2019 Annual Report

Port of Alaska
Storm Water Management Program
Anchorage, Alaska

Prepared For:

Port of Alaska
2000 Anchorage Port Road
Anchorage, Alaska 99501

Prepared By:

R&M Consultants, Inc.
9101 Vanguard Drive
Anchorage, Alaska 99507

7 February 2020

R&M CONSULTANTS, INC.

PORT OF ALASKA
STORM WATER MANAGEMENT PROGRAM – INDEX
ANCHORAGE, ALASKA

PREFACE

The Port of Alaska (Port) (formerly named the Port of Anchorage) Storm Water Management Program (SWMP) is comprised of five individual components that guide compliance with requirements of the Alaska Pollutant Discharge Elimination System (APDES) Municipal Separate Storm Sewer System (MS4) Permit AKS052426. The current APDES MS4 permit went into effect on 1 August 2015 and expires on 31 July 2020. An application for permit renewal was submitted prior to the 2 February 2020 compliance date.

The five documents that comprise the Port SWMP include the following:

- APDES MS4 – Summary Annual Report
  - Provides an overview of data and inspection records generated over a reporting year.
- Detailed Annual Report
  - Provides expanded comment, analysis, and backup data to information included in the Summary Annual Report. This includes results from wet and dry weather monitoring.
- Storm Water Management Program Plan
  - The purpose of the SWMP Plan is to provide guidance to the Port and its Stakeholders, on a continual basis, regarding Best Management Practices (BMPs) to reduce the potential for pollutants to enter storm water runoff.
- MS4 Monitoring Program Plan
  - Details monitoring criteria for the Port and other Stakeholders to ensure compliance with the SWMP and the underlying APDES MS4 permit.
- MS4 Quality Assurance Project Plan
  - Details collection methods and analysis of chemical monitoring data to support analysis of the effectiveness of BMPs required by the SWMP in enforcing the APDES MS4 permit stipulations.

Each of these documents are provided under separate cover, but are attached to this index as together they are integral to successful implementation of the Port SWMP.

2019 Summary Annual Report

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ALASKA POLLUTANT DISCHARGE ELIMINATION SYSTEM
MS4 – Summary Annual Report Form

1. MS4 Information

AKS052426 — Permit Number

Port of Anchorage [Alaska] Municipal Separate Storm Sewer System — Name of MS4

Sharen — Name of Contact Person (First)

Walsh — (Last)

Deputy Port Director — (Title)

907.343.6203 — Telephone (including area code)

sharen.walsh@anchorageak.gov — Email

2000 Anchorage Port Road — Mailing Address

Anchorage — City

Alaska — State

99501 — Zip Code

What size population does your MS4 serve? N/A

What is the reporting period for this report? (mm/dd/yyyy) From 01/01/2019 to 12/31/2019

2. Water Quality Priorities

A. Does your MS4 discharge to waters listed as impaired on a state 303(d) list? ☐ Yes ☑ No

B. If yes, identify each impaired water, the impairment, whether a TMDL has been approved by EPA for each, and whether the TMDL assigns a wasteload allocation to your MS4. Use a new line for each impairment, and attach additional pages as necessary.

Impaired Water	Impairment	Approved TMDL		TMDL assigns WLA to MS4	
N/A		☐ Yes	☐ No	☐ Yes	☐ No
		☐ Yes	☐ No	☐ Yes	☐ No
		☐ Yes	☐ No	☐ Yes	☐ No
		☐ Yes	☐ No	☐ Yes	☐ No
		☐ Yes	☐ No	☐ Yes	☐ No
		☐ Yes	☐ No	☐ Yes	☐ No

C. What specific sources contributing to the impairment(s) are you targeting in your storm water program?
N/A

D. Do you discharge to any high-quality waters (e.g., Tier 2, Tier 3, outstanding natural resource waters, or other state or federal designation)? ☑ Yes ☐ No

