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HQ AEDC (AFMC)
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Std. No.
E11

Safety, Health, and Environmental Standard

Title: OIL POLLUTION PREVENTION AND POL STORAGE CONTAINER MANAGEMENT

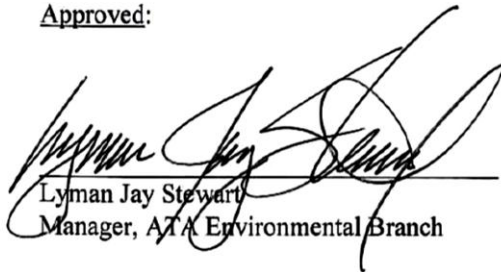
Standard No.: E11

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Releasability: There are no releasability restrictions on this publication.

The provisions and requirements of this standard are mandatory for use by all AEDC personnel engaged in work tasks necessary to fulfill the AEDC mission. Please contact your safety, industrial health and/or environmental representative for clarification or questions regarding this standard.

Approved:



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Manager, ATA Environmental Branch



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TSDCA

Record of Review/Revision

(Current revisions are highlighted in yellow and marked with a vertical line in the right margin.)

Date/POC	Description
04/26/13	Added NFAC supplement; administrative change to replace obsolete link with “Current training records for Base Operating Contractor Personnel may be obtained from the Base Operating Contractor Training Office.”
2/13/12 Kraig Smith	Clarified under definition of owner that “spent oil” is no longer stored for long periods by HWOOG and that HWOOG will not be responsible for performing inspections on stored oil drums. Clarified definition of Secondary Containment. Clarified in Section 2.1 that drums are not to be used as work platforms. Added two new sections, 5.0 – <i>Training Requirements</i> and 6.0 – <i>Inspections/Audits</i> , according to revised format structure. Global replacement of term “tank” with “container” to align with latest regulatory language. Global replacement of Synergen with Oracle WAM. Global replacement of “used oil” with “spent oil.” Referenced frequency of tests and inspections to industry standards and best management practices in several locations (Sections 1.2, 3.0, 4.4.1, 4.4.2, 4.4.3). Added ATA Environmental Branch to Section 4.0, Requirements and Responsibilities. Referenced procedure for turning in drums for recycling. Changed frequency of oil-filled equipment inspections to reflect risk-based management (4.6.1). Clarified section 4.7.3 regarding use of colored text on labels and specified five-color rotation to be used. Updated contact information in Annex B. Included new TDEC requirements for UST operator training. Updated drainage map in Annex A to make more legible and to show industrial drainage area boundary for purposes of secondary containment usage. Updated Annex C – Training Records. Clarifying language throughout.
11/30/09 Kraig Smith	Revised to show that the Rule was amended again in 2008. It sets the new compliance date for the AEDC SPCC Plan at 10 Nov 2010.
7/31/08 Kraig Smith	Inserted new <i>Section 4.6, Oil-Filled Operational Equipment System Owners</i> . It sets the visual inspection frequency for oil-filled operational equipment at <i>semi-annual</i> ; renumbered the sections following 4.6.
06/30/07 Michael Hunter	Revised to reflect changes resulting from the 2006 amendment to the regulation. These changes include delaying implementation and removing some of the requirements for oil-filled operational equipment and POL piping from the definition of bulk storage. Other minor edits made for improved clarity.
06/15/06 Michael Hunter	Provided latest regulatory dates. Clarified prohibition on unattended filling operations; removed prohibition on reconditioned drums. Revision explains that the requirement to replace drums before 10 years of service does not guarantee safe service for the full-time period. Updated POCs in Annex B.



Safety, Health, and Environmental Standard

Oil Pollution Prevention and POL Storage Container Management

1.0 INTRODUCTION/SCOPE/APPLICABILITY

1.1 Introduction

The Environmental Protection Agency Oil Pollution Prevention Rule, first effective in 1974, was revised in 2002. The Rule was amended again in 2008. The major changes were to delay implementation and to exclude some of the requirements for oil-filled operational equipment. The Rule is promulgated in *Title 40, Code of Federal Regulations, Part 112*. Prior to the 2002 revision, AEDC achieved compliance by maintaining a Spill Prevention Controls and Countermeasures (SPCC) Plan. The 2002 revision brought 55-gallon drums under the Rule and increased reporting requirements. If AEDC discharges more than 1,000 gallons of oil in a single discharge or discharges more than 42 gallons of oil in each of two discharges occurring within any 12-month period, the discharges must be reported to the EPA. For reporting to be required, the discharges must reach “waters of the State.” Amounts captured or absorbed upstream of the reporting point are not included in the reporting decision. This standard identifies what is required to comply with the 2008 revision of the Rule. The revisions to the Rule are to be incorporated into the AEDC SPCC Plan. The compliance date for the SPCC Plan is now 10 November 2010.

The purpose of the Oil Pollution Prevention Rule is to prevent discharge of oil into navigable waters, as opposed to response and cleanup after a spill occurs. This includes preventing discharge of any kind of oil such as petroleum, fuel oil, synthetic oil, or mineral oil. Discharge from storage containers may be controlled by: maintaining appropriate secondary containment or catchment basins; providing reliable loading/unloading/transfer equipment and procedures to prevent container overflow during filling; and preventing container failures through integrity testing and/or inspections. This standard sets the minimum acceptable actions to comply with each of these three spill control strategies.

