

**ACE FUELS, LLC  
MERRILL FIELD AIRPORT SELF SERVE AVGAS FUELING  
FACILITIES (MAIN & WHISKEY PARKING AREA)**

**ANCHORAGE, ALASKA**

**SPILL PREVENTION CONTROL  
AND  
COUNTERMEASURE PLAN (SPCC)**

**PREPARED  
USING GUIDELINES FROM  
U.S. ENVIRONMENTAL PROTECTION AGENCY  
SPILL PREVENTION REQUIREMENTS  
40 CFR, Part 112.1-11**

**April 18, 2009**

**CERTIFICATION**

**SPILL PREVENTION CONTROL AND COUNTERMEASURE PLAN  
ACE FUELS, LLC – MERRILL FIELD AIRPORT SELF SERVE FUEL FACILITIES**

***Facility Location***

The ACE Fuels self serve aviation stations are located on the Merrill Field, Alaska Airport. One self serve facility is located at the main runway (O7-25), and the other is located at the Merrill Field Ski Strip. Merrill Field Airport is located at N61<sup>0</sup> 12' 51"; W149<sup>0</sup> 50' 10".

***Mailing Address***

ACE Fuels, LLC  
2321 Merrill Field Drive, C-6  
Anchorage, Alaska 99501

***Responsible Person***

Richard S. Armstrong      (907) 222-3000 phone  
Manager                      (907) 222-3001 fax

Michelle LaRose              (907) 222-3000 phone  
QC Technician

***Management Approval***

This SPCC Plan for the Merrill Field Airport fuel dispensing sites will be implemented as described herein. I certify under penalty of law that this document and all attachments were prepared under my direction in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

\_\_\_\_\_  
Richard S. Armstrong, Manager

Date \_\_\_\_\_

**TABLE OF CONTENTS**

**SPILL PREVENTION CONTROL AND COUNTERMEASURE PLAN  
ACE FUELS, LLC – MERRILL FIELD, ALASKA**

<b><u>Section</u></b>	<b><u>Page</u></b>
<b>CERTIFICATION</b>	2
TABLE OF CONTENTS .....	3
<b>I. INTRODUCTION</b> <b>40 CFR Part 112.7 (a)</b>	
A. Regulatory Compliance.....	4
B. Facility Description.....	5
C. Spill Response	6
<b>II. GENERAL INFORMATION</b> <b>40 CFR Part 112.4 (a) &amp; 40 CFR Part 112.7 (b) - (j)</b>	
A. Spill History.....	7
B. Potential Spills .....	7
C. Containment Structures .....	8
D. Demonstration of Impracticability.....	8
E. Inspections, Tests, and Records.....	8
F. Personnel, Training, and Spill Prevention Procedures.....	9
G. Security.....	10
H. Tank Truck Loading Rack.....	10
I. Brittle Fracture Evaluation.....	10
J. Additional Discharge Prevention Requirements.....	10
k. Notification Requirements.....	10
<b>III. SPECIFIC REQUIREMENTS</b> <b>40 CFR Part 112.8 (a) - (d)</b>	
A. Onshore Facility Requirements.....	12
B. Facility Drainage .....	12
C. Bulk Storage Tanks .....	12
D. Facility Transfer Operations.....	12

**APPENDIX**

<b><u>Appendix</u></b>	<b><u>Page</u></b>
A Engineer's Observations.....	15
B Self Inspection Logs / Documentation.....	15

**FIGURES**

<b><u>Figure</u></b>	<b><u>Page</u></b>
1. Equipment layout and key plan .....	

**I. INTRODUCTION**  
**40 CFR Part 112.7 (a)**

A. Regulatory Compliance

The Environmental Protection Agency (EPA) adopted 40 CFR, Part 112 in 1974, and substantially amended it in August 2002. These oil pollution prevention regulations require the preparation of a Spill Prevention Control and Countermeasure Plan (SPCC) for facilities with aboveground oil storage in excess of 1,320 gallons and, which due to their location, could reasonably be expected to discharge oil in harmful quantities into or upon the navigable waters of the United States or adjoining shorelines.