E. Are you implementing additional specific provisions to ensure their continued integrity? ☑ Yes ☐ No

3. Public Education and Public Participation

A. Is your public education program targeting specific pollutants and sources of those pollutants? ☑ Yes ☐ No

B. If yes, what are the specific sources and/or pollutants addressed by your public education program?
Floatables, petroleum products, sediment, and any other illicit discharges

C. Note specific successful outcome(s) (e.g., quantified reduction in fertilizer use; NOT tasks, events, publications) fully or partially attributable to your public education program during this reporting period.
Undetermined

D. Do you have an advisory committee or other body comprised of the public and other stakeholders that provides regular input on your storm water program? ☑ Yes ☐ No

4. Construction

A. Do you have an ordinance or other regulatory mechanism stipulating:

- Erosion and sediment control requirements? ☑ Yes ☐ No
- Other construction waste control requirements? ☑ Yes ☐ No
- Requirement to submit construction plans for review? ☑ Yes ☐ No
- MS4 enforcement authority? ☑ Yes ☐ No

B. Do you have written procedures for:

- Reviewing construction plans? ☑ Yes ☐ No
- Performing inspections? ☑ Yes ☐ No
- Responding to violations? ☑ Yes ☐ No

C. Identify the total number of active construction sites ≥ 1 acre in operation in your jurisdiction during the reporting period. 2

D. How many of the sites identified in 4.C did you inspect during this reporting period? 2

E. Describe, on average, the frequency with which your program conducts construction site inspections.
At least once during project construction.

F. Do you prioritize certain construction sites for more frequent inspections? ☑ Yes ☐ No
If Yes, based on what criteria?
Larger scale construction projects typically require more frequent inspections during different phases

G. Identify which of the following types of enforcement actions you used during the reporting period for construction activities, indicate the number of actions, or note those for which you do not have authority:

☐ Yes	Notice Of Violation	# 0	No Authority	☐
☐ Yes	Administrative Fines	# 0	No Authority	☐
☐ Yes	Stop Work Orders	# 0	No Authority	☐
☐ Yes	Civil Penalties	# 0	No Authority	☐
☐ Yes	Criminal Actions	# 0	No Authority	☐
☐ Yes	Administrative Orders	# 0	No Authority	☐
☐ Yes	Other	# 0		

H. Do you use an electronic tool (e.g., GIS, data base, spreadsheet) to track the locations, inspection results, and enforcement actions of active construction sites in your jurisdiction? ☐ Yes ☑ No

I. What are the 3 most common types of violations documented during this reporting period?
a. N/A b. N/A c. N/A

J. How often do municipal employees receive training on the construction program?
Annually and at quarterly meetings

5. Illicit Discharge Elimination

A. Have you completed a map of all outfalls and receiving waters of your storm sewer system? ☑ Yes ☐ No

B. Have you completed a map of all storm drain pipes and other conveyances in the storm sewer system? ☑ Yes ☐ No

C. Identify the number of outfalls in your storm sewer system. 8

D. Do you have documented procedures, including frequency, for screening outfalls? ☑ Yes ☐ No

E. Of the outfalls identified in 5.C, how many were screened for dry weather discharges during this reporting period? 3

F. Of the outfalls identified in 5.C, how many have been screened for dry weather discharges at any time since you obtained MS4 permit coverage? 8

G. What is your frequency for screening outfalls for illicit discharges? Describe any variation based on size/type. As needed and during other scheduled and unscheduled site inspections.

