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5.0 OIL AND HAZARDOUS SUBSTANCES MANAGEMENT

5.1 INTRODUCTION

The Project will develop, establish and maintain a comprehensive Oil and Hazardous Substances Management (OHSM) Program to integrate the prevention, minimization, collection, handling, transport and disposal of the wastes produced by all phases of the project including construction, operation, maintenance and if necessary, decommissioning.

The Project will prepare a OHSM Plan that will serve as a guide to the implementation of the OHSM Program through coordination with the Technical and other Environmental Protection Programs through all phases of the Project. The Project will require the preparation of similar plans and procedures by contractors handling waste, oil, or other hazardous substances. In addition, compliance with approved procedures will be made a requirement of contractual agreements with Project contractors.

Oil and hazardous substances, especially petroleum products, will be used during construction and operation of the Alaska Segment. These materials pose risks as safety hazards and have the potential for causing environmental damage. The OHSM Program will be developed to minimize safety hazards and adverse environmental effects resulting from the storage, handling and use of oil and hazardous substances through proper procedures.

Spill prevention can be brought about by proper engineering design and by adhering to carefully structured procedures for handling, storing, and distributing petroleum products and other hazardous substances. Effective control and cleanup of spills requires response plans that are practical, flexible, and readily deployable. To this end, the Project is pursuing several planning areas that form key elements of an overall oil and hazardous substances management program. Prevention of spills by reduction of the use of hazardous substances and adoption of state-of-the-art pollution prevention practices are key elements of this section.

For each project activity where controls would be needed, this section identifies methodologies that identify the form the control would take, and the document in which it would be issued.

The project will prepare specific planning documents required by the OHSM program. These plans include the Oil Discharge Contingency (ODC) Plan(s), the Spill Prevention, Control and Counter-measures (SPCC) Plan(s), the Oil and Hazardous Substances Spill Control Plan (OHSSCP), and the Petroleum Handling Procedures Manual (PHPM). The planning, procedural, and conceptual design information in these documents is supplemented by related design information found in other technical documents.

Plans that are consistent with federal and state requirements will be prepared for individual construction and operational fuel storage facilities. The SPCC Plans prepared pursuant to 40 CFR 112 will describe in detail the actual storage equipment in use at each site and will present piping, structural containment, and other engineering details called for in the Federal regulations. The ODC Plans, which can be required under Title 46 but are not specifically mandated under 18 AAC 75 for facilities of less than 420,000 gallons of storage, will be written to jointly satisfy requirements in 40 CFR 112.

The Project OHSSCP will be developed to address project-wide abilities to respond to a spill event during construction and post-construction operation of the pipeline. It will be principally designed to be used as a field reference manual providing to project personnel specific guidance on spill response activities. The OHSSCP will outline project-wide reporting procedures and spill response organizations, and describe spill containment and clean-up techniques appropriate for the variety of weather and terrain conditions to be encountered. Sections of this plan establishing contractor requirements will also be incorporated into construction bid packages. Inspections and other operational practices to control fuel inventories and avoid fuel spills are set forth in the PHPM. All personnel associated with the storage, handling, distribution, collection, transportation, and disposal of petroleum products will use this manual.

Included in this section are expected quantities of used oils and hazardous substances known to be required during construction and operation. This information will be provided to designers to assist in the design of collection, storage, shipment, recycling, treatment, disposal brokers and facilities for these materials. Certain conceptual design measures for control of oil and hazardous substances are also presented to the level necessary for agency evaluation of their practicality and acceptability. Agency review and recommendations are important prior to final development of project designs and methodologies before resources are expended for detailed design. Also included is an indication of future source documents that will contain detailed design information on oil and hazardous substance systems and equipment. These source documents will be prepared during the normal course of the design process and submitted for agency review as they are available.

5.2 CRITERIA

5.2.1 Federal Regulatory Criteria

Federal requirements for the control of oil and hazardous substances appear in interrelated statutes and regulations administered by several federal agencies. With some exceptions, which will be indicated in this summary, the statutes and regulations generally address oil and hazardous substances separately. The term hazardous substances is used variously in the regulations to mean chemicals specifically designated as hazardous substances or a broader category including these and hazardous wastes, toxic pollutants, hazardous air pollutants, toxic substances, and hazardous materials (when hazardous substances are transported). This broader definition is the usage adopted by the Project.

The following sections summarize the federal statutes and regulations that may be applicable to the management of oil and hazardous substances for ANGTS. The summary focuses on requirements considered relevant to design, operations, and management decisions.

In addition to the specific criteria related to oil and hazardous substance management that are discussed in these sections, other federal criteria that are generally applicable to the Project include:

- 18 CFR 380.12, “FERC’s Environmental Reports for Natural Gas Act Applications,” and FERC environmental policy guidelines thereunder;

- Federal Right-of-Way Grant for the Alaska Natural Gas Transportation System Alaska Segment, Serial No. F-24538 (December 1, 1980), as such may be updated and/or amended from time to time.
- Federal Energy Regulatory Commission conditional certificate of public convenience and necessity, issued on December 16, 1977, as such is finalized.

Federal statutes and regulations with respect to the control of oil address the issue from many perspectives, ranging from general planning, to detailed design considerations, to notification requirements. For each perspective, different agency jurisdictions are involved. Table 5-1 lists these statutes and regulations and briefly describes the topics they address. This list is to be used to refer project personnel to the appropriate statutes and regulations, not as an informational substitute for them.

5.2.1.1 Discharge of Oil (40 CFR Part 110)

Under the legal authority of the Clean Water Act, the Discharge of Oil regulation, commonly known as the "sheen rule", provides the framework for determining whether an oil spill to inland and coastal waters and/or their adjoining shorelines should be reported to the federal government. In particular, the regulation requires the person in charge of a facility or vessel responsible for discharging oil that may be "harmful to the public health or welfare" to report the spill to the federal government. The regulation establishes the criteria for determining whether an oil spill may be harmful to public health or welfare, thereby triggering the reporting requirements, as follows:

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

The Oil Pollution Act of 1990, which amended the Clean Water Act, broadly defines the term "oil," the sheen rule applies to both petroleum and non-petroleum oils (e.g., vegetable oil). The regulation also provides several exemptions from the notification requirements. Sheen means an iridescent appearance on the surface of water. Sludge means an aggregate of oil or oil and other matter of any kind in any form other than dredged spoil having a combined specific gravity equivalent to or greater than water.

Navigable waters mean the waters of the United States, including the territorial seas. The term includes:

- a) all waters that are currently used, were used in the past, or may be susceptible to use in interstate or foreign commerce, including all waters that are subject to the ebb and flow of the tide;
- b) interstate waters, including interstate wetlands;

- c) all other waters such as intrastate lakes, rivers, streams (including intermittent streams), mudflats, sand flats, and wetlands, the use, degradation, or destruction of which would affect or could affect interstate or foreign commerce including any such waters:
- That are or could be used by interstate or foreign travelers for recreational or other purposes;
 - From which fish or shellfish are or could be taken and sold in interstate or foreign commerce;
 - (3) That are used or could be used for industrial purposes by industries in interstate commerce;
- d) all impoundments of waters otherwise defined as navigable waters under this section;
- e) tributaries of waters identified in paragraphs (a) through (d) of this section, including adjacent wetlands; and
- f) wetlands adjacent to waters identified in paragraphs (a) through (e) of this section.

5.2.1.2 Spill Prevention Control and Countermeasure (SPCC) Regulations (40 CFR Part 112)

The SPCC Plans are site-specific documents prepared to promote the proper design and operation of a given oil storage facility in a manner that minimizes spill opportunities and provides an effective response when spills do occur. SPCC Plans are required by Federal regulations (40 CFR 112) for any aboveground facilities with storage capacity in excess of 660 gallons in a single tank or 1,320 gallons total. SPCC Plans are required to have the following key information:

- name of the location and operator of a facility.
- maximum fuel storage or handling capacity of the facility and normal daily throughput.
- description of equipment or procedures that have a reasonable potential of causing an oil spill at the facility (tank overflow, rupture, or leakage), together with a prediction of the direction, rate of flow, and total quantity of oil that could be lost as a result of each major type of failure.
- description (and drawings where appropriate) of containment or diversionary structures or equipment to prevent discharged oil from reaching navigable watercourses.
- discussion of conformance with 40 CFR 112.7(e) guidelines and, where more stringent, applicable State regulations and guidelines. The 40 CFR 112.7(e) guidelines contain numerous equipment performance and facility configuration requirements.
- description of inspection procedures records.
- description of facility security (both structural and procedural measures).

