Fort Knox
Spill Prevention, Control, and Countermeasure Plan

Prepared for:
Fort Knox
Directorate of Public Works
Environmental Management Division

Prepared by:
Water Resources Protection Branch
Army Public Health Center
ATTN: MCHB-PH-WTR, Building E-1675
5158 Blackhawk Road
Aberdeen Proving Ground, MD 21010-5403

February 2017
Amended November 2017
Amended June 2018
Amended December 2019

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Prepared by:

James A. Johnson
Project Manager
ERG, LLC

30 DEC 2019
Date

Approved by:

Desiree S. Halsor, P.E.
Environmental Engineer
ERG, LLC

12/29/2019
Date

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ENGINEER'S CERTIFICATION

I, Desiree S. Halsor, attest by means of this certification:

- That I am familiar with the requirements of 40 CFR 112;
- That my agent has 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 Kentucky Administrative Regulations, based on my evaluation, I hereby certify that each secondary containment structure for Fort Knox is in compliance with the applicable requirements of 40 CFR 112.

Desiree S Halsor

Desiree S. Halsor, P.E.

Commonwealth of Kentucky Professional Engineer

License No. 35101

12/29/2019

Date

P.E. Certification

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MANAGEMENT APPROVAL

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

22 JAN 20

CJ King
COL, LG
Commanding

Date

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Record of Revisions

In accordance with 40 CFR 112.5(a), Fort Knox periodically reviews and evaluates this SPCC Plan for any change in the facility design, construction, operation, or maintenance that materially affects the facility's potential for an oil discharge, including, but not limited to:

- Commissioning of containers;
- Reconstruction, replacement, or installation of piping systems;
- Construction or demolition that might alter secondary containment structures; or
- Changes of product or service, revisions to standard operation, modification of testing/inspection procedures, and use of new or modified industry standards or maintenance procedures.

Plan amendments to address the types of changes listed above are considered technical amendments and must be certified by a P.E. Non-technical amendments can be completed by Fort Knox and do not need to be certified by a P.E. Non-technical amendments include the following types of changes:

- Change in the name or contact information (i.e., telephone numbers) of individuals responsible for the implementation of this Plan; or
- Change in the name or contact information of spill response or cleanup contractors.

Revisions must be made as soon as possible, but no later than six months after the changes occur. The Plan must be implemented within six months after the Plan has been amended. The Record of Revisions table below outlines the technical amendments that have been completed over the course of the past five years.

Date	Revision Number	Plan Section	Description
Dec 2016		All	Changed format, included 55-gallon drum storage areas, non-oil chemical containers, new construction
November 2017	1	All	Identified site closures, updated maps, updated master AST and GBT lists, and added 3 new site plans.
June 2018	2	All	Identified site closures, updated maps, updated master AST and GBT lists, and added 5 site plans.
December 2019	3	All	Miscellaneous technical update to incorporate added and removed storage tanks and operational information

"I certify that the Fort Knox SPCC Plan has been reviewed and any necessary technical changes have been incorporated and approved by the P.E. listed in the P.E. Certification."

Signed: _____

Daniel Musel, Chief, DPW Environmental Management Division

Date: 21 January 2020

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40 CFR 112 CROSS REFERENCE TABLE

Final SPCC Rule	Rule Requirement	Plan Section
§ 112.3(d)	P.E. 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	This 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
§ 112.7(a)(3)(i)	Plot plan showing the location and contents of each container, exempted USTs, piping, and transfer station	Figures 2.1-2.7, 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)	Figures 2.1-2.7, Figures in Section 5, 5.x.5*
§ 112.7(c)	Secondary containment	4.11, 5.x.3*
§ 112.7(d)	Contingency planning	4.7
§ 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.

Final SPCC Rule	Rule Requirement	Plan 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	5.33
§ 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 Knox, located near Radcliff, Kentucky. 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 Knox, and has been certified by a Professional Engineer registered in the Commonwealth of Kentucky.

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.

In accordance with 40 CFR 112.7(f)(2), the SPCC Program Manager and the Chief of the Directorate of Public Works (DPW), Environmental Management Division (EMD), are responsible for maintaining this Plan and overall discharge prevention at the garrison. A copy of this Plan is maintained onsite in the DPW EMD office.

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2.0 FACILITY DESCRIPTION

2.1 General Information

Fort Knox is on a 109,000-acre plot about 35 miles southwest of Louisville, Kentucky. Fort Knox stretches into Bullitt, Meade, and Hardin Counties with the cantonment area located primarily in Hardin County. The towns of West Point, Radcliff, Vine Grove, and Lebanon Junction are located in the immediate vicinity of the installation. The City of Muldraugh is within the installation boundaries and the City of Elizabethtown is 15 miles south of Fort Knox.

Fort Knox is responsible for all soldier career management with a primary mission to support the development of Army leaders. Fort Knox provides support services to training, mobilization, and power projection.

Fort Knox is located in Hardin County, near Radcliff, Kentucky, at 37° 54' North latitude; 85° 57' West longitude.

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

- Gasoline
- Diesel
- JP8 and F24 (military fuels differing only in their additives)
- Engine Oil
- Hydraulic Oil
- Grease
- 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), 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 Knox. 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 Knox does not have any field-constructed tanks. Fort Knox is a Resource Conservation and Recovery Act (RCRA) large quantity generator and, therefore, requires a RCRA contingency plan. Building 2949 is the RCRA less than 90-day storage facility. It has a RCRA Contingency Plan. 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 Knox property are not covered by this Plan. Such containers may include fuel tanker trucks or ASTs temporarily brought onto Fort Knox. 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 Knox 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 2.6) and are listed in Table A-2 in Appendix A.

There are oil/water separators (OWS) at various locations on Fort Knox. The OWS are slow flow, gravity separation chambers used either for primary treatment of industrial wastewater (treated effluent discharges to the sanitary sewer system) to remove free oil, grease, and fuel or for treatment of storm water runoff prior to direct discharge. The collected oil is periodically removed by a contractor. DPW personnel conduct periodic inspections and maintenance on the OWS to ensure proper operation. These OWS are exclusively used for storm water and 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. Department of Defense 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 Knox 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).

The electrical system at Fort Knox has been privatized and is owned, operated, and maintained by the Nolin Rural Electric Cooperative Corporation (or simply Nolin). Nolin is responsible for determining applicability and maintaining a SPCC Plan as necessary. Nolin is responsible for all SPCC regulated activities concerning transformers. They are included in the Fort Knox SPCC Plan for informational purposes only.

There are privatized fuel distribution areas located on Fort Knox that are not under the managerial control of Fort Knox. These areas have multiple ASTs with their own SPCC Plans and are not included in this SPCC Plan. These areas are: Frazier Fuel Point (Building 2796) and 9th CAV Fuel Point (Building 7330). The Godman Airfield (Buildings in the 5200 Area) fuel and oil handling operations are government owned and contractor operated and covered by this SPCC Plan.

2.3 Navigable Waters

The Fort Knox cantonment area is bounded on its eastern side by Mill Creek (tributary to the Salt River) and the western side by Otter Creek. Both flow north and are tributaries to the Ohio River, which flows southwest to the Mississippi River. The range areas drain to the Salt River (sometimes via one of its tributaries, Mill Creek or Rolling Fork). Various towns surrounding Fort Knox also discharge municipal storm water to Otter Creek and the Salt River upstream of Fort Knox. See Fort Knox Area Overview Map, Figure 2.1 for details.

Some of Fort Knox’s territory is within a recognized flood zone. The Federal Emergency Management Agency maps of the 1-percent annual chance flood area (also

known as the 100-year flood) include areas near Mill Creek and Otter Creek on the edges of Fort Knox's main cantonment area eastern and western boundaries and low-lying southeastern range areas.

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Figure 2.1 Fort Knox ASTs and Drainage Map

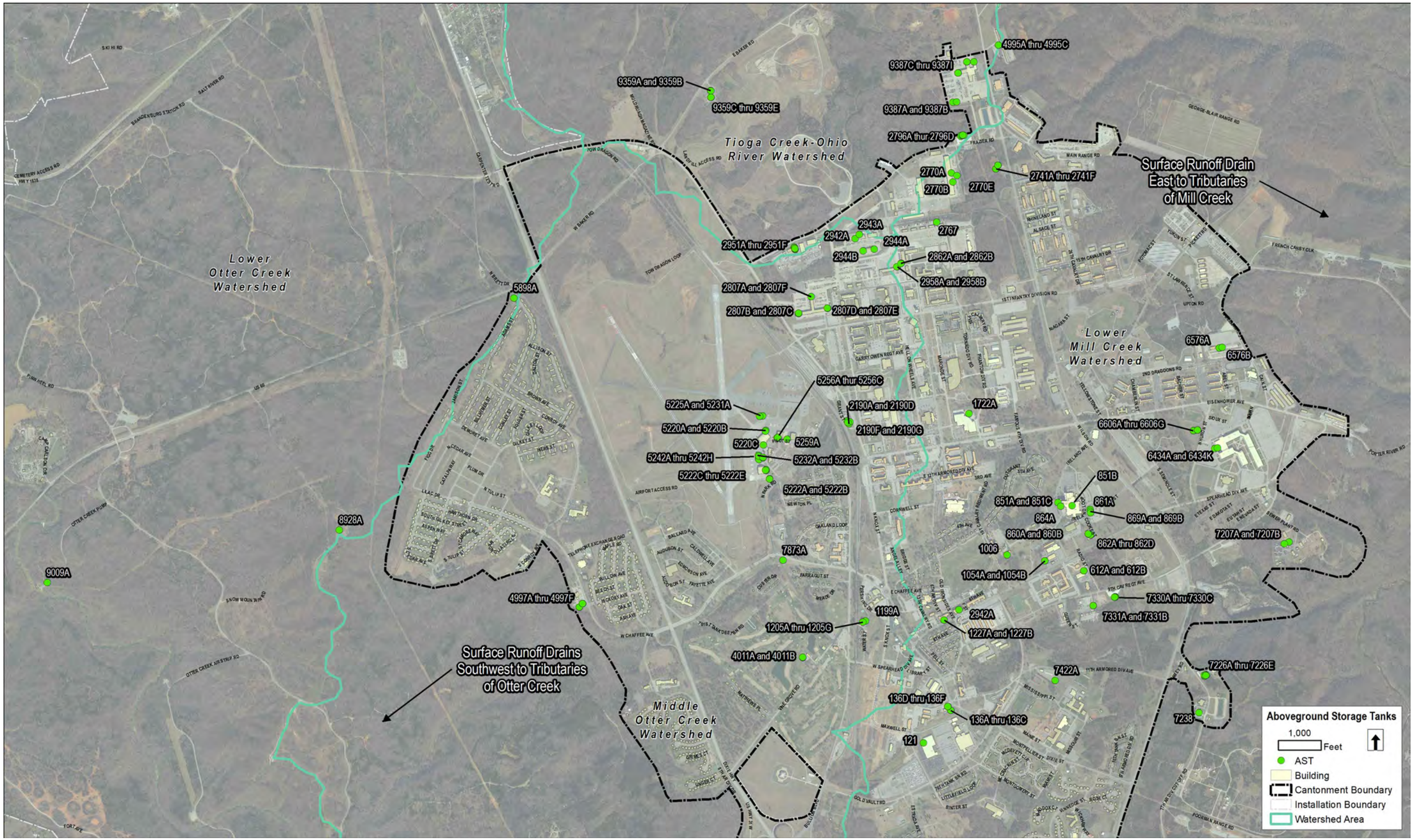


Figure 2.2 Fort Knox GBTs and Drainage Map

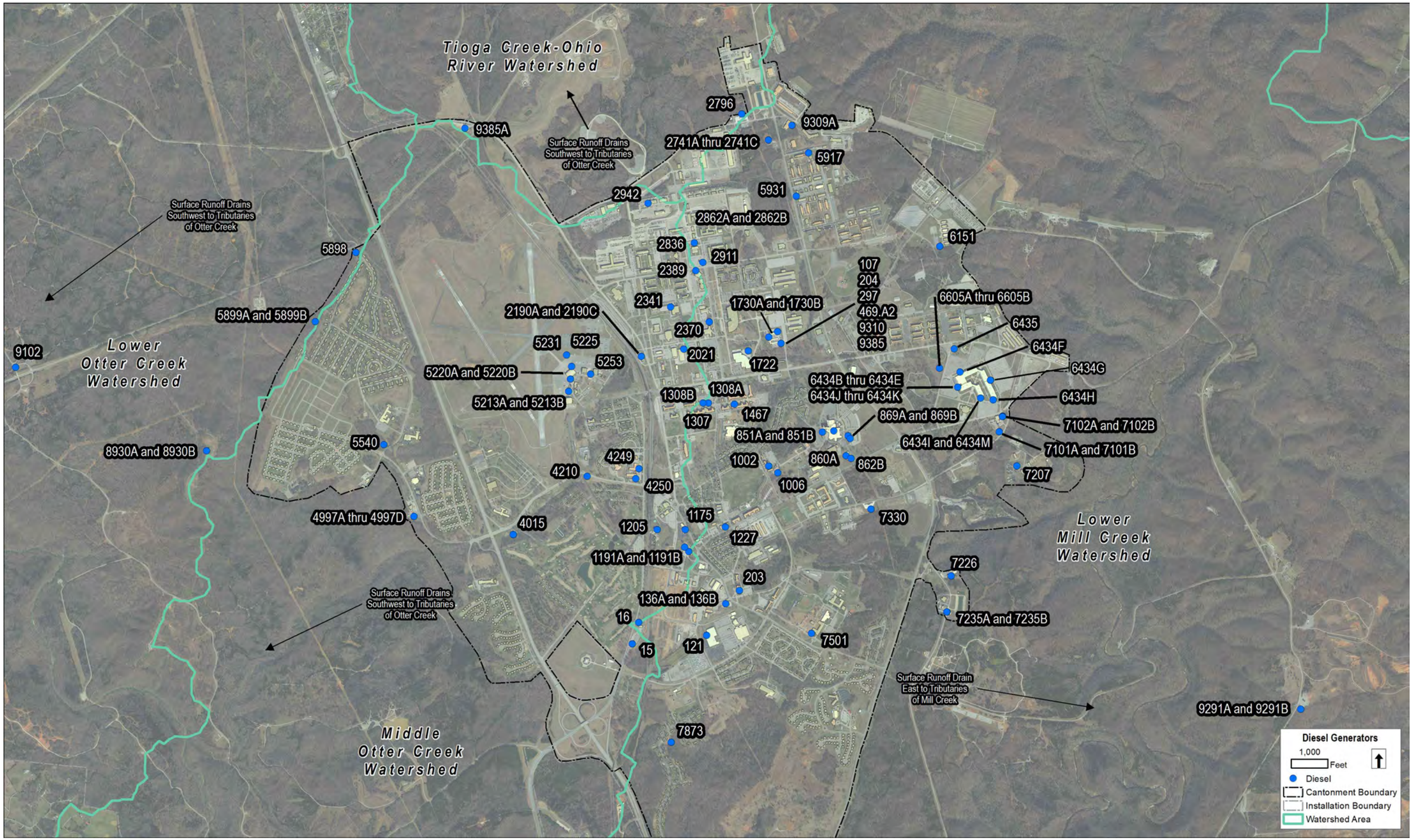


Figure 2.3 Fort Knox Grease Containers and Drainage Map

Figure 2.4 Fort Knox 55 Gallon Drums and Drainage Map

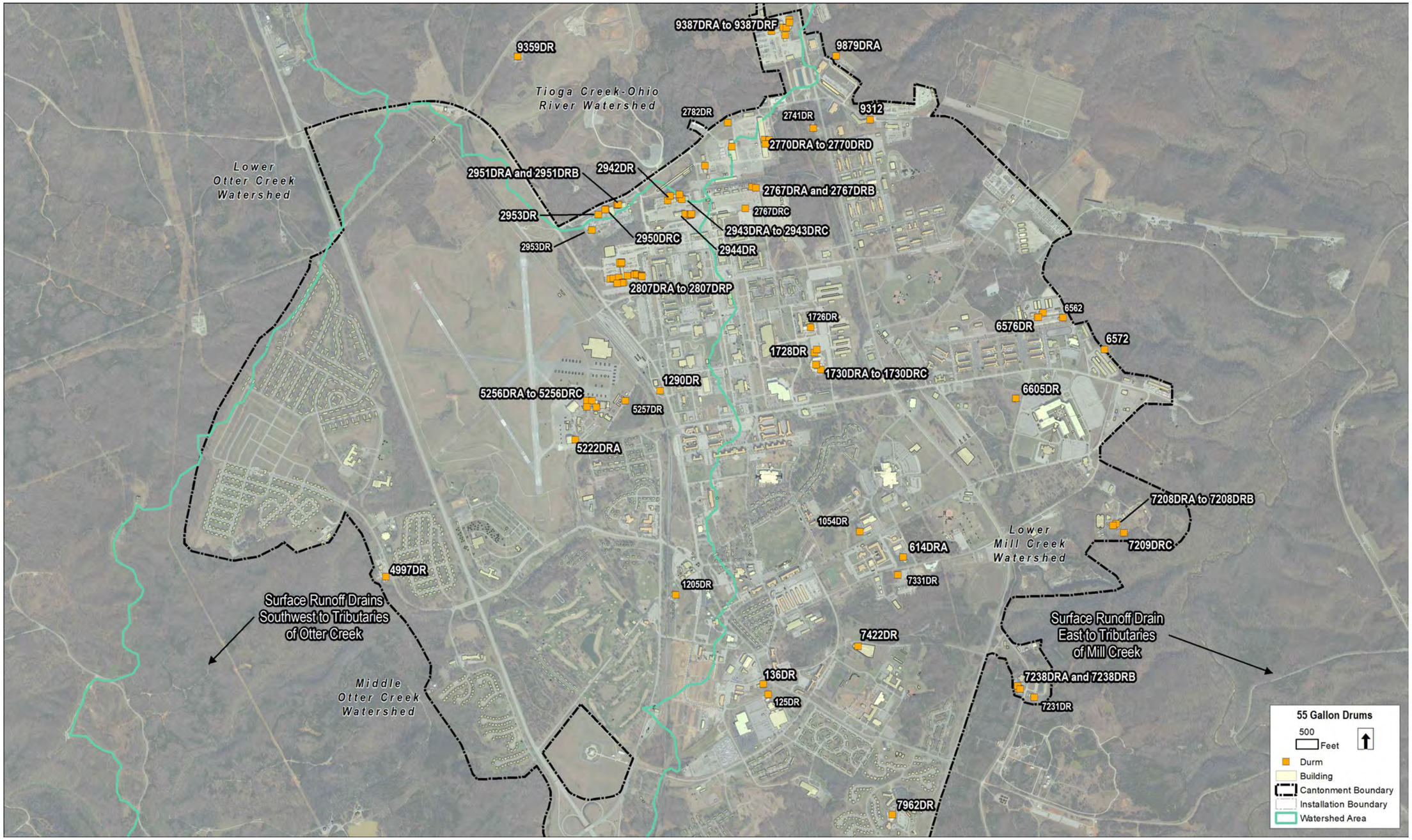


Figure 2.5 Fort Knox Range Maps All Containers and Drainage Map

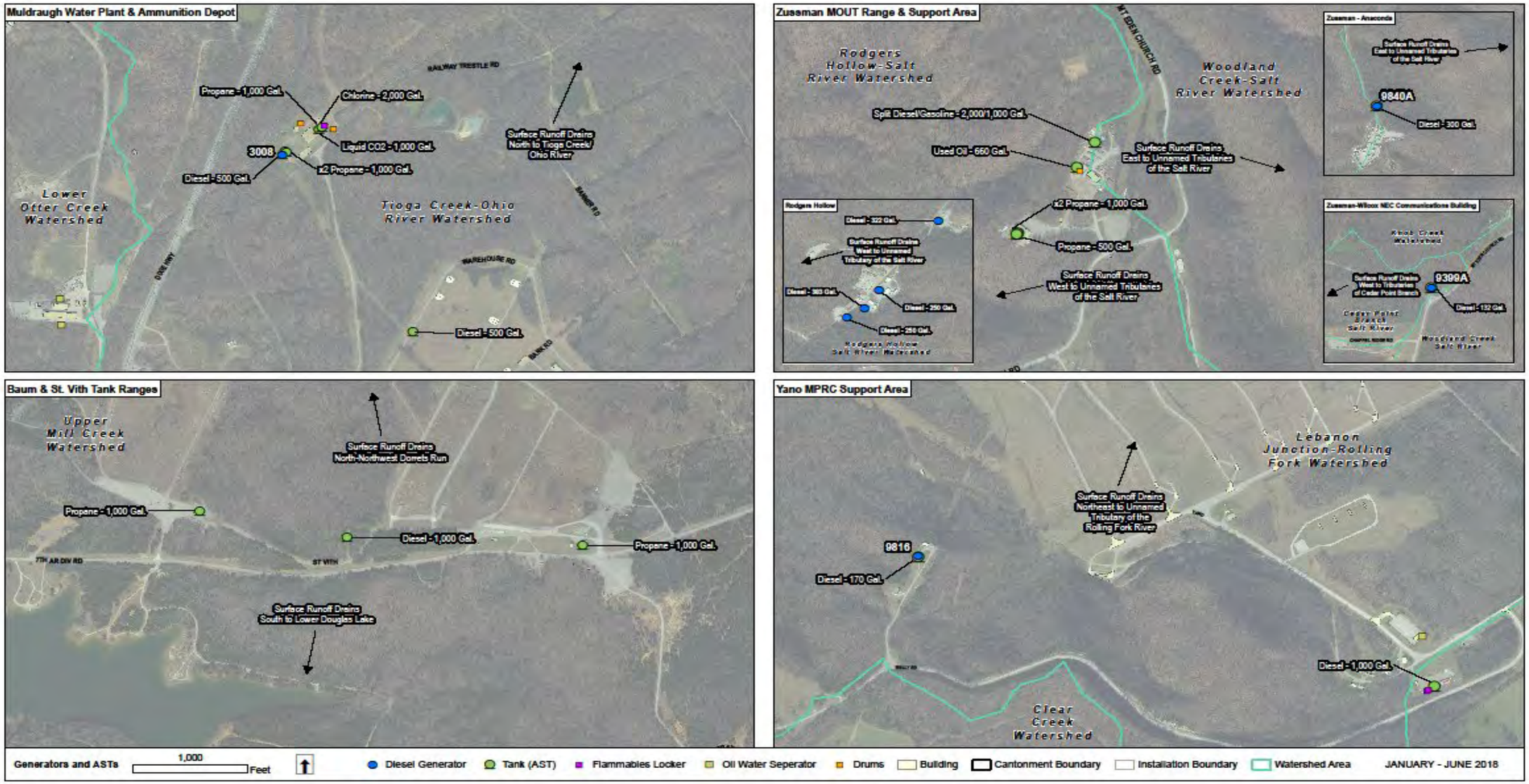
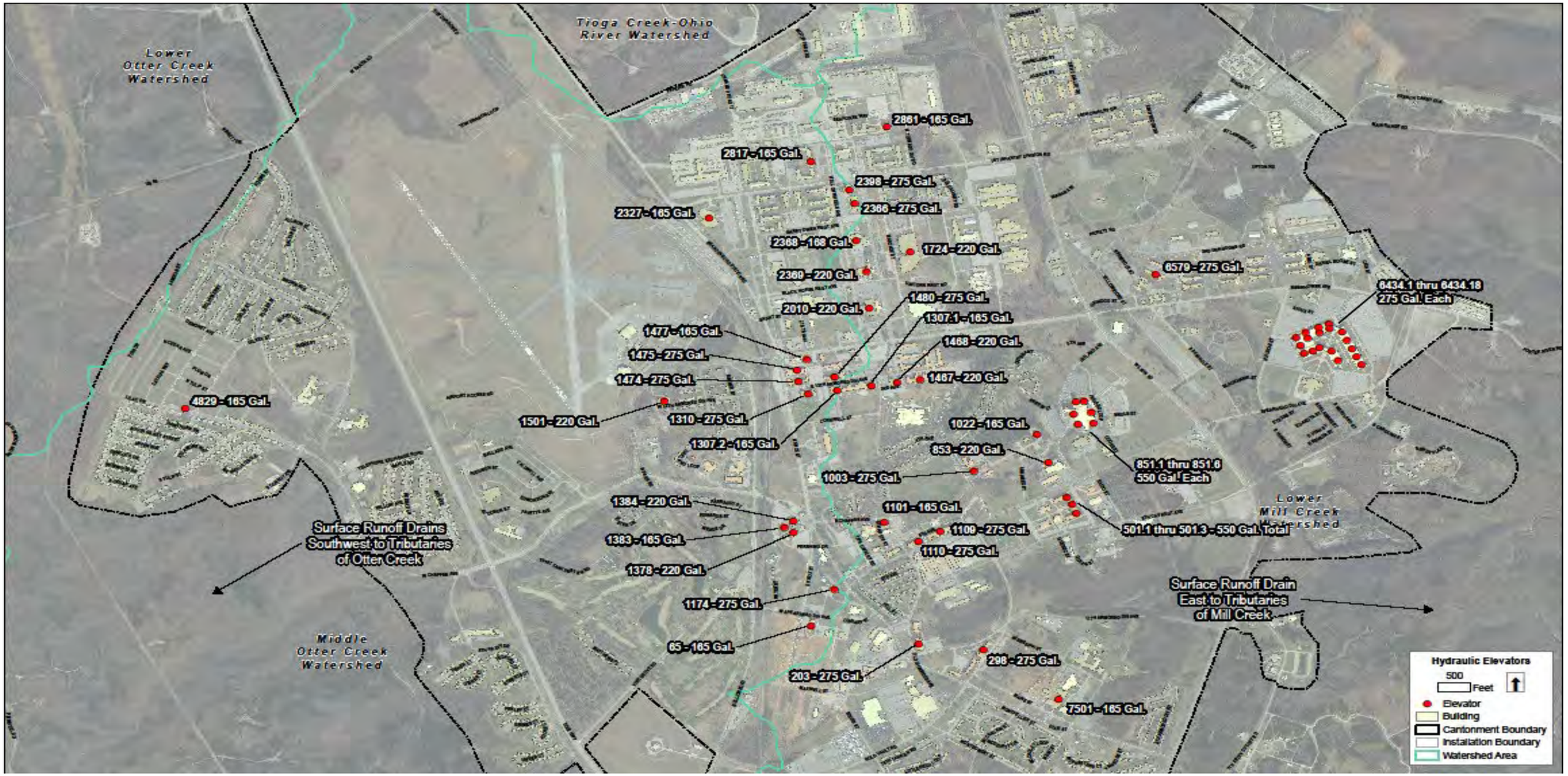


Figure 2.6 Fort Knox Elevators and Drainage Map



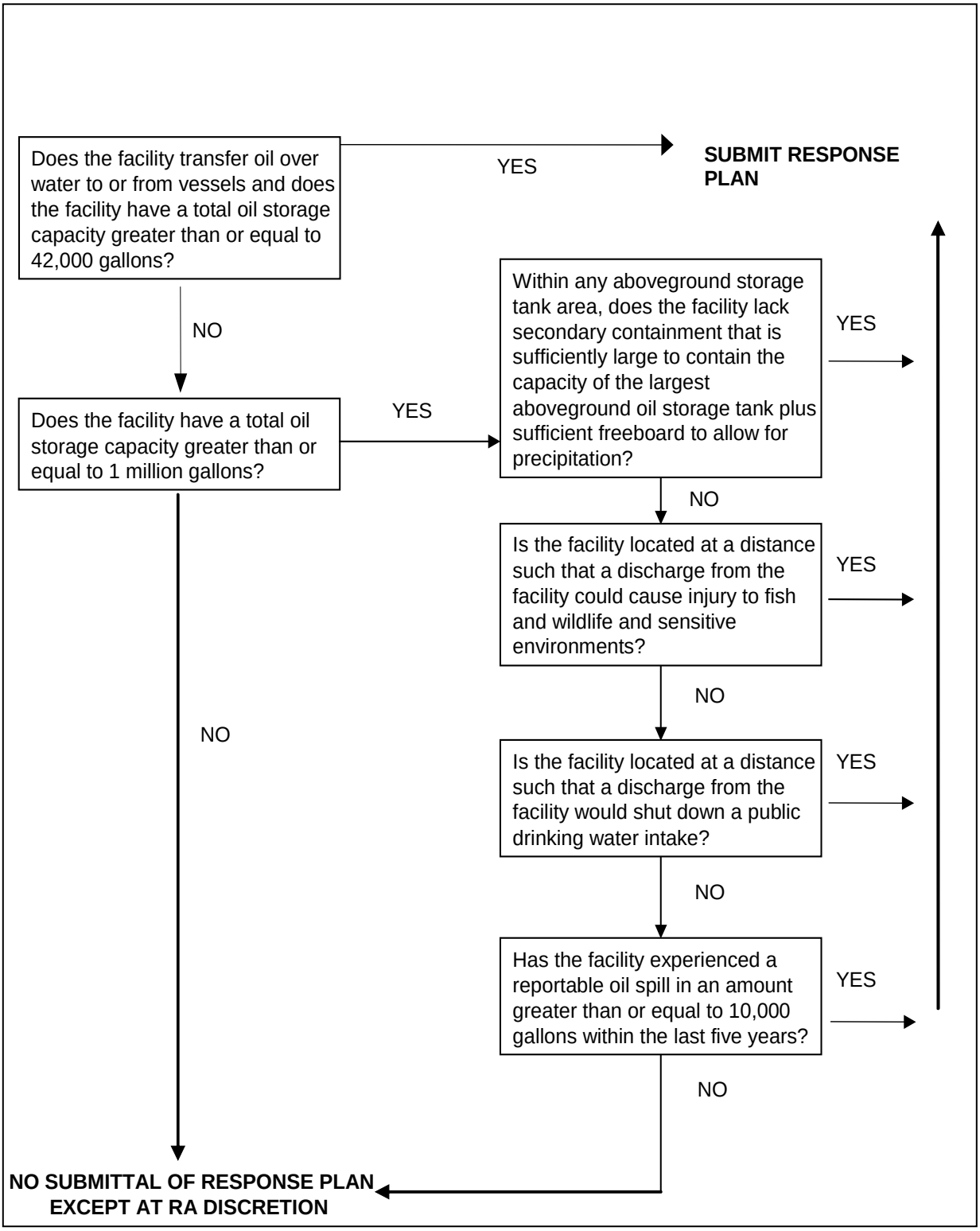
3.0 APPLICABILITY DETERMINATION

According to 40 CFR 112.1, Fort Knox requires an SPCC Plan. The facility-wide above-ground 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 Knox has less than one million gallons of oil storage capacity (approximately 550,000 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 EMD personnel can review the Plan and sign the revision tracking form on page vii.

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 Knox 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 Kentucky 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 Kentucky has some additional requirements [Kentucky Revised Statutes 224.1-400(11)] more stringent than the Federal requirements in regards to reporting spills. Kentucky requires spills (even within impervious secondary containment) to be reported to the Kentucky Environmental Response Team if they exceed 25 gallons

of petroleum in a 24-hour period or 75 gallons or more in a 24-hour period of diesel fuel. Section 4.7, Spill Response includes these requirements.

4.3 Personnel Training

As required by 40 CFR 112.7(f) (1 and 3), oil handling personnel are trained to prevent discharges. Fort Knox conducts SPCC Plan training on an annual basis for unit Environmental Officers (EOs). The EOs then train all oil-handling personnel under them. 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 Knox. Fort Knox 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.

4.4 Security

Fort Knox is a military installation that is fenced on most of its border. 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 EMD will maintain regular inspection and test records in accordance with 40 CFR 112.7(e); these records are maintained for a minimum of three years. DPW EMD 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 Knox spill history is maintained by DPW EMD 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. Appendix F contains the Fort Knox spill response procedures. Personnel, if properly trained and equipped to do so safely, will promptly correct and cleanup (using available absorbents or spill kits) any visible petroleum, oil, and lubricants (POL) discharges less than five gallons which are still on an impervious surface. All POL spills of any size that contact the ground (even on impervious surfaces), surface water, storm drains, or the sanitary sewer; or any size spills of a hazardous material (even on impervious surfaces) are called in to the Fort Knox Fire Department and the EMD immediately. Table 4.1 indicates the response for various spills.

The Fort Knox Fire Department is the primary spill responder and can be reached on any installation phone in the cantonement area by dialing 911. Some portions of the range areas must contact Range Control at 502-624-2125 if a spill occurs in the range and training complex.

Spill reporting may include notifications to the National Response Center (NRC), the Kentucky Department for Environmental Protection (KDEP), the Kentucky Emergency Response Commission (KERC), 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 EMD is responsible for all reporting to external agencies.

Hazardous materials used at Fort Knox are listed in Appendix G. Their reportable quantities (RQs) and largest container sizes are also listed. Antifreeze and used antifreeze (almost entirely ethylene glycol) tanks at Buildings 1054, 2807 (two tanks), 2951 (two tanks) and sodium hypochlorite solution at Building 5539 are stored in large enough containers to potentially require reporting. Also, a fire suppression material (mostly ethylene glycol) is stored at buildings 5222 and 5256. 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 4.1 Spill Response and Reporting Procedures

Spill Volume	Response	Reporting
All Hazardous Materials Spilled on pervious and impervious surface within the cantonement area or in the training area EMD will make all regulatory reports	On Site Personnel Fire Department & EMD	DPW EMD
Gasoline spills greater than 25 gallons and diesel fuel spills greater than 75 gallons released into the environment. EMD will make all regulatory reports	On Site Personnel Fire Department & EMD	DPW EMD
Any amount of POL that reaches ground surface to include on impervious surface	On Site Personnel Fire Department & EMD	DPW EMD
Any amount of POL that reaches a navigable water	On Site Personnel Fire Department& EMD	DPW EMD
Spill to Sewer System	Fire Department & EMD	DPW EMD, Hardin County Water District #1

Table 4.2 Spill Reporting Agencies

Agency	Phone
Fort Knox Fire Department	911 or (502) 624-6016
Fort Knox DPW EMD	(502) 624-3629
Range Control	(502) 624-2125
National Response Center	(800) 424-8802
KDEP	(800) 928-2380 or (502) 564-2380
KERC	(800) 255-2587
Bullitt, Meade, and Hardin County Fire Departments	911
Hardin County Water District #1 Fort Knox Wastewater Treatment Plant	(502) 624-1171
IMCOM - Report On-Line through AEDB-EQ or HQAES	

The information in Table 4.3 should be reported after a spill. Spill response equipment is maintained throughout the installation, including, but not limited to, the Fort Knox Fire Department [Buildings 469, 1609, and 5223 (Godman Airfield)], Energy Security (Buildings 136, 862, 2190, 2741, 4997, and 6605), contractor maintenance (Building 1730), AAFES gas stations (Buildings 711 and 4995), Autocraft (Building 1054), recycling center (Building 2951), motor pools (Buildings 2770, 2807, 2944, and 9387), golf course (Building 4011), and Godman airfield (Building 5242).

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. HazMat response trucks are adequate for spills of 1,000 gallons. For larger spills, the DPW 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.) are set up to allow for potential emergency use (see Appendix H for OSRO contacts). 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 EMD Hazardous Waste Manager will make determinations on the management of spill related wastes. The Hardin County Fire Department can also be called to assist with complex or burning spills.

Table 4.3 Spill Reporting Information

1	**SPILL INCIDENT REPORT** See page 2 below or on the back of this page for INSTRUCTIONS on completing this form.			
2	Complete this report for any spill of OIL, HAZARDOUS MATERIALS, HAZARDOUS WASTE, AIR RELEASES, or any substance which is a threat to humans or the environment.	The information is to be provided immediately to: a. The Environmental Management Division (EMD), 624-3629 b. The Fort Knox Fire Department 624-6016/1876 c. Range Control 624-2125 for Training Areas		
3	Identification Information	Complete the Information Below		
4	Date			
5	Time of Call In			
6	Caller Name			
7	Caller Telephone No.			
8	Unit/Activity/Organization			
9	POC at Spill Scene			
10	Location (building/street intersection/grid coordinate)			
11	When did Spill Occur (TIME)			
12	Material Spilled/Released			
13	Quantity of Material Spilled or Released (QTS.-GALS.-LBS.)		RQ (EMD Use)	
14	Source			
15	Cause			
16	IMPACT/MEDIA (spilled on grass, asphalt, concrete, dirt) (health, safety, environment)(in a waterway, storm drain)(sheen on water)			
17	WEATHER CONDITIONS	Describe the current weather conditions.		
a	Temperature			
b	Rain or Snow			
c	Sunny or Cloudy			
d	Windy (light breeze, moderate or high wind, no wind)			
18	Danger or Threat Posed by the Spill or Release			
19	Number and Types of Injuries or fatalities (if any)			
20	If Injuries or Fatalities, was Post Safety Notified? (Yes or No) If Yes, Who was Notified?			
21	Has an Evacuation Occurred? (Yes or No) If yes, explain.			
22	Were Vehicles Involved? (Yes or No) If Yes Explain.		If yes, contact EMD - 624-3629	
23	CORRECTIVE ACTION			
24	DISPOSAL INFORMATION (Landfill, Other)			
25	Does the Emergency Preparedness and Response Plan require changes as a result of this spill incident?	YES_____	NO_____	If yes, contact EMD - 624-3629
26	COMMENTS			
27	UNIT/ACTIVITY POC PRINTED NAME			
28	UNIT/ACTIVITY POC *SIGNATURE* AND *DATE*		Date:	
29	EMD POC PRINTED NAME			
30	EMD POC *SIGNATURE* AND *DATE*		Date:	
31	FM5003T RML			

1	**INSTRUCTIONS**		
2	Complete this report for any spill of OIL, HAZARDOUS MATERIALS, HAZARDOUS WASTE, AIR RELEASES, or any substance which is a threat to humans or the environment.	The information is to be provided immediately to: a. The Environmental Management Division (EMD), 624-3629 b. The Fort Knox Fire Department 624-6016/1876 c. Range Control 624-2125 for Training Areas	
3	Identification Information	Complete the Information Below	
4	Date	*Actual date of spill*	
5	Time of Call In	*Actual time you received or reported the spill to EMD*	
6	Caller Name	*Name with Rank or Title*	
7	Caller Telephone No.	*Your phone number*	
8	Unit/Activity/Organization	*Your unit/organization*	
9	POC at Spill Scene	*The on site person controlling the spill scene*	
10	Location (building/street intersection/grid coordinate)	*Building number, street address, grid location*	
11	When did Spill Occur (TIME)	*The time the spill actually happened*	
12	Material Spilled/Released	*Name or names of materials spilled*	
13	Quantity of Material Spilled or Released (QTS.-GALS.-LBS.)	*Best estimate of quantity*	RQ (EMD Use)
14	Source	*Actual starting point of the spill*	
15	Cause	*Identify what created the spill or where it came from*	
16	IMPACT/MEDIA (spilled on grass, asphalt, concrete, dirt) (health, safety, environment)(in a waterway, storm drain)(sheen on water)	*Describe what the material came in contact with, gravel, concrete, grass, dirt, waterway, and estimate the size of the spill*	
17	WEATHER CONDITIONS	Describe the current weather conditions.	
a	Temperature		
b	Rain or Snow		
c	Sunny or Cloudy		
d	Windy (light breeze, moderate or high wind, no wind)		
18	Danger or Threat Posed by the Spill or Release	*EXPLAIN THE DANGER OR THREAT POSED*	
19	Number and Types of Injuries or fatalities (if any)	*COMPLETE IF THIS APPLIES AT THIS SPILL*	
20	If Injuries or Fatalities, was Post Safety Notified? (Yes or No) If Yes, Who was Notified?	*INDICATE WHO YOU CALLED (POST SAFETY, MPs, FIRE DEPT.)*	
21	Has an Evacuation Occurred? (Yes or No) If yes, explain.	*Provide details of any evacuation*	
22	Were Vehicles Involved? (Yes or No) If yes, contact EMD - 624-3629	*If yes contact EMD.*	If yes, contact EMD - 624-3629
23	CORRECTIVE ACTION	*Explain cleanup and any protective measures taken to minimize impact.*	
24	DISPOSAL INFORMATION (Landfill, Other)	*Explain how you disposed of the cleanup materials.*	
25	Does the Emergency Preparedness and Response Plan require changes as a result of this spill incident?	YES_____ NO_____	If yes, contact EMD - 624-3629
26	COMMENTS	*Add any supporting information about the spill or release.*	
27	UNIT/ACTIVITY POC PRINTED NAME		
28	UNIT/ACTIVITY POC *SIGNATURE* AND *DATE*		Date:
29	EMD POC PRINTED NAME		
30	EMD POC *SIGNATURE* AND *DATE*		Date:
31	FK5053 FINAL		

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.

Mobile Container Monthly Inspections are performed using Fort Knox form FK5058, Monthly Inspection For Hazardous Materials (01APR18) inspection form for all portable containers equal to or greater than 55 gallons except those 55-gallon containers or larger that are inspected by 3rd party contractors.

Annual inspections are performed using the STI SP001 Annual Inspection Checklist in accordance with STI SP001 for the new permanent ASTs included in Addendum #1.

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 yearly. Table 4.4 shows the documented inspections required of all bulk storage tanks and piping. Inspection checklists are in Appendix E. Section 4.5 describes recordkeeping procedures.

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. Non-regulated chemical containers under 40CFR 112 but regulated by **AR200-1** are inspected monthly using the Fort Knox Form FK5058, Monthly Inspection for Hazardous Materials (01APR18).

Table 4.4a AST and Piping Inspection and Testing

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

4.9 Mobile and Portable Container Policy

Fort Knox is implementing this policy to manage oils and fuels stored in drums, portable containers, and mobile containers with an oil storage capacity of 55 gallons or greater. 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. Impervious secondary containment large enough to hold the entire volume of the largest container stored is required when containers covered under this policy are stationary and not in use for at least four consecutive hours. Mobile refuelers do not require 100% of volume secondary containment when parked, just the means available (such as spill kits) to prevent discharges to navigable waters [40 CFR 112.8(c) (2)].

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 E	Sampling	Monthly
Presence of water, oil, or debris in interstice or secondary containment	STI SP001-05, Appendix E	Manual	Monthly
Operation of leak detection system (Double-walled tanks only)	STI SP001-05, Appendix E	Manual	Monthly
Visible signs of leakage or corrosion/distortion	STI SP001-05, Appendix E	Visual	Monthly

Inspection/Test	Standard	Method	Frequency
Piping connections and openings properly sealed	STI SP001-05, Appendix E	Visual	Monthly
Drain valves operable and in closed position	STI SP001-05, Appendix E	Visual	Monthly
Operation of liquid level sensor	STI SP001-05, Appendix E	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 Knox 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, site personnel shall contact DPW EMD. DPW EMD shall advise on the 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 using EMD Secondary Containment Drainage Log – EMD SEC Log-13FEB18.

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 Knox. The limited potential for spills outside of typical fuel handling areas does not warrant a complete redesign of the existing drainage system. Fort Knox'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

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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. Transformers, generators, used food grease containers, and pool chemicals 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 Knox has the following container areas:

- Nolin Fuel Point (Building 612) AST Removed - Drums Added
- Autocraft (Building 1054)
- Contractor Maintenance (Building 1730) Drums Added
- St John's Fuel Point (Building 2747) ASTs CLOSED – GBT Removed
- Hurley Motor Pool (Building 2867) Drums Added
- Boatwright Motor Pool (Building 2770) 2 ASTs CLOSED
- Burke Fuel Point (Building 2798) AST CLOSED
- Mansfield Motor Pool (Building 2807)
- Colby Motor Pool (Buildings 2942, 2943, and 2944) ASTs and Drums Added
- Recycling Program and Hazardous Materials Center (Buildings 2951 and 2953) AST Removed _HAZWAS Bldg. Added to this site
- Ammunition Depot (Building 3075)
- Golf Course (Building 4011)
- AAFES Gas Stations (Buildings 711 and 4995) UST for Grease Added
- Equipment Concentration Site Motor Pool (Building 5901) AST CLOSED
- Potts Fuel Point (Building 6135) ASTs CLOSED
- Marines Motor Pool (Building 7238) Drums Added
- Grounds Contractor (Building 7331)
- School Bus Maintenance (Building 7422)
- Pool Hall (Building 9312)
- Wilson Road Washrack (Building 9357)
- Landfill (Building 9359)
- Mobilization and Training Equipment Site (MATES) (Building 9387) AST volumes corrected
- Wilcox Range (Building 9555) Used Oil AST removed
- Baum St Vith Range (Building 9717)
- Yano Range (Building 9779) Used Oil AST removed
- Zussman Range (Building 9829) Drums added
- Heins Range (Building 9855)
- Rogers Hollow (Building 999A)
- Electrical Transformers
- Energy Security – ASTs and Drums added to appropriate sites
- Emergency Generators
- Used Food Grease Containers

- Swimming Pools
- Godman Air Field POL Point – ASTs corrected
- 1st TSC Motor Pool See Addendum #1
- Central Water Plant See Addendum #1
- Muldraugh Water Plant See Addendum #1
- Waste Water Treatment Plant See Addendum #2
- Farmers MP - NEW See Addendum #2
- Van Voorhis Pump House - NEW See Addendum #2
- Otter Creek Generator House - NEW See Addendum #2
- Building Elevator Hydraulic Oil Systems - NEW See Addendum #2

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 Nolin Fuel Point (Building 612)

5.1.1 Area Description

Nolin personnel use this area to fuel vehicles and equipment. A 1,000-gallon gasoline and 500-gallon diesel AST store fuel for dispensing. Table 5.1.1 provides container details, and Figure 5.1.1 shows their locations.

Table 5.1.1 Nolin Fuel Point Containers

Container ID	Type	Capacity (Gallons)	Material of Construction	Product Stored
612A	AST, Horizontal	1,000	Steel	Gasoline
612B	AST, Horizontal	500	Steel	Diesel
614DRA	DRS, Vertical	55 (up to 8)	Steel	Oil

5.1.2 Product Handling

Personnel deliver fuel via trucks. Fuel is dispensed with electric pumps. Drums of oil are delivered by truck. Maintenance personnel dispense oil from the drums for use in service trucks. Gravity spigots or hand pumps are used to dispense oil products. Used oil is removed by vacuum truck. Table 5.1.2 provides product handling details.

Table 5.1.2 Nolin Fuel Point Product Handling

Container ID	Loading Method	Overfill Protection	Unloading Method
612A	Truck	Sight Gauge	Dispensed to Vehicles
612B	Truck	Sight Gauge	Dispensed to Vehicles
614DRA	Manual	Visual	Dispensed for Maintenance Vacuum Truck

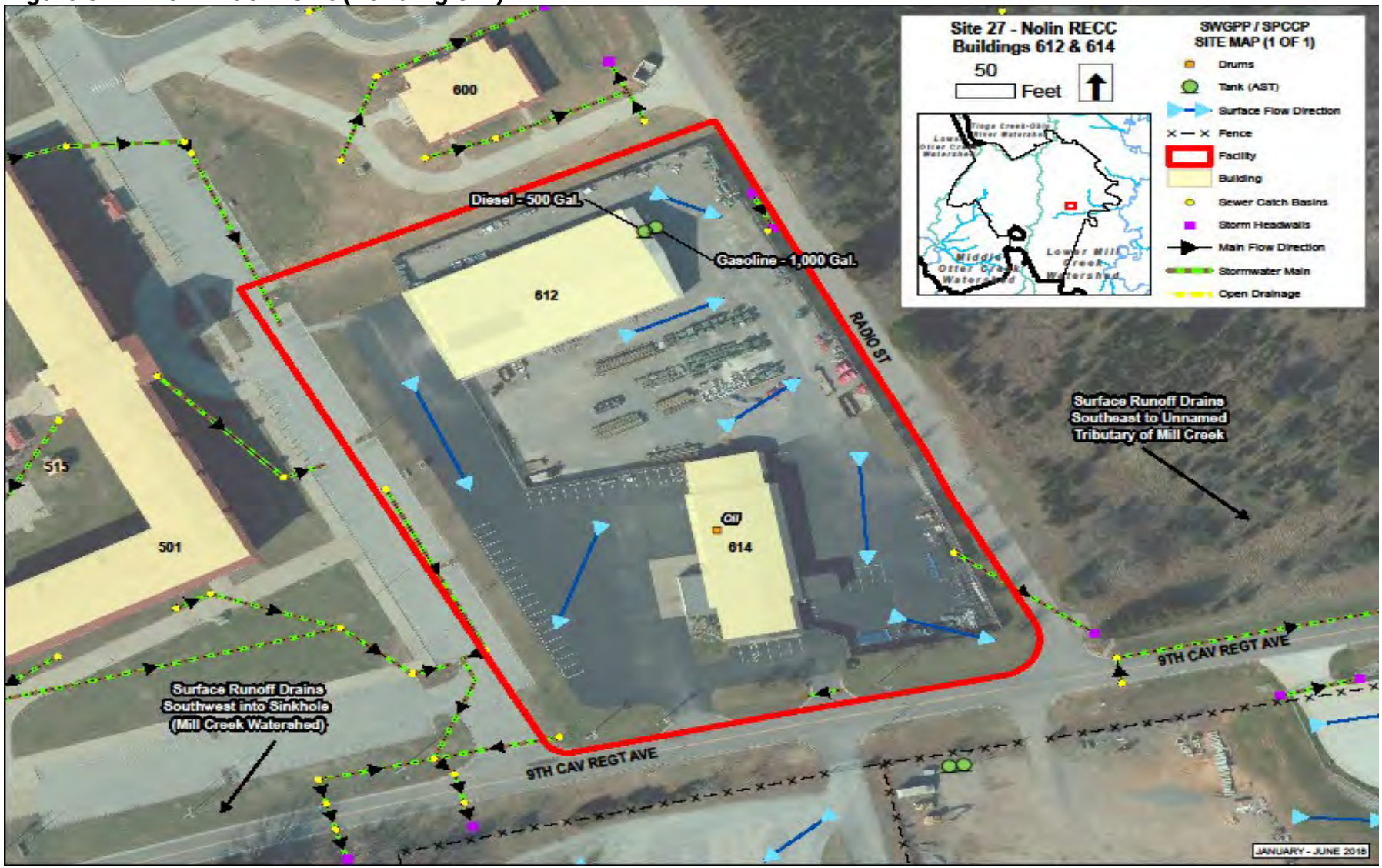
5.1.3 Secondary Containment

The ASTs are double-walled steel tanks that do not collect storm water. Drums are stored on spill containment pallets.

Table 5.1.3 Nolin Fuel Point Secondary Containment

Container ID	Type	Storm Water Release
612A	Double-walled	NA
612B	Double-walled	NA
614DRA	Secondary Containment	NA

Figure 5.1.1 Nolin Fuel Point (Building 612)



5.1.4 Inspection and Testing

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

5.1.5 Potential Spill Scenarios

Complete container failure of an AST could result in a spill of up to 1,000 gallons. The loss of the entire contents of the delivery tanker truck could spill 3,000 gallons. An error during dispensing could spill 25 gallons. Any spill from this area would flow east and south across asphalt to a storm water inlet and then south to an unnamed creek to Mill Creek (see Figures 2.1, 5.1.1 and 2.4). A spill in this area would trigger the spill response procedures listed in Section 4.7.

Table 5.1.4 Nolin Fuel Point Potential Spill Scenarios

Container ID	Spill Amount (Gallons)	Contents	Cause	Pathway
612A	1,000	Gasoline	Container Failure	East and south to Mill Creek
	25		Transfer Error	
	3,000		Delivery Truck Error	
612B	500	Diesel	Container Failure	East and south to Mill Creek
	25		Transfer Error	
	3,000		Delivery Truck Error	
614DRA	500	Oil	Container Failure	East and south to Mill Creek
	25		Transfer Error	
	3,000		Delivery Truck Error	

5.2 Autocraft (Building 1054)

5.2.1 Area Description

The Autocraft Shop is used by customers to complete their personal vehicle maintenance. There are two ASTs, used oil outside the building and used antifreeze inside. Table 5.2.1 provides container details, and Figure 5.2.1 shows their locations.

