

Oil Operations Compliance Standard Operating Procedure



NASA Goddard Space Flight Center
Medical and Environmental Management Division, Code 250
Greenbelt, Maryland 20771

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250-OIL-2019.1

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Prepared by:



DDC-4C Environmental Team

Summary

This NASA Goddard Space Flight Center (GSFC) Oil standard operating procedure (SOP) (250-OIL-2019.1) has been developed by the GSFC Medical and Environmental Management Division. The purpose of this plan is to document procedures for managing oil and bulk containers at GSFC, Greenbelt Campus.

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PREFACE

P.1 PURPOSE

This Standard Operating Procedure (SOP) establishes standard methods for Aboveground Storage Tank (AST)/Bulk Storage Units and oil filled equipment inspections and audits. In addition, this SOP details tasks that ensure compliance with federal and state regulations and NASA's Goddard Space Flight Center's (GSFC) Oil Operations Permit.

P.2 APPLICABILITY

These instructions apply to the Medical and Environmental Management Division (MEMD) at the Greenbelt location.

P.3 TOOLS, EQUIPMENT, AND MATERIALS

Personal protective equipment and field tools are site specific and may include:

- a. Reflective vest*;
- b. Hard hat*;
- c. Safety toed boots*;
- d. Safety glasses*;
- e. Long pants*;
- f. Chemical Resistant gloves;
- g. Hearing protection*;
- h. Drinking water;
- i. Insect repellent;
- j. Radio and/or Cell Phone
- k. Camera; and
- l. Notebook (to be filled out in compliance with established QA/QC protocols)

*These items taken in total comprise LEVEL D Personal Protective Equipment (PPE) as defined by OSHA in 29CFR1910.120 (HAZWOPER).

P.4 SAFETY PRECAUTIONS AND WARNINGS

The MEMD office maintains the completed Job Safety Analysis (JSA) for this job task. The "General Compliance Inspection" JSA is saved in MEMD file path EM-4.3.6 Job Hazard Analyses.

P.5 TRAINING

None.

P.6 RECORDS

Deliverable Title	Record Custodian	Retention
Annual Oil Operations Compliance Report	MEMD	NRRS 8/23.5A11 Destroy after second reissuance of permit or 10 years after permit expires or is cancelled.
Annual Tank Inspection/Audit	MEMD	NRRS 8/23.5A11 Destroy after second reissuance of permit or 10 years after permit expires or is cancelled.

* NRRS – NASA Records Retention Schedule ([NPR 1441.1](#))

P.7 REVIEW OF PROCEDURES

This SOP will be reviewed annually and modified as needed to reflect current documents, procedures, and regulations.

INSTRUCTIONS

In this document, a requirement is identified by “shall or must,” a good practice by “should,” permission by “may” or “can,” expectation by “will,” and descriptive material by “is.”

1.0 Method Summary

MEMD shall conduct an annual oil operations compliance assessment audit to ensure that GSFC is in compliance with its Oil Operations Permit; relevant requirements of the ICP, Code of Maryland Annotated Regulations, Title 26; and Code of Federal Regulations, Title 40. The Oil Operations Permit is issued by Maryland Department of the Environment (MDE) and authorizes the storage of oil in aboveground storage systems at GSFC pursuant to the general and special conditions outlined in the permit. Inspectors should be familiar with the STI-SP001 inspection requirements and industry terminology. The bulk storage container and oil filled equipment inventory is managed within a Tank Management Database (TMD).

2.0 Procedures for Inspection/Audit

The following procedures shall be followed:

All Bulk Storage Units (any container equal to or greater than 55 gallons containing petroleum and non-petroleum oils) shall be inspected in accordance with the inspection forms found in Appendix C. Inspections/audits and associated findings (either positive or negative) will be entered into the Safety, Health, and Environmental Tracking System (SHEtrak) (see 250-WI-8500.1.2, Environmental Problem Reporting and tracking).

A review of the inspection records of oil containing devices will also be done concurrently with the compliance assessment. The frequency of inspection will be determined by the facility groups that manage their daily operations.

