Fort Belvoir
Spill Prevention, Control, and Countermeasure Plan

Prepared for:

Fort Belvoir
Directorate of Public Works
Environmental Division

Prepared by:

Water Resources Division
Army Public Health Center
ATTN: MCHB-IP-ESW, Building E-1675
5158 Blackhawk Road
Aberdeen Proving Ground, MD 21010-5403

September 2017

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ENGINEER'S CERTIFICATION

I, Kevin R. Russell, attest by means of this certification:

- That I am familiar with the requirements of 40 CFR 112;
- That I have visited and examined the facility;
- That this Spill Prevention, Control, and Countermeasure Plan has been prepared in accordance with good engineering practice, including consideration of applicable industry standards, and the requirements of 40 CFR 112;
- That procedures for required inspections and testing have been established;
- That this Plan is adequate for the facility;
  and
- Pursuant to Virginia Administrative Code, based on my evaluation, I hereby certify that each secondary containment structure for Fort Belvoir is in compliance with the applicable requirements of 40 CFR Part 112, the Uniform Statewide Building Code and its referenced model codes and standards, and 29 CFR 1910.106.

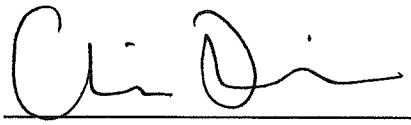
Kevin R. Russell — 26 Sep 17

Kevin R. Russell, PE Date

State of Maryland Professional Engineer
Certificate No. 0028442

MANAGEMENT APPROVAL

This Spill Prevention, Control, and Countermeasure Plan for Fort Belvoir has my full approval, and I am at a level of authority to commit the necessary resources to implement this plan.



20 04 17

CHRISTOPHER TOMLINSON
Lieutenant Colonel, U.S. Army
Commanding

Date

REVISION TRACKING FORM

Date	Revision Number	Plan Section	Description
Feb 2017		All	Changed format, included 55-gallon drum storage areas, non-oil chemical containers, new construction

Note: Non-technical revisions, such as changes in contact information, do not require PE Certification.

In accordance with 40 CFR 112.5(b), this Plan shall be reviewed at least once every five years. If there are no changes to the Plan, the DPW Environmental Division Chief will certify the following statement:

"I have completed a review and evaluation of this SPCC Plan for Fort Belvoir and will not amend the Plan as a result."

Signed: _____

Felix Mariani, DPW Environmental Division Chief

Date: 26 Sep 2017

40 CFR 112 CROSS REFERENCE TABLE

Final SPCC Rule	Rule Requirement	Equivalent Section
§ 112.3(d)	PE certification	Engineer's Certification
§ 112.3(e)(1,2)	Facility maintains copy of plan	1.0
§ 112.3(f)	Extension of time	6.0
§ 112.4	Submittal requirements to the EPA Region II administrator	4.1
§ 112.5(a)	Updating requirements	4.1
§ 112.5(b)	Plan reviewed at least once every five years	4.1
§ 112.7	Cross-reference table to the parts of the regulation	Cross Reference Table
§ 112.7	Facility management approval	Management Approval
§ 112.7(a)(1,2)	Conformance with the regulations, details on equivalent environmental protection	4.2, 4.8, 4.9, 5.9
§ 112.7(a)(3)(i)	Plot plan showing the location and contents of each container, exempted USTs, piping, and transfer station	Figure 2.1, Figures in Section 5
§ 112.7(a)(3)(ii)	Discharge prevention and product handling	4.13, 5.x.2*
§ 112.7(a)(3)(iii)	Discharge controls and secondary containment	4.7, 5.x.3*
§ 112.7(a)(3) (iv-vi)	Discharge countermeasures, disposal, and notification	4.7
§ 112.7(b)	Prediction of potential discharge (direction, rate of flow, amount)	Figure 2.1, Figure 2.2, 5.x.5*
§ 112.7(c)	Secondary containment	4.11, 5.x.3*
§ 112.7(d)	Contingency planning	4.7, 5.9
§ 112.7(e)	Inspections, tests, and records	4.5, 4.8, 4.9, 5.x.4*

*Note that "5.x" indicates a subsection in each Container Area described under Section 5 of the Plan.

40 CFR 112 CROSS REFERENCE TABLE (Continued)

Final SPCC Rule	Rule Requirement	Equivalent Section
§ 112.7(f)(1)	Personnel training program requirements	4.3
§ 112.7(f)(2)	Accountability for discharge prevention	1.0
§ 112.7(g)	Security	4.4
§ 112.7(h)	Loading/unloading	5.x.2*
§ 112.7(i)	Brittle fracture evaluation requirements	N/A
§ 112.7(j)	Conformance with State requirements	N/A
§ 112.7(k)	Qualified oil-filled operational equipment	5.9, 5.12
§ 112.8(b)	Facility drainage	2.3, Figures 2.1-2.7, 4.11
§ 112.8(c)(1)	Compatible bulk storage containers	2.1
§ 112.8(c)(2)	Bulk storage containers secondary containment	2.1, 5.x.3*
§ 112.8(c)(3)	Requirements for drainage of diked areas	4.10
§ 112.8(c)(4)	Cathodic protection for buried tanks	N/A
§ 112.8(c)(5)	Cathodic protection for partially buried tanks	N/A
§ 112.8(c)(6)	Inspections and integrity testing for aboveground containers	4.8, 4.9, 5.x.4*
§ 112.8(c)(7)	Monitor internal heating coils	N/A
§ 112.8(c)(8)	High level alarm requirements	5.x.2*
§ 112.8(c)(9)	Observe effluent treatment facilities	N/A
§ 112.8(c)(10)	Correct visible discharges	4.7
§ 112.8(c)(11)	Locate mobile containers in secondary containment	4.9
§ 112.8(d)	Facility transfer operations, pumping, and facility process	4.13, 4.8
§ 112.20(e)	Certification of Substantial Harm Criteria	3.0, Appendix B

*Note that “5.x” indicates a subsection in each Container Area described under Section 5 of the Plan.

1.0 INTRODUCTION

The Oil Pollution Prevention regulations, administered under the authority of the United States Environmental Protection Agency (US EPA), require certain facilities to prepare and implement a Spill Prevention, Control, and Countermeasure (SPCC) Plan to reduce or eliminate oil discharges to navigable waters of the United States. SPCC Plans document regulated containers at a facility and the inspection, testing, and maintenance procedures for those containers. The SPCC Plan also contains information regarding emergency response actions.

This document is the SPCC Plan (or Plan) for Fort Belvoir, located near Alexandria, Virginia. This Plan has been prepared in accordance with 40 CFR 112 as amended. This Plan includes references to industry standards that apply to containers at Fort Belvoir, and has been certified by a Professional Engineer registered in the State of Maryland.

Section 2.0 describes the installation and the surrounding area. The applicability of the SPCC regulations is described in Section 3.0. Section 4.0 contains general information required to be in any approved SPCC Plan. Facility contacts and spill response procedures are located in Section 4.7. Section 5.0 describes individual container storage areas. Section 6.0 contains the schedule for implementing any required facility changes.

The SPCC Program Manager in the Directorate of Public Works (DPW), Environmental Division, is responsible for maintaining this Plan and discharge prevention. A copy of this Plan is maintained onsite in the DPW Environmental Division Office. The container areas in Section 5 also have copies of their respective sections.

2.0 FACILITY DESCRIPTION

2.1 General Information

Fort Belvoir is on an 8,700-acre plot along the western bank of the Potomac River. The installation is about 11 miles southwest of Alexandria, 14 miles southwest of Washington, D.C, and 95 miles north of Richmond, Virginia.

Fort Belvoir's primary mission is to provide support services to activities and tenants located at Fort Belvoir and throughout the National Capital Region. The mission includes: regional administrative, logistics, recreation, housing, and contingency military support.

Fort Belvoir is located in Fairfax County, near Alexandria, Virginia, at 38° 41' North latitude; 77° 08' West longitude.

The following SPCC-regulated oils are used on Fort Belvoir:

- Gasoline
- Diesel
- Heating Oil
- Kerosene
- JP8
- Engine Oil
- Hydraulic Oil
- Grease
- Mineral Oil
- Vegetable Oil and Grease
- Used Oils and Sludges

These products are stored in a variety of containers including underground storage tanks (USTs), aboveground storage tanks (ASTs), electrical operating equipment, emergency generator day tanks, 55-gallon drums, and smaller containers. All containers that hold 55-gallons or more of SPCC-regulated oils are considered SPCC-regulated containers with the exception of regulated USTs, see section 2.2 below. Appendix A lists specific information for the SPCC regulated containers at Fort Belvoir. All of the regulated containers are designed to be compatible with the materials stored and operate at ambient temperatures and pressures. Secondary containment structures are sufficiently impervious to the oils they are intended to contain. No containers use internal heating coils. Fort Belvoir does not have any field-constructed

tanks. Fort Belvoir is a RCRA large quantity generator and, therefore, requires a RCRA contingency plan. Building 1495 is the RCRA less than 90-day storage facility. It has a RCRA Contingency Plan, prepared October 2014. Also, there are no polychlorinated biphenyl (PCB) oil storage containers or PCB-containing devices (transformers, ballasts, etc.) onsite.

2.2 Containers Not Covered By this Plan

Containers owned and operated by contractors temporarily working on Fort Belvoir property are not covered by this Plan. Such containers may include fuel tanker trucks or ASTs temporarily brought onto Fort Belvoir. Each contractor is responsible for determining SPCC applicability and developing a site-specific Plan if necessary. Although not included in the SPCC Plan, related spill response activities may still involve Fort Belvoir personnel.

USTs subject to all the technical requirements of 40 CFR 280 (see Appendix A, Table A-2) are exempt from all SPCC requirements. However, they must be shown on the Containers and Drainage Maps (Figures 2.2 to 2.7) and are listed in Table A-2 in Appendix A. There is one UST (2849D) listed in the Appendix that was installed but has never been used and will never be used. However, it was pre-registered as an UST. This tank could be removed from all listings and maps if the registration was nullified.

There are oil/water (O/W) separators at various locations on Fort Belvoir. The O/W separators are slow flow, gravity separation chambers used for primary treatment of industrial wastewater to remove free oil, grease, and fuel. Treated effluent discharges to the sanitary sewer system. The collected oil is periodically removed by a contractor. DPW personnel conduct periodic inspections and maintenance on the O/W separators to ensure proper operation. These O/W separators are exclusively used for wastewater treatment and are excluded from regulation by 40 CFR 112.

Amendments to 40 CFR 112 (from 26 December 2006) exempt all “motive power” containers (such as vehicle gas tanks) from SPCC Plan requirements. DoD recommends that the containment methods listed under 40 CFR 112.7(c) be employed as much as practicable for vehicle gas tanks and other such tanks over the 55-gallon threshold. Spills from these types of sources can be addressed under the description of undiked areas. Fort Belvoir operates equipment affected by this guidance including tactical vehicles, construction vehicles, and tractor-trailer trucks. (See Section 4.11 for more details regarding Undiked Areas).

Fort Belvoir is also responsible for satellite locations, including Rivanna and the Mark Center, that are geographically distinct and effectively not under direct management of daily operations. These are considered separate facilities for SPCC Plan purposes. These sites have their own SPCC Plans as required by 40 CFR 112. The NGA also has a separate SPCC Plan but this satellite location is closer and more directly linked to the Fort Belvoir Garrison and is thus included in this SPCC Plan too. Copies of the satellite location SPCC Plans are in Appendix I.

2.3 Navigable Waters

Fort Belvoir is surrounded on its eastern, western, and southern borders by the Potomac River and its tributaries, Dogue Creek, and Accotink Creek (which widens into Accotink Bay and Gunston Cove). Drainage discharges to Dogue Creek or Accotink Creek (through Gunston Cove) and eventually discharges to the Potomac River and then the Chesapeake Bay. Various towns in Fairfax County discharge municipal storm water to Dogue Creek and Accotink Creek upstream of Fort Belvoir. See Fort Belvoir Area Overview Map, Figure 2.2 for details.

Some of Fort Belvoir's territory is within a recognized flood zone. The Federal Emergency Management Agency maps of the 1 percent annual likelihood flood area (also known as the 100-year flood) include areas near Accotink Creek (including the entire northeast side of Davison Army Airfield, portions of Pohick Road and nearly up to Building 1495, the RCRA less than 90-day facility) on Fort Belvoir's main cantonment area western boundary, near the Potomac River on the southern end of Fort Belvoir (300-Area pier) and the eastern bank of Dogue Creek (near the marina) in the easternmost portion of Fort Belvoir.

Figure 2.1 Fort Belvoir Area Overview Map

UNITED STATES ARMY PUBLIC HEALTH CENTER (PROV) ABERDEEN PROVING GROUND, MARYLAND	Fort Belvoir Map Area Overview APHC ARMY PUBLIC HEALTH CENTER (Provisional) Prepared by APHC (Prov) GIS Branch Last Update: August 2016	N W E S	0 0.250.5 1 1.5 Km

Figure 2.2 Fort Belvoir Containers and Drainage Map (Area 1)

Figure 2.3 Fort Belvoir Containers and Drainage Map (Area 2)

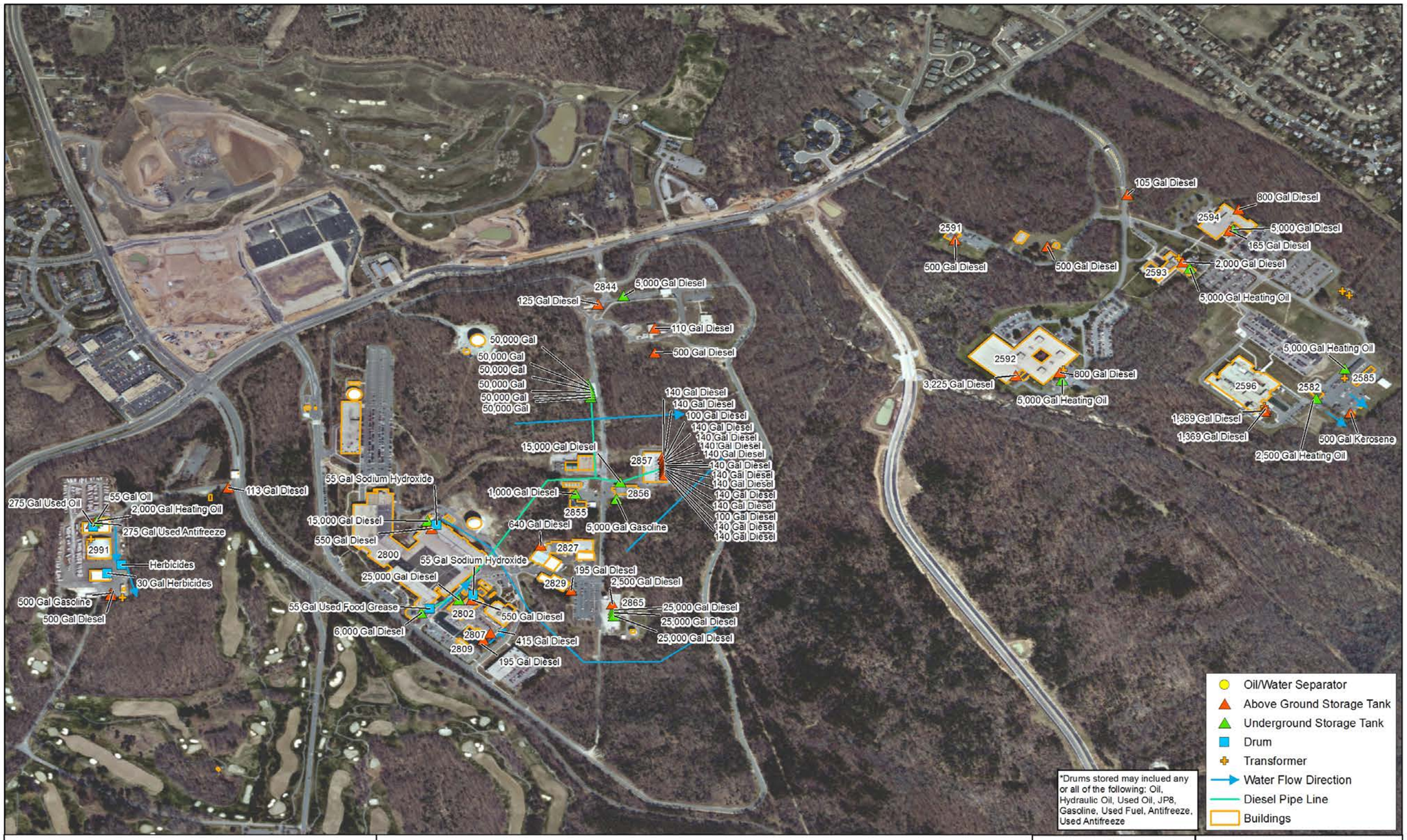


Figure 2.4 Fort Belvoir Containers and Drainage Map (Area 3)

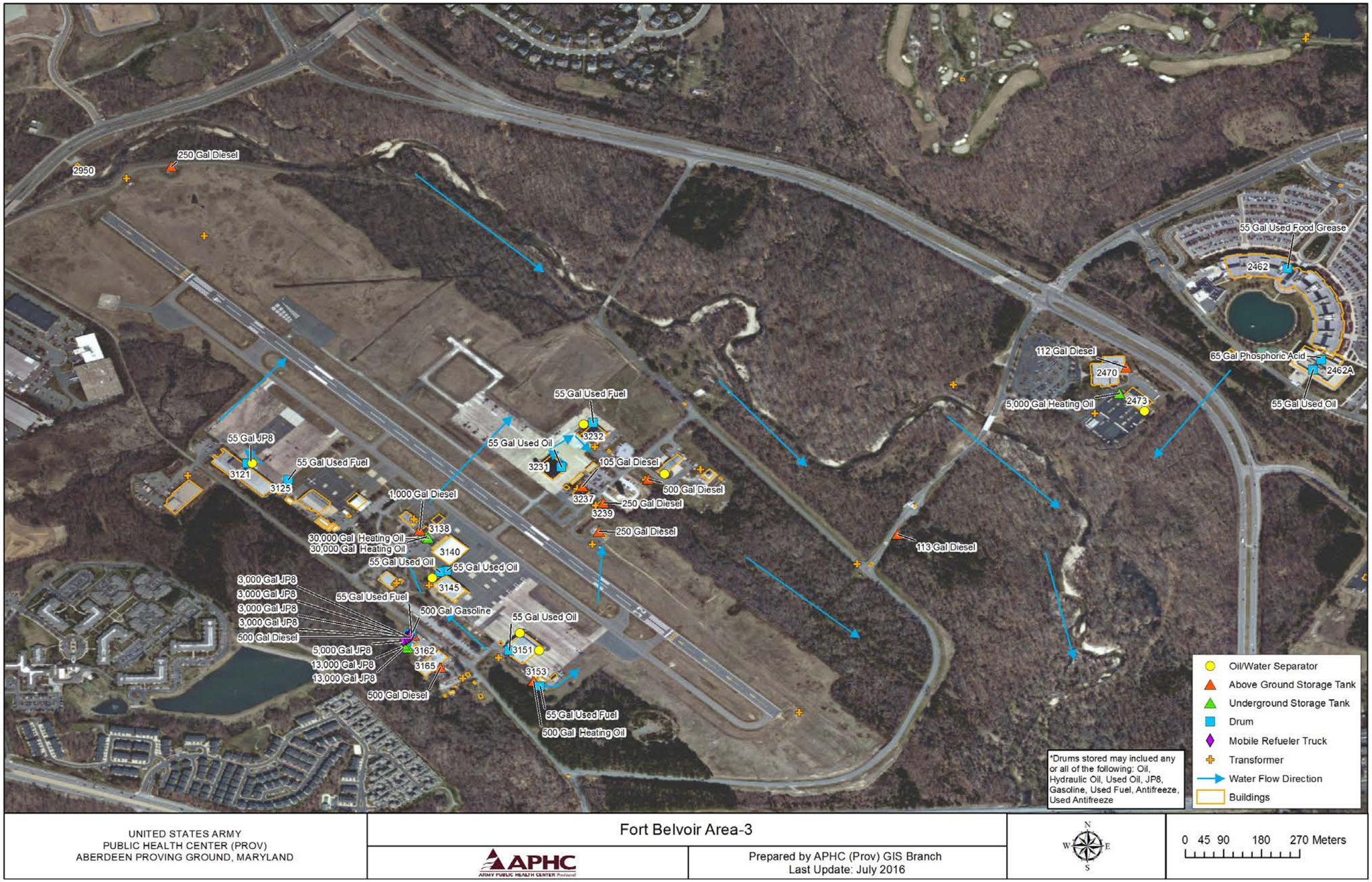


Figure 2.5 Fort Belvoir Containers and Drainage Map (Area 4)

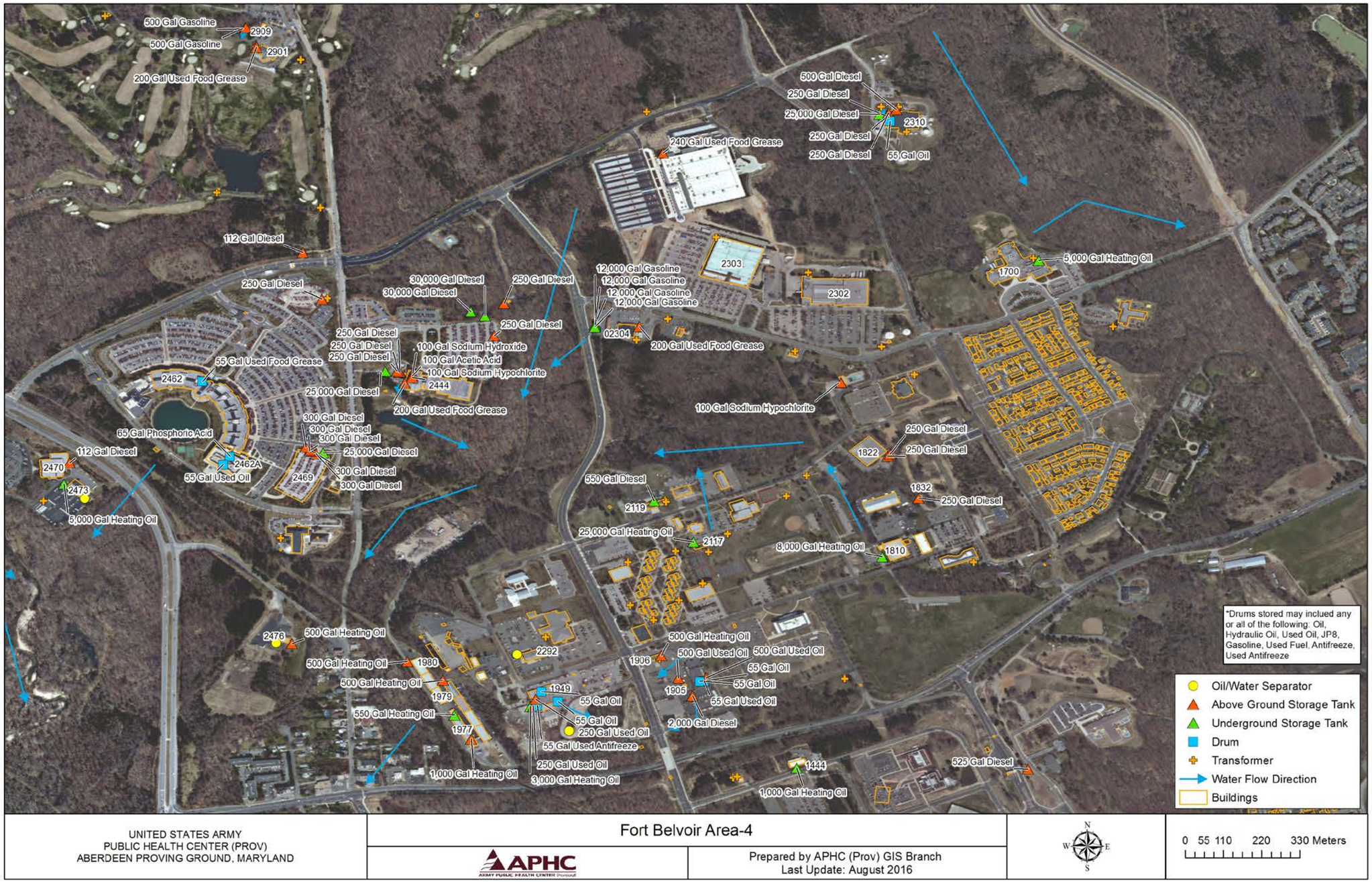
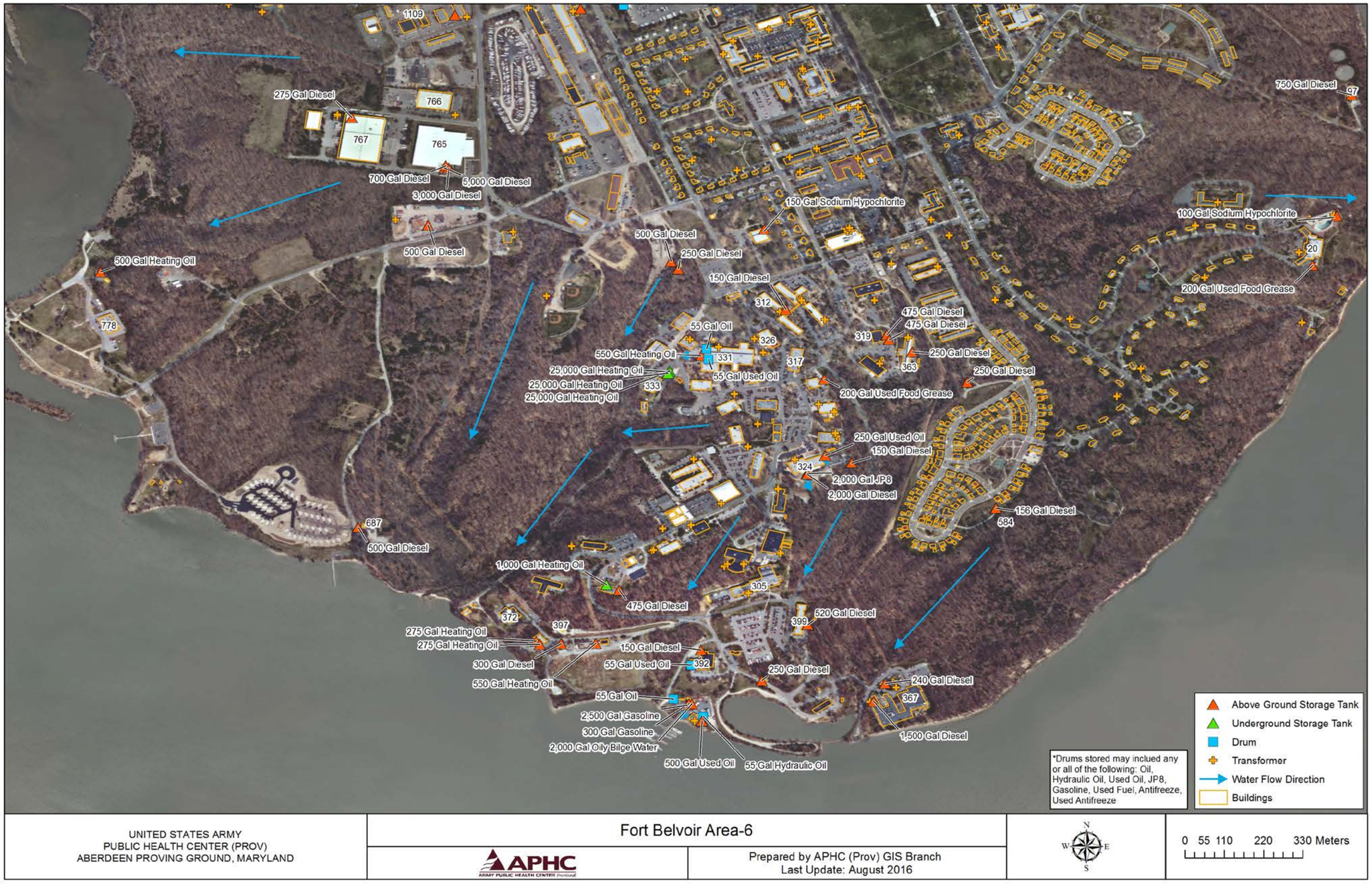


Figure 2.6 Fort Belvoir Containers and Drainage Map (Area 5)

Figure 2.7 Fort Belvoir Containers and Drainage Map (Area 6)



3.0 APPLICABILITY DETERMINATION

According to 40 CFR 112.1, Fort Belvoir requires an SPCC Plan. The facility-wide aboveground oil storage capacity totals more than 1,320 gallons, and oil discharges could reach navigable waters.

Army Regulation (AR) 200-1, chapter 11, paragraph 11-4b(2) states, “Ensure that the SPCC Plan addresses secondary containment (or lack thereof) at oil and hazardous material storage facilities.” This Plan includes hazardous materials storage sites.

40 CFR 112.20(e) requires that affected facilities determine their potential to cause substantial harm and file a Facility Response Plan with the EPA Regional Administrator, if necessary. Figure 3.1 shows the Flowchart of Criteria for Substantial Harm from Attachment C-1, Appendix C, 40 CFR 112. This flowchart asks several questions regarding facility processes and storage capacity. As required by 40 CFR 112.20(e), the Certification of the Applicability of the Substantial Harm Criteria is included in Appendix B of this Plan. Fort Belvoir has less than one million gallons of oil storage capacity (approximately 700,000 gallons) and does not transfer oil over water to/from vessels and does not pose a threat of substantial harm to fish and wildlife, a sensitive environment, or a drinking water intake. Therefore, a Facility Response Plan is not required.

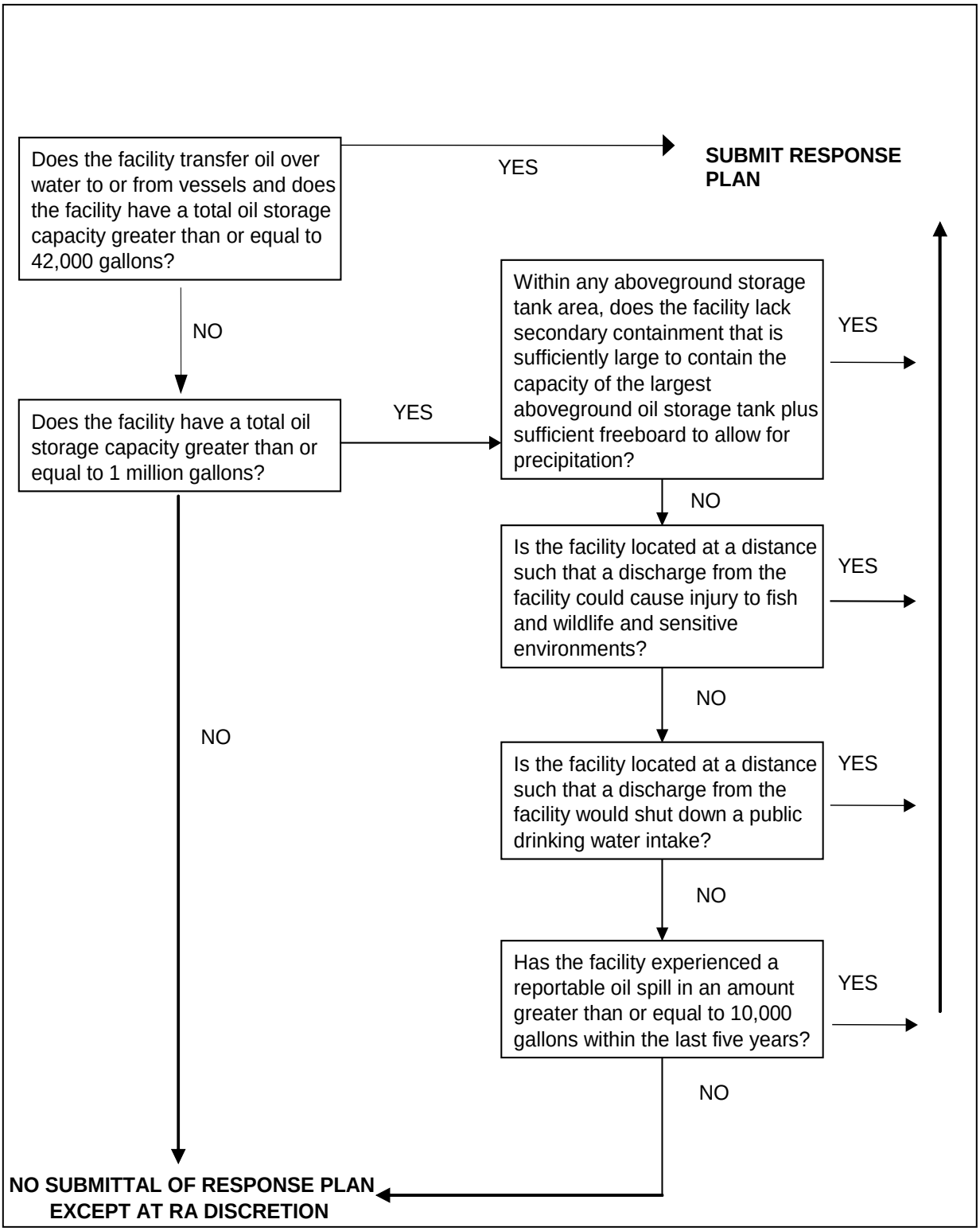


Figure 3.1 Substantial Harm Criteria Flowchart

4.0 GENERAL PLAN REQUIREMENTS

4.1 Plan Review and Submittal

This Plan must be reviewed and evaluated at least once every five years. This Plan must be amended within six months of the review if more effective, field-proven prevention and control technologies that would significantly reduce the likelihood of a discharge are available at the time of the review. If there are any technical amendments to the Plan, then a Professional Engineer must recertify it. Technical amendments include physical modifications, or changes in facility procedures. If all changes are non-technical (e.g., contact name, phone number, container identification number, etc.), DPW Environmental personnel can review the Plan and sign the revision tracking form on page v.

This Plan must also be updated whenever there is a change in the facility design, construction, operation, or maintenance that materially affects its discharge potential. These types of changes include, but are not limited to, commissioning or decommissioning containers; replacement, reconstruction, or movement of containers; reconstruction, replacement, or installation of piping systems; construction or demolition that might alter secondary containment structures; changes of product or service; or revision of standard operation or maintenance procedures. Movement of containers within an area that does not increase either the likelihood or the potential severity of a discharge would not require an update to the Plan.

Required Plan amendments must be prepared within six months of the change in operation, and implemented as soon as possible, but not later than six months following preparation of the amendment. The revisions page at the beginning of this Plan must be updated to include all technical and non-technical changes to the Plan.

A report must be submitted to the US EPA Regional Administrator only if Fort Belvoir has:

- Discharged more than 1,000 gallons of oil in a single discharge or
- Discharged more than 42 gallons of oil in each of two discharges, occurring within any twelve-month period.

40 CFR 112.4(a) lists the information that must be submitted to the US EPA Regional Administrator no more than 60 days from the date of the discharge that required the submittal. This required information is also presented in Appendix C. The Regional Administrator may also require that the SPCC Plan be submitted for review.

4.2 Conformance with Federal, Army, and Commonwealth of Virginia Regulations

The main purpose of this Plan is to comply with the requirements of 40 CFR 112. However, Army Regulation (AR) 200-1, chapter 11, paragraph 11-4b(2) states, “Ensure that the SPCC Plan addresses secondary containment (or lack thereof) at oil and hazardous material storage facilities.” So this Plan also includes hazardous material storage sites.

The Commonwealth of Virginia has additional requirements [9 Virginia Administrative Code (VAC) 25-91] more stringent than the Federal requirements in regards to ASTs and spill contingency plans. ASTs in Virginia are required to be registered with the state; the DEQ must be notified of major repairs or changes to ASTs; AST operator inspectors require additional training; AST closures must include a site assessment to evaluate potential soil, surface water, or groundwater contamination; secondary containment must be evaluated and certified by a PE; and ASTs must also have storage capacity, product stored, and tank identification number labeled on the tank. All of these requirements are applicable only to ASTs with volumes of greater than 660 gallons that are not an integral part of an emergency generator (base tank, belly tank). Section 4.7, Inspection and Testing includes additional requirements and exclusions.

