



Seismic Exploration Sleigh Camp #2

Spill Prevention Control and Countermeasure Plan

North Slope, Alaska

Prepared by:

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February 2015
RSE Project No. 13-1161

Spill Prevention Control and Countermeasure Plan

SAExploration Inc.
Anchorage, Alaska

This Spill Prevention Control and Countermeasure (SPCC) Plan has been prepared to conform to requirements set forth under 40 CFR 112 as provided in the Federal Register, Volume 67, Number 137 dated July 17, 2002 and SPCC Plan amendments through the most recent amendments dated December 5, 2008 in Federal Register Volume 73 No. 235, page 74300; April 1, 2009 in Federal Register Volume 74, No. 61, page 14736; November 13, 2009 in Federal Register Volume 74 No. 218, page 58784; and October 14, 2010 Federal Register Vol. 75, No. 198.

As provided in 40 CFR Part 112, this SPCC Plan is in effect for five (5) years from the date of the engineer's seal. During this 5-year period, non-technical SPCC Plan revisions are permitted by the facility Owner/Operator without engineer certification provided revisions are recorded and dated. Please record any facility updates or changes to the SPCC Plan using the SPCC Revision Log on the following page. Engineers Certification and/or inspection is required for structural changes to SPCC-regulated above ground storage tanks, secondary containments, and new or additional SPCC-regulated above ground storage tanks including: mobile bulk storage tanks over 55-gallons (40 CFR 112.5(c)).

Emergency Contacts

Primary Contact: Ted Smith

Alternate Contact: Joe Pagliero

Voice	(907) 522-4499	Voice	
Cell	(907) 301-5454	Cell	(907) 230-8684
Email		Email	
Fax		Fax	

SPCC Plan Revisions Log

[illegible]

**Spill Prevention Control and Countermeasure Plan
Compliance Inspection Review History**

In accordance with 40 CFR 112, a review and evaluation of this SPCC Plan is required at least once every five (5) years. As a result of this review and evaluation, this SPCC Plan will require amendment within six (6) months of the review to include more effective prevention and control technology if (1) such technology will significantly reduce the likelihood of a spill event from the facility, and (2) such technology has been field-proven at the time of review. Any amendment to this SPCC Plan shall be certified by a Registered Professional Engineer within six (6) months after a change in the facility design, construction, operation, or maintenance occurs which materially affects the facility's potential for the discharge of oil into or upon navigable waters of the United States or adjoining shorelines. Non-technical SPCC Plan revisions are permitted by the facility Owner/Operator without engineer certification.

40 CFR 112.4 requires submittal of an SPCC Plan to the United States Environmental Protection Agency (EPA) Regional Administrator and the appropriate state agency in charge of oil pollution control activities whenever the facility discharges more than 1,000 gallons of oil in a single event, or discharges more than 42 gallons of oil in each of two discharge incidents within a 12-month period.

Management Approval

SAExploration Inc. is committed to the prevention of discharges of oil to navigable waters and the environment, and maintains the spill prevention control and countermeasures readiness in accordance with 40 CFR 112 through regular review, updating, training, and implementation of this Spill Prevention Control and Countermeasures Plan. SAExploration Inc. has committed the necessary resources to implement the measures described in this plan.

I hereby approve the contents of the facility's Spill Prevention, Control, and Countermeasure Plan (SPCC Plan) and have the authority to commit the necessary resources to implement the SPCC Plan, as set forth in this document, in accordance with the federal requirements of 40 CFR part 112.

Authorized Representative

Signature

Title

Date

Rick Trupp

General
Manager SAE
Alaska

Registered Professional Engineer Certification

I have reviewed the SPCC plan for this facility and attest that (1) I am familiar with the requirements of Part 112 of Title 40 of the Code of Federal Regulations; (2) either myself or my qualified agent has visited and examined the facility; (3) this SPCC plan has been prepared in accordance with good engineering practice, including consideration of applicable industry standards; (4) procedures for required inspections and testing have been established; and (5) this SPCC plan is adequate for this facility.

Engineer: David M. Nyman, PE
Signature: 

Date: 2-17-15

Registration Number: CE-7794
Registration State: Alaska



If a release of oil to ground or water occurs that might threaten navigable waters of the United States the following immediate notifications are required:

- National Spill Response Center
(800) 424-8802
- Alaska Department of Environmental Conservation (ADEC)
(800) 478-9300

If a release to the ground or water should occur that does **not** threaten navigable waters of the United States, notification to the ADEC is required as follows:

Release to Land

- Any release of oil in **excess of 55 gallons** must be reported as soon as the person has knowledge of the discharge.
- Any release of oil in **excess of 10 gallons but less than 55 gallons** must be reported within 48 hours after the person has knowledge of the discharge.
- A person in charge of a facility or operation shall maintain and provide to the ADEC on a monthly basis, a written record of any discharges of oil **from 1 to 10 gallons**.

Release to Impermeable Secondary Containment Areas

- Any release of oil **in excess of 55 gallons** must be reported within 48 hours after the person has knowledge of the discharge.

Emergency Spill Response Contacts

Emergency Contact: 911

	<u>Office</u>	<u>Cell</u>
SAExploration: Anchorage Operations		(907) 522-4499
Joe Pagliero – Project Manager		(907) 230-8684
Ted Smith – Operations Supervisor	(907) 522-4499	(907) 301-5453
National Spill Response Center	(800) 424-8802	
ADEC 24-hour Spill Report Number	(800) 478-9300	
ADEC Anchorage Office	(907) 269-3063	(907) 269-7648
U.S. Coast Guard Marine Safety Office	(907) 271-6700	(907) 271-6751
U.S. EPA Anchorage Office	(907) 271-5083	(907) 271-3424
Alaska Clean Seas Oil Spill Response	(907) 659-2405	(907) 659-2616

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List of Abbreviations

ACS	Alaska Clean Seas
ADEC	Alaska Department of Environmental Conservation
A/G	Above Ground
AST	Above Ground Storage Tank
CFR	Code of Federal Regulations
DOT	Department of Transportation
FOR	Fuel Oil Return
FOS	Fuel Oil Supply
FRP	Facility Response Plan
NSB	North Slope Borough
SPCC	Spill Prevention Control and Countermeasure
USEPA	United States Environmental Protection Agency
U/G	Underground
UST	Underground Storage Tank

Overview

This Spill Prevention Control and Countermeasure (SPCC) Plan is specifically prepared for the SAExploration (SAE) Seismic Exploration Sleigh Camp #2 (Sleigh Camp #2) facility operating on Alaska's North Slope.

All SAE Sleigh Camp #2 facility ASTs are owned and operated by SAExploration Inc. In aggregate, these ASTs do not exceed the threshold requirements specified under the Certification of the Applicability of Substantial Harm Criteria Checklist for a Facility Response Plan (FRP) per 40 CFR 112.20. The completed checklist is attached in Appendix A for each facility.

During wintertime months, the SAE Sleigh Camp #2 facility operates in remote locations onshore as an onshore mobile facility. ASTs are categorized as either mobile and portable or as mobile refuelers consisting of 3,000-gallon and 4,000-gallon mobile refuelers and mobile and portable or bulk storage ASTs ranging in size from 67 gallons to 500 gallons during this time.

During summer, storage of the SAE facility trailers, AST/trailers, AST/sleds, and associated operating equipment is stored on a gravel pad located in Deadhorse, Alaska. When stored during non-operational periods of time, all mobile and portable tanks are de-fueled of their contents for out-of-service storage. Mobile refuelers are classified as double-walled tanks when positioned and out of service.

Summary of Site Descriptions

The SAE Sleigh Camp #2 facility ASTs are either externally mounted onto individual trailers or permanently mounted inside trailers and provide fuel for power generation and auxiliary requirements. Heating, hot water, and other camp energy requirements are provided via electrically powered devices. If additional AST's or other fuel storage containers are added to the facility, they will be similarly constructed, operated, as outlined in this SPCC plan. Additionally, the addition of any ASTs to this plan will require an engineer's inspection/certification (40 CFR 112.5 (c)).

