

**APPENDIX A**

**INDUSTRY  
STANDARDS**

APPENDIX A - INDUSTRY STANDARDS



**APPENDIX A- INDUSTRY STANDARDS**

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APPENDIX A - TABLE OF CONTENTS

## APPENDIX A - INDUSTRY STANDARDS

### APPENDIX A - INDUSTRY STANDARDS

### **Industry Standards**

Industry has developed and published many standards that deal with AST facilities. Standards are developed by organizations consisting of people who work and are familiar with various aspects of industry. Through research, experience and general knowledge standards are written. Their purpose is to provide guidelines for designing, operating and maintaining facilities in a safe, organized and functional manner.

If you want a copies of any of the standards, you can call or write to the appropriate organization and order them. Addresses and phone numbers are included in this section.

**APPENDIX A- INDUSTRY STANDARDS****Addresses for Industry Standards**

If you want to order copies of any of the standards, you can call or write to the appropriate organization and order them. The price of these documents vary. Following are addresses, phone and FAX numbers.

**American National Standards Institute (ANSI)**

11 West 42 nd Street  
New York, New York 10036  
Phone: (212) 642-4900

**American Petroleum Institute (API)**

1220 L St. NW  
Washington, D.C. 20005  
Phone: (202) 682-8000 or publications (202) 682-8375

**American Society of Mechanical Engineers (ASME)**

22 Law Drive, Box 2300  
Fairfield, New Jersey 07007-2300  
Phone: (800) 843-2763 or (800) 321-2633  
FAX: (201) 882-1717

**International Fire Code Institute (IFCI)**

9300 Jollyville Road, Suite 105  
Austin, Texas 78759-7455  
Phone: (512) 345-2633

**National Association of Corrosion Engineers (NACE)**

P.O. Box 218340  
Houston, Texas 77218-8340  
Phone: (713) 492-0535  
FAX: (713) 579-6694

## APPENDIX A - INDUSTRY STANDARDS

### APPENDIX A - ADDRESSES FOR INDUSTRY STANDARDS

#### Addresses for Industry Standards

National Fire Protection Association (NFPA)  
1 Batterymarch Park  
P.O. Box 9101  
Quincy, Massachusetts 02269-9101  
Phone: (617)770-3000

Petroleum Equipment Institute (PEI)  
P.O. Box 2380  
Tulsa, Oklahoma 74101-2380  
Phone: (918) 494-9696  
FAX: (918) 491-9895

Steel Tank Institute (STI)  
570 Oakwood Road  
Lake Zurich, Ill. 60047  
Phone: (847) 438-0989  
Fax: (847) 438-4509

Underwriters Laboratories (UL)  
333 Pfingsten Road  
Northbrook, Ill. 6662  
Phone: (847) 272-8800  
FAX: (847) 509-6247

Uniform Fire Code (UFC)  
5360 South Workman Mill Road  
Whittier, California 90601

**APPENDIX A- INDUSTRY STANDARDS****Facility Piping**

ANSI B31.3: *Chemical Plant and Petroleum Piping* describes use, design, fabrication, examination and testing of piping systems.

ANSI B31.4: *Liquid Transportation Systems for Hydrocarbons, Liquid Petroleum Gas, Anhydrous Ammonia and Alcohols* includes information on for design and construction, material specifications, assembling and testing piping, maintenance procedures and corrosion protection.

API 570: *Piping Inspection Code, Inspection, Repair, Alteration, and rerating of In-Service Piping Systems* provides guidelines for maintaining the safety and integrity of piping systems.

STI R892: *Recommended Practice for Corrosion Protection of Underground Piping Networks Associated with Liquid Storage and Dispensing Systems* outlines the steps designing, installing and monitoring of corrosion control systems for underground metallic piping.

## APPENDIX A - INDUSTRY STANDARDS

### APPENDIX A - INDUSTRY STANDARDS FOR TANK DESIGN AND CONSTRUCTION

#### Tank Design and Construction

API Spec 12B: *Specification for Bolted Tanks for Storage of Production Liquids* covers material, design and erection requirements for vertical, cylindrical, aboveground, bolted steel tanks with capacities of 4,200 to 420,000 gallons.

API Spec 12D: *Specification for Field Welded Tanks for Storage Production Liquids* covers material, design, fabrication and erection requirements for vertical, cylindrical, aboveground, welded steel tanks with capacities of 21,000 to 420,000 gallons.

API Spec 12F *Specification for Shop Welded Tanks for Storage Production Liquids* covers material, design, and construction requirements for vertical, cylindrical, aboveground, shop-welded steel tanks with capacities of 3,780 to 21,000 gallons.

API RP 12R1: *Recommended Practice for Setting, Maintenance, Inspection, Operation and Repair of Tanks in Production Service* contains guidelines for new tank battery installations and for revamping existing batteries.

API Std 620: *Design and Construction of Large, Welded, Low-Pressure Storage Tanks* covers design and construction of large, welded, low-pressure carbon steel aboveground storage tanks.

API Std 650: *Welded Steel Tanks for Oil Storage* covers material, design, fabrication, erection and testing requirements for vertical, cylindrical aboveground welded steel storage tanks in various sizes and capacities.

API Std 2610: *Terminal & Tank Facility Management* covers the design, construction, operation, inspection, and maintenance of petroleum terminal and tank facilities and is designed as a pointer document that will direct the user to other appropriate industry standards

ASME B96.1: *Welded Aluminum Alloy Storage Tanks* covers the design and fabrication of welded aluminum alloy storage tanks.



**APPENDIX A- INDUSTRY STANDARDS****Tank Design and Construction**

API Publ. 850: *API Standards 620, 650 and 653 Interpretations - Tank Construction and Inservice Inspection* is a compendium of responses to technical inquiries on the three API Standards listed.

NACE STD RP0193-93: *External Cathodic Protection of On-Grade Metallic Storage Tank Bottoms* provides guidelines for the design, installation and maintenance of cathodic protection systems for the exterior bottoms of on-grade metallic storage tanks.

PEI-RP200: *Recommended Practices for Installation of Aboveground Storage Systems for Motor Vehicle Fueling* provides a reference to preferred practices and procedures for installing aboveground storage systems at service stations, marinas and other fueling sites.

STI R893: *Recommended Practice for External Corrosion Protection of Shop /Fabricated Aboveground Storage Tank Floors* details design and manufacture procedures for an external corrosion control for ASTs that are shop fabricated to UL-142 within a steel secondary containment dike system.

STI F911: *Standard for Diked Aboveground Steel Tanks* includes fabrication specifications for construction of steel diked secondary containment of products stored in ASTs, and the manufacture, inspection and testing of open top diked secondary containment tanks.

STI R912: *Installation Instructions for Factory Fabricated Aboveground Storage Tanks* covers foundation preparation, air testing, handling, labeling and secondary containment installation requirements for primary storage tanks built to UL 142.

STI F921: *Standard for Aboveground Tanks with Integral Secondary Containment* addresses manufacturing, inspecting and testing secondary containment tanks.

## APPENDIX A - INDUSTRY STANDARDS

### APPENDIX A - INDUSTRY STANDARDS FOR TANK DESIGN AND CONSTRUCTION

#### **Tank Design and Construction**

STI R931: *Double Wall Aboveground Storage Tank Installation & Testing Instructions* detail handling and testing procedures for double walled ASTs upon arrival at the site.

UL 142: *Steel Aboveground Tanks for Flammable and Combustible Liquids* covers design and construction specifications for producing UL listed steel ASTs for flammable and combustible liquids.

UI 2085: *Insulated Aboveground Tanks for Flammable and Combustible Liquids* covers insulated aboveground, atmospheric tanks intended for storage of noncorrosive, stable, flammable or combustible liquids.

## APPENDIX A- INDUSTRY STANDARDS

### Tank Operation

API Chapter 3.1A: *Standard Practice for the Manual Gauging of Petroleum and Petroleum Products* describes the procedure for manual gauging of petroleum products in fixed or floating roof tanks and marine vessels.

API Chapter 3.1B: *Standard Practice for Level Measurement of Liquid Hydrocarbons in Stationary Tanks by Automatic Tank Gauging* discusses automatic tank gauging in general and gauge calibration.

API Chapter 16.2: *Mass Measurement of Liquid Hydrocarbons in Vertical, Cylindrical Storage Tanks by Hydrostatic Tank Gauging* provides guidance on the installation, commissioning, maintenance, validation and calibration of hydrostatic tank gauging systems for the direct measurement of static mass of liquid hydrocarbons in storage tanks.

API Publi 306: *An Engineering Assessment of Volumetric Methods of Leak Detection in Aboveground Storage Tanks* provides the results of a leak detection project in aboveground storage tanks which utilize volumetric methods to detect leaks.

API Publi 307: *An Engineering Assessment of Acoustic Methods of Leak Detection in Aboveground Storage Tanks* provides the results of a leak detection project in aboveground storage tanks which utilize acoustic methods to detect leaks.

API RP 651: *Cathodic Protection of Aboveground Petroleum Storage Tanks* describes the corrosion problems characteristic in aboveground steel storage tanks and associated piping systems and provides a general description of the two methods currently used to provide cathodic protection against corrosion.

API RP 652: *Lining of Aboveground Petroleum Storage Tank Bottoms* describes the procedures and practices for achieving corrosion control in aboveground storage tanks by application of tank bottom linings in both existing and new storage tanks.

## APPENDIX A - INDUSTRY STANDARDS

### APPENDIX ONE -INDUSTRY STANDARDS FOR TANK OPERATION

#### **Tank Operation**

API RP 1626: *Storage and Handling Ethanol and Gasoline-Ethanol Blends at Distribution Terminals and Service Stations* provides recommended practices for the storage, handling and fire protection for both ethanol and gasoline-ethanol blends.

API RP 1627: *Storage and Handling Gasoline-Methanol/Cosolvent Blends at Distribution Terminals and Service-Stations* describes recommended practices for the storage, handling and fire protection of gasoline-methanol/cosolvent blends.

API STD 2000: *Venting Atmospheric and Low -Pressure Storage Tanks (Nonrefridgerated and Refrigerated)* covers the normal and emergency venting requirements for aboveground liquid petroleum or petroleum products storage tanks and aboveground and underground refrigerated tanks.

API RP 2350: *Overfill Protection for Petroleum Storage Tanks* suggests methods of preventing petroleum storage tanks from being overfilled.

**APPENDIX A- INDUSTRY STANDARDS****AST Maintenance**

API 653: *Tank Inspection, Repair, Alteration and Reconstruction* provides guidance in the inspection, repair, alteration and reconstruction of steel storage tanks used in the petroleum and chemical industries.

API Publ 2015: *Safe Entry and Cleaning of Petroleum Storage Tanks* describes precautions and procedures to clean non-portable, nonrefrigerated atmospheric and pressurized petroleum storage tanks.