The Merrill Field Airport Self Serve fuel storage facility has bulk storage capacity of 6,000 gallons of 100 LL Avgas above ground double wall tank at the Ski Strip, and two 5,000 gallon double walled fiberglass tanks at the main airport site. The tanks are not adjacent to any wetlands, lakes, or rivers. There are no navigable waters in the immediate vicinity of the fuel storage facility. There is little or no probability of discharge of oil into navigable waters. All storm water at Merrill Field drains through the Municipality of Anchorage airport controlled oil water separator system, which than flows into Chester Creek, North Fork.

The content of the SPCC Plan is to follow the sequence outlined in 40 CFR, Parts 112.7-11. The Plan is to be prepared in accordance with good engineering practices to prevent and mitigate damage to the environment from oil spills. The Plan must be certified by a licensed Professional Engineer and must have the full approval of management at a level with authority to commit the necessary resources.

Facility management is to review and evaluate the Plan at least once every five years, and update it when ever there is a change in facility design, construction, operation, or maintenance that could materially affect the potential for discharge to navigable water. The review is to be documented.

EPA regulations further stipulate, in 40 CFR, Part 112.4, that a written report is to be submitted to the EPA Regional Administrator, and appropriate state agency, when a facility has discharged more than 1,000 gallons in a single discharge, or discharged more than 42 gallons in each of two discharges within any 12 month period which enter navigable waters or adjoining shorelines. The report must include:

1. Name of facility;
2. Your name;
3. Location of the facility;
4. Maximum storage or handling capacity of the facility and normal daily throughput;
5. Corrective action and countermeasures you have taken, including a description of equipment repairs and replacements;
6. An adequate description of the facility, including maps, flow diagrams, and topographical maps, as necessary;
7. The cause of the discharge, including a failure analysis of the system or subsystem in which the failure occurred;

8. Additional preventive measures you have taken or contemplated to minimize the possibility of recurrence; and
9. Such other information as the EPA Regional Administrator may reasonably require pertinent to the Plan or discharge.

In 1993, the regulations were expanded to require preparation and submittal of response plans from all facilities that can cause "substantial harm" due to potential oil spills. A Certification of Determination of Substantial Harm is to be completed, and, if necessary, a response plan prepared in accordance with 40 CFR, Part 112.20. The Merrill Field Airport fuel storage site does not meet EPA substantial criteria; therefore an EPA response plan is not required.

## **B. Facility Description**

The fueling facility is on a towered airport, and tenants are on the airport daily. The airport has installed Internet accessible, recording, digital cameras near the facility to monitor activities at the site, and to record any incident.

- Attached is an equipment site plan showing the tank, hardstand, and concrete pad. The facilities are mostly unmanned, with a staff person working at the main dispensing facility daily, 8 hours per day.

Deleted:

### ***Tank Accessories***

The system at the main station was installed in 2000, and the Whiskey Parking facility at the Ski Strip was installed February, 2003 as factory-new. The systems have numerous safety features, as listed below:

- There is a floating suction to only take fuel from the top level of the tank, so water or debris, if it did exist in the tank, would not be picked up.
- There is an impact valve on the outside piping between the tank and the dispenser to automatically break off and shut down in the event of a serious impact to the steel delivery pipe.
- There is a vacuum breaker valve at the top of the tank piping downstream of the pump and upstream of the dispenser. In the event that there were a pipe break on the pipe between the tank and the dispenser, the valve would shut off any fuel flow created by siphon. The valve requires positive pressure from the pump to open and allow fuel to flow.
- The piping between the tank and the dispenser has a piece of 12" UL listed flex piping to absorb relative motion that may be created by any seismic activity.
- Both the steel tank at Whiskey Parking and the dispenser are bolted to the concrete pad to prevent relative movement, using "redhead" concrete anchors. The two tanks at the main facility are buried.
- The pumps are controlled with a "Smart Controller Relay" that "learns" the pump current characteristics, and then programs itself to shut off in the event of a dry tank or a broken pipe where there would be less resistance to flow than normal.
- The fuel purchaser for the maximum number of gallons they wish to dispense must program the dispenser at each sale, which is typically less than 160

gallons. If more than 160 gallons were desired than the customer would have to repeat the transaction. This feature prevents abnormal amounts of fuel from being dispensed, which could limit the size of a spill if, for some reason, the hose or nozzle failed.