Seismic Exploration Sleigh Camp ASTs:

Bulk Fuel Tanks

The SAE Sleigh Camp #2 facility uses 3,000-gallon and 4,000-gallon bulk fuel mobile refuelers. These tanks are double-walled welded steel oval cylinder tanks set inside an open-top welded steel secondary containment with a rubber seal covering the containment mounted on a trailer. These ASTs have a 2-inch diameter fill shut-off valve, 2-inch diameter suction discharge, 2-inch diameter dry disconnect fuel transfer piping connection, a 16-inch diameter inspection manway, and a 16-inch pressure relieving manway. Additionally, these ASTs are equipped with overfill prevention devices and means to monitor filling operations. These chassis-mounted tanks are built to Department of Transportation 406 specifications and are classified as either mobile refuelers or double-walled tanks under this plan.

Interior Mounted Generator Tanks:

The SAE Sleigh Camp #2 modules are equipped with 100-gallon to 500-gallon single-walled and double-walled diesel fuel generator supply tanks. These tanks are classified as mobile and portable tanks while in operation, and bulk storage containers while "positioned" and stored for non-operational periods. Rigid and flexible fuel oil supply (FOS) and fuel oil return (FOR) product lines run between the ASTs and generators. These tanks are housed primarily inside enclosures in proximity to the generator being serviced. Each enclosure floor where a tank is housed is liquid-tight providing an added measure of secondary containment.

Auxiliary Tanks

The SAE Sleigh Camp #2 modules are equipped with a 67-gallon to 500-gallon single-walled and double-walled equipment service fluid tanks. These tanks are classified as mobile and portable tanks while in operation, and bulk storage containers while "positioned" and stored for non-operational periods of time. These tanks are housed primarily inside enclosures. Each enclosure floor where a tank is housed is liquid-tight providing an added measure of secondary containment.

Oil Spill Containment Equipment

Spill containment equipment is stored in overpack drums on the Vibe Shop Trailer deck, inside the cat train trailers, and in large plastic totes or overpack drums on each bulk fuel AST trailer.

112 Oil Pollution Prevention

40 CFR part 112 (July 17, 2002, and SPCC Plan amendments through the most recent amendments dated December 5, 2008, April 1, 2009, November 13, 2009, and October 14, 2010) requires facilities meeting certain criteria to prepare site-specific SPCC Plans to reduce the likelihood of releases of oil to navigable waters of the United States. Based on site inspection findings, the bulk storage containers at the facility require preparation of a site-specific SPCC Plan under 40 CFR 112 for onshore facilities.

112.7 General Requirements for SPCC Plans

This SPCC Plan is subject to requirements under 40 CFR 112.1 through 112.8, with particular emphasis on Sections 40 CFR 112.7 (General Information) and 40 CFR 112.8 (SPCC Plan Requirements for Onshore Facilities), as detailed in the following sections.

112.7 (a) General Information

The SAE Sleigh Camp #2 facility operates as an onshore mobile facility primarily during winter months throughout Alaska, on the North Slope of Alaska. All associated ASTs are used to support SAE Sleigh Camp #2 facility operations. During remote operations, fuel is provided to the facility by third-party jobbers. The SAE Sleigh Camp #2 facility typically uses about 4,500 gallons of fuel daily during active field operations.

Since these facilities do not require FRPs, 40 CFR 112.7(a) (3) requires addressing specific topics described in the remainder of this section:

Type of Oil and Compatibility

The type of oil, size, and secondary containment methods for the tank and associated piping are summarized in Table 1. ASTs and piping are compatible with the contained fluids. None of the ASTs have had a known reportable release.

Table 1: SAExploration Seismic Exploration Sleigh Camp #2 Facility AST Inventory

Asset Number	Approximate Volume (US Gallons)	Product	Secondary Containment Type when Facility is Operational	Secondary Containment Type When Facility is Non-Operational or Tanks are "Positioned"	Year Tank / Piping Installed/ Manufactured	Overfill Alarm	Overfill Limiting Device	Visual Fill Gauge	Active Secondary Containment
						Overfill Prevention Measure			
15-13 #1	67 (split 2x)	Service Oils	G	S, P	2014				
15-13 #2	100	Diesel	G	S, P	2014				
15-13 #3	100	Diesel	G	S,P	2014				
15-14 #1	69	Service Oil	G	S, P	2014				
15-14 #2	100	Diesel	G	S, P	2014				
15-14 # 3	100	Diesel	G	S,P	2014				
15-15 #1	140	Diesel	G	S, P	2014				
15-16 #1	140	Diesel	G	S, P	2014				
15-38 #1	100	Diesel	G	S, P	2014				
15-39 #1	100	Diesel	G	S, P	2014				
15-42 #1	100	Diesel	G	S, P	2014				
15-43 #1	100	Diesel	G	S, P	2014				
15-44 #1	500	Diesel	G	D	2014				√
15-41 #1	500	Diesel	G	D	2014				√
15-41 #2	100	Diesel	G	S, P	2014				
15-40 #1	100	Diesel	G	S, P	2014				
15-50 #1	100	Diesel	G	S, P	2014				
15-50 #2	3,000	Diesel	G	D	2014		√		
15-49 #1	3,000	Diesel	G	D	2014		√		
15-45 #1	100	Diesel	G	S, P	2014				
15-45 #2	4,000	Diesel	G	D	2014		√		
15-46 #1	100	Diesel	G	S, P	2014				
15-46 #2	4,000	Diesel	G	D	2014		√		
15-47 #1	4,000	Diesel	G	D	2014		√		
15-47 #2	100	Diesel	G	S, P	2014				
14-48 #1	4,000	Diesel	G	D	2014		√		
15-75 #1	500	Diesel	G	D	2014				√
15-76 #1	500	Diesel	G	D	2014				√
15-77 #1	500	Diesel	G	D	2014				√
15-78 #1	500 (split 4x)	Service Oils	G	S, P	2014				
15-78 #2	500	Diesel	G	D	2014				√
15-79 #2	500	Diesel	G	D	2014				√
15-79 #1	500 (split 4x)	Service Oils	G	S, P	2014				
15-80	500	Diesel	G	D	2014				√
15-81	500	Diesel	G	D	2014				√
15-82	500	Diesel	G	D	2014				√

G – Indicates General Secondary Containment

S - Indicates Sized Secondary Containment

D - Indicates Double Wall Tank

P – "Positioned" Means tanks are not in transit or otherwise being utilized for a transportation related purpose. When positioned or in a non-transportation mode, sized secondary containment is required for these tanks unless they are taken out of service in accordance with the "Permanently Closed" provisions of the SPCC Rule

Discharge Prevention Methods

All facility ASTs are filled by SAE personnel specifically trained in fuel transfer and handling for the weather and operational conditions presented on Alaska's North Slope. Additionally, all SAE fuel handlers have completed annual North Slope fuel transfer training. SAE personnel are responsible for all fuel transfers and require personnel to maintain full 'hands on' visual observation during fueling.

The 3,000-gallon and 4,000-gallon bulk fuel tanks are outfitted with dry disconnect fuel transfer pipe couplers to reduce the potential for unintentional fuel spills and/or drip leaks. The other tanks described in this SPCC plan utilize either drip pans or sized secondary containment. Additional containment is provided by a 3.5-inch high lip around the interior floor inside of each enclosure.

All SAE Sleigh Camp #2 facility ASTs are equipped with either visual sight ports, or gauges, and manual sticking ports. Additionally, the SAE Sleigh Camp #2 utilizes active containment measures for 500-gallon ASTs which required strict adherence to the following fuel transfer procedures.

Established fuel transfer procedures during AST filling are as follows:

- Prior to commencing fuel transfer, the existing fuel level in the storage tank must be measured and verified by the fuel transfer operator to confirm that sufficient storage tank volume is available to receive the volume of fuel to be transferred.
 - Fuel transfer personnel must be properly trained in fuel handling and transfer procedures, personal protection equipment, and emergency response actions.
 - Smoking is not allowed at any time during fuel transfer.
 - ASTs are equipped with emergency spill response action equipment adequate to handle small releases.
 - The fuel transfer vehicle must have wheel chocks (or similar for tracks/skis) and temporary warning/safety markers or cones set.
 - The fuel transfer operator must conduct a visual reconnaissance of the area and the storage tank prior to initiating fuel transfer to confirm site conditions.
 - Fuel transfer operator is required to remain at the AST at all times while fuel is being transferred.
 - Throughout the fuel transfer process, the operator will remain alert and must maintain unobstructed visual contact of the transfer hose(s) and the storage tank.
 - Throughout the fuel transfer process, the operator must remain within 25-feet of all components of the fuel transfer process, including the pumps and valves, fuel transfer line and storage tank.
 - All operators/drivers will exit the vehicle during refueling operations.
-

- Fuel transfer operations are to be performed only in areas designated for such purposes.
- The drain valve on the AST is to be closed and all fuel in the transfer line annulus is to be drained into the storage tank prior to disconnecting the fuel transfer line.
- Prior to departure, the operator will confirm all tank valves are secure and no leakage is present, as well as confirm the storage tank valves are secure. Fuel volume transfer will be logged as part of the delivery report.