API Publ 2217A: *Guidelines for Work in Inert Confined Spaces in the Petroleum Industry* provides guidelines for personnel to safely enter and work in or near confined spaces that have been intentionally purged with an inert gas until the vapor space and any emissions are below flammable or reactive levels.

## APPENDIX A - INDUSTRY STANDARDS

### APPENDIX A - FIRE PROTECTION

#### Fire Protection

API Publ 2207: *Preparing Tank Bottoms for Hot Work* outlines safety precautions for preventing accidental fires and explosions when hot work is performed on tank bottoms.

API Publ 2021: *Guide for Fighting Fires In and Around Petroleum Storage Tanks* is designed as a guide to train employees to successfully attack and extinguish various types of petroleum storage tank fires.

API Publ 2027: *Ignition Hazards Involved in Abrasive Blasting of Atmospheric Storage Tanks in Hydrocarbon Service* identifies the ignition hazard involved in abrasive blasting of the exteriors of hydrocarbon storage tanks containing a mixture that is flammable or that can become flammable when air is added.

NFPA 30: *Flammable and Combustible Liquids Code* provides safe storage and handling requirements for flammable and combustible liquids.

NFPA 30A: *Automotive and Marine Services Station Code* supplies general provisions for piping, fuel dispensing systems, stations inside buildings and operations.

NFPA 31: *Installation of Oil Burning Equipment* provides requirements for stationary and portable oil burning equipment, tanks, piping and accessories.

*Uniform Fire Code* gives supplemental provisions to laws relating to fire safety and includes specific information on aboveground storage tanks.

International Fire Code, which became available in 2000, is compatible with all International Codes, including the International Building Code.

**APPENDIX A- INDUSTRY STANDARDS****AST Related Industry Standards**

API Publ 328: *Laboratory Evaluation of Candidate Liners for Secondary Containment of Petroleum Products* provides comparative data on the physical properties of liner materials as a function of their controlled exposure to fuels and /or additives.

API Publ 422: *Groundwater Protection Programs for Petroleum Refining and Storage Facilities: A Guidance Document* provides guidance to help petroleum facilities identify the types of issues that may need to be addressed in a groundwater protection plan.

API Publ 1638: *Waste Management Practices for Petroleum Marketing Facilities* provides specific guidance for managing typical waste streams at petroleum marketing facilities.

API Publ 2202: *Dismantling and Disposing of Steel from Aboveground Leaded Gasoline Storage Tanks* outlines precautions to prevent hazardous exposure of personnel to lead antiknock compounds when dismantling tanks that have contained leaded gasoline and when disposing of the steel.

**APPENDIX B**

**MATERIALS**

**SAFETY DATA**

**SHEET**

MATERIALS SAFETY DATA SHEET





**APPENDIX B - MATERIALS SAFETY DATA SHEET**

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**APPENDIX B - MATERIALS SAFETY DATA SHEET**

**Diesel #2 MSDS**

Revision Date: 03/13/1998

MATERIAL SAFETY DATA SHEET

Product Name: No. 2 Diesel

Manufacturer: Mapco Alaska Petroleum, Inc. (A Williams Energy Co.)

Address: 1100 H & H Lane North Pole AK 99705

Telephone: (907) 488-0037

Emergency: (800) 424-9300

Contact: Refinery Operations

DIESEL #2 MSDS

SECTION 01 CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Trade Name: No. 2 Diesel

Synonyms: Burner oil, Diesel, Diessel #2, F-76, Fuel oil #2, Lago

Description: Petroleum Hydrocarbon

NFPA 704M Rating:

Health: 0 Fire: 2 Reactivity: 0 Special: 0

0=Insignificant 1=Slight 2=Moderate 3=High 4=Extreme

SECTION 02 COMPOSITION AND INFORMATION ON INGREDIENTS

**APPENDIX B - MATERIALS SAFETY DATA SHEET**

**Diesel #2 MSDS**

Chemical Ingredients (% by Weight)

Ingredient	CAS Number	Percent Weight
Aromatic & Aliphatic hydrocarbons	8002-05-9	100% - Max

**SECTION 03 HAZARD IDENTIFICATION**

**EYES:** High vapor concentration or liquid contact with eyes may result in eye irritation and conjunctivitis.

**SKIN:** Prolonged or repeated exposure may result in irritation, blistering or dermatitis.

**INGESTION:** Pain and irritation of mucous membranes, nausea, vomiting and diarrhea. Aspiration after ingestion causes bronchitis or chemical pneumonia.

**INHALATION:** High vapor concentrations may result in respiratory irritation, dizziness, unconsciousness, cardiac arrhythmias and possibly pulmonary edema depending on length of exposure.

**SECTION 04 FIRST AID INFORMATION**

**EMERGENCY AND FIRST AID PROCEDURES:**

**INHALATION:** Remove to fresh air area. If not breathing, administer artificial resuscitation. Seek medical attention immediately.

**EYE CONTACT:** Immediately flush with clean water for 15 minutes. Seek medical attention.

**SKIN CONTACT:** Wash thoroughly with soap and water; remove soiled clothing and wash before re-use.

**INGESTION:** DO NOT INDUCE VOMITING! Seek medical attention.

**LOCAL ORAL:** Wash until taste is gone.

**DIESEL #2 MSDS**

## APPENDIX B - MATERIALS SAFETY DATA SHEET

### Diesel #2 MSDS

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#### SECTION 05 FIRE FIGHTING MEASURES

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**EXTINGUISHING MEDIA:** Carbon dioxide, dry chemical, foam, or water fog.

**SPECIAL FIRE FIGHTING PROCEDURE:** Water stream may spread fire; use water spray only to cool exposures. Use foam to blanket the spill or fire.

**FLASH POINT (METHOD USED):** 124 degrees F minimum (Tag Closed Cup)

**FLAMMABLE OR EXPLOSIVE LIMITS (Percent by volume in Air):**

LOWER LIMIT: 1.0

UPPER LIMIT: 6.0

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#### SECTION 06 ACCIDENTAL RELEASE MEASURES

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**STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED:** If possible, shut off source of spill; remove sources of ignition. Contain in limited area if possible; recover liquid. Avoid breathing vapors; absorb on suitable media. Notify authorities if product enters sewers, waterways.

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#### SECTION 07 HANDLING AND STORAGE

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**HANDLING:** Keep containers closed. Avoid eye contact by use of chemical safety goggles and/or full faceshield where splashing is possible. Wear protective clothing appropriate for work situation to minimize skin contact. Use only in a well-ventilated area.

**STORAGE:** Do not store near heat, sparks, flame or strong oxidants. Store

DIESEL #2 MSDS

## APPENDIX B - MATERIALS SAFETY DATA SHEET

### Diesel #2 MSDS

in approved, properly marked areas as NFPA Class II B Liquid.

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#### SECTION 08 EXPOSURE CONTROLS AND PERSONAL PROTECTION

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##### RESPIRATORY PROTECTION:

**CONFINED AREA:** Use NIOSH/MSHA approved full or partial face mask equipped with organic vapor canister or self-contained breathing apparatus.

**OPEN AREA:** Use NIOSH/MSHA approved full or partial face mask equipped with organic vapor canister or large spills when vapors are present.

**VENTILATION REQUIREMENTS:** Local exhaust adequate to prevent explosive mixture.

**PROTECTIVE GLOVES:** Chemical-resistant gloves. (Neoprene is recommended.)

**EYE PROTECTION:** Splash goggles and face shield.

**PROTECTIVE CLOTHING:** Chemical-resistant clothing should be used when the possibility of splashing is present. (Neoprene is recommended.)

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#### SECTION 09 PHYSICAL AND CHEMICAL PROPERTIES

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**BOILING RANGE:** 300 - 650 degrees F

**SPECIFIC GRAVITY (H<sub>2</sub>O=1):** 0.84 - 0.88

**VAPOR PRESSURE (MM Hg):** Not established.

**pH:** Not established.

**VAPOR DENSITY (AIR @ 1):** >4

**APPEARANCE & ODOR:** Straw colored Liquid with hydrocarbon odor.

**SOLUBILITY IN WATER:** Negligible.

**POUR POINT:** Greater than 10 degrees F

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DIESEL #2 MSDS

**APPENDIX B - MATERIALS SAFETY DATA SHEET**

DIESEL #2 MSDS

**Diesel #2 MSDS**

**SECTION 10 STABILITY AND REACTIVITY**

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STABILITY: STABLE

HAZARDOUS POLYMERIZATION: WILL NOT OCCUR

INCOMPATIBILITY -- MATERIALS TO AVOID: Strong oxidants; like chlorine and concentrated oxygen.

HAZARDOUS DECOMPOSITION PRODUCTS: Carbon monoxide, carbon dioxide, smoke.

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**SECTION 11 TOXICOLOGICAL INFORMATION**

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No information provided by manufacturer.

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**SECTION 12 ECOLOGICAL INFORMATION**

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No information provided by manufacturer.

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**SECTION 13 DISPOSAL CONSIDERATIONS**

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WASTE DISPOSAL METHOD: For proper disposal of waste, refer to federal and state regulations.

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**SECTION 14 TRANSPORTATION INFORMATION**

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**APPENDIX B - MATERIALS SAFETY DATA SHEET**

**Diesel #2 MSDS**

DOT UN # 1993

DOT CLASSIFICATION: Combustible liquid

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SECTION 15 REGULATORY INFORMATION

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OSHA CLASSIFICATION: Combustible liquid

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SECTION 16 OTHER INFORMATION

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FOR EMERGENCY CONTACT:  
CHEMTREC 1-800-424-9300

FOR OTHER PRODUCT INFORMATION, CONTACT:  
MARKETING MANAGER (907)273-3300

DISCLAIMER: The information contained herein is believed to be accurate and is offered in good faith. This information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process. Mixing this product with any other materials may change the characteristics such as flash point, flammability or health effects. Because product use is beyond our control, no warranty is given, expressed or implied.

DIESEL #2 MSDS



**APPENDIX B - MATERIALS SAFETY DATA SHEET**

**Unleaded Gasoline MSDS**

Revision Date: 03/13/1998

MATERIAL SAFETY DATA SHEET

UNLEADED GASOLINE MSDS

Product Name: Unleaded Gasoline

Manufacturer: Mapco Alaska Petroleum, Inc. (A Williams Energy Co.)

Address: 1100 H & H Lane North Pole AK 99705

Telephone: (907) 488-0037

Emergency: (800) 424-9300

Contact: Refinery Operations

SECTION 01 CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Trade Name: Unleaded Gasoline

Synonyms: 87 Octane Unleaded, 88.5 Octane Unleaded,  
90 Octane Unleaded, Mid-grade unleaded,  
Premium unleaded, Regular unleaded,  
Subgrade unleaded

Description: Petroleum Hydrocarbon

NFPA 704M© Rating:

Health: 1 Fire: 3 Reactivity: 0 Special: 0

0=Insignificant 1=Slight 2=Moderate 3=High 4=Extreme

## APPENDIX B - MATERIALS SAFETY DATA SHEET

### Unleaded Gasoline MSDS

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#### SECTION 02 COMPOSITION AND INFORMATION ON INGREDIENTS

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##### Chemical Ingredients (% by Weight)

Ingredient	CAS Number	Percent Weight
Aromatic & Aliphatic hydrocarbons	8002-05-9	96% - Max
Benzene	71-43-2	4.8% - Max

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#### SECTION 03 HAZARD IDENTIFICATION

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**EYES:** High vapor concentration or liquid contact with eyes may result in eye irritation and conjunctivitis.

