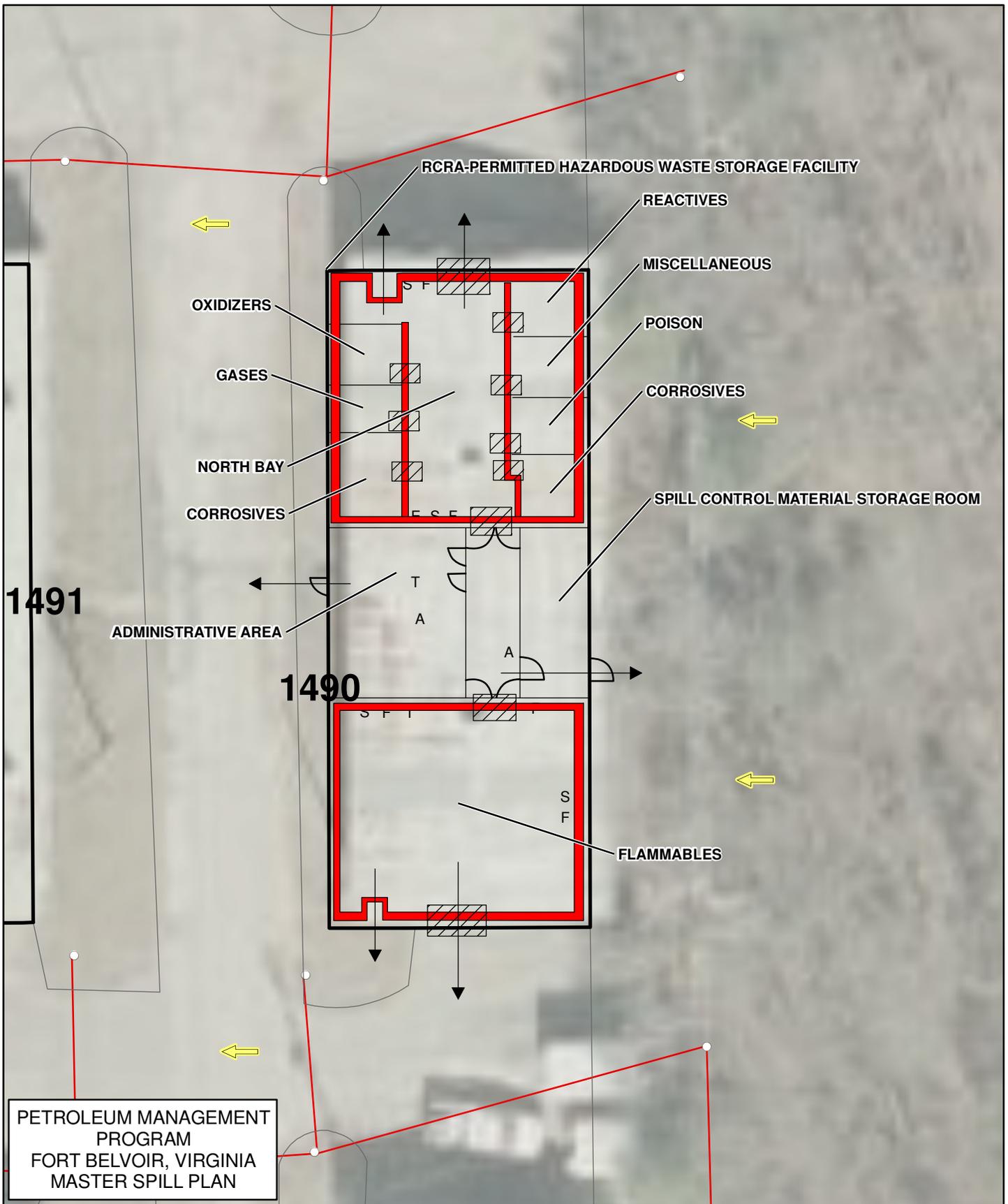
- 1462 BUILDING
- EVACUATION ROUTE
- STORM INLET
- STORM LINE
- DIRECTION OF SURFICIAL FLOW
- E EMERGENCY SHOWER
- F FIRE EXTINGUISHER
- S SPILL CONTROL MATERIALS
- T TELEPHONE

BLDG # 1414



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**PETROLEUM MANAGEMENT PROGRAM
FORT BELVOIR, VIRGINIA
MASTER SPILL PLAN**

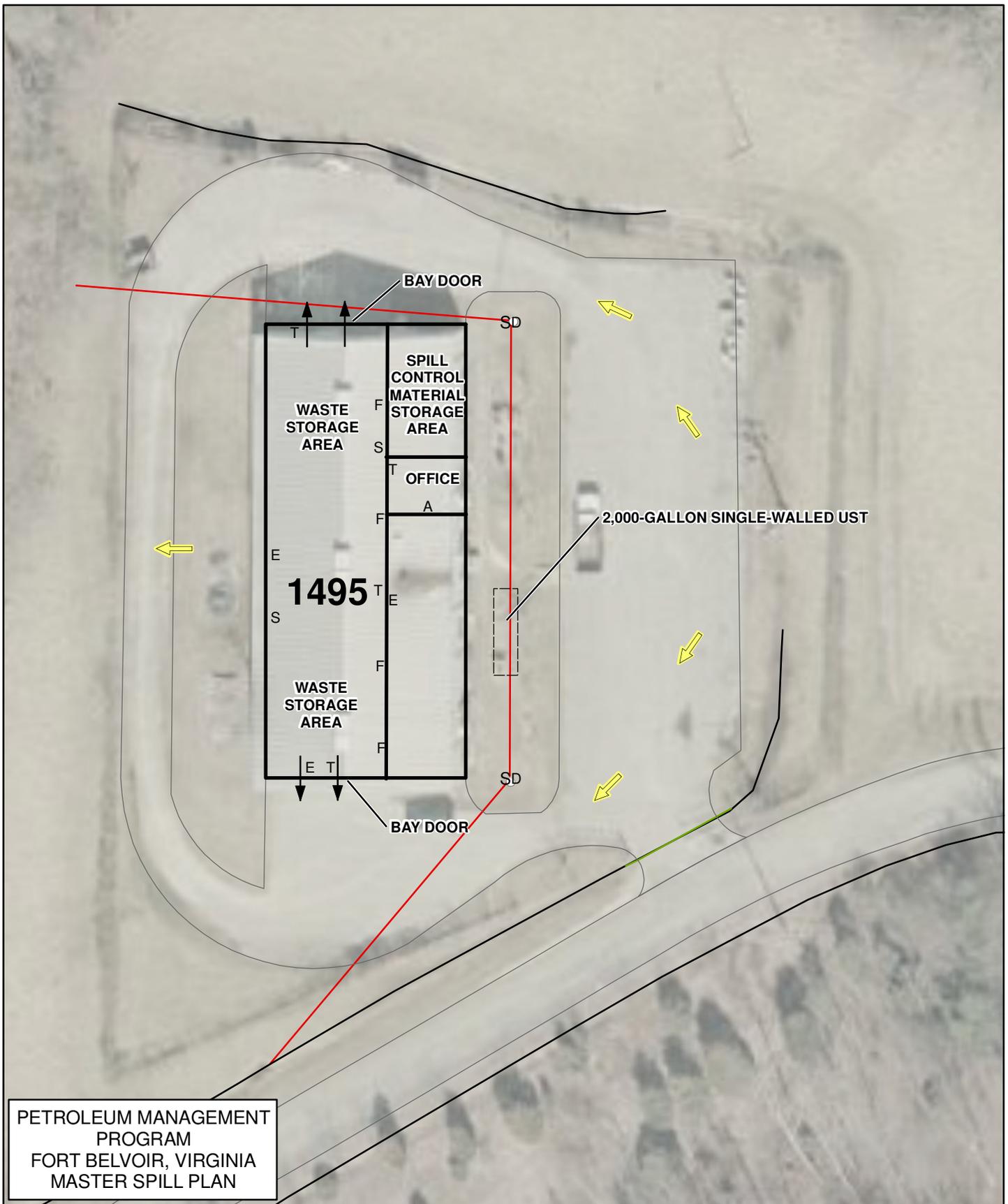
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- | | | |
|---------------------|-----------------------------|---------------------------|
| 1462 BUILDING | STORM LINE | A FIRST AID KIT |
| CONTAINMENT CURBING | DIRECTION OF SURFICIAL FLOW | E EMERGENCY SHOWER |
| RAMP | EVACUATION ROUTE | F FIRE EXTINGUISHER |
| STORM INLET | | S SPILL CONTROL MATERIALS |
| | | T TELEPHONE |

BLDG # 1490

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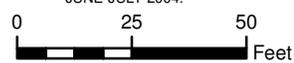
**PETROLEUM MANAGEMENT PROGRAM
FORT BELVOIR, VIRGINIA
MASTER SPILL PLAN**

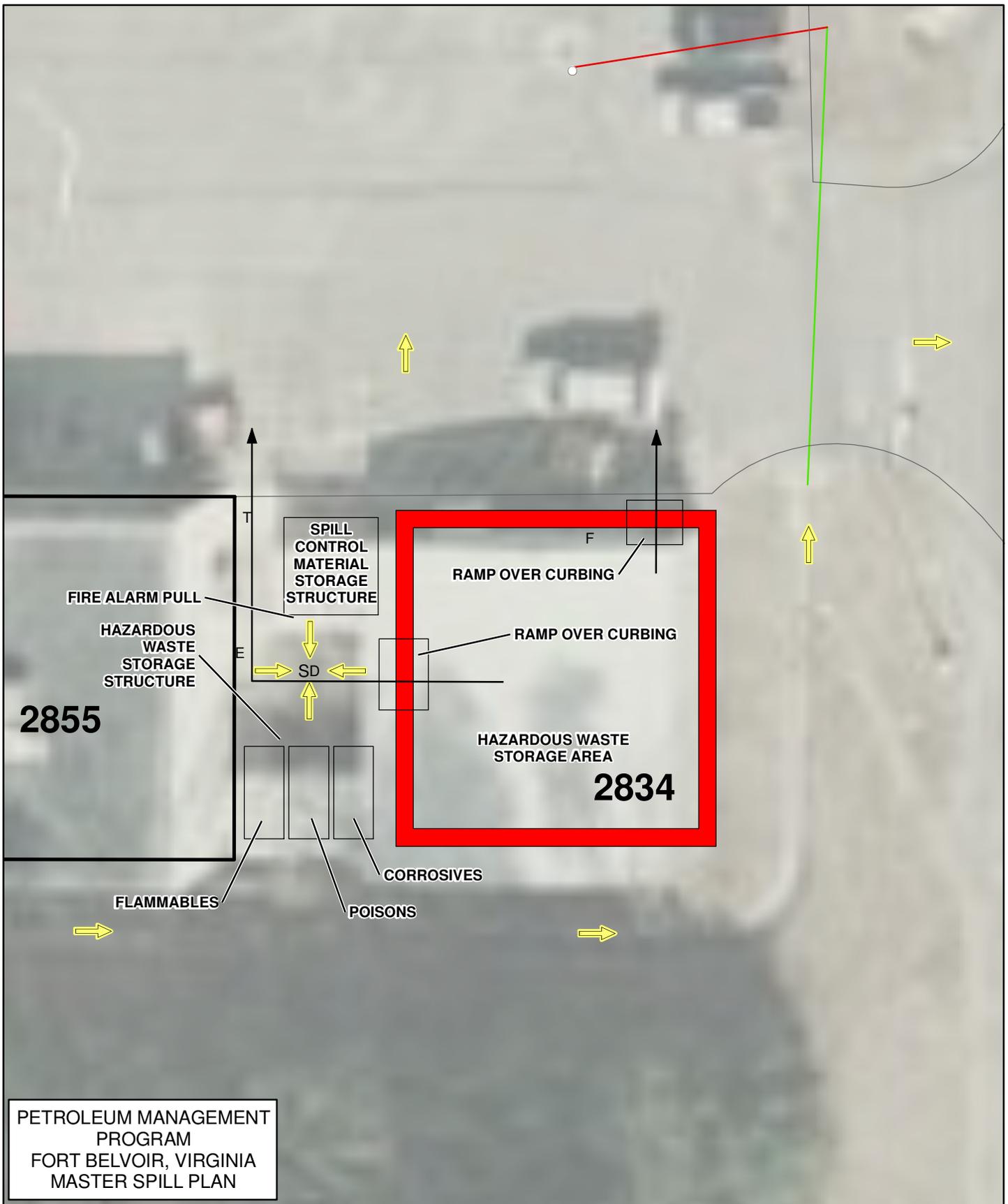
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| 1462 BUILDING | STORM OPEN DRAINAGE | A FIRST AID KIT |
| UST | STORM LINE | E EMERGENCY SHOWER |
| EVACUATION ROUTE | STORM CULVERT | F FIRE EXTINGUISHER |
| STORM INLET | DIRECTION OF SURFICIAL FLOW | S SPILL CONTROL MATERIALS |
| | | SD STORM DRAIN INLET |
| | | T TELEPHONE |

BLDG # 1495
TANK # 01495G

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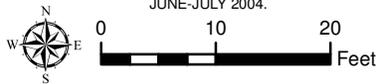




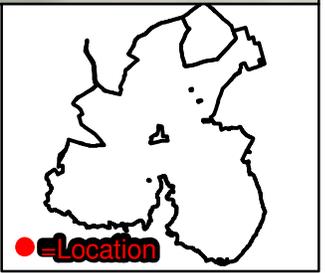
**PETROLEUM MANAGEMENT PROGRAM
FORT BELVOIR, VIRGINIA
MASTER SPILL PLAN**

- Legend**
- 1462 BUILDING
 - CONTAINMENT CURBING
 - EVACUATION ROUTE
 - STORM INLET
 - STORM LINE
 - STORM CULVERT
 - DIRECTION OF SURFICIAL FLOW
 - E EMERGENCY SHOWER
 - F FIRE EXTINGUISHER
 - SD STORM DRAIN INLET
 - T TELEPHONE

BLDG #2834



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11.0 PETROLEUM MANAGEMENT PLAN

11.1 Introduction

The Petroleum Management Plan outlines the standard operating procedures and protocols used in the management of the Fort Belvoir above ground and below ground storage tank program. This program is managed by the DPW, ENRD. These procedures apply to all activities on Fort Belvoir involved in installing, moving, or removing tanks on Fort Belvoir. These procedures include:

- Pre-installation procedures for state registration and Fort Belvoir permits
- Start-Up procedures for testing and recordkeeping
- Operating procedures for integrity, tightness, and cathodic protection testing
- Closure procedures for removal of regulated or unregulated tanks, and abandonment in place.

The DPW ENRD maintains an automated real time database on all above ground and below ground tanks on Fort Belvoir called the Petroleum Management Program (PMP). The PMP can be queried to provide information about any and all above ground and below ground tanks, by size, location, material stored, monitoring systems, and other criteria. Hazardous materials are inventoried annually, this inventory is maintained on CD, and is accessible by the ENRD, Fire Prevention and Protection Division and the Installation Safety Office. The procedures outlined in the Petroleum Management Plan are necessary to insure the currency and accuracy of the PMP database.

11.2 Procedures

The Petroleum Management Plan procedures are:

1. Fort Belvoir Requirements for Above Ground Storage Tanks
2. Fort Belvoir Requirements for Below Ground Storage Tanks
3. Fuel Storage Tank Activity Permit
4. Weekly Above Ground Storage Tank (AST) Visual Inspection Record
5. Monthly Above Ground Storage Tank (AST) Gauging Record
6. Record of Drainage of Secondary Containment
7. Initial Abatement Measures Report
8. Petroleum-Impacted Soil Disposal Information
9. Tank Removal Requirements/Procedures for Non-Regulated Above Ground Storage Tanks
10. Tank Removal Requirements/Procedures for Non-Regulated Underground Storage Tanks
11. Above Ground Storage Tank Removal Report Form
12. Underground Fuel Storage Tank Removal Report Form
13. Scope of Work for Above Ground Petroleum-storage Tank Removal Services
14. Scope of Work for Underground Petroleum-storage Tank Removal Services
15. Drum Tracking Procedures.

These procedures have been further described in the balance of this section.

PROCEDURE NO. 1

FORT BELVOIR REQUIREMENTS FOR ABOVEGROUND STORAGE TANKS

According to Army Regulation AR 200-1, the following items are **REQUIRED** of all Aboveground Storage Tanks (ASTs) that are brought onto Fort Belvoir:

First step:

- **Tank Permit form** – The attached “Tank_Activity_Permit” is required to be filled out. This aids the ENRD in keeping inventory of all ASTs at Fort Belvoir; a database is retained with all tank information. This permit must be submitted to the ENRD seven business days prior to the tank arriving on Post.

Required Items:

- **Secondary Containment** – of sufficient size to contain 110% of fuel in the AST, should the tank have a release or be ruptured. To meet this requirement, the AST:
 - Must be a double-walled tank OR
 - Have a container that encompasses the outer portion of the tank
- **Fuel Overfill Protection:** All ASTs **250 gallons or larger** are required to have ONE of the following:
 - Automatic gauging and shut-off valves
 - A visual gauge and procedures for manual oversight
 - An audible air vent
- **Cathodic protection** – required for all ASTs **250 gallons or larger** to provide protection against corrosion. To meet this requirement, the AST requires one of the following:
 - **Tanks**
 - Has corrosion resistant coating
 - Is made of fiberglass
 - Has cathodic protection system (impressed current or sacrificial anode system)
 - **Piping**
 - Uncoated steel piping has cathodic protection
 - Piping is made of fiberglass

PROCEDURE NO. 2

FORT BELVOIR REQUIREMENTS FOR UNDERGROUND PETROLEUM STORAGE TANKS

According to Army Regulation AR 200-1, the following items are **REQUIRED** of all Underground Petroleum Storage Tanks (USTs) that are installed at Fort Belvoir:

First step:

- **Tank Permit form** – The attached “Tank_Activity_Permit” is required to be filled out. This aids the ENRD in keeping inventory of all USTs at Fort Belvoir; a database is retained with all tank information. This permit must be submitted to the ENRD seven business days prior to the tank arriving on Post.

Required Items:

- **Spill Protection** – All USTs are required to have catchment basins to contain spills from delivery hoses. The basins are also described as “spill containment manholes” or “spill buckets.” In general, the catchment basin is a bucket sealed around the fill pipe to contain fuel spills.
- **Fuel Overfill Protection:** All USTs are required to have ONE of the following:
 - Automatic gauging and shut-off valves
 - Overfill alarms
 - Ball float valves
- **Cathodic protection** – required for all USTs to provide protection against corrosion. To meet this requirement, the UST requires one of the following:
 - **Tanks**
 - Has corrosion resistant coating
 - Is made of fiberglass
 - Has cathodic protection system (impressed current or sacrificial anode system)
 - **Piping**
 - Uncoated steel piping has cathodic protection
 - Piping is made of fiberglass
- **Leak Detection:** A manual or electronic interstitial monitoring gauge is required on all USTs not already equipped with an interstitial monitoring device
 - **Tanks**
 - Automatic tank gauging using Veeder-Root systems, TLS-350 or higher, is required
 - **Piping**
 - Secondary containment required along with leak detection (depends on if the piping is pressure or suction)

PROCEDURE NO. 4
WEEKLY ABOVEGROUND STORAGE TANK (AST) VISUAL INSPECTION RECORD
 (State of Virginia VAC 25-91-130)
 (*To be maintained at facility for a five year period*)

DATE	TANK/SITE ID	Tank size/capacity (Gallons)	List any observations regarding the AST (any fuel staining on tank or on ground around tank, any stressed vegetation near tank, any damage to tank)	Check piping and connections and list observations (any leaks evident, any new rust forming, anything loose)	Any other information about the AST	Inspector Name and phone #

PROCEDURE NO. 5
MONTHLY ABOVEGROUND STORAGE TANK (AST) GAUGING RECORD
 (*To be maintained at facility for a five year period*)

DATE	TANK/SITE ID	Tank size/capacity (Gallons)	Manual gauging level - measured with a yard stick directly into the ASTs fill port - write amount here	Fuel level observed on the ASTs fuel gauge - write amount here	Does a difference of more than 0.5" exist between the two measurements? YES/NO. If yes, contact the ENRD for further information.	Inspector Name and phone #

PROCEDURE NO. 6
RECORD OF DRAINAGE of SECONDARY CONTAINMENT
 (*To be maintained at facility for a five year period*)

DATE	TANK/SITE ID	Tank size/capacity (Gallons)	Contaminants observed in water? If yes, please describe. If sheen on water, call the ENRD prior to release to the environment	Discharge point (ground, oil-water separator, ditch, stormwater outfall)	Amount of discharge (in gallons, approximate)	Inspector Name and phone #

PROCEDURE NO. 7

**DIRECTORATE OF PUBLIC WORKS
ENVIRONMENTAL AND NATURAL RESOURCES DIVISION
Petroleum Management Program**

**INITIAL ABATEMENT MEASURES REPORT FOR
Building (number) – (tank type) Removal**

**VIRGINIA DEPARTMENT OF ENVIRONMENTAL QUALITY POLLUTION
COMPLAINT # (NUMBER)**

RELEASE SITE: *(include address and building number)*

DESCRIPTION OF RELEASE:

(include information regarding source of release, appearance of surrounding surface or subsurface soil or water, tank condition, sampling locations and collection procedures, analytical results).

TYPE OF PRODUCT INVOLVED:

HOW WAS THE SOURCE OF THE RELEASE IDENTIFIED:

DEPTH TO GROUNDWATER:

GROUNDWATER SAMPLES TAKEN:

**LIST STEPS TAKEN TO PREVENT FURTHER RELEASE AND MIGRATION OF
PRODUCT:** *(include information on initial abatement measures or spill response, soil excavation and off-site recycling etc.)*

WAS FREE PRODUCT VISIBLE:

DATE REPORT FILED WITH VIRGINIA DEQ:

RECOMMENDATIONS:

REPORT COMPLETED BY: *(name)*

TITLE:

DATE:

PROCEDURE NO. 8

PETROLEUM-IMPACTED SOIL DISPOSAL INFORMATION

The Fort Belvoir DPW-ENRD is responsible for compliance at Fort Belvoir. The Petroleum Management Program encompasses remedial or compliance actions associated with petroleum releases to the environment.

If petroleum-impacted soil is identified or observed during construction or investigative actions at Fort Belvoir, the DPW-ENRD shall be immediately notified by contacting the ENRD Spill Response Team at (703) 806-2119 or the ENRD Petroleum Program Manager at (703) 806-3694. The DPW-ENRD will respond to the site and in conjunction with the contracting officer provide recommendations for proper address.

The DPW-ENRD has sole reporting authority for Fort Belvoir to the Virginia Department of Environmental Quality (DEQ). The contractor shall provide whatever information is necessary to the DPW-ENRD and will fully cooperate in order to facilitate event reporting and proper mitigation.

In the event that petroleum-impacted soil requires excavation as part of contracted work activities, it must be excavated and properly segregated in accordance with all federal, state, and local regulations and at the direction of the contracting officer, under the observation of the DPW-ENRD representative. At a minimum, appropriate stockpiling requires that excavated soil shall be placed on top of two layers of 6-mil plastic sheeting and covered by one layer of 6-mil plastic sheeting, with the entire stockpile area appropriately protected from storm water run-on/run-off. Suspected petroleum-impacted soils shall be stockpiled separately from any other excavated materials.

Note that depending on site conditions, additional ground-water and/or discrete soil samples may be collected from sites following excavation of petroleum impacted soil, at the direction of the DEQ.

After soil excavation has been completed, a soil stockpile sample will be collected for quick-turn around analysis. The soil stockpile sampling must include all sampling requirements of the Virginia petroleum and solid waste program requirements or be inclusive of the requirements of a pre-approved soil recycling facility and be performed and analyzed in accordance with all federal, state, and local regulations. Once the soil stockpile has been appropriately characterized, the excavated soil shall be transported off-site by a licensed waste disposal company and treated/disposed of at a licensed facility permitted to accept this waste material. No disposal of soil shall occur without the express authorization of the Government. Land filling of the impacted soil is typically not a disposal option. Suggested disposal options include off-site thermal treatment or chemical recycling. A soil disposal bill of lading signed by a DPW-ENRD government representative shall accompany each truck en-route to the disposal facility. The contractor must coordinate with the DPW-ENRD to ensure availability of government signatory authorities. The government assumes no responsibility for truck wait time due to improperly coordinated signature actions.

Ticket weights shall be provided by the disposal facility to determine true volume of soil accepted. All certificates of disposal shall be forwarded to the DPW-ENRD within 15 working days upon completion of the project.

PROCEDURE NO. 9

TANK REMOVAL REQUIREMENTS/PROCEDURES FOR NON-REGULATED ABOVEGROUND STORAGE TANKS FORT BELVOIR, VIRGINIA

1.0 - GENERAL - The Contractor shall furnish all materials, labor and equipment to properly locate and identify, and remove all tanks and associated appurtenances relating to the building to be demolished or site. Potentially dangerous situations may arise during performance of this work and the Contractor shall therefore provide only properly trained and experienced personnel for completion of this work.

1.1 - TANK REMOVAL PERMIT - The Contractor shall be required to obtain a tank removal permit, from the Directorate of Public Works-Environmental and Natural Resource Division (DPW-ENRD), prior to scheduling the removal/excavation of the tank system (minimum 48 hours lead time). DPW-ENRD can be contacted at by phone at (703) 806-3694 or in person at Building 1442, Suite 200. The removal of the tank shall be performed within 30 working days of obtaining the permit.

2.0 - TANK REMOVAL - The following procedure, and all current industry standards, shall be utilized when performing the requirements of this specification. The tank and associated appurtenances shall be removed and the any excavation backfilled with clean soil prior to demolition of the building or contractor demobilization. The site shall be restored as appropriate.

2.1 - DISCONNECT THE SUPPLY AND RETURN LINES FROM THE BOILER - The Contractor shall be required to disconnect the supply and return lines from the boiler (or other applicable equipment) and allow all product inside the lines to flow back to the tank. The Contractor shall then cap off the lines by using screw-on caps or double-crimping of the line. Crimping the line requires the Contractor to fold over the end of the piping onto itself at least twice and crimp in a fashion that will not allow any product to leak from the line.

2.2 - DISCONNECT THE PIPING - The Contractor shall disconnect all attached piping and cap off the ends of the piping. Any openings on the tank, except the fill pipe opening, and holes in the tank surface shall be sealed off using boiler plugs or caps. Any sub-terrain piping or connections must be appropriately drained, isolated, and removed.

2.3 - PUMP TANK OF ALL PRODUCT AND SLUDGE - The Contractor shall utilize a pump truck to effectively remove and transport all material remaining inside the tank. The Contractor is solely responsible for the removal and disposal of any remaining fuel and/or sludge removed from the tank in accordance with all current federal, state, and local laws. The remaining fuel and /or sludge must be manifested through the DPW-ENRD for appropriate government signature on all shipping documents. After removal of all material, the Contractor shall be required to seal off the fill pipe opening.

2.4 - REMOVE FUEL LINES TO BUILDING - The Contractor shall be required to remove the fuel supply and return line, vent lines, remote filler lines and any associated appurtenances without causing any residual product to be released into the environment. Ideally, all lines should be free of product and sealed prior to removal.

2.5 - REMOVAL OF SOIL AND SOIL SAMPLING (as applicable) - If visibly impacted soils (including free liquid petroleum hydrocarbons) are discovered during tank closure, the DPW-ENRD shall be notified **immediately** and will direct removal of contaminated soil as an Initial Abatement Measure to mitigate further impact to the environment. ENRD will provide recommendations, but the contracting officer (KO) shall direct all further excavation. Soils shall be stockpiled in an area identified by the Contracting Officer or DPW-ENRD representative. All soil to be stockpiled shall be placed on top of two layers of 6-mil plastic sheeting and covered by one layer of 6-mil plastic sheeting, with the entire stockpile area appropriately protected from storm water run-on/run-off. Suspected petroleum-contaminated soils shall be stockpiled separately from any other excavated materials.

Following removal of any impacted soil, the Contractor shall be required to collect a minimum of two grab soil samples, one from each end of the excavated area or as directed by the contracting officer or DPW-ENRD representative. If groundwater is encountered within the excavated area the samples shall be collected from the sidewalls at the soil/water interface. The Contractor, at the direction and oversight of the DPW-ENRD, shall collect these soil samples and will be responsible for shipping and analysis of the soil samples, and will provide the DPW-ENRD copies of the analytical results for reporting/decision-making purposes. Sample collection, packaging, and preservation must be in accordance with industry standards and as dictated by the laboratory to ensure results as representative of site conditions as possible. Samples from diesel or heating oil tanks shall be analyzed by EPA approved method SW846 8015B for total petroleum hydrocarbons (TPH). Please note that DEQ reporting requirements provide a 24-hr window for reporting of confirmed releases so analytical results must be provided to the DPW-ENRD immediately upon reception from the laboratory.

2.6 - DISPOSAL OF CONTAMINATED SOILS (as applicable) - The contractor shall also be responsible for sampling soil stockpiles as appropriate for disposal based upon either the minimum requirements of the pre-selected disposal facility or as required under regulation. No disposal of soils shall occur without the express authorization of the Contracting Officer and the DPW-ENRD. All contaminated soils shall be properly handled and transported to a pre-approved (accepted by the ENRD prior to initiation of site work) off-site thermal treatment and/or recycling facility and not landfilled.

2.7 - BACKFILLING OF THE EXCAVATION (as applicable) - The contractor shall backfill any excavated area with clean backfill and compact to a 85% compaction rate in turf areas and 95% compaction in hardstand areas. Use of excavated soil or new backfill will be at the direction of the Contracting Officer and the DPW-ENRD.

2.8 - OPENING THE END OF THE TANK AND CLEANING - The Contractor shall be required to open the end of the tank by utilizing a non-sparking tool. Tanks shall first be de-vaporized using a current API method prior to cutting open the tank. All tanks will be cleaned prior to removal from Fort Belvoir. The cleaning process shall include sludge removal by vacuum system and/or squeegee. The Contractor shall be responsible for the proper transportation and disposal of all sludge. All sludge must be manifested through the DPW-ENRD office and receive appropriate government signature. The contractor is responsible for properly coordinating such events to ensure signatory availability.

3.0 - REMOVAL OF TANK - The Contractor shall be required to load the tank onto a transport vehicle of sufficient size to support the load and block, strap or secure in a manner that will provide firm and secured support during transport. All current transportation laws and regulations shall be adhered to.

4.0 - DISPOSAL OF TANK - The tank shall be disposed of at an approved recycling or metal recovering facility, or by an alternative method that has received prior approval from the Contracting Officer. A Certificate of Disposal must be obtained from the facility for the disposed tank.

5.0 - CERTIFICATE(S) OF DISPOSAL - All certificate(s) of disposal shall be forwarded to the Contracting Officer and the DPW-ENRD within 15 working days upon completion of the tank operation.

6.0 - TANK CLOSURE REPORT - The Contractor shall provide the DPW-ENRD with a completed tank removal report (a blank report may be obtained from the DPW-ENRD). This removal report shall be submitted with the disposal certificate(s) within 15 working days after completion of the site operations.

PROCEDURE NO. 10

TANK REMOVAL REQUIREMENTS/PROCEDURES FOR NON-REGULATED UNDERGROUND STORAGE TANKS FORT BELVOIR, VIRGINIA

1.0 - GENERAL - The Contractor shall furnish all materials, labor and equipment to properly locate and identify, excavate, and remove all tanks and associated appurtenances relating to the building to be demolished or site. Potentially dangerous situations may arise during performance of this work and the Contractor shall therefore provide only properly trained and experienced personnel for completion of this work.

1.1 - TANK REMOVAL PERMIT - The Contractor shall be required to obtain a tank removal permit, from the Directorate of Public Works-Environmental and Natural Resource Division (DPW-ENRD), prior to scheduling the excavation of the tank system (minimum 48 hours lead time). DPW-ENRD can be contacted at by phone at (703) 806-3694 or in person at Building 1442, Suite 200. The removal of the tank shall be performed within 20 working days of obtaining the permit.

2.0 - TANK REMOVAL - The following procedure, and all current industry standards, shall be utilized when performing the requirements of this specification. The tank and associated appurtenances shall be removed and the excavation backfilled with clean soil prior to demolition of the building or contractor demobilization. The site shall be restored as appropriate.

The Contractor shall make all reasonable efforts to remove the tank by excavation as described below. However, in some instances (usually the result of unusual physical site constraints) this procedure is impractical and, in these cases, the Contractor may petition the DPW-ENRD for a modification of this procedure. The modification would include specifications to properly close the tank *in place*. Should this situation arise, the Contractor shall contact the DPW-ENRD for permission to modify the tank removal procedures described herein. Without specific written permission from the DPW-ENRD, tank closure in-place is not considered an acceptable practice.

2.1 - DISCONNECT THE SUPPLY AND RETURN LINES FROM THE BOILER - The Contractor shall be required to disconnect the supply and return lines from the boiler (or other applicable equipment) and allow all product inside the lines to flow back to the tank. The Contractor shall then cap off the lines by using screw-on caps or double-crimping of the line. Crimping the line requires the Contractor to fold over the end of the piping onto itself at least twice and crimp in a fashion that will not allow any product to leak from the line.

2.2 - UNCOVER TOP OF TANK AND DISCONNECT THE PIPING - The Contractor shall be required to uncover the tank from the soil surface to the top metal surface of the tank and piping. After exposing the top of the tank and piping, the Contractor shall disconnect all attached piping and cap off the ends of the piping. Any openings on the tank, except the fill pipe opening, and holes in the tank surface shall be sealed off using boiler plugs or caps.

2.3 - PUMP TANK OF ALL PRODUCT AND SLUDGE - The Contractor shall utilize a pump truck to effectively remove and transport all material remaining inside the tank. The Contractor is solely responsible for the removal and disposal of any remaining fuel and/or sludge removed from the tank in accordance with all current federal, state, and local laws. The remaining fuel and /or sludge must be manifested through the DPW-ENRD for appropriate government signature on all shipping documents. After removal of all material, the Contractor shall be required to seal off the fill pipe opening.

2.4 - REMOVAL OF TANK FROM EXCAVATION SITE - The Contractor shall remove the tank from the excavation site by rolling the tank towards the trench and lifting from the excavation without puncturing the tank. A strap or chain may be used to facilitate the removal of the tank from the excavation. The tank, after removal from the excavation, shall be placed on top of 6-mil plastic sheeting so that the opening in the top of the tank remains upright.

2.5 - REMOVE FUEL LINES TO BUILDING - The Contractor shall be required to remove the fuel supply and return line, vent lines, remote filler lines and any associated appurtenances without causing any residual product to be released into the environment. Ideally, all lines should be free of product and sealed prior to removal.

2.6 - REMOVAL OF SOIL AND SOIL SAMPLING - The excavation shall be limited to include only those soils required to free the tank from the ground. However, removal of visibly contaminated soil may be required as an Initial Abatement Measure to mitigate further impact to the environment. If visibly impacted soils (including free liquid petroleum hydrocarbons) are discovered during tank closure, the DPW-ENRD shall be notified **immediately** and will provide recommendations; the contracting officer (KO) shall direct all further excavation. Soils shall be stockpiled in an area identified by the Contracting Officer or DPW-ENRD representative. All soil to be stockpiled shall be placed on top of two layers of 6-mil plastic sheeting and covered by one layer of 6-mil plastic sheeting, with the entire stockpile area appropriately protected from storm water run-on/run-off. Suspected petroleum-contaminated soils shall be stockpiled separately from other excavated materials.

The Contractor shall be required to collect a minimum of two grab soil samples, one from each end of the tank basin or as directed by the contracting officer or DPW-ENRD representative. If groundwater is encountered within the tank basin the samples shall be collected from the sidewalls at the soil/water interface. The Contractor, at the direction and oversight of the DPW-ENRD, shall collect these soil samples and will be responsible for shipping and analysis of the soil samples, and will provide the DPW-ENRD copies of the analytical results for reporting/decision-making purposes. Sample collection, packaging, and preservation must be in accordance with industry standards and as dictated by the laboratory to ensure results as representative of site conditions as possible. Samples from diesel or heating oil tanks shall be analyzed by EPA approved method SW846 8015B for total petroleum hydrocarbons (TPH). Please note that DEQ reporting requirements provide a 24-hr window for reporting of confirmed releases so analytical results must be provided to the DPW-ENRD immediately upon reception from the laboratory.

2.7 - DISPOSAL OF CONTAMINATED SOILS - The contractor shall also be responsible for sampling soil stockpiles as appropriate for disposal based upon either the minimum requirements of the pre-selected disposal facility or as required under regulation. No disposal of soils shall occur without the express authorization of the Contracting Officer and the DPW-ENRD. All contaminated soils shall be properly handled and transported to a pre-approved (accepted by the ENRD prior to initiation of site work) off-site thermal treatment and/or recycling facility and not landfilled.

2.8 - BACKFILLING OF THE EXCAVATION - The contractor shall backfill the excavated area with clean backfill and compacted to a 85% compaction rate in turf areas and 95% compaction in hardstand areas. Use of excavated soil or new backfill will be at the direction of the Contracting Officer and the DPW-ENRD.

2.9 - OPENING THE END OF THE TANK AND CLEANING - The Contractor shall be required to open the end of the tank by utilizing a non-sparking tool. Tanks shall first be de-vaporized using a current API method prior to cutting open the tank. All tanks will be cleaned prior to removal from Fort Belvoir. The cleaning process shall include sludge removal by vacuum system and/or squeegee. The Contractor shall be responsible for the proper transportation and disposal of all sludge.

3.0 - REMOVAL OF TANK - The Contractor shall be required to load the tank onto a transport vehicle of sufficient size to support the load and block, strap or secure in a manner that will provide firm and secured support during transport. All current transportation laws and regulations shall be adhered to.

4.0 - DISPOSAL OF TANK - The tank shall be disposed of at an approved recycling or metal recovering facility, or by an alternative method that has received prior approval from the Contracting Officer. A Certificate of Disposal must be obtained from the facility for the disposed tank.

5.0 - CERTIFICATE(S) OF DISPOSAL - All certificate(s) of disposal shall be forwarded to the Contracting Officer and the DPW-ENRD within 15 working days upon completion of the tank operation.

6.0 - TANK CLOSURE REPORT - The Contractor shall provide the DPW-ENRD with a completed tank removal report (a blank report may be obtained from the DPW-ENRD). This removal report shall be submitted with the disposal certificate(s) within 15 working days after completion of the site operations. The report shall include photo-documentation of all tank removal, excavation and disposal activities to support adherence to the SOP.

PROCEDURE NO. 11

**DIRECTORATE OF PUBLIC WORKS
ENVIRONMENTAL AND NATURAL RESOURCE DIVISION
BUILDING 1442, SUITE 200
FORT BELVOIR, VIRGINIA 22060-5116**

ABOVEGROUND FUEL STORAGE TANK REMOVAL REPORT FORM

BLDG/TANK #: _____ / _____ PERMIT NUMBER: _____

DATE WORK BEGAN: _____ DATE WORK COMPLETED: _____

MATERIAL STORED IN TANK: _____

TANK SIZE: _____ GALLONS; LENGTH: _____ FEET; DIAMETER: _____ INCHES

TANK MATERIAL: _____

_____ SINGLE WALLED _____ DOUBLE WALLED

TANK EXTERIOR COATING: _____ NONE _____ TYPE: _____

PIPING MATERIAL: _____ STEEL _____ COPPER _____ PLASTIC

_____ OTHER: _____

_____ PRESSURIZED _____ SUCTION

_____ SINGLE WALLED _____ DOUBLE WALLED

PIPE EXTERIOR COATING: _____

CATHODIC PROTECTION: _____ NONE _____ SACRIFICIAL _____ IMPRESS

TYPE LEAK DETECTION: _____

OVERFILL/SPILL PROTECTION: _____

WAS TANK PUMPED DRY OF CONTENTS PRIOR TO REMOVAL:

_____ YES _____ NO _____ NOT REQUIRED

WAS THE TANK DEVAPORIZED: _____ YES _____ NO

WAS THE TANK CLEANED: _____ YES _____ NO METHOD: _____

CONDITION OF TANK: _____

DIAGRAM OF TANK SYSTEM:

WAS THERE EVIDENCE OF CONTAMINATION IN THE SURROUNDING SOIL: ____YES ____NO
DESCRIBE:

DURING REGULATED AST REMOVAL, OR IF THERE IS EVIDENCE OF CONTAMINATION IN THE SURROUNDING SOIL, OR AT THE DIRECTION OF THE CONTRACTING OFFICER OR THE DPW-ENRD TECHNICAL REPRESENTATIVE, THE CONTRACTOR WILL COLLECT CONFIRMATORY SOIL SAMPLES FROM THE FORMER TANK LOCATION. THE CONTRACTOR SHALL COLLECT MINIMUM OF ONE DISCRETE SAMPLE FROM SOIL BENEATH EACH END OF THE TANK (TWO SAMPLES MINIMUM) OR FROM AREAS MOST INDICATIVE OF RELEASE IN ACCORDANCE WITH ALL FEDERAL, STATE, AND LOCAL REGULATIONS. *(NOTE: SOIL SHALL BE TESTED AS APPROPRIATE PER REGULATION AND BASED UPON TANK CONTENT AND FUNCTION. COORDINATION WITH THE DPW-ENRD WILL ENSURE THAT PROPER SAMPLING AND ANALYTICAL METHODS ARE UTILIZED).* SOIL STOCKPILED AS POTENTIALLY IMPACTED MUST BE SAMPLED FOR DISPOSAL CHARACTERIZATION IN ACCORDANCE WITH ALL FEDERAL, STATE, AND LOCAL REQUIREMENTS, AT THE DIRECTION OF THE CONTRACTING OFFICER OR DPW-ENRD REPRESENTATIVE.

DIAGRAM OF TANK LOCATION AND RELATIVE SOIL SAMPLING LOCATIONS *(BOTH IN AERIAL AND CROSS-SECTION PERSPECTIVE)*:

DATE SAMPLES COLLECTED: _____

RESULTS (INCLUDE SAMPLE ID, METHOD # AND UNITS):

ATTACH COPIES OF ALL LABORATORY REPORTS HEREIN.

FINAL DESTINATIONS FOR:

FINAL DESTINATIONS FOR: (CERTIFICATES OF DISPOSAL FOR EACH ITEM, WHEN DPWPOSED OF OFF SITE, ARE TO BE SUBMITTED WITH THIS REPORT FORM)

TANK: _____

TANK CONTENTS: _____

CONTAMINATED SOIL: _____

I certify that the above information is true and correct to the best of my knowledge. Under penalty of law, I certify that all local, state, and federal laws and regulations were strictly adhered to during removal of this tank system. A copy of this report, manifest, all pertinent laboratory reports and other information regarding removal of this tank system shall be submitted to DPW-ENRD within 24-hours of tank removal activities..

ON BEHALF OF: _____

AUTHORIZED SIGNATURE

PRINTED NAME

DATE

PROCEDURE NO. 12

***DIRECTORATE OF PUBLIC WORKS
ENVIRONMENTAL AND NATURAL RESOURCE DIVISION
BUILDING 1442, SUITE 200
FORT BELVOIR, VIRGINIA 22060-5116***

UNDERGROUND FUEL STORAGE TANK REMOVAL REPORT FORM

BLDG/TANK #: _____ / _____ PERMIT NUMBER: _____

DATE WORK BEGAN: _____ DATE WORK COMPLETED: _____

MATERIAL STORED IN TANK: _____

TANK SIZE: _____ GALLONS; LENGTH: _____ FEET; DIAMETER: _____ INCHES

TANK MATERIAL: _____

_____ SINGLE WALLED _____ DOUBLE WALLED

TANK EXTERIOR COATING: _____ NONE _____ TYPE: _____

PIPING MATERIAL: _____ STEEL _____ COPPER _____ PLASTIC

_____ OTHER: _____

_____ PRESSURIZED _____ SUCTION

_____ SINGLE WALLED _____ DOUBLE WALLED

PIPE EXTERIOR COATING: _____

CATHODIC PROTECTION: _____ NONE _____ SACRIFICIAL _____ IMPRESS

TYPE LEAK DETECTION: _____

OVERFILL/SPILL PROTECTION: _____

WAS TANK PUMPED DRY OF CONTENTS PRIOR TO REMOVAL FROM GROUND:

_____ YES _____ NO _____ NOT REQUIRED

WAS THE TANK DEVAPORIZED: _____ YES _____ NO

WAS THE TANK CLEANED: _____ YES _____ NO METHOD: _____

CONDITION OF TANK: _____

WAS THERE EVIDENCE OF CONTAMINATION IN THE SURROUNDING SOIL: _____ YES _____ NO
DESCRIBE:

DURING UST REMOVAL, CONTRACTOR WILL COLLECT CONFIRMATORY SOIL SAMPLES FROM THE TANK PIT AREA, MINIMUM OF ONE DISCRETE SAMPLE FROM SOIL BENEATH EACH END OF THE TANK (TWO SAMPLES MINIMUM) OR FROM AREAS MOST INDICATIVE OF RELEASE OR AS DIRECTED BY CONTRACTING OFFICER OR ENRD REPRESENTATIVE, IN ACCORDANCE WITH ALL FEDERAL, STATE, AND LOCAL REGULATIONS. (NOTE: SOIL SHALL BE TESTED AS APPROPRIATE PER REGULATION AND BASED UPON TANK CONTENT AND FUNCTION. COORDINATION WITH THE DPW-ENRD WILL ENSURE THAT PROPER SAMPLING AND ANALYTICAL METHODS ARE UTILIZED). SOIL STOCKPILED AS POTENTIALLY IMPACTED MUST BE SAMPLED FOR DISPOSAL CHARACTERIZATION IN ACCORDANCE WITH ALL FEDERAL, STATE, AND LOCAL REQUIREMENTS, AT THE DIRECTION OF THE CONTRACTING OFFICER OR ENRD REPRESENTATIVE.

DIAGRAM OF TANK BASIN AND RELATIVE SOIL SAMPLING LOCATIONS (BOTH IN AERIAL AND CROSS-SECTION PERSPECTIVE):

DATE SAMPLES COLLECTED: _____

RESULTS (INCLUDE SAMPLE ID, METHOD # AND UNITS):

ATTACH COPIES OF ALL LABORATORY REPORTS HEREIN.

FINAL DESTINATIONS FOR:

(CERTIFICATES OF DISPOSAL FOR EACH ITEM, WHEN DPWPOSED OF OFF SITE, ARE TO BE SUBMITTED WITH THIS REPORT FORM)

TANK: _____

TANK CONTENTS: _____

CONTAMINATED SOIL: _____

I certify that the above information is true and correct to the best of my knowledge. Under penalty of law, I certify that all local, state, and federal laws and regulations were strictly adhered to during removal of this tank system. A copy of this report, manifest, all pertinent laboratory reports and any other information regarding removal of this tank system shall be submitted to DPW-ENRD within 24-hours of tank removal activities.

ON BEHALF OF: _____

AUTHORIZED SIGNATURE

PRINTED NAME

DATE

PROCEDURE NO. 13

SCOPE OF WORK FOR THE DIRECTORATE OF PUBLIC WORKS ENVIRONMENTAL AND NATURAL RESOURCE DIVISION FORT BELVOIR, VIRGINIA

Aboveground Petroleum-Storage Tank System Removal Services

NOTE: This document represents an example of a generalized scope of work for services. The document must be edited for site and project specificity and to ensure it is inclusive of all specific requirements. This serves as an example only.

1.0 PROJECT DESCRIPTION

1.1 General:

The following Scope of Work (SOW) has been prepared in order to provide the Fort Belvoir Directorate of Public Works-Environmental and Natural Resource Division (DPW-ENRD) with various services related to the removal of out of service petroleum storage tanks. The Contractor shall be required to supply all materials, equipment, and labor to complete the Scope of Work identified below. The Contractor shall submit with the cost proposal, a copy of field procedures, a health and safety plan, personnel health and safety certification, and equipment operator licenses. The Contractor shall install (as necessary) adequate sloping and safety precautions for excavation work. The Contractor must protect all existing government property and utilities within the vicinity of the work areas, and shall be responsible to mitigate any damage that may have occurred during the course of his or her work activities. The Contractor shall be responsible for performing all work activities in accordance with all applicable federal, state, local, and army regulations. The Contractor shall coordinate with the DPW-ENRD or the designated representative of the DPW-ENRD to ensure that all work is performed and documented in accordance with Virginia Department of Environmental Quality (DEQ) requirements.

This SOW is divided into the following main tasks:

Task 1.0 Submittals

Task 2.0 Removal and Replacement of Regulated Aboveground Storage Tank at Bldg. XXX

Task 1.0 Submittals

The contractor shall provide a site specific work plan for review and approval by the government two weeks prior to initiating site work. Once approved the work plan must be adhered to during all subsequent activities. Following the completion of the activities the contractor must submit a tank closure report to the government containing the following items, at a minimum:

- Description of the work performed
- Official laboratory results of the analytical samples
- A site plan indicating scale, north arrow, legend, buildings and roads (labeled), the AST system (all components), soil sample locations and depths
- Any other pertinent nearby feature such as monitoring wells, drinking water wells, streams

- Photos indicating the site before removal activities, during removal activities, and after removal activities
- Photos of the tank indicating general condition
- Copies of disposal bills of lading and/or recycling forms
- Completed copies of the Tank Activity Permit and the Aboveground Storage Tank Removal Report Form (Note: Obtain these documents from the DPW-ENRD Petroleum Program Manager).

Task 2.0 Removal and Replacement of Regulated Aboveground Storage Tank at Bldg. XXX

The Contractor shall remove, decontaminate and properly dispose of the AST located near Building XXX. The contractor shall adhere to the work plan, applicable regulations, and all current industry standards, when performing the requirements of this SOW. The tank and associated appurtenances shall be removed and the site restored as appropriate (including backfilling, seeding, and laying straw of any excavated area) prior to contractor demobilization.

The Contractor shall obtain a DPW Excavation Permit (subsurface utility clearance) from the DPW-Construction Management Division prior to all activities requiring any excavation or other subsurface work. The Contractor shall be solely responsible for adherence to the requirements of this permit (maintaining the markings, renewing the permit as needed, contacting Miss Utility, maintaining a copy of the permit where the work is being performed, etc).

The Contractor shall obtain a Tank Permit from the DPW-ENRD (minimum 48-hrs) prior to beginning any activities associated with the tank.

In the event that petroleum-impacted soil is identified, it shall be removed and disposed of as appropriate and under the guidance of the contracting officer (KO) and the DPW-ENRD technical representative. All soil to be stockpiled shall be placed on top of two layers of 6-mil plastic sheeting and covered by one layer of 6-mil plastic sheeting, with the entire stockpile area appropriately protected from storm water run-on/run-off. Suspected petroleum-contaminated soils shall be stockpiled separately from any other excavated materials. The contract shall be modified to include payment for any additional soil volume based on the agreed upon contract unit rates.

The contractor shall be prepared to collect a minimum of two and a maximum of three discrete soil samples from the area beneath the former AST following tank removal (from areas deemed most likely to indicate a release) and a minimum of one composite sample from the stockpile for disposal characterization. The discrete soil samples shall be analyzed for total petroleum hydrocarbons (TPH) diesel range organics (DRO) by approved EPA method SW846 8015B or comparable (as defined by the Commonwealth of Virginia petroleum storage tank regulations and the petroleum storage tank technical manual.) Sample results shall be provided to the DPW-ENRD within 15 days of tank removal activities.

2.1 Tank Removal

The Contractor shall obtain a copy of Fort Belvoir's MS4 permit and will ensure compliance with said permit for any action disturbing ground surface area of 2500 square feet or greater. The Contractor shall submit an application for a Virginia Pollution Discharge Elimination System (VPDES) construction permit for any action disturbing ground surface area of 1 acre or greater. Throughout soil excavation and ground surface disturbance activities, the Contractor shall adhere to the requirements of the Fairfax County Public Facilities Manual in regards to soil and erosion control and best management practices.

The Contractor shall be required to disconnect the supply and return lines from the boiler (or other applicable equipment) and allow all product inside the lines to flow back to the tank. The Contractor shall then cap off the lines by using screw-on caps or double-crimping of the line. Crimping the line requires the Contractor to fold over the end of the piping onto itself at least twice and crimp in a fashion that will not allow any product to leak from the line. Any sub-terrain piping or connections must be appropriately drained, isolated, and removed or appropriately abandoned.

The Contractor shall utilize a pump truck to effectively remove and transport all material remaining inside the tank. The Contractor is solely responsible for the removal and disposal of any remaining fuel and/or sludge removed from the tank in accordance with all current federal, state, and local laws. The remaining fuel and /or sludge must be manifested through the DPW-ENRD for appropriate government signature on all shipping documents. After removal of all material, the Contractor shall be required to seal off the fill pipe opening.

The Contractor shall be required to open the end of the tank by utilizing a non-sparking tool. Tanks shall first be de-vaporized using a current API method prior to cutting open the tank. All tanks will be cleaned prior to removal from Fort Belvoir. The cleaning process shall include sludge removal by vacuum system and/or squeegee. The Contractor shall be responsible for the proper transportation and disposal of all sludge. All sludge must be manifested through the DPW-ENRD office and receive appropriate government signature. The contractor is responsible for properly coordinating such events to ensure signatory availability.

The Contractor shall be required to load the tank onto a transport vehicle of sufficient size to support the load and block, strap or secure in a manner that will provide firm and secured support during transport. All current transportation laws and regulations shall be adhered to.

The tank shall be disposed of at an approved recycling or metal recovering facility, or by an alternative method that has received prior approval from the Contracting Officer. A Certificate of Disposal must be obtained from the facility for the disposed tank.

Task 2.2 Petroleum-Impacted Soil Disposal (if required)

If visibly impacted soils (including free liquid petroleum hydrocarbons) are discovered during tank closure, the DPW-ENRD shall be notified **immediately** and in conjunction with the KO will direct removal of impacted soil as an Initial Abatement Measure to mitigate further impact to the environment. Soils shall be stockpiled in an area identified by the Contracting Officer or DPW-ENRD representative. All soil to be stockpiled shall be placed on top of two layers of 6-mil plastic sheeting and covered by one layer of 6-mil plastic sheeting, with the entire stockpile area appropriately protected from storm water run-on/run-off. Suspected petroleum-impacted soils shall be stockpiled separately from any other excavated materials.

Following removal of any impacted soil, the Contractor shall be required to collect a minimum of two grab soil samples, one from each end of the excavated area or as directed by the contracting officer or DPW-ENRD representative. If groundwater is encountered within the excavated area the samples shall be collected from the sidewalls at the soil/water interface. The Contractor, at the direction and oversight of the DPW-ENRD, shall collect these soil samples and will be responsible for shipping and analysis of the soil samples, and will provide the DPW-ENRD copies of the analytical results for reporting/decision-making purposes. Sample collection, packaging, and preservation must be in accordance with industry standards and as dictated by the laboratory to ensure results as representative of site conditions as possible. Samples from diesel or heating oil tanks shall be analyzed by EPA approved method SW846 8015B for total petroleum hydrocarbons (TPH). Any other fuel types shall be sampled in accordance

with the Virginia Petroleum and solid waste regulations. Please note that DEQ reporting requirements provide a 24-hr window for reporting of confirmed releases so analytical results must be provided to the DPW-ENRD immediately upon reception from the laboratory.

After soil removal has been completed a soil stockpile sample will be collected for quick-turn around analysis. The soil stockpile sampling must include all sampling requirements of the Virginia petroleum and solid waste requirements or be inclusive of the requirements of a pre-approved recycling facility. Once the soil stockpile has been characterized, the excavated soil shall be transported off-site by a licensed waste disposal company and treated/disposed of at a licensed facility permitted to accept this waste material. No disposal of soils shall occur without the express authorization of the Government. Land filling of the impacted soil is not a disposal option for this project. Suggested disposal options include off-site thermal treatment or recycling. A soil disposal bill of lading signed by a DPW-ENRD government representative shall accompany each truck en-route to the disposal facility. The contractor must coordinate with the DPW-ENRD to ensure availability of government signatory authorities. The government accepts no responsibility for truck wait time due to improperly coordinated signature actions.

Ticket weights shall be provided by the disposal facility to determine true volume of impacted soil accepted. All certificates of disposal shall be forwarded to the DPW-ENRD within 15 working days upon completion of the project.

2.3 Site Restoration and Tank Placement

The contractor shall backfill any excavated area with clean backfill and compact to 85% compaction rate in turf areas and 95% compaction in hardstand areas. Use of excavated soil or new backfill will be at the direction of the Contracting Officer and the DPW-ENRD.

PROCEDURE NO. 14

GENERALIZED SCOPE OF WORK FOR THE DIRECTORATE OF PUBLIC WORKS ENVIRONMENTAL AND NATURAL RESOURCE DIVISION FORT BELVOIR, VIRGINIA

Underground Petroleum-Storage Tank System Removal Services

NOTE: This document represents an example of a generalized scope of work for services. The document must be edited for site and project specificity and to ensure it is inclusive of all specific requirements. This serves as an example only.

2.0 PROJECT DESCRIPTION

2.1 General:

The following Scope of Work (SOW) has been prepared in order to provide the Fort Belvoir Directorate of Public Works-Environmental and Natural Resource Division (DPW-ENRD) with various services related to the removal of out of service petroleum storage tanks. The Contractor shall be required to supply all materials, equipment, and labor to complete the Scope of Work identified below. The Contractor shall submit with the cost proposal, a copy of field procedures, a health and safety plan, personnel health and safety certification, and equipment operator licenses. The Contractor shall install (as necessary) adequate sloping and safety precautions for excavation work. The Contractor must protect all existing government property and utilities within the vicinity of the work areas, and shall be responsible to mitigate any damage that may have occurred during the course of his or her work activities. The Contractor shall be responsible for performing all work activities in accordance with all applicable federal, state, local, and army regulations. The Contractor shall coordinate with the DPW-ENRD or the designated representative of the DPW-ENRD to ensure that all work is performed and documented in accordance with Virginia Department of Environmental Quality (DEQ) requirements.

This SOW is divided into the following main tasks:

Task 1.0 Submittals

Task 2.0 Removal of Regulated Underground Storage Tank at Bldg. XXX

Task 1.0 Submittals

The contractor shall provide a site specific work plan for review and approval by the government two weeks prior to initiating site work. Once approved the work plan must be adhered to during all subsequent activities. Following the completion of the activities the contractor must submit a tank closure report to the government containing the following items, at a minimum:

- Description of the work performed
- Official laboratory results of the analytical samples
- A site plan indicating scale, north arrow, legend, buildings and roads (labeled), the UST system (all components), soil sample locations and depths
- Any other pertinent nearby feature such as monitoring wells, drinking water wells, streams

- Photos indicating the site before removal activities, during removal activities, and after removal activities
- Photos of the tank indicating general condition
- Copies of disposal bills of lading and/or recycling forms
- Completed copies of the Tank Activity Permit and the Underground Storage Tank Removal Report Form (Note: Obtain these documents from the DPW-ENRD Petroleum Program Manager).

Task 2.0 Removal of Regulated Underground Storage Tank at Bldg. XXX

Building XXX- The tenant of Building XXX is currently renovating the building. The existing regulated underground storage tank (UST) will be rendered obsolete by the actions. The UST shall be closed, removed, and properly disposed of in accordance with all applicable federal, state, local and Army regulations. The contractor must properly coordinate and schedule the work to prevent any impact to the building renovation schedule. Work activities shall be documented in a format acceptable for submittal to the DEQ. Care shall be taken to minimize impacts to the building, surrounding facilities, and operations within the area near the UST.

The Contractor shall remove, decontaminate and properly dispose of the (*capacity*)-gallon UST. The Contractor shall demolish, remove, and properly dispose of the concrete above the tank. The Contractor must then restore the site to pre-excavation conditions following removal. The Contractor shall also protect the components of the existing Veeder-Root Automatic Tank Gauge and shall properly remove the sensors, probes, and CPU/monitor and shall provide all components to the government for appropriate storage and re-use. Conduit and wiring from the tank basin to the CPU/Monitor may be properly abandoned in place.

In the event that petroleum-impacted soil is identified, it shall be removed and disposed of as appropriate and under the guidance of the contracting officer (KO) and the DPW-ENRD technical representative. All soil to be stockpiled shall be placed on top of two layers of 6-mil plastic sheeting and covered by one layer of 6-mil plastic sheeting, with the entire stockpile area appropriately protected from storm water run-on/run-off. Suspected petroleum-impacted soils shall be stockpiled separately from any other excavated materials. The contract shall be modified to include payment for any additional soil volume based on the agreed upon contract unit rates.

Task 2.1 Soil Excavation and Stockpile

The Contractor shall obtain a DPW Excavation Permit (subsurface utility clearance) from the DPW-Construction Management Division prior to all activities requiring any excavation or other subsurface work. The Contractor shall be solely responsible for adherence to the requirements of this permit (maintaining the markings, renewing the permit as needed, contacting Miss Utility, maintaining a copy of the permit where the work is being performed, etc).

The Contractor shall obtain a Tank Activity Permit and an UST Removal Report Form from the DPW-ENRD (minimum 48-hrs) prior to beginning any activities associated with the tank.

The Contractor shall obtain a copy of Fort Belvoir's MS4 permit and will ensure compliance with said permit for any action disturbing ground surface area of 2500 square feet or greater. The Contractor shall submit an application for a Virginia Pollution Discharge Elimination System (VPDES) construction permit for any action disturbing ground surface area of 1 acre or greater. Throughout soil excavation and

ground surface disturbance activities, the Contractor shall adhere to the requirements of the Fairfax County Public Facilities Manual in regards to soil and erosion control and best management practices.

The Contractor shall remove the overburden from above the tank and stockpile it near the excavation. All soil to be stockpiled shall be placed on top of two layers of 6-mil plastic sheeting and covered by one layer of 6-mil plastic sheeting, with the entire stockpile area appropriately protected from storm water run-on/run-off. Suspected petroleum-impacted soils shall be stockpiled separately from any other excavated materials. Non-impacted overburden soil removed from the excavation may be used for excavation backfill. Soil removal shall be from an approximate depth of two feet to approximately 15 feet below ground surface or to groundwater, whichever occurs first.

The contractor shall be responsible for providing a vacuum truck on-site to remove any water that seeps into the excavations during work. Any water evidencing petroleum contamination must be properly disposed of following completion of work activities.

During soil removal operations, the excavated material shall be field screened using a photo-ionization detector (PID) or a flame ionization detector (FID). Visually stained material and material exhibiting elevated soil vapor concentrations (in relation to surrounding soil) during field screening shall be segregated and stockpiled for subsequent sample collection and laboratory analyses. The stockpiled material shall be placed in a bermed polyethylene plastic-lined area, and covered with polyethylene plastic sheeting to prevent contact of petroleum impacted soil with rain-water, and potential contaminant migration to adjacent soil, ground water or surface water bodies. Excavation zones, from which impacted material is removed, shall be lined with plastic and temporarily backfilled pending results of disposal characterization and post excavation analyses.

Soil Sampling and Analysis

The contractor shall perform confirmatory and stockpile soil sample collection and analysis for the Building XXX site. The contractor shall be prepared to collect a minimum of two and a maximum of three discrete samples from the tank basin following soil excavation (from areas deemed most likely to indicate a release) and a minimum of one composite sample from the stockpile for disposal characterization. The discrete tank basin samples shall be analyzed for total petroleum hydrocarbons (TPH) diesel range organics (DRO) by approved EPA method SW846 8015B or comparable (as defined by the Commonwealth of Virginia petroleum storage tank regulations and the petroleum storage tank technical manual.) Sample results shall be provided to the DPW-ENRD within 15 days of tank removal activities.

Task 2.2 Petroleum-Impacted Soil Disposal (if required)

If petroleum-impacted soil was observed during tank removal actions and excavated and segregated at the direction of the KO and the DPW-ENRD technical representative, the following requirements apply. Assume that approximately 25 tons of petroleum-impacted soil (per tank) shall require appropriate handling and removal.

After soil removal has been completed a soil stockpile sample will be collected for quick-turn around analysis. The soil stockpile sampling must include all sampling requirements of the petroleum and solid waste requirements or be inclusive of the requirements of a pre-approved recycling facility. Once the soil stockpile has been characterized, the excavated soil shall be transported off-site by a licensed waste disposal company and treated/disposed of at a licensed facility permitted to accept this waste material. No disposal of soils shall occur without the express authorization of the Government. Land filling of the impacted soil is not a disposal option for this project. Suggested disposal options include off-site thermal

treatment or recycling. A soil disposal bill of lading signed by a DPW-ENRD government representative shall accompany each truck en-route to the disposal facility. The contractor must coordinate with the DPW-ENRD to ensure availability of government signatory authorities. The government assumes no responsibility for truck wait time due to improperly coordinated signature actions.

Ticket weights shall be provided by the disposal facility to determine true volume of impacted soil accepted. All certificates of disposal shall be forwarded to the DPW-ENRD within 15 working days upon completion of the project.

Task 2.3 Site Restoration

Provided that all soils evidencing obvious impact (heavy odor, staining, or high concentrations based upon field screening mechanisms) were successfully removed, and that government and authorized representatives agreed that excavation and removal actions are complete, the excavation may be backfilled with clean fill. The temporary backfill material shall be removed and replaced with clean crushed stone and compacted material placed in 8-inch loose lifts to within 95 percent of ASTM D-698 to sub grade. Ground surface shall be graded and seeded to pre-excavation conditions or otherwise restored to pre-excavation conditions as applicable.

The contractor shall be responsible for providing a vacuum truck on-site to remove any water that seeps into the excavations during work. Any water evidencing petroleum impact must be properly disposed of following completion of work activities.

PROCEDURE NO. 15

PETROLEUM MANAGEMENT PROGRAM – DRUM TRACKING PROCEDURE

The Petroleum Management Program encompasses remedial actions associated with petroleum releases to the environment. These remedial actions sometimes include spill response or investigatory drilling or cleaning of remediation system components. In many cases these and other associated activities generate solid and liquid petroleum-impacted wastes. In order to ensure that drums of oily water, petroleum-impacted soil, spill response materials etc. are properly handled and transported, the following procedure was developed.

(1) The Remediation Contractor coordinates with the Directorate of Public Works – Environmental and Natural Resource Division (DPW-ENRD) Petroleum Program Manager regarding the anticipated schedule of activities. The DPW-ENRD Petroleum Program Manager confirms with the DPW-ENRD Hazardous Waste Turn-in Operator that there are adequate drums available for the Remediation Contractor to pick up to accommodate the anticipated waste generation associated with the scheduled activities.

The DPW-ENRD Petroleum Program Manager also provides a schedule of anticipated drum requirements and generation to the DPW-ENRD Hazardous Waste Turn-in Operator so that he or she will know how much space will be required to stage the drums at Building 1495.

(2) The Remediation Contractor initiates well installation or Geo-probing™ and picks up drums from Building 1495 to containerize the cuttings. The Remediation Contractor typically collects samples during well installation or geo-probing activities and these results are often utilized for disposal purposes as well (based on generator knowledge of the cause of the contamination- i.e. fuel oil from a storage tank that leaked. (Note: Sometimes disposal characterizations or different receiving facilities require different analyses, and the DPW-ENRD Petroleum Program Manager must coordinate with the DPW-ENRD Hazardous Waste Program Manager to ensure that all required tests are performed.)

(3) The DPW-ENRD Petroleum Program Manager calls the Remediation Contractor daily during work activities to establish the number of drums of cuttings at each respective site. These drums must be appropriately labeled, with the date included, and have the drum tops closed completely in preparation for transport to Building 1495. The DPW-ENRD Petroleum Program Manager enters the site name, number of drums, and the date into the drum tracking spreadsheet. (File name "drum_tracking.xls")

(4) After receiving appropriate government approval, the DPW-ENRD Petroleum Program Manager calls/faxes in a service order to the Base Operations Contractor to transport the drums to Building 1495. The DPW-ENRD Petroleum Program Manager must verify through the Remediation Contractor or by visual check that all drums are properly closed prior to contacting the Base Operations Contractor. The DPW-ENRD Petroleum Program Manager also contacts the DPW-ENRD Hazardous Waste Turn-in Operator and schedules a drop-off time for the Base Operations Contractor to leave the drums at Building 1495. The DPW-ENRD Petroleum Program Manager coordinates with the Base Operations Contractor to relay the agreed upon drop-off time or includes the instructions within the text of the service order fax. (For example: "Please pick up six drums of non-hazardous petroleum-impacted investigation derived waste from the 3161 fuel facility and deliver to the DPW- ENRD Hazardous Waste Turn-in Operator at Bldg 1495 on Thursday, XX June between 1300 and 1400".)