4.3 Personnel Training

As required by 40 CFR 112.7(f)(1 and 3), oil handling personnel are trained to prevent discharges. Fort Belvoir conducts SPCC Plan training on an annual basis for all oil-handling personnel. This training includes a review of this SPCC Plan, applicable pollution control laws, spill response procedures, inspection and recordkeeping requirements, and the spill history for Fort Belvoir. Personnel also receive specific training in petroleum product handling procedures and equipment maintenance and operation. Fort Belvoir Directorate of Logistics (DOL) personnel responsible for fuel transfers receive additional training commensurate with their specific job requirements. Records of additional training are maintained by individual units or activities. The additional training may include:

- Occupational Safety and Health Administration (OSHA) Hazardous Waste Operations and Emergency Response (29 CFR 1910.120),
- OSHA Hazard Communication Standard (29 CFR 1910.1200),
- OSHA Process Safety Standard (29 CFR 1910.119),

- Resource Conservation and Recovery Act (RCRA) Personnel Training (40 CFR 265.16),
- RCRA Waste Handling / Emergency Procedures (40 CFR 262.34(d)), and
- Department of Transportation Hazardous Materials Training (49 CFR 172, Subpart H).

Further training for personnel inspecting ASTs is required by 9VAC25-91. The training must include occupational safety, hazard recognition, personnel protection, facility operations, and procedures for conducting inspections, evaluating AST condition, and responding to identified hazards.

4.4 Security

Fort Belvoir is a fenced military installation. Access requires positive identification and all vehicles are subject to random searches. This level of security helps ensure that oil storage areas are only accessed by authorized personnel. In addition, military police conduct roving patrols throughout the installation. All pump starter controls are locked off when not in use and are only accessible to authorized personnel. Outdoor fuel dispensers are disabled after operating hours. All container areas have adequate facility lighting.

4.5 Recordkeeping

DPW Environmental maintains regular inspection and test records in accordance with 40 CFR 112.7(e); these records are maintained for a minimum of three years. DPW Environmental also maintains inspection and testing records for certified inspections for the life of the container. General inspection and testing procedures for containers are described in more detail in Sections 4.8 and 4.9. Exceptions to the general procedures are identified in individual container area descriptions in Section 5 of this Plan.

4.6 Spill History

The Fort Belvoir spill history is maintained by DPW Environmental with dates, quantities, and corrective actions for all spills during the last five years. Records of all spills over 5 gallons, whether they are a reportable quantity or not, are maintained in the spill log. The spill log must be reviewed annually to assess spill response and evaluate existing procedures.

4.7 Spill Response

If a spill occurs, installation personnel follow the response, reporting, and cleanup procedures appropriate to the level of spill. Personnel, if properly trained and equipped to do so safely, will promptly correct and cleanup (using available absorbents or spill kits) any visible POL discharges less than 5 gallons which are still on an impervious surface. All POL spills of any size that contact the ground, surface water, storm drains, or the sanitary sewer; POL spills greater than 5 gallons; or any size spills of a hazardous material (even on impervious surfaces) are called in to the Fort Belvoir Fire Department immediately. Table 4.1 indicates the response for various spills. The Fort Belvoir Fire Department is the primary spill responder and can be reached on any installation phone by dialing 911.

Spill reporting may include notifications to the National Response Center (NRC), the Virginia Department of Environmental Quality (DEQ), the Virginia Emergency Response Commission, and Installation Management Command (IMCOM). The US EPA does not distinguish between types of oil, and any spill that causes a sheen upon "navigable waters" or that violates applicable water quality standards must be reported to the NRC (40 CFR 110.6). DPW Environmental is responsible for all reporting to external agencies. For Fort Belvoir, this means that the NRC must be called if an oil spill reaches Accotink Creek/Bay, Dogue Creek/Bay, the Potomac River, any associated wetlands, or their tributaries as shown on Figures 2.1 and 2.2.

Hazardous materials used at Fort Belvoir are listed in Appendix G. Their reportable quantities (RQs) and largest container sizes are also listed. One herbicide monosodium methanearsonate (known as MSMA) at the Golf Course (Building 9293) and sodium hypochlorite solutions at Buildings 2444 and 5104 are stored in large enough containers to potentially require reporting. It should be noted that there are also some hazardous materials that may not have RQs established, and that spills below the RQ for some hazardous materials could still cause environmental harm.

Table 4.1a Spill Response and Reporting Procedures

Spill Volume	Response	Reporting
Hazardous Material Less than RQ or still on impervious surface within containment	Fire Department	DPW Environmental
Hazardous Material Greater than RQ that leaves containment	Fire Department	NRC, Virginia DEQ, Virginia Department of Emergency Management, IMCOM, DPW Environmental
Less than 5 gallons of POL contained on impervious surface	Onsite Personnel	None
Greater than 5 gallons of POL contained on impervious surface	Onsite Personnel and Fire Department	DPW Environmental
Any amount of POL that reaches ground surface	Fire Department	DPW Environmental
Any amount of POL that reaches a navigable water	Fire Department	NRC, Virginia DEQ, DPW Environmental
Greater than 25 gallons of POL in a single event	Fire Department	NRC, Virginia DEQ, DPW Environmental
Spill to Sewer System	Fire Department	Fairfax County Lower Pollution Control Plant

Table 4.2 Spill Reporting Agencies

Agency		Phone
National Response Center		(800) 424-8802
Virginia DEQ		(703) 583-3800
Virginia Department of Emergency Management		(800) 468-8892
Fairfax County Virginia Fire Department	Woodlawn	911 or (703) 780-0110
	Gunston	911 or (703) 339-5970
Fairfax County Lower Pollution Control Plant		(703) 323-1211
IMCOM		(404) 464-0709
Fort Belvoir Fire Department		911 or (703) 806-1800
Fort Belvoir DPW Environmental		(703) 806-3694 or (703) 806-0020 or (703) 806-2119

The information in Table 4.3 should be reported after a spill. Spill response equipment is maintained throughout the installation, including the Fort Belvoir Fire Department [Buildings 191 (South), 2119 (North), 3237 (DAAF), and 5100 (NGA)], 300-Area Pier (Buildings 338 and 341), DPW Roads and Grounds (Building 1114), Capitalized Fuel Station (Building 1124), AAFES gas stations (Buildings 1135 and 2304), DPW motor pool (Building 1420), autocraft (Building 1462), less than 90-day storage facility (Building 1495), motor pools (Buildings 1949 and 1950), golf course (Building 2990), DAAF Fuel Point (Building 3161), NGA (Building 5103).

The Fire Department response trucks contain sufficient materials to respond to, safely contain, and completely clean-up a spill of 300 gallons. There are enough fully encapsulating protective suits for an entire shift to don simultaneously. Two overpack drums and side cabinets and boxes contain oil absorbent booms, sheets, pads, and socks. The hazmat trailers, which are not attached to the response trucks, have approximately double the amount of response equipment. The trailers are adequate for spills of 1,000 gallons. The Fire Department does not clean-up spills, they contain and control spills to maintain public safety. Spills are cleaned up by installation maintenance contractor personnel. Some areas also have separate maintenance contractors that include spill clean-up. For larger spills, the DPW Roads and Grounds has approximately five pallets of oil absorbent compounds as well as containers (steel drums, plastic drums, and overpack drums), tools (shovels, rakes, picks, etc.), and earthmoving equipment (bulldozers, backhoes, excavators, etc.). Oil spill response organizations (OSROs) can also be contracted if there is a large amount of cleanup required. The decision to call in OSROs would be made by the incident commander (the senior fire department officer on-scene). Funding mechanisms (approval, contracting, accounting, etc.) need to be set up to allow for potential emergency use (see Appendix H for OSRO contactors). Recovered oils are managed as used oil or used fuel if they can be separated in liquid form. Recovered oils that are mixed with soil are managed as non-hazardous regulated waste and as hazardous waste if contaminated with other chemicals (complex mixtures, unknowns, highly flammables/toxics, etc.). The DPW Environmental POL and Hazardous Waste Managers and RCRA less than 90-day facility personnel will make determinations on the management of spill related wastes. The Fairfax County Fire Department can be called to assist with complex or burning spills.

Table 4.3 Spill Reporting Information

Individual Reporting Spill		
Name and Address		**Fort Belvoir DPW Environmental Division (IMBV-PWE) U.S. Army Garrison Fort Belvoir, VA 22060**
Phone		
Date and time of spill		
Type of material discharged		
Location of the spill		
Quantity discharged (estimate) and time/duration of the event		
Name of any surface water involved or threatened		
The source of the discharge		
Description of all affected media (soil, water, vegetation)		
Cause of the discharge		
Possible hazards to the environment		
Any damages or injuries caused by the discharge		
Any known or anticipated health risks associated with the incident		
Actions being used to stop, remove, and mitigate the effects of the discharge		
Whether an evacuation may be needed		
Individuals or organizations contacted		
Name	**Organization**	**Time of Call**

4.8 Inspection and Testing

Inspection and testing of tanks is required by 40 CFR 112.8(c)(6). The inspection and testing procedures for regulated containers in this Plan are based on applicable industry standards. Mobile and portable tank (including 55-gallon drum) inspection and testing requirements are described in section 4.9. The Steel Tank Institute (STI) Standard SP001-05 (September 2011 revision) applies to stationary shop-built tanks. This standard requires combinations of periodic inspections by owners, certified inspections for the interior and exterior of ASTs, and certified integrity (leak) tests at varying intervals depending on the volume and structure of the AST and secondary containment. Integrity tests are not required for shop-built ASTs with double-walls and volumes of less than or equal to 5,000 gallons. Instead, the STI Standard calls for inspection of the interstitial space and verification of the leak detection system.

Monthly AST inspections include the full length of piping associated with the AST. This is a much greater frequency of piping inspection than required by American Petroleum Institute Piping Inspection Code 570 (every 5 years or as determined by risk based analysis). In addition, if underground piping becomes exposed during excavation, construction, or demolition, a visual inspection for corrosion is required. If corrosion is found, then immediate corrective measures are undertaken (such as protective wrapping and coating or pipe replacement) and further excavation is completed to more fully examine the piping. 40 CFR 112.8(c)(8)(v) also requires verification of liquid level sensors on all bulk storage containers, which are tested monthly. Table 4.4 shows the documented inspections required of all bulk storage tanks and piping. Inspection checklists are in Appendix G. Section 4.5 describes recordkeeping procedures.

Table 4.4a AST and Piping Inspection and Testing

Inspection/Test	Standard	Method	Frequency
Presence of water in primary tank	STI SP001-05, Appendix C	Sampling	Monthly
Presence of water, oil, or debris in secondary containment	STI SP001-05, Appendix C	Manual	Monthly
Operation of leak detection system	STI SP001-05, Appendix C	Manual	Monthly
Piping connections and openings properly sealed	STI SP001-05, Appendix C	Visual	Monthly

Inspection/Test	Standard	Method	Frequency
Drain valves operable and in closed position	STI SP001-05, Appendix C	Visual	Monthly
Operation of liquid level sensor	STI SP001-05, Appendix C	Manual	Monthly
Visible signs of leakage, corrosion, or damage	STI SP001-05, App C and API 570, App D	Visual	Monthly
Exterior and coating deterioration/corrosion/distortion	STI SP001-05, Appendix C	Visual	Yearly
Operation and cleanliness of operating and emergency vents	STI SP001-05, Appendix C	Visual	Yearly
Emergency vent gasket	STI SP001-05, Appendix C	Visual	Yearly
Proper drainage around tank	STI SP001-05, Appendix C	Visual	Yearly
Tank supports, pad, and foundation damage	STI SP001-05, Appendix C	Visual	Yearly
Tank grounding and electrical wiring	STI SP001-05, Appendix C	Visual	Yearly
Operation of overfill protection devices	STI SP001-05, Appendix C	Visual	Yearly
Certified STI Inspection (Not required of double-walled tanks - 5,000 gallons or less)	STI SP001-05, Appendix C	Enhanced visual and records review	20 Years

All ASTs with volumes greater than 660 gallons must also be inspected in accordance with Virginia regulation (9VAC25-91-130). There are two exclusions to this regulation that apply at Fort Belvoir: heating oil tanks, which only require the Virginia inspections at greater than 5,000 gallons; and tanks that are an integral part of a generator and the fuel is only used by the generator (e.g. belly tanks). Tanks 246D, 324R, 324T, 765A, 765B, 1114A, 1956B, 2810D, 3138J, and tanks 5104A to 5104G are required to meet these additional inspection requirements. The tanks listed above are exempt from Virginia requirements for inventory control and variability analysis, because the tanks and associated piping are completely off the ground [9VAC25-91-130.B.1(a)(1)]. The requirements, listed in Table 4.4b below, as well as those listed in Table4.4a above, will be met for each of these tanks.

Table 4.4b
Additional Inspection/Test Schedule for Tanks 246D, 324R, 324T, 765A, 765B, 1114A, 1956B, 2810D, 3138J, and Tanks 5104A to 5104G

Inspection/Test	Standard	Method	Frequency
Visual Inspection*	9VAC25-91-130.B.5.a	Visual	Daily
Visual Inspection#	9VAC25-91-130.B.5.b	Visual	Weekly
Pressure Testing of Piping	9VAC25-91-130.B.4.b	Hydrostatic or API 570	5 years

* - Daily inspections must include: complete walk-throughs of the areas to assure no hazardous conditions exist; ground inspections for signs of spills/leaks or stains; a check of the containment for water and closed valves; visual inspections of the tank exteriors for damage/leakage; and evaluations of the tanks' appurtenances.

- Weekly inspections must be conducted using checklists that include the following minimum items: inspection of secondary containment condition; containment free of oil or water; containment valves secured; containment area free of debris; tank shell surface, including welds, rivets, bolts, seams, and foundation, inspected for rust or other deterioration; ground surface checked for signs of leakage; leak detection operational; separator or drainage tank in satisfactory condition; tank bottom water draw-offs secured; tank fill valves secured; valves inspected for signs of leakage or deterioration; piping and flanges inspected for leakage; and tank gauges inspected and operational.

Containers (drums and ASTs) of chemicals not regulated by 40 CFR 112, because they do not contain oil, are regulated by AR 200-1. AR 200-1 does not have requirements for container integrity testing or inspections. However, it would be a good management practice to visually inspect chemical containers for visible leaks and signs of areas of corrosion, wear, cracking, material thinning, and tightness/alignment of piping, fittings, connections, and gaskets as well as operability of gauges, pumps, and valves.

4.9 Mobile and Portable Container Policy

Fort Belvoir is implementing this policy to manage oils and fuels stored in drums, portable containers, and mobile containers with an oil storage capacity between 55-gallons and 2,000 gallons. Portable containers are typically mounted on skids or saddles and may remain in place for an extended period of time; 55-gallon drums are

also considered portable containers. Mobile containers are mounted to frames with wheels. Examples of mobile containers include fuel pods, mobile generator fuel tanks, and tanker trucks. Personnel frequently move these containers or alter the number of containers in a particular area. For this reason, the exact location of each drum, portable container, or mobile container is not included in this Plan. However, the areas that are commonly used for storage of drums or other mobile and portable containers (and the maximum allowable volume of POL products stored in those areas) are identified in this Plan.

All containers covered by this Mobile and Portable Container Policy must have the means available to prevent discharges to navigable waters. This may include spill kits or spill pallets, diked storage areas, and/or storing containers inside a building. Secondary containment is required when containers covered under this policy are stationary and not in use for at least four consecutive hours.

Inspection and testing of all bulk storage tanks is required by 40 CFR 112.8(c)(6). The inspection and testing procedures for regulated containers in this Plan are based on consideration of applicable industry standards. Mobile and portable tank (including 55-gallon drum) inspection and testing requirements are contained in STI Standard SP001-05 (September 2011 revision). This standard requires periodic inspections by owners and recertification to Department of Transportation (DOT) standards at varying intervals, depending on the material of construction and secondary containment used. Inspection checklists are in Appendix E.

Table 4.5 Mobile and Portable Container Inspections and Testing

Inspection/Test	Standard	Method	Frequency
Presence of water in primary tank	STI SP001-05, Appendix C	Sampling	Monthly
Presence of water, oil, or debris in interstice or secondary containment	STI SP001-05, Appendix C	Manual	Monthly
Operation of leak detection system (Double-walled tanks only)	STI SP001-05, Appendix C	Manual	Monthly
Visible signs of leakage or corrosion/distortion	STI SP001-05, Appendix C	Visual	Monthly
Piping connections and openings properly sealed	STI SP001-05, Appendix C	Visual	Monthly
Drain valves operable and in closed position	STI SP001-05, Appendix C	Visual	Monthly
Operation of liquid level sensor	STI SP001-05, Appendix C	Manual	Monthly
DOT recertification and leak testing (required only if no secondary containment is used)	49 CFR 173.28 49 CFR 178.803 49 CFR 180.605	Hydrostatic Test, Mass Measurement, Level Measurement, Pressure Decay, etc.	Plastic - Every 7 Years Steel – Every 12 Years Stainless Steel – Every 17 Years

Records of external inspections are maintained for at least three years. Records of integrity tests shall be maintained for the life of the container. Fort Belvoir does not intend to keep any drums beyond the DOT recertification test period. Personnel will track the container's age if a mobile/portable tank or drum is to be used for more than the DOT recertification test period (see Table 4.5). Records of monthly visual inspections are maintained for at least three years.

4.10 Rainwater Inspection in Diked Areas

Some containers are surrounded by secondary containment dikes. Installation personnel drain rainwater from these diked areas through locked, manually activated valves. Prior to release, personnel verify that an oil sheen is not present on the surface of the collected rainwater. If a sheen is present, personnel take appropriate action for reporting and cleanup. Site personnel also maintain a drain log recording the date and volume of rainwater that is released from the diked areas.

4.11 Undiked Areas

The SPCC regulations in 40 CFR 112.8(b) require facilities to prevent potential discharges from undiked areas by designing drainage systems that flow into catchment basins or lagoons. This does not apply to Fort Belvoir. The limited potential for spills outside of typical fuel handling areas does not warrant a complete redesign of the existing drainage system. Fort Belvoir's spill response capabilities as described in Section 4.7, proper personnel training as described in Section 4.3, and periodic inspections as described in Sections 4.8 and 4.9 should be adequate to prevent and contain discharges associated with typical failure mode (most likely to be a small drip or leaks from small bore suction piping that only contains oil when an emergency generator is activated) from undiked areas. A spill kit with absorbents would be able to contain and clean up this quantity of oil. This qualifies as equivalent environmental protection (as allowed under 40 CFR 112.7(a)(2)).

Fuel tanks (greater than 55 gallons) on some vehicles and larger equipment are exempt from SPCC plan requirements because they are considered "motive power containers". Spills from these containers may occur in undiked areas. Spill response will follow the procedures outlined in Section 4.7.

4.12 New Construction

Any new construction will comply with the applicable requirements of 40 CFR 112.8(d). New buried metallic piping will either have a protective coating or cathodic protection. In the event that piping is exposed during an excavation, the pipe will be inspected for corrosion and repaired or replaced as necessary.

4.13 General Product Handling

Installation personnel follow standard operating procedures for product handling as listed in applicable military standards. In general, personnel follow the spill prevention procedures below when transferring product to or from a tanker truck:

- Load or unload in approved locations only
- Establish communications between the pumping and receiving stations
- Verify that the available volume of the receiving container is greater than the volume of oil to be transferred
- Continuously monitor the entire oil transfer
- Properly close all drainage valves for any secondary containment
- Allow sufficient volume (approximately 10% of the total capacity) in the receiving container for thermal expansion
- Visually inspect all valves for leakage when transfer is complete

5.0 CONTAINER AREAS

This section of the Plan provides details about SPCC-regulated containers in each area. An area typically encompasses all the containers owned and maintained by a single shop or functional unit. Heating oil tanks, transformers, generators, and used food grease containers have been grouped as "areas" because of their common contents and procedures. All SPCC-regulated containers, regardless of container area, are in the consolidated table in Appendix A.

Fort Belvoir has the following container areas:

- Transportation Motor Pool (Building 190)
- 300-Area Fuel Point (Building 324)
- 300-Area Maintenance (Building 331)
- 300-Area Pier (Buildings 338 and 341)
- 600-Area (Building 606)
- Recycling Center (Building 1089)
- DPW Roads and Grounds (Building 1114)
- Capitalized Fuel Station (Building 1124)
- Building 1128
- AAFES Gas Station – South (Building 1135)
- Power Plant (Building 1234)
- Motor Pool (Buildings 1417, 1419, and 1420)
- Autocraft (Building 1462)
- Marina (Building 1696)
- Motor Pool (Buildings 1906 and 1956)
- Motor Pool (Buildings 1949 and 1950)
- AAFES Gas Station – North (Building 2304)
- Earth Satellite (Building 2310)
- INSCOM (Building 2444)
- DLA (Building 2462)
- HECSA (Building 2580)
- 2800-Area (Buildings 2800 and 2803)
- 2800-Area (Building 2838)
- Golf Course (Building 2909, 2990, and 2993)
- DAAF Hangar (Building 3121)
- DAAF Hangars (Buildings 3140 and 3144)
- DAAF Hangars (Buildings 3151 and 3153)
- DAAF Fuel Point (Building 3161)
- DAAF Hangars (Buildings 3231 and 3232)
- NGA (Buildings 5103 and 5104)
- Tulley Gate (Building 9500)

- Electrical Transformers
- Emergency Generators
- Heating Oil Tanks
- Used Food Grease Containers

The term “visual” is used in tables throughout Section 5 to describe a method of overfill prevention wherein the person filling a container can see the level of product in the container while it is being filled and can immediately shut off inflow upon reaching 90% of container capacity [40 CFR 112.8(8)(iii-iv)].

5.1 Transportation Motor Pool (Building 190)

5.1.1 Area Description

The Transportation Motor Pool (TMP) is the site of government vehicle maintenance. A 500-gallon AST is used to collect used oil. Various oils are dispensed for maintenance in the service bays while used POL products are collected in drums. New POL products are stored in 55-gallon drums in containment pallets outside the building. Table 5.1.1 provides container details, and Figure 5.1.1 shows their locations.

Table 5.1.1 Transportation Motor Pool Shop Containers

Container ID	Type	Capacity (Gallons)	Material of Construction	Product Stored
190	AST, Horizontal	500	Steel	Used Oil
190DRA	55-Gallon Drums	55 (up to 6)	Steel	Oil, Hydraulic Oil, Used Oil, Used Fuel
				Antifreeze, Used Antifreeze
190DRB	55-Gallon Drums	55 (up to 12)	Steel	Oil, Hydraulic Oil
				Antifreeze

- Does not contain oil, not regulated by 40 CFR 112

5.1.2 Product Handling

Mechanics drain fluids from vehicles into drip pans and then hand carry the drip pans to drums inside the maintenance bay. The used oil drum is moved outside to the AST and then an electric pump is used to transfer from the drum to the tank. The used antifreeze drums are removed when full. Table 5.1.2 provides product handling details.

Table 5.1.2 Transportation Motor Pool Product Handling

Container ID	Loading Method	Overfill Protection	Unloading Method
190	Electric Pump	Sight Gauge	Vacuum Truck
190DRA (New)	NA	NA	Dispensed for Maintenance
190DRA (Used)	Manual	Visual	Electric Pump
190DRB	NA	NA	NA

Figure 5.1.1 Transportation Motor Pool (Building 190)

5.1.3 Secondary Containment

The AST is a double-walled steel tank. The 190DRA drums inside the building are on containment pallets. The 190DRB drums outside the building are in roll top secondary containment pallets.

Table 5.1.3 Transportation Motor Pool Secondary Containment

Container ID	Type	Storm Water Release
190	Double-walled	NA
190DRA	Containment Pallets	NA
190DRB	Containment Pallets	NA

5.1.4 Inspection and Testing

Records of monthly visual inspections and overfill protection system tests are maintained by area personnel for at least three years. Sections 4.8 and 4.9 establish the Fort Belvoir policies for the integrity testing of shop-built containers (and piping) less than 5,000 gallons capacity and portable containers.

5.1.5 Potential Spill Scenarios

Complete container failure of AST 190 could result in a spill of up to 500 gallons of used oil. It is assumed that only one drum would spill in a given event. The loss of the entire contents of the collection tanker truck could spill 2,000 gallons of used oil. Any spill from this area would flow north across asphalt to a storm water inlet and then northwest to an unnamed creek to Accotink Bay (see Figures 5.1.1, 2.1, and 2.6). A spill in this area would trigger the spill response procedures listed in Section 4.7.

Table 5.1.4 Transportation Motor Pool Potential Spill Scenarios

Container ID	Spill Amount (Gallons)	Contents	Cause	Pathway
190	500	Used Oil	Container Failure	North to drop inlet and then northwest in pipes to Accotink Bay
	5		Transfer Error	
	2,000		Collection Truck Error	
190DRA	55	Oil, Hydraulic Oil, Used Oil, Used Fuel	Container Failure	
	5	Antifreeze, Used Antifreeze	Dispensing/Transfer Error	
190DRB	55	Oil, Hydraulic Oil	Container Failure	
		Antifreeze		

- Does not contain oil, not regulated by 40 CFR 112

5.2 300-Area Fuel Point (Building 324)

5.2.1 Area Description

The 300-Area fuel point is actually an office building which also has a government fuel dispensing operation. ASTs 324R and 324T are a split tank within a shared outer shell. A 250-gallon AST is used to collect used oil. Table 5.2.1 provides container details, and Figure 5.2.1 shows their locations.

Table 5.2.1 300-Area Fuel Point Containers

Container ID	Type	Capacity (Gallons)	Material of Construction	Product Stored
324R	AST, Horizontal	2,000	Steel	Diesel
324S	AST, Horizontal	250	Steel	Used Oil
324T	AST, Horizontal	2,000	Steel	Diesel
324V	AST, Horizontal	150	Steel	Diesel

5.2.2 Product Handling

Personnel drain used oil from maintenance into AST 324S. Used oil is removed for recycling by a vacuum truck. Fuel is delivered by contractor truck. Fuel is dispensed to vehicles from ASTs 324R and 324T. Table 5.2.2 provides product handling details.

Table 5.2.2 300-Area Fuel Point Product Handling

Container ID	Loading Method	Overfill Protection	Unloading Method
324R	Truck	Sight Gauge	Dispensed to Vehicles
324S	Manual	Sight Gauge	Vacuum Truck
324T	Truck	Sight Gauge	Dispensed to Vehicles
324V	Truck	Sight Gauge	Used in Generator

Figure 5.2.1 300-Area Fuel Point (Building 324)

5.2.3 Secondary Containment

The ASTs are double-walled, except for 324V. AST 324V has a steel dike but it is too small to contain the entire volume of the tank (See Section 6.0, Corrective Actions). Appendix D contains volume calculations for containers within diked areas. Personnel follow the rainwater release procedures found in Section 4.10.

Table 5.2.3 300-Area Fuel Point Secondary Containment

Container ID	Type	Storm Water Release
324R	Double-walled	NA
324S	Double-walled	NA
324T	Double-walled	NA
324V	Steel Dike	Manual

5.2.4 Inspection and Testing

Records of monthly visual inspections and overfill protection system tests are maintained by area personnel for at least three years. Section 4.8 establishes the Fort Belvoir policy for the integrity testing of shop-built containers (and piping) less than 5,000 gallons capacity.

5.2.5 Potential Spill Scenarios

Complete container failure of an AST could result in a spill of up to 2,000 gallons. An error dispensing fuel could spill 25 gallons. The loss of the entire contents of the fuel delivery tanker truck could spill 3,000 gallons. The loss of the entire contents of the collection tanker truck could spill 2,000 gallons of used oil. Any spill from AST 324R, 324S, or 324T would flow south to a storm water inlet and then to an unnamed creek to the Potomac River (see Figures 5.2.1, 2.1, and 2.7). A spill from 324V would flow in natural drainage to an unnamed creek to the Potomac River. A spill in this area would trigger the spill response procedures listed in Section 4.7.

Table 5.2.4 300-Area Fuel Point Potential Spill Scenarios

Container ID	Spill Amount (Gallons)	Contents	Cause	Pathway
324R	2,000	Diesel	Container Failure	Southwest to drop inlet and then south in pipes to Potomac River
	25		Dispensing Error	
	3,000		Delivery Truck Error	
324S	55	Used Oil	Container Failure	Southwest to drop inlet and then south in pipes to Potomac River
	5		Transfer Error	
	2,000		Collection Truck Error	
324T	2,000	Diesel	Container Failure	Southwest to drop inlet and then south in pipes to Potomac River
	25		Dispensing Error	
	3,000		Delivery Truck Error	
324V	150	Diesel	Container Failure	Southeast in open natural drainage south to Potomac River
	3,000		Delivery Truck Error	

5.3 300-Area Maintenance (Building 331)

5.3.1 Area Description

Building 331 is used for various types of maintenance. A 550-gallon AST contains heating oil. Various oils are dispensed for maintenance while used oil products are collected in drums. New oils are stored in 55-gallon drums inside the building. Table 5.3.1 provides container details, and Figure 5.3.1 shows their locations.

Table 5.3.1 300-Area Maintenance Shop Containers

Container ID	Type	Capacity (Gallons)	Material of Construction	Product Stored
331B	AST, Horizontal	550	Steel	Heating Oil
331DRA	55-Gallon Drums	55 (up to 6)	Steel	Used Oil
331DRB	55-Gallon Drums	55 (up to 8)	Steel	Oil, Hydraulic Oil

5.3.2 Product Handling

Heating oil is delivered by contractor truck. The AST does not have a level gauge to prevent overfills and it is partially buried by accumulated soil around its base (see Corrective Actions, Section 6.0). Mechanics drain fluids from vehicles into drip pans and then hand carry the drip pans to drums. The used oil drums are emptied by a vacuum truck. Gravity spigots or hand pumps are used to dispense new oils. Table 5.3.2 provides product handling details.

Table 5.3.2 300-Area Maintenance Product Handling

Container ID	Loading Method	Overfill Protection	Unloading Method
331B	Truck	Sight Gauge	Used in Heater
331DRA	Manual	Visual	Electric Pump
331DRB	NA	NA	Dispensed for Maintenance

Figure 5.3.1 300-Area Maintenance (Building 331)

5.3.3 Secondary Containment

The AST is a single-walled steel tank with no secondary containment (see Corrective Actions, Section 6.0). The drums inside the building are on containment pallets or in a shared metal dike area. Appendix D contains volume calculations for containers within diked areas.

Table 5.3.3 300-Area Maintenance Secondary Containment

Container ID	Type	Storm Water Release
331B	None	NA
331DRA	Containment Pallets	NA
331DRB	Steel Dike	NA (indoors)

5.3.4 Inspection and Testing

Records of monthly visual inspections and overfill protection system tests are maintained by area personnel for at least three years. Sections 4.8 and 4.9 establish the Fort Belvoir policies for the integrity testing of shop-built containers (and piping) less than 5,000 gallons capacity and portable containers.

5.3.5 Potential Spill Scenarios

Complete container failure of AST 331B could result in a spill of up to 550 gallons. It is assumed that only one drum would spill in a given event. The loss of the entire contents of the fuel delivery tanker truck could spill 3,000 gallons. The loss of the entire contents of the collection tanker truck could spill 2,000 gallons of used oil. Any spill from this area would flow southwest to a storm water inlet and then to an unnamed creek south to the Potomac River (see Figures 5.3.1, 2.1, and 2.7). A spill in this area would trigger the spill response procedures listed in Section 4.7.

Table 5.3.4 300-Area Maintenance Potential Spill Scenarios

Container ID	Spill Amount (Gallons)	Contents	Cause	Pathway
331B	550	Heating Oil	Container Failure	Southwest and then south to Potomac River
	3,000		Delivery Truck Error	
331DRA	55	Used Oil	Container Failure	Southwest and then south to Potomac River
	5		Transfer Error	
	3,000		Vacuum Truck Error	
331DRB	55	Oil, Hydraulic Oil	Container Failure	
	5		Dispensing Error	

5.4 300-Area Pier (Buildings 338 and 341)

5.4.1 Area Description

Building 338 is used for various types of maintenance related to the pier and watercraft. Building 341 is the land vehicle maintenance and administrative building. Various oils are dispensed for maintenance while used oil is collected in an AST and drums. Table 5.4.1 provides container details, and Figure 5.4.1 shows their locations.

Table 5.4.1 300-Area Pier Containers

Container ID	Type	Capacity (Gallons)	Material of Construction	Product Stored
338B	AST, Horizontal	300	Steel	Gasoline
338C	AST, Horizontal	2,000	Steel	Oily Bilge Water
338D	AST, Horizontal	500	Steel	Used Oil
338M	Mobile Refueler	2,500	Steel	Gasoline
338DRA	55-Gallon Drums	55 (up to 4)	Steel	Oil
338DRB	55-Gallon Drums	55 (up to 20)	Steel	Oil, Hydraulic Oil
341	AST, Horizontal	150	Steel	Diesel
341DR	55-Gallon Drums	55 (up to 4)	Steel	Used Oil

5.4.2 Product Handling

Gasoline is transported and stored at the site by a tanker truck. The truck fills a smaller AST for use dispensing on the pier. Contractor delivery trucks fill the diesel tank. Mechanics drain fluids from vehicles into drip pans and then hand carry the drip pans to AST 338D. The used oil tank is emptied by a vacuum truck. Hand pumps are used to dispense new oils. The oily bilge water tank is intended to be used within 6 months as a container for oily bilge water cleaned out of watercraft. Table 5.4.2 provides product handling details.

Table 5.4.2 300-Area Pier Product Handling

Container ID	Loading Method	Overfill Protection	Unloading Method
338B	Truck (338M)	Sight Gauge	Used in Heater
338C	Manual	Sight Gauge	Vacuum Truck
338D	Manual	Sight Gauge	Vacuum Truck
338M	Fuel Point	Automatic Gauge	Dispensed to 338B
338DRA	NA	NA	Dispensed for Maintenance
338DRB	NA	NA	Dispensed for Maintenance
341	Truck	Sight Gauge	Used in Generator
341DR	Manual	Visual	Vacuum Truck

Figure 5.4.1 300-Area Pier (Buildings 338 and 341)

5.4.3 Secondary Containment

AST 338C is a single-walled steel tank with a steel secondary containment dike but the containment has holes in it that must be repaired prior to using the tank (see Corrective Actions, Section 6.0). The other ASTs are double-walled. The drums are on containment pallets in a shed or in a steel containment conex. The tanker truck is parked in a plastic containment dike with walls that fold down for driving in and out. Appendix D contains volume calculations for containers within diked areas. Personnel follow the rainwater release procedures found in Section 4.10.

Table 5.4.3 300-Area Pier Secondary Containment

Container ID	Type	Storm Water Release
338B	Double-Walled	NA
338C	Steel Dike	Manual
338D	Double-Walled	NA
338M	Plastic Dike	Manual
338DRA	Containment Pallets	NA
338DRB	Steel Conex	NA
341	Double-Walled	NA
341DR	Containment Pallets	NA

5.4.4 Inspection and Testing

Records of monthly visual inspections and overfill protection system tests are maintained by area personnel for at least three years. Sections 4.8 and 4.9 establish the Fort Belvoir policies for the integrity testing of shop-built containers (and piping) less than 5,000 gallons capacity and portable containers.

5.4.5 Potential Spill Scenarios

Complete container failure of AST 338B could result in a spill of up to 300 gallons. It is assumed that only one drum would spill in a given event. An error dispensing fuel could spill 25 gallons. The loss of the entire contents of the fuel delivery tanker truck could spill 2,500 gallons. The loss of the entire contents of the collection tanker truck could spill 2,000 gallons of used oil. Any spill from this area would flow south to the Potomac River (see Figures 5.4.1, 2.1, and 2.7). A spill in this area would trigger the spill response procedures listed in Section 4.7.