H. Do you have an ordinance or other regulatory mechanism that effectively prohibits illicit discharges? ☑ Yes ☐ No

I. Do you have an ordinance or other regulatory mechanism that provides authority for you to take enforcement action and/or recover costs for addressing illicit discharges? ☑ Yes ☐ No

J. During this reporting period, how many illicit discharges/illegal connections have you discovered? 0

K. Of those illicit discharges/illegal connections that have been discovered or reported, how many have been eliminated? N/A

L. How often do municipal employees receive training on the illicit discharge program? Annually and as needed during quarterly meetings

6. Storm Water Management for Municipal Operations

A. Have storm water pollution prevention plans (or an equivalent plan) been developed for:

- All public parks, ball fields, other recreational facilities and other open spaces ☑ Yes ☐ No
- All municipal fleet and building maintenance activities ☑ Yes ☐ No
- All municipal construction activities, including those disturbing greater than 1 acre ☑ Yes ☐ No
- All municipal storm water system maintenance ☑ Yes ☐ No
- All municipal snow disposal site operation and maintenance activities ☑ Yes ☐ No
- Other N/A

B. Are storm water inspections conducted at these facilities? ☑ Yes ☐ No

C. If Yes, at what frequency are inspections conducted? Periodically throughout year

D. List activities for which operating procedures or management practices specific to storm water management have been developed (e.g., road repairs, catch basin cleaning). See SWMP Section 3.8

E. Do you prioritize certain municipal activities and/or facilities for more frequent inspection? ☐ Yes ☑ No

F. If Yes, which activities and/or facilities receive most frequent inspections? N/A

G. Do all municipal employees and contractors overseeing planning and implementation of storm water-related activities receive comprehensive training on storm water management? ☑ Yes ☐ No

H. If yes, do you also provide regular updates and refreshers? ☑ Yes ☐ No

I. If so, how frequently and/or under what circumstances? At least annually,whenever there is a violation, and/or at quarterly meetings

7. Long-term (Post-Construction) Storm Water Measures

A. Do you have an ordinance or other regulatory mechanism to require:

Site plan reviews for storm water/water quality of all new and re-development projects?	☑ Yes	☐ No
Long-term operation and maintenance of storm water management controls?	☑ Yes	☐ No
Retrofitting to incorporate long-term storm water management controls?	☐ Yes	☑ No

B. If you have retrofit requirements, what are the circumstances/criteria?
N/A

C. What are your criteria for determining which new/re-development storm water plans you will review (e.g., all projects, projects disturbing greater than one acre, etc.)
Projects that permanently alter storm water conveyance/discharge into the Port's MS4

D. Do you require water quality or quantity design standards or performance standards, either directly or by reference to a state or other standard, be met for new development and re-development? ☑ Yes ☐ No

E. Do these performance or design standards require that pre-development hydrology be met for:

Flow volumes	☑ Yes	☐ No
Peak discharge rates	☑ Yes	☐ No
Discharge frequency	☑ Yes	☐ No
Flow duration	☑ Yes	☐ No

F. Please provide the URL/reference where all post-construction storm water management standards can be found.
https://dec.alaska.gov/water/wastewater/stormwater/guidance/ or http://www.muni.org/departments/project_management/Pages/DesignCriteriaManual.aspx

G. How many development and redevelopment project plans were reviewed during the reporting period to assess impacts to water quality and receiving stream protection? 0

H. How many of the plans identified in 7.G were approved? N/A

I. How many privately owned permanent storm water management practices/facilities were inspected during the reporting period? 0

J. How many of the practices/facilities identified in 7.I were found to have inadequate maintenance? N/A

K. How long do you give operators to remedy any operation and maintenance deficiencies identified during inspections? typically 7 days

L. Do you have authority to take enforcement action for failure to properly operate and maintain storm water practices/facilities? ☑ Yes ☐ No

M. How many formal enforcement actions (i.e., more than a verbal or written warning) were taken for failure to adequately operate and/or maintain storm water management practices? 0

N. Do you use an electronic tool (e.g., GIS, database, spreadsheet) to track post-construction BMPs, inspections and maintenance? No

O. Do all municipal departments and/or staff (as relevant) have access to this tracking system? ☐ Yes ☑ No

P. How often do municipal employees receive training on the post-construction program? Annually (minimum)

8. Additional Information

Please include any additional information on the performance of your MS4 program. If providing clarification to any of the questions on this form, please provide the question number (e.g., 2C) in your response.