(5) The DPW-ENRD Petroleum Program Manager then tracks the status of the service order or coordinates with DPW-ENRD Hazardous Waste Turn-in Operator to ensure that the drums arrived at 1495 as scheduled. Once the DPW-ENRD Petroleum Program Manager knows that the DPW-ENRD Hazardous Waste Turn-in Operator has the drums, the DPW-ENRD Petroleum Program Manager updates the drum tracking spreadsheet to indicate drum arrival date at Building 1495. The DPW-ENRD Petroleum Program Manager provides the associated analytical results on the drum samples to the DPW-ENRD Hazardous Waste Program Manager for use in drum disposal.

In the event that bulk petroleum-impacted soil is going to be generated during an investigatory or remedial action, the DPW-ENRD Petroleum Program Manager will work with the Government, the Remediation Contractor, and the DPW-ENRD Hazardous Waste Program Manager to evaluate alternate handling and disposal options, such as soil stockpiling and transportation to Clean Earth of Maryland or another approved recycling facility, or the use of bulk containers such as roll-off units for soil accumulation.

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APPENDIX A
TANK SYSTEM LOCATION MAP

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Legend

• BelvoirGPS	— STREAM	• FUEL_TANK
• OIL_WATER_SEPARATOR	— STORM_OPEN_DRAINAGE	■ SPILL_CONTAINMENT
• SPILL_RESPONSE_FEATURE	— STORM_LINE	□ INSTALLATION
• STORM_DISCHARGE	— STORM_CULVERT	▨ WETLAND
• STORM_INLET		



FORT BELVOIR TANK SYSTEM LOCATION MAP

APPENDIX B
CONSOLIDATED SPILL RESPONSE GUIDE

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CONSOLIDATED SPILL RESPONSE GUIDE

This Spill Response Guide applies to all entities on Fort Belvoir. In accordance with federal, state, and Department of Army spill plan regulations, this Spill Response Guide serves as a “stand alone” document that addresses petroleum and/or hazardous material/hazardous waste releases. This Spill Response Guide also contains release reporting requirements (Attachment 1), emergency telephone numbers (Attachment 2), and a regulatory agency notification form (Attachments 3 & 4) which may assist in the efficient response to a release incident at Fort Belvoir.

For the Facilities included in Appendix C, this spill guide is supplemented with more detailed site specific information and procedures.

Release Discovery Actions

Personnel discovering a petroleum, hazardous material, or hazardous waste release shall follow the spill assessment procedures illustrated in Appendix B Figure 1 to identify the most appropriate course of action. Initial response actions shall be based on the necessity to immediately notify the Fire Prevention and Protection Division, the personnel's level of spill response training, the characteristics of the release incident, and the need to maintain personnel safety.

Emergency Response Notification Actions

If a fire, explosion, or threat thereof associated with the release is identified or suspected and the building or site is equipped with an automated alarm box or similar emergency system, then activate the alarm.

Otherwise, call the Fort Belvoir Fire Prevention and Protection Division at

(703) 781-1800, or
(703) 806-6911

from a telephone located at a safe distance from the spill site. Provide the following information to the Watch Officer (located at the Emergency Operations Center at building 2119), and stay at the incident site until the Fire Prevention and Protection Division Incident Response Team arrives:

- Location of the spill or release, and specific areas affected;
- Time of the incident or time of discovery;
- Any known injuries or personnel requiring rescue assistance;
- Type and estimated quantity or volume of materials involved in the incident;
- Rate of release, if continuing;
- Estimated extent of affected area;
- Any known hazards associated with the spilled or released material;
- Any control measures taken to date; and
- Other relevant information that may be useful to the Fire Prevention and Protection Division.

Figure 1

PETROLEUM OR HAZARDOUS MATERIAL/WASTE SPILL ASSESSMENT PROCEDURES

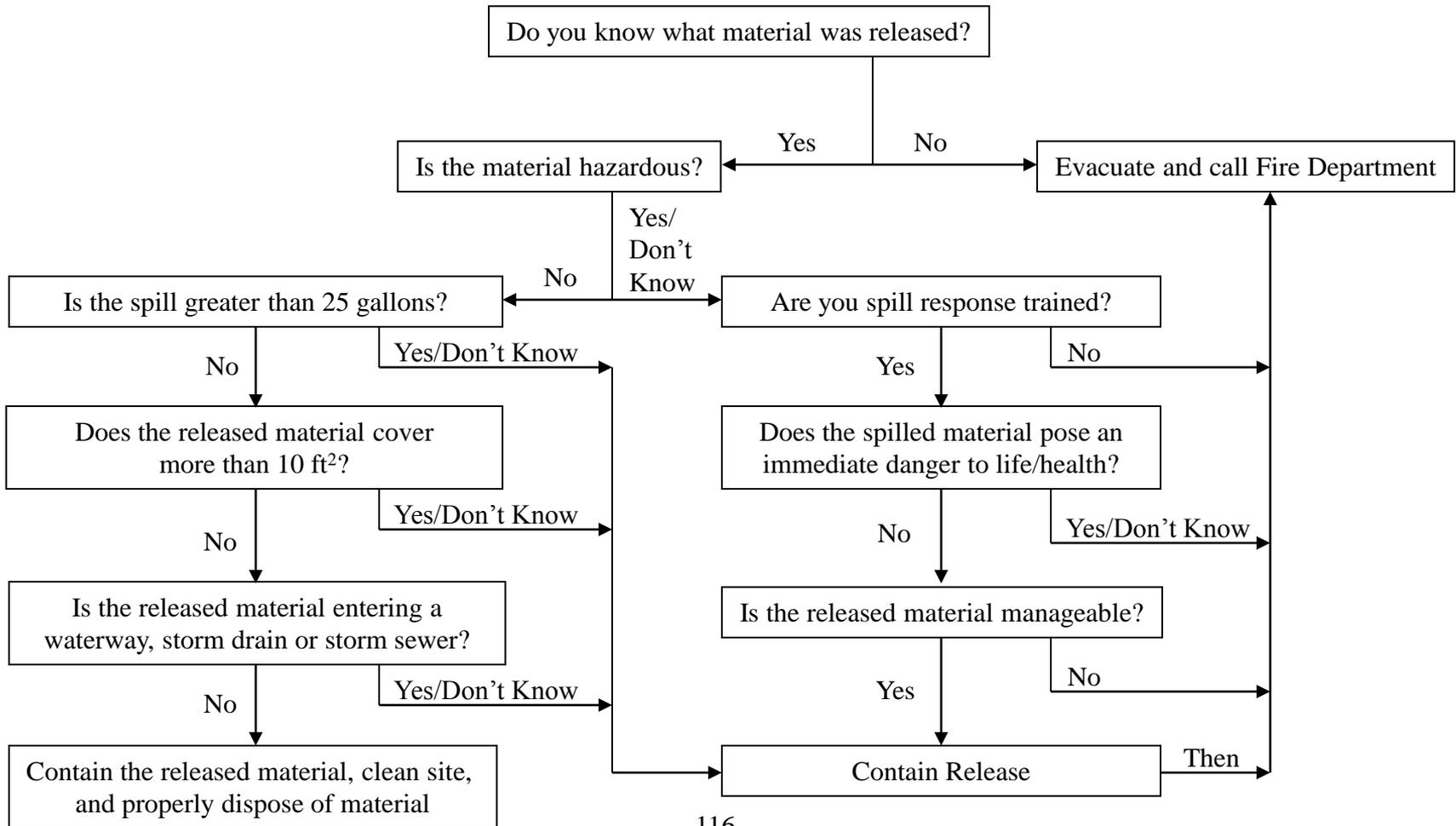
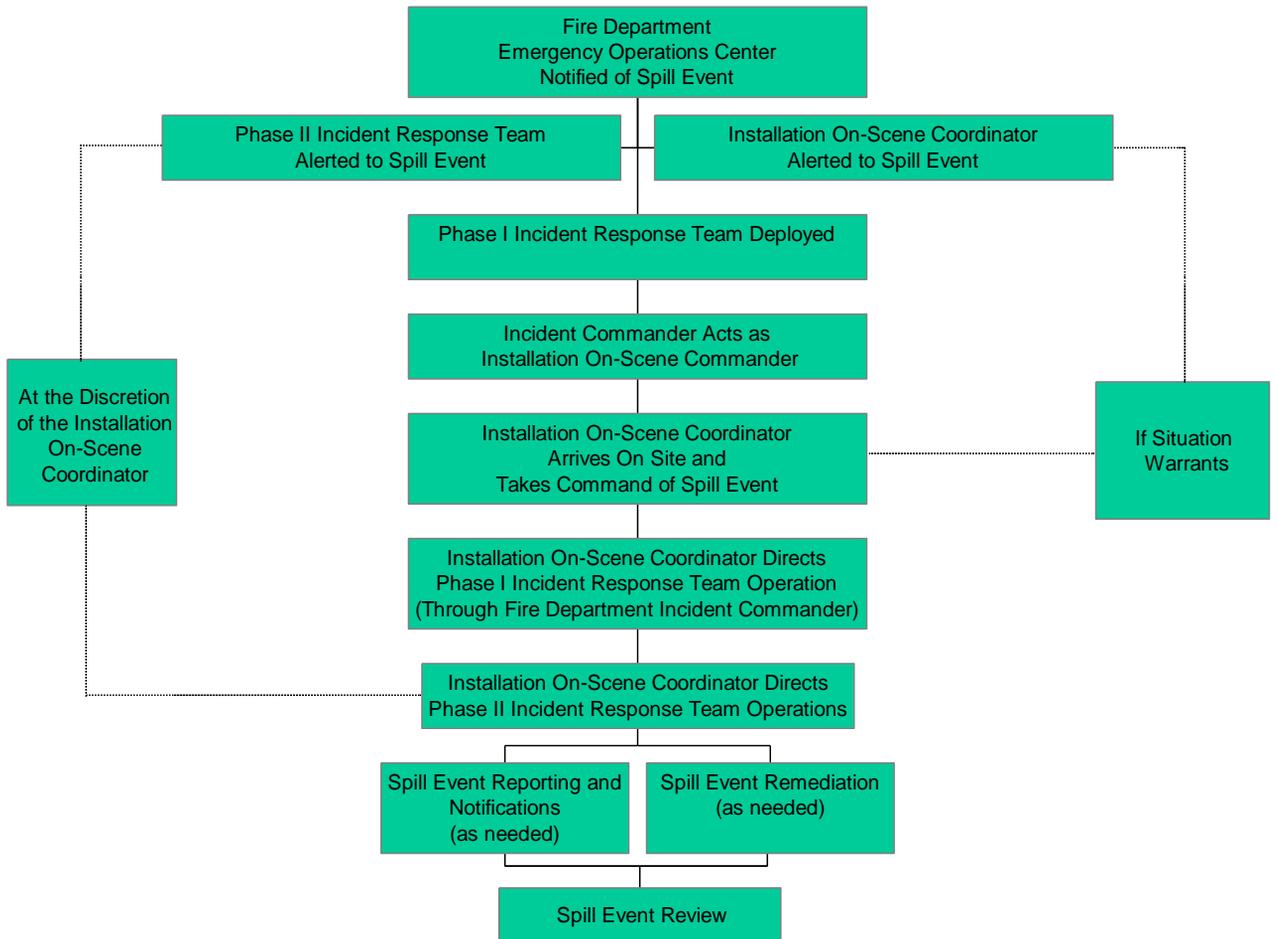


Figure 2

Spill Response Procedures



Spill Response Procedures

Containment and control of releases at Fort Belvoir are achieved through the usage of an incident command system and the coordinated effort of multiple trained spill response personnel. Response procedures performed by spill response personnel and the chronology of the actions are described below.

1. Notification Concerning Spill Event Received By Emergency Operations Center

- Emergency Operations Center gathers and records information from caller.
- Based on type of call and nature of incident, Emergency Operations Center dispatches Fire Prevention and Protection Division Phase I Incident Response Team in accordance with Standard Operating Procedure DPW-014-00.
- Emergency Operations Center notifies command-designated Installation On-Scene Coordinator (IOSC).
- Emergency Operations Center notifies the installation facilities management contractor Phase II Incident Response Team to initiate stand-by status.
- Emergency Operations Center provides a centralized communications center during the release response event.

2. Phase I Incident Response Team Arrival at Release Incident Site

- Ranking officer declares the Incident Command System is activated
- Ranking officer identifies him/her self as the Incident Commander and acting IOSC
- Incident Commander deploys the Phase I Incident Response Team to begin emergency operations.

3. Incident Commander acting as the IOSC

- Ascertains the type and extent of the incident
- Establishes incident command installation and request additional support, if needed
- Evaluates the incident to determine if the MSP should be implemented
- Alerts the command-designated IOSC

4. Command-Designated IOSC Arrival at Release Incident Site

- Takes command of IOSC responsibilities from the Incident Commander
- Evaluates the incident to determine if the MSP should be implemented and what level of notifications need to be made and if the incident necessitates the evacuation of any portion of Fort Belvoir
- Alerts Garrison Commander if additional manpower is needed to contain and control the incident or if the release is likely to impact areas outside of Fort Belvoir's boundaries
- Alerts the Phase II Incident Response Team, if needed, for additional support
- Alerts Fort Belvoir organizations, federal, state, and local emergency response organizations, or environmental remediation contractor(s) for additional support services as needed
- Alerts representatives of nearby environmentally sensitive natural resource areas or the county wastewater treatment facility if the release event may impact these sites

5. Spill Reporting Notification

- Command Designated IOSC (or authorized Directorate of Public Works personnel only) notifies appropriate federal, state, local, and Army agencies by telephone in a timely manner if the quantity

of released material and the circumstances of the release require such notification

6. Phase I Incident Response Team Operations

- Performs rescues, fire/explosion suppression actions, and arranges emergency medical treatment, as needed
- Stops facility operations that may impact or that may be impacted by the incident
- Takes actions to contain and control the release and to prevent additional releases to the environment

7. Spill Response Actions

- The IOSC develops overall response objectives and strategies for the release incident
- When required response actions involve the Phase I Incident Response Team, the IOSC issues instructions through the Incident Commander, who directly commands the Phase I Incident Response Team
- When required, the IOSC directs the Phase II Incident Response Team to assist the Phase I Incident Response Team in accomplishing specific spill control and containment objectives and perform any necessary evacuation
- The IOSC coordinates spill response actions with other outside agencies, as needed

8. Release of the Phase I and II Incident Response Teams

- After all immediate hazards have been controlled and the spill event is contained and stabilized, the IOSC releases the Phase I Incident Response Team from the site
- After the spill has been controlled and repairs have been made at the release site, the IOSC directs the termination of any evacuation efforts and releases the Phase II Incident Response Team from the site

9. Spill Incident Remediation

- The IOSC directs a selected environmental remediation contractor to accomplish remediation of the spill site as needed
- The IOSC arranges for appropriate disposal of contaminated materials soils, ground-water, spill control materials, etc. and decontamination of spill control equipment and supplies

10. Post Spill Reporting

- The IOSC prepares all documentation required by federal, state, local, and Army agencies concerning the release incident
- The Incident Commander and IOSC support staff assists the IOSC in the preparation of required documentation as needed

11. Spill Event Review

- Within 90 days of the release incident, the IOSC, Incident Commander and/or individuals who played key roles in the various response actions conduct a review of the release response actions to determine the circumstances of the release, the success of the response efforts, and the need for modification of prevention or response measures at the Post.

ATTACHMENT 1 - SPILL REPORTING CRITERIA

DPW ENRD shall record **ALL** release incidents in the IAMR

Release Scenario	Agencies To Be Notified By Telephone By The Command Designated IOOSC or Authorized Directorate of Public Works (DPW) Personnel Only	Response Time	Agencies To Be Notified With Follow-Up Written Documentation By Command Designated IOOSC or Authorized DPW Personnel	Response Time
PETROLEUM – Surface Release				
Release is greater than 25 gallons but does <u>not</u> go into water	Virginia Department of Environmental Quality (DEQ)	Immediate	Virginia DEQ	10 days
Release (no minimum quantity) which (a) violates applicable water quality standards, or (b) causes a film or sheen upon or discoloration of the surface of the waters of the United States or adjoining shorelines or causes a sludge or emulsion to be deposited beneath the surface of the waters of the United States	(i) National Response Center (ii) United States Coast Guard (USCG) (iii) Virginia DEQ (iv) Maryland Department of the Environment (MDE) if enters Potomac River (v) Army Environmental Command	Immediate Immediate Immediate Immediate	Virginia DEQ USEPA Region III, USCG, and MDE will notify Fort Belvoir if documentation is required	10 days ----
Release enters sanitary sewer system which conducts wastewater flow to a treatment facility.	(i) Fairfax County Lower Potomac Pollution Control Plant (Trouble Response Center for the Industrial Waste Section) (ii) Virginia DEQ	Immediate Immediate	Fairfax County Lower Potomac Pollution Control Plant Virginia DEQ	5 days 10 days
Facility has discharged more than 1,000 gallons of oil into or upon the navigable waters of the United States or adjoining shorelines in a single spill event, or discharged oil in harmful quantities, as defined in 40 CFR, Part 110, into or upon the navigable waters of the United States or adjoining shorelines in two spill events occurring within any 12-month period.	Not Applicable (N/A)	N/A	USEPA Region III Regional Administrator	60 days
PETROLEUM – Subsurface Release				
Release from a UST has been detected	Virginia DEQ	24 hours	Virginia DEQ	30 days
HAZARDOUS MATERIALS/WASTES				
Hazardous material/waste release of a quantity greater than the reportable quantity listed in 40 CFR, Part 302.4 Or Hazardous material/waste release, fire, or explosion which could threaten human health or the environment at the facility	(i) National Response Center (ii) Virginia DEQ (iii) Local Public Safety Communications Center (iv) Army Environmental Command (v) USCG if reaches water (vi) MDE if enters Potomac River (vii) Fairfax County Lower Potomac Pollution Control Plant if enters sanitary sewer system leading to treatment facility	Immediate Immediate Immediate Immediate Immediate Immediate Immediate	(i) USEPA Region III (ii) Virginia DEQ (iii) Local Emergency Planning Committee (iv) Army Environmental Command (v) USCG (vi) MDE (vii) Fairfax County Lower Potomac Pollution Control Plant	15 days 15 days 15 days 15 days 15 days 15 days 5 days

ATTACHMENT 2 – FORT BELVOIR EMERGENCY TELEPHONE NUMBERS		
ORGANIZATION	CONTACT PERSON	TELEPHONE NUMBER
DPW Fire Prevention and Protection Division Emergency Operations Center Bldg. 2119.	<u>Emergency</u>	(703) 781-1800 (On-Post) (703) 806-6911 (On-Post)
	<u>Incident Commander: Fire Chief</u>	(703) 806-6916 (Duty)
	<u>Incident Commander Alternate: Assistant Fire Chief</u>	(703) 805-4911 (Duty)
DPW Environmental and Natural Resource Division, Bldg. 1442.	<u>Installation On-Scene Coordinator: Chief, DPW ENRD</u>	(703) 806-3193 (Duty)
	<u>DPW ENRD Environmental Specialists (Installation On-Scene Coordinator Alternates): Chief, Environmental Compliance Branch</u>	(703) 806-0020 (Duty)
	<u>Petroleum Manager</u>	(703) 806-3694 (Duty)
	<u>Hazardous Waste Manager</u>	(703) 806-2119 (Duty)
	<u>DPW, Deputy Director (Installation On-Scene Coordinator Alternate):</u>	(703) 806-4194 (Duty)
	<u>Chief, Natural Resources Branch:</u>	(703) 806-0049 (Duty)
DPW Facilities Management Contractor (ALEUT), Bldg. 1420.	<u>Roads and Grounds Manager/Phase II Incident Response Team Point of Contact:</u> Mr. Austin Bolling, Manager Mr. Sean Morrison, Grounds Maintenance Mr. Ronnie Barnes, Pump Truck Drive	(703) 498-9555 (Cell) (703) 595-7698 (Cell) (703) 498-9379 (Cell)
	<u>Additional Points of Contact:</u> Mr. Peter Seufert, Project Manager Mr. Paul Meyer, Deputy Project Manager Mr. Mike Smoot, IJO Coordinator Mr. Steve Pitts, ES&H Manager Mr. Johnny Roberts, Environmental QC Mr. Brad Cassise, Environmental QC	(719) 433-5324 (Cell) (719) 596-3164 (Cell) (703) 357-8510 (Cell) (703) 376-4132 (Cell) (703) 296-7071 (Cell) (703) 357-0948 (Cell)
Logistics Readiness Center, Bldg. 766, 9910 Tracy Loop.	Plans and Operations Branch Transportation Branch Supply Division/Property Book	(703) 805-5505 (Duty) (703) 805-5674 (Duty) (703) 805-2836/3264 (Duty)
Provost Marshal's Office, Bldg. 1131.	MP Desk Sergeant (Emergency) Military Police (Emergency)	(703) 806-3104,3105, 3106 (703) 805-1104
Fort Belvoir Community Hospital, Bldg. 1230, 9300 DeWitt Loop.	Ambulance Shelter Bldg 1233 Emergency Room (Wing C), Bldg 1230 General Hospital, Bldg 1230	None as of Oct 2011 (571) 231-3124/3162 (571) 231-3066/3067
Installation Safety Office, Bldg. 1469.	Manager	(703) 806-3270 (Duty)
Office of the Staff Judge Advocate, Bldg. 257.	Staff Judge Advocate Ms. Susie Gillett	(703) 805-4389 (Duty)
Mission and Installation Contracting Command (MICC), Bldg. 1425.	Manager	(703) 806-4459 (Duty)
EMERGENCY SPILL RESPONSE/REMEDIAION CONTRACTORS		
Clean Harbors, Inc.	Emergency Attendant	(800) 622-3360 (800) 645-8265 (24-Hour)
IMS/HEPACO	Emergency Attendant	(800) 229-4671 (540) 372-9890 (24-Hour)

ATTACHMENT 3 – EXTERNAL EMERGENCY TELEPHONE NUMBERS

ATTACHMENT 3 – EXTERNAL EMERGENCY TELEPHONE NUMBERS

RELEASE NOTIFICATION PHONE NUMBERS (Notifications to Regulatory Agencies will ONLY be made by Command Designated Installation On-Scene Coordinator and/or authorized DPW Public Works personnel)

ORGANIZATION	TELEPHONE NUMBER
National Response Center (NRC): The NRC will notify USEPA Region III, the U.S. Coast Guard (USCG), and, if applicable, the Maryland Department of the Environment (MDE) and/or other federal and state agencies as needed.	(800) 424-8802 (24-Hour)
VDEQ's Valley Regional Office shall be contacted if a spill occurs during normal daytime hours at Fort Belvoir Rivanna Station. Virginia Department of Environmental Quality (VDEQ), P.O. Box 10009, Richmond, VA 23240: Virginia's Dept. of Emergency Management (VDEM) shall be contacted if a spill occurs during evening or weekend hours. VDES, in turn, will notify VDEQ's Valley Regional Office of the reported release.	(540) 574-7800 (540) 574-7878 (fax) (804) 698-4000 or (800) 468-8892 (800) 468-8892 (24-Hour) (804) 674-2400
Fairfax County Public Safety Communications Center (PSCC): In the case of a spill event, the PSCC shall notify the Local Emergency Planning Committee (Local Emergency Planning Committee)-designated Emergency Response Coordinator.	9-1-1 (Emergency) (703) 691-2131 (Non-Emergency)
Fairfax County Lower Pollution Control Plant (Trouble Response Center)	(703) 323-1211 (Emergency)
Department of the Army U.S. Army Environmental Command (AEC), Attn.: CETHA-EC-S, Aberdeen Proving Ground, MD 21010-5401.	(301) 671-4714/2427 24-Hour
Environmentally Sensitive Areas in the Vicinity of Fort Belvoir	
Fairfax County Park Authority	(703) 324-8700
Huntley Meadows Park Superintendent	(703) 768-2525
Mason Neck State Park Superintendent	(703) 550-0362 or (703) 550-0960
Mason Neck National Wildlife Refuge Superintendent	(703) 491-6255
Pohick Bay Regional Park Superintendent	(703) 339-6100

Fort Belvoir's EOC has additional 24 hour contact information for Fort Belvoir Staff.

ATTACHMENT 4 - REGULATORY AGENCY NOTIFICATION FORM

Complete this checklist to document telephone and written notification of any agencies listed in the attached telephone list which were contacted during a spill event. This form shall be maintained with other documentation of the spill event.

A. Provide brief description of the spill incident (Note: If the requested information is contained in another standard report format, then attach the report to this page)	
(1) Name, location, and type of function of installation	
(2) Name and phone no. of person making the report	
(3) Type and estimated amount of material	
(4) Location of spill;	
(5) Date and time of discovery	
(6) Receiving stream or water	
(7) Cause of incident and equipment/facility involved	
(8) Injuries and/or property damage	
(9) Duration of discharge; and	
(10) Remedial actions taken	
B. Provide the following information for each agency contacted by telephone	
(1) Agency Name	
(2) Agency Phone No.	
(3) Name of Contacted Person	
(4) Date/Time of Telephone Call	
(5) Summary of Information and/or Instructions Provided by Contacted Agency	
C. Provide the following information for each agency to whom written documentation of the spill event was submitted:	
(1) Agency Name	
(2) Agency Address and Telephone No.	
(3) Name of Agency Point of Contact to Whom the Report is Submitted	
(4) Date of Report Submittal	
(5) Summary of Follow Up Communications Regarding the Incident	

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APPENDIX C
FACILITY DESCRIPTIONS

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FACILITY IDENTIFICATION

Building: 00324 (Administrative Facility)
Point of Contact: Mr. Burleigh Kay
Telephone: (703) 704-3682
Master Spill Plan Location Reference Appendix A Map, Grid square D4

SPILL SOURCES

Volume (gal)	Product	Type	Surface Containment	Comments
2,000	Diesel Fuel & JP-8	AST	Double Wall	Split tank.
250	Used Oil	AST	Double Wall	

PROCESS/USE AND GENERAL LOCATION DESCRIPTION

The 2000-gallon fuel dispensing AST is located adjacent to the western end of the loading dock area at the south side of Building 00324. The tank has two 1,000 gallon inner compartments for diesel fuel and JP-8, with one dispenser for each compartment. This AST is a double-walled steel tank with insulation, impermeable liner, monolithic concrete outer shell, and concrete support legs situated on a concrete slab and surrounded by concrete bollards.

The 250-gallon used oil AST is located approximately 30 feet east of Building 00324. This tank is a double-walled steel tank with a concrete inner lining and interstitial space for monitoring the tank and it is coated with fiberglass for protection against corrosion. The 550-gallon used oil AST is located approximately 200 feet southeast of Building 00324, and next to a remediation system trailer. This AST collects the oil discharged from the oil-water separator associated with the dual-phase extraction system currently operating at this facility.

There are no stormwater drains in the immediate vicinity of the AST. Surface drainage in the vicinity of the 2000 gallon AST flows approximately 100 feet southwest over concrete pavement and grass cover, to an intermittent stream channel, which proceeds south approximately 600 feet to a perennial stream channel. From this junction, the perennial stream channel proceeds approximately 0.3 mile south to the junction of Gunston Cove and the Potomac River. Environmentally Sensitive Areas off-Post that could be impacted by a significant release is listed in Section 4, Table 6.

NOTIFICATION PROCEDURES

Dial (703) 781-1800 on a facility phone to reach the Fort Belvoir Emergency Operations Center Fire Department.

ON-SITE METHOD OF DETECTION

Detection of a petroleum release from the ASTs is achieved by visual confirmation during daily usage of the tanks or during scheduled inspections of the tanks.

SPILL PREVENTION MEASURES

- **Equipment** – The ASTs are double walled.
- **Inspections** - The ASTs are inspected according to the schedule outlined in Section 6.0 of the MSP. An inspection log is prepared by the DPW ENRD inspector, and is maintained in Building 01442.
- **Maintenance** - The DPW performs preventive maintenance of the AST systems on either a regularly scheduled or as-needed basis (if inspections warrant) as identified in Section 6.0 of the MSP and/or on an as requested basis.
- **Security** - Access ports are locked at all times when authorized transfers are not being performed. Additionally, Building 00324 is located in the R&D area, a fenced, guarded facility with controlled access.

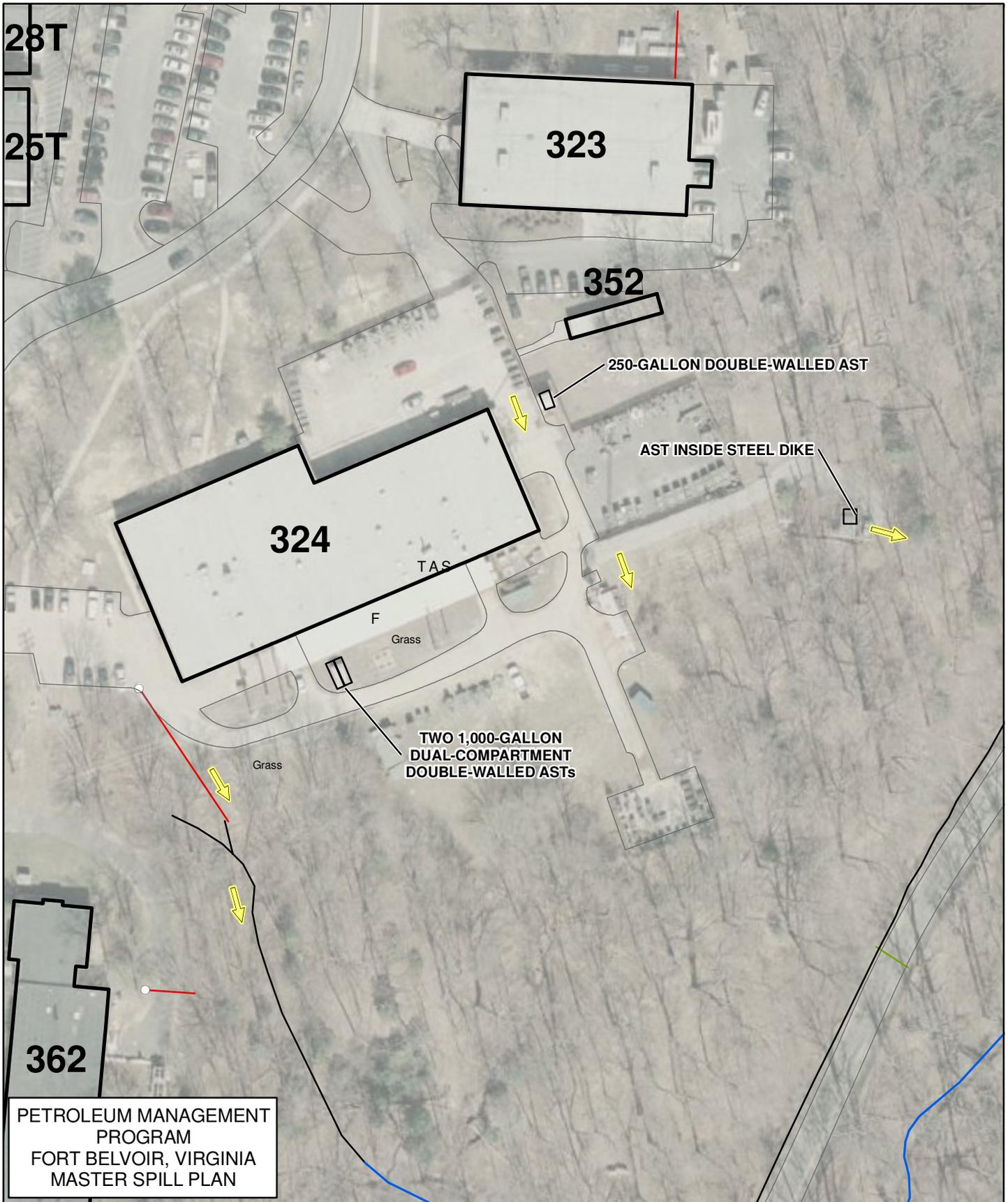
SPILL CONTROL MEASURES

Absorbent spill control materials are maintained outside Building 00324. Central storage locations of additional spill control materials and equipment maintained by the Fort Belvoir Fire Protection and Safety Division and DPW's ENRD are also located within a 2.5 mile radius of Building 00324.

In the event of a spill which cannot be contained, the Fort Belvoir Fire Protection and Safety Division, which serves as the base's primary Incident Response Team (IRT), will respond to the release event. The first-due fire station at Fort Belvoir is located approximately 0.9 miles north of Building 00324. Two additional fire stations are located within a 3.0-mile radius of Building 00324.

Fort Belvoir's Installation On-Scene Coordinator (IOSC) or his designated representative shall monitor the on-going spill control efforts and provide recommendations to the acting Fire Chief for additional spill control measures to be implemented by the Incident Response Team.

Additional spill control assistance at Building 00324 may be provided by ALEUT, the facilities maintenance contractor at Fort Belvoir, or other designated contractor, at the request of the acting Fire Chief or IOSC. The contractor shall provide personnel and equipment needed for the deployment of spill control materials, the closure of drain valves in the vicinity of a spill site, the preparation of spill control barriers, the removal of contaminated materials, and the performance of other services which may be required in a response event.



**PETROLEUM MANAGEMENT PROGRAM
FORT BELVOIR, VIRGINIA
MASTER SPILL PLAN**

- Legend**
- 1462 BUILDING
 - AST
 - STREAM
 - STORM INLET
 - STORM OPEN DRAINAGE
 - STORM LINE
 - STORM CULVERT
 - ↑ DIRECTION OF SURFICIAL FLOW
 - A FIRST AID KIT
 - F FIRE EXTINGUISHER
 - S SPILL CONTROL MATERIALS
 - T TELEPHONE

BLDG #324
TANK # 00324R,S,T,V

SOURCE NOTE:
ALL BASE MAP INFORMATION IS FROM THE FORT BELVOIR GIS, JUNE 2004. ALL UNDERGROUND FEATURES ARE APPROXIMATE AND ARE SHOWN FOR VISUALIZATION PURPOSES ONLY. SPILL PLAN FEATURES ARE FROM FIELD INSPECTIONS, JUNE-JULY 2004.



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FACILITY IDENTIFICATION

Building: 00332 (Heating Plant)
Point of Contact: Will Pineda
Telephone: (786) 525-0562
Master Spill Plan Location Reference Appendix A Map, Grid square D4

SPILL SOURCES

Volume (gal)	Product	Type	Surface Containment	Comments
3 @ 25,000	No. 2 Fuel Oil	UST	N/A	

PROCESS/USE AND GENERAL LOCATION DESCRIPTION

The UST system is considered to be part of Building 00332, though the UST's are located approximately 80 feet northeast of Building 00333. The tanks, installed in 1996, are used to supply No. 2 fuel oil through sub-grade piping from the tanks to furnaces and/or boilers located at the building 00332. This UST system complies with current federal and state environmental regulations regarding corrosion protection, leak detection, and spill control/overflow prevention. Corrosion protection for the UST system includes double walled fiberglass reinforced plastic (FRP), and a double walled piping design consisting of a steel, FRP, or polyethylene pipe enclosed within a FRP or polyethylene containment pipe. Leak detection for the UST system includes interstitial monitoring, audible and visual leak detection alarms, and observation wells. Spill control and overflow prevention for the UST system includes spill containment sumps, overflow prevention valves, and overflow audible and visual alarms.

Surface drainage in the vicinity of the UST system at Building 00332 flows approximately 50 feet east to a curbed concrete drainage basin with a manually operated valve. The valve is maintained in the open position to allow storm-water runoff and can be quickly closed in the event of a release while fueling the tanks. The drainage basin has an approximate volume of over 1000 gallons. The valve discharges directly to the outside of the curbing. The area around the drainage basin flows both approximately 200 feet south into a wooded ravine. This stream channel joins a perennial and/or intermittent stream channel approximately 350 feet southwest of Building 00332, from which point the combined channel proceeds approximately 0.4 mile southwest to Gunston Cove. No storm-water drains are located in the immediate vicinity of the UST's.

Environmentally Sensitive Areas off-Post that could be impacted by a significant release are listed in Section 4, Table 6.

NOTIFICATION PROCEDURES

Dial (703) 781-1800 on a facility phone to reach the Fort Belvoir Emergency Operations Center Fire Department.

ON-SITE METHOD OF DETECTION

Detection of a surface petroleum release from the UST system at Building 00332 will be achieved by visual confirmation during daily usage of the facility and/or during scheduled inspections of the UST system. Detection of a sub-grade petroleum release from the UST system at Building 00332 will be achieved by activation of audible and visual alarms associated with the interstitial monitoring sensors or identification of petroleum constituents in groundwater samples collected from observation wells in the vicinity of the UST system.

SPILL PREVENTION MEASURES

- **Equipment** – The USTs are double walled.
- **Inspections** - The operational status of the UST system's corrosion protection, leak detection, and spill control/overflow components shall be inspected according to the schedule outlined in Section 6.0 of the MSP. An inspection log shall be prepared by the inspector. Inspection documentation shall be maintained in Building 00332. Copies of inspection records shall also be maintained at DPW's office, located in Building 01442 at Fort Belvoir.
- **Maintenance** - Preventive maintenance of the UST system shall be performed on a regularly scheduled basis as identified in Section 6.0 of the MSP and/or on an as requested basis by the facilities management contractor (ALEUT) or other designated contractor.
- **Security** - The fill ports for the UST system at Building 00332 are locked at all times. Additionally, Building 00332 is located in the R&D area, a fenced, guarded facility with controlled access.

SPILL CONTROL MEASURES

Containment basins associated with the UST fill ports shall retain petroleum spills which may occur during filling operations. The valve to the aforementioned drainage basin around the immediate area of the UST's shall be closed in the event of petroleum spills which may occur during filling operations and the drainage basin shall retain petroleum spills that are not contained by the fill port basins. The shutoff valve is required to be closed during refueling operations. A sign is posted above the shutoff valve stating the following:

SHUT-OFF VALVE IS LOCATED HERE
VALVE IS REQUIRED BY REGULATION TO BE IN THE
CLOSED/OFF POSITION DURING FUEL DELIVERY

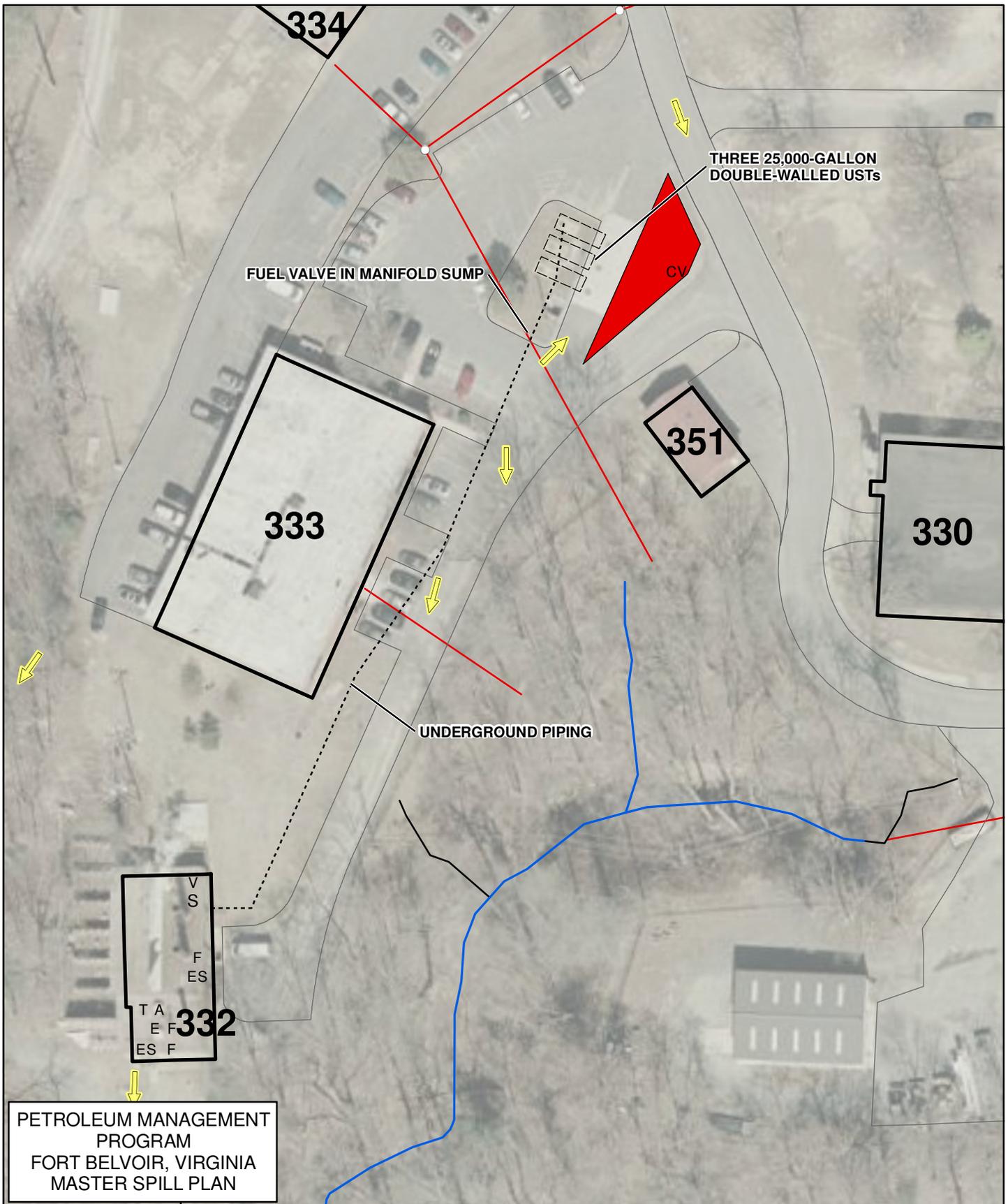
The facility is equipped to handle nearly all spills that may occur at the UST system. Absorbent spill control materials are maintained inside Building 00332 and at a variety of locations in the R&D area. Central storage locations of additional spill control materials and equipment maintained by the Fort Belvoir Fire Protection and Safety Division and DPW's ENRD are also located within a 2.5 mile radius of Building 00332.

In the event of a spill which cannot be contained by personnel at Building 00332, the Fort Belvoir Fire Protection and Safety Division, which serves as the base's primary Incident Response Team (IRT), will respond to the release event. The Incident Response Team shall report directly to the Fire Chief or designated representative present at the release site. The first-due fire station at Fort Belvoir is located approximately 0.7 mile north of Building 00332. Two additional fire stations are located within a 3.0 mile radius of Building 00332.

Fort Belvoir's Installation On-Scene Coordinator (IOSC) or his designated representative shall monitor the on-going spill control efforts and provide recommendations to the acting Fire Chief for additional spill control measures to be implemented by the Incident Response Team.

Additional spill control assistance at Building 00332 may be provided by ALEUT, the facilities maintenance contractor at Fort Belvoir, or other designated contractor, at the request of the acting Fire Chief or IOSC. The contractor shall provide personnel and equipment needed for the deployment of spill control

materials, the closure of drain valves in the vicinity of a spill site, the preparation of spill control barriers, the removal of contaminated materials, and the performance of other services which may be required in a response event.



**PETROLEUM MANAGEMENT PROGRAM
FORT BELVOIR, VIRGINIA
MASTER SPILL PLAN**

Legend

- 1462 BUILDING
- UST
- CONTAINMENT CURBING
- STREAM
- STORM INLET
- STORM LINE
- STORM OPEN DRAINAGE
- ↑ DIRECTION OF SURFICIAL FLOW

- A FIRST AID KIT
- CV CONTAINMENT VALVE
- E EMERGENCY SHOWER
- ES EMERGENCY STOP FOR FUEL PUMP
- F FIRE EXTINGUISHER
- T TELEPHONE
- V FUEL VALVE

SOURCE NOTE:
ALL BASE MAP INFORMATION IS FROM THE FORT BELVOIR GIS, JUNE 2004.
ALL UNDERGROUND FEATURES ARE APPROXIMATE AND ARE SHOWN FOR VISUALIZATION PURPOSES ONLY.
SPILL PLAN FEATURES ARE FROM FIELD INSPECTIONS, JUNE-JULY 2004.

BLDG # 332
TANK # 00332H,I,J



FACILITY IDENTIFICATION

Building: 00765 (Museum Support Facility)
Point of Contact: Mr. Dieter Stenger
Telephone: (703) 805-7476
Master Spill Plan Location Reference Appendix A Map, Grid square D3

SPILL SOURCES

Volume (gal)	Product	Type	Surface Containment	Comments
5,000	Fuel Oil	AST	Double Wall	
3,000	Fuel Oil	AST	Double Wall	

PROCESS/USE AND GENERAL LOCATION DESCRIPTION

Two ASTs with capacities of 5,000 and 3,000 gallons are located in an enclosure attached to the south wall of Building 765. Both horizontal tanks are constructed of steel, double-walled, and supply fuel to provide heat and hot water (via boilers) or backup power (via emergency electrical power generators) for the building. Both tank systems possess an interstitial monitoring system to detect leaks from the primary shell. Audible and visual alarms are located on the south wall of Building 765, and an indoor monitoring system also exists in the event of an incident.

A stormwater drainage inlet is located south of the enclosure associated with the ASTs. A release from the ASTs or from equipment associated with transfers to the ASTs would likely flow into this inlet. Inlets are also located in the parking area immediately east of the enclosure. These inlets are connected to an underground drainage system surrounding Building 765 that would convey liquid northwest approximately 1,000 feet. The system discharges to surface drainage ditch or seasonal stream which conveys liquid west approximately 2,000 to Accotink Bay. Environmentally Sensitive Areas off-Post that could be impacted by a significant release is listed in Section 4, Table 6.

NOTIFICATION PROCEDURES

Dial (703) 781-1800 on a facility phone to reach the Fort Belvoir Emergency Operations Center Fire Department.

ON-SITE METHOD OF DETECTION

Detection of a petroleum release from the ASTs is achieved by visual confirmation during daily usage of the tanks or during scheduled inspections of the tanks.

SPILL PREVENTION MEASURES

- **Equipment** – The ASTs are double walled. The ASTs also possess automated leak detection systems which trigger audible and visual alarms.
- **Inspections** - The ASTs are inspected according to the schedule outlined in Section 6.0 of the MSP. An inspection log is prepared by the DPW ENRD inspector, and is maintained in Building 01442.
- **Maintenance** - The DPW performs preventive maintenance of the AST systems on either a regularly scheduled or as-needed basis (if inspections warrant) as identified in Section 6.0 of the MSP and/or on an as requested basis.
- **Security** - Access ports are locked at all times when authorized transfers are not being performed. Additionally, the ASTs are located in a secured area associated with Building 765.

SPILL CONTROL MEASURES

Absorbent spill control materials are maintained adjacent to the ASTs within the enclosure associated with Building 00765. Central storage locations of additional spill control materials and equipment maintained by the Fort Belvoir Fire Protection and Safety Division and DPW's ENRD are also located within a 1.0 mile radius of Building 00765.

In the event of a spill which cannot be contained, the Fort Belvoir Fire Protection and Safety Division, which serves as the base's primary Incident Response Team (IRT), will respond to the release event. The first-due fire station at Fort Belvoir is located approximately 0.3 miles northeast of Building 00765. Two additional fire stations are located within a 2.5-mile radius of Building 00765.

Fort Belvoir's Installation On-Scene Coordinator (IOSC) or his designated representative shall monitor the on-going spill control efforts and provide recommendations to the acting Fire Chief for additional spill control measures to be implemented by the Incident Response Team.

Additional spill control assistance at Building 00765 may be provided by ALEUT, the facilities maintenance contractor at Fort Belvoir, or other designated contractor, at the request of the acting Fire Chief or IOSC. The contractor shall provide personnel and equipment needed for the deployment of spill control materials, the closure of drain valves in the vicinity of a spill site, the preparation of spill control barriers, the removal of contaminated materials, and the performance of other services which may be required in a response event.



**PETROLEUM MANAGEMENT PROGRAM
FORT BELVOIR, VIRGINIA
MASTER SPILL PLAN**

Legend

- 1462 BUILDING
- AST
- STORM INLET
- STORM OPEN DRAINAGE
- STORM LINE
- STORM CULVERT
- DIRECTION OF SURFICIAL FLOW
- S SPILL CONTROL MATERIALS

BLDG # 765
TANK # 765 A,B



SOURCE NOTE:
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SPILL PLAN FEATURES ARE FROM FIELD INSPECTIONS, JUNE-JULY 2004.



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FACILITY IDENTIFICATION

Buildings: 01109 (Facilities Maintenance Contractor's Roads) and
01114 (Grounds Equipment Storage Yard)
Point of Contact: Mr. Austin Bolling, Aleut
Telephone: (703) 498-9555 (Cell)
Master Spill Plan Location Reference Appendix A Map, Grid square C3

SPILL SOURCES

Volume (gal)	Product	Type	Surface Containment	Comments
6,000	Gasoline	AST	Dike w/ rain shield	
2 x 500	Diesel Fuel	AST	Polyethylene Dikes	
500	Kerosene	AST	Double Wall	

PROCESS/USE AND GENERAL LOCATION DESCRIPTION

The AST at Building 01114 is a steel, single-walled tank that is used to store and dispense gasoline for vehicles and heavy equipment. The AST is filled every two or three weeks. The tank, which was installed in 1992, is contained within a welded steel shell which acts as an outer dike to contain any leaks. A valve at the lowest point of the shell on the north side of the structure allows for controlling the release of any leaking product from the containment structure. The tank contains an overfill alarm, and the fuel dispenser contains a security access pad and monitors the volume of dispensed product. The tank is located inside a secured storage yard, approximately 92 feet north of the northwestern corner of Building 01114. There is no sub-grade piping or remote filling/dispensing location associated with this tank.

The two diesel fuel ASTs at Building 01109 are constructed of single-walled steel, while the kerosene AST is constructed of double-walled steel. All are used to store and dispense diesel fuel/kerosene for vehicles and heavy equipment. The ASTs have visual gauges on them.

Surface drainage in the vicinity of the AST flows to the northwest across approximately 90 feet of asphalt pavement, 200 feet of compacted gravel-covered storage yard, and 300 feet of forest-covered ravine leading to a stream. This stream flows approximately 0.4 mile west to Accotink Bay. Surface drainage in the vicinity of the tank does not flow towards the closest stormwater drain in the area, which is located approximately 60 feet west of the AST.

Environmentally Sensitive Areas off-Post that could be impacted by a significant release are listed in Section 4, Table 6.

NOTIFICATION PROCEDURES

Dial (703) 781-1800 on a facility phone to reach the Fort Belvoir Emergency Operations Center Fire Department.

ON-SITE METHOD OF DETECTION

Detection of a petroleum release from an AST at Building 01109 or 01114 shall be achieved by visual confirmation during daily usage of the tank and/or during scheduled inspections of the tank.

SPILL PREVENTION MEASURES

- **Equipment** – The ASTs are double walled.
- **Inspections** - The ASTs are inspected according to the schedule outlined in Section 6.0 of the MSP. An inspection log is prepared by the DPW ENRD inspector, and is maintained in Building 01442.
- **Maintenance** - The DPW performs preventive maintenance of the AST systems on either a regularly scheduled or as-needed basis (if inspections warrant) as identified in Section 6.0 of the MSP and/or on an as requested basis.
- **Security** - The ASTs are located in a secured storage yard which is locked during off-duty hours.

SPILL CONTROL MEASURES

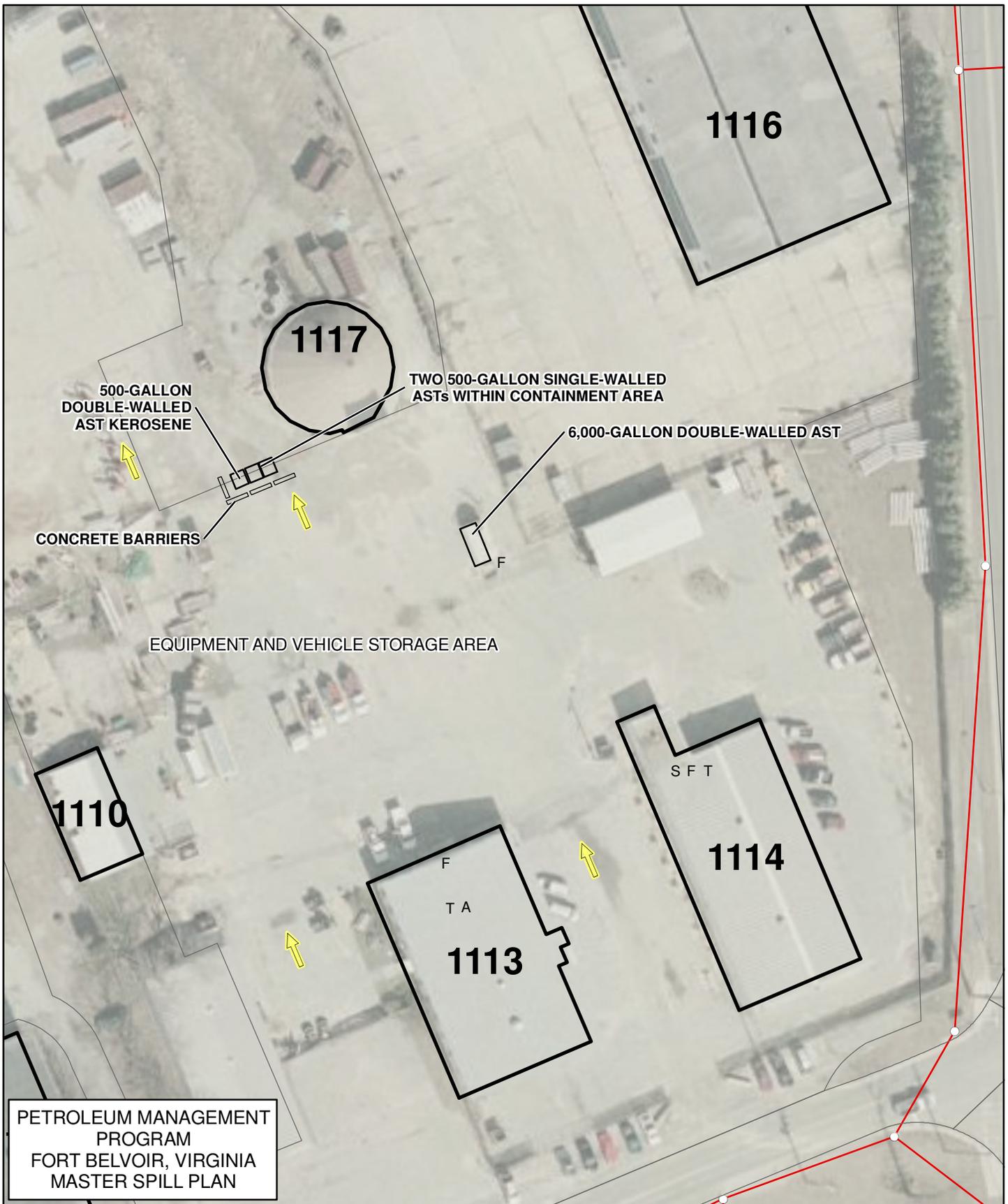
The steel containment structure for the 6,000 gallon AST is located on an elevated concrete slab foundation and includes rain covers to prevent the infiltration of precipitation into the containment structure. This structure has a capacity of approximately 6,600 gallons.

The facility is equipped to handle nearly all spills that may occur at the tanks. Absorbent spill control materials are maintained inside Building 01114. Central storage locations of additional spill control materials and equipment maintained by the Fort Belvoir Fire and Rescue Department and DPW's ENRD are also located within a 1.75 mile radius of Building 01114.

In the event of a spill which cannot be contained by personnel at Building 01109 or 01114, the Fort Belvoir Fire and Rescue Department, which serves as the base's primary Incident Response Team (IRT), will respond to the release event. The Incident Response Team shall report directly to the Fire Chief or designated representative present at the release site. The first-due fire station at Fort Belvoir is located approximately 0.25 mile east of Building 01114. Two additional fire stations are located within a 2.5 mile radius of Buildings 01109 and 01114.

Fort Belvoir's Installation On-Scene Coordinator (IOSC) or his designated representative shall monitor the on-going spill control efforts and provide recommendations to the acting Fire Chief for additional spill control measures to be implemented by the Incident Response Team.

Additional spill control assistance at Buildings 01109 and 01114 may be provided by ALEUT, the facilities maintenance contractor at Fort Belvoir, or other designated contractor, at the request of the acting Fire Chief or IOSC. The contractor shall provide personnel and equipment needed for the deployment of spill control materials, the closure of drain valves in the vicinity of a spill site, the preparation of spill control barriers, the removal of contaminated materials, and the performance of other services which may be required in a response event.



**PETROLEUM MANAGEMENT PROGRAM
FORT BELVOIR, VIRGINIA
MASTER SPILL PLAN**

Legend

- 1462 BUILDING
- AST
- STORM INLET
- STORM LINE

- ↑ DIRECTION OF SURFICIAL FLOW

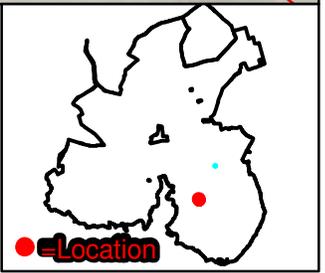
- A FIRST AID KIT
- F FIRE EXTINGUISHER
- S SPILL CONTROL MATERIALS
- T TELEPHONE

BLDG # 1114
TANK # 01114A,B & 01117A,B,C



SOURCE NOTE:
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Feet



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FACILITY IDENTIFICATION

Buildings: Motor Pool TMP-04
Point of Contact: Adam Konkle
Telephone: (808) 218-5411
Master Spill Plan Location Reference Appendix A Map, Grid square B3

SPILL SOURCES

Volume (gal)	Product	Type	Surface Containment	Comments
5 x 600	Diesel Fuel	AST	Rubber Containment System	

PROCESS/USE AND GENERAL LOCATION DESCRIPTION

The ASTs at Motor Pool TMP-04 are steel, single-walled tanks used to store and dispense diesel fuel for electrical generators used by the 12th Aviation Charlie Company. The ASTs are refilled every two or three weeks. The tanks are located within one of two rubber containment systems, which act as an outer dike to contain any leaks. These containment systems do not have pipes with valves for the release of accumulated precipitation. Collected precipitation is removed through the use of pumps following visual evaluation for oil content. The fuel dispensers are locked when not in use. The tank is located inside a secured storage yard immediately north of Meade Road, approximately 300 feet east of Gunston Road. There is no sub-grade piping or remote filling/dispensing locations associated with these tanks.

Surface drainage in the vicinity of the ASTs flows to the south across approximately 100 feet of asphalt pavement to a surface drainage ditch parallel to and north of Meade Road. The ditch conveys liquid to a culvert beneath Meade Road west of the facility entrance. From this point, surface drainage ditches convey the liquid west approximately 0.38 miles to Accotink Creek. Accotink Creek discharges to Accotink Bay approximately 0.68 mile further south.

Environmentally Sensitive Areas off-Post that could be impacted by a significant release are listed in Section 4, Table 6.

NOTIFICATION PROCEDURES

Dial (703) 781-1800 on a facility phone to reach the Fort Belvoir Emergency Operations Center Fire Department.

ON-SITE METHOD OF DETECTION

Detection of a petroleum release from an AST at Motor Pool TMP-04 shall be achieved by visual confirmation during daily usage of the tank and/or during scheduled inspections of the tank.

SPILL PREVENTION MEASURES

- **Equipment** – The ASTs are secondarily contained.
- **Inspections** - The ASTs are inspected according to the schedule outlined in Section 6.0 of the MSP. An inspection log is prepared by the DPW ENRD inspector, and is maintained in Building 01442.
- **Maintenance** - The DPW performs preventive maintenance of the AST systems on either a regularly scheduled or as-needed basis (if inspections warrant) as identified in Section 6.0 of the MSP and/or on an as requested basis.
- **Security** - The ASTs are located in a secured storage yard which is locked during off-duty hours.

SPILL CONTROL MEASURES

The containment structures for the ASTs are located on asphalt. Based on dimensions of 20 feet long by 11 feet wide by 1.5 feet high, these structures have the capacity to contain approximately 2,465 gallons respectively.

The facility is equipped to handle nearly all spills that may occur at the tanks. Absorbent spill control materials in two (2) spill kits are maintained adjacent to the containment systems inside the fence line of Motor Pool TMP-04. Central storage locations of additional spill control materials and equipment maintained by the Fort Belvoir Fire and Rescue Department and DPW's ENRD are also located within a 1.10 mile radius of Motor Pool TMP-04.

In the event of a spill which cannot be contained by Motor Pool TMP-04 personnel, the Fort Belvoir Fire and Rescue Department, which serves as the base's primary Incident Response Team (IRT), will respond to the release event. The Incident Response Team shall report directly to the Fire Chief or designated representative present at the release site. The first-due fire station at Fort Belvoir is located approximately 0.4 mile north of Motor Pool TMP-04. Two additional fire stations are located within a 2.5 mile radius of Motor Pool TMP-04.

Fort Belvoir's Installation On-Scene Coordinator (IOSC) or his designated representative shall monitor the on-going spill control efforts and provide recommendations to the acting Fire Chief for additional spill control measures to be implemented by the Incident Response Team.

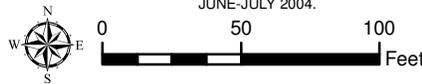
Additional spill control assistance at Motor Pool TMP-04 may be provided by ALEUT, the facilities maintenance contractor at Fort Belvoir, or other designated contractor, at the request of the acting Fire Chief or IOSC. The contractor shall provide personnel and equipment needed for the deployment of spill control materials, the closure of drain valves in the vicinity of a spill site, the preparation of spill control barriers, the removal of contaminated materials, and the performance of other services which may be required in a response event.



**PETROLEUM MANAGEMENT PROGRAM
FORT BELVOIR, VIRGINIA
MASTER SPILL PLAN**

- Legend**
- 1462 BUILDING
 - AST
 - STORM OPEN DRAINAGE
 - STORM CULVERT
 - ↑ DIRECTION OF SURFICIAL FLOW

BLDG # 249TH AVIATION GROUP
TANK # 249TH A,B,C,D,E



SOURCE NOTE:
ALL BASE MAP INFORMATION IS FROM THE FORT BELVOIR GIS, JUNE 2004.
ALL UNDERGROUND FEATURES ARE APPROXIMATE AND ARE SHOWN FOR VISUALIZATION PURPOSES ONLY.
SPILL PLAN FEATURES ARE FROM FIELD INSPECTIONS, JUNE-JULY 2004.



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FACILITY IDENTIFICATION

Building: 01124 (Government Vehicle Gas Station and Used Oil Storage Area)
 Point of Contact: Mr. Claude McMullen, Chief, Logistics Readiness Center (DOL)
 Telephone: (703) 805-9421
 Master Spill Plan Location Reference Appendix A Map, Grid square C3

SPILL SOURCES

Volume (gal)	Product	Type	Surface Containment	Comments
30,000	Unleaded Gas	UST	Basin for Rack Transfer Areas	
30,000	Diesel Fuel	UST		
12,000	E-85	UST		
12,000	Used Oil	UST		
1,000	Diesel Fuel	Mobile		Refueler Truck
3,000	Diesel Fuel	Mobile		Refueler Truck

PROCESS/USE AND GENERAL LOCATION DESCRIPTION

The E-85 and used oil UST's at Building 01124 were installed in 1987. Both UST's include large aboveground trays into which the used petroleum products are poured. The gasoline and diesel fuel USTs were installed in 1995. These USTs are connected both to an adjoining aboveground piping dispenser system (loading rack) and to four dispensers located on the south side of Building 01124. The loading rack is located within the fenced yard adjacent to the north side of 1124. Building 1124 has loading or unloading equipment meeting the definition of a "loading/unloading rack" in 40 CFR 112.2. This area's containment systems is designed to hold at least the maximum capacity of any single compartment of a tank car or tank truck loaded or unloaded at the facility. All four USTs are installed beneath a concrete pad which slopes north towards the containment basin. Two refueler trucks containing diesel fuel with capacities of 3,000 and 1,000 gallons respectively are located inside the fenced yard on pavement sloping to the containment basin.

The four USTs at Building 01124 comply with current federal and state environmental regulations regarding corrosion protection, leak detection, and spill control/overflow prevention. Corrosion protection for the E-85 and used oil UST systems include double walled fiberglass reinforced plastic (FRP) or FRP-coated steel tanks which are cathodically protected with an impressed current, and a double walled piping design consisting of a steel, FRP, or polyethylene pipe enclosed within a FRP or polyethylene containment pipe. Leak detection for the UST system includes interstitial monitoring, audible and visual leak detection alarms, and observation wells. Spill control and overflow prevention for the UST system includes a spill containment basin, overflow prevention valves, and overflow audible and visual alarms.

Two aboveground storage tank (AST) exists at Building 01124. One AST is a double-walled steel tank with a concrete inner lining and interstitial space for monitoring the tank and it is coated with fiberglass for protection against corrosion. The other is a single wall steel AST with a secondary containment system. Both contain kerosene for use during the winter months to supply heating fuel at the security gates onto the Post.

Surface drainage at the concrete pad overlying the UST system operating at Building 01124 flows north towards a concrete lined drainage channel with a containment basin that is located along the northern edge of the concrete pad. The basin has an approximate capacity of 15,000 gallons. Surface drainage in the

vicinity of the UST system flows over relatively level topography towards stormwater drains situated along 16th Street, Theote Road, and King Road. These stormwater drains conduct surface drainage approximately 800 feet northwest towards a ravine containing a stream channel. This stream channel then proceeds approximately 0.6 miles west to Accotink Bay.

Environmentally Sensitive Areas off-Post that could be impacted by a significant release are listed in Section 4, Table 6.

NOTIFICATION PROCEDURES

Dial (703) 781-1800 on a facility phone to reach the Fort Belvoir Emergency Operations Center Fire Department.

ON-SITE METHOD OF DETECTION

Detection of a petroleum release from an AST at Building 01124 shall be achieved by visual confirmation during daily usage of the tank and/or during scheduled inspections of the tank.

SPILL PREVENTION MEASURES

- **Equipment** – The ASTs are diked or double walled.
- **Inspections** - The operational status of the UST system's corrosion protection, leak detection, and spill control/overflow components shall be inspected according to the schedule outlined in Section 6.0 of the MSP. An inspection log shall be prepared by the inspector. Inspection documentation shall be maintained in Building 01124. Inspection records shall also be maintained at DPW's office, located in Building 01442 at Fort Belvoir. The AST has its own internal secondary containment system as well as overspill shut-off and interstitial monitoring.
- **Maintenance** - Preventive maintenance of the UST system shall be performed on a regularly scheduled basis as identified in Section 6.0 of the MSP and/or on an as requested basis by the facilities management contractor (ALEUT) or other designated contractor.
- **Security** - The fill ports and fuel dispensers for the gasoline and diesel fuel tanks and the access ports for the waste fuel and used oil UST's at Building 01124 are locked at all times. The UST system and ASTs at Building 01124 is also surrounded by a locked, fenced enclosure.

SPILL CONTROL MEASURES

Many releases at UST and AST sites occur from spills. Often the spills occur at the fill port when the delivery truck's hose is disconnected. To meet the discharge prevention measures included in 40 CFR 112.7(a)(3)(ii), each petroleum transportation contractor used by Fort Belvoir shall institute safe fill and shutdown procedures that will ensure overfilling of both USTs and ASTs does not occur. All tanks shall be filled to no more than 90 percent of their maximum volume. All petroleum transfer areas for ASTs greater than 55 gallons in capacity and USTs where filling/withdrawal connections are made shall be equipped with a spill containment system, including catchment basins or temporary containment barriers installed by either Fort Belvoir or the transporter that is capable of containing and collecting any spills that may occur during the transfer operation.

