

May 9, 2008

**Valdez Marine Terminal
Oil Discharge Prevention and Contingency Plan
Final Findings Document**

Prepared by

Alaska Department of Environmental Conservation
Division of Spill Prevention and Response
Industry Preparedness Program

INTRODUCTION

What is this Document?

This document presents the final findings of the Alaska Department of Environmental Conservation (ADEC) concerning the contents of Alyeska Pipeline Service Company's (Alyeska's) Valdez Marine Terminal (VMT) Oil Discharge Prevention and Contingency Plan (C-Plan), dated August 20, 2007 with additional information and edits submitted January 11, 2008 and February 14, 2008. The contingency plan addresses activities related to prevention, containment, and cleanup of oil discharges from the operation of the VMT.

These findings were written as a result of an extensive review of the plan and consideration of public comment. They are presented to assist the interested public and participating reviewers in understanding the analysis of priority issues by which the Department has arrived at its decision to approve the plan.

This document is also written to fulfill requirements of 18 AAC 75.460(b) for the Department to provide a brief summary of the basis of its decision to approve the VMT C-Plan in light of public comments that were adverse to the C-Plan application. Therefore, this document also contains the Department's response to written and oral comments received during the extended public comment period. The public comment period began on August 20, 2007 and was extended through March 10, 2008 to allow for review of additional information provided by Alyeska. The Department has considered all comments received by the deadline. This document does not respond to all of the individual comments, but rather it is a response to the most substantive issues raised by plan review participants.

What Has Been the Process to Approve the Plan?

This review is for the required five-year renewal of the VMT C-Plan approved in 2003. The review process began with the submittal of a draft plan on June 5, 2007. The plan was found sufficient for public review on July 6, 2007. After consultation with the plan holder to allow sufficient time for distribution of the plan, the 30-day public review began on August 20, 2008. On September 14, 2007 the Department suspended the public review period and determined that additional information was needed before the plan could be found to be complete.

On November 30, 2007 the Department issued a Request for Additional Information (RFAI) to Alyeska. The additional information deadline was extended for several days; the information was provided to the Department on January 11, 2008. Subsequently, the Department determined that additional clarifications and corrections were needed and issued a second RFAI on January 30, 2008. Additional information was subsequently received on February 14, 2008. The Department re-started the public comment period on February 25, 2008 for 15 days (the original five remaining public comment period days

plus 10 additional days) to allow the public sufficient time to review the responses to the RFAI and provide final comments on the plan. The deadline for public comments was set for March 10, 2008. Following the close of the public comment period ADEC found the plan to be complete. After extensive review of the plan and consideration of the public comments, the Department found that the plan met the criteria for plan approval as specified in Alaska law. The plan was approved with several conditions. These conditions are identified in this document, and they are detailed in the approval letter.

Although the Department is responsible for conducting the review of this contingency plan, many of the analyses in this document represent the combined efforts of the participating agencies of the Joint Pipeline Office (JPO), a consortium of eleven state and federal agencies. In addition to the involvement of the JPO's Oil Spill Preparedness, Prevention and Response Team, the Department utilized the expertise of JPO's technical staff for certain issues.

What Does it Mean When a Contingency Plan is Approved?

AS 46.04.030 requires that in order to operate an oil terminal facility in the state, the owner or operator must have an oil discharge prevention and contingency plan approved by the Alaska Department of Environmental Conservation (DEC). These contingency plans demonstrate an operator's access to equipment and other resources and describe how the operator plans to use those resources in order to contain and cleanup an oil discharge from the facility in the volumes and within the timeframes established by the Legislature in AS 46.04.030(k). The contingency plans also include a prevention plan describing how the operator plans to prevent oil discharges from its facility or vessel. The Department does not make its decision to approve a plan based on the operator proving everything in the plan, but rather upon the reasonableness of assertions and evidence that certain essential resources and practices are secured. Therefore, the Department's work does not end once the contingency plan is approved. The contingency plan approval is only a portion, although a major one, of the entire program of spill prevention and response. Many follow-up field tasks are done to proof the plan and assure that persons assigned response and prevention duties are trained and ready to respond if need be. The tasks range from both planned and unannounced inspections and oil spill exercises, surveillance of field operations, training audits, reviewing engineering inspection reports for checking structural integrity of tanks and piping and applying lessons learned from actual incident responses. In some cases the plan holder is not required to fully document how they will implement oil spill prevention and response requirements in the contingency plan. Nonetheless, the plan holder is required to fully implement all oil spill prevention and response programs required by State statute and regulation even if those programs are not documented in the approved contingency plan.

Changes in this Contingency Plan

During the five years since the last renewal of the VMT C-Plan, there were several major amendments to the plan. Almost without exception, these amendments were the result of implementation of plan compliance schedule commitments and represented significant

work and improvement to the VMT C-Plan. This work was often accomplished by Alyeska through cooperation and coordination with State and federal agency representatives and the Prince William Sound Regional Citizens' Advisory Council (PWS RCAC). Each major amendment also went through the public review process outlined in 18 AAC 75.455. The three major plan revisions included:

- Waste Management Section – complete revision based on a compliance schedule commitment
- Oil Spill Response Training Section – creation of an auditable training program for Alyeska oil spill responders and complete revision of the C-Plan training section based on results of ADEC inspection and audit of training during a response exercise
- Source Control Procedures – revision of plan, including revisions to oil spill response scenarios that included various source control actions based on a compliance schedule commitment

In addition, on-water recovery calculations were validated, the historical discharge analysis was updated, and various spill responder position checklists were updated. Secondary containment investigations and repairs were completed as well. All of these activities and plan improvements were based on compliance schedule commitments.

Format for this Document

The issues identified in this document have come about as a result of the Department's analysis of the submitted plan, additional information provided by the plan holder and careful consideration of written and oral comments from the public. Issues in these Findings are listed in the general order and format as listed in the state regulations governing contingency plan contents; Title 18, Chapter 75 of the Alaska Administrative Code.

This document uses the following format to address each of the selected topics:

- (1) Statement of Issue
- (2) Findings
- (3) Regulatory Authority
- (4) Response to Comments
- (5) Basis for Decision

The Department has benefited from and appreciates the contribution of many individuals and organizations throughout the process of reviewing and approving this plan.

**Valdez Marine Terminal
Oil Discharge Prevention and Contingency Plan
Final Findings Document**

Table of Contents

Introduction	2
What is this Document	2
What Has Been the Process to Approve the Plan	2
What Does it Mean When a Contingency Plan is Approved	3
Changes in this Contingency Plan	3
Format for this Document	4
Acronyms	6
Findings	7
Issue No. 1: Oil Discharge Prevention Training	7
Issue No. 2: Inspection and Maintenance of Aboveground Oil Storage Tanks	9
Issue No. 3: Secondary Containment	15
Issue No. 4: Facility Oil Piping at the VMT	17
Issue No. 5: Response Strategies and Tactics	21
Issue No. 6: Realistic Maximum Response Operating Limitations (RMROL)	27
Issue No. 7: RPS Scenario	29
Issue No. 8: Historical Discharge Analysis	32
Issue No. 9: Risk Assessment	33
Other Comments Received	34

ACRONYMS

AAC	Alaska Administrative Code
ADEC	Alaska Department of Environmental Conservation
ADNR	Alaska Department of Natural Resources
ADF&G	Alaska Department of Fish and Game
ANS	Alaska North Slope
APSC	Alyeska Pipeline Service Company
AS	Alaska Statute
BAT	Best Available Technology
BLM	Bureau of Land Management (U. S. Dept. of the Interior)
BWT	Ballast Water Treatment
C-Plan	Contingency Plan (Oil Discharge Prevention and Contingency Plan)
ESA	Environmentally Sensitive Area
JPO	Joint Pipeline Office
ICS	Incident Command System
OCC	Operations Control Center
OMS	Oil Movements and Storage
PHMSA	Pipeline & Hazardous Material Safety Administration
PM	Preventive Maintenance
PWS	Prince William Sound
PWS RCAC	Prince William Sound Regional Citizens' Advisory Council
RFAI	Request for Additional Information
RMROL	Realistic Maximum Response Operating Limitations
RPS	Response Planning Standard
SID	Supplemental Information Document
TAPS	Trans-Alaska Pipeline System
VMT	Valdez Marine Terminal

FINDINGS

Issue No. 1: Oil Discharge Prevention Training

Statement of Issue

Does APSC have training programs in place that are designed to ensure personnel with job duties directly involving inspection, maintenance, or operation of regulated oil storage and transfer equipment are regularly trained in pollution prevention measures applicable to their job duties? If so, does that description include identification of those positions and their appropriate training and knowledge levels? Does the description identify required licenses, certifications or other pre-requisites needed to fill those positions? Is there a list of training objectives, how training may be obtained, subjects, schedules, frequency and type of required training included in the VMT C-Plan?

Findings

ADEC finds that the prevention training programs described in the VMT C-Plan are designed to ensure personnel involved in inspection, maintenance, and operation of the VMT are regularly trained in pollution prevention measures applicable to their job duties. Those positions are listed and described, and the training, experience, and knowledge levels needed to successfully perform required duties are identified as well.

Requirements for licenses or certifications are identified for appropriate jobs. ADEC finds that the description of the prevention training program meets the requirements of 18 AAC 75.020(a) & (b) and or 18 AAC 75.425(e)(2)(A)(i).

Statutory and Regulatory Authority

AS 46.04.030(e) authorizes the Department to require training:

“...The Department may require an applicant or holder of an approved contingency plan to take steps necessary to demonstrate the applicant’s or holder’s ability to carry out the contingency plan, including (1) periodic training....”