1.2 Scope

Navigable waters are protected from oil spills in the developed area of AEDC by the Retention Reservoir system on Rowland Ditch and by skimming ponds on Bradley and Brumalow Creeks. These protective structures are the last line of defense. Spill cleanup must be aggressively pursued at the source rather than merely allowing oil to continue to the protective structure. Secondary containment for individual containers should continue to be installed for large containers. The skimming ponds would likely be unable to fully capture a spill greater than 10,000 gallons. Additionally, wherever drums of oil or fuel of 55 gallons or more are stored, secondary containment should be considered as an extra precaution against a release. When oil or fuel of 55 gallons or more is used in areas that do not have spill protection provided by the Retention Reservoir or one of the skimming ponds, temporary secondary containment must be provided and properly maintained so that it will be effective if a leak occurs. ANNEX A provides a map showing areas protected by secondary containment and those areas not protected.

Unattended filling operations must not be allowed anywhere on Arnold AFB. If automatic level detection and shut-off are provided, filling may be monitored from a control room or other remote location, but continuous monitoring while filling is underway must be done. This ban includes refueling operations for vehicles and mobile equipment.

Oil containers and fuel containers classified as “bulk storage containers” with a shell capacity of 55 gallons or greater (including drums and polyethylene (poly) containers) must be periodically inspected and tested for integrity in accordance with industry standards and best management practices. A detailed description of the testing and inspection program is contained in Section 7 of the facility SPCC Plan. To comply with this integrity testing requirement, a four-year program to test all applicable containers has been completed. In the case of disposable or consumable containers such as drums or polyethylene containers, this requirement may be achieved by replacing them before their service reaches 10 years. *If they are not replaced, they must be tested and the documentation must be retained for as long as they remain in service.* In no way should one infer from this requirement that a container less than 10 years old is safe for use. All containers, regardless of age, must be carefully inspected prior to use and removed from service if they are found to be unfit.

Personnel must verify that all containers are compatible with the material being stored and the condition of the storage such as pressure, temperature, and exposure to the elements.

Other containers that require periodic inspection if used to store oil or fuel are as follows: mobile refuelers (for transporting fuel), pipelines (if associated with POL storage and volume is 55 gallons or greater), and oil-filled operational equipment that contains lubricating oil, hydraulic fluid, or insulating (transformer) oil.

1.3 Applicability

This standard applies to all personnel, organizations, and operations on base. The revised regulation requires that the AEDC SPCC Plan be amended and implemented no later than 10 November 2010.

2.0 BASIC HAZARDS/HUMAN FACTORS

2.1 Basic Hazards

Hazards to human health and to the environment that are concerns of this standard result from the chemical and physical characteristics of oils and fuels. Oil and fuel exposures can be hazardous for the following reasons:

- Oils and especially fuels are normally combustible or flammable.
- Oil-contaminated handrails and walkways are likely to be slick, creating safety hazards (risk of slips and falls).
- Vapors from volatile fuels or oils may displace air in confined spaces.
- Some oils and fuels have been found to be carcinogenic.
- Aviation hydraulic oils such as Skydrol can cause a rash. Skin contact should be avoided.
- All oils and fuels, if released, have the potential to harm wildlife and damage ecosystems near AEDC.
- Drums and poly-containers are subject to structural degradation caused by environmental conditions and are not intended to support personnel or equipment. Under no circumstance should a drum be used for work platforms or supports. Poly-containers are particularly susceptible to embrittlement caused by sunlight.

2.2 Human Factors

The leading human factors contributing to injuries that might occur while working to comply with this Standard are inattention and a lack of knowledge. Workers need to know the hazards of oils or fuels and the site conditions where activities described herein occur, and use due diligence while working in the area. Workers should be aware of paths that a potential release might follow and be aware of the locations of absorbents and other spill response equipment.

3.0 DEFINITIONS

Arnold AFB SPCC Plan—This is the Spill Prevention Controls and Countermeasures Plan for Arnold Air Force Base. It is required by *40 CFR 112.3*, and it details the equipment, organizational structure, procedures, and steps to prevent, control, and provide adequate countermeasures to a discharge.

Bulk Storage Container—Any container of 55-gallons or greater shell capacity used to store oil. These containers are used for purposes including, but not limited to, the storage of oil prior to use, while being used, or prior to further distribution in commerce. Oil-filled electrical, operating, or manufacturing equipment is not a bulk storage container.

Drum—A drum is a cylindrical container; specifically a large, usually metal, bulk storage container for liquids (e.g., a 55-gallon drum). Drums with removable heads should be used for solids only—not liquids.

Fixed Container—A storage container that is not intended for transporting liquids or temporary collection is regarded as fixed. The container need not be attached to a structure and need not be placed on steel or concrete.

Hazardous Waste Operations Group (HWOG)—Group within Environmental Quality who provide guidance and assistance to waste generators; pick up drums of hazardous waste, non-hazardous waste, spent oil, and PCBs from waste generators; sample wastes as necessary; properly store and inspect drums; and coordinate transportation and disposal of wastes.