Prior to initiating the transfer, the transporter measures the level of petroleum product in a tank before adding/removing product. The transporter's loading rack has an automatic shutdown system easily accessible at each loading point. This shutdown system is tested weekly by the transporter. Test records

shall be made available to Fort Belvoir upon request. For flammables, the delivery vehicle must be shut off and the area double checked for other sources of ignition. The transporter shall verify that the vehicle is grounded, that the handbrake is set on the delivery vehicle, and shall place wheel chocks at the front and rear tires to prevent roll-away. The transporter shall remain at the loading rack during all phases of any transfer operation. Tank vehicles are equipped with brake interlock and secondary automatic shutoff control. Prior to filling/withdrawal and departure of any tank truck, the lowermost drain and all outlets of such vehicles are closely examined by the transporter for leakage and, if necessary, tightened, adjusted, or replaced to prevent liquid leakage while in transit.

Containment basins associated with the gasoline and diesel fuel UST fill ports and the containment trays associated with the waste fuel and oil UST's shall retain petroleum spills which may occur during filling and/or pump out operations, or from the refueling trucks parked nearby. The containment basin at the north end of the concrete pad overlying the UST's shall also retain petroleum spills that may occur at the aboveground piping dispenser system. A shutoff valve on the effluent line from the containment basin ensures no unintentional discharges occur. The valve remains in the closed position during normal operations and a sign is posted to remind the user to ensure the valve is closed during fueling operations. Precipitation that accumulates in the basin is inspected for a visual sheen prior to discharge into the sanitary sewer. If a sheen is detected, the precipitation is pumped out and discharged into the oil water separator located onsite. The sign posted above the shutoff valve states the following:

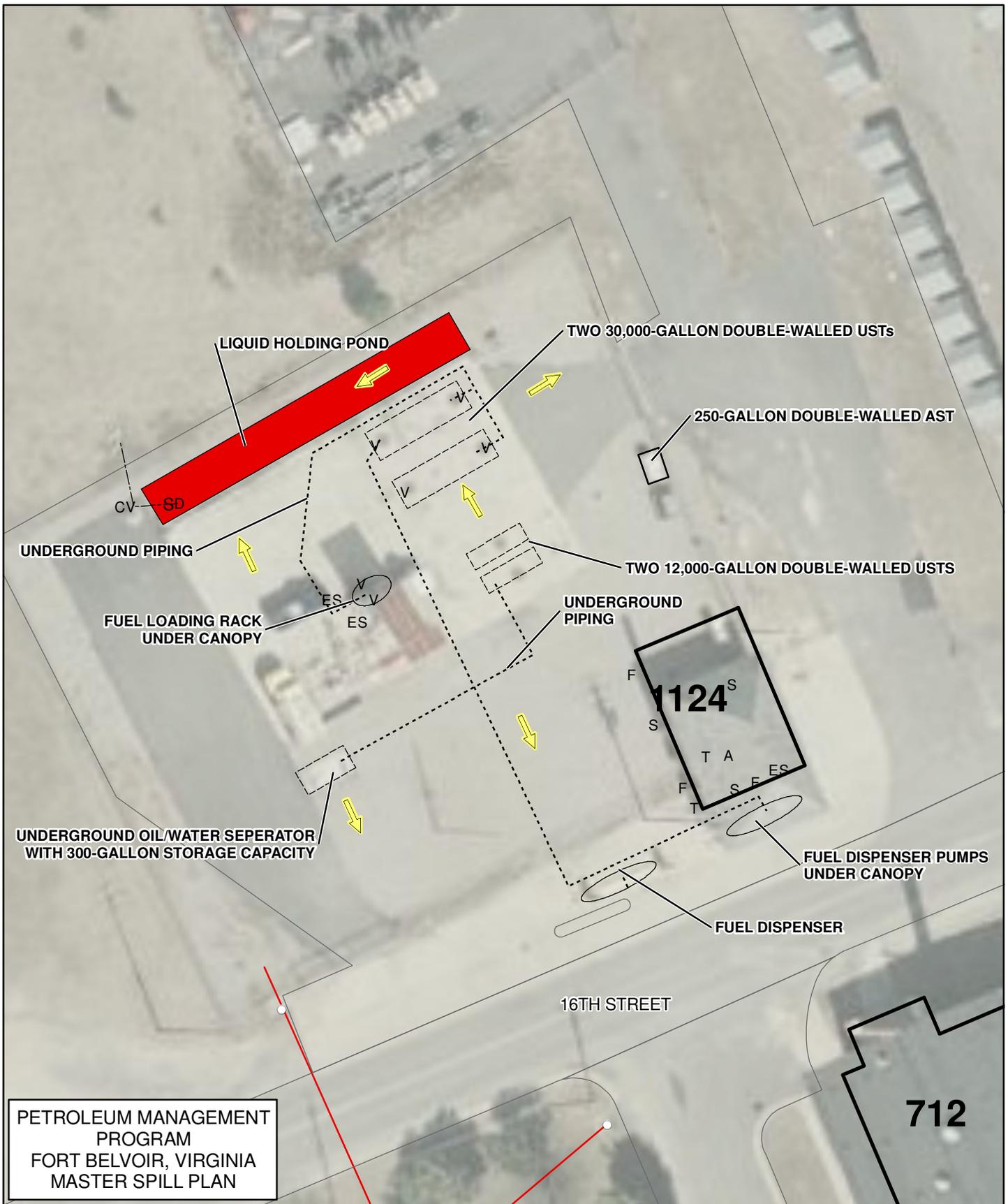
SHUT-OFF VALVE IS LOCATED HERE
VALVE IS REQUIRED BY REGULATION TO BE IN THE
CLOSED/OFF POSITION DURING FUEL DELIVERY

The facility is equipped to handle nearly all spills that may occur at the UST system. Absorbent spill control materials are maintained at Building 01124. Central storage locations of additional spill control materials and equipment maintained by the Fort Belvoir Fire Protection and Safety Division and DPW's ENRD are also located within a 1.75 mile radius of Building 01124.

In the event of a spill which cannot be contained by personnel at Building 01124, the Fort Belvoir Fire Protection and Safety Division, which serves as the base's primary Incident Response Team (IRT), will respond to the release event. The Incident Response Team shall report directly to the Fire Chief or designated representative present at the release site. The first-due fire station at Fort Belvoir is located approximately 0.1 mile east of Building 01124. Two additional fire stations are located within a 2.5-mile radius of Building 01124.

Fort Belvoir's Installation On-Scene Coordinator (IOSC) or his designated representative shall monitor the on-going spill control efforts and provide recommendations to the acting Fire Chief for additional spill control measures to be implemented by the Incident Response Team.

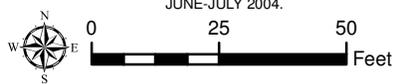
Additional spill control assistance at Building 01124 may be provided by ALEUT, the facilities maintenance contractor at Fort Belvoir, or other designated contractor, at the request of the acting Fire Chief or IOSC. The contractor shall provide personnel and equipment needed for the deployment of spill control materials, the closure of drain valves in the vicinity of a spill site, the preparation of spill control barriers, the removal of contaminated materials, and the performance of other services which may be required in a response event.



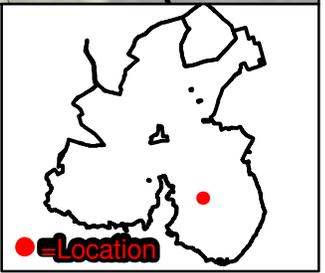
**PETROLEUM MANAGEMENT PROGRAM
FORT BELVOIR, VIRGINIA
MASTER SPILL PLAN**

- Legend**
- BUILDING
 - AST
 - UST
 - CONTAINMENT CURBING
 - STORM INLET
 - STORM LINE
 - DIRECTION OF SURFICIAL FLOW
 - A FIRST AID KIT
 - CV CONTAINMENT VALVE
 - ES EMERGENCY STOP FOR FUEL PUMP
 - F FIRE EXTINGUISHER
 - S SPILL CONTROL MATERIALS
 - SD STORM WATER INLET
 - T TELEPHONE
 - V FUEL VALVE

BLDG # 1124
TANK # 01124C,H,I,L,M



SOURCE NOTE:
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FACILITY IDENTIFICATION

Building: 01234 (Community Hospital Central Utility Plant)
Point of Contact: Mr. Rick Gensimore
Telephone: (571) 231-3563
Master Spill Plan Location Reference Appendix 1 Map, Grid square C3

SPILL SOURCES

Volume (gal)	Product	Type	Surface Containment	Comments
2 @ 25,000	Diesel Fuel	UST	N/A	
3 @ 20,000	Diesel Fuel	UST	N/A	
4 @ 500	Diesel Fuel	UST	Double Wall	

PROCESS/USE AND GENERAL LOCATION DESCRIPTION

The UST system at Building 01234 complies with current federal and state environmental regulations regarding corrosion protection, leak detection, and spill control/overflow prevention. The UST's are located on the west side of Building 1234 which serves as the Central Utility Plant for the Community Hospital. Underground piping transfers the fuel inside the facility and extends above the floor to the equipment. Fuel associated with this system is used to provide heat and hot water (via boilers) or backup power (via emergency electrical power generators) to the hospital.

Corrosion protection for the UST system includes double walled fiberglass reinforced plastic (FRP) or FRP-coated steel tanks and a double walled piping design consisting of a steel, FRP, or polyethylene pipe enclosed within a FRP or polyethylene containment pipe. Operation of these tanks is by DoD Medical Command staff specifically assigned to this facility. Leak detection for the UST system includes interstitial monitoring, sump sensors, audible and visual leak detection alarms, and observation wells. Spill control and overflow prevention for the UST system includes spill containment sumps, overflow prevention valves, and overflow audible and visual alarms.

There are four aboveground storage tanks (ASTs) at Building 01234. All four ASTs are 500 gallon double-walled steel tanks. The four tanks serve as day tanks for the generators. There are four generators located in Building 01234 and each generator has a belly tank underneath the generator. Any spill from these tanks would be contained within the building.

Surface drainage in the vicinity of the UST system at Building 01234 generally flows west into stormwater drains located in the adjacent roadway. These stormwater drains discharge to a surface drainage ditch and/or seasonal streams that conduct runoff approximately 1.05 miles west-southwest to Accotink Bay.

Environmentally Sensitive Areas off-Post that could be impacted by a significant release are listed in Section 4, Table 6.

NOTIFICATION PROCEDURES

Dial (703) 781-1800 on a facility phone to reach the Fort Belvoir Emergency Operations Center Fire Department.

ON-SITE METHOD OF DETECTION

Detection of a surface petroleum release from the UST system at Building 01234 shall be achieved by visual confirmation during usage of the facility and/or during scheduled inspections of the UST system. Detection

of a sub-grade petroleum release from the UST system at Building 01234 shall be achieved by activation of audible and visual alarms associated with the interstitial monitoring sensors or identification of petroleum constituents in groundwater samples collected from observation wells in the vicinity of the UST system.

SPILL PREVENTION MEASURES

- **Equipment** – The USTs are double walled.
- **Inspections** - The operational status of the UST system's corrosion protection, leak detection, and spill control/overflow components shall be inspected according to the schedule outlined in Section 6.0 of the MSP. An inspection log shall be prepared by the inspector. Inspection documentation shall be maintained in Building 01234. Inspection records shall also be maintained at DPW's office, located in Building 01442 at Fort Belvoir.
- **Maintenance** - Preventive maintenance of the UST system shall be performed on a regularly scheduled basis as identified in Section 6.0 of the MSP and/or on an as requested basis by the facilities management contractor (ALEUT) or other designated contractor.
- **Security** - The access ports to the UST's associated Building 01234 shall remain locked at all times.

SPILL CONTROL MEASURES

The facility is equipped to handle nearly all spills that may occur at the UST system. Absorbent spill control materials are maintained at Building 01234. Central storage locations of additional spill control materials and equipment maintained by the Fort Belvoir Fire Protection and Safety Division and DPW's ENRD are also located within a 1.0-mile radius of Building 01234. A shutoff valve is installed on the drain line from the concrete apron surrounding the tank fill ports. The shutoff valve is required to be closed during refueling operations. A sign is posted above the shutoff valve stating the following:

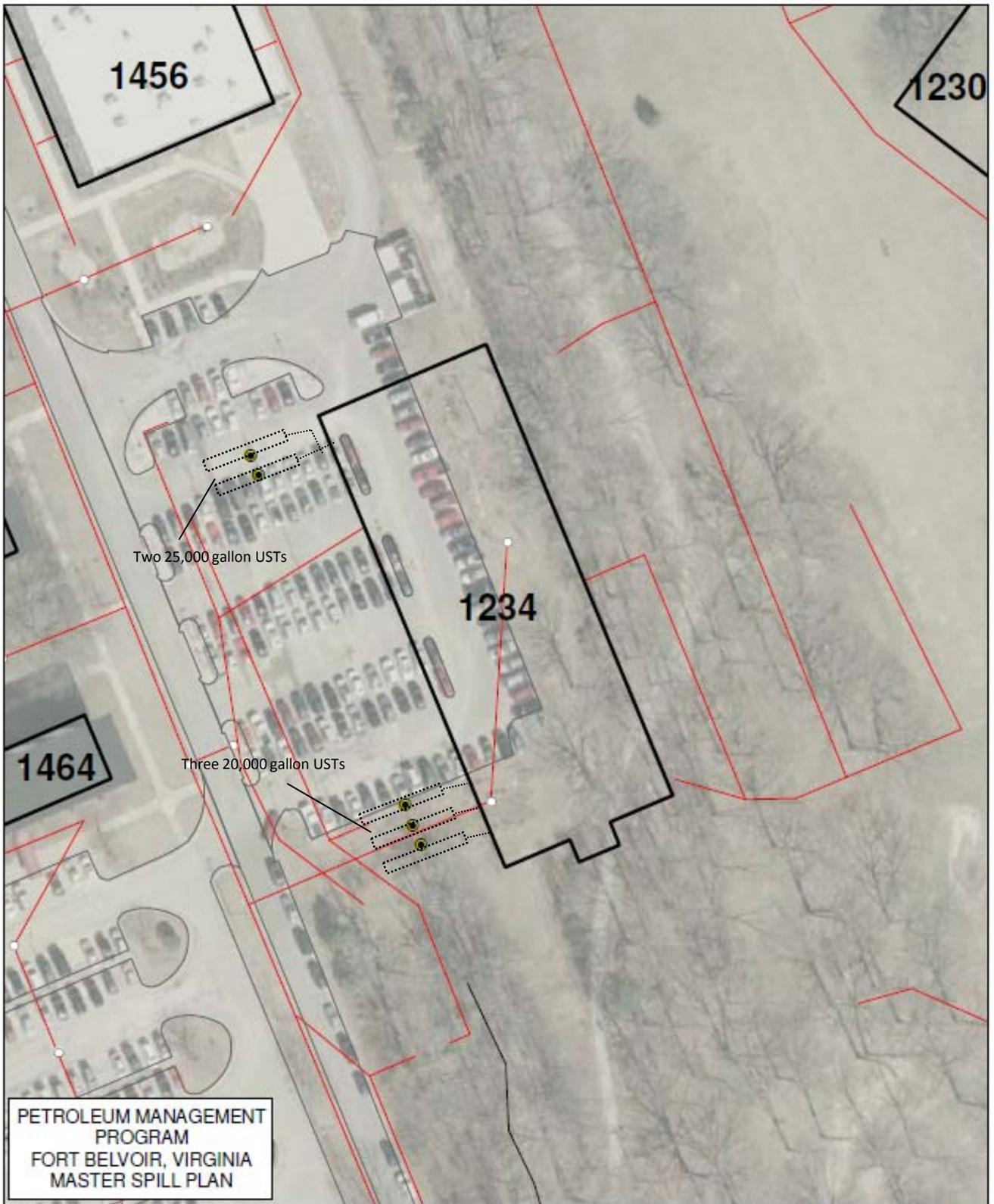
SHUT-OFF VALVE IS LOCATED HERE
VALVE IS REQUIRED BY REGULATION TO BE IN THE
CLOSED/OFF POSITION DURING FUEL DELIVERY

Inside the facility, a central floor drain tied to the sanitary sewer collects any liquid accidentally released. As no shutoff valve exists on the drain line, absorbent booms are placed around the drain to catch any accidental spills. Booms are inspected quarterly by the DPW to ensure they are in place correctly. Booms will be replaced when deteriorated or when used to capacity.

In the event of a spill which cannot be contained by personnel at Building 01234, the Fort Belvoir Fire Protection and Safety Division, which serves as the base's primary Incident Response Team (IRT), will respond to the release event. The Incident Response Team shall report directly to the Fire Chief or designated representative present at the release site. The first-due fire station at Fort Belvoir is located approximately 1.0 mile north of Building 01234. Two additional fire stations are located within a 1.0-mile radius of Building 01234.

Fort Belvoir's Installation On-Scene Coordinator (IOSC) or his designated representative shall monitor the on-going spill control efforts and provide recommendations to the acting Fire Chief for additional spill control measures to be implemented by the Incident Response Team.

Additional spill control assistance at Building 01234 may be provided by ALEUT, the facilities maintenance contractor at Fort Belvoir, or other designated contractor, at the request of the acting Fire Chief or IOSC. The contractor shall provide personnel and equipment needed for the deployment of spill control materials, the closure of drain valves in the vicinity of a spill site, the preparation of spill control barriers, the removal of contaminated materials, and the performance of other services which may be required in a response event.



1456

1230

Two 25,000 gallon USTs

1234

1464

Three 20,000 gallon USTs

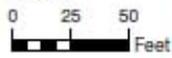
**PETROLEUM MANAGEMENT PROGRAM
FORT BELVOIR, VIRGINIA
MASTER SPILL PLAN**

Legend

- BUILDING
- STORM LINE
- STORM INLET
- STORM OPEN DRAINAGE

BLDG # 1234
TANK # 1234 A,B,C,D,E

SOURCE NOTE:
ALL BASE MAP INFORMATION IS FROM THE FORT BELVOIR GIS, JUNE 2004.
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SPILL PLAN FEATURES ARE FROM FIELD INSPECTIONS, JUNE-JULY 2004.



FACILITY IDENTIFICATION

Building: 01422 (Heating Plant)
Point of Contact: Mr. Aaron Benidict, Lead Boiler Rover, Aleut
Telephone: (703) 781-0428
Master Spill Plan Location Reference Appendix A Map, Grid square C3

SPILL SOURCES

Volume (gal)	Product	Type	Surface Containment	Comments
5 @ 25,000	No. 2 Fuel Oil	UST	N/A	

PROCESS/USE AND GENERAL LOCATION DESCRIPTION

The UST system at the northeast corner of Building 01422, is used to supply No. 2 fuel oil through sub-grade piping to furnaces and/or boilers located at the same building. This UST system complies with current federal and state environmental regulations regarding corrosion protection, leak detection, and spill control/overflow prevention. Corrosion protection for the UST system includes double walled fiberglass reinforced plastic (FRP) or FRP-coated steel tanks and a double walled piping design consisting of a steel, FRP, or polyethylene pipe enclosed within a FRP or polyethylene containment pipe. Leak detection for the UST system includes interstitial monitoring, audible and visual leak detection alarms, and observation wells. Spill control and overflow prevention for the UST system includes spill containment sumps, overflow prevention valves, and overflow audible and visual alarms.

Surface drainage in the vicinity of the UST systems at Building 01422 flows southeast or south or east towards a wooded ravine and stormwater drains. These drains conduct runoff south towards the wooded ravine containing a stream channel. This stream proceeds approximately 0.75 mile southwest to Accotink Bay.

Environmentally Sensitive Areas off-Post that could be impacted by a significant release are listed in Section 4, Table 6.

NOTIFICATION PROCEDURES

Dial (703) 781-1800 on a facility phone to reach the Fort Belvoir Emergency Operations Center Fire Department.

ON-SITE METHOD OF DETECTION

Detection of a surface petroleum release from the UST systems at Building 01422 shall be achieved by visual confirmation during daily usage of the facility and/or during scheduled inspections of the UST system. Detection of a sub-grade petroleum release from the UST systems at Building 01422 shall be achieved by activation of audible and visual alarms associated with the interstitial monitoring sensors, sump sensors, or identification of petroleum constituents in groundwater samples collected from observation wells in the vicinity of the UST systems.

SPILL PREVENTION MEASURES

- **Equipment** – The USTs are double walled.
- **Inspections** - The operational status of the UST system's corrosion protection, leak detection, and spill control/overflow components shall be inspected according to the schedule outlined in Section

6.0 of the MSP. An inspection log shall be prepared by the inspector. Inspection documentation shall be maintained in Building 01422. Inspection records shall also be maintained at DPW's office, located in Building 01442 at Fort Belvoir.

- **Maintenance** - Preventive maintenance of the UST system shall be performed on a regularly scheduled basis as identified in Section 6.0 of the MSP and/or on an as requested basis by the facilities management contractor (ALEUT) or other designated contractor.
- **Security** - The access ports for the UST's shall remain locked at all times.

SPILL CONTROL MEASURES

Containment basins associated with the UST fill ports shall retain petroleum spills that may occur during filling operations. A shutoff valve is located on the drain pipe from the containment basins. The shutoff valve is required to be closed during refueling operations. A sign is posted above the shutoff valve stating the following:

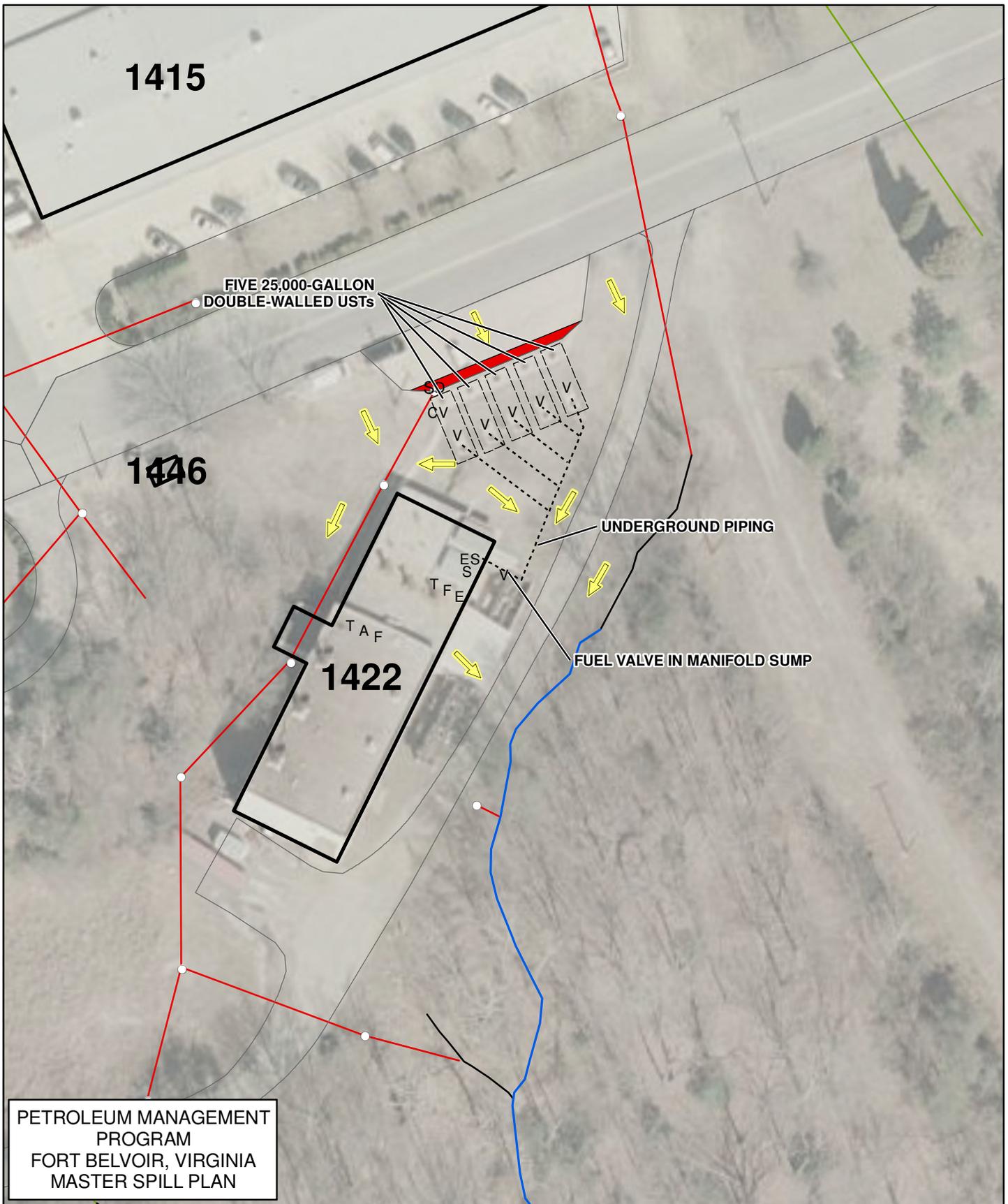
SHUT-OFF VALVE IS LOCATED HERE
VALVE IS REQUIRED BY REGULATION TO BE IN THE
CLOSED/OFF POSITION DURING FUEL DELIVERY

The facility is equipped to handle nearly all spills that may occur at the UST system. Absorbent spill control materials are maintained inside Building 01422. Central storage locations of additional spill control materials and equipment maintained by the Fort Belvoir Fire Protection and Safety Division and DPW's ENRD are also located within a 1.25-mile radius of Building 01422.

In the event of a spill which cannot be contained by personnel at Building 01422, the Fort Belvoir Fire Protection and Safety Division, which serves as the base's primary Incident Response Team (IRT), will respond to the release event. The Incident Response Team shall report directly to the Fire Chief or designated representative present at the release site. The first-due fire station at Fort Belvoir is located approximately 0.75 mile southeast of Building 01422. Two additional fire stations are located within a 2.0-mile radius of Building 01422.

Fort Belvoir's Installation On-Scene Coordinator (IOSC) or his designated representative shall monitor the on-going spill control efforts and provide recommendations to the acting Fire Chief for additional spill control measures to be implemented by the Incident Response Team.

Additional spill control assistance at Building 01422 may be provided by ALEUT, the facilities maintenance contractor at Fort Belvoir, or other designated contractor, at the request of the acting Fire Chief or IOSC. The contractor shall provide personnel and equipment needed for the deployment of spill control materials, the closure of drain valves in the vicinity of a spill site, the preparation of spill control barriers, the removal of contaminated materials, and the performance of other services which may be required in a response event.



**PETROLEUM MANAGEMENT PROGRAM
FORT BELVOIR, VIRGINIA
MASTER SPILL PLAN**

Legend

- 1462 BUILDING
- UST
- STREAM
- STORM INLET
- STORM OPEN DRAINAGE
- STORM LINE
- STORM CULVERT
- ↑ DIRECTION OF SURFICIAL FLOW

- A FIRST AID KIT
- CV CONTAINMENT VALVE
- E EMERGENCY SHOWER
- ES EMERGENCY STOP FOR FUEL PUMP
- F FIRE EXTINGUISHER
- S SPILL CONTROL MATERIALS
- SD STORM DRAIN INLET
- T TELEPHONE
- V FUEL VALVE

BLDG # 1422
TANK # 01422P,Q,R,S,T



SOURCE NOTE:
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FACILITY IDENTIFICATION

Building: Building 02594 (Humphreys Engineer Center Support Activity [HECSA] – Cude Building, Topographic Lab)
Point of Contact: Mr. James Groves, Facility Manager
Telephone: (703) 428-6063
Master Spill Plan Location Reference Appendix A Map, Grid square A3

SPILL SOURCES

Volume (gal)	Product	Type	Surface Containment	Comments
5,000	No. 2 Fuel Oil	UST	N/A	
500	Diesel Fuel	AST	Double Wall	

PROCESS/USE AND GENERAL LOCATION DESCRIPTION

The UST is used to supply No. 2 fuel oil through sub-grade piping from the tank to a furnace and/or boiler located at the same building. This UST system complies with current federal and state environmental regulations regarding corrosion protection, leak detection, and spill control/overflow prevention. Corrosion protection for the UST system includes double walled fiberglass reinforced plastic (FRP) and a double walled piping design consisting of a steel, FRP, or polyethylene pipe enclosed within a FRP or polyethylene containment pipe. Leak detection for the UST system includes interstitial monitoring, sump sensors, audible and visual leak detection alarms, and observation wells. Spill control and overflow prevention for the UST system includes spill containment sumps, overflow prevention valves, and overflow audible and visual alarms.

The AST, located adjacent to the southeast side of the west wing of building 02594, is used to supply diesel fuel through above-ground piping from the tank to an emergency generator at the same building.

Surface drainage in the vicinity of the UST system at Building 02594 flows approximately 20 feet northwest into a storm drain that proceeds approximately 90 feet south to its outfall at a tributary to Dogue Creek. Surface drainage in the vicinity of the AST flows south approximately 60 feet to the tributary to Dogue Creek, approximately 100 feet upstream of the storm drainage outfall. The tributary proceeds from the outfall approximately 0.7 mile southeast through the Jackson Miles Abbott Wetland Refuge to Dogue Creek.

Environmentally Sensitive Areas off-Post that could be impacted by a significant release are listed in Section 4, Table 6.

NOTIFICATION PROCEDURES

Dial (703) 781-1800 on a facility phone to reach the Fort Belvoir Emergency Operations Center Fire Department.

ON-SITE METHOD OF DETECTION

Detection of a surface petroleum release from the UST system and AST at Building 02594 will be achieved by visual confirmation during daily usage of the facility and/or during scheduled inspections of the UST

system and AST. Detection of a sub-grade petroleum release from the UST system at Building 02594 will be achieved by activation of audible and visual alarms associated with the interstitial monitoring sensors.

SPILL PREVENTION MEASURES

- **Equipment** – Both the UST and AST are double walled.
- **Inspections** - The operational status of the UST system's corrosion protection, leak detection, and spill control/overflow components and the AST shall be inspected according to the schedule outlined in Section 6.0 of the MSP. An inspection log shall be prepared by the inspector. Inspection documentation shall be maintained in Building 02594. Inspection records shall also be maintained at DPW's office, located in Building 01442 at Fort Belvoir.
- **Maintenance** - Preventive maintenance of the UST system shall be performed on a regularly scheduled basis as identified in Section 6.0 of the MSP and/or on an as requested basis by the facilities management contractor (ALEUT) or other designated contractor.
- **Security** - The fill ports for the UST system and AST at Building 02594 are locked at all times.

SPILL CONTROL MEASURES

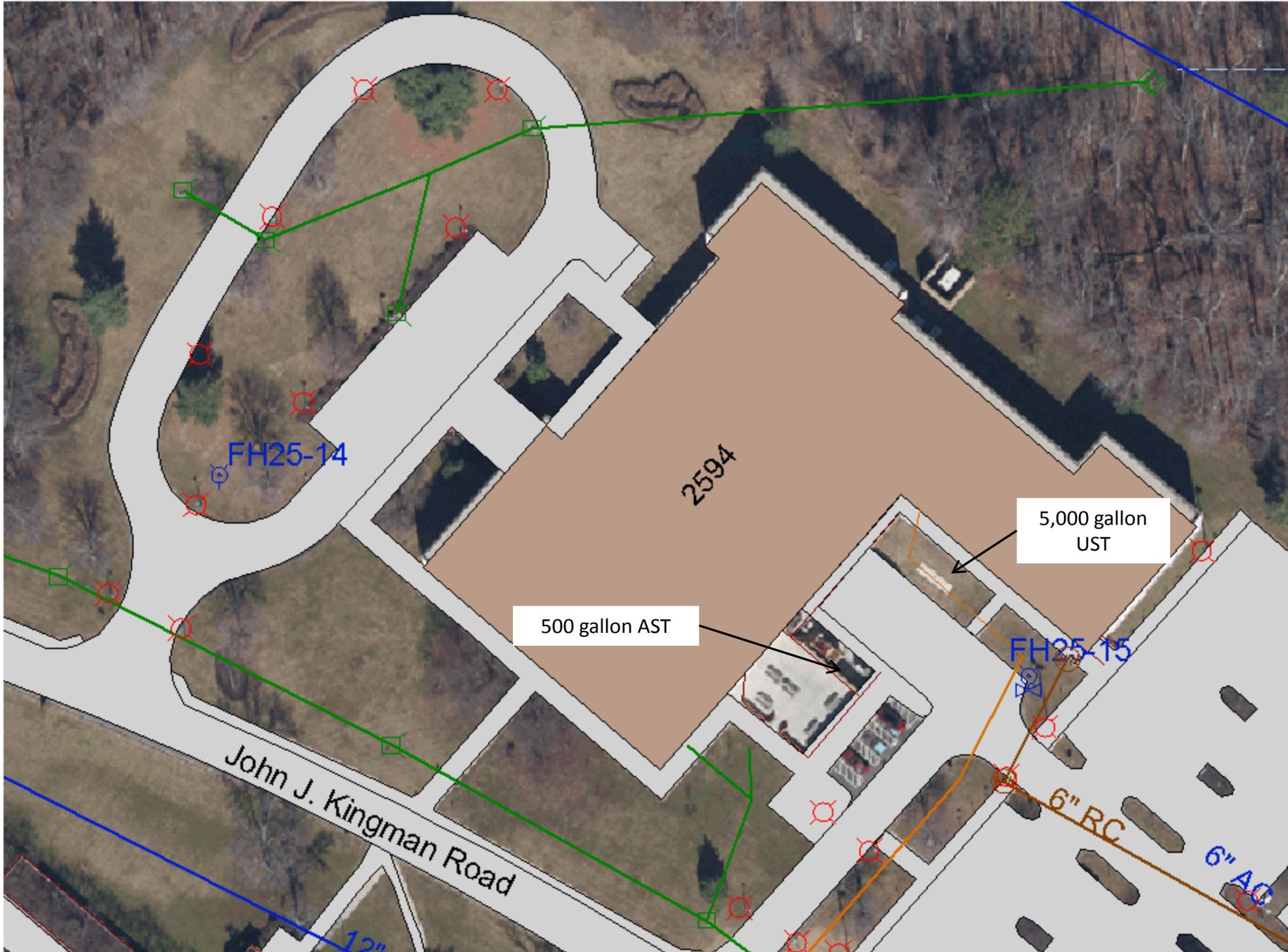
Containment basins associated with the gasoline UST fill ports shall retain petroleum spills that may occur during filling operations.

Spill control materials shall be maintained in Building 02594. Central storage locations of additional spill control materials and equipment maintained by the Fort Belvoir Fire Protection and Safety Division and DPW's ENRD are also located within a 2.0-mile radius of Building 02594.

In the event of a spill which cannot be contained by personnel at Building 02594, the Fort Belvoir Fire Protection and Safety Division, which serves as the base's primary Incident Response Team (IRT), will respond to the release event. The Incident Response Team shall report directly to the Fire Chief or designated representative present at the release site. The first-due fire station at Fort Belvoir is located approximately 2.0 miles southwest of Building 02594. Two additional fire stations are located within a 3.4-mile radius of Building 02594.

Fort Belvoir's Installation On-Scene Coordinator (IOSC) or his designated representative shall monitor the on-going spill control efforts and provide recommendations to the acting Fire Chief for additional spill control measures to be implemented by the Incident Response Team.

Additional spill control assistance at Building 02594 may be provided by ALEUT, the facilities maintenance contractor at Fort Belvoir, or other designated contractor, at the request of the acting Fire Chief or IOSC. The contractor shall provide personnel and equipment needed for the deployment of spill control materials, the closure of drain valves in the vicinity of a spill site, the preparation of spill control barriers, the removal of contaminated materials, and the performance of other services which may be required in a response event.



2594

FH25-14

5,000 gallon UST

500 gallon AST

FH25-15

John J. Kingman Road

6" RC

6" AC

12" A

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FACILITY IDENTIFICATION

Building: Building 02857
Point of Contact: Damian Smith
Telephone: (571) 721-6886
Master Spill Plan Location Reference Appendix A Map, Grid square A3

SPILL SOURCES

Volume (gal)	Product	Type	Surface Containment	Comments
14 x 140	Diesel Fuel	AST	Double Wall	Day Tanks

PROCESS/USE AND GENERAL LOCATION DESCRIPTION

The ASTs are day tanks used to supply diesel fuel to emergency electrical power generators located inside the building. These tanks are steel and double walled. The tanks are located indoors in a room with no floor drains.

Surface drainage in the vicinity of Building 02857 flows approximately southeast until reaching the edge of pavement, at which time it will flow down an embankment to an intermittent surface drainage ditch. The ditch conveys runoff southeast, east, and then northeast approximately 4,200 feet until discharging into an unnamed tributary to Dogue Creek.

Environmentally Sensitive Areas off-Post that could be impacted by a significant release are listed in Section 4, Table 6.

NOTIFICATION PROCEDURES

Dial (703) 781-1800 on a facility phone to reach the Fort Belvoir Emergency Operations Center Fire Department.

ON-SITE METHOD OF DETECTION

Detection of a surface petroleum release from ASTs at Building 02857 will be achieved by visual confirmation during either daily usage of the facility and/or during scheduled inspections of the AST systems. These ASTs also have basin rupture alarms for remote warning of a leak into the secondary containment system.

SPILL PREVENTION MEASURES

- **Equipment** – The ASTs are double walled, with basin rupture alarms to identify leaks.
- **Inspections** - The operational status of the AST systems shall be inspected according to the schedule outlined in Section 6.0 of the MSP. An inspection log shall be prepared by the inspector. Inspection documentation shall be maintained in Building 02857. Inspection records shall also be maintained at DPW's office, located in Building 01442 at Fort Belvoir.
- **Maintenance** - Preventive maintenance of the AST systems shall be performed on a regularly scheduled basis as identified in Section 6.0 of the MSP and/or on an as requested basis by the facilities management contractor (ALEUT) or other designated contractor.

- **Security** - Building 02857 is located in a high security area, and the building is locked at all times.

SPILL CONTROL MEASURES

Spill control materials shall be maintained in Building 02857. Central storage locations of additional spill control materials and equipment maintained by the Fort Belvoir Fire Protection and Safety Division and DPW's ENRD are also located within a 1.5-mile radius of Building 02857.

In the event of a spill which cannot be contained by personnel at Building 02857, the Fort Belvoir Fire Protection and Safety Division, which serves as the base's primary Incident Response Team (IRT), will respond to the release event. The Incident Response Team shall report directly to the Fire Chief or designated representative present at the release site. The first-due fire station at Fort Belvoir is located approximately 1.35 miles south of Building 02857. Two additional fire stations are located within a 3.1-mile radius of Building 02857.

Fort Belvoir's Installation On-Scene Coordinator (IOSC) or his designated representative shall monitor the on-going spill control efforts and provide recommendations to the acting Fire Chief for additional spill control measures to be implemented by the Incident Response Team.

Additional spill control assistance at Building 02857 may be provided by ALEUT, the facilities maintenance contractor at Fort Belvoir, or other designated contractor, at the request of the acting Fire Chief or IOSC. The contractor shall provide personnel and equipment needed for the deployment of spill control materials, the preparation of spill control barriers, the removal of contaminated materials, and the performance of other services which may be required in a response event.

No figure has been provided for this facility based on security concerns.

FACILITY IDENTIFICATION

Building: Buildings 02990-02993 (Golf Course and Equipment Maintenance Facility)
Point of Contact: Mr. Anthony Borros, Golf Course Manager
Telephone: (703) 929-9162
Master Spill Plan Location Reference Appendix A Map, Grid square A2

SPILL SOURCES

Volume (gal)	Product	Type	Surface Containment	Comments
500	Gasoline	AST	Double Wall	Split Tank
500	Diesel	AST	Double Wall	Split Tank
275	Used Oil	AST	Floor/Indoors	
9 x 55	New Oils	Drums	Floor/Indoors	

PROCESS/USE AND GENERAL LOCATION DESCRIPTION

Building 02990: Lawn equipment maintenance activities are performed in Building 02990. New operating fluids, such as hydraulic oil, gear oil, motor oils, and grease are located in drums inside the building, along with a 275-gallon capacity used oil AST.

Building 02993: A 1000-gallon fuel dispensing AST is located approximately 100 feet south of Building 02993's southeast corner, under a shelter. The tank has two 500 gallon inner compartments for diesel fuel and gasoline, with one dispenser for each compartment. This AST is a double-walled steel tank with steel support legs situated on a concrete slab and surrounded by concrete bollards.

Hazardous Material Storage Buildings: Chemical products, such as pesticides, fungicides, and herbicides may be placed in seven portable, grounded metal and/or fiberglass hazardous material storage buildings which are situated approximately 300 feet southwest of Building 02991 at the southwestern corner of the facility's asphalt storage yard. Containers with volumes ranging from less than one gallon to 55 gallons may be kept in the storage rooms. A maximum of approximately 250 gallons of chemical products may be placed in each of the storage compartments. Two of the buildings have containment compartments built into floors of the units. Containment trays may be inserted into the other five storage buildings. Each storage room door is locked at all times. Spill control materials and fire extinguishers are maintained in the vicinity of the storage buildings. No significant product releases have reportedly occurred at this location.

Surface drainage in the vicinity of the buildings and the adjoining asphalt storage yard flows south over approximately 400 feet of forest cover to a tributary of Accotink Creek. This stream channel flows south approximately 1.25 miles to its juncture with Accotink Creek, at which point Accotink Creek continues south an additional 2.0 miles to Accotink Bay. There are no stormwater drains in the vicinity of the chemical product storage areas noted above.

Environmentally Sensitive Areas off-Post that could be impacted by a significant release are listed in Section 4, Table 6.

NOTIFICATION PROCEDURES

Dial (703) 781-1800 on a facility phone to reach the Fort Belvoir Emergency Operations Center Fire Department.

ON-SITE METHOD OF DETECTION

Detection of a petroleum release from the drums or ASTs inside at Building 02990 or outside of Building 02993 will be achieved by visual confirmation during daily usage of the facility and/or during scheduled inspections of the area.

SPILL PREVENTION MEASURES

- **Equipment** – Both the fuel ASTs are double walled.
- **Inspections** - DPW's ENRD shall perform an inspection of the storage structure and the associated secondary containment zones on a semi-annual basis. Inspection records shall be maintained at DPW's office, located in Building 01442 at Fort Belvoir.
- **Maintenance** - Preventive maintenance of the storage facilities shall be performed on a regularly scheduled basis as identified in Section 6.0 of the MSP and/or on an as requested basis by the facilities management contractor (ALEUT) or other designated contractor.
- **Security** - The facility is surrounded by a gated fence which is locked during off hours. Access to the facility is controlled, and visitors must sign-in upon entrance and exit at the facility. Building 02991 is also locked during off-hours, and the doors to the seven storage buildings at the southwestern corner of the asphalt storage yard are locked when not in use.

SPILL CONTROL MEASURES

As noted above, two of the seven storage buildings located southwest of Building 02991 have built-in containment structures. Containment trays can also be inserted into the other five storage buildings situated southwest of Building 02991. The maximum volume of chemical products stored shall not exceed the containment capacity of that storage area. The outdoor fuel ASTs south of Building 02993 are double walled.

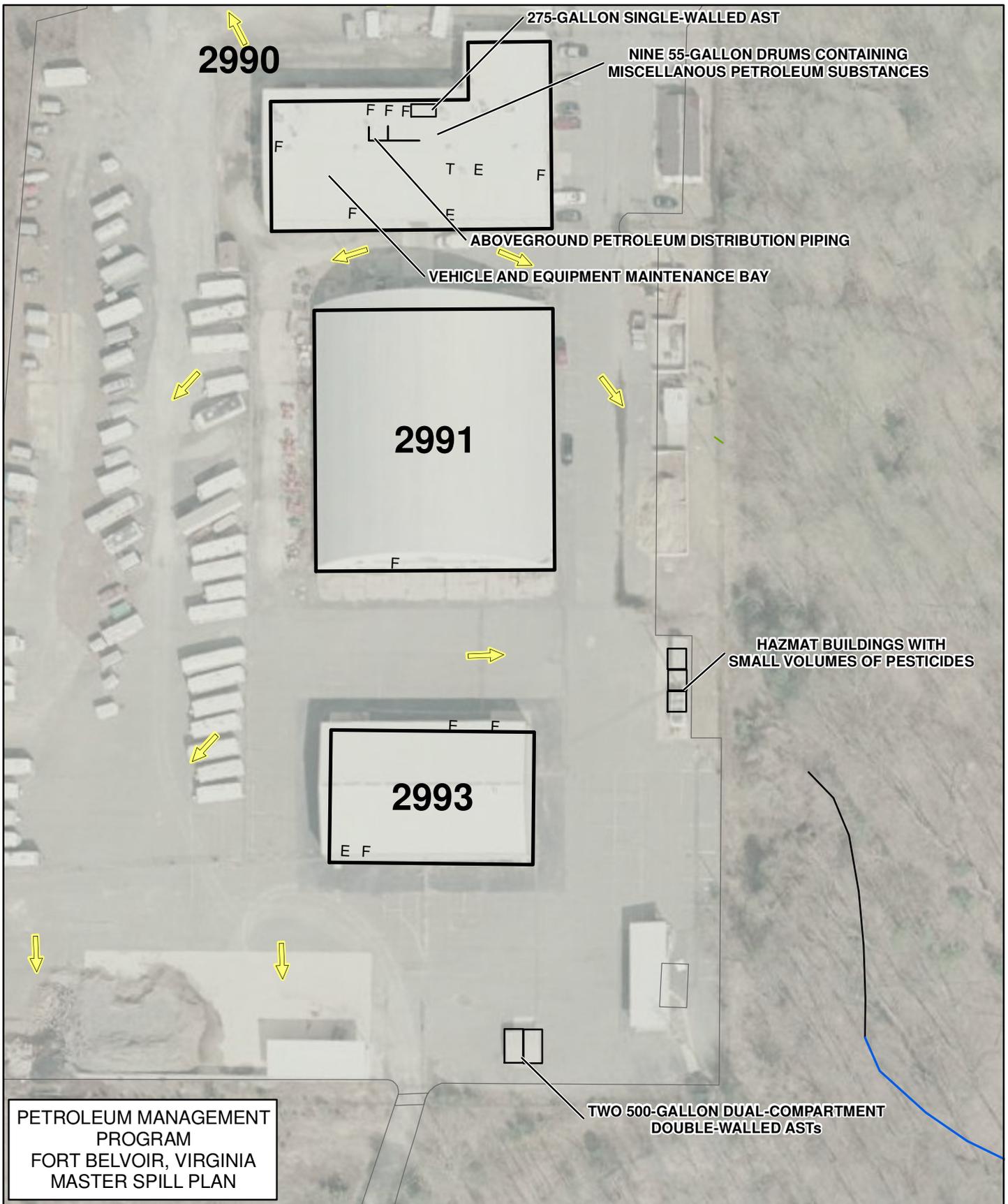
The facility is equipped to handle nearly all spills that may occur at the storage building. Absorbent spill control materials, including loose absorbent and absorbent booms, pillows, and mats, are maintained at several locations in the facility. Central storage locations of additional spill control materials and equipment maintained by the Fort Belvoir Fire Protection and Safety Division and DPW's ENRD are also located within a 2.5 mile radius of Building 02990.

In the event of a spill which cannot be contained by personnel at Building 02990, the Fort Belvoir Fire Protection and Safety Division, which serves as the base's primary Incident Response Team (IRT), will respond to the release event. The Incident Response Team shall report directly to the Fire Chief or designated representative present at the release site. The first-due fire station at Fort Belvoir is located approximately 1.6 miles southeast of Building 02990. Two additional fire stations are located within a 3.5 mile radius of Building 02990.

Fort Belvoir's Installation On-Scene Coordinator (IOSC) or his designated representative shall monitor the on-going spill control efforts and provide recommendations to the acting Fire Chief for additional spill control measures to be implemented by the Incident Response Team.

Additional spill control assistance at the Building 02990 may be provided by ALEUT, the facilities maintenance contractor at Fort Belvoir, or other designated contractor, at the request of the acting Fire Chief or IOSC. The contractor shall provide personnel and equipment needed for the deployment of spill control

materials, the closure of drain valves in the vicinity of a spill site, the preparation of spill control barriers, the removal of contaminated materials, and the performance of other services which may be required in a response event.



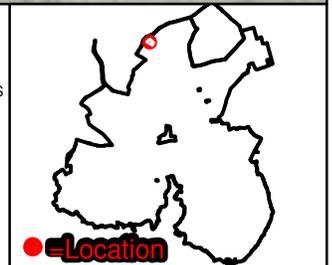
**PETROLEUM MANAGEMENT PROGRAM
FORT BELVOIR, VIRGINIA
MASTER SPILL PLAN**

Legend

- 1462 BUILDING
- AST
- STREAM
- STORM OPEN DRAINAGE
- STORM CULVERT
- ↑ DIRECTION OF SURFICIAL FLOW
- E EMERGENCY SHOWER
- F FIRE EXTINGUISHER
- S SPILL CONTROL MATERIALS
- T TELEPHONE

BLDG #2990
TANK # 02290A,B & 2991C,E,F,G,H,I,J,K,L,M & 2993C,D

SOURCE NOTE:
ALL BASE MAP INFORMATION IS FROM THE FORT BELVOIR GIS, JUNE 2004.
ALL UNDERGROUND FEATURES ARE APPROXIMATE AND ARE SHOWN FOR VISUALIZATION PURPOSES ONLY.
SPILL PLAN FEATURES ARE FROM FIELD INSPECTIONS, JUNE-JULY 2004.



FACILITY IDENTIFICATION

Building: Building 03138 (Boiler Plant at Davison Airfield)
Point of Contact: Will Pineda, Aleut
Telephone: (786) 525-0562
Master Spill Plan Location Reference Appendix A Map, Grid square B1

SPILL SOURCES

Volume (gal)	Product	Type	Surface Containment	Comments
2 x 30,000	No. 2 Fuel Oil	UST	N/A	
1,000	Diesel	AST	Double Wall	

PROCESS/USE AND GENERAL LOCATION DESCRIPTION

The UST system at the north-northeast corner of Building 3138, is used to supply No. 2 fuel oil through sub-grade piping to furnaces and/or boilers located at the same building and to other buildings in the vicinity. This UST system complies with current federal and state environmental regulations regarding corrosion protection, leak detection, and spill control/overflow prevention. Corrosion protection for the UST system includes double walled fiberglass reinforced plastic (FRP) or FRP-coated steel tanks and a double walled piping design consisting of a steel, FRP, or polyethylene pipe enclosed within a FRP or polyethylene containment pipe. Leak detection for the UST system includes interstitial monitoring, audible and visual leak detection alarms, and observation wells. Spill control and overflow prevention for the UST system includes spill containment sumps, overflow prevention valves, and overflow audible and visual alarms.

The 1000-gallon diesel fuel AST is situated adjacent to the northern side of Building 03138. This AST is regulated and therefore is inspected for releases or any problems on a monthly basis. The AST is a double-walled steel tank with insulation, impermeable liner, monolithic concrete outer shell, and concrete support legs. It supplies fuel to an emergency generator. There is no sub-grade piping or remote filling/withdrawal location associated with this tank. This tank sits on a concrete slab and is within a fenced area; the area is not locked, but all of Davison Airfield is within a secure facility requiring DoD ID. No known major spills have occurred at the AST.

Surface drainage in the vicinity of the UST system and the AST at Building 03138 slopes northwest over concrete and asphalt pavement to a concrete-lined surface impoundment. Overflow from the surface impoundment may enter a surface drainage channel that proceeds northwest along Britten Drive. This drainage channel ultimately connects with a drainage system which conducts runoff approximately 4,000 feet northeast to Accotink Creek, from which point the stream proceeds south approximately 1.25 miles south to Accotink Bay.

Environmentally Sensitive Areas off-Post that could be impacted by a significant release are listed in Section 4, Table 6.

NOTIFICATION PROCEDURES

Dial (703) 781-1800 on a facility phone to reach the Fort Belvoir Emergency Operations Center Fire Department.

ON-SITE METHOD OF DETECTION

Detection of a surface petroleum release from the UST system and the AST at Building 03138 shall be achieved by visual confirmation during daily usage of the facility and/or during scheduled monthly

regulation inspections of the AST. Detection of a sub-grade petroleum release from the UST system at Building 03138 shall be achieved by activation of audible and visual alarms.

SPILL PREVENTION MEASURES

- **Equipment** – Both the UST and AST are double walled.
- **Inspections** - The operational status of the UST system's corrosion protection, leak detection, and spill control/overflow components and the AST shall be inspected according to the schedule outlined in Section 6.0 of the MSP. An inspection log shall be prepared by the inspector. Inspection documentation shall be maintained in Building 03136. Inspection records shall also be maintained at DPW's office, located in Building 01442 at Fort Belvoir.
- **Maintenance** - Preventive maintenance of the UST system and AST shall be performed on a regularly scheduled basis as identified in Section 6.0 of the MSP and/or on an as requested basis by the facilities management contractor (ALEUT) or other designated contractor.
- **Security** - The access ports and fuel dispensers for the UST and AST shall remain locked at all times. Additionally, the UST and AST are located in a fenced storage area. Access to the Davison Army Airfield is also controlled at two security stations.

SPILL CONTROL MEASURES

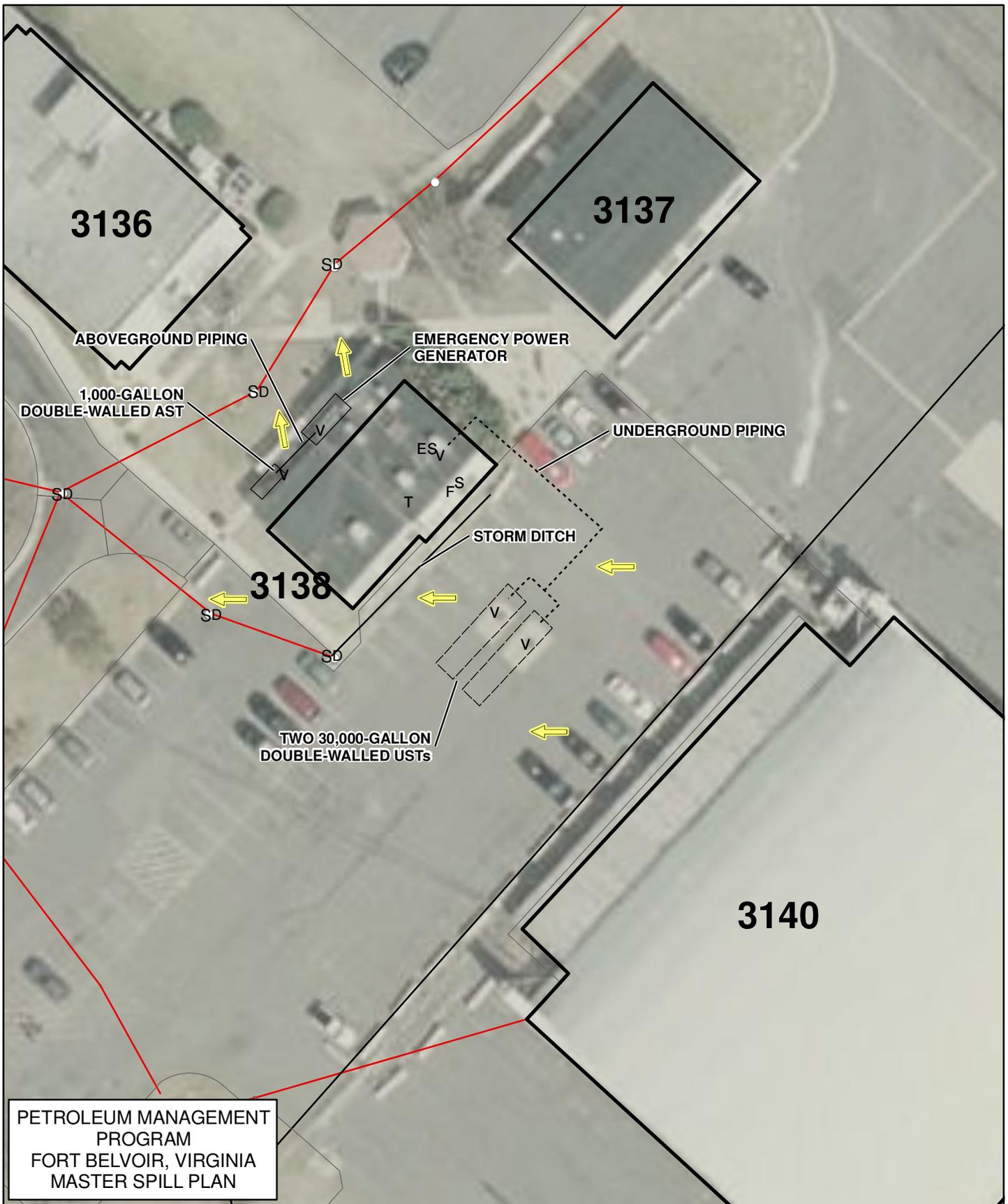
Containment basins associated with the UST and AST fill ports shall retain petroleum spills that may occur during filling operations.

The facility is equipped to handle nearly all spills that may occur at the UST system and AST. A spill pack containing a variety of absorbent materials is maintained behind Building 03138. Central storage locations of additional spill control materials and equipment maintained by the Fort Belvoir Fire Protection and Safety Division and DPW's ENRD are also located within a 1.75 mile radius of Building 03138.

In the event of a spill which cannot be contained by personnel at Building 03138, the Fort Belvoir Fire Protection and Safety Division, which serves as the base's primary Incident Response Team (IRT), will respond to the release event. The Incident Response Team shall report directly to the Fire Chief or designated representative present at the release site. The first-due fire station at Fort Belvoir is located 0.3 mile northeast of Building 03138. Two additional fire stations are located within a 2.75-mile radius of Building 03138.

Fort Belvoir's Installation On-Scene Coordinator (IOSC) or his designated representative shall monitor the on-going spill control efforts and provide recommendations to the acting Fire Chief for additional spill control measures to be implemented by the Incident Response Team.

Additional spill control assistance at Building 03138 may be provided by ALEUT, the facilities maintenance contractor at Fort Belvoir, or other designated contractor, at the request of the acting Fire Chief or IOSC. The contractor shall provide personnel and equipment needed for the deployment of spill control materials, the closure of drain valves in the vicinity of a spill site, the preparation of spill control barriers, the removal of contaminated materials, and the performance of other services which may be required in a response event.



**PETROLEUM MANAGEMENT PROGRAM
FORT BELVOIR, VIRGINIA
MASTER SPILL PLAN**

- Legend**
- BUILDING
 - AST
 - UST
 - STORM INLET
 - STORM OPEN DRAINAGE
 - STORM LINE
 - DIRECTION OF SURFICIAL FLOW
 - ES EMERGENCY STOP FOR FUEL PUMP
 - F FIRE EXTINGUISHER
 - S SPILL CONTROL MATERIALS
 - SD STORM DRAIN INLET
 - T TELEPHONE
 - V FUEL VALVE

BLDG #3138
TANK # 03138H,I,J

SOURCE NOTE:
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FACILITY IDENTIFICATION

Building: Building 03162 (Davison Army Airfield Aircraft Fuel Dispensing Station and Fuel Truck Storage Area Pump House and Dispensing Station)

Point of Contact: Ms. Priscilla Byars

Telephone: (703) 806-7061

Master Spill Plan Location Reference Appendix A Map, Grid square B1

SPILL SOURCES

Volume (gal)	Product	Type	Surface Containment	Comments
26,000	JP-8	UST	N/A	
500	Diesel	AST	Basin for Rack Transfer Areas & Storage Areas	
500	Gasoline	AST		
3,000	JP-8	Mobile		Refueler Truck
3,000	JP-8	Mobile		Refueler Truck
3,000	JP-8	Mobile		Refueler Truck
3,000	JP-8	Mobile		Refueler Truck
3,000	JP-8	Mobile		Refueler Truck

PROCESS/USE AND GENERAL LOCATION DESCRIPTION

The jet fuel UST at Building 03162 was installed in 1994. The tank is a 26,000-gallon tank with two separate 13,000-gallon compartments. The piping for the UST system was replaced in 1999. Various upgrades were completed in 2013 including construction of a personnel shelter, replacement of site asphalt and fencing, and upgraded fuel dispensing pipes. The personnel shelter allows the facility to be manned 24 hours a day to provide monitoring and security. The jet fuel is supplied to the pump house (Building 03162) and then to the dispensing station (Building 03160) through underground piping and is then dispensed through aboveground piping (loading rack) to fuel distribution trucks which take the fuel to the aircraft. Building 1124 has loading or unloading equipment meeting the definition of a “loading/unloading rack” in 40 CFR 112.2. This area’s containment systems is designed to hold at least the maximum capacity of any single compartment of a tank car or tank truck loaded or unloaded at the facility.

The UST at Building 03162 complies with current federal and state environmental regulations regarding corrosion protection, leak detection, and spill control/overflow prevention. Corrosion protection for the UST system includes a double walled fiberglass reinforced plastic (FRP) or FRP-coated steel tank which is cathodically protected with an impressed current, and a double walled piping design consisting of a steel, FRP, or polyethylene pipe enclosed within a FRP or polyethylene containment pipe. Leak detection for the UST system includes interstitial monitoring, sump sensors, audible and visual leak detection alarms, and observation wells. Spill control and overflow prevention for the UST system includes spill containment sumps, overflow prevention valves, and overflow audible and visual alarms.

The AST is a single-walled steel tank with insulation, impermeable liner, monolithic concrete outer shell, concrete support legs, and two separate 500 gallon compartments and is located approximately 300 feet northwest of Building 03160. The tank is used to dispense gasoline and diesel fuels for vehicles and equipment and has been in service since 2008. Each tank compartment contains a fuel dispenser that is locked when not in use. There is no sub-grade piping associated with these tanks. The tanks are filled approximately every six weeks. No known major spills have occurred at this AST location.

Surface drainage in the vicinity of the UST system, the AST, and the refueler trucks flows northwest over concrete and asphalt pavement to a concrete-lined basin. The basin has a capacity of approximately 18,000 gallons. Overflow from the basin may enter a surface drainage channel that proceeds northwest along Britten Drive. This drainage channel ultimately connects with a drainage system which conducts runoff approximately 4,000 feet northeast to Accotink Creek, from which point the stream proceeds south approximately 1.25 miles south to Accotink Bay.

Environmentally Sensitive Areas off-Post that could be impacted by a significant release are listed in Section 4, Table 6.

NOTIFICATION PROCEDURES

Dial (703) 781-1800 on a facility phone to reach the Fort Belvoir Emergency Operations Center Fire Department.

ON-SITE METHOD OF DETECTION

Detection of a surface petroleum release from the UST system, the AST, or the refueler trucks shall be achieved by visual confirmation during daily usage of the facility and/or during scheduled inspections of the UST system. Detection of a sub-grade petroleum release from the UST system at Building 03162 shall be achieved by activation of audible and visual alarms associated with the interstitial monitoring sensors, sump sensors, or identification of petroleum constituents in groundwater samples collected from observation wells in the vicinity of the UST system.

SPILL PREVENTION MEASURES

- **Equipment** – Drainage from transfer or storage areas flows into containment basin. Spill response supplies including booms and pads are stored in a shed located onsite in the fenced area.
- **Inspections** - The operational status of the UST system's corrosion protection, leak detection, and spill control/overflow components and the AST shall be inspected according to the schedule outlined in Section 6.0 of the MSP. An inspection log shall be prepared by the inspector. Inspection documentation shall be maintained in Building 03162. Inspection records shall also be maintained at DPW's office, located in Building 01442 at Fort Belvoir.
- **Maintenance** - Preventive maintenance of the UST system and AST shall be performed on a regularly scheduled basis as identified in Section 6.0 of the MSP and/or on an as requested basis by the facilities management contractor (ALEUT) or other designated contractor.
- **Security** - The access ports and fuel dispensers for the UST and AST shall remain locked at all times. Additionally, the UST and AST are located in a locked, fenced storage area. Access to the Davison Army Airfield is also controlled at two security stations.

SPILL CONTROL MEASURES

Many releases at UST and AST sites occur from spills. Often the spills occur at the fill port when the delivery truck's hose is disconnected. To meet the discharge prevention measures included in 40 CFR 112.7(a)(3)(ii), each petroleum transportation contractor used by Fort Belvoir shall institute safe fill and shutdown procedures that will ensure overfilling of both USTs and ASTs does not occur. All tanks shall be filled to no more than 90 percent of their maximum volume. All petroleum transfer areas for ASTs greater than 55 gallons in capacity and USTs where filling/withdrawal connections are made shall be equipped with a spill containment system, including catchment basins or temporary containment barriers

installed by either Fort Belvoir or the transporter that is capable of containing and collecting any spills that may occur during the transfer operation.

Prior to initiating the transfer, the transporter measures the level of petroleum product in a tank before adding/removing product. The transporter's loading rack has an automatic shutdown system easily accessible at each loading point. This shutdown system is tested weekly by the transporter. Test records shall be made available to Fort Belvoir upon request. For flammables, the delivery vehicle must be shut off and the area double checked for other sources of ignition. The transporter shall verify that the vehicle is grounded, that the handbrake is set on the delivery vehicle, and shall place wheel chocks at the front and rear tires to prevent roll-away. The transporter shall remain at the loading rack during all phases of any transfer operation. Tank vehicles are equipped with brake interlock and secondary automatic shutoff control. Prior to filling/withdrawal and departure of any tank truck, the lowermost drain and all outlets of such vehicles are closely examined by the transporter for leakage and, if necessary, tightened, adjusted, or replaced to prevent liquid leakage while in transit.

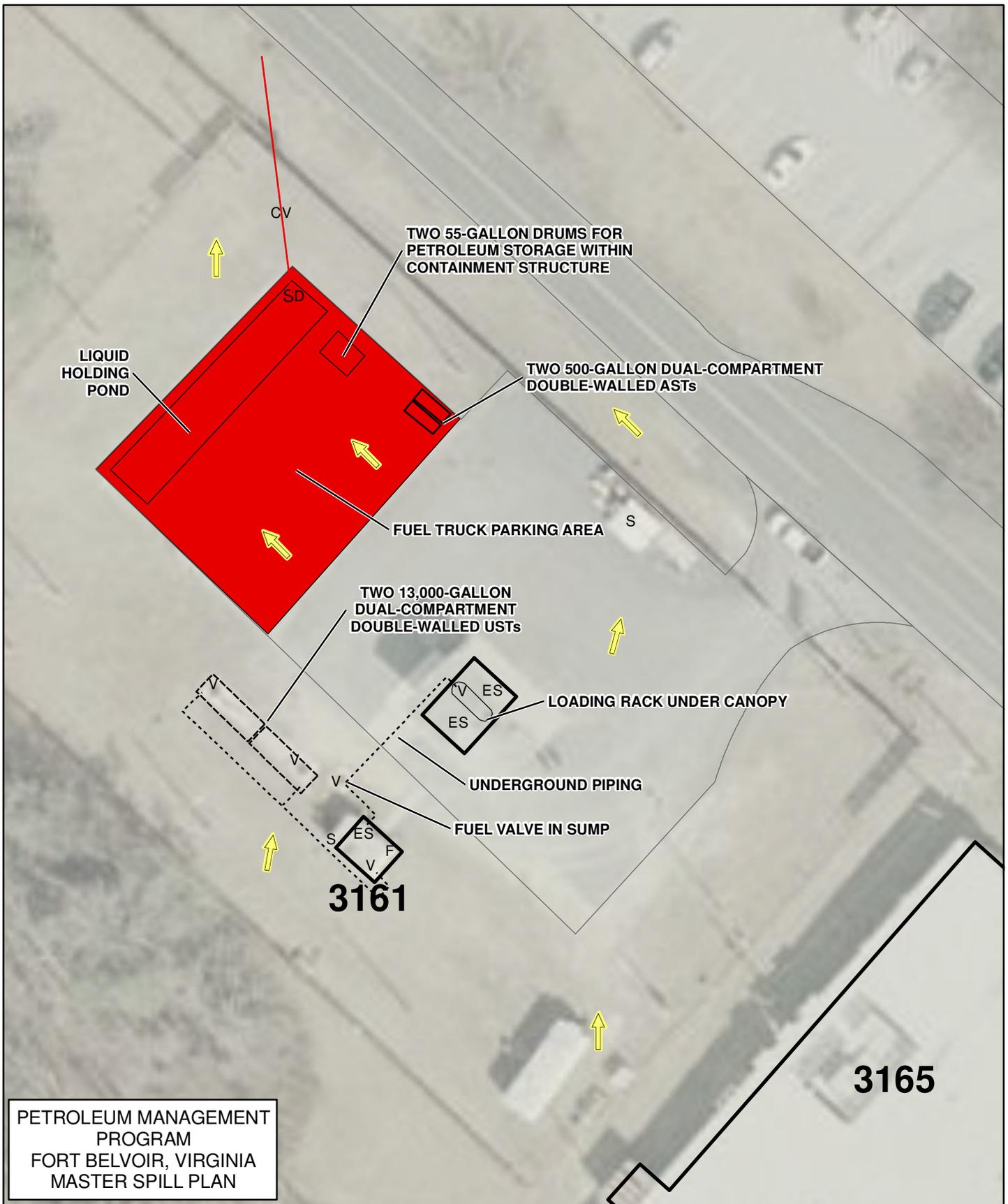
Containment basins associated with the UST and AST fill areas shall retain petroleum spills that may occur during filling operations. A shutoff valve on the effluent line from the containment basin ensures no unintentional discharges occur. The valve remains in the closed position during normal operations and a sign is posted to remind the user to ensure the valve is closed during fueling operations. Precipitation that accumulates in the basin is inspected for a visual sheen prior to discharge into the sanitary sewer. If a sheen is detected, the precipitation is pumped out and discharged into the oil water separator located at 1124.