Table 5.2.1 Autocraft Containers

Container ID	Type	Capacity (Gallons)	Material of Construction	Product Stored
1054A	AST, Horizontal	1,000	Steel	Used Oil
1054B	AST, Horizontal	500	Plastic	Used Anti-freeze

Does not contain oil, not regulated by 40 CFR 112

5.2.2 Product Handling

Personnel drain used oil and antifreeze from maintenance into the ASTs. Used oil and antifreeze are removed for recycling by a vacuum truck. The vents on tank 1054A are stuck which prevents the tank from operating properly to release pressure (see Corrective Actions, Section 6.0). Table 5.2.2 provides product handling details.

Table 5.2.2 Autocraft Product Handling

Container ID	Loading Method	Overfill Protection	Unloading Method
1054A	Manual	Sight Gauge	Vacuum Truck
1054B	Manual	Sight Gauge	Vacuum Truck

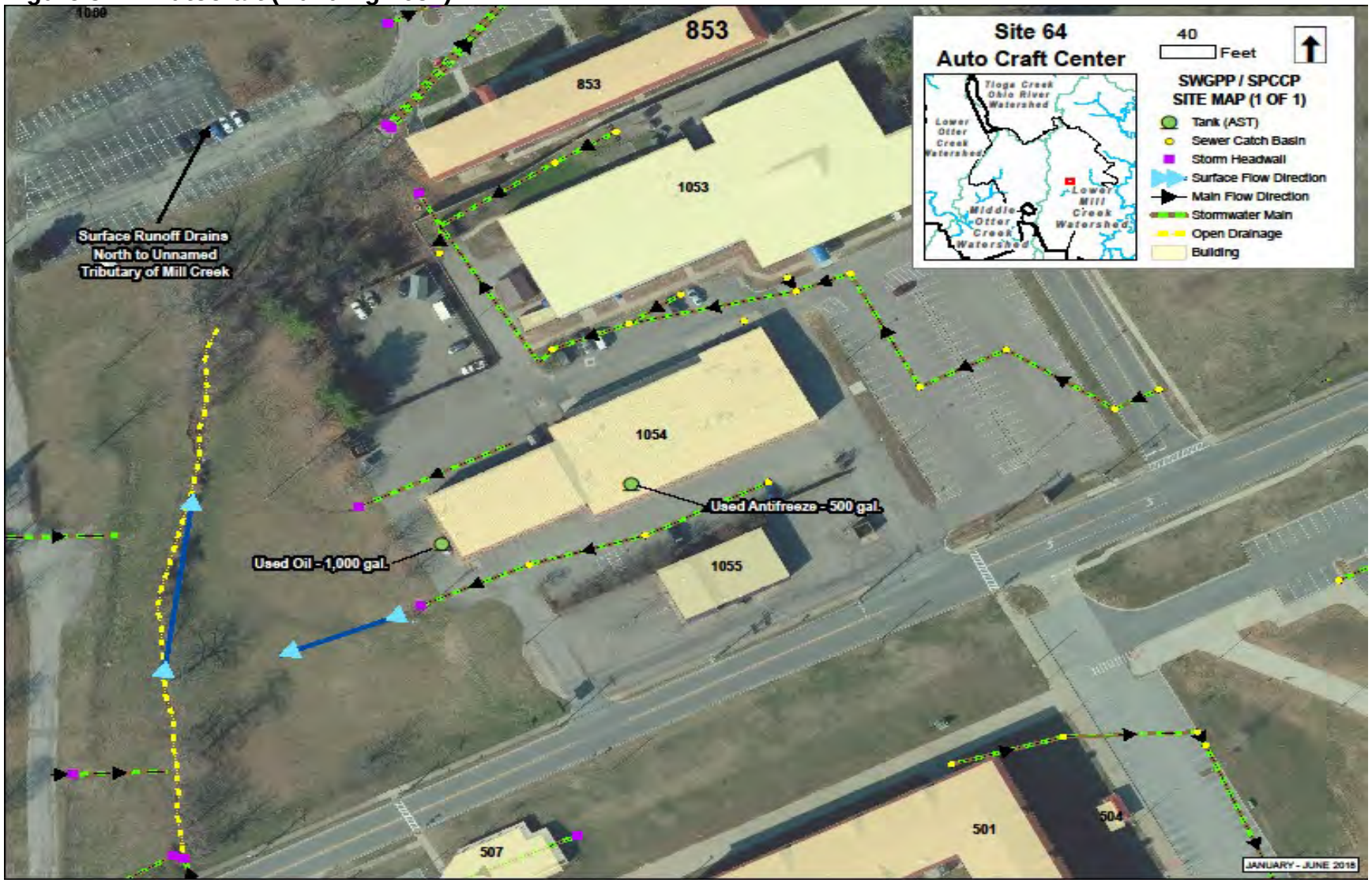
5.2.3 Secondary Containment

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

Table 5.2.3 Autocraft Secondary Containment

Container ID	Type	Storm Water Release
1054A	Double-walled	NA
1054B	Double-walled	NA

Figure 5.2.1 Autocraft (Building 1054)



5.2.4 Inspection and Testing

Records of monthly visual inspections are maintained by DPW personnel for at least three years. Section 4.8 establishes the Fort Knox 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 1,000 gallons. The loss of the entire contents of the vacuum tanker truck could spill 3,000 gallons. An error transferring into the tanks could cause a 5 gallon spill. Any spill from this area would flow southwest to a storm water inlet and then to an unnamed tributary to Mill Creek and the Salt River (see Figures 2.1, 5.2.1 and 2.3). A spill in this area would trigger the spill response procedures listed in Section 4.7.

Table 5.2.4 Autocraft Potential Spill Scenarios

Container ID	Spill Amount (Gallons)	Contents	Cause	Pathway
1054A	1,000	Used Oil	Container Failure	Southwest to Mill Creek
	5		Transfer Error	
	3,000		Vacuum Truck Error	
1054B	500	Used Anti-freeze	Container Failure	Southwest to Mill Creek
	5		Transfer Error	
	3,000		Vacuum Truck Error	

Does not contain oil, not regulated by 40 CFR 112

5.3 Contractor Maintenance (Building 1730)

5.3.1 Area Description

Building 1730 is used for various types of maintenance. There are two emergency generators. Used oil and antifreeze are collected in drums. Table 5.3.1 provides container details, and Figure 5.3.1 shows their locations.

Table 5.3.1 Contractor Maintenance Shop Containers

Container ID	Type	Capacity (Gallons)	Material of Construction	Product Stored
1726DR	55-Gallon Drums	55 (up to 2)	Steel	Ethylene Glycol
1728	55-Gallon Drums	55 (up to 2)	Steel	Ethylene Glycol
1730A	AST, Horizontal	240	Steel	Diesel
1730B	AST, Horizontal	77	Steel	Diesel
1730DRA	55-Gallon Drums	55 (up to 2)	Steel	Used Oil
1730DRB	55-Gallon Drums	55 (up to 2)	Steel	Used Oil, Used Fuel
1730DRC	55-Gallon Drums	55 (up to 4)	Steel	Used Anti-freeze

Does not contain oil, not regulated by 40 CFR 112

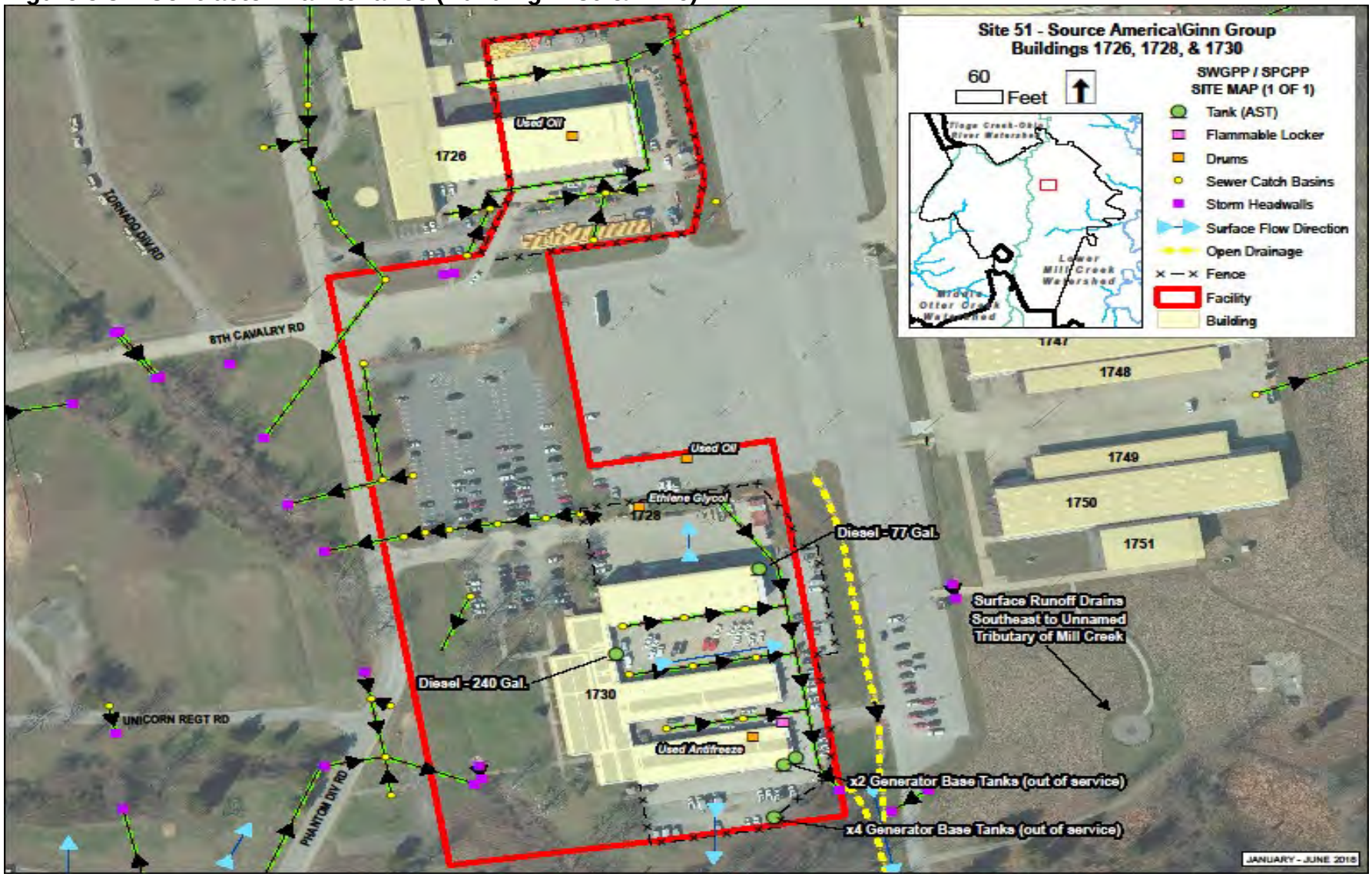
5.3.2 Product Handling

Diesel is delivered to generators by contractor truck. 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 ethylene glycol. Table 5.3.2 provides product handling details.

Table 5.3.2 Contractor Maintenance Product Handling

Container ID	Loading Method	Overfill Protection	Unloading Method
1726DR	NA	NA	Dispensed for Maintenance
1728DR	NA	NA	Dispensed for Maintenance
1730A	Truck	Sight Gauge	Used in Generator
1730B	Truck	Sight Gauge	Used in Generator
1730DRA	Manual	Visual	Vacuum Truck
1730DRB	Manual	Visual	Vacuum Truck
1730DRC	Manual	Visual	Vacuum Truck

Figure 5.3.1 Contractor Maintenance (Building 1730 & 1726)



5.3.3 Secondary Containment

The ASTs are double-walled steel tanks. The drums are on containment pallets.

Table 5.3.3 Contractor Maintenance Secondary Containment

Container ID	Type	Storm Water Release
1726DR	Containment Pallets	NA
1728DR	Containment Pallets	NA
1730A	Double-walled	NA
1730B	Double-walled	NA
1730DRA	Containment Pallets	NA
1730DRB	Containment Pallets	NA
1730DRC	Containment Pallets	NA

5.3.4 Inspection and Testing

Records of monthly visual inspections are maintained by DPW personnel for at least three years. Sections 4.8 and 4.9 establish the Fort Knox 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 1730A could result in a spill of up to 240 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. Any spill from this area would flow east to a storm water inlet and then to an unnamed creek south to Mill Creek and the Salt River (see Figures 5.3. 1, 2.1, 2.3 and 2.4). A spill in this area would trigger the spill response procedures listed in Section 4.7.

Table 5.3.4 Contractor Maintenance Potential Spill Scenarios

Container ID	Spill Amount (Gallons)	Contents	Cause	Pathway
1726DR	55	Ethylene Glycol	Container Failure	East and then south to Mill Creek
	5		Dispensing Error	
1728DR	240	Ethylene Glycol	Container Failure	East and then south to Mill Creek
	3,000		Delivery Truck Error	
1730A	240	Diesel	Container Failure	East and then south to Mill Creek
	3,000		Delivery Truck Error	
1730B	77	Diesel	Container Failure	East and then south to Mill Creek
	3,000		Delivery Truck Error	
1730DRA	55	Used Oil	Container Failure	East and then south to Mill Creek
	5		Transfer Error	
	3,000		Vacuum Truck Error	
1730DRB	55	Used Oil, Used Fuel	Container Failure	
	5		Transfer Error	
	3,000		Vacuum Truck Error	
1730DRC	55	Used Anti-freeze	Container Failure	East and then south to Mill Creek
	5		Transfer Error	
	3,000		Vacuum Truck Error	

Does not contain oil, not regulated by 40 CFR 112

5.4 St John's Fuel Point (Building 2747) CLOSED – ASTs Disconnected and GBT Removed

5.4.1 Area Description

The Building 2747 area is a central fuel point. Various fuels are dispensed to vehicles and there is a small emergency generator onsite. Table 5.4.1 provides container details, and Figure 5.4.1 shows their locations.

Table 5.4.1 St John's Fuel Point Containers

Container ID	Type	Capacity (Gallons)	Material of Construction	Product Stored
2747A	AST, Horizontal	10,000	Steel	Diesel
2747B	A	1,000	Steel	Gasoline
2747C	A CLOSED	10,000	Steel	Diesel
2747D	A	10,000	Steel	F24
2747E	AST, Horizontal	10,000	Steel	F24
2747F	A REMOVED	138	Steel	Diesel

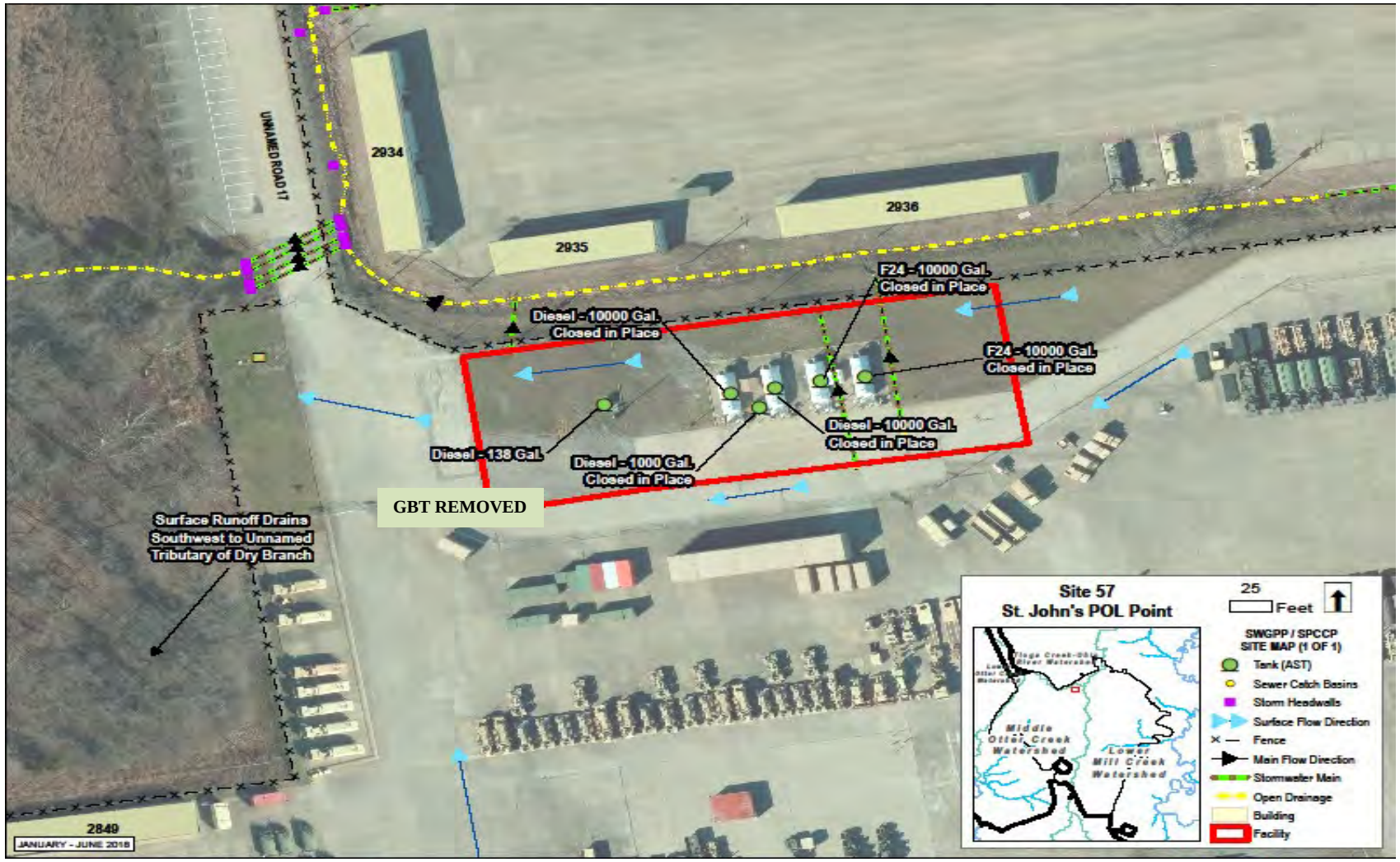
5.4.2 Product Handling

Contractor delivery trucks fill the tanks. Commercial style pumps are used to dispense fuels. The area is also a loading/unloading rack capable of directly filling or emptying mobile refueler tanker trucks. The rack does not have a system to prevent vehicles from departing prior to disconnection of pipes and hoses (see Corrective Actions, Section 6.0). Table 5.4.2 provides product handling details.

Table 5.4.2 St John's Fuel Point Product Handling

Container ID	Loading Method	Overfill Protection	Unloading Method
2747A, 2747C, 2747D, 2747E	Truck	Electronic Gauge, Automatic Overfill Prevention	Dispensed to Vehicles or Mobile Refuelers
2747B	Truck	Electronic Gauge, Automatic Overfill Prevention	Dispensed to Vehicles
2747F	Truck	Sight Gauge	Used in Generator

Figure 5.4.1 St John's Fuel Point (Building 2747) ASTs shutdown and disconnected-GBT removed.



5.4.3 Secondary Containment

The ASTs are all double-walled steel tanks. The loading/unloading rack has concrete containment. Appendix D contains volume calculations for the loading/unloading rack. Personnel follow the rainwater release procedures found in Section 4.10.

Table 5.4.3 St John's Fuel Point Secondary Containment

Container ID	Type	Storm Water Release
2747A	Double-Walled	NA
2747B	Double-Walled	NA
2747C	Double-Walled	NA
2747D	Double-Walled	NA
2747E	Double-Walled	NA
2747F	Double-Walled	NA
2747 Loading/Unloading Rack	Concrete Dike	Manual

5.4.4 Inspection and Testing

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

5.4.5 Potential Spill Scenarios

Complete container failure of an AST could result in a spill of 10,000 gallons. An error dispensing fuel could spill 50 gallons. The loss of the entire contents of the fuel delivery tanker truck could spill 5,000 gallons. Any spill from this area would flow west in open drainage and then to an unnamed creek west to Otter Creek (see Figures 2.1 and 5.4.1). A spill in this area would trigger the spill response procedures listed in Section 4.7.

Table 5.4.4 St John's Fuel Point Potential Spill Scenarios

Container ID	Spill Amount (Gallons)	Contents	Cause	Pathway
2747A	10,000	Diesel	Container Failure	West to Otter Creek
	50		Transfer Error	
	3,000		Error Unloading to Mobile Refueler	
	5,000		Delivery Truck Error	
2747B	1,000	Gasoline	Container Failure	West to Otter Creek
	50		Transfer Error	
	5,000		Delivery Truck Error	
2747C	10,000	Diesel	Container Failure	West to Otter Creek
	50		Transfer Error	
	3,000		Error Unloading to Mobile Refueler	
	5,000		Delivery Truck Error	
2747D	10,000	F24	Container Failure	West to Otter Creek
	50		Transfer Error	
	3,000		Error Unloading to Mobile Refueler	
	5,000		Delivery Truck Error	
2747E	10,000	F24	Container Failure	West to Otter Creek
	50		Transfer Error	
	3,000		Error Unloading to Mobile Refueler	
	5,000		Delivery Truck Error	
2747F	138	Diesel	Container Failure	West to Otter Creek
	3,000		Delivery Truck Error	

5.5 Hurley Motor Pool (Building 2767)

5.5.1 Area Description

Building 2767 is a motor pool. There is an AST for collecting used oil. Drums of oil are stored inside building 2767 for vehicle maintenance. Table 5.5.1 provides container details, and Figure 5.5.1 shows the location.

Table 5.5.1 Hurley Motor Pool Containers

Container ID	Type	Capacity (Gallons)	Material of Construction	Product Stored
2767	AST, Vertical	660	Steel	Used Oil
2767DRA	55 Gallon Drums	55 (up to 4)	Steel	Oil
2767DRB	55 Gallon Drums	55 (up to 4)	Steel	Oil

5.5.2 Product Handling

Used oil is transferred into the tank by pouring from small containers and removed by a vacuum truck. Oil is pumped from drums and put into vehicles. Table 5.5.2 provides product handling details.

Table 5.5.2 Hurley Motor Pool Product Handling

Container ID	Loading Method	Overfill Protection	Unloading Method
2767	Manual	Sight Gauge	Vacuum Truck
2767DRA	Manual	Visual	Dispensed for Maintenance
2767DRB	Manual	Visual	Dispensed for Maintenance

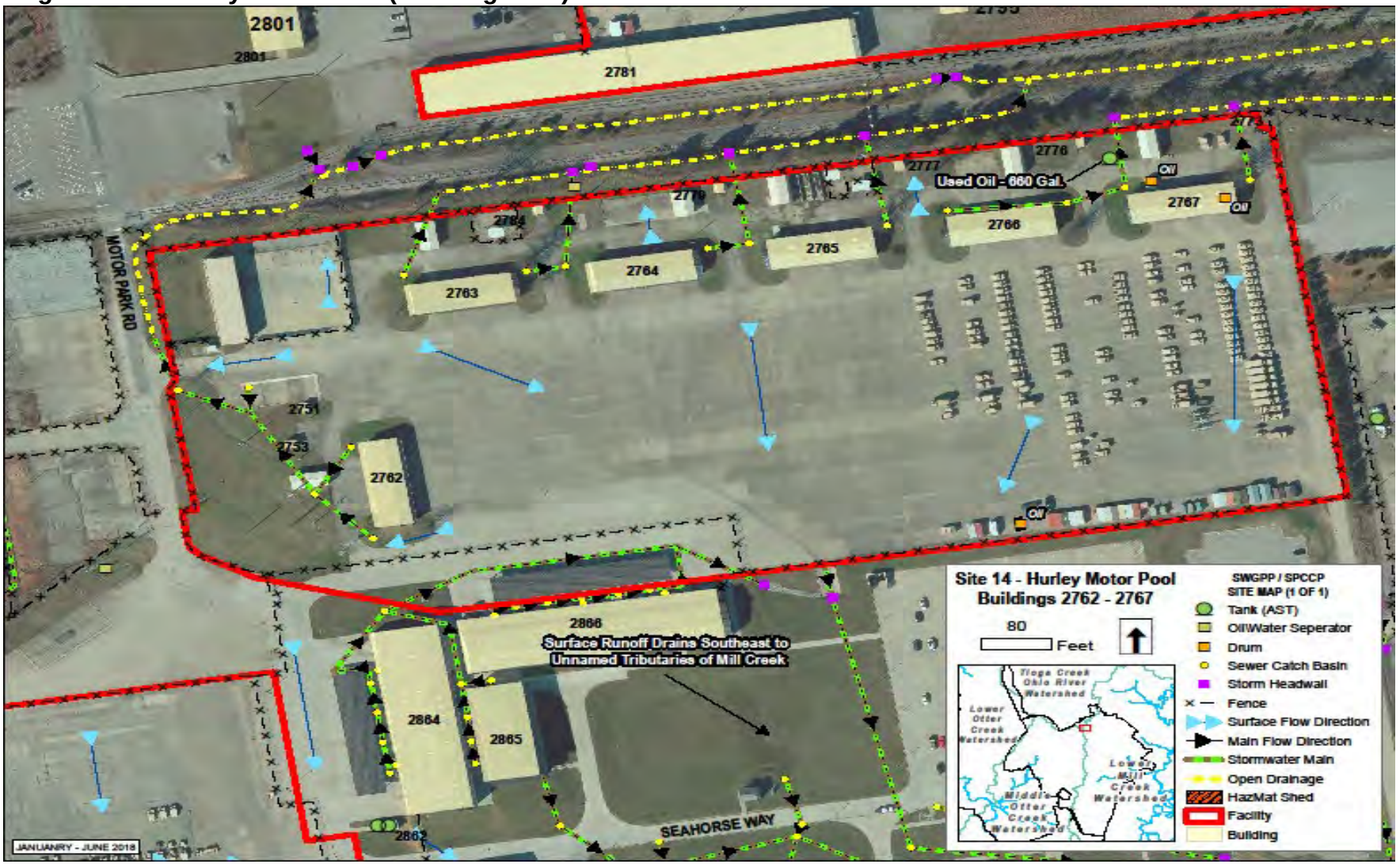
5.5.3 Secondary Containment

The AST is double-walled and does not collect storm water. Drums are stored on spill containment pallets.

Table 5.5.3 Hurley Motor Pool Secondary Containment

Container ID	Type	Storm Water Release
2767	Double-Walled	NA
2767DRA	Secondary Containment	NA
2767DRB	Secondary Containment	NA

Figure 5.5.1 Hurley Motor Pool (Building 2767)



5.5.4 Inspection and Testing

Records of monthly visual inspections are maintained by DPW personnel for at least three years. Section 4.8 establishes the Fort Knox 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 660 gallons. An error transferring oil could spill 5 gallons. The loss of the entire contents of the vacuum collection tanker truck could spill 3,000 gallons. Any spill from this area would flow south to a drop inlet and then north to Tollgate Creek to the Salt River (see Figures 2.1, 5.5.1 and 2.4). A spill in this area would trigger the spill response procedures listed in Section 4.7. It is assumed that only one drum would spill in a given event.

Table 5.5.4 Hurley Motor Pool Potential Spill Scenarios

Container ID	Spill Amount (Gallons)	Contents	Cause	Pathway
2767	660	Diesel	Container Failure	South to drop inlet then to Tollgate Creek
	5		Transfer Error	
	3,000		Vacuum Truck Error	
2767DRA	55	Oil	Container Failure	South to drop inlet then to Tollgate Creek
	5		Transfer Error	
	3,000		Vacuum Truck Error	
2767DRB	55	Oil	Container Failure	South to drop inlet then to Tollgate Creek
	5		Transfer Error	
	3,000		Vacuum Truck Error	

5.6 Boatwright Motor Pool (Building 2776) Shutdown gas and F24 ASTs, added DMS.

5.6.1 Area Description

The Building 2770 complex is a motor pool. Vehicle and equipment maintenance requires new oil products (usually in drums), fuel for vehicles, and collection of used products (often in tanks). Table 5.6.1 provides container details, and Figure 5.6.1 shows their locations.

Table 5.6.1 Boatwright Motor Pool Containers

Container ID	Type	Capacity (Gallons)	Material of Construction	Product Stored
~~2770A~~	CLOSED	~~10,000~~	~~Steel~~	~~F24~~
~~2770B~~	~~AST, Horizontal~~	~~1,000~~	~~Steel~~	~~Gasoline~~
2770C	AST, Horizontal	500	Steel	Used Fuel
2770D	AST, Horizontal	2,000	Steel	Used Oil
2770E	AST, Vertical	660	Steel	Used Oil
2770DRA	55-Gallon Drums	55 (up to 80)	Steel	Oil, Hydraulic Oil, Grease
			Plastic	Antifreeze
2770DRB	55-Gallon Drums	55 (up to 4)	Steel	Used Oil, Used Fuel
				Used Anti-freeze
2770DRC	55-Gallon Drums	55 (up to 60)	Steel	Oil, Hydraulic Oil, Grease
				Antifreeze
2770DRD	55-Gallon Drums	55 (up to 4)	Steel	Used Oil, Used Fuel
				Used Anti-freeze
2778DR	55-Gallon Drums	55 (up to 4)	Steel	Oil
2803DR	55-Gallon Drums	55 (up to 4)	Steel	Oil

Does not contain oil, not regulated by 40 CFR 112

5.6.2 Product Handling

Personnel pour used oil into the drums which are then pumped to the tanks outside. Used fuel is carried outside and poured directly into the AST. The used products tanks are emptied by a vacuum truck. The fuel tank area is also a loading/unloading rack capable of directly filling or emptying mobile refueler tanker trucks. The rack does not have a system to prevent vehicles from departing prior to disconnection of pipes and hoses (see Corrective Actions, Section 6.0). Table 5.4.2 provides product handling details.

Table 5.6.2 Boatwright Motor Pool Product Handling

Container ID	Loading Method	Overfill Protection	Unloading Method
~~2770A~~	~~Truck~~ CLOSED	~~Sight Gauge~~	~~Dispensed to Vehicles~~
~~2770B~~	~~Truck~~	~~Sight Gauge~~	~~Dispensed to Vehicles~~
2770C	Manual	Sight Gauge	Vacuum Truck
2770D	Pumped from Drums	Sight Gauge	Vacuum Truck
2770E	Pumped from Drums	Sight Gauge	Vacuum Truck
2770DRA	NA	NA	NA (moved inside for use)
2770DRB	Manual	Visual	Pumped to Tanks
2770DRC	NA	NA	Used in Maintenance
2770DRD	Manual	Visual	Pumped to Tanks
2778DR	Pumped from Drums	Sight Gauge	Vacuum Truck
2803DR	Pumped from Drums	Sight Gauge	Vacuum Truck

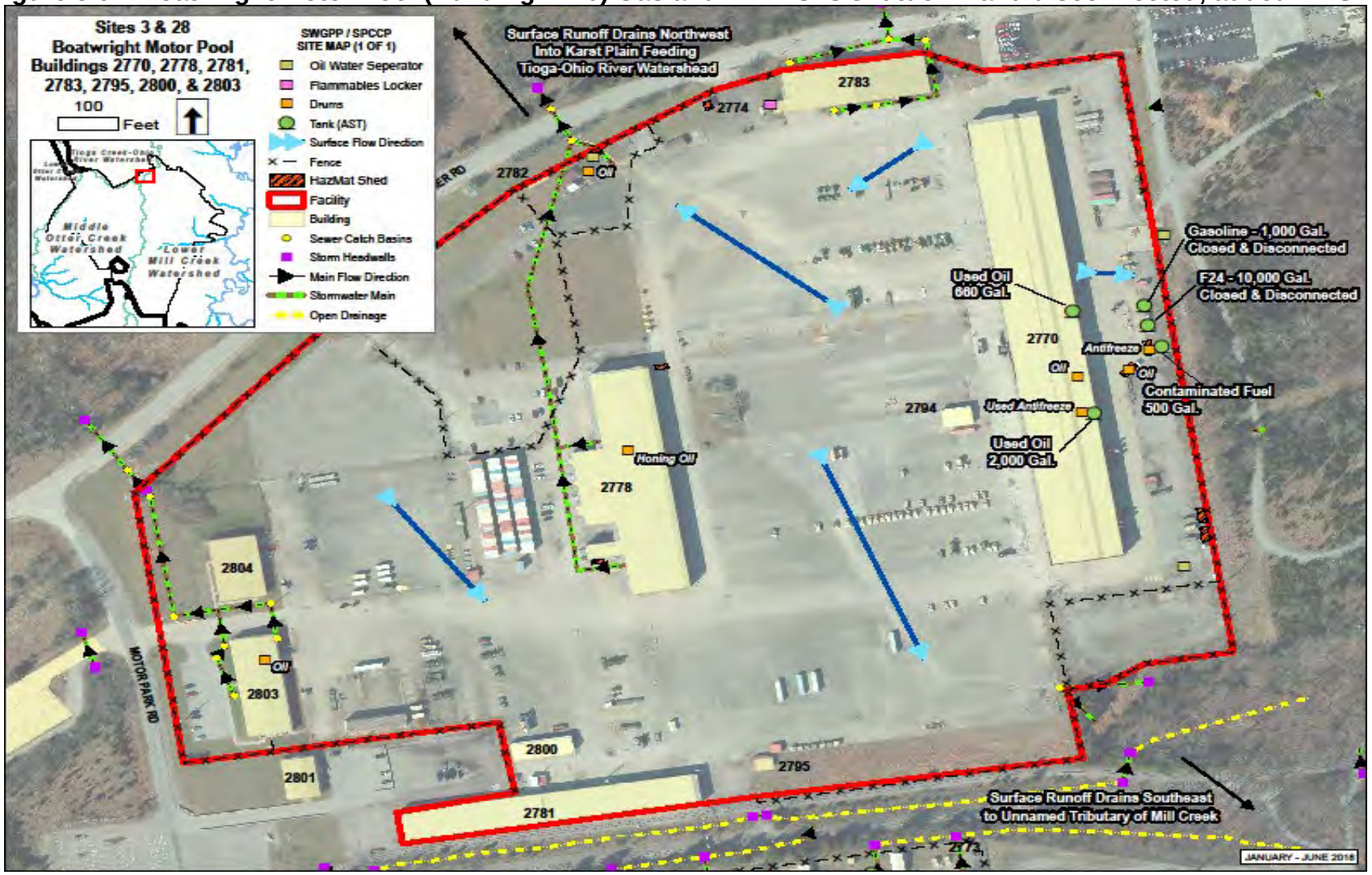
5.6.3 Secondary Containment

The ASTs are double-walled and do not collect storm water. The drums at 2770DRA are in a covered outdoor area with a concrete berm. However the concrete berm has many cracks and breaks (not impervious) and drains to an oil/water separator that discharges to the storm water system. This is not adequate secondary containment (see Corrective Actions, Section 6.0). The other drums are on spill containment pallets. The fueling area is a loading/unloading rack with a concrete berm. Appendix D contains volume calculations for the loading/unloading rack. Personnel follow the rainwater release procedures found in Section 4.10.

Table 5.6.3 Boatwright Motor Pool Secondary Containment

Container ID	Type	Storm Water Release
~~2770A~~ CLOSED	~~Double-Walled~~	~~NA~~
~~2770B~~	~~Double-Walled~~	~~NA~~
2770C	Double-Walled	NA
2770D	Double-Walled	NA
2770E	Double-Walled	NA
2770DRA	None	NA
2770DRB	Plastic Containment Pallets	NA
2770DRC	Plastic Containment Pallets	NA
2770DRD	Plastic Containment Pallets	NA
2781M	None	NA
2770 Loading/Unloading Rack	Concrete Dike	Manual
2778DR	Plastic Containment Pallets	NA
2803DR	Plastic Containment Pallets	NA

Figure 5.6.1 Boatwright Motor Pool (Building 2770) Gas and F24 ASTs shutdown and disconnected, added DMS.



5.6.4 Inspection and Testing

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

5.6.5 Potential Spill Scenarios

Complete container failure of an AST could result in a spill of 10,000 gallons. The fuel delivery truck could spill up to 3,000 gallons. The loss of the entire contents of the collection tanker truck could spill 3,000 gallons of used oil. It is assumed that only one drum would spill in a given event. Any spill from this area would flow north and east to Tollgate Creek, Mill Creek and then the Salt River (see Figures 2.1, 2.4 and 5.6.1). A spill in this area would trigger the spill response procedures listed in Section 4.7.

Table 5.6.4 Boatwright Motor Pool Potential Spill Scenarios

Container ID	Spill Amount (Gallons)	Contents	Cause	Pathway
~~2770A~~	~~10,000~~	~~F24~~	~~Container Failure~~	~~North across concrete and then east to Tollgate Creek~~
	~~50~~		~~Dispensing Error~~	
	CLOSED		~~Error Unloading to Mobile Refueler~~	
	~~5,000~~		~~Delivery Truck Error~~	
~~2770B~~	~~1,000~~	~~Gasoline~~	~~Container Failure~~	~~North across concrete and then east to Tollgate Creek~~
	CLOSED		~~Dispensing Error~~	
	~~3,000~~		~~Delivery Truck Error~~	
2770C	500	Used Fuel	Container Failure	North across concrete and then east to Tollgate Creek
	5		Transfer Error	
	3,000		Vacuum Truck Error	
2770D	2,000	Used Oil	Container Failure	North across concrete and then east to Tollgate Creek
	5		Transfer Error	
	3,000		Vacuum Truck Error	
2770E	660	Used Oil	Container Failure	North across concrete and then east to Tollgate Creek
	5		Transfer Error	

Container ID	Spill Amount (Gallons)	Contents	Cause	Pathway
	3,000		Vacuum Truck Error	
2770DRA	55	Oil, Hydraulic Oil, Grease	Container Failure	North across concrete and then east to Tollgate Creek
		Antifreeze		
2770DRB	55	Used Oil, Used Fuel	Container Failure	North across concrete and then east to Tollgate Creek
	5	Used Antifreeze	Transfer Error	
2770DRC	55	Oil, Hydraulic Oil, Grease	Container Failure	North across concrete and then east to Tollgate Creek
	5	Antifreeze	Dispensing Error	
2770DRD	55	Used Oil, Used Fuel	Container Failure	North across concrete and then east to Tollgate Creek
	5	Used Antifreeze	Transfer Error	
2778DR	55	Oil	Dispensing Error	North across concrete and then east to Tollgate Creek
2803DR	55	Oil	Dispensing Error	North across concrete and then east to Tollgate Creek

Does not contain oil, not regulated by 40 CFR 112

5.7 Burke Fuel Point (Building 2730 & 2798) AST CLOSED

5.7.1 Area Description

Building 2798 is a fuel point for military vehicles. There is one AST to dispense fuel. Table 5.7.1 provides container details, and Figure 5.7.1 shows the location.

Table 5.7.1 Burke Fuel Point Containers

Container ID	Type	Capacity (Gallons)	Material of Construction	Product Stored
~~2798~~	CLOSED	~~10,000~~	~~Steel~~	~~JP8~~

5.7.2 Product Handling

Contractor delivery trucks fill the AST. Fuel is dispensed into vehicles/equipment and also through the loading rack into mobile refuelers. Table 5.7.2 provides product handling details.

Table 5.7.2 Burke Fuel Point Product Handling

Container ID	Loading Method	Overfill Protection	Unloading Method
~~2798~~	CLOSED	~~Automatic Tank Gauging~~	~~Dispensed to Vehicles~~

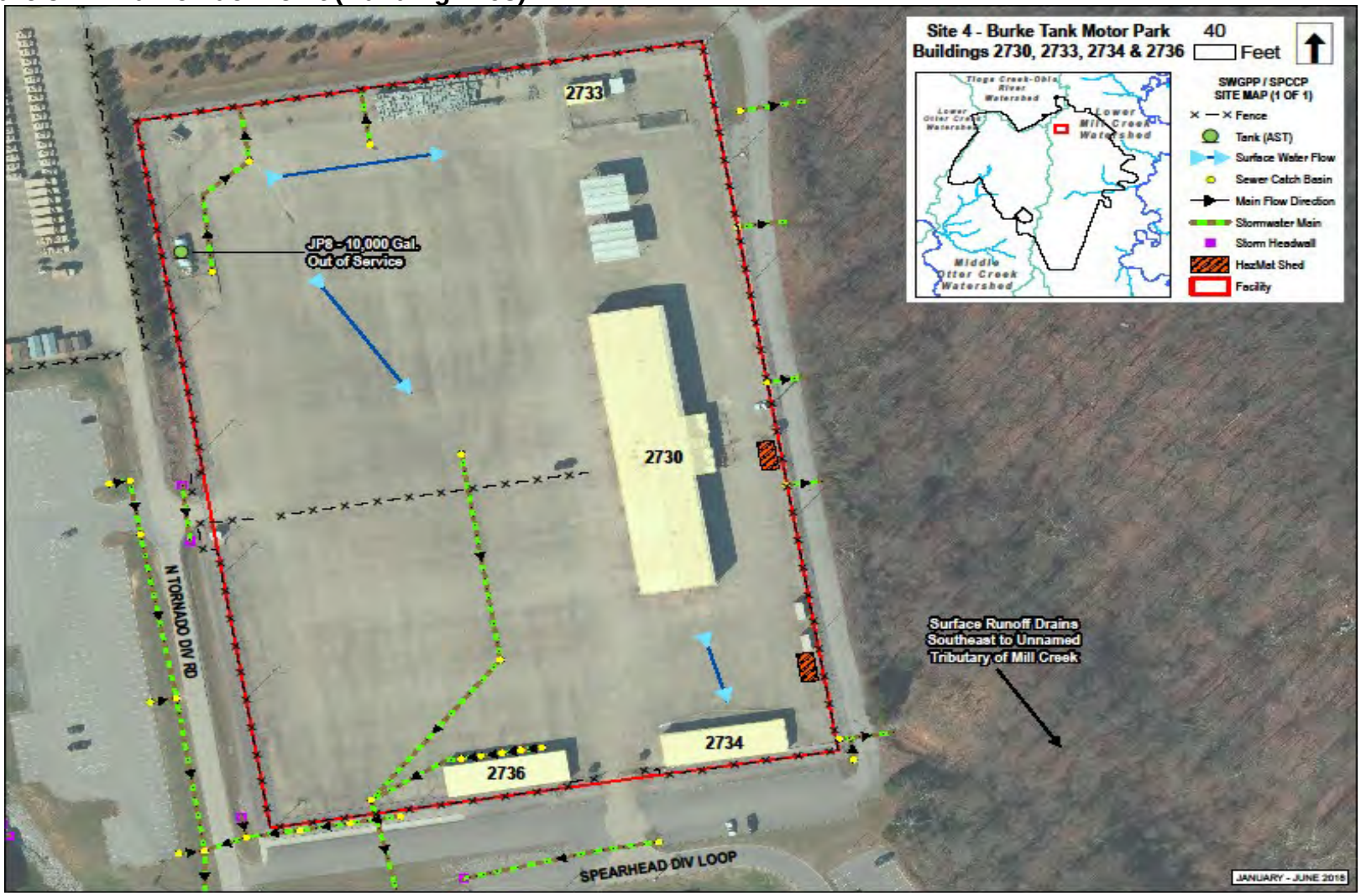
5.7.3 Secondary Containment

The AST is double-walled and does not collect storm water. The loading/unloading rack has a concrete berm with a valve to release storm water. Appendix D contains volume calculations for the loading/unloading rack. Personnel follow the rainwater release procedures found in Section 4.10.

Table 5.7.3 Burke Fuel Point Secondary Containment

Container ID	Type	Storm Water Release
2798	Double-walled	NA
~~2798 Loading/Unloading Rack~~	CLOSED ~~ike~~	~~Manual~~

Figure 5.7.1 Burke Fuel Point (Building 2798)



5.7.4 Inspection and Testing

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

5.7.5 Potential Spill Scenarios

An error dispensing fuel could spill 50 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 east across concrete to a storm water inlet and then to Tollgate Creek to the Salt River (see Figures 2.1 and 5.7.1). A spill in this area would trigger the spill response procedures listed in Section 4.7.

Table 5.7.4 Burke Potential Spill Scenarios

Container ID	Spill Amount (Gallons)	Contents	Cause	Pathway
~~2798~~	~~10,000~~	~~JP8~~	~~Container Failure~~	~~East to Tollgate Creek~~
	CLOSED		~~Dispensing Error~~	
	~~3,000~~		~~Error Unloading to Mobile Refueler~~	
	~~5,000~~		~~Delivery Truck Error~~	

5.8 Mansfield Motor Pool (Building 2807)

5.8.1 Area Description

The Building 2807 complex is a motor pool. Vehicle and equipment maintenance requires new oil products (usually in drums), fuel for vehicles, and collection of used products (often in tanks). Table 5.8.1 provides container details, and Figure 5.8.1 shows their locations.

Table 5.8.1 Mansfield Motor Pool Containers

Container ID	Type	Capacity (Gallons)	Material of Construction	Product Stored
2807A	AST, Horizontal	500	Steel	Used Fuel
2807B	AST, Horizontal	660	Steel	Used Oil
2807C	AST, Horizontal	1,000	Steel	Used Oil
2807D	AST, Horizontal	500	Steel	Used Antifreeze
2807E	AST, Horizontal	1,000	Steel	Used Oil
2807F	AST, Horizontal	500	Steel	Used Antifreeze
2807DRA	65-Gallon Drums, Horizontal	65 (up to 4)	Steel	Oil, Hydraulic Oil Antifreeze
2807DRB	55-Gallon Drums	55 (up to 4)	Steel	Used Fuel
2807DRC	55-Gallon Drums	55 (up to 16)	Steel	Oil, Hydraulic Oil, Used Oil, Used Fuel Antifreeze, Used Antifreeze
2807DRD	55-Gallon Drums	55 (up to 4)	Steel	Oil, Used Oil
2807DRE	65-Gallon Drums, Horizontal	65 (up to 4)	Steel	Oil, Hydraulic Oil Antifreeze
2807DRF	55-Gallon Drums	55 (up to 4)	Steel	Used Antifreeze
2807DRG	65-Gallon Drums, Horizontal	65 (up to 4)	Steel	Oil, Hydraulic Oil Antifreeze
2807DRH	55-Gallon Drums	55 (up to 6)	Steel	Oil, Hydraulic Oil Antifreeze

Container ID	Type	Capacity (Gallons)	Material of Construction	Product Stored
2807DRI	65-Gallon Drums, Horizon-tal	65 (up to 4)	Steel	Oil, Hydraulic Oil
				Antifreeze
2807DRJ	55-Gallon Drums	55 (up to 4)	Steel	Used Oil
2807DRK	55-Gallon Drums	55 (up to 4)	Steel	Oil
				Antifreeze
2807DRL	55-Gallon Drums	55 (up to 16)	Steel	Oil, Hydraulic Oil, Used Oil, Used Fuel
				Antifreeze, Used Antifreeze
2807DRM	55-Gallon Drums	55 (up to 16)	Steel	Oil, Hydraulic Oil, Used Oil, Used Fuel
				Antifreeze, Used Antifreeze
2807DRN	55-Gallon Drums	55 (up to 16)	Steel	Oil, Hydraulic Oil, Used Oil, Used Fuel
				Antifreeze, Used Antifreeze
2807DRO	55-Gallon Drums	55 (up to 16)	Steel	Oil, Hydraulic Oil, Used Oil, Used Fuel
				Antifreeze, Used Antifreeze
2807DRP	55-Gallon Drums	55 (up to 16)	Steel	Oil, Hydraulic Oil, Used Oil, Used Fuel
				Antifreeze, Used Antifreeze

Does not contain oil, not regulated by 40 CFR 112

5.8.2 Product Handling

Used products are collected manually into drums in the maintenance areas and then usually transferred via pump into larger tanks outside. Vacuum trucks empty the used product tanks. Various products are dispensed for maintenance by hand pumps or air assisted distribution systems. 65-gallon horizontal rectangular drums are used in dispensing racks in some places instead of the standard 55-gallon drums. Some drum

storage areas hold drums with different product handling, so product handling is addressed by the nature of the drums regardless of the storage location. Table 5.8.2 provides product handling details.

Table 5.8.2 Mansfield Motor Pool Product Handling

Container ID	Loading Method	Overfill Protection	Unloading Method
2807A – 2807F	Pumped from Drums	Sight Gauge	Vacuum Truck
2807 Drums (New Product)	NA	NA	Moved from Storage and then Dispensed for Maintenance
2807 Drums (Used Product)	Manual	Visual	Pumped into Tanks

5.8.3 Secondary Containment

The ASTs are all double-walled and do not collect storm water. The drums are on containment pallets or inside conex sheds. The 65-gallon dispensing drums are in a rack with a steel dike beneath. See Appendix D for volume calculations for conex sheds and steel dikes.

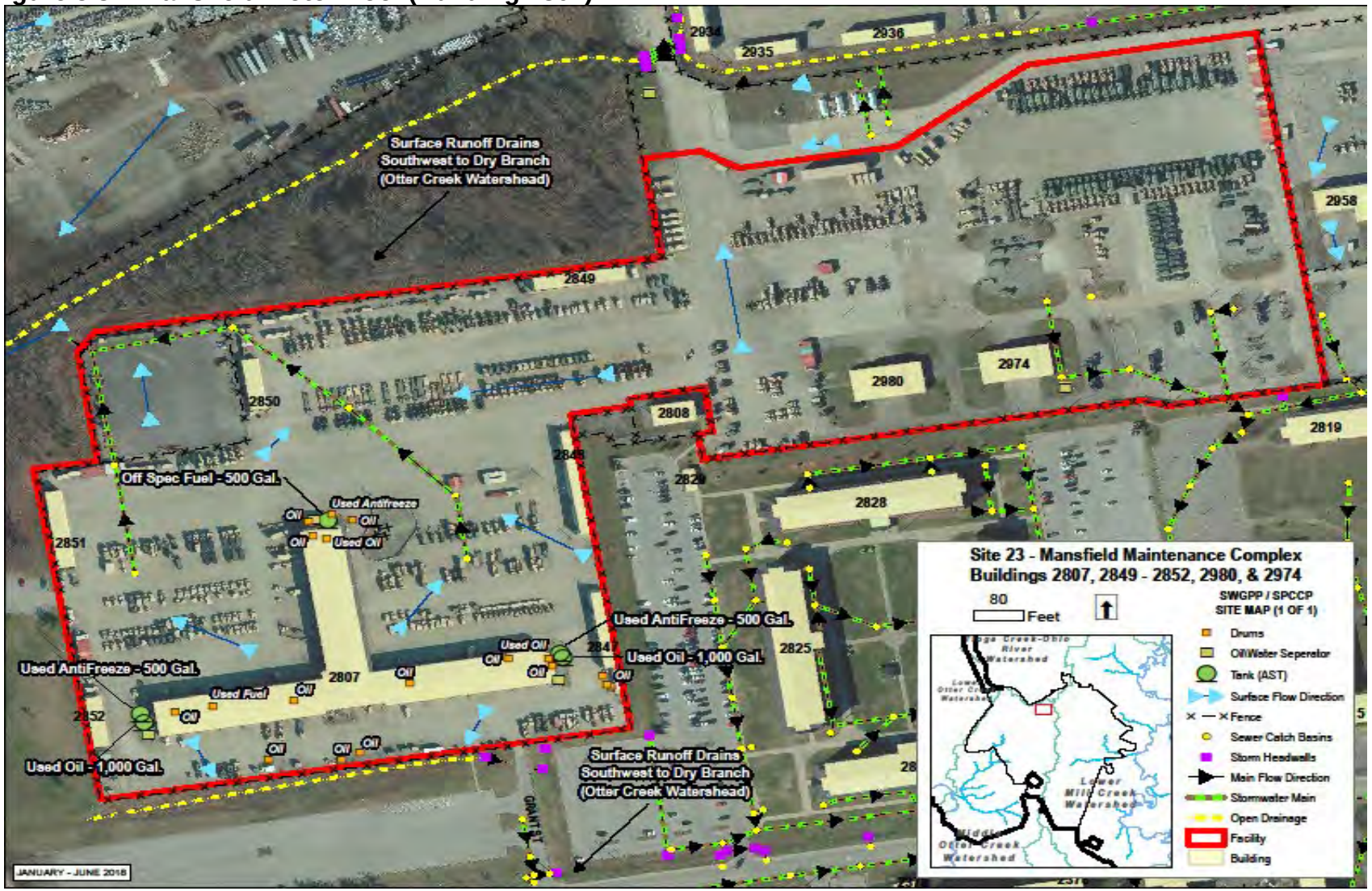
Table 5.8.3 Mansfield Motor Pool Secondary Containment

Container ID	Type	Storm Water Release
2807A – 2807F	Double-Walled	NA
2807DRA, 2807DRE, 2807DRG, 2807DRI	Steel Dike	NA
2807DRB, 2807DRC, 2807DRD, 2807DRF, 2807DRH, 2807DRJ, 2807DRK	Plastic Containment Pallet	NA
2807DRL, 2807DRM, 2807DRN, 2807DRO, 2807DRP	Steel Conex	NA

5.8.4 Inspection and Testing

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

Figure 5.8.1 Mansfield Motor Pool (Building 2807)



5.8.5 Potential Spill Scenarios

Complete container failure of an AST could result in a spill of up to 1,000 gallons. The loss of the entire contents of the vacuum truck could spill 3,000 gallons. It is assumed that only one drum would spill in a given event. Any spill from this area would flow west in open drainage and then to an unnamed creek west to Otter Creek (see Figures 2.1, 2.4 and 5.8.1). A spill in this area would trigger the spill response procedures listed in Section 4.7.