2.1 Annual Oil Operations Compliance Assessment/Audit

On an annual basis, MEMD shall interview the point of contact responsible for each bulk storage unit and audit each unit to assess compliance with GSFC requirements, local, state and federal regulations, and relevant industry standards. These audits will evaluate the following:

- a. Monthly AST and Generator Logbooks, records, and related documentation;
- b. Current tank and related piping condition;
- c. Secondary containment release records;
- d. Secondary containment or interstitial space condition;
- e. Tank gauging and overfill mechanism testing records;
- f. Evaluation of appropriate measures taken (including reporting and record keeping) for any discharges or bulk oil transfers that have occurred;
- g. Evaluation of tank operator’s inspection methods;
- h. Documentation of any spill/leak that has occurred in the proximity of the tank;
- i. Documentation of maintenance performed on the tank;
- j. Training records;
- k. Procedural information (signs posted, emergency notification procedures, etc.); and
- l. Verification of unit information and attributes in the tank management database.

Bulk storage container inspections must capture the applicable information found in the STI Standard for the Inspection of Aboveground Storage Tanks SP001. The STI inspection form in Appendix C can be used to aid the annual compliance inspection to ensure that the requirements are met and appropriate information is assessed. The MEMD civil servant program manager or supervisor must be informed immediately of any inspection finding

that would result in a severity ranking of “1” in SHEtrak. Such findings must be addressed in the field at the time of the finding.

2.2 Operations Compliance Follow-up Assessment

Following the annual assessment of each bulk storage unit, a follow-up assessment may be conducted prior to the next annual inspection for any unit including those that presented any of the following conditions. The frequency of follow up is dependent on severity of finding(s):

- a. New and/or open noncompliance findings tracked in accordance with **250-WI-8500.1.2, Environmental Problem Reporting and Tracking**;
- b. A finding that poses a threat of a release of materials (extensive corrosion/dents/holes etc.);
- c. Installation of a new unit (either temporary or permanent);
- d. New or change of tank owner responsible for tank compliance and inspection; or
- e. History of repeat findings.

MEMD shall interview the point of contact (POC) responsible for each bulk storage unit and evaluate each unit as necessary to assess changes to the compliance conformity of the unit since its last MEMD audit.

2.3 Tank Management Database

The TMD report is located on the MEMD 250 Data drive at file path: **E-5.4.1**. The following information shall be contained in the database and verified at least annually:

- a. Asset number or unique identifier of each bulk storage unit on center and the tank number match what is in the field;
- b. Bulk Storage Unit contents, capacity, type, purpose, construction material, installation date, secondary containment type, secondary containment volume, and alarm type;
- c. Dates of past and future integrity testing;
- d. Contact information for primary individual responsible for tank maintenance;
- e. Responsible code; and
- f. Asset number, capacity, and type of each transformer and other oil filled equipment on center.

2.4 Annual Oil Operations Compliance Report

The annual oil operations compliance report evaluates and documents GSFC’s compliance with its Oil Operations Permit, as well as applicable state and federal regulations during the prior calendar year. The following information shall be contained in the report:

- a. A description of special and general conditions imposed by GSFC’s Oil Operations Permit;
- b. An account of how GSFC has met said conditions during the reporting period;
- c. An account of any interactions with the permitting authority and results of said interactions;
- d. Any oil operations structural and procedural findings opened or resolved within the reporting period;
- e. Recommendations to address structural and procedural findings;
- f. A general assessment of current overall program health;
- g. Recommendations to address systemic issues;
- h. A summary of all oil discharges and any associated reporting during the reporting period;
- i. A summary of changes to oil operations during the reporting period and proposed future changes;

- j. A description of any noncompliance or potential noncompliance with GSFC's Oil Operations Permit;
- k. Recommendations for GSFC to maintain continuous compliance with its Oil Operations Permit; and
- l. An updated inventory of ASTs and other bulk storage units to include unit identification number, unit size, product stored, and type of piping as reported via the TMD.

3.0 Tracking

All new and follow-up assessments and related findings of noncompliance shall be documented and tracked to closure in accordance with 250-WI-8500.1.2, Environmental Problem Reporting and Tracking.

4.0 Record Keeping

The Annual Oil Operations Compliance Report along with the tank inspections will become a facility record. MEMD shall retain a copy of the report for three years.

