

# Spill Prevention, Control, and Countermeasure Plan

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Olympia Regional Airport  
7643 Old Highway 99  
Tumwater, WA 98501



# Olympia Regional Airport Spill Prevention, Control, and Countermeasure Plan Review

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Date: May 2, 2011

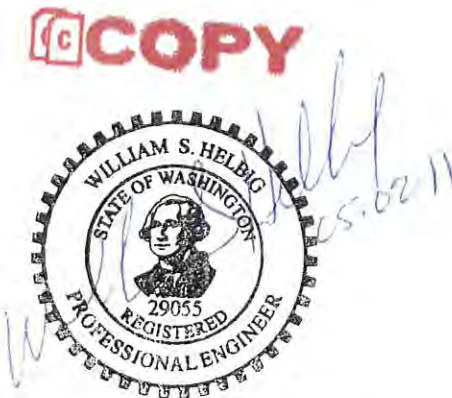
Purpose: The purpose of this review is to evaluate the existing Port of Olympia's March 2005, *Spill Prevention, Control, and Countermeasure Plan* (SPCC Plan) for the Olympia Regional Airport. This review and evaluation is necessary to determine if the SPCC Plan meets current federal regulations.

Documents Reviewed: The following documents were reviewed in order to provide a cohesive evaluation:

- *Spill Prevention, Control, and Countermeasure Plan – Olympia Regional Airport* (March, 2005) completed by USKH, Inc., Lewiston, Idaho
- *Code of Federal Regulations, Title 40, Part 112* (July 2010)

Review Evaluation: The *Code of Federal Regulations* (CFR) outline the necessary requirements and components of a SPCC Plan. The information in Table 1 – Cross Reference of Federal SPCC Plan Regulations, found on the following five (5) pages outlines the individual requirements as stipulated in the CFR, a description of the requirements, and where in the March 2005 SPCC Plan the information can be found.

Certification: I hereby certify that I have examined the above documents and the Olympia Regional Airport facility, and being familiar with the provisions of 40CFR112, attest that the SPCC Plan (March 2005), along with Table 1 included herein, have been prepared in accordance with good engineering practice, 40CFR112, and local requirements.



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William S. Helbig, P.E.

**Table 1** Cross Reference of Federal SPCC Plan Regulations  
with the *Olympia Regional Airport SPCC Plan* (March, 2005)

40CFR112 Rule	Requirement*	Location in 2005 Document with Heading
112.3(d)	Professional Engineer Certification	This Review
112.3(e)	Location of SPCC Plan	Page 3
112.5	Plan Review	Page 5 :SPCC Plan Review – 40CFR112.5(b)
112.7	Management Approval	Page 5: Management Approval – 40CFR112.7(a)
112.7	Cross-Reference with SPCC Rule	This Review
112.7(a)(3) Facility Layout	Describe physical layout of the facility and include facility diagram	Pages 3 & 4 This Review
112.7(a)(4) Discharge Notification	Provide procedures for discharge notification. Procedures in the Plan must enable a person reporting a discharge to relate information on the exact location or address and phone number of the facility; the date and time of the discharge, the type of material discharged, estimates of the total quantity discharged, the media affected by the discharge, the cause of the discharge, etc. (rule stipulates specific notification information that must be included in the Plan)	Page 11
112.7(b) Direction and Route of Flow	Where experience indicates a reasonable potential for equipment failure (such as tank overflow, rupture or leakage, or any other equipment known to be a source of a discharge), the Plan must include a prediction of the direction, rate of flow, and total quantity of oil which could be discharged from the facility as a result of each type of major equipment failure.	Page 6: Potential Equipment Failures – 40CFR112.7(b)
112.7(c) Containment and Diversion	Provide appropriate containment and/or diversionary structures or equipment to prevent discharged oil from reaching a navigable water course. At a minimum, one of the following preventative systems or its equivalent must be used: Dikes, berms or retaining walls sufficiently impervious to contain spilled oil; Curbing; Culverting, gutter or other barriers; Weirs, booms, or other barriers; Spill diversion ponds; Retention ponds; or Sorbent materials  The capacity of the secondary containment requires is that which is necessary to meet the general containment requirement based on a likely discharge.	Page 6: Containment and Diversionary Structures – 40CFR112.7(c)(1)  Page 8: Containment Volumes

**Table 1** Cross Reference of Federal SPCC Plan Regulations  
with the *Olympia Regional Airport SPCC Plan* (March, 2005)

40CFR112 Rule	Requirement*	Location in 2005 Document with Heading
112.7(d) Practicability of Secondary Containment	If it is determined that providing secondary containment structures or equipment is not practicable, clearly explain in Plan why such measures are not practicable; for bulk storage containers conduct both periodic integrity testing of the containers and periodic integrity and leak testing of the valves and piping; and provide in the Plan the following:  An oil spill contingency plan following the provisions of 40 CFR part 109.  A written commitment of manpower, equipment, and materials required to expeditiously control and remove any quantity of oil discharged that may be harmful.	Page 6: Demonstration of Practicability – 40CFR112.7(d)
112.7(e) Inspections, Tests, and Records	Inspections required by this part should be in accordance with written procedures developed for the facility. Written procedures and a record of inspections and tests, signed by the appropriate supervisor or inspector, must be kept for 3 years.	Page 9: Inspections and Records – 40CFR112.7(e)(8)
112.7(f) Personnel Training	At a minimum, train all oil handling personnel in the operation and maintenance of equipment to prevent discharges; discharge procedure protocols; applicable pollution prevention laws, rules and regulations; general facility operations; and, the contents of the facility SPCC Plan.	Page 10: Personnel, Training and Spill Prevention Procedures – 40CFR112.7(e)(10)
112.7(g) Security: Fencing	All facilities handling, processing and storing oil must be fully fenced, and entrance gates must be locked and/or guarded when the facility is not in production or is unattended.	Page 10: Security – 40CFR112.7(e)(9) Item i
112.7(g)(5) Security: Lighting	Provide facility lighting commensurate with the type and location of the facility that will assist in the:  Discovery of discharges occurring during hours of darkness, both by operating or non-operating personnel; and  Prevention of discharges occurring through acts of vandalism.	Page 10: Security – 40CFR112.7(e)(9) Item v
112.7(h) Tank Car or Truck Loading/Unloading Rack	Loading/unloading rack areas must be designed to have secondary containment to hold at least the maximum capacity of any single compartment of a tank car or truck loaded or unloaded at the facility.	Page 9: Tank Car and Tank Truck Loading/Unloading Rack – 40CFR112.7(e)(4)
112.7(i) Brittle Fracture Evaluation	If a field-constructed aboveground container undergoes a repair, alteration, or change in service, or has discharged oil due to a brittle fracture failure, a brittle fracture evaluation may be required.	Not Applicable
112.7(j) Conformance with Applicable State Requirements	Include a discussion of conformance with applicable State rules, regulation or guidelines.	This Review



**Table 1** Cross Reference of Federal SPCC Plan Regulations  
with the *Olympia Regional Airport SPCC Plan* (March, 2005)

40CFR112 Rule	Requirement*	Location in 2005 Document with Heading
112.7(k) Qualified Oil- Filled Operational Equipment	<p>If oil-filled operational equipment meets the qualification criteria of 40 CFR 112.7(k)(1) if you choose, rather than meet the requirements of 40 CFR 112.7 (c) you may implement the alternative general secondary containment requirements of:</p> <p>Establish and document procedure for inspection or monitoring to detect equipment failure an/or discharge;</p> <p>Unless you have submitted a response plan under 40 CFR 112.20, provide:</p> <p>An oil spill contingency plan following the provisions of 40 CFR part 109;</p> <p>A written commitment of manpower, equipment, and materials required to expeditiously control and remove any quantity of oil discharged.</p>	Not Applicable
112.8(b) Facility Drainage	<p>Facility Drainage</p> <p>Restrain drainage from diked storage areas by valves to prevent a discharge. Pumps or ejectors may be used to drain diked areas, but they must be manually operated and water must be inspected before drainage.</p> <p>Use valves or manual, open-and-closed design to drain diked areas. Stormwater must be inspected before release.</p> <p>Design facility drainage systems from undiked areas where a discharge is possible to flow into ponds, lagoons, or catchment basins designed to retain or return oil to the facility.</p> <p>If facility drainage is not engineered as in (3) above, equip the final discharge of all ditches inside the facility with a diversion system that would in the event of an uncontrolled discharge, retain oil at the facility.</p> <p>Where drainage waters are treated in more than one treatment unit and treatment is continuous, and pump transfer is needed, provide two "lift" pumps and permanently install one of the pumps. Whatever techniques are used, the facility drainage systems must be engineered to prevent a discharge in case there is an equipment failure or human error at the facility.</p>	Page 7: Facility Drainage – 40CFR112.7(e)(1)
112.8(c)(1) Bulk Storage Container: Construction	Only use containers for the storage oil if its materials and construction are compatible with the material stored and condition of storage such as pressure and temperature.	Page 7: Bulk Storage Tanks – 40CFR112.7(e)(2) Item i
112.8(c)(2) Bulk Storage Container: Secondary Containment	<p>Construct all bulk storage tanks to provide secondary containment for the entire capacity of the largest single container and sufficient freeboard to contain precipitation.</p> <p>This specific containment requirement is based on a major container failure in which the entire capacity of the container is discharged.</p>	Page 7: Bulk Storage Tanks – 40CFR112.7(e)(2) Item ii