Table 5.4.4 300-Area Pier Potential Spill Scenarios

Container ID	Spill Amount (Gallons)	Contents	Cause	Pathway
338B	300	Gasoline	Container Failure	South directly to Potomac River
	25		Transfer Error	
	2,500		Delivery Truck Error	
338C	2,000	Oily Bilge Water	Container Failure	
	25		Transfer Error	
	2,000		Vacuum Truck Error	
338D	500	Used Oil	Container Failure	
	5		Transfer Error	
	2,000		Vacuum Truck Error	
338M	2,500	Gasoline	Container Failure	
338DRA	55	Oil	Container Failure	South directly to Potomac River
	5		Dispensing Error	
338DRB	55	Oil, Hydraulic Oil	Container Failure	
	5		Dispensing Error	
341	150	Diesel	Container Failure	South directly to Potomac River
	3,000		Delivery Truck Error	
341DR	55	Used Oil	Container Failure	
	5		Transfer Error	
	2,000		Vacuum Truck Error	

5.5 600-Area (Building 606)

5.5.1 Area Description

Building 606 is a small wastewater pump station. The rest of the 600-Area includes a bulk waste drop off site and a contractor fueling point. Table 5.5.1 provides container details, and Figure 5.5.1 shows their locations.

Table 5.5.1 600-Area Containers

Container ID	Type	Capacity (Gallons)	Material of Construction	Product Stored
600	AST, Horizontal	500	Steel	Diesel
606A	AST, Horizontal	250	Steel	Diesel
606B	AST, Horizontal	500	Steel	Diesel

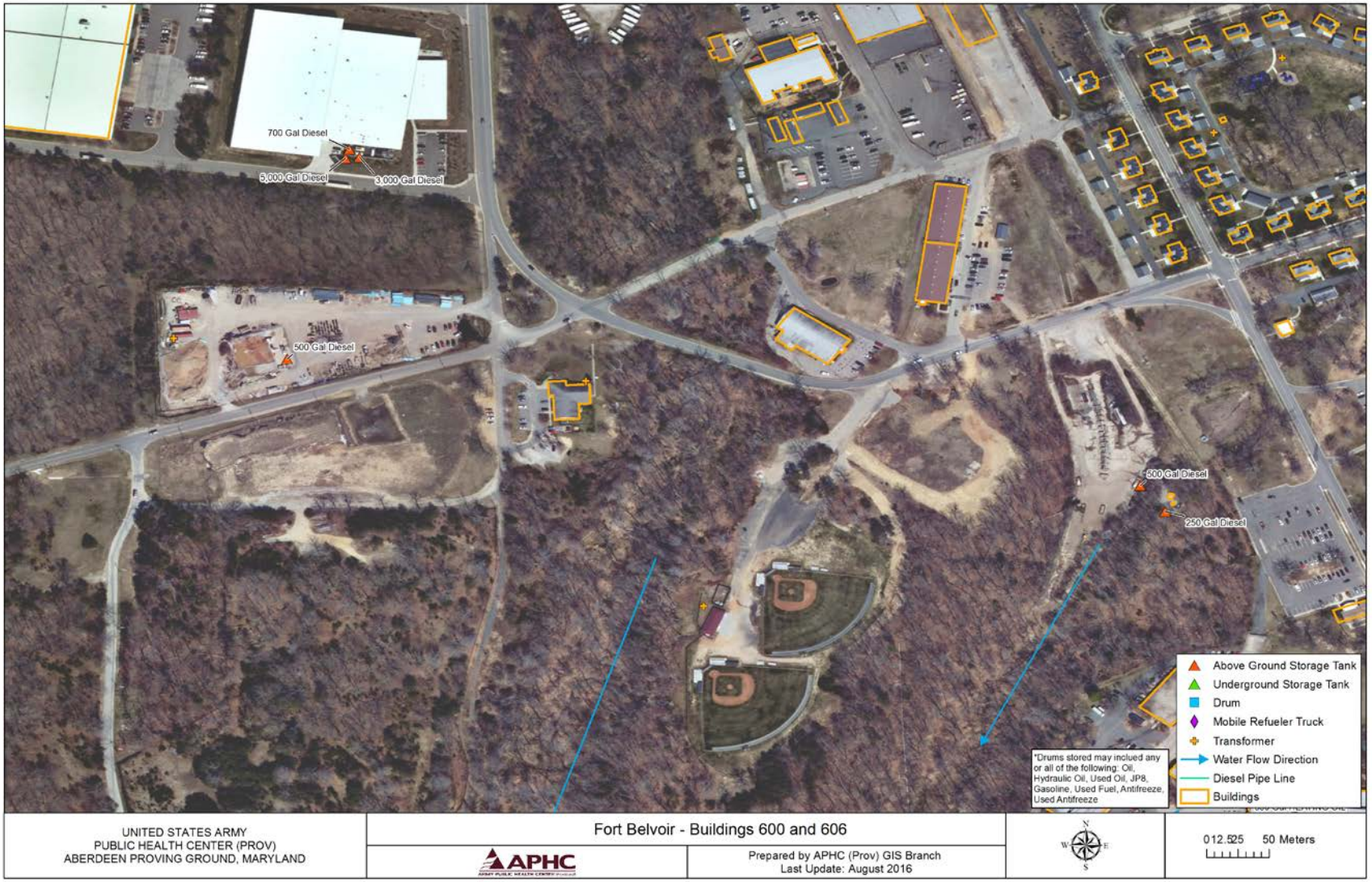
5.5.2 Product Handling

Contractor delivery trucks fill the diesel tanks. Diesel is dispensed into vehicles/equipment. ASTs 600 and 606B do not have level gauges (see Corrective Actions, Section 6.0). Table 5.5.2 provides product handling details.

Table 5.5.2 600-Area Product Handling

Container ID	Loading Method	Overfill Protection	Unloading Method
600	Truck	None	Dispensed to Vehicles
606A	Truck	Sight Gauge	Used in Generator
606B	Truck	None	Dispensed to Vehicles

Figure 5.5.1 600-Area (Building 606)



5.5.3 Secondary Containment

AST 606B is a single-walled steel tank with a plastic secondary containment dike. The other ASTs are double-walled. Appendix D contains volume calculations for containers within diked areas. Personnel follow the rainwater release procedures found in Section 4.10.

Table 5.5.3 600-Area Secondary Containment

Container ID	Type	Storm Water Release
600	Double-Walled	NA
606A	Double-Walled	NA
606B	Plastic Dike	Manual

5.5.4 Inspection and Testing

Records of monthly visual inspections and overfill protection system tests are maintained by area personnel for at least three years. Section 4.8 establishes the Fort Belvoir policy for the integrity testing of shop-built containers (and piping) less than 5,000 gallons capacity.

5.5.5 Potential Spill Scenarios

Complete container failure of an AST could result in a spill of up to 500 gallons. An error dispensing fuel could spill 25 gallons. The loss of the entire contents of the fuel delivery tanker truck could spill 3,000 gallons. Any spill from this area would flow south in open natural drainage to an unnamed creek south to the Potomac River (see Figures 5.5.1, 2.1, and 2.7). A spill in this area would trigger the spill response procedures listed in Section 4.7.

Table 5.5.4 600-Area Potential Spill Scenarios

Container ID	Spill Amount (Gallons)	Contents	Cause	Pathway
600	500	Diesel	Container Failure	South in open natural drainage to Potomac River
	25		Dispensing Error	
	3,000		Delivery Truck Error	
606A	250	Diesel	Container Failure	South in open natural drainage to Potomac River
	3,000		Delivery Truck Error	
606B	500	Diesel	Container Failure	
	25		Dispensing Error	
	3,000		Delivery Truck Error	

5.6 Recycling Center (Building 1089)

5.6.1 Area Description

Building 1089 is the recycling center. Used oil from customers is collected in an AST. Table 5.6.1 provides container details, and Figure 5.6.1 shows their locations.

Table 5.6.1 Recycling Center Containers

Container ID	Type	Capacity (Gallons)	Material of Construction	Product Stored
1089	AST, Horizontal	500	Steel	Used Oil

5.6.2 Product Handling

On-post residents pour used oil in the AST. The used oil tank is emptied by a vacuum truck. Table 5.4.2 provides product handling details.

Table 5.6.2 Recycling Center Product Handling

Container ID	Loading Method	Overfill Protection	Unloading Method
1089	Manual	Sight Gauge	Vacuum Truck

5.6.3 Secondary Containment

AST 1089 is double-walled and does not collect storm water.

Table 5.6.3 Recycling Center Secondary Containment

Container ID	Type	Storm Water Release
1089	Double-Walled	NA

Figure 5.6.1 Recycling Center (Building 1089)

5.6.4 Inspection and Testing

Records of monthly visual inspections and overfill protection system tests are maintained by area personnel for at least three years. Section 4.8 establishes the Fort Belvoir policy for the integrity testing of shop-built containers (and piping) less than 5,000 gallons capacity.

5.6.5 Potential Spill Scenarios

Complete container failure of the AST could result in a spill of up to 500 gallons. The loss of the entire contents of the collection tanker truck could spill 2,000 gallons of used oil. Any spill from this area would flow northwest in open drainage to Accotink Bay (see Figures 5.6.1, 2.1, and 2.6). A spill in this area would trigger the spill response procedures listed in Section 4.7.

Table 5.6.4 Recycling Center (Building 1089) Potential Spill Scenarios

Container ID	Spill Amount (Gallons)	Contents	Cause	Pathway
1089	500	Used Oil	Container Failure	Northwest in open drainage to Accotink Bay
	5		Transfer Error	
	2,000		Vacuum Truck Error	

5.7 DPW Roads and Grounds (Building 1114)

5.7.1 Area Description

Building 1114 is used as the roads and grounds office and fuel point. Table 5.7.1 provides container details, and Figure 5.7.1 shows their locations.

Table 5.7.1 DPW Roads and Grounds Containers

Container ID	Type	Capacity (Gallons)	Material of Construction	Product Stored
1109C	AST, Horizontal	500	Steel	Kerosene
1109D	AST, Horizontal	500	Steel	Diesel
1109E	AST, Horizontal	500	Steel	Diesel
1114A	AST, Horizontal	5,000	Steel	Gasoline

5.7.2 Product Handling

Contractor delivery trucks fill the fuel tanks. Fuel is dispensed into vehicles/equipment. Kerosene is dispensed for use in space heaters at entrance gates. ASTs 1109D and 1109E do not have level gauges (see Corrective Actions, Section 6.0). Table 5.7.2 provides product handling details.

Table 5.7.2 DPW Roads and Grounds Product Handling

Container ID	Loading Method	Overfill Protection	Unloading Method
1109C	Truck	Sight Gauge	Dispensed to Heaters
1109D	Truck	None	Dispensed to Vehicles
1109E	Truck	None	Dispensed to Vehicles
1114A	Truck	Sight Gauge	Dispensed to Vehicles

Figure 5.7.1 DPW Roads and Grounds (Building 1114)

5.7.3 Secondary Containment

AST 1109D is single-walled with a plastic containment dike. The other ASTs are double-walled. Appendix D contains volume calculations for containers within diked areas. Personnel follow the rainwater release procedures found in Section 4.10.

Table 5.7.3 DPW Roads and Grounds Secondary Containment

Container ID	Type	Storm Water Release
1109C	Double-Walled	NA
1109D	Plastic Dike	Manual
1109E	Double-Walled	NA
1114A	Double-Walled	NA

5.7.4 Inspection and Testing

Records of monthly visual inspections and overfill protection system tests are maintained by area personnel for at least three years. Section 4.8 establishes the Fort Belvoir policy for the integrity testing of shop-built containers (and piping) less than 5,000 gallons capacity.

5.7.5 Potential Spill Scenarios

Complete container failure of an AST could result in a spill of up to 5,000 gallons. An error dispensing fuel could spill 25 gallons. The loss of the entire contents of the fuel delivery tanker truck could spill 3,000 gallons. Any spill from this area would flow north in open drainage to an unnamed creek west to Accotink Bay (see Figures 5.7.1, 2.1, and 2.6). A spill in this area would trigger the spill response procedures listed in Section 4.7.

Table 5.7.4 DPW Roads and Grounds Potential Spill Scenarios

Container ID	Spill Amount (Gallons)	Contents	Cause	Pathway
1109C	500	Kerosene	Container Failure	North in open drainage and then west to Accotink Bay
	25		Dispensing Error	
	3,000		Delivery Truck Error	
1109D	500	Diesel	Container Failure	
	25		Dispensing Error	
	3,000		Delivery Truck Error	
1109E	500	Diesel	Container Failure	
	25		Dispensing Error	
	3,000		Delivery Truck Error	
1114A	5,000	Gasoline	Container Failure	
	25		Dispensing Error	
	3,000		Delivery Truck Error	

5.8 Capitalized Fuel Station (Building 1124)

5.8.1 Area Description

Building 1124 is the main fuel point for Fort Belvoir government vehicles. There are four USTs at the site. Two USTs hold fuel for vehicles, one holds used oil, and one is empty and temporarily out-of-service. Table 5.8.1 provides container details, and Figure 5.8.1 shows their locations.

Table 5.8.1 Capitalized Fuel Station Containers

Container ID	Type	Capacity (Gallons)	Material of Construction	Product Stored
1124C*	UST*	12,000*	Steel*	E85 (Ethanol / Gasoline)*
1124D	UST	12,000	Steel	Used Oil
1124H	UST	30,000	Fiberglass Reinforced Plastic (FRP)	Gasoline
1124I	UST	30,000	FRP	Diesel

* - empty and temporarily out-of-service

5.8.2 Product Handling

Contractor delivery trucks fill the UST fuel tanks. Fuel is dispensed into vehicles/equipment and also through the loading rack into mobile refuelers. The used oil UST is filled from an oil/water separator that collects used oil from throughout the installation. A vacuum truck empties the used oil UST. Table 5.8.2 provides product handling details.

Table 5.8.2 Capitalized Fuel Station Product Handling

Container ID	Loading Method	Overfill Protection	Unloading Method
1124C*	Truck*	Automatic Tank Gauging*	Dispensed to Vehicles*
1124D	From O/W Separator	Automatic Tank Gauging	Vacuum Truck
1124H	Truck	Automatic Tank Gauging	Dispensed to Vehicles
1124I	Truck	Automatic Tank Gauging	Dispensed to Vehicles

Figure 5.8.1 Capitalized Fuel Station (Building 1124)

5.8.3 Secondary Containment

The USTs do not have to meet SPCC Plan requirements for secondary containment. The loading/unloading rack has a concrete berm and a concrete holding basin with a valve to release storm water. The loading/unloading rack containment volume calculation is in Appendix D.

Table 5.8.3 Capitalized Fuel Station Secondary Containment

Container ID	Type	Storm Water Release
1124 Rack	Concrete Holding Basin	Manual

5.8.4 Inspection and Testing

Inspection and testing requirements from 40 CFR 280 are not included in this SPCC Plan.

5.8.5 Potential Spill Scenarios

An error dispensing fuel could spill 25 gallons. The loss of the entire contents of a larger fuel delivery tanker truck or a fuel truck being filled at the loading/unloading rack could spill 5,000 gallons. Any spill from this area would flow north across asphalt to a storm water inlet and then to an unnamed creek west to Accotink Bay (see Figures 5.8.1, 2.1, and 2.6). A spill in this area would trigger the spill response procedures listed in Section 4.7.

Table 5.8.4 DPW Roads and Grounds Potential Spill Scenarios

Container ID	Spill Amount (Gallons)	Contents	Cause	Pathway
1124C*	25	E85* (empty)	Dispensing Error	North and then west to Accotink Bay
	3,000		Error Unloading to Mobile Refueler	
	5,000		Delivery Truck Error	
1124D	3,000	Used Oil	Vacuum Truck Error	North and then west to Accotink Bay
1124H	25	Gasoline	Dispensing Error	
	3,000		Error Unloading to Mobile Refueler	
	5,000		Delivery Truck Error	

Container ID	Spill Amount (Gallons)	Contents	Cause	Pathway
1124I	25	Diesel	Dispensing Error	
	3,000		Error Unloading to Mobile Refueler	
	5,000		Delivery Truck Error	

* - empty and temporarily out-of-service

5.9 Building 1128

5.9.1 Area Description

Building 1128 has a diesel AST. Table 5.9.1 provides container details, and Figure 5.9.1 shows their locations.

Table 5.9.1 Building 1128 Containers

Container ID	Type	Capacity (Gallons)	Material of Construction	Product Stored
1128	AST, Horizontal	500	Steel	Diesel

5.9.2 Product Handling

Contractor delivery trucks fill the fuel tank. Fuel is dispensed into vehicles/equipment. Table 5.9.2 provides product handling details.

Table 5.9.2 Building 1128 Product Handling

Container ID	Loading Method	Overfill Protection	Unloading Method
1128	Truck	Sight Gauge	Dispensed to Heaters

5.9.3 Secondary Containment

The AST is double-walled and does not collect storm water.

Table 5.9.3 Building 1128 Secondary Containment

Container ID	Type	Storm Water Release
1128	Double-Walled	NA

Figure 5.9.1 Building 1128

5.9.4 Inspection and Testing

Records of monthly visual inspections and overfill protection system tests are maintained by area personnel for at least three years. Section 4.8 establishes the Fort Belvoir policy for the integrity testing of shop-built containers (and piping) less than 5,000 gallons capacity.

5.9.5 Potential Spill Scenarios

Complete container failure of an AST could result in a spill of up to 500 gallons. An error dispensing fuel could spill 25 gallons. The loss of the entire contents of the fuel delivery tanker truck could spill 3,000 gallons. Any spill from this area would flow west in open drainage to Accotink Bay (see Figures 5.9.1, 2.1, and 2.6). A spill in this area would trigger the spill response procedures listed in Section 4.7.

Table 5.9.4 Building 1128 Potential Spill Scenarios

Container ID	Spill Amount (Gallons)	Contents	Cause	Pathway
1128	500	Diesel	Container Failure	West in open drainage to Accotink Bay
	25		Dispensing Error	
	3,000		Delivery Truck Error	

5.10 AAFES Gas Station - South (Building 1135)

5.10.1 Area Description

Building 1135 is a gas station for privately owned vehicles. Three USTs hold fuel for vehicles. There is also a food grease container at the site (see Section 5.35). Table 5.10.1 provides container details, and Figure 5.10.1 shows their locations.

Table 5.10.1 AAFES Gas Station Containers

Container ID	Type	Capacity (Gallons)	Material of Construction	Product Stored
1135A	UST	20,000	FRP	Gasoline
1135B	UST	10,000	FRP	Gasoline
1135C	UST	10,000	FRP	Gasoline

5.10.2 Product Handling

Contractor delivery trucks fill the USTs. Fuel is dispensed into vehicles through standard commercial pumps. Table 5.10.2 provides product handling details.

Table 5.10.2 AAFES Gas Station Product Handling

Container ID	Loading Method	Overfill Protection	Unloading Method
1135A	Truck	Automatic Tank Gauging	Dispensed to Vehicles
1135B	Truck	Automatic Tank Gauging	Dispensed to Vehicles
1135C	Truck	Automatic Tank Gauging	Dispensed to Vehicles

Figure 5.10.1 AAFES Gas Station (Building 1135)

5.10.3 Secondary Containment

The USTs do not have to meet SPCC Plan requirements for secondary containment.

5.10.4 Inspection and Testing

Inspection and testing requirements from 40 CFR 280 are not included in this SPCC Plan.

5.10.5 Potential Spill Scenarios

An error dispensing fuel could spill 25 gallons. The loss of the entire contents of a larger fuel delivery tanker truck could spill 5,000 gallons. Any spill from this area would flow across the parking lot north to a storm water inlet and then northwest to Accotink Bay (see Figures 5.10.1, 2.1, and 2.6). A spill in this area would trigger the spill response procedures listed in Section 4.7.

Table 5.10.3 AAFES Gas Station Potential Spill Scenarios

Container ID	Spill Amount (Gallons)	Contents	Cause	Pathway
1135A	25	Gasoline	Dispensing Error	North and then northwest to Accotink Bay
	5,000		Delivery Truck Error	
1135B	25	Gasoline	Dispensing Error	
	5,000		Delivery Truck Error	
1135C	25	Gasoline	Dispensing Error	
	5,000		Delivery Truck Error	

5.11 Power Plant (Building 1234)

5.11.1 Area Description

Building 1234 is the central utility plant for the hospital. There are five buried tanks that store fuel onsite. Three of the tanks are 40 CFR 280 regulated USTs because they fuel electrical generators (See Appendix A, Table 2). Two of the tanks are 40 CFR 112 regulated because they store heating oil for consumptive use on the premises. Each generator also has a day tank aboveground inside the building. There are also chemical containers used to treat water used in heating systems. Table 5.11.1 provides container details, and Figure 5.11.1 shows their locations.

Table 5.11.1 Power Plant Containers

Container ID	Type	Capacity (Gallons)	Material of Construction	Product Stored
1234E	AST, Horizontal	600	Steel	Diesel
1234F	AST, Horizontal	600	Steel	Diesel
1234G	AST, Horizontal	600	Steel	Diesel
1234H	AST, Horizontal	600	Steel	Diesel
1234I	AST, Horizontal	125	Plastic	Sodium Hydroxide
1234DRA	65-Gallon Drum	65	Plastic	Sodium Hypochlorite
1234DRB	55-Gallon Drums	55 (up to 4)	Plastic	Sodium Hydroxide, Diethanol-Amine
1250U	Buried Tank	20,000	FRP	Heating Oil
1251U	Buried Tank	20,000	FRP	Heating Oil
1252A	UST	20,000	FRP	Diesel
1253A	UST	20,000	FRP	Diesel
1254A	UST	20,000	FRP	Diesel

- Does not contain oil, not regulated by 40 CFR 112

5.11.2 Product Handling

Contractor delivery trucks fill the USTs and buried heating oil tanks. Diesel is pumped into either the generator day tanks or the boilers. The chemical containers are filled by hand from small containers and the chemicals are fed into the water treatment system. Table 5.11.2 provides product handling details.

Table 5.11.2 Power Plant Product Handling

Container ID	Loading Method	Overfill Protection	Unloading Method
1234E	Pumped from USTs	Overfill Alarm	Used in Generators
1234F	Pumped from USTs	Overfill Alarm	Used in Generators
1234G	Pumped from USTs	Overfill Alarm	Used in Generators
1234H	Pumped from USTs	Overfill Alarm	Used in Generators
1234I	Manual	Visual	Used in Water Treatment
1234DRA	Manual	Visual	Used in Water Treatment
1234DRB	Manual	Visual	Used in Water Treatment
1250U	Truck	Automatic Tank Gauging	Used in Boiler
1251U	Truck	Automatic Tank Gauging	Used in Boiler

- Does not contain oil, not regulated by 40 CFR 112

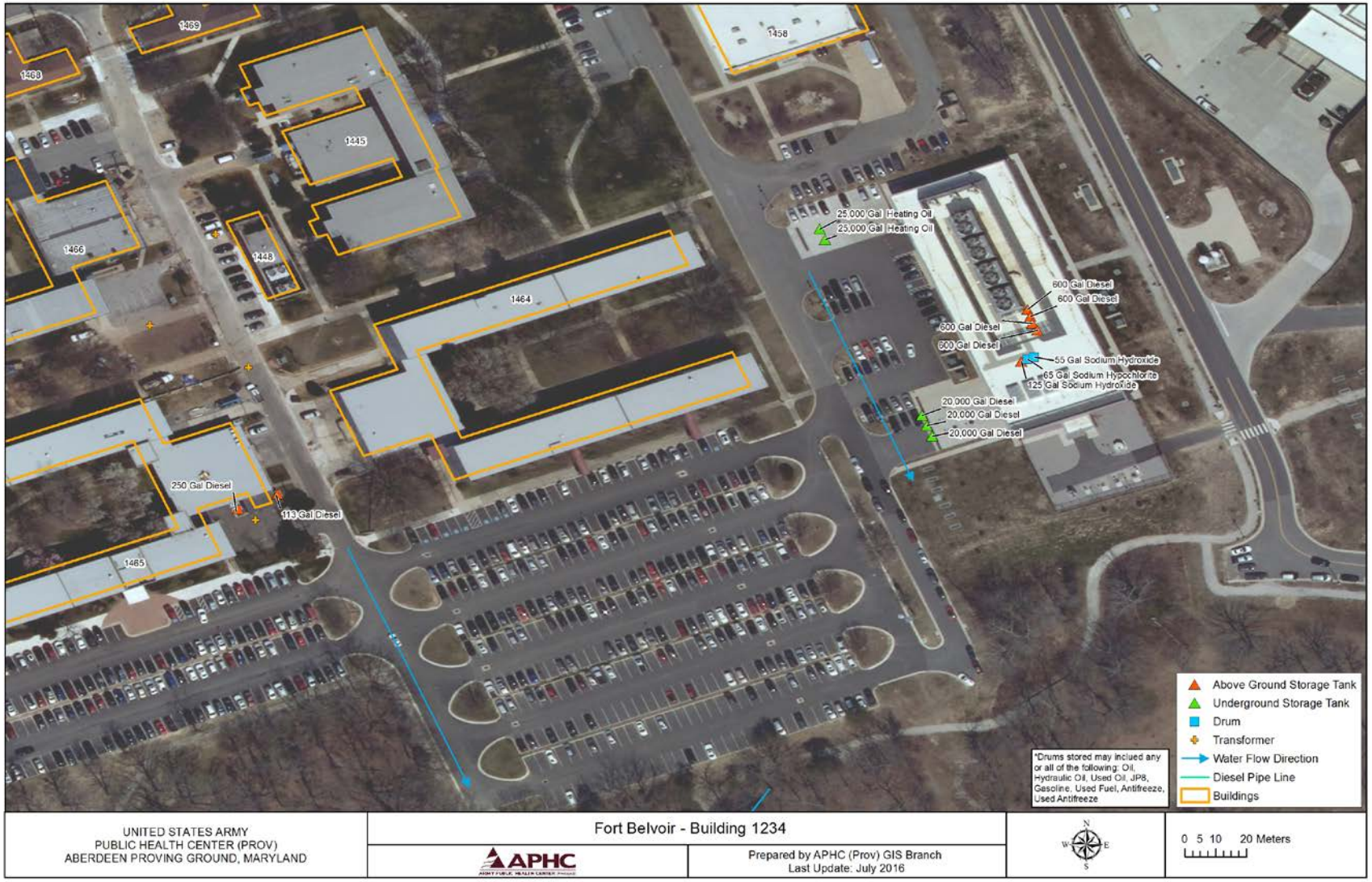
5.11.3 Secondary Containment

The day tank ASTs are double-walled and do not collect storm water. The chemical containers do not have secondary containment (see Corrective Actions, Section 6.0). The buried heating oil tanks are double-walled.

Table 5.11.3 Power Plant Secondary Containment

Container ID	Type	Storm Water Release
1234E	Double-Walled	NA
1234F	Double-Walled	NA
1234G	Double-Walled	NA
1234H	Double-Walled	NA
1234I	None	NA
1234DRA	None	NA
1234DRB	None	NA
1250U	Double-Walled	NA
1251U	Double-Walled	NA

Figure 5.11.1 Power Plant (Building 1234)



5.11.4 Inspection and Testing

Records of monthly visual inspections and overfill protection system tests are maintained by area personnel for at least three years. Section 4.8 establishes the Fort Belvoir policy for the integrity testing of shop-built containers (and piping) less than 5,000 gallons capacity.

5.11.5 Potential Spill Scenarios

Complete container failure of an AST could result in a spill of up to 600 gallons. An error transferring chemicals could spill 5 gallons. The loss of the entire contents of the fuel delivery tanker truck could spill 3,000 gallons. Any spill from this area would flow west across the concrete to a storm water inlet and then south to an unnamed creek west to Accotink Bay (see Figures 5.11.1, 2.1, and 2.6). A spill in this area would trigger the spill response procedures listed in Section 4.7.

Table 5.11.4 Power Plant Potential Spill Scenarios

Container ID	Spill Amount (Gallons)	Contents	Cause	Pathway
1234E	600	Diesel	Container Failure	West across concrete and then south to Accotink Bay
1234F	600	Diesel	Container Failure	
1234G	600	Diesel	Container Failure	
1234H	600	Diesel	Container Failure	
1234I	125	Sodium Hydroxide	Container Failure	West across concrete and then south to Accotink Bay
	5		Transfer Error	
1234DRA	65	Sodium Hypochlorite	Container Failure	
	5		Transfer Error	
1234DRB	55	Sodium Hydroxide, Diethanol-Amine	Container Failure	
	5		Transfer Error	
1250U	20,000	Heating Oil	Container Failure	West across concrete and then south to Accotink Bay
	3,000		Delivery Truck Error	
1251U	20,000	Heating Oil	Container Failure	
	3,000		Delivery Truck Error	

Container ID	Spill Amount (Gallons)	Contents	Cause	Pathway
1252A	3,000	Diesel	Delivery Truck Error	West across concrete and then south to Accotink Bay
1253A	3,000	Diesel	Delivery Truck Error	
1254A	3,000	Diesel	Delivery Truck Error	

- Does not contain oil, not regulated by 40 CFR 112

5.12 Motor Pool (Buildings 1417, 1419, and 1420)

5.12.1 Area Description

This area is used for two separate vehicle maintenance organizations: military motor pool with portable generators and the DPW motor pool. There are five ASTs and two drum storage areas outside the building in the parking area to the north. Other ASTs and drum storage areas are inside the buildings. Table 5.12.1 provides container details, and Figure 5.12.1 shows their locations.

Table 5.12.1 Motor Pool Containers

Container ID	Type	Capacity (Gallons)	Material of Construction	Product Stored
1417H	AST, Horizontal	500	Steel	Oil
1417I	AST, Horizontal	500	Steel	Oil
1417J	AST, Horizontal	500	Steel	Hydraulic Oil
1417K	AST, Horizontal	500	Steel	Used Oil
1417L	AST, Horizontal	600	Steel	Diesel
1417M	AST, Horizontal	600	Steel	Diesel
1417DRA	55-Gallon Drums	55 (up to 9)	Steel	Oil, Hydraulic Oil Antifreeze
1417DRB	55-Gallon Drums	55 (up to 36)	Steel	Oil, Hydraulic Oil Antifreeze
1417DRC	55-Gallon Drums	55 (up to 8)	Steel	Oil, Hydraulic Oil Antifreeze
1417DRD	55-Gallon Drums	55 (up to 4)	Steel	Used Oil, Used Fuel Used Antifreeze
1420A	AST, Horizontal	250	Steel	Hydraulic Oil
1420B	AST, Horizontal	275	Steel	Used Oil
1420C	AST, Horizontal	275	Steel	Oil
1420DRA	55-Gallon Drums	55 (up to 4)	Steel	Used Oil Used Antifreeze

1420DRB	55-Gallon Drums	55 (up to 6)	Steel	Oil, Hydraulic Oil, Grease
				Antifreeze

- Does not contain oil, not regulated by 40 CFR 112

5.12.2 Product Handling

Contractor delivery trucks fill the diesel tanks. The two diesel tanks do not have level gauges to prevent overfills (See Corrective Actions, Section 6.0). Diesel is dispensed into vehicles or generators (for testing in the parking area). The oil tanks are filled from drums by small electric pumps. Oil is dispensed by hand pump or gravity spigots. Collection drums and tanks are filled by manually pouring used products. The collection drums and tanks are emptied via vacuum truck. Table 5.12.2 provides product handling details.

Table 5.12.2 Motor Pool Product Handling

Container ID	Loading Method	Overfill Protection	Unloading Method
1417H	Pumped from Drums	Sight Gauge	Dispensed for Maintenance
1417I	Pumped from Drums	Sight Gauge	Dispensed for Maintenance
1417J	Pumped from Drums	Sight Gauge	Dispensed for Maintenance
1417K	Manual	Sight Gauge	Vacuum Truck
1417L	Truck	None	Dispensed to Vehicles
1417M	Truck	None	Used in Generators
1417DRA	NA	NA	Pumped into ASTs
1417DRB	NA	NA	Pumped into ASTs
1417DRC	NA	NA	Dispensed for Maintenance
1417DRD	Manual	Visual	Vacuum Truck
1420A	Pumped from Drums	Sight Gauge	Dispensed for Maintenance
1420B	Manual	Sight Gauge	Vacuum Truck
1420C	Pumped from Drums	Sight Gauge	Dispensed for Maintenance

1420DRA	Manual	Visual	Vacuum Truck
1420DRB	NA	NA	Dispensed for Maintenance

- Does not contain oil, not regulated by 40 CFR 112

5.12.3 Secondary Containment

The oil ASTs are double-walled and do not collect storm water. The drums are in steel conexes, on containment pallets, or in a concrete dike indoors. The ASTs at Building 1420 share an indoor concrete containment dike. One diesel tank does not have secondary containment (see Corrective Actions, Section6.0) while the other uses a temporary plastic dike. Appendix D contains volume calculations for containers within diked areas. Personnel follow the rainwater release procedures found in Section 4.10.

Table 5.12.3 Motor Pool Secondary Containment

Container ID	Type	Storm Water Release
1417H	Double-Walled	NA
1417I	Double-Walled	NA
1417J	Double-Walled	NA
1417K	Double-Walled	NA
1417L	None	NA
1417M	Plastic Dike	Manual
1417DRA	Steel Conex	NA
1417DRB	Steel Conex	NA
1417DRC	Plastic Containment Pallet	NA
1417DRD	Plastic Containment Pallet	NA
1420A	Concrete Dike	NA (indoors)
1420B	Concrete Dike	NA (indoors)
1420C	Concrete Dike	NA (indoors)
1420DRA	Plastic Dike	NA
1420DRB	Concrete Dike	NA (indoors)

- Does not contain oil, not regulated by 40 CFR 112

Figure 5.12.1 Motor Pool (Buildings 1417, 1419, and 1420)

5.12.4 Inspection and Testing

Records of monthly visual inspections and overfill protection system tests are maintained by area personnel for at least three years. Sections 4.8 and 4.9 establish the Fort Belvoir policies for the integrity testing of shop-built containers (and piping) less than 5,000 gallons capacity and portable containers.

5.12.5 Potential Spill Scenarios

Complete container failure of an AST could result in a spill of up to 600 gallons. An error transferring in or out of drums could spill 5 gallons. It is assumed that only one drum would spill in a given event. The loss of the entire contents of the fuel delivery tanker truck could spill 3,000 gallons. The loss of the entire contents of the vacuum collection truck could spill 2,000 gallons. Spills from the 1417 area would flow across the parking lot to a storm water inlet and then west to Accotink Creek; while spills from the 1419 and 1420 areas would flow south to a storm water inlet and then south to Accotink Bay (see Figures 5.12.1, 2.1, and 2.6). A spill in this area would trigger the spill response procedures listed in Section 4.7.