The requirement for prevention training programs is specified in State regulations found in 18 AAC 75.020(a) & (b):

(a) The owner or operator shall have in place personnel training programs designed to ensure that all personnel with job duties directly involving inspection, maintenance, or operation of oil storage and transfer equipment regulated under 18 AAC 75.005 – 18 AAC 75.085 are appropriately and regularly trained regarding company and state oil pollution prevention measures that are applicable to each position’s duties.

(b) Personnel training programs must include:

- (1) a listing of each position with job duties listed under (a) of this section and the training level of knowledge appropriate to that position;
- (2) a listing of any licenses, certifications, or other prerequisites needed to hold each position listed in (1) of this subsection; and
- (3) a listing of training objectives and the means of achieving them, including training subjects, training schedules, frequency, and type.

The requirement that a description of the prevention training programs be included in a C-Plan is found in 18 AAC 75.425(e)(2)(A)(i):

(A) Discharge prevention programs – a description and schedule of regular oil discharge prevention, inspection, and maintenance programs in place at the facility or operation, including

(i) oil discharge prevention training programs required by 18 AAC 75.020(a)...

Response to Comments

PWS RCAC provided comments on the prevention training description in the VMT C-Plan. The comments reflected general approval of the many changes APSC made to the VMT C-Plan prevention training description following the RFAI process during this plan review. However, the commenter requested that Table 2-2 (Description and Frequency of Oil Spill Prevention Training) be modified to specify the frequency of Berth Operators Training for each position listed in the table. ADEC agrees that this should be completed, noting, however, that it is our understanding that Marine Operations Technician is the only position that fills the Berth Operator role. Missing information in this line of Table 2-2 appears to be a minor editorial error, and ADEC will require APSC to make this correction prior to publication of the renewed VMT C-Plan.

PWS RCAC also asked that ADEC and other agencies conduct an audit of the prevention training program at APSC and provide the results to the VMT C-Plan Coordination Group. Also, the commenter requested that this commitment be formalized in the approval documents associated with this VMT C-Plan renewal. ADEC agrees that auditing the prevention training program is a good idea and a worthy activity. State regulations specifically require documentation of training and maintenance of training records for a minimum of 5 years. APSC is responsible to verify that prevention training records are complete and up to date at all times, and ADEC may audit these records at any time. However, given changing workloads and priorities, it is not appropriate for us to make a specific commitment to a particular audit within a specific timeframe as part of a plan review. As always, ADEC staff will endeavor to conduct appropriate audits and checks on many aspects of regulated APSC operations at the VMT to assure compliance with State statutes, regulations, and the VMT C-Plan.

Basis for Decision

On December 30, 2006 ADEC promulgated revised regulations that included the requirements in 18 AAC 75.020(a)&(b). Previously, plan holders were required to have prevention training programs, but the requirement for describing them in a C-Plan was added at 18 AAC 74.425(e)(2)(A)(i) during the same regulatory revision process. As a result, this is the first time APSC has been required to include this type of information in the VMT C-Plan.

During the initial phase of the review, ADEC staff determined that additional information was needed to meet the specificity required for the prevention training program descriptions. Requests for additional information and greater description were forwarded

to APSC on November 30, 2007, and significant additions were made to the final renewal application.

Based on the information provided and the modifications to the VMT C-Plan application, ADEC finds that the description of the programs meets regulatory requirements. ADEC appreciates the suggestion to conduct an audit of the prevention training programs at the VMT, and if there are any identified indicators that compliance with the prevention training programs at the VMT is lacking; ADEC will initiate such a review or audit as staff deem necessary to determine compliance.

Issue No. 2: Inspection and Maintenance of Aboveground Oil Storage Tanks

Statement of Issue

Does the VMT C-Plan adequately describe the inspection and maintenance practices and procedures for above ground oil storage tanks in use at the VMT? Are the inspection and maintenance procedures consistent with American Petroleum Institute (API) Standard 653 (API 653), *Tank Inspection, Repair, Alteration, and Reconstruction*, Third Edition, December 2001, and Addendum 1, September 2003 and regulations found in 18 AAC 75.065(a) &(b)?

Findings

ADEC finds that the above ground oil storage tank inspection and maintenance procedures and schedules included in the VMT C-Plan are consistent with the codified version of API 653 and State regulations and meet the requirements for information contained in a C-Plan.

Regulatory Authority

The basis for requiring information concerning oil storage tank inspection, maintenance and operational information to be included in the VMT C-Plan is found within State regulations at 18

AAC 75.425(e)(2): "Part 2 – Prevention Plan: The prevention plan must describe how the applicant meets all the applicable requirements of 18 AAC 75.005 – 18 AAC 76.085....."

Relevant State regulations governing field-constructed aboveground oil storage tanks are found in 18 AAC 75.065:

- (a) Unless the owner or operator must comply with a more stringent requirement set out in this section, the owner or operator of an oil terminal, crude oil pipeline, exploration, or production facility shall maintain and inspect each field-constructed above ground oil storage tank consistent with the requirements, as appropriate of
 - (1) American Petroleum Institute's (API) *Tank Inspection, Repair, Alteration, and Reconstruction*, Third Edition, December 2001, and Addendum 1, September 2003 (API 653), adopted by reference; or

- (2) *Recommended Practice for Setting, Maintenance, Inspection, Operation and Repair of Tanks in Production Service*, Fifth Edition, August 1997 (API RP 12R1) adopted by reference.
- (b) Inspection intervals for a field constructed aboveground oil storage tank
- (1) may be reduced by the department
 - (A) for field-constructed aboveground oil storage tanks older than 30 years;
 - (B) for a field-constructed aboveground oil storage tank that is riveted or bolted;
 - (C) for field-constructed aboveground oil storage tank with a demonstrated structural, corrosion, or foundation problems; or
 - (D) after a significant seismic event
 - (2) may not be based upon similar service as specified in Section 6.4.2 of *Tank Inspection, Repair, Alteration, and Reconstruction*, (API 653), adopted by reference in (a) of this section; and
 - (3) may be based upon risk-based inspection as specified in Section 6.4.3 of *Tank Inspection, Repair, Alteration, and Reconstruction*, (API 653), adopted by reference in (a) of this section, if the risk based inspection assessment is submitted to the Department for approval; the assessment must include:
 - (A) a quantitative risk assessment, signed by a registered engineer and conducted in accordance with the American Petroleum Institute's *Risk Based Inspection*, First Edition, May 2002 (API RP 580), adopted by reference; and
 - (B) an inspection schedule with intervals between inspections not to exceed 30 years.
- (d) Records and documentation
- (1) required by this section shall be maintained by the owner or operator, except as provided in (2) of this subsection, for the service life of the tank and shall be provided to the Department for inspection and copying upon request.
 - (2) of inspections required as specified in Section 6.3.1 of *Tank Inspection, Repair, Alteration and Reconstruction*, (API 653), adopted by reference in (a) of this section, shall be maintained by the owner or operator for five years and shall be provided to the Department for inspection and copying upon request.
- (e) The owner or operator shall notify the Department
- (1) as soon as practical before a field-constructed aboveground oil storage tank undergoes major repair or major alteration, as defined in Section 12.3.1.2 of *Tank Inspection, Repair, Alteration, and Reconstruction*, (API 653), adopted by reference in (a) of this section; and
 - (2) before a field-constructed above ground storage tank is returned to service following major repair or alteration as defined in Section 12.3.1.2 of *Tank Inspection, Repair, Alteration, and Reconstruction*, (API 653), adopted by reference in (a) of this section.
- (g) An internal lining system installed and used to control corrosion or to meet the requirements of (h) of this section must be installed in accordance with American Petroleum Institute's (API)
- (1) *Lining of Aboveground Petroleum Tank Bottoms*, First edition, 1991, (API RP 652) adopted by reference, for internal lining systems installed before December 30, 2008; or

- (2) *Lining of Aboveground Petroleum Storage Tank Bottoms*, Third Edition, October 2005 (API RP 652), adopted by reference, for internal lining systems installed after December 30, 2008.
- (h) An owner or operator of an installation placed in service before May 14, 1992 shall
- (1) equip each field-constructed aboveground oil storage tank with one or more of the following:
 - (A) a leak detection system that an observer from outside the tank can use to detect leaks in the bottom of the tank, such as secondary catchment under the tank bottom with a leak detection sump, a sensitive gauging system, or other leak detection system approved by the department;
 - (B) cathodic protection in accordance with the American Petroleum Institute's (API) *Cathodic Protection of Aboveground Petroleum Storage Tanks*, First Edition, 1991, (API RP 652), adopted by reference;
 - (C) a thick film liner in accordance with *Lining of Aboveground Petroleum Storage Tank Bottoms*; First Edition, 1991 (API RP 652), adopted by reference in (g)(1) of this section;
 - (D) another leak detection or spill prevention system approved by the Department; and
 - (2) operate and maintain, after December 30, 2008, the cathodic protection system on each field-constructed aboveground oil storage tank consistent with Section 11 of Standard Recommended Practice: External Cathodic Protection of On-Grade Carbon Steel Storage Tank Bottoms, (NACE RP0193-2001), adopted by reference in (j) of this section; a corrosion expert or qualified cathodic protection tester shall perform a cathodic protection survey specified under that standard.
- (k) In addition to the applicable requirements of 18 AAC 75.025, and except as required in (1) of this subsection, the owner or operator of a field-constructed aboveground oil storage tank shall ensure that one or more of the following means of preventing overfilling is provided:
- (1) high liquid level alarms with signals that sound and display in a manner immediately recognizable by personnel conducting a transfer; an installation placed in service after December 30, 2008.....
 - (2) high liquid level automatic pump shutoff devices set to stop flow at a predetermined tank content level;
 - (3) a means of immediately determining the liquid level of each bulk storage tank, if the liquid level is closely monitored during a transfer;
 - (4) a system approved by the Department which will immediately notify the operator of high liquid levels.
- (l) Overfill protection devices must be tested before each transfer operation or monthly, whichever is less frequent. If monthly testing would necessitate interrupting the operation of a system subject to continuous flow, the owner or operator may substitute monthly inspection and annual testing of overfill protection devices.
- (m) An owner or operator who installs a cathodic protection system after December 30, 2008 on a field-constructed aboveground oil storage tank shall meet the applicable requirements of (j)(3) of this section.