Table 5.8.4 Mansfield Motor Pool Potential Spill Scenarios

Container ID	Spill Amount (Gallons)	Contents	Cause	Pathway
2807A	500	Used Fuel	Container Failure	West to Otter Creek
	5		Transfer Error	
	3,000		Vacuum Truck Error	
2807B	660	Used Oil	Container Failure	West to Otter Creek
	5		Transfer Error	
	3,000		Vacuum Truck Error	
2807C	1,000	Used Oil	Container Failure	West to Otter Creek
	5		Transfer Error	
	3,000		Vacuum Truck Error	
2807D	500	Used Anti-freeze	Container Failure	West to Otter Creek
	5		Transfer Error	
	3,000		Vacuum Truck Error	
2807E	1,000	Used Oil	Container Failure	West to Otter Creek
	5		Transfer Error	
	3,000		Vacuum Truck Error	
2807F	500	Used Anti-freeze	Container Failure	West to Otter Creek
	5		Transfer Error	
	3,000		Vacuum Truck Error	
	65	Oil, Hy-draulic Oil	Container Failure	West to Otter Creek

Container ID	Spill Amount (Gallons)	Contents	Cause	Pathway
2807 Dispensing Racks (New Product)	5	Antifreeze	Dispensing Error	
2807 Standard Drums (New Product)	55	Oil, Hydraulic Oil	Container Failure	West to Otter Creek
	5	Antifreeze	Dispensing Error	
2807 Drums (Used Product)	55	Used Oil, Used Fuel	Container Failure	West to Otter Creek
	5	Used Antifreeze	Transfer Error	
2807 Drums (Storage)	55	Oil, Hydraulic Oil	Container Failure	West to Otter Creek
		Antifreeze		

Does not contain oil, not regulated by 40 CFR 112

5.9 Colby Motor Pool (Buildings 2942, 2943, and 2944) – Added 2 ASTs, used oil and used antifreeze, and DMS

5.9.1 Area Description

The Building 2943 complex is a motor pool. Vehicle and equipment maintenance requires new oil products (usually in drums), fuel for vehicles, and collection of used products (often in tanks). Table 5.9.1 provides container details, and Figure 5.9.1 shows their locations.

Table 5.9.1 Colby Motor Pool Containers

Container ID	Type	Capacity (Gallons)	Material of Construction	Product Stored
2942A	AST, Vertical	660	Steel	Used Oil
2942B	AST, Horizontal	120	Steel	Diesel
2942DR	55-Gallon Drums	55 (up to 4)	Steel	Used Fuel Used Antifreeze
2943	AST, Vertical	660	Steel	Used Oil
2943DRA	65-Gallon Drums, Horizontal	65 (up to 4)	Steel	Oil, Hydraulic Oil Antifreeze
2943DRB	55-Gallon Drums	55 (up to 4)	Steel	Oil, Hydraulic Oil Antifreeze
2943DRC	55-Gallon Drums	55 (up to 16)	Steel	Oil, Hydraulic Oil
2944A	AST, Vertical	660	Steel	Used Oil
2944B	AST, Vertical	660	Steel	Used Oil
2944DR	55-Gallon Drums	55 (up to 8)	Steel	Oil

Does not contain oil, not regulated by 40 CFR 112

5.9.2 Product Handling

The diesel tank is filled by a contractor delivery truck and used by a fire pump generator. Used oil is transferred directly into ASTs just outside the buildings. Other used products are collected manually into drums in the maintenance areas. Vacuum trucks empty the used product tanks and drums. Products are dispensed for maintenance by hand pumps or air assisted distribution systems. 65-gallon rectangular drums are used in dispensing racks in some places instead of standard 55-gallon drums. Table 5.9.2 provides product handling details.

Table 5.9.2 Colby Motor Pool Product Handling

Container ID	Loading Method	Overfill Protection	Unloading Method
2942A	Manual	Sight Gauge	Vacuum Truck
2942B	Truck	Sight Gauge	Used in Generator
2943	Manual	Sight Gauge	Vacuum Truck
2944A	Manual	Sight Gauge	Vacuum Truck
2944B	Manual	Sight Gauge	Vacuum Truck
2942, 2943, and 2944 Drums (New Product)	NA	NA	Moved from Storage and then Dispensed for Maintenance
2942, 2943, and 2944 Drums (Used Product)	Manual	Visual	Vacuum Truck

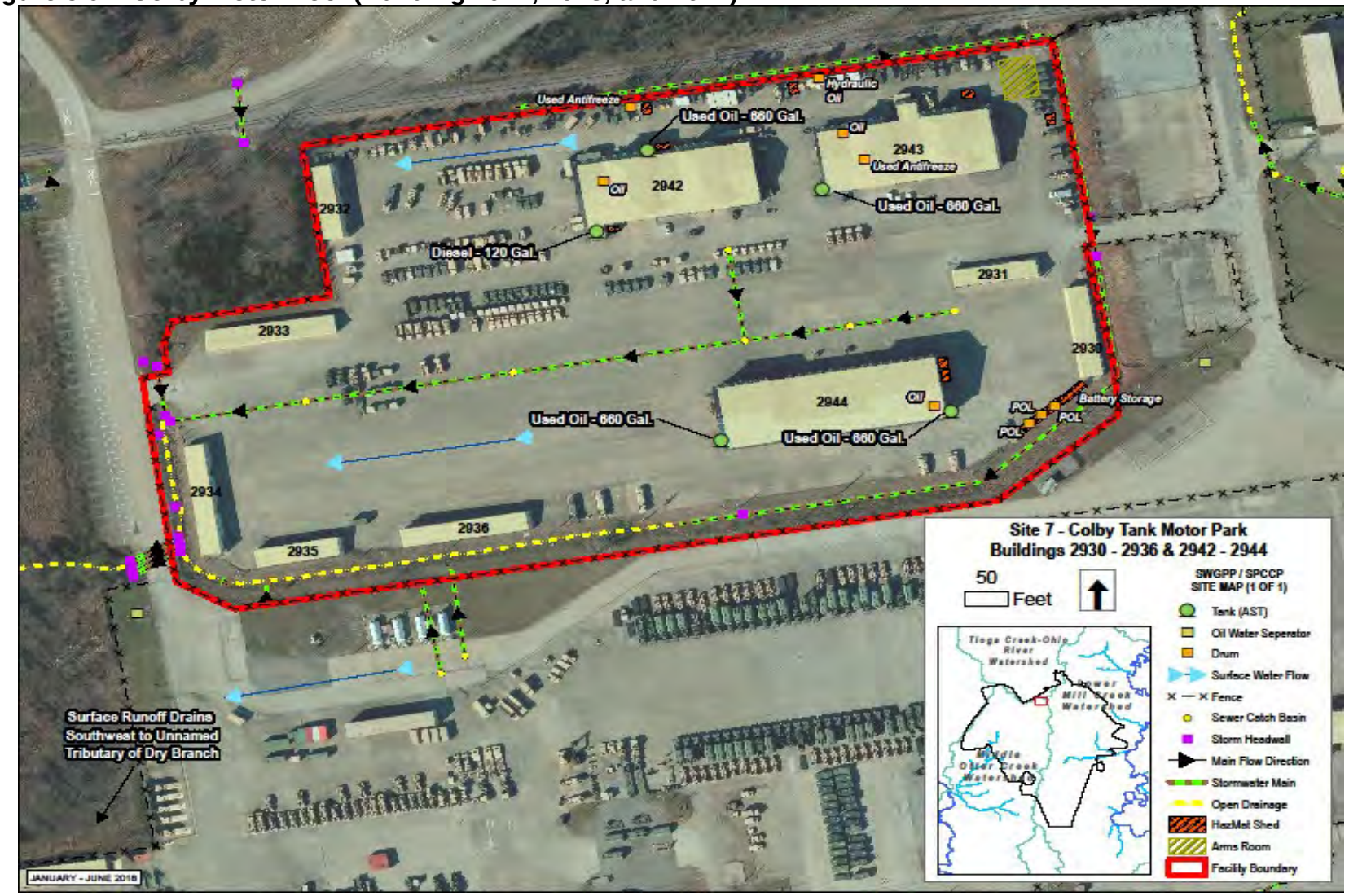
5.9.3 Secondary Containment

The fire pump generator AST (2942B) does not have secondary containment (see Corrective Actions, Section 6.0). The other ASTs are double-walled and do not collect storm water. The mobile refuelers have steel drive-in secondary containment. The drums are on containment pallets or inside conex sheds. The 65-gallon dispensing drums are in a rack with a steel dike beneath. See Appendix D for volume calculations for conex sheds and steel dikes.

Table 5.9.3 Colby Motor Pool Secondary Containment

Container ID	Type	Storm Water Release
2942A	Double-Walled	NA
2942B	None	NA
2944A	Double-Walled	NA
2944B	Double-Walled	NA
2942DR	Plastic Containment Pallet	NA
2943	Double-Walled	NA
2943DRA	Steel Dike	NA
2943DRB	Plastic Containment Pallet	NA
2943DRC	Steel Conex	NA
2944DR	Plastic Containment Pallet	NA
2944DR	Steel Conex	NA

Figure 5.9.1 Colby Motor Pool (Building 2942, 2943, and 2944)



5.9.4 Inspection and Testing

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

5.9.5 Potential Spill Scenarios

Complete container failure of an AST could result in a spill of up to 1,000 gallons. The loss of the entire contents of the vacuum truck could spill 3,000 gallons. It is assumed that only one drum would spill in a given event. Any spill from this area would flow west in open drainage and then to an unnamed creek west to Otter Creek (see Figures 2.1, 2.4, and 5.9.1). A spill in this area would trigger the spill response procedures listed in Section 4.7.

Table 5.9.4 Colby Motor Pool Potential Spill Scenarios

Container ID	Spill Amount (Gallons)	Contents	Cause	Pathway
2942A	660	Used Oil	Container Failure	West to Otter Creek
	5		Transfer Error	
	3,000		Vacuum Truck Error	
2942B	120	Diesel	Container Failure	West to Otter Creek
	3,000		Delivery Truck Error	
2942DR	65	Oil, Hydraulic Oil	Container Failure	West to Otter Creek
	5	Antifreeze	Dispensing Error	
2943	660	Used Oil	Container Failure	West to Otter Creek
	5		Transfer Error	
	3,000		Vacuum Truck Error	
2943DRA	65	Oil, Hydraulic Oil	Container Failure	West to Otter Creek
	5	Antifreeze	Dispensing Error	
2943DRB	55	Oil, Hydraulic Oil	Container Failure	West to Otter Creek
		Antifreeze		
2943DRC	55	Oil, Hydraulic Oil	Container Failure	West to Otter Creek
2944A	660	Used Oil	Container Failure	

Container ID	Spill Amount (Gallons)	Contents	Cause	Pathway
	5		Transfer Error	West to Otter Creek
	3,000		Vacuum Truck Error	
2944B	660	Used Oil	Container Failure	West to Otter Creek
	5		Transfer Error	
	3,000		Vacuum Truck Error	
2944DR	55	Oil	Container Failure	West to Otter Creek

Does not contain oil, not regulated by 40 CFR 112

5.10 Recycling Program and Hazardous Materials Center (Buildings 2951 & 2952)

5.10.1 Area Description

Building 2951 is the Qualified Recycling Program and Building 2953 is the Hazardous Material Control Center (HMCC). Recyclable products are collected from all over Fort Knox and then sorted and repackaged for shipment off site for further processing. New hazardous materials entering Fort Knox go through the HMCC. Table 5.10.1 provides container details, and Figure 5.10.1 shows their locations.

Table 5.10.1 Recycling Program Containers

Container ID	Type	Capacity (Gallons)	Material of Construction	Product Stored
2951DRC	55-Gallon Drums	55 (up to 20)	Steel	Used oil Used fuel
				Used Anti-freeze
~~2951~~	REMOVED	~~660~~	~~Steel~~	~~Used Oil~~
2951DRA	55-Gallon Drums	55 (up to 8)	Steel	Used Oil, Used Fuel
				Used Anti-freeze
2951DRB	55-Gallon Drums	55 (up to 8)	Steel	Used Oil
2951A	AST, Horizontal	660	Steel	Used Oil
2951B	AST, Horizontal	660	Steel	Used Oil
2951C	AST, Horizontal	660	Steel	Used Oil
2951D	AST, Horizontal	660	Steel	Used Fuel
2951E	AST, Horizontal	660	Steel	Used Anti-freeze
2951F	AST, Horizontal	660	Steel	Used Anti-freeze
2951G	AST, Horizontal	650	Steel	Used Oil
2951H	AST, Horizontal	800	Steel	Gas/Diesel
2953DR	55-Gallon Drums	55 (up to 8)	Steel	Oil, Hydraulic Oil
				Antifreeze, Iso-propyl Alcohol
2949	55-Gallon Drums	55 (up to 20)	Steel	HAZWAS

Does not contain oil, not regulated by 40 CFR 112

5.10.2 Product Handling

Vacuum trucks empty used product ASTs throughout Fort Knox and bring the contents to pump into holding tanks at Building 2951. The tanks are then emptied by contractor

vacuum trucks that take the used products for recycling. Empty oil drums are brought to Building 2951 to be crushed and any remaining residue oils are pumped into AST 2951. Some drums full of used product are stored outside the building in a covered area. The storage area in Building 2953 is used for warehouse storage of drums. The drums used in Building 2951 are stored on spill containment pallets and emptied by vacuum truck or drum pump. Table 5.10.2 provides product handling details.

Table 5.10.2 Recycling Program Product Handling

Container ID	Loading Method	Overfill Protection	Unloading Method
2951DRC	Pumped from Truck or Drums	NA	Vacuum Truck or Drum Pump
~~2951~~	REMOVED	~~Sight Gauge~~	~~Vacuum Truck~~
2951DRA	NA	NA	Pumped into ASTs
2951DRB	NA	NA	Pumped into ASTs
2951A	Pumped from Truck or Drums	Sight Gauge	Vacuum Truck
2951B	Pumped from Truck or Drums	Sight Gauge	Vacuum Truck
2951C	Pumped from Truck or Drums	Sight Gauge	Vacuum Truck
2951D	Pumped from Truck or Drums	Sight Gauge	Vacuum Truck
2951E	Pumped from Truck or Drums	Sight Gauge	Vacuum Truck
2951F	Pumped from Truck or Drums	Sight Gauge	Vacuum Truck
2951G	Pumped from Truck or Drums	Sight Gauge	Vacuum Truck
2951H	Pumped from Truck	Sight Gauge	Vacuum Truck
2953DR	NA	NA	NA - Delivered to Customers
2949DR	Fork Truck	Visual	NA

5.10.3 Secondary Containment

The ASTs are double-walled and do not collect storm water. The drums at 2951A and 2951B are stored on containment pallets, but the pallets are too small to provide adequate secondary containment (see Corrective Actions, Section 6.0). The drums at 2953DR are stored inside within a concrete area with floor containment sumps. The

drums stored at 2950 are on secondary containment pallets. Appendix D contains volume calculations for the containment sumps.

Table 5.10.3 Recycling Program Secondary Containment

Container ID	Type	Storm Water Release
2951DRC	Plastic Containment Pal- CLOSED	NA
~~2951~~	~~Double-Walled~~	~~NA~~
2951DRA	Plastic Containment Pallet	NA
2951DRB	Plastic Containment Pallet	NA
2951A	Double-Walled	NA
2951B	Double-Walled	NA
2951C	Double-Walled	NA
2951D	Double-Walled	NA
2951E	Double-Walled	NA
2951F	Double-Walled	NA
2951G	Double-Walled	NA
2951H	Double-Walled	NA
2953DR	Concrete Sump	NA
2949DR	Concrete Sump	NA

5.10.4 Inspection and Testing

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

Figure 5.10.1 Recycling Program (Building 2951 & 2952)

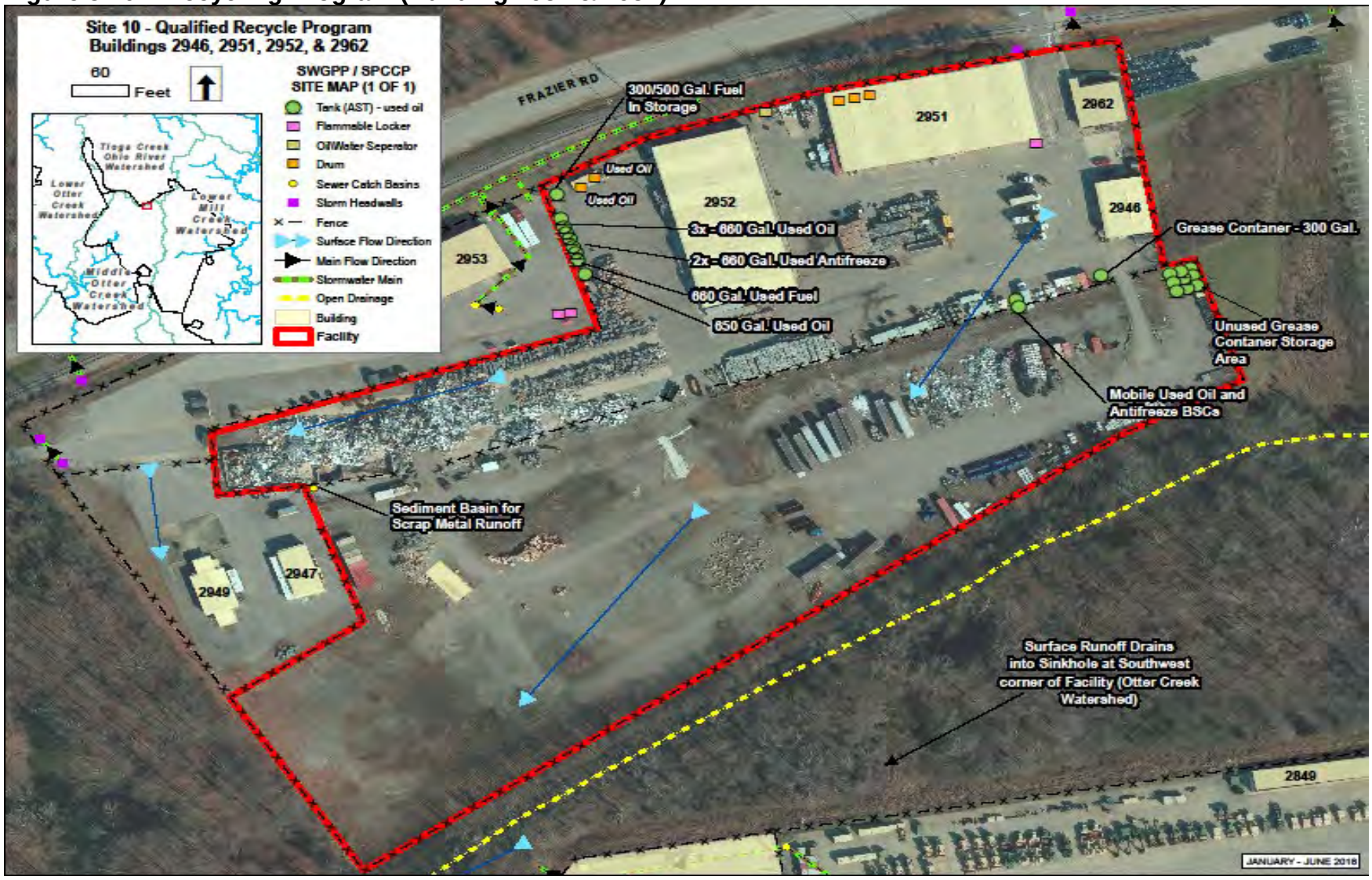
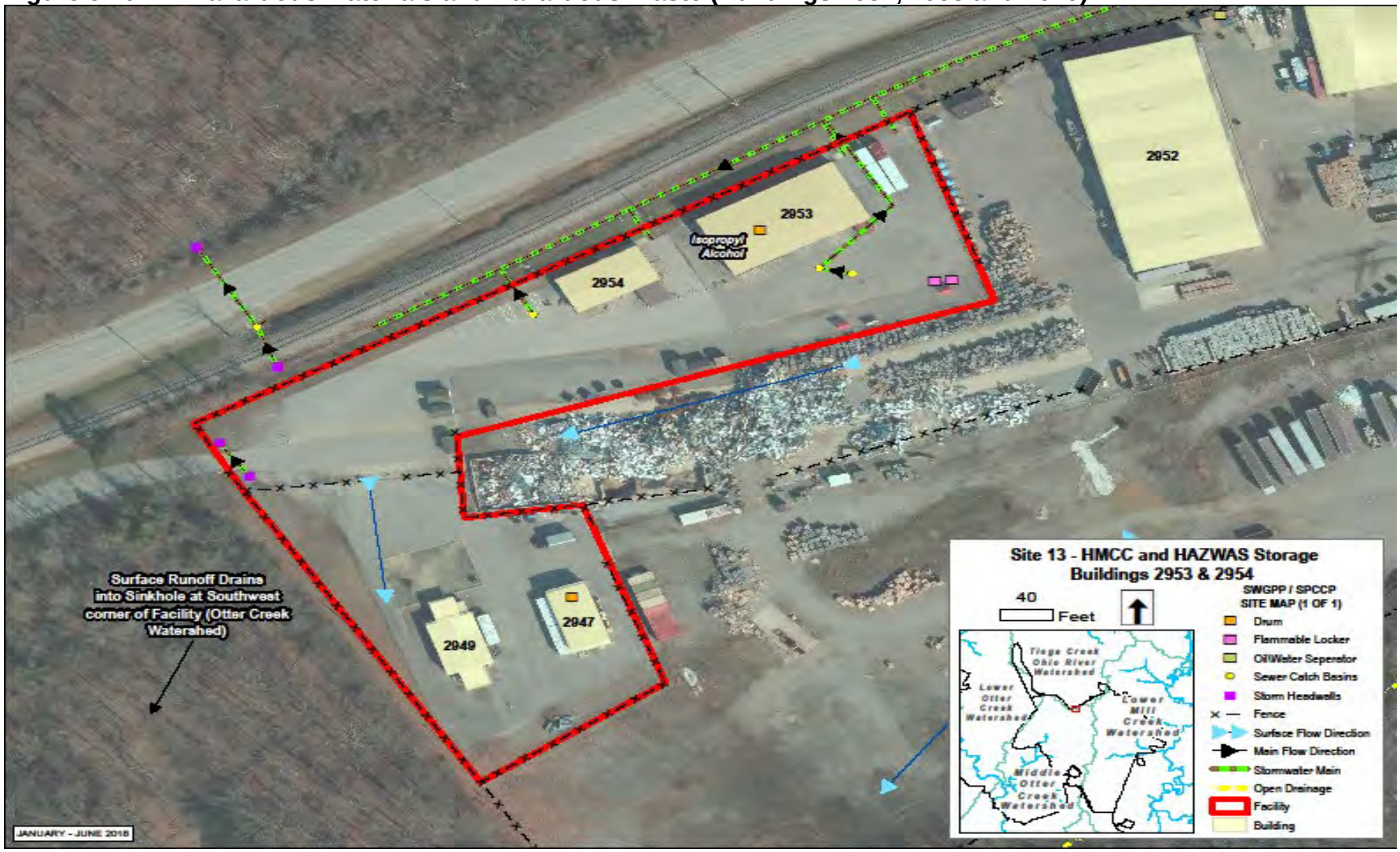


Figure 5.10.1.A Hazardous Materials and Hazardous Waste (Buildings 2954, 2953 and 2949)



5.10.5 Potential Spill Scenarios

Complete container failure of an AST could result in a spill of up to 660 gallons. An error transferring products could spill 5 gallons. The loss of the entire contents of the vacuum tanker truck could spill 3,000 gallons. It is assumed that only one drum would spill in a given event. Any spill from this area would flow west across the concrete to a storm water inlet and then to an unnamed creek west to Otter Creek (see Figures 2.1, 2.3, 2.4 and 5.10.1). A spill in this area would trigger the spill response procedures listed in Section 4.7.

Table 5.10.4 Recycling Program Potential Spill Scenarios

Container ID	Spill Amount (Gallons)	Contents	Cause	Pathway
2951DRC	55	Used Oil, Used Fuel Used Anti-freeze	Container Failure	West to Otter Creek
~~2951~~	~~660~~ – REMOVED ~~3,000~~	~~Used Oil~~	~~Container Failure~~ ~~Transfer Error~~ ~~Vacuum Truck Error~~	~~West to Otter Creek~~
2951DRA	55	Used Oil, Used Fuel Used Anti-freeze	Container Failure	West to Otter Creek
2951DRB	55	Used Oil	Container Failure	West to Otter Creek
2951A	660	Used Oil	Container Failure	West to Otter Creek
	5		Transfer Error	
	3,000		Vacuum Truck Error	
2951B	660	Used Oil	Container Failure	West to Otter Creek
	5		Transfer Error	
	3,000		Vacuum Truck Error	
2951C	660	Used Oil	Container Failure	West to Otter Creek
	5		Transfer Error	
	3,000		Vacuum Truck Error	

Container ID	Spill Amount (Gallons)	Contents	Cause	Pathway
2951D	660	Used Fuel	Container Failure	West to Otter Creek
	5		Transfer Error	
	3,000		Vacuum Truck Error	
2951E	660	Used Anti-freeze	Container Failure	West to Otter Creek
	5		Transfer Error	
	3,000		Vacuum Truck Error	
2951F	660	Used Anti-freeze	Container Failure	West to Otter Creek
	5		Transfer Error	
	3,000		Vacuum Truck Error	
2951G	650	Used Oil	Container Failure	West to Otter Creek
	5		Transfer Error	
	3,000		Vacuum Truck Error	
2951H	800	Gas/Diesel	Transfer Error	West to Otter Creek
	3,000		Container Failure	
2953DR	55	Oil, Hy-draulic Oil Antifreeze, Isopropyl Alcohol	Container Failure	West to Otter Creek
2949DR	55	Liquid HAZWAS	Container Failure	West to Otter Creek

Does not contain oil, not regulated by 40 CFR 112

5.11 Ammunition Depot (Building 3075)

5.11.1 Area Description

This area is the ammunition storage area. There is a diesel tank to dispense fuel to vehicles. Table 5.11.1 provides container details, and Figure 5.11.1 shows the location.

Table 5.11.1 Ammunition Depot Containers

Container ID	Type	Capacity (Gallons)	Material of Construction	Product Stored
3075	AST, Horizontal	500	Steel	Diesel

5.11.2 Product Handling

Contractor delivery trucks fill the diesel tank. The tank vent caps are not operated properly to avoid spills and release excess pressure (See Corrective Actions, Section 6.0). Diesel is dispensed into vehicles. Table 5.11.2 provides product handling details.

Table 5.11.2 Ammunition Depot Product Handling

Container ID	Loading Method	Overfill Protection	Unloading Method
3075	Truck	Sight Gauge	Dispensed to Vehicles

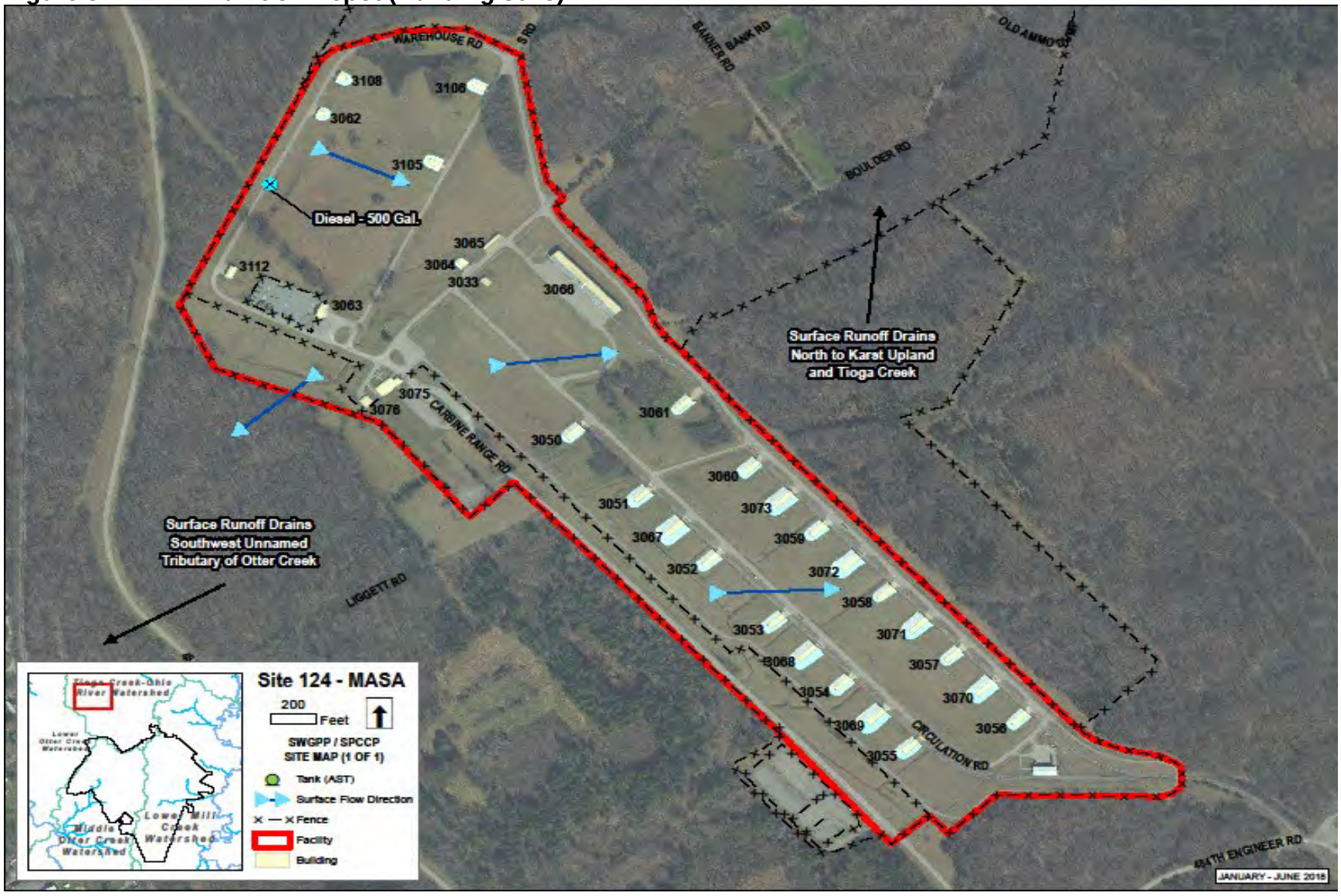
5.11.3 Secondary Containment

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

Table 5.11.3 Ammunition Depot Secondary Containment

Container ID	Type	Storm Water Release
3075	Double-Walled	NA

Figure 5.11.1 Ammunition Depot (Building 3075)



5.11.4 Inspection and Testing

Records of monthly visual inspections are maintained by DPW personnel for at least three years. Section 4.8 establishes the Fort Knox 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 the AST could result in a spill of 500 gallons. The loss of the entire contents of the fuel delivery tanker truck could spill 3,000 gallons. Spills from this site might pool in low-lying areas nearby but if they flowed further they would flow southwest and then west in open drainage to Otter Creek (see Figures 2.1, 5.11.1). A spill in this area would trigger the spill response procedures listed in Section 4.7.

Table 5.11.4 Ammunition Depot Potential Spill Scenarios

Container ID	Spill Amount (Gallons)	Contents	Cause	Pathway
3075	500	Diesel	Container Failure	Southwest and then west in open drainage to Otter Creek
	25		Dispensing Error	
	3,000		Delivery Truck Error	

5.12 Golf Course (Building 4011)

5.12.1 Area Description

This area is the Lindsey Golf Course maintenance area. There is one diesel tank and one gasoline tank to dispense fuel to vehicles. Table 5.12.1 provides container details, and Figure 5.12.1 shows their locations.

Table 5.12.1 Golf Course Containers

Container ID	Type	Capacity (Gallons)	Material of Construction	Product Stored
4011A	AST, Horizontal	500	Steel	Gasoline
4011B	AST, Horizontal	2,000	Steel	Diesel

5.12.2 Product Handling

Contractor delivery trucks fill the tanks. The level gauge on the gasoline tank is not functional (See Corrective Actions, Section 6.0). Fuel is dispensed into vehicles. Table 5.12.2 provides product handling details.

Table 5.12.2 Golf Course Product Handling

Container ID	Loading Method	Overfill Protection	Unloading Method
4011A	Truck	Sight Gauge	Dispensed to Vehicles
4011B	Truck	Sight Gauge	Dispensed to Vehicles

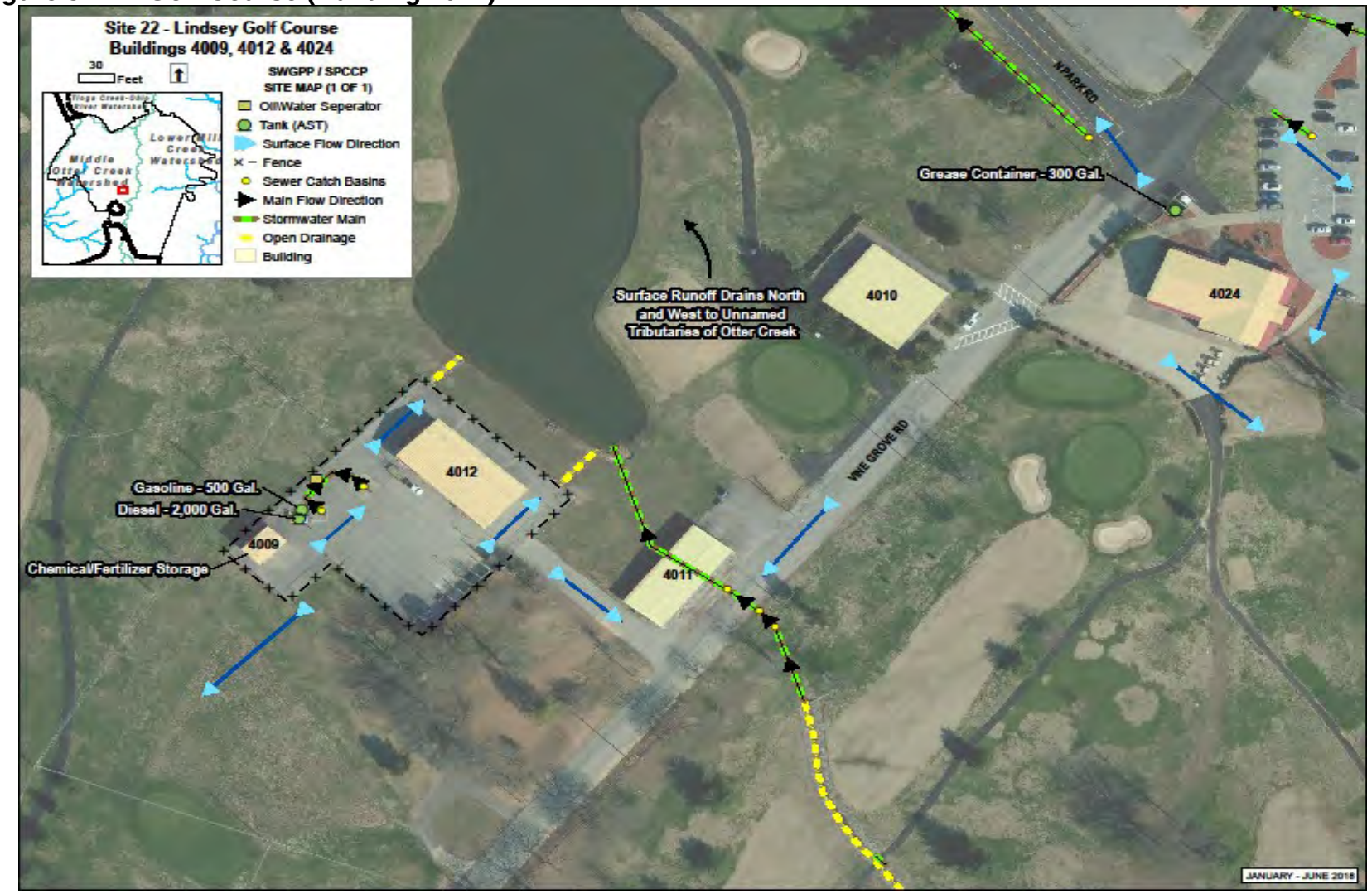
5.12.3 Secondary Containment

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

Table 5.12.3 Golf Course Secondary Containment

Container ID	Type	Storm Water Release
4011A	Double-Walled	NA
4011B	Double-Walled	NA

Figure 5.12.1 Golf Course (Building 4011)



5.12.4 Inspection and Testing

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

5.12.5 Potential Spill Scenarios

Complete container failure of the AST could result in a spill of 2,000 gallons. The loss of the entire contents of the fuel delivery tanker truck could spill 3,000 gallons. Spills from this area would flow west in open drainage to an unnamed creek and then to Otter Creek (see Figures 2.1, 2.3 and 5.12.1). A spill in this area would trigger the spill response procedures listed in Section 4.7.

Table 5.12.4 Golf Course Potential Spill Scenarios

Container ID	Spill Amount (Gallons)	Contents	Cause	Pathway
4011A	500	Gasoline	Container Failure	West in open drainage to Otter Creek
	25		Dispensing Error	
	3,000		Delivery Truck Error	
4011B	2,000	Diesel	Container Failure	West in open drainage to Otter Creek
	25		Dispensing Error	
	3,000		Delivery Truck Error	

5.13 AAFES Gas Stations (Buildings 711 and 4995) Added map for building 711

5.13.1 Area Description

The gas stations are used by customers for fueling privately owned vehicles. Building 711 uses USTs while Building 4995 uses ASTs for fuel storage. Table 5.13.1 provides container details, and Figures 5.13.1 and 2.3 show their locations.

Table 5.13.1 Gas Stations Containers

Container ID	Type	Capacity (Gallons)	Material of Construction	Product Stored
711AU	UST	20,000	FRP	Gasoline
711BU	UST	15,000	FRP	Gasoline
711CU	UST	10,000	FRP	Gasoline
711DU	UST	1000	Steel	Grease
4995A	AST, Horizontal	10,000	Steel	Gasoline
4995B	AST, Horizontal	10,000	Steel	Gasoline
4995C	AST, Horizontal	10,000	Steel	Gasoline

5.13.2 Product Handling

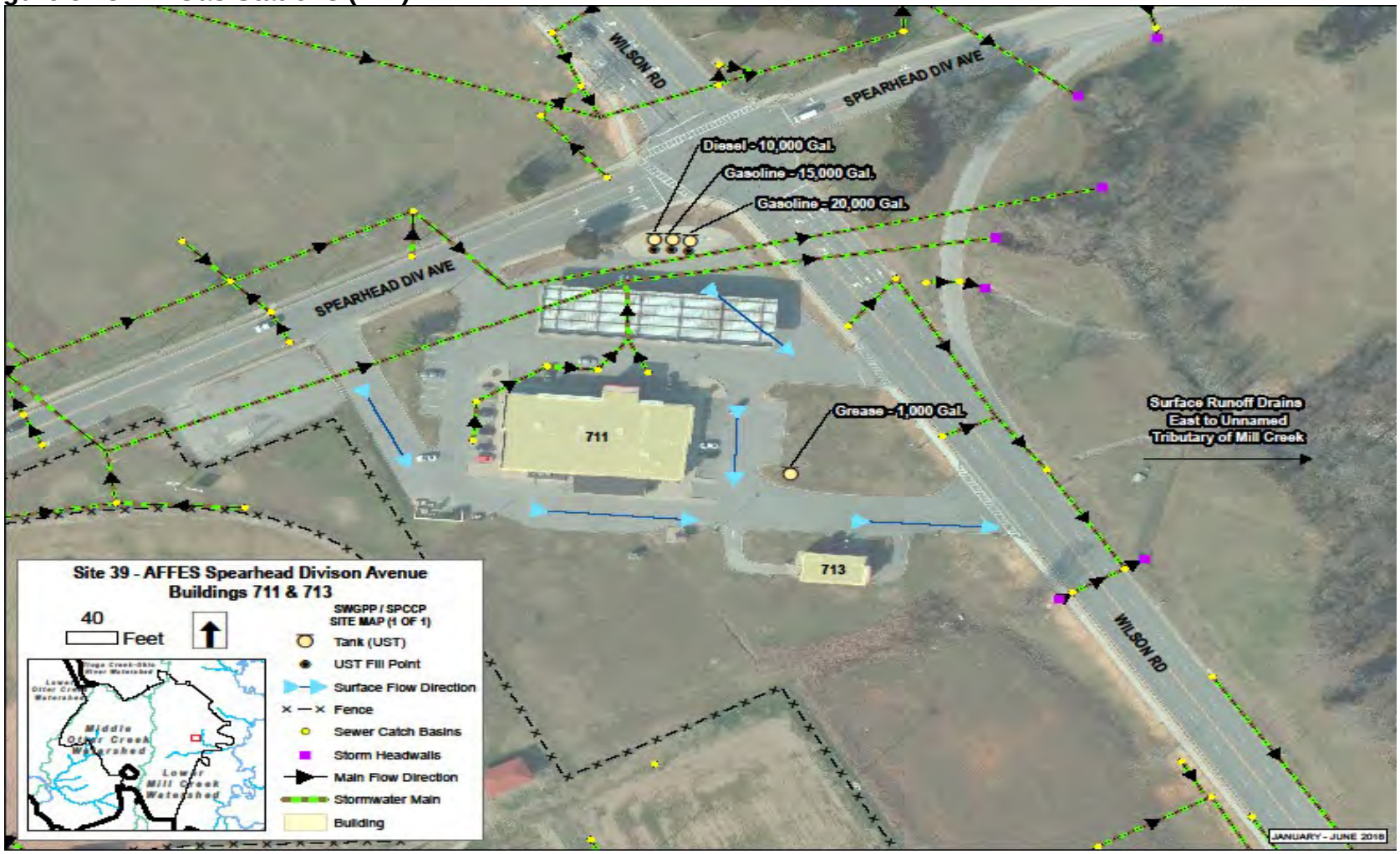
Contractor delivery trucks fill the gasoline tanks. Commercial pumps dispense fuel to customers. Table 5.13.2 provides product handling details.

Table 5.13.2 Gas Stations Product Handling

Container ID	Loading Method	Overfill Protection	Unloading Method
711AU	Truck	Automatic Tank Gauging (ATG)	Dispensed to Vehicles
711BU	Truck	ATG	
711CU	Truck	ATG	
711DU	Food Service	Manual	Discharged to Sewer
4995A	Truck	ATG	Dispensed to Vehicles
4995B	Truck	ATG	
4995C	Truck	ATG	

Figure 5.13.1 Gas Stations (4995)

Figure 5.13.1.A Gas Stations (711)



5.13.3 Secondary Containment

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

Table 5.13.3 Gas Stations Secondary Containment

Container ID	Type	Storm Water Release
711AU	Double-Walled	NA
711BU	Double-Walled	NA
711CU	Double-Walled	NA
711DU	Double-Walled	NA
4995A	Double-Walled	NA
4995B	Double-Walled	NA
4995C	Double-Walled	NA

5.13.4 Inspection and Testing

Records of certified inspections (for tanks greater than 5,000 gallons) are maintained by DPW EMD for the life of the container. Records of monthly visual inspections are maintained by DPW personnel for at least three years. Section 4.8 establishes the Fort Knox policy for the integrity testing of shop-built containers (and piping) with less than 5,000 gallons capacity. Inspection requirements for USTs are found in 40 CFR 280 and are not repeated in this SPCC Plan.

5.13.5 Potential Spill Scenarios

Complete container failure of an AST could result in a spill of 10,000 gallons. A leak from a UST could release 1,000 gallons. An error dispensing into a vehicle could spill 25 gallons. The loss of the entire contents of the fuel delivery truck could spill 5,000 gallons. A spill from the 711 area would flow east to an unnamed creek and then to Mill Creek and the Salt River. A spill from the 4995 area would flow west to Otter Creek (see Figures 2.1, 2.3, 5.13.1 and 5.131A). A spill in this area would trigger the spill response procedures listed in Section 4.7.

Table 5.13.4 Gas Stations Potential Spill Scenarios

Container ID	Spill Amount (Gallons)	Contents	Cause	Pathway
711AU	25	Gasoline	Dispensing Error	East to Mill Creek
	5,000		Delivery Truck Error	
711BU	25	Gasoline	Dispensing Error	East to Mill Creek
	5,000		Delivery Truck Error	

Container ID	Spill Amount (Gallons)	Contents	Cause	Pathway
711CU	25	Gasoline	Dispensing Error	East to Mill Creek
	5,000		Delivery Truck Error	
711DU	1000	Grease	Vacuum Truck Error	East to Mill Creek
4995A	10,000	Gasoline	Container Failure	West to Otter Creek
	25		Dispensing Error	
	5,000		Delivery Truck Error	
4995B	10,000	Gasoline	Container Failure	West to Otter Creek
	25		Dispensing Error	
	5,000		Delivery Truck Error	
4995C	10,000	Gasoline	Container Failure	West to Otter Creek
	25		Dispensing Error	
	5,000		Delivery Truck Error	

5.14 Equipment Concentration Site (ECS) Motor Pool (Building 5901) moved to Colby MP 2944 CLOSED – POL ASTs removed and fuel tank disconnected.

5.14.1 Area Description

This area is used for vehicle maintenance. There are two used oil ASTs and three drum storage areas, plus another fuel tank with a loading/unloading rack. Table 5.14.1 provides container details, and Figure 5.14.1 shows their locations.

Table 5.14.1 ECS Motor Pool Containers

Container ID	Type	Capacity (Gallons)	Material of Construction	Product Stored
~~5901A~~	~~AST, Vertical~~	~~660~~	~~Steel~~	~~Used Oil~~
~~5901B~~	~~AST, Vertical~~	~~660~~	~~Steel~~	~~Used Oil~~
~~5901DRA~~	~~55-G Dr~~	55 gallon drums relocated to Colby MP Building 2944		~~ic se~~
~~5901DRB~~	~~55-G Dr~~			~~ic Oil, el ze~~
~~5909DR~~	~~55-Gallon Drums~~	~~55 (up to 20)~~	~~Steel~~	~~Oil, Hydraulic Oil, Grease~~ ~~Antifreeze~~
5946	CLOSED	10,000	Steel	JP8

Does not contain oil, not regulated by 40 CFR 112

5.14.2 Product Handling

Contractor delivery trucks fill the fuel tank. JP8 is dispensed to military vehicles. Oil is dispensed from drums 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 5.14.2 provides product handling details.

Table 5.14.2 ECS Motor Pool Product Handling

Container ID	Loading Method	Overfill Protection	Unloading Method
5901A	M	Relocated to Colby MP Building 2944	m Truck
5901B	Manual	Sight Gauge	Vacuum Truck
5901DRB	NA	NA	Dispensed for Maintenance

5901DRB (N	Relocated to Colby MP Building 2944		d for nce
5901DRB (Used)			ruck
5909DR			her Ar-
5946			o Vehi- cles

5.14.3 Secondary Containment

The ASTs are double-walled and do not collect storm water. The drums are in steel conexes or on containment pallets. The drums at 5901DRB are on pallets that are too small (See Corrective Actions, Section 6.0). The loading/unloading rack has a concrete berm with a valve to release storm water. The loading/unloading rack and drum storage conexes containment volume calculations are in Appendix D.

Table 5.14.3 ECS Motor Pool Secondary Containment

Container ID	Type	Storm Water Release
5	Relocated to Colby MP Building 2944	
5		
590		
590		
59		
5		
5946 load rack	CLOSED	manual

Figure 5.14.1 ECS Motor Pool (Building 5901)

5.14.4 Inspection and Testing

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

5.14.5 Potential Spill Scenarios

Complete container failure of an AST could result in a spill of up to 10,000 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 5,000 gallons. The loss of the entire contents of the vacuum collection truck could spill 3,000 gallons. Any spill from this area would flow east across the parking lot and then north to an unnamed tributary and the Salt River (see Figures 2.1 and 5.14.1). A spill in this area would trigger the spill response procedures listed in Section 4.7.

Table 5.14.4 ECS Motor Pool Potential Spill Scenarios

Container ID	Spill Amount (Gallons)	Contents	Cause	Pathway
5901A	Relocated to Colby MP Building 2944			
5901B				
5901DRA				

Container ID	Spill Amount (Gallons)	Contents	Cause	Pathway
5901DRB	55	Relocated to Colby MP Building 2944		en med the
	5			
	5			
5909DR	55			en med the
5946	10,000	CLOSED	Container Failure	East and then north to unnamed tributary and the Salt River
	50		Dispensing Error	
			Unloading to ile Refueler	
	5,000		Delivery Truck Er-ror	

Does not contain oil, not regulated by 40 CFR 112

5.15 Potts Fuel Point (Building 6135) CLOSED – FUEL TANKS DISCONNECTED

5.15.1 Area Description

Building 6135 is a fuel point for military vehicles. There are three ASTs to dispense fuel. Table 5.15.1 provides container details, and Figure 5.15.1 shows their locations.

Table 5.15.1 Potts Fuel Point Containers

Container ID	Type	Capacity (Gallons)	Material of Construction	Product Stored
6135A	A	00	Steel	JP8
6135B	A	00	Steel	JP8
6135C	A	00	Steel	JP8

CLOSED

5.15.2 Product Handling

Contractor delivery trucks fill the AST. Fuel is dispensed into vehicles/equipment and also through the loading rack into mobile refuelers. Table 5.15.2 provides product handling details.