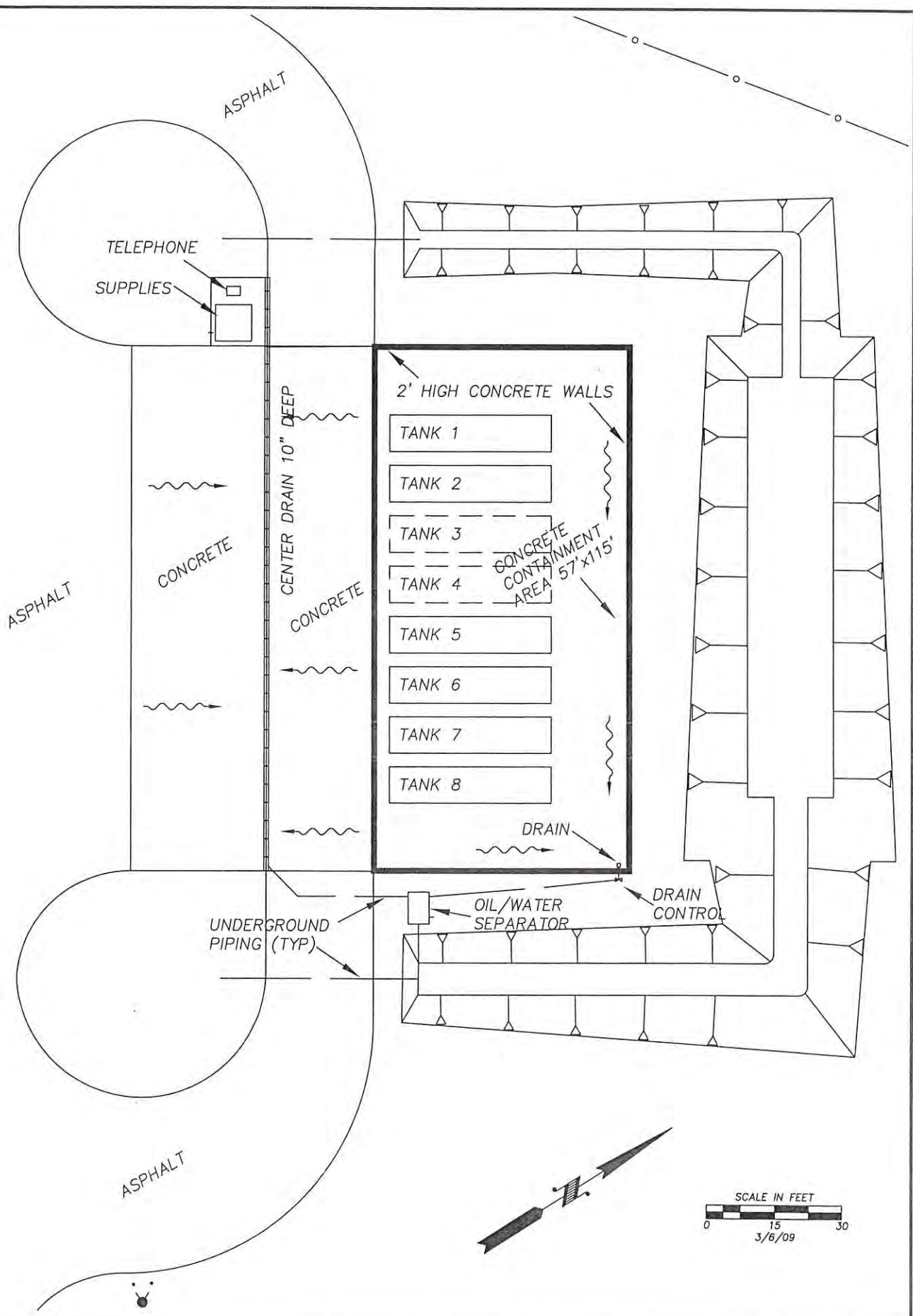
**Table 1** Cross Reference of Federal SPCC Plan Regulations  
with the *Olympia Regional Airport SPCC Plan* (March, 2005)

40CFR112 Rule	Requirement*	Location in 2005 Document with Heading
112.8(c)(3) Drainage of Diked Areas	Do not allow drainage of uncontaminated rainwater from diked areas into a storm drain or open watercourse, lake or pond without treatment unless you: Normally keep the bypass valve sealed closed; Inspect the retained rainwater to ensure that its presence will not cause an oil discharge; Open the bypass valve and reseal it under supervision; Keep adequate records of such events.	Page 7: Bulk Storage Tanks – 40CFR112.7(e)(2) Item iii
112.8(c)(4) Buried Tanks: Corrosion Protection	Protect all buried metallic installed after January 10, 1974 from corrosion by coatings or cathodic protection.	Page 7: Bulk Storage Tanks – 40CFR112.7(e)(2) Item iv
112.8(c)(5) Partially Buried and Bunkered Tanks	Do not use partially buried or bunkered tanks for oil storage unless the buried sections of the tank are protected from corrosion by coatings or cathodic protection.	Page 7: Bulk Storage Tanks – 40CFR112.7(e)(2) Item v
112.8(c)(6) Bulk Storage Container: Testing and Inspection	Test each aboveground container for integrity on a regular schedule and whenever you make material repairs. The frequency and of and type of testing must take into account the type, size and design of the container. Testing must combine visual inspection with another testing technique. Testing comparison records must be kept and the container's supports and foundations must also be inspected.	Page 7: Bulk Storage Tanks – 40CFR112.7(e)(2) Item vi
112.8(c)(7) Heating Coils	Control leakage from defective internal heating coils by monitoring the steam return or exhaust lines for contamination from internal heating coils that discharge into an open watercourse, or pass the lines through a settling tank, skimmer, or other separation or retention system.	Page 7: Bulk Storage Tanks – 40CFR112.7(e)(2) Item vii
112.8(c)(8) Bulk Storage Container: Overfill Prevention System	Engineer or update each container installation with at least one of the following devices: High liquid level alarm with an audible or visual signal at a constantly attended operation or surveillance station. High liquid level pump cutoff. Direct audible or code signal communication between the container gauger and the pumping station. A fast response system determining the liquid level of each bulk storage container such as digital computers, telepulse, or direct vision gauges. If this alternative is used, a person must be present to monitor gauges and the overall filling of bulk storage containers.	Page 7: Bulk Storage Tanks – 40CFR112.7(e)(2) Item viii

**Table 1** Cross Reference of Federal SPCC Plan Regulations  
with the *Olympia Regional Airport SPCC Plan* (March, 2005)

40CFR112 Rule	Requirement*	Location in 2005 Document with Heading
112.8(c)(9) Effluent Treatment Facilities	Observe effluent treatment facilities frequently enough to detect possible system upsets that could cause a discharge.	Page 7: Bulk Storage Tanks – 40CFR112.7(e)(2) Item ix
112.8(c)(10) Visual Discharges	Promptly correct any visible discharges and remove any accumulations of oil in diked areas.	Page 7: Bulk Storage Tanks – 40CFR112.7(e)(2) Item x
112.8(c)(11) Mobile and Portable Containers	Position or locate mobile or portable oil storage containers to prevent discharges. Except for mobile refuelers, a means of secondary containment must be provided, such as a dike or catchment basin, sufficient to contain the capacity of the largest single compartment or container with sufficient freeboard for precipitation.	Page 8: Bulk Storage Tanks – 40CFR112.7(e)(2) Item x
112.8(d) Transfer Operations, Pumping and In-plant processes		Page 9: Transfer Operation, Pumping and In-Plant Processes – 40CFR112.7(e)(3)
112.20(e) Certification of Substantial Harm Determination	Certification of Substantial Harm Determination must be completed and kept at the facility.	Page 12: Attachment A

\* Only selected excerpts of relevant rule text are provided. For a complete list of SPCC requirements, refer to the full text of 40 CFR part 112.







# SPILL PREVENTION, CONTROL, AND COUNTERMEASURE PLAN

## OLYMPIA REGIONAL AIRPORT

7643 Old Highway 99  
Tumwater, WA 98501



Prepared by:

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101 THAIN ROAD  
LEWISTON, ID 83501  
PH: 208-746-2661  
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USKH PROJECT #744312

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STEEL TANK INSTITUTE	

CONTACT  
Rudy Rudolf, Facility Manager

CERTIFICATION: I hereby certify that I have examined the facility and being familiar with the provisions of 40 CFR Part 112, attest that this SPCC Plan has been prepared in accordance with 40 CFR Part 112.

Engineer: Richard Lindsay, P.E.

Signature:

Registration Number: 40626

State: Washington

Date: March 1, 2005



## FACILITY INFORMATION

Facility Name: Olympia Regional Airport

Mailing Address: 7643 Old Highway 99  
Tumwater, WA 98501

Street Address: 7643 Old Highway 99  
Tumwater, WA 98501

Owner: Olympia Regional Airport  
Port of Olympia  
7643 Old Highway 99  
Tumwater, WA 98501

Contact Name: Rudy Rudolf, Facility Manager  
7643 Old Highway 99  
Tumwater, WA 98501  
Telephone: 360-528-8079

Location: The facility is located in Thurston County Washington, approximately  $\frac{3}{4}$  miles south, southwest of two small-unnamed ponds and about  $\frac{1}{2}$  mile southwest of Munn Lake. River. The facility is bordered to the North and West by Old Highway 99, to the east by 88<sup>th</sup> Avenue SE and to the south by New Market Street SW.