5.0 References

In this document citations are assumed to be the latest version unless otherwise noted.

- a. GSFC's current Oil Operations Permit;
- b. GSFC's most recent ICP;
- c. GSFC's Tank Management Database;
- d. GSFC's Release Tracking System (spill database);
- e. GPR 8500.5, Water Management;
- f. GPR 8500.3, Waste Management;
- g. 250-PG-1410.2.1, Configuration Management Procedure;
- h. 250-WI-8500.1.2, Environmental Problem Reporting and Tracking;
- i. COMAR 26.10 Oil Pollution and Tank Management;
- j. 29 CFR 1910.120, HAZWOPER;
- k. 40 CFR 112, Oil Pollution Prevention;
- l. 40 CFR 264.175, Containment;
- m. NFPA 30 Flammable and Combustible Liquids Code; and
- n. STI SP001 Standard for the Inspection of Aboveground Storage Tanks, 6th Edition 2018.

Appendix A – Definitions

A.1 Aboveground Storage Tank: Any metal, fiberglass, plastic, or fiberglass wrapped metal container utilized for the storage of oil containing products (both petroleum and non-petroleum) having a shell capacity of 55 gallons or greater. By definition, oil filled equipment does not meet the criteria for an above ground storage tank, and as such, are not counted toward the total oil volume of GSFC.

A.2 Bulk Storage Unit: see Aboveground Storage Tank

Appendix B – Acronyms

AST	Aboveground Storage Tank
CFR	Code of Federal Regulations
COMAR	Code of Maryland Regulations
EFR	Environmental Functional Review
GSFC	Goddard Space Flight Center
HAZWOPER	Hazardous Waste Operations and Emergency Response
ICP	Integrated Contingency Plan
JSA	Job Safety Analysis
MDE	Maryland Department of the Environment
MEMD	Medical and Environmental Management Division
OSHA	Occupational Safety and Health Administration
POC	Point of Contact
PPE	Personal Protective Equipment
SHEtrak	Safety, Health, and Environment Tracking System
STI	Steel Tank Institute
TMD	Tank Management Database

Appendix C – Inspection Form

STI Standard for the Inspection of Aboveground Storage Tanks SP001 STI SP001 AST Record

OWNER INFORMATION	FACILITY INFORMATION
Name	Name
Number and Street	Number and Street
City, State, Zip Code	City, State, Zip Code

TANK ID			
SPECIFICATION:			
Design:	<input type="checkbox"/> UL _____	<input type="checkbox"/> SWRI _____	<input type="checkbox"/> Horizontal
	<input type="checkbox"/> API _____	<input type="checkbox"/> Other _____	<input type="checkbox"/> Vertical
	<input type="checkbox"/> Unknown		<input type="checkbox"/> Rectangular
Manufacturer:	Contents:	Construction Date:	Last
Repair/Reconstruction Date:			
Dimensions:	Capacity:	Last Change of Service Date:	
Construction:	<input type="checkbox"/> Bare Steel	<input type="checkbox"/> Cathodically Protected (Check one: A. <input type="checkbox"/> Galvanic or B. <input type="checkbox"/> Impressed Current) Date	
Installed: _____	<input type="checkbox"/> Coated Steel	<input type="checkbox"/> Concrete	<input type="checkbox"/> Plastic/F berglass
	<input type="checkbox"/> Double-Bottom	<input type="checkbox"/> Double-Wall	<input type="checkbox"/> Other
		<input type="checkbox"/> Lined Date Installed: _____	
Containment:	<input type="checkbox"/> Earthen D ke	<input type="checkbox"/> Steel Dike	<input type="checkbox"/> Concrete
		<input type="checkbox"/> Synthetic Liner	<input type="checkbox"/> Other
CRDM:	<input type="checkbox"/>	Date Installed: _____	Type: _____
Release Prevention Barrier:	<input type="checkbox"/>	Date Installed: _____	Type: _____