**SKIN:** Prolonged or repeated exposure may result in irritation, blistering or dermatitis.

**INGESTION:** Pain and irritation of mucous membranes, nausea, vomiting and diarrhea. Aspiration after ingestion causes bronchitis or chemical pneumonia.

**INHALATION:** High vapor concentrations may result in respiratory irritation, dizziness, unconsciousness, cardiac arrhythmias and possibly pulmonary edema depending on length of exposure.

**OTHER:** This product contains benzene which is suspected of causing cancer with chronic exposure.

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#### SECTION 04 FIRST AID INFORMATION

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#### EMERGENCY AND FIRST AID PROCEDURES:

UNLEADED GASOLINE MSDS

## APPENDIX B - MATERIALS SAFETY DATA SHEET

UNLEADED GASOLINE MSDS

### Unleaded Gasoline MSDS

**INHALATION:** Remove to fresh air area. If not breathing, administer artificial resuscitation and seek medical attention immediately.

**EYE CONTACT:** Immediately flush with clean water for 15 minutes. Seek medical attention.

**SKIN CONTACT:** Wash thoroughly with soap and water; remove soiled clothing and wash before re-use.

**INGESTION:** DO NOT INDUCE VOMITING! Seek medical attention.

**LOCAL ORAL:** Wash until taste is gone.

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### SECTION 05 FIRE FIGHTING MEASURES

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**EXTINGUISHING MEDIA:** Carbon dioxide, dry chemical, foam or water fog.

**SPECIAL FIRE FIGHTING PROCEDURE:** Water stream may spread fire; use water spray only to cool exposures. Use foam to blanket the spill or fire.

**UNUSUAL FIRE AND EXPLOSION HAZARDS:** Explosion hazard in fire situation. Vapor heavier than air and may travel a considerable distance to a source of ignition and flash back.

**FLASH POINT (METHOD USED):** Less than -40 degrees F (Tag Closed Cup)

**FLAMMABLE OR EXPLOSIVE LIMITS (Percent by volume in Air):**

LOWER LIMIT: 1.4

UPPER LIMIT: 7.6

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### SECTION 06 ACCIDENTAL RELEASE MEASURES

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**STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED:** If possible, shut off source of spill; remove sources of ignition.

## APPENDIX B - MATERIALS SAFETY DATA SHEET

### Unleaded Gasoline MSDS

Contain in limited area if possible; recover liquid. Avoid breathing vapors; absorb on suitable media. Notify authorities if product enters sewers, waterways.

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#### SECTION 07 HANDLING AND STORAGE

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**HANDLING:** Keep containers closed. Avoid eye contact by use of chemical safety goggles and/or full faceshield where splashing is possible. Wear protective clothing appropriate for work situation to minimize skin contact. Use only in a well-ventilated area.

**STORAGE:** Do not store near heat, sparks, flame or strong oxidants. Store in approved, properly marked area as NFPA Class 1B Liquid.

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#### SECTION 08 EXPOSURE CONTROLS AND PERSONAL PROTECTION

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##### RESPIRATORY PROTECTION:

**CONFINED AREA:** Use a NIOSH/MSHA approved self-contained breathing apparatus.

**OPEN AREA:** Use NIOSH/MSHA approved full face mask equipped with organic vapor canister.

##### VENTILATION REQUIREMENTS:

**LOCAL EXHAUST:** Sufficient to prevent explosive mixtures developing.

**SPECIAL:** Electrical to be explosion-proof.

**MECHANICAL (GENERAL):** Non-sparking/Explosion-proof.

**PROTECTIVE GLOVES:** Chemical-resistant gloves (Neoprene is recommended).

**EYE PROTECTION:** Splash goggles and face shield.

**PROTECTIVE CLOTHING:** Chemical-resistant clothing should be used when the possibility of splashing is present. (Neoprene is recommended.)

UNLEADED GASOLINE MSDS

**APPENDIX B - MATERIALS SAFETY DATA SHEET**

UNLEADED GASOLINE MSDS

**Unleaded Gasoline MSDS**

SECTION 09 PHYSICAL AND CHEMICAL PROPERTIES

BOILING RANGE: 65 - 390 degrees F  
SPECIFIC GRAVITY (H2O = 1): 0.74 - 0.76  
VAPOR PRESSURE: 550 - 700 mm Hg @ 68 degrees F  
pH: Not established.  
VAPOR DENSITY (AIR @ 1): 3 - 4  
APPEARANCE & ODOR: Clear Liquid with strong hydrocarbon odor.  
SOLUBILITY IN WATER: Negligible.  
FREEZING/MELTING POINT: Not established.

SECTION 10 STABILITY AND REACTIVITY

STABILITY: STABLE  
HAZARDOUS POLYMERIZATION: WILL NOT OCCUR  
  
INCOMPATIBILITY — MATERIALS TO AVOID: Strong oxidants; like chlorine and concentrated oxygen.  
  
HAZARDOUS DECOMPOSITION PRODUCTS: Carbon monoxide, carbon dioxide, smoke.

SECTION 11 TOXICOLOGICAL INFORMATION

No information provided by manufacturer.

SECTION 12 ECOLOGICAL INFORMATION

No information provided by manufacturer.

SECTION 13 DISPOSAL CONSIDERATIONS

**APPENDIX B - MATERIALS SAFETY DATA SHEET**

**Unleaded Gasoline MSDS**

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WASTE DISPOSAL METHOD: For proper disposal of waste, refer to federal and state regulations.

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**SECTION 14 TRANSPORTATION INFORMATION**

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DOT UN # 1203  
 DOT CLASSIFICATION: Flammable liquid

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**SECTION 15 REGULATORY INFORMATION**

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OSHA CLASSIFICATION: Flammable liquid

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**SECTION 16 OTHER INFORMATION**

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FOR EMERGENCY CONTACT:  
 CHEMTREC 1-800-424-9300

FOR OTHER PRODUCT INFORMATION, CONTACT:  
 MARKETING MANAGER (907)273-3300

DISCLAIMER: The information contained herein is believed to be accurate and is offered in good faith. This information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process. Mixing this product with any other materials may change the characteristics such as flash point, flammability or health effects. Because product use is beyond our control, no warranty is given, expressed or implied.

**UNLEADED GASOLINE MSDS**



**APPENDIX C**

**SPILL**

**PREVENTION**

**CONTAINMENT**

**&**

**COUNTER-**

**MEASURE**

**PLANS**

APPENDIX C - SPCC PLANS





**APPENDIX C - SPCC PLANS**

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## APPENDIX C - SPCC PLANS

### EPA SAMPLE SPCC PLAN & INSTRUCTIONS

### EPA Sample SPCC Plan & Instructions

Environmental Protection Agency  
Region 10  
1200 6th Ave M/S ECL-116  
Seattle, WA 98101

### Sample SPCC Plan

Individual facilities have several choices in deciding what path to take in preparing or revising an SPCC plan. EPA provides outreach material which includes a booklet that explains in simple language how to put together an SPCC Plan, as well as a booklet that contains the official text of the regulations governing SPCC plans. To supplement these two sources of information, Region 10 has developed a **Sample SPCC Plan** (attached) to assist you in complying with applicable SPCC regulations. Alternatively, you may choose to employ a contractor or engineer to prepare an SPCC plan for your facility using a different format. However, in all cases, the final plan must be reviewed and certified by a Registered Professional Engineer in accordance with 40 CFR Section 112.3(d).

You should consider all available options and pick the one that most suits your needs while complying with the SPCC regulations. We have put together the attached outline that could be turned into an acceptable plan with the appropriate input by you or your contractors/engineers.

Any questions about the provisions of 40 CFR Section 112 can be directed to our Anchorage or Seattle Offices or to one of our inspectors at the time of their visit to your facility. If at the time of an inspection, you have been found to be without a plan, it is important that you promptly answer all correspondence about this matter to avoid additional penalties that may result from a lack of timely action on your part.

EPA Seattle: Mr. Carl Kitz (206) 553-1671  
EPA Anchorage: Mr. Matt Carr (907) 271-3616

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**APPENDIX C - SPCC PLANS**

**EPA Sample SPCC Plan & Instructions**

Spill Prevention Control and Countermeasure Plan  
(SPCC)

For: \_\_\_\_\_  
(Facility Name & Location)

Facility # \_\_\_\_\_

Index

Page #	Description
i	Index
1	Cover Page
2	Spill Notification List
3	Plan Implementation & Certification
4	Facility Information - Type of Business, Fuels stored & Tank List
5	Tank List continued
6	Containment & Related Information
7	Tank Farm Layout
8	Map of General Area & Closest Water or Sensitive Area
9	Spill Prevention Program - Including Tank Farm Management, Vehicular and/or Rail Transfers and Training
10	Spill Prevention Program cont'd. - Record Keeping and Spill Response Material List
11	Future Plans
12	Three Year Plan Review Record, EPA Disclaimer
13	EPA Acceptance Page (Issued after final submission of Plan Copy with Professional Engineer's Certification)

Rev 5/08/97

**EPA SAMPLE SPCC PLAN & INSTRUCTIONS**

**APPENDIX C - SPCC PLANS**

**EPA SAMPLE SPCC PLAN & INSTRUCTIONS**

**EPA Sample SPCC Plan & Instructions**

Spill Prevention Control and Countermeasure Plan  
(SPCC)

Facility # \_\_\_\_\_

Facility Name: \_\_\_\_\_

Type of Facility: \_\_\_\_\_

Date of Initial Operation: \_\_\_\_\_

Date of Preparation: \_\_\_\_\_

Location of Facility: \_\_\_\_\_

(Physical address) \_\_\_\_\_

Name & Address of Owner: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Designated Person Responsible for Oil Spill Prevention: \_\_\_\_\_  
\_\_\_\_\_

Oil Spill History: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Management Approval and Professional Engineers Certification shown on page 3.