Facility Description: Olympia Regional Airport handles, stores and uses petroleum products in the form of Jet-A Fuel, Aviation Gas and motor oil. The Site Map shows the site boundaries, nearby waterways, adjacent highways, oil handling facilities, and the office.



Fixed Storage: (1) 10,000-gallon aboveground horizontal tank. (Av-Gas Fuel), Pearson, Tank 1.  
(2) 12,000-gallon aboveground horizontal tank (Jet A Fuel), Pearson, Tank 2.  
(3) 12,000 gallon aboveground horizontal tank, (Jet A Fuel), Glacier, Tank 3.  
(4) 12,000 gallon aboveground horizontal tank (Av-Gas Fuel), Glacier, Tank 4  
(5) Space not currently occupied.  
(6) Space not currently occupied.  
(7) 12,000 above ground horizontal tank (Jet A Fuel), Gower, Tank7.  
(8) 12,000 above ground horizontal tank (Av-Gas), Gower, Tank 8.

Underground. There are no underground fuel storage tanks associated with this site. There is one underground oil/water separator and tank on site. The fuel storage area drains to this oil water separator, should the tank be overwhelmed by either precipitation or a fuel spill, it will automatically trigger the shut off valve, close and the fuel or water remaining in the concrete storage area will not drain. In this event, the shut off valve must be manually operated following the protocol in Attachment C, Record of Dike Drainage.

(Note: the "Fixed Storage" information is also provided on the Site Map showing location, contents, type, and capacity.)

Portable Storage: None associated with this site.

Total Oil Storage: 70,000 gallons currently, potential for a total of 96,000.

In-Plant Treatment: Oil water separator.

Vehicles: Each Fixed Base Operator has two delivery trucks to transport fuel to the aircraft.  
Pearson: one 1,200-gallon capacity Av-Gas Truck, and one 2,500-gallon Jet-A fuel truck.

Glacier: one 2,200-gallon capacity Jet-A fuel truck and one 750-gallon capacity Av-Gas truck. There is also one Ford pickup truck with a one hundred gallon capacity tank which is only used for off-airport, private aircraft fueling.

Gower: one 5,000-gallon capacity Jet-A fuel truck and one 1,200 capacity gallon Av-Gas fuel truck.

**Note:** The format of this plan is in reference to specific Code of Federal Regulations citations. Example 40 CFR 112.5(b)(i), meaning Code of Federal Regulations Part 40, Section 112.5, subsection (b), subsection (i).

## SPCC PLAN REVIEW - 40 CFR 112.5(b)

The owner or operators must complete a review and evaluation of the SPCC plan at least once every year. This plan must be updated by a licensed engineer every five years. Evidence of these reviews shall be recorded in the plan.

<u>Signature</u>	<u>Date</u>	<u>Comments</u>
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
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## MANAGEMENT APPROVAL - 40 CFR 112.7(a)

This SPCC plan is fully approved by the management of Olympia Regional Airport and the necessary resources have been committed to implement the plan as described.

\_\_\_\_\_  
Rudy Rudolf, - Facility Manager

\_\_\_\_\_  
Date

## PAST SPILL EXPERIENCE - 40 CFR 112.7(a)

None associated with this new facility.		
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## POTENTIAL EQUIPMENT FAILURES - 40 CFR 112.7(b)

<u>Potential Event</u>	<u>Spill Description</u>	<u>Containment</u>
Tank Failure	Loss of tank integrity.	Yes.
Tank Overfill	Spill caused by overfill during tank re-fill.	Asphalt or concrete paving, filling attendance required.
Spill during transfer to vehicle or plane	Potential for few drops to few gallons spillage.	Attendance during filling/ transferring procedures is required.
Piping leaks	Potential for few drops to gallons.	Examine monthly, and every transfer operation.

## CONTAINMENT AND DIVERSIONARY STRUCTURES - 40 CFR 112.7(c)(1)

- i. All tanks and piping are wholly contained within concrete containment.
- ii. The unloading area for tank trucks is sloped to provide secondary containment, and is paved, with a drain capable of containing 800 gallons of fuel.
- iii. Surface drainage at the facility is engineered so that oil spilled outside of diked or curbed areas at the facility will drain generally to the north, northwest, on pavement.
- iv. Weirs, booms, or other barriers are available from the local clean-up contractor.
- v. Sorbent materials are be provided strategically throughout the facility.

## DEMONSTRATION OF PRACTICABILITY - 40 CFR 112.7(d)

Facility management has determined that use of the containment and diversionary structures of readily available equipment to prevent discharged oil from reaching navigable waters is practical and effective at this facility.

## **FACILITY DRAINAGE - 40 CFR 112.7(e)(1)**

- i. Drainage from diked storage areas is contained by concrete, which would be cleaned or pumped by hand should a spill occur.
- ii. Water draining from the diked area flows through an oil water separator tank, which will close at capacity.
- iii. In the event of a spill from a tank, the oil should be contained within a dike. If a spill occurs during transfer or in a manner that cannot be contained in a dike, the material will drain north, northwest, on pavement..
- iv. Facility drainage systems are adequately engineered to prevent oil from reaching navigable water in the event of equipment failure or human error.

## **BULK STORAGE TANKS - 40 CFR 112.7(e)(2)**

- i. Each aboveground tank is of UL-142 construction and is compatible with the oils it contains and conditions of storage.
- ii. All aboveground tanks have concrete dikes for secondary containment with a volume greater than 110 percent of the largest single tank.
- iii. Rainwater will be drained from the dike area, by-passing any treatment, if:
  - a. Run-off rainwater is inspected to ensure compliance with applicable water quality standards and will not cause a harmful discharge.
  - b. Records are kept of drainage events on the form shown in Attachment C.
- iv. There are no underground fuel storage tanks associated with this facility.
- v. There are no partially buried tanks at the facility.
- vi. Above-ground tanks are tested every five years using a system of non-destructive shell thickness testing. Comparison records are maintained. Visual inspections are performed according to the procedure found in the Inspections and Records section and in the Facility Inspection Checklist section, and include inspection of tank supports and foundations.
- vii. There are no internal heating coils at this facility.
- viii. Each tank is equipped with a direct-reading level gauge. Venting capacity is suitable for the fill and withdrawal rates.
- ix. No effluent is discharged.
- x. Oil leaks which result in a loss of oil from tank seams, gaskets, rivets, and bolts are promptly corrected.



- xi. There is no portable oil tank. Other mobile oil storage, such as 55-gallon drums, are provided with secondary containment, and located where they will not be subject to periodic flooding.

## CONTAINMENT VOLUME CALCULATION WORKSHEET

Containment capacity required: 12,000-gallons plus 10%, 13,200-gallon.

### CONTAINMENT VOLUME AVAILABLE:

Dike height = 2'

Dike width = 57'

Dike length = 115'

Dike Volume:  $13,110 \text{ cubic feet} \times 7.48 \text{ gal/ft}^3 = 98,062 \text{ gallon capacity.}$

Displacement volume of seven 12,000-gallon tanks, 402 cubic feet each, 2,814 cubic feet total, displacement in gallons = 21,045.

Displacement volume has been calculated for seven 12,000-gallon tanks so that should Olympia Airport add two more tanks in the next five years, this SPCC plan will not need to be updated solely to accommodate the additional, and planned for, tanks.

98,062

21,045

77,017-gallon capacity available.

## **TRANSFER OPERATION, PUMPING AND IN-PLANT PROCESSES - 40 CFR 112.7(e)(3)**

- i. Buried piping is coated and cathodically protected to protect against corrosion. When a section of buried line is exposed, it is carefully examined for deterioration. If corrosion damage is found, additional examination and corrective action will be taken as indicated by the magnitude of the damage.
- ii. Pipelines not in service or on standby for an extended period are capped or blank-flanged and marked as to their origin.
- iii. All pipe supports are properly designed to minimize abrasion and corrosion and to allow for expansion and contraction.
- iv. All aboveground piping and valves are examined monthly to assess their condition. Pressure testing for piping is conducted every five years.
- v. Warning signs or protective bollards, or concrete barriers are placed as needed to prevent vehicles from damaging aboveground equipment.

## **TANK CAR AND TANK TRUCK LOADING/UNLOADING RACK - 40 CFR 112.7(e)(4)**

There is no loading/unloading rack associated with this facility. The storage tanks are directly loaded by a delivery tanker or truck. All fuel transfer operations are continuously manned.

- i. The tank truck unloading procedures meet the minimum requirements of the U.S. Department of Transportation.
- ii. Curbing is not installed at the vehicle loading/unloading rack.
- iii. Chock blocks are provided in the vehicles to prevent premature vehicular departure.
- iv. The lower most drain and all outlets on tank trucks are inspected prior to filling and departure.