- (n) An owner or operator shall maintain the cathodic protection test lead wires on a field-constructed aboveground oil storage tank in a condition that enables electrical measurements to determine the effectiveness of a cathode protection system.
- (o) A field-constructed aboveground oil storage tank removed from service for more than one year must be free of accumulated oil, marked with the words "Out of Service" and the date taken out of service, secured in a manner to prevent unauthorized use, and either blank flanged or otherwise disconnected from facility piping. The owner or operator shall notify the Department when a tank is removed from service and when the actions required by this subsection are completed. In this subsection, "removed from service" means not in regular use for the service intended and not included in a regular maintenance and inspection program in accordance with this section.

ADEC may grant waivers to any requirement of these regulations based on the following in 18 AAC 75.015:

- (a) The Department may waive a requirement of 18 AAC 75.005 – 18 AAC 75.085 if the owner or operator demonstrates to the Department's satisfaction that an equivalent level of protection will be achieved by using a technology or procedure other than the technology or procedure required by 18 AAC 75.005 – 18 AAC 75.085.

Response to Comments

PWS RCAC provided several comments related to various aspects of aboveground crude oil storage tank inspection and maintenance at the VMT.

Internal Inspection Intervals. In this review, PWS RCAC requested that ADEC utilize its regulatory discretion to require internal inspection intervals be established for all of the aboveground crude oil storage tanks at the VMT for 10 or fewer years as a means of protecting the environment and avoiding complacency (we presume this refers to potential complacency on the part of both APSC and ADEC). The reviewer noted specific concerns about Tanks 1 and 3, which are both located in the East Tank Farm and which are dual-jurisdictional tanks with the U. S. Department of Transportation, Pipeline & Hazardous Material Safety Administration (PHMSA). These tanks fall under ADEC jurisdiction because they are used for crude oil storage. However, their primary purpose in the facility design is to serve as protection against over pressurization of the TransAlaska Pipeline, an operation which is required and overseen by PHMSA. The commenter correctly notes that another tank, Tank 8, was granted a 2-year internal inspection interval extension by ADEC, and they oppose ADEC using its authority to grant waivers to the internal inspection interval. Recently, ADEC has granted internal inspection interval extensions to two additional crude oil storage tanks at the VMT: Tanks 13 and 14.

Internal inspection intervals are determined in several ways. The initial interval is established at 10-years by API 653. Subsequent intervals may be determined by analysis of inspection data to determine corrosion rates for tank bottoms and calculation of remaining tank bottom thickness after any necessary repairs are completed. API 653 also

allows for tank owners or operators to establish internal inspection intervals based on "similar service" history of other aboveground petroleum storage tanks. However, in its regulatory revision promulgated in late 2006, ADEC specifically disallowed this option (similar service) for plan holders in Alaska. Alternatively, ADEC regulations allow a tank owner to determine internal inspection intervals using a risk based assessment as described above in the Regulatory Authority section. Finally, ADEC has authority to waive a requirement, in this case the requirements for internal inspection intervals, as described in 18 AAC 75.020 above.

When APSC informs ADEC of intention to extend an internal inspection interval, we review the notice or request and determine whether the technical data provided and mitigating measures proposed satisfy the need for an equivalent level of protection as provided for in regulation. In the case of the storage tanks that have been given short extensions, the basis for those extensions and required conditions or verification of mitigating measures have been detailed in letters between APSC and ADEC, and they are available for review upon submission of a public records request. Typically the basis for the extension has to do with multiple technical systems to protect against corrosion being in place and on-going verification of operation and maintenance of the cathodic protection systems in place for the tanks in the VMT East Tank Farm.

In the case of Tanks 1 and 3, ADEC agreed to the 20-year inspection interval that was initially approved by PHMSA. The basis for that agreement is detailed in letters to Alyeska and from PHMSA, and they are available upon request. In summary, however, because these tanks are dual-jurisdictional tanks, we approached our consideration of the internal inspection interval in coordination with the U. S. DOT Office of Pipeline Safety (OPS), which was the office responsible for oversight of these two tanks in 2006 and 2007. Based on our review of tank inspection histories, cathodic protection operational parameters, and consultation with OPS, ADEC decided not to object to the 20-year inspection interval for either Tank 1 or Tank 3.

Additional notes from the reviewer request that inspection dates in the VMT C-Plan and requirements for retention of records related to tank maintenance and inspection should be updated. ADEC agrees that tank inspection schedules should be updated in the VMT C-Plan as changes to the schedule are made, and we will require APSC to submit updates once any schedule changes or waiver requests are submitted to and approved by ADEC staff. The commenter also requested that all tank records be maintained for the service life of the tank. State regulations require the monthly visual inspection records (API 653, Section 6.3.1, Routine In-Service Inspections) to be held for a minimum of five years. These are not the 5-year external inspection records or the internal inspection records which must, without question, be held for the service life of the tank. It is not necessary for records specified in 18 AAC 75.065(d)(2) to be held for over five years unless the tank owner or operator wishes to do so.

West Tank Farm

PWS RCAC and Mr. Tom Lakosh provided comments concerning the crude oil storage tanks in the VMT's West Tank Farm, Tanks 15, 16, 17 and 18. Tank 16 is the only crude

oil storage tank in the West Tank Farm that is currently in service. The other tanks have been removed from service and are not eligible for storing petroleum products without inspections in accordance with State regulations and completion of any necessary repairs. PWS RCAC requested that a footnote be included that reflect that status, but it is unnecessary. APSC would be in violation of State statutes and regulations if any of these three tanks were used without proper inspection and repair. A C-Plan footnote makes no difference one way or the other. There is no basis in regulation to require noting that actions that violate regulations or statutes are not available to the planholder.

PWS RCAC requested that ADEC require APSC to install a cathodic protection system and replace the tank bottom in Tank 16. The suggested basis is that the tank is old and its bottom has had many repairs. Tank 16 is the only in-service crude oil storage tank at the VMT that does not have cathodic protection for the tank bottom. The tank was placed in service prior to May 1992, and therefore, there is no requirement for it to have a cathodic protection system installed. Likewise, there is no regulatory basis for requiring a new tank bottom to be installed as long as appropriate repairs are made and the inspection interval reflects the calculated tank bottom corrosion rate based on inspection data obtained by an authorized API 653 inspector.

Other comments relate to Tanks 15, 17, and 18. Both PWS RCAC and Mr. Lakosh suggest that ADEC should require these tanks to be returned to service, with appropriate inspections and repairs, in order to be used for emergency response purposes: either to provide additional storage capacity during adverse weather conditions when loading tankers may be problematic or as interim storage during a spill response. Mr. Lakosh also suggested that ADEC require up to four additional crude oil storage tanks be kept empty and available for emergency storage. ADEC does not agree that it is appropriate, or that it has authority, to require APSC to maintain tanks not currently in service either for operational considerations or emergency considerations.

Tank 81

PWS RCAC asked whether ADEC would allow APSC to take Tank 81 out of service indefinitely. Tank 81 is a recovered crude oil tank that is part of the Ballast Water Treatment facility on the VMT. Tank 81 is subject to the same inspection and maintenance requirements as the other oil storage tanks at the VMT. It may be taken out of service when APSC determines it is no longer needed for their operations. If its out-of-service status extends for one year or beyond, it must be treated as described in 18 AAC 75.065(o). Regulations do not require that the tank be physically dismantled, and because the structure remains on the facility, we prefer for its out-of-service status to be captured in the VMT C-Plan. An additional comment concerning Tank 81 is that it is still described as active in various sections of the C-Plan. ADEC agrees that this should be corrected, and we will direct APSC to make this correction prior to publication of the renewed VMT C-Plan.

Basis for Decision

Section 2.1.6, Oil Storage Tanks, in Part 2 – Prevention Plan, of the VMT C-Plan contains information on the programs and procedures in place at the VMT for inspection

and maintenance of oil storage tanks at the facility. The regulated tanks that fall under these programs and procedures include the crude oil storage tanks, oily water tanks, recovered crude oil tanks and fuel tanks that are over 10,000 gallons in capacity. Additional information on the regulated tanks, including age and size, prevention technologies, leak detection systems, and planned inspection schedules are included in Table 2-9, APSC Valdez Terminal tankage database report. APSC staff have reviewed the Oil Storage Tanks section and tankage database table to determine whether the required information is provided and whether the described prevention programs, procedures and policies reflect planning for compliance with prevention regulations found in 18 AAC 75.065. ADEC staff finds that the oil storage tank programs as described in the VMT C-Plan meet regulatory requirements. We note that ADEC has utilized its authority to grant waivers to internal tank inspection intervals, and that these waivers are based on review of technical information and engineering review as well as consultation with U. S. DOT PHMSA on Tanks 1 and 3.

We do find that the language concerning updating the tankage database table is somewhat unclear, and as a regular part of maintaining an updated C-Plan, ADEC will require that this table be updated as a routine plan amendment on an on-going basis as schedule changes or any waivers are granted by ADEC. Also, as noted above, we will require APSC to correct out of date references to Tank 81 prior to publication.

Issue No. 3: Secondary Containment

Statement of Issue

Do secondary containment areas for aboveground oil storage tanks meet the technical, capacity, inspection and maintenance requirements to ensure they will be effective containment areas to prevent the further spread of oil should an oil spill from a tank occur at the VMT?

Findings

ADEC finds that the secondary containment descriptions and inspection and maintenance programs described in the VMT C-Plan provide adequate assurance of compliance with State regulations.