- description of
 - procedures for properly instructing personnel in the operation and maintenance of oil spill prevention equipment;
 - person(s) (by name or title) accountable for oil spill prevention at the facility and their line reporting management; and
 - spill prevention briefings for personnel.

SPCC Plans are required under 40 CFR parts 112.1 through 112.21. Additional requirements for a Facility Response Plan (FRP) pursuant to 40 CFR 112.20 may not be required but will be evaluated for each SPCC against the threshold requirements specified under the Certification of the Applicability of Substantial Harm Criteria Checklist per 40 CFR 112. Individual SPCC Plans will be prepared prior to a new facility going into service, and will be fully implemented within the first year of service.

The U.S. Environmental Protection Agency (EPA) does not review nor approve SPCC Plans; the responsibility for current SPCC Plans rests wholly on the facility owner/operator. A licensed professional engineer must seal SPCC Plans. RSE licensed professional engineers conduct all SPCC site inspections prior to plan preparation and sealing.

SPCC Plans are current for three years from date of preparation and require annual internal review and update. After three years, a new inspection and seal by a licensed professional engineer is required. Also, if significant changes to the facility fuel storage/transfer capacity are made during the three-year period, revision and approval by a licensed professional engineer may be required.

5.2.1.3 SARA Title III – Emergency Planning and Community Right to Know

Congress passed the Emergency Planning & Community Right to Know Act (EPCRA) as part of the Superfund Amendments and Reauthorization Act of 1986 (SARA). As a result, EPCRA is also referred to as SARA Title III. The act created a program with two basic goals:

- increase public knowledge of and access to information on the presence of toxic chemicals in communities, releases of toxic chemicals into the environment, and waste management activities involving toxic chemicals; and
- encourage and support planning for responding to environmental emergencies.

To fulfill these goals, EPCRA created the Toxics Release Inventory or TRI and the hazardous chemical inventory. This information enables state and local governments and the community to identify what needs to be done at the local level to better deal with pollution and chemical emergencies.

This regulation established a framework under which the State of Alaska established statutes and regulations Under Title 13, that provides for the establishment of Local Emergency Planning

Committees (LEPCs). These LEPCs establish reporting requirements for businesses that ship, transshipment, or store hazardous substances. Typical reporting requirements include:

- a facility that has over the Threshold Planning Quantity (TPQ), established by the EPA of an Extremely Hazardous Substance must notify the SERC that it is subject to the emergency planning provisions of the law (sect. 302, 303).
- a facility which has an accidental release of an Extremely Hazardous Substance above the reportable quantity established by the EPA must immediately notify the LEPC and the SERC of any state likely to be affected by the release (Sect. 304)
- a facility that is subject to Occupational Safety and Health Administration (OSHA) worker right- to-know regulations must submit basic information to the LEPC, SERC and the local fire department, including the name, type, amount, and health effects of each hazardous chemical (Sect. 311, 312)
- a facility must annually report routine and accidental emissions of Toxic Chemicals to the state and the EPA.

The LEPC districts in the Project area requiring notification include:

- Farthest North LEPC (Barrow/North Slope)
- Fairbanks Area LEPC
- Delta Greely LEPC
- Copper River Basin LEPC

5.2.1.4 Identification and Listing of Hazardous Waste (40 CFR Part 261)

EPA has issued regulations governing hazardous waste under the Resource Conservation and Recovery Act (RCRA) and the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA or Superfund). The Resource Conservation and Recovery Act RCRA is the federal law requiring safeguards and encouraging environmentally sound methods for disposal of household, municipal, commercial, and industrial waste. Hazardous waste is regulated under RCRA's Subtitle C program. Subtitle C establishes a system for controlling hazardous waste from "cradle to grave" from the moment it is generated until its ultimate disposal. These controls include:

- tracking system that requires a manifest document to accompany transported hazardous waste from the point of generation to the point of final disposal.
- identification and permitting system that enables EPA and the states to ensure the safe operation of all facilities involved in the treatment, storage, and disposal of hazardous waste. Certain generators, transporters, and treatment, storage, and disposal facilities (TSDFs) must obtain an EPA identification number. TSDFs also must obtain a permit to operate, which ensures that they meet the standards established under the RCRA program for proper waste management.

- system of restrictions and controls on the placement of hazardous waste on or into the land. RCRA requirements for hazardous waste management vary depending on whether the waste is generated by a conditionally exempt small quantity generator

Hazardous waste generators may include various types of facilities and businesses ranging from large manufacturing operations, universities, and hospitals to small businesses and laboratories. Because these different types of facilities generate different volumes of wastes resulting in varying degrees of environmental risk, RCRA regulates generators based on the amount of waste that they generate in a calendar month. As a result, there are three categories of hazardous waste generators. These categories are large quantity generators (LQGs), Small Quantity Generators (SQGs), and conditionally exempt small quantity generators (CESQGs).

The Subtitle C regulations broadly define the term generator to include any person, by site, who:

- first creates or produces a hazardous waste (e.g., from an industrial process) or
- first brings a hazardous waste into the RCRA Subtitle C system (e.g., imports a hazardous waste into the United States).

Because generators are the first step in the RCRA Subtitle C system, it is important to properly classify and identify their waste to ensure proper handling later in the hazardous management process. As a result, generators of waste must make the following determinations:

- is the waste a solid waste?
- is it excluded from regulation?
- is the waste a listed hazardous waste?
- is it a characteristic hazardous waste?

Large quantity generators are defined as those facilities that generate:

- greater than 1,000 kg of hazardous waste per calendar month (approx. 2,200 lbs) or
- greater than 1 kg of acutely hazardous waste per calendar month (approx. 2.2 lbs)

Small Quantity Generators are those generators that produce:

- between 100 kg (approximately 220 lbs) and 1,000 kg of hazardous waste per calendar month; and
- accumulate less than 6,000 kg (approximately 13,200 lbs) of hazardous waste at any time.

Conditionally Exempt Small Quantity Generators are those generators whose facilities produce:

- less than 100 kg of hazardous waste per calendar month or
- less than 1 kg of acutely hazardous waste per calendar month.

The CESQG requirements additionally limit the facility's waste accumulation to less than 1,000 kg of hazardous waste, 1 kg of acute hazardous waste, or 100 kg of any residue from the cleanup of a spill of acute hazardous waste at any time.

Generator status is determined on a monthly basis, it is possible that a generator's status can change from one month to the next, depending on the amount of waste generated in a particular month. This is referred to as episodic generation. If a generator's status does in fact change, the generator is required to comply with the respective regulatory requirements for that class of generators for the waste generated in particular month.

The EPA has maintained primacy for enforcement of the Hazardous Waste and Used Oil regulations in Alaska. The ADEC provides compliance assistance but in general does not become involved in used oil regulatory enforcement actions.

5.2.1.5 Used Oil Regulations (40 CFR Part 279)

The used oil regulations, or management standards, were issued by the EPA in September 1992 and are contained in Title 40, Part 279, of the Code of Federal Regulations. They cover all segments of the used oil recycling system, including:

- used oil generation;
- used oil transportation; and
- used oil burned for energy recovery

Used oil regulations were created to provide objective management standards to distinguish used oil from hazardous waste and to do so in a manner that promotes recycling of used oils. Since used oil is recycled primarily by one of two methods, as a fuel or reprocessed for use as lube oil, the categories established were built around these recycling methods. Additionally since used oil is a hazardous material and can at times exhibit characteristics of a hazardous waste, EPA sought to provide consistency between the hazardous waste regulations under 40 CFR Part 261-262 and the used oil regulations under 40 CFR part 279.