Table 5.12.4 Motor Pool Potential Spill Scenarios

Container ID	Spill Amount (Gallons)	Contents	Cause	Pathway
1417H	500	Oil	Container Failure	West to Accotink Creek
	5		Dispensing Error	
	5		Transfer Error	
1417I	500	Oil	Container Failure	
	5		Dispensing Error	
	5		Transfer Error	
1417J	500	Hydraulic Oil	Container Failure	
	5		Dispensing Error	
	5		Transfer Error	
1417K	500	Used Oil	Container Failure	
	5		Transfer Error	
	2,000		Vacuum Truck	

Container ID	Spill Amount (Gallons)	Contents	Cause	Pathway
			Error	
1417L	600	Diesel	Container Failure	West to Accotink Creek
	25		Dispensing Error	
	3,000		Delivery Truck Error	
1417M	600	Diesel	Container Failure	
	25		Dispensing Error	
	3,000		Delivery Truck Error	
1417DRA	55	Oil, Hydraulic Oil Antifreeze	Container Failure	West to Accotink Creek
1417DRB	55	Oil, Hydraulic Oil Antifreeze	Container Failure	
1417DRC	55	Oil, Hydraulic Oil Antifreeze	Container Failure	South to Accotink Bay
	5		Dispensing Error	
1417DRD	55	Used Oil, Used Fuel Used Antifreeze	Container Failure	South to Accotink Bay
	5		Transfer Error	
1420A	250	Hydraulic Oil	Container Failure	South to Accotink Bay
	5		Dispensing Error	
	5		Transfer Error	
1420B	275	Used Oil	Container Failure	
	5		Transfer Error	
	2,000		Vacuum Truck Error	
1420C	275	Oil	Container Failure	

Container ID	Spill Amount (Gallons)	Contents	Cause	Pathway
	5		Dispensing Error	
	5		Transfer Error	
1420DRA	55	Used Oil	Container Failure	South to Accotink Bay
	5	Used Antifreeze	Transfer Error	
1420DRB	55	Oil, Hydraulic Oil, Grease	Container Failure	
	5	Antifreeze	Dispensing Error	

- Does not contain oil, not regulated by 40 CFR 112

5.13 Autocraft (Building 1462)

5.13.1 Area Description

The Autocraft Shop is used by customers to complete their personal vehicle maintenance. There are two ASTs outside the building and a drum storage area inside. Table 5.13.1 provides container details, and Figure 5.13.1 shows their locations.

Table 5.13.1 Autocraft Containers

Container ID	Type	Capacity (Gallons)	Material of Construction	Product Stored
1462B	AST, Horizontal	250	Steel	Used Antifreeze
1462C	AST, Horizontal	500	Steel	Used Oil
1462DR	55-Gallon Drums	55 (up to 4)	Steel	Used Oil

- Does not contain oil, not regulated by 40 CFR 112

5.13.2 Product Handling

Collection drums and tanks are filled by manually pouring used products. Used oil is also transferred into the AST from drums by a small pump. The collection tanks are emptied via vacuum truck. Table 5.13.2 provides product handling details.

Table 5.13.2 Autocraft Product Handling

Container ID	Loading Method	Overfill Protection	Unloading Method
1462B	Manual	Sight Gauge	Vacuum Truck
1462C	Pumped from Drums	Sight Gauge	Vacuum Truck
1462DR	Manual	Visual	Pumped into AST

- Does not contain oil, not regulated by 40 CFR 112

5.13.3 Secondary Containment

The ASTs are double-walled and do not collect storm water. The drums are on a steel containment pallet indoors.

Figure 5.13.1 Autocraft (Building 1462)

Table 5.13.3 Autocraft Secondary Containment

Container ID	Type	Storm Water Release
1462B	Double-Walled	NA
1462C	Double-Walled	NA
1462DR	Steel Containment Pallet	NA

- Does not contain oil, not regulated by 40 CFR 112

5.13.4 Inspection and Testing

Records of monthly visual inspections and overfill protection system tests are maintained by area personnel for at least three years. Sections 4.8 and 4.9 establish the Fort Belvoir policies for the integrity testing of shop-built containers (and piping) less than 5,000 gallons capacity and portable containers.

5.13.5 Potential Spill Scenarios

Complete container failure of an AST could result in a spill of up to 500 gallons. An error transferring in or out of drums could spill 5 gallons. It is assumed that only one drum would spill in a given event. The loss of the entire contents of the vacuum collection truck could spill 2,000 gallons. Any spill from this area would flow to a storm water inlet and then west to an unnamed creek west to Accotink Creek (see Figures 5.13.1, 2.1, and 2.6). A spill in this area would trigger the spill response procedures listed in Section 4.7.

Table 5.13.4 Autocraft Potential Spill Scenarios

Container ID	Spill Amount (Gallons)	Contents	Cause	Pathway
1462B	250	Used Antifreeze	Container Failure	West to Accotink Creek
	5		Transfer Error	
	2,000		Vacuum Truck Error	
1462C	500	Used Oil	Container Failure	
	5		Transfer Error	
	2,000		Vacuum Truck Error	

Container ID	Spill Amount (Gallons)	Contents	Cause	Pathway
1462DR	55	Used Oil	Container Failure	
	5		Dispensing Error	

- Does not contain oil, not regulated by 40 CFR 112

5.14 Marina (Building 1696)

5.14.1 Area Description

The Marina is used by customers to complete their personal boat maintenance. There is an AST for an emergency generator and a buried heating oil tank for the building. The buried heating oil tank is less than 50 yards from the shoreline. Table 5.14.1 provides container details, and Figure 5.14.1 shows their locations.

Table 5.14.1 Marina Containers

Container ID	Type	Capacity (Gallons)	Material of Construction	Product Stored
1695	AST, Horizontal	250	Steel	Diesel
1696CU	Buried Tank	1,000	FRP	Heating Oil

5.14.2 Product Handling

Contractor delivery trucks fill the diesel and heating oil tanks. Table 5.14.2 provides product handling details.

Table 5.14.2 Marina Product Handling

Container ID	Loading Method	Overfill Protection	Unloading Method
1695	Truck	Sight Gauge	Used in Generator
1696CU	Truck	Overfill Alarm	Used in Heater

5.14.3 Secondary Containment

The AST and buried tank are double-walled and do not collect storm water.

Table 5.14.3 Marina Secondary Containment

Container ID	Type	Storm Water Release
1695	Double-Walled	NA
1696CU	Double-Walled	NA

Figure 5.14.1 Marina (Building 1696)

5.14.4 Inspection and Testing

Records of monthly visual inspections and overfill protection system tests are maintained by area personnel for at least three years. Section 4.8 establishes the Fort Belvoir policy for the integrity testing of shop-built containers (and piping) with less than 5,000 gallons capacity.

5.14.5 Potential Spill Scenarios

Complete container failure of the AST could result in a spill of up to 250 gallons. A leak of the buried tank could release 1,000 gallons. The fuel delivery truck could spill 3,000 gallons. Any spill from this area would flow west directly to Dogue Creek (see Figures 5.14.1, 2.1, and 2.6). A spill in this area would trigger the spill response procedures listed in Section 4.7.

Table 5.14.4 Marina Potential Spill Scenarios

Container ID	Spill Amount (Gallons)	Contents	Cause	Pathway
1695	250	Diesel	Container Failure	West to Dogue Creek
	3,000		Delivery Truck Error	
1696CU	1,000	Heating Oil	Container Failure	
	3,000		Delivery Truck Error	

5.15 Motor Pool (Buildings 1906 and 1956)

5.15.1 Area Description

This area is used for two separate vehicle maintenance organizations: a military motor pool with portable generators and an unoccupied motor pool. There are four ASTs and three drum storage areas outside the buildings. Table 5.15.1 provides container details, and Figure 5.15.1 shows their locations.

Table 5.15.1 Motor Pool Containers

Container ID	Type	Capacity (Gallons)	Material of Construction	Product Stored
1906C	AST, Horizontal	500	Steel	Used Oil
1906E	AST, Horizontal	500	Steel	Heating Oil
1956A	AST, Horizontal	500	Steel	Used Oil
1956B	AST, Horizontal	2,000	Steel	Diesel
1956DRA	55-Gallon Drums	55 (up to 4)	Steel	Used Oil
				Used Antifreeze
1956DRB	55-Gallon Drums	55 (up to 12)	Steel	Oil, Hydraulic Oil
				Antifreeze
1956DRC	55-Gallon Drums	55 (up to 4)	Steel	Oil, Hydraulic Oil
				Antifreeze

- Does not contain oil, not regulated by 40 CFR 112

5.15.2 Product Handling

Contractor delivery trucks fill the diesel tank. Diesel is dispensed into vehicles or generators (for testing in the parking area). Oil is dispensed by hand pump or gravity spigots. The used oil tanks are filled by manually pouring used products. AST 1906C does not have a level gauge to prevent overfills (see Corrective Actions, Section 6.0). The collection drums and tanks are emptied via vacuum truck. Table 5.15.2 provides product handling details.

Table 5.15.2 Motor Pool Product Handling

Container ID	Loading Method	Overfill Protection	Unloading Method
1906C	Manual	None	Vacuum Truck
1906E	Truck	Sight Gauge	Used in Heater
1956A	Manual	Sight Gauge	Vacuum Truck
1956B	Truck	Sight Gauge	Used in Generators
1956DRA	Manual	Visual	Vacuum Truck
1956DRB	NA	NA	NA
1956DRC	NA	NA	Dispensed for Maintenance

- Does not contain oil, not regulated by 40 CFR 112

5.15.3 Secondary Containment

The ASTs are double-walled and do not collect storm water. The drums are in steel conexes or on containment pallets. The 1956DRC drums are not properly within the containment pallets, so they do not have proper secondary containment (see Corrective Actions, Section 6.0).

Table 5.15.3 Motor Pool Secondary Containment

Container ID	Type	Storm Water Release
1906C	Double-Walled	NA
1906E	Double-Walled	NA
1956A	Double-Walled	NA
1956B	Double-Walled	NA
1956DRA	Plastic Containment Pallet	NA
1956DRB	Steel Conex	NA
1956DRC	Plastic Containment Pallet	NA

- Does not contain oil, not regulated by 40 CFR 112

Figure 5.15.1 Motor Pool (Buildings 1906 and 1956)

5.15.4 Inspection and Testing

Records of monthly visual inspections and overfill protection system tests are maintained by area personnel for at least three years. Sections 4.8 and 4.9 establish the Fort Belvoir policies for the integrity testing of shop-built containers (and piping) less than 5,000 gallons capacity and portable containers.

5.15.5 Potential Spill Scenarios

Complete container failure of an AST could result in a spill of up to 2,000 gallons. An error transferring in or out of drums could spill 5 gallons. It is assumed that only one drum would spill in a given event. The loss of the entire contents of the fuel delivery tanker truck could spill 3,000 gallons. The loss of the entire contents of the vacuum collection truck could spill 2,000 gallons. Any spill from 1906 would flow west in storm water pipes to Accotink Creek while spills from 1956 would flow south first in open drainage flowing west to Accotink Creek (see Figures 5.15.1, 2.1, and 2.5). A spill in this area would trigger the spill response procedures listed in Section 4.7.

Table 5.15.4 Motor Pool Potential Spill Scenarios

Container ID	Spill Amount (Gallons)	Contents	Cause	Pathway
1906C	500	Used Oil	Container Failure	West in pipes to Accotink Creek
	5		Transfer Error	
	2,000		Vacuum Truck Error	
1906E	500	Heating Oil	Container Failure	
	3,000		Delivery Truck Error	
1956A	500	Used Oil	Container Failure	South in open drainage and then west to Accotink Creek
	5		Transfer Error	
	2,000		Vacuum Truck Error	
1956B	2,000	Diesel	Container Failure	
	25		Dispensing Error	
	3,000		Delivery Truck Error	

Container ID	Spill Amount (Gallons)	Contents	Cause	Pathway
1956DRA	55	Used Oil	Container Failure	South in open drainage and then west to Accotink Creek
		Antifreeze	Transfer Error	
1956DRB	55	Oil, Hydraulic Oil	Container Failure	
		Antifreeze		
1956DRC	55	Oil, Hydraulic Oil	Container Failure	
	5		Dispensing Error	
		Antifreeze		

- Does not contain oil, not regulated by 40 CFR 112

5.16 Motor Pool (Buildings 1949 and 1950)

5.16.1 Area Description

This area is used for two separate vehicle maintenance organizations (both military). There are two ASTs and two drum storage areas, plus a buried heating oil tank that is shared between the buildings. Table 5.16.1 provides container details, and Figure 5.16.1 shows their locations.

Table 5.16.1 Motor Pool Containers

Container ID	Type	Capacity (Gallons)	Material of Construction	Product Stored
1949	AST, Horizontal	250	Steel	Used Oil
1949DR	55-Gallon Drums	55 (up to 4)	Steel	Oil
				Antifreeze, Used Antifreeze
1950AU	Buried Tank	3,000	Steel	Heating Oil
1950B	AST, Horizontal	250	Steel	Used Oil
1950DRA	55-Gallon Drums	55 (up to 2)	Steel	Used Antifreeze
1950DRB	55-Gallon Drums	55 (up to 20)	Steel	Oil, Hydraulic Oil
				Antifreeze

- Does not contain oil, not regulated by 40 CFR 112

5.16.2 Product Handling

Contractor delivery trucks fill the heating oil tank. Diesel is used in the building boilers. Oil is dispensed by hand pump or gravity spigots. The used oil tanks are filled by manually pouring used products. The collection drums and tanks are emptied via vacuum truck. Table 5.16.2 provides product handling details.

Table 5.16.2 Motor Pool Product Handling

Container ID	Loading Method	Overfill Protection	Unloading Method
1949	Manual	Sight Gauge	Vacuum Truck
1949DR (New)	NA	NA	Dispensed for Maintenance
1949DR (Used)	Manual	Sight Gauge	Vacuum Truck

1950AU	Truck	Sight Gauge	Used in Heaters
1950B	Manual	Sight Gauge	Vacuum Truck
1950DRA	Manual	Visual	Vacuum Truck
1950DRB	NA	NA	Dispensed for Maintenance

- Does not contain oil, not regulated by 40 CFR 112

5.16.3 Secondary Containment

AST 1949 is double-walled and does not collect storm water. AST 1950B does not have secondary containment (see Corrective Actions, Section 6.0). The drums are in steel conexes or on containment pallets.

Table 5.16.3 Motor Pool Secondary Containment

Container ID	Type	Storm Water Release
1949	Double-Walled	NA
1949DR	Plastic Containment Pallet	NA
1950AU	Double-Walled	NA
1950B	None	NA
1950DRA	Plastic Containment Pallet	NA
1950DRB	Steel Conex	NA

- Does not contain oil, not regulated by 40 CFR 112

Figure 5.16.1 Motor Pool (Buildings 1949 and 1950)

5.16.4 Inspection and Testing

Records of monthly visual inspections and overfill protection system tests are maintained by area personnel for at least three years. Sections 4.8 and 4.9 establish the Fort Belvoir policies for the integrity testing of shop-built containers (and piping) less than 5,000 gallons capacity and portable containers.

5.16.5 Potential Spill Scenarios

Complete container failure of an AST could result in a spill of up to 250 gallons. An error transferring in or out of drums could spill 5 gallons. It is assumed that only one drum would spill in a given event. The loss of the entire contents of the fuel delivery tanker truck could spill 3,000 gallons. The loss of the entire contents of the vacuum collection truck could spill 2,000 gallons. Any spill from this area would flow east across the parking lot to a storm water inlet and then south and west in open drainage to Accotink Creek (see Figures 5.16.1, 2.1, and 2.5). A spill in this area would trigger the spill response procedures listed in Section 4.7.

Table 5.16.4 Motor Pool Potential Spill Scenarios

Container ID	Spill Amount (Gallons)	Contents	Cause	Pathway
1949	250	Used Oil	Container Failure	East across surface and then south and west in open drainage to Accotink Creek
	5		Transfer Error	
	2,000		Vacuum Truck Error	
1949DR	55	Oil	Container Failure	
	5		Dispensing Error	
	5	Antifreeze, Used Antifreeze	Transfer Error	
1950AU		Heating Oil	Container Failure	East across surface and then south and west in open drainage to Accotink Creek
	3,000		Delivery Truck Error	
1950B	250	Used Oil	Container Failure	East across surface and then south and west in open
	5		Transfer Error	

Container ID	Spill Amount (Gallons)	Contents	Cause	Pathway
	2,000		Vacuum Truck Error	drainage to Accotink Creek
1950DRA	55	Used Antifreeze	Container Failure	
	5		Transfer Error	
1950DRB	55	Oil, Hydraulic Oil	Container Failure	
	5		Dispensing Error	
		Antifreeze		

- Does not contain oil, not regulated by 40 CFR 112

5.17 AAFES Gas Station - North (Building 2304)

5.17.1 Area Description

Building 2304 is a gas station for privately owned vehicles. Four USTs hold fuel for vehicles. There is also a food grease container at the site (see Section 5.35). Table 5.17.1 provides container details, and Figure 5.17.1 shows their locations.

Table 5.17.1 AAFES Gas Station Containers

Container ID	Type	Capacity (Gallons)	Material of Construction	Product Stored
2304A	UST	12,000	FRP	Gasoline
2304B	UST	12,000	FRP	Gasoline
2304C	UST	12,000	FRP	Gasoline
2304D	UST	12,000	FRP	Gasoline

5.17.2 Product Handling

Contractor delivery trucks fill the USTs. Fuel is dispensed into vehicles through standard commercial pumps. Table 5.17.2 provides product handling details.

Table 5.17.2 AAFES Gas Station Product Handling

Container ID	Loading Method	Overfill Protection	Unloading Method
2304A	Truck	Automatic Tank Gauging	Dispensed to Vehicles
2304B	Truck	Automatic Tank Gauging	Dispensed to Vehicles
2304C	Truck	Automatic Tank Gauging	Dispensed to Vehicles
2304D	Truck	Automatic Tank Gauging	Dispensed to Vehicles

Figure 5.17.1 AAFES Gas Station (Building 2304)

5.17.3 Secondary Containment

The USTs do not have to meet SPCC Plan requirements for secondary containment.

5.17.4 Inspection and Testing

Inspection and testing requirements from 40 CFR 280 are not included in this SPCC Plan.

5.17.5 Potential Spill Scenarios

An error dispensing fuel could spill 25 gallons. The loss of the entire contents of a larger fuel delivery tanker truck could spill 5,000 gallons. Any spill from this area would flow north across the parking lot to a storm water inlet to an unnamed creek and then southwest to Accotink Creek (see Figures 5.17.1, 2.1, and 2.5). A spill in this area would trigger the spill response procedures listed in Section 4.7.

Table 5.17.3 AAFES Gas Station Potential Spill Scenarios

Container ID	Spill Amount (Gallons)	Contents	Cause	Pathway
2304A	25	Gasoline	Dispensing Error	North across surface and then southwest to Accotink Creek
	5,000		Delivery Truck Error	
2304B	25	Gasoline	Dispensing Error	
	5,000		Delivery Truck Error	
2304C	25	Gasoline	Dispensing Error	
	5,000		Delivery Truck Error	
2304D	25	Gasoline	Dispensing Error	
	5,000		Delivery Truck Error	

5.18 Earth Satellite (Building 2310)

5.18.1 Area Description

This area is a satellite control facility. There are ASTs that are day tanks for backup power, as well as a separate emergency generator and a drum storage area. An UST (2310A) is the main fuel storage tank (see Appendix A, Table A-2). Table 5.18.1 provides container details, and Figure 5.18.1 shows their locations.

Table 5.18.1 Earth Satellite Containers

Container ID	Type	Capacity (Gallons)	Material of Construction	Product Stored
2310A	UST	25,000	FRP	Diesel
2310B	AST, Horizontal	500	Steel	Diesel
2310C	AST, Horizontal	335	Steel	Diesel
2310D	AST, Horizontal	335	Steel	Diesel
2310E	AST, Horizontal	335	Steel	Diesel
2310DR	55-Gallon Drums	55 (up to 4)	Steel	Oil, Used Oil

5.18.2 Product Handling

Contractor delivery trucks fill the diesel UST and tank 2310B. Oil is dispensed by hand pump or gravity spigots. The used oil drums are filled by manually pouring used products. The collection drums are emptied via vacuum truck. Table 5.18.2 provides product handling details.

Table 5.18.2 Earth Satellite Product Handling

Container ID	Loading Method	Overfill Protection	Unloading Method
2310B	Truck	Sight Gauge	Used in Generator
2310C	Pump from UST	Overfill Alarm	Used in Generator
2310D	Pump from UST	Overfill Alarm	Used in Generator
2310E	Pump from UST	Overfill Alarm	Used in Generator
2310DR (New)	NA	NA	Dispensed for Maintenance
2310DR (Used)	Manual	Visual	Vacuum Truck

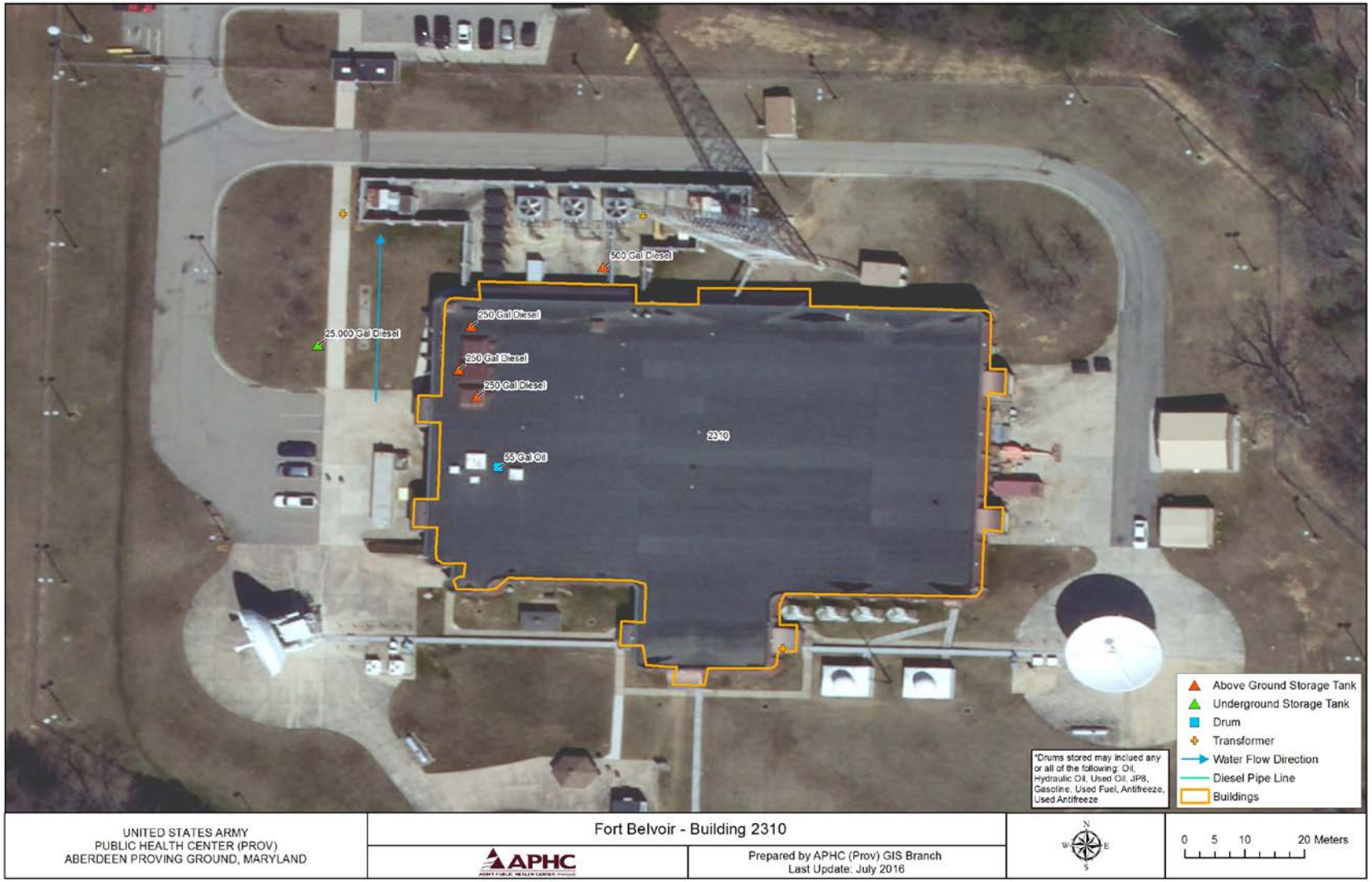
5.18.3 Secondary Containment

AST 2310B is double-walled and does not collect storm water. The day tank ASTs (2310C, 2310D, and 2310E) are inside the building but, because of penetrations through the walls/dikes, do not have secondary containment (see Corrective Actions, Section 6.0). The drums are on containment pallets inside the building.

Table 5.18.3 Earth Satellite Secondary Containment

Container ID	Type	Storm Water Release
2310B	Double-Walled	NA
2310C	None	NA
2310D	None	NA
2310E	None	NA
2310DR	Plastic Containment Pallet	NA

Figure 5.18.1 Earth Satellite (Building 2310)



5.18.4 Inspection and Testing

Records of monthly visual inspections and overfill protection system tests are maintained by area personnel for at least three years. Sections 4.8 and 4.9 establish the Fort Belvoir policies for the integrity testing of shop-built containers (and piping) less than 5,000 gallons capacity and portable containers.

5.18.5 Potential Spill Scenarios

Complete container failure of an AST could result in a spill of up to 500 gallons. An error transferring in or out of drums could spill 5 gallons. It is assumed that only one drum would spill in a given event. The loss of the entire contents of the fuel delivery tanker truck could spill 3,000 gallons. The loss of the entire contents of the vacuum collection truck could spill 2,000 gallons. Any spill from this area would flow north to a storm water inlet and then southeast in an unnamed creek to Dogue Creek (see Figures 5.18.1, 2.1, and 2.5). A spill in this area would trigger the spill response procedures listed in Section 4.7.

Table 5.18.4 Earth Satellite Potential Spill Scenarios

Container ID	Spill Amount (Gallons)	Contents	Cause	Pathway
2310A	3,000	Diesel	Delivery Truck Error	North to storm water inlet and then southeast to Dogue Creek
2310B	500	Diesel	Container Failure	
	3,000		Delivery Truck Error	
2310C	335	Diesel	Container Failure	North to storm water inlet and then southeast to Dogue Creek
2310D	335	Diesel	Container Failure	
2310E	335	Diesel	Container Failure	
2310DR	55	Oil, Used Oil	Container Failure	North to storm water inlet and then southeast to Dogue Creek
	5		Dispensing Error	
	5		Transfer Error	
	2,000		Vacuum Truck Error	

5.19 INSCOM (Building 2444)

5.19.1 Area Description

This area is a satellite control facility. There are ASTs that are day tanks for backup power, as well as chemical tanks for boiler water treatment. An UST (2444C) is the main fuel storage tank (see Appendix A, Table A-2). Used food grease is also onsite (see Section 5.35). Table 5.19.1 provides container details, and Figure 5.19.1 shows their locations.

Table 5.19.1 INSCOM Containers

Container ID	Type	Capacity (Gallons)	Material of Construction	Product Stored
2444C	UST	25,000	FRP	Diesel
2444D	AST, Horizontal	250	Steel	Diesel
2444E	AST, Horizontal	250	Steel	Diesel
2444F	AST, Horizontal	250	Steel	Diesel
2444G	AST, Vertical	100	Plastic	Sodium Hydroxide
2444H	AST, Vertical	100	Plastic	Acetic Acid
2444I	AST, Vertical	100	Plastic	Sodium Hypochlorite

- Does not contain oil, not regulated by 40 CFR 112

5.19.2 Product Handling

Contractor delivery trucks fill the diesel UST which pumps to the day tanks. Chemicals are poured into the tanks from small containers and then dispensed directly into the boiler water system. Table 5.19.2 provides product handling details.

Table 5.19.2 INSCOM Product Handling

Container ID	Loading Method	Overfill Protection	Unloading Method
2444D	Pump from UST	Overfill Alarm	Used in Generator
2444E	Pump from UST	Overfill Alarm	Used in Generator
2444F	Pump from UST	Overfill Alarm	Used in Generator
2444G	Manual	Visual	Used in Water Treatment
2444H	Manual	Visual	Used in Water Treatment
2444I	Manual	Visual	Used in Water Treatment

5.19.3 Secondary Containment

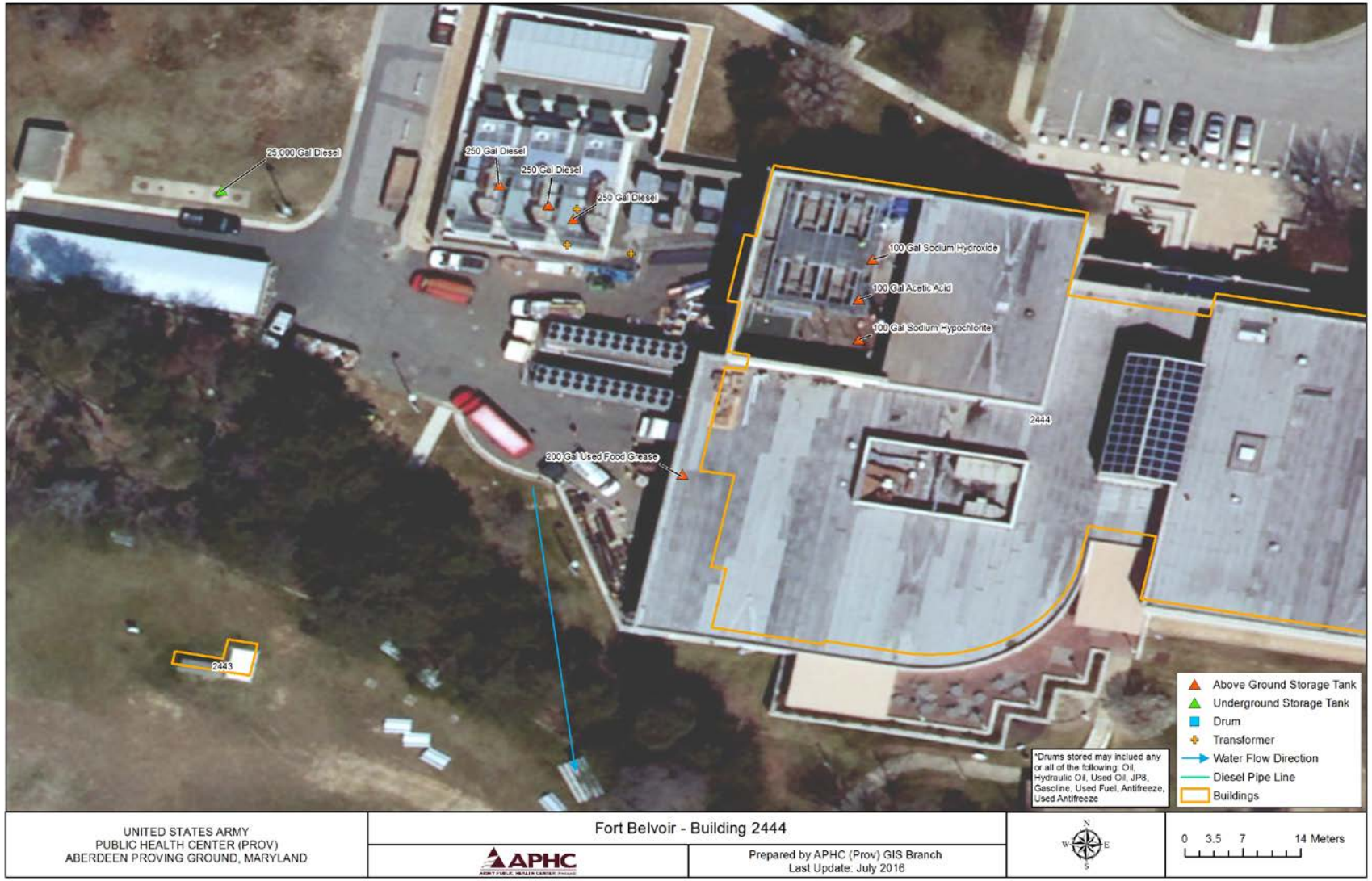
The day tank ASTs are double-walled and do not collect storm water. The chemical tank ASTs (2444G, 2444H, and 2444I) are inside the building, but do not have secondary containment (see Corrective Actions, Section 6.0).

Table 5.19.3 INSCOM Secondary Containment

Container ID	Type	Storm Water Release
2444D	Double-Walled	NA
2444E	Double-Walled	NA
2444F	Double-Walled	NA
2444G	None	NA
2444H	None	NA
2444I	None	NA

- Does not contain oil, not regulated by 40 CFR 112

Figure 5.19.1 INSCOM (Building 2444)



5.19.4 Inspection and Testing

Records of monthly visual inspections and overfill protection system tests are maintained by area personnel for at least three years. Section 4.8 establishes the Fort Belvoir policy for the integrity testing of shop-built containers (and piping) less than 5,000 gallons capacity.

5.19.5 Potential Spill Scenarios

Complete container failure of an AST could result in a spill of up to 250 gallons. The loss of the entire contents of the fuel delivery tanker truck could spill 3,000 gallons. Any spill from this area would flow south across asphalt to a storm water inlet and then south to an unnamed creek and south to Accotink Creek (see Figures 5.19.1, 2.1, and 2.5). A spill in this area would trigger the spill response procedures listed in Section 4.7.

Table 5.19.4 INSCOM Potential Spill Scenarios

Container ID	Spill Amount (Gallons)	Contents	Cause	Pathway
2444D	250	Diesel	Container Failure	South to Accotink Creek
2444E	250	Diesel	Container Failure	
2444F	250	Diesel	Container Failure	
2444G	55	Sodium Hydroxide	Container Failure	South to Accotink Creek
	5		Transfer Error	
2444H	55	Acetic Acid	Container Failure	
	5		Transfer Error	
2444I	55	Sodium Hypochlorite	Container Failure	
	5		Transfer Error	

- Does not contain oil, not regulated by 40 CFR 112

5.20 DLA (Building 2462)

5.20.1 Area Description

This building is DLA Headquarters. There are ASTs that are day tanks for backup power, a drum storage area, a fuel tank for small vehicles, and a chemical tank for boiler water treatment. An UST (2462B) is the main fuel storage tank (see Appendix A, Table A-2). Used food grease is also onsite (see Section 5.35). Table 5.20.1 provides container details, and Figure 5.20.1 shows their locations.

Table 5.20.1 DLA Containers

Container ID	Type	Capacity (Gallons)	Material of Construction	Product Stored
2462B	UST	25,000	FRP	Diesel
2462C	AST, Horizontal	300	Steel	Diesel
2462D	AST, Horizontal	300	Steel	Diesel
2462E	AST, Horizontal	300	Steel	Diesel
2462F	AST, Horizontal	300	Steel	Diesel
2462G	AST, Horizontal	300	Steel	Diesel
2462H	AST, Horizontal	250	Steel	Diesel
2462I	AST, Vertical	65	Plastic	Phosphoric Acid
2462DRA	55-Gallon Drums	55 (up to 4)	Steel	Used Oil

- Does not contain oil, not regulated by 40 CFR 112

5.20.2 Product Handling

Contractor delivery trucks fill the diesel UST which pumps to the day tanks. The same trucks fill the fuel point tank. The fuel point tank (2462H) does not have a spill bucket to contain spills during disconnection (see Corrective Actions, Section 6.0). Chemicals are poured into the tank from small containers and then dispensed directly into the boiler water system. Used oil is manually poured into the drums. The drums are removed full for recycling, but are in improperly labeled drums (see Corrective Actions, Section 6.0). Table 5.20.2 provides product handling details.