Table 5.15.2 Potts Fuel Point Product Handling

Container ID	Loading Method	Overfill Protection	Unloading Method
~~6135A – 6135C~~	~~Truck~~	~~Automatic Tank Gauging~~	~~Dispensed to Vehicles~~

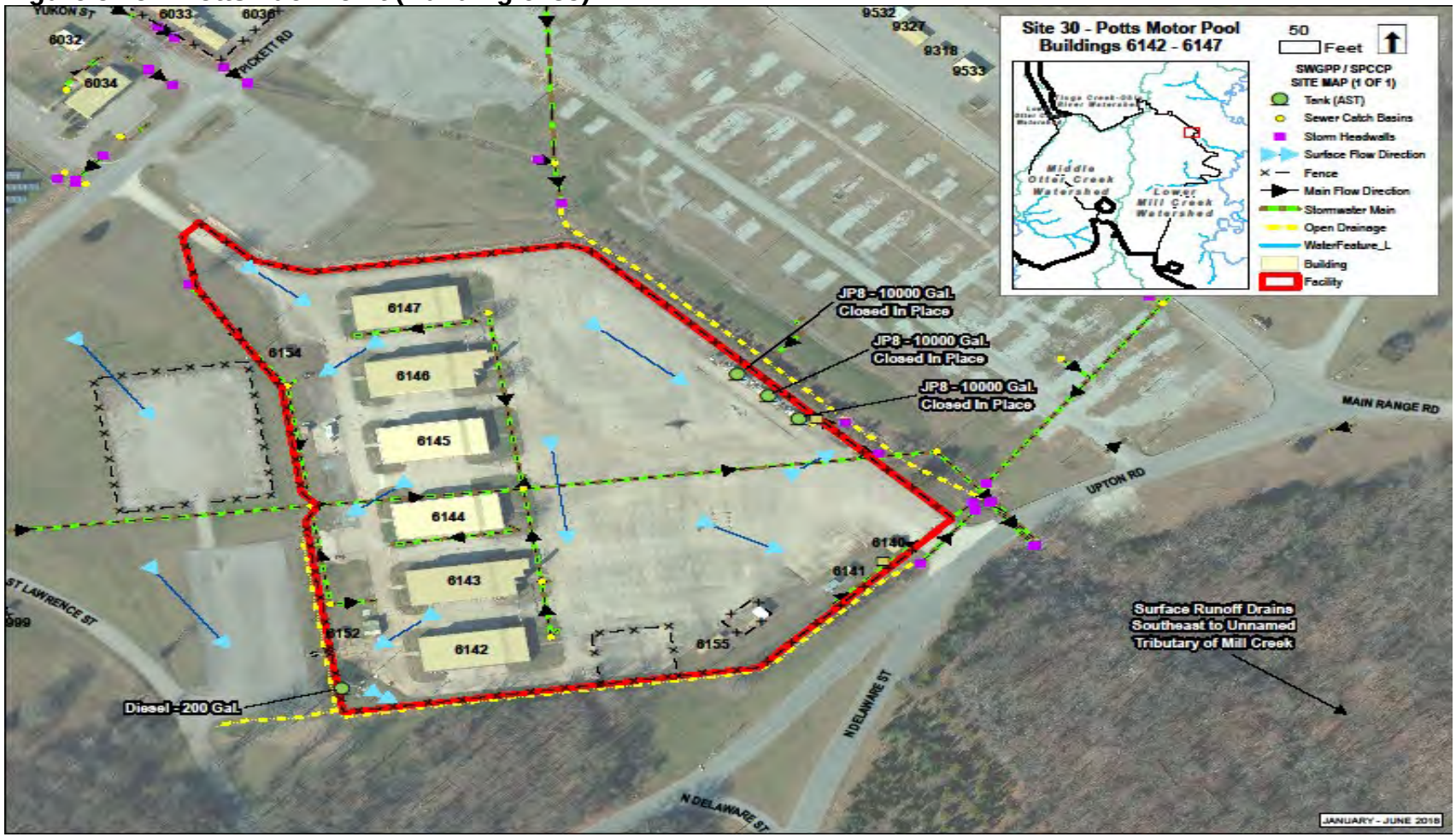
5.15.3 Secondary Containment

The ASTs are double-walled and do not collect storm water. The loading/unloading rack has a concrete berm with a valve to release storm water. The loading/unloading rack containment volume calculation is in Appendix D. Personnel follow the rainwater release procedures found in Section 4.10.

Table 5.15.3 Potts Fuel Point Secondary Containment

Container ID	Type	Storm Water Release
~~6135A – 6135C~~	~~Double-walled~~	~~NA~~
~~6135 Loading/Unloading Rack~~	~~Concrete Dike~~	~~Manual~~

Figure 5.15.1 Potts Fuel Point (Building 6135)



5.15.4 Inspection and Testing

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

5.15.5 Potential Spill Scenarios

Complete container failure of an AST could result in a spill of up to 10,000 gallons. 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 southeast to a storm water inlet and then to Mill Creek east to the Salt River (see Figures 2.1, and 5.15.1). A spill in this area would trigger the spill response procedures listed in Section 4.7.

Table 5.15.4 Potts Potential Spill Scenarios

Container ID	Spill Amount (Gallons)	Contents	Cause	Pathway
~~6135A - 6135C~~	~~10,000~~	~~JP8~~	~~Container Failure~~	~~Southeast to Mill Creek and then the Salt River~~
	~~50~~		~~Dispensing Error~~	
	~~3,000~~		~~Error Unloading to Mobile Refueler~~	
	~~5,000~~		~~Delivery Truck Error~~	

5.16 Marines Motor Pool (Building 7238)

5.16.1 Area Description

This area is used for vehicle maintenance. There is a drum storage area and a mobile refueler. Table 5.16.1 provides container details, and Figure 5.16.1 shows their locations.

Table 5.16.1 Marines Motor Pool Containers

Container ID	Type	Capacity (Gallons)	Material of Construction	Product Stored
7238DR	55-Gallon Drums	55 (up to 4)	Steel	Used Anti-freeze
7238DRA	55-Gallon Drums	55 (up to 2)	Steel	Oil
7238M	Mobile Refueler	2,000	Steel	JP8
7238A	AST, Vertical	120	Steel	Used OIl

Does not contain oil, not regulated by 40 CFR 112

5.16.2 Product Handling

The used product containers are filled by manually pouring used products into the drum or AST. The used product containers are emptied via vacuum truck. The mobile refueler is not filled onsite. Table 5.16.2 provides product handling details.

Table 5.16.2 Marines Motor Pool Product Handling

Container ID	Loading Method	Overfill Protection	Unloading Method
7238DR	Manual	Visual	Vacuum Truck
7238DRA	Manual	Visual	Dispensed for Vehicle Service
7238M	Fuel Point	Automatic Shutoff	Dispensed to Vehicles
7238A	Manual	Visual	Vacuum Truck

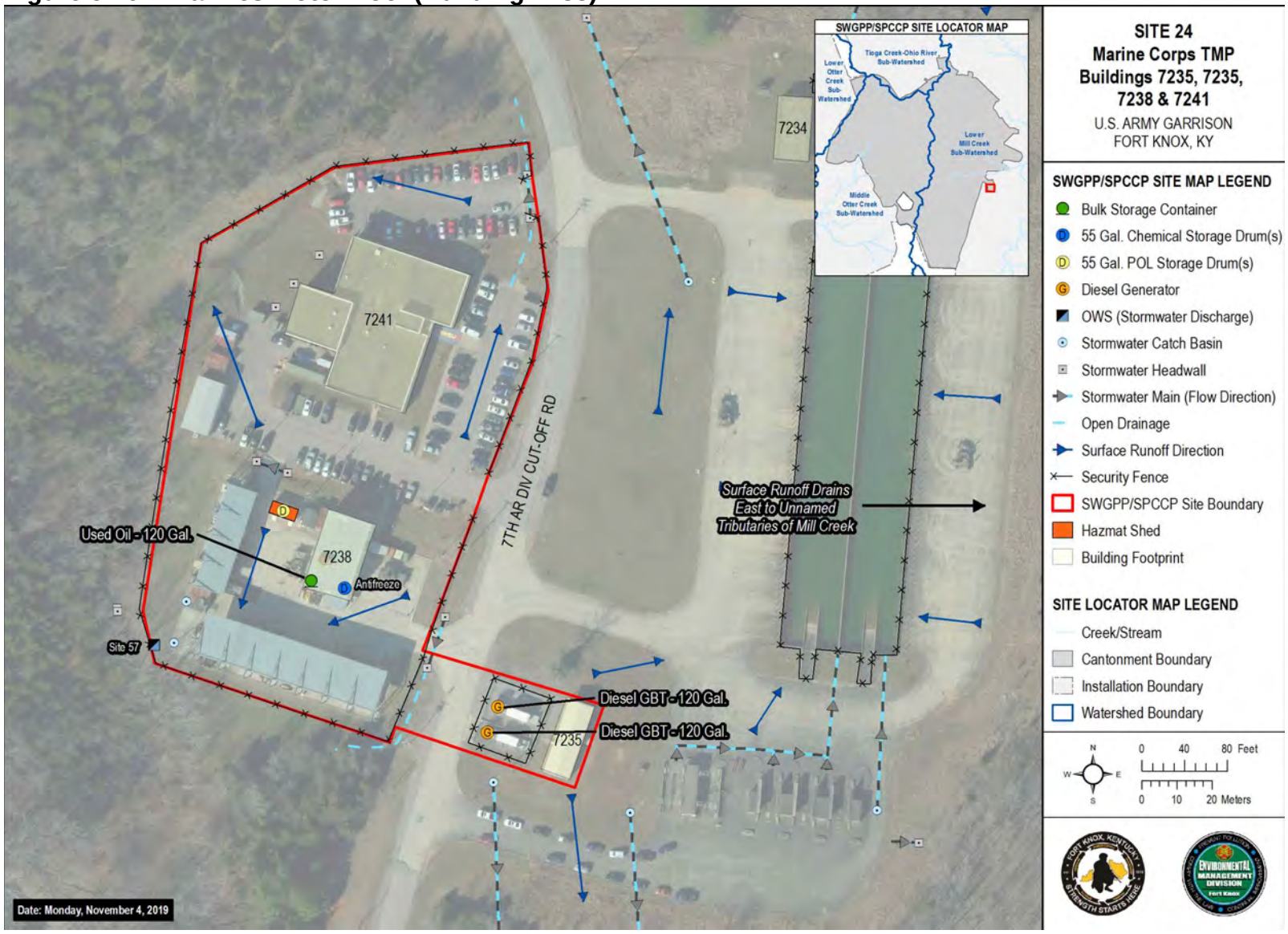
5.16.3 Secondary Containment

The drums are on containment pallets. The mobile refueler does not have secondary containment.

Table 5.16.3 Marines Motor Pool Secondary Containment

Container ID	Type	Storm Water Release
7238DR	Plastic Containment Pallet	NA
7238DRA	Secondary Containment	NA
7238M	None	NA
7238A	Double-walled	NA

Figure 5.16.1 Marines Motor Pool (Building 7238)



5.16.4 Inspection and Testing

Records of monthly visual inspections are maintained by DPW personnel for at least three years. Sections 4.8 and 4.9 establish the Fort Knox 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

An error transferring in or out of drums or storage tanks 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 mobile refueler truck could spill 2,000 gallons. Any spill in this area that is outside of a building would flow west across the parking lot to a storm water inlet and then east to Mill Creek and then the Salt River (see Figures 2.1, 2.2, 2.4 and 5.16.1). A spill in this area would trigger the spill response procedures listed in Section 4.7.

Table 5.16.4 Marines Motor Pool Potential Spill Scenarios

Container ID	Spill Amount (Gallons)	Contents	Cause	Pathway
7238DR	55	Used Anti-freeze	Container Failure	NA – inside of building
7238M	2,000	JP8	Container Failure	West to inlet then east to Mill Creek and east to the Salt River
7238A	120	Used Oil	Container Failure	NA – inside of building

Does not contain oil, not regulated by 40 CFR 112

5.17 Grounds Contractor Fuel Point (Building 7331)

5.17.1 Area Description

Building 7331 is a vehicle fuel point. There are two ASTs to dispense fuel to contractor vehicles. Table 5.17.1 provides container details, and Figure 5.17.1 shows their locations.

Table 5.17.1 Grounds Contractor Fuel Point Containers

Container ID	Type	Capacity (Gallons)	Material of Construction	Product Stored
7331A	AST, Horizontal	1,000	Steel	Gasoline
7331B	AST, Horizontal	1,000	Steel	Diesel
7331DR	Drums	55 (Up to 3 drums)	Steel	Oil and Used Oil

5.17.2 Product Handling

Contractor delivery trucks fill the ASTs. Fuel is then dispensed into vehicles/equipment. The ASTs do not have required level gauges or spill catchment buckets to prevent overfills (see Corrective Actions, Section 6.0). Table 5.17.2 provides product handling details.

Table 5.17.2 Grounds Contractor Fuel Point Product Handling

Container ID	Loading Method	Overfill Protection	Unloading Method
7331A	Truck	None	Dispensed to Vehicles
7331B	Truck	None	Dispensed to Vehicles
7331DR	Manual	None	Dumped into drum

5.17.3 Secondary Containment

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

Table 5.17.3 Grounds Contractor Fuel Point Secondary Containment

Container ID	Type	Storm Water Release
7331A	Double-walled	NA
7331B	Double-walled	NA
7331DR	Containment Pallet	NA

Figure 5.17.1 Grounds Contractor Fuel Point (Building 7331)

5.17.4 Inspection and Testing

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

5.17.5 Potential Spill Scenarios

Complete container failure of an AST could result in a spill of up to 1,000 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 east in open drainage to Mill Creek and the Salt River (see Figures 2.1, 2.4 and 5.17.1). A spill in this area would trigger the spill response procedures listed in Section 4.7.

Table 5.17.4 Grounds Contractor Potential Spill Scenarios

Container ID	Spill Amount (Gallons)	Contents	Cause	Pathway
7331A	1,000	Gasoline	Container Failure	East in open drainage to Mill Creek and the Salt River
	25		Dispensing Error	
	3,000		Delivery Truck Error	
7331B	1,000	Diesel	Container Failure	East in open drainage to Mill Creek and the Salt River
	25		Dispensing Error	
	3,000		Delivery Truck Error	
7331DR	5	Used Oil	Dumping Error	East in open drainage to Mill Creek and the Salt River
	55		Vacuum Truck Error	

5.18 School Bus Maintenance (Building 7422)

5.18.1 Area Description

This building is the school bus maintenance area. There is an AST that dispenses diesel for buses and a maintenance area with drums. Table 5.18.1 provides container details, and Figure 5.18.1 shows their locations.

Table 5.18.1 School Bus Maintenance Containers

Container ID	Type	Capacity (Gallons)	Material of Construction	Product Stored
7422	AST, Horizontal	3,000	Steel	Diesel
7422DR	55-Gallon Drums	55 (up to 4)	Steel	Oil, Used Oil
				Antifreeze

Does not contain oil, not regulated by 40 CFR 112

5.18.2 Product Handling

Contractor delivery trucks fill the AST. An electric pump is used to dispense. Products are dispensed with hand pumps and used oil is collected manually in small containers for transfer into drums. Table 5.18.2 provides product handling details.

Table 5.18.2 School Bus Maintenance Product Handling

Container ID	Loading Method	Overfill Protection	Unloading Method
7422	Truck	Sight Gauge	Dispensed to Vehicles
7422DR (New)	NA	NA	Dispensed for Maintenance
7422DRA (Used)	Manual	Visual	Vacuum Truck

5.18.3 Secondary Containment

The AST has a steel dike. Secondary containment has a plug in the drain port. Drain plug is left in place unless draining off non-contaminated rain water. See Appendix D for volume calculations for diked areas. If the valves are closed, then storm water will be drained by the procedures in Section 4.10. The drums are on plastic containment pallets.

Figure 5.18.1 School Bus Maintenance (Building 7422)

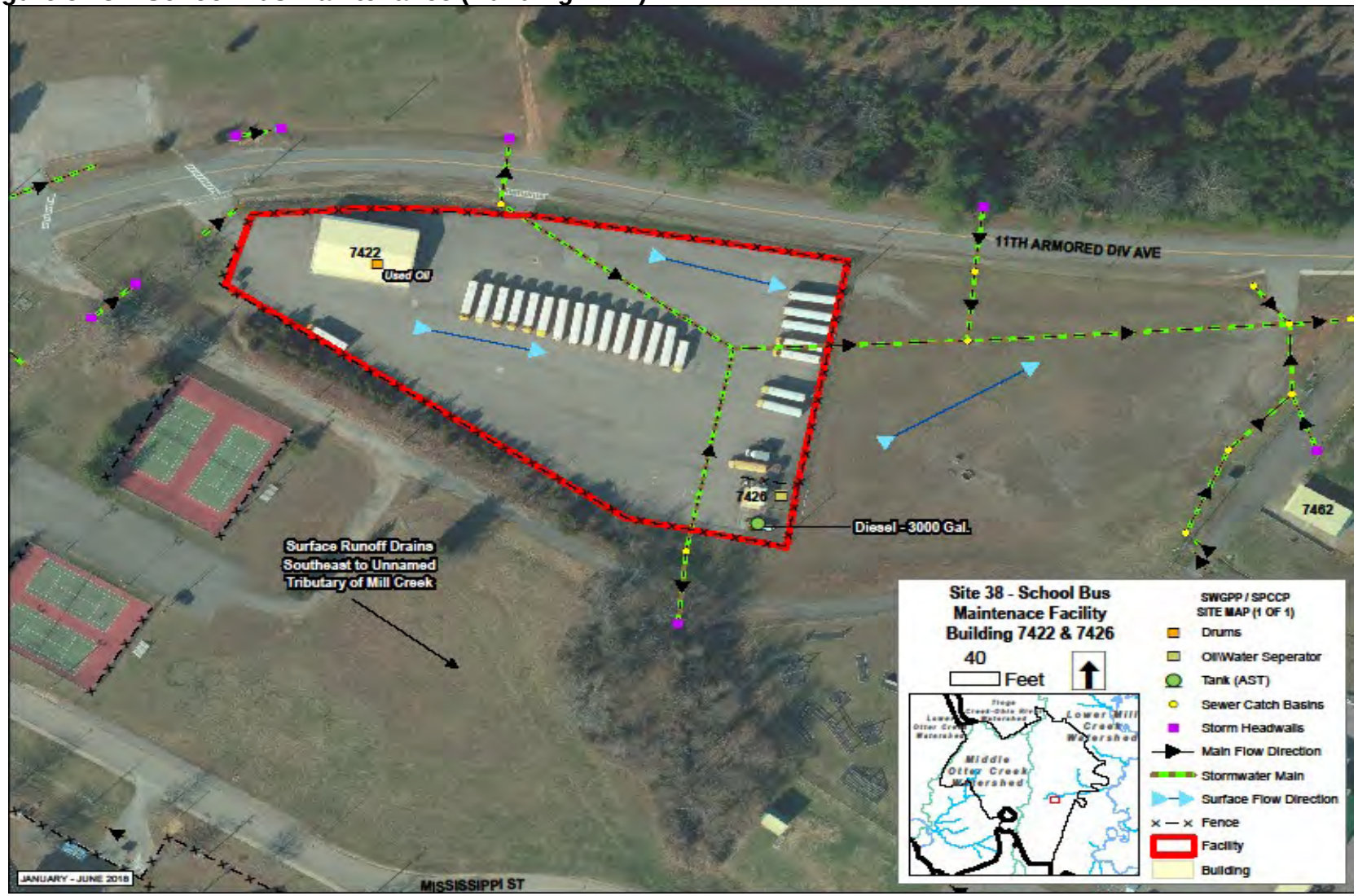


Table 5.18.3 School Bus Maintenance Secondary Containment

Container ID	Type	Storm Water Release
7422	Steel Dike	Manual
7422DR	Plastic Containment Pallets	NA

5.18.4 Inspection and Testing

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

5.18.5 Potential Spill Scenarios

Complete container failure of an AST could result in a spill of up to 3,000 gallons. The loss of the entire contents of the fuel delivery tanker truck could spill 3,000 gallons. It is assumed that only one drum would spill in a given event. Any spill from this area would flow northeast in open drainage to Mill Creek and the Salt River (see Figures 2.1, 2.4 and 5.18.1). A spill in this area would trigger the spill response procedures listed in Section 4.7.

Table 5.18.4 School Bus Maintenance Potential Spill Scenarios

Container ID	Spill Amount (Gallons)	Contents	Cause	Pathway
7422	3,000	Diesel	Container Failure	Northeast to Mill Creek and the Salt River
	25		Dispensing Error	
	3,000		Delivery Truck Error	
7422DR	55	Oil, Used Oil	Container Failure	Northeast to Mill Creek and the Salt River
	5	Antifreeze	Transfer Error	

Does not contain oil, not regulated by 40 CFR 112

5.19 Pool Hall (Building 9312)

5.19.1 Area Description

The Pool Hall building houses training aid production. Plastic models are made using a two component chemical reaction. One component is a hazardous chemical stored in drums. Table 5.19.1 provides container details, and Figure 5.19.1 shows the location.

Table 5.19.1 Pool Hall Containers

Container ID	Type	Capacity (Gallons)	Material of Construction	Product Stored
9312DR	55-Gallon Drums	55 (up to 4)	Steel	Phenyl-Iso-cyanate

Does not contain oil, not regulated by 40 CFR 112

5.19.2 Product Handling

The chemicals are dispensed from the drums into molds for reaction. Table 5.19.2 provides product handling details.

Table 5.19.2 Pool Hall Product Handling

Container ID	Loading Method	Overfill Protection	Unloading Method
9312DR	NA	NA	Used in Plastic

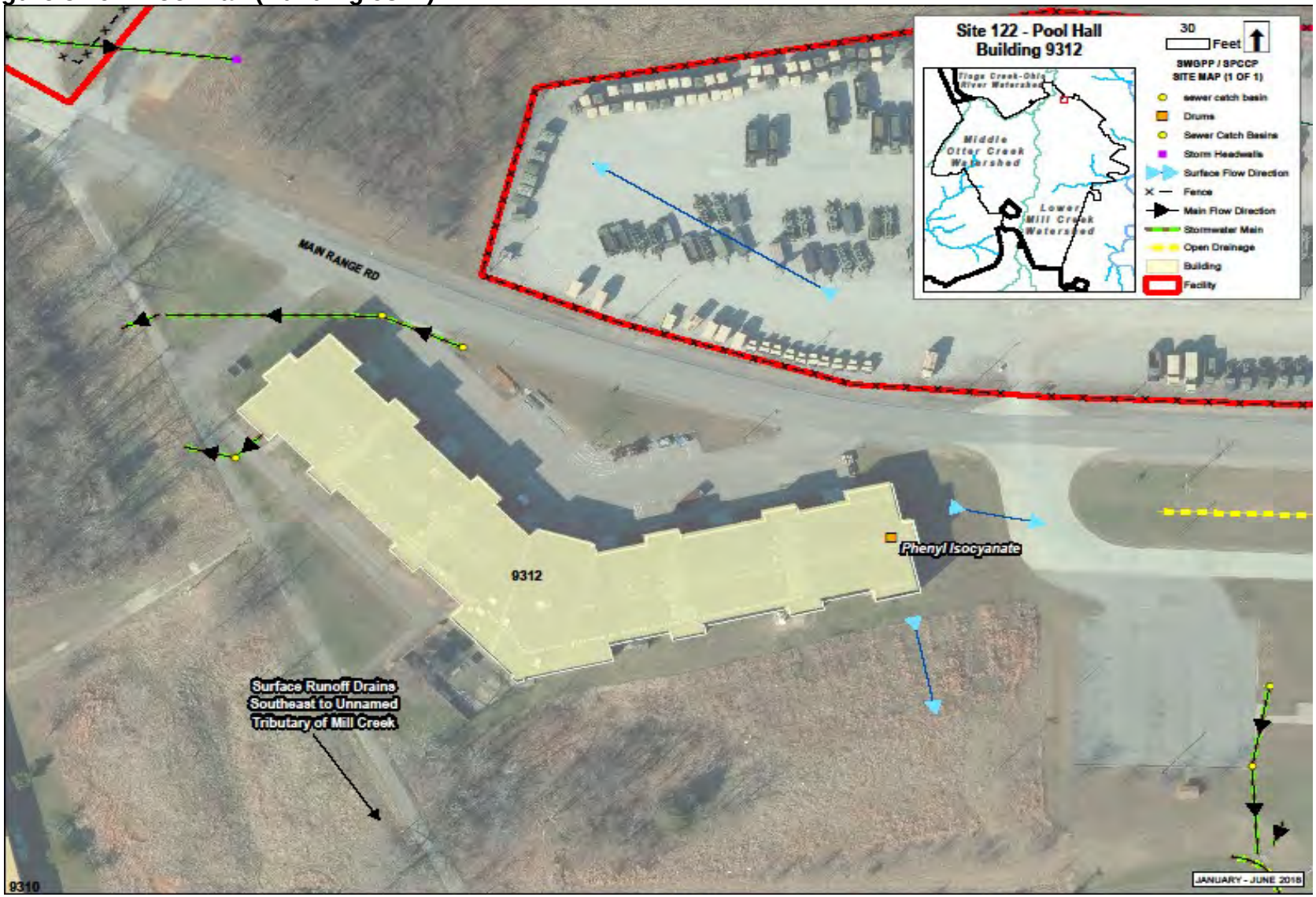
5.19.3 Secondary Containment

The drums are on spill containment pallets.

Table 5.19.3 2800 Area Secondary Containment

Container ID	Type	Storm Water Release
9312DR	Plastic Containment Pal-lets	NA

Figure 5.19.1 Pool Hall (Building 9312)



5.19.4 Inspection and Testing

Records of monthly visual inspections are maintained by DPW personnel for at least three years. Section 4.9 establishes the Fort Knox policy for the integrity testing of portable containers.

5.19.5 Potential Spill Scenarios

It is assumed only one drum would spill in a given event. Any spill from this area would flow east in open drainage and then north to Tollgate Creek and the Salt River (see Figures 2.4 and 5.19.1). A spill in this area would trigger the spill response procedures listed in Section 4.7.

Table 5.19.4 Pool Hall Potential Spill Scenarios

Container ID	Spill Amount (Gallons)	Contents	Cause	Pathway
9312DR	55	Phenyl-isocyanate	Container Failure	East in open drainage and then north to Tollgate Creek and the Salt River
	5		Transfer Error	

Does not contain oil, not regulated by 40 CFR 112

5.20 Wilson Road Washrack (Building 9357)

5.20.1 Area Description

The vehicle washrack on Wilson Road (Building 9357) has a used oil tank for oil skimmed from the surface of the water. Table 5.20.1 provides container details, and Figure 5.20.1 shows the location.

Table 5.20.1 Wilson Road Washrack Containers

Container ID	Type	Capacity (Gallons)	Material of Construction	Product Stored
9357	AST, Horizontal	500	Steel	Used Oil

5.20.2 Product Handling

A rope skimmer collects oil floating on the surface of a water basin and deposits it into the tank. A vacuum truck empties the tank. Table 5.20.2 provides product handling details.

Table 5.20.2 Wilson Road Washrack Product Handling

Container ID	Loading Method	Overfill Protection	Unloading Method
9357	Rope Skimmer	Sight Gauge	Vacuum Truck

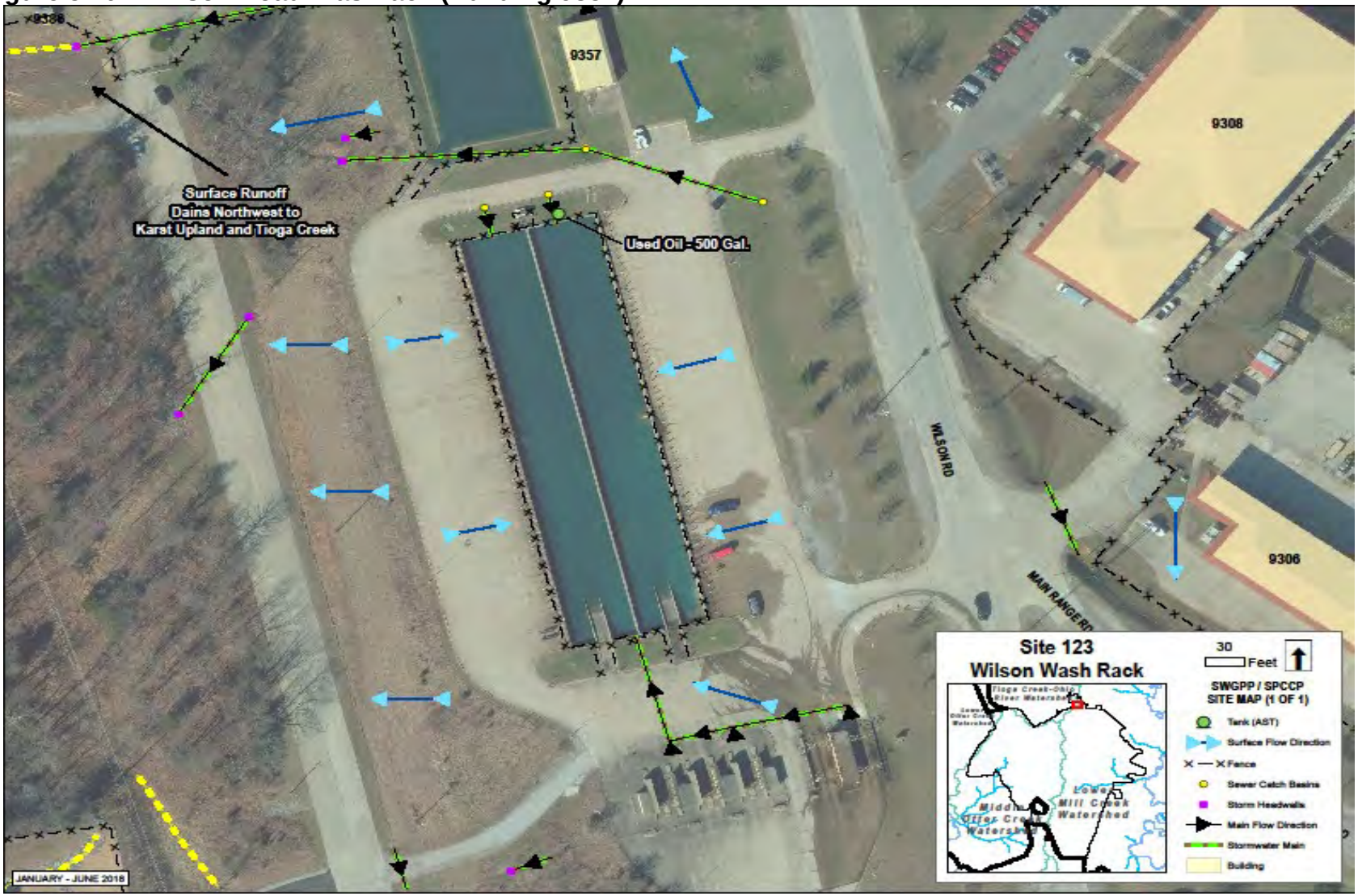
5.20.3 Secondary Containment

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

Table 5.20.3 Wilson Road Washrack Secondary Containment

Container ID	Type	Storm Water Release
9357	Double-walled	NA

Figure 5.20.1 Wilson Road Washrack (Building 9357)



5.20.4 Inspection and Testing

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

5.20.5 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 vacuum tanker truck could spill 3,000 gallons. Any spill from this area would flow east in pipes to Tollgate Creek and the Salt River (see Figures 2.1, 5.20.1). A spill in this area would trigger the spill response procedures listed in Section 4.7.

Table 5.20.3 Wilson Road Washrack Potential Spill Scenarios

Container ID	Spill Amount (Gallons)	Contents	Cause	Pathway
9357	500	Used Oil	Container Failure	East in pipes to Tollgate Creek and the Salt River
	5		Transfer Error	
	3,000		Vacuum Truck Error	

5.21 Landfill (Building 9359)

5.21.1 Area Description

The landfill has ASTs for fueling equipment and vehicles and tanks to hold various oils and used oils. Table 5.21.1 provides container details, and Figure 5.21.1 shows their locations.

Table 5.21.1 Landfill Containers

Container ID	Type	Capacity (Gallons)	Material of Construction	Product Stored
9359A	AST, Horizontal	2,000	Steel	Diesel
9359B	AST, Horizontal	1,000	Steel	Diesel
9359C	AST, Horizontal	500	Steel	Used Oil
9359D	AST, Horizontal	275	Steel	Oil
9359E	AST, Horizontal	275	Steel	Hydraulic Oil
9359DR	55-Gallon Drums	55 (up to 4)	Steel	Used Oil

5.21.2 Product Handling

Contractor delivery trucks fill the diesel tanks. Collection tanks and drums are filled by pumping from smaller collection containers and emptied by vacuum truck. The oil and hydraulic oil tanks are filled by pumping from drums of new product.

Table 5.21.2 Landfill Product Handling

Container ID	Loading Method	Overfill Protection	Unloading Method
9359A	Truck	Sight Gauge	Dispensed to Vehicles
9359B	Truck	Sight Gauge	Dispensed to Vehicles
9359C	Pumped from Containers	Sight Gauge	Vacuum Truck
9359D	Pumped from Drums	Sight Gauge	Dispensed for Maintenance
9359E	Pumped from Drums	Sight Gauge	Dispensed for Maintenance
9359DR	Manual	Visual	Vacuum Truck

5.21.3 Secondary Containment

The fuel tanks in the maintenance area are double-walled. The other tanks are inside steel containment dikes. The containment for AST 9359C is too small to contain the entire volume of the tank (see Corrective Actions, Section 6.0). See Appendix D for volume calculations of the diked area. The drums are on spill containment pallets.

Table 5.21.3 Landfill Secondary Containment

Container ID	Type	Storm Water Release
9359A	Double-walled	NA
9359B	Double-walled	NA
9359C	Steel Dike - Inside	NA
9359D	Steel Dike - Inside	NA
9359E	Steel Dike - Inside	NA
9359DR	Plastic Containment Pal-lets	NA

5.21.4 Inspection and Testing

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

Figure 5.21.1 Landfill (Building 9359)

5.21.5 Potential Spill Scenarios

Complete container failure of an AST could result in a spill of up to 2,000 gallons. The loss of the entire contents of the fuel delivery or vacuum tanker trucks could spill 3,000 gallons. It is assumed only one drum would spill in a given event. There are low lying areas at this site that might cause a spill to simply pool nearby, but any spill that leaves this area would flow southwest in open drainage and unnamed creek to Otter Creek (see Figures 2.1 and 5.21.1). A spill in this area would trigger the spill response procedures listed in Section 4.7.

Table 5.21.4 Landfill Potential Spill Scenarios

Container ID	Spill Amount (Gallons)	Contents	Cause	Pathway
9359A	2,000	Diesel	Container Failure	Southwest in open drainage to Otter Creek
	25		Dispensing Error	
	3,000		Delivery Truck Error	
9359B	1,000	Diesel	Container Failure	
	25		Dispensing Error	
	3,000		Delivery Truck Error	
9359C	500	Used Oil	Container Failure	Southwest in open drainage to Otter Creek
	5		Transfer Error	
	3,000		Vacuum Truck Error	
9359D	275	Oil	Container Failure	Southwest in open drainage to Otter Creek
	55		Transfer Error	
9359E	275	Hydraulic Oil	Container Failure	Southwest in open drainage to Otter Creek
	55		Transfer Error	
9359DR	55	Oil	Container Failure	Southwest in open drainage to Otter Creek
	5		Dispensing Error	

5.22 Maneuver Area Training Equipment Site (MATES) (Building 9387)

1NOV17 Update: Modified antifreeze tank information, removed unused tanks, and corrected used oil tank volumes

5.22.1 Area Description

The MATES area is a large motor pool and vehicle maintenance facility. A fuel supply area is in one corner and the maintenance bays have numerous used oil tanks and drum storage areas. Table 5.22.1 provides container details, and Figure 5.22.1 shows their locations.

Table 5.22.1 MATES Containers

Container ID	Type	Capacity (Gallons)	Material of Construction	Product Stored
9387A	AST, Horizontal	10,000	Steel	Diesel
9387B	AST, Horizontal	10,000	Steel	Diesel
9387C	AST, Horizontal	500	Steel	Used Oil
9387D	AST, Horizontal	480	Steel	Used Oil
9387E	AST, Horizontal	480	Steel	Used Oil
9387F	AST, Horizontal	480	Steel	Used Oil
9387G	AST, Horizontal	480	Steel	Used Oil
9387H	AST, Vertical	500	Steel	Used Anti-freeze
9387I	AST, Horizontal	480	Steel	Used Oil
9387M	Mobile Refueler	2,500 (up to 20 trucks)	Steel	JP8
9387DRA	55-Gallon Drums	55 (up to 2)	Steel	Used Oil
9387DRB	55-Gallon Drums	55 (up to 12)	Steel	Oil, Hydrau-lic Oil, Grease Antifreeze
9387DRC	55-Gallon Drums	55 (up to 24)	Steel	Oil, Hydraulic Oil, Grease Antifreeze
9387DRD	55-Gallon Drums	55 (up to 40)	Steel	Oil, Hydraulic Oil, Grease Antifreeze

9387DRE	55-Gallon Drums	55 (up to 2)	Steel	Oil
9387DRF	55-Gallon Drums	55 (up to 5)	Steel	Oil, Hydraulic Oil, Grease
				Antifreeze

Does not contain oil, not regulated by 40 CFR 112

5.22.2 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 5.22.2 provides product handling details.

Table 5.22.2 MATES Product Handling

Container ID	Loading Method	Overfill Protection	Unloading Method
9387A	Truck	Automatic Tank Gauging	Dispensed to Vehicles or Loading Rack
9387B	Truck	Automatic Tank Gauging	
9387C	Manual	Sight Gauge	Burned in Heater
9387D	Manual	Sight Gauge	Burned in Heater
9387E	Manual	Sight Gauge	Burned in Heater
9387F	Manual	Sight Gauge	Burned in Heater
9387G	Manual	Sight Gauge	Burned in Heater
9387H	Manual	Visual	Vacuum Truck
9387I	Manual	Sight Gauge	Burned in Heater
9387M	Loading Rack	Automatic Tank Gauging	Dispensed to Vehicles
9387DRA	Manual	Visual	Vacuum Truck
9387DRB	NA	NA	Dispensed for Maintenance
9387DRC	NA	NA	Dispensed for Maintenance
9387DRD	NA	NA	Dispensed for Maintenance
9387DRE	NA	NA	Dispensed for Maintenance
9387DRF	NA	NA	Dispensed for Maintenance

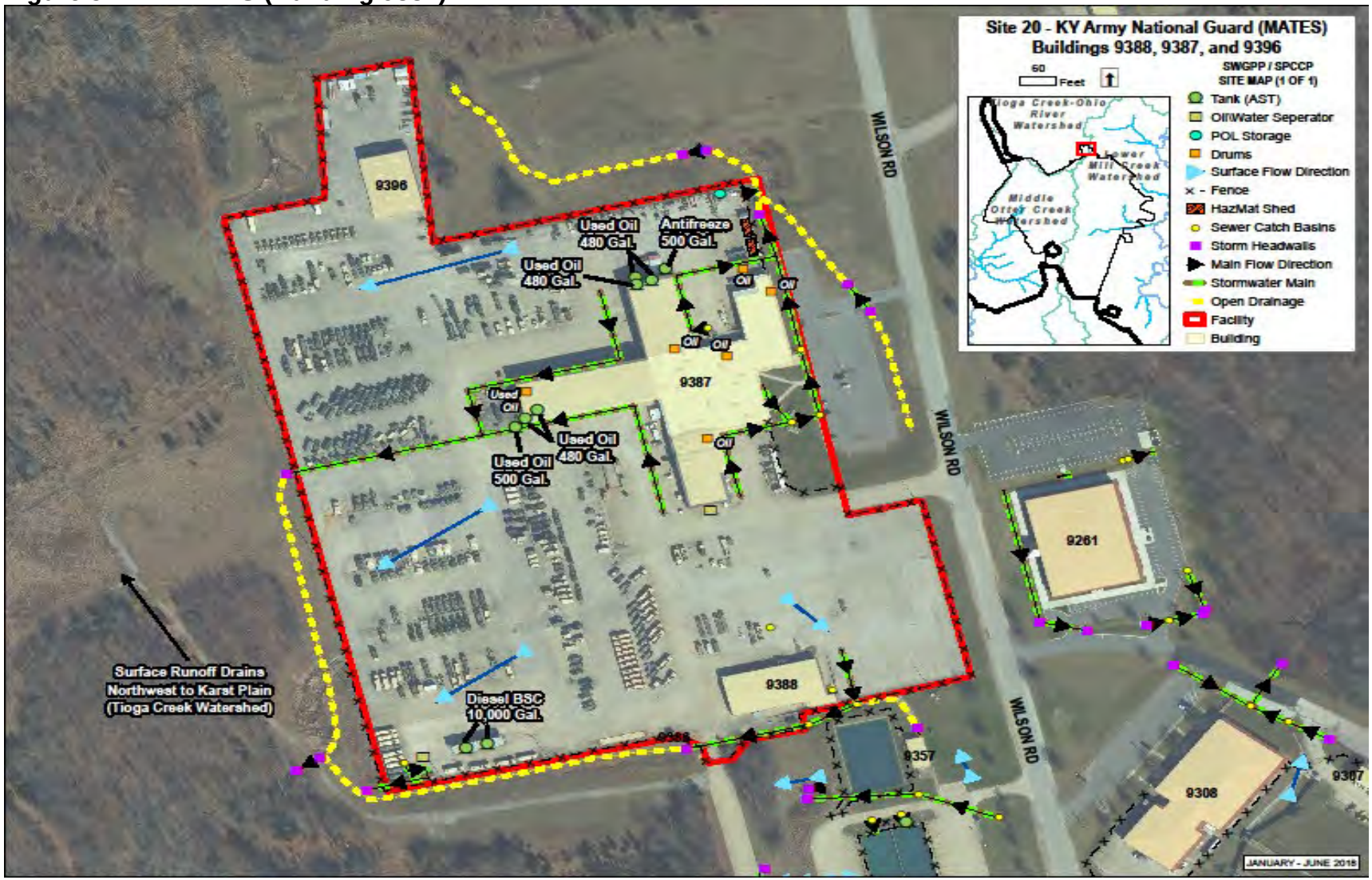
5.22.3 Secondary Containment

The ASTs are double-walled, except for the two diesel tanks which have covered steel dikes. The drums are on plastic containment pallets or in steel containment conexes. Appendix D contains volume calculations for the containment areas. The covered steel dikes collect very little rainwater, but when necessary, personnel follow the rainwater release procedures found in Section 4.10.

Table 5.22.3 MATES Secondary Containment

Container ID	Type	Storm Water Release
9387A	Covered Steel Dike	NA
9387B	Covered Steel Dike	NA
9387C	Double-walled	NA
9387D	Double-walled	NA
9387E	Double-walled	NA
9387F	Double-walled	NA
9387G	Double-walled	NA
9387H	Double-walled	NA
9387I	Double-walled	NA
9387M	None	NA
9387DRA	None	NA
9387DRB	Plastic Containment Pallet	NA
9387DRC	Steel Conex	NA
9387DRD	Steel Conex	NA
9387DRE	Plastic Containment Pallet	NA
9387DRF	None	NA

Figure 5.22.1 MATES (Building 9387)



5.22.4 Inspection and Testing

Records of certified inspections (for tanks greater than 5,000 gallons) are maintained by DPW EMD for the life of the container. Records of monthly visual inspections are maintained by DPW personnel for at least three years. Sections 4.8 and 4.9 establish the Fort Knox policies for the integrity testing of small steel tanks (5,000 gallons or less) and portable containers.

5.22.5 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 west across concrete to a storm water inlet and then west to Otter Creek (see Figures 2.1, 2.4 and 5.22.1). A spill in this area would trigger the spill response procedures listed in Section 4.7.

Table 5.22.4 MATES Potential Spill Scenarios

Container ID	Spill Amount (Gallons)	Contents	Cause	Pathway
9387A	10,000	Diesel	Container Failure	West to drop inlet and then west to Otter Creek
	50		Dispensing Error	
	3,000		Error Unloading to Mobile Refueler	
	5,000		Delivery Truck Error	
9387B	10,000	Diesel	Container Failure	West to drop inlet and then west to Otter Creek
	50		Dispensing Error	
	3,000		Error Unloading to Mobile Refueler	
	5,000		Delivery Truck Error	
9387C	480	Used Oil	Container Failure	Southwest to drop inlet and then west to Otter Creek
	5		Transfer Error	
9387D	480	Used Oil	Container Failure	Southwest to drop inlet and then west to Otter Creek
	5		Transfer Error	
9387E	480	Used Oil	Container Failure	West to drop inlet and then west to Otter Creek
	5		Transfer Error	
9387F	480	Used Oil	Container Failure	West to drop inlet and then west to Otter Creek
	5		Transfer Error	

Container ID	Spill Amount (Gallons)	Contents	Cause	Pathway
9387G	500	Used Oil	Container Failure	West to drop inlet and then west to Otter Creek
	5		Transfer Error	
9387H	500	Used Anti-freeze	Container Failure	West to drop inlet and then west to Otter Creek
	5		Transfer Error	
	3,000		Vacuum Truck	
9387I	480	Used Oil	Container Failure	West to drop inlet and then west to Otter Creek
	5		Transfer Error	
9387M	2,500	JP8	Container Failure	West to drop inlet and then west to Otter Creek
9387DRA	55	Used Oil	Container Failure	West to drop inlet and then west to Otter Creek
	5		Transfer Error	
9387DRB	55	Oil, Hydrau-lic Oil, Grease	Container Failure	West to drop inlet and then west to Otter Creek
	5	Antifreeze	Dispensing Error	
9387DRC	55	Oil, Hydrau-lic Oil, Grease	Container Failure	West to drop inlet and then west to Otter Creek
	5	Antifreeze	Dispensing Error	
9387DRD	55	Oil, Hydrau-lic Oil, Grease	Container Failure	West to drop inlet and then west to Otter Creek
	5	Antifreeze	Dispensing Error	
9387DRE	55	Oil	Container Failure	West to drop inlet and then west to Otter Creek
	5		Dispensing Error	
9387DRF	55	Oil, Hydrau-lic Oil, Grease	Container Failure	West to drop inlet and then west to Otter Creek
	5	Antifreeze	Dispensing Error	

Does not contain oil, not regulated by 40 CFR 112

5.23 Wilcox Range (Building 9555) Removed used oil AST

1NOV17 Update: Removed used oil tank in maintenance area. Corrected POL point drainage issue.

5.23.1 Area Description

The Wilcox range area includes a fuel point and a washrack with a used oil tank. Table 5.23.1 provides container details, and Figure 5.23.1 shows their locations**.**

Table 5.23.1 Wilcox Range Containers

Container ID	Type	Capacity (Gallons)	Material of Construction	Product Stored
9555A	AST, Horizontal	1,000	Steel	Diesel
~~9569B~~	REMOVED	~~1,000~~	~~Steel~~	~~Used Oil~~

5.23.2 Product Handling

The fuel tank is filled by a fuel tanker truck. The used oil tank is emptied via vacuum truck. The filling system for the used oil tank is inoperable (see Corrective Actions, Section 6.0). Table 5.23.2 provides product handling details.

Table 5.23.2 Wilcox Range Product Handling

Container ID	Loading Method	Overfill Protection	Unloading Method
9555A	Truck	Sight Gauge	Dispensed to Vehicles
~~9569B~~	~~Oil/Water Separator~~	CLOSED	~~Vacuum Truck~~

5.23.3 Secondary Containment

The fuel tank is double-walled and the used oil tank has a concrete berm. Volume calculations for the diked area are in Appendix D. The diked area has no storm water release valve and must be emptied by a portable pump. Periodic flooding of the containment area has likely contributed to excessive corrosion to the tank (see Corrective Actions, Section 6.0).

Table 5.23.3 Wilcox Range Secondary Containment

Container ID	Type	Storm Water Release
9555A	Double-walled	NA
~~9569B~~	REMOVED	~~Portable Pump~~

Figure 5.23.1 Wilcox Range (Building 9555)

5.23.4 Inspection and Testing

Records of monthly visual inspections are maintained by DPW personnel for at least three years. Section 4.8 establishes the Fort Knox policy for the integrity testing of small (5,000 gallons or less) storage tanks.

5.23.5 Potential Spill Scenarios

The loss of the entire contents of the vacuum tanker truck could spill 3,000 gallons. Any spill from this area would flow east in open drainage to Duck Lake and then the Salt River (see Figures 2.2, 2.5 and 5.23.1). A spill in this area would trigger the spill response procedures listed in Section 4.7.

Table 5.23.4 Wilcox Range Potential Spill Scenarios

Container ID	Spill Amount (Gallons)	Contents	Cause	Pathway
9555A	1,000	Diesel	Container Failure	East in open drainage to Duck Lake and the Salt River
	25		Dispensing Error	
	3,000		Delivery Truck Error	
~~9569B~~	~~1,000~~	~~Used Oil~~	~~Container Failure~~	~~East in open drainage to Duck Lake and the Salt River~~
	~~5~~ REMOVED ~~3,000~~		~~Transfer Error~~	
			~~Vacuum Truck Error~~	

5.24 Baum St. Vith Range (Building 9717)

5.24.1 Area Description

The Baum St Vith fuel point supplies fuel for range activities. Table 5.24.1 provides container details, and Figure 5.24.1 shows the location.

Table 5.24.1 Baum St. Vith Range Containers

Container ID	Type	Capacity (Gallons)	Material of Construction	Product Stored
9717	AST, Horizontal	1,000	Steel	Diesel

5.24.2 Product Handling

Contractor delivery trucks fill the fuel tank. Table 5.24.2 provides product handling details.