## **INSPECTIONS AND RECORDS - 40 CFR 112.7 (e)(8)**

Daily visual inspections consist of a complete walk through of the facility property to check for tank damage or leakage, stained or discolored soils, excessive accumulation of water in diked areas, plant effluent discharged from the oil/water separator, and to ensure the dike drain valves are securely closed.

The checklist provided in Attachment B is used during monthly inspections. These inspections are performed in accordance with written procedures developed for the facility by the owner or operator. Written inspection procedures and monthly inspections are signed by the inspector and maintained with this plan for three years.

## **SECURITY - 40 CFR 112.7(e)(9)**

- i. The facility is surrounded by steel security fencing and the entrance gates are locked when the facility is unattended.
- ii. There are no master flow and drain valves associated with this facility.
- iii. The electrical starter controls for the oil pumps are located on the pumps, locked when not in use.
- iv. The loading and unloading connections of oil pipelines are capped when not in service or when in standby service for an extended time.
- v. Area lights are located so as to illuminate the tank and storage areas. Consideration in the location of the lights was given in order to discover spills at night and prevent spills occurring through vandalism.

## **PERSONNEL, TRAINING AND SPILL PREVENTION PROCEDURES - 40 CFR 112.7(e)(10)**

- i. Facility personnel have been instructed by management in the operation and maintenance of oil pollution prevention equipment and pollution control laws and regulations.
- ii. The facility manager, Rudy Rudolf, is accountable for oil spill prevention at Olympia Regional Airport.
- iii. Yearly spill prevention briefings are provided by management for operation personnel to ensure adequate understanding of the SPCC plan. These briefings highlight any past spill events or failures and recently developed precautionary measures. Training has been held on oil spill prevention, containment and retrieval methods. A simulation of an on-site vehicular spill has been conducted and future exercises shall be periodically held to prepare for possible spill response. Records of these briefings and spill prevention training are kept on the form shown in Attachment D. Instructions and phone numbers regarding the reporting of a spill to the National Response Center and the state are listed below and have been publicized and posted in the office.

## Emergency Telephone Numbers

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Emergency Phone: 911

### A. Notification Contacts

1. Facility Manager: Rudy Rudolph 360.528.8079
2. National Response Center 800.424.8802
3. U.S. EPA Region X Spill Phone 800.424.4EPA or 206.553.1200
4. Washington State Emergency Response 800.258.5990

### B. Clean-Up Contractors

1. NRC Environmental Services  
26328 79th Ave. South.  
Kent/Seattle, WA 98032  
**800.337.7455**
2. CCS Environmental Services  
55 International Way  
Longview, WA 98632  
**888.423.6316**



**ATTACHMENT A**  
**CERTIFICATION OF SUBSTANTIAL HARM DETERMINATION FORM**

Facility Name: Olympia Regional Airport  
Facility Address: 7643 Old Highway 99  
Tumwater, WA 98501

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 one-million gallons?

Yes \_\_\_\_\_ No ☒ \_\_\_\_\_

2. Does the facility have a total oil storage capacity greater than or equal to 1 million gallons and does the facility lack secondary containment that is sufficiently large to contain the capacity of the largest aboveground oil storage tank plus sufficient freeboard to allow for precipitation within any aboveground storage tank area?

Yes \_\_\_\_\_ No ☒ \_\_\_\_\_

3. Does the facility have a total oil storage capacity greater than or equal to 1 million gallons and is the facility located at a distance (as calculated using the appropriate formula) such that a discharge from the facility could cause injury to fish and wildlife and sensitive environments?

Yes \_\_\_\_\_ No ☒ \_\_\_\_\_

4. Does the facility have a total oil storage capacity greater than or equal to 1 million gallons and is the facility located at a distance (as calculated using an appropriate formula) such that a discharge from the facility would shut down a public drinking water intake\*\*?

Yes \_\_\_\_\_ No ☒ \_\_\_\_\_

5. Does the facility have a total oil storage capacity greater than or equal to 1 million gallons and has the facility experienced a reportable oil spill in an amount greater than or equal to 10,000 gallons within the last 5 years?

Yes \_\_\_\_\_ No ☒ \_\_\_\_\_

**CERTIFICATION**

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

\_\_\_\_\_  
Signature

Facility Manager  
Title

Rudy Rudolf,  
Name (please type or print)

\_\_\_\_\_  
Date

## ATTACHMENT B FACILITY INSPECTION CHECKLIST

Instructions: This inspection record will be completed every month. Place an X in the appropriate box for each item. If any response requires elaboration, do so in the Descriptions & Comments space provided. Further descriptions or comments should be attached on a separate sheet of paper if necessary.

Yes    No    Descriptions & Comments

Tank surfaces show signs of leakage	<input type="checkbox"/>	<input type="checkbox"/>	
Tanks are damaged, rusted or deteriorated	<input type="checkbox"/>	<input type="checkbox"/>	
Bolts, rivets, or seams are damaged	<input type="checkbox"/>	<input type="checkbox"/>	
Tank supports are deteriorated or buckled	<input type="checkbox"/>	<input type="checkbox"/>	
Tank foundations have eroded or settled	<input type="checkbox"/>	<input type="checkbox"/>	
Level gauges or alarms are inoperative	<input type="checkbox"/>	<input type="checkbox"/>	
Vents are obstructed	<input type="checkbox"/>	<input type="checkbox"/>	
Valve seals or gaskets are leaking	<input type="checkbox"/>	<input type="checkbox"/>	
Pipelines or supports are damaged or deteriorated	<input type="checkbox"/>	<input type="checkbox"/>	
Buried pipelines are exposed	<input type="checkbox"/>	<input type="checkbox"/>	
Loading/unloading rack is damaged or deteriorated	<input type="checkbox"/>	<input type="checkbox"/>	
Connections are not capped or blank-flanged	<input type="checkbox"/>	<input type="checkbox"/>	
Secondary containment is damaged or stained	<input type="checkbox"/>	<input type="checkbox"/>	
Dike drainage valves are open	<input type="checkbox"/>	<input type="checkbox"/>	
Oil/water separator is functioning properly	<input type="checkbox"/>	<input type="checkbox"/>	
Oil/water separator effluent has a sheen	<input type="checkbox"/>	<input type="checkbox"/>	
Fencing, gates, or lighting is non-functional	<input type="checkbox"/>	<input type="checkbox"/>	

Remarks: \_\_\_\_\_

Signature: \_\_\_\_\_

Date: \_\_\_\_\_

## ATTACHMENT C RECORD OF DIKE DRAINAGE

Instructions: This record will be completed when rainwater from diked areas is drained into a storm drain or into an open watercourse, lake or pond, and bypasses the in-plant treatment. The bypass valve normally should be sealed closed and only opened and resealed following drainage under responsible supervision.

<u>Diked Area</u>	<u>Date</u>	<u>Presence of Oil</u>	<u>Time Started</u>	<u>Time Finished</u>	<u>Signature</u>
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____

## ATTACHMENT D

### RECORD OF SPILL PREVENTION BRIEFINGS AND TRAINING

Instructions: Briefings will be scheduled and conducted by the owner or operators for operating personnel at intervals frequent enough to assure adequate understanding of the SPCC plan for this facility. These briefings should also highlight and describe known spill events or failures, mal-functioning components, and recently developed precautionary measures. Personnel will also be instructed in operation and maintenance of equipment to prevent the discharges of oil, and in applicable pollution control laws, rules, and regulations. During these briefings, there will be an opportunity for facility operators and other personnel to share recommendations concerning health, safety and environmental issues encountered during operation of the facility.

Date: \_\_\_\_\_

Attendees: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

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\_\_\_\_\_

\_\_\_\_\_

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\_\_\_\_\_

Subjects and Issues: \_\_\_\_\_

\_\_\_\_\_

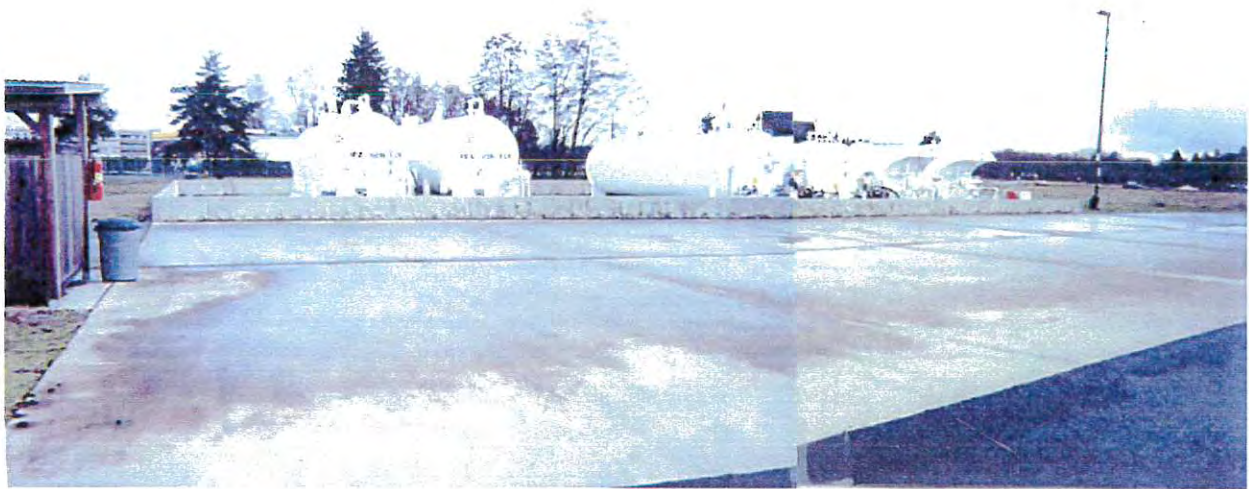
\_\_\_\_\_

Recommendations and Suggestions: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

## OLYMPIA AIRPORT FUEL FACILITY



Photograph 1 Olympia Airport Fuel Facility.