Any deviation from these procedures or observed problems must be immediately reported to the SAE Site Responsible-in-Charge Project Manager, Joe Pagliero, at (907) 230-8684.

Discharge Countermeasures

This section describes the response and cleanup procedures in the event of an oil discharge. The uncontrolled discharge of oil to groundwater, surface water, or soil is prohibited by state and possibly federal law. Any spills occurring in locations where there exists the possibility of oil release to navigable waters of the U.S. must be managed according to the SPCC Plan requirements. Immediate action must be taken to control, contain, and recover discharged product.

In general, the following steps are taken:

1. Eliminate potential spark sources.
2. If it is safe to do so, identify and shut down source of discharge to stop flow.
3. Contain the discharge with sorbents, berms, snow or ice, liners, or other material.
4. Contact the facility manager or their alternate including the senior onsite manager.
5. Contact the police, fire department, and spill response organizations as applicable.
6. Collect and dispose of recovered product in accordance with applicable regulations.

For establishing appropriate response procedures, this SPCC plan classifies either discharges as “minor” or “major” depending on the characteristics and volume of the material released.

Response to a Minor Release

A “minor” release is defined in 40 CFR 112.7(a) (5) as one that poses no significant harm (or threat) to human health and safety, or to the environment. Minor discharges are generally those where: the quantity of product released involves less than 10 gallons of oil; is easily stopped and controlled at the time of the release; is localized near the source and not likely to reach water; poses little risk to human health or safety, and has little risk of fire or explosion.

Minor releases can typically be cleaned up by SAE Sleigh Camp #2 facility personnel. The following countermeasures for minor releases include the following:

1. Immediately notify the facility manager or senior onsite manager.
2. Contain the discharge with absorbent or other suitable materials, pump free product into an appropriate container.
3. Enter release information into SAE Sleigh Camp’s oil release database.
4. If release is greater than 10 gallons, the Alaska Department of Environmental Conservation (ADEC) must be notified within 48 hours. If the release is less than 10 gallons, the release must be recorded in SAE Sleigh Camp #2 spill log for monthly submission to the ADEC.

Response to a Major Release

A “major” release is defined as one that cannot be safely controlled or cleaned by SAE Sleigh Camp #2 facility personnel such as when: the discharge is large enough to spread beyond the discharge area; the discharge material enters navigable waters of the U.S.; the discharge requires special equipment to clean up; the discharge material poses a hazard to human health or safety, or there is danger of fire or explosion.

In the event of a major discharge, the following guidelines apply:

1. All workers must immediately evacuate the discharge site via designated exit routes and move to designated staging areas at safe distances from the discharge.
2. If the facility manager is not onsite or is not available for immediate communication, the senior onsite manager shall have the authority to indicate notification and response requirements under the SPCC plan.
3. The senior onsite manager shall call for emergency medical assistance if workers are injured.
4. The senior onsite manager shall call the fire and police departments.
5. The senior onsite manager must call spill response and/or the cleanup contractor as required for release containment and clean up.
6. The senior onsite manager must immediately call the ADEC for releases greater than 55 gallons, and within 48 hours for releases between 10 and 55 gallons.
7. The senior onsite manager must coordinate the cleanup and recovery effort and engage response organizations as required.
8. Enter release information into SAE Sleigh Camp #2 oil release database.

Notifications as per the following Response Action Contacts:

- National Spill Response Center
(800) 424-8802
 - Alaska Department of Environmental Conservation (ADEC)
(800) 478-9300
-

If contact to any of the Response Actions Contacts provided on the previous page is made, the following information must be provided:

Table 2: Release Reporting Checklist

Facility	SAExploration Seismic Exploration Sleigh Camp #2 Facility Summer Pad Storage	SAExploration Seismic Exploration Sleigh Camp #2 Facility Winter Operations
Address	SAExploration Pad, Deadhorse	Ted Smith, Operations Supervisor
Phone	907-659-9228	(907) 301-5454
AST/UST Potential Release	AST: 4,000 gallons [largest single AST] Piping: 40 gallons (est.)	AST: 4,000 gallons [largest single AST] Piping: 40 gallons (est.)
<u>Other Required SPCC Reporting Information</u> (Reference Appendix E for Spill Release Log)		
Date and Time of Release		
Type of Material Discharged		
Estimated Total Quantity Discharged		
Source of Discharge		
Materials Affected by Discharge		
Cause of Discharge		
Damages and Injuries		
Actions used to stop, remove, and mitigate effects of discharge		
Evacuation Requirements		
Individuals and Organizations Contacted		

SAE maintains the following emergency spill response equipment to address a spill at the SAE Sleigh Camp #2 Facility. Spill response materials will be stored in labeled and secure overpack drums on trailers.

Table 3: Emergency Spill Response Equipment

<u>Amount</u>		<u>Item</u>
5	bales	Absorbent pads
2	each	85-gallon open-top over pack drums
100	each	6-mil poly waste bags
50	feet	3 to 6-inch diameter 'mini-boom' absorbent
1	roll	Sweep Sorbent Pads
1	Box	Nitrile gloves
1	Box	Tyvek or Saranex coveralls
6	Each	Half mask respirators with organic vapor cartridges
4	Each	Flashlights and fresh batteries
		Safety Glasses Adequate for Response Workers
		Hammers, stakes, 200 feet of ½-inch poly rope
		Reflective mesh safety vests and hard hats
		First Aid Kit and Hand-held Eye Wash Kit(s) Adequate for Response Workers
<i>Personnel safety equipment must be sized for the trained emergency response personnel. Periodic (monthly) maintenance of this equipment must be conducted by the Owner or designated representative to assure availability and unimpeded access.</i>		

Disposal of Recovered Materials

Disposal of material and materials used for oil cleanup operations shall be packaged and transported to an approved disposal/treatment facility such as Emerald Alaska, Inc. in accordance with SAE Sleigh Camp #2 facility cleanup procedures, and North Slope Fuel Management Protocol, and applicable local, state, and federal requirements.

112.7 (b) Direction, Rate and Total Quantity of Discharge

Mitigating for potential equipment failure at SAE Sleigh Camp #2 facility resulting in oil discharge threatening navigable waters is considered a major priority. In the event a release should occur, Table 4 presents reasonably expected discharge directions and rate and quantity estimates.

Table 4: Discharge Direction, Rate, and Quantity

Potential Event	Maximum Volume Released (Gallons)	Maximum Discharge Rates in Gallons	Direction of Flow	Containment
Failure of mobile refueler	4,000-gallons (Largest Facility Tanks)	Gradual to instantaneous	Varies depending on camp location, generally all directions	General
Tank overfill	Limited to the capacity of the transfer vessel	60 gal/minute or pump capacity of jobber refueler	Varies depending on camp location, generally all directions	General, Active Containment, Sized Secondary Containment
Pipe failure	Sized to the largest facility tank or 4,000-gallons	100 gal/minute or the pumping capacity of the transfer pump	Varies depending on camp location, generally all directions	General, Sized Secondary Containment
Leaking pipe or valve packing	Sized to the largest facility tank or 4,000-gallons	100 gal/minute	Varies depending on camp location, generally all directions	General, Sized Secondary Containment

Winter operations are conducted over frozen tundra and ice. No open or free water is anticipated during winter operation periods and snow cover is anticipated. Any release reaching the snow or frozen tundra will require complete removal. Petroleum hydrocarbon release onto snow or seasonally frozen tundra is considered a discharge and threat to waters of the U.S and must be responded to in accordance with this SPCC plan.

112.7 (c) Containment and Diversionary Structures

All ASTs listed in this plan are located at onshore facilities and have general secondary containment as required for their specific application. In order to provide additional protection from release, all tanks are either double-walled tanks with overfill valves, spill buckets, and/or are placed in sized secondary containment.