Table 5.20.2 DLA Product Handling

Container ID	Loading Method	Overfill Protection	Unloading Method
2462C	Pump from UST	Overfill Alarm	Used in Generator
2462D	Pump from UST	Overfill Alarm	Used in Generator
2462E	Pump from UST	Overfill Alarm	Used in Generator
2462F	Pump from UST	Overfill Alarm	Used in Generator
2462G	Pump from UST	Overfill Alarm	Used in Generator
2462H	Truck	Sight Gauge	Dispensed to Vehicles
2462I	Manual	Visual	Used in Water Treatment
2462DRA	Manual	Visual	Removed Full

- Does not contain oil, not regulated by 40 CFR 112

5.20.3 Secondary Containment

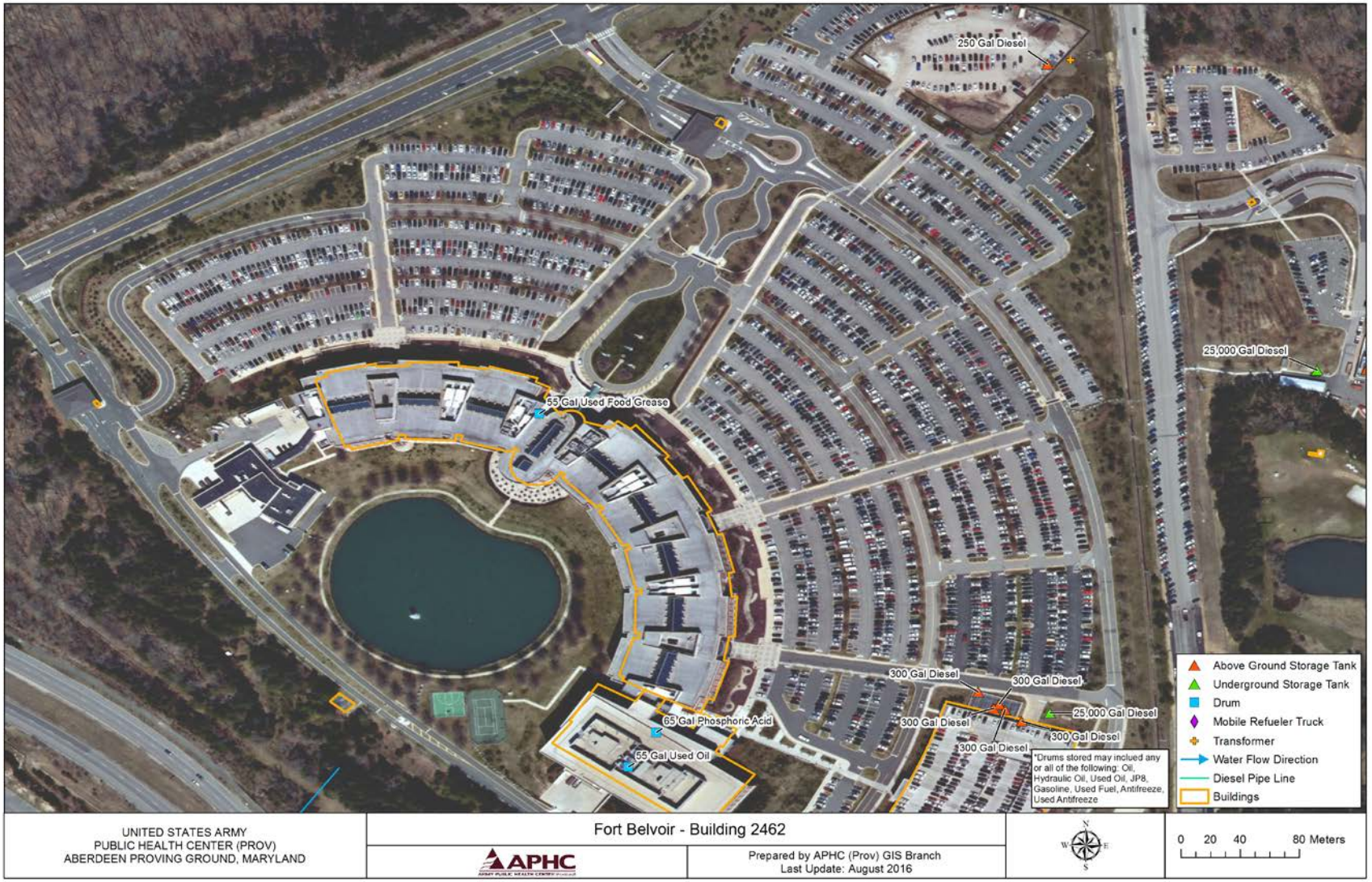
The day tank ASTs have steel dikes and do not collect storm water since they are inside generator buildings. The fuel dispensing and chemical tanks are double-walled. The drums are on spill containment pallets. Appendix D contains volume calculations for containers within diked areas.

Table 5.20.3 DLA Secondary Containment

Container ID	Type	Storm Water Release
2462C	Steel Dike	NA
2462D	Steel Dike	NA
2462E	Steel Dike	NA
2462F	Steel Dike	NA
2462G	Steel Dike	NA
2462H	Double-Walled	NA
2462I	Double-Walled	NA
2462DRA	Spill Containment Pallets	NA

- Does not contain oil, not regulated by 40 CFR 112

Figure 5.20.1 DLA (Building 2462)



5.20.4 Inspection and Testing

Records of monthly visual inspections and overfill protection system tests are maintained by area personnel for at least three years. Sections 4.8 and 4.9 establish the Fort Belvoir policies for the integrity testing of shop-built containers (and piping) less than 5,000 gallons capacity and portable containers.

5.20.5 Potential Spill Scenarios

Complete container failure of an AST could result in a spill of up to 250 gallons. The loss of the entire contents of the fuel delivery tanker truck could spill 3,000 gallons. Any spill from this area would flow west in storm water pipes to the DLA ornamental pond and then south to Accotink Creek (see Figures 5.20.1, 2.1, and 2.5). A spill in this area would trigger the spill response procedures listed in Section 4.7.

Table 5.20.4 DLA Potential Spill Scenarios

Container ID	Spill Amount (Gallons)	Contents	Cause	Pathway
2462B	3,000	Diesel	Delivery Truck Error	West to ornamental pond and then south to Accotink Creek
2462C	300	Diesel	Container Failure	
2462D	300	Diesel	Container Failure	
2462E	300	Diesel	Container Failure	
2462F	300	Diesel	Container Failure	
2462G	300	Diesel	Container Failure	
2462H	250	Diesel	Container Failure	Southwest across ground to ornamental pond and then south to Accotink Creek
	25		Dispensing Error	
	3,000		Delivery Truck Error	
2462I	65	Phosphoric Acid	Container Failure	West to pond and then south to Accotink Creek
	5		Transfer Error	
2462DRA	55	Used Oil	Container Failure	West to pond and then south to Accotink Creek
	5		Transfer Error	

- Does not contain oil, not regulated by 40 CFR 112

5.21 HECSA (Building 2580)

5.21.1 Area Description

This area is operated by HECSA. There is an AST that dispenses kerosene for small heaters. Table 5.21.1 provides container details, and Figure 5.21.1 shows their locations.

Table 5.21.1 HECSA Containers

Container ID	Type	Capacity (Gallons)	Material of Construction	Product Stored
2580	AST, Horizontal	500	Steel	Kerosene

5.21.2 Product Handling

Contractor delivery trucks fill the AST. A hand pump is used to dispense. Table 5.21.2 provides product handling details.

Table 5.21.2 HECSA Product Handling

Container ID	Loading Method	Overfill Protection	Unloading Method
2580	Truck	Sight Gauge	Dispensed to Heaters

5.21.3 Secondary Containment

The AST is double-walled and does not collect storm water.

Table 5.21.3 HECSA Secondary Containment

Container ID	Type	Storm Water Release
2580	Double-Walled	NA

Figure 5.21.1 HECSA (Building 2580)

5.21.4 Inspection and Testing

Records of monthly visual inspections and overfill protection system tests are maintained by area personnel for at least three years. Section 4.8 establishes the Fort Belvoir policy for the integrity testing of shop-built containers (and piping) less than 5,000 gallons capacity.

5.21.5 Potential Spill Scenarios

Complete container failure of an AST could result in a spill of up to 500 gallons. The loss of the entire contents of the fuel delivery tanker truck could spill 3,000 gallons. Any spill from this area would flow south in open drainage to Dogue Creek (see Figures 5.21.1, 2.1, and 2.3). A spill in this area would trigger the spill response procedures listed in Section 4.7.

Table 5.21.4 HECSA Potential Spill Scenarios

Container ID	Spill Amount (Gallons)	Contents	Cause	Pathway
2580	500	Kerosene	Container Failure	South in open drainage to Dogue Creek
	3,000		Delivery Truck Error	

5.22 2800 Area (Buildings 2800 and 2803)

5.22.1 Area Description

These buildings house administrative and utility services. There are ASTs that are day tanks for backup power (one of which is also a fuel tank for vehicles), a portable generator, and chemical drums for boiler water treatment. USTs are the main fuel storage tanks (see Appendix A, Table A-2). Used food grease is also onsite (see Section 5.35). Table 5.22.1 provides container details, and Figure 5.22.1 shows their locations.

Table 5.22.1 2800 Area Containers

Container ID	Type	Capacity (Gallons)	Material of Construction	Product Stored
2800C	AST, Vertical	550	Steel	Diesel
2800DRB	55-Gallon Drums	55 (up to 2)	Plastic	Sodium Hydroxide, Cyclohexyl-amine
2803B	AST, Vertical	550	Steel	Diesel
2803C	AST, Horizontal	195	Steel	Diesel
2803DR	55-Gallon Drums	55 (up to 2)	Plastic	Sodium Hydroxide

- Does not contain oil, not regulated by 40 CFR 112

5.22.2 Product Handling

Contractor delivery trucks fill the diesel USTs which pump to the day tanks. The same trucks fill the portable generator tank. Chemicals are poured into the drums from small containers and then dispensed directly into the boiler water system. Table 5.22.2 provides product handling details.

Table 5.22.2 2800 Area Product Handling

Container ID	Loading Method	Overfill Protection	Unloading Method
2800C	Pump from UST	Overfill Alarm	Used in Generator
2800DRB	Manual	Visual	Used in Water Treatment
2803B	Pump from UST	Overfill Alarm	Used in Generator or Dispensed to Vehicles
2803C	Truck	Sight Gauge	Used in Generator
2803DR	Manual	Visual	Used in Water Treatment

5.22.3 Secondary Containment

The two day tanks (2800C and 2803B) and the portable generator (2803C) do not have secondary containment (see Corrective Actions, Section 6.0). The drums at 2800DRB are on spill containment pallets. The drums at 2803DR do not have secondary containment (see Corrective Actions, Section 6.0).

Table 5.22.3 2800 Area Secondary Containment

Container ID	Type	Storm Water Release
2800C	None	NA
2800DRB	Spill Containment Pallets	NA
2803B	None	NA
2803C	None	NA
2803DR	None	NA

- Does not contain oil, not regulated by 40 CFR 112

Figure 5.22.1 2800 Area (Buildings 2800 and 2803)

5.22.4 Inspection and Testing

Records of monthly visual inspections and overfill protection system tests are maintained by area personnel for at least three years. Sections 4.8 and 4.9 establish the Fort Belvoir policies for the integrity testing of shop-built containers (and piping) less than 5,000 gallons capacity and portable containers.

5.22.5 Potential Spill Scenarios

Complete container failure of an AST could result in a spill of up to 550 gallons. The loss of the entire contents of the fuel delivery tanker truck could spill 3,000 gallons. It is assumed only one drum would spill in a given event. Any spill from this area would flow northeast across asphalt to a storm water inlet and then to an unnamed creek turning southeast to Dogue Creek (see Figures 5.22.1, 2.1, and 2.3). A spill in this area would trigger the spill response procedures listed in Section 4.7.

Table 5.22.4 2800 Area Potential Spill Scenarios

Container ID	Spill Amount (Gallons)	Contents	Cause	Pathway
2800C	550	Diesel	Container Failure	Northeast and then southeast to Dogue Creek
2800DRB	55	Sodium Hydroxide, Cyclohexyl-amine	Container Failure	Northeast and then southeast to Dogue Creek
	5		Transfer Error	
2803B	550	Diesel	Container Failure	Northeast and then southeast to Dogue Creek
	25		Dispensing Error	
2803C	195	Diesel	Container Failure	
	3,000		Delivery Truck Error	
2803DR	55	Sodium Hydroxide	Container Failure	Northeast and then southeast to Dogue Creek
	5		Transfer Error	

- Does not contain oil, not regulated by 40 CFR 112

5.23 2800 Area (Building 2838)

5.23.1 Area Description

Building 2838 is a fuel point for government owned vehicles. A UST holds gasoline for vehicles. Table 5.23.1 provides container details, and Figure 5.23.1 shows their locations.

Table 5.23.1 2800 Area Containers

Container ID	Type	Capacity (Gallons)	Material of Construction	Product Stored
2838A	UST	5,000	Steel	Gasoline

5.23.2 Product Handling

Contractor delivery trucks fill the UST. Fuel is dispensed into vehicles through a standard commercial pump. Table 5.23.2 provides product handling details.

Table 5.23.2 2800 Area Product Handling

Container ID	Loading Method	Overfill Protection	Unloading Method
2838A	Truck	Automatic Tank Gauging	Dispensed to Vehicles

5.23.3 Secondary Containment

The UST does not have to meet SPCC Plan requirements for secondary containment.

5.23.4 Inspection and Testing

Inspection and testing requirements from 40 CFR 280 are not included in this SPCC Plan.

Figure 5.23.1 2800 Area (Building 2838)

5.23.5 Potential Spill Scenarios

An error dispensing fuel could spill 25 gallons. The loss of the entire contents of the fuel delivery tanker truck could spill 3,000 gallons. Any spill from this area would flow northeast in open drainage and then southeast to Dogue Creek (see Figures 5.23.1, 2.1, and 2.3). A spill in this area would trigger the spill response procedures listed in Section 4.7.

Table 5.23.3 2800 Area Potential Spill Scenarios

Container ID	Spill Amount (Gallons)	Contents	Cause	Pathway
2838A	25	Gasoline	Dispensing Error	Northeast in open drainage and then southeast to Dogue Creek
	3,000		Delivery Truck Error	

5.24 Golf Course (Buildings 2909, 2990, and 2993)

5.24.1 Area Description

The golf course includes a fuel point on the course and separate vehicle maintenance facilities. There are ASTs fueling vehicles, drums for maintenance, and pesticides for controlling weeds and insects. Used food grease is also onsite (see Section 5.35). Table 5.24.1 provides container details, and Figure 5.24.1 shows their locations.

Table 5.24.1 Golf Course Containers

Container ID	Type	Capacity (Gallons)	Material of Construction	Product Stored
2909A	AST, Horizontal	500	Steel	Gasoline
2909B	AST, Horizontal	500	Steel	Gasoline
2990A	AST, Horizontal	275	Steel	Used Antifreeze
2990B	AST, Horizontal	275	Steel	Used Oil
2990CU	Buried Tank	2,000	Steel	Heating Oil
2990DR	55-Gallon Drums	55 (up to 12)	Steel	Oil, Hydraulic Oil, Grease
				Antifreeze
2993C	AST, Horizontal	500	Steel	Gasoline
2993D	AST, Horizontal	500	Steel	Diesel
2993DRA	30-Gallon Drum	30	Plastic	Prodiamine
2993DRB	Various	Various	Plastic	Various Herbicides

- Does not contain oil, not regulated by 40 CFR 112

5.24.2 Product Handling

Contractor delivery trucks fill the fuel and heating oil tanks. Collection tanks are filled by pumping from smaller collection containers and emptied by vacuum truck. Drums have hand pumps for dispensing. The fuel point tanks on the course (2909A and 2909B) and the used oil tank and the buried heating oil tank in the maintenance area (2990B and 2990CU) do not have level gauges and spill buckets to prevent overfills (see Corrective Actions, Section 6.0). Table 5.24.2 provides product handling details.

Table 5.24.2 Golf Course Product Handling

Container ID	Loading Method	Overfill Protection	Unloading Method
2909A	Truck	None	Dispensed to Vehicles
2909B	Truck	None	Dispensed to Vehicles
2990A	Pumped from Containers	None	Vacuum Truck
2990B	Pumped from Containers	Sight Gauge	Vacuum Truck
2990CU	Truck	None	Used in Heater
2990DR	NA	NA	Dispensed for Maintenance
2993C	Truck	Sight Gauge	Dispensed to Vehicles
2993D	Truck	Sight Gauge	Dispensed to Vehicles
2993DRA	NA	NA	Mixed for Application
2993DRB	NA	NA	Mixed for Application

5.24.3 Secondary Containment

The two on course fuel tanks (2909B and 2909C), the used oil tank (2990B), and the drums in the maintenance area (2990DR) do not have secondary containment (see Corrective Actions, Section 6.0). The fuel tanks in the maintenance area are double-walled. The drums at 2993DRA are on spill containment pallets while the 2993DRB drums are in a containment conex.

Table 5.24.3 Golf Course Secondary Containment

Container ID	Type	Storm Water Release
2909A	None	NA
2909B	None	NA
2990A	Double-walled	NA
2990B	None	NA
2990CU	None	NA

2990DR	None	NA
2993C	Double-walled	NA
2993D	Double-walled	NA
2993DRA	Spill Containment Pallets	NA
2993DRB	Steel Conex	NA

- Does not contain oil, not regulated by 40 CFR 112

Figure 5.24.1 Golf Course (Building 2909)

Figure 5.24.2 Golf Course (Buildings 2990 and 2993)

5.24.4 Inspection and Testing

Records of monthly visual inspections and overfill protection system tests are maintained by area personnel for at least three years. Sections 4.8 and 4.9 establish the Fort Belvoir policies for the integrity testing of shop-built containers (and piping) less than 5,000 gallons capacity and portable containers.

5.24.5 Potential Spill Scenarios

Complete container failure of an AST could result in a spill of up to 500 gallons. The loss of the entire contents of the fuel delivery tanker truck could spill 3,000 gallons. It is assumed only one drum would spill in a given event. Any spill from this area would flow south in open drainage and unnamed creek to Accotink Creek (see Figures 5.24.1, 2.1, and 2.3). A spill in this area would trigger the spill response procedures listed in Section 4.7.

Table 5.24.4 Golf Course Potential Spill Scenarios

Container ID	Spill Amount (Gallons)	Contents	Cause	Pathway
2909A	500	Gasoline	Container Failure	South in open drainage to Accotink Creek
	25		Dispensing Error	
	3,000		Delivery Truck Error	
2909B	500	Gasoline	Container Failure	
	25		Dispensing Error	
	3,000		Delivery Truck Error	
2990A	275	Used Antifreeze	Container Failure	South in open drainage to Accotink Creek
	5		Transfer Error	
	2,000		Vacuum Truck Error	
2990B	275	Used Oil	Container Failure	South in open drainage to Accotink Creek
	5		Transfer Error	
	2,000		Vacuum Truck Error	

Container ID	Spill Amount (Gallons)	Contents	Cause	Pathway
2990CU	3,000	Heating Oil	Delivery Truck Error	South in open drainage to Accotink Creek
2990DR	55	Oil, Hydraulic Oil, Grease	Container Failure	South in open drainage to Accotink Creek
	5		Dispensing Error	
		Antifreeze		
2993C	500	Gasoline	Container Failure	South in open drainage to Accotink Creek
	25		Dispensing Error	
	3,000		Delivery Truck Error	
2993D	500	Diesel	Container Failure	
	25		Dispensing Error	
	3,000		Delivery Truck Error	
2993DRA	30	Prodiamine	Container Failure	South in open drainage to Accotink Creek
	5		Mixing Error	
2993DRA	30	Various Herbicides	Container Failure	
	5		Mixing Error	

- Does not contain oil, not regulated by 40 CFR 112

5.25 DAAF Hangar (Building 3121)

5.25.1 Area Description

The hangar area includes aircraft maintenance facilities with drum storage areas. Table 5.25.1 provides container details, and Figure 5.25.1 shows their locations.

Table 5.25.1 Hangar Containers

Container ID	Type	Capacity (Gallons)	Material of Construction	Product Stored
3121DRA	55-Gallon Drums	55 (up to 12)	Steel	Used Oil, Used Fuel
3121DRB	55-Gallon Drums	55 (up to 20)	Steel	Oil, JP8

5.25.2 Product Handling

Used products are manually poured into the drums. Drums are emptied via vacuum truck. New product drums have hand pumps for dispensing. Table 5.25.2 provides product handling details.

Table 5.25.2 Hangar Product Handling

Container ID	Loading Method	Overfill Protection	Unloading Method
3121DRA	Manual	Visual	Vacuum Truck
3121DRB	NA	NA	Dispensed for Maintenance

5.25.3 Secondary Containment

The drums are in steel containment conexes.

Table 5.25.3 Hangar Secondary Containment

Container ID	Type	Storm Water Release
3121DRA	Steel Conex	NA
3121DRB	Steel Conex	NA

Figure 5.25.1 Hangar (Building 3121)

5.25.4 Inspection and Testing

Records of monthly visual inspections and overfill protection system tests are maintained by area personnel for at least three years. Section 4.9 establishes the Fort Belvoir policies for the integrity testing of portable containers.

5.25.5 Potential Spill Scenarios

The loss of the entire contents of the vacuum tanker truck could spill 2,000 gallons. It is assumed only one drum would spill in a given event. Any spill from this area would flow northwest across concrete to a storm water inlet and then northeast before turning south to Accotink Creek (see Figures 5.25.1, 2.1, and 2.4). A spill in this area would trigger the spill response procedures listed in Section 4.7.

Table 5.25.4 Hangar Potential Spill Scenarios

Container ID	Spill Amount (Gallons)	Contents	Cause	Pathway
3121DRA	55	Used Oil, Used Fuel	Container Failure	Northwest across concrete and then south to Accotink Creek
	5		Transfer Error	
	2,000		Vacuum Truck Error	
3121DRB	55	Oil, JP8	Container Failure	
	5		Dispensing Error	

5.26 DAAF Hangars (Buildings 3140 and 3144)

5.26.1 Area Description

The hangar area includes aircraft maintenance facilities with drum storage areas. Table 5.26.1 provides container details, and Figure 5.26.1 shows their locations.

Table 5.26.1 Hangars Containers

Container ID	Type	Capacity (Gallons)	Material of Construction	Product Stored
3140DR	55-Gallon Drums	55 (up to 8)	Steel	Used Oil, Used Fuel
3144DR	55-Gallon Drums	55 (up to 8)	Steel	Used Oil, Used Fuel

5.26.2 Product Handling

Used products are manually poured into the drums. Drums are emptied via vacuum truck. Table 5.26.2 provides product handling details.

Table 5.26.2 Hangars Product Handling

Container ID	Loading Method	Overfill Protection	Unloading Method
3140DR	Manual	Visual	Vacuum Truck
3144DR	Manual	Visual	Vacuum Truck

5.26.3 Secondary Containment

The drums are on covered plastic containment pallets.

Table 5.26.3 Hangars Secondary Containment

Container ID	Type	Storm Water Release
3140DR	Plastic Containment Pallet	NA
3144DR	Plastic Containment Pallet	NA

Figure 5.26.1 Hangars (Buildings 3140 and 3144)

5.26.4 Inspection and Testing

Records of monthly visual inspections and overfill protection system tests are maintained by area personnel for at least three years. Section 4.9 establishes the Fort Belvoir policies for the integrity testing of portable containers.

5.26.5 Potential Spill Scenarios

The loss of the entire contents of the vacuum tanker truck could spill 2,000 gallons. It is assumed only one drum would spill in a given event. Any spill from this area would flow northwest across concrete to a storm water inlet and then northeast before turning south to Accotink Creek (see Figures 5.26.1, 2.1, and 2.4). A spill in this area would trigger the spill response procedures listed in Section 4.7.

Table 5.26.4 Hangars Potential Spill Scenarios

Container ID	Spill Amount (Gallons)	Contents	Cause	Pathway
3140DR	55	Used Oil, Used Fuel	Container Failure	Northwest across concrete and then south to Accotink Creek
	5		Transfer Error	
	2,000		Vacuum Truck Error	
3144DR	55	Used Oil, Used Fuel	Container Failure	
	5		Transfer Error	
	2,000		Vacuum Truck Error	

5.27 DAAF Hangars (Buildings 3151 and 3153)

5.27.1 Area Description

The hangar area includes aircraft maintenance facilities with drum storage areas and an office building with a heating oil tank. Table 5.27.1 provides container details, and Figure 5.27.1 shows their locations.

Table 5.27.1 Hangars Containers

Container ID	Type	Capacity (Gallons)	Material of Construction	Product Stored
3151DR	55-Gallon Drums	55 (up to 4)	Steel	Used Oil, Used Fuel
3153A	AST, Horizontal	550	Steel	Heating Oil
3153DR	55-Gallon Drums	55 (up to 4)	Steel	Used Fuel

5.27.2 Product Handling

Contractor delivery trucks fill the heating oil tank. AST 3153A does not have a level gauge to prevent overfills (see Corrective Actions, Section 6.0). Used products are manually poured into the drums. Drums are emptied via vacuum truck. Table 5.27.2 provides product handling details.

Table 5.27.2 Hangars Product Handling

Container ID	Loading Method	Overfill Protection	Unloading Method
3151DR	Manual	Visual	Vacuum Truck
3153A	Truck	Sight Gauge	Used In Heater
3153DR	Manual	Visual	Vacuum Truck

5.27.3 Secondary Containment

The AST is double-walled. The drums are on covered plastic containment pallets.

Table 5.27.3 Hangars Secondary Containment

Container ID	Type	Storm Water Release
3151DR	Plastic Containment Pallet	NA
3153A	Double-walled	NA
3153DR	Plastic Containment Pallet	NA

Figure 5.27.1 Hangars (Buildings 3151 and 3153)

5.27.4 Inspection and Testing

Records of monthly visual inspections and overfill protection system tests are maintained by area personnel for at least three years. Section 4.9 establishes the Fort Belvoir policies for the integrity testing of portable containers.

5.27.5 Potential Spill Scenarios

Complete failure of the AST could spill 550 gallons. The loss of the entire contents of the fuel delivery truck could spill 3,000 gallons. The loss of the entire contents of the vacuum tanker truck could spill 2,000 gallons. It is assumed only one drum would spill in a given event. Any spill from this area would flow northwest across concrete to a storm water inlet and then northeast before turning south to Accotink Creek (see Figures 5.27.1, 2.1, and 2.4). A spill in this area would trigger the spill response procedures listed in Section 4.7.

Table 5.27.4 Hangars Potential Spill Scenarios

Container ID	Spill Amount (Gallons)	Contents	Cause	Pathway
3151DR	55	Used Oil, Used Fuel	Container Failure	Northwest across concrete and then south to Accotink Creek
	5		Transfer Error	
	2,000		Vacuum Truck Error	
3153A	550	Heating Oil	Container Failure	South and then northeast and then south to Accotink Creek
	3,000		Delivery Truck Error	
3153DR	55	Used Fuel	Container Failure	
	5		Transfer Error	
	2,000		Vacuum Truck Error	

5.28 DAAF Fuel Point (Building 3161)

5.28.1 Area Description

The fuel point supplies fuel for all of the aircraft at DAAF. There are two USTs as the main fuel storage, five mobile refueler trucks that deliver fuel directly to aircraft on the flight line, two ASTs for fueling ground vehicles, and drums for collecting used fuel. Used food grease is also onsite (see Section 5.35). Table 5.28.1 provides container details, and Figure 5.28.1 shows their locations.

Table 5.28.1 DAAF Fuel Point Containers

Container ID	Type	Capacity (Gallons)	Material of Construction	Product Stored
3161A	AST, Horizontal	500	Steel	Gasoline
3161B	AST, Horizontal	500	Steel	Diesel
3161DR	55-Gallon Drums	55 (up to 2)	Steel	Used Fuel
3161MA	Mobile Refueler	5,000	Steel	JP8
3161MB	Mobile Refueler	3,000	Steel	JP8
3161MC	Mobile Refueler	3,000	Steel	JP8
3161MD	Mobile Refueler	3,000	Steel	JP8
3161ME	Mobile Refueler	3,000	Steel	JP8
3162AU	UST	13,000	FRP	JP8
3162BU	UST	13,000	FRP	JP8

5.28.2 Product Handling

Contractor delivery trucks fill the USTs and the fuel tanks. The USTs fill the mobile refuelers at the loading/unloading rack. Collection drums are filled manually from small containers and emptied by vacuum truck. Mobile refueler trucks dispense fuel directly to aircraft. Table 5.28.2 provides product handling details.

Table 5.28.2 DAAF Fuel Point Product Handling

Container ID	Loading Method	Overfill Protection	Unloading Method
3161A	Truck	Sight Gauge	Dispensed to Vehicles
3161B	Truck	Sight Gauge	Dispensed to Vehicles
3161DR	Manual	Visual	Vacuum Truck
3161MA	Pumped from USTs	Sight Gauge	Dispensed to Aircraft
3161MB	Pumped from USTs	Sight Gauge	Dispensed to Aircraft
3161MC	Pumped from USTs	Sight Gauge	Dispensed to Aircraft
3161MD	Pumped from USTs	Sight Gauge	Dispensed to Aircraft
3161ME	Pumped from USTs	Sight Gauge	Dispensed to Aircraft

5.28.3 Secondary Containment

The two ground vehicle fuel tanks (3161A and 3161B) are double-walled. The drums are in a covered plastic containment pallet. The mobile refueler trucks are parked in a concrete containment area. The loading/unloading rack is contained by a concrete berm. Appendix D contains volume calculations for containers within diked areas and the loading/unloading rack. Personnel follow the rainwater release procedures found in Section 4.10.

Table 5.28.3 DAAF Fuel Point Secondary Containment

Container ID	Type	Storm Water Release
3161A	Double-walled	NA
3161B	Double-walled	NA
3161DR	Plastic Containment Pallet	NA
3161MA	Concrete Dike	Manual
3161MB	Concrete Dike	Manual
3161MC	Concrete Dike	Manual
3161MD	Concrete Dike	Manual
3161ME	Concrete Dike	Manual

Figure 5.28.1 DAAF Fuel Point (Building 3161)

5.28.4 Inspection and Testing

Records of monthly visual inspections and overfill protection system tests are maintained by area personnel for at least three years. Sections 4.8 and 4.9 establish the Fort Belvoir policies for the integrity testing of shop-built containers (and piping) less than 5,000 gallons capacity and portable containers.

5.28.5 Potential Spill Scenarios

Complete container failure of an AST could result in a spill of up to 500 gallons. The loss of the entire contents of the larger fuel delivery tanker truck could spill 5,000 gallons. The loss of the entire contents of the vacuum truck could spill 2,000 gallons. It is assumed only one drum would spill in a given event. Any spill from this area would flow northwest across concrete to a storm water inlet and then northeast before turning south to Accotink Creek (see Figures 5.28.1, 2.1, and 2.4). A spill in this area would trigger the spill response procedures listed in Section 4.7.

Table 5.28.4 DAAF Fuel Point Potential Spill Scenarios

Container ID	Spill Amount (Gallons)	Contents	Cause	Pathway
3161A	500	Gasoline	Container Failure	Northwest across concrete and then south to Accotink Creek
	25		Dispensing Error	
	3,000		Delivery Truck Error	
3161B	500	Diesel	Container Failure	
	25		Dispensing Error	
	3,000		Delivery Truck Error	
3161DR	55	Used Fuel	Container Failure	
	5		Transfer Error	
	2,000		Vacuum Truck Error	
3161MA	5,000	JP8	Container Failure	
	50		Filling Error	
3161MB	3,000	JP8	Container Failure	
	50		Filling Error	

Container ID	Spill Amount (Gallons)	Contents	Cause	Pathway
3161MC	3,000	JP8	Container Failure	Northwest across concrete and then south to Accotink Creek
	50		Filling Error	
3161MD	3,000	JP8	Container Failure	
	50		Filling Error	
3161ME	3,000	JP8	Container Failure	
	50		Filling Error	
3162AU	5,000	JP8	Delivery Truck Error	
3162BU	5,000	JP8	Delivery Truck Error	

5.29 DAAF Hangars (Buildings 3231 and 3232)

5.29.1 Area Description

The hangar area includes aircraft maintenance facilities with drum storage areas. Table 5.29.1 provides container details, and Figure 5.29.1 shows their locations.

Table 5.29.1 Hangars Containers

Container ID	Type	Capacity (Gallons)	Material of Construction	Product Stored
3231DR	55-Gallon Drums	55 (up to 3)	Steel	Used Oil
3232DR	55-Gallon Drums	55 (up to 3)	Steel	Used Fuel

5.29.2 Product Handling

Used products are manually poured into the drums. Drums are emptied via vacuum truck. Table 5.29.2 provides product handling details.

Table 5.29.2 Hangars Product Handling

Container ID	Loading Method	Overfill Protection	Unloading Method
3231DR	Manual	Visual	Vacuum Truck
3232DR	Manual	Visual	Vacuum Truck

5.29.3 Secondary Containment

The drums are on covered plastic containment pallets.

Table 5.29.3 Hangars Secondary Containment

Container ID	Type	Storm Water Release
3231DR	Plastic Containment Pallets	NA
3232DR	Plastic Containment Pallets	NA

Figure 5.29.1 Hangars (Buildings 3231 and 3232)

5.29.4 Inspection and Testing

Records of monthly visual inspections and overfill protection system tests are maintained by area personnel for at least three years. Section 4.9 establishes the Fort Belvoir policies for the integrity testing of portable containers.

5.29.5 Potential Spill Scenarios

The loss of the entire contents of the vacuum tanker truck could spill 2,000 gallons. It is assumed only one drum would spill in a given event. Any spill from this area would flow northwest across concrete to a storm water inlet and then northeast before turning south to Accotink Creek (see Figures 5.29.1, 2.1, and 2.4). A spill in this area would trigger the spill response procedures listed in Section 4.7.

Table 5.29.4 Hangars Potential Spill Scenarios

Container ID	Spill Amount (Gallons)	Contents	Cause	Pathway
3231DR	55	Used Oil	Container Failure	Northwest across concrete and then south to Accotink Creek
	5		Transfer Error	
	2,000		Vacuum Truck Error	
3232DR	55	Used Fuel	Container Failure	
	5		Transfer Error	
	2,000		Vacuum Truck Error	

5.30 NGA (Buildings 5103 and 5104)

5.30.1 Area Description

The NGA facility includes fuel storage tanks and day tanks for emergency generators, plus water treatment chemicals, and used oil collection drums. Table 5.30.1 provides container details, and Figure 5.26.1 shows their locations.

Table 5.30.1 NGA Containers

Container ID	Type	Capacity (Gallons)	Material of Construction	Product Stored
5103A	AST, Horizontal	400	Steel	Diesel
5103B	AST, Horizontal	400	Steel	Diesel
5103C	AST, Horizontal	400	Steel	Diesel
5103D	AST, Horizontal	400	Steel	Diesel
5103E	AST, Horizontal	400	Steel	Diesel
5103F	AST, Horizontal	400	Steel	Diesel
5103G	AST, Horizontal	400	Steel	Diesel
5103H	AST, Horizontal	500	Steel	Diesel
5103I	AST, Horizontal	500	Steel	Diesel
5103J	AST, Horizontal	500	Steel	Diesel
5104A	AST, Horizontal	10,000	Steel	Diesel
5104B	AST, Horizontal	30,000	Steel	Diesel
5104C	AST, Horizontal	30,000	Steel	Diesel
5104D	AST, Horizontal	30,000	Steel	Diesel
5104E	AST, Horizontal	30,000	Steel	Diesel
5104F	AST, Horizontal	30,000	Steel	Diesel
5104G	AST, Horizontal	30,000	Steel	Diesel
5104H	AST, Horizontal	400	Steel	Diesel
5104I	AST, Horizontal	110	Plastic	Glutaraldehyde
5104J	AST, Horizontal	110	Plastic	Phosphonic Acid
5104K	AST, Horizontal	110	Plastic	Sodium Hypochlorite
5104L	AST, Vertical	200	Plastic	Sodium Hydroxide
5104DR	55-Gallon Drums	55 (up to 4)	Plastic	Used Oil

5.30.2 Product Handling

Contractor delivery trucks fill the receiving diesel tank (5104A). Diesel is distributed from AST 5104A into the 30,000-gallon tanks for storage. The diesel is then transferred via underground piping to the emergency generator day tanks (5103A-5103J). Oil collection drums are filled by manually pouring from smaller collection containers and then the entire drum is removed for recycling. Water treatment chemical tanks have automatic pumps for dispensing directly into the boiler water system. Table 5.30.2 provides product handling details.