Photograph 2 Phone, cut off switch, spill control equipment storage shed.



## OLYMPIA AIRPORT FUEL FACILITY

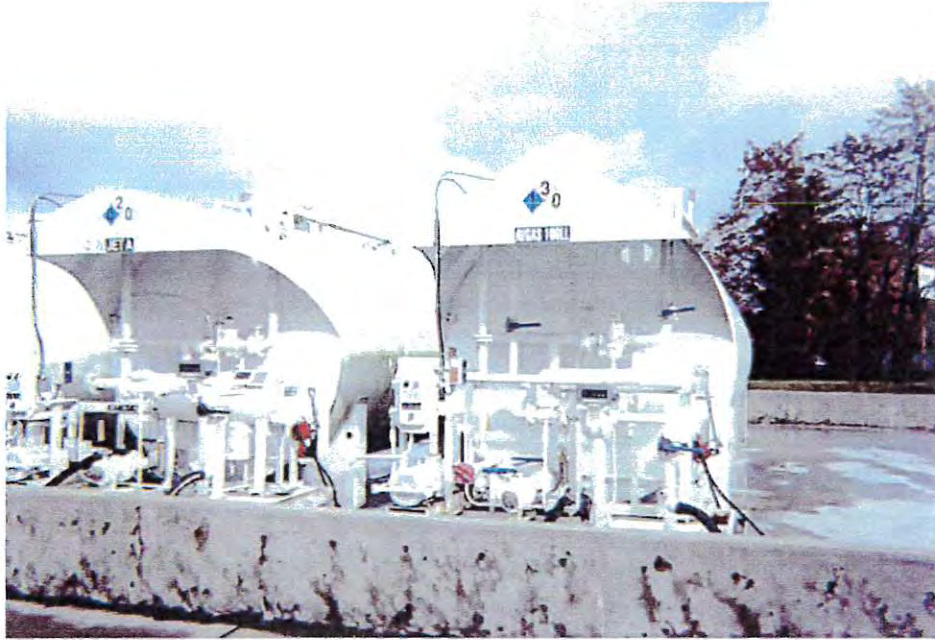


Photograph 3 Tanks 1 & 2, Pearson tanks, 1-10,000 gallon Av-gas, 2-12,000 gallon Jet A.



Photograph 4 Glacier tanks and connection Tank 3 - Jet A, Tank 4 - Av-gas.

## OLYMPIA AIRPORT FUEL FACILITY



Photograph 5 Gower Tanks 7 & 8 - 12,000 gallon Jet A and Av-Gas (respectively).



Photograph 6 Location of oil water separator.



## OLYMPIA AIRPORT FUEL FACILITY

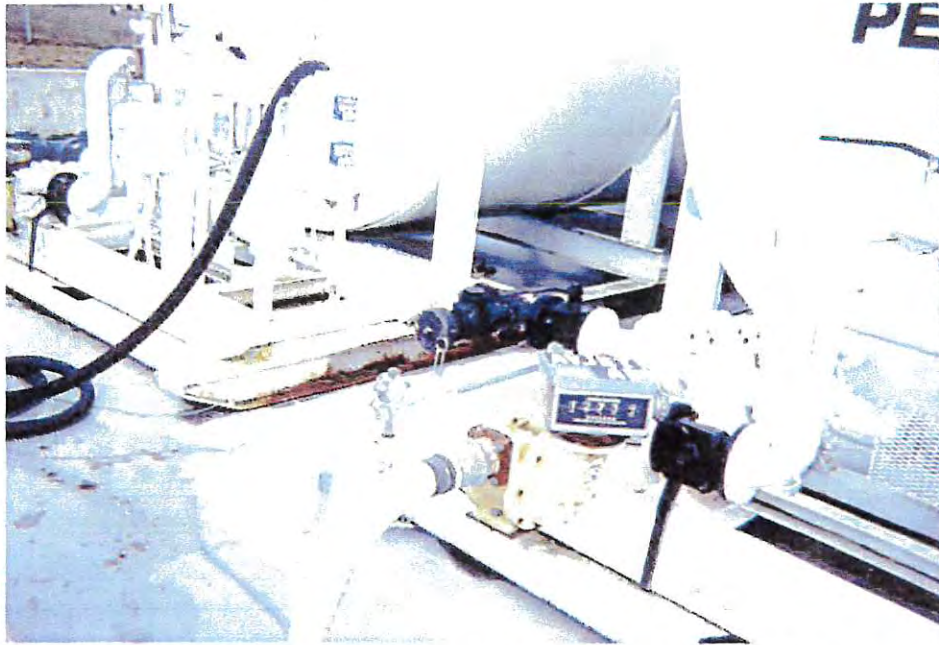


Photograph 7 Drain, which leads to oil water separator.



Photograph 8 Pearson delivery trucks.

## OLYMPIA AIRPORT FUEL FACILITY



Photograph 9 Pearson's tank connections, locked.



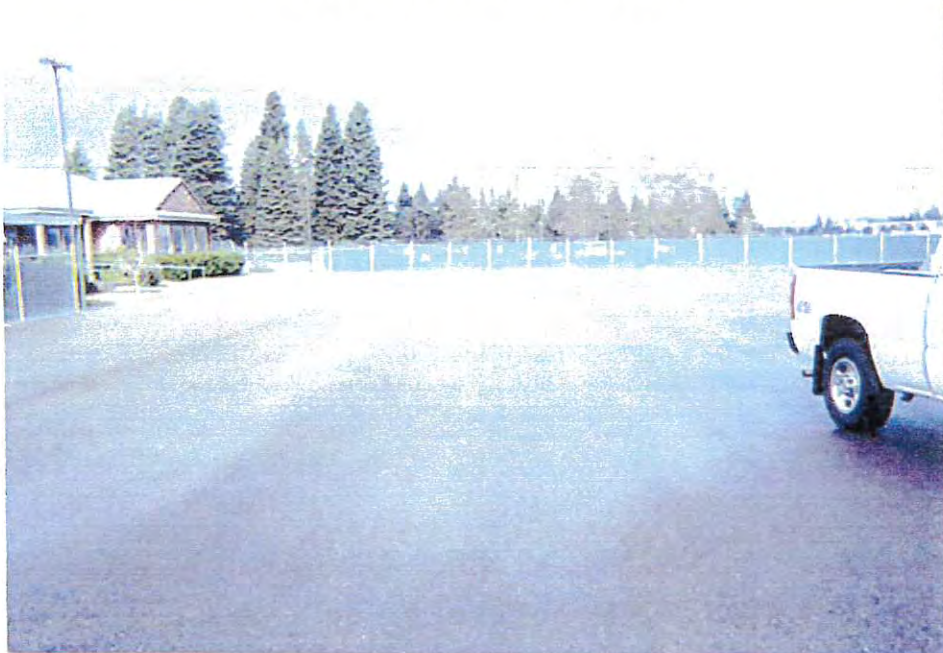
Photograph 10 Glacier delivery truck.



## OLYMPIA AIRPORT FUEL FACILITY



Photograph 11 Gower delivery truck.



Photograph 12 Terminal - on occasion private jets may be fueled here.



FUEL FARM

ASPHALT

TELEPHONE

SUPPLIES

57'

2' HIGH  
CONCRETE  
WALLS

TANK 1

TANK 2

CONCRETE  
CONTAINMENT  
AREA

TANK 3

TANK 4

TANK 7

TANK 8

115'

CONCRETE SLAB

14"

CENTER DRAIN 10" DEEP

GRASS

DRAIN

DRAIN  
CONTROL

UNDERGROUND  
PIPING

OIL/WATER  
SEPARATOR

**USKH**

Engineering • Land Surveying • Planning • Environmental

101 Thain Road, Lewiston, ID 83501  
Phone: 208-746-2661 • Fax: 208-746-6825

OLYMPIA REGIONAL AIRPORT  
SPILL PREVENTION, CONTROL, &  
COUNTERMEASURES PLAN

Date 02-10-05

Drawn AMB

Checked TK

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**STEEL TANK INSTITUTE**

**STANDARD FOR INSPECTION  
OF IN-SERVICE SHOP FABRICATED  
ABOVEGROUND TANKS  
FOR STORAGE OF  
COMBUSTIBLE AND FLAMMABLE LIQUIDS**

**SP001-00**

Steel Tank Institute  
570 Oakwood Road  
Lake Zurich, IL 60047  
847/438-8265  
Fax: 847/438/8766  
[www.steeltank.com](http://www.steeltank.com)

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## **1.0 GENERAL**

- 1.1** This standard covers the inspection of shop fabricated steel tanks built to a nationally recognized standard for aboveground storage tanks that are intended for the aboveground storage of noncorrosive, stable, flammable, and combustible liquids having a specific gravity not exceeding that of water.
- 1.2** The purpose of the inspection shall be to determine the condition of the tank and whether it is leaking.
- 1.3** The scope is limited to the tank foundation, supports, inner and outer walls, piping to the face of the first flange, the first threaded joint, or the first welded-end connections, including normal and emergency vents. Other accessories are not included.
- 1.4** This Standard is intended for use by organizations and/or individuals who are knowledgeable and experienced in aboveground tank inspection. Applicable federal, state and local laws, regulations and ordinances concerning tank inspection shall also be consulted.
- 1.5** Consult the tank manufacturer prior to making any alterations or repairs to a tank.