- The above ground steel tank at Whiskey Parking is founded on a 9" thick reinforced concrete pad. The pad has a concrete curb around the three sides that are nearest to the wetlands.
- The tanks are continuously monitored by an electronic Eeco 1500 (or equal) leak detection system, (Merrill Main has a Veeder Root TLS-300C similar system) which runs a tank leak test daily, and alarms on failure. ACE Fuels personnel check the leak detection system during their routine inspections. The electronic device also measures tank levels and computes 95% ullage levels for ordering fuel.
- The tank interstitial space is monitored by a second leak detector, with a visual indicator of fuel in the interstitial space.

### ***Delivery Pipeline***

Fuel is delivered from the above ground tank at Whiskey parking to the dispenser with a 1.5" welded steel above ground pipe, which is about 30" in horizontal distance. Any leak in the piping would be immediately noticed. The buried tanks have double walled fuel pipe, which terminates in a sump so any fuel leak can be detected.

### ***Tank Fill System***

Fuel is delivered into the above ground storage tank by a pump on the fuel delivery tanker truck. Fuel is delivered to the buried tanks using gravity. The tanker truck parks on a 6" thick concrete hardstand and connects to the low fill of the above grade tank with a 3" fuel rated hose. The truck connects to the buried tanks in a similar way. The operator is in attendance during all fuel deliveries. The connection point for the above grade tank is a low fill 3" POL type coupling located inside a spill containment box. The pipe from the low fill to the tank inlet has a check valve and an isolation shutoff valve to prevent contents of the pipe from flowing back during each fill. In addition, the tank has an overfill valve that shuts off flow to the tank when the tank reaches approximately 95% of it's capacity. The two buried tanks have a fill port accessible through a surface manhole, and both are equipped with high level shutoff valves.

### ***Tank Construction***

The Facility at the Ski Strip (Whiskey Parking) consists of one 6,000 gallon Avgas 100 LL, ballistic and vehicle impact resistant steel above ground storage tank. The tank is an STI-P3 corrosion protected steel tank, certified by the Steel Tank Institute. The tank is double walled, with concrete filling in the interstitial space. The tank is UL 2085 listed and labeled, making it both ballistic and vehicle impact resistant. The tanks at the main site are both 5,000 gallon buried double wall fiberglass construction.

### **C. Spill Response**

The fuel package at the tank includes a small spill response kit installed at the end of the tank for immediate use for first response. The kit is stocked with sorbent pads, socks, and other spill materials.

Merrill Field Airport Self Serve Avgas Fueling Facility

Spill potential and spill prevention measures are presented in the following sections of this SPCC Plan.

## **II. GENERAL INFORMATION**

### **40 CFR Part 112.4 (a) 40 CFR Part 112.7 (b)-(j)**

#### **A. Spill History - 40 CFR Part 112.4 (a)**

This section of the regulations require a written report be submitted to the EPA Regional Administrator, and appropriate state agencies, when a facility has discharged more than 1,000-gallons of fuel into navigable waters, or adjoining shorelines, or if it has discharged more than 42 gallons/discharge in two separate instances within a 12 month period into navigable waters, or adjoining shorelines. The content of the report is listed in Section I.A of this Plan.

ACE Fuels, LLC hereby confirms, as of June 2005, it has not discharged oil in quantities that require a written report be submitted to the EPA.

#### **B. Potential Spills - 40 CFR Part 112.7 (b)**

Deleted: 1

The reasonably expected modes of major failure, rupture or accident in which fuel could be spilled from the Facility are as follows:

##### **Primary Storage Tank Leak or Failure**

The fuel storage tank is a double wall tank that meets the intent of the EPA containment guidelines. It is possible a tank leak or failure could result from mechanical failure, vandalism, or catastrophic event.