Statutory and Regulatory Authority

Inclusion of descriptions of secondary containment areas for aboveground oil storage tanks in the VMT C-Plan is based on regulations found in 18 AAC 75.425(e)(2): Part 2 -- Prevention: 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 specific oil discharge risks involved. The prevention plan must describe how the applicant meets all the applicable requirements of 18 AAC 75.005- 18 AAC 75.085.

The pertinent regulations governing technical, inspection, and maintenance aspects of secondary containment areas are found in 18 AAC 75.075, Secondary containment requirements for aboveground oil storage tanks.

“Sufficiently impermeable” is defined in 18 AAC 75.990(124): “‘sufficiently impermeable’ means, for a secondary containment system, that its design and construction has the impermeability necessary to protect groundwater from contamination and to contain a discharge or release until it can be detected and cleaned up; for design purposes for a new installation, “sufficiently impermeable” means using a layer of natural or manufactured material of sufficient thickness, density, and composition to produce a maximum permeability for the substance being contained of 1×10^{-6} cm per second at a maximum anticipated hydrostatic pressure, unless the department determines that an alternate design standard protects groundwater from contamination and contains a discharge or release until detection and cleanup.”

Response to Comments

PWS RCAC and Mr. Tom Lakosh included comments related to secondary containment at the VMT.

Mr. Lakosh suggested adding a concave deflection shield to the top of secondary containment walls for the East Tank Farm in order to provide an additional spill control measure should a catastrophic release from a tank create an initial wave of oil that would spread over the containment wall. While this idea is intriguing, there is no regulatory requirement specifying the use of deflection shields in secondary containment structures. We are unaware of commercially available proven technology along the lines of the deflection shield described by the commenter. The secondary containment areas at the VMT exceed the capacity required by regulation, and we don't find a basis for requiring the addition of new structural features to the East Tank Farm secondary containment areas.

PWS RCAC disagreed with Alyeska's plan to conduct integrity inspections on secondary containment liners only when they are exposed for other operational purposes. The basis of that perspective is a technical report that notes the limitations of “visual testing.” The commenter proposes that ADEC require additional invasive permeability and leak testing of buried liners to ensure the liners continue to meet State and federal specifications of liner impermeability. For purposes of State regulations, buried secondary containment liners that are not beneath an oil storage tank must be “sufficiently impermeable.” The VMT C-Plan notes two significant evaluations of secondary containment liners performed since the last VMT C-Plan renewal in 2003. These investigations primarily focused on evaluating disbondment at the CBA to XR5 interfaces within the 90s and 80s tanks secondary containment areas which are part of the Ballast Water Treatment facility on the VMT. In 2004 and 2005 there was also an investigation and subsequent repair of secondary containment walls above grade in the 80s tanks containment and in the West Tank Farm containment, although this investigation is not noted in the VMT C-Plan. Additionally, in 2003 a multi-year investigation and repair project for secondary containment liner in the East Tank Farm was completed. The investigation and repairs were subsequent to observations made during a 2002 project.

ADEC believes that the VMT plan to observe and investigate, and conduct necessary tests during project work that exposes secondary containment liners is adequate to meet

the inspection requirements of our regulations. If it were the case that APSC had conducted no investigation of secondary containment during the last plan approval cycle, we would likely find this investigation plan to be suspect. However, because APSC is actively pursuing investigating the condition of its secondary containment during project work, we are satisfied that it is an appropriate approach.

Basis for Decision

As noted in the Response to Comments above, APSC has demonstrated on-going attention to investigation of secondary containment liners and walls as project work or operational observations suggest it is warranted. Other considerations must be made when determining whether the secondary containment inspection and maintenance programs described in the VMT C-Plan are adequate. For example, the VMT C-Plan provides information on maintenance and operational procedures – debris removal, snow handling, water accumulation procedures, traffic restrictions, and so on which are intended, in part, to minimize impacts to secondary containment liners. If operational and inspection procedures are not implemented, the risk to secondary containment integrity goes up. As part of on-going observations at the VMT, DEC staff will continue to observe conditions within secondary containment and to work with APSC whenever project work exposes liners and provides an opportunity for investigation.

Issue No. 4: Facility Oil Piping at the VMT

Statement of Issue

Does the VMT C-Plan describe facility oil piping systems, and inspection, maintenance, and corrosion control programs in place at the VMT in fulfillment of C-Plan requirements? Do the facility oil piping systems in place at the VMT conform to the design, maintenance, and inspection requirements detailed in State regulation?

Findings

ADEC finds that the VMT C-Plan provides adequate descriptions of the multiple and complex facility oil piping systems place at the VMT, including maintenance, inspection and corrosion control programs that are consistent with State regulations.

Regulatory Authority

The VMT C-Plan is required by regulations in 18 AAC 75.425(e)(2) to include information on facility oil piping: “....The prevention plan must describe how the applicant meets all the applicable requirements of 18 AAC 75.005 – 18 AAC 75.085.....”

Facility piping regulations have been extensively revised, and the current facility oil piping regulations are as follows.

18 AAC 75.080. Requirements for facility oil piping

- (a) The owner or operator of an oil terminal, crude oil transmission pipeline, exploration facility, or production facility shall ensure that all facility oil piping associated with that facility meets the requirements of this section.

- (b) The owner or operator shall maintain metallic facility oil piping containing oil in accordance with a corrosion control program.
- (c) Unless the owner or operator must comply with a more stringent requirement set out in this section, the owner or operator shall ensure that facility oil piping placed in service after December 30, 2008 is designed and constructed in accordance with one of the following standards, as appropriate:
- (1) American Society of Mechanical Engineers' *Process Piping* (ASME B31.3-2004), adopted by reference;
 - (2) American Society of Mechanical Engineers' *Pipeline Transportation Systems for Liquid Hydrocarbons and Other Liquids*, 2002 Edition (ASME B31.4-2002), adopted by reference;
 - (3) American Society of Mechanical Engineers' *Gas Transmission and Distribution Piping Systems*, 2003 Edition (ASME B31.8-2003), adopted by reference;
 - (4) another equivalent standard approved by the Department.
- (d) The owner or operator shall ensure that buried metallic facility oil piping placed in service between May 14, 1992 and December 30, 2008, is protected from corrosion by installing protective coating and cathodic protection appropriate for local soil conditions and is of all welded construction with no clamped, threaded, or similar connections for lines larger than a one inch nominal pipe size.
- (e) The owner or operator shall ensure that buried facility oil piping placed in service after December 30, 2008
- (1) is of all welded construction with no clamped, threaded, or similar connections for lines larger than one inch nominal pipe size; and
 - (2) unless constructed of a corrosion-resistant material approved by the Department, is
 - (A) protected from corrosion by installing protective coating; and
 - (B) cathodically protected in accordance with (f) of this section.
- (f) The owner or operator shall ensure that, after December 30, 2008, cathodic protection systems installed on facility oil piping are
- (1) consistent with NACE International's Standard Recommended Practice – Control of External Corrosion on Underground or Submerged Metallic Piping Systems, 2002 edition (NACE RP0169-2002), adopted by reference;
 - (2) designed by a corrosion expert; and
 - (3) installed under the supervision of a corrosion expert;
- (g) The owner or operator shall ensure that, if a piping segment of a buried facility oil piping installation is exposed for any reason, the segment is carefully examined, for damaged coating or corroded piping in accordance with Section 9.2.6 of Piping Inspection Code, Inspection, Repair, Alteration and Rerating of In-service Piping Systems (API 570), adopted by reference in (j) of this section, if active corrosion is found during that examination,
- (1) the owner or operator shall implement actions for control of future corrosion; and
 - (2) significant repairs or replacements must meet the requirements of (c) and (e) of this section.

- (h) An owner or operator of a buried facility oil piping installation of metallic construction without cathodic protection shall ensure that the piping
 - (1) is electrically inspected by a corrosion expert for active corrosion at least once every three years, but with intervals between inspections not exceeding 39 months; and
 - (2) in areas in which active corrosion is found, cathodically protected in accordance with (d) or (f) of this section, as appropriate.
- (i) The owner or operator shall ensure that aboveground facility oil piping is supported consistent with the requirements of Paragraph 321 of Process Piping, (ASME B31.3-2004), adopted by reference in (c) of this section.
- (j) After December 30, 2007, unless the owner or operator must comply with a more stringent requirement set out in this section, the owner or operator shall ensure that all facility oil piping is maintained and inspected under
 - (1) a program developed in accordance with the requirements of the American Petroleum Institute's (API) Piping Inspection Code, Inspection, Repair, Alteration, and Rerating of In-service Piping systems, Second Edition, October 1998, Addendum 1, February 2000, Addendum 2, December 2001, and Addendum 3, August 2003 (API 570) adopted by reference;
 - (2) another equivalent program approved by the Department.
- (k) Unless the owner or operator must comply with a more stringent requirement set out in this section, the operation and maintenance of a cathodic protection system on facility oil piping must
 - (1) be consistent with Section 10 of Standard Recommended Practice: Control of External Corrosion on Underground or Submerged Metallic Piping systems, (NACE RP0169-2002), adopted by reference in (f) of this section;
 - (2) include a cathodic protection survey by a corrosion expert or qualified cathodic protection tester; and
 - (3) include maintenance of test lead wires in a condition that enables electrical measurements to be taken to determine the effectiveness of a cathode protection system;
- (l) The owner or operator of aboveground facility oil piping, other than the piping specified in (m) of this section, shall ensure that the piping is protected from atmospheric corrosion by the application of a protective coating or by the use of corrosion-resistant material unless the owner or operator demonstrates by test, investigation, or experience appropriate to the environment of the piping segment that the anticipated extent of corrosion will
 - (1) only be a light surface oxide; or
 - (2) not affect the safe operation of the piping before the next scheduled inspection under a program developed under (j) of this section;
- (m) The owner or operator of aboveground facility oil piping located outside a sufficiently impermeable deck onboard a marine structure or at a soil-to-air interface shall ensure that the piping is protected against external corrosion through the application of a protective coating or by the use of corrosion-resistant materials.
- (n) The owner or operator of aboveground facility oil piping that is removed from service for more than one year shall ensure that the facility oil piping is free of accumulated oil, identified as to origin, marked on the exterior with the words "Out

of Service” and the date taken out of service, secured in a manner to prevent unauthorized use, and either blank flanged or otherwise isolated from the system. The owner or operator shall notify the Department when facility oil piping is removed from service and when the actions required by this subsection are completed.