The fuel transfer procedures discussed in section 112.7 (a), of this SPCC plan are used to describe the procedures used to implement the active control measures discussed in this SPCC plan. The most likely failure mode for a release from the subject 500-gallon double walled tanks is during filling operations. Maintaining constant visual contact of the tank while filling, and the presence of a containment basin sized to contain an average of two minutes of tank overfill, with a fill rate of 60 gallons per minute, is the principle method of active secondary containment. This will contain four times the likely volume of a discharge. Through constant visual contact of fueling the process relating to the subject 500-gallon tanks, the discovery and reaction time to a discharge will be less than the time required to fill the active secondary containment measure employed. For the purpose of the active containment measures discussed in his SPCC plan, the reaction time shall be 30 seconds. The direct action required to employ this active containment measure is to secure the device pumping oil into the subject AST. A release relating to a catastrophic failure (where automatic shut-off devices and overfill alarms provide no discharge prevention) is remote as discussed section (112.7 (c)) of this SPCC plan.

All of the ASTs installed at the SAE Sleigh Camp #2 are classified as mobile and portable, mobile refuelers or as double-walled tanks. Containment for mobile and mobile and portable containers is provided by general secondary containment, which requires the presence of

sorbent materials in order to immediately address the cleanup requirements of a release. Mobile and portable ASTs, when positioned for periods of time in excess of normal operational periods, are drained of their contents.

For ASTs requiring sized secondary containment, no allocation of freeboard for rain events is required for this SPCC plan because these ASTs are located inside of SAE Sleigh Camp #2 facility modules.

All SAE Sleigh Camp #2 facility diesel fuel ASTs are equipped with dry disconnect fuel transfer pipe couplers in order to limit the potential drip type release during the fuel transfer process. Additionally, all SAE Sleigh Camp #2 facility ASTs located inside of modules have welded steel flooring that provides additional drip and spill containment.

Spill pads, drip pans and 'duck ponds' are used for all fuel transfers at the SAE Sleigh Camp #2 facility exposed to uncontained locations. 'Duck ponds' are also placed under each valve, AST opening, or any other potential leak point not otherwise protected by secondary containment. The most likely causes for a release during fuel transfer are:

- Human error
- Pump, valve and/or discharge line breakage/malfunction
- Catastrophic tank structural failure

Tank pumps, valves, and discharge lines are inspected daily during field operations. Any observed system deficiency noted is repaired immediately.

Catastrophic structural failure is considered a rare occurrence. Human error is considered the most likely cause of a release during fuel transfer with the most likely release resulting from an overfill of the AST. SAE Sleigh Camp #2 facility ASTs are equipped with secondary containment whether or not required by this plan. As such, releases are primarily expected to be controlled within these secondary containment structures.

The SAE Sleigh Camp #2 facility is equipped with emergency spill response kits on all bulk fuel ASTs and inside various trailers.

112.7 (d) Containment and Diversionary Structure Impracticability

There are no determinations of secondary containment impracticability for the SAE Sleigh Camp #2 facility.

112.7 (e) Inspections, Tests, and Records

The SAE Sleigh Camp #2 facility has three general types of SPCC-regulated AST's:

- Bulk Storage ASTs
- Mobile or Portable ASTs
- Mobile Refuelers

SAE employees conduct Periodic Inspections of all Mobile or Portable ASTs on a monthly and annual basis as required by the Steel Tank Institute (STI) SP-001 standard using inspection reports and checklists in appendix E of this plan. Periodic inspections are required for all ASTs at the facility on both a monthly and annual inspection schedule. Inspection records must be signed by the SAE inspector or supervisor and kept for three years as usual and customary business records.

The following reporting forms are attached in the Appendix E:

- SPCC Plan Monthly Visual Inspection Checklist
- AST Monthly Inspection Report
- Spill Release Record Log
- Permanently Closed AST List
- AST Procedures and Tracking Log

112.7 (f) Personnel, Training, and Discharge Prevention Procedures

“Personnel, training, and discharge prevention procedures. (1) at a minimum, train your oil-handling personnel in the operation and maintenance of equipment to prevent discharges; discharge procedure protocols; applicable pollution control laws, rules, and regulations; general facility operations; and, the contents of the facility SPCC Plan.”

Routine facility inspections will be conducted by SAE Sleigh Camp #2 facility personnel specifically trained in AST visual inspection and mechanical system checks. Furthermore, SAE Sleigh Camp #2 facility and/or SAE Sleigh Camp #2 facility contractor personnel must receive worker-right-to-know health and safety training and be familiar with characteristics of these materials.

Table 5 lists primary individuals who are accountable and responsible for discharge prevention at the SAE.

Table 5: Designated Responsible-in-Charge for Discharge Prevention

<u>Role</u>	<u>Facility</u>	<u>Person</u>	<u>Contact Number</u>
Overall Responsible-in-Charge	SAExploration Seismic Exploration Sleigh Camp Facility	Ted Smith	(907) 301-5454 (cell)
Site Responsible-in-Charge	SAExploration Seismic Exploration Sleigh Camp Facility	Joe Pagliero	(907) 230-8684 (cell)

At a minimum, the SAE Sleigh Camp #2 facility and/or contract personnel will annually conduct SPCC discharge prevention training for personnel active with SPCC inspections, oil or fuel transferring, and other practices related to handling oils.

Specifically, this annual training will be conducted by the SAE Sleigh Camp #2 facility and, at a minimum, will address:

- Review fuel and oil transfer procedures stated previously in this SPCC.
- Summarize findings of visual inspections.
- All known discharges in the past review period and full explanation of cause of discharge.
- Malfunctioning equipment and components at ASTs and associated piping, pumps, or hoses.
- New or revised precautionary measures to prevent discharges

Routine facility inspections will be conducted by SAExploration personnel specifically trained in AST visual inspection and mechanical system checks.

112.7 (g) Security

40 CFR 112 requires a minimum level of site security at each facility and storage tank, as well as engineering judgment regarding higher levels of facility protection and security as site-specific conditions warrant. Specific security measures include:

Controlled Access to AST, Valves and Pumps

The SAE Sleigh Camp #2 is a private facility with sufficient oversight and security measures to prevent unauthorized access to the AST's contents. All fill ports and other AST access points are locked. In addition, this facility is monitored 24 hours per day when operational.

Lighting

The SAE Sleigh Camp #2 has sufficient lighting to prevent vandalism and assist in the discovery of oil discharges.

112.7 (h) Tank Car / Truck Loading / Unloading Racks

Tank car / truck loading / unloading racks are not installed or used at the SAE Sleigh Camp #2 facility.

112.7 (i) Brittle Fracture Assessment

Brittle fracture assessment is not relevant to this SPCC plan. Applicable regulation and standards require brittle fracture assessments for field constructed tanks after repair, alteration, reconstruction, or a change in service.

112.7 (j) Conformance to State and Local SPCC Regulations

The ASTs inspected at the SAE Sleigh Camp #2 facility comply with state and local discharge and containment regulations, which may be more stringent than this SPCC plan.

112.8 SPCC Plan Requirements for Onshore Facilities

112.8 (a) General Requirements

This facility is considered an Onshore Facility under 40 CFR 112 and as such is required to meet the requirements set forth under 40 CR 112.7 above and the following requirements established under 40 CFR 12.8.

112.8 (b) Facility Drainage

Discharge from secondary containment areas must be compliant with 40 CFR 110.3, which describes the threshold limit for allowable discharges as the "Sheen Rule," summarized below. This regulation establishes the criteria for determining whether facility drainage spill may be harmful to public health or welfare, thereby triggering the reporting requirements, as follows:

- Discharges that cause a sheen or discoloration on the surface of a body of water;
- Discharges that violate applicable water quality standards; and/or
- Discharges that cause a sludge or emulsion to be deposited beneath the surface of the water or on adjoining shorelines.

Should it become necessary to discharge secondary containment fluids and they do not violate the above threshold levels, the containment fluids may be openly discharged. North Slope operating requirements may be more stringent and may not permit stormwater discharge meeting the "Sheen Rule".

If the secondary containment fluids violate any of the above threshold levels, the fluids must be treated prior to discharge.

112.8 (c) Bulk Storage Containers

Stored Fluid Compatibility

The bulk storage containers for the inspected SAE Sleigh Camp #2 facility ASTs are compatible with their stored fluid.

Secondary Containment

All ASTs listed in this plan are located at onshore facilities and have secondary containment as required for their specific application. In order to provide additional protection from release, all tanks are either double walled with overfill valves, are placed in sized secondary containment, and use passive and active secondary containment measures.