The facility is equipped to handle nearly all spills that may occur at the UST system and AST. A spill pack containing a variety of absorbent materials is maintained behind Building 03162. Central storage locations of additional spill control materials and equipment maintained by the Fort Belvoir Fire Protection and Safety Division and DPW's ENRD are also located within a 1.75 mile radius of Building 03162.

In the event of a spill which cannot be contained by personnel at Building 03162, the Fort Belvoir Fire Protection and Safety Division, which serves as the base's primary Incident Response Team (IRT), will respond to the release event. The Incident Response Team shall report directly to the Fire Chief or designated representative present at the release site. The first-due fire station at Fort Belvoir is located 0.3 mile northeast of Building 03162. Two additional fire stations are located within a 2.75-mile radius of Building 03162.

Fort Belvoir's Installation On-Scene Coordinator (IOSC) or his designated representative shall monitor the on-going spill control efforts and provide recommendations to the acting Fire Chief for additional spill control measures to be implemented by the Incident Response Team.

Additional spill control assistance at Building 03162 may be provided by the facilities maintenance contractor at Fort Belvoir, or other designated contractor, at the request of the acting Fire Chief or IOSC. The contractor shall provide personnel and equipment needed for the deployment of spill control materials, the closure of drain valves in the vicinity of a spill site, the preparation of spill control barriers, the removal of contaminated materials, and the performance of other services which may be required in a response event.



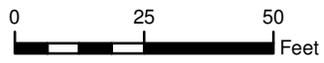
**PETROLEUM MANAGEMENT PROGRAM
FORT BELVOIR, VIRGINIA
MASTER SPILL PLAN**

Legend

- | | | |
|---------------------|-----------------------------|---------------------------------|
| 1462 BUILDING | STORM LINE | CV CONTAINMENT VALVE |
| AST | DIRECTION OF SURFICIAL FLOW | ES EMERGENCY STOP FOR FUEL PUMP |
| UST | | F FIRE EXTINGUISHER |
| CONTAINMENT CURBING | | S SPILL CONTROL MATERIALS |
| | | SD STORM DRAIN INLET |
| | | V FUEL VALVE |

BLDG #3162
TANK # 03159A,B & 03162A,B

SOURCE NOTE:
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APPENDIX D

SPILL DOCUMENTATION FORMS

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DIRECTORATE OF PUBLIC WORKS
ENVIRONMENTAL AND NATURAL RESOURCES DIVISION

Initial abatement measures for (specify location and date):

Release site:

Description of issue:

Type of product involved

Quantity released:

How was the source of the release identified?

List steps taken to prevent further release and migration of product:

Was free product visible (check box)?

YES	<input type="checkbox"/>	NO	<input type="checkbox"/>
-----	--------------------------	----	--------------------------

Date report filed with Virginia DEQ (if applicable):

Report completed by:

Title: DPW-ENRD IAMR

Date:

USEPA Spill Incident Report Form

Part 1. Facility (Division) Originating Report

Name		Phone		Fax	
Address		City		State	Zip

Part 2. Incident Description

Date/Time Started:		Date/Time Ended:	
Cloud Cover		Precipitation Conditions	
Temperature (°F)		Wind Direction & Speed	
Incident Location			
Type Material Spilled/Released			

Damages or Injuries? NO YES (if yes, describe):

Spill/Release into/onto (Check applicable box(es)):	Containment <input type="checkbox"/>	Ground <input type="checkbox"/>	Sewer <input type="checkbox"/>
Amount Spilled/Released to each media checked.			
Amount Recovered from each media checked.			
Product/Material Source Container(s)			
Total Capacity of Spill Source Container(s)			
Equipment Repairs/Replacement Needs			
If spill entered interior sewer inlet, was spill contained by OWS?	YES <input type="checkbox"/> NO <input type="checkbox"/>		
Did spill impact adjacent properties? NO <input type="checkbox"/> YES <input type="checkbox"/> (if yes, describe):			

Description of What Caused the Release:

Corrective Action(s) Taken:

Part 3. Notifications

Agency & Telephone #	Contact Name	Date	Time
Local Emergency: 781-1800			am/pm
VDEQ (540) 574-7800 (800) 468-8892			am/pm
NRC: (800) 424-8802			am/pm
Other:			am/pm

Instructions Given By Agencies

Part 4. Review and Approval

Preparer of Spill Report (Print Name)	Signature	Date

APPENDIX E
SAMPLE INSPECTION FORMS

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Building ID:

00324 – page 1

Date:

Tank ID 00324 R and T
 Tank Contents: Diesel and JP8

Tank Capacity: Two 1,000 gallons
 Product Quantity: _____

Inspection Criteria	Yes	No	Comment
1) Aboveground tank system components, including tank walls, access ports, dispensers, valves, gauges, and piping do not exhibit evidence of deterioration or product releases			
2) Secondary containment system components, including containment floor, walls, and releases valves do not exhibit evidence of deterioration or product releases			
3) Rainwater trapped in the secondary containment system does not exhibit evidence of petroleum. Clean water may be released from the containment area and discharged to the surface. Free petroleum or water containing a petroleum sheen shall be pumped out and properly managed.	---	---	No exterior secondary containment
4) Tank Remains in-use/active	√		
5) Interstitial spaces do not exhibit evidence of product releases	---	---	Interstitial space access not available
6) Overfill prevention controls, including manual gauging, float gauging, or electronic gauging of tank content level, high level alarms, and automatic feed cutoffs, have been examined and appear to be operating properly			
7) Security equipment, including locks on fill/withdrawal ports interstitial ports containment release valves, and fenced enclosures have been examined and appear to be properly maintained			Secure Area (DPW ID req'd)
8) The presence and adequacy of spill control materials in the immediate vicinity of the tank system has been confirmed			
9) The presence and adequacy of posted emergency response information, including spill response procedures, names and telephone numbers of the Fort Belvoir Fire Protection and Safety Division Activity Environmental Coordinator or Point-of-Contact, and Installation On Scene Coordinator, and the location of fire extinguishers and spill control, has been confirmed			
10) The presence and adequacy of hazard communication information for the tank system including tank content labels and site warning labels has been confirmed			
11) Condition of the sides and bottom of the AST has been observed; there are no signs of leakage and tank is in satisfactory condition			
12) Condition of the structural supports of the AST has been observed; they are in satisfactory condition			
Other Observations			

Inspected By: _____

Building ID: 00324 – page 2
Tank ID: 00324 R and T
Tank Contents: Diesel and JP8

Date: _____
Tank Capacity: Two 1,000 gallons
Product Quantity: _____

Inspection Criteria	Yes	No	Comment
PER SPCC GUIDANCE for Regional Inspectors, August. 28, 2013:			
I. CHECK TANK FOR LEAKS – specifically: drip marks, discoloration of tanks; puddles containing spilled or leaked material; corrosion; cracks; and localized dead vegetation			
II. CHECK FOUNDATION for: cracks; discoloration; puddles containing spilled or leaked material; settling; gaps between tank and foundation; and damage caused by vegetation roots.			
III. CHECK PIPING for: Droplets of stored material; discoloration; corrosion; bowing of pipe between supports; evidence of stored material seepage from valves or seals; and localized dead vegetation.			
Other Observations			

Inspected By: _____

Building ID: 03138 – page 1
Tank ID: 03138J
Tank Contents: Diesel

Date: _____
Tank Capacity: 1,000 gallons
Product Quantity: _____

Inspection Criteria	Yes	No	Comment
1) Aboveground tank system components, including tank walls, access ports, dispensers, valves, gauges, and piping do not exhibit evidence of deterioration or product releases			
2) Secondary containment system components, including containment floor, walls, and releases valves do not exhibit evidence of deterioration or product releases			
3) Rainwater trapped in the secondary containment system does not exhibit evidence of petroleum. Clean water may be released from the containment area and discharged to the surface. Free petroleum or water containing a petroleum sheen shall be pumped out and properly managed.	---	---	No exterior secondary containment
4) Tank Remains in-use/active	√		
5) Interstitial spaces do not exhibit evidence of product releases	---	---	Interstitial space access not available
6) Overfill prevention controls, including manual gauging, float gauging, or electronic gauging of tank content level, high level alarms, and automatic feed cutoffs, have been examined and appear to be operating properly			
7) Security equipment, including locks on fill/withdrawal ports interstitial ports containment release valves, and fenced enclosures have been examined and appear to be properly maintained			Secure Area (DPW ID req'd)
8) The presence and adequacy of spill control materials in the immediate vicinity of the tank system has been confirmed			
9) The presence and adequacy of posted emergency response information, including spill response procedures, names and telephone numbers of the Fort Belvoir Fire Protection and Safety Division Activity Environmental Coordinator or Point-of-Contact, and Installation On Scene Coordinator, and the location of fire extinguishers and spill control, has been confirmed			
10) The presence and adequacy of hazard communication information for the tank system including tank content labels and site warning labels has been confirmed			
11) Condition of the sides and bottom of the AST has been observed; there are no signs of leakage and tank is in satisfactory condition			
12) Condition of the structural supports of the AST has been observed; they are in satisfactory condition			
Other Observations			

Inspected By: _____

Building ID: 03138 – page 2
Tank ID 03138J
Tank Contents: Diesel

Date: _____
Tank Capacity: 1,000 gallons
Product Quantity: _____

Inspection Criteria	Yes	No	Comment
PER SPCC GUIDANCE for Regional Inspectors, August. 28, 2013:			
I. CHECK TANK FOR LEAKS – specifically: drip marks, discoloration of tanks; puddles containing spilled or leaked material; corrosion; cracks; and localized dead vegetation			
II. CHECK FOUNDATION for: cracks; discoloration; puddles containing spilled or leaked material; settling; gaps between tank and foundation; and damage caused by vegetation roots.			
III. CHECK PIPING for: Droplets of stored material; discoloration; corrosion; bowing of pipe between supports; evidence of stored material seepage from valves or seals; and localized dead vegetation.			
Other Observations			

Inspected By: _____

APPENDIX F

MEMORANDUMS OF ASSISTANCE BETWEEN FORT BELVOIR AND FAIRFAX CO.

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**NORTHERN VIRGINIA
EMERGENCY SERVICES
MUTUAL RESPONSE AGREEMENT**

CITY OF ALEXANDRIA

CITY OF FAIRFAX

CITY OF MANASSAS

CITY OF MANASSAS PARK

COUNTY OF ARLINGTON

COUNTY OF FAIRFAX

COUNTY OF FAUQUIER

COUNTY OF LOUDOUN

COUNTY OF PRINCE WILLIAM

COUNTY OF STAFFORD

FORT BELVOIR

FORT MYER

METROPOLITAN WASHINGTON AIRPORTS AUTHORITY

MARINE CORPS BASE QUANTICO

March 2009

NORTHERN VIRGINIA EMERGENCY SERVICES MUTUAL RESPONSE

MEMORANDUM OF AGREEMENT

I. Purpose

This Memorandum of Agreement, hereinafter known as the NOVA Agreement, is intended to update and reaffirm the provisions of the original emergency services Memorandum of Understanding, which was agreed to and signed by the parties on December 12, 1975.

II. Background

For more than 20 years, the Fire and Rescue Departments of the Northern Virginia region have displayed an unprecedented level of cooperation in providing emergency services to the citizens of our collective Northern Virginia community. The provisions of the original Memorandum of Understanding created a framework that has allowed our citizens to enjoy the benefits of a regional approach to the delivery of emergency services, using standardized response protocols and operational procedures that are unencumbered by the boundaries of our respective political subdivisions. This system of automatic mutual response has proven to be invaluable, and this update is intended to perpetuate and strengthen this method of emergency service delivery within the region.

III. Parties to this Agreement

This NOVA Agreement is made for the purpose of continuing the mutual exchange of emergency services between the fire, rescue, and emergency medical service agencies of the northern Virginia jurisdictions that are signatories to this agreement. These parties recognize that within the geographic area of northern Virginia the organizational nature, authority, scope of service and operational capability of each fire, rescue and emergency medical service agency differs and, as such, not every jurisdiction that is a party to this agreement can fully comply with all provisions of this agreement.

With this understanding, the parties to this agreement recognize that jurisdictions are willing to comply with all provisions currently within their organizational capability, engage in mutual response wherever and whenever appropriate and commit to continue improvement toward becoming fully compliant with all provisions of this agreement in the future.

With this understanding, the parties of this agreement recognize two distinct types of jurisdictions as signatories:

Tier One (1) Jurisdictions

Tier One jurisdictions are those fire, rescue and emergency medical service organizations with the operational capability and organizational authority to comply with the provisions of this agreement.

Tier Two (2) Jurisdictions

Tier Two jurisdictions are those fire, rescue and emergency medical service agencies that agree with the provisions of this agreement but are currently unable to fully comply due to current limitations on operational capability and/or organizational authority. Tier Two jurisdictions are willing to comply with all provisions currently within their organizational capability, engage in mutual response wherever and whenever appropriate and commit to continued improvement toward becoming a Tier 1 signatory to this agreement in the future.

The following jurisdictions are Tier One signatories to this agreement:

Arlington County, Virginia (Includes City of Falls Church)

City of Fairfax, Virginia

City of Manassas, Virginia

Fairfax County, Virginia (Includes towns of Clifton, Herndon and Vienna)

United States Army Base – Fort Belvoir

The following jurisdictions are Tier Two signatories to this agreement:

City of Alexandria, Virginia

City of Manassas Park, Virginia

Fauquier County, Virginia

Loudoun County, Virginia

Metropolitan Washington Airports Authority

Prince William County, Virginia

Stafford County, Virginia

United States Army Base – Fort Myer

Marine Corp Base Quantico

The Chief of Fire and Rescue, or other official as appropriate shall serve as the signatory to this agreement.

IV. Authority

This agreement is made in accordance with the provisions of Title 27. Chapter 1, Sections 27-1, 27-2, 27-3, and 27-4 of the 1954 Code of Virginia, as amended and 42 USC, Section 1856a.

V. Proviso

The parties to this NOVA Agreement concur with the following provisions specific to the exchange of mutual response emergency services:

A. For the purpose of this agreement, the Northern Virginia region is defined as the entire geographical land area within the political subdivisions of Arlington County, City of Alexandria, City of Fairfax, City of Falls Church, City of Manassas, City of Manassas Park, Fairfax County, Fauquier County, Fort Belvoir military base, Fort Myer military base, Loudoun County, Metropolitan Washington Airports Authority, Prince William County, Marine Corp Base Quantico, and Stafford County.

B. Emergency Services shall mean Fire Suppression, Emergency Medical, Hazardous Material, Technical Rescue, and/or other related types of emergency services. Other services not specifically named in this section may also be exchanged if mutually agreed upon by the parties to this agreement

C. Each party agrees to participate in a mutual response system that, when needed or requested, will automatically dispatch the most appropriate response resource(s) available, to an incident location, without regard to jurisdictional boundary lines.

D. Each party to this agreement shall retain primary responsibility for determining the most appropriate response resources to be utilized within its jurisdiction; however, standardization for common incident types is desirable. For service in geographic areas where mutual response is desirable, the responsible jurisdiction shall confer with the other jurisdiction(s) affected prior to implementing mutual response programming.

E. Each party's Public Safety Communications Center shall maintain direct links to the other communication centers within the Northern Virginia region. These communication centers shall serve as the primary source for a mutual response request. Requests for mutual response may be made by telephone, radio, or via computer network. Each communication center shall also maintain records and reports of mutual response incidents, using their established procedures. Records, reports, and information concerning mutual response incidents shall be provided to the parties to this agreement, when requested through the appropriate method.

F. All tactical units and personnel responding to a mutual response incident shall operate in accordance with the NIMS Incident Command System and all established NOVA operational procedures. Incidents will be under the command of the first arriving officer on scene, regardless of jurisdiction, until command is transferred to an appropriate command officer.

G. Each party shall participate in the development and use of operational procedures to be used during mutual response incidents. These guidelines shall cover such areas as dispatch procedures, communications, apparatus response, tactical operations, medical control, EMS protocols, incident command, and incident reporting. These operational guidelines shall be

reviewed by the NOVA Operations Chiefs on at least a three (3) year cycle and updated as necessary.

VI. Cost for Services

In general, a party to this agreement shall not be indebted to another party for the costs of any usual and customary emergency services rendered by that other party in accordance with the terms and conditions of this agreement. However, in the event of a specific incident where the responsible jurisdiction may be able to recover costs of mitigating an incident, the costs incurred by an assisting jurisdiction may be reimbursed to that jurisdiction if said costs are recovered from the party legally responsible for causing the incident or from a significant event that is approved for cost reimbursement from state and/or federal disaster assistance funds (i.e. a declared emergency under the provisions of the federal Stafford Act),

VII. Indemnity

A. All services performed and expenditures made under this agreement shall be deemed for public and governmental purposes and all immunities from liability enjoyed by federal, state and local governments within its boundaries shall extend to its participation in rendering emergency services, in accordance with this agreement, outside of its boundaries.

B. Each party to this agreement shall waive any and all claims against all the other parties hereto, which may arise out of their activities outside their respective jurisdictions while rendering assistance under this agreement.

C. In providing for the exchange of Emergency Medical Services, each party agrees to acknowledge and accept the use of the pre-hospital medical protocols, procedures, and standards of care regularly employed by another party's EMS agency for use by said agency when providing patient care during a mutual response incident.

D. This NOVA Agreement is intended to work in concert with any other existing agreement(s) between the parties, which address issues relating to cooperation of emergency services agencies. Should the terms of this agreement conflict with similar provisions of another existing agreement

between any of the parties, said parties agree to meet and confer to resolve the conflict between the agreements in question.

VIII. Modification and Termination of Agreement

A. This agreement may be modified at any time the parties deem it necessary. Suggested modifications to this agreement shall be developed in writing and distributed to each party for their review and comment. A modification to this agreement is approved or rejected by mutual consensus of the NOVA Fire Chiefs.

B. Any party may terminate their participation in this agreement by submitting written notice of their withdrawal to the other parties. This notice shall include the reason for their withdrawal from this agreement. A termination notice shall be provided at least 90 days in advance of the effective date of such termination to provide time for any adjustments in response procedures that may be necessary.

IX. Date of Effectiveness

The terms and conditions of this agreement shall become effective on the date that the representatives of each jurisdiction sign this agreement. The provisions of this agreement shall remain in full force and effect until such time that this agreement is modified or terminated by the parties.

X. Signatures

See attached.

**NORTHERN VIRGINIA EMERGENCY SERVICES
MUTUAL RESPONSE AGREEMENT**

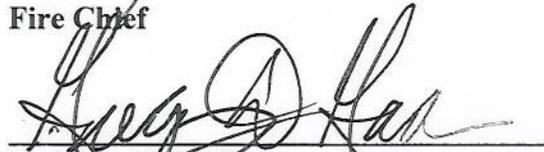
X. Signatures

Ft. Belvoir Fire and Emergency Services



**Richard M. Monroe
Fire Chief**

Dated 20 Feb 2013



**Gregory D. Gadson
Colonel, US Army
Commanding**

Dated 11 Mar 13

APPENDIX G
EVACUATION PLAN

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FORT BELVOIR EVACUATION PLAN

This evacuation plan addresses the requirements outlined in 40 CFR 264.52(f) for a hazardous waste site to include in its contingency plan “an evacuation plan for all site personnel where there is a possibility that evacuation could be necessary”. Currently, Fort Belvoir’s evacuation plan requires individual site managers to contact tenants and instruct them to evacuate. Fort Belvoir does have an active web-site and an information line that can be utilized for mass-release information. Further, the Fort Belvoir e-mail system has a variety of user groups that allow mass-mailings of critical information. Additionally, Fort Belvoir has installed a post-wide communications system consisting of announcement towers throughout the installation to facilitate distribution of evacuation instructions or other emergency announcements.

Should evacuation of any of the hazardous waste accumulation sites be necessary, the IOSC or the Fort Belvoir Fire Prevention and Protection Division will direct the site operators and any spill response personnel to evacuate the buildings either directly or by telephone. In the event of evacuation, personnel will exit buildings at one of the designated exits (see figures in Section 10 for individual buildings).

The figure contained in this Appendix shows the location of the RCRA waste accumulation sites in relation to the office of the Provost Marshall and the locations of the three Fort Belvoir Fire Prevention and Protection Divisions on Fort Belvoir, and the access points listed below. Emergency medical help is available at the Inova Mount Vernon Hospital located approximately 2.5 miles north on Route 1. Fort Belvoir Community Hospital located on Belvoir Drive is available only to treat critical life-threatening injuries.

Should evacuation of Fort Belvoir or any part thereof be deemed necessary, determination of the most effective route off the installation shall be determined in consideration of material involved, the amount of material, the toxicity of the material, the wind direction and personnel protection required for handling the material. Once the downwind hazard area is established the most expeditious evacuation route will be used if evacuation becomes necessary. Fort Belvoir is divided into two distinct areas, North Post and South Post, with US Route 1 running between these two areas. In the event of a Hazardous Waste spill/release/explosion on Fort Belvoir the least dangerous and most appropriate route based on evacuation area will be used to evacuate personnel. In the event evacuation of part or all of Fort Belvoir is ordered, the Military Police will direct traffic for the evacuation. Fairfax County will be notified of the evacuation.

The North Post area of Fort Belvoir has four main arteries for entrance and exit to the installation. These points of entrance/exit are:

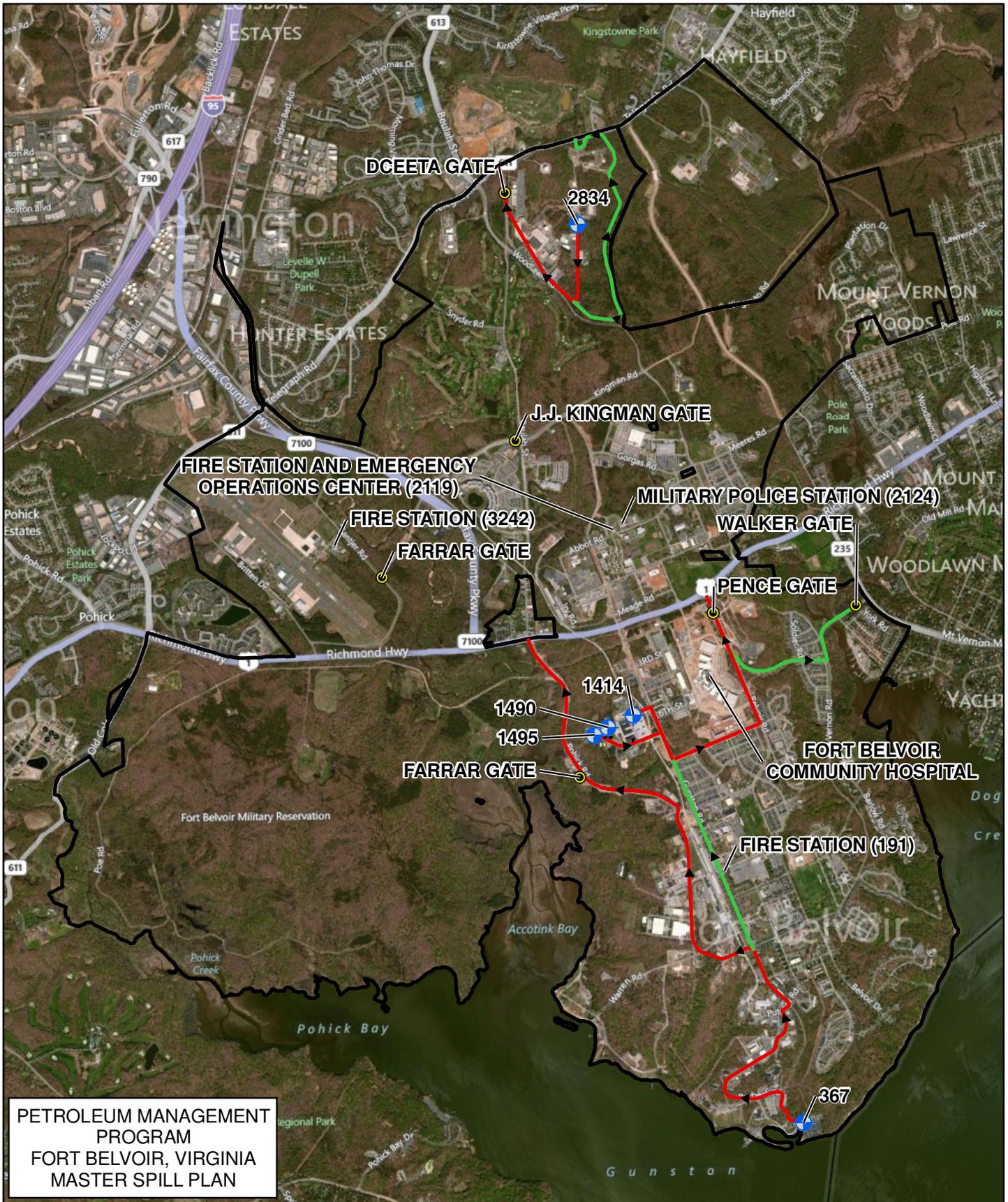
- Kingman Gate on JJ Kingman Road off the Fairfax County Parkway State Route 7100 (open 7-days a week, 0500 to 2100*),
- Telegraph Gate on Beulah Street (State Route 613) off Telegraph Road (State Route 611) (open Monday through Friday, 0500 to 2100; closed on holidays*),
- Woodlawn Village Gate at Pole Road (open 24-hrs a day, 7-days a week*).
- Woodlawn Gate at Woodlawn and US Route 1 (closed*), and

The South Post area of Fort Belvoir has three main arteries for entrance and exit to the installation. These points of entrance/exit are:

- Pence Gate on Belvoir Road at US Route 1 (open 24-hrs a day, 7-days a week*),
- Tulley Gate on Pohick Road at US Route 1 (open 7-days a week, 0500 to 2100*; with an associated Visitor Processing Center),
- Walker Gate on Mount Vernon Road (open 7-days a week, 0500 to 2100*).

All commercial traffic and visitors without DOD ID must enter at Tulley Gate and procure appropriate passes at the Visitor Control and Processing Centers in order to enter the installation from any of the other gates. Visitors may enter at Pence Gate after hours, but no commercial traffic is permitted entry.

* - Information current as of June 2014. Please check the Fort Belvoir Web-site at <http://www.belvoir.army.mil/> for updated information.



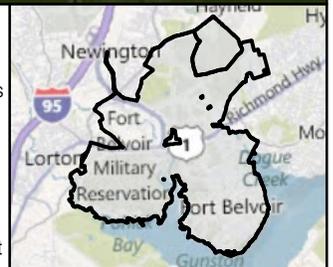
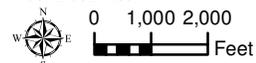
**PETROLEUM MANAGEMENT PROGRAM
FORT BELVOIR, VIRGINIA
MASTER SPILL PLAN**

MAP 2: EVACUATION PLAN ROUTES

Legend

- Gates
- Control Area: Hazardous Waste Storage Area
- Primary Evacuation Route
- Secondary Evacuation Route

SOURCE NOTE:
ALL BASE MAP INFORMATION IS FROM THE FORT BELVOIR GIS, JUNE 2004.
ALL UNDERGROUND FEATURES ARE APPROXIMATE AND ARE SHOWN FOR VISUALIZATION PURPOSES ONLY.
SPILL PLAN FEATURES ARE FROM FIELD INSPECTIONS, JUNE-JULY 2004.



APPENDIX H
SPILL RESPONSE EQUIPMENT INVENTORY LISTS
AND REPORTABLE QUANTITY TABLE (40 CFR 302.4)

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1. The primary Fort Belvoir spill response materials repository is maintained in Building 1495. Materials at this location are used as needed by the Fire and Rescue Dept., DPW Environmental and Natural Resource Dept., and are available to tenant activities. Actual quantities of these materials may vary depending on use and replenishment.

Bay Area Products	Quantity
Telephone (beside northern bay door)	1 unit
Telephone (beside southern bay door)	1 unit
Telephone (beside interior office door)	1 unit
Emergency Eye Wash and Shower (midway down length of bay, western wall)	1 unit
Emergency Eye Wash and Shower (southern end of bay)	1 unit
Spill Kit (by northern bay door)	1 unit
Spill Kit (1/3 of the way down length of bay, western wall)	1 unit
Spill Kit (1/3 of the way down length of bay, eastern wall)	1 unit
Spill Kit (2/3 of the way down length of bay, western wall)	1 unit
Overpack Poly drums (2/3 of the way down length of bay, western wall)	2 units
Steel drums (2/3 of the way down length of bay, western wall)	12 drums
blue plastic HM drums	4 drums
Spill Kit (by northern bay door)	1 unit
Telephone (southern end of bay)	1 unit
Fire Extinguisher (dry chemical type, eastern bay wall, 1/4 of the way down length of bay)	1 unit
Fire Extinguisher (dry chemical type, eastern bay wall, 1/2 of the way down length of bay)	1 unit
Fire Extinguisher (dry chemical type, eastern bay wall, 3/4 of the way down length of bay)	1 unit
Fire Extinguisher (dry chemical type, eastern bay wall, at the southern end of bay)	1 unit
Spill Supplies Storage Room Products	Quantity
Inert particle absorbent	3 large pallets
Anti-slip inert particle absorbent	12 bags
spill absorbent pads	1 bags
rolled spill absorbent pads	3 rolls
20 foot long absorbent booms	5 bags
4 and 5 foot absorbent socks	3 boxes
Inert absorbent (Oil Zorb)	2 bags
oil snare/biodegradable	4 boxes
Stat-Mat Anti-static absorbent pads	10 bags
Hazmat absorbent pads	1 bag
Oil only absorbent pads	1 bags
absorbent socks (blue and pink type)	5 boxes
Imbiber absorbent blankets (transformer oils)	2 boxes
drum liners	1 box
Polypropylene bags	1 box
Clear plastic sheeting (20 feet by 100 feet x 6 mil)	1 roll
Floating oil containment boom (for deployment on river or bay)	200-250 ft.
Miscellaneous spill kit supplies	2 boxes
DPW-ENRD Hazardous Waste Management Office Equipment	Quantity
Telephone	1 unit
MSDS and analytical information	multiple items

2. The Fort Belvoir Fire Prevention and Protection Division Emergency Operations Center is located in Building 2119. The Operations Center possesses pre-plans, MSDSs, petroleum and hazardous material/waste release response guidance information, and notification lists. The following Fire Fighting Equipment is maintained at Buildings 191, 2119, and 3237.

Vehicle Type	Rating/Abilities or Features	Number
Foam Truck	1,000 gpm (65 gallons of foam per 660 gallons water)	2
Foam Truck	1,000 gpm (125 gallons of foam per 1,000 gallons water)	1
Pumper Trucks	1,250 gpm with foaming units	4
Aerial Pump	1,250 gpm with foaming units	2
Incident Commander Trucks	Petroleum and hazardous material/waste release response guidance information.	2

3. Aleut, the maintenance Contractor, maintains the equipment below at Bldgs. 1114 and 1419. This equipment is operated only through the Contractor.

Vehicle Type	Rating/Abilities or Features	Number
5 ton dump trucks	Hauling soil and debris	3
backhoe	Excavation	1
front-end loader	Scooping soil and loading bulk materials	2
1.5 ton pickup truck	Hauling materials	6
¼ ton truck	Hauling personnel and equipment	4
2.5 ton truck	Hauling personnel and equipment	3
Chain saws	Cutting wood obstacles	3
Vacuum truck	4,000 gallon capacity used to remove liquids	1
Street sweeper		1

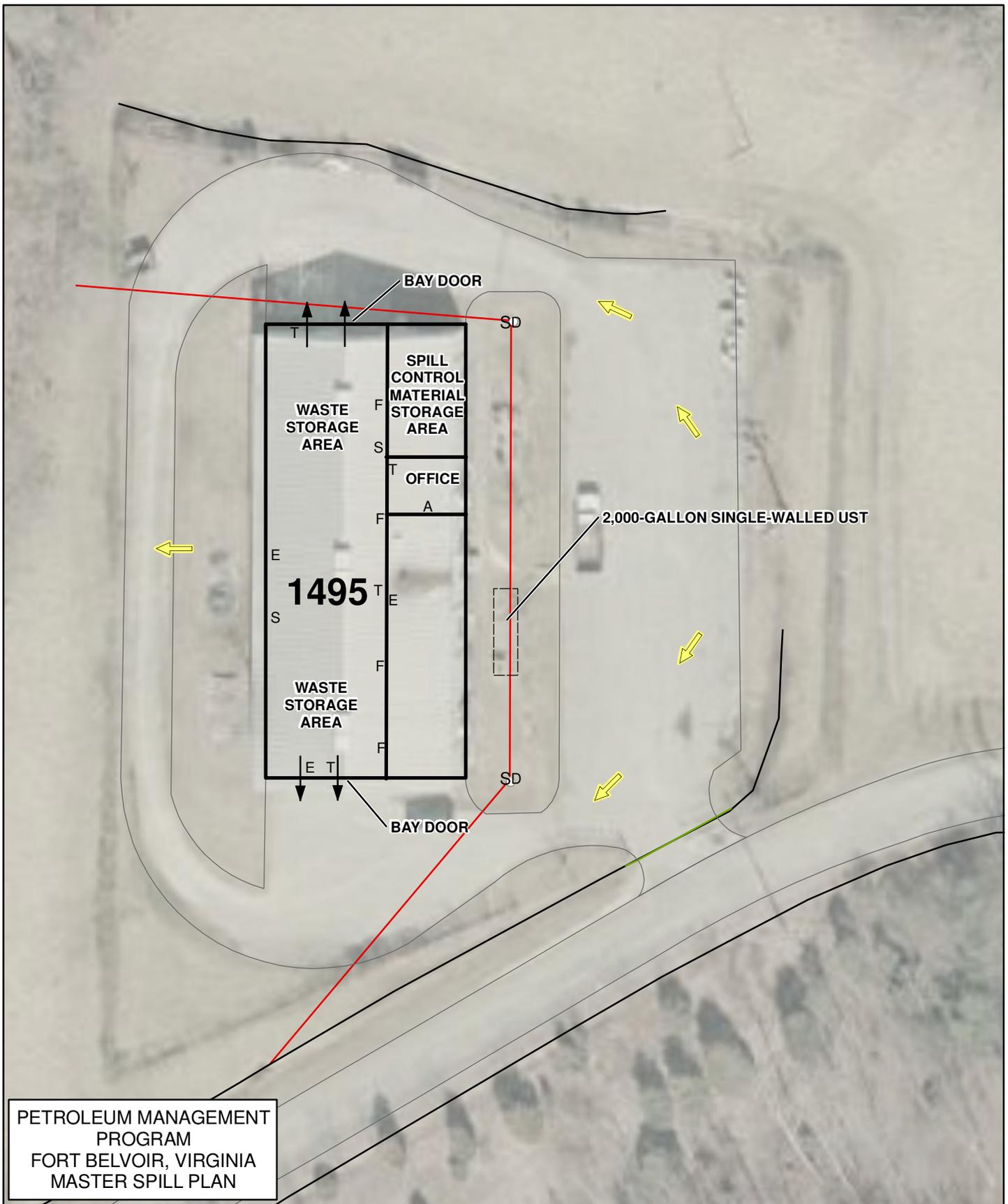
Additional heavy equipment is available through the MDW Engineers at the Garrison Commander's request.

4. The Fort Belvoir Fire Prevention and Protection Division HAZMAT response trailer is stationed at Building 2119 on North Post. An inventory of the equipment in the trailer has been included on the following pages. The inventory is reviewed at least annually by staff.

5. Facility-Level spill response materials in modest quantities are maintained in several locations throughout Ft. Belvoir.

Spill Response Product Use Table

Product Name	Catalog Numbers	Use	Colors (if Pig Product)
Pig Dri	PLP213-50	Oils, Coolants, Solvents, Water	Light Gray
Pig Lite Dri	PLP218	Oils, Coolants, Solvents, Water	Light Brown
Pig Sock	PIG 209	Oils, Coolants, Solvents, Water	Gray
Pig Sock	4048	Oils, Coolants, Solvents, Water	Blue
Pig Sock	2048	Oils, Coolants, Solvents, Water	Blue
Pig Spill Mat Rolls	MAT 419, 462, 458, 461, or 401	Oil Only	White
Pig Sock	SKM 210	Oil Only	Gray
Pig Oil Only Pads	MAT 403 or 455 (100 pack)	Oil Only	White
Pig HazMat Pads	MAT 300-354	Acids, bases, unknown liquids	Pink
Pig Spaghetti Booms	BOM 402-404 (20' long)	Oil on Water	White
Pig Stat Mat Pads (Anti Static)	MAT215 (200 pack)	Acetone, benzene, gasoline, toluene, xylene, mineral spirits, jet fuels	White with pink polyethylene bag for storage
WYK Spill Response Kit			
Oil Zorb Inert			
Imbiber Blankets		Transformer Oils	
Polypropylene Fibers		#5 or #6 Fuel Oil	



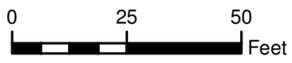
**PETROLEUM MANAGEMENT PROGRAM
FORT BELVOIR, VIRGINIA
MASTER SPILL PLAN**

Legend

- | | | |
|------------------|-----------------------------|---------------------------|
| 1462 BUILDING | STORM OPEN DRAINAGE | A FIRST AID KIT |
| UST | STORM LINE | E EMERGENCY SHOWER |
| EVACUATION ROUTE | STORM CULVERT | F FIRE EXTINGUISHER |
| STORM INLET | DIRECTION OF SURFICIAL FLOW | S SPILL CONTROL MATERIALS |
| | | SD STORM DRAIN INLET |
| | | T TELEPHONE |

BLDG # 1495
TANK # 01495G

SOURCE NOTE:
ALL BASE MAP INFORMATION IS FROM THE FORT BELVOIR GIS, JUNE 2004. ALL UNDERGROUND FEATURES ARE APPROXIMATE AND ARE SHOWN FOR VISUALIZATION PURPOSES ONLY. SPILL PLAN FEATURES ARE FROM FIELD INSPECTIONS, JUNE-JULY 2004.



APPENDIX I
ACRONYMS & DEFINITIONS

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AEC	Army Environmental Command
API	American Petroleum Institute
AR	Army Regulation
AST	Aboveground Storage Tank
BOCA	Building Officials and Code Administrators
BRAC	Base Realignment and Closure Act
CAD	Computer Aided Dispatching
CERCLA	Comprehensive Environmental Response Compensation and Liability Act
CFR	Code of Federal Regulations
CWA	Clean Water Act
DA	Department of the Army
DOI	Department of the Interior
DOT	Department of Transportation
DPCA	Directorate of Personnel and Community Activities
DPW	Directorate of Public Works
EC	Emergency Coordinator
ENRD	Environmental and Natural Resources Division (of DPW)
EOC	Emergency Operation Center
EPCRA	Emergency Planning and Community Right-to-Know Act
EQCs	Environmental Quality Corridors
ERC	Emergency Response Coordinator
FCLPPCP	Fairfax County Lower Potomac Pollution Control Plant
FIFRA	Federal Insecticide Fungicide and Rodenticide Act
FRP	Fiberglass Reinforced Plastic
IAMR	Incident Abatement Measures Report
IC	Incident Commander
ICS	Incident Command System
IOSC	Installation On-Scene Coordinator
IRT	Incident Response Team
ISCP	Installation Spill Contingency Plan
ISO	Installation Safety Officer
KO	Contracting Officer
LEPC	Local Emergency Planning Committee
LRC	Logistics Readiness Center
MDE	Maryland Department of the Environment
MDW	Military District of Washington
MGD	Million Gallons per Day
MP	Military Police
MSDS	Material Safety Data Sheet
MSP	Master Spill Plan
NCP	National Contingency Plan
NCR	National Capitol Region
NFPA	National Fire Protection Association
NRC	National Response Center
ODCP	Oil Discharge Contingency Plan
OPA	Oil Pollution (Prevention) Act
OSHA	Occupational Safety and Health Administration
PCBs	Polychlorinated Biphenyls
PM	Provost Marshal
PMA	Preventive Medicine Activity
POC	Point of Contact

PREP	(National) Preparedness for Response Exercise Program
PSCC	Public Safety Communications Center
RFPR	Richmond, Fredericksburg, Potomac Railroad
RCRA	Resource Conservation and Recovery Act
RQ	Reportable Quantity
RRT	Regional Response Team
SARA	Superfund Amendments Reauthorization Act
SJA	Staff Judge Advocate
SOP	Standard Operating Procedure
SPCC	Spill Prevention Control and Countermeasure Plan
TSCA	Toxic Substances Control Act
TSD	Treatment, Storage, and Disposal Facility
UL	Underwriter Laboratories
USCG	United States Coast Guard
USEPA	United States Environmental Protection Agency
UST	Underground Storage Tanks
VDEQ	Virginia Department of Environmental Quality
VDES	Virginia Department of Emergency Services
VR	Virginia Regulation

Act - means the Federal Water Pollution Control Act (FWPCA), as amended, 33 U.S.C. 1251 et seq., also known as the Clean Water Act (40 CFR 110).

Applicable Water Quality Standards - means State water quality standards adopted by the State pursuant to Section 303 of the Act or promulgated by the EPA pursuant to that section (40 CFR 110).

Discharge - includes, but is not limited to, any spilling, leaking, pumping, pouring, emitting, emptying or dumping. Discharges of oil which are authorized by permits issued pursuant to Section 13 of the River and Harbor Act of 1899, or Section 402 or 405 of the FWPCA Amendments of 1972 (40 CFR 112) are not included in this definition.

Facility - means any mobile or fixed, onshore or offshore building, property, parcel, lease, structure, installation, equipment, pipe, or pipeline (other than a vessel or a public vessel) used in oil well drilling operations, oil production, oil refining, oil storage, oil gathering, oil processing, oil transfer, oil distribution, and oil waste treatment, or in which oil is used. Based on language contained in the December 5 2008 Federal Register Final Rule pertaining to 40 CFR 112, it allows an owner or operator of a facility to separate or aggregate containers to determine the facility boundaries. The boundaries of a facility depend on several site-specific factors, including but not limited to, the ownership or operation of buildings, structures, and equipment on the same site and types of activity at the site. Contiguous or non-contiguous buildings, properties, parcels, leases, structures, installations, pipes, or pipelines under the ownership or operation of the same person may be considered separate facilities. Only this definition governs whether a facility is subject to this part (40 CFR 112.2).

Harmful Quantities - is any discharge of oil that violates applicable water quality standards, or causes a film or sheen upon, or discoloration of, the surface of the water or adjoining shorelines, or causes a sludge or emulsion to be deposited beneath the surface of the water or upon adjoining shorelines (40 CFR 110).

Hazardous Material - According to 9 VAC 20-60-10 Definitions, these include any substances or materials which have been determined by the Secretary of Transportation to be capable of posing an unreasonable risk to health, safety, and property when transported in commerce, and which has been so designated under 49 CFR 171 and 173. In practice, any substance to which exposure may result in adverse chronic or acute health effects, or any substance that requires special handling to mitigate fire, explosion, or reactivity hazards should be considered a hazardous material. Response to a hazardous material spill is covered by 29 CFR 1910.120, the Hazardous Waste Operations and Emergency Response (HAZWOPER) Standard. The Fort Belvoir Fire Prevention and Protection Division are first responders providing for safety and health protection at any spill incident at Fort Belvoir. Material Safety Data Sheets (MSDSs) should be made available to first responders to assist in containment and clean-up activities.

Hazardous Waste - Hazardous wastes are waste materials that could: (a) cause injury or death; or (b) damage or pollute land, air, or water, as designated as hazardous by the Environmental Protection Agency in 40 CFR part 261. In non-regulatory language, hazardous waste is a hazardous material that has been used and, as a result of contamination or degradation, can no longer serve the purpose for which it was produced without processing. This category includes both listed hazardous waste and characteristic hazardous wastes as defined in VAC 20-60-100 through VAC 20-60-200. Waste characterization profiles and/or MSDSs should be made available to first responders to assist in containment and clean-up activities.

Navigable Water* - All waters that are currently used, were used in the past, or may be susceptible to use in interstate or foreign commerce, including all waters that are subject to the ebb and flow of the tide (*Note: This definition is usually broadly interpreted to include most waters near industrial facilities,

except for bodies of water confined to, and retained within, the limits of private property). These waters include, but are not limited to (40 CFR 110):

- Interstate waters, including wetlands;
- Storm water drainage systems (in most cases);
- All other waters such as interstate lakes, rivers, streams (including intermittent streams), mudflats, sandflats, and wetlands, the use, degradation, or destruction of which would affect or could affect interstate or foreign commerce;
- All impoundments of waters otherwise defined as navigable;
- Tributaries to waters identified as navigable; and,
- Wetlands adjacent to waters identified as navigable.

Oil - means oil of any kind or in any form, including, but not limited to petroleum, fuel oil, sludge, oil refuse and oil mixed with wastes other than dredged spoil (40 CFR 112).

OSC - The On-Scene Commander is responsible for all spill response activity at the site and for coordinating all response personnel. The senior fire official on the scene will serve as the initial OSC until replaced by the appointed OSC.

Reportable Oil Spill or Reportable Release - is any discharge of oil in harmful quantities which enters, or has the potential to enter, navigable water or waters of the state. Any release which requires response action to prevent draining, seeping, running or otherwise entering waters of the State is a reportable spill event. A spill of oil to the ground or groundwater is not a reportable spill under 40 CFR 110 unless it should later appear as a surface water contamination.

Sheen - means an iridescent appearance on the surface of water (40 CFR 110).

Sludge - means an aggregate of oil or oil and other matter of any kind in any form other than dredged spoil having a combined specific gravity equivalent to or greater than water (40 CFR 110).

Spill Event - a discharge of oil into or upon the navigable waters of the United States or adjoining shorelines in harmful quantities, as defined at 40 CFR Part 110 (40 CFR 112.2).

Waters of the State - includes all streams, lakes, ponds, marshes, watercourses, waterways, wells, springs, irrigation systems, drainage systems, and all other bodies or accumulations of waters, surface and underground, natural or artificial, public or private, which are contained within, flow through, or border upon this state; except that bodies of water confined to, and retained within, the limits of private property shall not be considered "waters of the state".

APPENDIX J
RIVANNA SPCC PLAN

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Rivanna Station
2055 Boulders Road
Charlottesville, VA 22902

**SPILL PREVENTION, CONTROL AND
COUNTERMEASURE PLAN**

Prepared By:
AMEC Earth & Environmental, Inc.
690 Commonwealth Center
11003 Bluegrass Parkway
Louisville, Kentucky 40299
(502) 267-0700

AMEC Project No. 3-2106-0196

OCTOBER 2012

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1.0 APPROVAL AND CERTIFICATION

1.1 Management Approval

This Spill Prevention Control and Countermeasure Plan (SPCCP) has been carefully reviewed by Fort Belvoir's Environmental Management Office. Management concurs and supports the programs and procedures which are to be implemented and periodically reviewed and updated in accordance with Title 40 Code of Federal Regulations (CFR) Part 112 (Oil Pollution Prevention). Management approval has been extended at a level with authority to commit the necessary resources.

Signature: _____

Date: _____

Name: _____

Mr. Patrick McLaughlin

Title: _____

Chief, DPW ENRD

1.2 Professional Engineer Certification

"I hereby attest that: (i) I am familiar with the requirements of the SPCC rule; (ii) I or my agent has visited and examined the facility; (iii) the Plan has been prepared in accordance with good engineering practice, including consideration of applicable industry standards, and with the requirements of the SPCC rule; (iv) procedures for required inspections and testing have been established; and, (v) the Plan is adequate for the facility."

Signature:	<i>Erica A. Geasler - Bromley</i>
Date of Plan Certification:	<i>10/3/12</i>
Name:	Erica Geasler-Bromley
Professional Engineer Certification Number:	<i>00039336</i>
State of Certification:	Virginia
Date of PE Certification:	<i>10/3/12</i>
PE Seal/Stamp:	

1.3 Certification of the Applicability of the Substantial Harm Criteria

Facility Name: Rivanna Station

Facility Address: 2055 Boulders Road Charlottesville VA 22911

1. Does the facility transfer oil over water to or from vessels and does the facility have a total oil storage capacity greater than or equal to 42,000 gallons?
Yes _____ No X
2. Does the facility have a total oil storage capacity greater than or equal to 1 million gallons and does the facility lack secondary containment that is sufficiently large to contain the capacity of the largest aboveground oil storage tank plus sufficient freeboard to allow for precipitation within any aboveground storage tank area?
Yes _____ No X
3. Does the facility have a total oil storage capacity greater than or equal to 1 million gallons and is the facility located a distance (as calculated using the appropriate formula in Attachment C-III to this appendix or a comparable formula) such that a discharge from the facility could cause injury to fish and wildlife and sensitive environments? For further description of fish and wildlife and sensitive environments, see Appendices I, II, and III to DOC/NOAA's "Guidance for Facility and Vessel Response plans: Fish and Wildlife and Sensitive Environments" (See Appendix E to this part, section 10, for availability) and the applicable Area Contingency Plan.
Yes _____ No X
4. Does the facility have a total oil storage capacity greater than or equal to 1 million gallons and is the facility located a distance (as calculated using the appropriate formula in Attachment C-III to this appendix or a comparable formula) such that a discharge from the facility would shut down a public drinking water intake?
Yes _____ No X
5. Does the facility have a total oil storage capacity greater than or equal to 1 million gallons and has the facility experienced a reportable oil spill in an amount greater than or equal to 10,000 gallons within the last 5 years?
Yes _____ No X

Certification (Attachment C-II, 40 CFR 112.20e)

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document, and that based on my inquiry of those individuals responsible for obtaining this information, I believe that the submitted information is true, accurate, and complete.

Signature: _____

Date: _____

Name: Patrick McLaughlin

Title: Chief, Environmental and Natural Resource Division, Fort Belvoir

2.0 INTRODUCTION

This Spill Prevention, Control and Countermeasure Plan (SPCCP) establishes procedures, methods and equipment, and other requirements to prevent the discharge of oil and hazardous substances from the Rivanna Station. This SPCCP identifies potential spill sources, preventive measures, control and response procedures, inspection programs, and required training of personnel. The SPCCP is on-site at all times at Rivanna Station. The exact location of this Plan is known and easily accessed by facility personnel who may handle or potentially be involved in handling oil or hazardous substances.

2.1 Key Facility Personnel

2.1.1 Spill Prevention and Preparedness

The Rivanna Station Environmental Coordinator or designated individual is responsible for spill prevention and preparedness, as described in 40 CFR 112.7 (f)(2). Their primary responsibilities include:

- Keeping this SPCCP updated as changes occur;
- Ensuring current Material Safety Data Sheets are appropriately obtained and maintained;
- Ensuring copies of the SPCCP are distributed to appropriate personnel at the facility and authorized emergency response agencies who request it;
- Ensuring facility personnel designated to handle oil and/or hazardous materials, or respond to spills, have been appropriately trained and coordinating training (Section 5);
- Performing inspections; and
- Reviewing/recertifying the SPCCP once every five years.

Spill response materials, including sorbent materials, booms, pads, etc. are located in the fixed generator enclosure. An inventory of spill response materials is maintained in Appendix 2.

2.1.2 Spill Response and Control

Table 1 - Installation On-Scene Coordinators

	Primary	Alternate	Alternate
Name:	Cpt. Freddie Florentz	David Masterson	NGIC 24/7 Emergency Hotline
Title:	Rivanna Station Division Commander	Project Manager (Alutiiq)	NGIC Only
Work:	(434) 951-4380	(434) 951-1905	--
Cell:	(571) 221-9029	--	--
24-hour:*	(434) 951-4379	(434) 951-4379	(434)-980-5555

* Front Gate will contact one of the persons above.

The Rivanna Station Environmental Coordinator or designee is responsible for spill response coordination following a release. Their primary responsibilities include:

- Evacuation of and controlling access to the spill location as required;
- Notifying the appropriate local, state, and federal agencies of reportable quantity spills;
- Notifying appropriate company officials;

- Serving as the Installation On-Scene Coordinator (IOSC) until arrival of appropriate government agency representatives (i.e., local fire department). This includes directing any available initial response team personnel; and,
- Overseeing non-emergency clean-up activities following spill.

Spill response by Rivanna Station personnel will include measures that can be effected safely and within the scope of the requirements of 29 CFR 1910.1200, and specifically in 29 CFR 1910.1200 sections (b)(2) and (g)(2)(viii).

Appendix 1 includes a site location map and site plan to aid emergency response personnel with transportation to and within the facility.

2.2 Material Safety Data Sheets

Material Safety Data Sheets (MSDSs) are available to personnel during working hours, as required by the Occupational Safety and Health Administration (OSHA) Hazardous Communications (HAZCOM) Program. They contain critical information regarding oils and oil-based substances, including toxicity, reactivity, flammability, personal protective equipment (PPE), health and safety hazards, and emergency medical decontamination and treatment procedures. In addition, many MSDSs include information related to spill containment and cleanup.

3.0 SPILL RESPONSE AND CONTINGENCY PLAN

WARNING: Personnel safety and protection of life and limb take precedence over environmental protection. If there is a threat to personnel safety, the local fire department should be the first official agency notified. Special precautions should be exercised when handling fuels or other materials with low flash points (i.e., gasoline). **Facility personnel will not respond to leaks or spills from transformers** due to the safety (electrical) risks involved. Contact the Rivanna Station Environmental Coordinator, who will notify the owning utility responsible for response actions and subsequent cleanup of a release.

Spill response by facility personnel will include measures that can be effected safely and within the scope of the requirements of OSHA's HAZCOM Standard, 29 CFR 1910.1200, and specifically in sections (b)(2) and (g)(2)(viii). However, basic spill response guidelines are presented for consideration.

3.1 Initial Spill Response Procedures

The initial spill response procedures are as follows:

1. **Evaluate the incident and/or spill scene. Identify as best as possible the facility's ability to handle (i.e., control source and clean up release) the incident and spill internally.**
2. **If the incident appears to be a threat to human health, evacuate the area.**
3. **Contact the Rivanna Station Environmental Coordinator (Section 2.1.1) and convey the available incident information (i.e., location, substance spilled, estimated volume, status, injuries, etc.). Receive instructions from the Rivanna Station Environmental Coordinator regarding further actions.**

The Rivanna Station Environmental Coordinator is responsible for further evaluation of the spill and to classify the spill as either **INCIDENTAL** or **MAJOR**. This evaluation may be performed based on the information provided by the person reporting the spill, or through a first hand evaluation if needed.

INCIDENTAL SPILL (Response actions outlined in Section 3.1.1):

- Personnel have knowledge of the spilled substance through normal day to day activities;
- The spill is less than 25 gallons;
- No immediate threat to life, human health, or the environment is believed present; and
- The spill has not flowed into an indoor or outdoor drain, navigable water, or onto adjacent property.

MAJOR SPILL (Response actions outlined in Section 3.1.2):

- The material released is immediately or potentially threatening to life, human health, or the environment;
- The spill is equal to or larger than 25 gallons;
- Involved personnel have not been trained in initial response actions for hazardous material releases; or
- Involved personnel do not handle the hazardous material(s) as part of their routine job functions.

3.1.1 Incidental Spill Response Procedures

Incidental spills are spills small enough to be handled using personnel and equipment routinely located in the immediate area of the release. The normal course of action following an **INCIDENTAL SPILL** is for appropriately trained personnel to contain and clean up the spill using available spill response equipment.

The Rivanna Station Environmental Coordinator, or personnel instructed by the Rivanna Station Environmental Coordinator, will follow these steps when responding to an incidental spill:

- Observe the spill from an upwind location, noting product type and/or appearance, source, volume, status (still leaking or not), and nearby conveyances (i.e., drains). Complete Part 2 of the Spill Incident Report Form (Appendix 3).
- Turn off or extinguish all sources of ignition (pumps, motors, heaters, cigarettes, etc.) when flammable and/or combustible substances are involved.
- Review facility records (i.e., MSDSs) and manifests as necessary to identify product(s) released, health hazards, and clean up/recovery procedures.
- Stop the source of a spill. If the source cannot be stopped, request additional assistance using information in Table 3.
- If trained to respond, contain the spill using spill response equipment (Appendix 2) or whatever means are readily available. Stop or slow the spread of the spill using one or more of the following methods:
 - Build a dike around the spill using absorbent material. Only use absorbent material marked as compatible with the hazard class of the spilled material (check the materials MSDS for guidance).
 - Dispose of contaminated media, residue, and cleanup materials as waste.
- Complete Parts 3 and 4, Spill Incident Report Form. Completed copies of the form will be inserted into the SPCCP and maintained on-site for at least five (5) years.
- If needed, the Rivanna Station Environmental Coordinator will notify the appropriate environmental authorities after the incident and follow up with a written report according to Section 3.4.
- The Rivanna Station Environmental Coordinator will notify the Rivanna Station-HQ EHS department within 72-hours.

3.1.2 Major Spill Response Procedures

Major spills are spills that **CANNOT** be absorbed or otherwise controlled at the time of release by personnel in the immediate release area. These include spills that pose a significant safety or health hazard, such as fire or explosion, or that may reach a water source. Table 2 identifies reporting requirements for specific spill volume and type scenarios. Table 3 includes the telephone numbers for internal and external personnel who may need to be notified of a major spill. Unless otherwise directed, the Rivanna Station Environmental Coordinator will be responsible for notifications.

Table 2 - Spill Scenarios and Required Notifications

Spill Scenario	Agencies to be Notified(See Table 3)
Any quantity of oil that discharged into or upon a navigable water (including storm water drains) in an amount that causes a visible film or sheen upon the surface of the water.	<ol style="list-style-type: none"> 911 Virginia DEQ National Response Center
Oil spills equal to or greater than 25 gallons .	<ol style="list-style-type: none"> Virginia DEQ
Non-petroleum Substances (i.e. water treatment chemicals).	Refer to 40 CFR 302 (hazardous substance reportable quantity table) to identify whether a threshold has been exceeded for reporting to Virginia DEQ and the National Response Center.

Table 3 - Emergency Telephone Numbers and Contact List

Rivanna Station Staff	Office	24-Hour
Rivanna Station Environmental Coordinator	(434) 951-1905/1799	(434) 951-4379
Cpt. Freddie Florentz	(434) 951-4380 or (571) 221-9029 (cell)	(434) 951-4379
Fort Belvoir Staff	Office	24-Hour
Mr. Patrick McLaughlin, Chief of the DPW ENRD	(703) 806-3193	(703) 739-4916 (703) 927-5597
Ms. Kelly Lease, Acting Compliance Branch Chief, Environmental Compliance Branch	(703) 806-0020	(703) 298-8045
Mr. Ben Wallen, PG, DPW ENRD Petroleum Program and Spill Response Manager	(703) 806-3694	(571) 232-5784
Outside Agencies	Telephone	
Fire, Medical, & Police	911	
Albemarle County Fire & Rescue (Asst. Chief Lagomarsino)	1 434-296-5833	
Virginia DEQ Valley Region Office (normal hours)	1-540-574-7800	
Virginia DEQ Statewide (24-hours)	1-800-468-8892	
National Response Center ¹	1-800-424-8802	
EPA Region 3 Response Hotline (If NRC is not available)	1-215-814-9016	
Emergency Response Contractors	Telephone	

The Rivanna Station Environmental Coordinator, or personnel instructed by the Rivanna Station Environmental Coordinator, will follow these steps when responding to a major spill (the sequence of initial response action may be altered depending upon individual spill characteristics (i.e., type of spill, quantity of spill, and/or safety hazards involved)):

- **Observe the spill** from an upwind location. Document **basic spill information** (i.e., product type and/or appearance, source, volume, status (still leaking or not), and nearby conveyances (i.e., sewer inlets) using **Part 2** of the **Spill Incident Report Form** located in **Appendix 3**. Answers to some questions about the cause of the spill will not be immediately known, but it is important to quickly gather as much information as possible without putting personnel in danger. Product identification number, shipping manifests, and placard information are essential for the identification of the spilled or leaked material. First responders should use DOT's Emergency Response Guidebook to help identify hazardous substances, and for guidance on initial precautionary and containment steps.
- **Secure the area** from non-essential employees.
- **Turn off or extinguish all sources of ignition** (pumps, motors, cigarettes, etc.) when flammable and/or combustible substances are involved.
- **IF NEEDED, initiate evacuation and notify facility personnel of the threat.** Fire evacuation route maps are posted through the buildings at the facility.
- **Notify Fort Belvoir staff identified in Table 3**, and convey information to them. Fort Belvoir staff will advise what additional actions and notifications are needed.
- **IF NEEDED, Immediately notify the local emergency response agencies by dialing 911.**
- **IF NEEDED, request assistance from the Emergency Response Contractor**, to aid in stopping and containing the spill.
- **If directed by Fort Belvoir staff, notify state, and federal regulatory agencies if the spill is reportable.** The Rivanna Station Environmental Coordinator and Fort Belvoir staff will determine if the spill is a reportable spill, using spill scenarios in Table 2 as a guide. Emergency agency telephone numbers are included in Table 3. The Rivanna Station Environmental Coordinator will convey information recorded on Part 2 of the Spill Incident Report Form (as required by 40 CFR 112), and will document notifications for future reference.
- **Stop spill flow when possible without undue risk of personal injury.** Attempt to stop the source of a spill only if sufficiently familiar with the substance and equipment and can provide an effective response without undue risk of personal injury.
- **Report to senior management upon their arrival to the scene.**
- **Complete Parts 2, 3, and 4 of the Spill Incident Report Form (Appendix 3) to document the release.** The report will identify the type of equipment and methods used in spill cleanup, the names of personnel involved, and a description of assistance received from emergency response agencies. Completed copies of the form will be inserted into the SPCCP and maintained on-site for at least five (5) years.

3.2 Additional Emergency Action

- ***In case of fire/explosion, activate the fire alarm system, telephone local fire department, and evacuate the area.***
- ***Do not allow smoking or open flames within the potential area of the spill.***
- ***Do not use equipment with magneto-sparked engines or equipment that produce sparks or static electricity in potential spill risk areas.***
- ***Do not use any material that would cause oil to sink or disperse in water.***
- ***Place chemical soaked sorbent and soil in metal, leak-tight drums, label and dispose of properly and promptly.***

For releases originating outside of the facility, Figure 2 located in Appendix 1 will be consulted to determine the potential flow direction of the spill. Outfalls through which spills could be discharged may need to be monitored. In the event additional personnel and/or services are required, the local fire department or outside contractors may be employed.

3.3 Off-Site Spills of Oil

Off-site spills will be reported following the procedure outlined in 3.1 for on-site spills of oil. If the spilled material flows past the property boundary of the facility or occurs off-site, the Rivanna Station Environmental Coordinator shall ensure that information, records, and samples adequate for legal purposes are obtained and safeguarded for future use.

3.4 Internal Notification of Spill

Facility personnel will be notified of a spill that could pose an immediate threat to their health through the facility-wide intercom system in accordance with the Rivanna Station Emergency Plan.

3.5 Public Notification of Spill

If necessary, following coordination with the Public Affairs Office at Fort Belvoir and/or Rivanna Station, an authorized representative will make appropriate statements to the media concerning an oil spill event. The extent and nature of the hazard, as well as the steps being taken to safeguard life and property will be explained to prevent or reduce widespread public alarm. Follow-up information will be provided to interested media as it becomes available.

4.0 POST SPILL ACTIONS

The Rivanna Station Environmental Coordinator will submit a completed copy of the **Spill Incident Report Form**, included in Appendix 3, to appropriate local, state, and federal agencies as requested. Clean-up actions will be performed by Rivanna Station and/or response contractors according to the requirements of the agency with jurisdiction. Contaminated media and spill response materials shall be properly containerized and analyzed to identify applicable disposal requirements.

4.1 Amendments

After a spilled substance has been removed and the site remediated, consideration will be given to ways of preventing the reoccurrence of the spill. This may involve one or more of the following:

1. Reviewing equipment inspection records;
2. Reevaluating procedures for certain operations, (i.e., tank filling, tank inspecting, emergency response); and,
3. Investigating options such as:
 - i. Purchasing more spill contingency resources;
 - ii. Installing monitoring/ warning devices;
 - iii. Constructing new secondary containment devices; and,
 - iv. Updating storage equipment.

Any changes made related to resources or procedures, which affect the potential for a spill, shall be incorporated into this SPCCP as an amendment. These changes shall be documented on the Record of Changes, Amendments, and Reviews Form located in Appendix 4.

4.2 State Follow-Up

Immediately following a reportable quantity release of oil, Virginia DEQ shall be notified of the release. A follow-up or written report is not required, unless requested by Virginia DEQ.

4.3 Federal Follow-Up

If a 1,000-gallon single discharge event or two 42-gallon oil discharge event occurs within a 12-month period, the following information is required to be submitted to the Regional Administrator of EPA Region 4 within 60 days (40 CFR Part 112.4(a)):

1. A detailed description of the facility;
2. The reporter's name;
3. Location of the facility;
4. Maximum storage or handling capacity of the facility and normal daily throughput;
5. Corrective action and countermeasures you have taken, including a description of equipment repairs and replacements;
6. An adequate description of the facility, including maps, flow diagrams, and topographical maps, as necessary;
7. The cause of such discharge, including a failure analysis of the system or subsystem in which the failure occurred;
8. Additional preventive measures you have taken or contemplated to minimize the possibility of recurrence;
9. Such other information as the Regional Administrator may reasonably require pertinent to the SPCCP or discharge; and

10. A complete copy of the SPCC Plan.

The above information will be sent to the USEPA at the address below. The shipping envelope/container label will clearly indicate that the package is to be submitted to the USEPA Region 3 official in charge of the SPCCP program. A complete copy of all information sent to USEPA will also be simultaneously sent to the Virginia DEQ, as required by 40 CFR Part 112.4 (c).

Office of the Regional Administrator
U.S. EPA Region 3
1650 Arch Street
Philadelphia, PA 19103
Attn: EPA Region 3 Official in
Charge of SPCC Program

Virginia DEQ
Valley Region
4411 Early Road
P.O. Box 3000
Harrisonburg, VA
22801

Following the receipt and review of the spill and SPCCP information at the state and federal (EPA) levels, either of these agencies may contact Rivanna Station requiring changes or amendments be made to the SPCCP.

