

## **Chapter 9: Underground Storage Tank Management**

### **1. Purpose**

This procedure establishes the requirements for the management of underground storage tank (UST) systems at Ft. Greely Alaska (FGA). UST are used at Ft. Greely to store petroleum fuels and for the temporary collection of spilled petroleum. This procedure assures that tank storage will be conducted in compliance with federal, state, local and U.S. Army requirements.

### **2. Scope**

This procedure applies to all underground storage tanks at FGA to include inspections, maintenance, leak detection, spill and overfill prevention, corrosion protection, construction and modification of tanks, and closure of tanks. The requirements of this procedure apply to below ground tanks and to piping, secondary containment, and ancillary equipment.

This procedure will be revised prior to August 15, 2008 or before the date that Doyon Utilities assumes ownership and operational responsibilities for USTs affected by utilities privatization.

### **3. Responsibilities**

#### **a. Garrison Commander**

The Garrison Commander is the responsible official for environmental compliance at Fort Greely and provides overall policy and guidance associated with environmental compliance. The Commander will consult regularly with FGA-ENV to ensure the installation's environmental policies and procedures are consistent with federal, state and Army requirements and are properly implemented. The Commander will consult regularly with all installation tenant organizations and departments and facilitate resolution of conflicts regarding environmental matters that cannot be resolved at lower levels.

#### **b. FGA Environmental Office (FGAENV)**

The FGA Environmental Office, part of the Fort Greely Directorate of Public Works, is responsible for establishing environmental procedures that apply to all activities conducted at FGA. FGAENV:

- (1) Oversees tank management operations for environmental compliance.

- (2) Submits all required reports and documents to regulatory agencies and serves as FGA's primary point of contact on environmental compliance.
- (3) Advises the DPW, tenants and contractors of environmental requirements and provide assistance achieving compliance.
- (4) Provides annual tank management training.
- (5) Maintains this procedure, the SPR Plan, and the FGA tank inventory (Attachment 1).
- (6) Schedules tank, pipeline and cathodic protection system inspections and testing.

c. Installation Management Command (IMCOM) – Pacific

IMCOM - Pacific oversees environmental management and compliance activities at FGA and provides resources for environmental program implementation. IMCOM - Pacific insures Fort Greely's environmental program conforms to DoD and Army requirements and provides policy and programmatic guidance to FGA-ENV.

d. FGA Departments, Tenants and Contractors

FGA Departments, tenants and contractors will designate tank operators that are responsible for meeting the requirements of this procedure for all the tank systems that are under their control. A listing of responsible departments, tenants or contractors for each tank system is provided in Attachment 1. Funding must be provided to adequately operate and maintain equipments IAW this procedure.

#### **4. Spill Notification and Response**

If a spill from a tank is discovered or suspected, the operator will immediately provide verbal notification to the FGA Fire Department at (907) 873-3473 (911 for on-base lines) and conduct response activities according to Chapter 5 of the FGA Environmental Procedures Manual.

#### **5. Inspection and Testing**

- (1) FGAENV will ensure that each registered UST is inspected at least every three years by an inspector who is ADEC certified according to the schedule in Attachment 1.
- (2) Tank operators must inspect their tanks weekly using the inspection form in Attachment 2. (An inspection is not required for a tank that is permanently out of service.)
- (3) Operators must conduct release detection at least every 30 days using one of the

- (a) Inventory control capable of detecting a release of at least 1.0 percent of flow-through plus 130 gallons monthly.
- (b) Manual tank gauging can be used for tanks of 1,000 gallons or less.
- (c) Tank tightness testing capable of detecting a 0.1-gallon per hour leak rate from any part of a tank.
- (d) Automatic tank gauging that tests for the loss and equipment that conducts inventory control.
- (e) Interstitial monitoring between the tank and a secondary barrier.
- (f) Statistical inventory reconciliation methods that must be capable of detecting a 0.2-gallon per hour leak rate.

## **6. Operation, Maintenance, and Repair**

- (1) Tank operators must coordinate all major repairs with the FGAENV to ensure that the repairs will prevent a release and meet regulatory and Army requirements.
- (2) Repairs must be conducted using a nationally-recognized code and by a person certified by ADEC.
- (3) Only a manufacturer's authorized representative may make repairs to tanks and pipes constructed of fiberglass-reinforced plastic or other corrosion-resistant material.
- (4) Metal pipe sections and fittings that have leaked as a result of corrosion or other damage must be replaced.
- (5) Operators will label tanks as to contents and place "No Smoking", "Authorized Personnel Only" signs and the spill reporting sign (Attachment 3) at the tank facility and replaced if faded or illegible.