**APPENDIX C - SPCC PLANS**

**EPA Sample SPCC Plan & Instructions**

SPCC Plan for Facility # \_\_\_\_\_

**SPILL NOTIFICATION LIST**

FOR \_\_\_\_\_

(Facility Name, City, State)

	<b>Phone Numbers</b>	
<b>Owner/Operator:</b> _____	_____	<b>Work</b>
	_____	<b>Home</b>
<b>Response Team:</b> _____	_____	
_____	_____	
_____	_____	

**Fire Department:** 911 or \_\_\_\_\_

**Local Police:** 911 or \_\_\_\_\_

**State Environmental Dept:**

**National Response Center:** 1-800-424-8802

**Environmental Protection Agency:** \_\_\_\_\_

**Other (List):**

**EPA SAMPLE SPCC PLAN & INSTRUCTIONS**

## APPENDIX C - SPCC PLANS

### EPA Sample SPCC Plan & Instructions

#### SPCC Plan Implementation & Certification Page

**Facility Name:**

**Address:**

**City, State:**

**Person in Charge of Facility:**

**Person Responsible for Spill Prevention:**

**This SPCC Plan will be implemented as herein described.**

**Signature:**

\_\_\_\_\_

**Date:**

\_\_\_\_\_

**I hereby certify that I am familiar with the facility and per the provisions of 40 CFR, part 112 attest that this SPCC Plan has been prepared in accordance with good engineering practices.**

**Signature:** \_\_\_\_\_  
(date)

**Registration #**

**State:**

## APPENDIX C - SPCC PLANS

### EPA Sample SPCC Plan & Instructions

SPCC Plan for Facility # \_\_\_\_\_

**Facility Information Page - Type of business or operation, Fuels Stored and Tank List: (check appropriate boxes)**

1. ~ Bulk fuel storage for distribution
2. ~ Bulk fuel storage for on-site use including business, school, hospital, power plant, National Guard, correction facility, hatchery, nursery, greenhouse.
3. ~ Lodges & Resorts engaged in catering to visitors coming for small conventions and/or vacation activities including hunting, fishing, or out of door whale, bird and animal watching. Includes associated air strips.
4. ~ Emergency Response for a small community (Police, Fire, Ambulance, Rescue) which may provide fuel for vehicles it uses. Small town/village administration.
5. ~ Airport for small town.

**Fuel Storage Information:**

Check all types stored

- |   |  |
|---|--|
| <p>6. ~ Unleaded Gasoline</p> <p>7. ~ Diesel for heating/power gen.</p> <p>8. ~ Diesel for vehicles</p> | <p>9. ~ Outboard mix for boats</p> <p>10. ~ Diesel for boats</p> <p>11a. ~ Jet Fuel, 11b. ~ Av Gas</p> <p>12. ~ Lubricating oils</p> |
|---|--|

**Facility Tank List:**

Tank #	Capacity (gals)	Product Stored	AST or UST	Horizontal or Vertical	Double Wall - Y or N

**Total Tank Capacity this page = \_\_\_\_\_ gallons**

**Use next page for additional tanks.**

**EPA SAMPLE SPCC PLAN & INSTRUCTIONS**



## APPENDIX C - SPCC PLANS

### EPA Sample SPCC Plan & Instructions

SPCC Plan for Facility # \_\_\_\_\_

#### Facility Tank List cont'd -

Tank #	Capacity (gals)	Product Stored	AST or UST	Horizontal or Vertical	Double Wall - Y or N
--------	-----------------	----------------	------------	------------------------	----------------------


**Total tank capacity this page = \_\_\_\_\_ gallons**

**Total tank capacity both pages = \_\_\_\_\_ gallons**

EPA SAMPLE SPCC PLAN & INSTRUCTIONS

**APPENDIX C - SPCC PLANS**

**EPA Sample SPCC Plan & Instructions**

SPCC Plan - Inspection of Containment and Planned Compliance

Facility #: \_\_\_\_\_ Date of Insp. \_\_\_\_\_

Inspectors: \_\_\_\_\_ ,

The following defects were noted that need correction:

- ~ 1. No containment for any tank.
- ~ 2. Partial or defective containment or two or more tank areas and some without containment or defects in existing containment.
- ~ 3. Containment inadequate for largest tank, or inadequate in volume. (less than 114% of largest tank in an individual containment)
- ~ 4. Containment not sufficiently impervious to contain spilled oil.
- ~ 5. Truck or rail load/unload rack has no containment.
- ~ 6. A double wall tank(s) needs the installation of a spill alarm(s) and an automatic shut-off device(s).

All of the above requires construction work of some type, the funds to accomplish the work, and the time to do it.

~ 7. No containment defects. Insp. Initials \_\_\_\_\_

A containment will be built or repaired at the existing tank location(s) that meets the requirements of 40

CFR 112. If required, spill prevention devices mentioned in item 6, will be installed. This will be done by:

- Within 90 days of plan acceptance by EPA
- Within one month of the start of the construction season in this area.
- Before the end of the construction season in this area.
- Within 90 days of obtaining funds for construction from governing unit for Municipal, Tribal, Village or School District.
- Other, list.

The checked resolution is accepted by EPA and this sheet in a completed form dated and signed by EPA is to be included in the final SPCC plan that contains the signed certification by a PE.

Date \_\_\_\_\_ Signature by EPA \_\_\_\_\_

**EPA SAMPLE SPCC PLAN & INSTRUCTIONS**

## APPENDIX C - SPCC PLANS

EPA SAMPLE SPCC PLAN & INSTRUCTIONS

### EPA Sample SPCC Plan & Instructions

SPCC Plan for Facility # \_\_\_\_\_

#### Tank Farm Layout

Sketch or drawing showing plan view of all tanks and their containment walls and any truck/rail loading areas. Mark "DW" on any double walled tanks. Please include a North arrow and an approximate scale indicator (such as one inch = 10 feet). Indicate on sketch with several arrows, the direction a spill would go if no containment was in place. If no containment exists or if there are some tanks without containment, please check boxes at bottom of page.

- ~ No containment exists
- ~ Some tanks are without containment
- ~ All tanks have containment

**APPENDIX C - SPCC PLANS**

**EPA Sample SPCC Plan & Instructions**

SPCC Plan for Facility # \_\_\_\_\_

**Geographic Location of Facility**

Sketch or copy of area map that shows where the facility is located with respect to a city, village, river, large body of water, river, stream or other geographic landmark that would be quickly recognized by a person in your local area. Map copy can be pasted in this space. Location of facility can be marked with an X or circled. Please include a North arrow and an approximate scale indicator.

EPA SAMPLE SPCC PLAN & INSTRUCTIONS

## APPENDIX C - SPCC PLANS

EPA SAMPLE SPCC PLAN & INSTRUCTIONS

### EPA Sample SPCC Plan & Instructions

SPCC Plan for Facility # \_\_\_\_\_

**Spill Prevention Program** (check all items that apply in appropriate box)

1. Tanks  All tanks are equipped with a provision for individually locking out valves when not in use or tank is unattended.
  - No underground storage tanks
  - Each Tank is equipped with a direct reading gage.
  - Each Tank is dip sticked to check level.
  - Main power switch for fuel pumps is located within a locked box or building.
  - All tanks are within a suitable containment that meets SPCC regulations or are of a double wall construction of 12,000 gallons or less.
  - Lighting in tank farm area is suitable to detect tank or piping leaks during nighttime hours.
  - Tank farm area is fenced and locked during nonbusiness hours.
  - Excess water within berm is periodically pumped out & records are kept of this.
  - Excess water within berm is drained from tank farm by a valved connection that goes through the berm & records are kept of this.
  - Tanks equipped with high liquid level alarms with an audible or visual signal.
  - There is some buried piping used in the fuel transfer and storage systems.
  - All buried piping has protective wrapping and coating.
  
2. Loading Rack (Space where truck or rail car is placed for fuel transfers to or from vehicle or rail car).
  - Load rack containment is sufficient to contain a spill from the largest tank in the vehicle or rail car or the entire amount if a single tank.
  - Load rack fuel transfers are always done by a properly trained person at the point of transfer, and spill response materials are available (minimum of shovel and absorbent pads) close by.
  - Records are kept of fuel deliveries and shipments.
  
3. Personnel Training
  - Regular meetings are held to review safe fuel transfer and storage procedures, spill response procedures, record keeping and proper reporting of spills.
  - No new employee is allowed to work in or around tank farms or transfer fuel without instructions as given in the regular meetings as listed in the previous item.
  - A call list with phone numbers to report spills is posted in the office, pump control shed and close to the loading rack to facilitate prompt reporting of spills and employees are instructed as to how and what to report.
  - One of the employees has been named as the Designated Person Responsible for Oil Spill Prevention and they are thoroughly familiar with the SPCC regulation and the facility's SPCC plan.

**continued on next page**

# APPENDIX C - SPCC PLANS

## EPA Sample SPCC Plan & Instructions

### Spill Prevention Program - cont'd

4. Record Keeping (Keep all records for three years, can combine on a single weekly or monthly log as appropriate)
- Records kept of routine inspections of tanks, associated piping and loading racks (if this applies to this facility).
  - Records kept of each time water is drained from tank farm containment(s).
  - Records kept of all routine safe fuel handling and storage personnel meetings.
  - Records kept of all spills and notifications.
  - Records kept of all drills and exercises.

5. Spill Response Material kept on site or readily available in community.

Listed below are the amounts and types of material that we have on site or that are quickly available in the community for our use in the event of a spill.

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Plan Note: Boxes checked on pages 9 and 10 are items we are currently doing or have in place or expect to be doing or have in place by the time this SPCC Plan has been certified by a P.E. (Professional Engineer). This includes the listed Spill Response material.

EPA SAMPLE SPCC PLAN & INSTRUCTIONS

## APPENDIX C - SPCC PLANS

EPA SAMPLE SPCC PLAN & INSTRUCTIONS

### EPA Sample SPCC Plan & Instructions

SPCC Plan for Facility # \_\_\_\_\_

#### Future Plans

Future plans for facility changes that affect SPCC plan -

- ~ Not applicable, we have no current plans to add or change our tanks, containment, response equipment or procedures we use in storing and transferring fuel.
  
- ~ We do have plans for changes that impact our SPCC Plan. See below, or refer to page 4 where we have committed to containment and or tank spill safety devices.

## APPENDIX C - SPCC PLANS

### EPA Sample SPCC Plan & Instructions

SPCC Plan for Facility # \_\_\_\_\_

#### Three Year SPCC Plan Review

Under 40 CFR 112.5, (b) “Notwithstanding compliance with paragraph (a), of this section, owners and operators of facilities subject to ` 112.3(a), (b) or (c) shall complete a review and evaluation of the SPCC Plan at least every three years from the date such facility becomes subject to this part.”

To accommodate this provision we are listing each of those reviews as follows:

Date	Comments	Signature of owner/operator

EPA SAMPLE SPCC PLAN & INSTRUCTIONS

**EPA SPCC PLAN DISCLAIMER:** This form is intended to be used as a guideline for small facilities. This may or may not be appropriate for your facility. EPA does not assume any liability for the use of this format for your SPCC Plan. This form is intended only as a guidance as you select a method of plan preparation. The improper use of this SPCC Plan guidance will not result in compliance with the SPCC regulations found in 40 CFR Section 112 and may subject the owner/operator to civil penalties or other enforcement action.