Some key provisions of used oil regulations include the following:

- Hazardous Waste Generators and Used Oil Transporters, Marketers, and Energy Recovery Operations are identified and managed by facility. The ID number will be associated with the facility at which the regulated substance is generated.
- a facility is defined under RCRA as “all contiguous land and structure, other appurtenances and improvements on the land, used for treating, storing or disposing of hazardous waste”.
- once used oil is shown to be on-specification (on-spec) by combination of historic chemical analyses, routine screening, generator knowledge, and marketer declaration; and is to be burned for “energy recovery”, the used oil is not subject to regulation under the 40 CFR Part 279, the Used Oil Regulations. Table 5-2 provides a summary of on-specification criteria This distinction is qualified by another condition that the party claiming that the used oil is not subject to 40 CFR part 279 is in full compliance with applicable provisions of the following paragraphs of Subpart H, Standards for Used Oil Fuel Marketers:
 - On-spec Oil Standards for Used Oil Fuel Marketers

- Notification, Standards for Used Oil Fuel Marketers
- 279.74(b) On-specification Used Oil delivery Standards
- a used oil generator is any person, by site, whose act or process produces used oil or whose act first causes used oil to become subject to regulation.
- used oil Transporters must obtain EPA identification numbers before they may transport a generator's used oil. Transporters, in addition to meeting the requirements identified for generators, must meet the following requirements:
 - obtain an EPA ID number;
 - store used oil in areas with oil-impervious flooring and secondary containment such as berms, ditches, or over packs (depending on the type of facility, used oil may be able to be stored for only a limited amount of time);
 - ensure that hazardous wastes have not been added to the used oil;
 - comply with DOT requirements for packaging, labeling, and placarding; and
 - record each used oil shipment accepted for transport or delivered

Any person who conducts either of the following activities is a used oil fuel marketer.

- directs a shipment of off-specification used oil from their facility to a used oil burner; or
- first claims that used oil that is to be burned for energy recovery meets the used oil fuel specifications set forth in § 279.11.

Used Oil Marketers must also comply with one of the following:

- Subpart C - Standards for Used Oil Generators;
- Subpart E - Standards for Used Oil Transporters and Transfer Facilities;
- Subpart F - Standards for Used Oil Processors and Re-refiners; or
- Subpart G - Standards for Used Oil Burners who Burn Off-Specification Used Oil.

On-site burning of used oil for energy recovery requires this to be done in space heaters of less than 0.5 million BTU/hr capacity.

5.2.1.6 National Oil and Hazardous Substances Pollution Contingency Plan (NCP)

(40 CFR Part 300)

NCP represents the federal governments methodology for responding to oil spills and hazardous substance releases. NCP has been broadened historically to cover legislation associated with the Clean Water Act of 1972, CERCLA, emergency removal actions for releases at hazardous waste

sites, and the most recent changes in 1994 covering provisions related with the Oil Pollution Act of 1990. The National Contingency Plan provides the institutional framework that:

- defines Federal, state and local governments responsibilities for an oil or chemical release;
- describes resources available for response situations;
- establishes a hierarchy of response teams;
- specifies a command structure to oversee spill response;
- requires Federal, regional and area contingency plans;
- summarizes state and local emergency planning requirements, as well as response priorities, phases and procedures; and
- provides procedures for the use of chemicals (e.g., dispersants, shoreline cleaning agents) in removing spilled hazardous materials.

The NCP requires that notice of an oil discharge or release of a hazardous substance in an amount equal or greater than the reportable quantity (RQ) be made immediately to the National Response Center (NRC) at: 1-800-424-8802.

5.2.2 State Regulatory Criteria

State of Alaska statutes and regulations pertaining to control of oil and hazardous substances are extensive. The following summary focuses on the principal statutes and regulations directly applicable to the Alaska segment. Requirements that relate to liability matters or agency administrative actions rather than design, or practical considerations, have not been included here.

Alaska statutes establish the authority of the Alaska Department of Environmental Conservation (ADEC) to regulate discharges of oil, specifically Title 46 Chapter 03, where it is stated that:

- "No person may discharge, cause to be discharged, or permit the discharge of petroleum, acid, coal or oil tar, lampblack, aniline, asphalt, bitumen, or a residuary product of petroleum, into, or upon the waters or land of the state except in quantities, and at times and locations or under circumstances and conditions as the department may by regulation permit..." (AS 46.03.740)

The reporting of oil discharges is addressed by Section 46.03.755, where it is stated that:

- "A person in charge of a facility, operation or vessel, as soon as he has knowledge of any discharge from the facility, operation or vessel in violation of AS 46.03.740 or 46.03.750, shall immediately notify the department of the discharge."

Chapter 4 of Title 46 addresses oil pollution control, from the perspective of avoiding oil spills and, where spills do occur, minimizing the ensuing environmental damage. Section 46.04.020 states that persons causing an oil discharge must contain and cleanup the discharge. The manner of containment and cleanup, including associated waste treatment or disposal, must be approved

by ADEC. If the ADEC determines that cleanup activities are inadequate, the state may undertake cleanup activities.

Section 46.04.030 states that an Oil Discharge Contingency Plan (approved by ADEC) must be prepared for all oil terminal facilities. These regulations require that the plans are also submitted to and approved by the Alaska Department of Natural Resources and the Alaska Department of Fish and Game.

Regulations determined by ADEC to be necessary to carry out the purposes of AS 46.03 and AS 46.04 are found in Title 18, Chapter 75 of the Alaska Administrative Code (AAC). The following is an article-by-article indication of Chapter 75 content.

- Article 1: Oil Pollution Prevention Requirements (18 AAC 75.005 - 75.090)
- Article 2: Financial Responsibility for Oil Discharges (18 AAC 75.205 - 75.290)
- Article 3: Discharge Reporting, Cleanup, and Disposal of Oil and Other Hazardous Substances (18 AAC 75.300 - 18 AAC 75.396)
- Article 4: Oil Discharge Prevention and Contingency Plans (18 AAC 75.400 - 18 AAC 75.495)
- Article 5: Oil Spill Primary Response Action Contractors (18 AAC 75.500 - 18 AAC 75.580)
- Article 6: Civil Penalties for Discharge of Petroleum and Petroleum Products and Byproducts (18 AAC 75.605 - 18 AAC 75.670)
- Article 7: Surface Oiling (18 AAC 75.700 - 18 AAC 75.730)
- Article 8: Oil Discharge for Scientific Purposes (18 AAC 75.800 - 18 AAC 75.830)
- Article 9: General Provisions (18 AAC 75.905 - 18 AAC 75.990)

Article 1 and 3 of Chapter 75 sets forth regulations for oil discharge reporting, cleanup, and disposal.

5.2.2.1 Discharge Reporting, Cleanup, Disposal of Oil and Hazardous Substances and General Provisions (18 AAC 75 Articles 3 and 9)

Chapter 75, Article 3 establishes ADEC reporting, cleanup, and disposal requirements for spills of hazardous substances. Spills of hazardous substances other than oil or discharge of oil in excess of 55 gallons solely to land outside an impermeable secondary containment area or structure must be reported to ADEC immediately. Other time frames for reporting oil spills vary with the size of the spill and the environment in which the spill occurs. Article 3 describes the information necessary for the initial and final reports of hazardous substance or oil spills. The clean up and disposal of hazardous substances or oil and any other materials contaminated with these products must be approved by ADEC.

ADEC defines a hazardous substance under AS 46.03.826 as follows:

- an element or compound which, when it enters into the atmosphere or in or upon the water or surface or subsurface land of the state, presents an imminent and substantial danger to the public health or welfare, including but not limited to fish, animals, vegetation, or any part of the natural habitat in which they are found;
- oil; or
- a substance defined as a hazardous substance under 42 U.S.C. 9601 (14)

AS 46.04.900 defines oil as "a derivative of a liquid hydrocarbon and includes crude oil, lubricating oil, sludge, oil refuse or any other petroleum-related product or byproduct."

The definition for hazardous substance under 42 U.S.C. 9601 (14) is:

- any substance designated pursuant to section 1321(b)(2)(A) of title 33,
- any element, compound, mixture, solution, or substance designated pursuant to section 9602 of this title,
- any hazardous waste having the characteristics identified under or listed pursuant to section 3001 of the Solid Waste Disposal Act (42 U.S.C. 6921) (but not including any waste the regulation of which under the Solid Waste Disposal Act (42 U.S.C. 6901 et seq.) has been suspended by Act of Congress),
- any toxic pollutant listed under section 1317(a) of title 33,
- any hazardous air pollutant listed under section 112 of the Clean Air Act (42 U.S.C. 7412), and
- any imminently hazardous chemical substance or mixture with respect to which the Administrator has taken action pursuant to section 2606 of title 15.