Table 5.24.2 Baum St. Vith Range Product Handling

Container ID	Loading Method	Overfill Protection	Unloading Method
9717	Truck	Sight Gauge	Dispensed to Vehicles

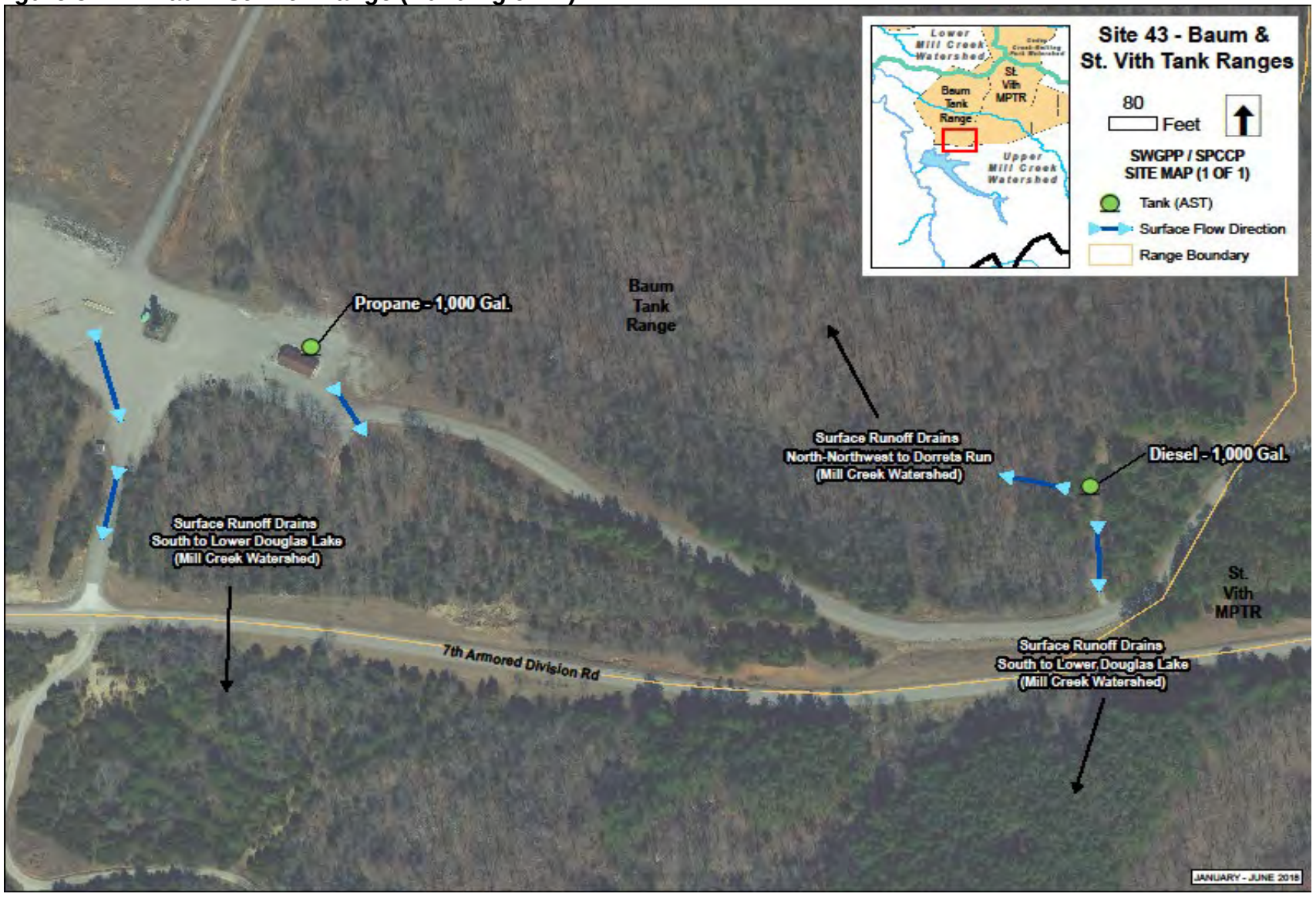
5.24.3 Secondary Containment

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

Table 5.24.3 BaumSt. Vith Range Secondary Containment

Container ID	Type	Storm Water Release
9717	Double-walled	NA

Figure 5.24.1 Baum St. Vith Range (Building 9717)



5.24.4 Inspection and Testing

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

5.24.5 Potential Spill Scenarios

Complete container failure of an AST could result in a spill of up to 1,000 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 Lower Douglas Lake and then to Mill Creek and eventually the Salt River (see Figures 2.5, 5.24.1). A spill in this area would trigger the spill response procedures listed in Section 4.7.

Table 5.24.4 Baum St. Vith Range Potential Spill Scenarios

Container ID	Spill Amount (Gallons)	Contents	Cause	Pathway
9717	1,000	Diesel	Container Failure	South to Lower Douglas Lake and then to Mill Creek and the Salt River
	25		Dispensing Error	
	3,000		Delivery Truck Error	

5.25 Yano Range (Building 9779)

1NOV17 Update: Remove used oil tank in maintenance area.

5.25.1 Area Description

The Yano range area includes a fuel point and a washrack with a used oil tank. Table 5.25.1 provides container details, and Figure 5.25.1 shows their locations.

Table 5.25.1 Yano Range Containers

Container ID	Type	Capacity (Gallons)	Material of Construction	Product Stored
9779A	AST, Horizontal	1,000	Steel	Diesel
~~9809B~~	~~AST, Horizontal~~	REMOVED	~~Steel~~	~~Used Oil~~

5.25.2 Product Handling

The fuel tank is filled by a fuel tanker truck. The used oil tank is emptied via vacuum truck. The filling system for the used oil tank is inoperable (see Corrective Actions, Section 6.0). Table 5.25.2 provides product handling details.

Table 5.25.2 Yano Range Product Handling

Container ID	Loading Method	Overfill Protection	Unloading Method
9779A	Truck	Sight Gauge	Dispensed to Vehicles
~~9809B~~	~~Oil/Water Separator~~	CLOSED	~~Vacuum Truck~~

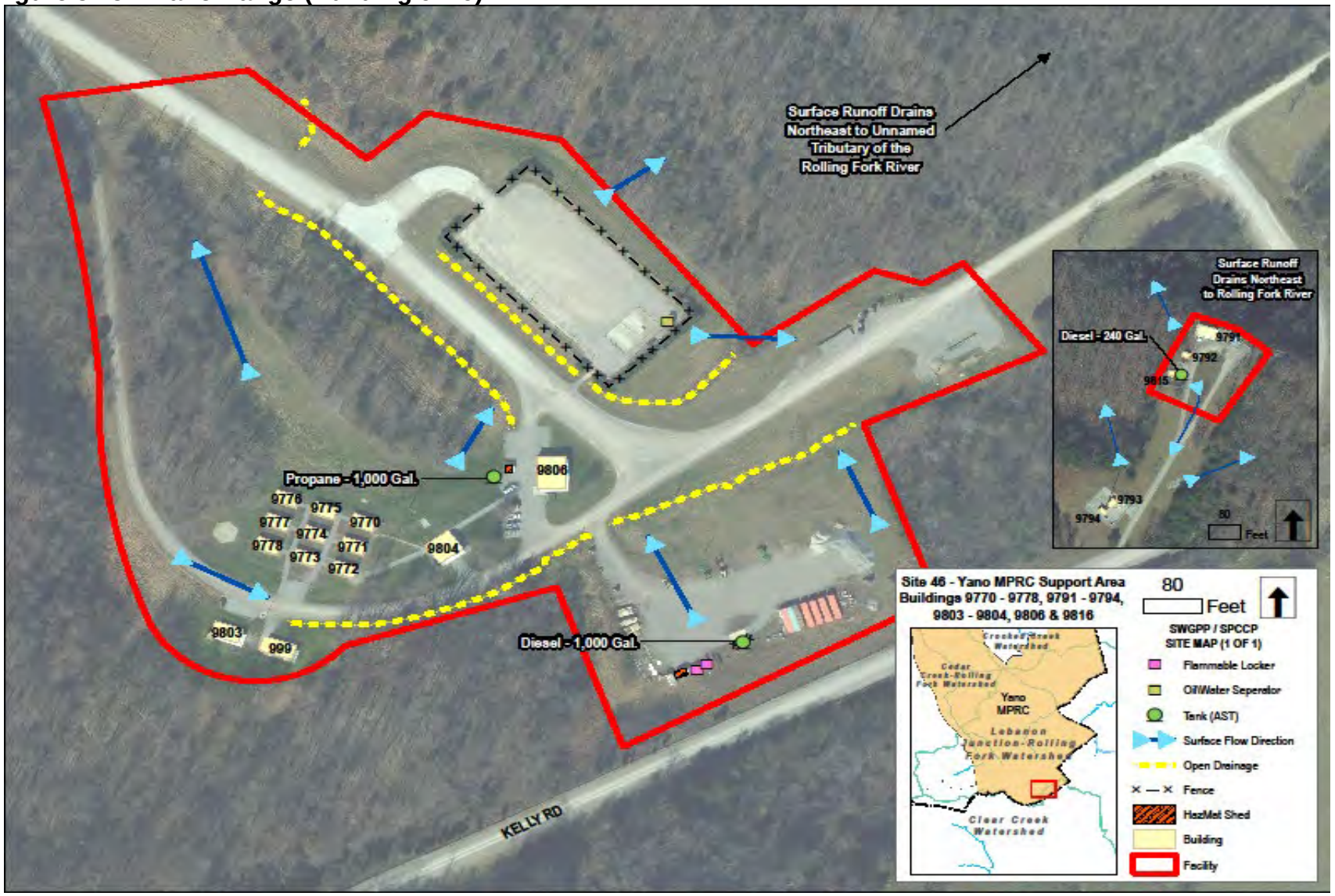
5.25.3 Secondary Containment

The fuel tank is double-walled and the used oil tank has a concrete berm. Volume calculations for the diked area are in Appendix D. The diked area has no storm water release valve and must be emptied by a portable pump. Periodic flooding of the containment area has likely contributed to excessive corrosion to the tank (see Corrective Actions, Section 6.0).

Table 5.25.3 Yano Range Secondary Containment

Container ID	Type	Storm Water Release
9779A	Double-walled	NA
~~9809B~~	REMOVED	~~Portable Pump~~

Figure 5.25.1 Yano Range (Building 9779)



5.25.4 Inspection and Testing

Records of monthly visual inspections are maintained by DPW personnel for at least three years. Section 4.8 establishes the Fort Knox policy for the integrity testing of small (5,000 gallons or less) storage tanks.

5.25.5 Potential Spill Scenarios

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 Rolling Fork and then to the Salt River (see Figure 5.25.1 and 2.5). A spill in this area would trigger the spill response procedures listed in Section 4.7.

Table 5.25.4 Yano Range Potential Spill Scenarios

Container ID	Spill Amount (Gallons)	Contents	Cause	Pathway
9779A	1,000	Diesel	Container Failure	North in open drainage to Rolling Fork and then to the Salt River
	25		Dispensing Error	
	3,000		Delivery Truck Error	
~~9809B~~	~~1,000~~	REMOVED	~~ntainer Failure~~	~~North in open drainage to Rolling Fork and then to the Salt River~~
	~~5~~	~~Used Oil~~	~~Transfer Error~~	
	~~3,000~~		~~Vacuum Truck Error~~	

5.26 Zussman Range (Building 9829)

1NOV17 Update: Corrected drainage problem at POL location.

5.26.1 Area Description

The Zussman range facility includes fuel storage tanks and a used oil collection tank. The site also has 2 55 gallon drums in building 9879. These drums contain used anti-freeze. Table 5.26.1 provides container details, and Figure 5.26.1 shows their locations.

Table 5.26.1 Zussman Range Containers

Container ID	Type	Capacity (Gallons)	Material of Construction	Product Stored
9829	AST, Vertical	660	Steel	Used Oil
9845	AST, Horizontal	1,000 / 2,000	Steel	Gasoline / Diesel
9879DRA	2 DMS @ 55 Gallons	55 Gallons	Steel	Used Anti-freeze

Does not contain oil, not regulated by 40 CFR 112

5.26.2 Product Handling

Contractor delivery trucks fill the fuel tank. The concrete fueling area does not drain well and this causes ponding around the tank and freezes into slippery ice sheet in winter (see Corrective Actions, Section 6.0). The oil collection tank is filled by manually pouring from small collection containers. Table 5.26.2 provides product handling details.

Table 5.26.2 Zussman Range Product Handling

Container ID	Loading Method	Overfill Protection	Unloading Method
9829	Manual	Sight Gauge	Vacuum Truck
9845	Truck	Sight Gauge	Dispensed to Vehicles
9879DRA	Manual	Visual	Vacuum Truck

5.26.3 Secondary Containment

The tanks are double-walled and do not collect storm water. The 55 gallon drums are on a plastic containment pallet.

Table 5.26.3 Zussman Range Secondary Containment

Container ID	Type	Storm Water Release
9829	Double-walled	NA
9845	Double-walled	NA
9879DRA	Plastic Containment Pallet	NA

Figure 5.26.1 Zussman Range (Building 9829)

5.26.4 Inspection and Testing

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

5.26.5 Potential Spill Scenarios

Complete container failure of an AST could result in a spill of up to 2,000 gallons. The loss of the entire contents of the fuel delivery or vacuum tanker truck could spill 3,000 gallons. Any spill from this area would flow southwest in open drainage to the Salt River (see Figures 2.2, 2.5 and 5.26.1). A spill in this area would trigger the spill response procedures listed in Section 4.7.

Table 5.26.4 Zussman Range Potential Spill Scenarios

Container ID	Spill Amount (Gallons)	Contents	Cause	Pathway
9829	660	Used Oil	Container Failure	Southwest in open drainage to the Salt River
	5		Transfer Error	
	3,000		Vacuum Truck Error	
9845	1,000 / 2,000	Gasoline / Diesel	Container Failure	Southwest in open drainage to the Salt River
	25		Dispensing Error	
	3,000		Delivery Truck Error	
9879DRA	1,000 / 2,000	Used Anti-freeze	Container Failure	Southwest in open drainage to the Salt River
	25		Dispensing Error	
	3,000		Delivery Truck Error	

Does not contain oil, not regulated by 40 CFR 112

5.27 Heins Range (Building 9855)

5.27.1 Area Description

The Heins range has a fuel point with a combined gas/diesel tank (two tanks within one outer containment housing). Table 5.27.1 provides container details, and Figure 5.27.1 shows the location.

Table 5.27.1 Heins Range Containers

Container ID	Type	Capacity (Gallons)	Material of Construction	Product Stored
9855	AST, Horizontal	500 / 1,000	Steel	Gasoline / Diesel

5.27.2 Product Handling

Contractor delivery trucks fill the tank. Table 5.27.2 provides product handling details.

Table 5.27.2 Heins Range Product Handling

Container ID	Loading Method	Overfill Protection	Unloading Method
9855	Truck	Sight Gauge	Dispensed to Vehi-cles

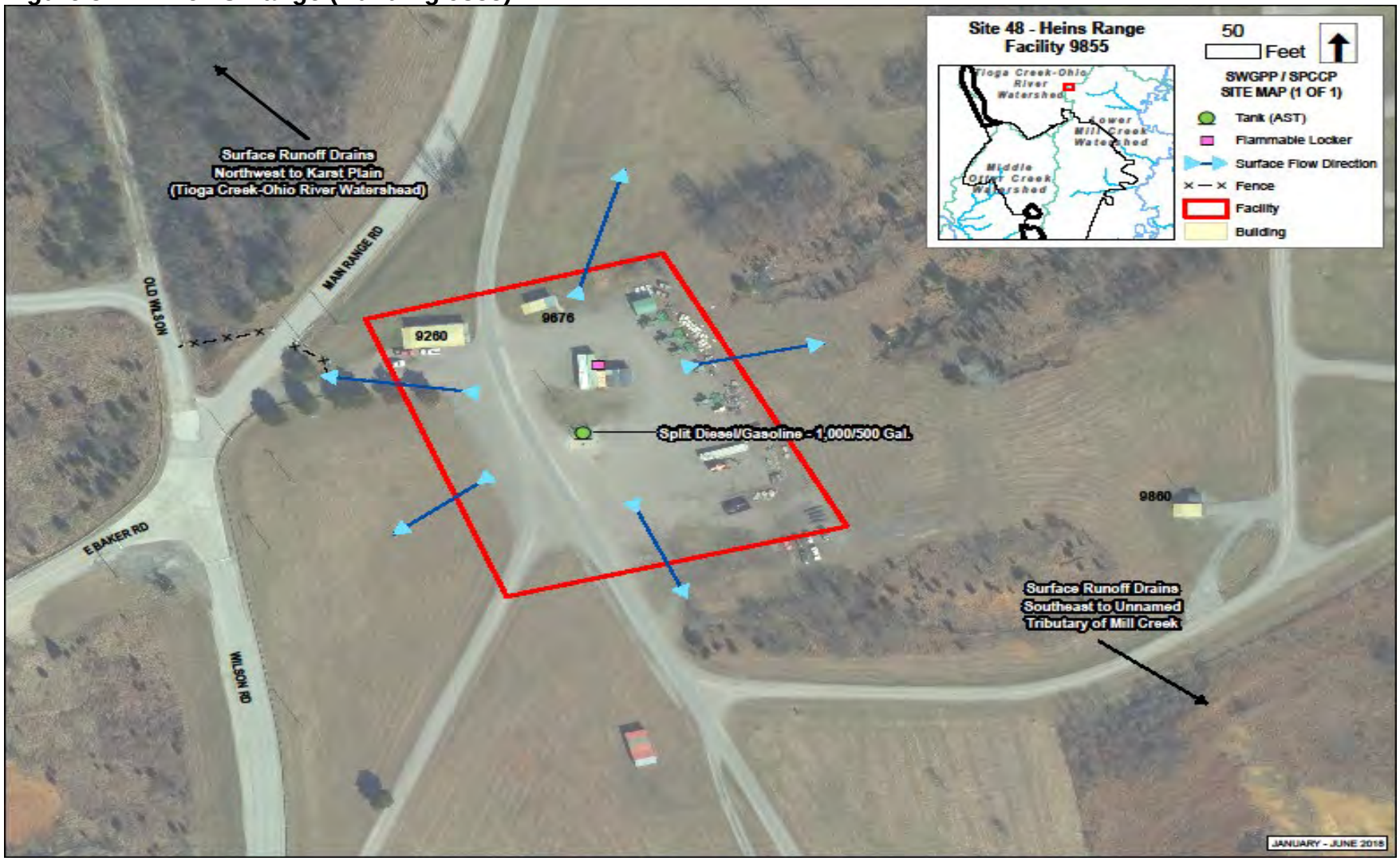
5.27.3 Secondary Containment

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

Table 5.27.3 Heins Range Secondary Containment

Container ID	Type	Storm Water Release
9855	Double-walled	NA

Figure 5.27.1 Heins Range (Building 9855)



5.27.4 Inspection and Testing

Records of monthly visual inspections are maintained by DPW personnel for at least three years. Section 4.8 establishes the Fort Knox policy for the integrity testing of small (5,000 gallons or less) containers.

5.27.5 Potential Spill Scenarios

Complete failure of the AST could spill 1,000 gallons. The loss of the entire contents of the fuel delivery truck could spill 3,000 gallons. Any spill from this area would flow south in open drainage and then east to the Salt River (see Figures 2.1, 5.27.1). A spill in this area would trigger the spill response procedures listed in Section 4.7.

Table 5.27.4 Heins Range Potential Spill Scenarios

Container ID	Spill Amount (Gallons)	Contents	Cause	Pathway
9855	500 / 1,000	Gasoline / Diesel	Container Failure	South in open drainage and then east to the Salt River
	25		Dispensing Error	
	3,000		Delivery Truck Error	

5.28 Blank – NOT USED

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5.29 Electrical Transformers

5.29.1 Area Description

Oil-filled electrical transformers are located throughout Fort Knox, typically near large buildings. Mineral oil is the fluid in all Fort Knox transformers. There are no PCB-containing transformers on Fort Knox. The electrical system at Fort Knox has been privatized and is owned, operated, and maintained by the Nolin Rural Electric Cooperative Corporation (or simply Nolin). Nolin is responsible for determining applicability and maintaining a SPCC Plan as necessary. Nolin 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. Nolin is responsible for all SPCC regulated activities concerning transformers. They are included in the Fort Knox SPCC Plan for informational purposes only.

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.

Nolin maintains a list of the transformer capacities. There has never been a discharge from a transformer at Fort Knox.

5.29.2 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, Nolin 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.

5.29.3 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 Knox’s storm water system to contain a spill prior to contact with navigable waters.

5.29.4 Inspection and Testing

Nolin 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. Nolin personnel follow these recommendations and perform visual inspections every three years or when necessary. Records of these inspections are maintained for three years.

5.29.5 Potential Spill Scenario

Catastrophic failure of one of the larger transformers may release more than five thousand gallons of mineral 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 through 2.6).

5.30 Energy Security

5.30.1 Area Description

Electrical power is generated at several small power plants on Fort Knox. Natural gas is the primary fuel with diesel generators used as a backup. The small power plants have similar designs and operations. Larger ASTs provide diesel to smaller day tanks connected to generators. The generators themselves have engine oil tanks (separate tanks that supply oil to the engine oil pan) and used oil tanks. Some locations also store various oils and/or antifreeze in the same area. Table 5.30.1 provides container details, Figures 2.1 and 2.2 show their locations, and Figures 5.30.1 to 5.30.6 show their detailed site plans.

Table 5.30.1 Energy Security

Container ID	Type	Capacity (Gallons)	Material of Construction	Product Stored
136A	AST, Horizontal	10,000	Steel	Diesel
136B	AST, Horizontal	10,000	Steel	Diesel
136C	AST, Horizontal	400	Steel	Diesel
136D	AST, Horizontal	400	Steel	Diesel
136E	AST, Horizontal	500	Steel	Oil
136F	AST, Horizontal	400	Plastic	Used Oil
136DR	55-Gallon Drums	55 (up to 4)	Steel	Oil Antifreeze
862A	AST, Horizontal	500	Steel	Oil
862B	AST, Horizontal	400	Plastic	Used Oil
2190A	AST, Horizontal	10,000	Steel	Diesel
2190B	AST, Horizontal	10,000	Steel	Diesel
2190C	AST, Horizontal	400	Steel	Diesel
2190D	AST, Horizontal	400	Steel	Diesel
2190E	AST, Horizontal	400	Plastic	Used Oil
2190DR	55-Gallon Drums	55 (up to 4)	Steel	Oil Antifreeze
2741A	AST, Horizontal	10,000	Steel	Diesel
2741B	AST, Horizontal	10,000	Steel	Diesel
2741C	AST, Horizontal	400	Steel	Diesel
2741D	AST, Horizontal	400	Steel	Diesel
2741E	AST, Horizontal	400	Plastic	Used Oil

Container ID	Type	Capacity (Gallons)	Material of Construction	Product Stored
2741DR	55-Gallon Drums	55	Steel	Oil
4997A	AST, Horizontal	10,000	Steel	Diesel
4997B	AST, Horizontal	10,000	Steel	Diesel
4997C	AST, Horizontal	400	Steel	Diesel
4997D	AST, Horizontal	400	Steel	Diesel
4997E	AST, Horizontal	500	Steel	Oil
4997F	AST, Horizontal	400	Plastic	Used Oil
4997DR	55-Gallon Drums	55 (up to 4)	Steel	Oil
				Antifreeze
6605A	AST, Horizontal	10,000	Steel	Diesel
6605B	AST, Horizontal	10,000	Steel	Diesel
6605C	AST, Horizontal	400	Steel	Diesel
6605D	AST, Horizontal	400	Steel	Diesel
6605E	AST, Horizontal	500	Steel	Oil
6605F	AST, Horizontal	400	Plastic	Used Oil
6605DR	55-Gallon Drums	55 (up to 4)	Steel	Oil
				Antifreeze

Does not contain oil, not regulated by 40 CFR 112

5.30.2 Product Handling

Personnel use a 3,000 gallon tanker truck to fill the larger generator fuel tanks and the engine oil 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. The day tanks are not directly filled from the delivery truck. These tanks are filled by pump from the associated larger storage tanks. Used oil is drained directly from the generators. Table 5.30.2 provides product handling details.

Table 5.30.2 Energy Security Product Handling

Container ID	Loading Method	Overfill Protection	Unloading Method
Main Generator Tanks (136A, 136B, 2190A, 2190B, 2741A, 2741B, 4997A, 4997B, 6605A, 6605B)	Truck	Sight Gauge	Used in Generator
Day Tanks (136C, 136D, 2190C, 2190D, 2741C, 2741D, 4997C, 4997D, 6605C, 6605D)	Pumped from Main Tanks	Overfill Alarm	Used in Generator
Oil Tanks (136E, 862A,862B 4997E, 6605E)	Pumped from Drums	Sight Gauge	Used in Generator
Used Oil Tanks (136F, 862B, 2190E, 2741E, 4997F, 6605F)	Drained from Generator	Sight Gauge	Vacuum Truck
Drums (136DR, 2190DR, 4997DR, 6605DR)	NA	NA	Pumped into Oil Tanks or Used in Maintenance

5.30.3 Secondary Containment

All energy security tanks are double-walled ASTs. Drums are stored indoors on containment pallets.

Table 5.30.3 Energy Security Secondary Containment

Container ID	Type	Storm Water Release
All Energy Security Tanks	Double-walled	NA
All Energy Security Drums	Plastic Containment Pallets	NA (indoors)

5.30.4 Inspection and Testing

Records of certified inspections (for tanks greater than 5,000 gallons) are maintained by DPW EMD 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 EMD.

Sections 4.8 and 4.9 establish the Fort Knox policies for the integrity testing of shop-built containers (and piping) less than 5,000 gallons capacity and drums, respectively.

Figure 5.30.1 Energy Security (Building 136)

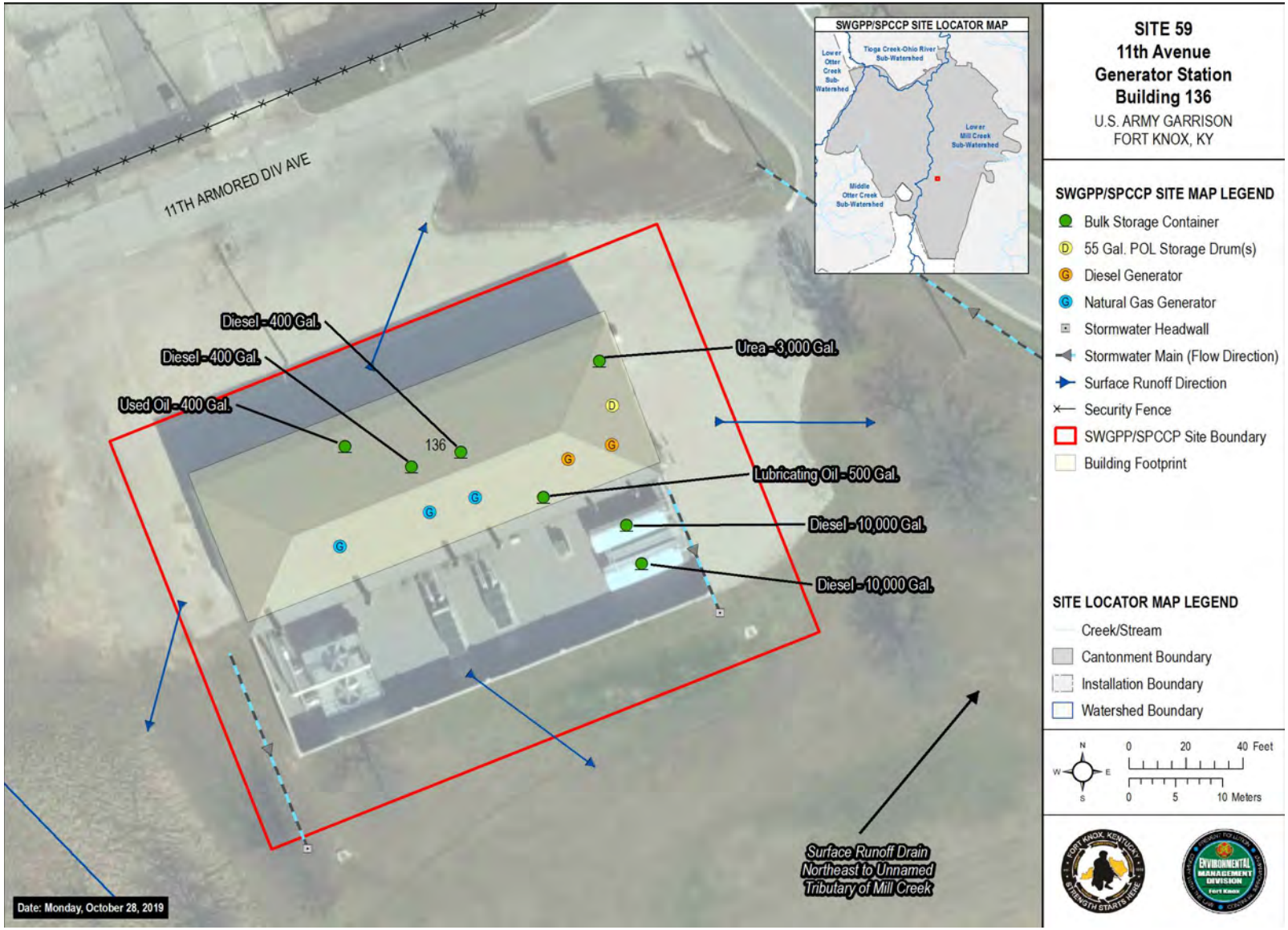


Figure 5.30.2 Energy Security (Building 862)

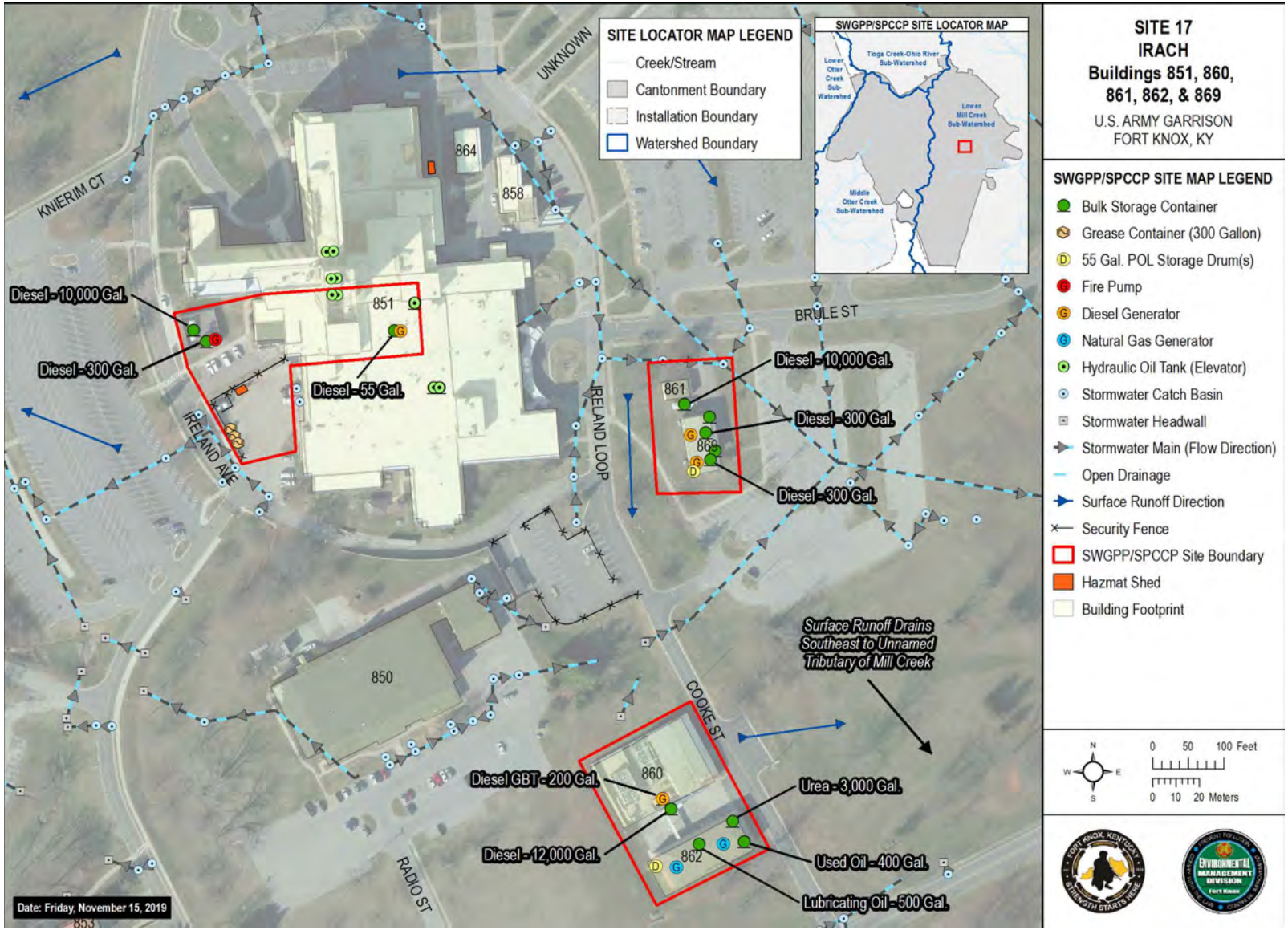


Figure 5.30.3 Energy Security (Building 2190)

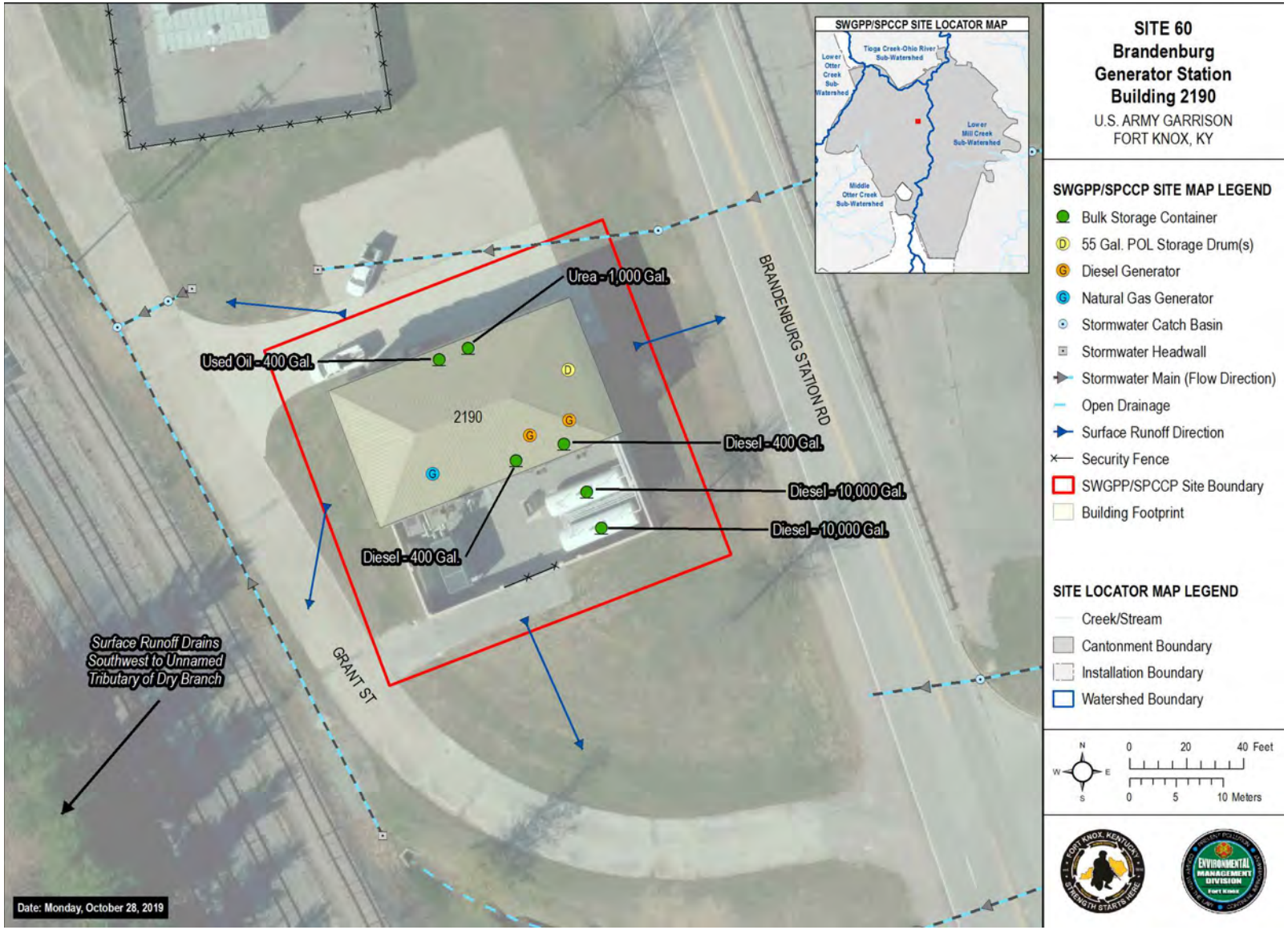


Figure 5.30.4 Energy Security (Building 2741)

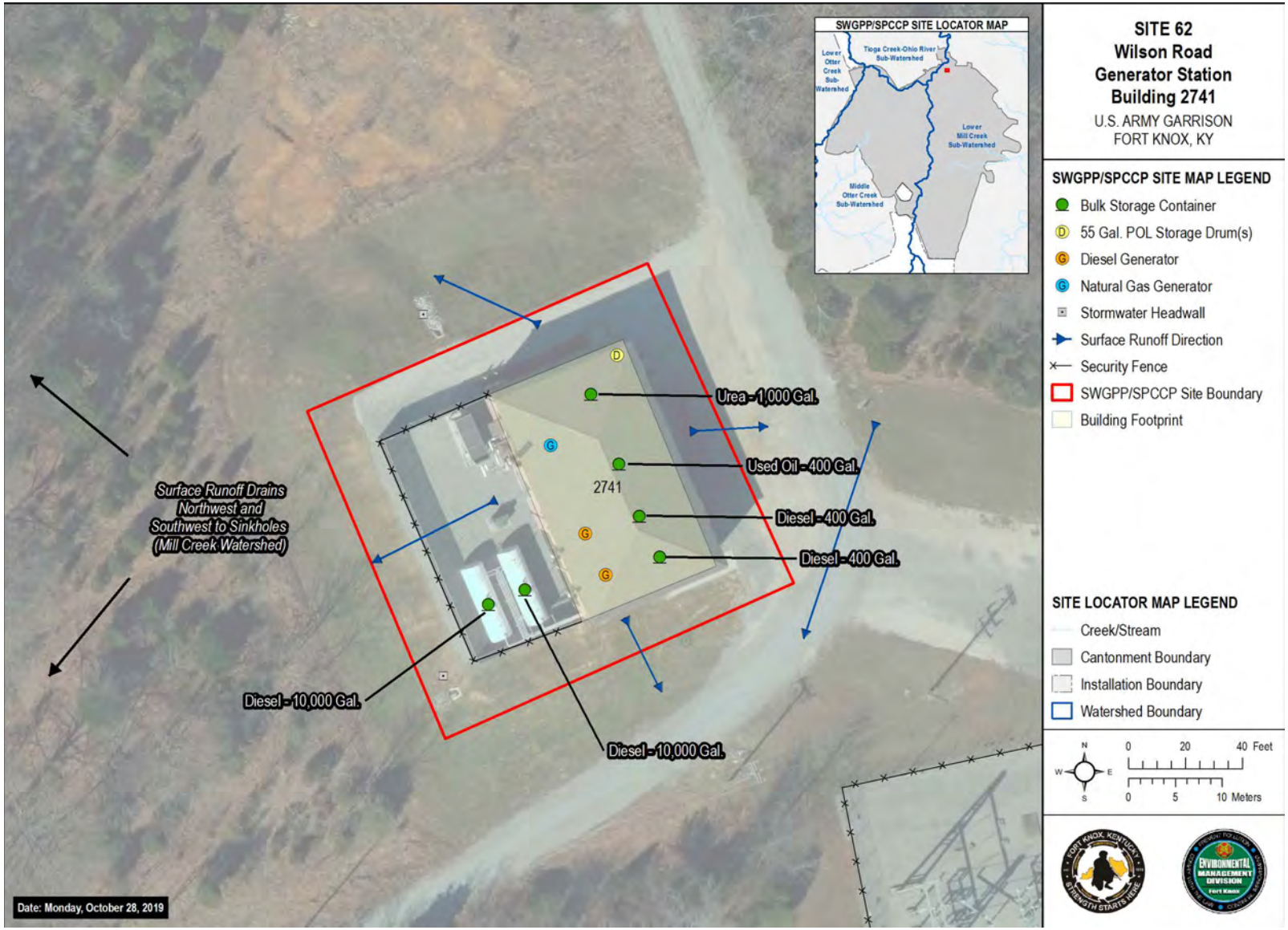


Figure 5.30.5 Energy Security (Building 4997)

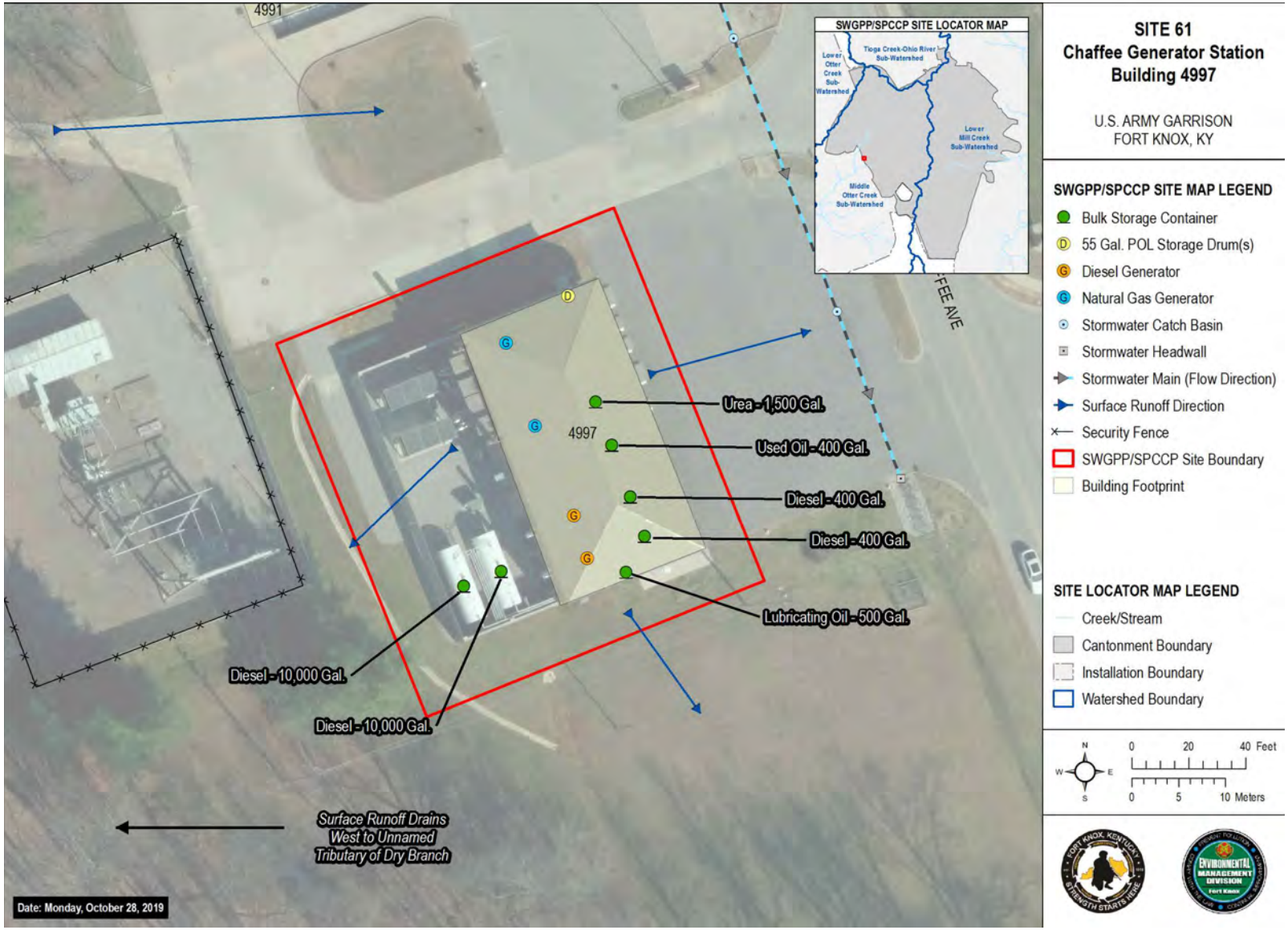
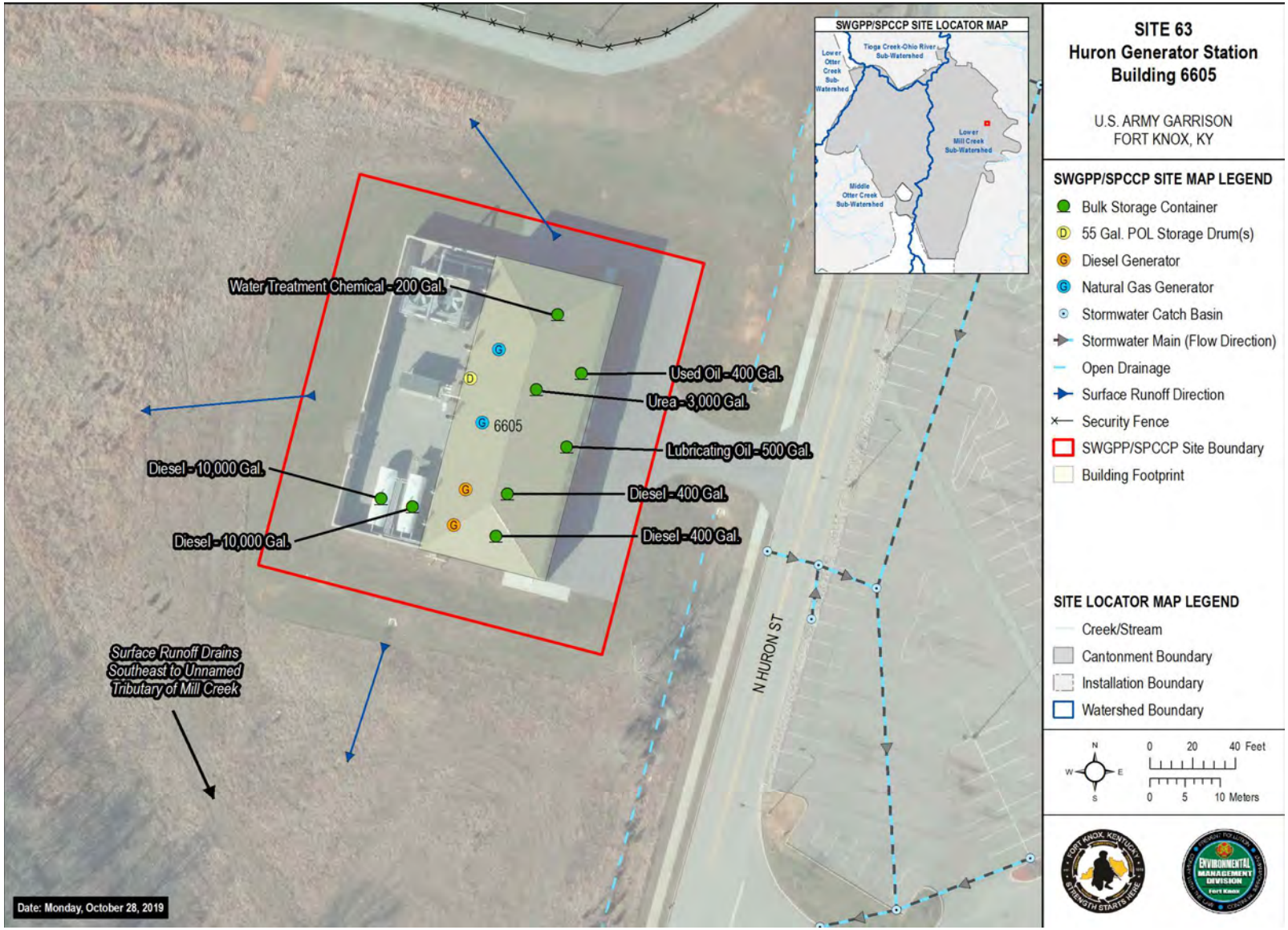


Figure 5.30.6 Energy Security (Building 6605)



5.30.5 Potential Spill Scenarios

Complete failure of one emergency generator tank could result in a 10,000 gallon spill. The loss of the entire contents of the delivery tanker truck or used oil vacuum truck could spill 3,000 gallons at any location. Trucks park next to the generators when they are filling them; a spill due to either container failure or delivery truck error at any energy security location could flow to Otter Creek or the Salt River depending on the location (see Figures 2.1, 2.2, 2.4 and 5.30.1 through 5.30.6). A spill in any of these areas would trigger the spill response procedures listed in Section 4.7.

Table 5.30.4 Energy Security Potential Spill Scenarios

Container ID	Spill Amount (Gallons)	Contents	Cause	Pathway
136A and 136B	10,000	Diesel	Container Failure	Southeast to Mill Creek and then the Salt River
	3,000		Delivery Truck Error	
136C and 136D	400	Diesel	Container Failure	
	50		Transfer Error	
136E	500	Oil	Container Failure	
	5		Transfer Error	
136F	400	Used Oil	Container Failure	
	3,000		Vacuum Truck Error	
136DR	55	Oil	Container Failure	
	5	Antifreeze	Dispensing Error	
862A	500	Oil	Container Failure	South and east to Mill Creek and then the Salt River
	5		Transfer Error	
862B	400	Used Oil	Container Failure	
	3,000		Vacuum Truck Error	
2190A and 2190B	10,000	Diesel	Container Failure	Southwest and then west to Otter Creek
	3,000		Delivery Truck Error	
2190C and 2190D	400	Diesel	Container Failure	
	50		Transfer Error	
2190E	400	Used Oil	Container Failure	
	3,000		Vacuum Truck Error	
2190DR	55	Oil	Container Failure	
	5	Antifreeze	Dispensing Error	
	10,000	Diesel	Container Failure	

Container ID	Spill Amount (Gallons)	Contents	Cause	Pathway
2741A and 2741B	3,000		Delivery Truck Error	Southwest and then west to Otter Creek
2741C and 2741D	400	Diesel	Container Failure	
	50		Transfer Error	
2741E	400	Used Oil	Container Failure	
	3,000		Vacuum Truck Error	
4997A and 4997B	10,000	Diesel	Container Failure	West to Otter Creek
	3,000		Delivery Truck Error	
4997C and 4997D	400	Diesel	Container Failure	
	50		Transfer Error	
4997E	500	Oil	Container Failure	
	5		Transfer Error	
4997F	400	Used Oil	Container Failure	
	3,000		Vacuum Truck Error	
4997DR	55	Oil	Container Failure	
	5	Antifreeze	Dispensing Error	
6605A and 6605B	10,000	Diesel	Container Failure	Southwest to Mill Creek and then the Salt River
	3,000		Delivery Truck Error	
6605C and 6605D	400	Diesel	Container Failure	
	50		Transfer Error	
6605E	500	Oil	Container Failure	
	5		Transfer Error	
6605F	400	Used Oil	Container Failure	
	3,000		Vacuum Truck Error	
6605DR	55	Oil	Container Failure	
	5	Antifreeze	Dispensing Error	

Does not contain oil, not regulated by 40 CFR 112

5.31 Emergency Generators

01NOV17 Update: Added generators and removed 4002 location.

30JUN18 Update: Added generators.

5.31.1 Area Description

Diesel emergency generators are used throughout Fort Knox 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 5.31.1 provides container details, and Figures 2.2 shows their locations.