Retain this page in the SPCC plan



**APPENDIX C - SPCC PLANS**

**APPENDIX C - SPCC PLANS**

**Example SPCC Plan**

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

**AGENCIES TO BE CONTACTED IN THE EVENT OF A SPILL**

Agency	Spill Size	Verbal Report	Phone Number	Written Report
U.S. Coast Guard	Any size on or threatening navigable water	Immediately	800-424-8802 800-478-5555, or (907) 271-6700 (days)	Not required
U.S. Environmental Protection Agency	Any size on land but threatening or on surface waters	Immediately	1800-424-8802 or (907)271-5083 (days)	If spill is 1,000 or more gallons or if second spill over 12 months
Alaska Department of Environmental Conservation	Waters Any discharge to Water	Immediately	800-478-9300 Or (907) 262-5210 (Soldotna)	Within 15 days of end of clean-up
Alaska Department of Environmental Conservation	Land >55 gal.	5 hours	See Above	Within 15 days of end of clean-up
Alaska Department of Environmental Conservation	Land 10 to 55 gal.	24 hours	See Above	Within 15 days of end of clean-up
Alaska Department of Environmental Conservation	Land < 10 gal.	7 days	See Above	Within 15 days of end of clean-up
Alaska Department of Environmental Conservation	All hazardous substance spills	Immediately	See Above	Within 15 days of end of clean-up

**EXAMPLE SPCC PLAN**

A complete copy of the SPCC Plan shall be maintained at the facility if the facility is normally attended at least eight hours per day, or at the nearest field office if the facility is so attended.

Revision O, September 1997

## APPENDIX C - SPCC PLANS

EXAMPLE SPCC PLAN

### Example SPCC Plan

#### SPILL PREVENTION CONTROL AND COUNTERMEASURE PLAN GENERAL INFORMATION

This Spill Prevention Control and Countermeasures Plan (SPCC Plan) has been developed to comply with 40 CFR 112.7. This SPCC establishes procedures, methods, and equipment to prevent the discharge of oil and fuel from aboveground storage tanks (AST's) into navigable waters of the United States or adjoining shorelines. SPCC regulations apply to the *NBC Company* since this facility:

- qualifies as an onshore facility, coastal or inland;
- is engaged in the storing of oil;
- is non-transportation related;
- has AST's with a capacity greater than 660-gallons; and
- in the event of a spill, poses a threat to navigable waters or adjoining shorelines.

Reportable oil spills, as defined by EPA Oil Pollution Prevention Regulations in 40 CFR Part 110, must be reported immediately to the Coast Guard or National Response Center. A reportable spill is one which will cause a sheen on the water, a sludge on the bottom, or violate applicable water quality standards. Any two spills within any twelve month period, or any spill of more than 1,000-gallons, must be reported in writing. The report must be submitted to the U.S. EPA Regional Administration within 60 days and must include details prescribed in 40 CFR Part 112.4 (a).

#### 40 CFR Part 112.4 (a)

1. Name of facility;
2. Name(s) of the owner or operator of the facility;
3. Location of the facility;
4. Date and year of initial facility operation;
5. Maximum storage or handling capacity of the facility and normal daily throughput;
6. Description of the facility, including maps, flow diagrams, and topographical maps;
7. A complete copy of the SPCC Plan with any amendments;
8. The cause(s) of such spill, including a failure analysis of system or subsystem in which the failure occurred;
9. The corrective actions and/or countermeasures taken, including an adequate description of equipment repairs and/or replacements;
10. Additional preventive measures taken or contemplated to minimize the possibility of recurrence; and
11. Such other information as the Regional Administrator may reasonably require pertinent to the Plan or spill event.

**APPENDIX C - SPCC PLANS**

**Example SPCC Plan**

GENERAL INFORMATION	
1. Name of Facility	ABC Company
2. Type of Facility	Store
3. Location of Facility	Lots 1, 2 + 3 of the Alaska Subdivision Section 1, 2, 3 ABC, Alaska
4. Name and Address of Owner	1 John Doe PO Box ABC Alaska 99999 Phone: 907- 123- 4567
5. Designated Person Accountable for Spill Prevention	Jane Doe Phone: 907-123-4567
6. Revisions to Plan	Provided in Appendix A
7. Spill History/Reportable Spills	Provided in Appendix B
8. Deficiencies to 40 CFR with required and/or recommended action items	Provided in Appendix C

**EXAMPLE SPCC PLAN**

**APPENDIX C - SPCC PLANS**

**EXAMPLE SPCC PLAN**

**Example SPCC Plan**

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Appendix F - SPCC Plan Training Roster

## APPENDIX C - SPCC PLANS

### Example SPCC Plan

SPCC Plan

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#### FACILITY ANALYSIS

##### 1.0 Site Description and Operations Summary

This Spill Prevention Control and Countermeasure (SPCC) Plan was prepared in accordance with 40 CFR 112.7. It contains a description of the fueling systems, fueling procedures and fuel storage located on the Facility property. A spill plan and engineers certificate is included.

The Facility is located on the \_\_\_\_\_ of Lake ABC and is operated as a store. The site is located on the \_\_\_\_\_ separating \_\_\_\_\_ Lake ABC, Alaska. The site lies on a north facing gradual decline toward \_\_\_\_\_ Bay. A Site Map and Drainage Diagram is provided as Figure 1.

The facility consists of a main lodge, garage, and lodging for up to 40 guests. There are three fuel storage areas on the property: Area 1 contains two (2) 3,000-gallon aboveground storage tanks (ASTs) for storage of aviation gas; Area 2 contains one (1) 500-gallon AST that stores heating fuel for heating; and Area 3 contains one (1) 500-gallon AST for storage of heating fuel for the main lodge. Secondary containment is provided for all fuel storage areas. Total fuel storage on the property is approximately 7,000-gallons.

##### 2.0 Physical and Operational Environment

An inventory of the ASTs located on the subject property are presented in Table 1 and Table 2. A Site Plan is provided as Figure 1.

**Table 1 - Aviation Fuel Storage**

Description	Tank 1	Tank 2
Contents	Aviation Gasoline	Aviation Gasoline
Purpose	Float Plane Refueling	Float Plane Refueling
Capacity	3,000-Gallon	3,000-Gallon
Location	Dock	Dock
Level	1' Aboveground Level (AGL)	1' AGL
Construction	Double Wall Steel-Cylindrical	Double Wall Steel-Cylindrical
Orientation	Horizontal	Horizontal
Spill Flow	North to Lake Iliamna (1" 30 feet)	North to Lake Iliamna (1" 30 feet)
Containment Method	Double wall tank with integral containment of 110 percent	Double wall tank with integral containment of 110 percent
Input Transfer Method	Tank Truck	Tank Truck
Output Transfer Method	Manually operated pump and 1 1/2-inch hose with nozzle	Manually operated pump and 1 1/2-inch hose with nozzle

**EXAMPLE SPCC PLAN**

# APPENDIX C - SPCC PLANS

EXAMPLE SPCC PLAN

## Example SPCC Plan

SPCC Plan \_\_\_\_\_

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**Table 2 - Heating Fuel Storage**

Description	Tank 3	Tank 4
Contents	Heating Fuel	Heating Fuel
Purpose	Bunkhouse Boiler	Main Lodge Boiler
Capacity	500-Gallon	500-Gallon
Location	Main Lodge	Guest Cabins
Level	1' AGL	1' AGL
Construction	Steel cylindrical	Steel cylindrical
Orientation	Horizontal	Horizontal
Spill Flow	North to Lake Iliamna	North to Lake Iliamna
Containment Method	Lined wooden crib	Lined wooden crib
Input Transfer Method	Tank Truck	Tank Truck
Output Transfer Method	Gravity flow 3/4-inch copper tubing	Gravity flow 3/4-inch copper tubing <sup>1</sup>

### 3.0 Facility Security

**Barriers** Unimproved land on three sides (north, east, and west). Gentle downward slope to north and northeast. Only access vehicle access is from the west. Security fencing is not provided for any containment areas. Vandalism is not a concern in Iliamna and fencing is not considered necessary for security. An 8-foot wooden fence at the east end of the driveway prevents accidental contact from vehicles maneuvering in the area (See Figure 1). Tanks 3 and 4 are not in a vehicle traffic area and are not in danger of accidental vehicle contact.

**Locks** Flow valves are shut off and capped when the facility is not in use. Locks are installed on the discharge and input valves for Tanks 1 and 2 at the facility. The valves are locked when not in service for a length of time and remain locked until a transfer is required.

Dispensing of heating fuel is connected directly to the furnaces. No locks are installed on Tanks 3 and 4.

**Attendance** Facility is closed during the winter months, but is monitored periodically by a winter watchman.

**Lighting** Incidental lighting from adjacent buildings.

## APPENDIX C - SPCC PLANS

### Example SPCC Plan

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**Notification** "Authorized Personnel Only" and "No Smoking" signs are posted at fuel storage areas. Additionally, emergency procedure and notification numbers are posted at each fuel storage area.

#### 4.0 Potential Spills and Controls

Potential spills may occur due to tank rupture, hose or valve malfunction during fuel transfer operations, tank overflow, or from an aboveground fuel line leak. Near surface soils outside the containment are relatively permeable imported sand and gravel fill. During the winter, the surface may be covered with a snow and ice layer which could limit infiltration of fuel and increase run-off potential. Site drainage is generally to the property north toward Lake ABC. Site drainage is shown on Figure 1.

Tanks with integral secondary containment and lined wooden cribs are the primary spill control measure for any release at the site. Containment areas are provided in Table 3.

Table 3 - Secondary Containment Areas

Tank ID	Dimensions (feet)	Volume gallons (ft <sup>3</sup> )	Largest Container (gallons)	Percent Capacity
1	Integral	3,300	3,000	110
2	Integral	3,300	3,000	110
3	4x8x4	1,915	600	120
4	4x8x4	1,915	600	120

EXAMPLE SPCC PLAN



## APPENDIX C - SPCC PLANS

EXAMPLE SPCC PLAN

### Example SPCC Plan

SPCC Plan

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#### 5.0 Procedures for Inspection of Spill Prevention Facilities

1. **INSPECT** the facility on a regular schedule. Formal log inspections at least every six (6) months or when deficiencies are found. Note deficiencies found and corrective actions taken in the Inspection Log provided in Appendix D. At a minimum, check the following conditions:

**Inspection Items**

- Storage tank free of leaks, cracks, corrosion, etc.
- Transfer pipes and connectors free of leaks, cracks, corrosion, etc.
- Containment free of leaks, cracks, animal damage, etc.
- Valves, pumps, gauges, and other equipment in correct working order.
- No evidence of oil spills outside of containment.
- Inventory and accessibility of emergency supplies.
- Required documents in place and up to date.

Inspection records will be signed by the inspectors and maintained as a part of the SPCC Plan for a period of three (3) years.