Refer to the 2019 Detailed Annual Report

Certification Statement and Signature

☑ Yes

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Per Appendix A, Part 1.12.2 This report to be signed as follows: **For a municipal, State, Federal, or other public facility**: by either a principal executive or ranking elected official; **for a corporation**, a responsible corporate officer.

Sharon A. Walsh

Signature

2/04/2020

Date

Sharon A. Walsh, DEPUTY DIRECTOR

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TABLE OF CONTENTS

List of Appendices

TABLE OF CONTENTS (CONTINUED)

ACRONYMS AND ABBREVIATIONS

AAC	Alaska Administrative Code
ABI	Alaska Basic Industries
ADEC	Alaska Department of Environmental Conservation
AFSC	Anchorage Fueling and Service Company (a subsidiary of ASIG)
APDES	Alaska Pollutant Discharge Elimination System
ASIG	Aircraft Service International Group
AWWU	Anchorage Water and Wastewater Utility
BMP	Best Management Practice
CGP	construction general permit
DL	detection limit
DMR	Discharge Monitoring Report
EPA	Environmental Protection Agency (U.S.)
IDDE	Illicit Discharge Detection and Elimination
LOD	limit of detection
MCM	Minimum Control Measure
MEP	Maximum Extent Practicable
mg/L	milligrams per liter
MOA	Municipality of Anchorage
MS4	Municipal Separate Storm Sewer System
NPDES	National Pollutant and Discharge Elimination System
OWS	oil water separator
PHF	pesticides, herbicides, and fertilizers
Port	Port of Alaska
QAPP	Quality Assurance Project Plan
sf	square feet
SOP	standard operating procedures
SWMP	Storm Water Management Program
SWPP	storm water pollution prevention
SWPPP	storm water pollution prevention plan
SWR	System-Wide Report
TAH	total aromatic hydrocarbons
TAqH	total aqueous hydrocarbon
Tesoro	Tesoro Alaska Petroleum Co.
TOTE	TOTE Maritime Alaska
µg/L	micrograms per liter
VOC	volatile organic compound
WQS	Water Quality Standards

2019 DETAILED ANNUAL REPORT

PORT OF ALASKA
STORM WATER MANAGEMENT PROGRAM
ANCHORAGE, ALASKA

1.0 INTRODUCTION

This Port of Alaska (Port) Storm Water Management Program (SWMP) Detailed Annual Report has been prepared in accordance with requirements of the Alaska Pollutant Discharge Elimination System (APDES) Municipal Separate Storm Sewer System (MS4) Permit AKS052426. The purpose of this Detailed Annual Report is to provide an in-depth discussion and assessment of the Port's SWMP and its implementation from 1 January 2019 to 31 December 2019.

The report assesses the effectiveness of each SWMP program component or activity and may include discussion of the following:

- A description of the effectiveness of each SWMP component or activity.
- Planned activities and changes for the next reporting period for each SWMP program component or activity.
- An evaluation of compliance with the requirements of this permit, the appropriateness of identified best management practices (BMPs), and progress towards achieving identified measurable goals of the SWMP for each minimum control measure.
- Results of any information collected and analyzed during the previous twelve month reporting period, including monitoring data used to assess the success of the program at reducing the discharge of pollutants to the maximum extent practicable (MEP).
- A summary of the activities the Port plans to undertake during the next reporting cycle (including an implementation schedule) for each minimum control measure.
- Proposed changes and completed changes to the SWMP, including changes to any BMPs or any identified measurable goals for any minimum control measures.
- Description and schedule for implementation of additional BMPs that may be necessary, based on monitoring results and applicable Water Quality Standards (WQS).
- Description of any added or transferred areas to the Port's MS4 and schedules for implementation of the MS4 for the next reporting cycle.
- Notice if the Port is relying on another entity to satisfy some of the permit obligations.