## **2.0 DEFINITIONS**

- 2.1** Aboveground storage tank—a tank which is wholly aboveground, i.e. not partially buried. The tank may be resting on the ground, or set on supports, such as saddles, skids, legs, etc. It may be installed in an underground vault.
- 2.2** Primary tank—for tanks which are single-wall, it is the containment tank. For double-wall tanks, it is the inner tank.
- 2.3** Secondary tank—for tanks which are double-wall, it is the outer tank.
- 2.4** Double wall tank—an aboveground storage tank with a tank contained within a containment tank. This will form an interstitial (annular) space between the two tanks which is capable of being monitored for leakage into the space from either the interior or exterior walls.
- 2.5** Single-wall tank—an aboveground storage tank with only one wall or shell.
- 2.6** Secondary containment dike—a structure which is intended to contain product resulting from a spill, leak, or rupture of the tank. The tank may be either single wall or double wall. The dike may be either open or closed at the top.

- 2.7 Manway—an opening in the tank designed to allow personnel entry.
- 2.8 Tank in contact with the ground—a tank which does not allow for the visual inspection of the exterior of the bottom of the tank. This includes a tank in contact with soil or in contact with a concrete foundation. It also includes a tank which is supported above the ground, but the conditions do not allow for a visual inspection of the exterior of the bottom of the tank.
- 2.9 Tank supports—structures designed to elevate a tank above the ground. These include saddles, skids, beams, legs, and similar structures.
- 2.10 Corrosion—the degradation of metals due to chemical reactions with their environment. In steel, this is commonly known as “rust.”
- 2.11 Pitting—small but sharp cavities on a surface due to corrosion.
- 2.12 Interstice—in double wall tanks, the space between the primary tank and secondary tank. This space may be monitored by a vacuum or leak detection equipment.

### 3.0 TANK INSPECTOR QUALIFICATIONS

- 3.1 Periodic tank inspections are to be performed by the tank owner or his designate.
- 3.2 Qualified tank inspectors are to perform the certified tank inspections. Qualified tank inspectors are those who are certified by one or more of the following sources:
- 3.2.1 American Petroleum Institute Certified Aboveground Storage Tank Inspector Contact: American Petroleum Institute, Aboveground Storage Tank Inspector Certification Program, 1220 L Street NW, Washington, DC 20005
  - 3.2.2 STI trained and certified tank inspectors who have received their training by Steel Tank Institute (STI) Contact: STI, 570 Oakwood Rd., Lake Zurich, IL 60047. These inspectors shall be trained in accordance with the STI Standard “AST Inspector Qualification Procedure.”

**4.0 PERIODIC INSPECTION (PERFORMED BY TANK OWNER OR HIS DESIGNATE)**

**4.1** The following situations are considered Critical Situations. These REQUIRE IMMEDIATE ATTENTION. Inspect the tank for serviceability and make corrections as required prior to returning it to service.

4.1.1 Take a tank out of service immediately (within 24 hours) if a leak is found in the tank at any time. Repair or replace the tank. Consult the tank manufacturer prior to making any alterations or repairs to a tank.

4.1.2 If the tank has been exposed to a fire or other means which could cause possible damage, inspect the tank for serviceability and leaks prior to being put into service. Follow the inspection criteria described in paragraph 5.0 below. Make corrections and/or repairs as required. Consult the tank manufacturer prior to making any alterations or repairs to a tank.

4.1.3 Check for proper drainage during or after a major storm in accordance with paragraph 4.6 below.

**4.2** Monthly, check the primary tank for the presence of water at the lowest possible point(s) inside the tank. In addition, check the secondary tank or secondary containment if the aboveground tank is so equipped. Remove any water found. Bacteria in the water can cause corrosion and plug filters. If water is found in a tank, check for the presence of corrosion inducing bacteria using a microbe detection kit. If bacteria are present, treat with a suitable bactericide. See the US Department of Energy BNL 48406, a report which provides additional information. Remove a tank from service that has a known leak in either the primary or secondary tank or secondary containment.

**4.3** Monthly, inspect the interstice of a double wall tank for the presence of fuel. If tank is so equipped, check the leak detection system and replace or correct as necessary. Check groundwater wells if the tank is so equipped. Remove a tank from service that has a known leak in either the primary or secondary tank or secondary containment.

**4.4** Monthly, inspect all pipe connections to the tank for evidence of leakage. Replace the gaskets in flanged connections, as necessary, with ones compatible with the stored fluid and rated to cover the temperature extremes of the tank environment. Tighten threaded connections if necessary.

**4.5** Quarterly, perform a walk-around inspection to identify and repair areas of damage to the tank or its coating. Clean the exterior if necessary. Promptly repair any deficiencies that are found. It is important that the tank exterior be inspected periodically to ensure that the integrity of the coating is maintained.



The frequency of periodic recoating (repainting) will be based upon environmental factors in the geographic area where the tank is located. Give special consideration when recoating to the selection of the coating, surface preparation and coating application. Select a coating of industrial quality that is compatible with the existing coating or else remove the existing coating prior to recoating.

- 4.6 Quarterly, inspect and clean normal operating vents and emergency vents on the primary tank (and secondary tank and secondary containment tank, if applicable) and spill containers. Refer to Appendix for instructions.
- 4.7 Once a year, perform a walk-around inspection checking for proper drainage around the tank area. Proper site maintenance is vital to ensure drainage of surface water. Check for ground settling and puddling of water near the tank. Correct as necessary. If ground conditions change or settlement occur, correct the situation by providing drainage or regrading to prevent standing water from being in contact with the steel tank and its supports.
- 4.8 Once a year, check o-ring/gasket of emergency vents for damage or deterioration.
- 4.9 Once a year, inspect the tank supports to determine if there is damage or deterioration of the supports. Inspect the supports for signs of damage from vehicles, misuse, and corrosion. Damage may require replacement of the supports. Contact the tank manufacturer for their recommendation. If deterioration has occurred, more frequent inspections may be required. (See paragraph 6.0 for further details.) Periodic recoating of the supports may be necessary.
- 4.10 Once a year, inspect the tank foundation for signs of settlement, cracking, pitting, and spalling. Contact a qualified contractor for repair of concrete foundations. Observe the condition of the anchor bolts to determine if there has been distortion of the bolts or significant cracking around the bolts. Replace the bolts if they have deteriorated.
- 4.11 If a cathodic protection system has been installed on the tank to prevent corrosion of the bottom of the tank, perform periodic readings of the system to be sure that the protection remains adequate in accordance with local, state, and federal guidelines. This procedure shall be performed by a qualified cathodic protection tester. The criteria for protection shall be as defined by NACE RP-0285, "Corrosion Control of Underground Storage Tank Systems by Cathodic Protection."

**5.0 CERTIFIED INSPECTION (PERFORMED BY QUALIFIED TANK INSPECTOR, AS DEFINED IN PARAGRAPH 3.2)**

**5.1** Every 10 years, or as determined in paragraph 6.0, inspect all tanks as follows:

- 5.1.1 Perform all monthly, quarterly, and yearly inspections listed in paragraphs 4.2 through 4.9 above.
- 5.1.2 Pressure test the tank for tightness. Consult tank manufacturer installation instructions or the Steel Tank Institute Recommended Practice R912-00, "Installation Instructions for Shop Fabricated Stationary Aboveground Storage Tanks for Flammable, Combustible Liquids. Air should not be used for a pressure test and an inert gas should be used instead. The introduction of a gas containing oxygen (such as air) to a tank which has previously held a petroleum product can pose a explosion hazard.

**5.2** Every 10 years, or as determined in paragraph 6.0, inspect single wall horizontal, rectangular, or vertical tanks which are not in contact with the ground (as defined in paragraph 2.8 above) in one of the following ways:

- 5.2.1 If the tank is equipped with a manway, either conduct ultrasonic testing as described in paragraph 5.5 below, or visually examine the interior of the tank as described in paragraph 5.6 below.
- 5.2.2 If the tank is not equipped with a manway, another inspection method is necessary. Either use "Method C-Invasive Permanently Recorded Visual Inspection and Evaluation Including External Corrosion Assessment" described in ASTM G 158, "Standard Guide for Three Methods of Assessing Buried Steel Tanks" or use ultrasonic testing to determine the wall thickness of the tank as described in 5.5 below.