The ASTs installed at the SAE Sleigh Camp #2 are classified as bulk storage, mobile and portable or as mobile refuelers. Containment for mobile refuelers is provided by general secondary containment, which requires the presence of sorbent materials in order to immediately address the cleanup requirements of a release. Sized secondary containment is provided for single walled tanks and mobile and portable ASTs as required to contain the full contents of the largest AST within the containment in the event of a release. In lieu of overfill alarms and fuel shut off valves, active containment measures are employed for the subject 500-gallon ASTs contained within this plan.

For ASTs requiring sized secondary containment, no allocation of freeboard for rain events is required for this SPCC plan because these ASTs are located inside of SAE Sleigh Camp #2 facility modules.

All SAE Sleigh Camp #2 facility diesel fuel ASTs control drips and other minor discharges through the use of drip pans integral to the AST system. Additionally, all SAE Sleigh Camp #2 facility ASTs located inside of modules have welded steel flooring that provides additional drip and spill containment.

Cathodic Protection and Piping Systems

The SAE Sleigh Camp #2 facility ASTs are not subject to cathodic protection requirements. Cathodic protection is required for AST systems that are fully or partially buried or in direct contact with soils. Cathodic protection requirements do not pertain to this plan.

Integrity Testing

"6) Test or inspect each aboveground container for integrity on a regular schedule and whenever you make material repairs. You must determine, in accordance with industry standards, the appropriate qualifications for personnel performing tests and inspections, the frequency and type of testing and inspections, which take into account container size, configuration, and design (such as containers that are: shop-built, field-erected, skid-mounted, elevated, equipped with a liner, double-walled, or partially buried). Examples of these integrity tests include, but are not limited to: visual inspection, hydrostatic testing, radiographic testing, ultrasonic testing, acoustic emissions testing, or other systems of non-destructive testing. You must keep comparison records and you must also inspect the container's supports and foundations. In addition, you must frequently inspect the outside of the container for signs of deterioration, discharges, or accumulation of oil inside diked areas. Records of inspections and

tests kept under usual and customary business practices satisfy the recordkeeping requirements of this paragraph.”

RSE has established inspection intervals for Periodic integrity inspections for the SAE Sleigh Camp #2 facility in accordance with the STI's SP-001 tank inspection standard. The Periodic integrity tests will be implemented in accordance with integrity the testing protocols established under STI SP-001. Any repair or modification to the AST or their associated piping involving welding, cutting, or mechanical coupling will require integrity testing in addition to visual and integrity inspection.

The SAE Camp #2 facility personal performing tank integrity inspections must be knowledgeable about the storage facility operations, the type of AST and its associated components, and characteristics of the liquid storage. Additionally, facility inspectors must be familiar with the pumping, piping, and valve operations of the AST system.

Integrity inspections of the SAE Sleigh Camp #2 facility shall be performed according to the timeline provided in Table 6. These integrity inspections shall be recorded on the integrity inspection form located in Appendix E of this SPCC plan.

Table 6: Bulk Fuel Storage Tank Integrity Testing Assessment Table

Asset ID	Tank Volume	Original Manufacture Date	Most Recent Tank Inspection	AST Category Determination ¹	Required Inspection Interval and Type ²
15-13 #1	67 (split 2x)	2014	2014	Category 1	P (M) (A)
15-13 #2	100	2014	2014	Category 1	P (M) (A)
15-13 #3	100	2014	2014	Category 1	P (M) (A)
15-14 #1	69	2014	2014	Category 1	P (M) (A)
15-14 #2	100	2014	2014	Category 1	P (M) (A)
15-14 # 3	100	2014	2014	Category 1	P (M) (A)
15-15 #1	140	2014	2014	Category 1	P (M) (A)
15-16 #1	140	2014	2014	Category 1	P (M) (A)
15-38 #1	100	2014	2014	Category 1	P (M) (A)
15-39 #1	100	2014	2014	Category 1	P (M) (A)
15-42 #1	100	2014	2014	Category 1	P (M) (A)
15-43 #1	100	2014	2014	Category 1	P (M) (A)
15-44 #1	500	2014	2014	Category 1	P (M) (A)
15-41 #1	500	2014	2014	Category 1	P (M) (A)
15-41 #2	100	2014	2014	Category 1	P (M) (A)
15-40 #1	100	2014	2014	Category 1	P (M) (A)
15-50 #1	100	2014	2014	Category 1	P (M) (A)
15-50 #2	3,000	2014	2014	Category 1	P (M) (A)
15-49 #1	3,000	2014	2014	Category 1	P (M) (A)
15-45 #1	100	2014	2014	Category 1	P (M) (A)
15-45 #2	4,000	2014	2014	Category 1	P (M) (A)
15-46 #1	100	2014	2014	Category 1	P (M) (A)
15-46 #2	4,000	2014	2014	Category 1	P (M) (A)
15-47 #1	4,000	2014	2014	Category 1	P (M) (A)
15-47 #2	100	2014	2014	Category 1	P (M) (A)
14-48 #1	4,000	2014	2014	Category 1	P (M) (A)
15-75 #1	500	2014	2014	Category 1	P (M) (A)
15-76 #1	500	2014	2014	Category 1	P (M) (A)
15-77 #1	500	2014	2014	Category 1	P (M) (A)
15-78 #1	500 (split 4x)	2014	2014	Category 1	P (M) (A)
15-78 #2	500	2014	2014	Category 1	P (M) (A)
15-79 #2	500	2014	2014	Category 1	P (M) (A)
15-79 #1	500 (split 4x)	2014	2014	Category 1	P (M) (A)
15-80	500	2014	2014	Category 1	P (M) (A)
15-81	500	2014	2014	Category 1	P (M) (A)
15-82	500	2014	2014	Category 1	P (M) (A)

¹ The tank category determination made by the inspecting engineering is required in order to establish the inspection type and inspection interval required by the STI SP-001 AST integrity inspection standard.

² P = Periodic Inspection, M = Monthly Inspection Required, A = Annual Inspection Required.

Heating Coils

No AST heating coils are installed at the SAE Sleigh Camp #2. Controlling leakage through monitoring the steam return and exhaust lines of heating coils is required at applicable AST facilities.

Discharge (Overfill) Protection

40 CFR 112.8(c) specifically requires discharge protection to reduce the likelihood of overfill. One of the following alternatives is utilized to accomplish this requirement at this SAE facility:

- Direct audible or code signal communication systems.
- Fast response system for liquid level determination.

AST's at the SAE Sleigh Camp #2 facility use a fast response system during filling operations and/or code signal communication systems. Fast response fueling requires an additional person who continuously observes and communicates to the fueler the AST liquid level measurements during filling operations.

These liquid level testing methods must be regularly tested to ensure proper operation. A record of these tests shall be maintained as part of the facilities record keeping program.

112.8 (d) Facility Transfer Operations, Pumping, and Facility Process

Fuel transfer into the SAE Sleigh Camp #2 facility ASTs is via a fuel transfer pump and flexible hosing equipped with dry break disconnect pipe couplers. Hose bibs and reels are used for fuel transfer along with drip pans. Facility ASTs, fuel hoses, bibs and reel systems must be included in the routine inspections prior to each fuel transfer and at least monthly. Specifically, visual inspections must include assessing above-grade:

- Valves and Valve Locks
 - Flange and Expansion Joints
 - Catchment Pans
-



N.T.S.