(p) In this section,

- (1) “active corrosion” means continuing corrosion that, unless controlled, could result in a spill;
- (2) “buried” means covered or in contact with soil;
- (3) “protective coating” means a durable external coating that is applied to piping and that
 - (A) isolates the external surface of the piping from the environment;
 - (B) has sufficient adhesion to effectively resist underfilm migration of moisture;
 - (C) is sufficiently ductile to resist cracking in the range of temperatures encountered during bending, handling, installation, and operation;
 - (D) has sufficient strength and adhesion, or is otherwise protected, to resist mechanical damage;
 - (E) resists degradation throughout the range of temperatures encountered during storage, shipping, construction, and operation; and
 - (F) is compatible with the cathodic protection system in use on the piping;
- (4) “removed from service” means not in regular use for the service intended and not included in a regular maintenance and inspection program in accordance with (j) of this section.
- (5) “submerged” means located below the surface of waters of the state.

Response to Comments

PWS RCAC noted that there were significant improvements in the facility oil piping information provided in response to the Department’s RFAs. However, this reviewer had several requests and comments for consideration.

First, PWS RCAC asked that ADEC require APSC to develop a strategy for systematically replacing all older facility piping. There was a note about most of the VMT facility piping being over 30 years old, so it is our understanding that the commenter is suggesting that all piping over that age should systematically be replaced. There is no requirement in the applicable standards or State regulations that would prompt ADEC to require replacement of facility oil piping based on its age alone. Inspections will undoubtedly identify piping that should be replaced based on its condition, and when this is the case, significant replacements or repairs are required to be consistent with design and cathodic protection requirements for facility piping based on the new installation date.

Secondly, the reviewer recommended revisions to the Best Available Technology (BAT) analysis for buried facility oil piping. The particular comment was that APSC eliminated two technologies for corrosion surveys based on cost without providing cost information for either remote sensitive NDE (non-destructive examination) or close interval survey.

However, our review of APSC's BAT Review indicates that remote sensitive NDE (identified as Alternative Method 1), is "becoming available," is "probably transferable," the effectiveness is "not known," "could be very cost effective," is a new, "not proven" technology, and is "probably compatible."¹ For close interval survey (identified as Alternative Method 4), the BAT analysis suggests it is "available," "not transferable," "not effective," "not cost effective," "current technology," and "compatible." For both of the technologies highlighted by the public reviewer, we believe there are considerations other than cost that indicate these are not currently the best methods for use at the VMT. It should be noted that the VMT C-Plan commits to evaluating the best corrosion survey techniques for specific sites and situations rather than apply one survey technique to all piping systems at all times.

Thirdly, the reviewer requests that inspection and testing frequency be added to Section 2.7 for Terminal Industrial Waste Water Sewer System Inspections. We note, however, that that system is included in Table 2-8, Facility Oil Piping Corrosion Control that identifies the corrosion control method as inspection and cathodic protection per ASME B31.3.

Finally, the reviewer requests that specific timeframes be associated with inspections that are identified as "routine" for facility oil piping. It is not clear which sections are referenced by this comment. For example, in the above ground facility piping descriptions, the C-Plan describes daily inspections, monthly inspections, and inspections when various buried piping is uncovered.

Basis for Decision

The Department reviewed the C-Plan application and additional information and plan edits provided by APSC during the review process. There is no question that the variety of facility piping systems at the VMT requires multiple and complex inspection, maintenance, and corrosion protection programs to assure piping integrity. ADEC is satisfied that the VMT C-Plan adequately describes facility oil piping programs that meet the regulatory requirements identified above. ADEC intends to continue its regular work practice of following up on any incidents involving facility oil piping and working with APSC and other oversight agencies to identify improvements that may be available throughout the VMT C-Plan renewal period.

Issue No. 5: Response Strategies and Tactics

Statement of Issue

Are the response strategies and tactics in the VMT C-Plan described in sufficient detail to guide responders in an emergency event? Does implementation of those strategies and tactics during a RPS volume discharge provide the required response capability?

¹ VMT C-Plan Renewal Application, Revision January 11, 2008, p. 4-36 (part of RFAI response)

Findings

The response strategies and tactics described in the VMT C-Plan provide adequate specificity and applicability to provide guidance needed to respond to an RPS volume discharge or a discharge of a smaller size that may occur on the VMT.

Regulatory Authority

18 AAC 74.445(d) Response strategies. The response strategies must take into account the type of product discharged and must demonstrate that

- (1) procedures are in place to stop the discharge at its source within the shortest possible time.....
- (3) procedures and equipment are sufficient to monitor and track the discharge in order to ensure proper allocation and deployment of response personnel and equipment;
- (4) sufficient oil discharge response equipment, personnel, and other resources are maintained and available for the specific purpose of preventing discharged oil from entering an environmentally sensitive area or area of public concern that would likely be impacted if a discharge occurs, and that this equipment and personnel will be deployed and maintained on a time schedule that will protect those areas before oil reaches them according to the predicted oil trajectories for an oil discharge of the volumes established under 18 AAC 75.430 – 18 AAC 75.442; areas identified in the plan must include areas added by the Department as a condition of plan approval;
- (5) plan strategies are sufficient to meet the applicable response planning standard established under 18 AAC 75.430 – 18 AAC 75.442 for containment, control, recovery, transfer, storage, and cleanup within the specified time and under environmental conditions that might reasonably be expected to occur at the discharge site;
- (6) there is access to sufficient lightering equipment and personnel to transfer all oil from damaged tanks and from undamaged tanks if the risk of an additional discharge is present; the plan must provide for commencement and completion of lightering within the shortest possible time, consistent with ensuring the safety of personnel; and
- (7) adequate temporary storage and removal capacity for recovered oil and oily wastes will be available at or near the site of the spill to keep up with the skimming and recovery operations and to meet the applicable planning standard established under 18 AAC 75.430 – 18 AAC 75.442 for control, containment, and cleanup; plans for temporary storage and ultimate disposal must include the specific actions to be taken to obtain all necessary permits and approvals.

Response to Comments

Both PWS RCAC and Mr. Tom Lakosh made comments on several aspects of Response Strategies and Tactics in the VMT C-Plan. We have broken those comments down by general subject category to facilitate this discussion section.

Source Control

Following the last VMT C-Plan renewal in 2003, a significant review of source control procedures, decision-making structures, and description within the VMT oil spill scenarios was completed as part of a compliance schedule agreement with Alyeska. The primary changes to the VMT C-Plan Response Action Plan included incorporation of guiding principles focusing on system isolation and prevention of secondary spills and an explanation of the difference between initial response source control, which is operator initiated prior to forming the Incident Command System structure, and the second phase of source control, which is conducted under the ICS structure. Specific source control procedure modifications were made to each scenario, and diagrams of the source control points were added to most scenarios to demonstrate Alyeska's ability to respond to a hypothetical spill and stop the discharge for the distinct circumstance of each scenario.

As noted above, both reviewers provided comments related to source control. The common "comment" was that all source control equipment should be specifically inventoried in Part 3, SID 1, Section 1 of the VMT C-Plan. We find that source control equipment is adequately identified and listed in this section of the VMT C-Plan, although it is not segregated in a manner the commenters propose. For example, for a given source control operation, boom, pit liner, and culvert plugs are all source control equipment. We understand, however, that the commenters might be looking for a listing of each operational valve that might be used for stopping or limiting the discharge from piping or for specific equipment used to implement source control procedures for discharges from storage tanks.

Because isolation valves are integrated into the piping systems on the VMT, they do not lend themselves to an inventory listing in the plan. Another piping discharge source control method in use at the VMT involves the use of sleeves or clamps to secure damaged piping. There is not a detailed inventory of sleeves at the VMT or clamps at the Fairbanks facility included in the VMT C-Plan. We agree that the inventory of sleeves and clamps designated and available for use on VMT piping should be included in the C-Plan, and we have made that a condition of approval. While there is a 48" hydraulic clamp available from Fairbanks, most large diameter piping at the VMT is below ground, severely limiting the applicability of this technology. Mr. Lakosh felt that a 48" hydraulic clamp should be permanently placed at the VMT, but we do not find merit in that suggestion. For tanks, both crude oil and fuel storage tanks, the primary source control method is to de-inventory the leaking tank into another tank or tanker-of-opportunity (TOO) using existing tank valves and controls and piping systems. Secondly, secondary containment is itself a method of source control and limiting the spread of a discharge from a tank. For crude oil tanks, other methods include firewater injection – a strategy of injecting firewater into a tank when the leak is near the bottom to allow water rather than crude oil to leak. The technology is integral to the tanks, but this method has not been tested. There is no additional equipment that should be listed for this method. Finally, when a spill escapes secondary containment, the tactics and strategies for limiting its spread include utilizing the settlement pond systems, creating berms or dikes using heavy equipment listed in the plan. Heavy equipment and

equipment needed to manage settlement ponds for maximum oil containment is listed in the VMT C-Plan.