Integrity Testing—Integrity testing is any means of measuring the strength of a container shell, bottom, and/or floor to contain oil and must include inspection of container supports and foundations. The Oil Pollution Prevention Rule requires periodic integrity testing of aboveground containers, as well as testing when material repairs are performed on the container. Periodic testing means that tests are conducted in accordance with a regular schedule consistent with accepted “industry standards.” Applicable industry standards include:

- American Petroleum Institute (API) Standard 653—Container Inspection, Repair, Alteration, and Reconstruction
- API Recommended Practice 575—Inspection of Atmospheric and Low Pressure Containers
- Steel Container Institute (STI) Standard SP001-03—Standard for Inspection of In-service Shop Fabricated Aboveground Containers for Storage of Combustible and Flammable Liquids
- API Standard 653 and Recommended Practice 575 cover field-fabricated steel containers built to API Standard 650.

The integrity testing must be completed in accordance with written procedures approved by the engineer certifying the Arnold AFB SPCC Plan (see ANNEX B). Integrity testing for piping shall be limited to piping that is associated with POL storage and not conveyance and will be consistent with integrity testing for POL storage containers.

Mineral Oil—A colorless to yellowish-white, highly refined liquid hydrocarbon mixture, obtained by fractional distillation of petroleum. It may be used as a lubricant, a dielectric, or in preparing medicinal ointments.

Navigable Waters—Navigable waters means any river, lake, stream or watercourse, natural or man-made, or their tributaries, which have been adjudicated and held to be navigable in the technical or legal sense, pursuant to *T.C.A. §69-1-101 et seq.*

Oil—The term oil as used in this standard and the underlying EPA regulation means oil of any kind or in any form, including, but not limited to: oils and greases including petroleum, fuel oil, sludge, synthetic oils, mineral oils, oil refuse, or oil mixed with wastes other than dredged spoil.

Oil-Filled Operational Equipment—Oil-filled operational equipment is equipment that includes an oil storage container (or multiple containers and associated piping intrinsic to the operation of the equipment) in which the oil is present solely to support the function of the apparatus or the device. It is not considered a bulk storage container, and does not include oil-filled manufacturing equipment. Some examples include: hydraulic systems, lubricating

systems (e.g., those for pumps, compressors, and other rotating equipment), gear boxes, machining coolant systems, heat transfer systems, transformers, circuit breakers, electrical switches, and other systems containing oil solely to enable the operation of the device. Generator Sets (Gen Sets) are a combination of oil-filled operational equipment and a bulk storage container. Lubrication systems on Gen Sets may be oil-filled operational equipment, but bulk storage containers providing fuel for the generator typically are not oil-filled operational equipment.

Out-of-Service—This term refers to containers that have been physically disconnected from the system they served, physically removed from the system they served, or the system they served has been deactivated with no intended future use. Containers (not isolated or removed) and systems held in reserve for potential future use are not exempt from the requirements of this Standard. Containers or drums are “placed in service” when fluid controlled by this standard is first introduced into the container or drum.

Owner (drum or poly-container)—Possession shall determine ownership with regard to this standard. For example, “Spent oil” drums must be labeled showing the name of the person and organization responsible for filling the drum (see SHE Standard E18). If this person still has possession of the drum when a visual inspection becomes due, he will be responsible for the visual inspection.

POL—Petroleum-based fuels, oils and lubricants.

Poly-containers—Seamless, polyethylene bulk storage containers (typically 1500-gallon capacity at AEDC, but may be as small as 100 gallons or as large as several thousand gallons) that may be oriented horizontally or vertically and may be placed on the ground, on skids, or on trailers.

Secondary Containment—This containment catches fluid that has leaked from the primary container. Secondary containment may be created by a berm around a storage container or it may be the outer wall of a double-walled horizontal container. Secondary containment should be **sufficiently impervious to contain oil**. Curbing may provide secondary containment for smaller containers. Alternative systems consisting of a drainage trench enclosure arranged so that any discharge will terminate and be safely confined in a facility catchment basin or holding pond are acceptable. The secondary containment must have a volume equal to or greater (110 percent is recommended for containers outside the areas protected by catchments or skimming pond) than the largest container within the area being contained.

Storage Capacity—Storage capacity of a container means the design shell capacity of the container.

Visual Inspection—A documented visual inspection of containers and associated piping that meets the bulk storage containers definition above. Inspection results must be kept as comparison records for a period of three years. Inspections shall include visually checking for signs of deterioration, external corrosion, discharges, or accumulation of oil in diked areas. The visual inspection also must include inspection of the container’s supports and foundations. Visual inspections for bulk storage containers shall conform to specific details, including documentation requirements, identified in the Arnold AFB SPCC Plan or a Oracle WAM benchmark work-order. **Visual inspection frequency for bulk storage containers shall be based on industry standards and best management practices (details of the inspection program are contained in Section 7 of the Facility SPCC Plan).**

Waters of the State—Waters of the State means such accumulations of water, surface and underground, natural and artificial, public and private, or parts thereof, which are wholly or partially within, flow through, or border upon this state. However, the term does not include any private pond, or any pond, reservoir, or facility built for reduction or control of pollution or cooling of water prior to discharge unless the discharge therefrom causes or threatens to cause water pollution.