SAE EXPLORATION SEISMIC SLEIGH CAMP #2

VICINITY MAP

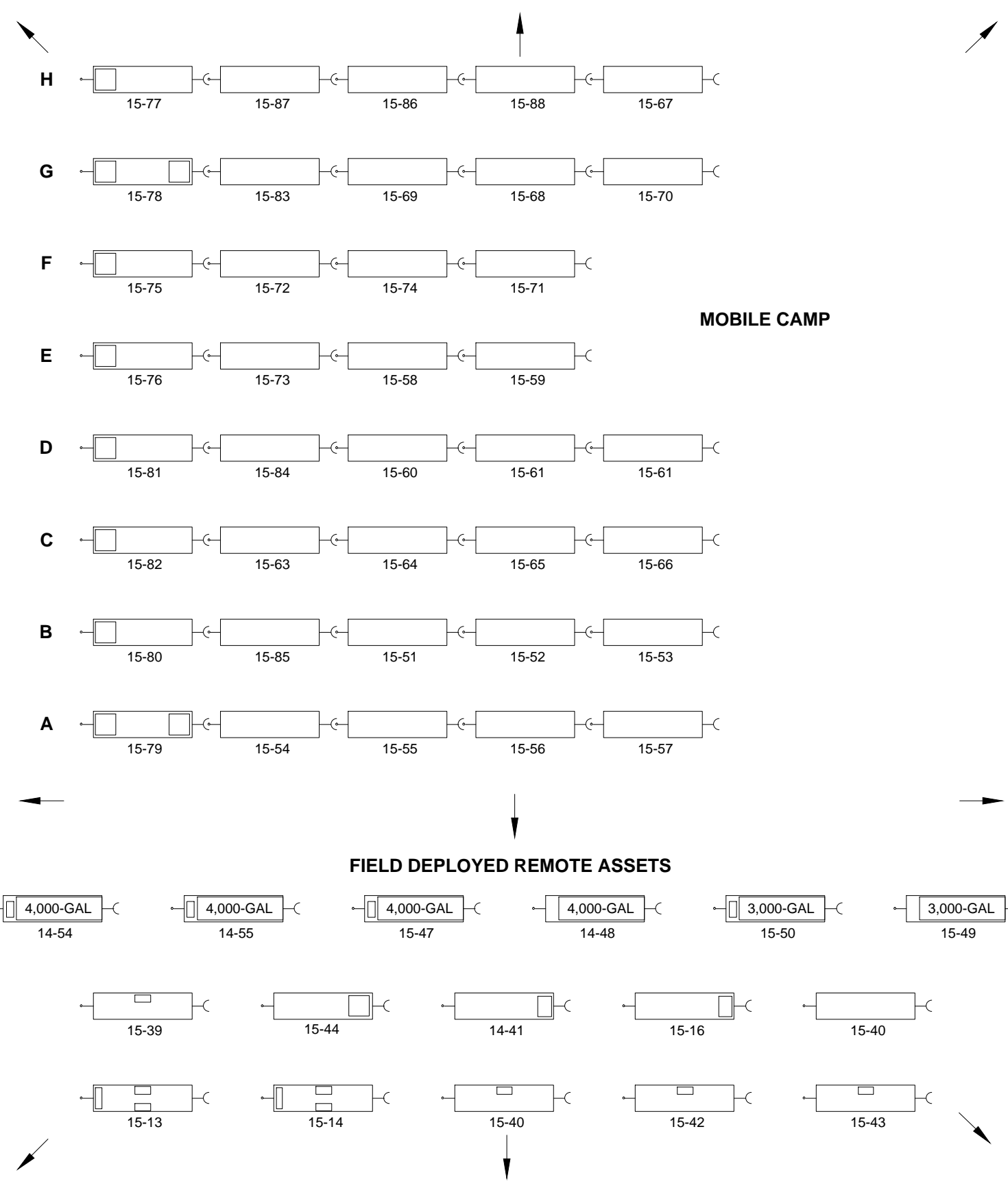
NORTH SLOPE, ALASKA

JOB NO: 13-1161
DATE: 2.12.2015

DRAWN: MSB
CHECKED: NB

RESTORATION
Science & Engineering, LLC
911 West 8th Avenue, Suite 100
Anchorage, Alaska 99501
PH (907) 278-1023 FAX (907) 277-5718

FIGURE 1



Asset ID	Tank Volume (Gallons)	Contents	Asset Description
Field Deployed Remote Assets			
15-13 #1	100	Diesel	Vibe Tender
15-13 #2	67 (split 2x)	Service Oils/Out of Service	Vibe Tender
14-41 #1	140	Diesel	Battery Shack
15-16 #1	140	Diesel	Node Reaper
15-39 #1	100	Diesel	Recorder
14-46 #1	100	Diesel	GPS Base Station
15-43 #1	100	Diesel	GPS Base Station
15-44 #1	500	Diesel	Water Maker
15-40 #1	100	Diesel	Survival
15-50 #1	3,000	Diesel	Camp Fuel
15-50 #2	100	Diesel	Camp Fuel
15-49 #1	3,000	Diesel	Fuel Storage
14-54 #1	4,000	Diesel	Remote Fuel
14-54 #2	100	Diesel	Remote Fuel
14-55 #1	4,000	Diesel	Fuel Storage
15-47 #1	4,000	Diesel	Remote Fuel
15-47 #2	100	Diesel	Remote Fuel
14-48 #1	4,000	Diesel	Remote Fuel
14-48 #2	100	Diesel	Remote Fuel
Sleigh Camp Assets			
15-38 #1	100	Diesel	Potable Water Tank
15-41 #1	500	Diesel	Incinerator
15-41 #2	100	Diesel	Incinerator
15-75 #1	500	Diesel	Genset / Food Storage
15-76 #1	500	Diesel	Genset / Food Storage
15-77 #1	500	Diesel	Genset / Camp Shop
15-78 #1	500	Diesel	Genset / Oil Room
15-78 #2	500 (split 4x)	Service Oils	Genset / Oil Room
15-79 #1	500	Diesel	Genset / Vibe Storage
15-79 #2	500 (split 4x)	Service Oils	Genset / Vibe Storage
15-80	500	Diesel	Genset / Storage
15-81	500	Diesel	Genset / Washroom
15-82	500	Diesel	Genset / Laundry
Camp Assets Not In Use			
15-14 #1	69	Service Oil/Out of Service	Field Shop
15-14 #2	100	Diesel/Out of Service	Field Shop
15-14 #3	100	Diesel/Out of Service	Field Shop

LEGEND

DRAINAGE DIRECTION

TRAIN MODULE

MOBILE REFUELER

SAE EXPLORATION SEISMIC SLEIGH CAMP #2

MOBILE SITE & DRAINAGE PLAN

NORTH SLOPE, ALASKA

JOB NO: 13-1161
DATE: 2.12.2015

DRAWN: MSB
CHECKED: NB

RESTORATION
Science & Engineering, LLC
911 West 8th Avenue, Suite 100
Anchorage, Alaska 99501
PH (907) 278-1023 FAX (907) 277-5718

FIGURE 2

RESTORATION SCIENCE & ENGINEERING, LLC

Appendix A
Certification of the Applicability of Substantial Harm Checklist

CERTIFICATION OF THE APPLICABILITY OF SUBSTANTIAL HARM CRITERIA CHECKLIST

Facility Name SAEExploration Seismic Exploration Sleigh Camp #2, SAE Alaska, Inc.

Facility Address North Slope, Alaska

1. Does the facility transfer oil over water to or from vessels and does the facility have a total oil storage capacity greater than or equal to 42,000 gallons?
☐ Yes ☒ No
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 above ground oil storage tank plus sufficient freeboard to allow for precipitation within any above ground oil 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 formula in Attachment C-III, Appendix C, 40 CFR 112 or a comparable formula ¹) such that a discharge for the facility could cause injury to fish and wildlife and sensitive areas? For further description of fish and wildlife and sensitive environments, see Appendices I, II, and III to DOC/NOAA's "Guidance for Facility and Vessel Response Environments" (Section 10, Appendix E, 40 CFR 112 for availability) and the applicable Area Contingency Plan.
☐ 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 the appropriate formula (Attachment C-III, Appendix C, 40 CFR 112 or comparable formula¹) such that a discharge for the facility would shut down a public drinking water intake ² ?
☐ 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 five (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.

Printed Name Rick Trupp

Title SAE General Manager,
Alaska

Signature _____

Date _____

¹ If a comparable formula is used, documentation of the reliability and analytical soundness of the comparable formula must be attached to this form.

² For the purposes of 40 CFR 112, public drinking water intakes are analogous to public water systems as described at 40 CFR 143.2(c).

Appendix B
Volume Calculations

Secondary containment calculations are not required for this facility during operational periods.

All mobile and portable tanks contained in this plan must use secondary containment during non-operational periods or when not under the direct oversight and control of facility personnel as prescribe by this SPCC plan.

Appendix C
Drainage Distance Analysis

Drainage distance calculations for SAExploration Seismic Exploration Sleigh Camp #2 are presented below:

While this facility is mobile, distances and directions to navigable water of the US are variable. The SAE Sleigh Camp #2 must regularly evaluate the distances and directions to navigable waters of the US in order to execute the requirements of this plan.