2. **MAINTENANCE** will be performed on a periodic basis as required. Leaks will be sealed as soon as they are discovered. Corrective maintenance will be carried-out in a timely manner on cracks, corrosion and defective equipment. Necessary clean-up activities will be scheduled as feasible.
3. **CONTAINMENT WATER DISCHARGE** shall be performed as rainwater collects within the secondary containment areas. Prior to discharge, the rainwater is inspected for fuel sheen and noted. All discharges shall be recorded in the Discharge Log, Appendix E. Any sheen shall be collected with adsorbent pads prior to discharge.

Spills from hoses and pumps will be contained by sorbent materials and / or berms of earth and, if necessary, snow.

There are no buried pipes or hoses at the facility.

Regular maintenance, inspections, back-up spill control procedures, and training have been established at the facility.

Fueling of all four ASTs at the facility is performed by *the Facility's* fuel truck. Fueling is performed from the locations indicated on Figure 1. Due to the impracticability of

## APPENDIX C - SPCC PLANS

### Example SPCC Plan

SPCC Plan

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providing secondary containment for a mobile delivery system with three points of discharge, no containment is provided for the transfer area. Fuel transfer procedures are provided in Section 7.0 of this plan.

#### 5.1 Spill Potential

##### Tank Rupture

The largest potential spill at this site is 3,000-gallons resulting from a catastrophic single tank failure of an aviation gasoline tank. Rate of flow of discharged fuel would be variable and dependent upon the size and location of the rupture. Discharged fuel would be contained within the integral secondary containment. In a catastrophic event of both a tank and dike failure, the maximum potential spill on the ground would be 3,000-gallons. This fuel could readily flow into Lake ABC.

##### Tank Overflow

There is a potential for tank overflow during refilling by tanker truck. Rate of flow of discharged fuel would not exceed 30-gallons per minute based on the tanker truck delivery rate into the tanks. AST filling operations are observed by a trained operator during the entire fuel transfer operation. Audible high level alarms are installed in the two 3,000-gallon tanks.

Total quantity of fuel which could be discharged is variable and dependent upon the length of time the tank is overflowing. Based upon delivery and inspection procedures and the close proximity of shut-down controls, it is estimated that no more than 30-gallons of fuel would be discharged.

##### Freezing Valves

Base valves are installed on Tanks 1 and 2. During the winter these valves could freeze and rupture if water is allowed to accumulate. Winterization of the tanks to prevent this type of release include: decanting fuel from the base valve into a container to check for moisture prior to the first freeze in the fall.

##### Spill During Refueling of Aircraft

During fuel transfer to aircraft or container, there is potential for a spill if a fitting or system component fails while transfer is in progress. The maximum rate of flow if a system component is accidentally broken during refueling is estimated to be 5-gallons per minute.

The total quantity of product which could be discharged is variable. Any fuel transfer at the facility is performed manually with full time attendance of a least one, and commonly two, trained personnel. It is estimated that no more than 5-gallons would be discharged at any one

EXAMPLE SPCC PLAN

## APPENDIX C - SPCC PLANS

EXAMPLE SPCC PLAN

### Example SPCC Plan

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time during any particular failure. The spill quantity from a failure would be proportional to the time elapsed before the fuel transfer pump is shut-off.

Discharged fuel on land would be absorbed into the local soils and would be contained by temporary trenches and sorbents. Spilled fuel would be removed from the trench immediately using available equipment and manpower.

Fuel transfers to float planes would immediately enter waters of Lake Arctic. Any release would be immediately contained with the use of sorbent pads and booms. Wave action at the lake could disperse the spill quickly, therefore immediate action and readily available response materials are necessary.

#### 6.0 Procedures and Schedules for Training Personnel

The accountable spill prevention supervisor will brief operating employees who are responsible for equipment with spill potential. These briefings will be carried out in conjunction with regularly scheduled inspections every six months or more frequently, if required, by rotation of personnel.

All personnel on-site are instructed to alert the facility supervisor or his alternate when a problem is detected. Spills are to be reported to the U.S. Coast Guard Response Center, U.S. Environmental Protection Agency, Alaska Department of Environmental Conservation, and the Bureau of Land Management as per the cover sheet. The training program will include the following items:

- 1) Procedures to use in preparing for and conducting transfers of oil into and out of storage containers, including proper use of couplings, pumps, gauges, etc.
- 2) Monitoring procedures and schedules for checking for leaks or potential leaks in the equipment.
- 3) Procedures for responding to an oil spill.
- 4) Names, addresses, and telephone numbers for routine and emergency clean-up assistance.
- 5) History of previous spills and near-spills.

Training will consist of on-site operating instructions and demonstrations as well as required reading of the SPCC Plan and of other pertinent instructions by the responsible supervisor. A Training Roster is provided as Appendix F.

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#### 7.0 Facility Transfer Operations

All fuel is brought to the site by a tank truck owned and operated by *ABC Company* Inc. The largest single compartment in the tanker truck is 1,000-gallons. Each storage tank is filled individually. At present, spill controls (secondary containment) are not provided for the tank loading area. Two trained personnel are present during the transfer of all fuel at the facility. Verbal or visual communication must be maintained between the person at the delivery truck and the person at the storage tank. The following procedures are followed:

##### 1) Before fuel transfer begins

- Designate a person in charge to be responsible for seeing that the following steps are completed properly.
- Gauge tanks to determine available space.
- Inspect hoses for rips or loose connections.
- During storage tank refilling, establish two way communication between the pump and the tank.

##### 2) During the transfer

- Check connections, tanks, pump or fittings for signs of leaks.
- Transfer at normal rate.
- During aircraft or container refueling, visually monitor the process to guard against overfilling.
- Reduce pumping pressure and rate when tank is at approximately 75-percent of capacity.
- Terminate fueling when tank is at 90-percent capacity to allow for volumetric expansion from temperature changes and prevent overfilling.

##### 3) After the transfer

- Ensure the nozzle and any fittings or valves are not leaking fuel after pump has been shut-off. Wrap nozzle with sorbent during return to truck.
- Clean-up any spills.

Spill response phone numbers are posted by each tank.

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4) Tank to Aircraft Transfer Operations and Pumping

- All fuel transfer is done by pump and flex hose, no gravity flow is used for fuel transfer.
- All aircraft refueling is performed by *ABC Company* personnel.
- Fuel is transferred from the 3,000-gallon storage tanks to aircraft moored at the dock via 120 volt tank mounted transfer pump, 100-feet of hose, and a delivery nozzle.
- The maximum rate of flow is 5-gallons per minute.
- The delivery nozzle is not equipped with an automatic shut-off device to prevent overfilling. A *ABC Company* employee attends the fuel transfer constantly. Should overfilling occur, the operator is be expected to respond within 5 seconds. This would result in a ½-gallon release.
- Sorbent pads are used to collect drips from the nozzle after fueling.

5) Facility Tanker Truck Unloading

A crew of two transfer fuel from tanker truck into fuel storage tanks at the lodge. Transfer is made through an engine driven fuel pump via 1 ½-inch discharge hose. Fuel transfer is continuously monitored. Prior to, and during the transfer, the fuel level is gauged with a stick. One crew member visually monitors the storage tank with a flashlight and dipstick in order to determine the level of fuel as the tank fills. Hand signals are used between this crew member and the crew member operating the tanker truck pump controls.

It is estimated that the maximum amount of fuel which could be spilled using this procedure would be approximately 5-gallons. Spills will be contained by sorbent material, and / or berms of earth and, if necessary, snow.

The fuel transfer procedures meet the minimum requirements and regulations of NFPA 407.

8.0 Emergency Spill Equipment

Emergency spill equipment is stored in the garage on the premises. The spill equipment includes the following items:

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- 100 sorbent pads
- Shovels, rakes, picks, and miscellaneous hand excavation tools
- Health and safety supplies

<u>Additional Equipment Available Locally</u>		
Additional equipment and response supplies are available from the following sources:		
Equipment	Source	Phone Number
Sorbent Boom	John Doe	907-123-4567
Fuel recovery equipment skimmer, boom, boom wringer, drums	Electric Cooperative	907-123-4567
Excavation Equipment	Electric Cooperative	907-123-4567

#### 9.0 Contingency Plans and Manpower Commitments for Response to Spills

Leaks from tanks with containments will automatically be contained. Oil will be pumped from containments and disposed of through on-site used oil burner or commercial outlets. In the event of a leak from a hose, pump, or dispenser outside a containment area, oil flow will be stopped by hand shoveled earth barriers with sorbent booms and pads, if possible. Contaminated gravel will be stored on an impermeable liner and covered. If any portion of the release reaches Slop Bucket Lake, the U.S. Coast Guard will need to be notified.

#### IN THE EVENT OF A SPILL

##### Initial Actions

- Eliminate all spark source.
- Shut down pumps; close valves that allow product to spill. STOP THE FLOW.
- Stop fuel transfer if spill is caused by overfilling.
- If an explosion or fire hazard exists, evacuate personnel.
- Contain the spill with sorbents, berms, fences, trenches, sandbags, or other material at hand.
- Call the Facility Supervisor or his alternate immediately.

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SPILL CONTACT LIST	
<u>Facility Contacts</u>	
John Doe	907-123-4567
<u>Government Agencies</u>	
Alaska Department of Environmental Conservation (24-hr Hotline)	800-478-9300
Alaska Department of Environmental Conservation, Soldotna	907-262-5210
National Response Center	800-424-8802
U.S. Coast Guard - Port Operations	907-271-6700

#### CLEAN-UP ACTION

- Try to stop the spread of fuel being spilled; build a berm of earth or snow; dig a trench; place plywood, sheet metal, or other available material in the ground as a barrier.
- If possible, line the berm with an impermeable liner.
- If possible, pump standing fuel into empty drums, fuel bladder, or tanker truck for temporary storage.
- Deploy sorbents. Absorb as much product as possible. Sorbents can be squeezed dry into a container and reused. Waste fuel can be temporarily stored in empty fuel drums.
- Dispose of contaminated fuel in a manner approved by the ADEC. Burning or backhaul, or spreading on a roadway requires special permits.
- Dispose of sorbents in a leak-proof container such as a drum or plastic bag. Do not cause more contamination by leaving oily sorbents around.
- If the ground or snow is saturated with product, excavate the contaminated soil and place it in leak-proof containers, a lined pit, or some other place where product leaching will not contaminate more ground.
- Never attempt to spread contaminated soil out on a clean area to mix it in with clean soil.
- Try to secure the area of contaminated soil to keep out children or pets.

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### 10.0 Certification, Reviews and Amendments

This SPCC Plan has been approved and certified as indicated. The Plan, together with its updated attachments, is to be held at the facility. Changes will be incorporated in the attachments as necessary. In addition, as required by Federal Regulations, the SPCC Plan as a whole will be reviewed and evaluated at least once every three (3) years to determine if amendments are required. Review logs are included in Appendix A.