4.0 REQUIREMENTS/RESPONSIBILITIES

4.1 All Departments and All Employees

- 4.1.1 All AEDC employees who discover a spill or sheen are required to notify the Operations Center (see SHE Standard E17) at extensions 454-7680/7688/5361/7752. If conditions allow it to be done safely, persons

possessing the required training should minimize the amount of oil released by placing containment and performing cleanup at the source.

- 4.1.2 When performing activities outside the area for which spill catchments are provided by skimming ponds or the Retention Reservoir, provide secondary containment (may be portable device or temporary diking) for bulk storage containers of 55-gallons capacity or greater (including 55-gallon drums and poly containers).
- 4.1.3 Secondary containment should be used where reasonably possible. This includes spill containment pallets for drums. Covered spill containment pallets are available for outside use. The natural environment outside AEDC is protected from oil spills that occur inside by the Retention Reservoir system on Rowland Ditch and by skimming ponds on Bradley and Brumalow Creeks. This satisfies the requirements of the SPCC regulations. These spill catchments do not, however, eliminate any damage to the environment or eliminate the costs of spill response and cleanup inside the protected area.
- 4.1.4 Keep secondary containment in proper condition to capture container contents in the event of container failure (e.g., keep drain valves closed and remove rainwater). Water collected in secondary containment must be visually inspected for sheens, and when appropriate, tested prior to being discharged. SHE Standard E17 provides instructions on how to manage water that may have become contaminated. Departments should include these requirements in procedures and in inspection or operating reports.
- 4.1.5 Before beginning to fill a new or newly repaired container—drum or container—make a visual inspection to ensure all valve settings are correct, all ports are closed, and no damage has been received that might compromise the integrity of the container. Continue to check for leaks as the container is filled.
- 4.1.6 The material of construction used for primary containers (drum, poly-container, or storage container) and for secondary containment must be compatible with the material being stored in the container.
- 4.1.7 Any permanent installation outside the AEDC security fence that involves containers regulated under the Oil Pollution Prevention Rule must include its own security fencing. These fenced security islands must be kept locked when unattended. Security lighting, to prevent acts of vandalism and assist in the discovery of oil discharges, should be added where appropriate.
- 4.1.8 Regardless of protection provided by secondary containment or skimming pond structures, do not permit unattended filling operations anywhere on Arnold AFB. This ban includes vehicle and mobile equipment fueling operations. If automatic level detection and shut-off are provided, filling must be monitored, but the monitoring may be done from a control room or other remote location.

4.2 Facilities O&M Department

- 4.2.1 Maintain the Retention Reservoir system and the skimming ponds on Bradley and Brumalow Creeks in fully functional condition (e.g., keep ponds dredged and dams and siphon pipes sound). Routine inspections are performed at least every two hours in accordance with Work Instruction W02-2606-0405. Observations are recorded on forms GC-1702 (Rowland Creek Pumping Station and Flow Thru System Sheet) and GC-1706 (Creek Condition Log Sheet). These logs are kept by the secondary pumping station operator.
- 4.2.2 Maintain secondary containment for individual oil and fuel containers that have a shell capacity of 10,000 gallons or more. (This capacity was chosen based on an evaluation of existing catchments and skimming ponds.) Releases from catastrophic failures of containers with capacity of 10,000 gallons or more could exceed the removal capacity at the skimming ponds. Therefore, spill prevention relies on individual secondary containment for these large containers.
- 4.2.3 Be aware that portable, secondary containment systems for individual oil and fuel drums may be available at no cost from the ATA Environmental Branch (see ANNEX B).

4.3 Design Engineering Branch

- 4.3.1 Include secondary containment in the design for new containers that have a shell capacity of 10,000 gallons or greater or where required by AEDC environmental management personnel. Include consideration of secondary containment for smaller containers and add it to the design when costs are not prohibitive.
- 4.3.2 Include secondary containment in the design for new containers that have a shell capacity of 55 gallons or greater and are located outside the catchment area provided by the Retention Reservoir or skimming ponds.
- 4.3.3 Container design shall incorporate automatic overfill protection rather than administrative controls, where economically feasible. Designer must obtain approval of the ATA Environmental Branch (see ANNEX B) if administrative controls are to be used to satisfy overfill protection requirements.