Oil spills which result in a discharge to a U.S. navigable water may also require the submission of a written report to the U.S. EPA. If the U.S. EPA is notified of a discharge or threatened discharge of oil(s) or hazardous substance(s) into surface waters from the facility, a "Clean Water Act Section 308 Letter - Information Required for Oil Spills" notice may be sent to the facility. The required information must be submitted within a specific time frame (i.e. 20 calendar days) after receipt of the information request. A written request for an extension to the time limit for responding must be made within five (5) calendar days after receipt of the information request. Due to the level of detail contained in the information request, it is critical that all activities and persons involved in the spill and subsequent response are documented as thoroughly as possible.

5.0 FACILITY DESCRIPTION AND POTENTIAL SPILL LOCATIONS

5.1 Facility Name and Address

Rivanna Station
2055 Boulders Road
Charlottesville, VA 22911

5.2 Facility Description

Location

Rivanna Station is located in northern Albemarle County, Virginia, just east of US Route 29 at its intersection with Boulders Road, approximately 10 miles north of Charlottesville, Virginia. Figure 1 in Appendix 1 shows the location of Rivanna Station (Topographic Map).

Storm Water Drainage System

Storm water inlets are located throughout the property, primarily in the parking area. The inlets associated with Building 2010 convey water to an underground drainage system which discharge into a retention pond southwest of the building. When the water level in the retention pond reaches a certain height, water is discharged from the pond south into the North Fork of the Rivanna River. The approximate surface drainage patterns and important inlet locations are identified in Figure 2.

5.3 General Security

A fence exists around the entire property. Additionally, security operates 24 hours a day, 7 days a week. The aboveground oil storage containers are double-walled. Master valves and starter controls for oil transfer systems do not exist. Lighting is sufficient at all potential spill locations to identify unauthorized entrants, vandalism, spills, or activities that may create the potential for a spill.

5.4 Potential SPCC Spill Sources

The site has several significant locations with a potential source of oil spills. The following narrative describes potential oil spill sources.

5.4.1 Building 2000 ASTs (Day Tanks)

- ✓ Diesel Fuel ASTs (2 @ 500 gallons)

Two (2) 500-gallon capacity ASTs (day tanks) containing diesel fuel are located inside an enclosure northwest of the northwest corner of Building 2000. The ASTs are constructed of double-walled steel, which constitutes secondary containment. The diesel fuel is used to supply emergency electrical power generators immediately to the east within the enclosure. Transfers to the ASTs occur as needed through underground piping from a 10,000 gallon underground storage tank (UST) outside (east of) the southeast corner of the enclosure.

Spills from the ASTs or UST transfer area may occur due to drips and leaks from the AST systems or transfers. The largest probable spill is anticipated to be less than one gallon, resulting from minor incidents. A larger spill from one of the ASTs would likely flow west, outside the enclosure and to a surface drainage ditch that conveys liquid south to the North Fork Rivanna River. A larger spill during transfers to the UST would flow northeast, towards a

storm water inlet in the pavement. The inlet is connected to underground piping that would convey liquid northwest and discharge to a surface drainage ditch north of the enclosure. This ditch would convey liquid west to another surface drainage ditch that conveys liquid south to the North Fork Rivanna River. Spills would be contained and/or removed by appropriately trained personnel using spill response equipment maintained inside Building 2000.

5.4.2 Building 2010 AST

- ✓ Diesel Fuel AST (1 @ 5,000 gallons)

A 5,000-gallon AST containing diesel fuel is located outside the southeast portion of the Joint Use Intelligence Analysis Facility (JUJIAF), Building 2010. The AST is constructed of double-walled steel that constitutes secondary containment. The diesel fuel is supplied to the fixed emergency electrical power generator via aboveground piping. The AST is surrounded on two (2) sides by fencing. Access ports to the AST are locked with a key. Transfers to the AST occur as needed.

Spills from the AST system or transfer area may occur due to drips and leaks from the AST system or fuel transfer operations. The largest probable spill is anticipated to be less than one gallon, resulting from minor incidents. Large spills would flow south, over the asphalt parking lot and into a storm drain, which is connected to the storm sewer system which discharges into a retention pond southwest of the building. Spills would be contained and/or removed by appropriately trained personnel using spill response equipment located near the AST.

5.4.3 Building 2010 Emergency Generator ASTs

- ✓ Diesel Fuel ASTs (2 @ 6,000 gallons)

Two (2) 6,000-gallon capacity ASTs containing diesel fuel are also located outside the southeast portion of the Joint Use Intelligence Analysis Facility (JUJIAF), Building 2010. The ASTs are constructed of double-walled steel that constitutes secondary containment and are integral to the generator enclosure cabinets. The diesel fuel is supplied to the fixed emergency electrical power generators via aboveground piping which is integral to the generator cabinet. A leak sensor located in the interstitial space between each AST's primary and secondary containment would trigger an alarm monitored by Emcor if diesel fuel enters the interstitial space.

Spills from the AST systems or transfer area may occur due to drips and leaks from the AST systems or fuel transfer operations. The largest probable spill is anticipated to be less than one gallon, resulting from minor incidents. Large spills would flow south, over the asphalt parking lot and into a storm drain, which is connected to the storm sewer system which discharges into a retention pond southwest of the building. Spills would be contained and/or removed by appropriately trained personnel using spill response equipment located near these ASTs.

5.4.4 Building 2020 Emergency Generator AST

- ✓ Diesel Fuel AST (1 @ 250 gallons)

A 250-gallon capacity AST containing diesel fuel is located on the eastern portion of the property, outside the building. The AST is constructed of double-walled steel that constitutes secondary containment and is integral to the generator cabinet. The diesel fuel is supplied to the fixed emergency electrical power generator via aboveground piping which is integral to the

generator cabinet. The tank is equipped with leak detection located inside the generator cabinet. Access ports are located inside a panel on the generator, which is locked with a key.

Spills from the AST system or transfer area may occur due to drips and leaks from the AST system or fuel transfer operations. The largest probable spill is anticipated to be less than one gallon, resulting from minor incidents. Large spills would flow east, over the asphalt parking lot and into a storm drain, which is connected to the storm sewer system which discharges into a surface drainage ditch to the south. The ditch discharges to a retention pond further southwest, west of Building 2010. Spills would be contained and/or removed by appropriately trained personnel using spill response equipment located south of Building 2010.

5.5 Facility Storage and Compatibility

Table 4 provides a summary of the facility oil storage sites. No field-constructed aboveground containers, pipelines, partially buried tanks, portable tanks, mobile tanks, or tanks with internal heating devices, are currently used by this facility. The containers utilized for bulk fluid storage are constructed of materials compatible for the liquids they contain. Pipe supports are assumed to be properly designed and constructed to minimize abrasion and corrosion and to allow for expansion and contraction. No buried pipes are associated with the ASTs. Figure 2 in Appendix 1 show approximate locations of oil storage areas, including an underground storage tank that is regulated by 40 CFR Part 280/281.

The outdoor ASTs are considered to be well-designed, shop-manufactured containers. Integrity testing of these ASTs is not required¹ because they are not in direct contact with soil and are double-walled. Product transfer areas do not meet the definition of a loading/unloading “Rack”, since no hard piped systems are used during the transfers.

Table 4 - Facility SPCC-Regulated Oil Storage Sites

Storage Type	Qty	Location	Product	Capacity (gallons)	Container Type/Material	Secondary Containment	Equipment Failure Rate of Flow
AST	2	Outside NW Building 2000 Corner	Diesel Fuel	500	Steel	Double-Wall	<1 gpm to instantaneous
AST	1	Outside SE Building 2010 Corner	Diesel Fuel	5,000	Steel	Double-Wall	<1 gpm to instantaneous
AST	2	Outside SE Building 2010 Corner	Diesel Fuel	6,000	Steel	Double-Wall	<1 gpm to instantaneous
AST	1	Outside E Building 2020 Corner	Diesel Fuel	250	Steel	Double-Wall	<1 gpm to instantaneous

gpm = Gallon per minute

5.6 General Spill Prevention Measures

The following measures have been taken to reduce the potential for environmental contamination from its activities:

¹ Well-designed shop-built containers with a shell capacity of 30,000 gallons or less are exempted through the “SPCC Settlement Issues” dated 31 March 2004 by the EPA as produced through the Oil Program Staff.

- Use of a double-walled tank for oil products stored aboveground and outdoors.

6.0 TRAINING, INSPECTIONS, AND RECORDKEEPING

This section provides information for required training, inspections, and recordkeeping.

6.1 Training

Specific training requirements included in 40 CFR 112.7(f) related to oil releases are described below.

Facility personnel must be properly instructed in the operation and maintenance of containers and/or equipment to prevent the discharges of oil to the environment. The Spill Prevention Coordinator is responsible for coordination of the following personnel training:

- *Operating personnel - spill prevention and response briefings at least once a year; and,*
- *Supervisors - spill prevention briefings at least annually (since personnel could be subject to evacuation notices) to assure understanding of the plan.*

Training of facility personnel is required to ensure proper response to spills or releases. Facility personnel involved with management and handling of oil are also required to participate in Occupational Safety and Health Administration hazardous communication training.

Personnel are instructed in the use of the inspection forms and the parameters to be assessed in an on-the-job training format.

*The **Spill Plan Training Form**, included in Appendix 5, may be used to record personnel trained, units assigned, and date of training for the annual spill prevention training, and periodic briefings. Completed copies of the forms will be kept on-site for at least five (5) years.*

6.2 Inspections

Inspections are required as a component of a spill plan. Written records of the inspections are outlined in Sections 6.2.1 - 6.2.2 and documented through forms located in Appendix 2 (spill response equipment) and Appendix 6 (oil storage). These records are kept on file at the site for at least five (5) years. If the parameter inspected is in satisfactory condition, the appropriate designation is placed in the appropriate line. In addition to these recorded inspections, undocumented inspections are performed periodically in or near work areas through the natural course of performing normal duties at the facility. If a deficiency is noted, it will either be described on the appropriate line or written up and attached to the form.

6.2.1 Oil Storage Site Inspections

The **Oil Storage Container Inspection Form (Form 1)** included in Appendix 6, is used to document **monthly visual inspections** of the emergency power generator ASTs and the associated transfer areas. Aboveground containers undergoing repair, alteration, or change in service that might affect the risk of a discharge or failure due to brittle fracture or other catastrophe, will be evaluated at the time servicing is performed.

6.2.2 Integrity Testing

Bulk storage containers are defined in 40 CFR 122.2 (and through a telephone conversation with Mr. Pete Reich, USEPA Region 9) as

“any container used to store oil. These containers are used for purposes including, but not limited to, the storage of oil prior to use, while being used, or prior to further distribution in commerce. Oil-filled electrical, operating, or manufacturing equipment is not a bulk storage container.”

Integrity testing of these containers was initially required by 40 CFR 112.8(c)(6), which entailed a visual examination plus a non-destructive evaluation (NDE) testing technique on a regular schedule. However, on March 31, 2004, a settlement with EPA was reached on several SPCC-specific issues included in the 2002 rule, including integrity testing. The EPA generally believes that for well-designed shop-built containers with a shell capacity of 30,000 gallons or under, combining appropriate visual inspection with the measures described below would generally provide environmental protection equivalent (as allowed by 40 CFR 112.7(a)(2)) to that provided by visual inspection plus another form of testing. Included in this settlement was the following language:

“We generally believe that visual inspection plus elevation of a shop-built container in a manner that decreases corrosion potential (as compared to a container in contact with soil) and makes all sides of the container, including the bottom, visible during inspection (e.g., where the containers are mounted on structural supports, saddles, or some forms of grillage) would be considered “equivalent.” In a similar vein, we generally believe an approach that combines visual inspection with placement of a barrier between the container and the ground, designed and operated in a way that ensures that any leaks are immediately detected, to be considered “equivalent.” For example, we believe it would generally provide equivalent environmental protection to place a shop-built container on an adequately designed, maintained, and inspected synthetic liner.”

Rivanna Station is deviating from the integrity testing provision of 40 CFR 112.8(c)(6) and establishing this “equivalent environmental protection” for bulk storage containers (believed to be well-designed shop-built containers with shell capacities of less than 30,000 gallons) based on the 2004 EPA settlement guidance, which allows such after considering the tank installation, the requirements of Steel Tank Institute (STI) Standard SP-001, and alternative measures (i.e. good engineering practices) implemented by the facility. Rivanna Station’s bulk storage containers feature double-walled construction. Under STI’s SP-001 standard, such a tank is considered a Category 1 tank (aboveground storage tank with spill control and with continuous release detection method) and therefore requires only periodic inspection. Section 3 identifies the contingency plan to be implemented during a release or threatened release.

The personnel performing these inspections are knowledgeable of storage facility operations, characteristics of the liquid stored, the type of aboveground storage tank and its associated components. Facility personnel perform periodic inspections as described in Section 6.2.1 of the Plan. The scope of inspections and procedures is covered in the training provided to employees involved in handling oil at the facility. The routine inspections focus specifically on detecting any change in conditions or evidence of product leakage from the tank, piping system, and appurtenances.

In accordance with inspection procedures outlined in this Plan, if evidence of leakage from a tank or deterioration of a tank system is observed by facility personnel, the tank is to be inspected by a tank inspector certified by the American Petroleum Institute or STI to assess its suitability for continued service, according to SP-001.

The tank's physical configuration, combined with inspections identified in Section 6.2.1, ensures that any small leak that could develop in the tank inner shell will be detected before it can become significant, escape secondary containment, and reach the environment. This approach provides environmental protection equivalent to the non-destructive shell evaluation component of integrity testing required under 40 CFR 112.8(c)(6) since it provides an appropriate and effective means of assessing the condition of the tank and its suitability for continued service.

6.2.3 Inspection of Secondary Containment Systems

The double-wall secondary containment systems associated with the outdoor emergency power generator fuel tanks have been constructed to contain the volume of the primary tank. Since the systems are closed, sufficient freeboard to allow for precipitation is not necessary. The containment systems have been constructed of materials compatible with the substances the systems are designed to contain.

The containment systems are inspected simultaneously with the bulk storage systems to check to ensure they have not degraded or been damaged in a manner that would prevent the containment of a spill. The ***Oil Container Inspection Form (Form 1)***, included in Appendix 6, is used to document the condition of the containment systems.

6.2.4 Fuel Transfer Inspection

Transfers of diesel fuel to the emergency power generator tanks are performed in the presence of a Rivanna Station employee, along with an employee of the delivery company. Visual monitoring of the receiving containers (volume gauge) is performed to identify when to discontinue the transfer to prevent overfilling. No hard pipes are involved in transfers (i.e., no "Rack"), and no oil transfer or storage piping is located underground. The ***Oil Transfer Container Inspection Form (Form 2)*** is used to document these inspections.

6.3 Recordkeeping

Completed copies of the following documentation spills and related emergency response actions are maintained on-site in the Rivanna Station Environmental Coordinator's office for at least five (5) years:

- Spills, and related emergency response/cleanup actions;
- Local, state, or federal agency spill notifications;
- Inspection forms; and,
- Training forms.

6.4 Required Documentation

Blank forms to perform the documentation required to maintain the plan have been included in Appendices 2-6. Locally generated forms may be used as long as they contain the same information. Plan certifications have been executed in Section 1.0.

7.0 ENVIRONMENTAL GUIDANCE FOR PLAN

7.1 General Applicability and Purpose

This Plan fulfills the requirements for a SPCCP as required by the United States Environmental Protection Agency (USEPA) Regulation Title 40, Code of Federal Regulations, Part 112 (40 CFR 112), and describes spill detection, reporting, containment, cleanup and disposal procedures.

7.2 Regulatory Requirements and Applicability

This Plan has been prepared and implemented in accordance with 40 CFR 112, Oil Pollution Prevention, and Title 35 Virginia Statutes §§ 6021.101-6021.2104 (Virginia Storage Tank and Spill Prevention Act). This Plan also incorporates oil spill reporting requirements in accordance with 40 CFR Part 110. The procedures described in Section 3 are consistent and comply with SPCCP requirements. The SPCCP component of this Plan shall be implemented when oil is accidentally (i.e., un-permitted) released to the environment, including indoor spills having the potential to impact the environment. A copy of this Plan is located in the Rivanna Station Environmental Coordinator's office and is available for review by the USEPA during normal business hours.

The SPCCP has been prepared and certified for this facility because the following conditions exist (40 CFR 112.1(d)):

- There is a reasonable potential for discharging oil from fixed facilities into waters of the United States.
- The oil storage capacity on-site in containers with capacities equal to or greater than 55 gallons exceeds 1,320 gallons of total aboveground storage.

The facility is not required to prepare a Facility Response Plan (FRP) because it does not meet any of the FRP preparation thresholds as identified in 40 CFR 112.20. The underground storage tank on the property is regulated by 40 CFR 280, and is not required to be included in this plan other than noting the location on Figure 2. The facility does not have pipelines, partially buried tanks, or underground transfer piping, and therefore is not required to cap and blank flange out of service pipelines, or maintain cathodic protection or wrapping for buried materials. No piping associated with oil at the facility is in a location that could be damaged by large vehicles, so warning signs related to aboveground piping have not been installed. No tanks have internal heating coils.

7.3 Review and Amendment of the Plan

7.3.1 Periodic Review and Evaluation

The Rivanna Station Environmental Coordinator is responsible for:

- Conducting a review of the SPCCP at least once every five years (40 CFR 112.5(b));
- Updating the SPCCP whenever there is a change in facility design, construction, operation, or maintenance that affects the facility's potential for the discharge of oil or hazardous substances into or upon navigable waters or adjoining shorelines (40 CFR 112.5(a)); and,
- Monitoring any corrective actions related to the SPCCP.

The Plan will be amended if it is determined that:

1. Equipment or procedure changes are recommended by the above periodic review process;
2. More effective, field-proven prevention and control technology becomes available at the time of above review (40 CFR 112.5(b)); or
3. The USEPA requires revisions.

The Plan amendment must be implemented as soon as possible, but not later than six months following preparation of any amendment, unless an extension [40 CFR 112.3(f)] has been requested and granted.

Review of the Plan and any resulting amendments or changes shall be documented on the **Record of Changes, Amendments and Review** form in Appendix 4.

7.3.2 USEPA Regional Administrative Review

This Plan will be reviewed by an USEPA Regional Administrator if the facility discharges oil into or upon navigable waters of the United States or adjoining shorelines, or as otherwise described in 40 CFR 112.1(b), in excess of the following quantities:

- 1,000 U.S. gallons in a single spill event; or
- 42 U.S. gallons in each of two spill events within any 12-month period.

The administrator may require an amendment to bring the Plan into compliance with the regulations and to prevent and contain discharges of oil from the facility. Plan amendments will be documented using the **Record of Changes, Amendments and Review** form in Appendix 4.

7.4 Certification of Plan and Amendments

A professional engineer (PE) must certify the Plan and Plan Amendments (40 CFR 112.5(c)). Non-technical amendments, such as administrative type revisions and deletions to the Plan, which do not materially affect the facility's potential for a discharge of oil, do not require PE certification.

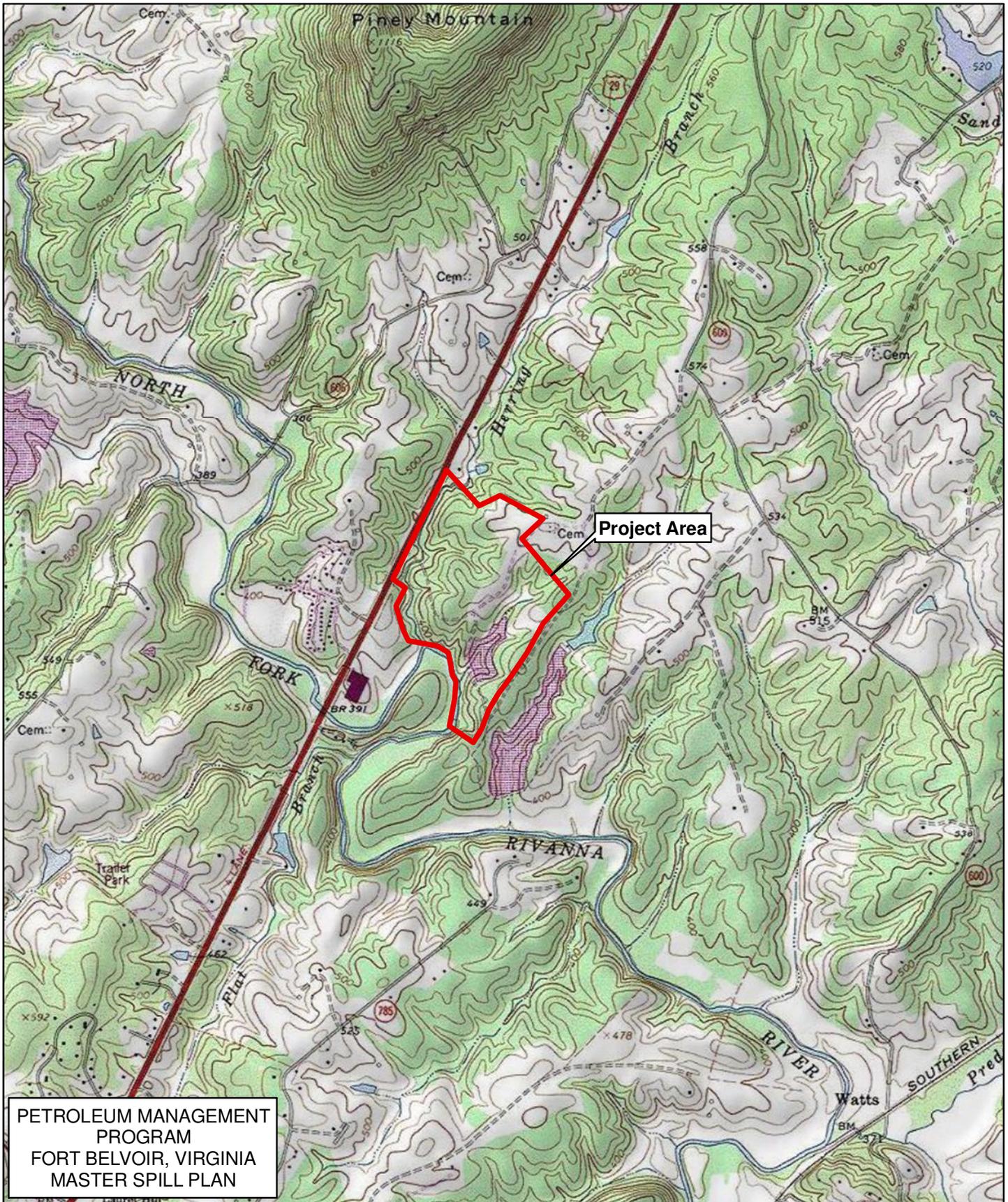
7.5 Civil Penalties

Owners or operators of facilities subject to 40 CFR 112.3 (a), (b) or (c) who violate the requirements of this part 112 by failing or refusing to comply with any of the provisions of 112.3, 112.4 or 112.5 are liable for a civil penalty for each day such violation continues.

7.6 Spill History

The spill history for this facility is no longer required by 40 CFR 112. However the facility has not experienced spill events as defined by 40 CFR 110 (oil discharged in harmful quantities to navigable waters of the United States). Future spill events will be appropriately documented and records maintained for legal purposes.

Appendix 1 - Figures



PETROLEUM MANAGEMENT PROGRAM
 FORT BELVOIR, VIRGINIA
 MASTER SPILL PLAN

TOPOGRAPHIC MAP

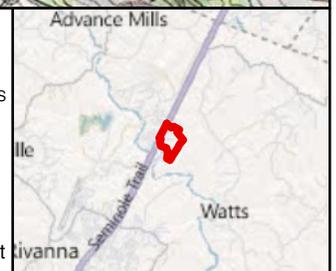
Legend

 Rivanna Project Area

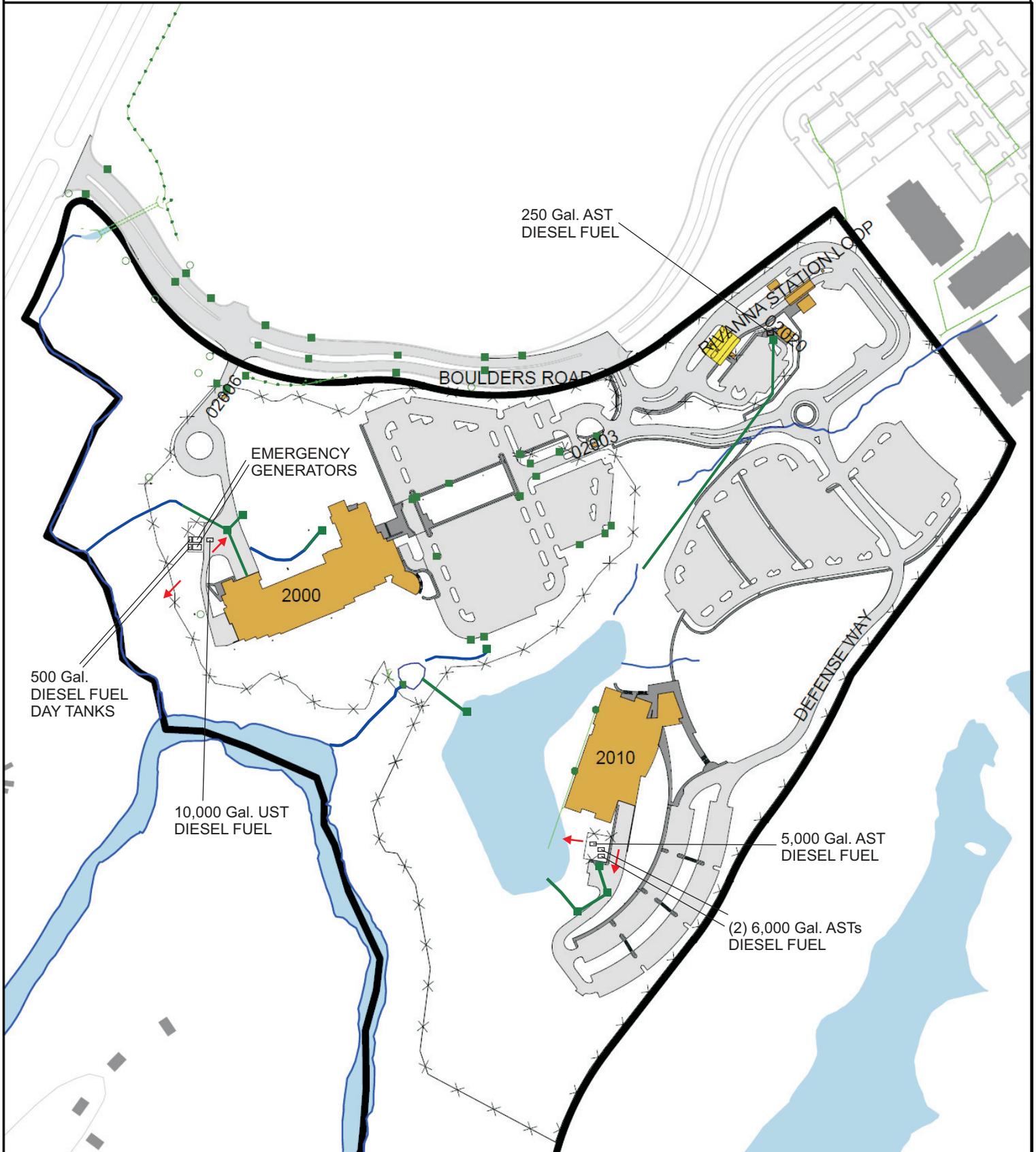
SOURCE NOTE:
 ALL BASE MAP INFORMATION IS FROM THE FORT BELVOIR GIS, JUNE 2004.
 ALL UNDERGROUND FEATURES ARE APPROXIMATE AND ARE SHOWN FOR VISUALIZATION PURPOSES ONLY.
 SPILL PLAN FEATURES ARE FROM FIELD INSPECTIONS, JUNE-JULY 2004.



0 500 1,000
 Feet



RIVANNA STATION - CURRENT STORM WATER UTILITIES IN GIS



Appendix 2 - Facility Spill Control/Emergency Equipment List

FACILITY SPILL CONTROL/ EMERGENCY EQUIPMENT LIST

The following table includes the available spill control and emergency response equipment located on-site. The equipment is inspected and/or tested **ANNUALLY** (at a minimum) to ensure the equipment is available and/or operational. Additional inspections unrelated to this plan may be performed on this equipment periodically. The completed inspection form shall be forwarded to the Rivanna Station Environmental Coordinator. Faulty equipment or spent supplies will be replaced or repaired as soon as practical following completion of a spill response event or the inspection.

Building 2000 On-Hand Spill Response Kit (indoors):

Serial	Noun	Size	Quantity	Inspections		Follow-up Completed
				Date & Initials	Actions Needed	
1	Ever Soak Absorbent Rolls	8 sq ft	2			
2	Absorbent Oil Socks	Case	1			
3	Ever Soak Absorbent Pads	Box (8 sq ft)	4			
4	Snake/Spill Containment	3 feet	4			
5	Snake/Spill Containment	12 feet	2			
6	Yellow BRUTE 44 Gal Containers	44 GAL	1			
7	Safety Glover – HVY Duty	One Size	1			
8	Silica Sands	24# bags	5			

Building 2010 On-Hand Spill Response Kit (outdoors):

Serial	Noun	Size	Quantity	Inspections		Follow-up Completed
				Date & Initials	Actions Needed	
1	Ever Soak Absorbent Rolls	8 sq ft	2			
2	Absorbent Oil Socks	Case	1			
3	Ever Soak Absorbent Pads	Box (8 sq ft)	4			
4	Snake/Spill Containment	3 feet	12			
5	Snake/Spill Containment	12 feet	3			
6	Yellow BRUTE 44 Gal Containers	44 GAL	3			
7	Safety Glover – HVY Duty	One Size	1			
8	Silica Sands	24# bags	10			
9	Kleen Guard A30 Protective Overalls	One Size	2			
10	Storm Drain Mat	48" X 40"	1			

Appendix 3 - Facility Spill Incident Reporting Form

Rivanna Station Spill Incident Report Form

Part 1. Facility (Division) Originating Report

Name	Rivanna Station	Phone		Fax	
Address	Route 29 North	City	Charlottesville	State	VA
				Zip	22902

Part 2. Incident Description

Date/Time Started:	Date/Time Ended:
Cloud Cover	Precipitation Conditions
Temperature (°F)	Wind Direction & Speed
Incident Location	
Type Material Spilled/Released	

Damages or Injuries? NO YES (if yes, describe):

Spill/Release into/onto (Check applicable box(es)):	Containment <input type="checkbox"/>	Ground <input type="checkbox"/>	Sewer <input type="checkbox"/>
Amount Spilled/Released to each media checked.			
Amount Recovered from each media checked.			
Product/Material Source Container(s)			
Total Capacity of Spill Source Container(s)			
Equipment Repairs/Replacement Needs			
If spill entered interior sewer inlet, was spill contained by OWS?	YES <input type="checkbox"/>	NO <input type="checkbox"/>	

Did spill impact adjacent properties? NO YES (if yes, describe):

Description of What Caused the Release:

Corrective Action(s) Taken:

Part 3. Notifications

Agency & Telephone #	Contact Name	Date	Time
Local Emergency: 911			am/pm
VADEQ (804) 527-5020 (800) 468-8892			am/pm
NRC: (800) 424-8802			am/pm
Other:			am/pm

Instructions Given By Agencies

Part 4. Review and Approval

Preparer of Spill Report (Print Name)	Signature	Date

Appendix 4 - Record of Changes, Amendments, and Review Form

Appendix 5 - Spill Plan Training Form

SPILL PLAN TRAINING FORM

The following Spill Plan Training Form should be completed each time a training session related to the SPCCP is performed. Training is required at a minimum **ANNUALLY** to assure understanding of the plan. Participants should print their name, employee number, and then sign their name in the appropriate spaces provided below. The trainer should complete the upper portion of the form, including topics covered in addition to the general review of the plan.

Trainer's Name:			
Date and Time of Training:			
Training Topics:	<input type="checkbox"/> Regulatory Background	<input type="checkbox"/> Goals	<input type="checkbox"/> Emergency Actions
<input type="checkbox"/> Potential Pollution Sources	<input type="checkbox"/> Good Housekeeping	<input type="checkbox"/> Best Management Practices	
List Training Materials:			
Attendees must print their name and sign below to receive credit for attending the training:			
Name (print)	Employee #	Signature	
1.			
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Appendix 6 - Inspection Forms

INSPECTIONS AND RECORDS

Area	Inspection/ Type of Testing	Required Documentation	Recommended Frequency	Inspected By
Storage containers and storage areas	Cursory visual observation for general condition and spills/leaks.	None	Periodically during normal generator maintenance activities.	Generator Maintenance Personnel
Storage containers and storage areas	Detailed inspection for general condition and spills/leaks.	Inspection Form 1	At least Monthly	Facility personnel
Transfer areas	Visual inspection before, during, and following transfers to emergency generator tanks.	Inspection Form 2	Each transfer	Facility personnel
Secondary containment systems	Inspection of waning systems.	Inspection Form 3	Monthly	Facility personnel
Spill response material	Ensure: a. Appropriate number of kits, b. Appropriate locations, and c. Contain at least minimum materials.	Yes, Facility Spill Control/Emergency Equipment List, App. 2	Annually or following emergency response	Facility personnel

INSPECTION FORM 1 OIL STORAGE CONTAINERS

Complete this inspection record **MONTHLY** for bulk oil storage tank as well as associated piping/hoses. Visually inspect the equipment and place a N (No for Compliance), Y (Yes for Non-Compliance) or N/A (Not Applicable) in the appropriate box for each inspection item. If any item needs elaboration, use the comments space provided, or attach additional descriptions and comments on a separate page. When the inspection is completed, submit the completed form to the Rivanna Station Environmental Coordinator for review and follow up actions if needed.

INSPECTION ITEM	Bldg 2000 Fuel AST	Bldg 2010 Gen Set ASTs	Bldg 2010 Fuel AST	Bldg 2020 Gen Set AST		COMMENTS & FOLLOW UP
Exterior surfaces/equipment/containment show signs of leakage						
External coatings are bubbled, cracked, or damaged						
Tanks/piping/valves are rusted, pitted, or deteriorated						
Bolts, rivets, welds, or seams are damaged, cracked, rusted, or non-uniform						
Metal/steel wall itself appears to be cracked						
Tank foundation/supports has eroded, settled or buckled						
Containers are open (i.e., bung/cap is not in top hole)						
Containers are overturned (when not in use)						
Containers with product are located outside building						
Areas adjacent to tank/reservoir are stained or has free product visible						
Security measures are non-functional						
Secondary containment is damaged (major cracks, rust, holes) or non-functional						
ADDITIONAL COMMENTS:						

INSPECTION FORM 2 OIL TRANSFERS

Complete this inspection record **EACH TIME** a transfer to the diesel fuel AST is performed. Visually inspect the equipment before, during and following the transfer, and place a Y (Yes for Compliance), N (No for Non-Compliance) or N/A (Not Applicable) in the appropriate box for each inspection item. If any item needs elaboration, use the comments space provided, or attach additional descriptions and comments on a separate page. When the transfer inspection is completed, submit the completed form to the Rivanna Station Environmental Coordinator for review and follow up actions if needed.

INSPECTION ITEM	Bldg 2000 Transfer Area	Bldg 2010 Transfer Area	Bldg 2020 Transfer Area	COMMENTS & FOLLOW UP
Pre-Transfer				
Drain blocker placed over nearby drain by truck driver.				
Tanker truck is not leaking product (identify location of leak if observed).				
Generator is not leaking product (identify location of leak if observed).				
Generator fuel gauge is working.				
Tanker truck spill response equipment readily available/deployed if needed.				
Transfer				
Hose(s) or connection(s) are not leaking during transfer.				
Generator fuel gauge is working.				
Post-Transfer				
Tanker truck valves are closed and capped when hose disconnected.				
Hoses are capped when disconnected.				
Small spill/drips have been cleaned up by tanker truck driver.				
Cap has been replaced on emergency generator tank.				
Emergency generator door has been closed & locked.				
Drain blocker removed from nearby drain by truck driver.				
ADDITIONAL COMMENTS:				

Appendix 7 - Acronyms and Definitions

Acronyms

AST	Aboveground Storage Tank
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act of 1980, as amended
CFR	Code of Federal Regulations
CWA	Clean Water Act
DEQ	Department for Environmental Quality
EPCRA	Emergency Planning and Community Right-to-Know Act of 1986
HAZCOM	OSHA 1910.120 Hazard Communication Program
HAZMAT	Hazardous Materials
ICS	Incident Command System
LEPC	Local Emergency Planning Committee
MSDS	Material Safety Data Sheet
NFPA	National Fire Protection Association
OSHA	Occupational Safety and Health Administration
OWS	Oil/Water Separator
Plan	Spill Prevention, Control and Countermeasure Plan and Installation Spill Contingency Plan
PPE	Personal Protective Equipment
RCRA	Resource Conservation and Recovery Act
RQ	Reportable Quantity
SARA	Superfund Amendments and Reauthorization Act of 1986
SOP	Standard Operating Procedure
IOSC	Installation On-Scene Coordinator
SPCCP	Spill Prevention, Control and Countermeasure Plan
TPQ	Threshold Planning Quantity
TSCA	Toxic Substances Control Act
USDA	United States Department of Agriculture
USEPA	United States Environmental Protection Agency
UST	Underground Storage Tank

Definitions

Act - means the Federal Water Pollution Control Act (FWPCA), as amended, 33 U.S.C. 1251 et seq., also known as the Clean Water Act (40 CFR 110).

Applicable Water Quality Standards - means State water quality standards adopted by the State pursuant to Section 303 of the Act or promulgated by the EPA pursuant to that section (40 CFR 110).

Discharge - includes, but is not limited to, any spilling, leaking, pumping, pouring, emitting, emptying or dumping. Discharges of oil which are authorized by permits issued pursuant to Section 13 of the River and Harbor Act of 1899, or Section 402 or 405 of the FWPCA Amendments of 1972 (40 CFR 112) are not included in this definition.

Harmful Quantities - is any discharge of oil that violates applicable water quality standards, or causes a film or sheen upon, or discoloration of, the surface of the water or adjoining shorelines, or causes a sludge or emulsion to be deposited beneath the surface of the water or upon adjoining shorelines (40 CFR 110).

Navigable Water* - All waters that are currently used, were used in the past, or may be susceptible to use in interstate or foreign commerce, including all waters that are subject to the ebb and flow of the tide (*Note: This definition is usually broadly interpreted to include most waters near industrial facilities, except for bodies of water confined to, and retained within, the limits of private property). These waters include, but are not limited to (40 CFR 110):

- Interstate waters, including wetlands;
- Storm water drainage systems (in most cases);
- All other waters such as interstate lakes, rivers, streams (including intermittent streams), mudflats, sandflats, and wetlands, the use, degradation, or destruction of which would affect or could affect interstate or foreign commerce;
- All impoundments of waters otherwise defined as navigable;
- Tributaries to waters identified as navigable; and,
- Wetlands adjacent to waters identified as navigable.

Oil - means oil of any kind or in any form, including, but not limited to petroleum, fuel oil, sludge, oil refuse and oil mixed with wastes other than dredged spoil (40 CFR 112).

IOSC: The Installation On-Scene Commander is responsible for all spill response activity at the site and for coordinating all response personnel. The senior fire official on the scene will serve as the initial IOSC until replaced by the appointed IOSC.

Reportable Oil Spill or Reportable Release - is any discharge of oil in harmful quantities which enters, or has the potential to enter, navigable water or waters of the state. Any release which requires response action to prevent draining, seeping, running or otherwise entering waters of the State is a reportable spill event. A spill of oil to the ground or groundwater is not a reportable spill under 40 CFR 110 unless it should later appear as a surface water contamination.

Sheen - means an iridescent appearance on the surface of water (40 CFR 110).

Sludge - means an aggregate of oil or oil and other matter of any kind in any form other than dredged spoil having a combined specific gravity equivalent to or greater than water (40 CFR 110).

Spill Event - a discharge of oil into or upon the navigable waters of the United States or adjoining shorelines in harmful quantities, as defined at 40 CFR Part 110 (40 CFR 112.2).

Waters of the State - includes all streams, lakes, ponds, marshes, watercourses, waterways, wells, springs, irrigation systems, drainage systems, and all other bodies or accumulations of waters, surface and underground, natural or artificial, public or private, which are contained within, flow through, or border upon this state; except that bodies of water confined to, and retained within, the limits of private property shall not be considered "waters of the state".

Appendix 8 - Cross Reference Matrix

SPCCP Cross Reference Matrix

40 CFR 112.7 and 40 CFR 112.8, as Amended December 2009	SPCC Section
Professional Engineer Certification and Plan Review Dates and Changes [40 CFR 112.3(d)]	1.2, Apx 4
Plan Review & Amendments [40 CFR 112.4 & .5]	7.3
Self Certification Provisions [40 CFR 112.6]	N/A
40 CFR 112.7 – General Requirements for SPCC Plans	
(a) Discuss facility's conformance with requirements &/or non-conformance/equivalent protection, describe layout (diagram), countermeasures for discharge recovery, response, and cleanup, emergency contact list.	7.0; Apx 1; 3.0; 5.4; Table 3
(b) Prediction of Flow Rate, Direction, and Total Quantity of Oil As A Result Of Each Major Type of Failure.	5.4 & Table 4
(c) Appropriate Containment &/or Diversionsary Structures or Equipment to Prevent Discharge from Reaching Navigable Water, including tank, piping, and valves.	5.4, 5.6, 5.7; Table 4
(d) Demonstration Of Impracticability For Installation Of Structures Or Equipment To Prevent Discharged Oil From Reaching Navigable Water (i.e., Contingency Plans).	Not Applicable
(e) Inspections, tests, and records.	6.2 & Apx 2-6
(f) Personnel Training and Discharge Prevention Procedures.	6.1
(1) Owners/Operators responsible for training employees.	6.1
(2) Designate person accountable for discharge prevention.	2.1.1
(3) Schedule and conduct briefings at least once a year to assure understanding of SPCC Plan.	6.1 & Apx 5
(g) Security (fencing, locked entrance gates, or guarded; master flow and drain valves locked and closed when non-operating; pump starter controls - locked in "off" position or inside inaccessible area when non-operating; loading/unloading connections - capped or blank-flanged when not in use over long time period; facility lighting).	5.3
(h) Facility Tank Car and Tank Truck Loading/Unloading Rack.	5.6
(1) Rack drainage area to contain maximum capacity of largest single container transfer compartment.	N/A (5.6)
(2) Interlock warning light or physical barrier system, warning signs to prevent vehicle departure.	5.6, Table 5
(3) Examination of drains and valves on tanker truck prior to filling or departure, and make adjustments if needed to prevent leakage during transit.	6.2.4, Apx 6
(i) Evaluate condition of field-constructed aboveground container for risk of discharge or failure due to brittle fracture or other catastrophe and, as necessary, take action.	N/A
(j) Include discussion of compliance with other applicable requirements listed in this part (i.e., 40 CFR 112.8), or state rules, regulations, and guidelines.	7.0
(k) Contingency Plan for qualified oil-filled operational equipment not in general secondary containment area.	N/A (3.0)
40 CFR 112.8 – SPCC Plan Requirements for Onshore Facilities (excluding production facilities)	
(a) Meet the general requirements of 40 CFR 112.7 and specific requirements of this section.	7.1 – 7.2
(b) Facility Drainage, Especially From Storage & Secondary Containment Areas.	5.3 & 5.4
(c) Bulk Storage Containers.	5.5, Table 4; Apx 6
(1) Storage tanks compatible with stored materials.	5.5
(2) Secondary containment requirements & description (mobile refuelers, to be positioned in general containment).	5.4 & Table 4
(3) Drainage from diked areas & associated recordkeeping.	6.2.3, Apx 6 If needed
(4) Buried metallic storage tanks & protection.	5.5
(5) Partially buried metallic tanks.	5.5
(6) AST, piping, and support equipment, integrity testing and visual inspection (i.e. non-destructive shell thickness testing, hydrostatic testing, etc.).	5.5; 6.2.2, Apx 6
(7) Control of internal heating coil leakage.	5.5
(8) Fail-safe engineering for tank systems, including high liquid level alarms, high level pump cut-offs, audible or code communication between pump and receiving device, liquid level devices and testing of such devices.	5.0; 6.2
(9) Plant effluents which are discharged into navigable waters.	5.2
(10) Visible oil leaks which cause the accumulation of oil in diked areas.	6.2.1, Apx 6
(11) Mobile or portable oil storage tanks.	5.4
(d) Facility Transfer Operations, Pumping, And Facility Process.	5.5, 6.2, 7.2
(1) Cathodic protection or wrapping for buried materials (i.e., piping).	7.2
(2) Out of service pipelines capped and blank flanged, with origin marking.	7.2
(3) Pipe supports designed to minimize abrasion/corrosion, allow for contraction/expansion.	5.5
(4) Inspection of aboveground piping and supports; Integrity testing of exposed buried piping.	6.2.1; 7.2
(5) Signs warning visitors driving large vehicles of aboveground piping.	7.2

APPENDIX K

NGA OIL DISCHARGE CONTINGENCY PLAN

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Fort Belvoir Oil Discharge Contingency Plan

For

**U.S. Army Fort Belvoir, Virginia
North Area**

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1.0 Introduction

1.1 Objective and Scope

The main objective of the Oil Discharge Contingency Plan (ODCP) is to provide for the use of the best available technology (economically feasible, proven effective and reliable and compatible with the safe operation of the facility) at the time the plan is submitted for approval. The ODCP has been designed to assist personnel in responding safely and effectively to accidental releases of petroleum. A spill prevention and response program for petroleum is required by federal and state regulations.

This plan shall be kept current by Fort Belvoir and shall be reviewed and considered for modification annually and when a reportable spill occurs. This Plan, updated February 2011, is the first ODCP for the North Area (formally the Engineer Proving Ground) of Fort Belvoir, covering only the activities of the National Geospatial-Intelligence Agency (NGA) campus. This plan follows the sequence identified in 9 VAC 25-91-170.

1.2 Regulatory Requirements

This ODCP has been prepared to be consistent with the requirements of the federal, state, and United States Department of the Army (herein "Army") environmental and health and safety regulations for petroleum release prevention and response programs which are summarized in this section.

The following items are for reference only, and as they pertain specifically to aboveground fuel storage tanks. Regulations providing petroleum release prevention and response program requirements include:

- Clean Water Act (CWA) at 33 USC 1251 to 1387 (see USC 1321, oil and hazardous substance liability);
- Discharge of Oil Regulations at 40 CFR 110;
- Oil Pollution Act of 1990 (OPA) at 33 USC 2701 to 2761;
- Petroleum Storage Tank Compliance Manual, Virginia Department of Environmental Quality Guidance Memorandum 01-2025;
- Oil Pollution Prevention regulations at 40 Code of Federal Regulations (CFR), Part 112.7 (Spill Prevention Control and Countermeasure [SPCC] Plan);
- Oil Pollution Prevention regulations at 40 CFR, Part 112.20 (Facility Response Plan);
- Oil Pollution Prevention Inspection and Training regulations at 40 CFR, Parts 112.7 and 112.20;
- Oil and Hazardous Substance Pollution Contingency Plan regulations at 40 CFR, Part 300.210 (National Oil and Hazardous Substance Pollution Contingency Plan);
- Emergency Response Plan regulations at 29 CFR, Part 1910.120;
- Commonwealth of Virginia Facility and AST regulations (9 VAC 25-91-10 et seq.);
- Emergency Planning and Notification regulations at 40 CFR, Part 355;
- Flammable and Combustible Liquid Storage Inspection regulations at 29 CFR, Part 1910.106; and,

- Emergency Planning and Community Right-To-Know Act of 1986 – Section 301(c), 303(d) (1), 304.

Army regulations providing petroleum release prevention and response program requirements include:

- Army Regulation (AR) 200-1, Environmental Protection and Enhancement, 13 December 2007, Chapter 3 (Oil and Hazardous Substances Spills); and,
- Department of the Army Pamphlet (DA PAM) 200-1, Environmental Protection and Enhancement, 17 January 2002, Chapter 3 (Oil and Hazardous Substances Spills).

2.0 Facility Information

2.1 Introduction

Fort Belvoir is an approximately 8,700-acre installation located in Fairfax County, Virginia along the western bank of the Potomac River. The installation is situated 11 miles southwest of the City of Alexandria, 14 miles southwest of Washington, D.C., and 95 miles north of Richmond. Fort Belvoir can be divided into three main sections; Main Post, North Post and North Area, known formally as Engineer Proving Ground (EPG). EPG (hereinafter referred to as North Area) is a former military training and testing area on an 807-acres noncontiguous portion of the installation approximately 1.5 miles northwest of the Main Post. North Area is bounded by I-95 to the east and by commercial and residential properties to the north, west, and south. North Area is further inland and on higher ground than the Main Post. Accotink Creek traverses North Area from north to south, dividing it into two nearly equal parts. Broad level terraces are present on each half of the site. The Army acquired North Area in the early 1940s for the testing of a wide range of engineering equipment and supplies, including methods and equipment for the deployment, detection, and neutralization of landmines. The Army used North Area for these purposes from the 1940s through the 1970s. An approximately 170-acre tract of land along the western and southern boundaries has been dedicated as the right-of-way for the Fairfax County Parkway (FCP).

The current development plan for North Area consists of: NGA; FCP; an Emergency Services Center (ESC); NGA's Remote Inspection Facility (RIF); and, Child Development Center. The NGA campus is located on the eastern portion of the North Area. NGA is both a Department of Defense agency and an Intelligence Community agency. The mission of the agency is to provide timely, relevant and accurate geospatial intelligence in support of national security. NGA serves a variety of military, civil, and international needs. The NGA campus is on approximately 130 acres and includes five (5) buildings and related infrastructure to include a Main Building, Visitor Control Center, Parking Garage, Technology Center, and Central Utility Plant (CUP). The approximately 6.5 acres RIF is on the west side of the North Area.

The address of the facility is:

National Geospatial-Intelligence Agency (NGA)
7500 GEOINT Drive
Springfield, Virginia 22150

There are three roadway accesses to the North Area: off of Backlick Road, the FCP, and from I-95 southbound. An additional HOV ramp on/off I-95 is planned but not yet budgeted or designed.

The CUP is located in the southwest corner of the NGA campus and is the site of the aboveground storage tanks (ASTs), day tanks and the Terrafix Envirodrain filters addressed in this Plan (see Appendix A). The ASTs and aboveground piping in the CUP supply low or ultra low sulfur diesel fuel oil to the facility's boilers and emergency generators. The site plan provided in Figure 1 shows the oil storage areas, transfer locations, and fuel transfer piping within the facility boundary. Stormwater drain lines and Pond #8 are also shown in Figure 1. The locations of spill containment devices within the NGA campus are also indicated in Figure 1. Figures 2, 3 and 4 provide additional details of items shown in Figure 1.

2.2 Aboveground Storage Tanks

The total AST storage capacity at the NGA campus is 190,000 gallons in seven (7) regulated tanks and 4,000 gallons in non-regulated tanks. In addition to the references in Section 1.2, the AST systems for petroleum storage shall operate in accordance with applicable federal and state regulatory requirements, industry standards, and manufacturer guidelines, including, but not limited to, the following:

- Petroleum Storage Tank Compliance Manual, Guidance Memorandum 01-2025;
- VDEQ Storage Tank Technical Manual (DEQ Guidance Document # 01-2024) 3rd Edition;
- Occupational Safety and Health Act (OSHA) regulations (29 CFR; Parts 1910.106 (flammable and combustible liquids) and 1910.120)(hazardous waste and emergency response regulations);
- National Fire Protection Association (NFPA) Code 30, Flammable and Combustible Liquids Code, and Code 704, Identification of the Fire Hazards of Materials;
- Building Officials and Code Administrators (BOCA) Standards for hazardous materials (F-2301.0 through F-2320.0) and flammable and combustible liquids (F-3201.0 through F-3210.0);
- Underwriter Laboratories (UL) Standard 142, Standard for Safety for Steel Aboveground Tanks for Flammable and Combustible Liquids; and,
- American Petroleum Institute (API) 653 AST standards and specifications.

3.0 Operator

The facility will be under the oversight of Fort Belvoir's Directorate of Public Works (DPW).

Directorate of Public Works (DPW)

Bldg. 1442, Fort Belvoir, VA 22060

Mr. Patrick McLaughlin, Chief, DPW Environmental & Natural Resource Division (ENRD)

(703) 806-3193 (Duty)

(703) 927-5597 (Cellular)

(703) 739-4916 (Home)

Day-to-day operations of the tanks and related systems is by Parsons, the current Base Operating Support Contractor (BOSC) for NGA. The local address for the company is:

Parsons
7200 Fullerton Road, Suite B-300
Springfield, VA 22150

4.0 Facility Description

4.1 General Description

The CUP is located in the southwest corner of the NGA campus. The tank farm is located west of the CUP. The tank farm and containment area is approximately 254 feet by 42 feet and contains six (6) 30,000-gallons and one (1) 10,000-gallon ASTs. Construction of the tank farm consists of reinforced concrete slab-on-grade with a reinforced concrete curb surrounding the area. The curb varies in height from 1.17 ft on the west side to 1.67 ft on the east side. A trench drain is located on the downward slope of the slab, at the southeast corner of the containment area. The trench drain is 4 inches wide and varies in depth from 1 foot to 4.5 feet with a metal grate flush with the adjacent floor slab. The trench drain is connected to an oil stop catch basin. The catch basin will act as an oil water separator and filter the water to the storm drain. The catch basin will contain two high density polyethylene filters. There is a liquid level switch equipped with normally open and normally closed contacts for alarming high liquid levels in sump and connected to remote monitoring system at the Building Automation System. The filters are designed to only allow water through. No oil will penetrate the filters. The containment area is designed to contain over 125% of the largest tank (30,000 gallons), plus a 10 year storm event (approximately 6" rainfall), and 22% slosh factor, for a total capacity of 116,781 gallons. The spill containment area at the transfer station has a capacity of 29,841 gallons, which far exceeds the required regulation amount. The catch basin at the transfer station contains a locked shutoff valve. Both catch basins drain to Pond #8 on the NGA campus.

The 30,000-gallon ASTs and 10,000-gallon AST are double-walled (DW), 2-hour fire rated, steel tanks, according to the manufacturer. They are compliant with UL-2085, UL-142, NFPA 30 and 30A, and STI F941. The 30,000-gallon tanks are horizontal cylindrical ASTs, measuring 10 feet in diameter by 52 feet long. The 10,000-gallon fuel distribution tank is a horizontal cylindrical AST, measuring 8 feet in diameter by 27.5 feet long.

Fuel oil supply and return piping between the tank area and the generators is 3-inch, double wall, aboveground steel piping. The fuel oil piping on the east side of the CUP is installed in a pre-manufactured pre-cast concrete trough below grade, and equipped with leak-detection tape. The above-grade piping on the west side of the CUP also contains leak detection piping. None of the fuel piping is buried. The trough is open-topped except for vehicle crossings so that the piping in the trough is completely visible. Fuel oil piping that passes through the CUP (building) from west to east and to the boilers inside the CUP is single wall pipe.

4.2 Release Monitoring

Parsons personnel will operate, maintain, monitor and document the AST system. Documents shall be submitted to the DPW-ENRD on a regular basis. To meet the ODCP requirements

regarding AST leak detection, Fort Belvoir has implemented the procedures outlined in 9 VAC 25-91-170. The regulation requires the implementation of acceptable leak detection procedures at all ASTs with storage volumes greater than 660 gallons in order to identify petroleum releases. Leak detection will include inventory control and visual monitoring of the site ASTs. The ASTs are inspected by Parsons personnel on a regularly scheduled basis for evidence of petroleum releases and immediately prior to a fuel delivery. AST system components, including tank walls, access ports, dispensers, valves, gauges, and piping shall be visually examined for evidence of deterioration and product release. Secondary and tertiary containment system components, including containment floor, walls, and release valves, shall be visually examined for evidence of deterioration and product release. Personnel who visually observe evidence of a release shall report their observations, per Section 8.0 of this Plan.

Interstitial spaces will be monitored with detection equipment for evidence of product release. Each of the ASTs has a Veeder-Root automatic tank gauging (ATG) system associated with them, which can monitor the interstitial space.

4.3 Preventive Maintenance Activities

Parsons shall conduct preventive maintenance procedures for critical AST storage and transfer equipment. The preventive maintenance procedures shall be based on manufacturer guidelines. Typical preventive maintenance procedures include equipment lubrication, light painting and/or rust removal, small valve replacement, tightening leaky fittings, and minor adjustments to electrical, mechanical and other equipment. Parsons personnel performing these activities shall be properly trained in AST preventive maintenance procedures. Documentation of the training and records of preventive maintenance activities, along with required repairs or corrective actions, shall be maintained for a minimum of five years.

5.0 Material Safety Data Sheets

A copy of the MSDS for diesel fuel stored at the CUP will be maintained onsite and will be consistent with specifications of Fort Belvoir’s air emissions permit (Registration No. 73630). The permit requires that the fuel meet ASTM D975 and have a sulfur content of 0.05% by weight. The MSDS for the fuel being stored at the CUP is provided in Appendix B.

6.0 Facility Petroleum Storage Capacity

Table 1 below lists the storage capacity of ASTs inside and outside the CUP.

Table 1 - Aboveground Storage Tanks (ASTs) – Central Utility Plant

Location	Tank Id	Building Id	Tank Capacity (gallons)	Tank Contents	Tank Function	Tank Regulated
Tank Farm	05104A	CUP	10,000	Diesel	Fuel for Emergency Generator and Boiler	Yes
Tank Farm	05104B	CUP	30,000	Diesel	Fuel for Emergency Generator and Boiler	Yes

Location	Tank Id	Building Id	Tank Capacity (gallons)	Tank Contents	Tank Function	Tank Regulated
Tank Farm	05104C	CUP	30,000	Diesel	Fuel for Emergency Generator and Boiler	Yes
Tank Farm	05104D	CUP	30,000	Diesel	Fuel for Emergency Generator and Boiler	Yes
Tank Farm	05104E	CUP	30,000	Diesel	Fuel for Emergency Generator and Boiler	Yes
Tank Farm	05104F	CUP	30,000	Diesel	Fuel for Emergency Generator and Boiler	Yes
Tank Farm	05104G	CUP	30,000	Diesel	Fuel for Emergency Generator and Boiler	Yes
CUP	DT-1	CUP	400	Diesel	Day Tank for Emergency Generator	No
CUP	DT-2	CUP	400	Diesel	Day Tank for Emergency Generator	No
CUP	DT-3	CUP	400	Diesel	Day Tank for Emergency Generator	No
CUP	DT-4	CUP	400	Diesel	Day Tank for Emergency Generator	No
CUP	DT-5	CUP	400	Diesel	Day Tank for Emergency Generator	No
CUP	DT-6	CUP	400	Diesel	Day Tank for Emergency Generator	No
CUP	DT-7	CUP	400	Diesel	Day Tank for Emergency Generator	No
CUP	DT-8	CUP	400	Diesel	Day Tank for Emergency Generator	No
CUP	DT-9	CUP	400	Diesel	Day Tank for Emergency Generator	No
Boiler Room	DT B-1	CUP	400	Diesel	Day Tank for Boiler	No

Total capacity of regulated ASTs 190,000 gallons (7 ASTs)

Total capacity of non-regulated ASTs 4,000 gallons (9 ASTs)

7.0 Discharge Notifications of Regulatory Agencies

Table 2 is a contact list and Table 3 the phone numbers for the facility response coordinator, National Response Center, cleanup contractors, and all appropriate Federal, State and local agencies to be contacted in the event of a spill.

TABLE 2				
SPILL REPORTING CRITERIA				
Release Scenario	Agencies To Be Notified By Telephone By The Command Designated Installation OSC (IOSC) or Authorized Directorate of Public Works (DPW) Personnel Only	Response Time	Agencies To Be Notified With Follow-Up Written Documentation By Command Designated IOSC or Authorized DPW Personnel	Response Time
PETROLEUM – Surface Release				
Release is less than 25 gallons, and does <u>not</u> reach State waters, storm drain systems, or groundwater	None. However, per subsection C of §62.1-44.34:19.2, the oil shall be remediated from State lands in accordance with the requirements of this article. In addition, a record of all discharges of oil to state lands in amounts less than 25 gallons will be maintained for a period of five years.	None	DPW ENRD shall record the release incident in the Initial Abatement Measures Report (IAMR) – see Appendix C. Records will be maintained for a period of five years.	Immediate
Release is greater than 25 gallons and reaches either State waters, storm drain systems, groundwater or soil	Virginia Department of Environmental Quality (VDEQ) Fairfax County Government	Immediate	DPW ENRD shall also record the release incident in the IAMR VDEQ	Immediate 10 days
Release (no minimum quantity) which (a) violates applicable water quality standards, or (b) causes a film or sheen upon or discoloration of the surface of the waters of the United States or adjoining shorelines or (c) causes a sludge or emulsion to be deposited beneath the surface of the waters of the United States	(i) National Response Center (ii) VDEQ (iii) Maryland Department of the Environment (MDE) (iv) Army Environmental Center (v) Fairfax County Park Authority (vi) Mason Neck State Park (vii) Mason Neck National Wildlife Refuge (viii) Pohick Bay Regional Park	Immediate Immediate Immediate Immediate, if spill enters Accotink Creek Immediate Immediate Immediate	DPW ENRD shall also record the release incident in the IAMR VDEQ USEPA Region III, USCG, and MDE will notify Fort Belvoir if documentation is required	Immediate 10 days ----
Release enters sanitary sewer system which conducts wastewater flow to a treatment facility.	(i) VDEQ (ii) Fairfax County Lower Potomac Pollution Control Plant (Trouble Response Center for the Industrial Waste Section)	Immediate Immediate	DPW ENRD shall also record the release incident in the IAMR Fairfax County Lower Potomac Pollution Control Plant VDEQ	Immediate 5 days 10 days

TABLE 2**SPILL REPORTING CRITERIA**

Release Scenario	Agencies To Be Notified By Telephone By The Command Designated Installation OSC (IOSC) or Authorized Directorate of Public Works (DPW) Personnel Only	Response Time	Agencies To Be Notified With Follow-Up Written Documentation By Command Designated IOSC or Authorized DPW Personnel	Response Time
<p>Facility has discharged (a) more than 1,000 gallons of oil into or upon the navigable waters of the United States or (b) adjoining shorelines in a single spill event, or (c) discharged oil in harmful quantities, as defined in 40 CFR Part 110, into or upon the navigable waters of the United States or (d) adjoining shorelines in two spill events occurring within any 12-month period.</p>	<ul style="list-style-type: none"> (i) National Response Center (ii) VDEQ (iii) MDE (iii) Army Environmental Center (v) Fairfax County Park Authority (vi) Mason Neck State Park (vii) Mason Neck National Wildlife Refuge (viii) Pohick Bay Regional Park 	<p>Immediate Immediate Immediate Immediate, if spill enters Accotink Creek Immediate</p>	<p>USEPA Region III Regional Administrator</p>	<p>60 days</p>

Table 3 provides emergency telephone numbers and contact information. A critical information checklist to be used when notifying emergency agencies is provided in Appendix D.

TABLE 3 - EMERGENCY TELEPHONE NUMBERS		
ORGANIZATION	CONTACT PERSON	TELEPHONE NUMBER
Directorate of Public Works (DPW) Fire Prevention and Protection Division Emergency Operations Center Bldg. 2119, Fort Belvoir, VA 22060	<u>Emergency</u> <u>Incident Commander:</u> Fire Chief <u>Incident Commander Alternate:</u> Assistant Fire Chief	(703) 805-1107 (On-Post) (703) 806-6911 (On-Post) (703) 781-1800 (Duty) (703) 805-4911 (Duty)
DPW Environmental and Natural Resource Division, Bldg. 1442, Fort Belvoir, VA 22060	<u>Installation On-Scene Coordinator:</u> Mr. Patrick McLaughlin, Chief, DPW ENRD <u>DPW ENRD Environmental Specialists (Installation On-Scene Coordinator Alternates):</u> Ms. Marcia Kicos, Chief, Environmental Branch <u>Environmental Specialists</u> Ben Wallen <u>DPW, Deputy Director (Installation On- Scene Coordinator Alternate):</u> Mr. David Hale <u>Chief, Natural Resources Branch:</u> Ms. Dorothy Keough	(703) 806-3193 (Duty) (703) 927-5597 (Cell) (703) 739-4916 (Home) (703) 806-0020 (Duty) (703) 569-2844 (Home) (703) 477-0228 (Cell) (703) 806-3694 (Duty) (571) 232-5784 (Cell) (703) 806-4194 (Duty) (703) 490-4389 (Home) (703) 806-0049 (Duty) (703) 765-3249 (Home)
DPW Facilities Management Contractor (ISS), Bldg. 1420, Fort Belvoir, VA 22060	<u>Roads and Grounds Manager/Phase II Incident Response Team Point of Contact:</u> Ms. Terri Gulan <u>Additional Points of Contact:</u> Project Manager (Mr. Paul Gillespie) Deputy Project Manager (Mr. Mike Johnson) Utility Systems (Mr. Paul Praeger)	(703) 805-3553 (Duty) (703) 357-5484 (Cell) (703) 357-0238 (Cell) (703) 806-4800 (Duty) (703) 806-4804 (Duty) (703) 357-4510 (Cell) 703) 863-8761 (Cell)

TABLE 3 - EMERGENCY TELEPHONE NUMBERS		
ORGANIZATION	CONTACT PERSON	TELEPHONE NUMBER
	Quality Management (Mr. Darryl Chavez)	(703) 806-4789 (Duty) (703) 595-1106 (Cell) (703) 806-4780 (Duty)
Directorate of Logistics, Bldg. 714, Fort Belvoir, VA 22060	Director Plans and Operations Branch Transport Branch Property Control Branch	(703) 805-2473 (Duty) (703) 805-3387 (Duty) (703) 805-3751 (Duty) (703) 805-3106 (Duty)
Provost Marshal's Office, Bldg. 1131, Fort Belvoir, VA 22060	MP Desk Sergeant Military Police	(703) 806-3104,3105, 3106 (Emergency) (703) 805-1104 (Emergency)
DeWitt Army Hospital, Bldg. 808, Fort Belvoir, VA 22060	Ambulance MEDDAC Fire Marshal Emergency Room Non-Commissioned Officer in Charge	(703) 805-1106 (Emergency) 9-1-1 (Emergency – Off Post) (703) 805-0637 (703) 805 0730
Installation Safety Office, Bldg. 1469, Fort Belvoir, VA 22060	Manager	(703) 806-3270 (Duty)
Office of the Staff Judge Advocate, Bldg. 257, Fort Belvoir, VA 22060	Staff Judge Advocate Ms. Susie Gillett	(703) 805-1107 (Emergency) (703) 805-4389 (Duty)
Directorate of Contracting, Bldg. 1425, Fort Belvoir, VA 22060	Manager Mr. Bill Campbell	(703) 806-4607
Parsons, BOSCO for NGA	Site Manager: Brett Crozier ESOH Manager: Tom Lyons Plant Manager: Darrell Thompson	(703) 772-9805 (Cell) (703) 462-9445 (Alt) (703) 861-4803 (Cell) (202) 386-2472 (Cell)
NGA 7500 GEOINT Drive, Springfield, VA 22150	Gregory Wojtkun: Site Manager Patrick McVey Deputy Site Manager	571-557-0146 (Duty) 540-668-9056 (Cell) 301-227-5353 (Duty thru 9/11) 301-293-9674 (Cell)
EMERGENCY SPILL RESPONSE/REMEDATION CONTRACTORS		
Ace Environmental Services, LLC (see also Appendix E)	Primary Call Ron Morris (ACE Spill Coordinator) Rick Rasmussen	(410) 354-8030 (866) 750-4223 (410) 350-1049 (443) 756-3098 (cell) (410) 557-0211 (home)
FCC Environmental, LLC (see also Appendix E)	Emergency Hot Line George Jackson	(410) 365-8364 (443) 324-9160

TABLE 3 - EMERGENCY TELEPHONE NUMBERS		
ORGANIZATION	CONTACT PERSON	TELEPHONE NUMBER
	Tammy Danjou Jim Gaunch Cliff Thomas Rolando Agosto	(443) 309-8364 (443) 463-7822 (443) 463-6204 (443) 463-5169
II) RELEASE NOTIFICATION PHONE NUMBERS (Notifications to Regulatory Agencies will be made by Command Designated Installation On-Scene Coordinator and/or authorized DPW Public Works personnel only)		
National Response Center (NRC): The NRC will notify USEPA Region III, the U.S. Coast Guard (USCG), and, if applicable, the Maryland Department of the Environment (MDE) and/or other federal and state agencies as needed.	Emergency Attendant	(800) 424-8802 (24-Hour)
VDEQ's Northern Virginia Regional Office shall be contacted if a spill occurs during normal daytime hours. Virginia's Dept. of Emergency Management (VDEM) shall be contacted if a spill occurs during evening or weekend hours. VDES, in turn, will notify VDEQ's Northern Virginia Regional Office of the reported release.	Emergency Attendant Emergency Attendant	(703) 583-3800 (Phone) (703) 583-3801 (Fax) (800) 468-8892 (24-Hour) (804) 674-2400 (Phone)
Fairfax County Public Safety Communications Center (PSCC): In the case of a spill event, the PSCC shall notify the Local Emergency Planning Committee -designated Emergency Response Coordinator.	Emergency Attendant	9-1-1 (Emergency) (703) 691-2131 (Phone/Non-Emergency)
Fairfax County Norman M. Cole Pollution Control Plant (Trouble Response Center)	Emergency Attendant	(703) 323-1211 (Emergency)
Department of the Army U.S. Army Environmental Center (AEC), Attn.: CETHA-EC-S, Aberdeen Proving Ground, MD 21010-5401.	Emergency Attendant	(301) 671-4714/2427 (24-Hour)
Environmentally Sensitive Areas in the Vicinity of Fort Belvoir Fairfax County Park Authority Mason Neck State Park Mason Neck National Wildlife Refuge Pohick Bay Regional Park	Park Authority Park Superintendent Park Superintendent Park Superintendent Park Superintendent	(703) 324-8700 (Phone) (703) 550-0362 (Phone) or (703) 550-0960 (Phone) (703) 491-6255 (Phone) (703) 339-6100 (Phone)

8.0 Responsibility for Notification

The Parsons personnel listed in Table 4A are responsible for notifying the Fort Belvoir Fire Department and DPW-ENRD. The DPW-ENRD personnel listed in Table 4B are responsible for contacting the agencies listed in Table 2.