The current MS4 Permit went into effect on 1 August 2015 and this reporting cycle (1 January 2019 to 31 December 2019) has involved development, updating, and/or implementing new programs, tracking, and/or record keeping requirements of the 2015 MS4 permit. The Port Director, Deputy Port Director, Storm Water Pollution Prevention (SWPP) team members including Stakeholders are responsible for implementation of the storm water management guidelines presented in the Port's SWMP. The Port's designated representative is responsible for assisting the Port in implementing, coordinating, and managing the SWMP.

2.0 MINIMUM CONTROL MEASURES (MCM)

Section 3.0 of the MS4 permit lists six minimum control measures for proper storm water management and permit compliance: public education and outreach; public involvement and participation; illicit discharge detection and elimination; construction site storm water runoff control; post-construction storm water management in new development and redevelopment; and pollution prevention and good housekeeping. This section summarizes the implementation of these control measures during the 2019 reporting period, the effectiveness of each measure, and proposed changes (if any) for the subsequent year.

2.1 PUBLIC EDUCATION AND OUTREACH

The Public Education and Outreach Program was successfully implemented in 2019. The target audience for the program are Port and Stakeholder employees who have the potential to affect the quality of storm water discharged to and from the Port's MS4. The program addresses illicit discharges and/or connections, with the primary focus on floatables, petroleum hydrocarbons, and sediment based on historical data and current operations.

The annual education program consists of presenting a relevant storm water focused training video that illustrates BMPs and good housekeeping measures that can prevent storm water contamination from occurring. The current training video highlights illicit discharges and how to identify and eliminate them in order to protect storm water quality. Following the presentation of the video, a quiz on the video's content is administered, and trainees sign an acknowledgement form stating the date the training has been received. In addition, the training includes a discussion period during which trainees may ask questions and seek clarification on storm water related issues.

No additional formal education programs were implemented in 2019; however, storm water pollution prevention team members were educated at each quarterly meeting on the importance of maintaining water quality, permit compliance, new BMPs, and good housekeeping practices.

The measurable goal for the Public Education and Outreach MCM is to provide this training opportunity for employees of the Port and each Stakeholder by 31 December of each reporting year (Appendix A, Table 1). This goal was achieved and approximately 103 Port and Stakeholder employees participated in the Port's education program in 2019. The Port considers this program to be effective and in compliance with the current MS4 permit; no changes to the program itself or associated measurable goal are proposed for the upcoming year.

2.2 PUBLIC INVOLVEMENT AND PARTICIPATION

The Port has updated its Public Involvement and Participation Plan to comply with the 2015 MS4 permit. Public involvement for the 2019 reporting cycle was primarily aimed at users of the MS4 – namely the Port and Stakeholder employees (Section 2.1). The general public was not targeted for involvement due to the Port being a secure facility with very limited public access.

Although involvement with the general public was limited during the 2019 reporting period, the Port developed a specific website containing storm water management plan documents, annual reports, and relevant storm water information. This new tool is used to inform the public and solicit feedback as warranted. The current Annual Report and associated attachments are made publicly available on the Port's website once submitted to the Alaska Department of Environmental

Conservation (ADEC). The website also provides links to quarterly storm water team meeting minutes, contact information, the MS4 jurisdiction map, and general storm water information. An option to sign up to receive storm water email updates has been developed which allows interested members of the general public to sign up to receive emails regarding storm water. The website is located at the following URL:

https://www.portofalaska.com/business/storm-water-management/

The SWPP team consists of representatives from each Stakeholder, Port security and safety personnel, the Deputy Port Director, the Port's representative, and ADEC. Four storm water team meetings were held in 2019 and were well attended; meeting minutes are included in Appendix D.

In 2015, 100% of the Port's storm drains were stenciled with "NO WASTE DUMPING" (with the exception of beehive inlets). The stenciling serves as a reminder to all Port users that the drains are associated with storm water and care needs to be taken to prevent illicit discharges from entering the MS4 and receiving waters. Storm drains will be re-stenciled as needed to maintain this important reminder.