4.4 Bulk Storage Container Owners

- 4.4.1 Bulk storage oil containers and fuel containers with a shell capacity of 55 gallons or greater must be visually inspected routinely. The frequency of inspections is to be based on applicable industry standards and best management practices. A detailed description of the inspection program is contained Section 7.0, *Testing, Inspection, and Record Keeping* of the Facility SPCC Plan. Records to document visual inspections must be maintained for three years.
- 4.4.2 Bulk storage containers with a shell capacity of 55 gallons or greater, must be tested for integrity per applicable industry standards. Where appropriate, industry inspection standards API 653 for field-erected containers and STI SP001-03 for shop-fabricated containers should be used. The integrity testing must be completed in accordance with written procedures approved by the engineer certifying the Arnold AFB SPCC Plan (see ANNEX B). Fixed container owners not conducting these inspections and integrity tests will be out-of-compliance with this Standard.
- 4.4.3 Routine visual inspections shall be conducted periodically as described in Section 7.0, *Testing, Inspection, and Record Keeping* of the Facility SPCC Plan. Container inspections shall include the container exterior, piping connections, container supports, secondary containment if provided, pumps, and safety features (pressure relief, vents, overfill protection, etc.). These inspections shall be documented in operational reports or completed work instructions that are maintained for at least three years.
- 4.4.4 Container visual inspection records shall be maintained in the Oracle WAM record and by Environmental Quality for each particular container. The exception to this is the containers maintained by the ATA Fuels Group. The inspection records for these containers are maintained in the Test Fuel Farm Office (Building 869). Integrity testing reports are maintained by ATA Environmental Quality. The test record shall include the date, the technique used, and the test-finding details.
- 4.4.5 Notify the ATA Environmental Branch whenever a container is taken out of service permanently, whenever a new container is installed, or whenever significant modifications are made (see ANNEX B).

4.5 Piping System Owners

- 4.5.1 POL piping systems associated with bulk storage containers may require inspection where piping inspection is specified as part of the industry standards for the container inspection referenced in Section 4.4.2.

4.6 Oil-filled Operational Equipment System Owners

- 4.6.1 Oil-filled operational equipment, to include hydraulic and lubricating oil systems and electrical transformers with a capacity of 55 gallons or greater, must be visually inspected routinely. The frequency of inspection will be risk-based and will be in coordination with the system PM benchmarks or pre and post operational equipment checks. Inspection of oil-filled operational equipment shall include equipment exterior, piping connections, supports, secondary containment (if present), pumps, and safety features

(pressure relief, vents, overfill protection, etc.). The visual inspection record shall be maintained in the Oracle WAM record for each particular system.

4.7 Drum and Poly-container Owners

- 4.7.1 In the case of drums or polyethylene containers (poly-containers), the integrity testing requirement may be accomplished by replacing them before their service reaches 10 years. *If they are not replaced, they must be tested and the documentation must be retained for as long as they remain in service.* Owners using drums and poly-containers more than 10 years old will be out-of-compliance with this standard unless they have documentation to show the container has been tested. In no way should one infer from this requirement that a container less than 10 years old is safe for use. All containers, regardless of age, should be carefully inspected prior to use and removed from service if they are found to be unfit.
- 4.7.2 Notify the ATA Environmental Branch whenever a poly-container is taken out of service permanently or whenever a new poly-container is purchased (see ANNEX B).
- 4.7.3 Visually inspect drums that are in service on an annual frequency. Drums that appear incapable of containing the liquid without a leak or a failure, while undergoing the harshest treatment to be expected in the area where the drum is being used, must be removed from service.

Inspect for holes, leaks, excessive rust or corrosion, and dents that could reduce the integrity of the drum. Inspect the embossed markings on the bottom of the drum. A typical marking would be as follows:

UN / 1A1 / Y1.4 / 100 / 04

- **UN** means the drum was manufactured to meet United Nations standards.
- **1A1** means this is a closed-head steel drum.
- **Y** means that the drum is acceptable for DOT materials included in Packing Groups II and III. (At AEDC, an X or Y is acceptable for oils; Z is not.)
- **1.4** designates the acceptable specific gravity for liquid contents. (At AEDC, 1.2 is the minimum acceptable number for drums to be used for storing oils.)
- **100** is the pressure in kilopascals used for hydrostatically testing the drum. (At AEDC, 100 is the minimum acceptable number for drums to be used for storing oils.)
- **04** designates the year of manufacture. (At AEDC, only drums less than 10-years old are acceptable for storing fuels or oils.)

Some drums may have additional letters and numbers. The letter “R” may, depending upon its location, indicate that the drum has been reconditioned. If the letter “R” is encountered, contact the HWOOG for an interpretation (see ANNEX B).

Drums passing inspection must be labeled with a drum inspection label. These blank labels are available from the ATA Environmental Branch (see ANNEX B). The label, illustrated at the top of the next page, will show the month and year (e.g., March 2010) of the inspection and include the name and organization of the person making the inspection. Labels with colored lettering will be used with at least five years elapsing before the same color is repeated (sequence shall be red, purple, orange, blue, and green). The ATA Environmental Branch will account for the number of drum inspection labels issued. Existence of the label provides documentary evidence of the regulatory inspection. Drums in service with no inspection label, or a label showing more than 12 months since the previous inspection, will be out-of-compliance with this standard.

2012

ANNUAL DRUM / POLYTANK INSPECTION

DATE (MONTH/YEAR) _____

NAME: **EXAMPLE** _____

ORG: _____

- 4.7.4 Visually inspect poly-containers that are in service annually and remove from service those that do not pass inspection.

Inspect for holes, leaks, excessive wear or deformation, and dents that could compromise the integrity of the poly-container. Inspect the imprinted markings on the side of the neck of the poly-container. The year the poly-container was manufactured will be identified. Remove from service any poly-containers older than 10 years.

Poly-containers passing inspection must be labeled with the “drum” inspection label. These blank labels are available from the ATA Environmental Branch (see ANNEX B). The label will show the month and calendar year (e.g., March 2010). Existence of the label provides documentary evidence of the regulatory inspection. Poly-containers in service with no inspection label, or a label showing more than 12 months since the previous inspection, will be out-of-compliance with this standard.