Mr. Lakosh re-stated concerns raised during the 2000 and 2003 VMT C-Plan reviews that response strategies for spill containment, control and recovery had not been properly designed to accommodate the high content of volatile natural gas liquids carried in the oil. The reviewer commented that response strategies and the physical plant should be addressed to account for the limits placed on response operations from the high vapor content of oil and potential burning spills. The Department provided a detailed discussion of similar comments on vapor hazards in the Findings Document for the April 11, 2000 plan approval, and concluded that the response strategies in the plan were adequate to address the vapor risks associated with the volatility of the Alaska North Slope Crude oil handled at the Terminal.² These comments were addressed again in 2003, when it was noted that prior to that renewal, Alyeska hired a consultant to develop a vapor model for an RPS volume discharge at the Terminal, based on Scenario 5 of the plan³. This vapor model was brought to the scenarios work group and led to changes in the on-land response assumptions for the RPS volume discharge. A 12-hour delay was worked into the scenario to account for an average expected time in which vapor hazards would preclude many elements of the planned on-land response. Mr. Lakosh is not satisfied with the 12-hour safety delay for some activities, and claims that all response equipment should be intrinsically safe so that operations in the high vapor area can continue. It has not been demonstrated to our satisfaction that a full complement of intrinsically safe equipment is available such that the risk of operations in a high vapor atmosphere is warranted.

It is the responsibility of the plan holder to conduct its BAT analysis, and it is our finding that Alyeska has conducted the required BAT analysis for source control equipment.

SERVS Technical Manual

PWS RCAC noted that the newly developed SERVS Technical Manual is envisioned as a manual that will be used during all SERVS response operations, whether they are for response to a VMT discharge or a PWS tanker discharge event. The SERVS Technical Manual is not yet fully complete, and it does not currently contain all of the response tactics applicable for a VMT RPS response. The reviewer suggests requiring a specific deadline for incorporation of all VMT related tactics to correspond with a proposed major overhaul of the VMT C-Plan that Alyeska has suggested it may undertake in 2009-2010. ADEC is reluctant to impose this time frame for several reasons. First, we are approving the current VMT C-Plan renewal in a manner that we believe will be effective and useable for the full 5-year renewal period. We welcome Alyeska initiatives to consider any improvements to the VMT C-Plan that will be beneficial to the company, but it is not

² Alaska Department of Environmental Conservation, Division of Spill Prevention and Response, Industry Preparedness and Pipeline Program, Valdez Marine Terminal Oil Discharge Prevention and Contingency Plan Final Findings Document and Response to Comments, April 11, 2000, pp. 13 – 15.

³ Alaska Department of Environmental Conservation, Division of Spill Prevention and Response, Industry Preparedness Program, Valdez Marine Terminal Oil Discharge Prevention and Contingency Plan Final Findings Document and Response to Comments, April 10, 2003, pp. 16 – 17.

ADEC's role to dictate those types of overhauls for reasons not related to statutory or regulatory compliance. Secondly, we anticipate on-going work on the SERVS Technical Manual so that it will become the technical resource document Alyeska envisions. Our primary concern during this review, however, is that the VMT C-Plan contains adequate descriptions of tactics, strategies, and resources needed. Where inconsistencies in the two documents exist, Alyeska must utilize the tactics most applicable to the VMT.

Protection of Environmentally Sensitive Areas

PWS RCAC noted that during the fall 2007 oil spill response exercise held at the VMT, the VMT's Sensitive Area Tactical Guide (a supplemental document to the VMT C-Plan) and the Prince William Sound (PWS) Subarea Contingency Plan (PWS SCP) Geographic Response Strategies (GRS) were both consulted and utilized. It was discovered that each set of documents contained information that could be useful for protection of specific environmentally sensitive areas identified in the VMT C-Plan. The reviewer requested that the VMT C-Plan Coordination Group be tasked with testing, refining, and consolidating the tactics into one unified document that would be utilized for all spill responders (including PWS specific information that is beyond the projected trajectories for the VMT RPS discharge). PWS RCAC requested that this commitment be incorporated into the VMT C-Plan or agency approval documents. It should be noted that the exercise that is the subject of this comment was held months after the submission of the VMT C-Plan renewal application but prior to the close of the public comment period.

Following the 2007 exercise, the recommendations for modification to the PWS SCP GRS were forwarded to the Alaska Regional Response Team (ARRT) subgroup that is updating the PWS SCP. Exercise evaluators noted only one potential recommendation for consideration in updating the VMT Sensitive Area Tactical Guide. The potential recommendation was to indicate that the amount of shore seal boom needed for the Anderson Bay exclusion booming tactics was a minimum of 400 feet and that more would be better.⁴ Through the VMT C-Plan Coordination Group, ADEC representatives will suggest editing the Tactical Guide to more clearly indicate that the 400 feet of shore seal boom for protection of Anderson Bay is the minimum amount required and that more may be needed for variable tide and weather conditions. The resulting update to the Sensitive Area Tactical Guide will be considered a routine update to a technical document and will not require a plan amendment.

ADEC will not require that Alyeska/SERVS or the VMT C-Plan Coordination Group create a "unified" document suggested by PWS RCAC. The VMT C-Plan already incorporates the PWS SCP by reference, and all of the tactics and strategies contained in it are fully available to responders for the VMT. Also, ADEC is not dictating the work schedule for the ARRT's Sensitive Areas Working Group. ADEC representatives are currently working through the ARRT to accomplish the recommended edits to the GRS documents.

⁴ SLR International Corp, Alyeska Pipeline Service Company, Valdez Marine Terminal Sensitive Areas Exercise, October 24, 2007, An Exercise of the Valdez Marine Terminal Oil Discharge Prevention and Contingency Plan Emphasizing Sensitive Area Protection by Equipment Deployment and Response Tactics, pp. C-8 through C-10.

PWS RCAC also questioned why certain information on SERVS PWS Response Centers was removed. We find that the information on the PWS Response Centers is sufficient. However, upon reviewing this comment, ADEC staff noted that the storage van boom inventories for the Valdez Duck Flats and Solomon Gulch Hatchery response has been removed. ADEC will require that these inventories be retained in the VMT C-Plan.

Drills and Exercises

Finally, PWS RCAC requested that ADEC require APSC to list drills and exercises to be accomplished during 2008 – 2013 in the VMT C-Plan. Drills and exercises are one way of ensuring competent deployment of response tactics and strategies. We are not sure if the commenter is referring only to the major exercises scheduled for each year or if they are referring to the many “internal” exercises conducted by Alyeska/SERVS without specific coordination with oversight agencies. The VMT C-Plan currently lists the number and type of major exercises to be held each year, and the primary IMT and equipment deployment exercises are designed in cooperation with interested agencies and often the PWS RCAC. There is a current VMT C-Plan Coordination Group initiative to take a longer-term look at structuring and planning major exercises. We believe that this is a better and more flexible approach than identifying five years of exercises, including scope and dates, in advance. We want to the plan holder to identify areas that need more attention on a continuous basis and to design exercises that strengthen those areas.

Basis for Decision

ADEC staff reviewed the Response Action Plan, the Supplemental Information Documents, and the Response Scenarios to determine whether response strategies and tactics were adequately described and resourced to provide effective response capability for the VMT C-Plan. We have identified all of the major categories of response tactics required by regulation, and they appear to be consistent within the VMT C-Plan. We do agree with some of the public review comments that suggest some additional updating or restoration is needed. In particular, we agree that source control sleeves and clamps designated for use on VMT piping should be listed in the plan. Also, we disagree with the removal of the Valdez Duck Flats and Solomon Gulch Hatchery storage van boom inventories. Therefore, we are requiring several items to be corrected or updated:

- Alyeska must include in the C-Plan a list of sleeves that are located in Valdez and clamps that are located in Fairbanks that are available and designated for use to stop a leak from piping on the VMT.
- Boom specifically dedicated for protection of the Valdez Duck Flats and Solomon Gulch Hatchery (located in strategically placed storage vans), must be reinstated in the VMT C-Plan prior to publication. However, if the boom inventories have changed from the previous C-Plan⁵, the inventory must be submitted to ADEC as a plan amendment under 18 AAC 75.455.

⁵ VMT C-Plan, Part 3, SID 1, Section 1.13.2, Hatchery Protection and Special Sites, CP-35-2, Fourth Edition, Revision 9, (August 5, 2005), p. 3.1.1-57

As discussed above in the "Response to Comments," ADEC representatives have submitted the recommendations for GRS modifications based on the 2007 exercise to the ARRT.

Issue No. 6: Realistic Maximum Response Operating Limitations (RMROL)

Statement of Issue

Does the supplementary information contained in the VMT C-Plan adequately describe severe weather and environmental limitations that might occur during a discharge event? Have there been events that reasonably call into question the descriptions of RMROL in the VMT C-Plan and the ability of Alyeska to conduct an effective response in less severe weather or other environmental conditions?

Findings

ADEC finds that RMROL is adequately described in the VMT C-Plan and that expectations for response equipment operation in conditions less severe than RMROL are reasonable.

Regulatory Authority

Incorporating RMROL into response plans is found in numerous regulations:

18 AAC 75.425(e)(3)(D) Realistic maximum response operating limitations – a description of the realistic maximum response operating limitations that might be encountered at the facility or operation and, based on environmental and safety considerations, an analysis of the frequency and duration, expressed as a percentage of time, of limitations that would render mechanical response method ineffective; the realistic maximum response operating limitations for a response must be defined, with a description of any additional specific temporary prevention or response measures that will be taken to reduce the environmental consequences of a discharge, including nonmechanical response options, during those periods when environmental conditions exceed this maximum; environmental conditions to be considered in this analysis must include:

- (i) weather, including wind, visibility, precipitation and temperature;
- (ii) sea states, tides, and currents;
- (iii) ice and debris presence;
- (iv) hours of daylight; and
- (v) other known environmental conditions that might influence the efficiency of the response equipment or the overall effectiveness of a response effort;

18 AAC 75.445(c) Deployment strategies. The plan must demonstrate that the identified personnel and equipment are sufficient to meet the applicable response planning standard and can be deployed and operating within the time specified under 18 AAC 75.430- 18 AAC 75.442. The plan must state what conditions were assumed and must take into account the realistic maximum response operating limitation and their effects on response capability and deployment of resources. Plans using contractual resources must

demonstrate that the transition and substitution of equipment and resources will occur without interruption of response or cleanup.