**5.3** Every 10 years, or as determined in paragraph 6.0, inspect single wall (horizontal, rectangular, or vertical) tanks which are in contact with the ground (as defined in paragraph 2.8 above) in one of the following ways:

- 5.3.1 Inspect tanks which are constructed with a double bottom and include a vacuum on the interstice the same as double wall tanks (as described in paragraph 5.4 below).
- 5.3.2 If a cathodic protection system has been installed on the tank bottom to protect the exterior of the tank bottom the following steps shall be taken:
  - 5.3.2.1 Examine the periodic readings which have been taken to be sure that the cathodic protection remains adequate in accordance with local, state, and federal guidelines. These periodic readings shall have been performed by a qualified cathodic protection tester. The criteria for

protection shall be as defined by NACE RP-0285, "Corrosion Control of Underground Storage Tank Systems by Cathodic Protection."

5.3.2.2 Inspect the interior of the tank per paragraph 5.1.1 or 5.1.2, as applicable.

5.3.3 If a cathodic protection system has not been installed on the tank bottom to protect the exterior of the tank bottom, determine the thickness of bottom using one of the following methods:

5.3.3.1 If the tank is equipped with a manway, use ultrasonic testing as described in paragraph 5.5 below.

5.3.3.2 If the tank is not equipped with a manway, take the tank out of service and inspect the bottom. This will require disconnecting associated piping and excavating or moving the tank so that the thickness of the tank bottom can be determined. Determine the remaining thickness per paragraph 5.5 below. Inspect the interior of the tank per paragraph 5.2.2 above.

5.4 Every 10 years, inspect double wall (horizontal, rectangular, or vertical) tanks, which are either in contact or not in contact with the ground as follows:

5.4.1 Verify that the leak detector equipment is operating if the tank is so equipped.

5.4.2 Check for water and fuel in the interstice.

5.5 Described below is the ultrasonic testing procedure. Determine the minimum remaining wall thickness.

5.5.1 This testing shall be performed by a qualified person in accordance with the American Society for Nondestructive Testing, ANSI/ASNT CP-189 "ASNT Standard for Qualification and Certification of Nondestructive Testing Personnel."

5.5.2 Ultrasonic testing equipment that is capable of scanning the tank, rather than measuring only individual points, is the preferred method of performing the testing.

5.5.3 If using ultrasonic testing equipment which is capable of scanning the tank is not practical, use equipment which tests individual points. In this case, perform wall thickness measurements of the portion of the tank described in paragraph 5.5.4 below on at least 15 points in each 12 inch square area.

5.5.4 Test the bottom 60° of a horizontal cylindrical tank. Test the bottom and the lower 12 inches of the sides of a vertical cylindrical or a rectangular tank.

5.5.5 Consider the construction of lap joints in all inspections. Lap joints which allow water to accumulate may lead to accelerated corrosion and therefore require special attention during inspections.

- 5.6** Described below is the visual testing procedure. If corrosion and pitting is found, determine the minimum remaining wall thickness.
- 5.6.1 Do not enter a tank until you have determined that a breathable, non-explosive atmosphere exists within the tank. Follow OSHA requirements for confined space entry and see NFPA 326, "Standard for the Safeguarding of Tanks and Containers for Entry, Cleaning or Repair."
  - 5.6.2 Use sufficient light to illuminate the interior of the tank.
  - 5.6.3 Check for the presence of water, excessive corrosion, and other forms of deterioration.
    - 5.6.3.1 Measure the extent and depth of any pitting found.
    - 5.6.3.2 Inspect all welds.
    - 5.6.3.3 Determine the extent of general corrosion.
  - 5.6.4 Consider the construction of lap joints in all inspections. Lap joints which allow water to accumulate may lead to accelerated corrosion and therefore require special attention during inspections.

## **6.0 CERTIFIED TANK INSPECTION CRITERIA**

- 6.1** After the minimum remaining wall thickness is determined in paragraph 5, apply the following criteria to determine if the tank may remain in service:
- 6.1.1 If less than 5% of any 12 inch by 12 inch square area of the tank has a remaining wall thickness less than or equal to 50% of the original thickness, remove the tank from service and contact a qualified tank manufacturer to have these sections repaired. Bring the thickness of these areas back to the original design thickness. Have the qualified inspector re-inspect the tank after the repairs have been made. Identify and correct the cause of corrosion. Re-inspect the tank in 5 years, or less as recommended by the qualified tank inspector.
  - 6.1.2 If more than 5% of any 12 inch by 12 inch square area of the tank has a remaining wall thickness less than or equal to 50% of the original thickness, remove the tank from service and contact a qualified tank manufacturer to have these sections repaired. These sections must be repaired by cutting out these sections and replacing them with new steel of the original design thickness or else by welding new steel of the original design thickness over the damaged areas. These repairs must be made from the side that is corroded. Have the qualified inspector re-inspect the tank after the repairs have been made. Identify and correct the cause of corrosion. Re-inspect the tank in 5 years, or less as recommended by the qualified tank inspector.
  - 6.1.3 If the remaining wall thickness is more than or equal to 50% but less than 75% of the original thickness, identify and correct the cause of corrosion. Re-inspect the tank in 5 years, or less as

recommended by the qualified tank inspector.

- 6.1.4 If the remaining wall thickness is greater than or equal to 75% of the original thickness, re-inspect the tank in 10 years, or less as recommended by the qualified tank inspector.

**6.2** Suggested methods of determining the original thickness are as follows:

- 6.2.1 Review the original tank documentation, such as drawings and packing lists.
- 6.2.2 Consult the tank manufacturer.
- 6.2.3 Examine the tank labels for evidence of a widely accepted tank standard, such as Underwriters Laboratories Standard UL 142, etc. Consult the referenced standard to determine the minimum design wall thickness.
- 6.2.4 Measure the tank thickness of several areas of the tank which have no visible corrosion or pitting. The smallest of these measurements will result in a minimum design thickness which can be used.

**7.0 RECORD KEEPING**

- 7.1 Keep records of Periodic Inspections (performed by tank owner or his designate) for the previous year and the current year or as required by local, state, and federal guidelines. Refer to the section of this document called, "Checklists" for suggested records format.

- 7.1.1 Keep results of the last two inspections of a cathodic protection system, if applicable.

- 7.2 Keep records of any "Critical Situation", as defined in paragraph 4.1 above, for the entire life of the tank.

- 7.3 Keep records of the Certified Inspection (performed by Qualified Tank Inspector, as defined in paragraph 3.2) for the entire life of the tank. Refer to the section of this document called, "Checklists" for suggested records format.



## REFERENCES

American Petroleum Institute, API Standard 653, *Tank Inspection, Repair, Alteration, and Reconstruction*, 1998.

American Society for Nondestructive Testing, ANSI/ASNT CP-189, *ASNT Standard for Qualification and Certification of Nondestructive Testing Personnel*, 1995.

American Society for Testing and Materials, ASTM G 158, *Standard Guide for Three Methods of Assessing Buried Steel Tanks*, 1998.

National Fire Protection Association, NFPA 326, *Standard for the Safeguarding of Tanks and Containers for Entry, Cleaning, or Repair*, 1999

NACE International, NACE RP-0285, *Corrosion Control of Underground Storage Tank Systems by Cathodic Protection*, 1995.

Steel Tank Institute, STI-R893, *Recommended Practice For External Corrosion Protection of Shop Fabricated Aboveground Tank Floors*, 1989.

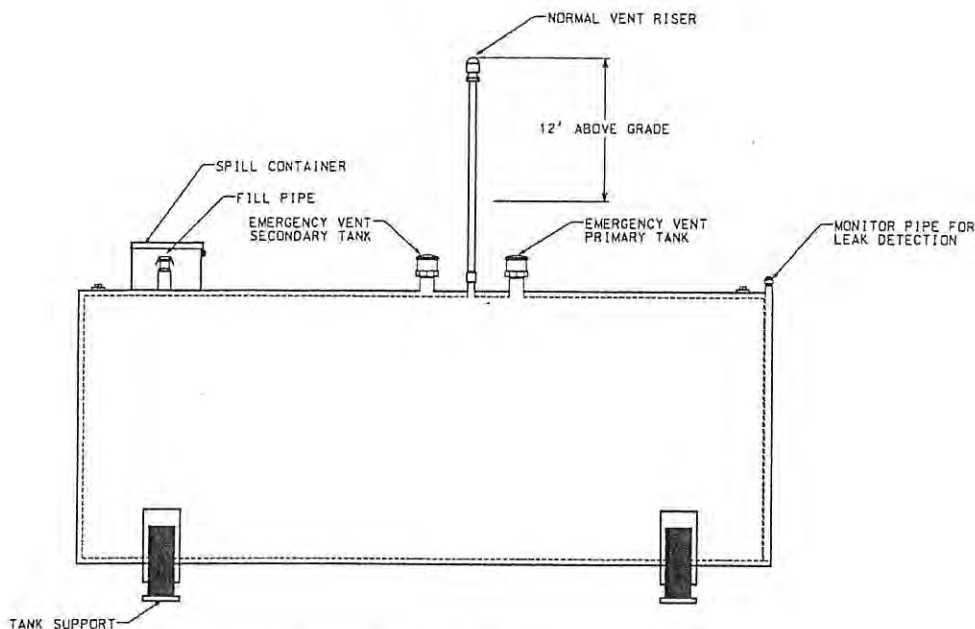
Steel Tank Institute, STI-R912, *Installation Instructions for Shop Fabricated Stationary Aboveground Storage Tanks for Flammable, Combustible Liquids*, 2000.