The term does not include petroleum, including crude oil or any fraction thereof which is not otherwise specifically listed or designated as a hazardous substance under subparagraphs (a) through (f) of this paragraph, and the term does not include natural gas, natural gas liquids, liquefied natural gas, or synthetic gas usable for fuel (or mixtures of natural gas and such synthetic gas).

Other state requirements pertaining to the management of oil and hazardous substances at the work site appear in the Alaska Occupational Safety and Health Standards; (specifically, subchapter 01, the General Safety Code, Subchapter 04, the Occupational Health and Environmental Control Code; and Subchapter 08, Petroleum); the Alaska Motor Carrier Safety Requirements (3 AAC 62) and Radiation and Hazardous Waste Protection (AS 46.03.250).

5.2.2.2 Discharge or Release Notification Reporting Requirements (18 AAC 75.300)

5.2.2.3 Oil Discharge Prevention and Contingency Plans (18 AAC 75 Article 4)

ADEC regulations may not specifically mandate that this plan be developed for project facilities having less than 420,000 gallons of storage. Requirements of this section include the following key components:

Response Action Plan

The response action plan must provide in sufficient detail to clearly guide responders in an emergency event, all information necessary to guide response to a discharge. It includes sections that address the following:

- safety
- communications
- deployment strategies
- response strategies
- waste management plans and procedures
- wildlife protection, recovery, disposal, rehabilitation,
- facility diagrams

Prevention Plan

Under the provisions of 18 AAC 75.005 - 18 AAC 75.090, the prevention plan must include a detailed description of all oil discharge prevention measures and policies employed at the facility or operation, with reference to the risks involved. The prevention plan may be submitted as a separate volume, and must include, at a minimum, the following information:

- description and schedule of regular pollution prevention, inspection, and maintenance programs in place at the facility or operation;
- history of all known discharges;
- analysis of potential oil discharges, including size, frequency, cause, duration, and location, and a description of actions taken to prevent a potential discharge;
- description of any conditions specific to the facility or operation that might increase the risk of a discharge, including physical or navigation hazards, traffic patterns, or other site-specific factors, and any measures that have been taken to reduce the risk of a discharge attributable to these conditions;
- description of the existing and proposed means of discharge detection, including surveillance schedules, leak detection, observation wells, monitoring systems, and spill-detection instrumentation; and

- detailed basis for the calculation of exceptions, if any, to be applied to the response planning standards set out in 18 AAC 75.430 - 18 AAC 75.438.

Supplemental Information. The supplemental information section must provide background and verification information, including:

- Facility description and operational overview
- Receiving environment
- Command system
- Realistic maximum response operating limitations
- Logistical support
- Response equipment

5.2.2.4 Underground Storage Tank Regulations (18 AAC 78)

An underground storage tank, or underground storage tank (UST) system, means one or a combination of stationary devices, including underground pipes connected to the devices, that is designed to contain an accumulation of petroleum, the volume of which, including the volume of underground pipes, is 10-percent or more beneath the surface of the ground. ADEC's definition is essentially the same as EPA's, although Alaska does not include tanks that store hazardous waste.

If USTs are used as part of this project, they will need to conform to the following:

- adequate leak detection, spill and overflow prevention, and corrosion protection
- routine maintenance on UST system per the Alaska Operation and Maintenance Manual
- adequate Financial Responsibility coverage
- UST system inspected every three years by a licensed inspector
- operations tags posted on-site
- installation, testing or closing of a UST (including piping), performed by a person certified by the state of Alaska to perform UST work

Other pertinent state of Alaska regulations related to management of oily and hazardous substances include:

Title 18, Chapter 50, Air Quality Control. Establishes emission limits for incinerators (including those to be used for disposal of waste oil), and requires facilities above certain capacities to obtain ADEC Permits to Operate. These requirements are addressed in other sections of this submittal

Title 18, Chapter 60, Solid Waste Management. Establishes requirements for the design, permitting, and operation of solid waste landfills. Section 4 of this volume, Waste Management, describes these requirements in greater detail.

Title 18, Chapter 70, Water Quality Standards. Establishes allowable levels of "Toxic and Other Deleterious Organic and Inorganic Substances" and "Petroleum, Hydrocarbons, Oils, and Grease" in marine and fresh waters of the State. The levels are expressed as criteria assigned with regard to the intended use of given water bodies.

Title 18, Chapter 72, Wastewater Disposal. Contains requirements on the discharge of oil and hazardous substances as a wastewater. The discharge of oil, petroleum products, or industrial solvents to a sewage system designed to contain only sewage is prohibited by 18 AAC 72.010 (f). The design of wastewater treatment plants must be formally approved by ADEC under the Plan Review process described in 18 AAC 72.060. Wastewater is defined as including oil and grease. Plan 12, Waste Management, addresses these requirements.

Other state requirements pertaining to the management of oil and hazardous substances at the work site appear in the Alaska Occupational Safety and Health Standards; (specifically, subchapter 01, the General Safety Code, Subchapter 04, the Occupational Health and Environmental Control Code; and Subchapter 08, Petroleum); the Alaska Motor Carrier Safety Requirements (3AAC62) and Radiation and Hazardous Waste Protection (AS 46.03.250).

5.2.2.5 State of Alaska Fire Code (13 AAC 50.025)

As of September of 2001, the State of Alaska adopted the International Fire Code (IFC). This code applies to any district within the state of Alaska where it is not superseded by local ordinances. Districts with local ordinances are Fairbanks Borough and the Municipality of Anchorage. Chapters of the IFC which apply to oil and hazardous substances include: Chapter 27, Sections 2701 through 2705, Hazardous Materials General Provisions and Chapter 34, Sections 3401 through 3406, Flammable and Combustible Liquids.

5.2.3 Local Codes and Ordinances

The Project will review local codes and ordinances for the following local governments:

- North Slope Borough,
- Fairbanks North Star Borough, and
- Any others affected by the Project.

5.2.4 Design Criteria

The Project has identified the principal oil and hazardous substances that will require engineering and procedural controls during the course of the project. This section indicates the source and expected amounts of these known substances. General measures that will be employed as controls are provided in Section 5.3 Methodologies. The purpose of this

presentation is to establish initial design criteria for recyclable materials and hazardous substances anticipated to be handled during this project.

The measures described in this section are necessarily conceptual in order to be reviewed by the agencies before greater detail is applied. It is intended that this presentation be the basis for the agencies to comment on project criteria and methodologies in the areas of oil and hazardous substance management, and thus become a baseline for later development of detailed design and procedures in these areas. The presentation in this section is not intended to cover all aspects of oil and hazardous substance management in equivalent intensity or in final detail.

Oil and hazardous substances estimated to be used during construction and operation of the Alaska segment of the ANGTS are shown in Table 5-3. Most of the project quantities were obtained from a prior version of this Plan and estimated generation rates were based on peak construction periods for a 1,000-person pipeline construction camp. Also shown on the table are estimates of waste generation rates during operation of permanent facilities. Some of these quantities have been modified based upon the preparer's judgment. As more project details emerge, these quantities will be necessarily updated to reflect more accurate estimated based upon confirmed project details

Execution Contractors (EC's) may employ in the performance of their work other hazardous substances not currently identified in the tables. A centralized procurement and inventory control system will be employed by the Project to identify and track usage of project hazardous substances and materials and to the extent practical, limit the types and quantities of hazardous materials to be used during the construction activities and meet LEPC reporting and OSHA worker right-to-know requirements. Use of these materials will be permitted only as approved by this centralized procurement system and when the contractor has affirmed compliance with project management documents including the Petroleum Handling and Procedures Manual (PHPM).

5.2.4.1 Bulk Fuel Storage and Shipment

Camp facilities may store up to 200,000 gallons of diesel and other hydrocarbon products in storage tanks equipped with secondary containment. Current understanding is that four camps will be operated simultaneously. Fuel will be delivered to the camps and transferred to bulk storage at a frequency to meet camp and field spread crew-fueling requirements. Fuel stored at camp may be transferred to tanker trucks for delivery to field construction equipment as well as to smaller truck-mounted equipment fueling systems or dispensed to equipment or vehicles directly. Fuels will include arctic diesel, unleaded gasoline, jet fuel and arctic heating oil (jet fuel).