- The rate of flow would be variable depending on the size and location of the tank leak or failure.
- The total quantity of fuel that could reasonably be discharged is 5,700 gallons - the 95% ullage capacity of the tank.
- Fuel spilled would be contained within the steel outer wall secondary containment impound. If spilled fuel escapes secondary containment, it would then drain onto the surrounding ground. Spilled fuel would be recovered by ACE Fuels and/or airport personnel and response equipment.

##### **Storage Tank Overflow**

During delivery there is no potential for storage tank overflow due to the existence of the overflow valve inside the tank that will stop flow into the tank when it reaches 95% of its capacity.

##### **Leak or Fracture in Hose from Truck to Tank**

The potential for leaks or fractures in the hose between the delivery truck and the low fill connection is very low, since a trained operator is continuously monitoring fueling of the storage tank.

##### **Leak or Fracture in Supply Pipeline from Tank to Dispenser**

There is potential for discharge from the 1.5" above ground supply pipeline that extends approximately 3 feet from the tank to the dispenser. The pipe is steel, welded except for connections in areas where service requires threaded or flanged connections.

- The rate of flow would be variable depending upon the nature and location of the leak or fracture. The submersible turbine pump delivery rate is a maximum of about 35 GPM. The pump would have to be operating in order to get that delivery rate, and for the pump to be operating, a customer would have to be present who has swiped his credit card to pay for the fuel. There are two emergency stops at the facility, one on the side of the point of sale and one about 20 feet away on the edge of the adjacent building. Both E-stops are clearly marked.
- The total quantity of fuel that could be spilled is proportional to the length of time the pipe is leaking, however, the pump is programmed to stop after the authorized amount is reached. This is typically about 160 gallons maximum. A fracture that occurs ahead of the meter would likely overload the ampacity of the pump motor and cause a pump shutdown. There is a pump controller that "learns" normal current patterns, so it can shut off when abnormally high or low currents are detected, as from an empty tank or from a low resistance, high flow event.

There is potential for overfill of aircraft fuel tanks while pilots are fueling their aircraft. The aircraft are to be fuelled on a concrete hardstand, which has a sealant placed over the concrete so that any minor spills do not seep into the ground but would instead flash to vapor unless an unusually large spill occurred. Potential spills would most likely be small, since the pilot will be hand filling his airplane. The pilot cannot fill the aircraft without continuously holding the nozzle lever on since all automatic fill hold on latches have been removed, so he would have to be aware that he was overfilling the plane if that occurred. The pilot would be paying for any spilled fuel, so this is an added incentive for him to not spill.

**C. Containment Structures - 40 CFR Part 112.7 (c)**

The steel tank and the two buried tanks are all double walled, with the outer tank structure having a volume larger than the inner tank structure, which acts as the secondary containment mechanism.

The tank secondary containment structure complies with the intent of EPA regulations (40 CFR, Part 112.8).

Transfer hoses used at the tank during delivery are provided by, and tested by, the fuel supplier.

**D. Demonstration of Impracticability - 40 CFR Part 112.7 (d)**

This section of 40 CFR Part 112 states that if it is impracticable to install secondary containment, then additional prevention/response measures are to be implemented. Secondary containment measures that comply with EPA guidelines are in place at the Facility.

**E. Inspection, Tests, and Records - 40 CFR Part 112.7 (e)**

Facility personnel observe the above ground tank and dispensing equipment during daily duties. The buried tanks are monitored electronically. A thorough visual inspection of the exposed fuel system is conducted daily by the ACE Fuels personnel.

The following additional inspections, tests, and records are required by EPA and are applicable to the Facility:

- Oil handling personnel are to be trained in operations, maintenance and discharge prevention procedures pertinent to their duties. Training is to be conducted, at minimum, on an annual basis and is to be documented.
- A spill notification and report form is to be completed and maintained for each oil discharge resulting from Facility operations.
- EPA requires a documented review and evaluation of this SPCC Plan at least once every five years.