The SAExploration Seismic Exploration Sleigh Camp #2 storage pad in Deadhorse, Alaska is located directly adjacent to water-inundated tundra as is common for this area. The pad is mostly flat with water-inundated tundra to the east and west. While at this location, ASTs addressed in this SPCC plan are in storage and not in use. Site topography is such that spills originating at this site and escaping secondary containment would infiltrate or, if catastrophic, under certain conditions migrate as a sheet flow toward the water-inundated tundra. This pad and Deadhorse in general is surrounded by wetlands.

Drainage Structure	Drainage Direction	Approximate Distance
Wetlands and Surface Water	All Directions	0 to 225 Feet

Appendix D

SPCC Upgrade Needs and Recommendations

SPCC Recommendations

Administrative SPCC Recommendations

- Confirm annual SPCC Training and maintain training log;
- Maintain AST inspection or repair reports and certifications and records of new AST construction standards, AST details and specifications, AST interstitial monitoring records, piping and valve inspections, overfill alarm and pump shut off test records;
- Verify SAE Sleigh Camp #2 SPCC plan with accurate tank list and engineer's inspection is adequately updated as required.

SPCC Recommendations

"Permanently Closed" AST Management

ASTs that can hold fuel but are not in service and do not meet SPCC requirements for containment are still subject to regulation. As such, RSE advises the removal of any old fuel tanks greater than 55 gallons (including any old empty drums) from your facility as soon as practical.

Alternatively the SAExploration Seismic Exploration Sleigh Camp #2 can institute a "Permanently Closed AST" tagging system. For a tank to be "Permanently Closed" it must be emptied of all fluids, sludge and debris, capped except vent, and labeled "Permanently Closed" with the date.

Fueling Protocols

RSE recommends SAExploration Seismic Exploration Sleigh Camp #2 require on-site personnel to participate in all third-party fuel transfers to the facility. This is a best management practice to prevent mistakes, overfills, and helps ensure that spills that are the responsibility of the third-party fueler (jobber) are reported and managed.

Appendix E
Record Keeping Logs
Inspection and Spill Release Forms

SPCC Inspection Guidance Form (Equivalent to SP001 Monthly Inspection Requirements)

Introduction

Regularly scheduled inspections, evaluations, and testing by qualified personnel are critical parts of discharge prevention. Their purpose is to prevent, predict, and readily detect discharges. Records of inspections and tests are required by 40 CFR part 112 and must be signed by the appropriate supervisor or inspector. Documentation of AST and Facility inspections and tests should be kept with the SPCC Plan for a period of three years.

Visible oil leaks from tank walls, piping, or other components must be repaired as soon as possible to prevent a larger spill or a discharge. Pooled oil must be removed immediately upon discovery. All problems regarding tanks, piping, containment, or response equipment must immediately be reported to the Facility Manager. The following provides descriptions of AST visual inspection details.

AST Physical Conditions

- Are tanks damaged, rusted or deteriorated?
- Are bolts, rivets, or seams damaged?
- Is the tank securely anchored and are supports in good condition?
- Have tank foundations eroded or settled?
- Are there any visible leaks or cumulative stains on AST or on ground underneath AST?
- Does the corrosion state or AST condition require integrity assessment?

Secondary Containment

- Check containment berm/walls for damage or if lined check for rips, tears, and exposed sections of liner.
- Check if secondary containment drainage valves (if present) are locked.
- Check for standing water inside containment and if sheen is present.
- If double walled, check interstitial space for fluids.

Overfill Protection Systems (For Double Walled ASTs Not Inside Containment)

- Are double walled tanks equipped the proper overfill protection systems – Overfill alarm, tank gauge, interstitial monitoring, and float limiter valve or automatic shut-off?
- Check the function of mechanical systems, level gauges and overfill alarms as required.
- Check interstitial space of double walled tanks for fluids.

AST Identification, Security, and Safety Measures

- Are in-use ASTs properly labeled identifying content?
- Are not-in-use ASTs (55-gallons and above) labeled 'permanently closed'?
- Are no-smoking and Hazcom signs posted (No Smoking, Flammable Liquids, Used Oil)?
- Are pumps, valves, fill ports, bottom valves capped and/or locked if not in use?
- Is illumination sufficient and are bollards provided as appropriate?
- Are anti-siphoning valves present, if required?

AST Piping, Loading/Unloading Racks, and Transfer Equipment

- Are pipelines properly protected and supported?
- Are there any visible leaks or cumulative stains on or associated with the tank or piping?
- Is the fuel transfer hose connection secure?
- Are level gauges and emergency shut-off valves intact?
- Is loading/unloading rack, piping and hoses in good condition (if present)?
- When not in-use is fuel transfer piping either capped or blank-flanged?
- Are warning signs, bollards, and wheel chocks used at loading rack area?

Spill Response Equipment and SPCC Currency

- Is the facility equipped with minimum spill response equipment and is inventory complete?
- Does the SPCC Plan represent the current configuration of site AST systems?

SPCC Training and Inspection Records

- Are inspection, training, reportable spills, and containment dewatering records current?
- If double-walled AST are interstitial monitoring records current?
- Does the SPCC Plan represent the current configuration of site AST systems?

SAExploration Seismic Exploration Sleigh Camp #2 MONTHLY/ANNUAL AST INSPECTION SHEET
 (Equivalent to Monthly and Annual SP001 Inspection Requirements)

Date:	ASSET ID:							
Inspector:								
AST Visual Inspection Checklist (See Notes 1 -4)	Compliant		Compliant		Compliant		Compliant	
AST Physical Conditions	Y <input type="checkbox"/>	N <input type="checkbox"/>	Y <input type="checkbox"/>	N <input type="checkbox"/>	Y <input type="checkbox"/>	N <input type="checkbox"/>	Y <input type="checkbox"/>	N <input type="checkbox"/>
Secondary Containment	Y <input type="checkbox"/>	N <input type="checkbox"/>	Y <input type="checkbox"/>	N <input type="checkbox"/>	Y <input type="checkbox"/>	N <input type="checkbox"/>	Y <input type="checkbox"/>	N <input type="checkbox"/>
Overfill Protection (Double Walled Tanks)	Y <input type="checkbox"/>	N <input type="checkbox"/>	Y <input type="checkbox"/>	N <input type="checkbox"/>	Y <input type="checkbox"/>	N <input type="checkbox"/>	Y <input type="checkbox"/>	N <input type="checkbox"/>
AST Identification, Security, and Safety Measures	Y <input type="checkbox"/>	N <input type="checkbox"/>	Y <input type="checkbox"/>	N <input type="checkbox"/>	Y <input type="checkbox"/>	N <input type="checkbox"/>	Y <input type="checkbox"/>	N <input type="checkbox"/>
AST Piping, Loading/Unloading Rack, Dispensing, and Transfer Equipment	Y <input type="checkbox"/>	N <input type="checkbox"/>	Y <input type="checkbox"/>	N <input type="checkbox"/>	Y <input type="checkbox"/>	N <input type="checkbox"/>	Y <input type="checkbox"/>	N <input type="checkbox"/>
Spill Response Equipment and SPCC Currency	Y <input type="checkbox"/>	N <input type="checkbox"/>	Y <input type="checkbox"/>	N <input type="checkbox"/>	Y <input type="checkbox"/>	N <input type="checkbox"/>	Y <input type="checkbox"/>	N <input type="checkbox"/>
SPCC Training and Inspection Records	Y <input type="checkbox"/>	N <input type="checkbox"/>	Y <input type="checkbox"/>	N <input type="checkbox"/>	Y <input type="checkbox"/>	N <input type="checkbox"/>	Y <input type="checkbox"/>	N <input type="checkbox"/>
	Comments/Deficiencies:							
	1) Inspection requirements for each of the seven inspection categories are detailed on the SPCC Inspection Guidance Form. A yes indicates the installation meets SPCC requirements and is considered compliant.							
	2) A no response requires a follow-up comment in the space provided below. Comments must identify the AST and describe non-compliance or specify further assessment necessary.							
	3) Visible oil leaks from tank walls, piping, or other components must be repaired as soon as possible. Pooled oil must be removed immediately upon discovery. All problems regarding spills, tanks, piping, containment, or response equipment must immediately be reported to the Facility Manager.							
	4) Mobile Refuelers, tanker trucks, pump trucks and mobile/portable ASTs require general secondary containment in accordance with 112.7(c) which requires active containment in the form of spill kits, booms, curbs, or berms during mobilization and fueling of ASTs or tanker trucks/trailers. If mobile AST is used as a fixed tank or is left unattended and contains product for several days it must be inside sized secondary containment in accordance with Section 112.8(c) (11) of the SPCC rule.							
	Facility Manager Signature:							

Permanently Closed/ Not In-Use AST Procedures and Tracking Log

Bulk Storage Container Permanently Closed/ Not In-Use Procedures

All SPCC-regulated 'Bulk Storage Containers' staged at the SAExploration Seismic Exploration Sleigh Camp #2 not in-use as "positioned" mobile or portable AST will be marked as 'Permanently Closed' or 'Not In-Use/Out-of Service' in accordance with 40 CFR 112.2 definitions. Please note that the intent of EPA's permanently closed category is to establish category non-SPCC regulated containers that are not required to count towards SPCC-regulated storage as long as the conditions listed below are met. EPA personnel recognize that an operator may choose to use a permanently closed AST at a future date but as long as they meet permanently closed conditions they are not subject to SPCC regulation. If the AST is for used for bulk oil storage at a future date it must meet all applicable SPCC provisions in accordance with the AST type and usage service.