- 4.7.5 Drums and poly-containers must be visually inspected prior to being placed in service and each time they are reused. Leaking or defective drums should be marked accordingly or moved immediately to Salvage.

NOTE: Empty drums (e.g., product, damaged, surplus) should be turned in to Premiere Building Maintenance Corp. (PBM), 454-5329, for recycling in a timely manner. While awaiting pickup, these drums should be placed on their side so they do not collect rainwater.

- 4.7.6 Drums and poly-containers stored in infrequently visited areas should be checked for leaks on a monthly basis unless they are empty. Those found leaking should be replaced immediately. [SHE Standard E17, *Oil & Hazardous Substances Spill Response*, requires leaking containers to be reported to the Ops Center immediately.]
- 4.7.7 Drums and poly-containers are to be labeled with the “drum” inspection label available from the ATA Environmental Branch when first placed in service (see ANNEX B).
- 4.7.8 Drums and poly-containers must have a label showing contents except when empty. The label must identify contents, and if waste, the name and organization of the waste generator (see SHE Standard E18). Drums containing product need only be labeled with the vendor label. If the vendor label is illegible, use a

Chemical Hazard Alert label (Form GC-1514). Poly-containers must follow the same labeling requirements as drums.

4.8 Vehicle Drivers, Mobile Equipment Operators, Portable Equipment Operators, and Portable Container Owners

4.8.1 Regardless of protection provided by secondary containment or skimming pond structures, do not permit unattended filling operations anywhere on Arnold AFB unless automatic level detection and shut-off are provided. This ban includes vehicle and mobile equipment fueling operations. Even if automatic level detection and shut-off are provided, filling must be monitored, but monitoring may be done from a control room or other remote location.

4.8.2 Filling or refueling operations conducted outside the main industrial area, that is protected by the designated secondary containments, shall only be conducted over temporary secondary containment basins/devices. These basins/devices must be capable of containing 110 percent of the contents of the container being filled or the supply container, whichever is greater. Plastic drip trays or inflatable basins are acceptable.

4.9 Logistics Support/Procurement Offices

Maintain an adequate inventory of Department of Transportation (DOT)-approved drums for issue.

4.10 ATA Environmental Branch

4.10.1 Monitor governing regulations for any changes that could possibly affect AEDC.

4.10.2 Revue this standard and, if required, issue revisions at least every two years or as required by changes to regulations.

5.0 TRAINING REQUIREMENTS

All personnel involved in oil-handling activities must receive at least eight hours of training (including spill response) within the first week of their employment. The training emphasizes pollution prevention as a key element of all employees' activities. All personnel who physically respond to oil and/or hazardous substance spills must have attended a forty-hour Hazardous Waste Operations and Emergency Response (HAZWOPER) training course, and must annually attend the 8 hour HAZWOPER refresher course.

In support of the goal to emphasize pollution prevention, AEDC has instituted Pollution Prevention Training. This training is designed to ensure that all AEDC employees understand the meaning of pollution prevention. All new-hire employees receive Pollution Prevention Training. Site-specific training will be conducted for areas with the largest need for spill prevention and/or pollution abatement. The training goal is to teach employees the following:

- Why pollution prevention should be important to everyone.
- The specific goals AEDC has established for the Pollution Prevention Program.
- The employee's role in successfully meeting the Pollution Prevention Program goals.

In addition to the Pollution Prevention training, AEDC trains appropriate personnel as spill responders. Their training is consistent with the requirements for site-specific training, and they have access to all available spill response equipment and supplies as well as outside resources if needed. Spill responders participate in unannounced drills or actual spill responses on an annual frequency. These exercises are coordinated by the base Exercise Evaluation Team (EET) that maintains records of the exercise activities. Spill responders are briefed annually by the ATA Spill Coordinator (454-4027) on the location and use of spill equipment, and any significant changes to the AEDC SPCC plan and the AEDC Facility Response Plan. AEDC maintains trained spill responders in the following organizations:

- Fire Protection Branch
- Environmental Branch
- Utilities Operations Branch

Additional training is provided for all employees who work in industrial areas, the training is in accordance with OSHA requirements set forth in 29CFR1910.120. Training is appropriate to the employee function and is accomplished through the AEDC specific "Spill Awareness" computer based training module and the annual HAZWOPER training. HAZWOPER training includes oil handling personnel and contains a training module specific to spill response.

Specific training on the protocols for regularly scheduled inspections (AEDC SPCC Plan - Section 7) will be administered as necessary to maintenance teams performing the inspections.

Training records for Spill Awareness and HazWoper courses are attached as Annex C. These records will be updated for each review cycle of this document. Current records are maintained in the Peoplesoft database and are available upon request from the ATA Training Coordinator (454-7170).

AEDC has three registered underground storage tanks (USTs) located at the Motor Pool (Building 1400). The Tennessee Division of Underground Storage Tanks (TDUST) now requires that each facility with active USTs have trained operators in each of three operator classifications: Class A, B, and C. The operator classification definitions are as follows:

- Class A Operator - any person having primary responsibility for on-site operation and maintenance of underground storage tank systems.
- Class B Operator - any person having daily on-site responsibility for the operation and maintenance of underground storage tank systems.
- Class C Operator - any on-site employee having primary responsibility for addressing emergencies presented by a spill or release from an underground storage tank system.