The following sample documentation forms are contained in Appendix B of this Plan:

- Facility Inspection – Monthly Checklist
- Discharge Prevention Training Log
- Oil Spill Report Form
- SPCC Plan Review and Evaluation

The Facility Responsible Person is to ensure adequate records are completed. Documentation is to be maintained for five years, except for records of significant tank repairs, modifications, integrity tests, and spill reports that should be maintained permanently.

#### **F. Personnel Training, and Spill Prevention Procedures - 40 CFR Part 112.7 (f)**

The Facility Responsible Person is accountable for overall operations, oil spill prevention, and personnel training.

All oil handling personnel are to be instructed in operations, maintenance, and spill prevention procedures pertinent to their duties. Training is to be provided at least once a year. Verification of training is to be maintained. At minimum, the training should address the following topics:

- A. Pollution control laws, rules, and regulations summary of 40 CFR Part 112 "Oil Pollution Prevention".
- B. Fuel Storage Systems:
  1. Purpose and application
  2. System elements:
    - a. Tanks
    - b. Pumps
    - c. Accessory equipment
  3. Operational and maintenance of equipment
- C. Spill Prevention and Control:
  1. Potential spill sources
  2. Procedures to prevent spills
  3. Review of control measures:
    - a. Secondary containment
    - b. Safety valves
    - c. Pump shutoff switches
- D. Emergency response procedures:
  1. Location and use of emergency phone numbers
  2. Location and use of fire extinguishers

3. Location and use of spill cleanup materials

**G. Security - 40 CFR Part 112.7 (g)**

Security measures at the Facility include:

- The facility is routinely patrolled by the Municipality of Anchorage Airport Manager, and his maintenance people.
- Facility operators normally visit and inspect the site once every other day. A thorough visual inspection of the fuel system is to be conducted monthly.
- When not in direct use, all tank and pipelines valves that allow outward product flow, are to be locked in the closed position.
- No smoking signs and emergency notification phone numbers are posted at the Facility.
- The tank storage area is lighted.
- Portable fire extinguishers are located both on the storage tank and on the adjacent transient shelter.
- Digital cameras monitor the facility, and record all motion in the area of the tank and dispenser. Activity is maintained on the computer hard disk for up to 6 months.
- A spill response kit is maintained in a weather tight container mounted directly to the end of the storage tank. Additional response equipment is maintained by the Anchorage International Airport.

**H. Tank Truck Loading Rack - 40 CFR Part 112.7 (h)**

There is no tank truck loading rack at this location..

**I. Brittle Fracture Evaluation - 40 CFR Part 112.7 (i)**

All tanks are shop-fabricated and not subject to brittle fracture evaluation.

**J. Additional Discharge Prevention Requirements - 40 CFR Part 112.7 (j)**

There are no known State rules, regulations, or guidelines pertaining to discharge prevention and containment that are applicable to this Facility which are more stringent than the requirements of this section.

**K. Notification Procedures**

In the event of a spill or discharge of fuel in quantities that may be harmful to public health or welfare or the environment, the following agencies must be notified. Those quantities that may be harmful include those that:

- Violate applicable water standards
- Cause a film or sheen or discolor the surface of water
- Cause a sludge or emulsion to be deposited beneath the surface of water or on shorelines

The agencies to notify are listed in the order of notification:

Merrill Field Airport Self Serve Avgas Fueling Facility

1. National Response Center: 800-424-8802
2. Environmental Protection Agency, ADEC: 907-269-7500
3. Municipality of Anchorage, Airport Management:
  - a. Dave Lundeby, Airport Manager, 907-343-6305
  - b. Alex Jumao-as; 907-343-6311

### **III. SPECIFIC REQUIREMENTS**

#### **40 CFR Part 112.8 (a) - (d)**

##### **A. Onshore Facility Requirements - 40 CFR Part 112.8 (a)**

In addition to the specific spill prevention and containment procedures listed under this section, the general requirements listed in Part 112.7 are addressed in Section II of this plan.