Table 5.31.1 Emergency Generators

Container ID	Type	Capacity (Gallons)	Material of Construction	Product Stored
17	AST, Horizontal	77	Steel	Diesel
18	AST, Horizontal	250	Steel	Diesel
121	AST, Horizontal	500	Steel	Diesel
203	AST, Horizontal	145	Steel	Diesel
851A	AST, Horizontal	10,000	Steel	Diesel
851B	AST, Horizontal	300	Steel	Diesel
851C	AST, Vertical	55	Steel	Diesel
860A	AST, Horizontal	12,000	Steel	Diesel
860B	AST, Horizontal	200	Steel	Diesel
869A	AST, Horizontal	10,000	Steel	Diesel
869B	AST, Horizontal	300	Steel	Diesel
869C	AST, Horizontal	300	Steel	Diesel
1002	AST, Horizontal	280	Steel	Diesel
1006	AST, Horizontal	500	Steel	Diesel
1175	AST, Horizontal	594	Steel	Diesel
1191A	AST, Horizontal	200	Steel	Diesel
1191B	AST, Horizontal	194	Steel	Diesel
1199	AST, Horizontal	500	Steel	Diesel
1205	AST, Horizontal	500	Steel	Diesel
1227A	AST, Horizontal	1,000	Steel	Diesel
1227B	AST, Horizontal	75	Steel	Diesel
1307	AST, Horizontal	1,500	Steel	Diesel
1308A	AST, Horizontal	1,500	Steel	Diesel

Container ID	Type	Capacity (Gallons)	Material of Construction	Product Stored
1308B	AST, Horizontal	875	Steel	Diesel
1467	AST, Horizontal	693	Steel	Diesel
1722	AST, Horizontal	187	Steel	Diesel
2021	AST, Horizontal	516	Steel	Diesel
2341	AST, Horizontal	785	Steel	Diesel
2370	AST, Horizontal	331	Steel	Diesel
2389	AST, Horizontal	1,200	Steel	Diesel
2836	AST, Horizontal	2,000	Steel	Diesel
2862A	AST, Horizontal	120	Steel	Diesel
2862B	AST, Horizontal	120	Steel	Diesel
2911	AST, Horizontal	200	Steel	Diesel
2942	AST, Horizontal	120	Steel	Diesel
3008	AST, Horizontal	500	Steel	Diesel
~~4002~~	Removed	~~500~~	~~Steel~~	~~Diesel~~
4015	AST, Horizontal	235	Steel	Diesel
4210	AST, Horizontal	250	Steel	Diesel
4249	AST, Horizontal	1,700	Steel	Diesel
4250	AST, Horizontal	1,700	Steel	Diesel
5590/5592	AST, Horizontal	240	Steel	Diesel
5898	AST, Horizontal	250	Steel	Diesel
5899	AST, Horizontal	250	Steel	Diesel
5917A	AST, Horizontal	278	Steel	Diesel
5931	AST, Horizontal	331	Steel	Diesel
6151	AST, Horizontal	250	Steel	Diesel
6434A	AST, Horizontal	10,000	Steel	Diesel
6434B	AST, Horizontal	175	Steel	Diesel
6434C	AST, Horizontal	175	Steel	Diesel
6434D	AST, Horizontal	175	Steel	Diesel
6434E	AST, Horizontal	175	Steel	Diesel
6434F	AST, Horizontal	2,350	Steel	Diesel
6434G	AST, Horizontal	2,350	Steel	Diesel
6434H	AST, Horizontal	2,350	Steel	Diesel

Container ID	Type	Capacity (Gallons)	Material of Construction	Product Stored
6434I	AST, Horizontal	2,350	Steel	Diesel
6434J	AST, Horizontal	2,350	Steel	Diesel
6434K	AST, Horizontal	2,350	Steel	Diesel
6434L	AST, Horizontal	944	Steel	Diesel
~~6434M~~	~~AST, Horizontal~~	~~9~~ REMOVED	~~eel~~	~~Diesel~~
6435	AST, Horizontal	875	Steel	Diesel
~~6579~~	~~AST, Horizontal~~	~~653~~ REMOVED	~~el~~	~~Diesel~~
7101	AST, Horizontal	250	Steel	Diesel
7102	AST, Horizontal	130	Steel	Diesel
7103	AST, Horizontal	278	Steel	Diesel
7207A	AST, Horizontal	500	Steel	Diesel
7207B	AST, Horizontal	100	Steel	Diesel
7226	AST, Horizontal	100	Steel	Diesel
7235A	AST, Horizontal	120	Steel	Diesel
7235B	AST, Horizontal	120	Steel	Diesel
7501	AST, Horizontal	200	Steel	Diesel
7873	AST, Horizontal	500	Steel	Diesel
8928	AST, Horizontal	500	Steel	Diesel
8930	AST, Horizontal	240	Steel	Diesel
9009	AST, Horizontal	500	Steel	Diesel
9065A	AST, Horizontal	214	Steel	Diesel
9065B	AST, Horizontal	200	Steel	Diesel
9101	AST, Horizontal	113	Steel	Diesel
9102	AST, Horizontal	113	Steel	Diesel
9309	AST, Horizontal	100	Steel	Diesel
9385	AST, Horizontal	100	Steel	Diesel
9399A	AST, Horizontal	132	Steel	Diesel
9816	AST, Horizontal	170	Steel	Diesel
9840	AST, Horizontal	300	Steel	Diesel
999A	AST, Horizontal	322	Steel	Diesel
999B	AST, Horizontal	383	Steel	Diesel
999C	AST, Horizontal	250	Steel	Diesel

Container ID	Type	Capacity (Gallons)	Material of Construction	Product Stored
999D	AST, Horizontal	250	Steel	Diesel

5.31.2 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 861B, 861C, 1227B, 6434B through 6434E, and 7207B 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.

Table 5.31.2 Emergency Generator Product Handling

Container ID	Loading Method	Overfill Protection	Unloading Method
All Generator Tanks (unless listed below)	Truck	Sight Gauge	Used in Generator
869B and 869C	Pumped from 869A	Overfill Alarm	Used in Generator
1227B	Pumped from 1227A	Overfill Alarm	Used in Generator
6434A – 6434L	Pumped from 6434A	Overfill Alarm	Used in Generator
7207B	Pumped from 7207A	Overfill Alarm	Used in Generator

5.31.3 Secondary Containment

Most generators have double-walled ASTs including the recently replaced diesel day tank #1227B in the NEC Generator Room (See Section 6.0, Corrective Actions). The diesel storage tank for generator 1722 is double-walled. Single-walled tanks 869B, 869C, and 7207B have containment dikes that are inside buildings and do not collect storm water. Appendix D contains volume calculations for generators within diked areas.

Table 5.31.3 Emergency Generators Secondary Containment

Container ID	Type	Storm Water Release
All Generator Tanks (unless listed below)	Double-walled	NA
869B and 869C	Steel Dikes	NA (indoors)
1227B	Double-walled	NA (indoors)
1722	Double-walled	NA (indoors)
7207B	Concrete Dike	NA (indoors)

5.31.4 Inspection and Testing

Records of certified inspections (for tanks greater than 5,000 gallons) are maintained by DPW EMD 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 EMD. Section 4.8 establishes the Fort Knox policy for the integrity testing of shop-built containers (and piping) less than 5,000 gallons capacity.

5.31.5 Potential Spill Scenarios

Complete failure of one emergency generator tank could result in a 12,000 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 Otter Creek or Mill Creek and the Salt River depending on the location of the generator (see Figures 2.2 through 2.6). A spill in any of these areas would trigger the spill response procedures listed in Section 4.7.

Table 5.31.4 Emergency Generators Potential Spill Scenarios

Container ID	Spill Amount (Gallons)	Contents	Cause	Pathway
17	77	Diesel	Container Failure	Southwest to Otter Creek
	3,000		Delivery Truck Error	
18	250	Diesel	Container Failure	Southwest to Otter Creek
	3,000		Delivery Truck Error	
121	500	Diesel	Container Failure	North to drop inlet and then south and east to Mill Creek and the Salt River
	3,000		Delivery Truck Error	
203	145	Diesel	Container Failure	East to drop inlet and then east to Mill Creek and the Salt River
	3,000		Delivery Truck Error	
851A	10,000	Diesel	Container Failure	South to drop inlet and then east to Mill Creek and the Salt River
	3,000		Delivery Truck Error	
851B	300	Diesel	Container Failure	South to drop inlet and then east to Mill Creek and the Salt River
	3,000		Delivery Truck Error	
851C	55	Diesel	Container Failure	

Container ID	Spill Amount (Gallons)	Con-tents	Cause	Pathway
	3,000		Delivery Truck Error	Located inside of building
860A	12,000	Diesel	Container Failure	South to drop inlet and then east to Mill Creek and the Salt River
	3,000		Delivery Truck Error	
860B	200	Diesel	Container Failure	
	3,000		Delivery Truck Error	
869A	10,000	Diesel	Container Failure	South to drop inlet and then east to Mill Creek and the Salt River
	3,000		Delivery Truck Error	
869B	300	Diesel	Container Failure	
	50		Pump Transfer Error	
869C	300	Diesel	Container Failure	
	50		Pump Transfer Error	
1002	280	Diesel	Container Failure	Southeast in storm drains to Mill Creek and the Salt River
	3,000		Delivery Truck Error	
1006	500	Diesel	Container Failure	Southeast in storm drains to Mill Creek and the Salt River
	3,000		Delivery Truck Error	
1175	594	Diesel	Container Failure	North to storm drain and then west to Otter Creek
	3,000		Delivery Truck Error	
1191A	200	Diesel	Container Failure	Northwest to storm drain and then west to Otter Creek
	3,000		Delivery Truck Error	
1191B	194	Diesel	Container Failure	Northwest to storm drain and then west to Otter Creek
	3,000		Delivery Truck Error	
1199	500	Diesel	Container Failure	

Container ID	Spill Amount (Gallons)	Con-tents	Cause	Pathway
	3,000		Delivery Truck Error	North to storm drain and then west to Otter Creek
1205	1,000	Diesel	Container Failure	East and north to storm drain and then west to Otter Creek
	3,000		Delivery Truck Error	
1227A	1,000	Diesel	Container Failure	South and then east in storm drains to Mill Creek and the Salt River
	3,000		Delivery Truck Error	
1227B	75	Diesel	Container Failure	
	50		Pump Transfer Error	
1307	1,500	Diesel	Container Failure	East in storm drains to Mill Creek and the Salt River
	3,000		Delivery Truck Error	
1308A	1,500	Diesel	Container Failure	East in storm drains to Mill Creek and the Salt River
	3,000		Delivery Truck Error	
1308B	875	Diesel	Container Failure	
	3,000		Delivery Truck Error	
1467	693	Diesel	Container Failure	Southwest to Dry Branch and then Otter Creek
	3000		Delivery Truck Error	
1722	187	Diesel	Container Failure	East in storm drains to Mill Creek and the Salt River
	3,000		Delivery Truck Error	
2021	516	Diesel	Container Failure	Southwest to Dry Branch and then Otter Creek
	3,000		Delivery Truck Error	
2341	785	Diesel	Container Failure	Southwest to Dry Branch and then Otter Creek
	3,000		Delivery Truck Error	
2370	331	Diesel	Container Failure	

Container ID	Spill Amount (Gallons)	Con-tents	Cause	Pathway
	3,000		Delivery Truck Error	Southwest to Dry Branch and then Otter Creek
2389	1,200	Diesel	Container Failure	Southwest to Otter Creek
	3,000		Delivery Truck Error	
2836	2,000	Diesel	Container Failure	Southwest to Dry Branch and then to Otter Creek
	3,000		Delivery Truck Error	
2862A	120	Diesel	Container Failure	East in storm drains to Tollgate Creek and the Salt River
	3,000		Delivery Truck Error	
2862B	120	Diesel	Container Failure	
	3,000		Delivery Truck Error	
2911	200	Diesel	Container Failure	East to Mill Creek and the Salt River
	3,000		Delivery Truck Error	
2942	120	Diesel	Container Failure	East to Mill Creek and the Salt River
	3,000		Delivery Truck Error	
3008	500	Diesel	Container Failure	Northwest to Tioga Creek and then the Ohio River
	3,000		Delivery Truck Error	
~~4002~~	~~500~~ Removed	~~Diesel~~	~~Container Failure~~	~~West to Otter Creek~~
	~~3,000~~		Delivery Truck Error	
4015	235	Diesel	Container Failure	West to Otter Creek
	3,000		Delivery Truck Error	
4210	250	Diesel	Container Failure	West to Otter Creek
	3,000		Delivery Truck Error	
4249	1,700	Diesel	Container Failure	West to Otter Creek

Container ID	Spill Amount (Gallons)	Con-tents	Cause	Pathway
	3,000		Delivery Truck Error	
4250	1,700	Diesel	Container Failure	West to Otter Creek
	3,000		Delivery Truck Error	
5590/5592	240	Diesel	Container Failure	South to Dry Branch and then west to Otter Creek
	3,000		Delivery Truck Error	
5898	250	Diesel	Container Failure	South and then west to Otter Creek
	3,000		Delivery Truck Error	
5899	250	Diesel	Container Failure	South and then west to Otter Creek
	3,000		Delivery Truck Error	
5917A	278	Diesel	Container Failure	East to Mill Creek and then the Salt River
	3,000		Delivery Truck Error	
5931	331	Diesel	Container Failure	South and then east to Mill Creek and the Salt River
	3,000		Delivery Truck Error	
6151	250	Diesel	Container Failure	Southeast to Mill Creek and then the Salt River
	3,000		Delivery Truck Error	
6434A	10,000	Diesel	Container Failure	Southeast to Mill Creek and then the Salt River
	3,000		Delivery Truck Error	
6434B	175	Diesel	Container Failure	
	3,000		Delivery Truck Error	
6434C	175	Diesel	Container Failure	
	3,000		Delivery Truck Error	
6434D	175	Diesel	Container Failure	
	3,000		Delivery Truck Error	

Container ID	Spill Amount (Gallons)	Con-tents	Cause	Pathway
6434E	175	Diesel	Container Failure	
	3,000		Delivery Truck Error	
6434F	2,350	Diesel	Container Failure	
	3,000		Delivery Truck Error	
6434G	2,350	Diesel	Container Failure	
	3,000		Delivery Truck Error	
6434H	2,350	Diesel	Container Failure	
	3,000		Delivery Truck Error	
6434I	2,350	Diesel	Container Failure	
	3,000		Delivery Truck Error	
6434J	2,350	Diesel	Container Failure	
	3,000		Delivery Truck Error	
6434K	944	Diesel	Container Failure	
	3,000		Delivery Truck Error	
6434L	944 3,000	Diesel	Container Failure Delivery Truck Error	Southeast to Mill Creek and then the Salt River
6435	875	Diesel	Container Failure	Southeast to Mill Creek and then the Salt River
	3,000		Delivery Truck Error	
~~6579~~	~~653~~	REMOVED	~~Container Failure~~	~~Southeast to Mill Creek and then the Salt River~~
	~~3,000~~		~~Delivery Truck Error~~	
7101	250	Diesel	Container Failure	Northeast to Mill Creek and then the Salt River
	3,000		Delivery Truck Error	
7102	130	Diesel	Container Failure	

Container ID	Spill Amount (Gallons)	Con-tents	Cause	Pathway
	3,000		Delivery Truck Error	Northeast to Mill Creek and then the Salt River
7103	278	Diesel	Container Failure	Northeast to Mill Creek and then the Salt River
	3,000		Delivery Truck Error	
7207A	500	Diesel	Container Failure	North to Mill Creek and then the Salt River
	3,000		Delivery Truck Error	
7207B	275	Diesel	Container Failure	
	50		Pump Transfer Error	
7226	100	Diesel	Container Failure	South to inlet then north and east to the Salt River
	3000		Delivery Truck Error	
7235A	120	Diesel	Container Failure	South to inlet then north and east to the Salt River
	3,000		Delivery Truck Error	
7235B	120	Diesel	Container Failure	
	3,000		Delivery Truck Error	
7501	200	Diesel	Container Failure	Southwest to Mill Creek and then the Salt River
	3,000		Delivery Truck Error	
7873	500	Diesel	Container Failure	East to Mill Creek and then the Salt River
	3,000		Delivery Truck Error	
8928	500	Diesel	Container Failure	West to Otter Creek
	3,000		Delivery Truck Error	

Container ID	Spill Amount (Gallons)	Con-tents	Cause	Pathway
8930	240	Diesel	Container Failure	West to Otter Creek
	3,000		Delivery Truck Error	
9009	500	Diesel	Container Failure	South to Otter Creek
	3,000		Delivery Truck Error	
9065A	214	Diesel	Container Failure	East to Mill Creek and then the Salt River
	3,000		Delivery Truck Error	
9065B	200	Diesel	Container Failure	
	3,000		Delivery Truck Error	
9101	113	Diesel	Container Failure	West to Otter Creek
	3,000		Delivery Truck Error	
9102	113	Diesel	Container Failure	West to Otter Creek
	3,000		Delivery Truck Error	
9309	100	Diesel	Container Failure	Northeast to Tollgate Creek and the Salt River
	3,000		Delivery Truck Error	
9385	100	Diesel	Container Failure	West to Otter Creek
	3,000		Delivery Truck Error	
9399A	132	Diesel	Container Failure	West and the south to Salt River
	3000		Delivery Truck Error	
9816	170	Diesel	Container Failure	North to Rolling Fork and then the Salt River
	3,000		Delivery Truck Error	
9840	300	Diesel	Container Failure	South to the Salt River
	3,000		Delivery Truck Error	
~~9999~~	~~1000~~	REMOVED	~~iner Failure~~	~~South to the Salt River~~

Container ID	Spill Amount (Gallons)	Con-tents	Cause	Pathway
	~~3000~~		~~Delivery Truck Error~~	
999A	322 3000	Diesel	Container Failure Delivery Truck Error	South to the Salt River
999B	383 3000	Diesel	Container Failure Delivery Truck Error	South to the Salt River
999C	250 3000	Diesel	Container Failure Delivery Truck Error	South to the Salt River
999D	250 3000	Diesel	Container Failure Delivery Truck Error	South to the Salt River

5.32 Used Food Grease Containers

5.32.1 Area Description

There are many locations that store used food grease in outdoor containers on Fort Knox. The sites all use the same method for storage and handling. Steel grease containers similar to small dumpsters (grease bins) with flip open lids and manual pouring. The presence of grease containers at a given site is dependent on the seasonal nature of Fort Knox's mission. When there are students present the grease containers are there; no students, no grease. Containers that are taken out of service for a season are emptied, cleaned, and stored at Building 2951. All potential locations are listed in this section. Table 5.32.1 provides details for the grease containers, and Figure 2.3 shows locations and flow directions.

Table 5.32.1 Used Food Grease Containers

Container ID	Type	Capacity (Gallons)	Material of Construction	Product Stored
127A	AST, Horizontal	300	Steel	Used Food Grease
127B	AST, Horizontal	300	Steel	Used Food Grease
297	AST, Horizontal	300	Steel	Used Food Grease
~~502~~	~~AST, Horizontal~~	~~300~~	~~Steel~~	~~Used Food Grease~~
715	AST, Horizontal	300	Steel	Used Food Grease
~~851B~~	~~AST, Horizontal~~	~~300~~	~~Steel~~	~~Used Food Grease~~
~~851C~~	~~AST, Horizontal~~	~~300~~	~~Steel~~	~~Used Food Grease~~
~~851D~~	~~AST, Horizontal~~	~~300~~	~~Steel~~	~~Used Food Grease~~
1118	AST, Horizontal	300	Steel	Used Food Grease
1491	AST, Horizontal	300	Steel	Used Food Grease
2012	AST, Horizontal	300	Steel	Used Food Grease
2013	AST, Horizontal	300	Steel	Used Food Grease
2377	AST, Horizontal	300	Steel	Used Food Grease
2380	AST, Horizontal	300	Steel	Used Food Grease
2723A	AST, Horizontal	300	Steel	Used Food Grease
2723B	AST, Horizontal	300	Steel	Used Food Grease
2835A	AST, Horizontal	300	Steel	Used Food Grease
2835B	AST, Horizontal	300	Steel	Used Food Grease
2946	AST, Horizontal	300	Steel	Used Food Grease
4024	AST, Horizontal	300	Steel	Used Food Grease
4991	AST, Horizontal	300	Steel	Used Food Grease
5549	AST, Horizontal	300	Steel	Used Food Grease
5915	AST, Horizontal	300	Steel	Used Food Grease
5917B	AST, Horizontal	300	Steel	Used Food Grease
5940	AST, Horizontal	300	Steel	Used Food Grease
6012	AST, Horizontal	300	Steel	Used Food Grease

REMOVED

REMOVED

6018	AST, Horizontal	300	Steel	Used Food Grease
6204	AST, Horizontal	300	Steel	Used Food Grease
6424	AST, Horizontal	300	Steel	Used Food Grease
6542A	AST, Horizontal	300	Steel	Used Food Grease
6542B	AST, Horizontal	300	Steel	Used Food Grease
6555A	AST, Horizontal	300	Steel	Used Food Grease
~~6555B~~	~~AST, Horizontal~~	REMOVED	~~Steel~~	~~Used Food Grease~~
7959	AST, Horizontal	300	Steel	Used Food Grease

5.32.2 Product Handling

The oil and grease is brought out to the grease bins in small buckets or jugs for manual pouring. The tanks are then emptied by a contractor vacuum truck. The tank at 2946 is used as a sort of overflow tank when other tanks are filled and activities need to remove the contents to clear volume prior to vacuum truck collection. Used food grease is pumped out of a grease bin at a site and then transported in small containers to 2946 where it is pumped from the small containers into the 2946 grease bin. Table 5.32.2 provides more details regarding product handling activities for this area.

Table 5.32.2 Used Food Grease Product Handling

Container ID	Loading Method	Overfill Protection	Unloading Method
2946	Pump	Visual	Truck
All Other Used Food Grease Containers	Manual	Visual	Truck

5.32.3 Secondary Containment

The grease bins are all double-walled and do not collect storm water.

Table 5.32.3 Used Food Grease Secondary Containment

Container ID	Type	Storm Water Release
All Used Food Grease Containers	Double-walled	NA

5.32.4 Inspection and Testing

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

5.32.5 Potential Spill Scenario

Complete failure of one food grease tank could result in a 300 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 Mill Creek, Otter Creek, or the Salt River, depending on where the spill occurred (see Figures 2.3 through 2.5). A spill in any of these areas would trigger the spill response procedures listed in Section 4.7.

Table 5.32.4 Used Food Grease Potential Spill Scenario

Container ID	Spill Amount (Gallons)	Contents	Cause	Pathway
127A & 127B	600	Food Grease	Container Failure	Southwest and then south and east to Mill Creek and the Salt River
	5		Transfer Error	
	2,000		Vacuum Truck Error	
297	300	Food Grease	Container Failure	North and east to Mill Creek and the Salt River
	5		Transfer Error	
	2,000		Vacuum Truck Error	
502	REMOVED	Food Grease	Container Failure	South and then east to Mill Creek and the Salt River
	5		Transfer Error	
	2,000		Vacuum Truck Error	
715	300	Food Grease	Container Failure	South and then east to Mill Creek and the Salt River
	5		Transfer Error	
	2,000		Vacuum Truck Error	
~~851B, 851C and 851D~~	~~300~~	REMOVED	~~Container Failure~~	~~Northeast to Mill Creek and then the Salt River~~
	~~5~~		~~Transfer Error~~	
	~~2,000~~		~~Vacuum Truck Error~~	
1118	300	Food Grease	Container Failure	West to Dry Branch and then Otter Creek
	5		Transfer Error	
	2,000		Vacuum Truck Error	
1491	300	Food Grease	Container Failure	East to Mill Creek and the Salt River
	5		Transfer Error	
	2,000		Vacuum Truck Error	
2012	300	Food Grease	Container Failure	North to Dry Branch and then west to Otter Creek
	5		Transfer Error	
	2,000		Vacuum Truck Error	
2013	300	Food Grease	Container Failure	

Container ID	Spill Amount (Gallons)	Contents	Cause	Pathway
	5		Transfer Error	Northwest to Dry Branch and then west to Otter Creek
	2,000		Vacuum Truck Error	
2377	300	Food Grease	Container Failure	Southwest to Dry Branch and Otter Creek
	5		Transfer Error	
	2,000		Vacuum Truck Error	
2380	300	Food Grease	Container Failure	West to Otter Creek
	5		Transfer Error	
	2,000		Vacuum Truck Error	
2723A and 2723B	300	Food Grease	Container Failure	East to Mill Creek and the Salt River
	5		Transfer Error	
	2,000		Vacuum Truck Error	
2835A and 2835B	300	Food Grease	Container Failure	Southeast and then east to Mill Creek and the Salt River
	5		Transfer Error	
	2,000		Vacuum Truck Error	
2946	300	Food Grease	Container Failure	West to Otter Creek
	25		Transfer Error	
	2,000		Vacuum Truck Error	
4024	300	Food Grease	Container Failure	West in open drainage to Otter Creek
	5		Transfer Error	
	2,000		Vacuum Truck Error	
4991	300	Food Grease	Container Failure	West in open drainage to Otter Creek
	5		Transfer Error	
	2,000		Vacuum Truck Error	
5549	300	Food Grease	Container Failure	
	5		Transfer Error	

Container ID	Spill Amount (Gallons)	Contents	Cause	Pathway
	2,000		Vacuum Truck Error	South to Dry Branch and Otter Creek
5915	300	Food Grease	Container Failure	South and then east to Mill Creek and the Salt River
	5		Transfer Error	
	2,000		Vacuum Truck Error	
5917B	300	Food Grease	Container Failure	South and then east to Mill Creek and the Salt River
	5		Transfer Error	
	2,000		Vacuum Truck Error	
5940	300	Food Grease	Container Failure	Southeast to Mill Creek and then the Salt River
	5		Transfer Error	
	2,000		Vacuum Truck Error	
6012	300	Food Grease	Container Failure	West then turning east to Mill Creek and the Salt River
	5		Transfer Error	
	2,000		Vacuum Truck Error	
6018	300	Food Grease	Container Failure	West then turning east to Mill Creek and the Salt River
	5		Transfer Error	
	2,000		Vacuum Truck Error	
6204	300	Food Grease	Container Failure	Southeast to Mill Creek and the Salt River
	5		Transfer Error	
	2,000		Vacuum Truck Error	
6424	300	Food Grease	Container Failure	East to Mill Creek and the Salt River
	5		Transfer Error	
	2,000		Vacuum Truck Error	
6542A and 6542B	300	Food Grease	Container Failure	South to Mill Creek and the Salt River
	5		Transfer Error	
	2,000		Vacuum Truck Error	

Container ID	Spill Amount (Gallons)	Contents	Cause	Pathway
6555A and 6555B	300	Food Grease	Container Failure	South to Mill Creek and the Salt River
	5		Transfer Error	
	2,000		Vacuum Truck Error	
7959	300	Food Grease	Container Failure	South to Mill Creek and the Salt River
	5		Transfer Error	
	2,000		Vacuum Truck Error	

5.33 Swimming Pools

5.33.1 Area Description

There are three swimming pools on Fort Knox that use chlorine (sodium hypochlorite solution) for disinfection. Table 5.33.1 provides details for the pool chemical containers, and Figures 2.1 and 5.33.1 show their locations.

Table 5.33.1 Swimming Pool Chemical Containers

Container ID	Type	Capacity (Gallons)	Material of Construction	Product Stored
850	55-Gallon Drums	55 (up to 2)	Plastic	Sodium Hypochlorite
5539	AST, Vertical	500	Plastic	Sodium Hypochlorite
7962	55-Gallon Drums	55 (up to 4)	Plastic	Sodium Hypochlorite

Does not contain oil, not regulated by 40 CFR 112

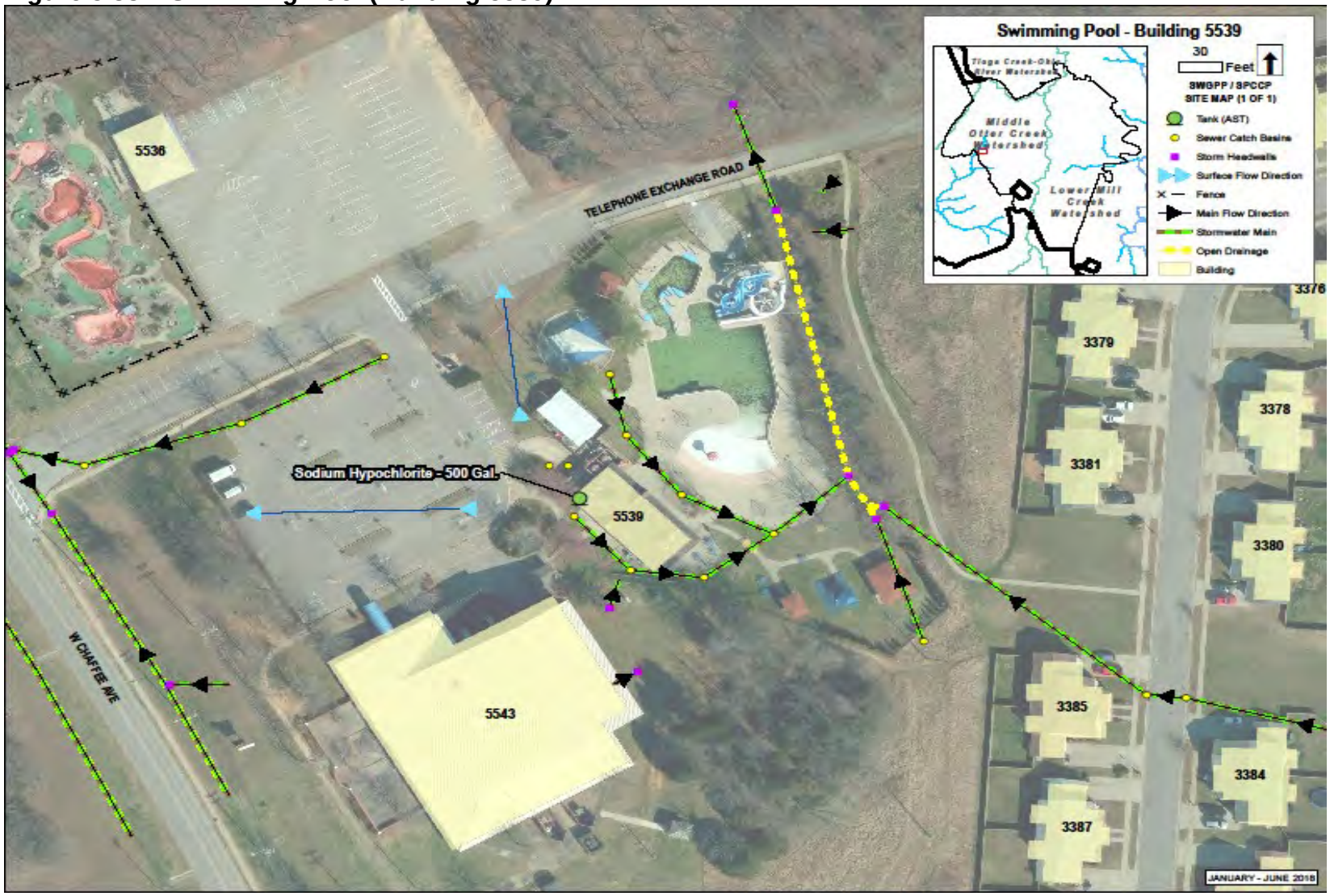
5.33.2 Product Handling

The chlorine is delivered by contractors and pumped into the distribution tanks. The drums and tank 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 5.33.2 provides more details regarding product handling activities for this area.

Table 5.33.2 Swimming Pool Chemical Product Handling

Container ID	Loading Method	Overfill Protection	Unloading Method
850	Electric Pump	Visual	Used in Water Treatment
5539	Electric Pump	Visual	Used in Water Treatment
7962	Electric Pump	Visual	Used in Water Treatment

Figure 5.33.1 Swimming Pool (Building 5539)



5.33.3 Secondary Containment

The tank at 7962 is inside a plastic dike. The drums are on containment pallets. Appendix D contains volume calculations for containers within diked areas.

Table 5.33.3 Swimming Pool Chemical Secondary Containment

Container ID	Type	Storm Water Release
850	Containment Pallet	NA
5539	Plastic Dike	NA
7962	Containment Pallet	NA

5.33.4 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.

5.33.5 Potential Spill Scenario

Complete failure of one chemical tank could result in a 500 gallon spill. An error transferring into a container could spill 5 gallons. A spill from a pool area would go to the Mill Creek or Otter Creek, depending on where the spill occurred (see Figures 2.4, 2.1, and 5.33.1). A spill in any of these areas would trigger the spill response procedures listed in Section 4.7.

Table 5.33.4 Swimming Pool Chemical Potential Spill Scenario

Container ID	Spill Amount (Gallons)	Contents	Cause	Pathway
850	55	Sodium Hypochlorite	Container Failure	Northeast to Mill Creek and then the Salt River
	5		Transfer Error	
5539	500	Sodium Hypochlorite	Container Failure	West to Otter Creek
	5		Transfer Error	
7962	55	Sodium Hypochlorite	Container Failure	Northeast to Mill Creek and then the Salt River
	5		Transfer Error	

Does not contain oil, not regulated by 40 CFR 112

5.34 Godman Airfield (5200-Area)

5.34.1 Area Description

This area is used aircraft storage, maintenance, and refueling. There are emergency generators, mobile refuelers, and various other ASTs for fuel and used products. Table 5.34.1 provides container details, and Figure 5.34.1 shows their locations.

Table 5.34.1 Godman Airfield Containers

Container ID	Type	Capacity (Gallons)	Material of Construction	Product Stored
5220A	AST, Horizontal	500	Steel	Diesel
5220B	AST, Horizontal	80	Steel	Diesel
5220C	AST, Horizontal	500	Steel	Diesel
5222A	AST, Horizontal	500	Steel	Used Fuel
5222B	AST, Horizontal	500	Steel	Used Oil
5222C	AST, Horizontal	200	Steel	Ethylene Glycol
5222D	AST, Horizontal	200	Steel	Ethylene Glycol
5222E	AST, Horizontal	100	Steel	Ethylene Glycol
5222DRA	55-Gallon Drums	55 gallons (up to 2)	Plastic	Ethylene Glycol
5225	AST, Horizontal	80	Steel	Diesel
5231	AST, Horizontal	500	Steel	Diesel
5232A	AST, Horizontal	574	Steel	Diesel
5232B	AST, Horizontal	574	Steel	Diesel
5242A	AST, Horizontal	10,000	Steel	F24
5242B	AST, Horizontal	10,000	Steel	F24
5242C	REMOVED	500	Steel	Gasoline
5242D	AST, Horizontal	500	Steel	Used Fuel
5242E	AST, Horizontal	15,000	Steel	F24
5242F	AST, Horizontal	15,000	Steel	F24
5242G	AST, Horizontal	15,000	Steel	F24
5242H	AST, Horizontal	15,000	Steel	F24
5256A	AST, Horizontal	200	Steel	Ethylene Glycol
5256B	AST, Horizontal	200	Steel	Ethylene Glycol
5256C	AST, Horizontal	100	Steel	Ethylene Glycol

5256DRA	55-Gallon Drums	55 (up to 4)	Steel	Used Oil
5256DRB	55-Gallon Drums	55 (up to 6)	Steel	Used Oil
5256DRC	55-Gallon Drums	55 gallons (up to 2)	Plastic	Ethylene Glycol
5259	AST, Horizontal	336	Steel	Diesel

Does not contain oil, not regulated by 40 CFR 112

5.34.2 Product Handling

Contractor delivery trucks fill the diesel tanks. The used product tanks are filled by manually pouring used products. The collection tanks are emptied via vacuum truck. Table 5.34.2 provides product handling details.

Table 5.34.2 Godman Airfield Product Handling

Container ID	Loading Method	Overfill Protection	Unloading Method
5220A, 5220B, 5220C	Truck	Sight Gauge	Used in Generator
5222A, 5222B	Manual	Sight Gauge	Vacuum Truck
5222C, 5222D, 5222C	Manual	Visual	Dispensed to Fire System
5222DRA	Manual	Visual	Dispensed to Fire System Tanks
5225, 5231, 5232A, 5232B	Truck	Sight Gauge	Used in Generator
5242A, 5242B	Truck	Sight Gauge	Dispensed to Vehicles or Mobile Refuelers
5242C	REMOVED	Sight Gauge	Dispensed to Vehicles
5242D	Manual	Sight Gauge	Vacuum Truck
5242E, 5242F, 5242G, 5242H	Truck	Sight Gauge	Dispensed to Vehicles or Mobile Refuelers
5242MA, 5242MB, 5252M	Loading Rack	Automatic Shutoff	Dispensed to Vehicles
5256A, 5256B, 5256C	Manual	Visual	Dispensed to Fire System

5256DRA, 5256DRB	Manual	Visual	Vacuum Truck
5256DRC	Manual	Visual	Dispensed to Fire System Tanks
5259	Truck	Sight Gauge	Used in Generator

5.34.3 Secondary Containment

The generator ASTs are double-walled and do not collect storm water. The used product drums are in a steel containment conexes. The mobile refuelers and used product tanks are in concrete berms. Volume calculations for the diked areas are in Appendix D. Personnel follow the procedures in 4.10 for draining water from the berms.

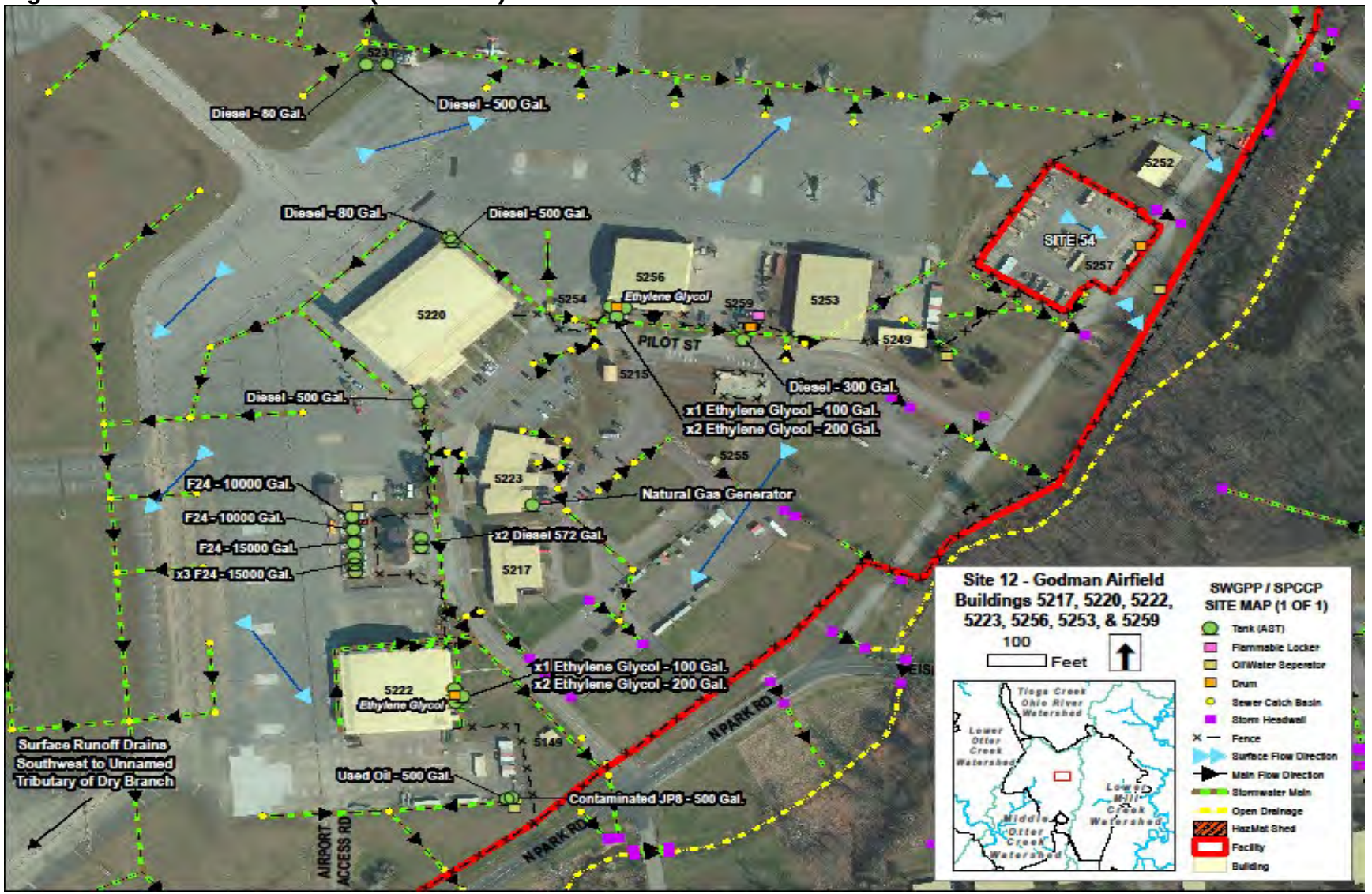
Table 5.34.3 Godman Airfield Secondary Containment

Container ID	Type	Storm Water Release
5220A, 5220B, 5220C	Double-Walled	NA
5222A, 5222B	Double-Walled	NA
5222C, 5222D, 5222E	Double-Walled	NA
5222DRA	Plastic Containment Pallets	NA
5225, 5231, 5232A, 5232B, 5242A, 5242B, ~~5242C, 5242D~~, 5242E, 5242F, 5242G, 5242H	Double-Walled	NA
5256A, 5256B, 5256C	Double-Walled	NA
5256DRA, 5256DRB, 5256DRC	Steel Conex	NA
5256DRC	Plastic Containment Pallets	NA
5259	Double-Walled	NA

5.34.4 Inspection and Testing

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

Figure 5.34.1 Godman Airfield (5200-Area)



5.34.5 Potential Spill Scenarios

Complete container failure of an AST could result in a spill of up to 15,000 gallons. The loss of the entire contents of the fuel delivery or vacuum collection tanker trucks could spill 5,000 or 3,000 gallons, respectively. 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. Any spill from this area would flow across concrete south in storm water pipes to Dry Branch and then west to Otter Creek (see Figures 2.1, 2.2, 2.4 and 5.34.1). A spill in this area would trigger the spill response procedures listed in Section 4.7.

Table 5.34.4 Godman Airfield Potential Spill Scenarios

Container ID	Spill Amount (Gallons)	Contents	Cause	Pathway
5220A	500	Diesel	Container Failure	South in storm water pipes and west to Otter Creek
	3,000		Delivery Truck Error	
5220B	80	Diesel	Container Failure	South in storm water pipes and west to Otter Creek
	3,000		Delivery Truck Error	
5220C	500	Diesel	Container Failure	South in storm water pipes and west to Otter Creek
	3,000		Delivery Truck Error	
5222A	500	Used Fuel	Container Failure	South in storm water pipes and west to Otter Creek
	5		Transfer Error	
	3,000		Vacuum Truck Error	
5222B	500	Used Oil	Container Failure	
	5		Transfer Error	
	3,000		Vacuum Truck Error	
5222C	200 3,000 5	Ethlyene Glycol	Container Failure Transfer Error Vacuum Truck Error	South in storm water pipes and west to Otter Creek

Container ID	Spill Amount (Gallons)	Contents	Cause	Pathway
5222D	200 3,000 5	Ethlyene Glycol	Container Failure Transfer Error Vacuum Truck Error	South in storm water pipes and west to Otter Creek
5222E	100 3,000 5	Ethlyene Glycol	Container Failure Transfer Error Vacuum Truck Error	South in storm water pipes and west to Otter Creek
5222DRA	55 3,000 5	Ethlyene Glycol	Container Failure Transfer Error Vacuum Truck Error	South in storm water pipes and west to Otter Creek
5225	80 3000	Diesel	Container Failure Delivery Truck Error	South in storm water pipes and west to Otter Creek
5231	500	Diesel	Container Failure	South in storm water pipes and west to Otter Creek
	3,000		Delivery Truck Error	
5232A	574	Diesel	Container Failure	South in storm water pipes and west to Otter Creek
	3,000		Delivery Truck Error	
5232B	574	Diesel	Container Failure	South in storm water pipes and west to Otter Creek
	3,000		Delivery Truck Error	
5242A	10,000	F24	Container Failure	South in storm water pipes and west to Otter Creek
	50		Dispensing Error	
	5,000		Error Unloading to Mobile Refueler	
	5,000		Delivery Truck Error	
5242B	10,000	F24	Container Failure	

Container ID	Spill Amount (Gallons)	Contents	Cause	Pathway
	50		Dispensing Error	South in storm water pipes and west to Otter Creek
	5,000		Error Unloading to Mobile Refueler	
	5,000		Delivery Truck Error	
5242C	500	Gasoline	Container Failure	South in storm water pipes and west to Otter Creek
	25 REMOVED		Dispensing Error	
			Delivery Truck Error	
5242D	500 REMOVED	Avigas	Container Failure	South in storm water pipes and west to Otter Creek
			Transfer Error	
	1,000		Vacuum Truck Error	
5242E	15,000	F24	Container Failure	South in storm water pipes and west to Otter Creek
	50		Dispensing Error	
	3,000		Delivery Truck Error	
5242F	15,000	F24	Container Failure	South in storm water pipes and west to Otter Creek
	50		Dispensing Error	
	3,000		Delivery Truck Error	
5242G	15,000	F24	Container Failure	South in storm water pipes and west to Otter Creek
	50		Dispensing Error	
	3,000		Delivery Truck Error	
5242H	15,000	F24	Container Failure	South in storm water pipes and west to Otter Creek
	50		Dispensing Error	
	3,000		Delivery Truck Error	

Container ID	Spill Amount (Gallons)	Contents	Cause	Pathway
5256A	200 55 3000	Ethylene Glycol	Container Failure Transfer Error	South in storm water pipes and west to Otter Creek
5256B	200 55 3000	Ethylene Glycol	Container Failure Transfer Error	South in storm water pipes and west to Otter Creek
5256C	200 55 3000	Ethylene Glycol	Container Failure Transfer Error	South in storm water pipes and west to Otter Creek
5256DRA	55 5 3,000	Used Oil	Container Failure Transfer Error Vacuum Truck Error	South in storm water pipes and west to Otter Creek
5256DRB	55 5 3,000	Used Oil	Container Failure Transfer Error Vacuum Truck Error	South in storm water pipes and west to Otter Creek
5256DRC	55 5 3,000	Ethylene Glycol	Container Failure Transfer Error	South in storm water pipes and west to Otter Creek
5259	336 3000	Diesel	Container Failure Delivery Truck Error	South in storm water pipes and west to Otter Creek

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 Knox may not be able to complete these changes within a six-month time period. Fort Knox 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 (See Addendum 6.1 for details)

Corrective Actions	Date Signed	Responsible Party	Signature	Comment
Provide adequate secondary containment for tanks: 1227B, NEC Generator 1722, Harmon Hall 7422, School Bus Maint. 9359C. Landfill Maint.	04AUG17 4JAN17 7SEP16 12SEP16	Tom Wright Tom Wright Tom Wright Tom Wright	Tom Wright Tom Wright Tom Wright Tom Wright	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 drums at: 2770.	7SEP16	Tom Wright	Tom Wright	Drums are covered, but a spill could leak out of the concrete or pass through the OWS.
Provide a method to prevent fuel tanker trucks from departing before disconnecting fuel transfer lines at loading/unloading racks: 2747, St. John's- 2770, Boatwright- 5946, ECS63- 6135Potts –	18JUL17 8JUN17 17JUL17 8JUN17	Tom Wright Tom Wright Tom Wright Tom Wright	Tom Wright Tom Wright Tom Wright Tom Wright	1) An interlocked warning light, vehicle brake, or physical barrier, OR, 2) warning signs and wheel chocks are needed

Corrective Actions	Date Signed	Responsible Party	Signature	Comment
Used oil ASTs that use a pump to fill the tank from a remote location need a method to prevent overfills: 2730, Burke – NOT USED 2770, Boatwright-System Repaired 2807.Mansfield-Alarm repaired	21SEP16 21SEP16 19OCT16	Tom Wright Tom Wright Tom Wright	Tom Wright Tom Wright Tom Wright	The gauge to read tank level is not visible from the pumping point. Equipment (flow restrictors, alarms, etc.) or procedures (two-person monitoring and communication system) to prevent an overfill are required.
Provide larger secondary containment for drums at: 2951, QRP-Drums were empty 5901, ECS63-containment pallet added 9387.MATES-Spill dikes added at doors	21SEP16 27SEP16 21SEP16	Tom Wright Tom Wright Tom Wright	Tom Wright Tom Wright Tom Wright	Containment must be impervious and at least large enough to hold the volume of a drum (55 gallons).
Remove (replace if necessary) ASTs that are heavily corroded: 9555, 9779.	13SEP17	Tom Wright	Tom Wright	Used Oil ASTS removed.
Ensure proper operation of vent caps: 1054, Autocraft-Repaired 1227A, NEC-Repaired, 3075, Ammo Depot-Repaired 9359, Landfill-Repaired 9779, YANO-Repaired 9845, Zussman-Repaired Inspection form modified to include vent cap check.	All completed on 12SEP16 Except one on 21SEP16 21SEP16	Tom Wright Tom Wright	Tom Wright Tom Wright	Vent caps must operate properly to allow air too escape during filling and for emergency pressure relief.
Replace level gauges and/or spill buckets at tanks:	All completed on 2SEP16	Tom Wright	Tom Wright	Level gauges are required to prevent spills due to overfills.

Corrective Actions	Date Signed	Responsible Party	Signature	Comment
2807, Mansfield -Repaired 4012, Golf Course-Repaired 7331. LL Brooks-Repaired				
Improve drainage of fueling area at: 9845-Zussman 9555-Wilcox 9779-Yano	01NOV17 20OCT17 01NOV17	Mark Hazelwood Mark Hazelwood Mark Hazelwood	Mark Hazelwood Mark Hazelwood Mark Hazelwood	Trench to the drop inlet or otherwise slope the area to improve drainage.
Emptied and removed an out-of-service AST-4002 Lift Station-	09AUG17	Tom Wright via HWCD	Tom Wright	AST has been removed along with the generator.