The SPCC Plan shall be amended whenever there is a change in the facility design, construction, operation or maintenance which materially effects the facility's potential for the discharge of oil into or upon the navigable water's of the United States. The amendment shall be certified by a Professional Engineer in accordance with 40 CFR 112.3(d).

#### APPROVAL AND CERTIFICATION

This SPCC Plan will be implemented as herein described.

Signature: John Doe 6/1/98

Title: John Doe  
Property Owner / Manager

I hereby certify that the facility has been examined under my direction, and being familiar with the provisions of 40 CFR, Part 112, attest that this SPCC Plan has been prepared in accordance with good engineering practices.

Richard A. Mitchells, Professional Engineer

Bob Doe  
Signature of Registered Professional Engineer

Registration No. 1234 State AK

(Seal)

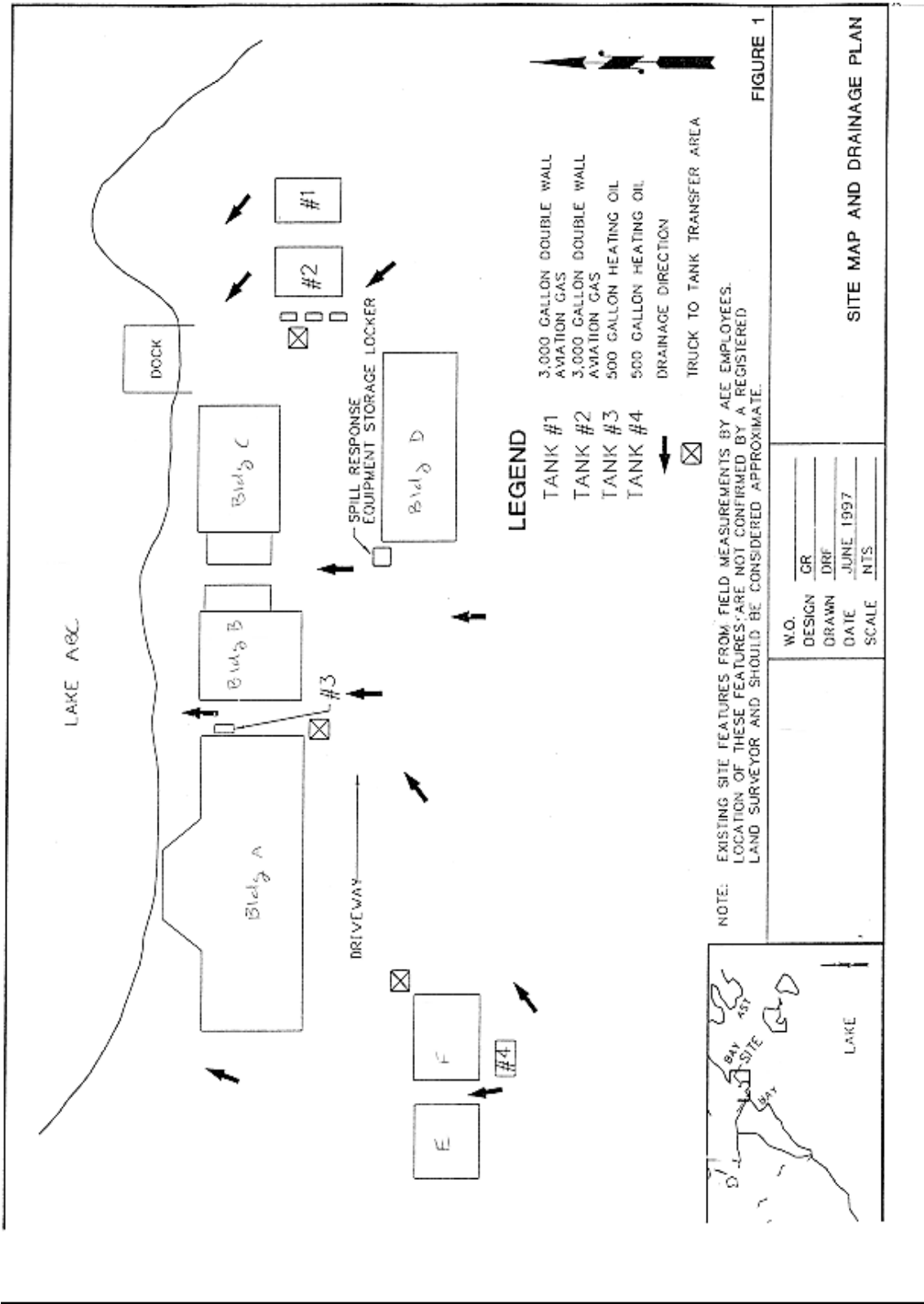
Date 10/02/97



EXAMPLE SPCC PLAN

# APPENDIX C - SPCC PLANS

## Example SPCC Plan



## APPENDIX C - SPCC PLANS

### Example SPCC Plan

APPENDIX A

#### SPCC Plan Review History

Date:	_____
Reviewed by:	_____
Notes:	_____ _____
Signature:	_____
Date:	_____
Reviewed by:	_____
Notes:	_____ _____
Signature:	_____
Date:	_____
Reviewed by:	_____
Notes:	_____ _____
Signature:	_____
Date:	_____
Reviewed by:	_____
Notes:	_____ _____
Signature:	_____

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APPENDIX B

SPCC Plan Spill History

Complete this form for any reportable spill(s) which has (have) occurred from this facility since 1973 into nearby ponds.

1.  
Date: \_\_\_\_\_ Volume: \_\_\_\_\_

Cause:  
\_\_\_\_\_  
\_\_\_\_\_

Corrective action taken:  
\_\_\_\_\_  
\_\_\_\_\_

Plans for preventing recurrence:  
\_\_\_\_\_  
\_\_\_\_\_

2.  
Date: \_\_\_\_\_ Volume: \_\_\_\_\_

Cause:  
\_\_\_\_\_  
\_\_\_\_\_

Corrective action taken:  
\_\_\_\_\_  
\_\_\_\_\_

Plans for preventing recurrence:  
\_\_\_\_\_  
\_\_\_\_\_

EXAMPLE SPCC PLAN

## APPENDIX C - SPCC PLANS

### Example SPCC Plan

#### APPENDIX C

#### SPCC Plan Action Items

The following action items are required to improve the preventive and response capabilities of the *ABC Company*:

No Required Action Items

The following action items are recommended to improve the preventative and response capabilities at *ABC Company*:

1. Placement of sorbent boom in facility spill response equipment cache.

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## APPENDIX C - SPCC PLANS

### Example SPCC Plan

APPENDIX D				
SPCC Plan Formal Inspection Log				
Formal inspections are to be carried out every six months or when deficiencies are found. The inspection log is to be attached to the SPCC Plan, Appendix D, and kept for a period of 3 years.				
	Yes	No	Corrective Action Necessary	Corrective Action Completed Date
Storage tanks free of leaks, cracks, corrosion, etc.				
Transfer pipes and connectors free of leaks, cracks, corrosion, etc.				
Secondary containment free of leaks, cracks, corrosion, etc.				
Valves, pumps, gauges, and other equipment in correct working order				
Evidence of oil spills outside of secondary containment				
Response equipment available and in good working order				
Notes:				
Inspector: _____				
Date: _____				
Signature: _____				

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**Example SPCC Plan**

APPENDIX E (CONTINUED)

SPCC Plan Secondary Containment Drainage Report

<p>This form should be completed for each discharge of rainwater from the secondary containment areas and attached to the SPCC Plan, Appendix D.</p> <p>Secondary containment areas may be emptied by pumps when necessary. The pumps should be manually activated and the accumulation should be examined before starting to be sure no oil will be discharged into the water. The rainwater should be in compliance with the applicable water quality standards.</p>	
Location of Containment Discharge:	Date of Inspection:
	Date of Discharge:
<p>Oil Sheen or oil Product Present on Water?                      <input type="checkbox"/> Yes?                      <input type="checkbox"/> No?</p>	
Describe:	
Amount of Sorbent Pad Used:	
Approximate volume of water (gal.) removed from containment area:	
<p>Method of Removal:</p> <p style="padding-left: 100px;">Drain</p> <p style="padding-left: 100px;">Other</p>	
Signature:	
Date:	

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## APPENDIX C - SPCC PLANS

### SPCC Checklist

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Facility Name _____	Review Date: _____			
_____	Reviewed By _____			
<b>U.S. EPA REGION III SPILL PREVENTION, CONTROL AND COUNTERMEASURE (SPCC) PLAN REVIEW CHECKLIST</b>	Adequately Addressed	Inadequately Addressed	Not Addressed	Not Applicable
<b>40 CFR 1123 - Requirement for Preparation and Implementation of SPCC Plans</b>				
(d) The SPCC Plan is certified by a registered professional engineer				
<b>40 CFR 1124 - Amendments of SPCC Plans by Regional Administrator</b>				
(a) Whenever a facility discharges more than 1,000 gallons of oil into navigable waters or has two reportable spills within 12 months, the following information is submitted to the regional administrator (RA):				
(1) Name of facility				
(2) Name(s) of the owner or operator of the facility:				
(3) Location of facility				
(4) Date and year of initial facility operations				
(5) Maximum storage or handling capacity and daily throughput				
(6) Description of the facility, including maps and diagrams				
(7) Complete copy of the SPCC Plan with any amendments				
(8) Causes of the spill, including failure analysis				
(9) Corrective actions and /or countermeasures taken:				
(10) Additional preventive measures taken or contemplated; and				
(11) Other information required by the RA				
<b>40 CFR 1125 - Amendment of SPCC Plans by Owners or Operators</b>				
(b) The SPCC Plan is reviewed and evaluated every three years by the owners or operators of the facility				
(c) Amendments to the SPCC Plan are certified by a registered professional engineer				
<b>40 CFR 1127 Guidelines for the Preparation and Implementation of SPCC Plans</b>				
Full approval given by management with authority to commit resources				
The SPCC Plan follows the sequence of §112.7				
(a) If a facility has experienced one or more spill events since January 10, 1973, the SPCC Plan includes				
- A written description of each spill;				
- Corrective actions taken; and				
- Plans for prevention recurrence.				
(b) Where experience indicates a reasonable potential for equipment failure, the SPCC Plan includes the following for each major type of failure:				
- A prediction of the spill's direction;				
- Rate of flow; and				
- Total quantity of oil that could be discharged.				