## **7. Filling or Off-loading**

- (1) Operators will ensure tank level is tested before filling to make certain adequate capacity exists.
- (2) Operators may not allow fuel to be placed in a registered UST unless a valid operating tag issued by DEC is displayed. If an operating tag is missing, the operator will contact the FGA ENV to obtain a replacement.
- (3) The operator or refueler must check all fittings before filling or off-loading tanks and ensure that vents are free of ice.

- (4) The operator or designated refueler will monitor transfer operations to ensure that:
  - (a) A release due to spilling or overfilling does not occur;
  - (b) The volume available in the tank is greater than the volume of petroleum to be transferred to the tank before the transfer is made;
  - (c) The transfer operation is constantly monitored to prevent overfilling or spilling;
  - (d) The distributor is provided with the UST registration number before the transfer is made; and
  - (e) Any spill or overfill is reported immediately.
- (5) After off-loading or loading fuel the operator will cap all truck manifolds.

## **8. Construction, Modification and Closure**

- (1) All new tank construction, modifications, and closures must be preapproved by the FGAENV.
- (2) New tanks constructed at FGA will be above ground, unless conditions exist that make aboveground construction impractical or cost prohibitive. Installation will not occur within 100 feet of a potable drinking water well.
- (3) Only ADEC certified contractors may perform upgrades.
- (4) A change in service is the continued use of a tank to store a different material. Before a change-in-service, FGA operators will
  - (a) empty and clean the tank by removing all liquid and accumulated sludge;
  - (b) conduct a site characterization; and
  - (c) conduct either a site assessment or a release investigation
- (5) If a tank is temporarily closed for three months or longer, FGA operators will leave vent lines open and functioning; and cap and secure all other lines, pumps, manways, and ancillary equipment. Piping must be emptied of liquid content either by draining or by inert gas pressure. FGA operators will continue operation and maintenance of corrosion protection and release detection equipment for temporarily closed tanks.
- (6) A site characterization and assessment as described below must be performed before completion of permanent closure or change-in-service.
- (7) A UST that is to be closed must be removed from the ground, along with all associated piping. The resulting excavation must be investigated and corrective action completed as required.
- (8) When performing permanent closure or a change-in-service, FGAENV, with the

- (a) A visual inspection of the site;
  - (b) Photographs documenting the site;
  - (c) Surface or subsurface soil and water sampling and analytical testing;
  - (d) Personal interviews; and
  - (e) Data review.
- (10) If the results of the site characterization indicate that a release of petroleum has occurred, FGAENV will perform a site assessment. The site assessment must include an evaluation of the tank site to check for obvious leaks at the dispensers and at exposed pumps and piping; check for obvious soil or water contamination caused by a release or leakage from a tank; review the tank inventory control and repair records for indications of a release; and determine the general nature of the stored substance; general nature of the subsurface soils; and estimated depth to groundwater; and the site assessment must include the collection of soil samples.
- (11) If the results of the site characterization indicate that a release of petroleum has occurred, or is likely to have occurred, FGAENV will proceed with corrective action, including release notification and release investigation.

## **9. Record Keeping**

Operators will keep detailed records on site for as long as the tank is used. If a tank is closed, the operator will transfer all records to the FGAENV. Records include:

- (1) Completed weekly inspection forms.
- (2) Documentation of operation of corrosion protection.
- (3) Documentation of upgrades and repairs.
- (4) Proof of compliance with applicable release detection.
- (5) Leak detection manuals.
- (6) Written documentation of calibration, maintenance, and repair of release detection equipment.
- (7) Schedules of required calibration and maintenance provided by the release detection equipment manufacturer must be kept for at least five years.
- (8) Records of operation of the cathodic protection system that are sufficient to demonstrate compliance, including the results of the last three inspections.
- (9) Records of each repair made for the remaining operating life of the system.

FGAENV will keep the following records for as long as the tank is used plus three years:

- (1) Information about any suspected or confirmed release and corrective actions.
- (2) The results of any site characterization or site will be retained for at least three years after closure or change-in-service.
- (3) Copies of ADEC spill reports.
- (4) UST registrations.
- (5) UST inspection results.
- (6) External and internal tank inspection results.
- (7) Closure and corrective action reports.