Underwriters Laboratories Inc., UL 142, *Steel Aboveground Tanks for Flammable and Combustible Liquids*, 1998.

United States Environmental Protection Agency, EPA 510-K-95-002, *Musts for USTs—A Summary of Federal Regulations For Underground Storage Tank Systems*, 1995.

## APPENDIX

The diagram below is included to assist in the identification of the accessories of Aboveground Storage Tank which are to be inspected per paragraph 4. Any specific individual tank may include one or all of these accessories.



The purpose of these accessories is as follows:

1. Spill Container—This tank accessory is designed to catch any spills during tank filling operations. It typically has a lockable, hinged lid and allows any spilled fluid to drain into the tank.
2. Tank Vent (and Riser)—This tank accessory allows air to enter the tank when fluid is being withdrawn and also exhausts air when the tank is being filled. This prevents damage to the tank due to too much pressure. The vent is typically installed on a pipe which is 12 feet above the ground.
3. Emergency Vent (for Primary and Secondary Tank)—These tank accessories prevent damage to the tank by allowing excess pressure to be vented. They are designed to relieve excess pressure in the event of an emergency, such as a fire.
4. Monitor Pipe for Leak Detection—This pipe is installed in the air space (interstice) between the primary tank and secondary tank of a double wall tank. It is typically used with leak detection equipment to detect a leak in either the primary or secondary tank.
5. Tank Supports—These structures are used to elevate the tank off the ground.

## MAINTENANCE INSTRUCTION FOR SPILL CONTAINER

1. Quarterly, clean and inspect inside and outside of container.
2. Quarterly, check condition of hinge, locking mechanism, and drain apparatus. Replace if necessary.

## MAINTENANCE INSTRUCTION FOR TANK VENT

1. Visual check daily for any obstruction on top of vents that would prevent operation.
2. Quarterly check the operation of vent by checking for any internal obstruction of the vent and screen if applicable. Clean as needed.

## MAINTENANCE INSTRUCTION FOR EMERGENCY VENTS

1. Visual check daily for any obstruction on top of emergency vents that would prevent its operation.
2. Quarterly check the operation of the emergency vents by lifting the top and check for any internal obstruction of the emergency vent and screen if applicable.
3. Annually check o-ring/gasket for damage or deterioration.

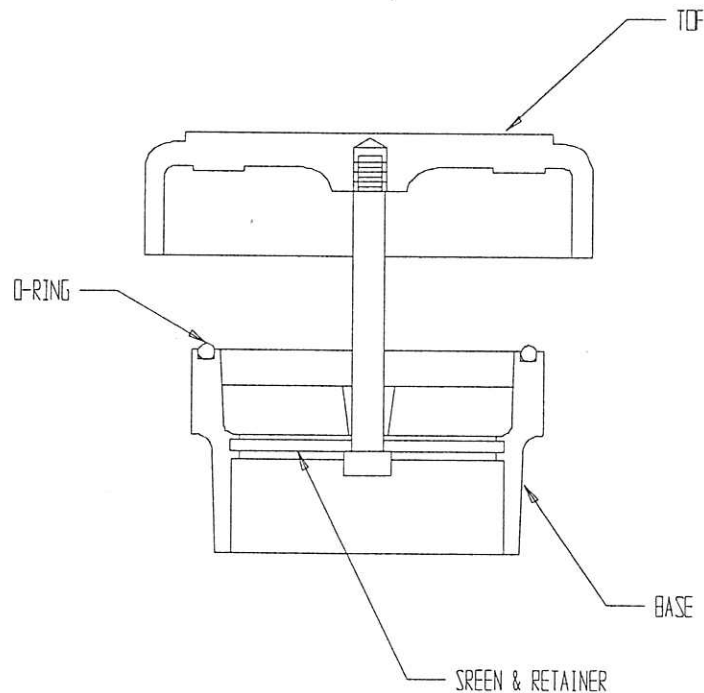


Diagram of Emergency Vent

ABOVEGROUND STORAGE TANK PERIODIC INSPECTION					
CHECKLIST					
Frequency	Date	By	Section	Item to check	Comments
Monthly			4.2	Water in tank(s)	
			4.3	Tank interstice, Leak detection	
			4.4	Pipe connections	
Monthly			4.2	Water in tank(s)	
			4.3	Tank interstice, Leak detection	
			4.4	Pipe connections	
Quarterly			4.2	Water in tank(s)	
			4.3	Tank interstice, Leak detection	
			4.4	Pipe connections	
			4.5	Exterior	
			4.6	Vents, Emergency Vents, Spill Containers	
Monthly			4.2	Water in tank(s)	
			4.3	Tank interstice, Leak detection	
			4.4	Pipe connections	
Monthly			4.2	Water in tank(s)	
			4.3	Tank interstice, Leak detection	
			4.4	Pipe connections	
Quarterly			4.2	Water in tank(s)	
			4.3	Tank interstice, Leak detection	
			4.4	Pipe connections	
			4.5	Exterior	
			4.6	Vents, Emergency Vents, Spill Containers	

ABOVEGROUND STORAGE TANK PERIODIC INSPECTION CHECKLIST					
Frequency	Date	By	Section	Item to check	Comments
Monthly			4.2	Water in tank(s)	
			4.3	Tank interstice, Leak detection	
			4.4	Pipe connections	
Monthly			4.2	Water in tank(s)	
			4.3	Tank interstice, Leak detection	
			4.4	Pipe connections	
Quarterly			4.2	Water in tank(s)	
			4.3	Tank interstice, Leak detection	
			4.4	Pipe connections	
			4.5	Exterior	
			4.6	Vents, Emergency Vents, Spill Containers	
Monthly			4.2	Water in tank(s)	
			4.3	Tank interstice, Leak detection	
			4.4	Pipe connections	
Monthly			4.2	Water in tank(s)	
			4.3	Tank interstice, Leak detection	
			4.4	Pipe connections	



ABOVEGROUND STORAGE TANK PERIODIC INSPECTION CHECKLIST					
Frequency	Date	By	Section	Item to check	Comments
Yearly			4.2	Water in tank(s)	
			4.3	Tank interstice, Leak detection	
			4.4	Pipe connections	
			4.5	Exterior	
			4.6	Vents, Emergency Vents, Spill Containers	
			4.7	Site drainage	
			4.8	Emergency Vents o-rings or gaskets	
			4.9	Tank Supports	
			4.10	Tank Foundation	
As Required			4.11	Cathodic Protection System	

- NOTES: 1. Every 10 years, Certified Inspection by Qualified Tank Inspector is required.
2. The inspection intervals listed above may require adjustment as a result of the Certified Inspection.

CRITICAL SITUATION REPORT				
Date tank taken out of service	Reason	Date of Inspection	Inspected By	Outcome

# CERTIFIED TANK INSPECTION REPORT

Date \_\_\_\_\_

Inspector Name _____	
Company _____	Phone _____
Address _____	FAX _____
Tank Owner's Name _____	Phone _____
Tank Location _____	
Tank Dimensions _____	Capacity _____ gallons
Product(s) Stored _____	

Tank type (check all that apply):		
<input type="checkbox"/> Single wall	<input type="checkbox"/> Double wall	<input type="checkbox"/> Secondary containment
<input type="checkbox"/> Horizontal	<input type="checkbox"/> Vertical	<input type="checkbox"/> Rectangular
<input type="checkbox"/> In contact with ground	<input type="checkbox"/> Not in contact with ground	<input type="checkbox"/> Cathodic protection installed
<input type="checkbox"/> Tank equipped with manway	<input type="checkbox"/> Tank not equipped with manway	

Yearly Inspection Requirements		
Section	Item to check	Comments
4.2	Water in tank(s)	
4.3	Tank interstice, Leak detection	
4.4	Pipe Connections	
4.5	Exterior	
4.6	Vents, Emergency Vents, Spill Containers	
4.7	Site Drainage	
4.8	Emergency Vents o-rings or gaskets	
4.9	Tank Supports	
4.10	Tank Foundation	

Tank Tightness Testing			
Type of test(s) performed:	Pressure	Time	Comments
Primary tank pressure test			
Secondary tank pressure test			
Interstice vacuum test			
Water pressure test (used for tanks with weak shell to roof design)			

Cathodic Protection Testing (For tanks so equipped)		
System type	Testing Interval	Comments
Sacrificial anode OR Impressed current (circle one)		

Next Certified Tank Inspection Recommendation:		
<input type="checkbox"/> One Year	<input type="checkbox"/> 5 Years	<input type="checkbox"/> 10 Years
<input type="checkbox"/> Other _____ Explain _____		
_____		
_____		

### Tank Integrity Report

Test Performed (reference Section no.) \_\_\_\_\_

Results \_\_\_\_\_

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Recommendations \_\_\_\_\_

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Test Performed (reference Section no.) \_\_\_\_\_

Results \_\_\_\_\_

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Recommendations \_\_\_\_\_

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Test Performed (reference Section no.) \_\_\_\_\_

Results \_\_\_\_\_

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Recommendations \_\_\_\_\_

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Test Performed (reference Section no.) \_\_\_\_\_

Results \_\_\_\_\_

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Recommendations \_\_\_\_\_

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