Table 5.30.2 NGA Product Handling

Container ID	Loading Method	Overfill Protection	Unloading Method
5103A - 5103J	Pumped from ASTs	Overfill Alarms	Used in Generators
5104A	Truck	Automatic Tank Gauging, Overfill Alarms, Automatic Shut-Off	Pumped to ASTs
5104B – 5104G	Pumped from 5104A	Overfill Alarms, Automatic Shut-Off	Pumped to Day Tanks
5104H	Pumped from ASTs	Overfill Alarms	Used in Generator
5104I – 5104L	Manual	Visual	Used in Water Treatment
5104DR	Manual	Visual	NA

5.30.3 Secondary Containment

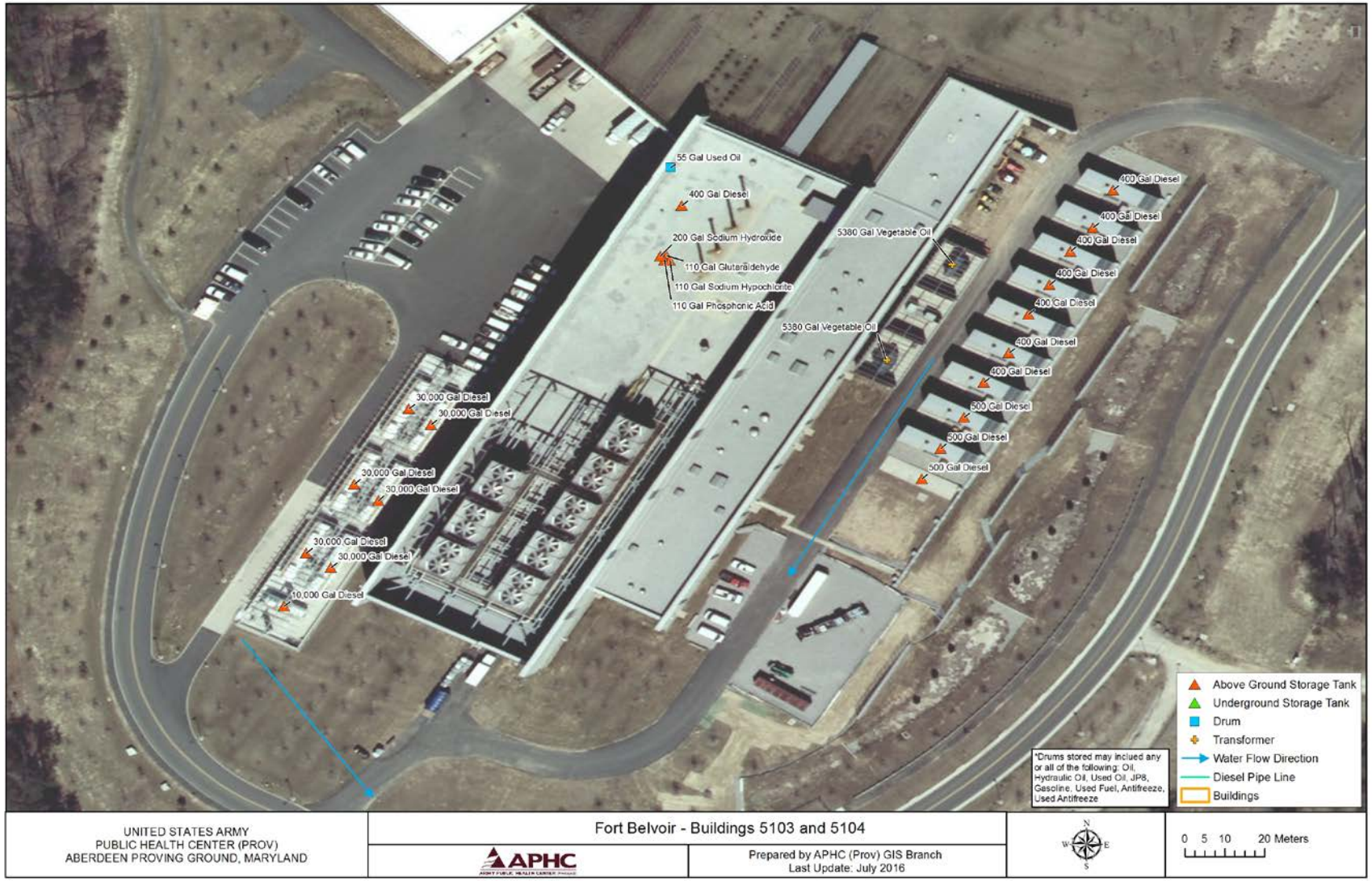
The diesel tanks are all double-walled. The water treatment chemical tanks have dikes for secondary containment. The drums at 5104DR are on spill containment pallets which are not large enough to hold their entire volume (see Corrective Actions, Section 6.0). See Appendix D for volume calculations of diked areas.

Table 5.30.3 NGA Secondary Containment

Container ID	Type	Storm Water Release
5103A - 5103J	Double-walled	NA
5104A	Double-walled	NA
5104B – 5104G	Double-walled	NA
5104H	Double-walled	NA
5104I	Plastic Dike	NA
5104J	Stainless Steel Dike	NA
5104K	Plastic Dike	NA
5104L	Plastic Dike	NA
5104DR	Spill Containment Pallets	NA

- Does not contain oil, not regulated by 40 CFR 112

Figure 5.30.1 NGA (Buildings 5103 and 5104)



5.30.4 Inspection and Testing

Records of certified inspections (for tanks greater than 5,000 gallons) are maintained by DPW Environmental for the life of the container. Records of monthly visual inspections and overfill protection system tests are maintained by area personnel for at least three years. Sections 4.8 and 4.9 establish the Fort Belvoir policies for the integrity testing of shop-built containers (and piping) less than 5,000 gallons capacity and portable containers.

5.30.5 Potential Spill Scenarios

Complete container failure of an AST could result in a spill of up to 30,000 gallons. The loss of the entire contents of the fuel delivery tanker truck could spill 5,000 gallons. It is assumed only one drum would spill in a given event. Any spill from this area would flow north to a storm water inlet and then southeast to a storm water pond and then south to Accotink Creek (see Figures 5.30.1, 2.1, and 2.2). A spill in this area would trigger the spill response procedures listed in Section 4.7.

Table 5.30.4 NGA Potential Spill Scenarios

Container ID	Spill Amount (Gallons)	Contents	Cause	Pathway
5103A – 5103G	400	Diesel	Container Failure	North to storm water inlet and then southeast to a storm water pond and south to Accotink Creek
	25		Pump Transfer Error	
5103H – 5103J	500	Diesel	Container Failure	
	25		Pump Transfer Error	
5104A	10,000	Diesel	Container Failure	North to storm water inlet and then southeast to a storm water pond and south to Accotink Creek
	50		Pump Transfer Error	
	5,000		Delivery Truck Error	
5104B – 5104G	30,000	Diesel	Container Failure	
5104H	400	Diesel	Container Failure	
	25		Dispensing Error	

5104I	110	Glutaraldehyde	Container Failure	North to storm water inlet and then southeast to a storm water pond and south to Accotink Creek
	5		Transfer Error	
5104J	110	Phosphonic Acid	Container Failure	
	5		Transfer Error	
5104K	110	Sodium Hypochlorite	Container Failure	
	5		Transfer Error	
5104L	200	Sodium Hydroxide	Container Failure	
	5		Transfer Error	
5104DR	55	Used Oil	Container Failure	North to storm water inlet and then southeast to a storm water pond and south to Accotink Creek
	5		Transfer Error	

- Does not contain oil, not regulated by 40 CFR 112

5.31 Tulley Gate (Building 9500)

5.31.1 Area Description

The Tulley Gate has a visitor center with an emergency generator and a fuel tank for filling space heaters used by guards. Table 5.31.1 provides container details, and Figure 5.31.1 shows their locations.

Table 5.31.1 Tulley Gate Containers

Container ID	Type	Capacity (Gallons)	Material of Construction	Product Stored
9500A	AST, Horizontal	500	Steel	Diesel
9500B	AST, Horizontal	500	Steel	Kerosene

5.31.2 Product Handling

Contractor delivery trucks fill the fuel and generator tanks. The kerosene tank does not have a level gauge to prevent overfills (see Corrective Actions, Section 6.0). The kerosene tank has a hand dispenser pump for filling space heaters. Table 5.31.2 provides product handling details.

Table 5.31.2 Tulley Gate Product Handling

Container ID	Loading Method	Overfill Protection	Unloading Method
9500A	Truck	Sight Gauge	Used in Generator
9500B	Truck	None	Dispensed to Heaters

5.31.3 Secondary Containment

The tanks are double-walled and do not collect storm water.

Table 5.31.3 Tulley Gate Secondary Containment

Container ID	Type	Storm Water Release
9500A	Double-walled	NA
9500B	Double-walled	NA

Figure 5.31.1 Tulley Gate (Building 9500)

5.31.4 Inspection and Testing

Records of monthly visual inspections and overfill protection system tests are maintained by area personnel for at least three years. Section 4.8 establishes the Fort Belvoir policy for the integrity testing of shop-built containers (and piping) less than 5,000 gallons capacity.

5.31.5 Potential Spill Scenarios

Complete container failure of an AST could result in a spill of up to 500 gallons. The loss of the entire contents of the fuel delivery tanker truck could spill 3,000 gallons. Any spill from this area would flow west in open drainage to Accotink Creek (see Figures 5.31.1, 2.1, and 2.6). A spill in this area would trigger the spill response procedures listed in Section 4.7.

Table 5.31.4 Tulley Gate Potential Spill Scenarios

Container ID	Spill Amount (Gallons)	Contents	Cause	Pathway
9500A	308	Diesel	Container Failure	West in open drainage to Accotink Creek
	3,000		Delivery Truck Error	
9500B	500	Kerosene	Container Failure	
	10		Dispensing Error	
	3,000		Delivery Truck Error	

5.32 Electrical Transformers

5.32.1 Area Description

Oil-filled electrical transformers are located throughout Fort Belvoir, typically near large buildings. There are no PCB-containing transformers on Fort Belvoir. The electrical system at Fort Belvoir has been privatized and is now owned and operated by the Old Dominion Power Company. Old Dominion is responsible for determining applicability and maintaining a SPCC Plan as necessary. Old Dominion personnel also maintain many pole mounted transformers with oil storage capacities less than 55 gallons. The pad mounted transformers and the primary transformers at the electrical substation all contain more than 55 gallons of oil.

There are some areas of Fort Belvoir where the electrical system is still owned and operated by the Army. Two of the Army owned transformers contain a vegetable-based oil, while the others all contain traditional mineral oil. Electrical operating equipment is specifically excluded from the definition of bulk storage containers in 40 CFR 112.2. This means that requirements for secondary containment, integrity testing, and spill and overfill prevention do not apply. However, there is still a requirement for appropriate containment and diversionary structures to prevent a spill from reaching navigable waters (40 CFR 112.7(c)). Amendments to 40 CFR 112 (5 December 2008) exempt “oil-filled operational equipment” (such as transformers) from secondary containment requirements if inspection procedures are documented and a spill contingency plan, with a commitment to control any spills, is prepared.

Table 5.32.1 shows the transformer capacities, and the Fort Belvoir Containers and Drainage Map and Area Overview Map, Figures 2.2, 2.3, and 2.4 show the transformer locations and potential spill routes. There has never been a discharge from a transformer at Fort Belvoir.

Table 5.32.1 Electrical Transformers

Transformer ID	Capacity (Gallons)
T5103A	5,380
T5103B	5,380
T2500A	785
T2500B	1,240
T2584	225
T2592	350
T2593	388
T2594	365
T2596	500

5.32.2 Product Handling

Transformer maintenance includes monitoring the oil level and testing for dissolved gases in the oil. If the oil level drops below the required level, maintenance personnel add new oil. If the oil quality degrades below standards, then maintenance personnel replace the oil or hire a contractor to perform this service. These events are rare, and in both cases personnel manually fill the containers from 5 gallon or smaller containers and use drip pans and rags to catch any small spills. Typically, DPW personnel simply replace an entire transformer if a problem develops. New transformers arrive full of oil, and old transformers are shipped away with their contents intact.

5.32.3 Secondary Containment

The SPCC regulations require documented inspection procedures and a spill contingency plan, with a commitment to control any spills from oil-filled electrical equipment to prevent a discharge and contain oil until cleanup occurs. A large spill from a transformer would result in power loss and immediate attention from installation personnel. Response personnel would deploy sorbent materials to contain any spilled oil at that time. Personnel may also use portions of Fort Belvoir's storm water system to contain a spill prior to contact with navigable waters.

5.32.4 Inspection and Testing

DPW personnel inspect and test transformers when sensors indicate reduced performance. This is similar to having an automatic monitoring system and provides

more environmental protection than monthly inspections. If a transformer develops a leak, it will be checked immediately. At that time, oil level and oil quality may be checked. The Institute for Electronic and Electrical Engineers Standard 62, Guide for Diagnostic Field Testing of Electric Power Apparatus, recommends common, practical diagnostic procedures to assist electrical maintenance personnel in establishing a maintenance schedule for oil-filled electrical equipment. This standard relies heavily upon manufacturer's recommendations for inspections and testing. DPW personnel follow these recommendations and perform visual inspections every three years or when necessary. Records of these inspections are maintained for three years.

5.32.5 Potential Spill Scenario

Catastrophic failure of one of the larger transformers may release more than five thousand gallons of vegetable oil. Facility personnel would respond appropriately according to the procedures outlined in Section 4.7 and prevent the spill from reaching navigable waters (see Figures 2.1, 2.2, and 2.3).

5.33 Emergency Generators

5.33.1 Area Description

Diesel emergency generators are used throughout Fort Belvoir to ensure constant power supplies. Some of the generators are piped to ASTs that provide diesel fuel while others have an internal diesel tank. Table 5.33.1 provides container details, and Figure 2.1 shows their locations.

Table 5.33.1 Emergency Generators

Container ID	Type	Capacity (Gallons)	Material of Construction	Product Stored
97	AST, Horizontal	750	Steel	Diesel
193B	AST, Horizontal	500	Steel	Diesel
200	AST, Horizontal	315	Steel	Diesel
238	AST, Horizontal	676	Steel	Diesel
246D	AST, Horizontal	1,000	Steel	Diesel
314A	AST, Horizontal	150	Steel	Diesel
315	AST, Horizontal	150	Steel	Diesel
319A	AST, Horizontal	475	Steel	Diesel
319B	AST, Horizontal	475	Steel	Diesel
363C	AST, Horizontal	250	Steel	Diesel
367A	AST, Horizontal	1,500	Steel	Diesel
367B	AST, Horizontal	240	Steel	Diesel
380B	AST, Horizontal	475	Steel	Diesel
399	AST, Horizontal	520	Steel	Diesel
584A	AST, Horizontal	156	Steel	Diesel
594B	AST, Horizontal	250	Steel	Diesel
687B	AST, Horizontal	500	Steel	Diesel
765A	AST, Horizontal	3,000	Steel	Diesel
765B	AST, Horizontal	5,000	Steel	Diesel
765C	AST, Horizontal	700	Steel	Diesel
767	AST, Horizontal	275	Steel	Diesel
952A	AST, Horizontal	250	Steel	Diesel
1156A	AST, Horizontal	112	Steel	Diesel

Table 5.33.1 Emergency Generators (Continued)

Container ID	Type	Capacity (Gallons)	Material of Construction	Product Stored
1204	AST, Horizontal	505	Steel	Diesel
1260	AST, Horizontal	1,705	Steel	Diesel
1262	AST, Horizontal	1,705	Steel	Diesel
1421B	AST, Horizontal	250	Steel	Diesel
1456A	AST, Horizontal	461	Steel	Diesel
1465A	AST, Horizontal	250	Steel	Diesel
1465B	AST, Horizontal	112	Steel	Diesel
1576	AST, Horizontal	150	Steel	Diesel
1589	AST, Horizontal	112	Steel	Diesel
1822D	AST, Horizontal	250	Steel	Diesel
1822E	AST, Horizontal	250	Steel	Diesel
1832	AST, Horizontal	250	Steel	Diesel
2445C	AST, Horizontal	250	Steel	Diesel
2454A	AST, Horizontal	250	Steel	Diesel
2470	AST, Horizontal	250	Steel	Diesel
2494	AST, Horizontal	112	Steel	Diesel
2590A	AST, Horizontal	500	Steel	Diesel
2591B	AST, Horizontal	500	Steel	Diesel
2592E	AST, Horizontal	3,225	Steel	Diesel
2592F	AST, Horizontal	800	Steel	Diesel
2593C	AST, Horizontal	2,000	Steel	Diesel
2594E	AST, Horizontal	165	Steel	Diesel
2594F	AST, Horizontal	800	Steel	Diesel
2596A	AST, Horizontal	1,369	Steel	Diesel
2596B	AST, Horizontal	1,369	Steel	Diesel
2597	AST, Horizontal	105	Steel	Diesel
2809	AST, Horizontal	415	Steel	Diesel
2810D	AST, Horizontal	2,500	Steel	Diesel
2822	AST, Horizontal	195	Steel	Diesel
2849A	AST, Horizontal	110	Steel	Diesel

Container ID	Type	Capacity (Gallons)	Material of Construction	Product Stored
2849B	AST, Horizontal	500	Steel	Diesel
2849C	AST, Horizontal	125	Steel	Diesel
2857A	AST, Horizontal	140	Steel	Diesel
2857B	AST, Horizontal	140	Steel	Diesel
2857C	AST, Horizontal	140	Steel	Diesel
2857D	AST, Horizontal	140	Steel	Diesel
2857E	AST, Horizontal	140	Steel	Diesel
2857F	AST, Horizontal	140	Steel	Diesel
2857G	AST, Horizontal	140	Steel	Diesel
2857H	AST, Horizontal	140	Steel	Diesel
2857I	AST, Horizontal	140	Steel	Diesel
2857J	AST, Horizontal	140	Steel	Diesel
2857K	AST, Horizontal	140	Steel	Diesel
2857L	AST, Horizontal	140	Steel	Diesel
2857M	AST, Horizontal	140	Steel	Diesel
2857N	AST, Horizontal	140	Steel	Diesel
2857O	AST, Horizontal	100	Steel	Diesel
2857P	AST, Horizontal	100	Steel	Diesel
2935	AST, Horizontal	112	Steel	Diesel
3138J	AST, Horizontal	1,000	Steel	Diesel
3165A	AST, Horizontal	500	Steel	Diesel
3209	AST, Horizontal	250	Steel	Diesel
3229	AST, Horizontal	250	Steel	Diesel
3238	AST, Horizontal	105	Steel	Diesel
3239A	AST, Horizontal	250	Steel	Diesel
3242	AST, Horizontal	500	Steel	Diesel
DAAF Gate	AST, Horizontal	112	Steel	Diesel
5101	AST, Horizontal	350	Steel	Diesel
7336A	AST, Horizontal	250	Steel	Diesel
7352A	AST, Horizontal	156	Steel	Diesel

5.33.2 Product Handling

Personnel use a 3,000 gallon tanker truck to fill most generator fuel tanks. Personnel follow the truck unloading procedures described in Section 4.13. The truck is equipped with a spill kit for cleaning up small spills and drips. Tanks 1822E, 2849A, and 3138J do not have level gauges to prevent overfills (See Section 6.0, Corrective Actions). Tanks 765C, 2594E, and 2857A through 2857N are day tanks for emergency generators and are not directly filled from the delivery truck. These tanks are filled by pump from associated larger storage tanks. ASTs 2857O and 2857 P are overflow tanks for the 2857 system and are not normally filled.

Table 5.33.2 Emergency Generator Product Handling

Container ID	Loading Method	Overfill Protection	Unloading Method
All Generator Tanks (unless listed below)	Truck	Sight Gauge	Used in Generator
765C	Pumped from 765B	Overfill Alarm	Used in Generator
2594E	Pumped from UST 2594A	Overfill Alarm	Used in Generator
2857A – 2857N	Pumped from UST 2856B	Overfill Alarm	Used in Generator
2857O and 2857P	Overflow from 2857A – 2857N	Overfill Alarm	Returned by pump to 2857A – 2857N

5.33.3 Secondary Containment

Most generators have double-walled ASTs. Generators 2809 and 2822 do not have secondary containment (See Section 6.0, Corrective Actions). Single-walled tanks 246D and 767 are inside buildings and do not collect storm water. The containment area for 767 is not large enough to hold the tank volume (See Section 6.0, Corrective Actions). The tank and metal secondary containment for AST 1822E are so corroded that holes may develop (See Section 6.0, Corrective Actions). Tank 193B is partially buried under accumulated soil which could cause corrosion (See Section 6.0, Corrective Actions). Appendix D contains volume calculations for generators within diked areas. Personnel follow the rainwater release procedures found in Section 4.10.

Table 5.33.3 Emergency Generators Secondary Containment

Container ID	Type	Storm Water Release
97	Double-walled	NA
193B	Double-walled	NA
200	Double-walled	NA
238	Double-walled	NA
246D	Steel Dike	NA (indoors)
314A	Double-walled	NA
315	Double-walled	NA
319A	Double-walled	NA
319B	Double-walled	NA
363C	Double-walled	NA
367A	Double-walled	NA
367B	Double-walled	NA
380B	Double-walled	NA
399	Double-walled	NA
584A	Double-walled	NA
594B	Double-walled	NA
687B	Double-walled	NA
765A	Double-walled	NA
765B	Double-walled	NA
765C	Double-walled	NA
767	Concrete Dike	NA (indoors)
952A	Double-walled	NA
1156A	Double-walled	NA
1204	Double-walled	NA
1260	Double-walled	NA
1262	Double-walled	NA
1421B	Double-walled	NA
1456A	Double-walled	NA
1465A	Double-walled	NA
1465B	Double-walled	NA
1576	Double-walled	NA

Container ID	Type	Storm Water Release
1589	Double-walled	NA
1822D	Double-walled	NA
1822E	Steel Dike	Manual
1832	Double-walled	NA
2445C	Double-walled	NA
2454A	Double-walled	NA
2470	Double-walled	NA
2494	Double-walled	NA
2590A	Double-walled	NA
2591B	Double-walled	NA
2592E	Double-walled	NA
2592F	Double-walled	NA
2593C	Double-walled	NA
2594E	Double-walled	NA
2594F	Double-walled	NA
2596A	Double-walled	NA
2596B	Double-walled	NA
2597	Double-walled	NA
2809	None	NA
2810D	Double-walled	NA
2822	None	NA
2849A	Double-walled	NA
2849B	Double-walled	NA
2849C	Double-walled	NA
2857A	Double-walled	NA
2857B	Double-walled	NA
2857C	Double-walled	NA
2857D	Double-walled	NA
2857E	Double-walled	NA
2857F	Double-walled	NA
2857G	Double-walled	NA
2857H	Double-walled	NA

Container ID	Type	Storm Water Release
2857I	Double-walled	NA
2857J	Double-walled	NA
2857K	Double-walled	NA
2857L	Double-walled	NA
2857M	Double-walled	NA
2857N	Double-walled	NA
2857O	Double-walled	NA
2857P	Double-walled	NA
2935	Double-walled	NA
3138J	Double-walled	NA
3165A	Double-walled	NA
3209	Double-walled	NA
3229	Double-walled	NA
3238	Double-walled	NA
3239A	Double-walled	NA
3242	Double-walled	NA
DAAF Gate	Double-walled	NA
5101	Double-walled	NA
7336A	Double-walled	NA
7352A	Double-walled	NA

5.33.4 Inspection and Testing

Records of monthly visual inspections and overfill protection system tests are maintained for at least three years by DPW Environmental. Section 4.8 establishes the Fort Belvoir policy for the integrity testing of shop-built containers (and piping) less than 5,000 gallons capacity.

5.33.5 Potential Spill Scenarios

Complete failure of one emergency generator tank could result in a 5,000 gallon spill. The loss of the entire contents of the delivery tanker truck could spill 3,000 gallons at any generator location. Fuel delivery trucks park next to the generators when they are filling them; a spill due to either container failure or delivery truck error at any emergency generator location could flow to Accotink Creek/Bay, Dogue Creek/Bay, or the Potomac River depending on the location of the generator (see Figures 2.1 through

2.7). A spill in any of these areas would trigger the spill response procedures listed in Section 4.7.

Table 5.33.4 Emergency Generators Potential Spill Scenarios

Container ID	Spill Amount (Gallons)	Contents	Cause	Pathway
97	750	Diesel	Container Failure	East to Dogue Bay
	3,000		Delivery Truck Error	
193B	500	Diesel	Container Failure	West to Accotink Bay
	3,000		Delivery Truck Error	
200	315	Diesel	Container Failure	East to Dogue Bay
	3,000		Delivery Truck Error	
238	676	Diesel	Container Failure	East to Dogue Bay
	3,000		Delivery Truck Error	
246D	1,000	Diesel	Container Failure	East to Dogue Bay
	3,000		Delivery Truck Error	
314A	150	Diesel	Container Failure	South to Potomac River
	3,000		Delivery Truck Error	
315	150	Diesel	Container Failure	South to Potomac River
	3,000		Delivery Truck Error	
319A	475	Diesel	Container Failure	South to Potomac River
	3,000		Delivery Truck Error	
319B	475	Diesel	Container Failure	South to Potomac River
	3,000		Delivery Truck Error	
363C	250	Diesel	Container Failure	South to Potomac River
	3,000		Delivery Truck Error	
367A	1,500	Diesel	Container Failure	South to Potomac River
	3,000		Delivery Truck Error	
367B	240	Diesel	Container Failure	
	3,000		Delivery Truck Error	
380B	475	Diesel	Container Failure	South to Potomac River
	3,000		Delivery Truck Error	

Table 5.33.4 Emergency Generators Potential Spill Scenarios (Continued)

Container ID	Spill Amount (Gallons)	Contents	Cause	Pathway
399	520	Diesel	Container Failure	South to Potomac River
	3,000		Delivery Truck Error	
584A	156	Diesel	Container Failure	South to Potomac River
	3,000		Delivery Truck Error	
594B	250	Diesel	Container Failure	South to Potomac River
	3,000		Delivery Truck Error	
687B	500	Diesel	Container Failure	South to Potomac River
	3,000		Delivery Truck Error	
765A	3,000	Diesel	Container Failure	West to Accotink Bay
	3,000		Delivery Truck Error	
765B	5,000	Diesel	Container Failure	
	3,000		Delivery Truck Error	
765C	700	Diesel	Container Failure	
	50		Pump Transfer Error	
767	275	Diesel	Container Failure	West to Accotink Bay
	3,000		Delivery Truck Error	
952A	250	Diesel	Container Failure	East to Dogue Bay
	3,000		Delivery Truck Error	
1156A	112	Diesel	Container Failure	West to Accotink Bay
	3,000		Delivery Truck Error	
1204	525	Diesel	Container Failure	East to Dogue Creek
	3,000		Delivery Truck Error	
1260	1,705	Diesel	Container Failure	West to Accotink Bay
	3,000		Delivery Truck Error	
1262	1,705	Diesel	Container Failure	West to Accotink Bay
	3,000		Delivery Truck Error	
1421B	250	Diesel	Container Failure	West to Accotink Creek
	3,000		Delivery Truck Error	
1456A	461	Diesel	Container Failure	West to Accotink Creek
	3,000		Delivery Truck Error	

1465A	250	Diesel	Container Failure	West to Accotink Creek
	3,000		Delivery Truck Error	
1465B	112	Diesel	Container Failure	
	3,000		Delivery Truck Error	
1576	150	Diesel	Container Failure	East to Dogue Creek
	3,000		Delivery Truck Error	
1589	112	Diesel	Container Failure	West to Dogue Creek
	3,000		Delivery Truck Error	
1822D	250	Diesel	Container Failure	West to Accotink Creek
	3,000		Delivery Truck Error	
1822E	250	Diesel	Container Failure	
	3,000		Delivery Truck Error	
1832B	250	Diesel	Container Failure	West to Accotink Creek
	3,000		Delivery Truck Error	
2445C	250	Diesel	Container Failure	South to Accotink Creek
	3,000		Delivery Truck Error	
2454A	250	Diesel	Container Failure	South to Accotink Creek
	3,000		Delivery Truck Error	
2470	250	Diesel	Container Failure	South to Accotink Creek
	3,000		Delivery Truck Error	
2590A	500	Diesel	Container Failure	South to Dogue Creek
	3,000		Delivery Truck Error	
2591B	500	Diesel	Container Failure	South to Dogue Creek
	3,000		Delivery Truck Error	
2592E	3,225	Diesel	Container Failure	South to Dogue Creek
	3,000		Delivery Truck Error	
2592F	800	Diesel	Container Failure	
	3,000		Delivery Truck Error	
2593C	2,000	Diesel	Container Failure	South to Dogue Creek
	3,000		Delivery Truck Error	
2594E	165	Diesel	Container Failure	South to Dogue Creek
	3,000		Delivery Truck Error	
2594F	800	Diesel	Container Failure	
	3,000		Delivery Truck Error	

2596A	1,369	Diesel	Container Failure	South to Dogue Creek
	3,000		Delivery Truck Error	
2596B	1,369	Diesel	Container Failure	
	3,000		Delivery Truck Error	
2597	2,000	Diesel	Container Failure	South to Dogue Creek
	3,000		Delivery Truck Error	
2809	415	Diesel	Container Failure	Northeast and then south to Dogue Creek
	3,000		Delivery Truck Error	
2810D	2,500	Diesel	Container Failure	Northeast and then south to Dogue Creek
	3,000		Delivery Truck Error	
2822	195	Diesel	Container Failure	Northeast and then south to Dogue Creek
	3,000		Delivery Truck Error	
28 Gate	125	Diesel	Container Failure	Northeast and then south to Dogue Creek
	3,000		Delivery Truck Error	
2849A	110	Diesel	Container Failure	Northeast and then south to Dogue Creek
	3,000		Delivery Truck Error	
2849B	500	Diesel	Container Failure	
	3,000		Delivery Truck Error	
2857A – 2857N	140	Diesel	Container Failure	Northeast and then south to Dogue Creek
	50		Pump Transfer Error	
2857O – 2857P	100	Diesel	Container Failure	
2935	112	Diesel	Container Failure	South to Accotink Creek
	3,000		Delivery Truck Error	
3138J	1,000	Diesel	Container Failure	Northeast and then south to Accotink Creek
	3,000		Delivery Truck Error	
3165A	500	Diesel	Container Failure	Northeast and then south to Accotink Creek
	3,000		Delivery Truck Error	
3209	250	Diesel	Container Failure	Northeast and then south to Accotink Creek
	3,000		Delivery Truck Error	
3229	250	Diesel	Container Failure	Northeast and then south to Accotink Creek
	3,000		Delivery Truck Error	
3238	105	Diesel	Container Failure	Northeast and then south to Accotink Creek
	3,000		Delivery Truck Error	

3239A	250	Diesel	Container Failure	Northeast and then south to Accotink Creek
	3,000		Delivery Truck Error	
3242	500	Diesel	Container Failure	Northeast and then south to Accotink Creek
	3,000		Delivery Truck Error	
DAAF Gate	112	Diesel	Container Failure	South to Accotink Creek
	3,000		Delivery Truck Error	
5101	350	Diesel	Container Failure	South to Accotink Creek
	3,000		Delivery Truck Error	
7336A	250	Diesel	Container Failure	South to Potomac River
	3,000		Delivery Truck Error	
7352A	156	Diesel	Container Failure	South to Potomac River
	3,000		Delivery Truck Error	

5.34 Heating Oil Tanks

5.34.1 Area Description

Heating oil tanks are used throughout Fort Belvoir at locations that do not have natural gas lines available for heating. This section includes completely buried heating oil tanks that are excluded from the definition of USTs in 40 CFR 280 but are regulated by 40 CFR 112 (not including single family residences). Completely buried heating oil tanks have the suffix "U" on the container ID. Table 5.34.1 provides container details, and Figure 2.1 shows their locations.

Table 5.34.1 Heating Oil Tanks

Container ID	Type	Capacity (Gallons)	Material of Construction	Product Stored
193CU	Buried Tank	1,000	FRP	Heating Oil
332HU	Buried Tank	25,000	FRP	Heating Oil
332IU	Buried Tank	25,000	FRP	Heating Oil
332JU	Buried Tank	25,000	FRP	Heating Oil
374A	AST, Horizontal	275	Steel	Heating Oil
374B	AST, Horizontal	275	Steel	Heating Oil
380AU	Buried Tank	1,000	Steel	Heating Oil
780B	AST, Horizontal	500	Steel	Heating Oil
1141A	AST, Horizontal	550	Steel	Heating Oil
1142A	AST, Horizontal	550	Steel	Heating Oil
1143A	AST, Horizontal	550	Steel	Heating Oil
1143B	AST, Horizontal	550	Steel	Heating Oil
1157A	AST, Horizontal	550	Steel	Heating Oil
1412A	AST, Horizontal	550	Steel	Heating Oil
1412B	AST, Horizontal	550	Steel	Heating Oil
1422PU	Buried Tank	25,000	FRP	Heating Oil
1422QU	Buried Tank	25,000	FRP	Heating Oil
1422RU	Buried Tank	25,000	FRP	Heating Oil
1422SU	Buried Tank	25,000	FRP	Heating Oil
1422TU	Buried Tank	25,000	FRP	Heating Oil
1436D	AST, Horizontal	2,000	Steel	Heating Oil

Table 5.34.1 Heating Oil Tanks (Continued)

Container ID	Type	Capacity (Gallons)	Material of Construction	Product Stored
1444	AST, Horizontal	1,000	Steel	Heating Oil
1700AU	Buried Tank	5,000	FRP	Heating Oil
1810AU	Buried Tank	8,000	Steel	Heating Oil
1970D	AST, Horizontal	500	Steel	Heating Oil
1976C	AST, Horizontal	1,000	Steel	Heating Oil
1980A	AST, Horizontal	500	Steel	Heating Oil
1981U	Buried Tank	550	Steel	Heating Oil
2117U	Buried Tank	25,000	FRP	Heating Oil
2473BU	Buried Tank	5,000	FRP	Heating Oil
2476A	AST, Horizontal	500	Steel	Heating Oil
2582BU	Buried Tank	2,500	FRP	Heating Oil
2584BU	Buried Tank	5,000	FRP	Heating Oil
2592DU	Buried Tank	5,000	FRP	Heating Oil
2827	AST, Horizontal	640	Steel	Heating Oil
3138HU	Buried Tank	30,000	FRP	Heating Oil
3138IU	Buried Tank	30,000	FRP	Heating Oil

5.34.2 Product Handling

Personnel use a 3,000 gallon tanker truck to fill heating oil tanks following the truck unloading procedures described in Section 4.13. The truck is equipped with a spill kit for cleaning up small spills and drips. Tanks 374A, 374B, 780B, and 1976C do not have level gauges to prevent overfills (See Section 6.0, Corrective Actions). Heating oil is used to fuel boilers and heaters within adjacent buildings.

Table 5.34.2 Heating Oil Tanks Product Handling

Container ID	Loading Method	Overfill Protection	Unloading Method
All Heating Oil Tanks	Truck	Sight Gauge	Used in Boiler/Heater

5.34.3 Secondary Containment

Most aboveground heating oil tanks are double-walled. ASTs 374A, 374B, 780B, 1412A, 1412B, and 1976C do not have secondary containment (See Section 6.0, Corrective Actions). Buried heating oil tanks 380AU, 1810AU, and 1981U do not have secondary containment and do not have equivalent environmental protection (See Section 6.0, Corrective Actions). Appendix D contains volume calculations for heating oil tanks within diked areas. Personnel follow the rainwater release procedures found in Section 4.10.

Table 5.34.3 Heating Oil Tanks Secondary Containment

Container ID	Type	Storm Water Release
193CU	Double-walled	NA
332HU	Double-walled	NA
332IU	Double-walled	NA
332JU	Double-walled	NA
374A	None	NA
374B	None	NA
380AU	None	NA
780B	None	NA
1141A	Double-walled	NA
1142A	Double-walled	NA
1143A	Double-walled	NA
1143B	Double-walled	NA
1157A	Double-walled	NA
1412A	None	NA
1412B	None	NA
1422PU	Double-walled	NA
1422QU	Double-walled	NA
1422RU	Double-walled	NA
1422SU	Double-walled	NA
1422TU	Double-walled	NA
1436D	Double-walled	NA
1444	Double-walled	NA
1700AU	Double-walled	NA

Container ID	Type	Storm Water Release
1810AU	None	NA
1970D	Double-walled	NA
1976C	None	NA
1980A	Double-walled	NA
1981U	None	NA
2117U	Double-walled	NA
2473BU	Double-walled	NA
2476A	None	NA
2582BU	Double-walled	NA
2584BU	Double-walled	Manual
2592DU	Double-walled	NA
2827	Double-walled	NA
3138HU	Double-walled	NA
3138IU	Double-walled	NA

5.34.4 Inspection and Testing

Records of certified inspections (for tanks greater than 5,000 gallons) are maintained by DPW Environmental for the life of the container. Records of monthly visual inspections and overfill protection system tests are maintained for at least three years by DPW Environmental. Section 4.8 establishes the Fort Belvoir policy for the integrity testing of shop-built containers (and piping) less than 5,000 gallons capacity.