18 AAC 75.445(f) Realistic maximum response operating limitations. In designing a spill response, severe weather and environmental limitations that might be reasonable expected to occur during a discharge event must be identified. The plan must use realistic efficiency rates for the specified response methods to account for the reduction of control or removal rates under those severe weather or other environmental limitations that might be reasonably be expected to occur. The department may require the plan holder to take specific temporary prevention or response measures until environmental conditions improve to reduce the risk or magnitude of an oil discharge during periods when planned mechanical spill response options are rendered ineffective by environmental limitations. Plans that propose the use of nonmechanical response options under 18 AAC 75.425(e)(3)(D) must meet the requirements of 18 AAC 75.425(e)(1)(G), 18 AAC 75.425(e)(#)(G), and (h) of this section.

Response to Comments

Mr. Tom Lakosh argued that the RMROL descriptions in the VMT C-Plan were not valid based on review of a third-party oil discharge exercise report. In particular, an open water exercise near Naked Island in Prince William Sound was called off by the SERVS drill controller due to safety concerns when wind and waves increased dramatically during transit from Cordova to Naked Island. The commenter suggested that if an exercise was called off when seas and winds were below RMROL conditions, that was sufficient evidence that equipment and personnel could not respond and that RMROL was misidentified or that response equipment efficiencies were inadequate at less than RMROL conditions. The commenter also argued that without an exhaustive analysis of all spill drills ever conducted, equipment capabilities would be unknown.

One exercise alone does not determine ADEC's decision when considering equipment capabilities. Nor do we consider that Alyeska/SERVS must conduct exercises in RMROL or near RMROL conditions when no real response condition exists. Instead, ADEC looks for the reasonableness of the assertions of the plan, the equipment efficiency ratings, and whether there are reasonable exercise programs in place to assure personnel are familiar with general conditions.

As a matter of interest in the comments received, and to determine whether the third-party report contained accurate information, ADEC staff followed up with the Alyeska/SERVS drill controllers. Alyeska/SERVS staff was adamant that it was the best choice in this situation to err on the side of safety because this was not an actual response. As it turns out, one of the vessels was taking on water and repairs were made while it was underway to fix the problem and pump out the accumulated water. The third-party report provides no reasonable basis for questioning RMROL ratings or descriptions in the VMT C-Plan.

Basis for Decision

Part 3, SID 1, Section 11 of the VMT C-Plan describes RMROL for the VMT response for all areas of the terminal facility, including beach areas, all of the waters of Port Valdez and the northeast portion of the Valdez Narrows, and the waters of Valdez Arm from Potato Point to Point Freemantle. Equipment operational limits are identified, wind data for the year is provided, tides, water depth, currents, and sea states are all discussed. Other environmental factors including precipitation, visibility, temperature, and ice are discussed. The C-Plan also describes measures that can be taken to compensate for those conditions. The assertions of this section are reasonable. Their reasonableness is not undermined by the public review comments provided to ADEC.

Issue No. 7: RPS Scenario**Statement of Issue**

Does the Response Planning Standard (RPS) Scenario (Scenario5) provide a valid description of an effective response to an RPS volume discharge? Are the equipment and personnel resources identified in Scenario 5 sufficient to conduct the described strategies and tactics in the required time frames?

Finding

ADEC finds that Scenario 5 in the VMT C-Plan, identified as the RPS Scenario, provides a valid and reasonable description of an effective response to the VMT's RPS volume discharge. We agree with APSC's Compliance Schedule commitment to evaluate response personnel numbers as part of their planned project to re-structure or re-write Scenario 5. The Scenario 5 re-write project is based on APSC business initiatives, and is not itself required by ADEC. Nonetheless, the revised Scenario 5, including validated personnel numbers for specific job roles and duties, will be submitted to ADEC as a plan amendment. The amendment will be reviewed according to procedures in 18 AAC 75.455.

Regulatory Authority

Regulations describing the required content of the RPS scenario (and other scenarios that may be required by the department) are found in 18 AAC 75.425(e)(1)(F):

Response scenario – a written description of a hypothetical spill incident and response that demonstrates a plan holder's ability to respond to a discharge of each applicable response planning standard volume within the required time frames using the resources described in the contingency plan, and that identifies the spill location, time of year, and time of day, the source and course of the spill, the quantity and type of oil spilled, the relevant environmental conditions, including weather, sea state, and visibility, the spill trajectory, and the expected timeline for response actions, describing response actions to be taken; the response scenario must be usable as a general guide for a discharge of any size, must describe the discharge containment, control and cleanup actions to be taken, which clearly demonstrate the strategies and procedures adopted to conduct and maintain an effective response, and if the response

scenario is for an exploration....; if required by the Department, the plan holder must provide additional response strategies to account for variations in receiving environments and seasonal conditions; ...response strategies must include:

- (i) procedures to stop the discharge at its source and prevent its further spread;
- (ii) a description of methods to prevent or control a potential fire hazard;
- (iii) repealed 5/26/2004
- (iv) procedures and methods for real-time surveillance and tracking of discharge oil on open water and forecasting of its expected points of shoreline contact;
- (v) for a stationary facility or operation, or a railroad, and, if requested by the Department, for a vessel, a description of site-specific strategies for the protection of environmentally sensitive areas and areas of public concern identified under (3)(J) of this subsection, including, for a land-based facility or railroad, protection of groundwater and public water supplies; if identification of those areas and site-specific strategies for protection of those areas are in an applicable subarea contingency plan, the plan holder may incorporate that information by reference;
- (vi) a description of the action to be taken to recover the contained or controlled oil using mechanical response options, including procedures and provisions for skimming, absorbing, or otherwise recovering the contained or controlled product from water or land;
- (vii) procedures for lightering, transfer, and storage of oil from damaged tanks or from undamaged tanks that might be at risk of discharging additional oil;
- (ix) procedures for transfer and storage of recovered oil and oily water, including methods for estimating the amount of recovered oil;
- (x) procedures and locations for temporary storage and ultimate disposal of oil contaminated materials, oily wastes, and sanitary and solid wastes, including procedures for obtaining any required permits or authorizations for temporary storage or ultimate disposal;
- (xi) procedures and methods for the protection, recovery, disposal, rehabilitation, and release of potentially affected wildlife, including: minimizing wildlife contamination through hazing or other means, when appropriate; the recovery of oiled carcasses to preclude secondary contamination of scavengers; and the capture, cleaning, rehabilitation, and release of oiled wildlife, when appropriate; and
- (xii) if applicable, a description of procedures for the deployment of shoreline cleanup equipment and personnel, including cleanup and restoration methods and techniques to be used if the shoreline is impacted by the discharge;....

Response to Comments

Mr. Tom Lakosh provided comments on the RPS Scenario (Scenario 5) that appeared to be based on the original C-Plan application that included a scenario that was significantly revised from the previously and currently approved RPS scenario. During the RFAI process, ADEC staff suggested that the proposed RPS scenario (the one we believe Mr. Lakosh was commenting on) was not approvable and requested that Alyeska agree to place the currently approved RPS scenario back into the renewal application. Alyeska agreed to do this, and at their initiative they placed a schedule in the VMT C-Plan for review and revising the RPS scenario in cooperation with the VMT C-Plan Coordination

Group. Therefore, the comments submitted for the initially proposed RPS scenario will not be addressed here.

Similarly, Mr. Lakosh stated that specifications for the GrahamRec skimmer efficiency ratings had been dramatically altered from previously approved efficiencies. However, it appears that Mr. Lakosh may have not realized that the additional information provided by Alyeska included reinstating the RPS scenario previously approved by ADEC. The skimmer recovery efficiencies, including those for the GrahamRec system are the same as have been approved for many years. The primary change is that some barge capacities have been reduced to reflect more accurate calculations of storage capacity. During the last renewal cycle, representatives from ADEC, Alyeska/SERVS, and PWS RCAC reviewed the open water recovery calculations in the VMT C-Plan and agreed that they accurately reflected the efficiencies agreed to with ADEC in the 1990s.

PWS RCAC expressed on-going concerns with personnel assignments and numbers needed to staff an RPS scenario response. The Department agreed that it was appropriate to validate Scenario 5 personnel numbers for specific job roles and duties needed to fully implement the strategies and tactics described, although we do not find that there are insufficient numbers of trained personnel identified in the VMT C-Plan. We requested that APSC include the commitment to validate personnel numbers in their Scenario 5 re-write commitment in the C-Plan Compliance Schedule, and they agreed to do so. PWS RCAC noted this commitment and agreed to the process as part of APSC's project to re-write Scenario 5 (as noted above, this is a project initiated by APSC). Members of the VMT C-Plan Coordination Group will work cooperatively during this revision project, and the final revised RPS scenario, including validated personnel numbers for specific job roles and duties, will be submitted to ADEC as a VMT C-Plan amendment. It will undergo public review.

Basis for Decision

The RPS Scenario (Scenario 5) describes actions implementing response strategies required by regulations in 18 AAC 75.425(e)(1)(F). Recovery capacities for the major skimming systems reflect those agreed to by ADEC for many years, and at this time we do not see a reason for changing those capacities. Barge storage capacities have been corrected to reflect capacities that were re-calculated by industry and agency staff. Because APSC has determined for business reasons it wishes to re-write Scenario 5, they have agreed to validate personnel numbers for specific job roles and duties as part of that process. They have placed a commitment to that task in the Compliance Schedule for the VMT C-Plan. The re-written Scenario 5, including validated personnel information, will be submitted as an amendment to the VMT C-Plan, and it will be reviewed according to procedures in 18 AAC 75.455.