## **10. Reporting**

### **a. Spill / Emergency Reporting**

- (1) FGAENV will notify ADEC of any release according to the requirements of the Ch 5 Spill Notification and Response Procedure and Spill Prevention and Response Plan.
- (2) If a regulated UST is taken out of service because of an emergency, FGAENV will notify the ADEC within 24 hours.
- (3) FGAENV will submit a written final corrective action report to ADEC for each UST site at which corrective action activities have been completed

### **b. UST Registration**

- (1) FGAENV will register regulated USTs. Attachment 1 of this procedure identifies those tanks that have an ADEC ID.
- (2) Tank operators will obtain a current operating tag from the FGAENV before allowing a petroleum product to be placed in the UST. Tank operators will permanently affix the tag where it can be easily be seen by a person who fills the UST.

### **c. Inspection Report**

By September 30 of each year in which UST inspections are performed, FGAENV will provide ADEC the results of the UST inspection. The certified inspector who conducted the inspection and FGAENV must sign the report.

### **d. Closure or Change-in-Service Reports**

- (1) Before beginning permanent closure or change-in-service of USTs, FGAENV will

notify the ADEC in writing.

- (2) After closure or change-in-service of USTs, FGAENV will submit a completed post-closure report to ADEC.

e. Installation Report

Before beginning installation of a regulated UST, FGAENV will notify ADEC in writing.

f. Tank Reconfiguration Report

At least 15 days, but not more than 60 days before significantly reconfiguring a UST, FGAENV will notify ADEC on the proposed changes.

## 11. Training

All tank operators and POL handlers must attend initial and annual refresher training on:

- (1) The requirements of this procedure;
- (2) The operation and maintenance of equipment to prevent discharges;
- (3) Applicable pollution control laws, rules, and regulations;
- (4) General facility operations;
- (5) The spill response and notification procedures provided in Chapter 5 of FGA Environmental Procedures;
- (6) The contents of the facility SPR Plan; and
- (7) Known discharges or failures, malfunctioning components, and any recently developed precautionary measures.

## 12. References

- a. 18 AAC 78 Alaska Standards for USTs
- b. 40 CFR 112 Oil Pollution Prevention and Response (SPCC regulations)
- c. 40 CFR 280 Standards for USTs
- d. AR 200-1 Army Environmental Protection and Enhancement
- e. DA PAM 200-1 Army Environmental Protection and Enhancement
- f. FGA Spill Prevention and Response Plan

## FT. GREELY STORAGE TANK INVENTORY

### Underground Storage Tank Inventory

Building No.	ADEC ID No.	Capacity (gallons)	Contents	Year Installed	Next 3 yr. Inspection Due
101		10,000	Heating Oil	1996	
133		500	Heating Oil	1985	
501	79	5,000	Fuel Oil	1995	2009
602	77	10,000	Gasoline	1991	2009
602	78	10,000	Gasoline	1991	2009
606	53	35,000	Diesel	1992	
606	54	35,000	Diesel	1992	
625	87	300	Gasoline	1997	2009
632		500	Fuel Oil	2000	

**FT. GREELY STORAGE TANK WEEKLY INSPECTION FORM**

MONTH \_\_\_\_\_ 20\_\_

Tank No. _____	Week: _____	1	2	3	4	5	
Condition		Y/N/NA	Y/N/NA	Y/N/NA	Y/N/NA	Y/N/NA	Comments
<b>UNDERGROUND STORAGE TANKS</b>							
Area around tank clean/free of debris							
Fire extinguishers available & charged							
No smoking signs posted							
No visible leaks, weeping or drips from tanks, valves, piping, or hoses							
No corrosion > 0.1" (~as thick as a quarter's edge) on tank or piping							
Tank sign with contents visible							
Leak detection equipment operational							
Vents clear							
Lights functioning							
Tank fill valve capped when not in use							
Piping supports in good condition							
Pipe wrapping or coating in good condition							
All tank gauges operational (overfill alarm high level shut off, level)							
Spill response materials available							
Dispenser hoses & nozzles in good condition							
Cathodic protection sacrificial metals sufficient							
Cathodic protection system operating							
Fill pipe catch basin free of liquid							
Sump monitor operating							
<b>INSPECTOR:</b>							
<b>DATE:</b>							

# **REPORT ALL Oil and Hazardous Material Spills**

Immediately contact the Fort Greely Fire Department  
**873-FIRE (3473)**  
to report spills or discoveries of contamination

When reporting please provide as much information you can, including:

- Your name
- Time of spill or discovery
- Location of spill or discovery
- Nature of spill or discovery

Form approved by the Alaska Department of Environmental Conservation