5.34.5 Potential Spill Scenarios

Complete failure of one heating oil tank could result in a 5,000 gallon spill. The loss of the entire contents of the delivery tanker truck could spill 3,000 gallons at any location. Fuel delivery trucks park next to the heating oil tanks when they are filling them; a spill due to either container failure or delivery truck error at any heating oil tank location could flow to Accotink Creek/Bay, Dogue Creek/Bay, or the Potomac River depending on the location of the heating oil tank (see Figures 2.1 through 2.7). A spill in any of these areas would trigger the spill response procedures listed in Section 4.7.

Table 5.34.4 Heating Oil Tanks Potential Spill Scenarios

Container ID	Spill Amount (Gallons)	Contents	Cause	Pathway
193CU	1,000	Heating Oil	Container Failure	West to Accotink Bay
	3,000		Delivery Truck Error	
332HU	25,000	Heating Oil	Container Failure	South to Potomac River
	3,000		Delivery Truck Error	
332IU	25,000	Heating Oil	Container Failure	
	3,000		Delivery Truck Error	
332JU	25,000	Heating Oil	Container Failure	
	3,000		Delivery Truck Error	
374A	275	Heating Oil	Container Failure	South to Potomac River
	3,000		Delivery Truck Error	
374B	275	Heating Oil	Container Failure	
	3,000		Delivery Truck Error	
380AU	1,000	Heating Oil	Container Failure	South to Potomac River
	3,000		Delivery Truck Error	
780B	500	Heating Oil	Container Failure	West to Accotink Bay
	3,000		Delivery Truck Error	
1141A	550	Heating Oil	Container Failure	West to Accotink Bay
	3,000		Delivery Truck Error	
1142A	550	Heating Oil	Container Failure	
	3,000		Delivery Truck Error	
1143A	550	Heating Oil	Container Failure	
	3,000		Delivery Truck Error	
1143B	550	Heating Oil	Container Failure	
	3,000		Delivery Truck Error	
1157A	550	Heating Oil	Container Failure	West to Accotink Bay
	3,000		Delivery Truck Error	

Table 5.34.4 Heating Oil Tanks Potential Spill Scenarios (Continued)

Container ID	Spill Amount (Gallons)	Contents	Cause	Pathway
1412A	550	Heating Oil	Container Failure	West to Accotink Creek
	3,000		Delivery Truck Error	
1412B	550	Heating Oil	Container Failure	
	3,000		Delivery Truck Error	
1422PU	25,000	Heating Oil	Container Failure	West to Accotink Creek
	3,000		Delivery Truck Error	
1422QU	25,000	Heating Oil	Container Failure	
	3,000		Delivery Truck Error	
1422RU	25,000	Heating Oil	Container Failure	
	3,000		Delivery Truck Error	
1422SU	25,000	Heating Oil	Container Failure	
	3,000		Delivery Truck Error	
1422TU	25,000	Heating Oil	Container Failure	
	3,000		Delivery Truck Error	
1436D	2,000	Heating Oil	Container Failure	West to Accotink Creek
	3,000		Delivery Truck Error	
1444	1,000	Heating Oil	Container Failure	West to Accotink Creek
	3,000		Delivery Truck Error	
1700AU	5,000	Heating Oil	Container Failure	North and then south to Dogue Creek
	3,000		Delivery Truck Error	
1810AU	8,000	Heating Oil	Container Failure	North and then west to Accotink Creek
	3,000		Delivery Truck Error	
1970D	500	Heating Oil	Container Failure	South to Accotink Creek
	3,000		Delivery Truck Error	
1976C	1,000	Heating Oil	Container Failure	North and then south to Accotink Creek
	3,000		Delivery Truck Error	
1980A	500	Heating Oil	Container Failure	South to Accotink Creek
	3,000		Delivery Truck Error	
1981U	550	Heating Oil	Container Failure	North and then south to Accotink Creek
	3,000		Delivery Truck Error	

Table 5.34.4 Heating Oil Tanks Potential Spill Scenarios (Continued)

Container ID	Spill Amount (Gallons)	Contents	Cause	Pathway
2117U	25,000	Heating Oil	Container Failure	North and then west to Accotink Creek
	3,000		Delivery Truck Error	
2473BU	5,000	Heating Oil	Container Failure	South to Accotink Creek
	3,000		Delivery Truck Error	
2476A	500	Heating Oil	Container Failure	South to Accotink Creek
	3,000		Delivery Truck Error	
2582BU	2,500	Heating Oil	Container Failure	South to Dogue Creek
	3,000		Delivery Truck Error	
2584BU	5,000	Heating Oil	Container Failure	
	3,000		Delivery Truck Error	
2592DU	5,000	Heating Oil	Container Failure	
	3,000		Delivery Truck Error	
2827	640	Heating Oil	Container Failure	South to Dogue Creek
	3,000		Delivery Truck Error	
3138HU	30,000	Heating Oil	Container Failure	Northeast and then south to Accotink Creek
	3,000		Delivery Truck Error	
3138IU	30,000	Heating Oil	Container Failure	
	3,000		Delivery Truck Error	

5.35 Used Food Grease Containers

5.35.1 Area Description

There are 10 locations that store used food grease in outdoor containers on Fort Belvoir. The sites use one of three methods for storage and handling. Some use standard steel 55-gallon drums with manual pouring. Others use steel grease containers similar to small dumpsters (grease bins) with flip open lids and manual pouring. Lastly, some locations use vertically-oriented stainless steel cylindrical tanks with electric pumping. Table 5.35.1 provides details for the grease containers, and the Fort Belvoir Containers and Drainage Map, Figure 2.1, shows locations and flow directions.

Table 5.35.1 Used Food Grease Containers

Container ID	Type	Capacity (Gallons)	Material of Construction	Product Stored
20	AST, Horizontal	200	Steel	Used Food Grease
321	AST, Horizontal	200	Steel	Used Food Grease
1135D	AST, Vertical	240	Stainless Steel	Used Food Grease
1199	AST, Horizontal	200	Steel	Used Food Grease
1200DR	55-Gallon Drums	55 (up to 4)	Steel	Used Food Grease
1456B	AST, Horizontal	85	Steel	Used Food Grease
2303	AST, Vertical	350	Stainless Steel	Used Food Grease
2304E	AST, Horizontal	200	Steel	Used Food Grease
2444J	AST, Horizontal	200	Steel	Used Food Grease
2462DRB	55-Gallon Drums	55 (up to 2)	Steel	Used Food Grease
2800DRA	55-Gallon Drums	55 (up to 4)	Steel	Used Food Grease
2920	AST, Horizontal	200	Steel	Used Food Grease

5.35.2 Product Handling

The oil and grease is brought out to the drums and grease bins in small buckets or jugs for manual pouring. The stainless steel tanks are directly hard piped to the frying vats and grease is pumped to the tanks by electric pump. The tanks and drums are then emptied by a contractor vacuum truck. Table 5.35.2 provides more details regarding product handling activities for this area.

Table 5.35.2 Used Food Grease Product Handling

Container ID	Loading Method	Overfill Protection	Unloading Method
20	Manual	Visual	Truck
321	Manual	Visual	Truck
1135D	Electric Pump	High Level Alarm	Truck
1199	Manual	Visual	Truck
1200DR	Manual	Visual	Truck
1456B	Manual	Visual	Truck
2303	Electric Pump	High Level Alarm	Truck
2304E	Manual	Visual	Truck
2444J	Manual	Visual	Truck
2462DRB	Manual	Visual	Truck
2800DRA	Manual	Visual	Truck
2920	Manual	Visual	Truck

5.35.3 Secondary Containment

Drums 2800DRA are on a containment pallet, but the pallet is too small. The containers are all single-walled and do not have required secondary containment (See Section 6.0, Corrective Actions). 2462DR and 1135D are inside buildings that may provide some secondary containment prior to release out doors or floor drains.

Table 5.35.3 Used Food Grease Secondary Containment

Container ID	Type	Storm Water Release
20	None	NA
321	None	NA
1135D	None	NA
1199	None	NA
1200DR	None	NA
1456B	None	NA
2303	None	NA
2304E	None	NA
2444J	None	NA
2462DRB	None	NA
2800DRA	Spill Containment Pallet	NA
2920	None	NA

5.35.4 Inspection and Testing

Records of monthly visual inspections are maintained by area personnel for at least three years. Section 4.8 establishes the policy for inspection of tanks less than 5,000 gallons capacity.

5.35.5 Potential Spill Scenario

Complete failure of one food grease tank could result in a 350 gallon spill. An error transferring into a container could spill 5 gallons. The vacuum truck could spill 2,000 gallons. A spill would go to Accotink Creek/Bay, Dogue Creek/Bay, or the Potomac River, depending on where the spill occurred (see Figures 2.1 through 2.7). A spill in any of these areas would trigger the spill response procedures listed in Section 4.7.

Table 5.35.4 Used Food Grease Potential Spill Scenario

Container ID	Spill Amount (Gallons)	Contents	Cause	Pathway
20	200	Food Grease	Container Failure	East to the Potomac River
	5		Transfer Error	
	2,000		Vacuum Truck	

Container ID	Spill Amount (Gallons)	Contents	Cause	Pathway
			Error	
321	200	Food Grease	Container Failure	South to the Potomac River
	5		Transfer Error	
	2,000		Vacuum Truck Error	
1135D	240	Food Grease	Container Failure	West to Accotink Bay
	5		Transfer Error	
	2,000		Vacuum Truck Error	
1199	200	Food Grease	Container Failure	North in storm water piping and then west to Accotink Bay
	5		Transfer Error	
	2,000		Vacuum Truck Error	
1200DR	55	Food Grease	Container Failure	West to Dogue Creek
	5		Transfer Error	
	2,000		Vacuum Truck Error	
1456B	85	Food Grease	Container Failure	West to Accotink Creek
	5		Transfer Error	
	2,000		Vacuum Truck Error	
2303	350	Food Grease	Container Failure	West and then south to Accotink Creek
	5		Transfer Error	
	2,000		Vacuum Truck Error	
2304E	200	Food Grease	Container Failure	South to Accotink Creek
	5		Transfer Error	
	2,000		Vacuum Truck Error	
2444J	200	Food Grease	Container Failure	South to Accotink Creek
	5		Transfer Error	
	2,000		Vacuum Truck Error	
2462DRB	55	Food Grease	Container Failure	South to

Container ID	Spill Amount (Gallons)	Contents	Cause	Pathway
	5		Transfer Error	Accotink Creek
	2,000		Vacuum Truck Error	
2800DRA	55	Food Grease	Container Failure	Northeast and then southeast to Dogue Creek
	5		Transfer Error	
	2,000		Vacuum Truck Error	
2920	200	Food Grease	Container Failure	South to Accotink Creek
	5		Transfer Error	
	2,000		Vacuum Truck Error	

5.36 Swimming Pool Chemical Containers

5.36.1 Area Description

There are three swimming pools on Fort Belvoir that use chlorine (sodium hypochlorite solution) for disinfection. The Officer Club pool (Building 75) uses a salt water system where chlorine is a backup while the indoor pool (Building 182) and the north pool (Building 2330) use chlorine as the sole disinfectant. Table 5.36.1 provides details for the pool chemical containers, and the Fort Belvoir Containers and Drainage Map, Figure 2.1, shows locations and flow directions.

Table 5.36.1 Swimming Pool Chemical Containers

Container ID	Type	Capacity (Gallons)	Material of Construction	Product Stored
75	AST, Vertical	100	Plastic	Sodium Hypochlorite
182	AST, Vertical	150	Plastic	Sodium Hypochlorite
2330A	AST, Vertical	100	Plastic	Sodium Hypochlorite
2330B	AST, Vertical	60	Plastic	Sodium Hypochlorite

- Does not contain oil, not regulated by 40 CFR 112

5.36.2 Product Handling

The chlorine is delivered by contractors and pumped into the distribution tanks. The tanks are translucent so the level of product in the tanks is always visible. The solution is then added to the water by an automatic metering system with an electric pump. Table 5.36.2 provides more details regarding product handling activities for this area.

Table 5.36.2 Swimming Pool Chemical Product Handling

Container ID	Loading Method	Overfill Protection	Unloading Method
75	Electric Pump	Visual	Used in Water Treatment
182	Electric Pump	Visual	Used in Water Treatment
2330A	Electric Pump	Visual	Used in Water Treatment
2330B	Electric Pump	Visual	Used in Water Treatment

5.36.3 Secondary Containment

The tank at 182 is inside a plastic dike, but the other tanks do not have secondary containment. Appendix D contains volume calculations for containers within diked areas. The other containers are all single-walled and do not have secondary containment (See Section 6.0, Corrective Actions).

Table 5.36.3 Swimming Pool Chemical Secondary Containment

Container ID	Type	Storm Water Release
75	None	NA
182	Plastic Dike	NA
2330A	None	NA
2330B	None	NA

5.36.4 Inspection and Testing

Records of annual visual inspections are maintained by area personnel for at least three years. Section 4.8 establishes the policy for inspection of containers holding chemicals (non-oils) not regulated by 40 CFR 112.

5.36.5 Potential Spill Scenario

Complete failure of one chemical tank could result in a 150 gallon spill. An error transferring into a container could spill 5 gallons. A spill would go to the Accotink Creek/Bay, Dogue Creek/Bay, or the Potomac River, depending on where the spill occurred (see Figures 2.1 through 2.7). A spill in any of these areas would trigger the spill response procedures listed in Section 4.7.

Table 5.36.4 Swimming Pool Chemical Potential Spill Scenario

Container ID	Spill Amount (Gallons)	Contents	Cause	Pathway
75	100	Sodium Hypochlorite	Container Failure	East to the Potomac River
	5		Transfer Error	
182	150	Sodium Hypochlorite	Container Failure	South to the Potomac River
	5		Transfer Error	
2330A	100	Sodium Hypochlorite	Container Failure	West to Accotink Creek
	5		Transfer Error	

Container ID	Spill Amount (Gallons)	Contents	Cause	Pathway
2330B	60	Sodium Hypochlorite	Container Failure	West to Accotink Creek
	5		Transfer Error	

- Does not contain oil, not regulated by 40 CFR 112

6.0 Corrective Actions.

Facilities that are unable to implement their Corrective Actions within 6 months of certification must submit a written extension request to the Regional Administrator in accordance with the requirements of 40 CFR 112.3(f). Due to the Army's funding process, Fort Belvoir may not be able to complete these changes within a six-month time period. Fort Belvoir will show a good faith effort through submittal of proper work and funding requests to address these issues.

Table 6.1 shows the new corrective actions required by this Plan. Any updates to the Plan should include Table 6.1 showing the implemented corrective actions.

Table 6.1 Corrective Actions

Corrective Actions	Date Signed	Responsible Party	Signature	Comment
Provide adequate secondary containment for: 331B, 338C, 374A, 374B, 767, 780B, 1412A, 1412B, 1417L, 1950B, 1976C, 2310C, 2310D, 2310E, 2476A, 2800C, 2803B, 2803C, 2809, 2822, 2909A, 2909B.				Secondary containment must be impervious and large enough to hold the entire volume of the container plus enough freeboard for precipitation. Double-walled containers are preferred.
Provide secondary containment for food grease containers at: 20, 321, 1135D, 1199, 1200DR, 1456B, 2303, 2304E, 2444J, 2462DRB, 2920				
Provide secondary containment for buried heating oil tanks at 380AU, 1810AU, and 1981U.				Installing impervious secondary containment may not be possible. Replace with double-walled containers (ASTs or completely buried tanks).

Corrective Actions	Date Signed	Responsible Party	Signature	Comment
Provide secondary containment for drums at: 1956DRC, 2990DR.				Drums are inside but a spill could leave the building.
Provide larger secondary containment for drums at: 2800DRA, 5104DR.				Containment must be at least large enough to hold the volume of a drum (55 gallons).
Provide larger secondary containment for ASTs 324V and 767.				Containment is too small. It must be large enough to hold the entire volume of the tank.
Remove (replace if necessary) ASTs that are heavily corroded: 1822E, 2909A, 2909B				These corroded tanks cannot be determined to maintain structural integrity.
Remove soil to completely expose piping accidentally buried and then visually inspect piping for integrity at tank: 193B, 331B				Piping must remain exposed so that the entire surface can be visually inspected.
Replace level gauges and/or spill buckets at tanks: 331B, 374A, 374B, 600, 606B, 780B, 1109D, 1109E, 1417L, 1417M, 1465A, 1822E, 1906C, 1976C, 2462H, 2590A, 2849, 2909A, 2909B, 2990B, 2990CU, 3138J, 3153A, 9500B.				Level gauges are required (9VAC225-91-130.B.3.d) to prevent spills due to overfills.
Label drums properly for use to contain oil products at 2462DRA				Drums should not be labeled with other hazardous material and/or hazardous waste labels.

Corrective Actions	Date Signed	Responsible Party	Signature	Comment
Provide secondary containment for tanks at: 75, 1234I, 2330A, 2330B, 2444G, 2444H, 2444I, and drums at: 1234DRA, 1234DRB, 2800DRB, 2803DR.				These containers do not contain oil and are only regulated by AR 200-1.

Appendix A

SPCC Regulated Containers

Table A-1. SPCC Regulated Containers

Container ID (Building Number)	Capacity (Gallons)	Material of Construction	Product Stored	Secondary Containment Type	Function
20	200	Steel	Used Food Grease	None	Waste
75	100	Plastic	Sodium Hypochlorite	None	Water Treatment
97	750	Steel	Diesel	Double-walled	Generator
182	150	Plastic	Sodium Hypochlorite	Plastic Dike	Water Treatment
190	500	Steel	Used Oil	Double-walled	Waste
190DRA	55 (up to 6)	Steel	Oil, Hydraulic Oil, Used Oil, Used Fuel Antifreeze, Used Antifreeze	Containment Pallet	Dispense, Waste
190DRB	55 (up to 12)	Steel	Oil, Hydraulic Oil Antifreeze	Steel Dike	Storage
193B	500	Steel	Diesel	Double-walled	Generator
193CU	1,000	Steel	Heating Oil	None	Heat
200	315	Steel	Diesel	Double-walled	Generator
238	676	Steel	Diesel	Double-walled	Generator
246D	1,000	Steel	Diesel	Steel Dike	Generator
314A	150	Steel	Diesel	Double-walled	Generator
315	150	Steel	Diesel	Double-walled	Generator
319A	475	Steel	Diesel	Double-walled	Generator
319B	475	Steel	Diesel	Double-walled	Generator
321	200	Steel	Used Food Grease	None	Waste
324R	2,000	Steel	Diesel	Double-walled	Dispense
324S	250	Steel	Used Oil	Double-walled	Waste
324T	2,000	Steel	JP8	Double-walled	Dispense
324V	150	Steel	Diesel	Steel Dike	Generator
331B	550	Steel	Heating Oil	None	Heat
331DRA	55 (up to 6)	Steel	Used Oil	Containment Pallet	Waste
331DRB	55	Steel	Oil,	Steel Dike	Dispense

Container ID (Building Number)	Capacity (Gallons)	Material of Construction	Product Stored	Secondary Containment Type	Function
	(up to 8)		Hydraulic Oil		
332HU	25,000	Steel	Heating Oil	None	Heat/Hot Water
332IU	25,000	Steel	Heating Oil	None	Heat/Hot Water
332JU	25,000	Steel	Heating Oil	None	Heat/Hot Water
338B	300	Steel	Gasoline	Double-walled	Dispense
338C	2,000	Steel	Oily Bilge Water	Steel Dike	Waste
338D	500	Steel	Used Oil	Double-walled	Waste
338M	2,500 (truck)	Steel	Gasoline	Plastic Dike (when parked)	Dispense
338DRA	55 (up to 4)	Steel	Oil	Containment Pallet	Dispense
338DRB	55 (up to 20)	Steel	Oil, Hydraulic Oil	Steel Conex	Storage
341	150	Steel	Diesel	Double-walled	Generator
341DR	55 (up to 4)	Steel	Used Oil	Containment Pallet	Waste
363C	250	Steel	Diesel	Double-walled	Generator
366C	550	Steel	Heating Oil	Double-walled	Heat/Hot Water
367A	1,500	Steel	Diesel	Double-walled	Generator
367B	240	Steel	Diesel	Double-walled	Generator
374A	275	Steel	Heating Oil	None	Heat/Hot Water
374B	275	Steel	Heating Oil	None	Heat/Hot Water
380AU	1,000	Steel	Heating Oil	None	Heat/Hot Water
380B	475	Steel	Diesel	Double-walled	Generator
399	520	Steel	Diesel	Double-walled	Generator
584A	156	Steel	Diesel	Double-walled	Generator
594B	250	Steel	Diesel	Double-walled	Generator
600	500	Steel	Diesel	Double-walled	Dispense
606A	250	Steel	Diesel	Double-walled	Generator
606B	500	Steel	Diesel	Plastic Dike	Dispense
687B	500	Steel	Diesel	Double-walled	Generator
765A	3,000	Steel	Diesel	Double-walled	Generator
765B	5,000	Steel	Diesel	Double-walled	Generator
765C	700	Steel	Diesel	Double-walled	Generator
767	275	Steel	Diesel	Concrete Dike	Fire Pump
780B	500	Steel	Heating Oil	None	Heat/Hot Water

Container ID (Building Number)	Capacity (Gallons)	Material of Construction	Product Stored	Secondary Containment Type	Function
952A	250	Steel	Diesel	Double-walled	Generator
1089C	500	Steel	Used Oil	Double-walled	Waste
1109C	500	Steel	Kerosene	Double-walled	Dispense
1109C	500	Steel	Diesel	Plastic Dike	Dispense
1109D	500	Steel	Diesel	Double-walled	Dispense
1114A	5,000	Steel	Gasoline	Double-walled	Dispense
1128B	500	Steel	Diesel	Double-walled	Dispense
1135D	240	Stainless Steel	Used Food Grease	None	Waste
1141A	550	Steel	Heating Oil	Double-walled	Heat/Hot Water
1142A	550	Steel	Heating Oil	Double-walled	Heat/Hot Water
1143A	550	Steel	Heating Oil	Double-walled	Heat/Hot Water
1143B	550	Steel	Heating Oil	Double-walled	Heat/Hot Water
1156A	112	Steel	Diesel	Double-walled	Generator
1157A	550	Steel	Heating Oil	Double-walled	Heat/Hot Water
1199	200	Steel	Used Food Grease	None	Waste
1200DR	55 (up to 4)	Steel	Used Food Grease	None	Waste
1204	525	Steel	Diesel	Double-walled	Generator
1234E	600	Steel	Diesel	Double-walled	Generator
1234F	600	Steel	Diesel	Double-walled	Generator
1234G	600	Steel	Diesel	Double-walled	Generator
1234H	600	Steel	Diesel	Double-walled	Generator
1234I	125	Plastic	Sodium Hydroxide	None	Boiler Water Treatment
1234DRA	65	Plastic	Sodium Hypochlorite	None	Boiler Water Treatment
1234DRB	55 (up to 4)	Plastic	Sodium Hydroxide, Diethanol-Amine	None	Boiler Water Treatment
1250U	25,000	Steel	Heating Oil	None	Heat/Hot Water
1251U	25,000	Steel	Heating Oil	None	Heat/Hot Water
1260	1705	Steel	Diesel	Double-walled	Generator
1262	1705	Steel	Diesel	Double-walled	Generator
1412A	550	Steel	Heating Oil	None	Heat

Container ID (Building Number)	Capacity (Gallons)	Material of Construction	Product Stored	Secondary Containment Type	Function
1412B	550	Steel	Heating Oil	None	Heat
1417H	500	Steel	Motor Oil	Double-walled	Dispense
1417I	500	Steel	Motor Oil	Double-walled	Dispense
1417J	500	Steel	Hydraulic Oil	Double-walled	Dispense
1417K	500	Steel	Used Oil	Double-walled	Waste
1417L	600	Steel	Diesel	None	Dispense
1417M	600	Steel	Diesel	Plastic Dike	Dispense
1417DRA	55 (up to 9)	Steel	Oil, Hydraulic Oil Antifreeze	Steel Conex	Storage
1417DRB	55 (up to 36)	Steel	Oil, Hydraulic Oil Antifreeze	Steel Conex	Storage
1417DRC	55 (up to 8)	Steel	Oil, Hydraulic Oil Antifreeze	Containment Pallet	Dispense
1417DRD	55 (up to 4)	Steel	Used Oil, Used Fuel Used Antifreeze	Containment Pallet	Waste
1420A	250	Steel	Hydraulic Oil	Concrete Dike	Dispense
1420B	275	Steel	Used Oil	Concrete Dike	Waste
1420C	275	Steel	Oil	Concrete Dike	Dispense
1420DRA	55 (up to 4)	Steel	Used Oil Used Antifreeze	Plastic Dike	Waste
1420DRB	55 (up to 6)	Steel	Oil, Hydraulic Oil, Grease Antifreeze	Concrete Dike	Dispense
1421B	250	Steel	Diesel	Double-walled	Generator
1422PU	25,000	Steel	Heating Oil	None	Heat/Hot Water
1422QU	25,000	Steel	Heating Oil	None	Heat/Hot Water
1422RU	25,000	Steel	Heating Oil	None	Heat/Hot Water
1422SU	25,000	Steel	Heating Oil	None	Heat/Hot Water
1422TU	25,000	Steel	Heating Oil	None	Heat/Hot Water
1436D	2,000	Steel	Heating Oil	Double-walled	Heat/Hot Water
1444	1,000	Steel	Heating Oil	Double-walled	Heat/Hot Water
1456A	461	Steel	Diesel	Double-walled	Generator

Container ID (Building Number)	Capacity (Gallons)	Material of Construction	Product Stored	Secondary Containment Type	Function
1456B	85	Steel	Used Food Grease	None	Waste
1462B	250	Steel	Used Antifreeze	Double-walled	Waste
1462C	500	Steel	Used Oil	Double-walled	Waste
1462DR	55 (up to 4)	Steel	Used Oil	Steel Dike	Waste
1465A	250	Steel	Diesel	Double-walled	Generator
1465B	112	Steel	Diesel	Double-walled	Generator
1576	150	Steel	Diesel	Double-walled	Generator
1589	112	Steel	Diesel	Double-walled	Generator
1695A	250	Steel	Diesel	Double-walled	Generator
1696CU	1,000	Steel	Heating Oil	None	Heat/Hot Water
1700AU	5,000	Steel	Heating Oil	None	Heat/Hot Water
1810AU	8,000	Steel	Heating Oil	None	Heat/Hot Water
1822D	250	Steel	Diesel	Double-walled	Generator
1822E	250	Steel	Diesel	Steel Dike	Generator
1832B	250	Steel	Diesel	Double-walled	Generator
1906C	500	Steel	Used Oil	Double-walled	Waste
1906E	500	Steel	Heating Oil	Double-walled	Heat/Hot Water
1949	250	Steel	Used Oil	Double-walled	Waste
1949DR	55 (up to 4)	Steel	Oil Antifreeze, Used Antifreeze	Containment Pallet	Dispense, Waste
1950AU	3,000	Steel	Heating Oil	None	Heat/Hot Water
1950B	250	Steel	Used Oil	None	Waste
1950DRA	55 (up to 2)	Steel	Used Antifreeze	Containment Pallet	Waste
1950DRB	55 (up to 20)	Steel	Oil, Hydraulic Oil Antifreeze	Steel Conex	Dispense
1956A	500	Steel	Used Oil	Double-walled	Waste
1956B	2,000	Steel	Diesel	Double-walled	Generator
1956DRA	55 (up to 4)	Steel	Used Oil Used Antifreeze	Containment Pallet	Waste
1956DRB	55	Steel	Oil, Hydraulic Oil	Steel Conex	Storage

Container ID (Building Number)	Capacity (Gallons)	Material of Construction	Product Stored	Secondary Containment Type	Function
	(up to 12)		Antifreeze		
1956DRC	55 (up to 4)	Steel	Oil, Hydraulic Oil Antifreeze	Containment Pallet	Dispense
1970D	500	Steel	Heating Oil	Double-walled	Heat/Hot Water
1976C	1,000	Steel	Heating Oil	None	Heat/Hot Water
1980A	500	Steel	Heating Oil	Double-walled	Heat/Hot Water
1981U	550	Steel	Heating Oil	None	Heat/Hot Water
2117U	25,000	Steel	Heating Oil	None	Heat/Hot Water
2303	350	Stainless Steel	Used Food Grease	None	Waste
2304E	200	Steel	Used Food Grease	None	Waste
2310B	500	Steel	Diesel	Double-walled	Generator
2310C	335	Steel	Diesel	None	Generator
2310D	335	Steel	Diesel	None	Generator
2310E	335	Steel	Diesel	None	Generator
2310DR	55 (up to 4)	Steel	Oil, Used Oil	Containment Pallet	Dispense, Waste
2330A	100	Plastic	Sodium Hypochlorite	None	Water Treatment
2330B	60	Plastic	Sodium Hypochlorite	None	Water Treatment
2444D	250	Steel	Diesel	Double-walled	Generator
2444E	250	Steel	Diesel	Double-walled	Generator
2444F	250	Steel	Diesel	Double-walled	Generator
2444G	100	Plastic	Sodium Hydroxide	None	Boiler Water Treatment
2444H	100	Plastic	Acetic Acid	None	Boiler Water Treatment
2444I	100	Plastic	Sodium Hypochlorite	None	Boiler Water Treatment
2444J	200	Steel	Used Food Grease	None	Waste
2445C	250	Steel	Diesel	Double-walled	Generator
2454A	250	Steel	Diesel	Double-walled	Generator
2462C	300	Steel	Diesel	Steel Dike	Generator
2462D	300	Steel	Diesel	Steel Dike	Generator
2462E	300	Steel	Diesel	Steel Dike	Generator

Container ID (Building Number)	Capacity (Gallons)	Material of Construction	Product Stored	Secondary Containment Type	Function
2462F	300	Steel	Diesel	Steel Dike	Generator
2462G	300	Steel	Diesel	Steel Dike	Generator
2462H	250	Steel	Diesel	Double-walled	Dispense
2462I	65	Plastic	Phosphoric Acid	Double-walled	Boiler Water Treatment
2462DRA	55 (up to 4)	Steel	Used Oil	Containment Pallet	Waste
2462DRB	55 (up to 2)	Steel	Used Food Grease	None	Waste
2470	250	Steel	Diesel	Double-walled	Generator
2473BU	5,000	Steel	Heating Oil	None	Heat/Hot Water
2476A	500	Steel	Heating Oil	None	Heat/Hot Water
2494	112	Steel	Diesel	Double-walled	Generator
2580	500	Steel	Kerosene	Double-walled	Dispense
2582BU	2,500	Steel	Heating Oil	None	Heat/Hot Water
2584BU	5,000	Steel	Heating Oil	None	Heat/Hot Water
2590A	500	Steel	Diesel	Double-walled	Generator
2591B	500	Steel	Diesel	Double-walled	Generator
2592DU	5,000	Steel	Heating Oil	None	Heat/Hot Water
2592E	3,225	Steel	Diesel	Double-walled	Generator
2592F	800	Steel	Diesel	Double-walled	Generator
2593C	2,000	Steel	Diesel	Double-walled	Generator
2594E	165	Steel	Diesel	Double-walled	Generator
2594F	800	Steel	Diesel	Double-walled	Generator
2596A	1,369	Steel	Diesel	Double-walled	Generator
2596B	1,369	Steel	Diesel	Double-walled	Generator
2597	105	Steel	Diesel	Double-walled	Generator
2800C	550	Steel	Diesel	None	Heat/Hot Water
2800DRA	55 (up to 4)	Steel	Used Food Grease	Containment Pallet	Waste
2800DRB	55 (up to 2)	Plastic	Sodium Hydroxide, Cyclohexyl-amine	None	Boiler Water Treatment
2803B	550	Steel	Diesel	None	Heat/Hot Water, Dispense
2803C	195	Steel	Diesel	None	Generator

Container ID (Building Number)	Capacity (Gallons)	Material of Construction	Product Stored	Secondary Containment Type	Function
2803DR	55	Plastic	Sodium Hydroxide	None	Boiler Water Treatment
2809	415	Steel	Diesel	None	Generator
2810D	2,500	Steel	Diesel	Double-walled	Generator
2822	195	Steel	Diesel	None	Generator
2827	640	Steel	Diesel	Double-walled	Heat/Hot Water
2849A	110	Steel	Diesel	Double-walled	Generator
2849B	500	Steel	Diesel	Double-walled	Dispense
2849C	125	Steel	Diesel	Double-walled	Generator
2857A	140	Steel	Diesel	Double-walled	Generator
2857B	140	Steel	Diesel	Double-walled	Generator
2857C	140	Steel	Diesel	Double-walled	Generator
2857D	140	Steel	Diesel	Double-walled	Generator
2857E	140	Steel	Diesel	Double-walled	Generator
2857F	140	Steel	Diesel	Double-walled	Generator
2857G	140	Steel	Diesel	Double-walled	Generator
2857H	140	Steel	Diesel	Double-walled	Generator
2857I	140	Steel	Diesel	Double-walled	Generator
2857J	140	Steel	Diesel	Double-walled	Generator
2857K	140	Steel	Diesel	Double-walled	Generator
2857L	140	Steel	Diesel	Double-walled	Generator
2857M	140	Steel	Diesel	Double-walled	Generator
2857N	140	Steel	Diesel	Double-walled	Generator
2857O	100	Steel	Diesel	Double-walled	Generator
2857P	100	Steel	Diesel	Double-walled	Generator
2909A	500	Steel	Gasoline	None	Dispense
2909B	500	Steel	Gasoline	None	Dispense
2920	200	Steel	Used Food Grease	None	Waste
2935	112	Steel	Diesel	Double-walled	Generator
2990A	275	Steel	Used Antifreeze	Double-walled	Waste
2990B	275	Steel	Used Oil	Double-walled	Waste
2990CU	2,000	Steel	Heating Oil	None	Heat/Hot Water
2990DR	55 (up to 12)	Steel	Oil, Hydraulic Oil,	None	Dispense

Container ID (Building Number)	Capacity (Gallons)	Material of Construction	Product Stored	Secondary Containment Type	Function
			Grease Antifreeze		
2993C	500	Steel	Gasoline	Double-walled	Dispense
2993D	500	Steel	Diesel	Double-walled	Dispense
2993DRA	30	Plastic	Prodiamine	Containment Pallet	Herbicide
2993DRB	Various	Plastic	Various Pesticides	Containment Pallet	Various Pesticides
3121DRA	55 (up to 12)	Steel	Used Oil, Used Fuel	Steel Conex	Waste
3121DRB	55 (up to 20)	Steel	Oil, JP8	Steel Conex	Dispense
3138HU	30,000	Steel	Heating Oil	None	Heat/Hot Water
3138IU	30,000	Steel	Heating Oil	None	Heat/Hot Water
3138J	1,000	Steel	Diesel	Double-walled	Generator
3140DR	55 (up to 8)	Steel	Used Oil, Used Fuel	Containment Pallet	Waste
3144DR	55 (up to 8)	Steel	Used Oil, Used Fuel	Containment Pallet	Waste
3151DR	55 (up to 4)	Steel	Used Oil, Used Fuel	Containment Pallet	Waste
3153A	550	Steel	Heating Oil	Double-walled	Heat/Hot Water
3153DR	55 (up to 4)	Steel	Used Fuel	Containment Pallet	Waste
3161A	500	Steel	Gasoline	Double-walled	Dispense
3161B	500	Steel	Diesel	Double-walled	Dispense
3161DR	55 (up to 2)	Steel	Used Fuel	Containment Pallet	Waste
3161MA	5,000 (truck)	Steel	JP8	Concrete Dike (when parked)	Dispense
3161MB	3,000 (truck)	Steel	JP8	Concrete Dike (when parked)	Dispense
3161MC	3,000 (truck)	Steel	JP8	Concrete Dike (when parked)	Dispense
3161MD	3,000 (truck)	Steel	JP8	Concrete Dike (when parked)	Dispense
3161ME	3,000 (truck)	Steel	JP8	Concrete Dike (when parked)	Dispense
3165A	500	Steel	Diesel	Double-walled	Generator