Quantities of drummed virgin hydrocarbon and other hazardous materials will also be stored in Camps and Fairbanks headquarters facilities. These materials will include the previously mentioned fuels as well as solvents, glycols, alcohols, lubricating oils, hydraulic oil, transmission, and brake fluids.

5.2.4.2 Water Contaminated Fuels

Water contaminated fuels or fuel contaminated waters will be generated through equipment facility maintenance activities. No attempt has been made to estimate total quantities of this water but a single relatively small spill event can generate several hundred thousand gallons of fuel-contaminated water. In addition to this episodic generation, tank farm dewatering and used oil energy recovery activities may also generate significant quantities of mixed water and hydrocarbon products. Estimation of total quantities of these substances generated on this project has not been performed at this time but episodic generation events may result in generation of several hundred thousands gallons in a short time period. Monthly generation is expected to be at least 10,000 gallons related to accruals of collected waters from other project activities.

5.2.4.3 Solvents and Methanols

Hydrocarbon-based solvents as well as methanols and other alcohol-based hazardous materials will be used in both project operation and maintenance activities. Larger quantities of solvents may be used in equipment maintenance such as parts wash tanks or in small incidental use of aerosol solvents such as carburetor cleansers or penetrating lubricants. Pollution prevention through inventory control and waste segregation activities will greatly limit the quantity of these materials to be managed. Despite the “non-hazardous” marketing associated with “environmentally friendly” solvents, the fact remains a solvent may through a process or a characteristic (which are influenced by its use and management) can enter the hazardous waste regulation category. Small amounts of chlorinated solvents can alter the classification of used oil to an off-specification or hazardous waste category. Intentional mixing of a used solvent with another product such as used oil can result in the entire quantity of fluid requiring management as a hazardous waste.

While the pipeline construction itself may not generate great quantities of these substances, frequently, project contractors and subcontractors working on specific project functions may generate wastes from activities such as painting or urethane membrane operations. These trade-specific wastes may become co-mingled with other project-generated recyclables and result in costly and complicated treatment or disposal scenarios. Another significant waste management challenge is related to the poorly or weathered product identification labels. Regulatory assumptions are made that these products are wastes (possibly hazardous) unless correctly identified and managed under a recycling or energy recovery methodology.

At least 100-gallons per month of cleaning solvents, 50-gallons per month of paint solvents, and 50-gallons per month of methanol will be generated during the project construction phase.

5.2.4.4 Acids

Sulfuric acid may be drained from batteries under certain circumstances prior to transport. Broken batteries may require draining to prevent spillage during shipping or handling. Up to 80-gallons per month could be generated during the construction phase. The acid will be stored in ADEC approved labeled containers in a storage room or chemical storage cabinet placarded for

such items. This waste will be shipped offsite as a hazardous material on an as needed basis to a qualified third party for disposal or treatment. Drained batteries will be stored in placarded DOT-approved containers and packaging approved totes for offsite transport to a third party recycler.

5.2.4.5 Radiographic Film Processing Wastes

Due to the increased usage of digital and ultrasonic pipeline construction methods, production of radiographic film processing wastes are not anticipated at this time. Should any such wastes be produced, they will be stored in approved labeled containers in a storage area or hazardous material storage cabinet established for such items. Waste will be shipped offsite as a hazardous material on an as needed basis to a qualified third party for disposal or treatment.

5.2.4.6 Used Oils and Glycols

On-specification and off-specification used oil and other used hydrocarbon materials will be generated at Construction Camps and Fairbanks Headquarters in shops and maintenance facilities. The relative percentage of on- versus off-specification used oil or in some cases hazardous waste will be dependent on how effectively pollution prevention and hazardous material management programs are implemented.

Anti-freezes such as ethylene glycol will also be generated in these project areas. Third party contractors engaged on the project will see increased generation rates of these materials that may not be managed under the auspices of the Project. Generation rates were originally estimated by the kind and quantities of equipment to be serviced at assumed service intervals. These generation rates during project construction were estimated for peak construction periods to plan for handling, storage, recycling, treatment and disposal of these products. Glycol quantities were not included in prior estimates and were based upon a percentage of used oil generated. This information will be used to design storage and disposal facilities for project used oil and glycols. Used oil and glycol generation estimates are provided in Table 5-3.

Some used oils such as hydraulic oils and transmission fluids can be managed more effectively by segregation from used oil streams. Properties of these base hydrocarbons and additives in these products can impact the ability to burn used oil for energy recovery. Burning used oil on-site for energy recovery is an accepted and viable method of reducing total quantities of used oil managed by brokers or at third party facilities. It is anticipated that at least 100,000 gallons per month of used oil and 10,000 gallons per month of ethylene glycol will be generated during peak construction phase.

5.3 METHODOLOGIES

5.3.1 Oil and Hazardous Substances Management (OHSM) Plan

The Project will prepare a OHSM Plan that will serve as a guide to the implementation of the OHSM Program and defines the structure and the functions of the OHSM Program.

The OHSM Plan will serve as a guide to the implementation of the OHSM Program and defines the structure and the functions of the Program. The Project will coordinate with the Alaska Department of Environmental Conservation (ADEC), Alaska Department of Transportation and Public Facilities (ADOTPF), the Alaska Department of Natural Resources (ADNR), and the Alaska Department of Fish and Game (ADFG) in the development of the OHSM Plan.

The Plan will describe:

- the organization of documents used to administer oil and hazardous substance management;
- engineering applications for selected activities where the potential for spills or mishandling is exists.

The project's oil and hazardous substance documents and the engineering concepts described in this section are meant to satisfy the regulatory criteria in Section 5.2. This initial planning document is intended to foster discussion between project personnel and oversight regulatory agency personnel. Detailed development of plans and moving from conceptual to design detail will occur after agency review. Further planning and design processes will involve engineering management, design and field personnel, contract administrators, and eventually execution contractors and operations personnel. Agency personnel are expected to be involved in review of draft project documents and design as well.

Implementation as the shift into practice of plans and procedures is expected to continue into the construction and operational phases of the project.

5.3.2 Project Oil and Hazardous Substances Planning Documents

The oil and hazardous substance management program will be an ongoing effort. As such, it is necessary to develop and present information in stages so that the appropriate documents are prepared as the design details that must be addressed become available and, conversely, as the design effort requires guidance or input. This is viewed as a “living” process, wherein the design and planning documents develop on parallel tracks. The staged approach is also necessary so agency agreement can be reached on conceptual levels before final designs and procedures are developed.

The functional requirements to be fulfilled by project oil and hazardous spill planning include:

- program management and coordination,
- guidance of engineering design, and
- control of field activities.

To meet these diverse requirements within the aforementioned constraints and objectives, the project's oil and hazardous substances planning effort is organized into four areas and corresponding documents, as follows:

- Waste Minimization and Recycling Plan (WMRP), a Component of Solid Waste Management Plan providing general criteria for the minimization and proper

identification, characterization, containerization, packaging and labeling of recyclable hazardous materials and integration of these activities with the day-to day guidance in the PHPM.

- Oil Discharge Prevention and Contingency (ODC) Plans and Spill Prevention, Control, and Countermeasure (SPCC) Plans - Planning for prevention, control, and cleanup of oil spills from terminals or storage. Depending on the amount of storage, an SPCC, or combined SPCC/ODC will be prepared for each fuel storage facility.
- Oil and Hazardous Substances Spill Contingency Plan (OHSSCP) - Planning for prevention, control, cleanup, and reporting of spills of all hazardous substances; and for oil spills from locations other than from bulk storage facilities.
- Petroleum Handling and Procedures Manual (PHPM) - Procedures for fuel handling, fuel transfers, and surveillance/inspection of oil storage transfer facilities, and for recycling or waste management activities.

The logic used to determine which documents are applicable to a given activity or project facility is graphically presented in Figure 5-1.

There is expected to be frequent information exchange between the project groups preparing these four documents and subsidiary procedures and the engineering teams responsible for facility design. The following sections provide a description of each of the four documents presented in sufficient detail to enable the reviewer to understand the level of content and ultimate practicality of each.