To foster public involvement and community outreach, the Deputy Port Director regularly attended Government Hill Community Council meetings given this neighborhood's proximity to the Port and its facilities.

Three of the measurable goals for the Public Involvement and Participation Plan MCM were achieved by the dates listed in Table 1 (Appendix A): 100 % stencil coverage for all storm drain inlets was maintained, a specific storm water management page was created on the Port website, and a list-serve system was created and tracked. The goal to have 10 individuals sign up for the list-serve will remain a priority for the Port in 2020. The anticipated achievement dates are included in Table 1. The Port considers this plan to be effective and in compliance with the current MS4 permit; no changes to the program itself or associated measureable goals are proposed for the upcoming year.

2.3 ILLICIT DISCHARGE DETECTION AND ELIMINATION

The prevention, detection, resolution, and elimination of illicit discharges are the primary goals of the Port's SWMP. Municipality of Anchorage (MOA) ordinance 15.50.020 prohibits non-storm water discharges into the MS4 (Appendix E). As an entity of the MOA, the Port will enforce this ordinance in addition to Port-specific enforcement actions. Specific implementation and enforcement procedures and actions are outlined in SWMP Sections 3.3 and 3.5.

Education, public involvement, and communication with individuals who may have exposure to storm water on Port property are critical tools in the prevention and detection of illicit discharges. Additionally, the implementation of the new Monitoring Program Plan and Quality Assurance Project Plan (QAPP) will assist the Port in detecting and eliminating illicit discharges.

Locating an illicit discharge at the Port starts with a site inspection preferably during periods of dry weather. Site inspections are conducted on a regular basis by both Port and Stakeholder representatives. During these inspections, signs of present and past illicit discharges are documented by completing the Illicit Discharge Tracking Form (refer to SWMP). If an illicit discharge is observed, the origin of the discharge is determined. This can involve a number of steps depending on the location and condition of the discharge. At times, determining the source of the discharge is

as simple as following the flow of water back to its source. Evidence of an illicit discharge can include, but is not limited to, sheen, odor, and/or other visual indicators. By knowing the history and topography of the Port, it is also possible to determine where a discharge might have originated and what a likely source for the discharge could be. Certain areas may be prioritized for investigation of illicit discharges based primarily on the history of previous illicit discharges associated with either the area or Stakeholder. Areas associated with larger quantities of storm water will be given a relatively higher priority for investigations versus outfalls with smaller associated drainage basins. Currently, all outfalls are given the same priority.

Once the source of the discharge is determined, steps will be taken to mitigate future illicit discharges from that source. If deemed beneficial, where sufficient flow is found at an outfall, field testing for selected chemical parameters indicating discharge sources will be performed. Stakeholders are held financially responsible for the cleanup and resolution of illicit discharges for which they are at fault.

This section presents a summary of the inspection and screening activities performed at the Port in 2019. These activities included qualitative dry weather screening and wet weather monitoring which was reinstated under the 2015 MS4 permit.

2.3.1 WET WEATHER MONITORING

The permit requires that the Port design and implement an ongoing wet weather screening program. The purpose of this screening program is to detect the presence of illicit discharges and connections or other pollution issues relating to the storm drain system. The Port has designed a wet weather screening program that consists of collecting visual observations and testing of water quality parameters once or twice per year (depending on parameter). Wet weather monitoring requirements, parameters, and frequency are outlined in the Monitoring Program Plan and QAPP. Outfalls 001, 002, and 003 were identified in the MS4 permit as the representative outfalls requiring monitoring and sampling; there are no monitoring requirements for Outfalls 004 through 007.