1. Upon summer storage and "positioning" of the SAExploration Seismic Exploration Sleigh Camp SPCC-regulated bulk storage containers the container ID, capacity, SPCC-regulated product, and date of closure must be recorded in the Permanently Closed AST Procedures and Tracking Log.
2. All liquid and sludge will be removed from each container and connecting line and disposed of by SAExploration Seismic Exploration Sleigh Camp personnel at the approved disposal facility.
3. All connecting lines and piping will be disconnected from the container and blanked off.
4. All valves, except ventilation valves, will be closed and locked.
5. A placard or painted sign will be posted on container identifying it as 'Permanently Closed' or 'Not In-Use/Out-of Service' and date of closure.

SAExploration Seismic Exploration Sleigh Camp #2				
Container ID	Location	Capacity	SPCC Regulated Product	Date of Closure

SAExploration Seismic Exploration Sleigh Camp #2 SPCC Plan North Slope, Alaska Containment Dewatering Log					
Containment Area	Tank ID	Volume of Water Removed (gallons)	Discharge Location	Sheen Present Yes/No	Signature and Date

Notes:

1. Identify Containment Area with Tank ID
2. Inspect water for sheen, sludge, or emulsion
3. If present, contact Environmental Manager for proper disposal
4. Record discharge location (ground surface or off-site treatment (i.e. Emerald))
5. Sign and date form

Appendix F
SPCC Training Forms

SAExploration Seismic Exploration Sleigh Camp #2 SPCC Personnel Training Form Checklist

Annual SPCC Training Refresher Checklist

This form is designed to guide personnel in conducting Spill Prevention Control and Countermeasure Training. Address each item in sequence.

All personnel attending the spill meeting should be recorded at completion of the training meeting.

1. Record location, date and time of SPCC training meeting.
 2. Record name and title of person leading the SPCC training meeting.
 3. Discuss location(s) of spill response equipment.
 4. Review location(s), type(s) and proper operation of spill response equipment.
 5. Discuss the possible spill sources direction(s) and flow rate of a potential spill.
 6. Discuss potential spill containment actions.
 7. Discuss potential spill collection and disposal actions.
- Any release actually or threatening to enter waters of the United States is a reportable spill, reference contact numbers in the SPCC Plan.***
8. Discuss contractors available to help provide equipment and manpower.
 9. Discuss the condition, use, and proper operation of hoses, pumps, piping and valves in the product transfer and storage systems.
 10. Discuss preventative actions that can be taken to reduce the chance of a spill.
 11. Discuss the definition of a spill or release and agency contact procedures.
 12. Record SPCC training meeting action items.
 13. Record personnel attending SPCC training meeting; have them sign their names as record of attendance.

Appendix G

Definitions

SPCC Definitions

SPCC regulations provide for various definitions for categories of ASTs that are subject to differing requirements for secondary containment or other spill prevention measures as follows:

Active Containment Measures

Active containment measures are those which involve certain action by facility personnel before or after a (or the) discharge occurs. These actions are also referred to as spill countermeasures.

General Secondary Containment Measures

The general secondary containment regulations require appropriate containment and/or diversionary structures or equipment to prevent a discharge to navigable waters or adjoining shorelines. While the general containment regulations do not require sized secondary containment, the containment system must prevent a release from reaching navigable waters before response and cleanup. All ASTs in service for the SAExploration Seismic Exploration Sleigh Camp #2 Facility require general secondary containment. Examples of general secondary equipment include:

- Dikes, berms, or retaining walls sufficiently impervious to contain oil
- Curbing or “duck ponds”
- Sumps and collection systems
- Culverting, gutters, or other drainage systems
- Weirs, booms, or other barriers
- Spill diversion ponds
- Retention ponds
- Sorbent materials

The primary method of providing General Secondary Containment for the SAExploration Seismic Exploration Sleigh Camp #2 Facility is spill kits containing a variety of sorbent material types. Each spill kit shall be located in close proximity to any tank covered under this plan.

Mobile/Portable Containers

A mobile or portable storage container with a capacity to store more than 55-gallons is subject to regulation by EPA under the SPCC rules when they are not being used for transportation. Examples of mobile/portable containers include 55-gallon barrels, totes, and intermediate bulk containers. When these containers are “positioned” and used for fixed storage sized secondary containment sufficient to contain the capacity of the largest single compartment or container with sufficient freeboard to contain precipitation must be provided.

Mobile Refuelers

A mobile refueler is a tanker or bulk storage container onboard a vehicle or towed that is designed solely to store and transport fuel into or from an aircraft, motor vehicle, locomotive, vessel, ground service equipment. Mobile refuelers are exempted from specific-sized secondary containment requirements for bulk storage but remain subject to general SPCC secondary containment requirements.

Non-Transportation-Related Tank Trucks

Non-transportation-related tank trucks operate similarly to mobile refuelers, though not specifically transferring fuel. Non-transportation-related tank trucks typically carry lubrication oils, grease, and transformer oil for example. Non-transportation-related tank trucks (bulk fuel and oil tank trucks) are exempt from sized secondary containment requirements unless tanker trucks are permanently positioned for use as supplemental storage and/or serve as a fixed storage tank at the facility. Non-transportation-related tank trucks remain subject to general SPCC secondary containment requirements.

Motive Power Containers

A motive power container is in or on a motor vehicle and serve as an onboard bulk storage container used primarily to power the movement of a motor vehicle, or ancillary onboard oil-filled operational equipment. Motive power container non-transportation related facilities fall under EPA jurisdiction but are exempt from the SPCC rule.

Oil-Filled Equipment

Oil-filled operating equipment is equipment where oil is present solely to enable operation of the device. This includes lubricating systems for pumps and compressors, gearboxes, transformers, and other systems containing oil solely to enable the operation of an apparatus or device and are not considered bulk storage, not part of a flow through process, and is not a generator set. EPA requirements can be met if general secondary containment is provided.

Positioned

When a mobile and portable container is positioned, or in stationary mode within the confines of a non-transportation related facility, it is subject to the sized secondary containment requirements of the SPCC rule. Positioned should be considered to be when the mobile and portable container is intended to be in a stationary mode for any period of time and when its purpose is not related to a transportation related use.

Permanently Closed ASTs

Permanently closed ASTs are not counted when calculating total oil storage capacity. "Permanently closed," is defined as ASTs "for which 1) All liquid and sludge has been removed from each container and connecting line; and (2) All connecting lines and piping have been disconnected from the container and blanked off, all valves (except for ventilation valves) have been closed and locked, and conspicuous signs have been posted on each container stating that it is a permanently closed container and noting the date of closure."

All ASTs that are subject to permanent closure requirements should set in a designated facility area. Stacked and labeled empty 55-gallon drums can be considered permanently closed and will be stored in an area designated for empty drum storage.

Sized Secondary Containment

Sized secondary containment refers to SPCC requirements that are intended to address the possibility of major container failure. The containment is sized to contain the volume of the largest container or AST in the containment plus additional freeboard to account for precipitation if applicable. Specific secondary containment requirements apply to the following:

- Bulk storage containers
- Loading/unloading racks
- Mobile or portable bulk storage containers
- Production facility bulk storage containers, including tank batteries, separation, and treating vessels/equipment.

Appendix H
Completed SPCC Inspection, Dewatering, and Spill Reporting Forms