TANK ID					
SPECIFICATION:					
Design:	<input type="checkbox"/> UL _____	<input type="checkbox"/> SWRI _____	<input type="checkbox"/> Horizontal	<input type="checkbox"/> Vertical	<input type="checkbox"/> Rectangular
	<input type="checkbox"/> API _____	<input type="checkbox"/> Other _____			
	<input type="checkbox"/> Unknown				
Manufacturer:		Contents:	Construction Date:	Last	
Repair/Reconstruction Date:					
Dimensions:		Capacity:	Last Change of Service Date:		
Construction:	<input type="checkbox"/> Bare Steel	<input type="checkbox"/> Cathodically Protected (Check one: A. <input type="checkbox"/> Galvanic or B. <input type="checkbox"/> Impressed Current) Date			
Installed: _____					
	<input type="checkbox"/> Coated Steel	<input type="checkbox"/> Concrete	<input type="checkbox"/> Plastic/F berglass	<input type="checkbox"/> Other	
	<input type="checkbox"/> Double-Bottom	<input type="checkbox"/> Double-Wall	<input type="checkbox"/> Lined Date Installed: _____		
Containment:	<input type="checkbox"/> Earthen D ke	<input type="checkbox"/> Steel Dike	<input type="checkbox"/> Concrete	<input type="checkbox"/> Synthetic Liner	<input type="checkbox"/> Other
CRDM:	<input type="checkbox"/>	Date Installed:	Type:		
Release Prevention Barrier:	<input type="checkbox"/>	Date Installed: _____	Type:		

TANK ID					
SPECIFICATION:					
Design:	<input type="checkbox"/> UL _____	<input type="checkbox"/> SWRI _____	<input type="checkbox"/> Horizontal	<input type="checkbox"/> Vertical	<input type="checkbox"/> Rectangular
	<input type="checkbox"/> API _____	<input type="checkbox"/> Other _____			
	<input type="checkbox"/> Unknown				
Manufacturer:		Contents:	Construction Date:	Last	
Repair/Reconstruction Date:					
Dimensions:		Capacity:	Last Change of Service Date:		
Construction:	<input type="checkbox"/> Bare Steel	<input type="checkbox"/> Cathodically Protected (Check one: A. <input type="checkbox"/> Galvanic or B. <input type="checkbox"/> Impressed Current) Date			
Installed: _____					
	<input type="checkbox"/> Coated Steel	<input type="checkbox"/> Concrete	<input type="checkbox"/> Plastic/F berglass	<input type="checkbox"/> Other	
	<input type="checkbox"/> Double-Bottom	<input type="checkbox"/> Double-Wall	<input type="checkbox"/> Lined Date Installed: _____		
Containment:	<input type="checkbox"/> Earthen D ke	<input type="checkbox"/> Steel Dike	<input type="checkbox"/> Concrete	<input type="checkbox"/> Synthetic Liner	<input type="checkbox"/> Other
CRDM:	<input type="checkbox"/>	Date Installed:	Type:		
Release Prevention Barrier:	<input type="checkbox"/>	Date Installed: _____	Type:		

TANK ID				
SPECIFICATION:				

Design: <input type="checkbox"/> UL _____ <input type="checkbox"/> SWRI _____ <input type="checkbox"/> Horizontal <input type="checkbox"/> Vertical <input type="checkbox"/> Rectangular			
<input type="checkbox"/> API _____			
<input type="checkbox"/> Unknown		<input type="checkbox"/> Other _____	
Manufacturer: Repair/Reconstruction Date:		Contents: Construction Date: Last	
Dimensions:		Capacity:	
Last Change of Service Date:			
Construction: <input type="checkbox"/> Bare Steel <input type="checkbox"/> Cathodically Protected (Check one: A. <input type="checkbox"/> Galvanic or B. <input type="checkbox"/> Impressed Current) Date Installed: _____			
<input type="checkbox"/> Coated Steel		<input type="checkbox"/> Concrete <input type="checkbox"/> Plastic/F berglass <input type="checkbox"/> Other	
<input type="checkbox"/> Double-Bottom		<input type="checkbox"/> Double-Wall <input type="checkbox"/> Lined Date Installed: _____	
Containment: <input type="checkbox"/> Earthen Dike <input type="checkbox"/> Steel Dike <input type="checkbox"/> Concrete <input type="checkbox"/> Synthetic Liner <input type="checkbox"/> Other			
CRDM: <input type="checkbox"/>		Date Installed: _____ Type: _____	
Release Prevention Barrier: <input type="checkbox"/>		Date Installed: _____ Type: _____	