Phone List for Discharge Notification and Reporting

Table 4A. Parsons Personnel

FUNCTION	POC	EMAIL	MOBILE	ALTERNATE #
Site Manager	Brett Crozier	brett.crozier@parsons.com	(703) 772-9805	(703) 462-9445
Environmental Manager	Elizabeth Spillane	elizabeth.spillane@parsons.com	(703) 408-0981	(571) 480-5325
Environmental Engineer	Justin Barlow	justin.barlow@parsons.com	(202) 420-0897	(571) 480-5302
Mission Assurance Manager	James Caballero	james.caballero@parsons.com	(703) 851-5460	(703) 806-5053

Table 4B. Fort Belvoir Personnel

Name	Title	Phone
Fort Belvoir Fire Department	Fire Department	(703) 781-1800
Patrick McLaughlin,	Chief, DPW ENRD	(703) 806-3193
Marcia Kicos	Chief, Compliance Division	(703) 806-0020
Ben Wallen	Tank Petroleum and Remediation Program Manager	(703) 806-3694

9.0 Responsibility to Implement Containment and Cleanup Operations

The Parsons personnel listed above in Table 4A are responsible for stopping the source of the spill, if possible, initiating containment procedures, and immediately reporting the spill to the Fort Belvoir Fire Department.

10.0 Responsibility for Regulatory Compliance during Containment and Cleanup

The Fort Belvoir personnel listed in Table 4B are responsible for regulatory compliance during containment and cleanup.

Parsons' petroleum discharge containment equipment is stored within and adjacent to the CUP; approximate locations are noted in Figure 1. The manufacturer's description as to what is in the spill kit(s) is indicated Appendix F.

The Fort Belvoir Fire Department and/or Installation On-scene Coordinator (IOSC) will determine if the containment is within the abilities of the Fort Belvoir Incident Response Team (IRT). The Fort Belvoir IOSC will either contact a spill response contractor or direct NGA to contact either Ace Environmental or FCC Environmental, emergency response and remediation services companies with local offices in Baltimore, Maryland, and FCC Environmental also has an office in Alexandria, Virginia. **The 24-hour emergency phone number for Ace Environmental is (410) 354-8030 or (410) 350-1049 & for FCC Environmental is (410) 365-8364 or (443) 324-9160.** Both companies are contracted to respond to the facility within 60 - 90 minutes of notification by Parsons. A signed contract from each company, indicating their ability to respond to emergencies at the CUP within 60 – 90 minutes notice, are included in Appendix E.

The overall responsibility of the spill site remains with the Fort Belvoir IOSC until the spill is contained and cleaned up.

11.0 Availability of Personnel and Equipment for Containment and Cleanup

The Fort Belvoir Fire Department will respond to a spill, along with appropriate contractor personnel, as needed. The Fort Belvoir Fire Department has trained personnel who can provide immediate response to spilled material, so that fuel is contained and any potential hazards or fire is minimized. The Fire Department has all required equipment to contain a spill, including sorbent materials, fire containing equipment, and other containment supplies.

The DPW also has trained personnel to cleanup and fully remediate a spill, using stored spill kits and sorbent materials. DPW personnel would be available to remove all spill material and equipment, and dispose of it, as required by State regulations. This includes any petroleum-contaminated materials that may be affected by a fuel release. Appendix G includes information regarding what actions should be taken if a petroleum release contaminates soils at the site.

12.0 Assessment of Potential Worst Case Discharge

**Table 5.
Potential Spill and Spill Control**

Location	Potential Type of Failure	Rate of Spill	Spill Migration	Secondary Containment	Potential for Occurrence
<i>Tank Area</i> (1) 10,000-gal AST (6) 30,000-gal ASTs	Leaking AST	100 gal/hr	Oil discharges will be released to interstitial space of secondary tank shell. Tertiary containment is provided by concrete dike around tank area.	Tanks are double-walled with electronic leak detection and high-level alarms. Spill containment materials are kept nearby for fast deployment. Tank area is equipped with 1'-2" & higher concrete dike & two Terrafix Envirodrain filters (see Appendix A & Figure 4).	LOW: Tanks are double-walled with electronic 24/7 leak detection. Outdoor piping is also double-walled with leak detection.
<i>Delivery Truck Spill Containment Area</i> (19,000-gal tanker compartment)	Spill during delivery transfer	1,000 gal/hr	Spills during transfer from truck are contained within diked loading area with sump & locked drain valve.	Truck Spill Containment Area (29,841 gallon capacity) is designed to contain tanker compartment spills; sump in area has locked valve (closed position) to prevent release storm water. Storm water is released through underground piping to detention Pond #8 southeast of the tank farm approximately 400 feet.	LOW: Spills will be contained within Containment Area as designed. Tanker operator and fuel systems personnel will be in attendance during fuel transfer.

Location	Potential Type of Failure	Rate of Spill	Spill Migration	Secondary Containment	Potential for Occurrence
<i>Tank Area</i> (1) 10,000-gal AST (6) 30,000-gal ASTs	Rupture of AST	5,000 gal/hr	Spills will be contained by secondary tank shell. If secondary containment fails, oil migration is contained by concrete dike around tank area.	Double wall-tanks, concrete dikes and two Terrafix Envirodrain filters provide redundant containment.	LOW: Tanks are double walled. Tank area is equipped with concrete dike.
<i>Tank Dike</i> (1) 10,000-gal AST (6) 30,000-gal ASTs	DEQ factor formula	30,000 x 1.25 x 0.22 = 8,250 gals	Spills will migrate to secondary tank shell. Tank area equipped with dike.	Overflow of secondary containment contained within tank dike area	LOW: Secondary containment capable of holding tank contents.
<i>Generator Shelters</i> (10) 400-gal ASTs *	Rupture of AST	400 gal/hr	Double walled tanks are factory-built into generator frames. Spill will be contained within generator enclosure.	Sealed, rectangular steel secondary containment with leak sensor	LOW: Secondary containment capable of holding tank contents.
<i>Pump Room</i> (1) 400-gal Daytank*	Rupture of AST	400 gal/hr	Spill will be contained within secondary shell.	Double-walled tank.	LOW: Secondary containment capable of holding tank contents.
<i>Fuel Piping for ASTs</i> Within Tank Farm Area (double-walled) Within CUP Building (single-walled)	Rupture pipe	400 gal/hr	Pipes in the tank farm and to the building are double-walled, spill will be contained within the double-walled pipe. Pipes in building are single-walled. Spill will be visible on building floor. Floor drains within the CUP are connected to the sanitary sewer.	Double-walled piping in tank farm up to the building, and from the building to the generators. Spill will be contained inside the building, on the floor of the CUP.	LOW: Spill contained within double-wall piping. LOW: Potential for offsite migration is minimal, due to 24 hour surveillance by NGA employees.

Note: *Tanks under 660-gallons in capacity are not regulated by DEQ.

12.1 Introduction

This section summarizes the potential spill scenarios at Table 5 and worst-case aboveground storage tank petroleum release event that could occur at the North Area. The objective of this section is to demonstrate the basic response actions and management strategies in a worst case scenario. This worst case scenario exercise has been prepared in compliance with the Commonwealth of Virginia's Oil Discharge Contingency Plan requirements for a ten-year, 24-hour rain event which translates into approximately six inches of rainfall.

12.2 Scenario Description

This worst-case scenario focuses on the largest AST at the NGA campus, which is a 30,000 gallon diesel fuel storage tank. This worst-case scenario assumes that both the inner and outer tank storage system walls have been breached. The breach occurs on the lower portion of one of the corner of the tank and results in the catastrophic release of 30,000 gallons of diesel fuel. This event occurs at 0100 hours during a ten year storm event. The majority of the spill will be contained within the containment area. Based on the topography in the area adjacent to the tank containment area, the fuel oil will flow to the stormwater catch basin within the truck fill containment area and to a drop inlet just north of the truck fill containment area. Both stormwater inlets drain to Pond # 8 southeast of the CUP.

12.3 Response Actions

- i) Notification and Dispatch
- ii) The operator, if unable to control the release, notifies his coworkers about the emergency and goes to the nearest phone to contact the Fort Belvoir Fire Department. The operator provides information concerning the type of incident and location.
- iii) Operator shall assess the potential for fuel ignition and make the necessary power source shut-down to limit ignition potential.
- iv) At the Fort Belvoir Fire Emergency Operations Center, the watch officer on duty records the information provided by the driver/operator. Based on the provided information, the watch officer determines that the Fort Belvoir Fire Department response unit is closer than Fairfax County's unit, and dispatches the appropriate Fire Department Phase I Incident Response Team (IRT). After the watch officer verifies that the Phase I IRT has been dispatched, he/she notifies the Installation On-Scene Coordinator (IOSC) of the spill event and notifies the facilities management contractor (the Phase II IRT) to standby.
- v) Spill Control, Containment, and Remediation
- vi) With an approximate response and arrival time of 15 minutes, the Phase I IRT reaches the site of the release, and the ranking officer declares the Incident Command System to be activated with himself as the Incident Commander and acting as the IOSC. After taking command at the site, the Incident Commander evaluates the situation and determines that (i) he will need additional Fire Department personnel to assist in spill control boom placement and that (ii) the ODCP must be implemented. Based on this evaluation, the Incident Commander instructs the Phase I IRT to begin emergency control and containment actions at

- the spill site, and radios the Fire Department Emergency Operations Center to dispatch additional Fire Department personnel to place spill control booms at Pond #8.
- vii) By the time the command-designated IOSC arrives at the site (i.e., approximately 30 minutes), the Phase I IRT shall have initiated spill control measures, including evacuation of non-essential personnel from the area, construction of containment dikes outside of the concrete containment area if needed with sorbent materials. Additional sorbent material and/or booms are placed in Pond #8. The command-designated IOSC shall take formal command of the incident and receive an incident status briefing from the Incident Commander. Based on this information, the IOSC shall determine (i) what additional response measures need to be taken and (ii) the requirements for notification(s) of regulatory agencies and the garrison commander. Additional response actions required of the Phase I IRT shall be issued through the Incident Commander in order to avoid confusion within the Incident Command System structure.
 - viii) Because the existing weather conditions increase the possibility that the release may reach the tributary of Accotink Creek west of the site, the IOSC has elected to have a second set of spill collection booms placed at Pond #8 to prevent any product leaving the facility. The ODCP provides the IOSC with the option of having these booms installed by either the Phase I IRT or the Phase II IRT, depending upon such factors as manpower availability, response time, and magnitude of threat. Based on the current situation, the IOSC activates the Phase II IRT to begin petroleum recovery actions at the tank site and at the spill control booms placed on the pond. After immediate hazards have been mitigated, the IOSC shall accomplish the required notifications of appropriate regulatory agencies, the Garrison Commander, and any other organizations within ODCP that are needed for additional support.
 - ix) After completion of the spill containment and control operations, the IOSC shall release the Phase I IRT from its duties. The IOSC shall then direct the Phase II IRT to begin remediation efforts at the spill site. These efforts shall include, but not be limited to, disposal of contaminated materials generated by the response action, soil testing and removal (based on VDEQ requirements), and structural repairs to the tank, if feasible.
 - x) Post-Incident Documentation
 - xi) Preparation and submittal of required documentation of the spill response and remediation efforts would be the responsibility of the IOSC. The IOSC shall receive assistance in the preparation of these reports from the Incident Commander, the DPW ENRD staff, and any other organization that participated in the event. All required documentation for this incident shall be reviewed and signed by the Garrison Commander prior to submittal to the regulatory agencies.
 - xii) Within 30 days of the incident, the IOSC will conduct a spill response action review to identify any lessons learned from the incident and to incorporate those lessons into the ODCP and supporting documentation.

12.4 Conclusion

The scenario and response actions described above illustrate the following:

- i) A release from an aboveground storage tank at the North Area is unlikely to have a significant impact on any surface waters or environmentally sensitive areas.
- ii) Fort Belvoir maintains sufficient resources (manpower and materials) and an Incident Command System that allows effective containment and control of a worst-case aboveground storage tank release.

13.0 Inventory of Facility Containment Equipment

13.1 Contractors Spill Response Material and Equipment

Parsons has placed spill kits near the potential spill areas, as identified in Figure 1. Spill kit contents are identified at Appendix F.

13.2 Fort Belvoir Spill Response Material and Equipment

Spill response materials and equipment are maintained at Fort Belvoir Main Post by DPW ENRD in Building 1495, the Fort Belvoir Fire Department at Buildings 191, 2119, and 3237, and the facilities maintenance contractor at Buildings 1419 and 1114. An inventory of these items is presented in Appendix H.

The Fire Department's equipment is used regularly for fire-fighting events, and the Fort Belvoir facilities maintenance contractor's equipment is used regularly for construction activities. Accordingly, the operational status of this equipment is monitored on a daily basis.

Spill response materials stored in DPW ENRD's storage repository at Building 1495 and in the Fire Department's mobile hazardous materials response trailer at Building 2119 are used as needed. Inspections of these materials shall be performed by DPW ENRD and Fire Department personnel. Replacement materials shall be ordered, as needed, to maintain the proper inventory volume.

Fort Belvoir also uses the services of remediation contractors to assist in the response to spills on the installation. Spill response materials and equipment for these contractors is listed in Appendix H.

14.0 Identification of Natural Resources at Risk

The ecological risk of oil discharges to natural resources in the CUP area is low because discharges will be contained onsite. In case of human error and the position indicator valve (PIV type) is left open at the truck spill containment area, the spill will be directed toward Pond # 8 located approximately 400 feet southeast of the tank farm. The nearest surface water body to the CUP is Accotink Creek which is located approximately 0.5 miles west of the CUP. Wetland areas have been identified in the southwest and southeast portions of the NGA campus. Figure 5 shows environmentally sensitive areas.

The following natural resource areas at risk at the North Area are: wetlands, resource protection areas and environmental quality corridor (EQC). These three are shown on Figure 5. The closest natural resource area at risk is the EQC located approximately 200 feet west of the CUP facility. The EQC is an environmentally-sensitive area that has been designated by the Army on the North Area. The EQC includes slopes that have gradients in stream valleys that are greater than 15%; wetlands connected to stream valleys; and upland habitats that augment the habitats and buffers provided by the stream valleys.

15.0 Identification of Municipal or Other Services at Risk

The risk of oil discharges to municipal services in the CUP area is low because discharges will be contained onsite. The CUP is served by the Fort Belvoir North Area Waterworks which purchases water from Fairfax County Water Authority. No known active water supply wells are located in the vicinity of CUP. The CUP is served by storm water management ponds installed in strategic locations to control offsite storm water discharge. The sanitary sewer system runs outside of the paved roads around the NGA property. The sanitary sewer lines are approximately 120 feet away from the CUP, and approximately 100 feet from the AST location. The nearest sanitary sewer manhole cover is located approximately 130 feet west of the AST area. The sanitary system is discharged to a temporary location south of NGA, where it eventually runs to the Norman M. Cole Pollution Control Plant (Cole PCP) for final cleaning and processing. The Cole PCP is a Fairfax County publically owned treatment works facility.

16.0 Response to Discharges from Vessels Moored at Facility [Not Applicable]

17.0 Training and Equipment Testing

17.1 Introduction

Additionally, Parsons maintains a training program for personnel conducting the weekly inspections. Specialized spill control training includes:

- Location of copies of ODCP
- Location and proper deployment of containment supplies
- Location and condition of storm drains and containment supplies
- Occupational safety, hazard recognition, personnel protective equipment, and facility operations
- Contingency (spill prevention) and emergency (shutdown, containment, and notification) procedures
- Weekly visual inspection protocols (see sample checklist in Appendix I)
- Procedures for evaluating ASTs and appurtenances including equipment testing schedules
- Training for new drivers in proper truck fueling procedures

The training program will be updated to reflect new equipment or procedures, or every three (3) years at a minimum. Training meetings will be documented in the facility's records.

This section of the ODCP addresses requirements for both prevention training and response training associated with a potential spill or release at Fort Belvoir. The following individuals or entities shall ensure that all personnel engaged in spill response activities are properly trained as noted in this section: the Installation IOSC and the designated alternates; the Fort Belvoir Fire Chief and the designated alternates who may serve as Incident Commander for the Phase I Incident Response Team; the installation facilities maintenance contractor, which serves as Fort Belvoir's Phase II Incident Response Team; designated environmental response contractors with whom Fort Belvoir has arranged to provide remediation services at spill sites; and all other individuals, Directorates, and contractors who may perform spill prevention and/or response activities at Fort Belvoir.

17.2 Spill and Release Prevention Training

Fort Belvoir shall establish spill and release prevention training requirements for those facility personnel involved in daily facility operations, daily, weekly, monthly, semiannual, or annual inspections, and preventive maintenance activities. Training shall be based on the duties and functions of response personnel and shall be conducted in accordance with OSHA health and safety regulations. The skill and knowledge levels required for all response personnel shall be attained by them through training before they are permitted to take part in actual emergency operations. Table 6 summarizes the required levels of spill response training for Fort Belvoir individuals, Directorates, tenant activities, and contractors who may be involved with spill and release response activities.

Prevention training requirements shall include the latest information regarding oil spill prevention and control procedures and shall address, at a minimum, the following subject areas:

- Federal, state, and Department of the Army spill prevention program elements, including Spill Prevention Control and Countermeasure plan (SPCC), and Integrated Spill Contingency Plan (ISCP) requirements;
- The ODCP program elements;
- Hazard Communication Training in accordance with 29 CFR, Part 1910.1200;
- Health and safety requirements for normal operations, maintenance, and spill response activities;
- Inspection procedures for ASTs,
- Operation procedures for ASTs including inventory volume monitoring and leak detection;
- Petroleum transfer procedures;
- Preventive maintenance procedures for AST storage areas;
- Notification procedures for spill and release events at Fort Belvoir; and
- Containment methods for small and large spills or releases.

17.3.1 Spill Response Training Levels

Table 6 Fort Belvoir Spill Response Training Level Requirements

	OSHA 1910.120 First Responder Awareness Level	OSHA 1910.120 First Responder Operations Level	OSHA 1910.120 Hazardous Materials Technician & Specialist	OSHA 1910.120 Incident Commander	Release Event Management Training
Installation On-Scene Coordinator and Alternates				•	•
Incident Commander and Alternates				•	•
Environmental Remediation Contractor Employees			•		
Phase II Incident Response Team Members			•		
Phase I Incident Response Team Members		•			
DPW ENRD Personnel		•			
Tenant Activity Environ. Coordinators, Points of Contact, and Personnel (BOSC)	•	•			
Provost Marshal Point of Contact and Personnel	•				
Installation Safety Office Point of Contact	•				
Directorate of Logistics Point of Contact	•				
Directorate of Personnel & Community Activities Point of Contact	•				

17.3.1.1 First Responder Awareness Level

First responders at the awareness level are individuals who are likely to witness or discover a spill or release and who have been trained to initiate an emergency response sequence by notifying the proper authorities of the incident. Individuals at this level would take no further action beyond notifying the appropriate authorities of the spill or release. To qualify as a first responder at the awareness level, one shall have sufficient training or have had sufficient experience to objectively demonstrate competency in the following areas:

- Understanding the potential outcomes associated with an emergency created when hazardous substances are present;
- Understanding what hazardous substances are and what risks are associated with them in the event of a spill;
- Recognizing the presence of hazardous substances in an emergency;
- Identifying the hazardous substances, if possible;

- The individual at the first responder awareness level understanding his or her role in the employer's emergency response plan, including site security, spill control, and, if applicable, usage of the U.S. DOT Emergency Response Guidebook; and
- Recognizing the need for additional resources and making appropriate notification to the communication center.

17.3.1.2 Operators Level

The operators of the NGA campus ASTs are those who are responsible for the day to day operations of the facility. They are responsible to notify personnel identified in Table 4A. They are trained to respond in a defensive manner.

17.3.1.3 First Responder Operation Level

First responders at the operations level are individuals who respond to petroleum releases. They are trained to respond in a defensive manner, and to try and minimize the release. Their function is to contain the release from a safe distance, keep it from spreading, and prevent exposure to the released material. OSHA regulations (29 CFR, Part 1910.120) require that first responders at the operational level receive at least eight hours of training or have had sufficient experience to objectively demonstrate competency in the following areas, in addition to those listed for the awareness level:

- Basic hazard and risk assessment techniques;
- Selection and use of proper personal protective equipment provided to first responder operational level personnel;
- Use of basic hazardous material terms;
- Performance of basic control, containment and/or confinement operations within the capabilities of the resources and personal protective equipment available with their unit;
- Implementation of basic decontamination procedures; and
- Relevant standard operating procedures and release response termination procedures.

17.3.1.4 Environmental Materials Technician

Environmental materials technicians are individuals who respond to petroleum spills or releases for the purpose of stopping the release. These individuals assume a more aggressive role than a first responder at the operations level in that they will approach the point of release in order to plug, patch or otherwise stop the release of a petroleum product. Environmental materials technicians receive at least 24 hours of training equal to the first responder operations level and have competency in the following areas:

- Implementation of the employer's emergency response plan;
- Classification, identification and verification of known and unknown materials by using field survey instruments and equipment;
- Functioning within an assigned role in the Incident Command System;

- Selection and use of the proper specialized chemical personal protective equipment required for a hazardous materials technician in the event of a spill or release;
- Hazard and risk assessment techniques;
- Perform of advance control, containment, and/or confinement operations within the capabilities of the resources and personal protective equipment available with the unit;
- Implementation of decontamination procedures;
- Release response termination procedures; and
- Basic chemical and toxicological terminology and characteristics.

17.3.1.5 Environmental Materials Specialist

Environmental materials specialists are individuals who respond with and provide support to environmental materials technicians. Their duties parallel those of the environmental materials technician; however, those duties require a more directed or specific knowledge of the various substances they may be called upon to contain. The environmental materials specialist would also act as the site liaison with federal, state, local and other government authorities in regards to site activities.

Environmental materials specialists shall receive at least 24 hours of training equal to the environmental materials technician level and have competency in the following areas:

- Implementation of the employer's emergency response plan and the local emergency response plan;
- Classification, identification and verification of known and unknown materials by using advanced survey instruments and equipment;
- The requirements of the state emergency response plan;
- Selection and use of proper specialized chemical personal protective equipment provided to the hazardous materials specialist;
- Hazard and risk assessment techniques;
- The advance control, containment, and/or confinement operations within the capabilities of the resources and personal protective equipment available with the unit;
- Implementation of decontamination procedures;
- Release response termination procedures; and
- Basic chemical and toxicological terminology and characteristics.

17.3.1.6 Incident Commander and Installation-On-Scene Coordinator

Incident Commanders and/or Installation OSCs, who shall assume control of the incident scene beyond the first responder awareness level, are required by OSHA regulations (29 CFR, Part 1910.120) to receive at least 24 hours of training equal to the first responder operations level and have competency in the following areas:

- Implementing the Incident Command System;
- Implementing the employer's emergency response plan;

- Understanding the hazards and risks associated with employees working in chemical protective clothing;
- Implementing the local emergency response plan;
- Requirements of the state emergency response plan and of the Federal Regional Response Team (RRT); and
- Understanding the importance of decontamination procedures.

18.0 Oil Inventory Control Procedures

All VDEQ-regulated ASTs in this plan are mounted on saddles so that the bottoms of the tanks can be visually inspected; all fuel-related piping is aboveground as well. VDEQ AST Pollution Prevention regulations allow for a variance in inventory requirements when tanks and associated piping is off the ground. However, this variance will not be required as the facility has installed a fuel inventory tracking system at the NGA, as an extra internal safety and quality measure. Fuel oil flow meters are installed to monitor the supply and return flow to the boilers, and another set of flow meters monitor the supply and return flow to the generators. By comparing the supply and return flows, the difference in flows will be the fuel consumed. The facility monitors these points directly. Ultimately, inventory reconciliation can be accomplished by comparing net gallons used to the net decrease in gallons of liquid inventory. The contractor's records shall be made available to Fort Belvoir's DPW ENRD upon request and shall be maintained for a period of at least five years.

19.0 Early Detection System

Early detection of petroleum discharges will be achieved through a combination of automated monitoring systems and weekly inspections.

The 30,000-gallon ASTs and the 10,000-gallon fuel distribution tank are equipped with Veeder Root AST interstitial monitoring systems, high-level and low-level alarms, and automatic shut off systems.

The operator will perform a daily visual inspection for each day of normal operation at the facility. This same operator, or other personnel, will conduct the weekly inspections and record the completion of each inspection and maintain the inspection records at the facility. The daily visual inspection includes the following:

- A complete walk-through of the locations of each AST to ensure that no hazardous conditions exist,
- An inspection of the ground surface for signs of leakage, spillage, or stained or discolored soils, or concrete,
- Inspection of the exterior tank shells to look for signs of leaks or damage,
- An evaluation of the condition of the ASTs and appurtenances

Weekly inspections of the ASTs and fuel handling systems are conducted by Parsons personnel during construction and initial testing. The weekly inspection documents are

maintained at the facility. A sample weekly inspection checklist is included in Appendix I. When the facility is operational, inspections/testing will continue to occur with daily visual observations, and weekly inspections documented on the appropriate form.

The leak detection system in the piping includes a cable installed in the containment shell of the double-wall fuel piping, which is monitored by a microprocessor system with remote monitoring capabilities. The system is Permalert Model PAL-AT AT40K and can detect leaks anywhere along the length of its cable and will report the physical location of the detection, which can then be mapped onto the physical layout of the piping, to accurately determine the location of the sensed leak. The cable will detect liquids, but will not differentiate between water and hydro-carbons. Leaks detected within the pipe may be associated with a "map" by the user and a reoccurrence of fluid in that same area will cause a new alarm independent of the length of wet leak cable. The system stores in its permanent memory all significant operating events, including power failure, cable leak/short/break/fault probe activation, and alarm silencing.

20.0 Discharge-Related Testing and Inspection Procedures for Source Identification

In the event of a spill or leak from the ASTs, the source of the discharge will be determined by visual inspection, or by the interstitial space monitoring system using the Veeder Root TLS-350 system at the site. If a leak occurs anywhere in the double-wall piping, a report of the physical location of the detection will be displayed on the Permalert panel. The location can then be mapped onto the physical layout of the piping, to accurately determine the location of the sensed leak. If a leak occurs in the section of the system that is single-wall piping, then the source will be visually determined.

The facility's fuel tank discharge detection system and the piping leak detection cable were tested by manufacturer-approved procedures, prior to the complete system becoming operational. Information about these systems are maintained as part of the facility records.

21.0 Preventive Maintenance Procedures

Refer to Section 4.3 activities. These activities are typical maintenance procedures regarding ASTs, and according to manufacturer equipment warranties.

22.0 Security

22.1 Introduction

Security is provided by surveillance cameras that survey the outside premises of the CUP. The CUP premises are patrolled on a 24-hour basis.

The automatic fill port at the Truck Spill Containment Area is secured with a lockable fitting, and has an integral 20-gallon spill bucket for the tanker fuel hose connection. This area also has a placard for the tank delivery teams, indicating the required protocols

during fuel delivery at the site (see Appendix J). Access to the CUP area is limited by security personnel to authorized personnel only.

22.2 Fencing and Gates

The entire NGA campus has a fence/gate around it. Only authorized personnel will be allowed into the NGA campus. Therefore, the AST fuel tanks will be secure.

22.3 Master Flow and Drain Valves

An AST overfill protection valve is installed at the fill port of the AST. This valve terminates flow when the fuel level in the tank reaches 95% to prevent overflow and spills.

22.4 Pump Locks

The fuel pumps are located in a secure perimeter and under constant supervision of security and operating personnel. No unauthorized personnel will be in the area due to this secure perimeter, which has access control points as well.

22.5 Fill/Drain Connections

During fuel filling activities, when the tank is 90% full, an audible and visual alarm will alert the fuel delivery driver. At 95% full, the automatic FuelPort valve closes, and can not be reopened.

The loading/unloading connections of oil pipelines shall be securely capped or blank-flanged when not in service or standby service for an extended time. This security practice shall also apply to pipelines that are emptied of liquid content by either draining or inert gas pressure. All fill ports shall be locked when not in use.

22.6 Facility Lighting

The lighting at the CUP tank farm consists of wall-mounted luminaries, four (4) on each column, one on each side on the center columns. Each luminaire utilizes a 50-watt Metal Halide with a forward distribution and generates an average of 2.4 fc throughout the tank farm path. Maximum is 3.6 fc and minimum is 0.6 fc

23.0 Post-Discharge Review Procedure

Following the containment and initial abatement of a discharge, Fort Belvoir DPW along with the Operator will conduct a post-discharge review. The DPW along with the Operator Supervisor will hold a meeting with all the members involved in the spill to review the source of the discharge, and to identify means by which the likelihood of future occurrences may be minimized.

The responses shall be compared with this plan to ensure that:

- all required agencies were notified,
- procedures indicated in the plan were followed satisfactorily,
- training, equipment, and general pollution prevention protocols were adequate,

- the type of discharge was adequately anticipated by the plan.

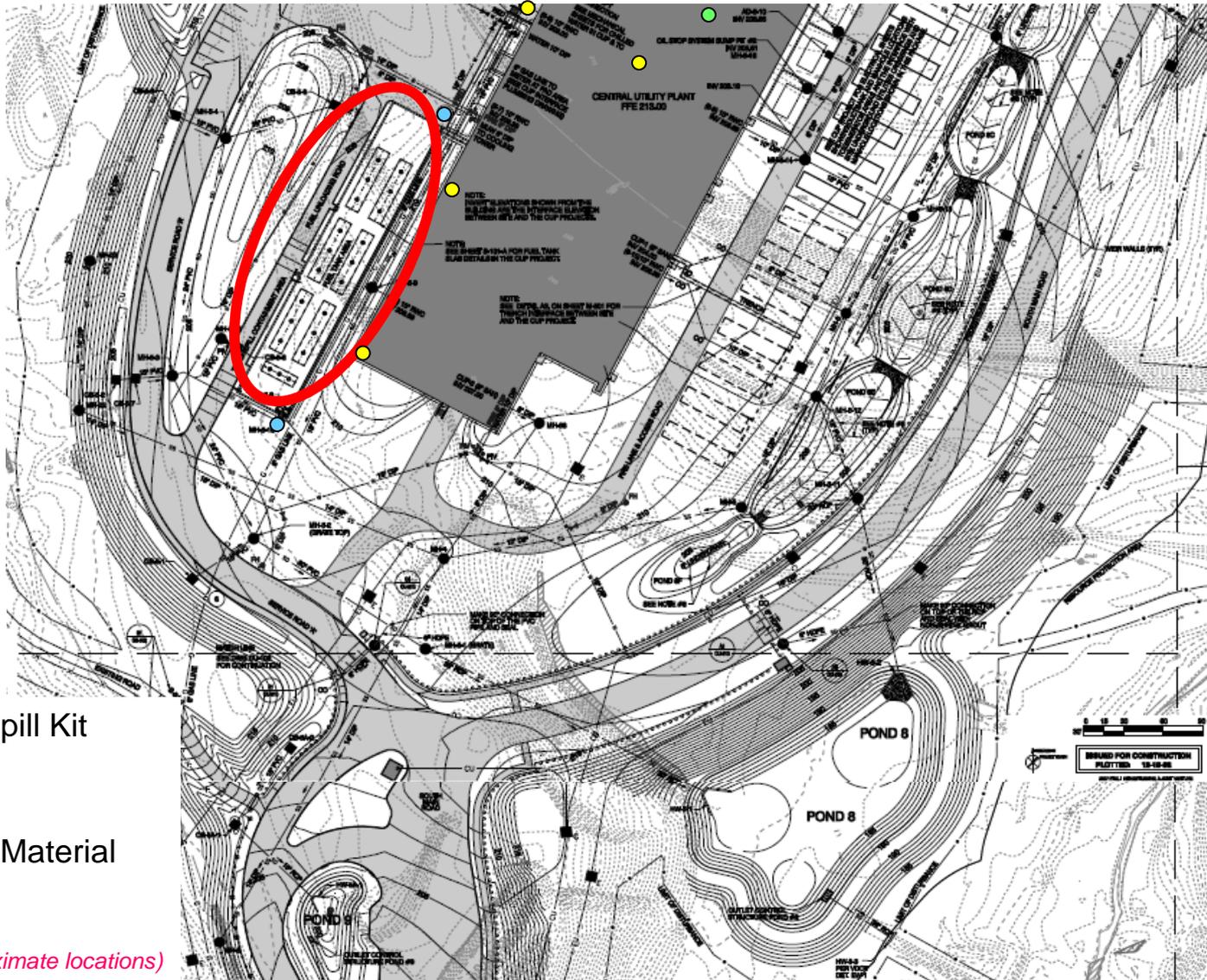
Finally, the cause of the discharge would be considered. If the cause is determined to be due to human error, operating procedures of the facility should be reviewed and modified if warranted. If the failure was due to equipment failure, the facility's preventive maintenance procedures should be examined and improved if necessary. This ODCP will be updated as needed to reflect new standard practices and equipment, as well as changes in key personnel.

All discharges that warrant emergency notifications in Table will be followed up promptly with a detailed written report, as required, fully describing the event. At a minimum, the report should include the following information:

- Name of the organization and person contacted during initial notification, including date and time of notification;
- Update of initial information;
- Actions taken to respond to and contain the release;
- Any known/anticipated acute or chronic health risk associated with the release;
- Advise regarding medical attention necessary for exposed individuals; and
- Prevention steps and actions taken.

FIGURES

Figure 1 - Site Plan



- Universal Spill Kit
- Oil Spill Kit
- Hazardous Material Spill Kit

(denotes approximate locations)

Figure 2 - Floor Plan

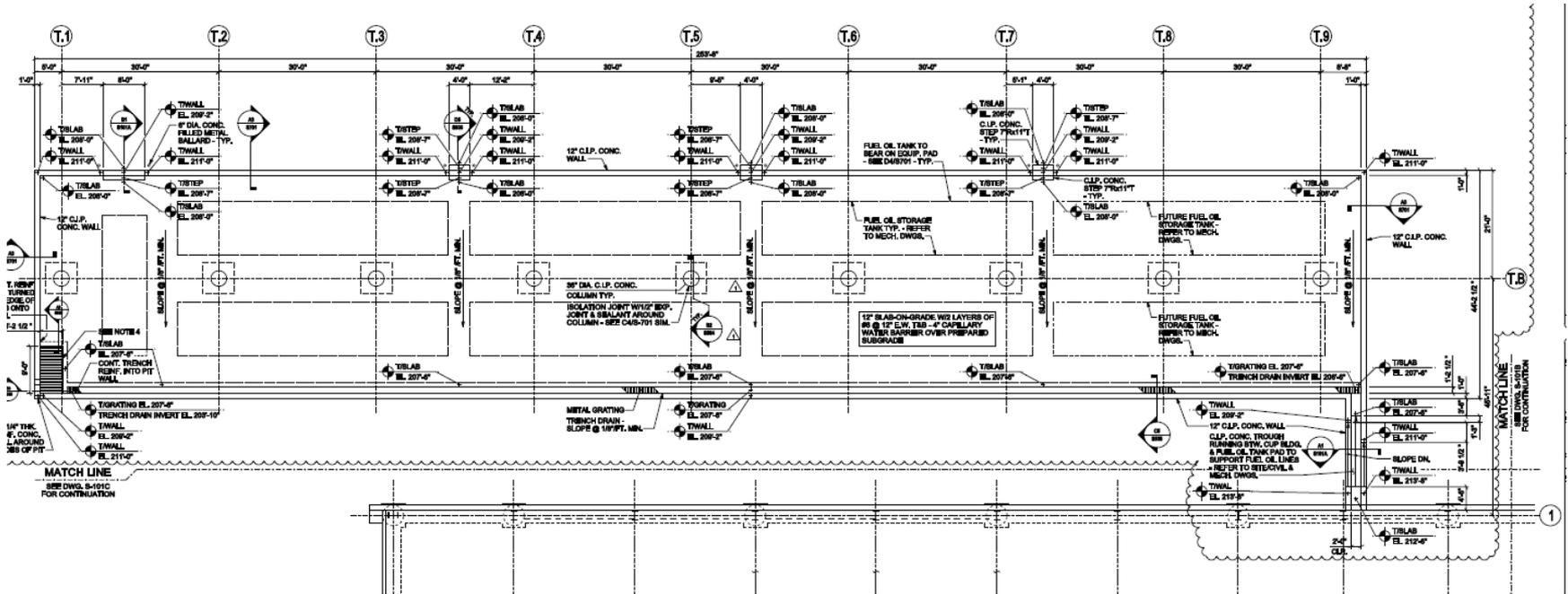
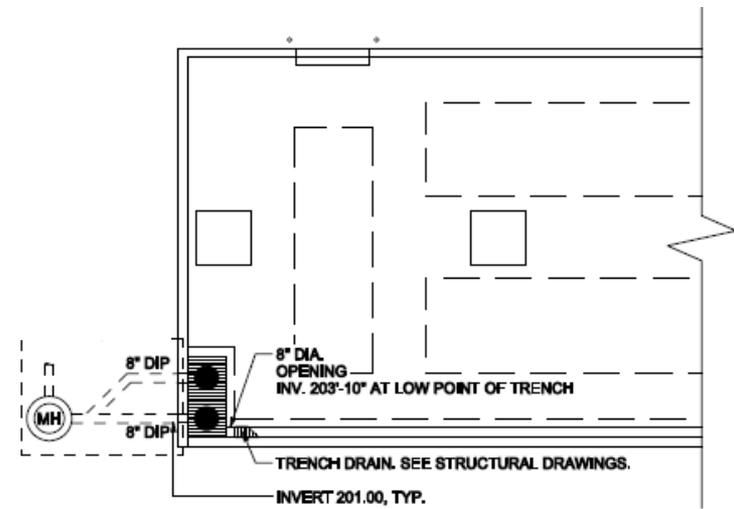
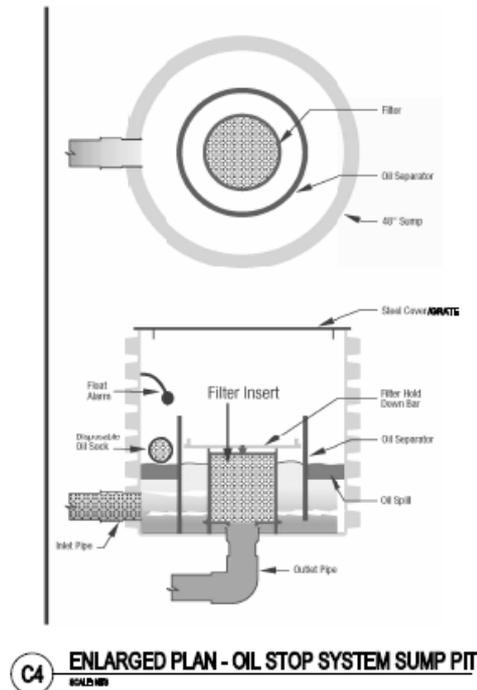
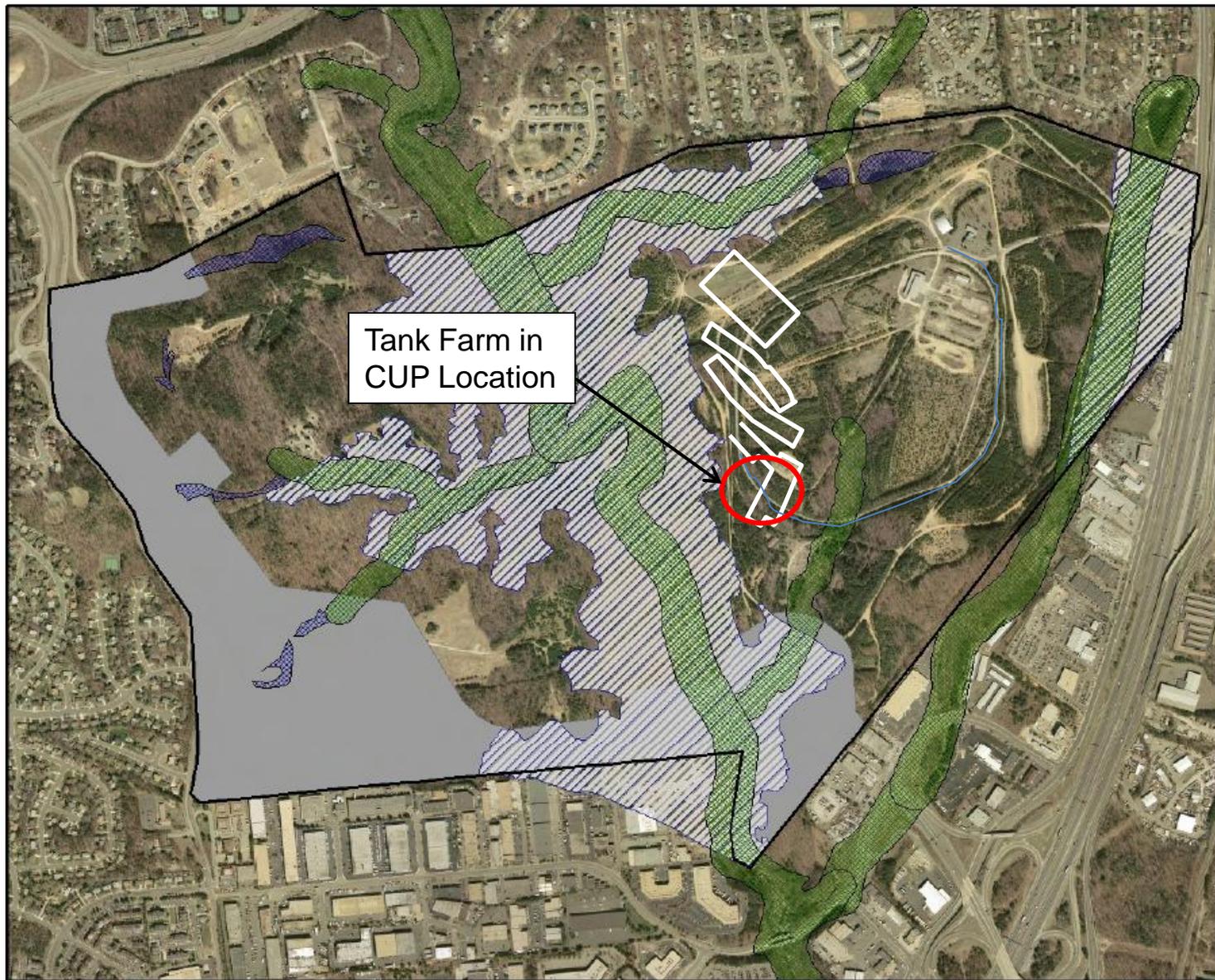


Figure 4 - Envirodrain





Fort Belvoir North Area

0 190380 760 1,140 1,520
Feet

Scale of aerial photo
Flight date 2002
Prepared 7/2005
by Fairfax County DPZ

Legend

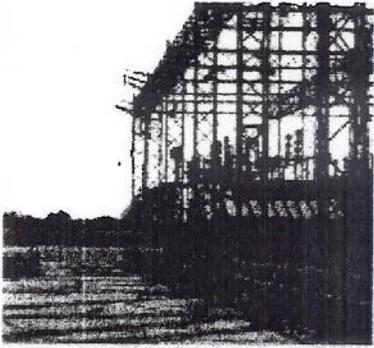
-  EPG Gross Buildable Area
-  Wetlands
-  Resource Protection Areas (RPA)
-  Environmental Quality Corridor (EQC)
-  Fairfax County Parkway Right of Way

Potential Buildable Area	
EPG Gross Building Area	795 acres
Environmental Constraints (RPA, EQC, Wetlands)	292 acres
VDOT Improvements	173 acres
EPG Net Buildable Area	391 acres

Figure 5 – Environmentally Sensitive Areas Site Map

APPENDIX A

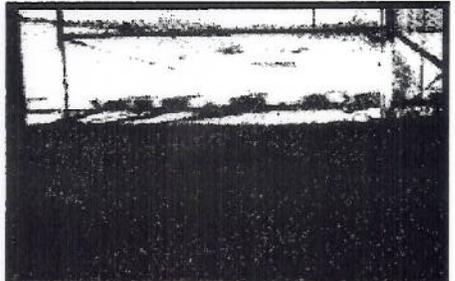
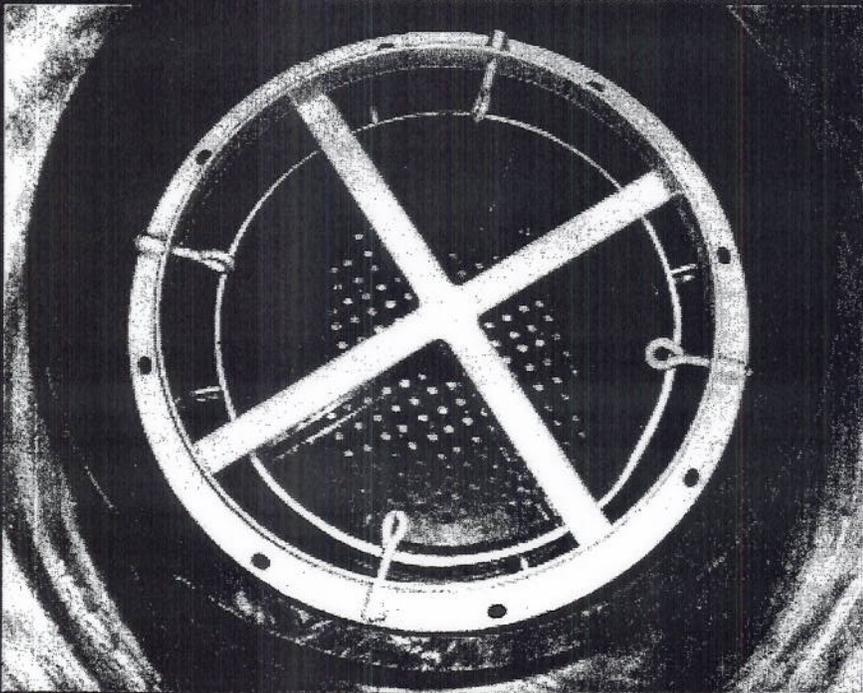
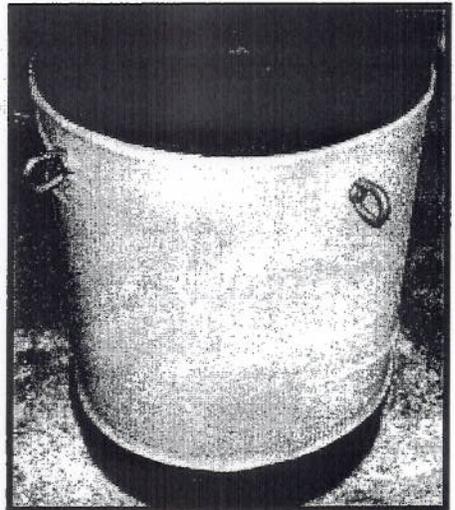
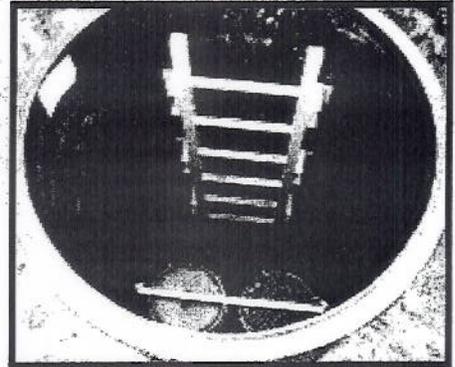
Envirodrain Specifications



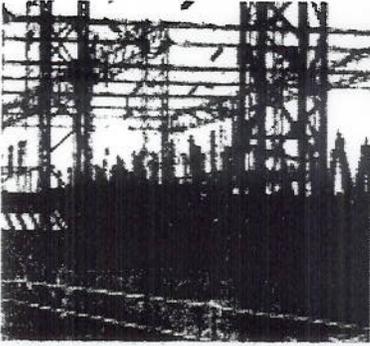
enviro drain[®]

Oil Spill Prevention

- Provides storm water drainage from bermed or drainage areas.
- Prevents the escape of hydrocarbon pollutants.
- Removes hydrocarbon pollutants and small oil spills while maintaining drainage.
- With oil separator, filter life is extended - only the largest spills will reach the filter.

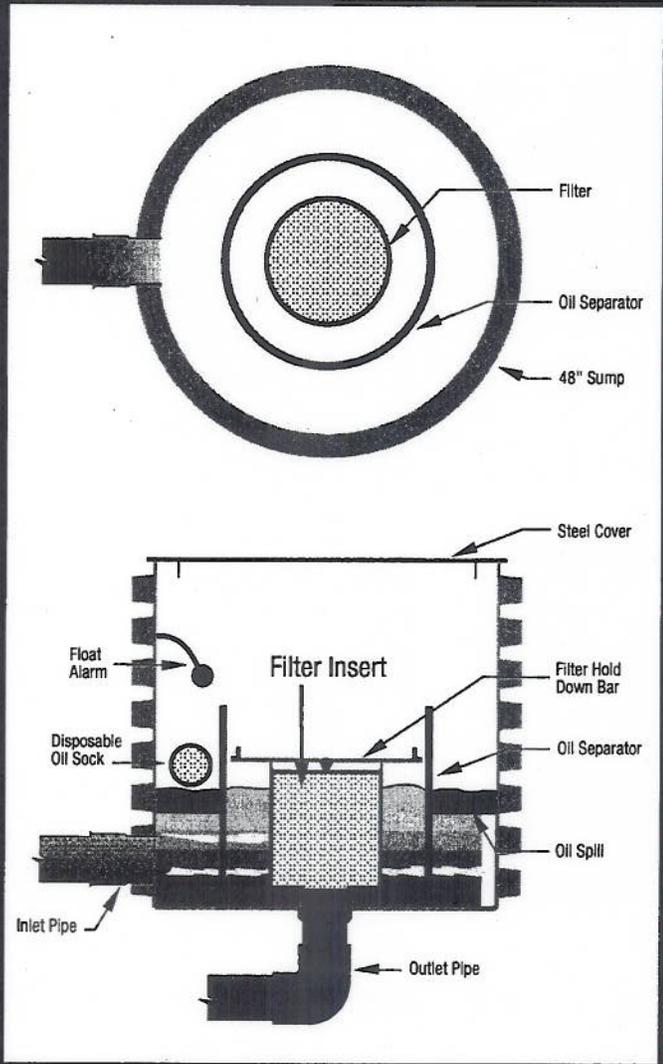


terrafix[®]
geosynthetics inc.
www.terrafixgeo.com



enviro drain[®]

Oil Spill Prevention



Envirodrain[®] is a preventive oil-stop system, designed to avoid the huge costs associated with transformer and coolant oil environmental cleanup. Envirodrain[®] is installed at a fraction of the cost of mechanical pump separator systems, with greatly reduced maintenance costs.

Features

- Polyethylene leak-tight construction for long life.
- Oil-water separator.
- Low placement of filter ensures high driving head.
- Site-specific custom-built sump with custom inlets.
- Custom covers, OSHA ladders (if required) and other appurtenances.

Benefits

- 50 years minimum service life for system, long filter life*.
- Easy to install filter units.
- 100% removal of target hydrocarbons.
- Low maintenance, non-mechanical.
- High base flow capacity for storm events.
- Easy to fit within existing site grades.
- Safe, reliable system.

How It Works

When small oil spills hit the system, an oil-water separator keeps the oil away from the filter, where it can be collected by disposable oil absorbent materials - maintaining the high flow rates. When larger spills hit the system, the filter blocks the oil completely, allowing the spill to be contained and remediated. An appropriate float alarm system can be incorporated to alert staff to spill.

*Filter life depends on spill frequency and concentration.

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terrafix[®]
geosynthetics inc.

www.terrafixgeo.com

178 Bethridge Rd., Toronto, Ontario M9W 1N3
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Envirodrain EIIIS Oil Prevention System

INDEX

- 1.0 Background
- 2.0 Technical Details of System

1.0 BACKGROUND

The Envirodrain EIIIS is a sump filter system designed to prevent identified hydrocarbons from escaping from bermed transformer stations. Most of these bermed stations have drainage systems to prevent the buildup of rain and melt water. Without the EIIIS system, hydrocarbons are free to drain from these bermed areas by transport with rain and melted snow into the surrounding storm system or in some cases, a local watercourse. These oils, typically mineral oils, have the potential to cause serious damage to local fish, wildlife and aquatic flora. In some cases, the spill volume potential is great. A slick of such a large size would involve serious clean up costs, particularly if it is not detected and mitigated quickly.

Spills can occur from regular maintenance and sampling work, or in some cases, through breakdowns and leaks. It is the large spills that can occur from breakdowns and leaks, which are of greatest concern to the environment. The time between leak and detection is often too long to prevent oil escape and resulting environmental damage.

The Envirodrain EIIIS system is a non-mechanical, low maintenance system specially designed too allow water to drain, while preventing oil from being transported from the bermed area. This system handles both the large and small spills, protecting and preserving the surrounding watercourses or drainage areas.

The EIIIS is a technical step forward from its predecessors. The design improves upon previous versions providing greater base flow rates, greater oil capacity, and a longer filter life, while providing zero mineral oil escape.

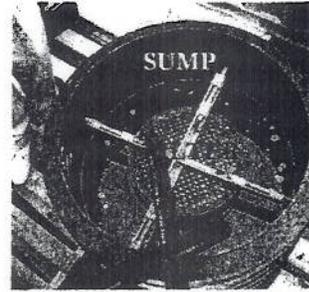
Terrafox has been providing geosynthetic solutions since 1973. We are the leaders in this specialized field in Canada particularly in Ontario where we have a wide base of loyal customers. We also work throughout the US in some of our business areas. We not only offer geosynthetic materials, we also offer full-engineered solutions for many of our products. Our focus is on providing a complete technical solution that fits with the customers need.

With Envirodrain EIIIS, we are providing to our power generation and distribution client a low-maintenance and cost effective way to reduce the environmental impact of oil spills.

3.0 TECHNICAL DETAILS

Product Description

The system consists of two major components, both constructed of High Density Polyethylene materials of the highest resin classes. Component 1 is the sump, embedded into the bed of the berm (clay, or concrete, or liner). The sump's inlet pipe allows the berm area to be drained into the sump. At the base of the sump, an outlet connects to the receiving storm or drainage pipe and proceeds out of the bermed area. Connected to this outlet by means of a gasketed bell and spigot is component 2 – the Envirodrain Filtration Unit. The filtration unit is connected to the sump with a unique hydrophilic gasket system, developed specifically for Envirodrain to prevent any water/oil to escape via the bell and spigot connection.



The system is designed such that any liquids finding their way into the sump, must pass through the polymer filtration media contained within the filtration unit, before being driven by pressure head to the outlet at the base of the sump. The filtration unit sits up above the base of the sump, to provide an effective filtration area. The polymer, a crumbed rubber-like material, is compacted into the filter unit, providing high flow rates for water flow and sufficient residence time to allow any hydrocarbons to be trapped within the polymer filtration material.

The polymer is an inert material that does not react with water. In the presence of compatible hydrocarbons, such as mineral oil, the polymer absorbs the oil and begins to gel, eventually becoming a solid rubber like mass. The polymer can absorb up to 10 times its weight in mineral oil. Thus, for small spills, the system acts like a selective filter, allowing water to continue to pass through the unit and exit the sump to the downstream drainage system. However in the event of a major oil spill within the berm, the polymer which comes into contact with the oil gels until it becomes a solid rubber mass, blocking the holes of the filter and preventing any oils from escaping and entering the downstream drainage system. The spill can then be remediated from within the berm.

To increase the life span of the filter, the Envirodrain EIIIS system incorporates an oil baffle separator system between the outside wall of the sump and the filter, which takes advantage of the fact that oil floats on top of water. The baffle has a port on the opposite side of the sump inlet. Thus any oily water entering the sump through the inlet must travel around the baffle and through the baffle port to reach the filter. The opening in the baffle is below the first entry point into the filter. As such, equalizing of water between the space outside the baffle and the space within the baffle occurs with water, since the oil will have ostensibly separated before reaching the baffle opening.

The filter insert is wrapped with a geotextile filter fabric to prevent debris, sand and silt from entering the filter. These foreign materials, washed in by rain and snowmelt, could otherwise reduce the rate of flow by filling voids in the filter media.

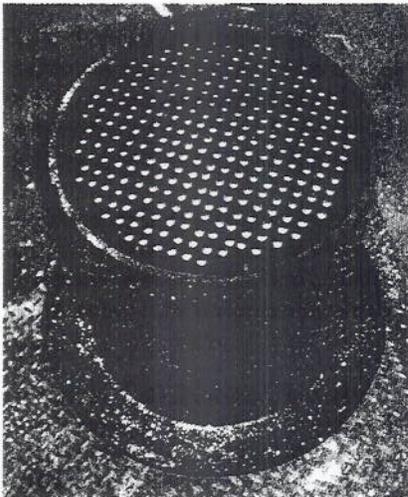
EIIS Sump

The sump is sized specific to each site to provide rainwater detention storage for those rain events that result in temporary flow rates greater than that of the filter. The sump is also designed to provide storage for oil when a large spill occurs. After such an event, the remediation of the site would begin at the sump, where the oil can be removed using "water only" pumps or sucker trucks to remove the remaining oil for treatment offsite.

The sump is also equipped (where specified) with an oil baffle/separator. This is designed to increase the life of the filtration unit, by preventing smaller spills from reaching the unit. Suitable sorbent sock materials can be employed in the space between the baffle and the wall of the sump to collect any separated oils. These should be "oil only" materials, such that the sock is floating on the surface.

EIII Filter Unit

The EIII filter has improved capacity to remove oil over previous versions. Through optimization of filtration opening area, the entire filter is involved in removal of oil. In addition, the top of the filter is also perforated, providing additional capacity. The choice of opening size and hole pattern was the result of lab-scale testing using various hole opening sizes and patterns.



The rate of flow through the filter unit is dependent directly on the head of water placed on the unit. All of the testing of the unit has been completed using a head level of 13.5" (to the bottom of the first filter opening). At this head level, a fresh filter has a flow rate of 50litres/min.

The EIII filter has the capacity to remove approximately 7 lbs of mineral oil before flow stops through the system. This represents approximately a one-inch deep layer around the circumference of the unit, plus a one-inch layer around the top of the unit.

Theoretically, the EIII filter will have an indefinite life if no spills occur. Trace oils and other debris will gradually slow down the overall flow rate in the system. With the addition of the oil baffle/separator system, small spills should never reach the filter. In addition, floating debris will never come into contact with the filter, remaining instead on the outer ring of the sump. The quantity of oil coming into contact with the insert will ultimately determine the life span of the system. After a very large spill, the unit will require replacement. The correct time to change the unit can be judged by the rate of flow through the system. If flow rate has reached less than one-half that of a fresh filter, this might be a good time to consider changing the filter.

enviro drain

Installation Instructions

INDEX

- 1.0 Installing Sump
- 2.0 Installing Filters
- 3.0 Installing Hold-Downs and Lids

1.0 INSTALLING SUMP

There are two types of sumps – 36" diameter with one filter hole, and 48" diameter with two filter holes. The 36" diameter sumps are either 36" tall or 48" tall. The 48" diameter sumps are 7' or 8' tall. Both sumps are adjustable on site for height.

BE CAUTIOUS not to damage outlets or inlets on sumps. Caution must be taken when handling and moving the sump into place.

1. Dig appropriate sized excavation for sump
2. Install receiving pipe system including bell to receive 6" spigot from bottom of sump. Spigot on bottom of sump is Corrugated HDPE pipe by IDEAL and should be connected to corrugated HDPE pipe. The spigot is about 12" long and can be adjusted as needed. For the 36" sump, you will need a one tee system. For the 48" sump, you will need to order a double tee system from your corrugated pipe supplier - two 6" bells, teed to an 8" line (see drawing 1A, 1B)
3. Unstrap sump from skid and remove protective lumber from unit
4. Lift unit using nylon strapping. **DO NOT SET UNIT DOWN ON BOTTOM – THIS MAY DAMAGE OUTLETS.**
5. Determine required sump length relative to excavation. Adjust sump height by cutting off corrugations at the top of the unit as required. You can use a saws-all (reciprocating saw) or chain saw. Exercise caution when cutting and use appropriate safety equipment including goggles. The FRP ladder on the 48" units can also be

adjusted by simply cutting off the ladder at the appropriate location and adjusting the supports where required. On the two larger units (8' tall), the top ladder support can be moved if necessary. If adjusting the height of the 7' tall unit, it is not necessary to move the support – merely cut it off if you are adjusting the height to at or below the top support. When moving the support, predrill the bolt hole prior to screwing the lag bolt into the block.

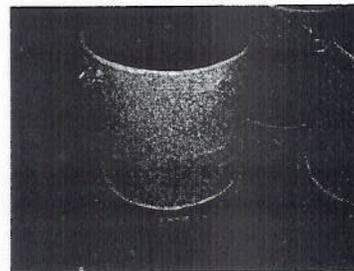
6. Attach appropriate gasket to sump outlet(s), apply gasket grease to gasket and bell and gently lower sump into position so that spigot is seated into receiving bell. Ensure that the bottom of the sump is evenly supported by granular material. It is recommended that a lean cement or soil cement be used under the unit to ensure full support.
7. Tie in inlets into system. The 36" units have built-in inlet ports. In this case, simply attach an appropriate gasket to the inlet pipe, grease the gasket and bell, and insert the inlet spigot into the bell.
8. The 48" units are designed to have the inlets cut in on site. Use an appropriate coring machine to introduce inlets. It is recommended to use an insertatee (www.insertatee.com) system to seal the inlet pipe into the sump unit. Alternatively, concrete can be massed around the insertion after installation. Coring is more easily achieved from the inside out.
9. If the unit is placed inside a bermed area, it is recommended to seal the bottom of the unit into a concrete slab to prevent any oil from short circuiting past the sump-filter system and entering the outlet through the gasket connecting the sump to the receiving pipe system.



2.0 INSTALLING FILTERS

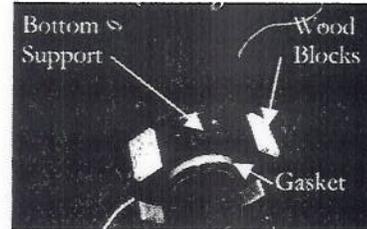
The Envirodrain Filter is a common filter for all units. The filters are approximately 50lb in weight and approximately 2ft high by 16 inches in diameter.

1. Remove plastic packaging from filter unit
2. Set filter on clean dry area on its side.
3. Remove plastic cellophane from gasket at bottom of unit. Once you have removed cellophane, be careful not to get dirt onto the gasket system.
4. Mix a solution of 1 part soap (dish detergent will do fine) to approximately 5 parts water and apply this using clean sponge or finger to the gasket and to the receiving bell inside the sump unit. Do not use gasket grease for this joint – this is a special hydrophilic gasket system. Do not use excessive soap such that there is soap running everywhere. Do not leave more than 20 mins between soaping gasket and installation of filter.
5. Leaving wood blocks on, set filter into bottom of sump. Hooks are provided which can assist in this process. You can attach rope or clips to these hooks to help lower the system into the sump using a



backhoe or manpower. If there is less room to maneuver inside the sump, such as with the 36" diameter units, you can remove the blocks while the unit is suspended from the backhoe. Be sure not to set the filter down on the spigot and gasket once the blocks are removed.

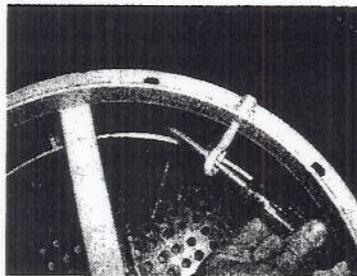
6. Place filter over the sump outlet hole. Using cordless drill, remove wood blocks while supporting filter unit via hooks. Once blocks are removed, gently lower the unit into the outlet hole. Apply downward pressure as needed. The bottom support of the unit should rest on the base of the sump such that there is no space showing.



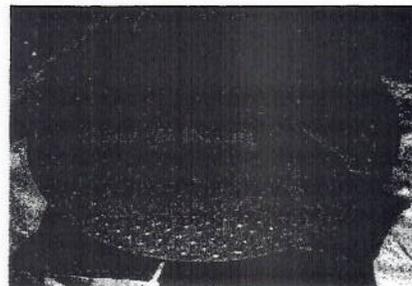
3.0 INSTALLING HOLD-DOWNS AND LIDS

Each unit has a hold down for the filter to prevent floatation, and a lid for safety.

1. For 36" diameter units, install the hold down apparatus by placing it into the unit, inside the oil separator. Using a screwdriver, twist the four hooks until they are pressing well into the oil separator. This will prevent the filter from floating up when water is introduced.



2. For the 48" diameter units, there is a 1.5"x1.5" bar that will serve as the hold down for both of the filter units. All of the 48" units are dual filter. The bar fits into a slotted block that is welded to each side of the unit. Once the filter units are seated in the sump base correctly, slide in the 1.5"x1.5" bar. There is a pin which fits into the block to keep the bar from falling out of the slots. Note that the bar need not be completely snug against the filter.



3. The lids can now be installed. Simply place the lid onto the top of the sump. Holes are provided in the lid to allow for a locking mechanism if desired. This can be accomplished by drilling down through the first corrugation in alignment with the holes in the lid. A suitable bolt and padlock system can be used to secure the lid to the sump. Please note, lids are not designed for vehicle loading, but can support the weight of three persons.