Container ID (Building Number)	Capacity (Gallons)	Material of Construction	Product Stored	Secondary Containment Type	Function
3209	250	Steel	Diesel	Double-walled	Generator
3229	250	Steel	Diesel	Double-walled	Generator
3231DR	55 (up to 3)	Steel	Used Oil	Containment Pallet	Waste
3232DR	55 (up to 3)	Steel	Used Fuel	Containment Pallet	Waste
3238	105	Steel	Diesel	Double-walled	Generator
3239A	250	Steel	Diesel	Double-walled	Generator
3242	500	Steel	Diesel	Double-walled	Generator
DAAF Gate	112	Steel	Diesel	Double-walled	Generator
5101	350	Steel	Diesel	Double-walled	Generator
5103A	400	Steel	Diesel	Double-walled	Generator
5103B	400	Steel	Diesel	Double-walled	Generator
5103C	400	Steel	Diesel	Double-walled	Generator
5103D	400	Steel	Diesel	Double-walled	Generator
5103E	400	Steel	Diesel	Double-walled	Generator
5103F	400	Steel	Diesel	Double-walled	Generator
5103G	400	Steel	Diesel	Double-walled	Generator
5103H	500	Steel	Diesel	Double-walled	Generator
5103I	500	Steel	Diesel	Double-walled	Generator
5103J	500	Steel	Diesel	Double-walled	Generator
5104A	10,000	Steel	Diesel	Double-walled	Generator
5104B	30,000	Steel	Diesel	Double-walled	Generator
5104C	30,000	Steel	Diesel	Double-walled	Generator
5104D	30,000	Steel	Diesel	Double-walled	Generator
5104E	30,000	Steel	Diesel	Double-walled	Generator
5104F	30,000	Steel	Diesel	Double-walled	Generator
5104G	30,000	Steel	Diesel	Double-walled	Generator
5104H	400	Steel	Diesel	Double-walled	Generator
5104I	110	Plastic	Glutaraldehyde	Plastic Dike	Boiler Water Treatment
5104J	110	Plastic	Phosphonic Acid	Stainless Steel Dike	Boiler Water Treatment
5104K	110	Plastic	Sodium Hypochlorite	Plastic Dike	Boiler Water Treatment
5104L	200	Plastic	Sodium Hydroxide	Plastic Dike	Boiler Water Treatment

Container ID (Building Number)	Capacity (Gallons)	Material of Construction	Product Stored	Secondary Containment Type	Function
5104DR	55 (up to 4)	Plastic	Used Oil	Containment Pallet	Waste
7336A	250	Steel	Diesel	Double-walled	Generator
7352A	156	Steel	Diesel	Double-walled	Generator
9500A	308	Steel	Diesel	Double-walled	Generator
9500B	500	Steel	Kerosene	Double-walled	Dispense

- Does not contain oil, not regulated by 40 CFR 112

SPCC Regulated Containers (Continued)
(Transformers)

Container ID (Building Number)	Capacity (Gallons)	Material of Construction	Product Stored	Secondary Containment Type
T5103A	5,380	Steel	Vegetable Oil	Concrete Dike
T5103B	5,380	Steel	Vegetable Oil	Concrete Dike
T2500A	785	Steel	Mineral Oil	None
T2500B	1,240	Steel	Mineral Oil	None
T2584	225	Steel	Mineral Oil	None
T2592	350	Steel	Mineral Oil	None
T2593	388	Steel	Mineral Oil	None
T2594	365	Steel	Mineral Oil	None
T2596	500	Steel	Mineral Oil	None

Table A-2. SPCC-Exempt USTs Subject to 40 CFR 280

Container ID (Building Number)	Type	Capacity (Gallons)	Material of Construction	Contents	Function
808A	UST	5,000	FRP	Diesel	Generator
1124C	UST	12,000	Steel with Coating	E85 (Empty) (Ethanol / Gasoline)	Dispense
1124D	UST	12,000	Steel with Coating	Used Oil	Waste
1124H	UST	30,000	FRP	Gasoline	Dispense
1124I	UST	30,000	FRP	Diesel	Dispense
1135A	UST	20,000	FRP	Gasoline	Dispense
1135B	UST	10,000	FRP	Gasoline	Dispense
1135C	UST	10,000	FRP	Gasoline	Dispense
1252A	UST	20,000	FRP	Diesel	Generator
1253A	UST	20,000	FRP	Diesel	Generator
1254A	UST	20,000	FRP	Diesel	Generator
2119	UST	550	FRP	Diesel	Generator
2304A	UST	12,000	FRP	Gasoline	Dispense
2304B	UST	12,000	FRP	Gasoline	Dispense
2304C	UST	12,000	FRP	Gasoline	Dispense
2304D	UST	12,000	FRP	Gasoline	Dispense
2310A	UST	25,000	FRP	Diesel	Generator
2444C	UST	25,000	FRP	Diesel	Generator / Heat
2445A	UST	30,000	FRP	Diesel	Generator
2445B	UST	30,000	FRP	Diesel	Generator
2462B	UST	25,000	FRP	Diesel	Generator
2594A	UST	5,000	FRP	Diesel	Generator / Heat
2800A	UST	15,000	FRP	Diesel	Generator / Heat
2800B	UST	6,000	FRP	Diesel	Generator / Heat
2803A	UST	25,000	FRP	Diesel	Generator / Heat / Dispense
2810A	UST	25,000	FRP	Diesel	Generator
2810B	UST	25,000	FRP	Diesel	Generator

2810C	UST	25,000	FRP	Diesel	Generator
2838A	UST	5,000	FRP	Gasoline	Dispense
2849D	UST	5,000	FRP	Diesel	Never Used
2851A	UST	50,000	FRP	Diesel	Generator / Heat
2851B	UST	50,000	FRP	Diesel	Generator / Heat
2851C	UST	50,000	FRP	Diesel	Generator / Heat
2851D	UST	50,000	FRP	Diesel	Generator / Heat
2851E	UST	50,000	FRP	Diesel	Generator / Heat
2851F	UST	50,000	FRP	Diesel	Generator / Heat
2855A	UST	1,000	FRP	Diesel	Generator / Heat
2856B	UST	15,000	FRP	Diesel	Generator / Heat
3162A	UST	13,000	FRP	JP8	Dispense
3162B	UST	13,000	FRP	JP8	Dispense

Appendix B

Certification of the Applicability of the Substantial Harm Criteria

Certification of the Applicability of the Substantial Harm Criteria (As per 40 CFR 112.20(f) Appendix C)

Facility Name: Fort Belvoir
Facility Address: Directorate of Public Works, Environmental Division
ATTN: IMBV-PWE
Fort Belvoir, VA 22060

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 oil 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 at a distance (as calculated using the appropriate formula in Attachment C-III to 40 CFR 112 or a comparable formula) such that a discharge from the facility could cause injury to fish and wildlife and sensitive environments?

   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 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 __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 discharge in an amount greater than or equal to 10,000 gallons within the last 5 years?

   Yes ____ No __X__

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: Felix Mariani, Chief, Environmental Division
Fort Belvoir

Appendix C

Discharge Report to US EPA Regional Administrator

Discharge Report to US EPA Regional Administrator

Facility name and location:	Fort Belvoir, Fairfax County, Virginia 22060
Name(s) of the owner or operator of facility:	U.S. Army Garrison Fort Belvoir (IMBV-PWE)
Date and year of initial facility operation:	1915
Maximum storage or handling capacity of the facility & normal daily throughput:	
Estimated amount of spill and type of oil	
Cause(s) of spill, including a failure analysis of system or subsystem in which the failure occurred:	
Corrective actions and/or countermeasures taken, including an adequate description of equipment repairs and/or replacements:	
Additional preventive measures taken or contemplated to minimize the possibility of recurrence:	
Provide the following:	

	Task Completed	**Comments**
☐	**Description of facility, including maps, flow diagrams, and topographical maps.**	
☐	**The names of individuals and/or organizations also contacted and the date and time contacted.**	

Appendix D

Volume Calculations for Secondary Containment Dikes

Volume Calculations for Secondary Containment Dikes

Container ID	Location	Container Type	Container Capacity (gallons)	Length (feet)	Width (feet)	Height (feet)	Containment Capacity (gallons)	Percent Containment Capacity
182	Swimming Pool	AST, Vertical	150	Cylinder	4	4	370	246%
246	Emergency Generator	AST, Horizontal	1,000	12.75	5.91	2	1,120	112%
324V	Emergency Generator	AST, Horizontal	150	3.33	3.08	1.58	120	**80%**
331DRB	Drum Storage	Drums	55	8	4	0.33	75	136%
338B	Fuel Storage	AST, Horizontal	300	10	10	1	740	246%
338C	Oily Bilge Storage	AST, Horizontal	2,000	14.83	7.83	2.66	2,300	115%
338DRB	Drum Storage	Drums	55	15	8.5	0.5	470	854%
338M	Tanker Parking	Mobile Refueler	2,500	34.5	11.5	1	2960	118%
606B	Fuel Storage	AST, Horizontal	500	7	5	2.58	670	134%
767	Fire Pump	AST, Horizontal	275	7	6.5	0.5	160	**58%**
1109D	Roads and Grounds	AST, Horizontal	500	7	5	2.58	670	134%
1124	DOL Fuel Station Loading/Unloading Rack	Mobile Refueler	5,000	98	3	8	17,500	350%
1417DRA	Drum Storage	Drums	55	23	8.5	0.5	720	1309%
1417DRB	Drum Storage	Drums	55	6	6	0.5	130	236%
1420A-C	Vehicle Maintenance	AST, Horizontal	275	17.5	9	1	1,175	427%
1420DRA	Drum Storage	Drums	55	17.5	9	1	1,175	2136%
1420DRB	Drum Storage	Drums	55	4.66	2.83	0.91	85	154%
1956DRB	Drum Storage	Drums	55	14.5	7	0.5	370	672%
2462C – 2462G	DLA	AST, Horizontal	300	6	4.66	1.41	300	100%^
2800DRA	Drum Storage	Drums	55	6	4	0.25	44	**80%**
2849	Generator	AST, Horizontal	110	3.41	2.66	2.5	165	150%
2993DR	Pesticides	Small Containers	30	24.5	6.5	0.5	590	1966%
3121DRA	Drum Storage	Drums	55	9	7	0.75	350	636%
3121DRB	Drum Storage	Drums	55	8	7	0.5	200	363%
3161	DAAF Fuel Station Loading/Unloading Rack	Mobile Refueler	5,000	48	35	0.5	6,200	125%
3161	Tanker Parking	Mobile Refueler	5,000	79	18	2	21,000	420%
5103	Transformers	Transformers	5,380	39	28	1.83	14,900	276%
5104I	Boiler Treatment	AST, Horizontal	110	4	3	1.83	160	145%
5104J	Boiler Treatment	AST, Horizontal	110	5	4	2.25	330	300%
5104K	Boiler Treatment	AST, Horizontal	110	5	4	2.25	330	300%
5104L	Boiler Treatment	AST, Horizontal	200	5.5	4.33	2	350	175%
5104DR	Drum Storage	Drums	55	4.25	2.16	0.5	34	**61%**
9500B	Fuel Storage	AST, Horizontal	500	7.33	5.83	1.66	525	105%^

Underlined Bold – secondary containment is not large enough to contain tank contents with adequate freeboard for precipitation (110% of container volume).

^ - containment is covered or inside a building and does not need additional containment for precipitation (100% of container volume is adequate).

Appendix E

Inspection Checklists

STI SP001 Monthly Inspection Checklist

General Inspection Information:

Inspection Date: _____ Retain Until Date: _____ (36 months from inspection date)

Prior Inspection Date: _____ Inspector Name: _____

Tanks Inspected (ID #'s): _____

Inspection Guidance:

- For equipment not included in this Standard, follow the manufacturer recommended inspection/testing schedules and procedures.
- The periodic AST Inspection is intended for monitoring the external AST condition and its containment structure. This visual inspection does not require a Certified Inspector. It shall be performed by an owner's inspector who is familiar with the site and can identify changes and developing problems.
- Upon discovery of water in the primary tank, secondary containment area, interstice, or spill container, remove promptly or take other corrective action. Before discharge to the environment, inspect the liquid for regulated products or other contaminants and disposed of it properly.
- (*) designates an item in a non-conformance status. This indicates that action is required to address a problem.
- Non-conforming items important to tank or containment integrity require evaluation by an engineer experienced in AST design, a Certified Inspector, or a tank manufacturer who will determine the corrective action. Note the non-conformance and corresponding corrective action in the comment section.
- Retain the completed checklists for 36 months.
- **In the event of severe weather (snow, ice, wind storms) or maintenance (such as painting) that could affect the operation of critical components (normal and emergency vents, valves), an inspection of these components is required as soon as the equipment is safely accessible after the event.**

Item	Task	Status	Comments
1.0 Tank Containment			
1.1 Containment structure	Check for water, debris, cracks or fire hazard	Yes* No N/A	
1.2 Primary tank	Check for water	Yes* No	
1.3 Containment drain valves	Operable and in a closed position	Yes No* N/A	
1.4 Pathways and entry	Clear and gates/doors operable	Yes No* N/A	
2.0 Leak Detection			
2.1 Tank	Visible signs of leakage	Yes* No	
2.2 Secondary Containment	Visible signs of leakage from tank into secondary containment	Yes* No	
2.3 Surrounding soil	Visible signs of leakage	Yes* No N/A	
2.4 Interstice	Visible signs of leakage	Yes* No N/A	

Item	Task	Status	Comments
3.0 Tank Equipment			
3.1 Valves	a. Check for leaks.	Yes* No N/A	
	b. Tank drain valves must be kept locked.	Yes* No N/A	
3.2 Spill containment boxes on fill pipe	a. Inspect for debris, residue, and water in the box and remove.	Yes* No N/A	
	b. Drain valves must be operable and closed.	Yes* No N/A	
3.3 Liquid level equipment	a. Both visual and mechanical devices must be inspected for physical damage.	Yes No* N/A	
	b. Check that the device is easily readable	Yes No* N/A	
3.4 Overfill equipment	a. If equipped with a "test" button, activate the audible horn or light to confirm operation. This could be battery powered. Replace the battery if needed	Yes No* N/A	
	b. If overfill valve is equipped with a mechanical test mechanism, actuate the mechanism to confirm operation	Yes No* N/A	
3.5 Piping connections	Check for leaks, corrosion and damage	Yes* No	
4.0 Tank Attachments and Appurtenances			
4.1 Ladder and platform structure	Secure with no sign of severe corrosion or damage?	Yes No* N/A	
5.0 Other Conditions			
5.1 Are there other conditions that should be addressed for continued safe operation or that may affect the site spill prevention plan?		Yes* No	

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STI SP001 Annual Inspection Checklist

General Inspection Information:

Inspection Date: _____ Retain Until Date: _____ (36 months from inspection date)

Prior Inspection Date: _____ Inspector Name: _____

Tanks Inspected (ID #'s): _____

Inspection Guidance:

- For equipment not included in this Standard, follow the manufacturer recommended inspection/testing schedules and procedures.
- The periodic AST Inspection is intended for monitoring the external AST condition and its containment structure. This visual inspection does not require a Certified Inspector. It shall be performed by an owner's inspector who is familiar with the site and can identify changes and developing problems.
- Remove promptly upon discovery standing water or liquid in the primary tank, secondary containment area, interstice, or spill container. Before discharge to the environment, inspect the liquid for regulated products or other contaminants and disposed of it properly.
- In order to comply with EPA SPCC (Spill Prevention, Control and Countermeasure) rules, a facility must regularly test liquid level sensing devices to ensure proper operation (40 CFR 112.8(c)(8)(v)).
- (*) designates an item in a non-conformance status. This indicates that action is required to address a problem.
- Non-conforming items important to tank or containment integrity require evaluation by an engineer experienced in AST design, a Certified Inspector, or a tank manufacturer who will determine the corrective action. Note the non-conformance and corresponding corrective action in the comment section.
- Retain the completed checklists for 36 months.
- Complete this checklist on an annual basis supplemental to the owner monthly-performed inspection checklists.
- **Note: If a change has occurred to the tank system or containment that may affect the SPCC plan, the condition should be evaluated against the current plan requirement by a Professional Engineer knowledgeable in SPCC development and implementation.**

Item	Task	Status	Comments
1.0 Tank Containment			
1.1 Containment structure	Check for: • Holes or cracks in containment wall or floor • Washout • Liner degradation • Corrosion • Leakage • Paint failure • Tank settling	Yes* No N/A	
2.0 Tank Foundation and Supports			
2.1 Foundation	Settlement or foundation washout?	Yes* No	
2.2 Concrete pad or ring wall	Cracking or spalling?	Yes* No N/A	

Item	Task	Status	Comments
2.3 Supports	Check for corrosion, paint failure, etc.	Yes* No N/A	
2.4 Water drainage	Water drains away from tank?	Yes No* N/A	
2.5 Tank grounding	Strap secured and in good condition?	Yes No* N/A	
3.0 Cathodic Protection			
3.1 Gavlvanic cathodic protection system	Confirm system is functional, includes the wire connections for galvanic systems	Yes No* N/A	
3.2 Impressed current system	a. Inspect the operational components (power switch, meters, and alarms).	Yes No* N/A	
	b. Record hour meter, ammeter and voltmeter readings.	Yes No* N/A	
4.0 Tank Shell, Heads, Roof			
4.1 Coating	Check for coating failure	Yes* No	
4.2 Steel condition	Check for: • Dents • Buckling • Bulging • Corrosion • Cracking	Yes* No	
4.3 Roof slope	Check for low points and standing water	Yes* No N/A	
5.0 Tank Equipment			
5.1 Vents	Verify that components are moving freely and vent passageways are not obstructed for: • Emergency vent covers • Pressure/vacuum vent poppets • Other moving vent components	Yes* No	

Item	Task	Status	Comments
5.2 Valves	Check the condition of all valves for leaks, corrosion and damage.	Yes* No	
5.2.1 Anti-siphon, check and gate valves	Cycle the valve open and closed and check for proper operation.	Yes No* N/A	
5.2.2 Pressure regulator valve	Check for proper operation. (Note that there may be small, 1/4 inch drain plugs in the bottom of the valve that are not visible by looking from above only)	Yes No* N/A	
5.2.3 Expansion relief valve	Check that the valve is in the proper orientation. (Note that fuel must be discharged back to the tank via a separate pipe or tubing.)	Yes No* N/A	
5.2.4 Solenoid valves	Cycle power to valve to check operation. (Electrical solenoids can be verified by listening to the plunger opening and closing. If no audible confirmation, the valve should be inspected for the presence and operation of the plunger.)	Yes No* N/A	
5.2.5 Fire and shear valves	a. Manually cycle the valve to ensure components are moving freely and that the valve handle or lever has clearance to allow valve to close completely.	Yes No* N/A	
	b. Valves must not be wired in open position.	Yes No* N/A	

Item	Task	Status	Comments
	c. Make sure fusible element is in place and correctly positioned.	Yes No* N/A	
	d. Be sure test ports are sealed with plug after testing is complete and no temporary test fixture or component remains connected to valve.	Yes No* N/A	
5.3 Interstitial leak detection equipment	Check condition of equipment, including: • The window is clean and clear in sight leak gauges. • The wire connections of electronic gauges for tightness and corrosion • Activate the test button, if applicable.	Yes No* N/A	
5.4 Spill containment boxes on fill pipe	a. If corrosion, damage, or wear has compromised the ability of the unit to perform spill containment functions, replace the unit.	Yes* No N/A	
	b. Inspect the connections to the AST for tightness, as well as the bolts, nuts, washers for condition and replace if necessary.	Yes* No N/A	
	c. Drain valves must be operable and closed	Yes* No N/A	
5.5 Strainer	a. Check that the strainer is clean and in good condition.	Yes No* N/A	

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Item	Task	Status	Comments
5.5 Strainer	b. Access strainer basket and check cap and gasket seal as well as bolts.	Yes No* N/A	
5.6 Filter	a. Check that the filter is in good condition and is within the manufacturer's expected service life. Replace, if necessary.	Yes No* N/A	
	b. Check for leaks and decreased fuel flow	Yes No* N/A	
5.7 Flame arrestors	Follow manufacturer's instructions. Check for corrosion and blockage of air passages.	Yes* No N/A	
5.8 Leak detector for submersible pump systems	Test according to manufacturer's instructions and authority having jurisdiction (AHJ). Verify leak detectors are suited and properly installed for aboveground use.	Yes No* N/A	
5.9 Liquid level equipment	a. Has equipment been tested to ensure proper operation?	Yes No* N/A	
	b. Does equipment operate as required?	Yes No* N/A	
	c. Follow manufacturer's instructions	Yes No* N/A	
5.10 Overfill equipment	a. Follow manufacturer's instructions and regulatory requirements for inspection and functionality verification.	Yes No* N/A	
	b. Confirm device is suited for above ground use by the manufacturer	Yes No* N/A	

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Item	Task	Status	Comments
6.0 Insulated Tanks			
6.1 Insulation	Check condition of insulation for: • Missing sections • Areas of moisture • Mold • Damage	Yes* No N/A	
6.2 Insulation cover or jacket	Check for damage that will allow water intrusion	Yes* No N/A	
7.0 Miscellaneous			
7.1 Electrical wiring and boxes	Are they in good condition?	Yes No* N/A	
7.2 Labels and tags	Ensure that all labels and tags are intact and readable.	Yes No* N/A	

Additional Comments:

STI SP001 Portable Container Monthly Inspection Checklist

General Inspection Information:

Inspection Date: _____ Retain Until Date: _____ (36 months from inspection date)

Prior Inspection Date: _____ Inspector Name: _____

Containers Inspected (ID #'s): _____

Inspection Guidance:

- For equipment not included in this Standard, follow the manufacturer recommended inspection/testing schedules and procedures.
- The periodic AST Inspection is intended for monitoring the external AST condition and its containment structure. This visual inspection does not require a Certified Inspector. It shall be performed by an owner's inspector who is familiar with the site and can identify changes and developing problems.
- (*) designates an item in a non-conformance status. This indicates that action is required to address a problem.
- Non-conforming items important to tank or containment integrity require evaluation by an engineer experienced in AST design, a Certified Inspector, or a tank manufacturer who will determine the corrective action. Note the non-conformance and corresponding corrective action in the comment section.
- Retain the completed checklists for 36 months.

Item	Area: _____		Area: _____		Area: _____		Area: _____	
1.0 AST Containment/Storage Area								
1.1 ASTs within designated storage area?	Yes	No*	Yes	No*	Yes	No*	Yes	No*
1.2 Debris, spills, or other fire hazards in containment or storage area?	Yes*	No	Yes*	No	Yes*	No	Yes*	No
1.3 Water in outdoor secondary containment?	Yes*	No	Yes*	No	Yes*	No	Yes*	No
1.4 Drain valves operable and in a closed position?	Yes	No*	Yes*	No	Yes*	No	Yes*	No
1.5 Egress pathways clear and gates/doors operable?	Yes	No*	Yes*	No	Yes*	No	Yes*	No

Item	Area: _____	Area: _____	Area: _____	Area: _____
2.0 Leak Detection				
2.1 Visible signs of leakage around the container or storage area?	Yes* No	Yes* No	Yes* No	Yes* No
3.0 Container				
3.0 Noticeable container distortions, buckling, denting or bulging?	Yes* No	Yes* No	Yes* No	Yes* No

Comments:

APPENDIX D—EXTERNAL INSPECTION CHECKLIST FOR PROCESS PIPING

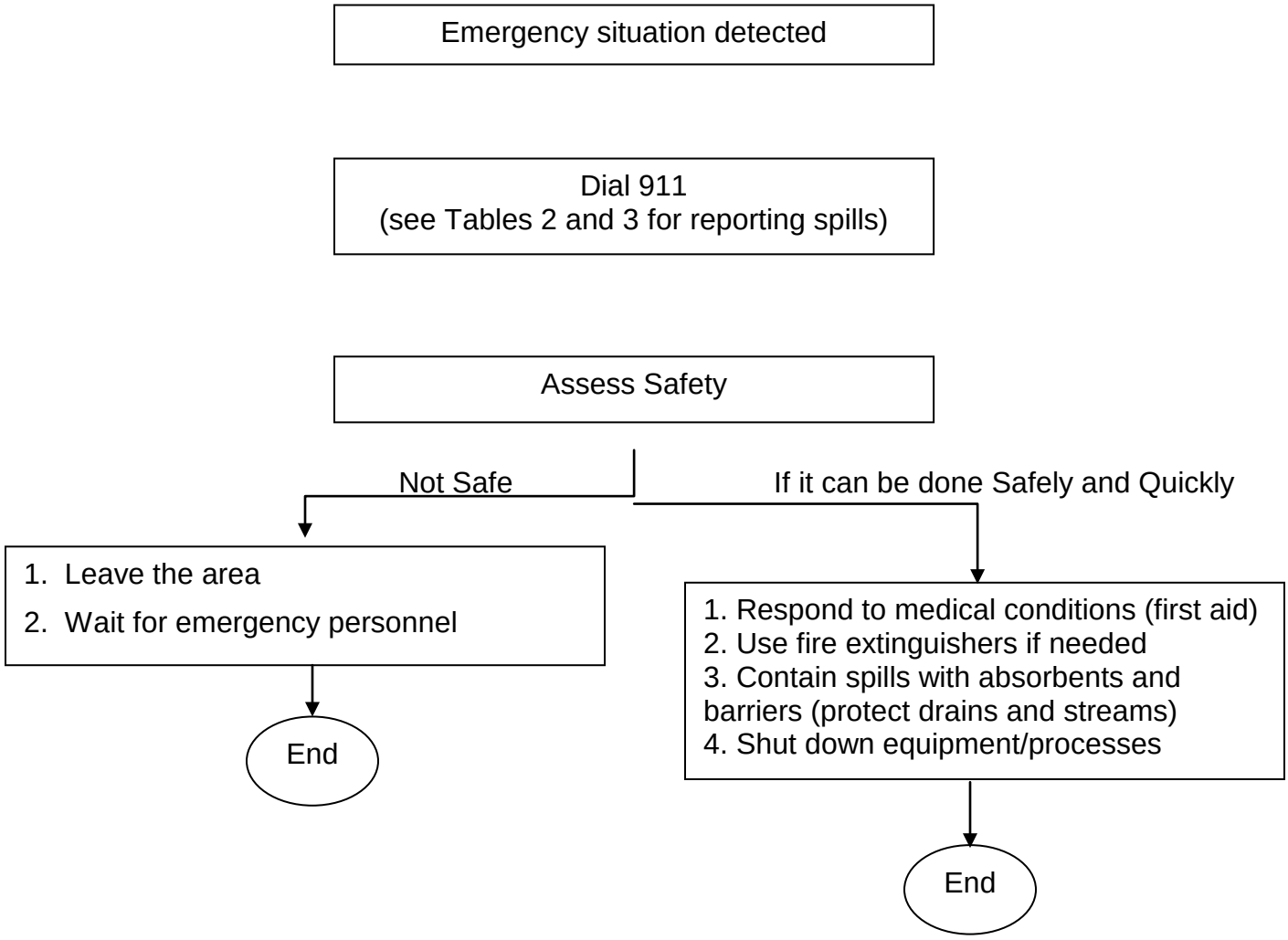
D.1 External Inspection Checklist for Process Piping

Publication Title #
Date Inspected
Item Inspected By Status

a. Leaks.
   1. Process.
   2. Steam Tracing.
   3. Existing Clamps.
b. Misalignment.
   1. Piping misalignment/restricted movement.
   2. Expansion joint misalignment.
c. Vibration.
   1. Excessive overhung weight.
   2. Inadequate support.
   3. Thin, small-bore, or alloy piping.
   4. Threaded connections.
   5. Loose supports causing metal wear.
d. Supports.
   1. Shoes off support.
   2. Hanger distortion or breakage.
   3. Bottomed-out springs.
   4. Brace distortion/breakage.
   5. Loose brackets.
   6. Slide plates/rollers.
   7. Counter balance condition.
   8. Support corrosion.
e. Corrosion.
   1. Bolting support points under clamps.
   2. Coating/Painting deterioration.
   3. Soil-to-air interface.
   4. Insulation interfaces.
   5. Biological growth.
f. Insulation.
   1. Damage/penetrations.
   2. Missing jacketing/insulation.
   3. Sealing deterioration.
   4. Bulging.
   5. Banding (broken/missing).

APPENDIX F

Immediate Actions



SPILL RESPONSE PROCEDURES

Step 1 **Evaluate Spill, does it meet one of the following criteria?**

- √ Is it 5-gallons or more of fuel / oil; or any amount of other chemicals
- √ Does it cover an area of 5 square feet or more
- √ Did it enter a waterway, storm drain, sewer system or surface water
- √ Does it pose a threat to public health or welfare

If YES to any of the above, the spill is TOO LARGE TO HANDLE SAFELY!

Step 2 **For Large Spills Only** Call Fort Belvoir Fire Dept. at **(703) 781-1800**
(For Small Spills, fill out Incident Report Form, skip to Step 3)

Step 3 For all Spills, notify one of the following:

- √ Spill Response Manager (703) 806-3694 or
- √ Compliance Branch Chief (703) 806-0020 or
- √ Hazardous Waste Manager (703) 806-2119

Step 4 Fax Incident Report Form to (703) 806-0145

If you get a voice mail, leave a message, then call the next number on the list

Step 5 If you have been Trained and are Qualified, Use Appropriate Personal Protective Equipment (*Check MSDS*) when Cleaning up Spill

Step 6 Contain or Confine the Spill Using Equipment in Spill Kit

DO NOT wash or dilute the pollutant with water

STOP the LEAK

CONFINE SPILL

PROTECT DRAINS

DIVERT FLOW

If the Spill has been Contained &

it is less than 5-gallons or smaller than 5 square feet, YOU MUST!

ABSORB SPILLED MATERIAL

CONTAINERIZE USED ABSORBENTS

Step 7 Turn in used materials and waste to the Fort Belvoir Hazardous Waste Consolidated Site located at Building 1495 by calling (703) 806-4537

Images of Spill Response Equipment are Courtesy of the New Pig Corporation www.newpig.com
For information about Spill Cards go to www.ebpartners-store.us or call (904) 287-4200
Quick Reference Card— S016 © 2013

Additional Considerations for Acid Spills

The highest probability of an acid spill on Fort Belvoir would be sulfuric acid from a vehicle battery. However the largest containers of acid are acetic acid at Building 2444 and phosphonic acid at Building 5104.

Personal Protective Equipment. Persons involved in cleaning up an acid spill must follow MSDS instructions and other applicable SOPs and chemical listing information for all safety, storage, and handling procedures, and should use the following PPE:

Butyl rubber or neoprene 18-inch gauntlet gloves, apron, safety goggles, boots or overshoes, and long-sleeved shirts (no exposed skin).

Full face-piece air purifying respirator (APR) with organic vapor/acid gas cartridges, approved by the National Institute for Occupational Safety and Health (NIOSH) or the Mine Safety and Health Administration (MSHA) if inside an enclosed space, or if the spill is large. A full-face shield can be worn when not wearing an APR and handling a spill.

Spill Control Actions. Spill control actions in the event of an acid spill include the following:

Containment. Contain spilled acid with a ring of absorbent. Acid-specific spill response kits contain socks and mats that start purple, and then turn yellow upon contact with acid. If there is any remaining neutralization potential in the absorbents, the color returns to purple.

Neutralization. Add additional acid-specific mats until the entire spill has been absorbed and neutralized. If all available acid-specific absorbents are exhausted, sodium bicarbonate (baking soda) or sodium carbonate (soda ash) must be added to the liquid spill until it is completely covered. If the spilled acid is a solid pellet, flake, or powder, containerize as much of the material as possible, then add sodium bicarbonate to the remaining material until completely covered. Test with pH paper to ensure a pH reading of 6 to 8 has been achieved.

Cautions. Avoid inhalation of fumes and contact with skin. The neutralization reaction may be violent (frothing, release of heat, and gas production). Control reactions by adding neutralizing agents slowly or through dilution.

Cleanup. Add sawdust or clay absorbent until the acid and neutralizing agents are completely covered. Scoop up spent solid absorbent with a long-handled, non-sparking shovel. Place spent waste in a proper plastic container. The container should be labeled “Acid Waste.”

Personal Decontamination. If a person contacts spilled acid, provide immediate treatment by thoroughly flushing the area with water using an eye wash station or

shower as appropriate, then transport the victim to the Fort Belvoir Community Hospital. Remove any clothing that the acid has come in contact with or contaminated. If someone ingests the acid or breathes acid fumes, immediately transport them to the Fort Belvoir Community Hospital.

Appendix G

Reportable Quantities

Chemical	RQ (in pounds)	Approximate RQ of Liquids (as packaged/used on Fort Belvoir)	Largest Container on Fort Belvoir
Ethylene glycol (in antifreeze)	5,000	Approx. 500 gal	275 gal
Phosphoric Acid	5,000	Approx. 500 gal	65 gal
Acetic Acid	5,000	Approx. 500 gal	100 gal
Sodium Hydroxide	1,000	Approx. 1,000 gal	125 gal
Sodium Hypochlorite	100	Approx. 100 gal	**110 gal**
Diethanolamine	100	Approx. 200 gal	55 gal
Triethylamine (herbicide)	5,000	Approx. 1,000 gal	1 gal
Monosodium Methanearsonate (herbicide)	1	Approx. 0.5 gal	**2.5 gal**
2,4-D (herbicide)	100	Approx. 30 gal	2.5 gal

Approximations are appropriate since the amount of a spill is rarely known precisely.

Reportable quantities for substances not listed above can be found at (40 CFR 302.4):

https://www.gpo.gov/fdsys/pkg/CFR-2004-title40-vol26/pdf/CFR-2004-title40-vol26-sec302-4.pdf

Note: RQ is for the pure substance. For instance, when determining whether RQ has been met, a mixture with 10% of a hazardous substance would be 1/10th of the weight of the mixture and thus only a 10 times larger spill (of the mixture) would be reportable.

Example: Sodium Hypochlorite (approximately 10% solution weight/volume)

$$\frac{\text{100 pounds RQ}}{\text{0.10 NaOCl in solution}} = \text{1000 pounds of solution required to meet RQ}$$

Density of solution is 9.26 pounds/gallon

$$\frac{\text{1000 pounds of solution required to meet RQ}}{\text{9.26 pounds/gallon}} = \text{108 gallons … or about 100 gallons}$$

Appendix H

Oil Spill Response Organizations

This list is intended for information purposes only and is not exhaustive, is ordered alphabetically for easy reference (not to signify order of calling), and does not imply any existing or potential contracts or obligations with any portion of the U.S. Government. Any or all of these OSROs could be called in the case of a spill beyond the capacity of onsite response/cleanup personnel/equipment.

OSRO	Contact Phone Number
ACE Environmental Services	**24-Hour Emergency Service or Response:** 1 (410) 354-8030 or 1 (866) 750-4223
Clean Harbors	**24-Hour Emergency Service or Response:** 1 (800) 645-8265 [1-800-OIL-TANK]
FCC Environmental	**24-Hour Emergency Service or Response:** 1 (410) 365-8364
IMS/HEPACO	**24-Hour Emergency Service or Response:** 1 (800) 888-7689
National Response Corporation	**24-Hour Emergency Service or Response:** 1 (800) 899-4672

Appendix I

Satellite Locations SPCC Plans