AEDC will maintain a primary and secondary operator in each of the three classifications. Training is accomplished through the TDUST web site. Certificates of completion for the training are kept with the UST records maintained by ATA Environmental Quality.

6.0 INSPECTIONS/AUDITS

Overall compliance with the requirements of this standard will be evaluated in conjunction with the annual ESOHCAMP program level review.

7.0 REFERENCES

33 *CFR* 329, Definition of Navigable Waters of the United States
40 *CFR* 112, Oil Pollution Prevention
49 *CFR* 178, Specifications for Packagings
Tennessee Department of Environment and Conservation Rules, Chapter 1200-4-8

AEDC SHE Standards

E9, Wastewater Discharge Management
E17, Oil & Hazardous Substances Spill Response
E18, Managing Wastes Containing Chemical or Petroleum Products

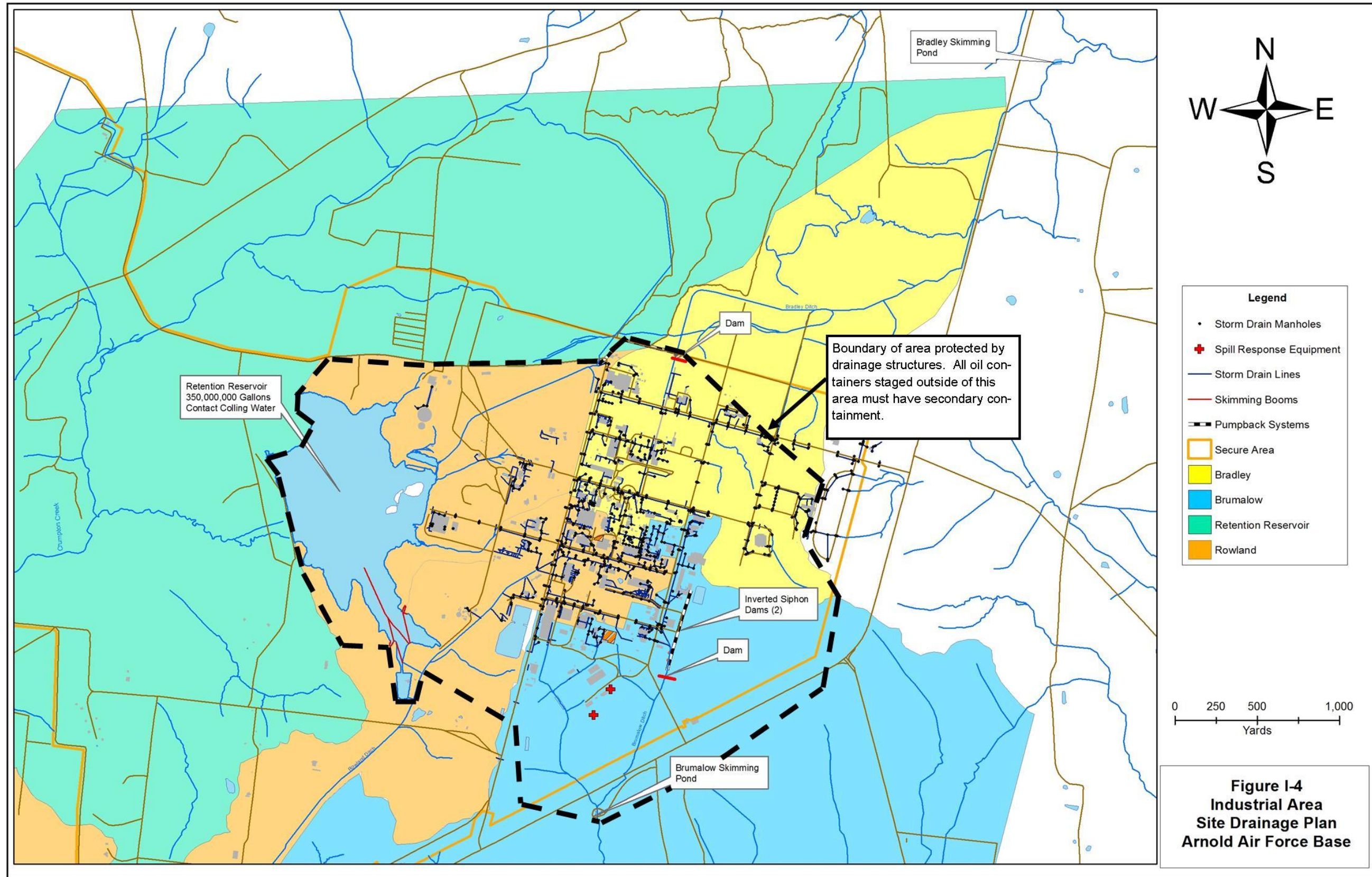
AEDC Spill Prevention Controls and Countermeasures Plan
Arnold Air Force Base Oil Spill Facility Response Plan

8.0 ANNEXES

- A. AEDC Industrial Area Site Drainage Plan
- B. Points of Contact
- C. Training Records