##### **B. Facility Drainage - 40 CFR Part 112.8 (b)**

- (1) The tank area is not diked, since a double walled UL 2085 protected tank is used for containment. There are no storm water drain lines from the tank storage area. Storm water that accumulates in the concrete base area flows by gravity to adjacent normal drainage patterns.
- (2) Storm water does not have to be manually removed from the tank area.
- (3) It is not feasible to alter site drainage to retain any potential discharge on Facility property. Piping not within secondary containment, and located where site drainage would not retain a spill on Facility property, shall be subject to daily visual examination. The integrity testing is intended to provide equivalent environmental protection, in accordance with 40 CFR, Part 112.7(a)(2) as applicable to 112.8(b)(3).
- (4) There are no ponds, lagoons or catchment basins designed to retain oil at this location.

Surface drainage from the Whiskey Parking storage area is to the Northwest where it typically soaks into the gravel soil. Surface drainage from the ACE Fuels main area typically flows toward the south, where it enters the Merrill Field Storm water system, which leads to an oil-water interceptor operated by the Airport. Spilled fuel that escapes the tank and dispensing area at the Whiskey Parking site would drain onto the surrounding concrete hardstand which is under the tank, the dispenser, and the filling areas where it would evaporate. A larger spill, not occurring over concrete areas could also possibly spill and drain on to the adjacent gravel pad. Spilled fuel would likely percolate into the sandy/gravelly soils and/or migrate with the surface drainage patterns. As described in the Facility Response Plan, spilled fuel would be contained and recovered by operators using response equipment maintained by the Merrill Field Airport. Spilled fuel from the main dispenser area would flow towards the south, where it could eventually enter into the storm water collection system, which than leads to an oil/water interceptor.

##### **C. Bulk Storage Tanks - 40 CFR Part 112.8 (c)**

- (1) The tank materials and construction are compatible with the stored fuel at storage temperature and pressure. The tank meets the requirements of the Fire Code.
- (2) Secondary containment for the bulk storage tanks is discussed in Section II.C.
- (3) Discharge of storm water from diked areas is not applicable.
- (4) There are two underground storage tanks at the Facility.
- (5) There are no partially buried tanks at the Facility.

- (6) Integrity testing of storage tanks is conducted on a regular schedule and when material repairs are conducted. Section II.E identifies testing and record keeping procedures.
- (7) No tanks at the Facility are equipped with internal heating coils.
- (8) ~~During fuel delivery, the fuel supplier maintains constant visual monitoring of the fuel connections and the offloading operation. A clock type level gauge is located directly above the fill area of the above ground tank to indicate tank levels. The buried tanks are sumped before filling begins, and are monitored using the Veeder Root automatic tank monitor system. The high level fill automatic shutoff further limits the possibility of overfilling the tank during a truck delivery.~~
- (9) No petroleum effluents are discharged into navigable waters.
- (10) Visible oil leaks from tank seams, gaskets, piping, pumps valves, and bolts are to be reported to the Facility Responsible Person and promptly corrected. Any accumulation of fuel is to be promptly removed.
- (11) There are no mobile tanks at this location.

Deleted:

**D. Facility Transfer Operations - 40 CFR Part 112.8 (d)**

- (1) There is no buried pipe at this facility.
- (2) There is no on-grade piping.
- (3) A thorough visual inspection of the entire fuel system is conducted daily by the Facility Responsible Person or designated alternate.
- (4) Vehicle access to the tank pad is restricted by the existence of a 9" high concrete pad. Exposed piping at the tank is not subject to normal vehicular traffic.

**40 CFR Part 112.9 - Not applicable**  
**40 CFR Part 112.10 - Not applicable**  
**40 CFR Part 112.11 - Not applicable**

**APPENDIX**

***APPENDIX A. ENGINEER'S OBSERVATIONS***

***APPENDIX B. SELF INSPECTION LOGS / DOCUMENTATION***

**APPENDIX A**

**ENGINEER'S OBSERVATIONS**

Storm water runoff sketch.

**APPENDIX B**

**SELF INSPECTION LOGS / ENGINEER'S DOCUMENTATION**

- Facility Inspection – Monthly Checklist
- Discharge Prevention Training Log
- Oil Spill Report Form