5.3.3 Waste Reduction and Pollution Prevention Plan

Waste reduction and pollution prevention planning are a required component of project waste management planning under provisions of 18 AAC 60. Project Management commitment to this waste management includes the following items:

- establish project-wide pollution prevention goals
- perform project-wide pollution prevention opportunity assessments
- provide training for proper handling of materials and operation of equipment to minimize material waste and energy and water use
- create forums for employees and supervisors to identify ways to reduce waste
- establish procedures for identification, characterization, segregation, containerization, temporary storage, labeling and packaging of and shipment of recyclable or hazardous waste products to project authorized recycling or water treatment and disposal facilities

5.3.4 Procurement Systems and Inventory Tracking

Implementation of centralized procurement and inventory control and tracking systems for the construction project can reduce the amount of excess supplies procured for project activities.

Establishment of procurement guidelines prior to construction can help in the following waste management areas:

- procurement of low toxicity or recyclable products to reduce hazardous and solid waste stream generation
- establish inventory control system to trace hazardous materials from “cradle to grave”
- use (as possible) “just-in-time” ordering system to prevent overstocking of raw materials or hazardous materials that may become obsolete or outdated
- develop a running inventory of unused chemicals from project activities to enter into the Alaska Materials Exchange Program or re-deploy to other project areas
- select quality and package types to minimize packing waste or product loss due to damage
- provide covered areas to protect materials and containers from degradation due to exposure to elements
- clearly label containers with information on contents, handling, storage, expiration dates, and health and safety hazards

The Alaska Materials Exchange Program can help to conserve resources; energy and land fill space by finding alternatives to the disposal of useful materials or wastes. The materials exchange provides an information clearinghouse for businesses to list materials wanted and available. Types of hazardous materials listed in the exchange include:

- Out of date/overstock chemicals
- Containers/packaging materials
- Paints and coatings
- Oils
- Batteries

5.3.5 Recycling and Energy Recovery

Alaska and the northwest United States are served by a wide variety of waste management facilities and brokers that accept recyclable products for processing. These resources, contact numbers, acceptance criteria and profiling requirements, and packaging and transportation requirements will be identified in the project Waste Management Plan. Specific waste streams that recycling facilities will accept include:

- energy recovery or reprocessing of on-specification used oil
- energy Recovery or reprocessing of off-specification used oil
- glycols (anti-freeze) recycling or treatment and disposal
- water/methanol mixtures
- oil contaminated water or water contaminated oil

- spill cleanup debris
- lead-acid or other recyclable batteries
- heavy equipment, truck and automotive tire

In addition to management by third party facilities, engineering design will include review and decision regarding what systems will be deployed to the Construction Camps, the Fairbanks Headquarters and permanent project facilities for waste reduction, recycling and reuse for energy recovery. As an example, project personnel will evaluate the use of used-oil-fired space heaters of less than 0.5 million BTU/hr capacity to determine if this is a viable method of recycling on the project.

Batteries slated for recycling will be frequently shipped from field locations to approved recycling brokers or directly to approved recycling facilities, pending batteries to be recycled are stored in corrosive resistant leak-proof containers. Batteries acids may be drained and managed as a corrosive hazardous waste if batteries are broken or if it is a requirement for shipping.

5.3.6 Materials Handling and Processing for Waste Minimization

Proper materials storage and handling will reduce the amount of unidentified virgin or partially used products, contamination of products with water, and will reduce product spills and resultant spill cleanup materials. Key components of this portion of the Waste Reduction and Pollution Prevention Plan include:

- identification of responsibilities for recycling management
- identification of the types, volumes and locations of containers to be used for storage or intermodal shipment of recyclable oils or hazardous substances along with packaging, labeling, and manifesting requirements
- project design criteria for virgin hazardous material storage or transshipment areas
- guidance for segregation of recyclable materials
- integration of these practices with the PHPM and management of hazardous wastes
- reporting and record keeping requirements

5.3.7 Spill Prevention Control and Countermeasure (SPCC) Plans

SPCC Plans will be prepared for each facility meeting the SPCC regulation threshold requirements. Combined SPCC/ODC Plans will be prepared for each facility with more than 420,000 gallons storage capacity. These joint plans are intended to satisfy both federal and state regulations. Facilities with more than 660 gallons in a single tank or 1,320 in multiple tanks containers but less than 420,000 gallons will be provided individual SPCC Plans.

The ODC Plan is required by Alaska regulations and applies only to larger storage facilities (in particular, terminals with a storage capacity in excess of 10,000 barrels (420,000 gallons). The ODC Plans prepared to meet state ODC Plan requirements for a given facility will also contain

information necessary to meet SPCC Plan requirements for that facility. The ODC Plans are site specific documents and will contain the information established by 18 AAC 75 Article 4 and as briefly summarized in Section 5.3.1.3 of this document.

5.3.8 Oil and Hazardous Substances Discharge Contingency Plan

The OHSSCP prepared for this project will be the operative field document for two functional areas:

- responses to all petroleum spills not covered by SPCC or ODC Plans; and
- management of hazardous substances (including transport, storage, use and disposal).

By operative, it is meant that the OHSSCP will be the principal document that field personnel at the worksite(s) will use to control project activities in these areas. Organization of this plan is considered to be the key to its effectiveness. Recognizing this, the plan will be organized to provide field personnel ready access to clear and adequate instructions on how to respond to given situations and the plan will be relatively free of nonessential information. It is intended that the plan address specific practical oil and hazardous substance management tasks at a level of detail that, while clear and instructive, can be followed consistently project-wide. The plan will be updated when necessary to reflect project experience and thus improve its effectiveness. It is also expected that some sections will be detachable or issued separately. Examples are sections pertaining to spill clean-up techniques and sections delineating reporting and record keeping procedures. The latter will establish the format and procedures for maintaining field office logs of inspection and spill response. This plan will refer to the PHPM for hazardous substance/waste management activities.

The following is a description of the general content of the OHSSCP and the depth of subject coverage.

Summary of Statutes and Regulations. An identification of Federal and State regulations pertaining to oil and hazardous substance spill prevention, control, clean-up, and reporting together with excerpts that relate to development of sections of the OHSSCP, and the requirements of individuals to avoid as well as properly report spills.

Description of Applicable Activities. Project activities that create an opportunity for spills of oil and hazardous substances will be described to the extent necessary to identify the general categories of spills and spill circumstances to be prevented, and the typical causes of spills. This section will be the basis for subsequent sections devoted to containment, clean up, and disposal.

Reporting. This section will describe the project's spill reporting organization and delineate the reporting procedures that field personnel are to follow when an oil or hazardous substance spill of varying degree occurs. Lines of verbal and follow-up written reporting will be established in a manner consistent with regulatory requirements. The project personnel to be contacted will be identified by position, location, and phone number such that contacts are correctly and consistently made regardless of the construction section or activity site experiencing a spill. Standard reporting forms will be provided together with instructions on the depth of information

required to complete each itemized question on the form. Procedures for distributing and maintaining field records of the spill reports will also be established.

Spill Response Organization. This section will describe the organization of the project's field response capability. The section will indicate how the response organization is to be structured administratively (at the pipeline construction section level) and at the working level in the field. Emphasis will be placed on where decision-making authority rests and the source of manpower to be called upon for the types of spill events for which a potential has been identified in previous sections of the plan. The section will indicate the extent to which specialized spill response services are to be used, the circumstances under which they would be called in, and the arrangements made to ensure their readiness. This section will also introduce and explain how the spill containment, clean up and disposal guidelines found in the next two sections are to be put into practice.

Spill Containment and Protection of Unaffected Areas. This section of the plan will contain a compendium of techniques for the initial field response to a spill, emphasizing safe means of limiting the spread of contaminants to adjacent unaffected areas. The techniques will be presented in a quick access format (e.g., cross-indexed or tabbed subsections) that will identify for users a reasonable range of alternate ways to stop a spill at its source and intercept its path, considering the nature of the material spilled, terrain, hydrology, adjacent environmental sensitivities, seasonal factors, equipment and manpower requirements, and safety. Instructions for employing each technique will be provided along with a statement of its advantages and limitations. The intent is to give field supervisory personnel a pre-established basis for making judgments and taking the proper course of action considering the spill circumstances and resources at hand. Logic charts and drawings of appropriate deployment methods will be a key part of this presentation.

Spill Clean Up and Disposal. This section will address the follow-up to initial containment and will be formatted similar to the Spill Containment Section. Alternate methods of spill clean up considering the product lost, the condition and accessibility of the affected area, equipment and manpower required, and the consequences of further disturbance will be presented. The alternatives identified will be consistent with prevailing practices, project permits and approvals, and field disposal procedures established in other project documents, including the Camp Operations Manuals (several disposal methods require the use of camp facilities and, therefore, must be accommodated in camp operational procedures). Again, logic charts and drawings will be a substantial part of the presentation in this section.