Issue No. 8: Historical Discharge Analysis**Statement of Issue**

Does the VMT C-Plan include a history of all known discharges greater than 55 gallons, including an analysis of those discharges with identified actions to prevent or mitigate similar discharges?

Findings

The historical discharge information contained in the C-Plan is only partially complete. While data was updated to within 6 months of the renewal application, the associated analysis was not finished. Therefore, as a condition of plan approval, ADEC is requiring APSC to incorporate required spill data through the end of 2007 into the C-Plan in order to ensure the analysis yet to be completed incorporates recent spill data. As part of the same condition of approval, ADEC requires the historical discharge analysis in Part 3, SID 10, Section 10.2 of the C-Plan to be updated using the spill data through the end of 2007. An amendment to the VMT C-Plan that fulfills this condition must be submitted to ADEC no later than June 30, 2008. It will be reviewed according to ADEC regulations.

Regulatory Authority

State regulations requiring historical discharge analysis are found in 18 AAC 75.425(e)(2)(B), which require the Prevention Plan to include:

(B) a history of all known discharges greater than 55 gallons that have occurred at the facility, with an analysis of the relationship, if any, between their frequency, cause, and size, and a description of actions to be taken to prevent or mitigate similar discharges in the future;

Response to Comments

Public comments did not focus specifically on the historical discharge analysis component of the overall VMT C-Plan Risk Analysis section. During our review of public comments on Risk Assessment for the VMT C-Plan (see Issue 9), we noted that historical discharge data has been updated through 2006.

Basis for Decision

The historical discharge and corresponding analysis in the VMT C-Plan Part 3, SID 10, Section 10.2 needs to be updated to identify any trends in the last five years that may identify common causes or other information that will help identify mitigating measures that could reduce the likelihood of a recurrence of spills over 55 gallons. In order to ensure that the spill data is as current as possible, ADEC is requiring that APSC incorporate spill data through the end of 2007 into the updated analysis. This data is gathered regularly and is readily available to APSC. Therefore, we are requiring a relatively quick completion of that work and submission of an amendment for review no later than June 30, 2008.

Issue No. 9: Risk Assessment**Statement of Issue**

Are the conditions at the VMT identified and described that might increase a risk of a discharge? Are steps identified to reduce identified risks?

Findings

ADEC finds that APSC has conducted several valid risk assessments which are well described in the VMT C-Plan and which identify discharge risks and associated mitigations. The most recent risk assessment was completed in 2001. Particularly following the submission of the C-Plan renewal application, some operational changes have occurred at the VMT, and ADEC supports APSC's commitment to complete an updated Risk Assessment utilizing the resources of the VMT C-Plan Coordination Group. The updated Risk Assessment and any related C-Plan amendments will be submitted to ADEC for review by June 30, 2009. ADEC will ensure that any C-Plan amendments are reviewed according to the appropriate regulatory review procedures found in 18 AAC 75.

Regulatory Authority

Regulations requiring the including of a risk analysis are found in 18 AAC 75.425(e)(2)(C) – (D):

- C) an analysis of potential oil discharges, including size, frequency, cause, duration, and location, and a description of actions taken to prevent a potential discharge;
- (D) a 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.....

Response to Comments

PWS RCAC pointed out that APSC has made a commitment to conduct and complete an updated VMT Risk Assessment in 2008. They have requested that ADEC require this updated Risk Assessment be included in the VMT C-Plan Compliance Schedule or in our approval documents. Risk assessment, including analysis of historical discharges and identification of risks particular to the facility components and operations, is required for the purpose of identifying and implementing measures to minimize the risk of oil discharges. Multiple risk assessments have been conducted at the VMT. The most recent risk assessment was completed in 2001 and focused on identifying where additional prevention measures could reduce risk. ADEC finds that the risk analysis included in the VMT C-Plan is adequate for meeting regulatory requirements. However, we agree that it is prudent to identify potential risk impacts of changes in operations at the VMT, and we note that several operational changes have occurred after the C-Plan renewal application was submitted. Therefore, we support the formal commitment by APSC to conduct an updated Risk Assessment. In discussions with APSC, it is agreed that the resources of the VMT C-Plan Coordination group will be utilized during this process. Any resulting C-Plan amendments will be submitted to ADEC for review by June 30, 2009.

PWS RCAC requested that two studies they have recently approved be provided to the consultant conducting the Risk Assessment⁶. If PWS RCAC wishes to provide their studies to APSC, that would be the proper channel at this point. We believe it would be inappropriate for ADEC to require the papers to be incorporated into the Risk Assessment for two reasons: We cannot commit to the validity or accuracy of either study and we are concerned that by endorsing these studies as necessary consideration in the Risk Assessment we may improperly dictate or limit the detailed project scoping that must take place.

Basis for Decision

The several risk assessments described in the VMT C-Plan and identified mitigating measures are adequate to meet the Risk Analysis required by regulation at the time of the VMT C-Plan renewal application (June 5, 2007). Since that time, there have been several operational changes at the VMT, including moving the Operations and Control Center (OCC) to Anchorage and installing vapor controls on the Ballast Water Treatment facility. In anticipation of these changes, and as part of an on-going initiative, APSC has initiated a project to up date the Risk Assessment work for the VMT and has made commitments to complete it in the near future. We strongly encourage APSC to work with the VMT C-Plan Coordination Group as this project is developed and finalized. And, we encourage members of the VMT C-Plan Coordination Group to share information they believe will be of assistance to APSC for purposes of this project. If the updated Risk Assessment identifies any change in risk profile for the VMT, APSC must submit the appropriate C-Plan amendment application or applications to ADEC for regulatory review by June 30, 2009. We believe this is an acceptable initiative that will supplement the Risk Analysis work that we found to be adequate at the time of the renewal application.

Other Comments Received

Several additional comments and recommendations were received that are not covered in the major issues identified above.

Continually checking otter nets. PWS RCAC asked that APSC modify Wildlife tactic W-4 to require constant checking of otter capture nets. The same tactic had been modified in the 2007 PWS Tanker C-Plan renewal, and the reviewer based the request on having consistency among plans. We agree that this is a reasonable request, and we also find that it is not a controversial request. Therefore, we are requiring APSC to modify the last sentence of the Description of Tactic W-4, Bird and Otter Capture and Transportation to state that otter capture nets (tangle nets) "...are checked continuously for otters...."

⁶Rock Slope Stability of the VMT, by Terry R. West, Ph.D., P.E., C.P.G. and Kyu Ho Cho, Ph.D., P.E. September 2007 (found at: <http://www.pwsrcac.org/docs/d0039900.pdf>) and Earthquake, Landslide and Tsunami Hazards in the Port Valdez area, Alaska: Consultation to the Prince William Sound Regional Citizens' Advisory Council, by Alaska Beget Consulting September 27, 3007 (found at: <http://www.pwsrcac.org/docs/d0039800.pdf>)

Suspending operations during a terminal incident. PWS RCAC stated that ADEC should require the VMT C-Plan to reflect that all terminal operations will be suspended during an incident (i.e., a spill). Not only does the reviewer believe that all terminal operations should immediately be shut down in the event of a spill (or other hazard such as a fire), but that all Trans Alaska Pipeline operations should be immediately shut down as well. The reviewer believes the Unified Command should have the authority to re-start operations, but that they do not have the authority to determine whether stopping operations throughout the TAPS system would reduce risk or increase it. It is beyond the authority of ADEC in this C-Plan review to limit the actions of the Unified Command during an actual response. It is possible to very quickly think of many scenarios in which immediately shutting down operations, including loading or unloading, could increase risk of additional discharge, fire, explosion, or any number of other operational disasters. The reviewer provides no parameters for the incident that would cause such a shut down, just that for any incident all operations should cease. No consideration is given to the impact on the Pipeline or North Slope producers. This is the exact job of the Incident Commander and Unified Command. We do not support limiting their ability to make decisions based on the situation at hand, and we will not impose such limits through the auspices of a contingency plan review.

VMT C-Plan Bibliography. PWS RCAC requested that a commitment be included in the VMT C-Plan that its Bibliography will be updated when a future revision to the C-Plan is made, by APSC initiative, to incorporate the SERVS Technical Manual into the plan. ADEC agrees that updating the C-Plan bibliography is a good task, but we are not prepared to place a requirement on APSC to conduct a major bibliographic update at a particular time. Discussions surrounding removing or adding documents to the VMT C-Plan Bibliography have the potential for being highly complex and possibly contentious. Should a significant amendment to the Bibliography be submitted to ADEC, it will be reviewed according to the appropriate regulatory review process.

Non-mechanical Response Information Updates. PWS RCAC requested that ADEC require APSC to update dispersant information, specifically the type and quantify of dispersants available. We were not aware that the information concerning dispersants at the VMT is inaccurate. The reviewer did not provide a basis for this comment, and it may have been intended as an on-going update request.

VMT C-Plan Coordination Group. PWS RCAC requested that the VMT C-Plan be edited to include a commitment to continuation of the VMT C-Plan Coordination Group in the VMT C-Plan or in the ADEC approval documents. ADEC is committed to the continuation of the VMT C-Plan Coordination Group as long as it continues to be a productive and cooperative venue for working through oil spill prevention and response issues. The VMT C-Plan Coordination

Group will continue to be led by APSC. It is our hope, not our requirement, that ADEC, other oversight agencies (BLM, EPA and the USCG in particular), and the PWS RCAC representatives will participate as active members of the group, including providing input on issues to be discussed and resolved. At this point, the VMT C-Plan Coordination Group meets quarterly, and until another schedule is deemed necessary or beneficial and is mutually agreed on, we see no reason to impose an alternate schedule

Copies of the final VMT C-Plan. PWC RCAC requested that APSC provide them with one electronic and three control copies of the final VMT C-Plan. This is something that PWS RCAC should address with APSC rather than ADEC.