SPCC CHECKLIST

## APPENDIX C - SPCC PLANS

### SPCC Checklist

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U.S. EPA REGION III SPILL PREVENTION, CONTROL AND COUNTERMEASURE (SPCC) PLAN REVIEW CHECKLIST	Adequately Addressed	Inadequately Addressed	Not Addressed	Not Applicable
<b>(c) The SPCC Plan describes one of the following as a minimum to prevent discharged oil from reaching a navigable water</b>				
<b>(1) Onshore facilities</b>				
(i) Dikes, berms, or retaining walls:				
(ii) Curbing;				
(iii) Culverts, gutters, or other drainage systems;				
(iv) Weirs, booms, or other barriers;				
(v) Spill diversion ponds;				
(vi) Retention ponds: and/or				
(vii) Sorbent materials				
<b>(2) Offshore facilities:</b>				
(i) Curbing, drip pans: and/or				
(ii) Sumps and collection systems				
<b>(d) If the installation of structures or equipment listed in §112.7(c) is not practicable as determined by the facility, the SPCC Plan provides:</b>				
- The impracticability is clearly				
(1) A strong oil contingency plan following 40 CFR 109; and				
(2) A written commitment of manpower, equipment and materials				
<b>(e) (1) Facility Drainage (Onshore): (Excluding Production Facilities)</b>				
(i) Drainage from diked storage areas is restrained by valves or other positive means to prevent an oil spill or excessive leakage				
(ii) Valves used for drainage of diked area are manual, open-and-close design				
(iii) To retain oil, plant drainage from undiked areas flows into ponds, lagoons, or catchment basins that are not subject to flooding; or				
(iv) In the event of an uncontrolled spill, a diversion system at the final discharge point of all in-plant ditches can return the oil to the plant.				
(v) Where more than one drainage water treatment unit is used, the transfer between units is by natural hydraulic (gravity) flow: or				
- Two lift pumps, with at least one permanently installed.				
- Facility drainage systems prevent oil from reaching navigable waters in the event of equipment failure or human error at the facility.				
<b>(e)(2) Bulk Storage Tanks (Onshore): (Excluding Production Facilities)</b>				
(i) Tank material and construction is compatible with stored material and conditions storage.				
(ii) All tank installations have secondary containment for the largest single tank plus allowance for precipitation: and				
- Dike walls and floors sufficiently impervious to contain spilled oil.				

SPCC CHECKLIST

## APPENDIX C - SPCC PLANS

### SPCC Checklist

SPCC CHECKLIST

U.S. EPA REGION III SPILL PREVENTION, CONTROL AND COUNTERMEASURE (SPCC) PLAN REVIEW CHECKLIST	Adequately Addressed	Inadequately Addressed	Not Addressed	Not Applicable
<b>(iii) Drainage of rainwater from diked areas, bypassing treatment is accomplished according t the following:</b>				
(A) Normally, the bypass valve is sealed closed				
(B) Rainwater drainage is inspected				
(C) The bypass valve is opened and resealed under supervision: and				
(D) Records are maintained by bypassing and drainage events				
<b>(iv) Buried metallic storage tanks are pressure tested on regular basis;</b>				
- Coated or cathodically protected to reduce corrosion				
<b>(v) Partially buried metallic tanks for the storage of oil are avoided; or</b>				
- Adequate coating is provided for the buried portion.				
<b>(vi) Aboveground tanks are integrity tested using one of the following methods:</b>				
- Hydrostatic testing				
- Visual inspections; or				
- Non-destructive shell thickness testing				
- And companion records are kept where appropriate:				
- Tank supports and foundations are inspected; and				
- All bulk storage tanks are visually inspected frequently				
<b>(vii) Internal heating coil leakage is controlled by considering one of the following:</b>				
(A) The steam return or exhaust lines for oil are monitored:				
- The lines are passed through a separation system; or				
(B) An external heating system is installed				
<b>(viii) Tanks are fail-safe engineered by installing one of the following:</b>				
(A) High-liquid level alarms with an audible or visual signal;				
(B) Automatic high liquid level pump cutoff devices;				
(C) A direct signal between the tank gauge and pumping station				
(D) A fast response system to detect oil level of each storage tank; or				
(E) Regularly testing liquid level sensing devices				
(ix) Plant effluent discharged directly into navigable waters is observed frequently to detect upsets				
(x) Visible oil leaks from tank seas, gaskets, rivets and bolts are promptly corrected				
<b>(xi) Mobile or portable storage tanks are:</b>				
- Located to prevent spilled oil from reaching navigable water;				
- Provided with secondary containment; and				
- Located where they will not be subject to periodic flooding				

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### SPCC Checklist

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U.S. EPA REGION III SPILL PREVENTION, CONTROL AND COUNTERMEASURE (SPCC) PLAN REVIEW CHECKLIST	Adequately Addressed	Inadequately Addressed	Not Addressed	Not Applicable
<b>(e)(3) Facility Transfer Operations, Pumping, and In-Plant Processes (On Shore): (Excluding Production Facilities)</b>				
(i) Buried pipes are protectively wrapped and coated if warranted;				
- Cathodically protected if warranted; and				
- Carefully examined for deterioration if exposed for any reason;				
(ii) Pipeline terminal connections are marked as to origin; and				
- Capped or blank-flanged if not in service or in standby service.				
(iii) Pipe supports are designed to minimize abrasion and corrosion and allow for expansion and contraction				
(iv) All aboveground valves and pipelines are inspected periodically; and				
(v) Vehicles entering the facility are warned, verbally or by signs, to avoid damaging above ground piping				
<b>(e)(4) Facility Tank Car and tank Loading/Unloading Rack (Onshore):</b>				
(i) tank car and tank truck loading/unloading procedures meet the minimum requirements of the Department of Transportation				
(ii) Where drainage does not flow into catchment basin or a treatment facility, a containment system holds the largest compartment of any truck.				
(iii) An interlocked warning light, physical barrier, or warning signs are provided to prevent premature vehicular departure.				
(iv) The lower most drain and all outlets on tank cars and tank trucks are inspected for leakage prior to filling and departure.				
<b>(e)(5) Oil production facility (onshore)</b>				
(ii) Oil production facility (onshore) drainage:				
(A) Secondary containment drains are closed and sealed.				
- The water is inspected before drainage; and				
- Accumulated oil is disposed of by approved methods.				
(B) And ditches, sumps, traps, etc. are inspected and kept clean of oil.				
(iii) Oil production facility (onshore) bulk storage tanks:				
(A) Tank material and construction compatible with stored material;				
(B) Tanks and treatment facilities have secondary containment;.				
(C) Tanks are visually inspected and defects are corrected; and				
(D) Tank batteries are fail-safe engineered to include:				
(1) Adequate tank capacities to prevent tank overflow;				
(2) Overflow equalizing lines between tanks;				
(3) Adequate vacuum protection to prevent tank collapse; or				
(4) High liquid level alarms.				

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### SPCC Checklist

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U.S. EPA REGION III SPILL PREVENTION, CONTROL AND COUNTERMEASURE (SPCC) PLAN REVIEW CHECKLIST	Adequately Addressed	Inadequately Addressed	Not Addressed	Not Applicable
<b>(iv) Facility transfer operations, oil production facility (onshore):</b>				
(A) All Aboveground equipment is periodically examined:				
(B) Salt water disposal facilities are examined often; and				
(C) Preventive flowline maintenance programs are established				
<b><u>(e)(6) Oil Drilling and Workover Facilities (Onshore)</u></b>				
(i) Drilling and workover equipment is located to prevent spilled oil from reaching navigable waters				
(ii) Catchment basins or diversion structures are provided to intercept and contain oil spills if needed				
(iii) A blowout preventer (BOP) assembly and well control system is installed as necessary to prevent release of oil				
<b><u>(e)(7) Oil Drilling, Production or Workover Facilities (Offshore)</u></b>				
(ii) Oil drainage collection equipment is used to prevent and control spillage with drains directed toward a central collection sump or equivalent.				
(iii) Sumps and drains are adequately sized and a spare is available. A regularly scheduled preventive maintenance program is employed.				
(iv) High level alarms or separators or other feasible alternatives are installed to prevent oil discharges.				
(v) Atmospheric storage or surge tanks are equipped with high level sensing devices or other acceptable alternatives.				
(vi) Pressure tanks are equipped with high and low level alarms and/or flow controllers				
(vii) Tanks are equipped with suitable corrosion protection.				
(viii) Written procedures for inspecting and testing pollution prevention equipment are included in the plan.				
(ix) Testing and inspections of pollution prevention equipment are include in the plan.				
(x) Surface and subsurface well shut-in valves and devices are described. Detailed records for each well are kept by the owner or operator.				
(xi) A blowout prevention (BOP) assembly and well control systems are installed. Casing and BOP installations meet requirements.				
(xii) Well control measures are provided for emergency situations. Redundancy varies with hazards and consequences of failure.				
(xiii) Written instructions are prepared for contractors and subcontractors and are maintained at the offshore production facility.				
(xiv) All manifolds (headers) are equipped with check valves on individual flowlines.				
(xv) Specified flowlines are equipped with high pressure sensing devices and shut-in valves at the wellhead.				

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U.S. EPA REGION III SPILL PREVENTION, CONTROL AND COUNTERMEASURE (SPCC) PLAN REVIEW CHECKLIST	Adequately Addressed	Inadequately Addressed	Not Addressed	Not Applicable
(xvi) All facility pipelines are corrosion protected using such methods as protective coatings or cathodic protection				
(xvii) Sub-marine pipelines belonging to the facility are protected against environmental stresses and other activities, such as fishing.				
(xviii) Sub-marine pipelines belonging to the facility are inspected periodically, and the documentation is maintained at the facility.				
<b><u>(e)(7) Inspections and Records</u></b>				
- Inspections are in accordance with written inspection procedures included in the Plan;				
- A record of the inspections are included in the Plan;				
- Written procedures and inspection records are signed by the appropriate supervisor or inspector; and				
- Written procedures and inspection records are maintained for a period of three years.				
<b><u>(e)(9) Security (Excluding Oil Production Facilities)</u></b>				
(i) Plants handling, processing, and storing oil are fully fenced, and				
- Entrance gates are locked and /or guarded when the plant is unattended or not in production				
(ii) Any valves that permit outflow of a tank's contents are securely locked closed when in non-operating or non-standby status				
(iii) Oil pump starter controls in non-operating or non-standby status are locked in the off position or are accessible only to authorized personnel.				
(iv) The loading/unloading connections of oil pipelines should be capped or blank-flanged if not in service or on standby status for an extended time				
(v) Lighting is commensurate with the facility giving consideration to :				
(A) Discovering spills at night; and				
(B) Preventing spills occurring through acts of vandalism				
<b><u>(e)(9) Personnel Training and Spill Prevention Measures</u></b>				
(i) Personnel are properly instructed in the operation and maintenance of oil pollution prevention equipment and pollution control laws and regulations				
(ii) A person accountable for oil spill prevention is designated in the Plan and reports to line management				
(iii) Spill prevention briefings for operating personnel are conducted at intervals frequent enough to assure adequate understanding of the Plan.				
<b>40 CFR 112.30 Facility Response Plans and Preamble to 40 CFR 9 and 112</b>				
(e) If the owners or operators of a regulated facility is not required to submit a response plan, the SPCC Plan includes a signed certification form contained in Appendix C to Part 112.				

SPCC CHECKLIST