9.0 SUPPLEMENT

NFAC A321-0801-XSP E11 Oil Pollution Prevention and POL Storage Container Management



ANNEX B – Points of Contact

Functional Area	Purpose	POC(s)	Phone Ext. (454-)
ATA Environmental Branch	Engineer to certify the Arnold AFB SPCC Plan	Kraig Smith	4284
ATA Environmental Branch	Whenever a container is: <ul style="list-style-type: none"> • Taken out of service permanently; or • A new container is installed; or • Significant modifications are made 	Kraig Smith	4284
ATA Environmental HWOOG	Interpretation of drum markings	Ben Partin Jim Hicks	3521 3628
ATA Environmental Branch	Provide drum inspection labels	Christina Norman	7383
ATA Environmental Branch	Approval of administrative controls used to satisfy overfill protection requirements	Kraig Smith	4284
ATA Environmental Branch	Provide integrity testing and inspection guidance	Kraig Smith	4284

TRAINING RECORDS
SPILL AWARENESS AND HAZWOPER
JANUARY 2011 – DECEMBER 2011

Current training records for Base Operating Contractor Personnel may be obtained
from the Base Operating Contractor Training Office

A321-0801-XSP E11 Oil Pollution Prevention and POL Storage Container Management

This supplement has been approved for the NFAC Site.

Review: This supplement will be reviewed and updated using the same cycle as the AEDC Safety Standard E11 “Oil Pollution Prevention and POL Storage Container Management”.

References: AEDC Safety Standard E11 – Oil Pollution Prevention and POL Storage Container Management at the AEDC NFAC Site.

Ames Procedural Requirements APR 8800.3:

Scope:

The Environmental Protection Agency Oil Pollution Prevention Rule, first effective in 1974, was revised in 2002. The Rule was amended again in 2008. The major changes were to delay implementation and to exclude some of the requirements for oil-filled operational equipment. The Rule is promulgated in *Title 40, Code of Federal Regulations, Part 112*. Prior to the 2002 revision, NFAC achieved compliance by utilizing Ames’s Spill Prevention Controls and Countermeasures (SPCC) Plan.

The purpose of the Oil Pollution Prevention Rule is to prevent discharge of oil into navigable waters, as opposed to response and cleanup after a spill occurs. This includes preventing discharge of any kind of oil such as petroleum, fuel oil, synthetic oil, or mineral oil. Discharge from storage containers may be controlled by: maintaining appropriate secondary containment or catchment basins; providing reliable loading/unloading/transfer equipment and procedures to prevent container overflow during filling; and preventing container failures through integrity testing and/or inspections.

Spill cleanup must be aggressively pursued at the source rather than merely allowing oil to continue to the protective structure. Secondary containment for individual containers should continue to be installed for large containers. Additionally, wherever drums of oil or fuel of 55 gallons or more are stored, secondary containment should be considered as an extra precaution against a release. When oil or fuel of 55 gallons or more is used spill protection provided by temporary secondary containment must be provided and properly maintained so that it will be effective if a leak occurs.

Unattended filling operations must not be allowed anywhere NFAC. If automatic level detection and shut-off are provided, filling may be monitored from a control room or other remote location, but continuous monitoring while filling is underway must be done. This ban includes refueling operations for vehicles and mobile equipment.

Oil containers and fuel containers classified as “bulk storage containers” with a shell capacity of 55 gallons or greater (including drums and polyethylene (poly) containers) must be periodically inspected and tested for integrity in accordance with industry standards and best management practices.

Personnel must verify that all containers are compatible with the material being stored and the condition of the storage such as pressure, temperature, and exposure to the elements.

Other containers that require periodic inspection if used to store oil or fuel are as follows: mobile re-fuelers (for transporting fuel), pipelines (if associated with POL storage and volume is 55 gallons or greater), and oil-filled operational equipment that contains lubricating oil, hydraulic fluid, or insulating (transformer) oil.

This supplement applies to all personnel conducting operations, maintenance, testing and support at NFAC, NASA AMES.

A321-0801-XSP E11 Oil Pollution Prevention and POL Storage Container Management

NFAC Worksite Application:

NFAC will comply with the following Ames Procedural Requirements APR 8800.3:

- Chapter 2 Pollution Prevention and Affirmative Procurement Program Requirements
- Chapter 10 Underground Storage Tanks (NFAC does not have any underground storage tanks)
- Chapter 12 Storm Water Management
- Chapter 13 Spill Prevention Control and Countermeasures and Facility Response Plane
- Chapter 20 Floodplains and Wetlands Management
- Chapter 24 Aboveground Tanks

I. NFAC Site Management shall:

1. Follow the supplement
2. Ensure all personnel follow the supplement

II. NFAC Supervisors and Test Directors shall:

1. Follow the supplement
2. Ensure all personnel follow the supplement
3. Personnel are current on required training
4. Inspections are complete and record keeping correct
5. Customers and vendors comply with the supplement

III. NFAC Safety Engineer/Management Designee shall:

1. Follow the supplement
2. Ensure compliance and inspection are complete
3. Report to AEDC OP Center any reportable spill release

IV. NFAC Staff shall:

1. Follow the supplement
2. Current on training spill response