Spill Response Equipment. Spill control and clean-up equipment and materials, in varying amounts depending on the location, will be stockpiled in predetermined amounts at each construction camp and at other appropriate locations of major construction activities (e.g., pipeline river crossings, field servicing areas). This section will establish the composition and requisite quantities of equipment and material inventories, and will establish inventory inspection, maintenance, and verification procedures.

In developing the OHSSCP, the Project will coordinate closely with Alyeska Pipeline Service Company so that

- Project personnel respond to ANGTS spills in a manner that doesn't hinder operation of the TAPS pipeline, and
- Project activities in the vicinity of TAPS facilities do not impede the capability of Alyeska to mount their own response should a spill from the oil pipeline occur.

Procedures will be developed to provide notification to Alyeska in the event of a spill involving their facilities. Additionally, the Project will perform similar coordination with other affected parties and/or owners of facilities with spill potential.

5.3.9 Petroleum and Hazardous Substances/Wastes Handling and Procedures Manual

Unified Fuel Transfer Procedures. The Petroleum and Hazardous Substances Procedures Manual (PHPM) is to be a project-wide standard for procedures relating to the storage, transfer, and dispensing of petroleum fuels, including automotive or aviation gasoline, arctic diesel, motor oil, jet fuel (JP-4), and liquefied petroleum gas (LPG). The PHPM will define minimum project procedural requirements for fuel handling and is to serve as an operational guide for all project personnel engaging in fueling practices. Fuel handlers are to be familiar with the content of the PHPM, and it is to be readily available in any area where petroleum products are stored, handled, transported, or dispensed.

The following sections provide descriptions of the principal sections to be included in the PHPM.

Safety and Emergency Response. This section will explain to personnel the hazards of refined petroleum products in terms of health, safety, and environmental effects. The dangers of vapor inhalation, dermal contact, and flammability will be described together with instructions on personnel protective gear to be used to avoid injury. Instructions will also be provided on proper responses to refined product spills. The flammability characteristics of various products will also be addressed, as well as wind, temperature, and terrain influences on potential hazards.

Operating Procedures. This section is to contain instructions for the day-to-day operation of fuel storage and dispensing facilities, including project storage terminals, petroleum, oil, and lubricants facilities (POL's), remote fuelers (i.e., trucks hauling fuel to equipment on the right-of-way), aircraft fuelers, and vehicle maintenance facilities. Included will be inspection checklists for bulk storage, drum storage, aircraft refueling, and propane storage areas, and procedures for operating and maintaining fuel dispensing equipment in a manner that minimizes the chances for spills to occur. Also included will be procedures for receiving fuel shipments from carriers, dispensing fuel into vehicles, draining and collecting waste oil and lubricants from vehicles and equipment in shop areas, fueling and equipment maintenance in floodplain areas, handling and inventory control of drums, and aircraft refueling. The procedures will distinguish between minor repairs, which can be performed in floodplains, as opposed to major repairs, which cannot, due to environmental concerns. A unified fuel transfer procedure will be established so that during the transfer of fluids the accidental discharges can be prevented. Hoses, valves, and equipment are to be in good working condition so that employees assisting in transfers control them in a safe and responsible manner, preventing incidents or environmental damage.

Release Detection and Inventory Control Systems. This section of the PHPM will contain procedures for inventory control at project POL's and will include inventory control equipment and documentation to be used to record the receipt and dispensing of all petroleum products. This documentation will be required for JP-4, diesel and gasoline transfers at the POL's and at project day tanks. The procedures presented with the forms will explain how to use methodologies to control product inventory and detect product loss. Many field systems are expected to be equipped with electronic inventory control and release detection and overfill alarm systems. A separate section will be presented on the characteristics and behavior of Liquid Petroleum Gas (LPG) and the precautions to be followed in storing, filling, and dispensing from LPG tanks and cylinders.

Hazardous Substance Control. This will be a separate section describing the manner in which all non-petroleum hazardous substances taken to the field (or hazardous wastes generated in the field) are to be properly and safely transported, stored, used, treated, disposed, and manifested. The section will also reference the inventory control procedures that contractors must follow to gain approval from the Project when hazardous substances are intended for use in the field. It will also provide day-to-day guidance for the proper identification, characterization, containerization, packaging and labeling of recyclable hazardous materials.

5.3.10 Inventory Tracking and Control Systems

The Bulk and Containerized Shipment and Handling of Petroleum and Hazardous Materials - Research and Special Programs Administration Department of Transportation is regulated under 49 CFR Parts 177-180. The PHPM will include procedures for Bulk and Containerized Shipment and Handling of Petroleum and Hazardous Substances and Wastes. This procedure will include employee-training requirements as follows:

General Awareness/Familiarization Training. Each hazmat employee shall be provided general awareness/familiarization training designed to provide familiarity with the requirements of this subchapter, and to enable the employee to recognize and identify hazardous materials consistent with the hazard communication standards of 49 CFR 172.

Function-Specific Training. Each HAZMAT employee shall be provided function-specific training concerning requirements of this subchapter, or exemptions issued under this chapter, which are specifically applicable to the functions the employee performs.

Safety Training. Each hazmat employee shall receive safety training concerning measures to protect the employee from the hazards associated with hazardous materials to which they may be exposed in the work place, including specific measures the hazmat employer has implemented to protect employees from exposure; and methods and procedures for avoiding accidents, such as the proper procedures for handling packages containing hazardous materials.

5.3.11 Used Oil and Glycol Recycling

The PHPM will contain guidance and procedures for recycling of used oil and glycols. Information contained in this section will be more fully developed than information provided in

day-to-day guidance for the proper identification, characterization, containerization, packaging and labeling of recyclable hazardous materials.

5.3.12 Spill Cleanup Debris

In the case of a spill of an oil or hazardous substance, there is potential for contaminating items within the spill area. Such items include soil, water, snow, vegetation and other miscellaneous debris. Hazardous substance absorbent or neutralization wastes will also be generated during the spill cleanup and may include sorbent pads and booms.

5.3.13 Contaminated Soil, Sorbents and Debris

Clean-up operations resulting from handling, transfer, and other accidental spill occurrences will generate contaminated soil, sorbents and debris including construction materials and vegetation. Sorbent materials generated from pipeline construction activities, at camps, storage yards, and fuel distribution and transfer systems will be collected and transported to camp incinerators for burning if operating permits allow this type of usage. Ash residue from incinerators will be landfilled at approved solid waste disposal sites. If on-site incineration is not available, sorbents will be placed into steel or plastic DOT-approved containers for shipment to third party waste management facilities.

5.3.14 Oil Contaminated Water or Snow

Spill cleanup debris may include sorbent pads and booms, spill-impacted soil, and other miscellaneous items impacted within the spill area. Sorbent pads and booms will be placed into DOT-approved containers. Unless saturated, these items will be thermally treated in the on-site incinerator if allowed in the facility permit. Saturated sorbent will be transported off-site in approved high-density polyethylene (HDPE), or equivalent, lined containers to a qualified third party source for thermal treatment. Absorbent materials such as wood may be thermally treated in the on-site incinerator if the permit allows or shipped off-site in approved oil resistant material lined containers to a qualified third party source for treatment by a methodology to be determined on an as-needed basis.

Contaminated soil and vegetation will be managed following ADEC approved methodologies and practices. Spill impacted soil will be temporarily stored in HDPE lined storage containment cells on site until a treatment methodology is determined based on impacted soil volume and characterization. If off-site treatment facilities are used, the materials will be placed into DOT-approved containers for shipment to these project approved facilities for recycling, treatment or disposal.

5.3.15 Heavy Greases and Hydraulic Oils

Heavy greases will be collected into DOT-approved containers for off-site recycling and disposal by approved third party facilities. Efforts will be made to minimize other incidental contamination of these materials to maximize options for energy recovery or recycling.

5.3.16 Radiographic Film Processing Wastes

These waste types are not expected to be generated during this project due to the use of ultrasonic and video imagery methods.

5.3.17 Empty Oil or Hazardous Substance Containers

Prior to disposal, drums or other containers that had formerly held acids will be cleaned by a triple rinse of lime solution and then will be either reused or handled as an ordinary metal solid waste and, depending on economics, either landfilled or sold as scrap. See Section 4 of this volume, Waste Management.