Section – “02730”

ENVIRODRAIN® OIL-STOP FILTER CATCH BASIN

Part 1 – General

1.01 Section Includes

- A. Envirodrain® Oil-Stop filter catch basin system which stops the flow of any mineral oil (hydrocarbons) from power station equipment. This scope covers the requirements to supply and install an Envirodrain® system. This system is comprised of the following assemblies and technical parts;
 - 1. Assembly ‘A’ – Catch Basin
Refer to specific project documents
 - 2. Assembly ‘B’ – Envirodrain® Filter
Refer to specific project documents
 - 3. Assembly ‘C’ – Envirodrain® Steel Lid and Hold-down Bar
Refer to specific project documents

1.02 Related Sections

- A. Section 02725 – Installation of Oil-Stop Containment system around power equipment and underground drainage systems.

1.03 References

- A. General Requirements: Comply with codes, ordinances, rules and regulations of all government authorities having jurisdiction on the work and with the following standards as applicable to the work
- B. American Society of Testing and Materials (ASTM)
 - 1. A-3212 – Jointing Systems for HDPE Pipes
 - 2. A-2240 – Durometer for Hardness for Rubber
 - 3. D-412 – Tensile Set for Rubber and Thermoplastic Elastomers
 - 4. D-1238 – Melt Flow Rates for Polymers
 - 5. D-2321 – Installation of Flexible Pipe
 - 6. D-2412 – External Loading of Plastic Pipe
 - 7. D-4012 – Reporting of Examination & Analysis of Deposits Formed from Water for Subsurface Injection

1.04 Quality Assurance

- A. Manufacturer's Qualifications
 - 1. Training in heat extrusion welding of HDPE piping material
 - 2. Training in fabrication and packing of Envirodrain® filter media
- B. Performance Requirements
 - 1. 100% blockage of mineral oil (hydrocarbons)
 - 2. 100% leak-free system
 - 3. Filter able to function without failure during freeze/thaw cycles
 - 4. Able to function by gravity without the aid of any mechanical devices

1.05 Submittal

- A. Shop drawings under the signature of a Professional Engineer
- B. Quality Control Submittal
 - 1. Manufacturers Instructions
 - a. Installation Guide
 - b. Maintenance Guide
 - 2. Certification
 - a. Submit manufacturers certification that all finished products meet the specified requirements

1.06 Delivery, Storage and Handling

- A. Packaging and Shipping
 - a. Shipped on a wooden skid and held down with banding or strapping. Protect filter gasket with plastic cellophane and spigot with blocks.
 - b. Shipped as a complete unit with the filter installed in the sump
- B. Storage and Protection
 - a. Store in an area that is not in direct sunlight and protected from the elements.

Part 2 - Products

2.01 Acceptable Manufacturer:

Subject to compliance with requirements, manufacturer offering Envirodrain® oil stop filter sump will be:

Terraflux Geosynthetics Inc.
178 Bethridge Road
Toronto, Ontario Canada
M9W 1N3

2.02 Materials

- A. Envirodrain® sump: The Envirodrain® sump and baffle plate (if specified) shall be pre-assembled and all parts extrusion welded at the factory. The Envirodrain® sump (36 inches, 48 inches or larger in diameter) and of specified height shall be constructed of high density polyethylene material of the highest resin classes. The sump will have an inlet for 6 inch pipe at its side and an outlet discharge pipe at the base of the sump (which will be connected to the receiving storm or drainage pipe). All the parts of the Envirodrain® sump such as sump, baffle plate, bottom plate, inlet and outlet pipes, will be extrusion welded and the system will be 100% leak-free.

- B. Envirodrain® filter: The filter shall be made of high density polyethylene, 16 inch outside diameter and 8 inch inside diameter pipe with top plates welded to both the outside and inside filter pipes. The filter unit at the top and all around its circumference will be perforated to allow the incoming affluent to pass through the unit. The filtration media is very specifically designed and manually placed (sandwiched) with great care between the inside and the outside pipes of the filter. At the bottom of the filtering unit will be the spigot and gasket unit. The wooden blocks will be attached to the bottom of the filtering unit to prevent any damage to the spigot and gasket unit during shipping, transportation and installation.

- C. Filter Hold-down Bars and Envirodrain® Sump Lid: There are two types of filter hold-down bars to prevent the filter from floating up when the incoming affluent is introduced.
1. For 36 inches diameter units, the hold-down bar is fabricated of steel as per ASTM specification A36 and painted safety fluorescent yellow.
 2. For 48 inches diameter or larger units, the hold-down unit is made of 1.5 inch x 1.5 inch bar fabricated of steel as per ASTM specification A36 and painted safety fluorescent yellow. Generally 48 inches or larger diameter units are dual filter units.
 3. Envirodrain® sump lid is fabricated of checkered steel as per ASTM specification A36 to provide a non-skid surface and painted safety fluorescent yellow. Four holes equally spaced are provided in the lid to allow for locking mechanism. The lid is not designed to take any vehicular loading, but it can support approximately 500 pounds of load. For a 36 inch diameter sump lid size will be 38 inches in diameter. For a 48 inch diameter sump lid size will be 50 inches in diameter.

Part 3 – Execution

3.01 Examination

- A. Trench excavation and other previously performed work on which specified work is in any way dependent to insure that conditions are satisfactory for the installation of Envirodrain® sump.
- B. Report defects in previously performed work which may influence satisfactory completion of Envirodrain® sump. Absence of such notification will be construed as acceptance of the previously performed work.

3.02 Preparation

- A. Grade Control:
 - 1. Establish and maintain for underground drainage system to be connected to Envirodrain® sump.
- B. Water Control:
 - 1. Do not allow water in the Envirodrain® sump excavation area during construction operation.
 - 2. Keep water away from cast-in-place concrete construction until the concrete has set.

3.03 Installation of the Envirodrain®

- A. Installation of Sump: As per Envirodrain® installation instructions Section 1.0, Installing Sump.
- B. Installation of Filters: As per Envirodrain® installation instructions Section 2.0, Installing Filters.
- C. Installation of Filter Hold-Downs and Sump Lids: As per Envirodrain® installation instructions Section 3.0, Installing Hold-Downs and Lids.

3.04 Field Quality Control

- A. Assure all work is done as per drawings, specifications and installation instructions for Envirodrain®.
- B. Assure that no damage is done to any Envirodrain® parts and its welded connections during shipping, transportation to site, and construction.
- C. Assure proper installation of Envirodrain® filter into the outlet discharge pipe without any damage to its gasket and spigot end.
- D. Assure proper installation of Envirodrain® hold-downs and sump lid with its hold-down screws in place.

Detroit Edison



A DTE Energy Company

Re: Performance of Envirodrain®

To whom it may concern:

The Detroit Edison Company has used the Terrafix Envirodrain® filter and catch basin assembly at many of its electrical distribution substation sites over the past several years. This product has enabled us to passively drain storm water from the secondary containment areas that surround our oil filled electrical substation equipment.

We have had one event at a substation location where an Envirodrain assembly was installed. The Envirodrain filter performed as designed, preventing any oil from escaping our containment system, which minimized the clean-up effort. The contaminated filter was removed, and a replacement filter installed in short order. The Envirodrain system has continued to perform as designed, without incident.

Thus far, Detroit Edison is very satisfied with the product.

A handwritten signature in black ink, appearing to read "Timothy S. Vandekerckhove".

Timothy S. Vandekerckhove, P.E.
Supervising Engineer-Architectural/Civil Design
The Detroit Edison Company

APPENDIX B

Fuel Material Safety Data Sheet (MSDS)



Material Safety Data Sheet

MSDS ID NO.: 0279MAR019
Revision date: 02/09/2007

CHEMICAL PRODUCT AND COMPANY INFORMATION

Product name: Marathon No. 2 Low Sulfur Diesel Dyed 500 ppm Sulfur Max
Synonym: Diesel No. 2 Dyed 500 ppm Sulfur Max; No. 2 Diesel, Non-Road Use, Dyed; No. 2 Diesel Dyed 500 ppm Sulfur Max; No. 2 NR 500 Diesel Dyed; No. 2 Diesel Dyed (0.05% Sulfur Max)
Chemical Family: Petroleum Hydrocarbon
Formula: Mixture
Manufacturer: Marathon Petroleum Company LLC
539 South Main Street
Findlay OH 45840

Other information: 419-421-3070
Emergency telephone number: 877-627-5463

COMPOSITION INFORMATION ON INGREDIENTS

No. 2 Diesel is a complex mixture of paraffins, cycloparaffins, olefins, and aromatic hydrocarbons having hydrocarbon chain lengths predominately in the range of C11 through C20. May contain a trace amount of benzene (<0.01%). Can contain small amounts of red dye and additives (<0.15%) which are not considered hazardous at the concentrations used.

Product Information:

Name	CAS Number	Weight %	ACGIH Exposure Limits:	OSHA - Vacated PELs - Time Weighted Ave	Other:
Marathon No. 2 Diesel	68476-30-2	100	Skin - potential significant contribution to overall exposure by the cutaneous route = 100 mg/m ³ TWA		

Component Information:

Name	CAS Number	Weight %	ACGIH Exposure Limits:	OSHA - Vacated PELs - Time Weighted Ave	Other:
Saturated Hydrocarbons	Mixture	54-85			
Aromatic Hydrocarbons	Mixture	15-45			
Unsaturated Hydrocarbons	Mixture	1-6			
Naphthalene	91-20-3	0.01-0.5	Skin - potential significant contribution to overall exposure by the cutaneous route = 10 ppm TWA = 15 ppm STEL	= 10 ppm TWA = 50 mg/m ³ TWA = 15 ppm STEL = 75 mg/m ³ STEL	

Notes:

The manufacturer has voluntarily elected to reflect exposure limits contained in OSHA's 1989 air contaminants standard in its MSDS's, even though certain of those exposure limits were vacated in 1992.

HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

NO. 2 DIESEL IS A RED COLORED LIQUID. THIS PRODUCT IS CONSIDERED TO BE A COMBUSTIBLE LIQUID PER THE OSHA HAZARD COMMUNICATION STANDARD AND SHOULD BE KEPT AWAY FROM HEAT, FLAME AND SOURCES OF IGNITION. NEVER SIPHON THIS PRODUCT BY MOUTH. IF SWALLOWED, THIS PRODUCT MAY GET SUCKED INTO THE LUNGS (ASPIRATED) AND CAUSE LUNG DAMAGE OR EVEN DEATH. PROLONGED OR REPEATED SKIN CONTACT CAN CAUSE DEFATTING AND DRYING OF THE SKIN WHICH MAY PRODUCE SEVERE IRRITATION OR DERMATITIS.

OSHA WARNING LABEL:

WARNING.
COMBUSTIBLE LIQUID.
 ASPIRATION (INADVERTENT SUCTION) OF LIQUID INTO THE LUNGS CAN PRODUCE CHEMICAL PNEUMONIA OR EVEN DEATH.
 PRODUCES SKIN IRRITATION UPON PROLONGED OR REPEATED CONTACT.

CONSUMER WARNING LABEL:

A CONSUMER WARNING LABEL IS NOT APPLICABLE FOR THIS PRODUCT.

- Inhalation:** Exposure to high vapor concentrations may produce headache, giddiness, vertigo, and anesthetic stupor.
- Ingestion:** Ingestion may result in nausea, vomiting, diarrhea and restlessness. Aspiration (inadvertent suction) of liquid into the lungs must be avoided as even small quantities in the lungs can produce chemical pneumonitis, pulmonary edema/hemorrhage and even death.
- Skin contact:** Prolonged and repeated liquid contact can cause defatting and drying of the skin and can lead to irritation and/or dermatitis.
- Eye contact:** Produces little or no irritation on direct contact with the eye.
- Carcinogenic Evaluation:**

Product information:

Name	IARC Carcinogens:	NTP Carcinogens:	ACGIH - Carcinogens:	OSHA - Select Carcinogens:
Marathon No. 2 Diesel 8847B-30-2	NE		A3 - Confirmed animal carcinogen with unknown relevance to humans (as total hydrocarbons)	

Notes:

The International Agency for Research on Cancer (IARC) has determined that there is inadequate evidence for the carcinogenicity of diesel fuel/fuel oil in humans. IARC determined that there was limited evidence for the carcinogenicity of marine diesel fuel in animals. Distillate (light) diesel fuels were not classifiable as to their carcinogenicity to humans (Group 3A).

IARC has determined that there is sufficient evidence for the carcinogenicity in experimental animals of diesel engine exhaust and extracts of diesel engine exhaust particles. IARC determined that there is only limited evidence for the carcinogenicity in humans of diesel engine exhaust. However, IARC's overall evaluation has resulted in the IARC designation of diesel engine exhaust as probably carcinogenic to humans (Group 2A) because of the presence of certain engine exhaust components.

Component information:

Name	IARC Carcinogens:	NTP Carcinogens:	ACGIH - Carcinogens:	OSHA - Select Carcinogens:
Naphthalene 91-20-3	Monograph 82, 2002	Reasonably Anticipated To Be A Carcinogen Listed	A4 - Not Classifiable as a Human Carcinogen	Present

Notes: The International Agency for Research on Cancer (IARC) and the Environmental Protection Agency (EPA) have determined that naphthalene could be a possible human carcinogen.

4. FIRST AID MEASURES

Inhalation: If affected, move person to fresh air. If breathing is difficult, administer oxygen. If not breathing or if no heartbeat, give artificial respiration or cardiopulmonary resuscitation (CPR). Immediately call a physician. If symptoms or irritation occur with any exposure, call a physician.

Skin contact: Wash with soap and large amounts of water. Remove contaminated clothing. If symptoms or irritation occur, call a physician.

Ingestion: If swallowed, do not induce vomiting and do not give liquids. Immediately call a physician.

Eye contact: Flush eyes with large amounts of tepid water for at least 15 minutes. If symptoms or irritation occur, call a physician.

Medical conditions aggravated by exposure: Pre-existing skin conditions and respiratory disorders may be aggravated by exposures to components of this product.

5. FIRE FIGHTING MEASURES

Suitable extinguishing media: For small fires, Class B fire extinguishing media such as CO2, dry chemical, foam (AFFF/ATC) or water spray can be used. For large fires, water spray, fog or foam (AFFF/ATC) can be used. Fire fighting should be attempted only by those who are adequately trained and equipped with proper protective equipment.

Specific hazards: This product has been determined to be a combustible liquid per the OSHA Hazard Communication Standard and should be handled accordingly. For additional fire related information, see NFPA 30 or the North American Emergency Response Guide 128.

Special protective equipment for firefighters: Avoid using straight water streams. Water spray and foam (AFFF/ATC) must be applied carefully to avoid frothing and from as far a distance as possible. Avoid excessive water spray application. Keep surrounding area cool with water spray from a distance and prevent further ignition of combustible material. Keep run-off water out of sewers and water sources.

Flash point: 130-190 F
Autoignition temperature: 637 F
Flammable limits in air - lower (%): 0.7
Flammable limits in air - upper (%): 5.0

NFPA rating:
 Health: 1
 Flammability: 2

HMIS classification:
 Health: 1
 Flammability: 2

Reactivity: 1
Other: -

Reactivity: 1
Special: *See Section 8 for guidance in selection of personal protective equipment.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions: Keep public away. Isolate and evacuate area. Shut off source if safe to do so. Eliminate all ignition sources. Advise authorities and National Response Center (800-424-8802) if substance has entered a watercourse or sewer. Notify local health and pollution control agencies, if appropriate. Contain liquid with sand or soil. Recover and return free product to proper containers. Use suitable absorbent materials such as vermiculite, sand, or clay to clean up residual liquids.

7. HANDLING AND STORAGE

Handling:

Comply with all applicable EPA, OSHA, NFPA and consistent state and local requirements. Use appropriate grounding and bonding practices. Store in properly closed containers that are appropriately labeled and in a cool well-ventilated area. Do not expose to heat, open flames, strong oxidizers or other sources of ignition. Do not cut, drill, grind or weld on empty containers since they may contain explosive residues.

Avoid repeated and prolonged skin contact. Never siphon this product by mouth. Exercise good personal hygiene including removal of soiled clothing and prompt washing with soap and water.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

PERSONAL PROTECTIVE EQUIPMENT

Engineering measures: Local or general exhaust required when using at elevated temperatures that generate vapors or mists.

Respiratory protection: Use approved organic vapor chemical cartridge or supplied air respirators when material produces vapors that exceed permissible limits or excessive vapors are generated. Observe respirator protection factor criteria cited in ANSI Z88.2. Self-contained breathing apparatus should be used for fire fighting.

Skin and body protection: Neoprene, nitrile, polyvinyl alcohol (PVA), polyvinyl chloride and polyurethane gloves to prevent skin contact.

Eye protection: No special eye protection is normally required. Where splashing is possible, wear safety glasses with side shields.

Hygiene measures: No special protective clothing is normally required. Select protective clothing depending on industrial operations. Use mechanical ventilation equipment that is explosion-proof.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	Red Liquid
Physical state (Solid/Liquid/Gas):	Liquid
Substance type (Pure/Mixture):	Mixture
Color:	Red
Odor:	Slight Hydrocarbon
Molecular weight:	180
pH:	Neutral
Boiling point/range (5-95%):	400-640 F
Melting point/range:	Not determined.

MSDS ID NO.: 0279MAR019

Product name: Marathon No. 2 Low Sulfur Diesel
Dyed 500 ppm Sulfur Max

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Decomposition temperature:	Not applicable.
Specific gravity:	C.A. 0.8
Density:	6.76 lbs/gal
Bulk density:	No data available.
Vapor density:	4-5
Vapor pressure:	1-10 mm Hg @ 100 F
Evaporation rate:	No data available.
Solubility:	Negligible
Solubility in other solvents:	No data available.
Partition coefficient (n-octanol/water):	No data available.
VOC content(%):	10%
Viscosity:	1.9-3.4 @ 40 C

10. STABILITY AND REACTIVITY

Stability:	The material is stable at 70 F, 760 mm pressure.
Polymerization:	Will not occur.
Hazardous decomposition products:	Combustion produces carbon monoxide, aldehydes, aromatic and other hydrocarbons.
Materials to avoid:	Strong oxidizers such as nitrates, perchlorates, chlorine, fluorine.
Conditions to avoid:	Excessive heat, sources of ignition and open flames.

11. TOXICOLOGICAL INFORMATION

Acute toxicity:

Product information:

Name	CAS Number	Inhalation:	Dermal:	Oral:
Marathon No. 2 Diesel	68476-33-2	No data available	No data available	No data available

Lifetime skin painting studies in animals with similar distillate fuels have produced weak to moderate carcinogenic activity following prolonged and repeated exposure. Similar middle distillates, when tested at nonirritating dose levels, did not show any significant carcinogenic activity indicating that this tumorigenic response is likely related to chronic irritation and not to dose. Repeated dermal application has produced severe irritation and systemic toxicity in subacute toxicity studies. Some components of this product, have been shown to produce a species specific, sex hormonal dependent kidney lesion in male rats from repeated oral or inhalation exposure. Subsequent research has shown that the kidney damage develops via the formation of an alpha-2μ-globulin, a mechanism unique to the male rat. Humans do not form alpha-2μ-globulin, therefore, the kidney effects resulting from this mechanism are not relevant in humans. Some components of this product were found to be positive in a few mutagenicity tests while negative in the majority of others. The exact relationship between these results and human health is not known.

Summary of health effect data on distillate fuel components:

This product may contain >0.1% naphthalene. Exposure to naphthalene at 30 ppm for two years caused lung tumors in female mice. Male mice with the same exposure did not develop tumors. Exposure to 10-60 ppm naphthalene for 2 years caused tumors in the tissue lining of the nose and respiratory tract in male and female rats. Oral administration of 133-267 mg/kg/day of naphthalene in mice for up to 90 days did not produce mortality, systemic toxicity, adversely affect organ or body weight or produce changes in blood. Repeated oral administration of naphthalene produced an anemia in dogs. Repeated intraperitoneal doses of naphthalene produced lung damage in mice. Repeated high doses of naphthalene has caused the formation of cataracts and retinotoxicity in the eyes of rats and rabbits due to accumulation of 1,2-naphthoquinone, a toxic metabolite. Effects in human eyes is uncertain and not well documented. Pregnant rats administered intraperitoneal doses of naphthalene during gestation gave birth to offspring that had delayed heart and bone development. Pregnant mice given near lethal doses of naphthalene showed no significant maternal toxicity and a reduction in the number of pups per litter, but no gross abnormalities in offspring. Suppressed spermatogenesis and progeny development have been reported in mice, rats and guinea pigs after exposure to high concentrations of naphthalene in their drinking water. Certain groups or individuals, i.e., infants, Semites, Arabs, Asians and Blacks, with a certain blood enzyme deficiency (glucose-6-phosphate dehydrogenase) are particularly susceptible to hemolytic agents and can rapidly develop hemolytic anemia and systemic poisoning from ingestion or inhalation of naphthalene.

Summary of health effect information on diesel engine exhaust:

Chronic inhalation studies of whole diesel engine exhaust in mice and rats produced a significant increase in lung tumors. Combustion of kerosine and/or diesel fuels produces gases and particulates which include carbon monoxide, carbon dioxide, oxides of nitrogen and/or sulfur and hydrocarbons. Significant exposure to carbon monoxide vapors decreases the oxygen carrying capacity of the blood and may cause tissue hypoxia via formation of carboxyhemoglobin.

12. ECOLOGICAL INFORMATION

Ecotoxicity effects:

Product can cause fouling of shoreline and may be harmful to aquatic life in low concentrations. The 96 hour LL50 values for an accommodated fraction (WAF) of fuel oil ranged from 3.2 to 65 mg/l in fish and 2-210 mg/l in invertebrates. EL50 values for inhibition of algal growth ranged from 1.8 to 2.9 mg/l for No. 2 fuel oil and from 10 to 78 mg/l for diesel fuel. This product does not concentrate or accumulate in the food chain. If released to soil and water, this product is expected to biodegrade under both aerobic and anaerobic conditions.

13. DISPOSAL CONSIDERATIONS

Cleanup Considerations:

This product as produced is not specifically listed as an EPA RCRA hazardous waste according to federal regulations (40 CFR 261). However, when discarded or disposed of, it may meet the criteria of a "characteristic" hazardous waste. This material could become a hazardous waste if mixed or contaminated with a hazardous waste or other substance(s). It is the responsibility of the user to determine if disposal material is hazardous according to federal, state and local regulations.

14. TRANSPORT INFORMATION

49 CFR 172.101:

DOT:
 Transport Information: This material when transported via US commerce would be regulated by DOT Regulations.

Proper shipping name: Fuel Oil, No. 2
 UN/Identification No: NA 1993
 Hazard Class: 3
 Packing group: III
 DOT reportable quantity (lbs): Not applicable.

TDG (Canada):
 Proper shipping name: Fuel Oil, No. 2
 UN/Identification No: NA 1993
 Hazard Class: 3
 Packing group: III
 Regulated substances: Not applicable.

15. REGULATORY INFORMATION

Federal Regulatory Information:

US TSCA Chemical Inventory Section 8(b): This product and/or its components are listed on the TSCA Chemical Inventory.

OSHA Hazard Communication Standard: This product has been evaluated and determined to be hazardous as defined in OSHA's Hazard Communication Standard.

EPA Superfund Amendment & Reauthorization Act (SARA):

SARA Section 302: This product contains the following component(s) that have been listed on EPA's Extremely Hazardous Substance (EHS) List:

Name	CERCLA/SARA - Section 302 Extremely Hazardous Substances and TPQs
Saturated Hydrocarbons	NA
Aromatic Hydrocarbons	NA
Unsaturated Hydrocarbons	NA
Naphthalene	NA

SARA Section 304: This product contains the following component(s) identified either as an EHS or a CERCLA Hazardous substance which in case of a spill or release may be subject to SARA reporting requirements:

Name	CERCLA/SARA - Hazardous Substances and their Reportable Quantities
Saturated Hydrocarbons	NA
Aromatic Hydrocarbons	NA
Unsaturated Hydrocarbons	NA
Naphthalene	= 0.454 kg final RQ = 1 lb final RQ = 100 lb final RQ = 45.4 kg final RQ

SARA Section 311/312:

The following EPA hazard categories apply to this product:

- Acute Health Hazard
- Fire Hazard
- Chronic Health Hazard

SARA Section 313:

This product contains the following component(s) that may be subject to reporting on the Toxic Release Inventory (TRI) From R:

Name	CERCLA/SARA 313 Emission reporting:
Saturated Hydrocarbons	None
Aromatic Hydrocarbons	None
Unsaturated Hydrocarbons	None
Naphthalene	= 0.1 % de minimis concentration

State and Community Right-To-Know Regulations:

The following component(s) of this material are identified on the regulatory lists below:

Saturated Hydrocarbons

- Louisiana Right-To-Know: Not Listed
- California Proposition 65: Not Listed
- New Jersey Right-To-Know: Not Listed.
- Pennsylvania Right-To-Know: Not Listed.
- Massachusetts Right-To Know: Not Listed.
- Florida substance List: Not Listed.
- Rhode Island Right-To-Know: Not Listed
- Michigan critical materials register list: Not Listed.
- Massachusetts Extraordinarily Hazardous Substances: Not Listed
- California - Regulated Carcinogens: Not Listed
- Pennsylvania RTK - Special Hazardous Substances: Not Listed
- New Jersey - Special Hazardous Substances: Not Listed
- New Jersey - Environmental Hazardous Substances List: Not Listed
- Illinois - Toxic Air Contaminants: Not Listed
- New York - Reporting of Releases Part 597 - List of Hazardous Substances: Not Listed

Aromatic Hydrocarbons

- Louisiana Right-To-Know: Not Listed
- California Proposition 65: Not Listed
- New Jersey Right-To-Know: Not Listed.
- Pennsylvania Right-To-Know: Not Listed.
- Massachusetts Right-To Know: Not Listed.
- Florida substance List: Not Listed.
- Rhode Island Right-To-Know: Not Listed
- Michigan critical materials register list: Not Listed.
- Massachusetts Extraordinarily Hazardous Substances: Not Listed
- California - Regulated Carcinogens: Not Listed
- Pennsylvania RTK - Special Hazardous Substances: Not Listed
- New Jersey - Special Hazardous Substances: Not Listed
- New Jersey - Environmental Hazardous Substances List: Not Listed
- Illinois - Toxic Air Contaminants: Not Listed
- New York - Reporting of Releases Part 597 - List of Hazardous Substances: Not Listed

Unsaturated Hydrocarbons

MSDS ID NO.: 0279MAR019

Product name: Marathon No. 2 Low Sulfur Diesel Dyed 500 ppm Sulfur Max

Louisiana Right-To-Know: Not Listed
 California Proposition 65: Not Listed
 New Jersey Right-To-Know: Not Listed.
 Pennsylvania Right-To-Know: Not Listed.
 Massachusetts Right-To Know: Not Listed.
 Florida substance List: Not Listed.
 Rhode Island Right-To-Know: Not Listed
 Michigan critical materials register list: Not Listed.
 Massachusetts Extraordinarily Hazardous Substances: Not Listed
 California - Regulated Carcinogens: Not Listed
 Pennsylvania RTK - Special Hazardous Substances: Not Listed
 New Jersey - Special Hazardous Substances: Not Listed
 New Jersey - Environmental Hazardous Substances List: Not Listed
 Illinois - Toxic Air Contaminants: Not Listed
 New York - Reporting of Releases Part 597 - List of Hazardous Substances: Not Listed

Naphthalene

Louisiana Right-To-Know: Not Listed
 California Proposition 65: Listed
 New Jersey Right-To-Know: Listed
 Pennsylvania Right-To-Know: Listed
 Massachusetts Right-To Know: Listed
 Florida substance List: Not Listed.
 Rhode Island Right-To-Know: Listed
 Michigan critical materials register list: Not Listed.
 Massachusetts Extraordinarily Hazardous Substances: Not Listed
 California - Regulated Carcinogens: Not Listed
 Pennsylvania RTK - Special Hazardous Substances: Not Listed
 New Jersey - Special Hazardous Substances: Not Listed
 New Jersey - Environmental Hazardous Substances List: Listed
 Illinois - Toxic Air Contaminants: Listed
 New York - Reporting of Releases Part 597 - List of Hazardous Substances: Listed

Canadian Regulatory Information:

Canada DSL/NDSL Inventory: This product and/or its components are listed either on the Domestic Substances List (DSL) or are exempt.

Name	Canada - WHMIS: Classifications of Substances:	Canada - WHMIS: Ingredient Disclosure:
Naphthalene	B4, D2A	1 %

16. OTHER INFORMATION

Additional Information: No data available.
Prepared by: Craig M. Parker Manager, Toxicology and Product Safety

The information and recommendations contained herein are based upon tests believed to be reliable. However, Marathon Petroleum Company LLC (MPC) does not guarantee their accuracy or completeness nor shall any of this information constitute a warranty, whether expressed or implied, as to the safety of the goods, the merchantability of the goods, or the fitness of the goods for a particular purpose. Adjustment to conform to actual conditions of usage maybe required. MPC assumes no responsibility for results obtained or for incidental or consequential damages, including lost profits arising from the use of these data. No warranty against infringement of any patent, copyright or trademark is made or implied.

End of Safety Data Sheet

APPENDIX C

Initial Abatement Measures Report

**DIRECTORATE OF PUBLIC WORKS
ENVIRONMENTAL AND NATURAL RESOURCES DIVISION
Petroleum Management Program**

INITIAL ABATEMENT MEASURES REPORT
Building (*number*)

**VIRGINIA DEPARTMENT OF ENVIRONMENTAL QUALITY POLLUTION
COMPLAINT # (NUMBER)**

RELEASE SITE: (*include address and building number*)

DESCRIPTION OF RELEASE:

(*include information regarding source of release, appearance of surrounding surface or subsurface soil or water, tank condition, sampling locations and collection procedures, analytical results*).

TYPE OF PRODUCT INVOLVED:

HOW WAS THE SOURCE OF THE RELEASE IDENTIFIED:

DEPTH TO GROUNDWATER:

GROUNDWATER SAMPLES TAKEN:

LIST STEPS TAKEN TO PREVENT FURTHER RELEASE AND MIGRATION OF PRODUCT: (*include information on initial abatement measures or spill response, soil excavation and off-site recycling etc.*)

WAS FREE PRODUCT VISIBLE:

DATE REPORT FILED WITH VIRGINIA DEQ:

RECOMMENDATIONS:

REPORT COMPLETED BY: (*name*)

TITLE:

DATE:

APPENDIX D

Emergency Notification Information Checklist

Emergency Spill Notification Checklist

In the event of an oil discharge, contact the appropriate emergency response agencies. Include the following information with your notification:

Caller's name, title & organization:

Callback phone number at scene:

Date & time of incident:

Description of incident & abatement/safety actions taken:

Type & number of injuries/exposures:

Chemical identification/name/MSDS information:

Estimated quantity of release:

Medium/media into which release occurred:

Known/anticipated acute or chronic health risk and advise on medical attention necessary for exposed individuals:

Proper precaution/evaluation to take:

Name of agency that was contacted regarding the release:

Name of person contacted at the above agency, & phone number:

Date & time of notification to above agency:

Name & telephone number of NCE personnel to be contacted for more information:

APPENDIX E

Emergency Response Services Agreements

Parsons
BASIC ORDER AGREEMENT
 Infrastructure & Technology Group, Inc.

PLEASE INCLUDE THE BOA
 NUMBER ON ALL CORRESPONDENCE
 BOA NO. AMEND
 747444-30039 0

SUBCONTRACTOR NAME AND ADDRESS FCC ENVIRONMENTAL, LLC 523 N. SAM HOUSTON PARKWAY E. SUITE 40 HOUSTON, TX 77060 ATTN: PHONE: FAX NO: EMAIL: SUBCONTRACTOR CODE: JZ705 CLIENT SUBCONTRACTOR CODE: JOBSITE: CONFIRMING NOTICE TO PROCEED DATED _____		Client: NGA REQUISITION NO. : 747444-30039 REV: 0 AMENDMENT DATE : 12-09-10 EFFECTIVE DATE : 12-09-10 COMPLETION DATE : 02-29-12 TYPE OF S/C : BOA PRIME CONTRACT NO. : HM0176-10-C-0006 PRIORITY RATING : DO C9 BASIC ORDER AGREEMENT: 747444-30039 PREVIOUS TOTAL AMOUNT: \$0.00 INCREASE / DECREASE: \$0.00 NEW TOTAL AMOUNT: \$0.00 ORDER NOT TO EXCEED: \$8,000.00 ALL AMOUNTS IN: American Dollars PAY TERMS: NET 30
--	--	--

THIS BASIC ORDER AGREEMENT IS ENTERED INTO BY AND BETWEEN PARSONS (HEREINAFTER CALLED THE "CONTRACTOR"), A CORPORATION ORGANIZED AND EXISTING UNDER THE LAWS OF THE STATE OF DELAWARE AND THE INDIVIDUAL, PARTNERSHIP, OR CORPORATION (HEREINAFTER CALLED THE "SUBCONTRACTOR"). THE PARTIES HEREBY AGREE AS FOLLOWS:
 THE SUBCONTRACTOR SHALL FURNISH ALL LABOR, EQUIPMENT AND MATERIAL AND PERFORM ALL SERVICES SET FORTH IN THE STATEMENT OF WORK AND ALL OTHER SECTIONS DESIGNATED IN THE TABLE OF CONTENTS BELOW.
 THIS IS A RATED ORDER CERTIFIED FOR NATIONAL DEFENSE USE, AND THE CONTRACTOR SHALL FOLLOW ALL THE REQUIREMENTS OF THE DEFENSE PRIORITIES AND ALLOCATIONS SYSTEMS REGULATION (15 CFR 700).

TABLE OF CONTENTS: THIS BASIC ORDER AGREEMENT CONTAINS THE FOLLOWING SECTIONS

SECTION NO.	REV.	DESCRIPTION OF SECTION	SECTION NO.	REV.	DESCRIPTION OF SECTION
0	0	Statement of Work			
I	0	Deliverable Items List			
IV	0	Compensation and Payment			
V	0	Special Provisions			
VI	0	General Provisions			

REFER ALL QUESTIONS AND CORRESPONDENCE TO: PROJECT NO. 746922 LOCATION 100 M STREET S.E. ATTENTION OF: Tracy Grimes TELEPHONE: (202) 469-6409 EMAIL: tracy.grimes@parsons.com	INVOICING INSTRUCTIONS: MAIL INVOICES TO: PARSONS 7100 FULLERTON RD. STE B100 SPRINGFIELD, VA 22150 ATTN: SUBCONTRACTOR 22-03
---	---

CHECK APPROPRIATE BOX: <input type="checkbox"/> INDIVIDUAL <input type="checkbox"/> PARTNERSHIP <input type="checkbox"/> INCORPORATED IN THE STATE OF: _____	NOTE: IF SUBCONTRACTOR IS A CORPORATION, THE FOLLOWING CERTIFICATION MUST BE COMPLETED IN FULL. I, _____, CERTIFY THAT I AM SECRETARY OF THE CORPORATION NAMED AS THE SUBCONTRACTOR HEREIN, THAT WHO SIGNED THIS BASIC ORDER AGREEMENT ON BEHALF OF THE SUBCONTRACTOR WAS THEN _____ OF SAID CORPORATION, THAT SAID BASIC ORDER AGREEMENT WAS DULY SIGNED FOR AND ON BEHALF OF SAID CORPORATION BY AUTHORITY OF ITS GOVERNING BODY, AND IS WITHIN THE SCOPE OF ITS CORPORATE POWERS.
---	---

IN WITNESS WHEREOF, THE PARTIES HAVE EXECUTED THIS BASIC ORDER AGREEMENT AS OF THE DATE SHOWN BELOW. THE EFFECTIVE DATE OF THIS BASIC ORDER AGREEMENT REMAINS AS ENTERED ABOVE.

BY <u>Tracy Grimes</u> SIGNATURE <u>Tracy Grimes</u> TITLE <u>Subcontracts Administrator</u> DATE <u>12-30-10</u>	BY <u>Kenneth D. Cherry</u> SIGNATURE <u>Kenneth D. Cherry</u> TITLE <u>EVP & CM</u> DATE <u>12/20/10</u>
--	--

FCC environmental

The contact names listed below are to be called for spill response. For the quickest response please call in the order as listed below.

Emergency Contact Names and Numbers

1. Hot Line 8364	Emergency Response line	410 - 365 -
2. George Jackson 9160	Field Services Supervisor	443 – 324 -
3. Tammy Danjou 8364	Field Services Coordinator	443 - 309 -
4. Jim Gaunch 7822	Field Service Regional Manager	443 - 463 –
5. Cliff Thomas 6204	Field Rep	443 – 463-
5. Rolando Agosto 5169	Field Rep	443 - 463 -

Thank you,

Tammy Danjou

Tammy Danjou

Field Services Coordinator

FCC environmental

8200 Fischer Rd
Baltimore, MD 21222

Tel: (410) 388-9745
Fax: (410) 388-9764

Parsons
Infrastructure & Technology Group, Inc.

BASIC ORDER AGREEMENT

PLEASE INCLUDE THE BOA NUMBER ON ALL CORRESPONDENCE

BOA NO. AMEND
747444-30038 0

SUBCONTRACTOR NAME AND ADDRESS ACE ENVIRONMENTAL SERVICES, LLC 3512 FAIRFIELD ROAD BALTIMORE, MD 21226 ATTN: PHONE: 410-354-8030 FAX NO: EMAIL: RB@ACEENVIRONMENTAL.NET SUBCONTRACTOR CODE: JZ234 CLIENT SUBCONTRACTOR CODE: JOBSITE: CONFIRMING NOTICE TO PROCEED DATED _____		Client: NGA REQUISITION NO. : 747444-30038 REV: 0 AMENDMENT DATE : 12-02-10 EFFECTIVE DATE : 12-02-10 COMPLETION DATE : 02-29-12 TYPE OF S/C : BOA PRIME CONTRACT NO. : EMD176-18-C-8006 PRIORITY RATING : DO C9 BASIC ORDER AGREEMENT: 747444-30038 PREVIOUS TOTAL AMOUNT: \$0.00 INCREASE / DECREASE: \$0.00 NEW TOTAL AMOUNT: \$8,000.00 ORDER NOT TO EXCEED: ALL AMOUNTS IN: American Dollars PAY TERMS: NET 30
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THIS BASIC ORDER AGREEMENT IS ENTERED INTO BY AND BETWEEN PARSONS INFRASTRUCTURE & TECHNOLOGY GROUP INC. (HEREINAFTER CALLED THE "CONTRACTOR"), A CORPORATION ORGANIZED AND EXISTING UNDER THE LAWS OF THE STATE OF NEVADA, AND THE INDIVIDUAL, PARTNERSHIP, OR CORPORATION (HEREINAFTER CALLED THE "SUBCONTRACTOR"). THE PARTIES HEREBY AGREE AS FOLLOWS:

THE SUBCONTRACTOR SHALL FURNISH ALL LABOR, EQUIPMENT AND MATERIAL AND PERFORM ALL SERVICES SET FORTH IN THE STATEMENT OF WORK AND ALL OTHER SECTIONS DESIGNATED IN THE TABLE OF CONTENTS BELOW.

THIS IS A RATED ORDER CERTIFIED FOR NATIONAL DEFENSE USE, AND THE CONTRACTOR SHALL FOLLOW ALL THE REQUIREMENTS OF THE DEFENSE PRIORITIES AND ALLOCATIONS SYSTEMS REGULATION (15 CFR 76B).

TABLE OF CONTENTS: THIS BASIC ORDER AGREEMENT CONTAINS THE FOLLOWING SECTIONS

SECTION NO.	REV.	DESCRIPTION OF SECTION	SECTION NO.	REV.	DESCRIPTION OF SECTION
0	0	Statement of Work			
I	0	Deliverable Items List			
IV	0	Compensation and Payment			
V	0	Special Provisions			
VI	0	General Provisions			

REFER ALL QUESTIONS AND CORRESPONDENCE TO:

PROJECT NO. 746921 LOCATION 100 M STREET S.E.
 ATTENTION OF: TRACY GRIMES
 SUBCONTRACT ADMINISTRATOR
 TELEPHONE: (202) 469-6409 FAX:
 EMAIL: tracy.grimes@parsons.com

INVOICING INSTRUCTIONS:

MAIL INVOICES TO:
 PARSONS
 7200 PULASKI RD.
 SUITE 2300
 SPRINGFIELD, VA 22150
 AFTER/PROCEEDMENT

CHECK APPROPRIATE BOX:

- INDIVIDUAL
- PARTNERSHIP
- INCORPORATED IN THE STATE OF:

NOTE: IF SUBCONTRACTOR IS A CORPORATION, THE FOLLOWING CERTIFICATION MUST BE COMPLETED IN FULL.

I, _____, CERTIFY THAT I AM SECRETARY OF THE CORPORATION NAMED AS THE SUBCONTRACTOR HEREIN. THAT _____ WHO SIGNED THIS BASIC ORDER AGREEMENT ON BEHALF OF THE SUBCONTRACTOR WAS THEN _____ OF SAID CORPORATION. THAT SAID BASIC ORDER AGREEMENT WAS DULY SIGNED FOR AND ON BEHALF OF SAID CORPORATION BY AUTHORITY OF ITS GOVERNING BODY, AND IS WITHIN THE SCOPE OF ITS CORPORATE POWERS.

IN WITNESS WHEREOF, THE PARTIES HAVE EXECUTED THIS BASIC ORDER AGREEMENT AS OF THE DATE SHOWN BELOW. THE EFFECTIVE DATE OF THIS BASIC ORDER AGREEMENT REMAINS AS ENTERED ABOVE.

Parsons Infrastructure & Technology Group Inc. BY <u>Tracy Grimes</u> <small>PRINT NAME</small> SIGNATURE <u>[Signature]</u> TITLE <u>Subcontracts Administrator</u> DATE <u>12-30-10</u>		SUBCONTRACTOR BY <u>Richard Rasmussen</u> <small>PRINT NAME</small> SIGNATURE <u>[Signature]</u> TITLE <u>owner</u> DATE <u>12-16-10</u>	
---	--	--	--

(866) 750-4ACE

ACE ENVIRONMENTAL SERVICES, LLC

(410) 354-8031

***3512 Fairfield Road
Baltimore, Maryland 21226
(410) 354-8030 FAX***

EMERGENCY RESPONSE CALL LIST

Primary Call: (410) 354-8030 or (866) 750-4223

Second Call: Ron Morris (410) 350-1049 (ACE Spill Coordinator)

**Back Up #'s: Rick Rasmussen: Cell: (443) 756-3098
Home: (410) 557-0211**

**Randi Barra: Cell: (410) 336-3809
Home: (607) 433-6222**

**No call for response should ever get past the second call but
back up numbers have been provided. In very rare instances, a
voice mail may be requested. Always leave a message if no one
answers. We will always get back to you ASAP.**

**These are 24 Hour Numbers. Do not hesitate to use them in
case of an emergency. Emergency Response is our business and
we understand the middle of the night phone call.**

**Underground/Aboveground Storage Tank Removal/Abandonment/Testing/Installation, Soil/Water
Sampling,
Vacuum Truck Service, Hazardous/Non-Hazardous Waste Transportation & Disposal, Oil Spill Response,
Tank Cleaning & Inspection, Site Restoration/Remediation & Monitoring, Compliance, Sampling &
Reporting**

APPENDIX F
Spill Kit Contents

PIG® HAZ-MAT Spill Kit in a 95-Gallon Wheeled Over pack #KIT341-WH

Product Description

- Absorbs up to 64 gallons
- Packed with a variety of absorbents (socks, mats, pillows, etc) plus temporary disposal bags
- Absorbents are specially treated to more quickly absorb more chemicals — including higher concentrations of corrosive liquids such as 98 percent sulfuric acid and 30 percent sodium hydroxide
- Absorbents are packed in protective baskets with lid for long-term protection against UV degradation; lift-out baskets provide easy, organized access to contents for quick spill response
- 6" olefin wheels make Spill Kit mobile
- Tamper-proof seals — protects contents from pilferage
- Container is X-rated for Packing Groups I, II and III — certified for shipping by air, land, sea or rail

Specifications

Dimensions: 37" H

Absorbency: Up to 63 gal.

Weight: 118 lbs.

Composition:

100% Polyethylene Container

Polypropylene Mats, Socks & Pillows

Includess

- 12 - 3" x 46" PIG® HAZ-MAT Absorbent Socks
- 6 - 3" x 10' PIG® HAZ-MAT Absorbent Socks
- 75 - 15" X 20" PIG® HAZ-MAT Pads
- 7 - 16" x 17" PIG® HAZ-MAT Pillows
- 2 - 5" x 10' PIG® HAZ-MAT Dikes
- 10 - Yellow Caution Disposal Bags and Ties
- 1 - Emergency Guidebook
- 6 - Tamper-proof Seals
- 1 - Instruction Spill Manual

APPENDIX G

Petroleum-Impacted Soil Disposal Information

PETROLEUM-IMPACTED SOIL DISPOSAL INFORMATION

The Fort Belvoir Directorate of Public Works- Environmental and Natural Resource Division is responsible for compliance at Fort Belvoir. The Petroleum Management Program encompasses remedial or compliance actions associated with petroleum releases to the environment.

If a release occurs at the site, and petroleum-impacted soils require excavation, it must be excavated and properly segregated in accordance with all federal, state, and local regulations and at the direction of the contracting officer, under the observation of the Directorate of Public Works- Environmental and Natural Resource Division (DPW-ENRD) representative. At a minimum, appropriate stockpiling requires that excavated soil shall be placed on top of two layers of 6-mil plastic sheeting and covered by one layer of 6-mil plastic sheeting, with the entire stockpile area appropriately protected from storm water run-on/run-off. Suspected petroleum-impacted soils shall be stockpiled separately from any other excavated materials. The DPW-ENRD will respond to the site and in conjunction with the contracting officer provide recommendations for proper address.

The DPW-ENRD has sole reporting authority for Fort Belvoir to the VDEQ. The contractor shall provide whatever information is necessary to the DPW-ENRD and will fully cooperate in order to facilitate event reporting and proper mitigation.

Note that depending on site conditions, additional ground-water and/or discrete soil samples may be collected from sites following excavation of petroleum impacted soil, at the direction of the DEQ.

After soil excavation has been completed, a soil stockpile sample will be collected for quick-turn around analysis. The soil stockpile sampling must include all sampling requirements of the Virginia petroleum and solid waste program requirements or be inclusive of the requirements of a pre-approved soil recycling facility and be performed and analyzed in accordance with all federal, state, and local regulations. Once the soil stockpile has been appropriately characterized, the excavated soil shall be transported off-site by a licensed waste disposal company and treated/disposed of at a licensed facility permitted to accept this waste material. No disposal of soil shall occur without the express authorization of the Government. Land filling of the impacted soil is typically not a disposal option. Suggested disposal options include off-site thermal treatment or chemical recycling. A soil disposal bill of lading signed by a DPW-ENRD government representative shall accompany each truck en-route to the disposal facility. The contractor must coordinate with the DPW-ENRD to ensure availability of government signatory authorities. The government assumes no responsibility for truck wait time due to improperly coordinated signature actions.

Ticket weights shall be provided by the disposal facility to determine true volume of soil accepted. All certificates of disposal shall be forwarded to the DPW-ENRD within 15 working days upon completion of the project.

APPENDIX H

Fort Belvoir Inventory of Spill Control Materials and Equipment

FORT BELVOIR INVENTORY OF SPILL CONTROL MATERIALS AND EQUIPMENT

(Actual Quantities of Materials may vary depending on use and replenishment)

(1) The Fort Belvoir Fire Prevention and Protection Division HAZMAT Response Trailer is maintained at **Bldg. 2119** on North Post

HAZMAT TRAILER MATERIAL LIST

Description	Application/Use	Quantity
Pink Absorbent Socks	Hazardous Materials/Waste Absorbent (Acids, Caustics, Solvents)	5 Boxes
Loose Absorbent for Hazardous Fluids	Hazardous Materials/Waste Absorbent (Acids, Caustics, Solvents)	4 Boxes
Orange Water Booms (12 & 18 Inch)	Petroleum Product Containment on Open Waters	1 Boom
Chicken Wire Fence	Petroleum Containment in Streams/Small Waterways (filter fences)	1 Roll
White Absorbent Socks (Skimmers)	Petroleum Product Absorbent	1 Box
Loose White Pulp	Petroleum Product Absorbent	4 Boxes
Hazardous Spill Control Pillows	Hazardous Materials/Waste Absorbent (Acids, Caustics, Solvents)	1 Box
Oil Snare	Petroleum Product Absorbent (for heavier petroleum products)	1 Box
Hazardous Spill Control Pads	Hazardous Materials/Waste Absorbent (Acids, Caustics, Solvents)	1 Bag
Blue Absorbent Socks	Petroleum Product Absorbent	5 Boxes
Absorbent Mats	Petroleum Product Absorbent 2 Bags	
Straw Petroleum Product	Containment in Streams/Small Waterways (filter fences)	1 Bales
Loose Sorbent C	Petroleum Product Absorbent	18 bags
Wooden Stakes (long and short)	Petroleum Product Containment in Streams/Small Waterways (filter fences)	1 Bundle
Large Pink Booms	Hazardous Materials/Waste Absorbent (Acids, Caustics, Solvents)	1 Bags
Large White Booms	Petroleum Product Absorbent	2 Bags
Sign Post Stakes (8 ft.	Petroleum Product Containment in	4 Stakes

length)	Streams/Small Waterways (filter fences)	
Trash Bags	Clean-Up and Containment of PPE and Contaminated Spill Supplies	1 Box
Polyethylene Plastic	Clean-Up and Containment of PPE and Contaminated Spill Supplies	1 Roll

Description	Application/Use	Quantity
201 Protective Gloves (water soluble)	Personal Protective Equipment	4 Tubs
Disposable Vinyl Gloves (large)	Personal Protective Equipment	1 Box
Goggles	Personal Protective Equipment	1 Pair
Hazmat Kit A	Hazardous Materials/Waste Absorbent (Acids, Caustics, Solvents)	1 Kit
Drum Wrench	Spill Response Tools/Opening and Closing Drums	1 Wrench
Green Duct Tape	Spill Response Tools/PPE	1 Roll
Funnels	Spill Response Tools/Containing Liquids into Drums	2 Funnel
ATA Chemical Pump	Spill Response Tools/Explosion Proof Pump	1 Pump
Metal Scoop Shovels	Spill Response Tools/Clean-Up Duties	2 Shovels
Plastic Scoop Shovels	Spill Response Tools/Clean-Up Duties	6 Shovels
Pointed Shovels (long handle)	Spill Response Tools/Clean-Up Duties	3 Shovels
Pitch Forks	Spill Response Tools/Bailing Straw for Filter Fences	3 Pitch Forks
Recovery Drums (large)	Spill Recovery Containment	1 Drum
Recovery Drums (small)	Spill Recovery Containment	1 Drum
Plastic Salvage Drum (extra large)	Spill Recovery Containment/Drum Overpack	1 Drum
Plastic Trash Can w/Wheels	Spill Recovery Containment	1 Can
Polypropylene Suits	Personal Protective Equipment	1 Box
Tyvek Suits	Personal Protective Equipment	3 Boxes

- (2) Fort Belvoir Fire Prevention and Protection Division Fire Fighting Equipment, maintained at Bldgs. 191, 2119, and 3237
- (a) Foam Trucks (3), 1,000 gallons per minute (GPM), two with 65 gallons of foam per 660 gallons of water and one with 125 gallons of foam per 1,000 gallons of water
 - (b) Pumper Trucks (3), 1,250 gpm with foaming units
 - (c) Aerial Pump, (1), 1,250 gpm with foaming units
 - (d) Incident Commander Trucks (2), containing petroleum and hazardous material/waste release response guidance information

- (e) Emergency Operations Center at Bldg. 2119, containing pre-plans, MSDSs, petroleum and hazardous material/waste release response guidance information, and notification lists
- (3) Spill response materials repository are maintained in Bldg. 1495. Materials at this location are used as needed by the Fire and Rescue Dept., DPW Environmental and Natural Resource Dept., and are available to tenant activities.

SPILL RESPONSE MATERIAL INVENTORY, BLDG. 1495

Bay Area	
Product	Quantity
Telephone (beside northern bay door)	1 unit
Telephone (beside southern bay door)	1 unit
Telephone (beside interior office door)	1 unit
Emergency Eye Wash and Shower (midway down length of bay, western wall)	1 unit
Emergency Eye Wash and Shower (southern end of bay)	1 unit
Spill Kit (by northern bay door)	1 unit
Spill Kit (1/3 of the way down length of bay, western wall)	1 unit
Spill Kit (1/3 of the way down length of bay, eastern wall)	1 unit
Spill Kit (2/3 of the way down length of bay, western wall)	1 unit
Overpack Poly drum (2/3 of the way down length of bay, western wall)	1 unit
Spill Kit (by northern bay door)	1 unit
Telephone (southern end of bay)	1 unit
Fire Extinguisher (dry chemical type, eastern bay wall, 1/4 of the way down length of bay)	1 unit
Fire Extinguisher (dry chemical type, eastern bay wall, 1/2 of the way down length of bay)	1 unit
Fire Extinguisher (dry chemical type, eastern bay wall, 3/4 of the way down length of bay)	1 unit
Fire Extinguisher (dry chemical type, eastern bay wall, at the southern end of bay)	1 unit
Spill Supplies Storage Room	
Inert particle absorbent	4 large pallets
Inert particle absorbent	1 bag
spill absorbent pads	22 bags
rolled spill absorbent pads	3 rolls
absorbent booms	20 booms
small absorbent socks	3 boxes
absorbent fibers	5 bags
oil snare/biodegradable	3 boxes
absorbent pads non-static	28 bags
absorbent pads	2 bags
rolled anti-static pads	2 rolls
absorbent socks (blue and pink type)	5 boxes
absorbent blankets	2 boxes
steel drums	12 drums
drum liners	1 box
blue plastic HM drums	4 drums
straw	3 bales
Miscellaneous spill kit supplies	2 boxes
DPW-ENRD Hazardous Waste Management Office	
Telephone	1 unit
MSDS and analytical information	multiple items

- (4) Facilities Maintenance Contractor (Kira) Equipment, Maintained at Bldgs. 1114 and 1419. This equipment is operated only through the Contractor. Additional heavy equipment is available through the MDW Engineers at the Garrison Commander's request.
- (a) 3x5 ton standard dump trucks with operators used for hauling soil and debris.
 - (b) 1 standard backhoe with operator used for excavation
 - (c) 2 standard front-end loaders with operators used for scooping soil and loading bulk materials
 - (d) 6x1.5 ton standard pickup trucks with operators used for hauling materials
 - (e) 4x0.25 ton trucks with operators used for hauling personnel and equipment
 - (f) 1 bulldozer with operator
 - (g) 1 grader with operator
 - (h) 3x2.5 ton trucks with operators
 - (i) 5 chain saws
 - (j) 1 vacuum truck, 4,000 gallon capacity used to remove liquids
 - (k) 1 street sweeper

APPENDIX I

INSPECTION FORM:

DAILY AST VISUAL INSPECTION FORM

ABOVEGROUND FUEL OIL STORAGE DAILY INSPECTION FORM

A daily visual inspection of all Aboveground Fuel Oil Storage Tanks and associated piping systems is to be completed and documented by authorized personnel only, utilizing this instruction.

For each of the AST's (listed in Table 2 below), oil/water separator, associated piping system and secondary containment area, complete a thorough review of the appropriate criteria listed in Table 1 to identify deficiencies and develop/implement corrective actions.

All deficiencies will be identified on the Daily Inspection form, and will result in the generation of a CMMS Work Order to formally identify and track corrective action.

Bulk Fuel Oil Tank	Secondary Containment
1. Tank shell surface, including any peeling areas, welds, rivets/bolts, seams, and foundation, visually inspected for areas of rust and other deterioration; proper labeling.	1. Containment berm in satisfactory condition.
2. Ground surface around tanks and containment structures and transfer areas checked for signs of leakage.	2. Containment area free of excess standing water or oil.
3. Leak detection equipment in satisfactory condition.	3. Containment area/base of tank free of debris.
4. Tank fill valves not in use are secured.	Fuel Oil Piping System
5. Valves inspected for signs of leakage or deterioration.	1. Inspect fuel oil piping system from the Fuel Tank to where the piping enters the CUP.
6. Inlet and outlet piping and flanges inspected for leakage.	2. Inspect fuel oil piping system from interior CUP wall penetration to boiler fuel meters, day tank and boilers #1 through #4.
7. All tank gauges have been inspected and are operational.	3. Inspect fuel oil piping system from interior CUP wall penetration to generator fuel meters.
8. Cat-walk safety chains are in place	4. Inspect fuel oil piping system from generator fuel meters to CUP exit point (SE wall).
9. Open pump control panel and verify power is on and not in alarm mode.	5. Inspect fuel oil piping system from CUP exit point (SE wall) to generators #1 through #9.
Oil/Water Separator	
1. Separator and drainage tank in satisfactory condition.	

Table 1- Inspection Criteria

Table 2- AST Inventory

Tank #1- 10k gallon (Receiving)	Tank #2- 30k gallon (Storage)
Tank #3- 30k gallon (Storage)	Tank #4- 30k gallon (Storage)
Tank #5- 30k gallon (Storage)	Tank #6- 30k gallon (Storage)
Tank #7- 30k gallon (Storage)	



ABOVEGROUND FUEL OIL STORAGE DAILY INSPECTION FORM

Reporting Requirement: In accordance with the NGA Campus East Oil Discharge Contingency Plan any fuel oil released into the environment shall be reported immediately.

Emergency Contact Information:

Plant Supervisor – Darrell Thompson, (202) 386-2472

Site Manager – Brett Crozier, (703) 772-9805

ESOH Manager – Tom Lyons, (703) 861-4803

Tank Inspection for Week Ending: _____

Plant Mgr: _____ **Lead Tech:** _____ **QC Manager:** _____

Inspection Date Start/Completion Time	Inspector Name/Signature	Corrective Activities (Include Work Order #)
Date (Mon): Start Time: Comp Time:		
Date (Tues): Start Time: Comp Time:		
Date (Wed): Start Time: Comp Time:		
Date (Thurs) : Start Time: Comp Time:		
Date (Fri) : Start Time: Comp Time:		
Date (Sat): Start Time: Comp Time:		
Date (Sun): Start Time: Comp Time:		

APPENDIX J

Placard at Fuel Delivery Area

DIESEL FUEL STORAGE TANKS

- 1. DRIVER MUST REMAIN WITH TRUCK DURING ENTIRE FILL OPERATION.**
- 2. CHOCK WHEELS AND CLOSE TRANSFER STATION CONTAINMENT DRAIN VALVE, BEFORE CONNECTING OIL HOSE.**
- 3. INSPECT TRUCK FOR LEAKS BEFORE AND AFTER FILLING TANK.**
- 4. DO NOT MOVE TRUCK BEFORE TRANSFER HOSE IS DISCONNECTED.**
- 5. OPEN TRANSFER STATION CONTAINMENT DRAIN VALVE, IF THERE WERE NO SPILLS, PRIOR TO TRUCK DEPARTURE.**
- 6. IN CASE OF SPILL, CALL EMERGENCY RESPONSE AT**

703-781-1800

NO SMOKING

COMBUSTIBLE

FUEL OIL



703-781-1800

NO SMOKING

COMBUSTIBLE

FUEL OIL

APPENDIX L
MARK CENTER SPCC PLAN

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Final

Spill Prevention, Control, and Countermeasure (SPCC) Plan for the Mark Center

Prepared for:



Washington Headquarters Service
Engineering and Technical Services Division
1155 Defense Pentagon
Room 5D325
Washington DC 20301-1155

Prepared by:



Applied Environmental, Inc.
200 Fairbrook Drive
Suite 201
Herndon, VA 20170



Eastern Research Group, Inc.
14555 Avion Parkway
Suite 200
Chantilly, VA 20151-1102

April 2012
Updated October 2012

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ABBREVIATIONS, ACRONYMS, AND SYMBOLS

AST	Aboveground Storage Tank
BRAC	Base Realignment and Closure
CFR	Code of Federal Regulations
CRDM	Continuous Release Detection Method
DEQ	Department of Environmental Quality
DoD	Department of Defense
EPA	Environmental Protection Agency
FRP	Facility Response Plan
ODCP	Oil Discharge Contingency Plan
OSHA	Occupational Safety and Health Administration
PE	Professional Engineer
SPCC	Spill Prevention, Control, and Countermeasure
STI	Steel Tank Institute
UST	Underground Storage Tank
WHS	Washington Headquarter Services

CERTIFICATION

Date of Last Plan Amendment/PE Certification: N/A

Date of Last Plan Review: N/A

Designated Person Accountable for Spill Prevention:

Joe Eichenlaub

Environmental Branch Manager, WHS

CERTIFICATION

In accordance with 40 Code of Federal Regulations (CFR) 112.3(d), I hereby certify that I or my agent has visited and examined the facility, and being familiar with the provisions of 40 CFR 112, Environmental Protection Agency (EPA) Regulations on Oil Pollution Prevention, attest that the Plan has been prepared in accordance with good engineering practice, including consideration of applicable industry standards, and with the requirements of this part; that procedures for required inspections and testing have been established; and that the Plan is adequate for the facility.

Registered Professional Engineer

Jenny Raczko, PE

SEAL

Signature of Registered Engineer

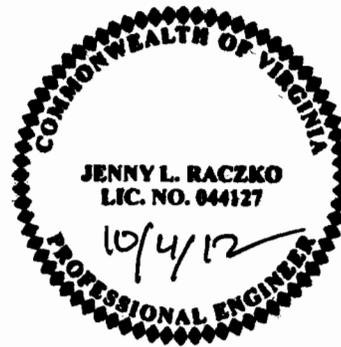


Registration Number

0402044127

State

Virginia



SPILL PREVENTION, CONTROL, AND COUNTERMEASURE COMPLIANCE INSPECTION PLAN REVIEW

In accordance with 40 CFR Part 112.5(b), a review and evaluation of this Spill Prevention, Control, and Countermeasure (SPCC) Plan is conducted at least once every five years. As a result of this review and evaluation, the WHS will amend the SPCC Plan within six months of the review to include more effective prevention and control technology if: (1) such technology will significantly reduce the likelihood of a spill event from the facility, and (2) if such technology has been field-proven at the time of review. Any amendment to the SPCC plan shall be certified by a Professional Engineer (PE) within six months after a change in the facility design, construction, operation, or maintenance occurs which materially affects the facility’s potential for the discharge of oil into or upon the navigable waters of the United States or adjoining shorelines.

OWNER/OPERATOR RECORD OF FIVE-YEAR REVIEWS

I have completed review and evaluation of the SPCC Plan for the Mark Center on the date indicated below, and will (will not) amend the Plan as a result.

Signature of Reviewer	Date of Review	Will Amend the Plan	Will Not Amend the Plan

OWNER/OPERATOR RECORD OF SPCC PLAN AMENDMENTS

The type of amendment (i.e., administrative or technical) is listed, along with how the amendment was completed (i.e., page change, addendum, etc.). The date of the amendment and the printed name/position of person responsible for the amendment are listed. A licensed PE reviews and certifies any technical amendment of the SPCC Plan. The amended Plan is implemented within six months of the amendment.

Description of Change (Administrative or Technical)	Date Entered	Posted By

MANAGEMENT APPROVAL

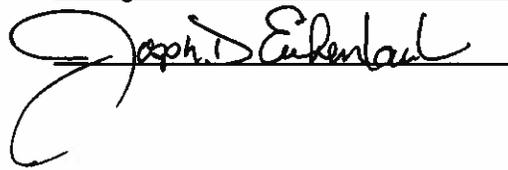
WHS is committed to the prevention of discharges of oil to navigable waters and the environment, and maintains the highest standards for spill prevention, control, and countermeasure through regular review, updating, and implementation of this Spill Prevention, Control, and Countermeasure Plan for the Mark Center, 4800 Mark Center Drive, Alexandria, Virginia.

Authorized Facility

Representative: Joe Eichenlaub

Title: Manager, WHS Environmental, Sustainability, and Energy Branch

Signature:


Joe Eichenlaub

1. INTRODUCTION

The Federal Water Pollution Control Act Amendment of 1972 and the Code of Federal Regulations 40 CFR Part 112 (effective August 16, 2002, amended February 26, 2007), titled: Oil Pollution Prevention and Response, require owner/operators of specified facilities to develop a Spill Prevention, Control and Countermeasure Plan (herein referred to as the SPCC Plan) to prevent the discharge of oil (including new, used, or byproducts of oil) into navigable waters of the United States (U.S.) or adjoining shorelines. Plans are to be developed by the owners/operators when aboveground storage of oil products (e.g. gasoline, diesel, used oil, mineral oil, etc.) exceeds an aggregate aboveground storage capacity of 1,320 gallons, or a total underground storage capacity of 42,000 gallons (excluding buried tanks that are subject to all of the technical requirements of 40 CFR Parts 280 or 281). The quantity and volume associated with oil storage containers of 55 gallons or greater are to be included in the determination of aggregate volumes.

This SPCC Plan has been developed in accordance with the requirements set forth in 40 CFR Part 112.7 and follows the sequence established in the regulation. The plan also includes a discussion of the facility's conformance with the appropriate guidelines included in the regulations.

The SPCC Plan is available for on-site review, during normal business hours, to the EPA Regional Administrator or designated representative, if requested, or to the Virginia Department of Environmental Quality (DEQ) representatives.

This SPCC Plan will be amended by the owner/operator of this facility whenever there is a change in the design, construction, operation, or maintenance of the facility, which materially affects the potential to discharge oil into or upon the navigable waters or adjoining shorelines. The amendments will be fully implemented as soon as possible, but no later than six months after the change occurs.

The owner/operator of this facility will review and evaluate the SPCC Plan as required by 40 CFR Part 112.5(b). At a minimum, this SPCC Plan must be reviewed by April 26, 2016 (five years from the date of this Plan), and once every five years thereafter, by a PE. Evidence of the reviews is recorded in this plan on page iii. The SPCC Plan will be amended to include more effective spill prevention and control technology if the following is true:

- The review indicates that the technology will significantly reduce the likelihood of a discharge event and;
- The technology has been field-proven at the time of the review and evaluation.

Whenever technical amendments are made to the SPCC Plan they shall be certified by a PE, in accordance with 40 CFR Part 112.5(c); if amendments are technical in nature, the amended document may not be considered in compliance with the requirements unless certified.

Per the requirements of 40 CFR 112, Appendix C, the facility has completed a Certification of Substantial Harm Criteria determination, which is included in Appendix A. Based on the Certification, this facility does not meet the Substantial Harm Criteria and is therefore not required to prepare and submit a Facility Response Plan (FRP) to the EPA.

2. FACILITY INFORMATION

2.1 General Facility Information

Name and Address of Facility: Mark Center
4800 Mark Center Drive
Alexandria, Virginia 22311

Type of Facility: Office building

Facility Owner and Operator Name and Address: Washington Headquarters Services
1155 Defense Pentagon
Washington, DC 20301-1155

2.2 Facility Contact(s)

112.7(a)(3)(vi): You must also address in your plan contact list and phone numbers for the facility response coordinator, National Response Center, cleanup contractors with whom you have an agreement for response, and all appropriate Federal, State, and local agencies who must be contacted in case of a discharge as described in 112.1(b).

Table 2-1. Facility Contacts

Name	Title	Telephone
Joe Eichenlaub (Designated Individual)	WHS Environmental Branch Manager	703-614-9583 (o) 703-785-1997 (c)
Bryan Kiser	Property Manager	571-372-0548 (o) 571-329-5788 (c)
Eugene Krevinko	SSI Safety Officer	571-372-2817 (o) 703-785-2092 (c)
Building Operations Command Center (BOCC)	N/A	571-372-3663 571-372-4357

2.3 Facility Description and History

112.7(a)(3): Describe in your Plan the physical layout of the Facility and include a Facility diagram, which must mark the location and contents of each container. The Facility diagram must include completely buried tanks that are otherwise exempted from the requirements of this part under §112.1(d)(4). The Facility diagram must also include all transfer stations and connecting pipes.