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Appendix A

SPCC Regulated Containers

Table A-1. SPCC Regulated Containers
Lined Out - Removed

Container ID (Building Number)	Capacity (Gallons)	Material of Construction	Product Stored	Secondary Containment Type	Function
17	77	Steel	Diesel	Double-walled	Generator
18	250	Steel	Diesel	Double-walled	Generator
121	500	Steel	Diesel	Double-walled	Generator
127A	300	Steel	Used Food Grease	Double-walled	Waste
127B	300	Steel	Used Food Grease	Double-walled	Waste
136A	10,000	Steel	Diesel	Double-walled	Generator
136B	10,000	Steel	Diesel	Double-walled	Generator
136C	400	Steel	Diesel	Double-walled	Generator
136D	400	Steel	Diesel	Double-walled	Generator
136E	500	Steel	Oil	Double-walled	POL
136F	400	Plastic	Used Oil	Double-walled	Waste
136DR	55 (up to 4)	Steel	Oil Antifreeze	Containment Pallet	Dispense
203	145	Steel	Diesel	Double-walled	Generator
297	300	Steel	Used Food Grease	Double-walled	Waste
502	300	Steel	Used Food Grease	Double-walled	Waste
612A	1,000	Steel	Gasoline	Double-walled	Dispense
612B	500	Steel	Diesel	Double-walled	Dispense
614DRA	55 (up to 8)	Steel	Oil & Used Oil	Containment Pallet	Dispense & Waste

Container ID (Building Number)	Capacity (Gallons)	Material of Construction	Product Stored	Secondary Containment Type	Function
715	300	Steel	Used Food Grease	Double-walled	Waste
850DR	55	Plastic	Sodium Hypochlorite	Containment Pallet	Water Treatment
851A	10,000	Steel	Diesel	Double-walled	Generator
851B	300	Steel	Diesel	Double-walled	Generator
851C	55	Steel	Diesel	Steel secondary containment	Generator
~~851B~~	REMOVED		~~Used Food Grease~~	~~Double-walled~~	~~Waste~~
~~851C~~			~~Used Food Grease~~	~~Double-walled~~	~~Waste~~
~~851D~~	~~300~~	~~Steel~~	~~Used Food Grease~~	~~Double-walled~~	~~Waste~~
860A	12,000	Steel	Diesel	Double-walled	Generator
860B	200	Steel	Diesel	Double-walled	Generator
862A	500	Steel	Oil	Double-walled	POL
862B	400	Plastic	Used Oil	Double-walled	Waste
869A	10,000	Steel	Diesel	Double-walled	Generator
869B	300	Steel	Diesel	Steel Dike	Generator
869C	300	Steel	Diesel	Steel Dike	Generator
1002	280	Steel	Diesel	Double-walled	Generator
1006	500	Steel	Diesel	Double-walled	Generator
1054A	1,000	Steel	Used Oil	Double-walled	Waste
1054B	500	Steel	Used Antifreeze	Double-walled	Waste
1118	300	Steel	Used Food Grease	Double-walled	Waste

Container ID (Building Number)	Capacity (Gallons)	Material of Construction	Product Stored	Secondary Containment Type	Function
1175	594	Steel	Diesel	Double-walled	Generator
1191A	200	Steel	Diesel	Double-walled	Generator
1191B	194	Steel	Diesel	Double-walled	Generator
1199	500	Steel	Diesel	Double-walled	Generator
1205	1,000	Steel	Diesel	Double-walled	Generator
1227A	1,000	Steel	Diesel	Double-walled	Generator
1227B	75	Steel	Diesel	Double-walled	Generator
1307	1,500	Steel	Diesel	Double-walled	Generator
1308A	1,500	Steel	Diesel	Double-walled	Generator
1308B	875	Steel	Diesel	Double-walled	Generator
1491	300	Steel	Used Food Grease	Double-walled	Waste
1467	693	Steel	Diesel	Double-walled	Generator
1722	187	Steel	Diesel	Double-walled	Generator
1728DR	55	Steel	Ethylene Glycol	Containment Pallet	Water Treatment
1730A	240	Steel	Diesel	Double-walled	Generator
1730B	77	Steel	Diesel	Double-walled	Generator
1730DRA	55 (up to 2)	Steel	Used Oil	Containment Pallet	Waste
1730DRB	55 (up to 2)	Steel	Used Oil, Used Fuel	Containment Pallet	Waste
1730DRC	55 (up to 4)	Steel	Used Anti-freeze	Containment Pallet	Waste
2012	300	Steel	Used Food Grease	Double-walled	Waste

Container ID (Building Number)	Capacity (Gallons)	Material of Construction	Product Stored	Secondary Containment Type	Function
2013	300	Steel	Used Food Grease	Double-walled	Waste
2021	516	Steel	Diesel	Double-walled	Generator
2190A	10,000	Steel	Diesel	Double-walled	Generator
2190B	10,000	Steel	Diesel	Double-walled	Generator
2190C	400	Steel	Diesel	Double-walled	Generator
2190D	400	Steel	Diesel	Double-walled	Generator
2190E	400	Plastic	Used Oil	Double-walled	Waste
2190DR	55 (up to 4)	Steel	Oil Antifreeze	Containment Pallet	POL
2341	785	Steel	Diesel	Double-walled	Generator
2370	331	Steel	Diesel	Double-walled	Generator
2377	300	Steel	Used Food Grease	Double-walled	Waste
2380	300	Steel	Used Food Grease	Double-walled	Waste
2389	1,200	Steel	Diesel	Double-walled	Generator
2723A	300	Steel	Used Food Grease	Double-walled	Waste
2723B	300	Steel	Used Food Grease	Double-walled	Waste
2730	660	Steel	Used Oil	Double-walled	Waste
2741A	10,000	Steel	Diesel	Double-walled	Generator
2741B	10,000	Steel	Diesel	Double-walled	Generator
2741C	400	Steel	Diesel	Double-walled	Generator
2741D	400	Steel	Diesel	Double-walled	Generator

Container ID (Building Number)	Capacity (Gallons)	Material of Construction	Product Stored	Secondary Containment Type	Function
2741E	400	Plastic	Used Oil	Double-walled	Waste
~~2747A~~	CLOSED		~~Diesel~~	~~Double-walled~~	~~Dispenser~~
~~2747B~~			~~Gasoline~~	~~Double-walled~~	~~Dispenser~~
~~2747C~~			~~Diesel~~	~~Double-walled~~	~~Dispenser~~
~~2747D~~	~~10,000~~	~~Steel~~	~~F24~~	~~Double-walled~~	~~Dispenser~~
~~2747E~~	~~10,000~~	~~Steel~~	~~F24~~	~~Double-walled~~	~~Dispenser~~
~~2747F~~	REMOVED		~~Diesel~~	~~Double-walled~~	~~Generator~~
2767	660	Steel	Used Oil	Double-walled	Waste
2767DRA	55 (up to 4)	Steel	Oil	Containment Pallet	Storage
2767DRB	55 (up to 4)	Steel	Oil	Secondary Containment	Storage
~~2770A~~	CLOSED		~~F24~~	~~Double-walled~~	~~Dispenser~~
~~2770B~~	~~1,000~~	~~Steel~~	~~Gasoline~~	~~Double-walled~~	~~Dispenser~~
2770C	500	Steel	Used Fuel	Double-walled	Waste
2770D	2,000	Steel	Used Oil	Double-walled	Waste
2770E	660	Steel	Used Oil	Double-walled	Waste
2770DRA	55 (up to 80)	Steel	Oil, Hydraulic Oil, Grease Antifreeze	Containment Pallet	Storage
2770DRB	55 (up to 4)	Steel	Used Oil, Used Fuel Used Anti-freeze	Containment Pallet	Waste
2770DRC	55 (up to 60)	Steel	Oil, Hydraulic Oil, Grease,	Containment Pallet	Dispense

Container ID (Building Number)	Capacity (Gallons)	Material of Construction	Product Stored	Secondary Containment Type	Function
			Antifreeze		
2770DRD	55 (up to 4)	Steel	Used Oil, Used Fuel Used Anti-freeze	Containment Pallet	Waste
2781M	3,000 (truck)	Steel	Diesel	None	Mobile Refueler
~~2798~~	CLOSED	~~Steel~~	~~JP8~~	~~Double-walled~~	~~Dispense~~
2807A	500	Steel	Used Fuel	Double-walled	Waste
2807B	660	Steel	Used Oil	Double-walled	Waste
2807C	1,000	Steel	Used Oil	Double-walled	Waste
2807D	500	Steel	Used Anti-freeze	Double-walled	Waste
2807E	1,000	Steel	Used Oil	Double-walled	Waste
2807F	500	Steel	Used Anti-freeze	Double-walled	Waste
2807DRA	65 (up to 4)	Steel	Oil, Hydraulic Oil Antifreeze	Steel Dike	Dispense
2807DRB	55 (up to 4)	Steel	Used Fuel	Containment Pallet	Waste
2807DRC	55 (up to 16)	Steel	Oil, Hydraulic Oil, Used Oil, Used Fuel Antifreeze, Used Anti-freeze	Containment Pallet	Dispense, Waste
2807DRD	55 (up to 4)	Steel	Oil, Used Oil	Containment Pallet	Dispense, Waste
2807DRE	65 (up to 4)	Steel	Oil, Hydraulic Oil Antifreeze	Steel Dike	Dispense
2807DRF	55 (up to 4)	Steel	Used Anti-freeze	Containment Pallet	Waste
2807DRG	65 (up to 4)	Steel	Oil, Hydraulic Oil	Steel Dike	Storage

Container ID (Building Number)	Capacity (Gallons)	Material of Construction	Product Stored	Secondary Containment Type	Function
			Antifreeze		
2807DRH	55 (up to 6)	Steel	Oil, Hydraulic Oil Antifreeze	Containment Pallet	Dispense
2807DRI	65 (up to 4)	Steel	Oil, Hydraulic Oil Antifreeze	Steel Dike	Dispense
2807DRJ	55 (up to 4)	Steel	Used Oil	Containment Pallet	Waste
2807DRK	55 (up to 4)	Steel	Oil Antifreeze	Containment Pallet	Dispense
2807DRL	55 (up to 16)	Steel	Oil, Hydraulic Oil, Used Oil, Used Fuel Antifreeze, Used Anti-freeze	Steel Conex	Storage, Waste
2807DRM	55 (up to 16)	Steel	Oil, Hydraulic Oil, Used Oil, Used Fuel Antifreeze, Used Anti-freeze	Steel Conex	Storage, Waste
2807DRN	55 (up to 16)	Steel	Oil, Hydraulic Oil, Used Oil, Used Fuel Antifreeze, Used Anti-freeze	Steel Conex	Storage, Waste
2807DRO	55 (up to 16)	Steel	Oil, Hydraulic Oil, Used Oil, Used Fuel Antifreeze, Used Anti-freeze	Steel Conex	Storage, Waste
	55		Oil,	Steel Conex	Storage, Waste

Container ID (Building Number)	Capacity (Gallons)	Material of Construction	Product Stored	Secondary Containment Type	Function
2807DRP	(up to 16)	Steel	Hydraulic Oil, Used Oil, Used Fuel Antifreeze, Used Anti-freeze		
2835A	300	Steel	Used Food Grease	Double-walled	Waste
2835B	300	Steel	Used Food Grease	Double-walled	Waste
2836	2,000	Steel	Diesel	Double-walled	Generator
2862A	120	Steel	Diesel	Double-walled	Generator
2862B	120	Steel	Diesel	Double-walled	Generator
2911	200	Steel	Diesel	Double-walled	Generator
2942A	660	Steel	Used Oil	Double-walled	Waste
2942B	120	Steel	Diesel	Secondary Containment	Generator
2942DR	55 (up to 4)	Steel	Used Fuel Used Anti-freeze	Containment Pallet	Waste
2943	660	Steel	Used Oil	Double-walled	Waste
2943DRA	65 (up to 4)	Steel	Oil, Hydraulic Oil Antifreeze	Steel Dike	Dispense
2943DRB	55 (up to 4)	Steel	Oil, Hydraulic Oil Antifreeze	Containment Pallet	Storage
2943DRC	55 (up to 16)	Steel	Oil, Hydraulic Oil	Steel Conex	Storage
2944A	660	Steel	Used Oil	Double-walled	Waste
2944B	660	Steel	Used Oil	Double-walled	Waste
2944DR	55 (up to 8)	Steel	Oil	Containment Pallet	Storage

Container ID (Building Number)	Capacity (Gallons)	Material of Construction	Product Stored	Secondary Containment Type	Function
2944M	2,500 (truck)	Steel	JP8	Steel Dike	Mobile Refueler
2946	300	Steel	Used Food Grease	Double-walled	Waste
2950DRC	55 (up to 20)	Steel	Used oil & fuel Used Anti-freeze	Plastic Containment Pallet	Waste
~~2951~~	~~660~~	REMOVED	~~Used Oil~~	~~Double-walled~~	~~Waste~~
2951DRA	55 (up to 8)	Steel	Used Oil, Used Fuel Used Anti-freeze	Containment Pallet	Waste
2951DRB	55 (up to 8)	Steel	Used Oil	Containment Pallet	Waste
2951A	660	Steel	Used Oil	Double-walled	Waste
2951B	660	Steel	Used Oil	Double-walled	Waste
2951C	660	Steel	Used Oil	Double-walled	Waste
2951D	660	Steel	Used Fuel	Double-walled	Waste
2951E	660	Steel	Used Anti-freeze	Double-walled	Waste
2951F	660	Steel	Used Anti-freeze	Double-walled	Waste
2951G	650	Steel	Used Fuel	Double-walled	Waste
2951H	800	Steel	Gas/Diesel	Double-walled	Not in use
2953DR	55 (up to 4)	Steel	Oil, Hydraulic Oil Antifreeze, Isopropyl Alcohol	Concrete Dike	Storage
2958A	650	Steel	Used Oil	Double-walled	Waste
2958B	550	Steel	Used Anti-freeze	Double-walled	Waste

Container ID (Building Number)	Capacity (Gallons)	Material of Construction	Product Stored	Secondary Containment Type	Function
3008	500	Steel	Diesel	Double-walled	Generator
3005DRA	55	Steel	Sodium Hypochlorite	Containment Pallet	Product & Waste
3013DRB	55	Plastic	Oil	Containment Pallet	Product
3075	500	Steel	Diesel	Double-walled	Dispense
~~4002~~	~~500~~	~~Steel~~ REMOVED	~~Diesel~~	~~Double-walled~~	~~Generator~~
4011A	500	Steel	Gasoline	Double-walled	Dispense
4011B	2,000	Steel	Diesel	Double-walled	Dispense
4015	235	Steel	Diesel	Double-walled	Generator
4024	300	Steel	Used Food Grease	Double-walled	Waste
4210	250	Steel	Diesel	Double-walled	Generator
4249	1,700	Steel	Diesel	Double-walled	Generator
4250	1,700	Steel	Diesel	Double-walled	Generator
4991	300	Steel	Used Food Grease	Double-walled	Waste
4995A	10,000	Steel	Gasoline	Double-walled	Dispense
4995B	10,000	Steel	Gasoline	Double-walled	Dispense
4995C	10,000	Steel	Gasoline	Double-walled	Dispense
4997A	10,000	Steel	Diesel	Double-walled	Generator
4997B	10,000	Steel	Diesel	Double-walled	Generator
4997C	400	Steel	Diesel	Double-walled	Generator
4997D	400	Steel	Diesel	Double-walled	Generator

Container ID (Building Number)	Capacity (Gallons)	Material of Construction	Product Stored	Secondary Containment Type	Function
4997E	500	Steel	Oil	Double-walled	Dispense
4997F	400	Plastic	Used Oil	Double-walled	Waste
4997DR	55 (up to 4)	Steel	Oil Used Anti-freeze	Containment Pallet	Dispense
5220A	500	Steel	Diesel	Double-walled	Generator
5220B	80	Steel	Diesel	Double-walled	Generator
5220C	500	Steel	Diesel	Double-walled	Generator
5222A	500	Steel	Used Fuel	Double-walled	Waste
5222B	500	Steel	Used Oil	Double-walled	Waste
5222C	200	Steel	Ethylene Gly-col	Double-walled	Dispense
5222D	200	Steel	Ethylene Gly-col	Double-walled	Dispense
5222C	100	Steel	Ethylene Gly-col	Double-walled	Dispense
5222DRA	55 gal-lons (up to 2)	Plastic	Ethylene Gly-col	Containment Pallet	Dispense
5225	80	Steel	Diesel	Double-walled	Generator
5231	500	Steel	Diesel	Double-walled	Dispense
5232A	574	Steel	Diesel	Double-walled	Dispense
5232B	574	Steel	Diesel	Double-walled	Dispense
5242A	10,000	Steel	F24	Double-walled	Dispense
5242B	10,000	Steel	F24	Double-walled	Dispense
~~5242C~~	REMOVED	~~Steel~~	~~Gasoline~~	~~Double-walled~~	~~Dispense~~

Container ID (Building Number)	Capacity (Gallons)	Material of Construction	Product Stored	Secondary Containment Type	Function
5242D	500	Steel	Avigas	Double-walled	Waste
5242E	15,000	Steel	F24	Double-walled	Dispense
5242F	15,000	Steel	F24	Double-walled	Dispense
5242G	15,000	Steel	F24	Double-walled	Dispense
5242H	15,000	Steel	F24	Double-walled	Dispense
5256A	200	Steel	Ethylene Glycol	Double-walled	Dispense
5256B	200	Steel	Ethylene Glycol	Double-walled	Dispense
5256C	100	Steel	Ethylene Glycol	Double-walled	Dispense
5256DRA	55 (up to 4)	Steel	Used Oil	Containment Pallet	Waste
5256DRB	55 (up to 6)	Steel	Used Oil	Containment Pallet	Waste
5256DRC	55 gallons (up to 2)	Plastic	Ethylene Glycol	Containment Pallet	Dispense
5259	336	Steel	Diesel	Double-walled	Generator
5539	500	Plastic	Sodium Hypochlorite	Plastic Dike	Water Treatment
5590/5592	240	Steel	Diesel	Double-walled	Generator
5549	300	Steel	Used Food Grease	Double-walled	Waste
5898	250	Steel	Diesel	Double-walled	Generator
5899	250	Steel	Diesel	Double-walled	Generator
~~5901A~~	~~660~~	**RELOCATED to Colby MP 2942, 2943 and 2944**		~~Double-walled~~	~~Waste~~
~~5901B~~	~~660~~			~~Double-walled~~	~~Waste~~
~~5901DRA~~	~~55 (up to 4)~~		~~Grease~~	~~Containment Pallet~~	~~Dispense~~

Container ID (Building Number)	Capacity (Gallons)	Material of Construction	Product Stored	Secondary Containment Type	Function
~~5901DRB~~	~~55 (up to 8)~~	~~Steel~~	~~Oil, Hydraulic Oil, Used Oil, Used Fuel~~ ~~Antifreeze~~	~~Containment Pallet~~	~~Dispense, Waste~~
~~5909~~	~~55 (up to 50)~~	~~Steel~~	~~Oil, Hydraulic Oil, Grease~~ ~~Antifreeze~~	~~Conex~~	~~Storage~~
5915	300	Steel	Used Food Grease	Double-walled	Waste
5917A	278	Steel	Diesel	Double-walled	Generator
5917B	300	Steel	Used Food Grease	Double-walled	Waste
5931	331	Steel	Diesel	Double-walled	Generator
5940	300	Steel	Used Food Grease	Double-walled	Waste
~~5946~~	~~10,000~~	CLOSED ~~Steel~~	~~JP8~~	~~Double-walled~~	~~Dispense~~
6012	300	Steel	Used Food Grease	Double-walled	Waste
6018	300	Steel	Used Food Grease	Double-walled	Waste
~~6135~~	~~10,000~~	CLOSED	~~JP8~~	~~Double-walled~~	~~Dispense~~
~~6135~~	~~10,000~~	CLOSED	~~JP8~~	~~Double-walled~~	~~Dispense~~
~~6135~~	~~10,000~~	~~Steel~~	~~JP8~~	~~Double-walled~~	~~Dispense~~
6151	250	Steel	Diesel	Double-walled	Generator
6204	300	Steel	Used Food Grease	Double-walled	Waste
6424	300	Steel	Used Food Grease	Double-walled	Waste
6434A	10,000	Steel	Diesel	Double-walled	Generator

Container ID (Building Number)	Capacity (Gallons)	Material of Construction	Product Stored	Secondary Containment Type	Function
6434B	175	Steel	Diesel	Double-walled	Generator
6434C	175	Steel	Diesel	Double-walled	Generator
6434D	175	Steel	Diesel	Double-walled	Generator
6434E	175	Steel	Diesel	Double-walled	Generator
6434F	2,350	Steel	Diesel	Double-walled	Generator
6434G	2,350	Steel	Diesel	Double-walled	Generator
6434H	2,350	Steel	Diesel	Double-walled	Generator
6434I	2,350	Steel	Diesel	Double-walled	Generator
6434J	2,350	Steel	Diesel	Double-walled	Generator
6434K	944	Steel	Diesel	Double-walled	Generator
~~6434M~~	~~944~~	**REMOVED**	~~Diesel~~	~~Double-walled~~	~~Generator~~
6542A	300	Steel	Used Food Grease	Double-walled	Waste
6542B	300	Steel	Used Food Grease	Double-walled	Waste
6555A	300	Steel	Used Food Grease	Double-walled	Waste
~~6555B~~	~~300~~	**CLOSED**	~~Used Food Grease~~	~~Double-walled~~	~~Waste~~
6572	55	Steel	Used Oil	Containment Pallet	Waste
6576A	660	Steel	Used Oil	Double-walled	Waste
6576B	650	Steel	Used Antifreeze	Double-walled	Waste
6562DR	55	Steel	Contaminated Fuel	Containment Pallet	Waste
6579	653	Steel	Diesel	Double-walled	Generator

Container ID (Building Number)	Capacity (Gallons)	Material of Construction	Product Stored	Secondary Containment Type	Function
6605A	10,000	Steel	Diesel	Double-walled	Generator
6605B	10,000	Steel	Diesel	Double-walled	Generator
6605C	400	Steel	Diesel	Double-walled	Generator
6605D	400	Steel	Diesel	Double-walled	Generator
6605E	500	Steel	Oil	Double-walled	Dispense
6605F	400	Plastic	Used Oil	Double-walled	Waste
6605DR	55 (up to 4)	Steel	Oil Antifreeze	Containment Pallet	Storage
7101	250	Steel	Diesel	Double-walled	Generator
7102	130	Steel	Diesel	Double-walled	Generator
7103	278	Steel	Diesel	Double-walled	Generator
7207A	500	Steel	Diesel	Double-walled	Generator
7207B	250	Steel	Diesel	Concrete Dike	Generator
7208DRA	55	Steel	Used Oil	Containment Pallet	Equipment
7208DRB	55	Plastic	Sodium Bi-sulfites	Containment Pallet	Water Treatment
7209A	275	Plastic	Sodium Hy-pochlorite	Containment Pallet	Water Treatment
7235A	120	Steel	Diesel	Double-walled	Generator
7235B	120	Steel	Diesel	Double-walled	Generator
7238A	120	Steel	Used Oil	Double-walled	Waste
7238DR	55 (up to 4)	Steel	Used Oil Used Anti-freeze	Containment Pallet	Waste

Container ID (Building Number)	Capacity (Gallons)	Material of Construction	Product Stored	Secondary Containment Type	Function
7238M	2,000 (truck)	Steel	JP8	Secondary Containment	Dispense
7331A	1,000	Steel	Gasoline	Double-walled	Dispense
7331B	1,000	Steel	Diesel	Double-walled	Dispense
7331DR	55 (up to 3)	Steel	Oil Used Oil	Containment Pallet	Waste
7422	3,000	Steel	Diesel	Steel Dike	Dispense
7422DR	55 (up to 4)	Steel	Oil, Used Oil Antifreeze	Containment Pallet	Dispense, Waste
7501	200	Steel	Diesel	Double-walled	Generator
7873	500	Steel	Diesel	Double-walled	Generator
7959	300	Steel	Used Food Grease	Double-walled	Waste
7962DR	55 (up to 4)	Plastic	Sodium Hypochlorite	Containment Pallet	Water Treatment
8928	500	Steel	Diesel	Double-walled	Generator
8930	240	Steel	Diesel	Double-walled	Generator
9009	500	Steel	Diesel	Double-walled	Generator
9065A	214	Steel	Diesel	Double-walled	Generator
9065B	200	Steel	Diesel	Double-walled	Generator
9101	113	Steel	Diesel	Double-walled	Generator
9102	113	Steel	Diesel	Double-walled	Generator
9296	55 (up to 2)	Steel	Oil	Steel Dike	Waste
9309	100	Steel	Diesel	Double-walled	Generator
9312	55 (up to 4)	Steel	Phenyl-isocyanate	Containment Pallet	Dispense
9357	500	Steel	Used Oil	Double-walled	Waste

Container ID (Building Number)	Capacity (Gallons)	Material of Construction	Product Stored	Secondary Containment Type	Function
9359A	2,000	Steel	Diesel	Double-walled	Dispense
9359B	1,000	Steel	Diesel	Double-walled	Dispense
9359C	500	Steel	Used Oil	Steel Dike	Waste
9359D	275	Plastic	Oil	Steel Dike	Dispense
9359E	275	Steel	Hydraulic Oil	Steel Dike	Dispense
9359DR	55 (up to 4)	Steel	Used Oil	Containment Pallet	Waste
9385	100	Steel	Diesel	Double-walled	Generator
9387A	10,000	Steel	Diesel	Steel Dike	Dispense
9387B	10,000	Steel	Diesel	Steel Dike	Dispense
9387C	500	Steel	Used Oil	Double-walled	Waste
9387D	480	Steel	Used Oil	Double-walled	Waste
9387E	480	Steel	Used Oil	Double-walled	Waste
9387F	480	Steel	Used Oil	Double-walled	Waste
9387G	480	Steel	Used Oil	Double-walled	Waste
9387H	500	Steel	Used Anti-freeze	Double-walled	Waste
9387I	480	Steel	Used Oil	Double-walled	Waste
9387DRA	55 (up to 2)	Steel	Used Oil	None	Waste
9387DRB	55 (up to 12)	Steel	Oil, Hydraulic Oil, Grease Antifreeze	Containment Pallet	Dispense
9387DRC	55 (up to 24)	Steel	Oil, Hydraulic Oil, Grease Antifreeze	Conex	Dispense
9387DRD	55 (up to 40)	Steel	Oil, Hydraulic Oil, Grease	Conex	Dispense

Container ID (Building Number)	Capacity (Gallons)	Material of Construction	Product Stored	Secondary Containment Type	Function
			Antifreeze		
9387DRE	55 (up to 2)	Steel	Oil	Containment Pallet	Dispense
9387DRF	55 (up to 5)	Steel	Oil, Hydraulic Oil, Grease Antifreeze	Containment Pallet	Dispense
9399A	132	Steel	Diesel	Double-walled	Generator
9555A	1,000	Steel	Diesel	Double-walled	Dispense
~~9569B~~	~~1,000~~	REMOVED ~~Steel~~	~~Used Oil~~	~~Concrete Dike~~	~~Waste~~
9717	1,000	Steel	Diesel	Double-walled	Dispense
9779A	1,000	Steel	Diesel	Double-walled	Dispense
~~9809B~~	~~1,000~~	REMOVED	~~Used Oil~~	~~Concrete Dike~~	~~Waste~~
9815	170	Steel	Diesel	Double-walled	Generator
9829	660	Steel	Used Oil	Double-walled	Waste
9840/9999	300	Steel	Diesel	Double-walled	Generator
9845	1,000/ 2,000	Steel	Gasoline/ Diesel	Double-walled	Dispense
9855	500/ 1,000	Steel	Gasoline/ Diesel	Double-walled	Dispense
9879DRA	55 (up to 2)	Steel	Used Antifreeze	Containment Pallet	Waste
999A	322	Steel	Diesel	Double-walled	Generator
999B	383	Steel	Diesel	Double-walled	Generator
999C	250	Steel	Diesel	Double-walled	Generator
999D	250	Steel	Diesel	Double-walled	Generator

Does not contain oil, not regulated by 40 CFR 112

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

Container ID (Building Number)	Type	Capacity (Gallons)	Material of Construction	Contents	Function
711A	UST	20,000	FRP	Gasoline	Dispense
711B	UST	15,000	FRP	Gasoline	Dispense
711C	UST	10,000	FRP	Gasoline	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 Knox
Facility Address: Directorate of Public Works
Environmental Management Division
ATTN: IMKN-PWE
Fort Knox, KY 40121

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?

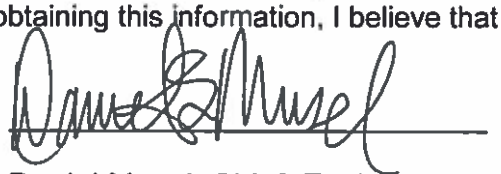
   Yes ____ No __X__

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: 21 January 2020

Name: Daniel Musel, Chief, Environmental Management Division
Fort Knox

Appendix C

Discharge Report to US EPA Regional Administrator

Discharge Report to US EPA Regional Administrator

Facility name and location:	Fort Knox, Hardin County, Kentucky 40121
Name(s) of the owner or operator of facility:	U.S. Army Garrison Fort Knox (IMKN-PWE)
Date and year of initial facility operation:	1918
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
869B	Hospital	AST, Horizontal	200	5	3.33	2.66	330	165%^
869C	Hospital	AST, Horizontal	200	5	3.33	2.66	330	165%^
~~2747~~	~~Loading/Unloading Rack~~	~~Mobile Refueler~~	~~10,000~~	~~100~~	~~39~~	~~0.5~~	~~14,500~~	~~145%~~
~~2770~~	~~Loading/Unloading Rack~~	~~Mobile Refueler~~	~~5,000~~	~~58~~	~~36~~	~~0.41~~	~~6,380~~	~~127%~~
~~2798~~	~~Loading/Unloading Rack~~	~~Mobile Refueler~~	~~5,000~~	~~63~~	~~19~~	~~0.5~~	~~4,460~~	~~110%~~
2767DRA	Drum Storage	55-Gallon Drums	55	3.75	3.75	0.75	60.5	115%^
2767DRB	Drum Storage	55-Gallon Drums	55	3.75	3.75	0.75	60.5	115%^
2807DRA	Drum Storage	65-Gallon Dispensers	65	3.75	3.75	0.75	75	115%^
2807DRE	Drum Storage	65-Gallon Dispensers	65	3.75	3.75	0.75	75	115%^
2807DRG	Drum Storage	65-Gallon Dispensers	65	3.75	3.75	0.75	75	115%^
2807DRI	Drum Storage	65-Gallon Dispensers	65	3.75	3.75	0.75	75	115%^
2807DRL	Drum Storage	55-Gallon Drums	55	24	7	0.5	620	1127%^
2807DRM	Drum Storage	55-Gallon Drums	55	15	8	0.5	440	800%^
2807DRN	Drum Storage	55-Gallon Drums	55	15	8	0.5	440	800%^
2807DRO	Drum Storage	55-Gallon Drums	55	15	8	0.5	440	800%^
2807DRP	Drum Storage	55-Gallon Drums	55	15	8	0.5	440	800%^
2943DRA	Drum Storage	65-Gallon Dispensers	65	3.75	3.75	0.75	75	115%^
2943DRB	Drum Storage	55-Gallon Drums	55	24	7	0.5	620	1127%^
2944DR	Drum Storage	55-Gallon Drums	55	3.75	3.75	0.75	75	115%^
2944DR	Drum Storage	55-Gallon Drums	55	24	7	0.5	620	800%
~~2944~~	~~Tanker Truck Parking~~	~~Mobile Refueler~~	~~2,500~~	~~40~~	~~13.5~~	~~0.66~~	~~2,700~~	~~108%~~
2950	Drum Storage	55-Gallon Drums	55	20	2	0.5	60.5	110
2953DR	Drum Storage	55-Gallon Drums	55	8	2	0.5	59	107%^
5539	Swimming Pool	AST, Vertical	500	Cylinder	2.83	2.66	500	100%^
~~5909~~	~~Drum Storage~~	~~55-Gallon Drums~~	~~55~~	~~36~~	~~5~~	~~2~~	~~2,680~~	~~4872%^~~
~~5946~~	~~Loading/Unloading Rack~~	~~Mobile Refueler~~	~~10,000~~	~~41~~	~~27.5~~	~~0.75~~	~~6,310~~	~~120%~~
~~6135~~	~~Loading/Unloading Rack~~	~~Mobile Refueler~~	~~10,000~~	~~173~~	~~35.5~~	~~0.5~~	~~22,900~~	~~229%~~
6576DRA	Drum Storage	55-Gallon Drums	55	20	2	0.5	60.5	110
6576DRB	Drum Storage	55-Gallon Drums	55	20	2	0.5	60.5	110
6576DRC	Drum Storage	55-Gallon Drums	55	20	2	0.5	60.5	110
6562DR	Drum Storage	55-Gallon Drums	55	20	2	0.5	60.5	110
7207B	Wastewater Treatment	AST, Horizontal	275	10.16	4.25	1	320	116%^
7208DRA	Wastewater Treatment	55-Gallon Drums	220	3.75	3.75	0.75	65.5	110%^
7208DRB	Wastewater Treatment	55-Gallon Drums	275	3.75	3.75	0.75	65.5	110%^
7209A	Wastewater Treatment	ADT, Horizontal	220	3.75	3.75	0.75	65.5	110%^
7422	School Bus Maintenance	AST, Horizontal	3,000	19	8	3	3,400	113%
9359C	Landfill	AST, Horizontal	500	6	6.91	0.83	250	**110 %**

9359D	Landfill	AST, Horizontal	275	6	6.66	1.79	530	192%
9359E	Landfill	AST, Horizontal	275	6	6.66	1.79	530	192%
9387A and 9387B	KY MATES	AST, Horizontal	10,000	34	11.83	3.66	11,000	110%
9387DRC	KY MATES	55-Gallon Drums	55	13.33	4	0.5	190	345%^
9387DRD	KY MATES	55-Gallon Drums	55	24	21.33	0.5	1,910	3472%^
~~9555~~	~~Range~~	~~AST, Horizontal~~	~~1,000~~	~~14~~	~~8~~	~~2~~	~~1,670~~	~~167%~~
~~9779~~	~~Range~~	~~AST, Horizontal~~	~~1,000~~	~~14~~	~~6.66~~	~~2~~	~~1,390~~	~~139%~~

Underlined Bold – secondary containment is not large enough to contain tank contents with adequate freeboard for precipitation (approximately 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).

Mobile refuelers do not require 100% of volume impervious secondary containment when parked, just the means available (such as spill kits) to prevent discharges to navigable waters [40 CFR 112.8(c) (2)].

Loading/unloading racks require 100% secondary containment for the largest truck loaded or unloaded at the site.

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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	

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 inspectec 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	

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	

AST INSPECTION STANDARD 36 SEPTEMBER 2011

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).

MONTHLY INSPECTION FOR HAZARDOUS MATERIALS

01APR18

DATE:	INSPECTOR:	UNIT/ACTIVITY:	AREA OR SITE:

	CHECKLIST ITEM	Storage ID	Storage ID	Storage ID	Storage ID	Storage ID	Storage ID
	Questions apply to each storage location.						
A	**Use Section A for HAZMAT Sheds, Flammable Storage Cabinets, and Battery Storage**						
1	Are cabinet or shed doors closed at all times except when adding or removing materials?	Yes ___ No ___ NA ___	Yes ___ No ___ NA ___	Yes ___ No ___ NA ___	Yes ___ No ___ NA ___	Yes ___ No ___ NA ___	Yes ___ No ___ NA ___
2	If the spill containment sump has a drainage valve or plug, is the valve or plug closed?	Yes ___ No ___ NA ___	Yes ___ No ___ NA ___	Yes ___ No ___ NA ___	Yes ___ No ___ NA ___	Yes ___ No ___ NA ___	Yes ___ No ___ NA ___
3	Is there a spill kit in the immediate area and does the spill kit have adequate spill response materials.	Yes ___ No ___ NA ___	Yes ___ No ___ NA ___	Yes ___ No ___ NA ___	Yes ___ No ___ NA ___	Yes ___ No ___ NA ___	Yes ___ No ___ NA ___
4	Are SDSs readily available for the materials in the cabinet or shed?	Yes ___ No ___ NA ___	Yes ___ No ___ NA ___	Yes ___ No ___ NA ___	Yes ___ No ___ NA ___	Yes ___ No ___ NA ___	Yes ___ No ___ NA ___
5	Is a chemical inventory posted on each cabinet or shed door?	Yes ___ No ___ NA ___	Yes ___ No ___ NA ___	Yes ___ No ___ NA ___	Yes ___ No ___ NA ___	Yes ___ No ___ NA ___	Yes ___ No ___ NA ___
6	Is the stock rotated so the oldest stock is issued (used) first?	Yes ___ No ___ NA ___	Yes ___ No ___ NA ___	Yes ___ No ___ NA ___	Yes ___ No ___ NA ___	Yes ___ No ___ NA ___	Yes ___ No ___ NA ___
7	Are all material containers serviceable, no rust, dents or leaking containers.?	Yes ___ No ___ NA ___	Yes ___ No ___ NA ___	Yes ___ No ___ NA ___	Yes ___ No ___ NA ___	Yes ___ No ___ NA ___	Yes ___ No ___ NA ___
8	Are batteries stored on a spill containment pallet or battery storage room?	Yes ___ No ___ NA ___	Yes ___ No ___ NA ___	Yes ___ No ___ NA ___	Yes ___ No ___ NA ___	Yes ___ No ___ NA ___	Yes ___ No ___ NA ___
9	Are corrosive spill response materials available?	Yes ___ No ___ NA ___	Yes ___ No ___ NA ___	Yes ___ No ___ NA ___	Yes ___ No ___ NA ___	Yes ___ No ___ NA ___	Yes ___ No ___ NA ___
B	**Use Section B for 55 gallon drums.**						
1	Are Spill Containment Pallets in good condition?	Yes ___ No ___ NA ___	Yes ___ No ___ NA ___	Yes ___ No ___ NA ___	Yes ___ No ___ NA ___	Yes ___ No ___ NA ___	Yes ___ No ___ NA ___
2	Are free liquids in containment pallets removed periodically?	Yes ___ No ___ NA ___	Yes ___ No ___ NA ___	Yes ___ No ___ NA ___	Yes ___ No ___ NA ___	Yes ___ No ___ NA ___	Yes ___ No ___ NA ___
3	Are drums stored outside covered?	Yes ___ No ___ NA ___	Yes ___ No ___ NA ___	Yes ___ No ___ NA ___	Yes ___ No ___ NA ___	Yes ___ No ___ NA ___	Yes ___ No ___ NA ___

FK FORM 5058,01APR18 PREVIOUS EDITIONS ARE OBSOLETE Page 1 of 2

Secondary Containment Drainage Log

Site: _____

Date	Sheen Present Y / N	Treatment Employed Y/ N	Time Drained	Name	Comments

EMD SEC Log – 13 Feb 2018

Appendix B
MINIMUM PREVENTIVE MAINTENANCE REQUIREMENTS FOR ELECTRIC TRACTION ELEVATORS

The following items (as applicable) shall be included requirements of a maintenance contract:

(Note: When items are inspected and found to be defective, broken, out of adjustment, etc., they must be repaired, replaced, or adjusted to meet the requirements of the Code.)

PERFORMED ON A **WEEKLY** BASIS:

Inspect and lubricate (as required) machinery, sheaves, worm, gear, motor, brake, selector, and controller.

Ride in the car to observe operation of doors, leveling, smoothness, and door reopening devices at each landing. Listen for unusual noises in the car and in the hoistway.

Check all car operating controls, lamps, and gongs. Replace burned-out lamps.

Clean:
- Drip pans (check oil levels of associated equipment)
- Door reopening device photo eye components
- Door tracks and sills
- Lamps and sensors in the car top controller
- Car top
- Machine room
- Pit
- Brushes and commutator
- Controller
- Selector
- Relay connectors
- Contacts

Check operation of the brake and adjust or repair if necessary. Lubricate pivot points.

Inspect governor operation and working parts. Clean and lubricate.

PERFORMED ON A **MONTHLY** BASIS:

Check and adjust car door operation. Lubricate hangers, rollers, gibs, linkages, and pivot points. Check and adjust door clearances, eccentrics, arm bearings, speed control switches, cables, clutches, chains, and belts. Tighten door drive system points.

Check selector. Clean, adjust, and lubricate components as required.

PERFORMED ON A SEMI-ANNUAL BASIS:

Comprehensive inspection - see *Section 3.2* of this document.

Additionally, note the following specific items:

Check for hoist rope wear, as well as rope length, lubrication, and tension. Replace, lubricate, or adjust the rope as required.

Check the clearances for governor tension sheave, counterweight-to-buffer (with car at top landing), and compensation sheave to pit. Check governor sheave fastenings.

Check all of the timers in the system and reset if necessary.

Inspect guide rails, cams, fastenings, and counterweights in hoistways.

Test all of the terminal limit switches. Lubricate the limit switch roller pins.

Inspect the sheaves to verify that they are tight on the shafts, and sound their spokes and hubs with a hammer to inspect for cracks. Repair as necessary.

Lubricate the guide shoe stems.

PERFORMED ON AN ANNUAL BASIS:

Conduct Category 1 tests (and Category 5 tests, if due)

Brakes: Remove, clean, and lubricate the brake cores.
Inspect the brake linings for wear - clean or replace if necessary.
Adjust the brakes to wear evenly if necessary.

Motors: Inspect the armatures of hoist motor and motor-generator (if equipped).

Check the electrical connections.

Drain, flush, and refill the oil reservoirs.

Check the brushes for neutral settings and for proper quartering and spacing on the commutators. Reset if necessary.

Lubricate the bearings.

Appendix F

Immediate Actions

CANTONEMENT AREA SPILL RESPONSE PLACARD

FORT KNOX SPILL CONTINGENCY PLAN & RESPONSE PROCEDURES

Report ALL spills to Environmental Management Division (EMD)
(502) 624-3629

INCIDENTAL SPILL

- Small amount of non-hazardous substance
- Small amount or oil
- Poses no threat to the safety or health of persons, but is a threat to the environment

SIGNIFICANT SPILL

- Measurable Quantity
- Potential to threaten the environment
- Has not reached a waterway (but could)
- No potential safety or health hazard
- Can be absorbed, neutralized or otherwise controlled

Spill Response Actions:

1. Evaluate the incident
2. Confine the spill
3. Stop the source
4. Notify the appropriate personnel - EMD @ (502) 624-3629 & Fire Dept. @ 911
5. Select the appropriate PPE per SDS
6. Initiate cleanup
7. Containerize the contaminated material
8. Decontaminate personnel if necessary
9. Complete reports – Spill Incident Report Form FK5053

MAJOR SPILL

- Large Quantity Spill
- Definite threat to the environment or the health or safety of persons in and around the area
- Characterized by any of the following:
  - Injuries have occurred
  - Spilled into a waterway
  - Poses significant safety or health hazards (fire, explosion, HAZMAT exposure)
  - Cannot be absorbed, neutralized, or otherwise controlled at the time of the release

Spill Response Actions:

1. Notify the Fire Department & EMD Immediately - 911 & EMD – (502) 624-3629
2. Evacuate the area if necessary
3. Wait for Emergency Response Personnel to Arrive
4. Waterway spills – Place booms downstream to contain the pollutant
5. Complete reports – Spill Incident Report Form FK5053

PROTECT WATERWAYS AND STORM WATER DRAINS

April 2016

RANGE SPILL RESPONSE PLACCARD

FORT KNOX SPILL CONTINGENCY PLAN & RESPONSE PROCEDURES

Report ALL spills to Environmental Management Division (EMD)
(502) 624-3629

INCIDENTAL SPILL

- Small amount of non-hazardous substance
- Small amount or oil
- Poses no threat to the safety or health of persons, but is a threat to the environment

SIGNIFICANT SPILL

- Measurable Quantity
- Potential to threaten the environment
- Has not reached a waterway (but could)
- No potential safety or health hazard
- Can be absorbed, neutralized or otherwise controlled

Spill Response Actions:

1. Evaluate the incident
2. Confine the spill
3. Stop the source
4. Notify the appropriate personnel - EMD @ (502) 624-3629 & Fire Dept. @ 911
5. Select the appropriate PPE per SDS
6. Initiate cleanup
7. Containerize the contaminated material
8. Decontaminate personnel if necessary
9. Complete reports – Spill Incident Report Form FK5053

MAJOR SPILL

- Large Quantity Spill
- Definite threat to the environment or the health or safety of persons in and around the area
- Characterized by any of the following:
  - Injuries have occurred
  - Spilled into a waterway
  - Poses significant safety or health hazards (fire, explosion, HAZMAT exposure)
  - Cannot be absorbed, neutralized, or otherwise controlled at the time of the release

Spill Response Actions:

1. Notify the Fire Department & EMD Immediately - 911 & EMD – (502) 624-3629
2. Evacuate the area if necessary
3. Wait for Emergency Response Personnel to Arrive
4. Waterway spills – Place booms downstream to contain the pollutant
5. Complete reports – Spill Incident Report Form FK5053

RANGE and TRAINING AREA COMPLEX SPILLS

Call Range Operations @ 502-624-2125 IMMEDIATELY

FOLLOW RANGE OPERATIONS'S DIRECTIONS

PROTECT WATERWAYS AND STORM WATER DRAINS

Additional Considerations for Acid Spills

The highest probability of an acid spill on Fort Knox would be sulfuric acid from a vehicle battery.

Personal Protective Equipment. Persons involved in cleaning up an acid spill must follow SDS 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 Knox 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 Knox Community Hospital.

Appendix G

Reportable Quantities

Chemical	RQ (in pounds)	Approximate RQ of Liquids (as packaged/used on Fort Knox)	Largest Container on Fort Knox
Ethylene glycol (in antifreeze)	5,000	Approx. 500 gal	**500 gal**
Sodium Hypochlorite	100	Approx. 100 gal	**500 gal**
Methylene bis(phenylisocyanate)	5,000	Approx. 800 gal	55 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)

100 pounds RQ = 1000 pounds of solution required to meet RQ

0.10 NaOCl in solution

Density of solution is 9.26 pounds/gallon

1,000 pounds of solution required to meet RQ = 108 gallons or about 100 gallons 9.26 pounds/gallon.

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
Clean Harbors	**24-Hour Emergency Service or Response:** 1 (800) 645-8265 [1-800-OIL-TANK]
Environmental Management Services	**24-Hour Emergency Service or Response:** 1 (877) 816-9111
Evergreen AES	**24-Hour Emergency Service or Response:** 1 (888) 625-5434
National Response Corporation	**24-Hour Emergency Service or Response:** 1 (800) 899-4672
Pettit Environmental, Inc.	**24-Hour Emergency Service or Response:** 1 (800) 264-6482

ADDENDUM #1

November 2017

2017 ADDED SPCC PLANS

5.35 1st TSC (Building 2958)

5.36 Central Water Plant (Building 1205)

5.37 Muldraugh Water Plant (Building 3008)

5.35 1st TSC (Building 2958)

5.35.1 Area Description

1st TSC military personnel use this area to store used oil and used antifreeze obtained when doing maintenance to military vehicles. A 550-gallon and 650-gallon ASTs store used antifreeze and used oil. Table 5.35.1 provides container details, and Figures 2.1 and 5.35.1 shows their locations.

Table 5.35.1 1st TSC Containers

Container ID	Type	Capacity (Gallons)	Material of Construction	Product Stored
2958A	AST, Horizontal	550	Steel	Used Anti-freeze
2958B	AST, Horizontal	650	Steel	Used Oil

Does not contain oil, not regulated by 40 CFR 112

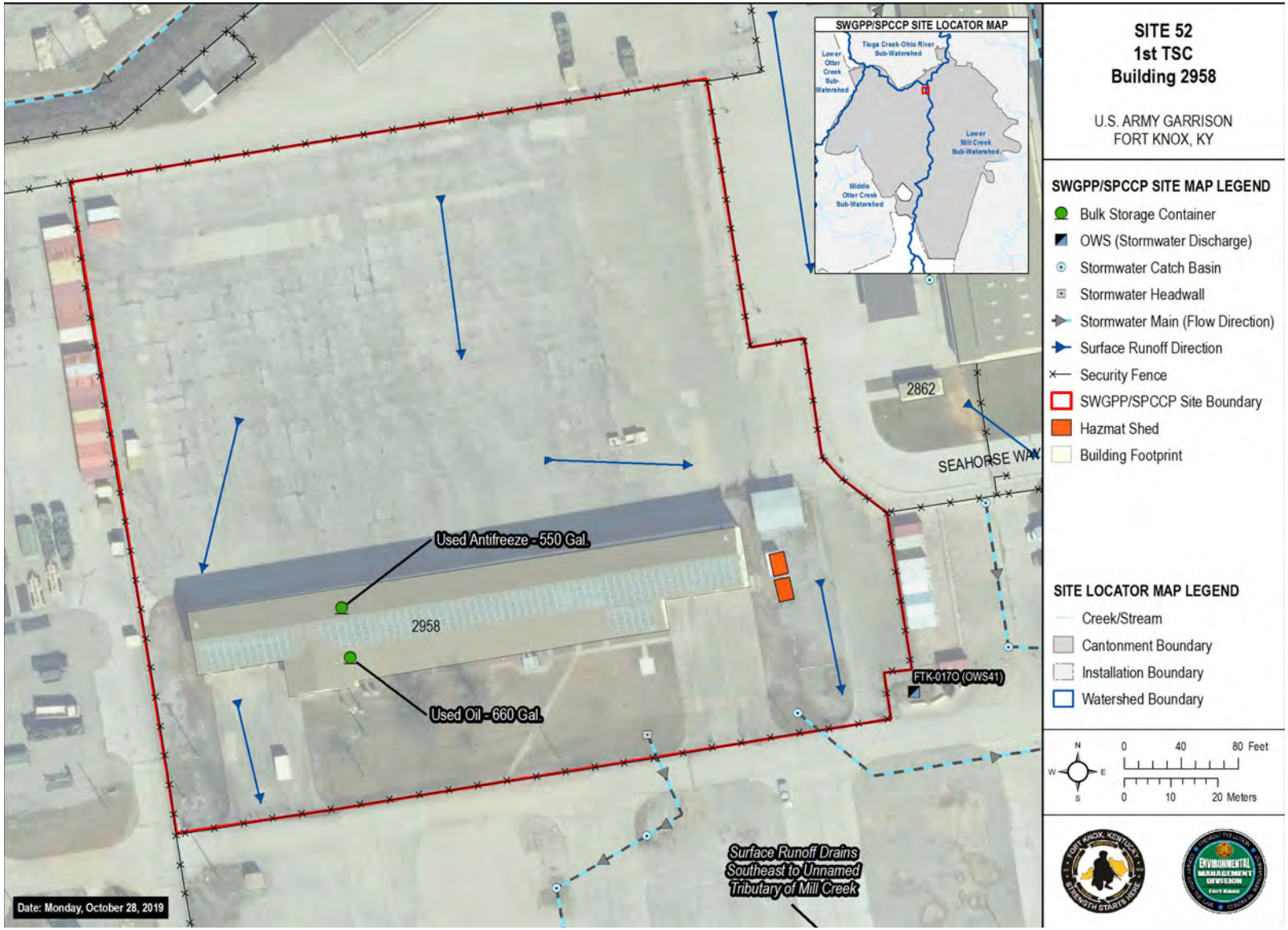
5.35.2 Product Handling

Personnel deliver liquids via various containers. Used liquids are dumped into these tanks. Table 5.35.2 provides product handling details.

Table 5.35.2 1st TSC Product Handling

Container ID	Loading Method	Overfill Protection	Unloading Method
2958A	Manual	Sight Gauge	Dumped from various containers
2958B	Manual	Sight Gauge	Dumped from various containers

Figure 5.35.1 1st TSC Used Liquid Collection ASTs (Building 2958)



5.35.3 Secondary Containment

The ASTs are double-walled steel tanks that do not collect storm water.

Table 5.35.3 1st TSC Used Oil/Antifreeze Secondary Containment

Container ID	Type	Storm Water Release
2958A	Double-walled	NA
2958B	Double-walled	NA

5.35.4 Inspection and Testing

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

5.35.5 Potential Spill Scenarios

Complete container failure of an AST could result in a spill of up to 660 gallons. The loss of the entire contents of the vacuum tanker truck could spill 3,000 gallons. An error during dumping could spill 5 gallons. Any spill from this area would flow southeast and south across asphalt to a storm water inlet and then south to an unnamed creek to Mill Creek (see Figures 5.35.1 and 2.1). A spill in this area would trigger the spill response procedures listed in Section 4.7.

Table 5.35.4 1st TSC Maintenance Potential Spill Scenarios

Container ID	Spill Amount (Gallons)	Contents	Cause	Pathway
2958A	550	Used Anti-freeze	Container Failure	East and south to Mill Creek
	25		Transfer Error	
	3,000		Vacuum Truck Error	
2958B	650	Used Oil	Container Failure	East and south to Mill Creek
	25		Transfer Error	
	3,000		Vacuum Truck Error	

Does not contain oil, not regulated by 40 CFR 112

5.36 Central Water Plant (Building 1205)

5.36.1 Area Description

The Central Water Plant is operated by Hardin County Water District and produces fresh water for Fort Knox. This site has 500-gallon diesel AST to store fuel for dispensing to a generator. 55 gallon drums are stored on the second floor of the building 1205 and used for water treatment. Vertical tanks of aluminum sulfate (not SPCC-regulated) are stored in Building 1205. Table 5.36.1 provides container details, and Figure 5.36.1 shows the locations. As the aluminum sulfate tanks and sodium hydroxide drums are not SPCC-regulated, they are not discussed further in Section 5.36.

Table 5.36.1 Central Water Plant Containers

Container ID	Type	Capacity (Gallons)	Material of Construction	Product Stored
1205A	AST, Horizontal	500	Steel	Diesel
1205DR	AST, Vertical	55	Plastic	Sodium Hypochlorite
1205B	AST, Vertical	55	Plastic	Aluminum Sulfate
1205C	AST, Vertical	750	Plastic	Aluminum Sulfate
1205D	AST, Vertical	750	Plastic	Aluminum Sulfate
1205E	AST, Vertical	750	Plastic	Aluminum Sulfate
1205F	AST, Vertical	750	Plastic	Aluminum Sulfate
1205G	AST, Vertical	750	Plastic	Aluminum Sulfate
1205H	AST, Vertical	750	Plastic	Aluminum Sulfate

Does not contain oil, not regulated by 40 CFR 112

5.36.2 Product Handling

Personnel deliver fuel via trucks. Fuel is dispensed with an electric pump. Table 5.36.2 provides product handling details. Drums are delivered via trucks.