5.3.18 Quality Assurance and Quality Inspection

The oil and hazardous substance requirements contained in Plan 12, other project documents, and subsequent procedures and specifications will be subject to inspection, surveillance, and audit by Quality Assurance/Quality Inspection (QA/QI). Basic QA/QI methodology along with authorities, responsibilities, and interfaces are identified in the project Quality Assurance Program Manual.

5.3.19 Training

Oil and hazardous substance training will be administered at several levels of the project organization. As part of their employment orientation, project personnel will receive a general presentation on the sources and consequences of spills or improper uses of oil and hazardous substances. The presentation will also provide instructions on reporting and response actions to be taken when a spill is discovered. More detail on these presentations, handout materials, and reorientation measures is to be found in other sections of this submittal. In addition to this general presentation, all personnel directly engaging in fuel handling, transport, or dispensing activities will be required to be familiar with content of the PHPM.

5.4 FIGURES AND TABLES

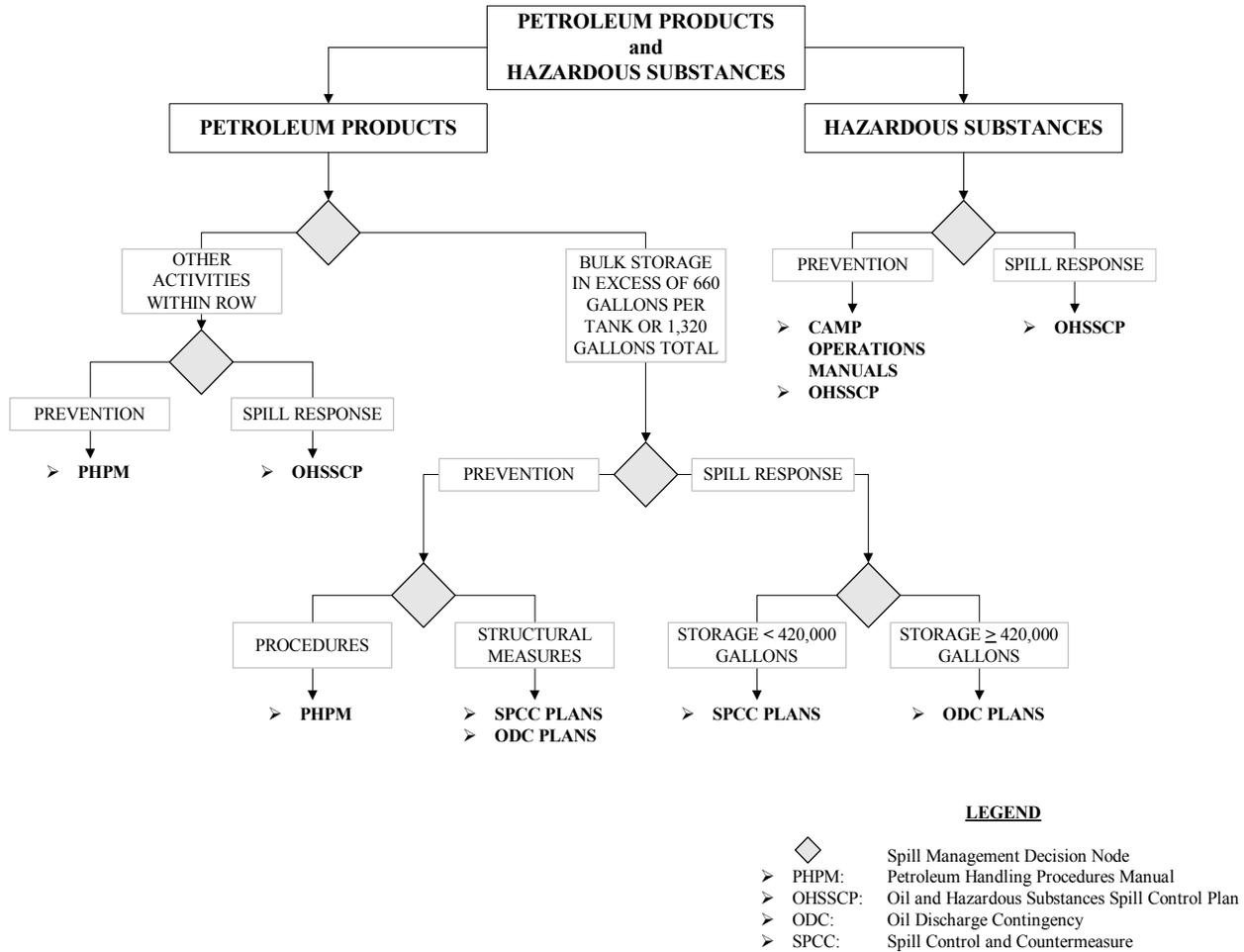
Figure 5-1 Spill Management Decision Tree

Table 5-1 Federal Statutes and Regulation Relating to Control of Oil

Table 5-2 On-Specification Used Oil Criteria

Table 5-3 Estimated Generation of Hazardous Wastes or Recyclable Hazardous Materials

Figure 5-1 Spill Management Decision Tree



**Table 5-1
 Federal Statutes and Regulation Relating to Control of Oil**

REGULATION	TITLE	SCOPE
PL 95-217, Section 311	Federal Water Pollution Control Act	Section 311 states that the discharge of oil in harmful quantities into or upon the navigable waters of the United States or their tributaries is prohibited. The act requires immediate notification to the Coast Guard or EPA and mandates that the spiller control, and clean up the affected area.
40 CFR 110	Discharge of Oil	This part states that for the purposes of Section 311, discharges are harmful which "(a) violate applicable water quality standards, or (b) cause a film or sheen upon or discoloration of the surface of the water or adjoining shorelines or cause a sludge emulsion to be deposited beneath the surface..." Applicable water quality standards are defined as State water quality standards approved by EPA pursuant to the Federal Water Pollution Control Act. Part 110 reaffirms that harmful discharges to navigable waters or adjoining shorelines are prohibited.
40 CFR 112	Oil Pollution Prevention	<p>Part 112 establishes guidelines for preventing the discharge of oil from non-transportation related facilities into or upon the navigable waters or adjoining shorelines of the United States.</p> <p>Statutes and regulations that pertain primarily to the liability of persons causing a spill, penalties, or agency administrative procedures subsequent to a spill, rather than to design of facilities, operational procedures, planning, or record-keeping requirements have purposely not been included in this list.</p> <p>Section 28 of the Mineral Leasing Act as amended, is one such statute. Part 112 provides for the preparation of Spill Prevention, Control, and Countermeasure (SPCC) Plans for all non- transportation facilities that due to their size.</p>

Table 5-2
On-Specification Used Oil Criteria

Constituent or Property	Allowable level
Arsenic	5 ppm maximum
Cadmium	2 ppm maximum
Chromium	10 ppm maximum
Lead	100 ppm maximum
Flash Point	100 degrees F minimum
Total Halogens ¹	4,000 ppm maximum

Notes:

- 1) The specification limit for total halogens is 4,000 ppm, but if oil is contaminated with 1,000 ppm or more halogens, it is presumed to be mixed with a hazardous waste until testing proves otherwise.
- 2) Used oil containing PCBs are managed under 40 CFR Part 761.20(e)

**Table 5-3
 Estimated Generation Of Hazardous Wastes Or Recyclable Hazardous Materials**

SUBSTANCE	CONSTRUCTION	OPERATION
Oil –Contaminated Water	Up to 200,000 gallon event	10 gal/mo
Used Oil	100,000 gal/mo	50 gal/mo
Sulfuric Acid	80 gal/mo	1 gal/mo
Cleaning Solvents	100 gal/mo	2 gal/mo
Paint Solvents	50 gal/mo	5 gal/mo
Methanol	50 gal/mo (seasonal)	1 gal/mo (seasonal)
Ethylene Glycol ¹	20,000 gal/mo	20 gal/mo (seasonal)
Hygroscopic Fluid (Methanol not yet selected) ²	300 - 1,000 gallons (upon completion of hydrotesting)	N/A

Notes:

¹ A hazardous material but not necessarily a hazardous waste when recycled

² Properties and categorization indeterminate

N/A= Not Applicable