In 2005, the Base Realignment and Closure (BRAC) process authorized the relocation of Department of Defense (DoD) offices from leased spaces in Crystal City to secure sites that meet modern anti-terrorism and force protection standards. BRAC-133 is the numerical designation given to the Mark Center, a new office facility for the Washington Headquarters Service (WHS) and other federal government organizations.

The Mark Center is located at the intersection of Seminary Road and Beauregard Street at the Interstate 395 interchange in Alexandria, Virginia. While the facility is owned by the federal government, the property is technically part of Fort Belvoir, an Army installation founded during World War I. The Mark Center is part of a larger 350-acre mixed use development plan consisting of residential, hotel, retail, office and open space. Existing development includes high-rise office and residential buildings to the north, I-395 to the south, and the 44-acre Winkler Botanical Preserve to the west.

The 24-acre site includes two interconnected office towers (East and West Towers) providing over 1.75 million gross square feet of office space, a transportation hub with access to MetroBus, DASH Bus, and the WHS shuttle, a visitor center, and a parking structure for 3,750 vehicles. Construction of the facility began in November 2008 and was completed in September 2011. The facility began operations in September 2011 and the transfer of federal employees will continue through 2012 until full occupancy is achieved. The facility will eventually house approximately 6,400 personnel.

There are a total of nine oil-containing aboveground storage tanks (ASTs) onsite. Four of these ASTs store ultra-low-sulfur diesel to operate emergency generators, two store ultra-low-sulfur diesel for boiler backup, and three store hydraulic oil to operate hydraulic freight elevators. Additional details on these ASTs are provided in Section 3.0. In addition, there are two underground storage tanks (USTs) onsite.

Figure 2-1 is a Site Location Map showing the general location of the site. General locations for each room containing an AST, as well as the location of the USTs, are included as Figure 2-2. Diagrams of each room with the location of each oil storage tank are included as Figure 2-3 through Figure 2-7.



Figure 2-1. Site Location Map

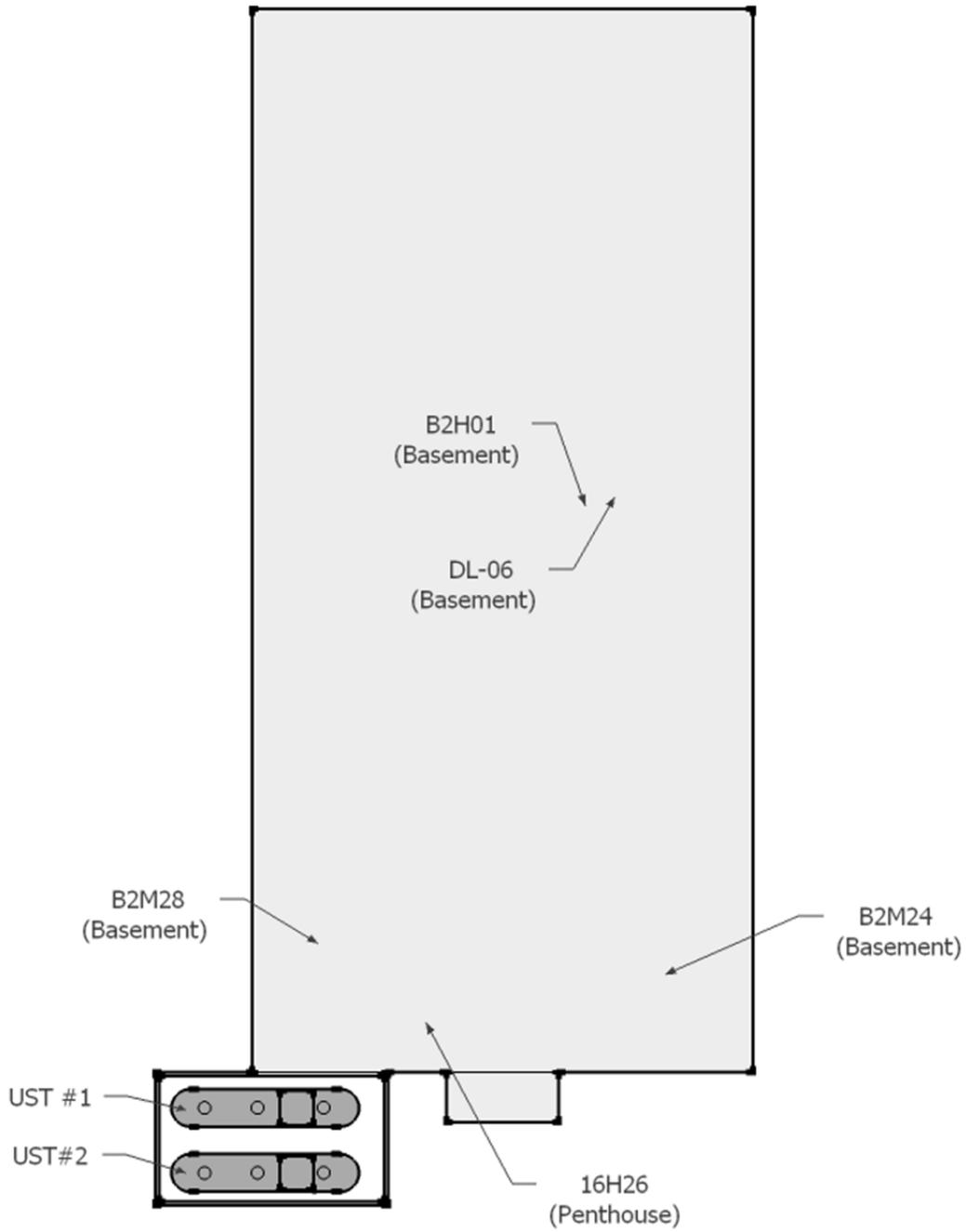


Figure 2-2. Room Locations within West Tower

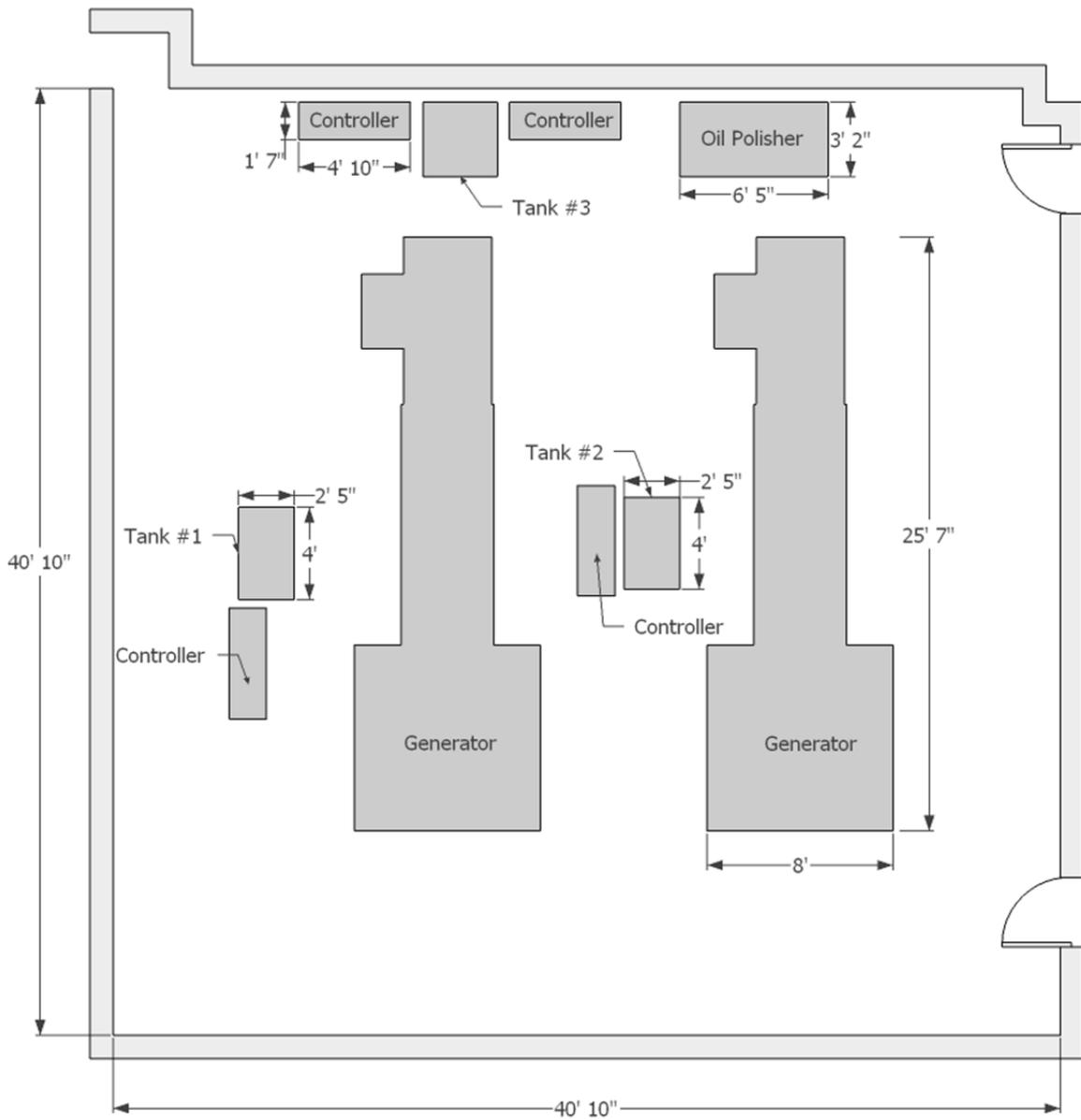


Figure 2-3. Generator Room B2M28

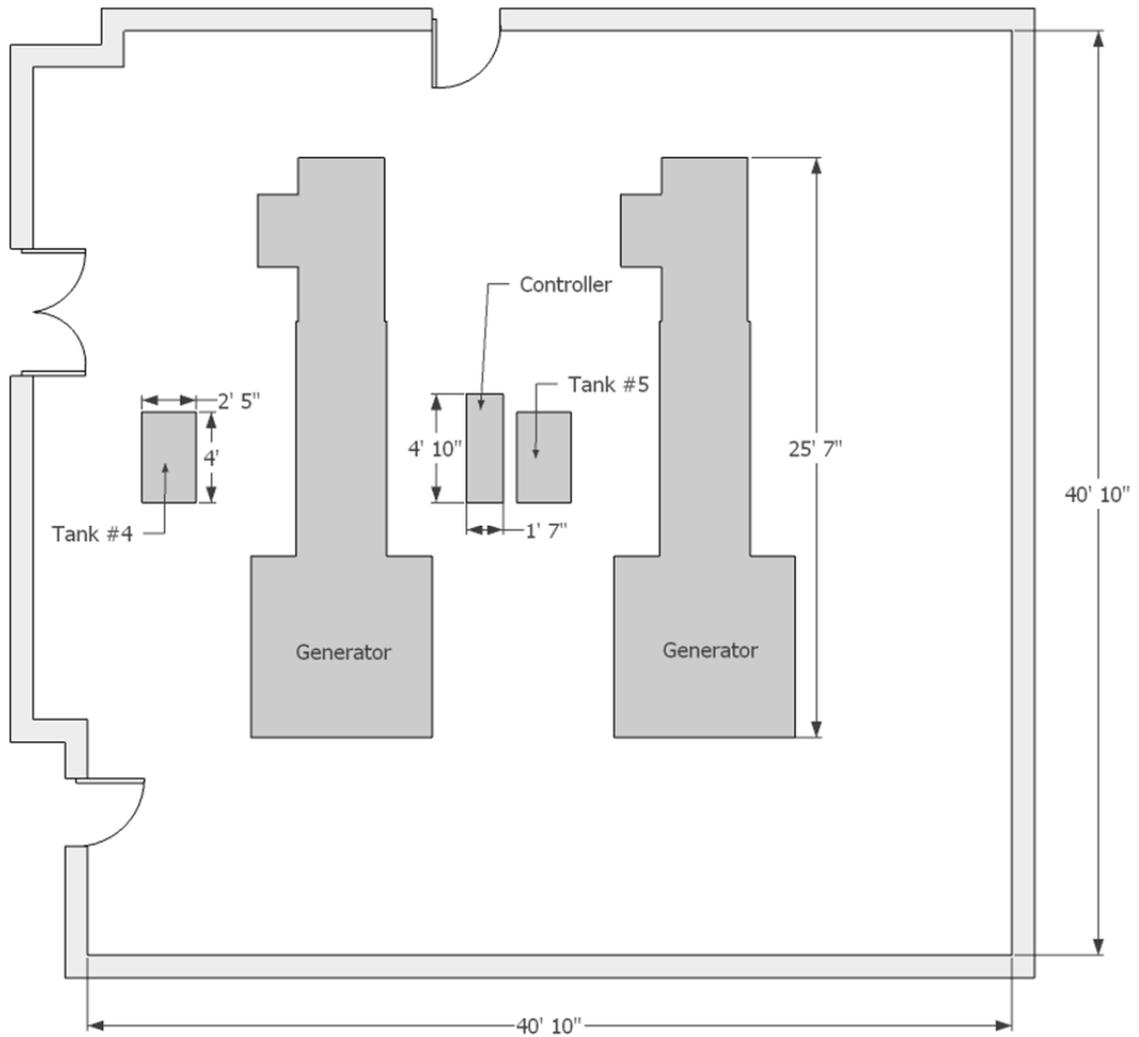


Figure 2-4. Generator Room B2M24

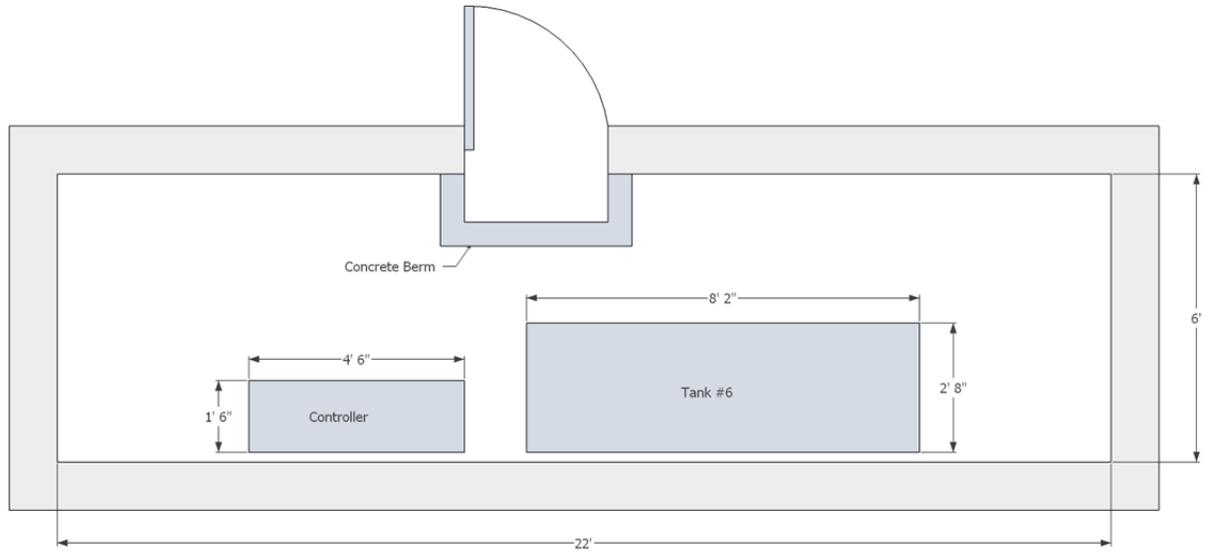


Figure 2-5. Fuel Room 16H26

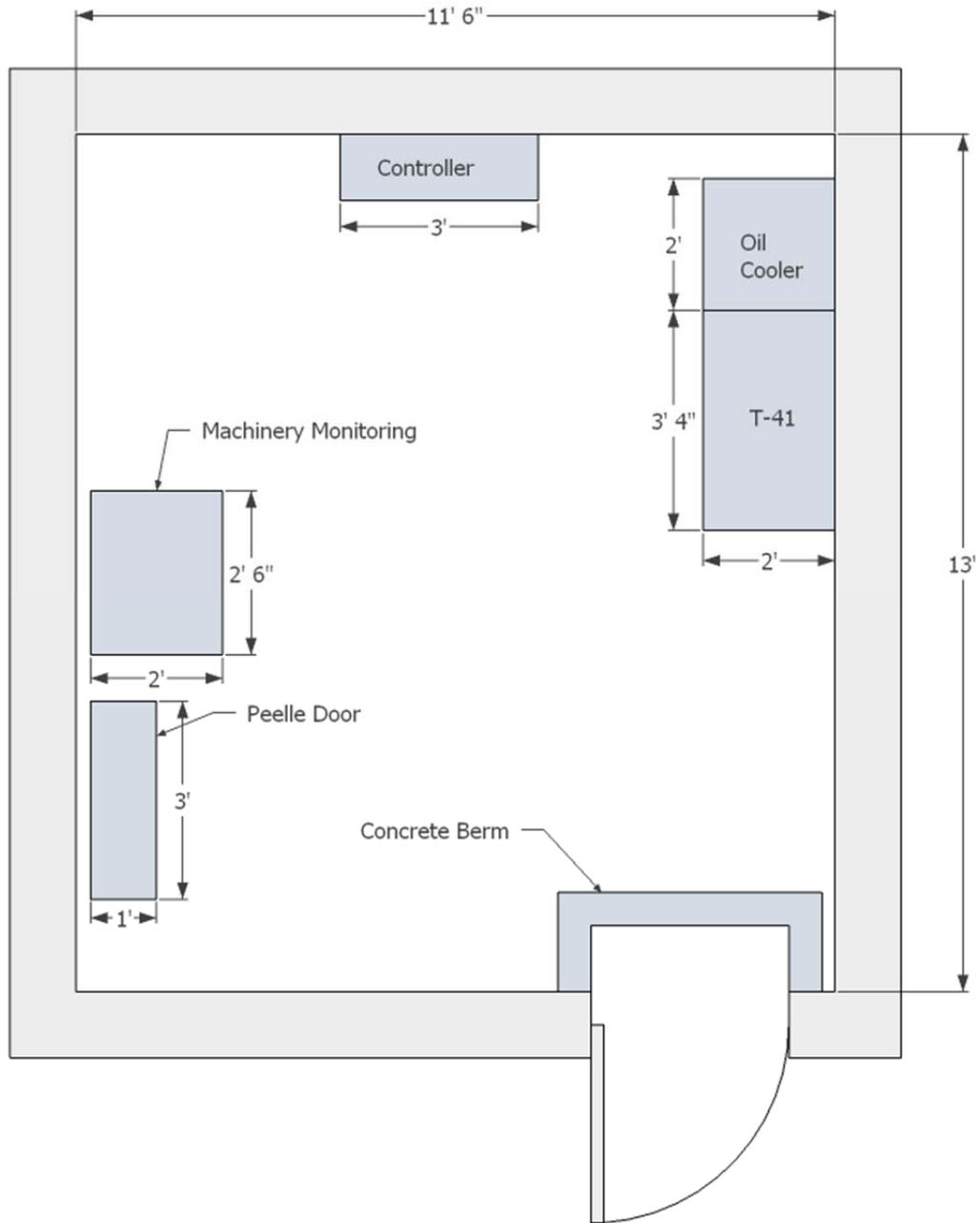


Figure 2-6. Elevator Machine Room DL-06

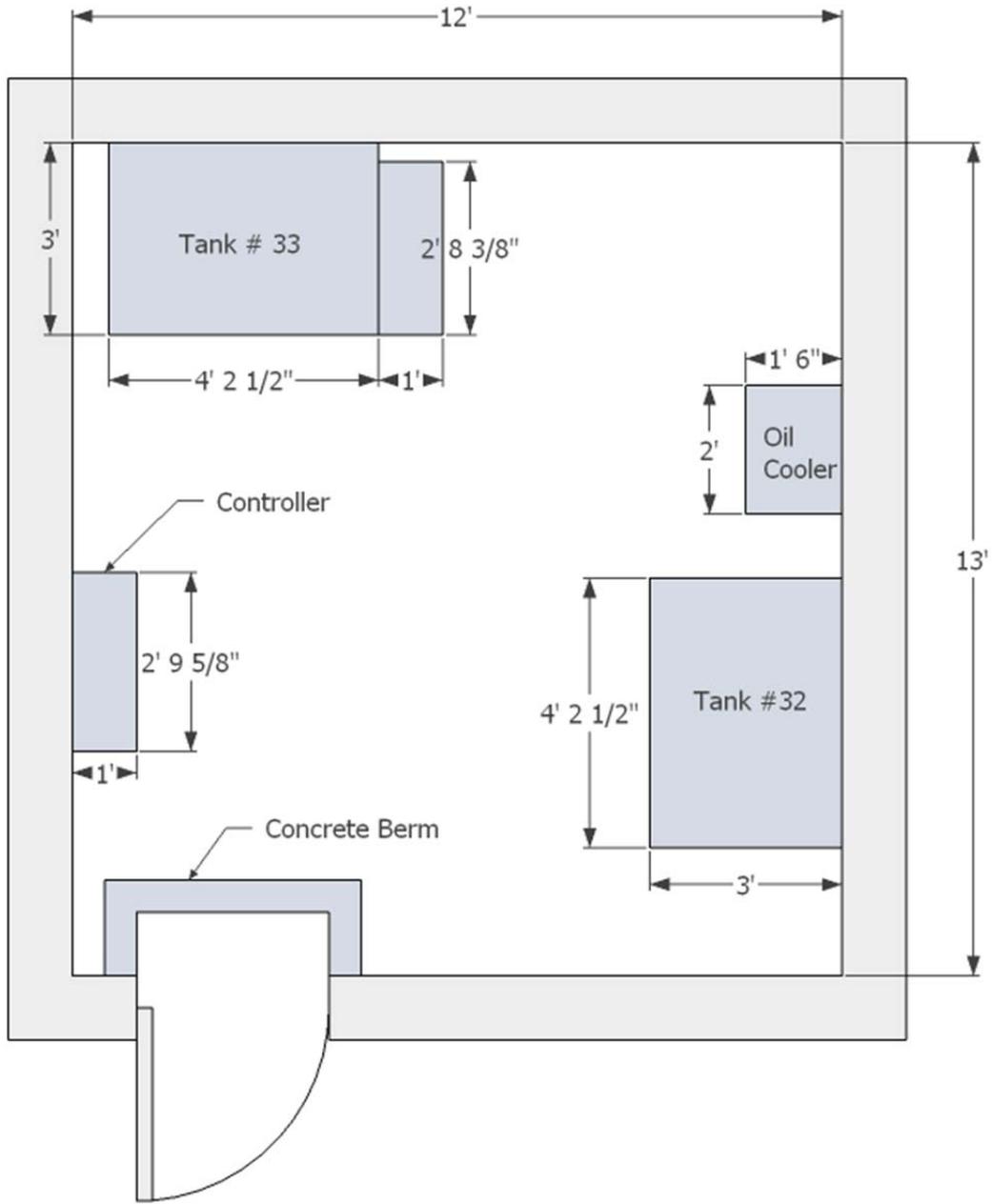


Figure 2-7. Elevator Machine Room B2H01

3. OIL STORAGE

3.1 Total Aggregate Oil Capacity

You must also address in your Plan:

112.7(a)(3)(i) The type of oil in each container and its storage capacity.

112.7(a)(3)(ii) Discharge prevention measures including procedures for routine handling of products (loading/unloading, and facility transfers, etc.)

112.7(a)(3)(iii) Discharge or drainage controls such as secondary containment around containers and other structures, equipment and procedures for the control of a discharge.

112.8(c)(8): Engineer or update each container installation in accordance with good engineering practice to avoid discharges. You must provide a liquid level sensing device.

The total combined aggregate capacity for all oil storage containers at the facility was calculated based on current EPA regulations in 40 CFR Part 112. The combined reportable total aggregate capacity for all petroleum storage containers at the facility is estimated at 51,875 gallons. Table 3-1 provides a detailed description of the oil storage units at the site. Photographs of all oil storage tanks and associated equipment are provided in Appendix B.

Table 3-1. Oil Storage Tanks

Tank No.	Location	Use	Capacity (Gallons)	Tank Contents	Secondary Containment
Aboveground Storage Tanks					
1*	Generator Room B2M28	Emergency generator	200	Ultra-low-sulfur diesel	Integral
2*	Generator Room B2M28	Emergency generator	200	Ultra-low-sulfur diesel	Integral
3*	Generator Room B2M28	Backup for boilers	150	Ultra-low-sulfur diesel	Integral
4*	Generator Room B2M24	Emergency generator	200	Ultra-low-sulfur diesel	Integral
5*	Generator Room B2M24	Emergency generator	200	Ultra-low-sulfur diesel	Integral
6*	Fuel Room 16H26	Backup for boilers	400	Ultra-low-sulfur diesel	Integral
T-41	Elevator Machine Room DL-06	Elevator operation	125	Hydraulic Oil	Concrete Berm
#32	Elevator Machine Room B2H01	Elevator operation	200**	Hydraulic Oil	Concrete Berm
#33	Elevator Machine Room B2H01	Elevator operation	200**	Hydraulic Oil	Concrete Berm
Estimated Total Oil Storage			1,875***	--	--

*The tanks are not numbered. The number in the table was assigned for ease of description in this Plan.

**The exact quantity of hydraulic oil in the hydraulic oil ASTs is unknown, but is estimated based on tank dimensions.

*** This number includes an estimate of the total volume of hydraulic oil for elevator operations. The exact quantity of hydraulic oil in the hydraulic oil ASTs is unknown, but is estimated based on tank dimensions.

3.2 Underground Storage Tanks

Additionally, there are two 25,000-gallon, double-walled, steel, low-sulfur diesel fuel underground storage tanks (USTs) located at the site. These USTs supply fuel for the emergency generators and provide a backup natural gas supply for the boilers at the Mark Center. The USTs are exempt from

40 CFR Part 112 because they are regulated under 40 CFR Part 280, and are therefore not included in this SPCC Plan.

3.3 Discharge Prevention Measures

New diesel fuel is received by a bulk truck and unloaded into one of the 25,000-gallon UST fill ports located near the southern façade of the West Tower. The delivery vehicle parks in the paved truck parking area next to the fill port transfer area on the southern side of the ground level generator room. The tank fill port transfer area does not meet the definition of “unloading rack” therefore, does not have a catchment basin that is capable of containing the capacity of the largest tank of the refueling truck. Active secondary containment is provided during tank truck unloading. The fuel vendor’s contract requires them to have drip pans, sorbent materials, and the responsibility to contain and clean up any spills. In addition, prior to filling the UST, the operator physically measures the ullage in the storage tank. The measured volume is compared to the delivery volume to ensure that there will be no overfilling.

Mark Center personnel conduct routine inspections of the oil storage tanks and equipment. The inspection procedure is described in Section 8.

4. OIL SPILL ABATEMENT PROCEDURES

112.7(a)(3): You must also address in your Plan: (iv) Countermeasures for discharge discovery, response, and cleanup... (v) Methods of disposal of recovered materials in accordance with applicable legal requirements.

In order for emergency oil spill abatement procedures to be effective, all oil-handling site personnel shall be trained periodically in the operation and maintenance of equipment to prevent the discharge of oil at the facility. At a minimum, each of the designated employees shall have basic knowledge of oil abatement and recovery operations and knows the location of this plan. In addition, the emergency phone list shall be posted in an area visible and easily accessible to the employees. Each employee shall be made aware of the location of the emergency abatement equipment and materials for an efficient and smooth response.

Foremost, all safety precautions shall be taken to ensure the safety of employees, facilities, and the environment. Emergency response operations and clean-up (abatement) efforts shall be conducted by properly trained personnel using appropriate personal protective equipment. All work shall be completed in accordance with EPA, Occupational Safety and Health Administration (OSHA), and Virginia Department of Environmental Quality (DEQ) regulations. All work shall be completed to the satisfaction of the authority having jurisdiction over the spill event.

In the event of an oil release from an oil storage container on the property, the spill abatement procedures described in Section 4.1 shall be followed.

4.1 Oil Spill Abatement Procedures for ASTs

In the event of an oil spill from an oil storage container, the following general procedures shall be followed at a minimum:

- Assess the nature of the spilled oil (source, cause, estimated quantity, and potential receptors);
- If the oil spill is assessed and considered to be a threat to the building safety (vapors, potential explosion, fire), evacuate affected building and call the designated person accountable for spill prevention, listed in the Certification
- section of this Plan;
- Assess if the spill can be easily corrected and stop the release;
- Assess if any local floor drains or sumps in the immediate vicinity of the spill will be impacted;
- Place boom and/or drain covers over affected floor drains to prevent oil from entering and/or stop oil from entering into drain(s);
- If oil has or is entering into a floor drain, place a drain plug into the affected drain to prevent additional oil from entering. Responders must try to minimize the severity of the spill. Oil lost into the floor drain will be considered a release; do not chase this oil, but prevent additional oil from impacting the drain. Report the spill immediately to the appropriate emergency personnel and authorities as required (emergency phone numbers are listed in Section 5.0):

- Designated Person Accountable for Spill Prevention listed in the Certification
 - section of this Plan (Joe Eichenlaub, WHS Environmental Branch Manager)
 - Onsite emergency contact (Bryan Kiser, Building Manager)
 - Virginia Department of Environmental Quality (only if the oil spilled is greater than 25 gallons, or if spill enters into floor drain); and
 - EPA Region III Regional Administrator (only if spill exceeds 1,000 gallons from one event, or two events of 42 gallons each or more within a 12-month period).
- If the oil spill is manageable and under control, then follow the Designated Person's directions to complete cleanup of spill.
 - If the oil spill is large and difficult to manage, make all attempts to prevent the spill from entering into any drains, sumps, or other such receptors (outside storm drains) in the spill vicinity (by use of drain covers, absorbent booms, spill pads and any other available equipment or materials). Await arrival of contracted clean-up personnel.

4.2 Waste Disposal

In the event that a release occurs at the Mark Center, the oil will be placed in drums and profiled for waste disposal.

5. SPILL EVENTS

112.7(a)(4): Unless you have submitted a response plan under §112.20, provide information and procedures in your plan to enable a person reporting a discharge as described in §112.1(b) to relate information on the exact address or location and phone number of the facility; the date and time of the discharge; the type of material discharged; estimates of the total quantity discharged; estimates of the quantity discharged as described in §112.1(b); the source of the discharge; a description of all affected media; the cause of the discharge; any damages or injuries caused by the discharge; whether an evacuation may be needed; and the names of individuals and/or organizations who have also been contacted.

For the purposes of this plan, a spill will be defined as an unintentional release of oil to the environment. The environment will be defined as areas that include, but are not limited to, floors, containment dikes, sidewalks, road surfaces, ground surface, basements, floor drains, storm drains, and streams. An occasional drip of oil from a pipe seam or joint may not necessarily be considered a spill. However, a chronic drip at a continuous rate, enough to create a potential environmental hazard if not corrected, may be considered a release or spill.

Generally, all spills over 25 gallons (either controllable or uncontrollable) must be reported to the appropriate agency (i.e., DEQ). A spill event must be reported to the EPA Regional Administrator office if any single event of more than 1,000 gallons occurs or two separate spill events of more than 42 gallons each occurs within any 12-month period. A spill (of any amount) is also reportable if it causes a sheen upon or discolors a surface water body or enters a storm drain or floor drain. Controllable spills less than 25 gallons need not necessarily be reported to an agency as long as oil has not caused a sheen to surface water, has been easily contained with no serious threat or impact to the surrounding environment, has not reached a storm drain or floor drain, and is easily controlled using available on-site equipment. Emergency Phone Numbers are listed in Table 5-1.

All spill occurrences should be recorded on the Spill Report Form included in Appendix C and included in this Plan for future reference. If at any time you are unsure if a spill is reportable, please seek the advice of the Plan director. Information that will be provided on the report form includes a written description of each spill, the corrective actions taken, and the plans that have been established to prevent recurrence of the spill(s).

Table 5-1. Emergency Phone Numbers

Department or Organization	Emergency Type	Contact Name	Office Phone (Business Hours)	24-Hr Phone
Mark Center Supervisory Property Manager	Any Spill	Bryan Kiser	571-372-0548	571-329-5788
WHS Environmental Branch Manager	Any Spill	Joe Eichenlaub	703-614-9583	703-785-1997
Virginia DEQ	Spills generally that are greater than 25 gallons, or cause a sheen, or enter a floor or storm drain	Cynthia Sale, Northern Regional Office	703-583-3800	N/A
Alexandria Sanitation Authority (ASA)	Any spill that enters a floor drain	Shift Leader	703-549-3381 ext. 0	N/A
Alexandria Transportation and Environmental Services	Any spill that enters a floor drain	Sewer Maintenance Dept.	703-746-4488	N/A

Table 5-1. Emergency Phone Numbers

Department or Organization	Emergency Type	Contact Name	Office Phone (Business Hours)	24-Hr Phone
City of Arlington	Any spill that occurs near Arlington County Water Pollution control wastewater pump station	Department of Environmental Services	703-228-6820	603-228-6555
EPA National Response Center	Large oil spill of 1,000 gallons in one event or two events of 42 gallons or more each. Or if a spill causes a sheen on a surface water body	Oil Spill Dept.	800-424-8802	N/A
Clean Harbors Laurel, MD	Oil Spill Response Cleanup Contractor	Emergency Services Dept.	301-939-6000	800-645-8265
Clean Venture, Inc. Baltimore, MD	Oil Spill Response Cleanup Contractor	Emergency Services Dept.	410-368-9170	N/A
Environmental Management Services, Inc. Rockville, MD	Oil Spill Response Cleanup Contractor	Emergency Services Dept.	301-309-0475	800-253-0749

It is recommended that the emergency response and abatement materials be stored in an area that can be accessible for a quick response. An Equipment Inspection Log to be used when performing periodic spill response equipment inspections is included in Appendix D. Recommended spill response equipment is listed in Table 5-2.

Table 5-2. Recommended Spill Response Equipment

Suggested Quantity	Material Description ¹
10	50-pound sand bags
2	Long handle square nose shovel
1	Bag of 5-inch diameter by 10 feet long oil-only absorbent booms
1	Bag of 3-inch diameter by 10 feet long oil-only absorbent booms
3	Bales of oil-only absorbent commercial spill pads 16.5-inch W x 20-inch L, quantity 100 per bale.
3	36-inch square polyurethane drain cover Note: Need drain cover that overlaps largest drain opening by at least 3-inches on each edge.
5	Bags of loose absorbent (preferably not clay). Recycled cellulose or equivalent.

¹ Equivalents may be substituted in all cases.

Table 5-2. Recommended Spill Response Equipment

Suggested Quantity	Material Description¹
6	12-inch round floor drain plugs. Good for drains up to 9-inch diameter.

The following are recommended spill response equipment suppliers:

PIG
One Pork Avenue
P.O. Box 304
Tipton, Pennsylvania 16684
1-800-474-7294
www.newpig.com

Interstate Products
3921 Sawyer Road
Sarasota, FL 34233
1-800-468-4647
1-800-238-4259 (Emergency After-Hours)
<http://www.interstateproducts.com/>

6. POTENTIAL SPILL PREDICTIONS, VOLUMES, RATES, AND CONTROL

112.7(b): Where experience indicates a reasonable potential for equipment failure (such as loading or unloading equipment, tank overflow, rupture, or leakage, or any other equipment known to be a source of a discharge), include in your Plan a prediction of the direction, rate of flow, and total quantity of oil which could be discharged from the facility as a result of each type of major equipment failure.

A reasonable potential for equipment failure exists at the site, including tank overflows and leakage, etc.; therefore, this plan includes a summary, as shown in Table 6-1, of the potential direction and rate of flow of oil that would be discharged from the oil storage areas and equipment.

Table 6-1. Potential Spills, Prediction and Control

Source	Location	Type of Failure	Volume (Gallons)	Rate	Direction of Flow	Secondary Containment
Diesel fuel emergency generator	Generator Room B2M28	Rupture, leakage	200	Instantaneous	To floor drain in Generator Room B2M28	Integral
Diesel fuel emergency generator	Generator Room B2M28	Rupture, leakage	200	Instantaneous	To grate in Generator Room B2M28	Integral
Diesel fuel boilers	Generator Room B2M28	Rupture, leakage	150	Instantaneous	To grate in Generator Room B2M28	Integral
Diesel fuel emergency generator	Generator Room B2M24	Rupture, leakage	200	Instantaneous	To tertiary containment within Generator Room B2M24	Integral
Diesel fuel emergency generator	Generator Room B2M24	Rupture, leakage	200	Instantaneous	To tertiary containment within Generator Room B2M24	Integral
Diesel fuel boilers	Fuel Room 16H26	Rupture, leakage	400	Instantaneous	To tertiary containment within Fuel Room 16H26	Integral
Hydraulic oil storage	Elevator Machine Room B2H01	Rupture, leakage	200	Instantaneous	To tertiary containment within elevator Room B2H01	Concrete berm
Hydraulic oil storage	Elevator Machine Room B2H01	Rupture, leakage	200	Instantaneous	To tertiary containment within elevator Room B2H01	Concrete berm
Hydraulic oil storage	Elevator Machine Room DL-06	Rupture, leakage	125	Instantaneous	To tertiary containment within Elevator Machine room DL-06	Concrete berm

7. SPILL PREVENTION MEASURES

7.1 Containment and Diversionary Structures and Equipment

112.7(c): Provide appropriate containment and/or diversionary structures or equipment to prevent a discharge as described in §112.1(b), except as provided in paragraph (k) of this section for qualified oil-filled operational equipment, and except as provided in §112.9(d)(3) for flowlines and intra-facility gathering lines at an oil production facility. The entire containment system, including walls and floor, must be capable of containing oil and must be constructed so that any discharge from a primary containment system, such as a tank, will not escape the containment system before cleanup occurs. In determining the method, design, and capacity for secondary containment, you need only to address the typical failure mode, and the most likely quantity of oil that would be discharged. Secondary containment may be either active or passive in design. At a minimum, you must use one of the following prevention systems or its equivalent:

(1) For onshore facilities:

- (i) Dikes, berms, or retaining walls sufficiently impervious to contain oil;
- (ii) Curbing or drip pans;
- (iii) Culverting, gutters, or other drainage systems;
- (iv) Weirs, booms, or other barriers;
- (v) Spill diversion ponds;
- (vi) Retention ponds; or
- (vii) Sorbent materials.

112.8(c)(2): You must construct all bulk storage container installations so that you provide a secondary means of containment for the entire capacity of the largest single container and sufficient freeboard to contain precipitation. You must ensure that diked areas are sufficiently impervious to contain discharged oil. Dikes, containment curbs, and pits are commonly employed for this purpose. You may also use an alternative system consisting of a drainage trench enclosure that must be arranged so that any discharge will terminate and be safely confined in a facility catchment basin or holding pond.

Appropriate containment and/or diversionary structures or equipment to prevent discharged oil from reaching a navigable watercourse are required. Each tank containment structure is listed in Table 3-1 and Table 6-1. Single-walled aboveground piping is located within adequately contained diked areas in the generator rooms.

7.2 Demonstration of Practicability

112.7(d): If you determine that the installation of any of the structures or pieces of equipment listed in 40 CFR 112.7 (c) and (h)(1), and 112.8(c)(2), 112.8(c)(11), to prevent a discharge as described in 112.1(b) from any onshore or offshore facility is not practicable, you must clearly explain in your Plan why such measures are not practicable; for bulk storage containers, conduct both periodic integrity testing of the containers and periodic integrity and leak testing of the valves and piping; and, unless you have submitted a response plan under 112.20, provide in your Plan the following:

- (1) An oil spill contingency plan following the provisions of 40 CFR 109.
 - (2) A written commitment of manpower, equipment, and materials required to expeditiously control and remove any quantity of oil discharged that may be harmful.
-

The prevention of oil from reaching navigable waters through the use of structures or equipment at the facility is practicable, therefore, an oil spill contingency plan, per 40 CFR Part 109, and a written commitment of manpower, equipment and materials are not required.

8. INSPECTION AND RECORDS

112.7(e): Conduct inspections and tests required by this part in accordance with written procedures that you or the certifying engineer develop for the facility. You must keep these written procedures and a record of the inspections and tests, signed by the appropriate supervisor or inspector, with the SPCC Plan for a period of three years. Records of inspections and tests kept under usual and customary business practices will suffice for purposes of this paragraph.

112.8(c)(6): You must test each aboveground container for integrity on a regular schedule, and whenever you make material repairs. The frequency of and type of testing must take into account container size and design (such as floating roof, skid-mounted, elevated, or partially buried). You must combine visual inspection with another testing technique such as hydrostatic testing, radiographic testing, ultrasonic testing, acoustic emissions testing, or another system of non-destructive shell testing. You must keep comparison records and you must also inspect the container's supports and foundations. In addition, you must frequently inspect the outside of the container for signs of deterioration, discharges, or accumulation of oil inside diked areas. Records of inspections and tests kept under usual and customary business practices will suffice for purposes of this paragraph.

Inspection and records shall be maintained in accordance with the specifications in the Steel Tank Institute (STI) Standard for the Inspection of Aboveground Storage Tanks, SP001, 5th edition. This method is an accepted industry standard for conducting inspections of shop-fabricated ASTs. Per the Standard, the ASTs onsite are considered to be Category 1 tanks, or tanks that have a Continuous Release Detection Method (CRDM). In the case of these ASTs, the CRDM is the integral secondary containment (double-walled tanks). Category 1 tanks with capacities of 5,000 gallons or less require periodic surveys by an owner's inspector. The "owner's inspector" is defined as someone "knowledgeable of storage facility operations, the type of AST and its associated components, and the characteristics of the liquid stored." Integrity inspections (e.g., pressure tests or ultrasonic thickness testing) are not required for well designed shop-fabricated tanks of shell capacity <30,000 gallons if all sides can be visually inspected.

Periodic inspections of all aboveground tanks and containment structures shall be conducted on a monthly basis by the owner's inspector. Each inspection shall be documented on the Monthly Inspection Checklist (Appendix E). These monthly inspections are intended for monitoring the external AST condition and its containment structure or interstice (for double-walled tanks).

According to the SPCC regulations, all records of inspections shall be maintained with the Plan for a period of three years.

9. PERSONNEL TRAINING AND SPILL PREVENTION PROCEDURES

112.7(f)(1): At a minimum, train your oil-handling personnel in the operation and maintenance of equipment to prevent discharges; discharge procedure protocols; applicable pollution control laws, rules, and regulations; general facility operations; and, the contents of the facility SPCC Plan.

Facility oil handling personnel are instructed by management in the operation and maintenance of equipment to prevent oil releases or discharges, procedures to follow in the event of an oil release or discharge, proper oil handling procedures, SPCC Plan contents, and pertinent laws and regulations for oil discharges and discharge reporting. The WHS Environmental Branch is responsible for developing and conducting training for all facility oil handling personnel.

At a minimum, the following individuals receive such training:

- Facility maintenance contractors
- The Designated Individual
- WHS Property Managers

112.7(f)(2): Designate a person at each applicable facility who is accountable for discharge prevention and who reports to facility management.

The Property Manager is in charge of the oil spill prevention procedures at the facility.

112.7(f)(3): Schedule and conduct discharge prevention briefings for your oil-handling personnel at least once a year to assure adequate understanding of the SPCC Plan for that facility. Such briefings must highlight and describe known discharges as described in §112.1(b) or failures, malfunctioning components, and any recently developed precautionary measures.

Spill prevention briefings shall be provided by management for all oil-handling operation personnel to ensure adequate understanding of the SPCC Plan. The briefings shall highlight any past spill events or failures and any recently developed precautionary measures. Training shall also be held on oil spill prevention, containment, and retrieval methods. Training shall be held annually to assure adequate understanding of the SPCC Plan.

Records of all briefings and spill prevention training shall be maintained on the form shown in Appendix F for a period of five years.

10. FACILITY TANK TRUCK UNLOADING

112.7(h) Facility tank car and tank truck loading/unloading rack (excluding offshore facilities). (1) Where loading/unloading rack drainage does not flow into a catchment basin or treatment facility designed to handle discharges, use a quick drainage system for tank car or tank truck loading/unloading racks. You must design any containment system to hold at least the maximum capacity of any single compartment of a tank car or tank truck loaded or unloaded at the facility. (2) Provide an interlocked warning light or physical barrier system, warning signs, wheel chocks or vehicle brake interlock system in the area adjacent to a loading/unloading rack, to prevent vehicles from departing before complete disconnection of flexible or fixed oil transfer lines. (3) Prior to filling and departure of any tank car or tank truck, closely inspect for discharges the lowermost drain and all outlets of such vehicles, and if necessary, ensure that they are tightened, adjusted, or replaced to prevent liquid discharge while in transit. (i) If a field-constructed aboveground container undergoes a repair, alteration, reconstruction, or a change in service that might affect the risk of a discharge or failure due to brittle fracture or other catastrophe, or has discharged oil or failed due to brittle fracture failure or other catastrophe, evaluate the container for risk of discharge or failure due to brittle fracture or other catastrophe, and as necessary, take appropriate action.

EPA defines a "Loading/Unloading Rack" as: "a structure necessary for loading or unloading a tank truck or tank car, which is located at a facility subject to the requirements of this part (40 CFR 112.7(h)). A loading/unloading rack includes a platform, gangway or loading/unloading arm; and any combination of the following: piping assemblages, valves, pumps, shut-off devices, overfill sensors, or personnel safety devices." The tank fill port transfer area does not meet the definition of "unloading rack" therefore, does not have a catchment basin that is capable of containing the capacity of the largest tank of the refueling truck.

New diesel fuel is received by a bulk truck and unloaded into one of the 25,000-gallon UST fill ports located near the southern façade of the West Tower. The delivery vehicle parks in the paved truck parking area next to the fill port transfer area on the southern side of the ground level generator room. The tank fill port transfer area does not meet the definition of "unloading rack" therefore, does not have a catchment basin that is capable of containing the capacity of the largest tank of the refueling truck. Active secondary containment is provided during tank truck unloading. The fuel vendor's contract requires them to have drip pans, sorbent materials, and the responsibility to contain and clean up any spills. In addition, prior to filling the UST, the operator physically measures the ullage in the storage tank. The measured volume is compared to the delivery volume to ensure that there will be no overfilling.

Two people are present during all fuel unloading. One person remains at the filling port and the other person remains at the tanker truck. Each person is equipped with a two-way radio so that the two people remain in constant communication during the filling process. The fuel vendor is required to inspect all tanker valves and drains prior to truck departure. All fuel unloading and loading connections are capped when not in use and prior to departure. Procedures for unloading of tank trucks at the site must meet the minimum requirements of the U.S. Department of Transportation; the requirements are outlined in 49 CFR Part 177.837.

Filling of the USTs uses equipment designed to handle spills. The tanks' fill ports are equipped with spill prevention equipment, including spill buckets and a concrete containment dike. In addition, overfill alarms on the tanks will alert the vendor when the tank reaches 90% capacity. Through employee training and absorbent materials, any likelihood of spilled oil reaching surface water sources would be minimized. Refer to Table 5-2 for data regarding overfill protection equipment.

11. SECURITY

112.7(g): Describe in your Plan how you secure and control access to the oil handling, processing and storage areas; secure master flow and drain valves; prevent unauthorized access to starter controls on oil pumps; secure out-of-service and loading/unloading connections of oil pipelines; and address the appropriateness of security lighting to both prevent acts of vandalism and assist in the discovery of oil discharges.

The oil storage containers are in locked and monitored areas at the facility. Personnel access to the oil storage containers is limited. Master valves and starter controls for oil transfer systems are locked when the facilities are not in use. Pipelines shall be drained and blank-flanged when taken out of service. Lighting is critical for oil system security and spill prevention and is provided in all of the oil storage areas. Additionally, overhead lighting at night is provided along roadways, thoroughfares, and many of the parking areas for security and inspections.

12. CONFORMANCE WITH OTHER APPLICABLE REGULATIONS

112.7(j): In addition to the minimal prevention standards listed under this section, include in your Plan a complete discussion of conformance with the applicable requirements and other effective discharge prevention and containment procedures listed in this part or any applicable more stringent State rules, regulations, and guidelines.

12.1 Commonwealth of Virginia Requirements

Per the Virginia DEQ, operator(s) of a facility located within the Commonwealth are required to register ASTs with a storage capacity of more than 660 gallons of oil with the board and with the local director or coordinator of emergency services (9 VAC 25-91-100(A)). The owner or a duly authorized representative of the facility or AST shall renew the registration required by this section every five years (9 VAC 25-91-100(G)).

Aboveground storage tanks completely off the ground with all associated piping off the ground and ASTs with a capacity of 5,000 gallons or less located within a building or structure designed to fully contain a discharge of oil shall not be subject to inventory control and testing for significant variations (9 VAC 25-91-130(B)(1)(a)(1,2)).

All ASTs shall be equipped with a gauge that is readily visible and indicates the level of oil or quantity of oil in the tank. In addition, the storage capacity and tank identification number shall be clearly marked on the tank at the location of the gauge. These gauges shall be calibrated annually (9 VAC 25-91-130(B)(3)(d)).

All piping shall be pressure tested using an equivalent method or measure approved by the board, at intervals not to exceed five years (9 VAC 25-91-130(B)(4)).

In addition, the Commonwealth of Virginia prohibits the discharge of pollutants into or upon state waters, lands, or storm drain systems within the Commonwealth. In addition, the Commonwealth requires that spills be reported to DEQ. The facility has a program in place to prohibit discharge of pollutants into waters of the Commonwealth and to report spills greater than 25 gallons to DEQ.

Section 9 VAC 25-91-170 provides the Oil Discharge Contingency Plan (ODCP) requirements of the Virginia DEQ. Note that the ODCP requirements provided by 9 VAC 25-91-170 only apply to facilities having 25,000 gallons of aboveground oil storage or more. Therefore the ODCP requirements do not apply to the Mark Center.

12.2 Consideration of Industry Standards

Virginia requires that ASTs shall be built in accordance with the applicable design standards adopted by Underwriters Laboratories, the American Petroleum Institute, the Steel Tank Institute, or other industry standards. In addition, Virginia requires compliance with OSHA Standards for Flammable and Combustible Liquids (29 CFR 1910.106), the International Fire Code, 2009 edition, with State amendments, and references the National Fire Protection Association codes 30 and 30A, 1996 and 1990 editions, respectively. All appropriate codes were taken into account during construction of the Mark Center.

13. FACILITY DRAINAGE

112.8(b)(1): Restrain drainage from diked storage areas by valves to prevent a discharge into the drainage system or facility effluent treatment system, except where facility systems are designed to control such discharge. You may empty diked areas by pumps or ejectors; however, you must manually activate these pumps or ejectors and must inspect the condition of the accumulation before starting, to ensure no oil will be discharged.

112.8(b)(2): Use valves of manual, open-and-closed design, for the drainage of diked areas. You may not use flapper-type drain valves to drain diked areas. If your facility drainage drains directly into a watercourse and not into an on-site wastewater treatment plant, you must inspect and may drain uncontaminated retained stormwater, as provided in 112.8(c)(3)(ii), (iii), and (iv).

112.8(b)(3): Design facility drainage systems from undiked areas with a potential for a discharge (such as where piping is located outside containment walls or where tank truck discharges may occur outside the loading area) to flow into ponds, lagoons, or catchment basins designed to retain oil or return it to the facility. You must not locate catchment basins in areas subject to periodic flooding.

112.8(b)(4): If facility drainage is not engineered as in 112.8(b)(3), equip the final discharge of all ditches inside the facility with a diversion system that would, in the event of an uncontrolled discharge, retain oil in the facility.

112.8(b)(5): Where drainage waters are treated in more than one treatment unit and such treatment is continuous, and pump transfer is needed, provide two "lift" pumps and permanently install at least one of the pumps. Whatever techniques you use, you must engineer facility drainage systems to prevent a discharge as described in §112.1(b) in case there is an equipment failure or human error at the facility.

112.8(c)(3): You must not allow drainage of uncontaminated rainwater from the diked area into a storm drain or discharge of an effluent into an open watercourse, lake, or pond, bypassing the facility treatment system unless you:

(i) Normally keep the bypass valve sealed closed.

(ii) Inspect the retained rainwater to ensure that its presence will not cause a discharge as described in §112.1(b).

(iii) Open the bypass valve and reseal it following drainage under responsible supervision; and

(iv) Keep adequate records of such events, for example, any records required under permits issued in accordance with 40 CFR 122.41(j)(2) and 40 CFR 122.41(m)(3).

All stormwater discharges flow to Holmes Run and ultimately, the Potomac River. Some areas of the site drain to a small stormwater detention pond prior to entering Holmes Run.

In general, diked areas on the site include the UST concrete secondary containment basins and the fuel loading dock. Drainage from these basins is restrained by valves to prevent a discharge in the stormwater system. Prior to draining the basins of rainwater after a storm event, the water is inspected for evidence of oil. If no oil is present, the basin is drained. If sheen is observed, the oil is pumped out for disposal instead of releasing to the stormwater conveyance system. Appendix G includes a form used to record draining of the dikes.

In the event of a release, absorbent booms and other diversionary materials will be utilized to prevent any spilled oil from entering the stormwater drains at the property. All impacted and soiled absorbent materials will be drummed and staged on the property pending proper disposal by a certified waste disposal company. In the event of any pooled or contained oil, a vacuum recovery truck will be utilized to remove the pooled oil and impacted stormwater from the property.

For small volume controllable spills, absorbent materials may be utilized for removal of the pooled oil. All recovered oil will be properly disposed of by a certified waste removal company.

14. BULK STORAGE TANKS

112.8(c)(1): You must not use a container for the storage of oil unless its material and construction are compatible with the material stored and conditions of storage such as pressure and temperature.

112.8(c)(8): You must engineer or update each container installation in accordance with good engineering practice to avoid discharges. You must provide at least one of the following devices:

(i) High liquid level alarms with an audible or visual signal at a constantly attended operation or surveillance station. In smaller facilities an audible air vent may suffice.

(ii) High liquid level pump cutoff devices set to stop flow at a predetermined container content level.

(iii) Direct audible or code signal communication between the container gauger and the pumping station.

(iv) A fast response system for determining the liquid level of each bulk storage container such as digital computers, telepulse, or direct vision gauges. If you use this alternative, a person must be present to monitor gauges and the overall filling of bulk storage containers.

(v) You must regularly test liquid level sensing devices to ensure proper operation.

112.8(c)(10) Promptly correct visible discharges which result in a loss of oil from the container, including but not limited to seams, gaskets, piping, pumps, valves, rivets, and bolts. You must promptly remove any accumulations of oil in diked areas.

A description of each tank at the facility, as applicable per the rules of 40 CFR Part 112.7, is included in Table 14-1. All fixed ASTs, 55-gallons and greater, are included on the table. The table includes the following information for both types of tanks: material of construction; system; overfill protection systems; leak detection systems; volume; and material stored.

Currently there are no partially buried metallic tanks at the facility nor are there any internal heating coils located on the property. AST supports, tank foundations, and tank exteriors are inspected regularly to check for structural integrity and for leaks. The facility's formal inspection program is presented in Section 8.

Visible oil leaks from tank seams, gaskets, piping, pumps, rivets, and bolts are promptly reported to WHS by the oil system operator, organizational tank custodian, or their designees. The oil system operator or organizational fuel tank custodian will clean up any leaked oil and correct the deficiency or damage responsible for causing the leakage.

Table 14-1. Aboveground Storage Tank Summary

Tank No.	Location	Use	Capacity (gallons) and Contents	Construction Material/Compatible with Contents?	Leak Detection
1*	Generator Room B2M28	Emergency generator	200 – Ultra-low-sulfur diesel	Steel/Yes	Visual Gauge, Low Level Alarm, High Level Alarm, Veeder-Root monitoring system
2*	Generator Room B2M28	Emergency generator	200 – Ultra-low-sulfur diesel	Steel/Yes	Visual Gauge, Low Level Alarm, High Level Alarm, Veeder-Root monitoring system

Table 14-1. Aboveground Storage Tank Summary

Tank No.	Location	Use	Capacity (gallons) and Contents	Construction Material/ Compatible with Contents?	Leak Detection
3*	Generator Room B2M28	Backup for boilers	150 – Ultra-low-sulfur diesel	Steel/Yes	Visual Gauge, Low Level Alarm, High Level Alarm, Veeder-Root monitoring system
4*	Generator Room B2M24	Emergency generator	200 – Ultra-low-sulfur diesel	Steel/Yes	Visual Gauge, Low Level Alarm, High Level Alarm, Veeder-Root monitoring system
5*	Generator Room B2M24	Emergency generator	200 – Ultra-low-sulfur diesel	Steel/Yes	Visual Gauge, Low Level Alarm, High Level Alarm, Veeder-Root monitoring system
6*	Fuel Room 16H26	Backup for boilers	400 - Ultra-low-sulfur diesel	Steel/Yes	Visual Gauge, Low Level Alarm, High Level Alarm, Veeder-Root monitoring system
#32	Elevator Machine Room B2H01	Elevator operation	200** - Hydraulic Oil	Steel/Yes	Visual Gauge
#33	Elevator Machine Room B2H01	Elevator operation	200** - Hydraulic Oil	Steel/Yes	Visual Gauge
T-41	Elevator Machine Room DL-06	Elevator operation	125 - Hydraulic Oil	Steel/Yes	Visual Gauge

*The tanks are not numbered. The number in the table was assigned for ease of description in this Plan.

**The exact quantity of hydraulic oil in the hydraulic oil ASTs is unknown, but is estimated based on tank dimensions.

15. PIPING PROTECTION AND EXAMINATION

112.8(d)(1): Provide buried piping that is installed or replaced on or after August 16, 2002, with a protective wrapping and coating. You must also cathodically protect such buried piping installations or otherwise satisfy the corrosion protection standards for piping in 40 CFR 280 or a State program approved under 40 CFR 281. If a section of buried line is exposed for any reason, you must carefully inspect it for deterioration. If you find corrosion damage, you must undertake additional examination and corrective action as indicated by the magnitude of the damage.

112.8(d)(2) Cap or blank-flange the terminal connection at the transfer point and mark it as to origin when piping is not in service or is in standby service for an extended time.

112.8(d)(3): Properly design pipe supports to minimize abrasion and corrosion and allow for expansion and contraction.

112.8(d)(4): Regularly inspect all aboveground valves, piping, and appurtenances. During the inspection you must assess the general condition of items, such as flange joints, expansion joints, valve glands and bodies, catch pans, pipeline supports, locking of valves, and metal surfaces. You must also conduct integrity and leak testing of buried piping at the time of installation, modification, construction, relocation, or replacement.

112.8(d)(5): Warn all vehicles entering the facility to be sure that no vehicle will endanger aboveground piping or other oil transfer operations.

All aboveground piping is inspected for abrasion and corrosion as part of the monthly AST inspections (Section 8). When piping is not in service or in standby status, it is capped or blank-flanged and marked, or physically removed from the fuel system altogether. Piping supports have been designed and constructed in accordance with good engineering practice to minimize the potential for abrasion and corrosion and to allow for expansion and contraction. All buried fuel piping that has been installed on or after 16 August 2002 is protected from corrosion with protective wrapping and/or protective coating and/or a cathodic protection system. Any section of buried fuel piping that is exposed for any reason is carefully inspected for signs of corrosion or deterioration. If corrosion damage is found the required repairs will be made.

No ASTs located at the Mark Center are at risk for vehicular damage. All ASTs are located within enclosed facilities, away from driveways and roads to minimize the potential for vehicular damage. Appropriate signage is located near aboveground piping in order to warn vehicles of its location.

APPENDIX A - CERTIFICATION OF SUBSTANTIAL HARM DETERMINATION

CERTIFICATION OF SUBSTANTIAL HARM DETERMINATION

Facility Name: WHS Mark Center
Facility Address: 4800 Mark Center Drive
Alexandria, VA 22311

1. Does the facility transfer oil over water to or from vessels and does the facility have a total oil storage capacity greater than or equal to 42,000 gallons?

Yes No

2. Does the facility have a total oil storage capacity greater than or equal to 1 million gallons and does the facility lack secondary containment that is sufficiently large to contain the capacity of the largest aboveground oil storage tanks plus sufficient freeboard to allow for precipitation within any aboveground oil storage tank area?

Yes No

3. Does the facility have a total oil storage capacity greater than or equal to 1 million gallons and is the facility located at a distance (as calculated using the appropriate formula in Attachment C-III to this appendix or a comparable formula) such that a discharge from the facility could cause injury to fish and wildlife and sensitive environments?

Yes No

4. Does the facility have a total oil storage capacity greater than or equal to 1 million gallons and is the facility located at a distance (as calculated using the appropriate formula in Attachment C-III to this appendix or a comparable formula) such that a discharge from the facility would shut down a public drinking water intake?

Yes No

5. Does the facility have a total oil storage capacity greater than or equal to 1 million gallons and has the facility experienced a reportable oil spill in an amount greater than or equal to 10,000 gallons within the last 5 years?

Yes No

Certification

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document, and that based on my inquiry of those individuals responsible for obtaining this information, I believe that the submitted information is true, accurate, and complete.

Signature: _____

Date: _____

Name (printed or typed): _____

Title: _____

APPENDIX B- FIGURES



Figure B-1. 150-gallon AST in Generator Room B2M28



Figure B-2. 200-gallon AST in Generator Room B2M28



Figure B-3. Drainage grate in Generator Room B2M28



Figure B-4. Fuel Oil Polisher in Generator Room B2M28



Figure B-5. 200-gallon AST in Generator Room B2M28



Figure B-6. Alarm System for all USTs and ASTs under WHS control at Mark Center



Figure B-7. Veeder Root Monitoring Panel for USTs and ASTs under WHS control at Mark Center



Figure B-8. 200-gallon AST in Generator Room B2M24



Figure B-9. Facility Tank Truck Unloading Area



Figure B-10. Suction system and piping chamber



Figure B-11. Tank Truck Unloading Area drains to storm sewer with valves open²



Figure B-12. Exterior vents for ASTs outside Generator Room B2M24

² Valves were closed during site visit on 4 October 2011.



Figure B-13. Exterior vents for ASTs



Figure B-14. 400-gallon AST in Fuel Room 16H26



Figure B-15. Concrete berm as tertiary containment in Fuel Room 16H26



Figure B-16. 200-gallon Hydraulic Oil AST in Elevator Machine Room B2H01



Figure B-17. 125-gallon Hydraulic Oil AST in Elevator Machine Room DL-06

APPENDIX C - FACILITY SPILL REPORT FORM

FACILITY SPILL REPORT FORM

Date: _____

Prepared By: _____

Date and Time of Spill: _____

Location of Spill: _____

Written Description of Spill: _____

Possible Affected Water Bodies: _____

Suspected Quantity of Spilled Material: _____

Description of Spilled Material: _____

Corrective Actions Taken: _____

Plan for Preventing Recurrence: _____

Agency	Phone Number	Date	Time
WHS Environmental Branch Manager			
Mark Center Property Manager			
Mark Center Safety/Security Officer			
Virginia Department of Environmental Quality	703-583-3800		
EPA National Response Center	800-424-8802		

Note: A copy of this Spill Report must be maintained in the SPCC Plan for a period of three years from the date of the spill.

APPENDIX D - SPILL RESPONSE EQUIPMENT INSPECTION LOG

APPENDIX E - AST INSPECTION CHECKLIST

MONTHLY AST INSPECTION CHECKLIST

Inspection Date: _____

Tank ID: _____

Inspector Name: _____

Location: _____

Item	Status (Y/N)	Comments
Tank Containment		
Water in primary tank, secondary containment, interstice, or spill container?		
Debris or fire hazard in containment?		
Drain valves operable and in a closed position?		
Containment egress pathways clear and gates/doors operable?		
Leak Detection		
Visible signs of leakage around the tank, concrete pad, containment, ringwall, or ground?		
Tank Attachments and Appurtances		
Ladder and platform structure secure with no signs of severe corrosion or damage?		
Tank liquid level gauge readable and in good condition?		
Tank openings properly sealed?		
Other Conditions		
Other conditions that should be addressed for continued safe operation or that may affect the site SPCC Plan?		

APPENDIX F - SPILL RESPONSE TRAINING LOG

SPILL RESPONSE TRAINING RECORD

Instructor: _____

Date: _____

Topic: _____

Printed Name	Signature	Department	Previous Spill Training (Y/N)

APPENDIX G - SECONDARY CONTAINMENT DRAINAGE LOG

APPENDIX H – REGULATORY CROSS REFERENCE

Regulatory Cross Reference Matrix		
Citation	Brief Description	Plan Section
40 CFR Part 112.7		
	Petroleum Storage Information	
(a)(3)	Physical Layout of the Facility	2.3
(a)(3)(i)	Petroleum Storage Inventory	3.1
(a)(3)(ii)	Discharge Prevention Measures	3.3
(a)(3)(iii)	Discharge or Drainage Controls	3.1
(a)(3)(iv)	Countermeasures for Discharge Recovery	4.1
(a)(3)(v)	Methods of Disposal for Recovered Materials	4.2
(a)(3)(vi)	Contact List and Phone Numbers	2.2, 5
(a)(4)	Discharge Reporting Responsibilities	5
(a)(5)	Discharge Emergency Response Procedures	5
(b)	Potential Spill Predictions, Volumes, Rates, and Control	6
(c)	Discharge Prevention, Diversionary Structures and Containment	7.1
(d)	Impracticability of Secondary Containment	7.2
(e)	Inspection, Tests, and Records	8
(f) (1-3)	Personnel Training and Discharge Spill Prevention Procedures	9
(f)(1)	Personnel Instructions	9
(f)(2)	Designated Person Accountable for Discharge Prevention	9
(f)(3)	Discharge Prevention Briefings	9
(g)	Site Security	11
(h)(1-3)	Loading/Unloading Operations	10
(h)(1)	Adequate Secondary Containment for Vehicles	10
(h)(2)	Warning or Barrier System for Vehicles	10
(h)(3)	Vehicles Examined for Lowermost Drainage Outlets	10
(i)	Brittle Fracture or Other Catastrophe of Field-Constructed Tanks	N/A
(j)	Conformance with Other Applicable Requirements	12
(k)	Qualified Oil-Filled Operational Equipment	N/A
40 CFR Part 112.8		
(b)(1-5)	Drainage Control	13
(b)(1)	Drainage from Diked Storage Areas	13
(b)(2)	Valves Used on Diked Storage Areas	13
(b)(3)	Plant Drainage Systems from Undiked Areas	13
(b)(4)	Final Discharge of Drainage	13
(b)(5)	Facility Drainage Systems and Equipment	13
(c)(1-11)	Bulk Storage Tanks/Secondary Containment	
(c)(1)	Tank Compatibility with Its Contents	14
(c)(2)	Diked Area Construction and Containment Volume for Storage Tanks	7
(c)(3)	Diked Area Inspection and Drainage of Rainwater	13

Regulatory Cross Reference Matrix		
Citation	Brief Description	Plan Section
(c)(4)	Corrosion Protection of Buried Metallic Storage Tanks	N/A
(c)(5)	Corrosion Protection of Partially Buried Metallic Tanks	N/A (14)
(c)(6)	Aboveground Tank Periodic Integrity Testing	8
(c)(7)	Control of Leakage Through Internal Heating Coils	N/A (14)
(c)(8)	Liquid Level Sensing Devices	3.1
(c)(9)	Observation of Disposal Facilities for Effluent Discharge	N/A
(c)(10)	Visible Oil Leak Corrections from Tank Seams and Gaskets	14
(c)(11)	Appropriate Position of Mobile or Portable Oil Storage Tanks	N/A
(d)(1-5)	Facility Transfer Operations, Piping, and Pumping	15
(d)(1)	Buried Piping Installation Protection and Examination	15
(d)(2)	Not-In-Service and Standby Service Terminal Connections	15
(d)(3)	Pipe Supports Design	15
(d)(4)	Aboveground Valve and Pipeline Examination	15
(d)(5)	Aboveground Piping Protection from Vehicular Traffic	15
	Written Spill Report Guidelines	
40 CFR 112.4(a); 112.4(c)	Amendment of SPCC Plans by Regional Administrator	4.1