Table 5.36.2 Central Water Plant Product Handling

Container ID	Loading Method	Overfill Protection	Unloading Method
1205A	Truck	Sight Gauge	Pumped to Generator

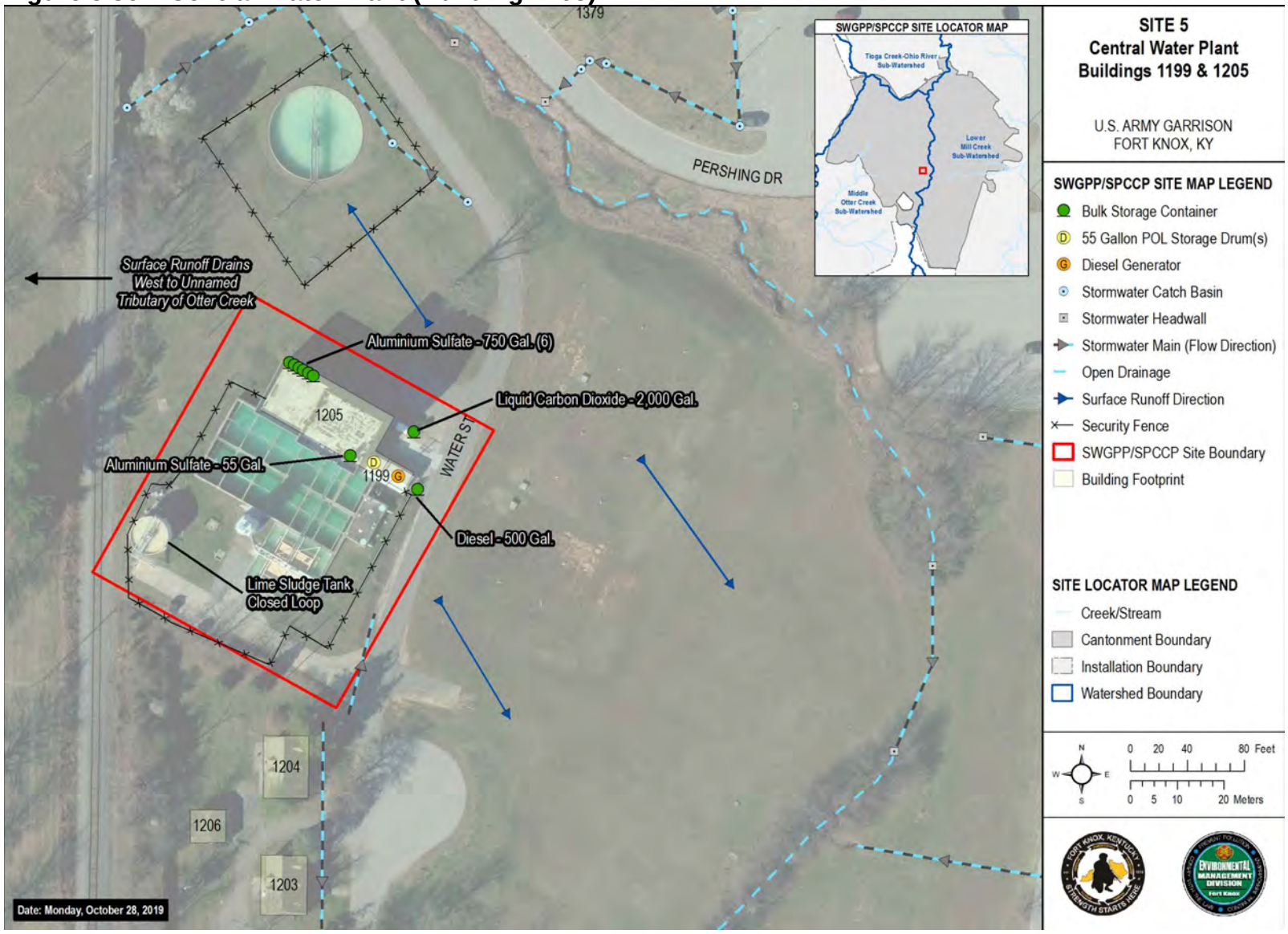
5.36.3 Secondary Containment

The AST is a double-walled steel tank that does not collect storm water. The drums are on secondary containment.

Table 5.36.3 Central Water Plant Secondary Containment

Container ID	Type	Storm Water Release
1205A	Double-walled	NA

Figure 5.36.1 Central Water Plant (Building 1205)



5.36.4 Inspection and Testing

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

5.36.5 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 delivery tanker truck could spill 3,000 gallons. An error during dispensing could spill 25 gallons. Operator error in handling of the 55 gallon drum could result in a 55 gallon spill. Any spill from this area would flow east and north to a stormwater drainage ditch and then west to an unnamed creek to Otter Creek (see Figures 5.36.1, 2.1, and 2.4). A spill in this area would trigger the spill response procedures listed in Section 4.7.

Table 5.36.4 Central Water Plant Potential Spill Scenarios

Container ID	Spill Amount (Gallons)	Contents	Cause	Pathway
1205A	500	Diesel	Container Failure	East and north and west to Otter Creek
	25		Transfer Error	
	3,000		Delivery Truck Error	

5.37 Muldraugh Water Plant (Building 3008)

5.37.1 Area Description

The Muldraugh Water Plant is operated by Hardin County Water District and produces fresh water for Fort Knox. This site has a 500-gallon diesel AST to store fuel for dispensing to a generator. Drums are stored in building **3013 (4 drums).** Vertical tanks of aluminum sulfate are stored in building 3009 and drums (6-8 drums) of Sodium Hydroxide are stored in building 3005 (neither are SPCC-regulated). Table 5.37.1 provides container details, and Figure 5.37.1 shows the locations. As the aluminum sulfate tanks and sodium hydroxide drums are not SPCC-regulated, they are not discussed further in Section 5.37.

Table 5.37.1 Muldraugh Water Plant Containers

Container ID	Type	Capacity (Gallons)	Material of Construction	Product Stored
3008A	AST, Horizontal	500	Steel	Diesel
3005DRA	AST, Vertical	55	Plastic	Sodium Hypochlorite
3013DRB	AST, Vertical	55	Steel	Oil
3009A	AST, Vertical	160	Plastic	Aluminum Sulfate
3009B	AST, Vertical	750	Plastic	Aluminum Sulfate
3009C	AST, Vertical	750	Plastic	Aluminum Sulfate
3009D	AST, Vertical	750	Plastic	Aluminum Sulfate
3009E	AST, Vertical	750	Plastic	Aluminum Sulfate
3009F	AST, Vertical	750	Plastic	Aluminum Sulfate
3009G	AST, Vertical	750	Plastic	Aluminum Sulfate

Does not contain oil, not regulated by 40 CFR 112

5.37.2 Product Handling

Personnel deliver fuel via trucks. Fuel is dispensed with an electric pump. Drums are delivered via trucks and manually placed in buildings 3005 and 3012. Table 5.37.2 provides product handling details.

Table 5.37.2 Muldraugh Water Plant Product Handling

Container ID	Loading Method	Overfill Protection	Unloading Method
3008A	Truck	Sight Gauge	Pumped to Generator
3013DRB	Truck	Visual	Manual

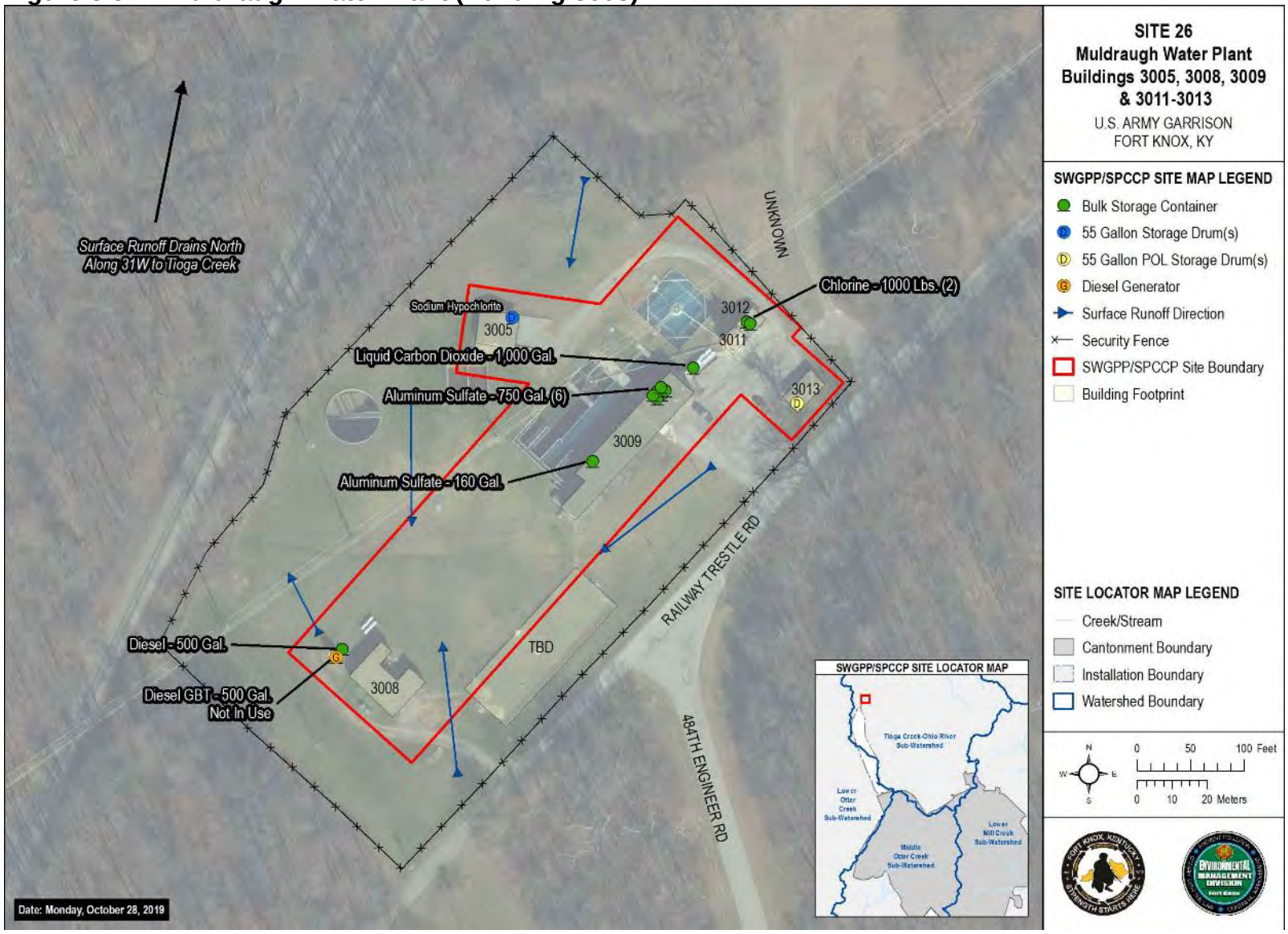
5.37.3 Secondary Containment

The AST is double-walled steel tank that does not collect storm water. The drums are stored on secondary containment.

Table 5.37.3 Muldraugh Water Plant Secondary Containment

Container ID	Type	Storm Water Release
3008A	Double-walled	NA
3013DRB	Secondary Containment	NA

Figure 5.37.1 Muldraugh Water Plant (Building 3008)



5.37.4 Inspection and Testing

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

5.37.5 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 delivery tanker truck could spill 3,000 gallons. An error during dispensing could spill 25 gallons. Operator error in handling 55 gallon drums could spill 55 gallons. Any spill from this area would flow west to a stormwater drainage ditch to Otter Creek (see Figures 5.37.1, 2.1, and 2.4). A spill in this area would trigger the spill response procedures listed in Section 4.7.

Table 5.37.4 Muldraugh Water Plant Potential Spill Scenarios

Container ID	Spill Amount (Gallons)	Contents	Cause	Pathway
3008A	500	Diesel	Container Failure	West to Otter Creek
	25		Transfer Error	
	3,000		Delivery Truck Error	
3013DRB	55	Oil	Container Failure	West to Otter Creek
	5		Transfer Error	
	55		Delivery Truck Error	

ADDENDUM #2

June 2018

2018 Added SPCCP PLANS

5.38 Waste Water Treatment Plant

5.39 Farmers MP

5.40 Otter Creek

5.41 Van Voorhis

5.42 Building Elevator Hydraulic Reservoirs

5.38 Wastewater Treatment Plant (Building 7207)

5.38.1 Area Description

The Wastewater Treatment Plant is operated by Hardin County Water District and treats sewage waste for Fort Knox. This site has 500-gallon diesel AST to store fuel for dispensing to an inside 200 gallon day AST that delivers to a generator. There are various other containers for oils, chemicals and used products. Table 5.38.1 provides container details, and Figure 5.38.1 shows their locations.

Table 5.38.1 Wastewater Treatment Plant Containers

Container ID	Type	Capacity (Gallons)	Material of Construction	Product Stored
7207A	AST, Horizontal	500	Steel	Diesel
7207B	AST, Horizontal	250	Steel	Diesel
7208DRA	55-Gallon Drums	55 (up to 4)	Steel	Used Oil
7208DRB	55-Gallon Drums	55 (up to 4)	Plastic	Sodium Bisulfites
7209A	275 Gallons	275	Plastic	Sodium Hypochlorite

Does not contain oil, not regulated by 40 CFR 112

5.38.2 Product Handling

Personnel deliver fuel via trucks. Fuel is dispensed with an electric pump. Personnel move drums into the respective storage areas. The product tanks are filled by manually pouring used products. Table 5.38.2 provides product handling details.

Table 5.38.2 Wastewater Treatment Plant Product Handling

Container ID	Loading Method	Overfill Protection	Unloading Method
7207A	Truck	Sight Gauge	Pumped to Generator Day Tank
7207B	Outside AST Pump	Automatic Gauge	Pumped to Generator
7208DRA	Manual	Visual	Dispensed to treatment equipment
7208DBB	Manual	Visual	Dispensed to treatment equipment
7209A	Manual	Visual	Dispensed to treatment equipment

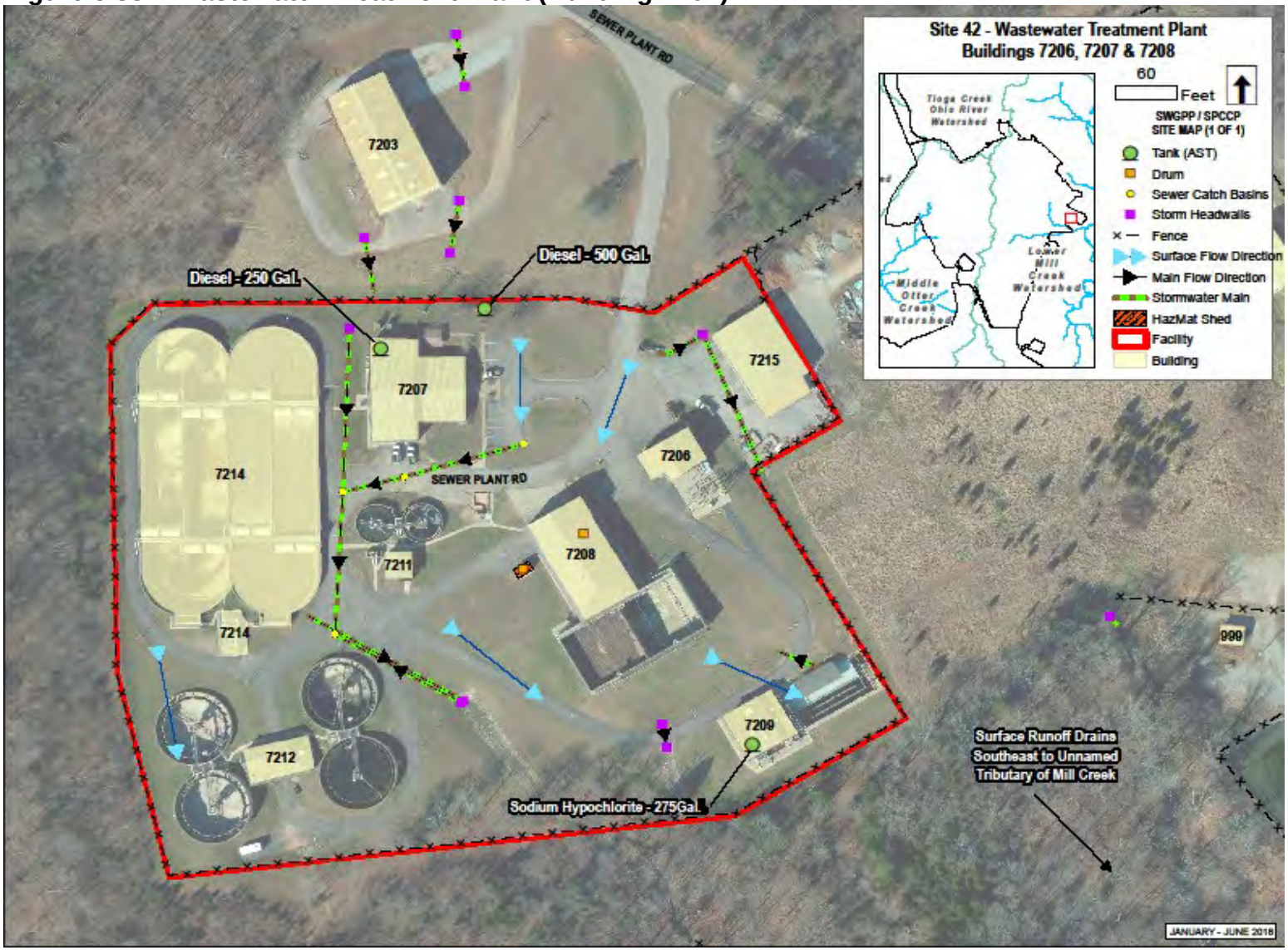
5.38.3 Secondary Containment

The ASTs are double-walled steel tank and do not collect storm water. The 55 gallon drums are stored inside on secondary containment.

Table 5.38.3 Wastewater Treatment Plant Secondary Containment

Container ID	Type	Storm Water Release
7207A	Double-walled	NA
7207B	Concrete Dike	NA
7208DRA	Secondary Containment	NA
7208DRB	Secondary Containment	NA
7209A	Secondary Containment	NA

Figure 5.38.1 Wastewater Treatment Plant (Building 7207)



5.38.4 Inspection and Testing

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

5.38.5 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 delivery tanker truck could spill 3,000 gallons. An error during dispensing could spill 25 gallons. Any spill from this area would flow north and west to a stormwater drainage ditch and then west to an unnamed creek to Mill Creek (see Figures 2.1, 2.2, 5.38.1 and 2.4). 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. Any spill from this area would flow across a grassy area west into storm water drainage ditches and to Mill Creek. (See Figures 5.38.1, 2.1, 2.2 and 2.4) A spill in this area would trigger the spill response procedures listed in Section 4.7.

Table 5.38.4 Wastewater Treatment Plant Potential Spill Scenarios

Container ID	Spill Amount (Gallons)	Contents	Cause	Pathway
7207A	500	Diesel	Container Failure	North and west to Mill Creek
	25		Transfer Error	
	3,000		Delivery Truck Error	
7207B	100	Diesel	Container Failure	North and west to Mill Creek
	25		Transfer Error	
	500		Delivery Pump Error	
7208DRA	55	Used Oil	Container Failure	West to Mill Creek
	5		Transfer Error	
	3,000		Delivery Error	
7208DRB	55	Sodium Bi-sulfites	Container Failure	West to Mill Creek
	5		Transfer Error	
	3,000		Delivery Error	
7209A	275	Sodium Hypo-chlorite	Container Failure	West to Mill Creek
	5		Transfer Error	
	3,000		Delivery Error	

5.39 Farmers MP (Building 6576)

5.39.1 Area Description

Military personnel use this area to store used oil and used antifreeze obtained when doing maintenance to military vehicles. The 550-gallon and 650-gallon ASTs are used to store used antifreeze and used oil. Drums are used to store contaminated fuel and receive oil. Table 5.35.1 provides container details, and Figure 5.35.1 shows their locations.

Table 5.39.1 Farmers MP Containers

Container ID	Type	Capacity (Gallons)	Material of Construction	Product Stored
6576A	AST, Horizontal	660	Steel	Used Oil
6576B	AST, Horizontal	650	Steel	Used Anti-freeze
6576DRA	DRs, Vertical	55	Steel	Contaminated Fuel
6576DRB	DRs, Vertical	55	Steel	Oil
6576DRC	DRs, Vertical	55	Steel	Oil
6562DR	DRs, Vertical	55	Steel	Oil

Does not contain oil, not regulated by 40 CFR 112

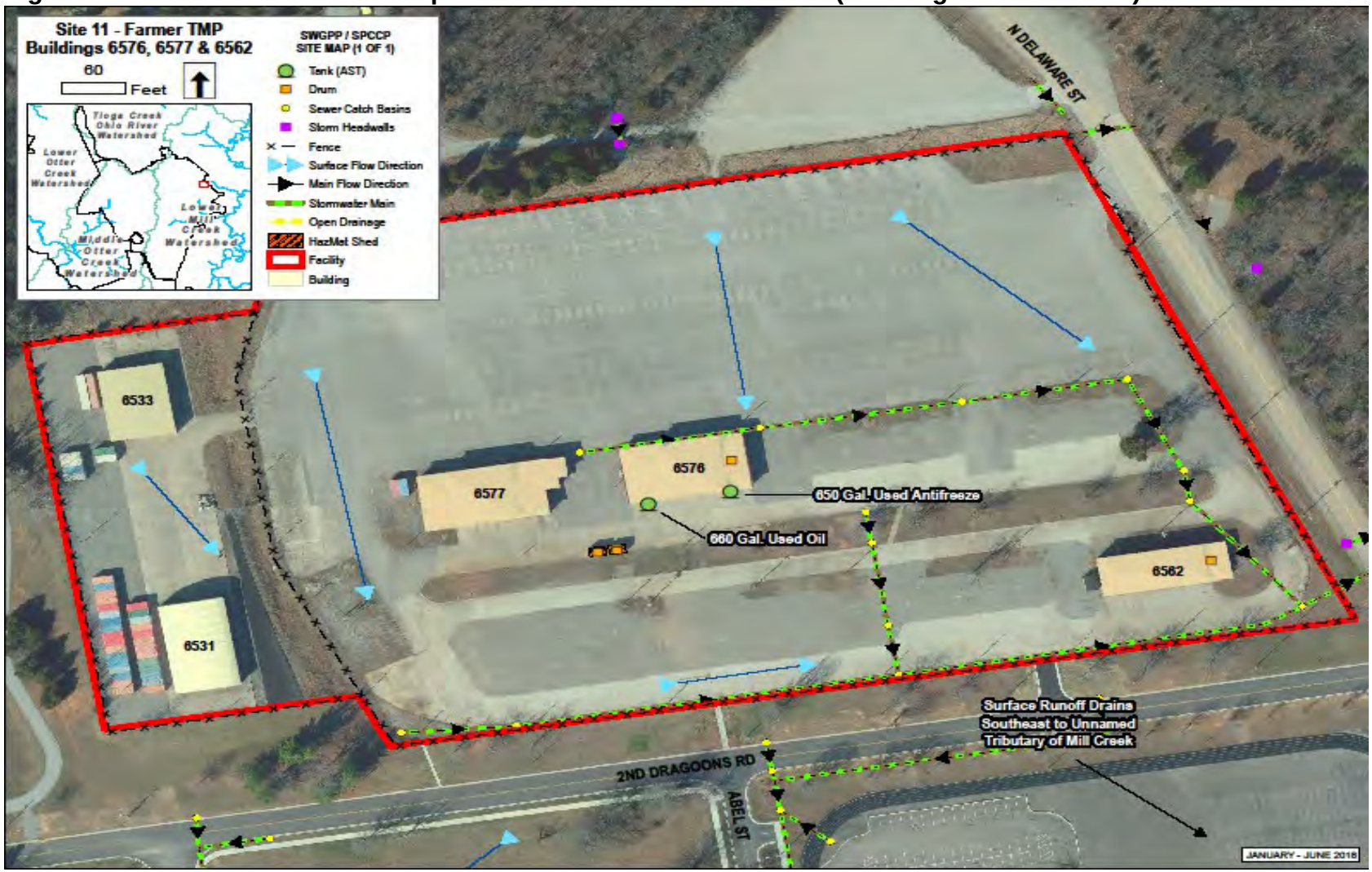
5.39.2 Product Handling

Personnel deliver liquids via various containers. Used liquids are dumped into these tanks. Table 5.39.2 provides product handling details.

Table 5.39.2 Famers MP Product Handling

Container ID	Loading Method	Overfill Protection	Unloading Method
6576A	Manual	Sight Gauge	Dumped from various containers
6576B	Manual	Sight Gauge	Dumped from various containers
6576DRA	Manual	Sight Gauge	Pumped into various containers
6576DRB	Manual	Sight Gauge	Pumped into various containers
6576DRC	Manual	Sight Gauge	Pumped into various containers
6562DR	Manual	Sight Gauge	Pumped into various containers

Figure 5.39.1 Farmers MP Used Liquid Collection ASTs and Drums (Building 6576 and 6562)



5.39.3 Secondary Containment

The ASTs are double-walled steel tanks that do not collect storm water. The drums are on secondary containment in a HAZMAT shed and in building 6576 and 6562.

Table 5.39.3 Farmers MP Used Oil/Antifreeze/DR Secondary Containment

Container ID	Type	Storm Water Release
6576A	Double-walled	NA
6576B	Double-walled	NA
6576DRA	Secondary Containment	NA
6576DRB	Secondary Containment	NA
6576DRC	Secondary Containment	NA
6562DR	Secondary Containment	NA

5.39.4 Inspection and Testing

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

5.39.5 Potential Spill Scenarios

Complete container failure of an AST could result in a spill of up to 660 gallons. The loss of the entire contents of the vacuum tanker truck could spill 3,000 gallons. An error during dumping could spill 5 gallons. Any spill from this area would flow east and south across grass to a storm water inlet and then southeast to an unnamed creek to Mill Creek (see Figures 2.1, 2.4 and 5.39.1). A spill in this area would trigger the spill response procedures listed in Section 4.7.

Table 5.39.4 Farmers MP Maintenance Potential Spill Scenarios

Container ID	Spill Amount (Gallons)	Contents	Cause	Pathway
6576A	500	Used Anti-freeze	Container Failure	East and south to Mill Creek
	25		Transfer Error	
	3,000		Vacuum Truck Error	
6576B	660	Used Oil	Container Failure	East and south to Mill Creek
	25		Transfer Error	
	3,000		Vacuum Truck Error	
6576DRA	55	Used Oil	Container Failure	East and south to Mill Creek
	5		Transfer Error	
	55		Delivery Truck Error	
6576DRB	55		Container Failure	

Container ID	Spill Amount (Gallons)	Contents	Cause	Pathway
	5	Contami-nated Fuel	Transfer Error	East and south to Mill Creek
	55		Delivery Truck Error	
6576DRC	55	Oil	Container Failure	East and south to Mill Creek
	5		Transfer Error	
	55		Delivery Truck Error	
6562DR	55	Oil	Container Failure	East and south to Mill Creek
	5		Transfer Error	
	55		Delivery Truck Fail-ure	

Does not contain oil, not regulated by 40 CFR 112

5.40 Otter Creek Generator and BSC (Building 9009)

5.40.1 Area Description

This site is operated by Hardin County Water District #1 and has an emergency generator in building 9009 and a 500 gallon diesel fuel located on the north side of the generator building.

Table 5.40.1 Otter Creek Containers

Container ID	Type	Capacity (Gallons)	Material of Construction	Product Stored
9009	AST, Horizontal	500	Steel	Diesel

5.40.2 Product Handling

Diesel fuel is delivered via a tanker truck. Diesel fuel is dispensed to the generator located in building 9009 from the AST. Table 5.40.2 provides product handling details.

Table 5.40.2 Otter Creek Product Handling

Container ID	Loading Method	Overfill Protection	Unloading Method
9009	Truck	Sight Gauge	Dispensed to the Generator

Figure 5.40.1 Otter Creek Generator and BSC

5.40.3 Secondary Containment

The AST is a double-walled steel tank that does not collect storm water. The double-walled diesel storage tank is equipped with an interstitial space electronic monitor that will alarm if the inner tank is compromised.

Table 5.40.3 Otter Creek Secondary Containment

Container ID	Type	Storm Water Release
9009	Double-walled	NA

5.40.4 Inspection and Testing

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

5.40.5 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 tanker truck could spill 3,000 gallons. Any spill from this area would flow west to Otter Creek. (See Figures 2.1, and 5.40.1). A spill in this area would trigger the spill response procedures listed in Section 4.7.

Table 5.40.4 Otter Creek Maintenance Potential Spill Scenarios

Container ID	Spill Amount (Gallons)	Contents	Cause	Pathway
9009	500	Diesel	Container Failure	West to Otter Creek
	25		Transfer Error	
	3,000		Vacuum Truck Error	

5.41 Van Voorhis Water Pump AST (Building 5898)

5.41.1 Area Description

This site is operated by Hardin County Water District #1 and has fresh water supply pump in building 5898 and a 300 gallon diesel fuel located on the east side of building 5898.

Table 5.41.1 Van Voorhis Containers

Container ID	Type	Capacity (Gallons)	Material of Construction	Product Stored
5898	AST, Horizontal Elevated	300	Steel	Diesel

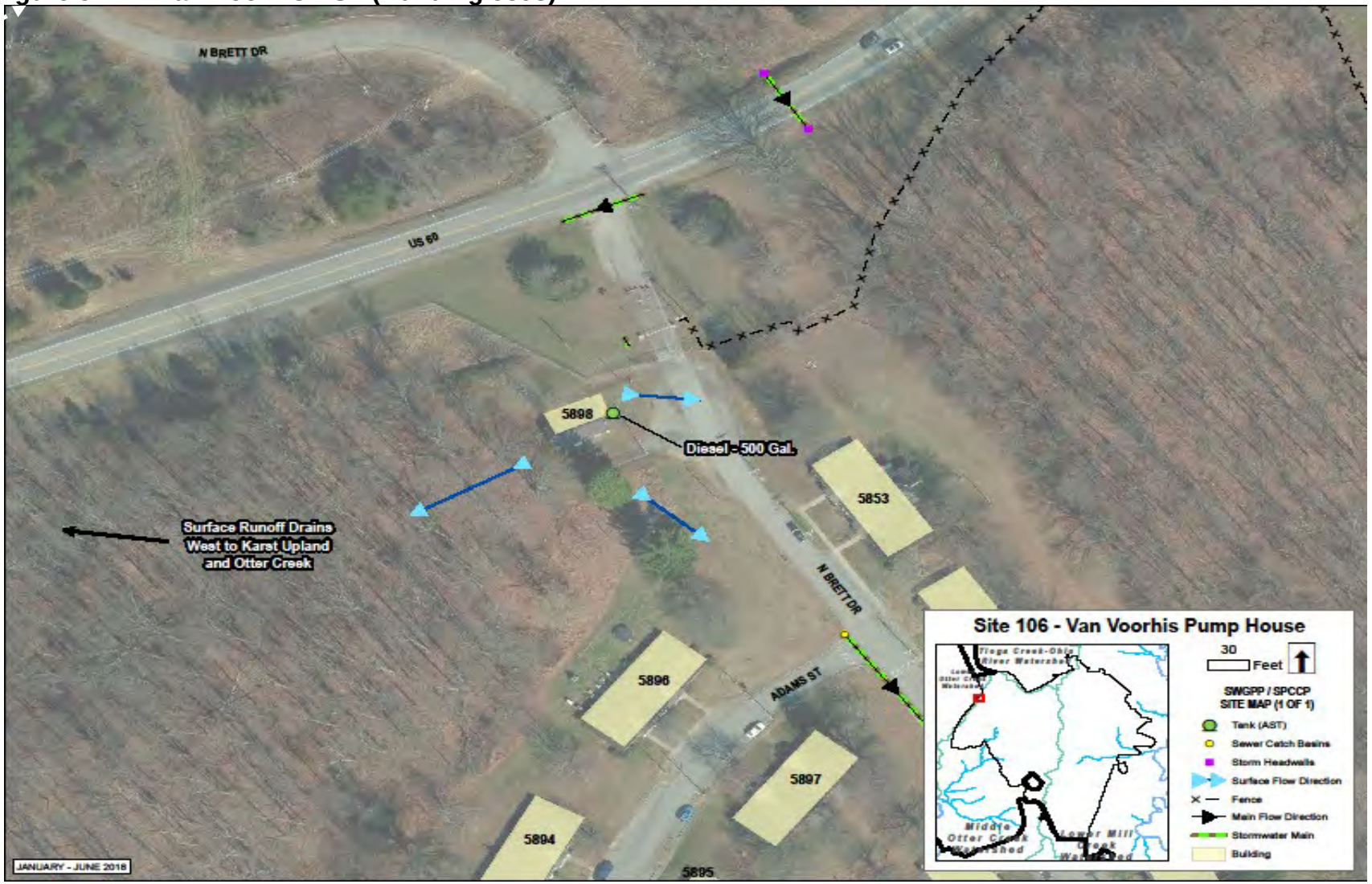
5.41.2 Product Handling

Diesel fuel is delivered via a tanker truck. Diesel fuel is dispensed to the water pumps located in building 5898. Table 5.41.2 provides product handling details.

Table 5.41.2 Van Voorhis Product Handling

Container ID	Loading Method	Overfill Protection	Unloading Method
5898	Truck	Sight Gauge	Dispensed to equipment

Figure 5.41.1 Van Voorhis AST (Building 5898)



5.41.3 Secondary Containment

The AST is a double-walled steel tank that does not collect storm water. The double-walled diesel storage tank is equipped with an interstitial space electronic monitor that will alarm if the inner tank is compromised.

Table 5.40.3 Van Voorhis Secondary Containment

Container ID	Type	Storm Water Release
5898	Double-walled	NA

5.41.4 Inspection and Testing

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

5.41.5 Potential Spill Scenarios

Complete container failure of an AST could result in a spill of up to 300 gallons. The loss of the entire contents of the tanker truck could spill 3,000 gallons. Any spill from this area would flow southeast and west to Otter Creek. (See Figures 2.1, and 5.40.1). A spill in this area would trigger the spill response procedures listed in Section 4.7.

Table 5.41.4 Van Voorhis Maintenance Potential Spill Scenarios

Container ID	Spill Amount (Gallons)	Contents	Cause	Pathway
5898	300	Diesel	Container Failure	Southeast and West to Otter Creek
	25		Transfer Error	
	3,000		Delivery Truck Error	

5.42 Building Elevator Hydraulic Oil Reservoirs

5.42.1 Area Description

There are many buildings that hydraulic elevators on Fort Knox. The sites all use hydraulic reservoirs for the storage of oil to operate the elevators. All building locations are listed in this section. Table 5.42.1 provides details for the building elevator locations, and Figure 2.6 shows locations and flow directions.

Table 5.42.1 Hydraulic Elevator Reservoirs

Container ID	Type	Capacity (Gallons)	Material of Construction	Product Stored
65	AST, Horizontal	165	Steel	Hydraulic Oil
203	AST, Horizontal	275	Steel	Hydraulic Oil
298	AST, Horizontal	275	Steel	Hydraulic Oil
501.1	AST, Horizontal	220	Steel	Hydraulic Oil
501.2	AST, Horizontal	165	Steel	Hydraulic Oil
501.3	AST, Horizontal	165	Steel	Hydraulic Oil
503	AST, Horizontal	110	Steel	Hydraulic Oil
851.1	AST, Horizontal	550	Steel	Hydraulic Oil
851.2	AST, Horizontal	550	Steel	Hydraulic Oil
851.3	AST, Horizontal	550	Steel	Hydraulic Oil
851.4	AST, Horizontal	550	Steel	Hydraulic Oil
851.5	AST, Horizontal	550	Steel	Hydraulic Oil
851.6	AST, Horizontal	550	Steel	Hydraulic Oil
853	AST, Horizontal	220	Steel	Hydraulic Oil
1003	AST, Horizontal	275	Steel	Hydraulic Oil
1022	AST, Horizontal	165	Steel	Hydraulic Oil
1101	AST, Horizontal	165	Steel	Hydraulic Oil
1109	AST, Horizontal	275	Steel	Hydraulic Oil
1110	AST, Horizontal	275	Steel	Hydraulic Oil
1174	AST, Horizontal	275	Steel	Hydraulic Oil
1307.1	AST, Horizontal	165	Steel	Hydraulic Oil
1307.2	AST, Horizontal	165	Steel	Hydraulic Oil
1310	AST, Horizontal	275	Steel	Hydraulic Oil
1378	AST, Horizontal	220	Steel	Hydraulic Oil
1383	AST, Horizontal	165	Steel	Hydraulic Oil
1384	AST, Horizontal	220	Steel	Hydraulic Oil
1467	AST, Horizontal	220	Steel	Hydraulic Oil
1468	AST, Horizontal	220	Steel	Hydraulic Oil
1474	AST, Horizontal	275	Steel	Hydraulic Oil
1475	AST, Horizontal	275	Steel	Hydraulic Oil

1477	AST, Horizontal	165	Steel	Hydraulic Oil
1480	AST, Horizontal	275	Steel	Hydraulic Oil
1724	AST, Horizontal	220	Steel	Hydraulic Oil
2010	AST, Horizontal	220	Steel	Hydraulic Oil
2327	AST, Horizontal	165	Steel	Hydraulic Oil
2366	AST, Horizontal	275	Steel	Hydraulic Oil
2368	AST, Horizontal	168	Steel	Hydraulic Oil
2369	AST, Horizontal	220	Steel	Hydraulic Oil
2389	AST, Horizontal	275	Steel	Hydraulic Oil
2817	AST, Horizontal	165	Steel	Hydraulic Oil
2861	AST, Horizontal	165	Steel	Hydraulic Oil
4829	AST, Horizontal	165	Steel	Hydraulic Oil
5101	AST, Horizontal	220	Steel	Hydraulic Oil
6434.1	AST, Horizontal	275	Steel	Hydraulic Oil
6434.2	AST, Horizontal	275	Steel	Hydraulic Oil
5434.3	AST, Horizontal	275	Steel	Hydraulic Oil
6434.4	AST, Horizontal	275	Steel	Hydraulic Oil
6434.5	AST, Horizontal	275	Steel	Hydraulic Oil
6434.6	AST, Horizontal	275	Steel	Hydraulic Oil
6434.7	AST, Horizontal	275	Steel	Hydraulic Oil
6434.8	AST, Horizontal	275	Steel	Hydraulic Oil
6434.9	AST, Horizontal	275	Steel	Hydraulic Oil
6434.10	AST, Horizontal	275	Steel	Hydraulic Oil
6434.11	AST, Horizontal	275	Steel	Hydraulic Oil
6434.12	AST, Horizontal	275	Steel	Hydraulic Oil
6434.13	AST, Horizontal	275	Steel	Hydraulic Oil
6434.14	AST, Horizontal	275	Steel	Hydraulic Oil
6434.15	AST, Horizontal	275	Steel	Hydraulic Oil
6434.16	AST, Horizontal	275	Steel	Hydraulic Oil
6434.17	AST, Horizontal	275	Steel	Hydraulic Oil
6434.18	AST, Horizontal	275	Steel	Hydraulic Oil
6579	AST, Horizontal	275	Steel	Hydraulic Oil
7501	AST, Horizontal	165	Steel	Hydraulic Oil

5.42.2 Product Handling

The hydraulic oil is put in the oil reservoirs by a 3rd party maintenance contractor. Table 5.42.2 provides more details regarding product handling activities for this area.

Table 5.42.2 Hydraulic Oil Product Handling

Container ID	Loading Method	Overfill Protection	Unloading Method
All Hydraulic Reservoirs	Manual	Visual	Truck

5.42.3 Secondary Containment

The hydraulic oil reservoirs are located inside the respective building location and do not collect storm water.

Table 5.42.3 Hydraulic Oil Secondary Containment

Container ID	Type	Storm Water Release
All Hydraulic Reservoirs	Contained by 4 Building Walls	NA

5.42.4 Inspection and Testing

Elevator inspections are conducted by a 3rd part vendor following the requirements established under ANSI 17.1, A17.2 and ASMC A17.1-2010/CSA B44-10. Records of monthly visual inspections are maintained by DPW ESD personnel for at least three years. Section 4.8 establishes the policy for inspection of tanks less than 5,000 gallons capacity.

5.42.5 Potential Spill Scenario

Complete failure of one reservoir could result in a 275 gallon spill that will be contained in the concrete elevator chamber. An error transferring into a container could spill 5 gallons. The vacuum truck could spill 275 gallons if emptying a reservoir. A spill would go to Mill Creek, Otter Creek, or the Salt River, depending on where the spill occurred (see Figure 2.6). A spill in any of these areas would trigger the spill response procedures listed in Section 4.7.

Table 5.42.4 Hydraulic Elevator Potential Spill Scenario

Container ID	Spill Amount (Gallons)	Contents	Cause	Pathway
65	165	Hydraulic Oil	Container Failure	West and north to a creek leading to Otter Creek
	5		Transfer Error	
	2,000		Vacuum Truck Error	
203	165	Hydraulic Oil	Container Failure	North and east to Mill Creek and the Salt River
	5		Transfer Error	
	2,000		Vacuum Truck Error	

Container ID	Spill Amount (Gallons)	Contents	Cause	Pathway
298	275	Hydraulic Oil	Container Failure	East and then south to Mill Creek and the Salt River
	5		Transfer Error	
	2,000		Vacuum Truck Error	
501.1	220	Hydraulic Oil	Container Failure	East and then south to Mill Creek and the Salt River
	5		Transfer Error	
	2,000		Vacuum Truck Error	
501.2	165	Hydraulic Oil	Container Failure	East and then south to Mill Creek and the Salt River
	5		Transfer Error	
	2,000		Vacuum Truck Error	
501.3	165	Hydraulic Oil	Container Failure	East and then south to Mill Creek and the Salt River
	5		Transfer Error	
	2,000		Vacuum Truck Error	
503	110	Hydraulic Oil	Container Failure	East and then south to Mill Creek and the Salt River
	5		Transfer Error	
	2,000		Vacuum Truck Error	
851.1	550	Hydraulic Oil	Container Failure	Southwest to Mill Creek and then the Salt River
	5		Transfer Error	
	2,000		Vacuum Truck Error	
851.2	550	Hydraulic Oil	Container Failure	Southwest to Mill Creek and then the Salt River
	5		Transfer Error	
	2,000		Vacuum Truck Error	
851.3	550	Hydraulic Oil	Container Failure	Southwest to Mill Creek and then the Salt River
	5		Transfer Error	
	2,000		Vacuum Truck Error	

Container ID	Spill Amount (Gallons)	Contents	Cause	Pathway
851.4	550	Hydraulic Oil	Container Failure	Southwest to Mill Creek and then the Salt River
	5		Transfer Error	
	2,000		Vacuum Truck Error	
851.5	550	Hydraulic Oil	Container Failure	Southwest to Mill Creek and then the Salt River
	5		Transfer Error	
	2,000		Vacuum Truck Error	
851.6	550	Hydraulic Oil	Container Failure	Southwest to Mill Creek and then the Salt River
	5		Transfer Error	
	2,000		Vacuum Truck Error	
853	220	Hydraulic Oil	Container Failure	Southwest to Mill Creek and then the Salt River
	5		Transfer Error	
	2,000		Vacuum Truck Error	
1003	275	Hydraulic Oil	Container Failure	East to Mill Creek and the Salt River
	5		Transfer Error	
	2,000		Vacuum Truck Error	
1022	165	Hydraulic Oil	Container Failure	Southwest to Mill Creek and then the Salt River
	5		Transfer Error	
	2,000		Vacuum Truck Error	
1101	165	Hydraulic Oil	Container Failure	Southwest to Mill Creek and then the Salt River
	25		Transfer Error	
	2,000		Vacuum Truck Error	
1109	275	Hydraulic Oil	Container Failure	West in open drainage to Otter Creek
	5		Transfer Error	
	2,000		Vacuum Truck Error	

Container ID	Spill Amount (Gallons)	Contents	Cause	Pathway
1110	275	Hydraulic Oil	Container Failure	West in open drainage to Otter Creek
	5		Transfer Error	
	2,000		Vacuum Truck Error	
1174	275	Hydraulic Oil	Container Failure	Southwest to Mill Creek and then the Salt River
	5		Transfer Error	
	2,000		Vacuum Truck Error	
1307.1	165	Hydraulic Oil	Container Failure	West in open drainage to Otter Creek
	5		Transfer Error	
	2,000		Vacuum Truck Error	
1307.2	165	Hydraulic Oil	Container Failure	West in open drainage to Otter Creek
	5		Transfer Error	
	2,000		Vacuum Truck Error	
1310	275	Hydraulic Oil	Container Failure	West in open drainage to Otter Creek
	5		Transfer Error	
	2,000		Vacuum Truck Error	
1378	220	Hydraulic Oil	Container Failure	West in open drainage to Otter Creek
	5		Transfer Error	
	2,000		Vacuum Truck Error	
1383	165	Hydraulic Oil	Container Failure	West in open drainage to Otter Creek
	5		Transfer Error	
	2,000		Vacuum Truck Error	
1384	220	Hydraulic Oil	Container Failure	West in open drainage to Otter Creek
	5		Transfer Error	
	2,000		Vacuum Truck Error	

Container ID	Spill Amount (Gallons)	Contents	Cause	Pathway
1467	220	Hydraulic Oil	Container Failure	West in open drainage to Otter Creek
	5		Transfer Error	
	2,000		Vacuum Truck Error	
1468	220	Hydraulic Oil	Container Failure	West in open drainage to Otter Creek
	5		Transfer Error	
	2,000		Vacuum Truck Error	
1474	275	Hydraulic Oil	Container Failure	West in open drainage to Otter Creek
	5		Transfer Error	
	2,000		Vacuum Truck Error	
1475	275	Hydraulic Oil	Container Failure	West in open drainage to Otter Creek
	5		Transfer Error	
	2,000		Vacuum Truck Error	
1477	275	Hydraulic Oil	Container Failure	East to Mill Creek and the Salt River
	5		Transfer Error	
	2,000		Vacuum Truck Error	
1480	275	Hydraulic Oil	Container Failure	East to Mill Creek and the Salt River
	5		Transfer Error	
	2,000		Vacuum Truck Error	
1724	220	Hydraulic Oil	Container Failure	East to Mill Creek and the Salt River
	5		Transfer Error	
	2,000		Vacuum Truck Error	
2010	220	Hydraulic Oil	Container Failure	West in open drainage to Otter Creek
	5		Transfer Error	
	2,000		Vacuum Truck Error	

Container ID	Spill Amount (Gallons)	Contents	Cause	Pathway
2327	165	Hydraulic Oil	Container Failure	West in open drainage to Otter Creek
	5		Transfer Error	
	2,000		Vacuum Truck Error	
2366	275	Hydraulic Oil	Container Failure	South to Mill Creek and the Salt River
	5		Transfer Error	
	2,000		Vacuum Truck Error	
2368	165	Hydraulic Oil	Container Failure	West in open drainage to Otter Creek
	5		Transfer Error	
	2,000		Vacuum Truck Error	
2369	220	Hydraulic Oil	Container Failure	West in open drainage to Otter Creek
	5		Transfer Error	
	2,000		Vacuum Truck Error	
2389	275	Hydraulic Oil	Container Failure	West in open drainage to Otter Creek
	5		Transfer Error	
	2,000		Vacuum Truck Error	
2817	165	Hydraulic Oil	Container Failure	East to Mill Creek and the Salt River
	5		Transfer Error	
	2,000		Vacuum Truck Error	
2861	165	Hydraulic Oil	Container Failure	East to Mill Creek and the Salt River
	5		Transfer Error	
	2,000		Vacuum Truck Error	
4829	165	Hydraulic Oil	Container Failure	West in open drainage to Otter Creek
	5		Transfer Error	
	2,000		Vacuum Truck Error	

Container ID	Spill Amount (Gallons)	Contents	Cause	Pathway
5101	220	Hydraulic Oil	Container Failure	South to Mill Creek and the Salt River
	5		Transfer Error	
	2,000		Vacuum Truck Error	
6434.1	275	Hydraulic Oil	Container Failure	South to Mill Creek and the Salt River
	5		Transfer Error	
	2,000		Vacuum Truck Error	
6434.2	275	Hydraulic Oil	Container Failure	South to Mill Creek and the Salt River
	5		Transfer Error	
	2,000		Vacuum Truck Error	
6434.3	275	Hydraulic Oil	Container Failure	South to Mill Creek and the Salt River
	5		Transfer Error	
	2,000		Vacuum Truck Error	
6434.4	275	Hydraulic Oil	Container Failure	South to Mill Creek and the Salt River
	5		Transfer Error	
	2,000		Vacuum Truck Error	
6434.5	275	Hydraulic Oil	Container Failure	South to Mill Creek and the Salt River
	5		Transfer Error	
	2,000		Vacuum Truck Error	
6434.6	275	Hydraulic Oil	Container Failure	South to Mill Creek and the Salt River
	5		Transfer Error	
	2,000		Vacuum Truck Error	
6434.7	275	Hydraulic Oil	Container Failure	South to Mill Creek and the Salt River
	5		Transfer Error	
	2,000		Vacuum Truck Error	

Container ID	Spill Amount (Gallons)	Contents	Cause	Pathway
6434.8	275	Hydraulic Oil	Container Failure	South to Mill Creek and the Salt River
	5		Transfer Error	
	2,000		Vacuum Truck Error	
6434.9	275	Hydraulic Oil	Container Failure	South to Mill Creek and the Salt River
	5		Transfer Error	
	2,000		Vacuum Truck Error	
6434.10	275	Hydraulic Oil	Container Failure	South to Mill Creek and the Salt River
	5		Transfer Error	
	2,000		Vacuum Truck Error	
6434.11	275	Hydraulic Oil	Container Failure	South to Mill Creek and the Salt River
	5		Transfer Error	
	2,000		Vacuum Truck Error	
6434.12	275	Hydraulic Oil	Container Failure	South to Mill Creek and the Salt River
	5		Transfer Error	
	2,000		Vacuum Truck Error	
6434.13	275	Hydraulic Oil	Container Failure	South to Mill Creek and the Salt River
	5		Transfer Error	
	2,000		Vacuum Truck Error	
6434.14	275	Hydraulic Oil	Container Failure	South to Mill Creek and the Salt River
	5		Transfer Error	
	2,000		Vacuum Truck Error	
6434.15	275	Hydraulic Oil	Container Failure	South to Mill Creek and the Salt River
	5		Transfer Error	
	2,000		Vacuum Truck Error	

Container ID	Spill Amount (Gallons)	Contents	Cause	Pathway
6434.16	275	Hydraulic Oil	Container Failure	South to Mill Creek and the Salt River
	5		Transfer Error	
	2,000		Vacuum Truck Error	
6434.17	275	Hydraulic Oil	Container Failure	South to Mill Creek and the Salt River
	5		Transfer Error	
	2,000		Vacuum Truck Error	
6434.18	275	Hydraulic Oil	Container Failure	South to Mill Creek and the Salt River
	5		Transfer Error	
	2,000		Vacuum Truck Error	
6579	275	Hydraulic Oil	Container Failure	South to Mill Creek and the Salt River
	5		Transfer Error	
	2,000		Vacuum Truck Error	
7501	165	Hydraulic Oil	Container Failure	South to Mill Creek and the Salt River
	5		Transfer Error	
	2,000		Vacuum Truck Error	