TANK ID			
SPECIFICATION:			
Design: <input type="checkbox"/> UL _____ <input type="checkbox"/> SWRI _____ <input type="checkbox"/> Horizontal <input type="checkbox"/> Vertical <input type="checkbox"/> Rectangular			
<input type="checkbox"/> API _____			
<input type="checkbox"/> Unknown		<input type="checkbox"/> Other _____	
Manufacturer: Repair/Reconstruction Date:		Contents: Construction Date: Last	
Dimensions:		Capacity:	
Last Change of Service Date:			
Construction: <input type="checkbox"/> Bare Steel <input type="checkbox"/> Cathodically Protected (Check one: A. <input type="checkbox"/> Galvanic or B. <input type="checkbox"/> Impressed Current) Date Installed: _____			
<input type="checkbox"/> Coated Steel		<input type="checkbox"/> Concrete <input type="checkbox"/> Plastic/F berglass <input type="checkbox"/> Other	
<input type="checkbox"/> Double-Bottom		<input type="checkbox"/> Double-Wall <input type="checkbox"/> Lined Date Installed: _____	
Containment: <input type="checkbox"/> Earthen Dike <input type="checkbox"/> Steel Dike <input type="checkbox"/> Concrete <input type="checkbox"/> Synthetic Liner <input type="checkbox"/> Other			
CRDM: <input type="checkbox"/>		Date Installed: _____ Type: _____	
Release Prevention Barrier: <input type="checkbox"/>		Date Installed: _____ Type: _____	

STI SP001 Monthly Inspection Checklist

General Inspection Information:

Inspection Date: _____	Retain Until Date: _____
Prior Inspection Date: _____	Inspector Name: _____
Tanks Inspected (ID #'s): _____	

Inspection Guidance:

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

Item	Task	Status	Comments
1.0 Tank Containment			
1.1 Containment structure	Check for water, debris, cracks or fire hazard	<input type="checkbox"/> Yes* <input type="checkbox"/> No <input type="checkbox"/> N/A	
1.2 Primary tank	Check for water	<input type="checkbox"/> Yes* <input type="checkbox"/> No	
1.3 Containment drain valves	Operable and in a closed position	<input type="checkbox"/> Yes <input type="checkbox"/> No* <input type="checkbox"/> N/A	
1.4 Pathways and entry	Clear and gates/doors operable	<input type="checkbox"/> Yes <input type="checkbox"/> No* <input type="checkbox"/> N/A	
2.0 Leak Detection			
2.1 Tank	Visible signs of leakage	<input type="checkbox"/> Yes* <input type="checkbox"/> No	
2.2 Secondary Containment	Visible signs of leakage from tank into secondary containment	<input type="checkbox"/> Yes* <input type="checkbox"/> No	
2.3 Surrounding soil	Visible signs of leakage	<input type="checkbox"/> Yes* <input type="checkbox"/> No <input type="checkbox"/> N/A	
2.4 Interstice	Visible signs of leakage	<input type="checkbox"/> Yes* <input type="checkbox"/> No <input type="checkbox"/> N/A	
3.0 Tank Equipment			
3.1 Valves	a. Check for leaks.	<input type="checkbox"/> Yes* <input type="checkbox"/> No <input type="checkbox"/> N/A	
	b. Tank drain valves must be kept locked.	<input type="checkbox"/> Yes* <input type="checkbox"/> No <input type="checkbox"/> N/A	

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

STI SP001 Annual Inspection Checklist

General Inspection Information:

Inspection Date: _____ (inspection date)	Retain Until Date: _____ (36 months from)
Prior Inspection Date: _____	Inspector Name: _____
Tanks Inspected (ID #'s): _____	

Inspection Guidance:

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

Item	Task	Status	Comments
1.0 Tank Containment			
1.1 Containment structure	Check for: <ul style="list-style-type: none"> • Holes or cracks in containment wall or floor • Washout • Liner degradation • Corrosion • Leakage • Paint failure • Tank settling 	<input type="checkbox"/> Yes* <input type="checkbox"/> No <input type="checkbox"/> N/A	
2.0 Tank Foundation and Supports			
2.1 Foundation	Settlement or foundation washout?	<input type="checkbox"/> Yes* <input type="checkbox"/> No	
2.2 Concrete pad or ring wall	Cracking or spalling?	<input type="checkbox"/> Yes* <input type="checkbox"/> No <input type="checkbox"/> N/A	
2.3 Supports	Check for corrosion, paint failure, etc.	<input type="checkbox"/> Yes* <input type="checkbox"/> No <input type="checkbox"/> N/A	
2.4 Water drainage	Water drains away from tank?	<input type="checkbox"/> Yes <input type="checkbox"/> No* <input type="checkbox"/> N/A	

Item	Task	Status	Comments
2.5 Tank grounding	Strap secured and in good condition?	<input type="checkbox"/> Yes <input type="checkbox"/> No* <input type="checkbox"/> N/A	
3.0 Cathodic Protection			
3.1 Galvanic cathodic protection system	Confirm system is functional, includes the wire connections for galvanic systems	<input type="checkbox"/> Yes <input type="checkbox"/> No* <input type="checkbox"/> N/A	
3.2 Impressed current system	a. Inspect the operational components (power switch, meters, and alarms).	<input type="checkbox"/> Yes <input type="checkbox"/> No* <input type="checkbox"/> N/A	
	b. Record hour meter, ammeter and voltmeter readings.	<input type="checkbox"/> Yes <input type="checkbox"/> No* <input type="checkbox"/> N/A	
4.0 Tank Shell, Heads, Roof			
4.1 Coating	Check for coating failure	<input type="checkbox"/> Yes* <input type="checkbox"/> No	
4.2 Steel condition	Check for: <ul style="list-style-type: none"> • Dents • Buckling • Bulging • Corrosion • Cracking 	<input type="checkbox"/> Yes* <input type="checkbox"/> No	
4.3 Roof slope	Check for low points and standing water	<input type="checkbox"/> Yes* <input type="checkbox"/> No <input type="checkbox"/> N/A	
5.0 Tank Equipment			
5.1 Vents	Verify that components are moving freely and vent passageways are not obstructed for: <ul style="list-style-type: none"> • Emergency vent covers • Pressure/vacuum vent poppets • Other moving vent components 	<input type="checkbox"/> Yes* <input type="checkbox"/> No	
5.2 Valves	Check the condition of all valves for leaks, corrosion and damage.	<input type="checkbox"/> Yes* <input type="checkbox"/> No	
5.2.1 Anti-siphon, check and gate valves	Cycle the valve open and closed and check for proper operation.	<input type="checkbox"/> Yes <input type="checkbox"/> No* <input type="checkbox"/> N/A	
5.2.2 Pressure regulator valve	Check for proper operation. (Note that there may be small, 1/4 inch drain plugs in the bottom of the valve that are not visible by looking from above only)	<input type="checkbox"/> Yes <input type="checkbox"/> No* <input type="checkbox"/> N/A	
5.2.3 Expansion relief valve	Check that the valve is in the proper orientation. (Note that fuel must be discharged back to the	<input type="checkbox"/> Yes <input type="checkbox"/> No* <input type="checkbox"/> N/A	

Item	Task	Status	Comments
	tank via a separate pipe or tubing.)		
5.2.4 Solenoid valves	Cycle power to valve to check operation. (Electrical solenoids can be verified by listening to the plunger opening and closing. If no audible confirmation, the valve should be inspected for the presence and operation of the plunger.)	<input type="checkbox"/> Yes <input type="checkbox"/> No* <input type="checkbox"/> N/A	
5.2.5 Fire and shear valves	a. Manually cycle the valve to ensure components are moving freely and that the valve handle or lever has clearance to allow valve to close completely.	<input type="checkbox"/> Yes <input type="checkbox"/> No* <input type="checkbox"/> N/A	
	b. Valves must not be wired in open position.	<input type="checkbox"/> Yes <input type="checkbox"/> No* <input type="checkbox"/> N/A	
	c. Make sure fusible element is in place and correctly positioned.	<input type="checkbox"/> Yes <input type="checkbox"/> No* <input type="checkbox"/> N/A	
	d. Be sure test ports are sealed with plug after testing is complete and no temporary test fixture or component remains connected to valve.	<input type="checkbox"/> Yes <input type="checkbox"/> No* <input type="checkbox"/> N/A	
5.3 Interstitial leak detection equipment	Check condition of equipment, including: <ul style="list-style-type: none"> • The window is clean and clear in sight leak gauges. • The wire connections of electronic gauges for tightness and corrosion • Activate the test button, if applicable. 	<input type="checkbox"/> Yes <input type="checkbox"/> No* <input type="checkbox"/> N/A	
5.4 Spill containment boxes on fill pipe	a. If corrosion, damage, or wear has compromised the ability of the unit to perform spill containment functions, replace the unit.	<input type="checkbox"/> Yes* <input type="checkbox"/> No <input type="checkbox"/> N/A	
	b. Inspect the connections to the AST for tightness, as well as the bolts, nuts, washers for condition and replace if necessary.	<input type="checkbox"/> Yes* <input type="checkbox"/> No <input type="checkbox"/> N/A	

Item	Task	Status	Comments
	c. Drain valves must be operable and closed	<input type="checkbox"/> Yes* <input type="checkbox"/> No <input type="checkbox"/> N/A	
5.5 Strainer	a. Check that the strainer is clean and in good condition.	<input type="checkbox"/> Yes <input type="checkbox"/> No* <input type="checkbox"/> N/A	
5.5 Strainer	b. Access strainer basket and check cap and gasket seal as well as bolts.	<input type="checkbox"/> Yes <input type="checkbox"/> No* <input type="checkbox"/> N/A	
5.6 Filter	a. Check that the filter is in good condition and is within the manufacturer's expected service life. Replace, if necessary.	<input type="checkbox"/> Yes <input type="checkbox"/> No* <input type="checkbox"/> N/A	
	b. Check for leaks and decreased fuel flow	<input type="checkbox"/> Yes <input type="checkbox"/> No* <input type="checkbox"/> N/A	
5.7 Flame arrestors	Follow manufacturer's instructions. Check for corrosion and blockage of air passages.	<input type="checkbox"/> Yes* <input type="checkbox"/> No <input type="checkbox"/> N/A	
5.8 Leak detector for submersible pump systems	Test according to manufacturer's instructions and authority having jurisdiction (AHJ). Verify leak detectors are suited and properly installed for aboveground use.	<input type="checkbox"/> Yes <input type="checkbox"/> No* <input type="checkbox"/> N/A	
5.9 Liquid level equipment	a. Has equipment been tested to ensure proper operation?	<input type="checkbox"/> Yes <input type="checkbox"/> No* <input type="checkbox"/> N/A	
	b. Does equipment operate as required?	<input type="checkbox"/> Yes <input type="checkbox"/> No* <input type="checkbox"/> N/A	
	c. Follow manufacturer's instructions	<input type="checkbox"/> Yes <input type="checkbox"/> No* <input type="checkbox"/> N/A	
5.10 Overfill equipment	a. Follow manufacturer's instructions and regulatory requirements for inspection and functionality verification.	<input type="checkbox"/> Yes <input type="checkbox"/> No* <input type="checkbox"/> N/A	
	b. Confirm device is suited for above ground use by the manufacturer	<input type="checkbox"/> Yes <input type="checkbox"/> No* <input type="checkbox"/> N/A	
6.0 Insulated Tanks			
6.1 Insulation	Check condition of insulation for: <ul style="list-style-type: none"> •Missing sections •Areas of moisture •Mold •Damage 	<input type="checkbox"/> Yes* <input type="checkbox"/> No <input type="checkbox"/> N/A	
6.2 Insulation cover or jacket	Check for damage that will allow water intrusion	<input type="checkbox"/> Yes* No <input type="checkbox"/> N/A	

STI SP001 Portable Container Monthly Inspection Checklist

General Inspection Information:

Inspection Date: _____ (date)	Retain Until Date: _____ (36 months from inspection date)
Prior Inspection Date: _____	Inspector Name: _____
Containers Inspected (ID #'s): _____	

Inspection Guidance:

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

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

CHANGE HISTORY LOG

Revision	Effective Date	Description of Changes	Approval
Baseline	04/26/2019	Initial Release	