Wet weather monitoring, field observations, and analytical sample collection was conducted for Outfalls 001, 002, and 003 on 12 June (Event 1) and 25 September 2019 (Event 2). Results were compared to action levels presented in the MS4 APDES permit authorization and are included in Tables 10 through 14 in Appendix A. The results were also used to complete the discharge monitoring report (DMR) included in Appendix F. Field observations included visually estimating flow, volume, and sheen along with measurement of temperature, pH, dissolved oxygen, and turbidity. The fully executed chains-of custody are included in Appendix F.

Analytical results included testing for total aromatic hydrocarbons (TAH) and total aqueous hydrocarbons (TAqH) which are calculations based on analysis for volatile organic compounds (VOC) and polycyclic aromatic hydrocarbons. TAH and TAqH summations were compared to permit action levels which are based on 18 Alaska Administrative Code (AAC) 70, Water Quality Standards. Additionally, the metals cadmium, copper, lead, and zinc were tested for in Outfalls 001 and 002.

TAH concentrations were below the action level of 10 micrograms per liter (µg/L) in the samples from Outfalls 001 and 002 with results ranging from 4.52 to 6.72 µg/L for the samples from Event 1 and Event 2. TAH exceeded the action level for Outfall 003 from the spring sample at a concentration of 18.2 µg/L.

TAqH concentrations were below the action level of 15 µg/L in samples from Outfalls 001 and 002 with results ranging from 4.88 to 6.86 µg/L for the samples from Event 1 and Event 2. TAH exceeded the action level for Outfall 003 from the spring sample at a concentration of 19.4 µg/L. TAqH results are primarily driven by TAH calculation results.

Metals (cadmium, copper, lead, zinc), phosphorus, hardness, biochemical oxygen demand, chemical oxygen demand, total suspended solids, total dissolved solids, nitrates, and total kjeldahl nitrogen were analyzed for and are reported in Table 12 in Appendix A and on the DMR in Appendix F. Copies of complete analytical results are available upon request.

2.3.2 DRY WEATHER SCREENING

The permit requires that the Port design and implement an ongoing dry weather screening program. The purpose of this screening program is to detect the presence of illicit connections and discharges or other water quality issues affecting the Port's storm drain system. The Port has designed a dry weather screening program that consists of an awareness program, outfall screening effort, and regular site-wide visual inspections. No dry weather analytical testing was conducted on any of the outfalls during 2019.

Outfalls 001, 002, and 003 are visually screened at least once per year during a period of relatively dry weather and low tide. Outfall screening is aimed at detecting illicit discharges and/or connections via the presence of solid waste, petroleum sheen, and/or unusual odors. The general condition and functionality of each is noted to ensure the system is discharging appropriately.

On 25 May 2019, 5 June 2019, and 16 July 2019, outfalls 001 through 007 were visually inspected at low tide and the general condition of each was noted in the Port of Alaska 2019 Condition Inspections (Appendix G).. Outfalls 002, 003, and 005 were located and appeared to be functional, adequately discharging storm water from the system. Low to moderate, continuous flows of clear water with no sheen or odor was observed. Outfall 001 appears to have damaged by the 30 November 2018 earthquake and outfall 004 was not observed during the 2019 condition assessment. Outfall 006 is inundated with fill as a result of active slope work within the South Backlands. Outfall 007 consists of an aboveground manhole; an outfall pipe was not visible. In addition to the outfall inspection conducted to support the condition assessment, all outfalls were observed on 29 August 2019 during an informal site visit with Port, ADEC, and consultant representatives. No additional issues or notable observations were documented. .

Site-wide visual inspections were performed in 2019 during relatively dry weather periods to look for evidence of illicit discharges, poor housekeeping, storm water control effectiveness and to confirm whether the Port and Port Stakeholders are adhering to the SWMP. The site-wide visual inspection consists of inspecting the entire Port, excluding the inside of buildings. The site-wide visual inspection focuses on identifying illicit discharges, solid waste accumulation, identifying on-site and off-site sources of potential pollution, and checking for prohibited outdoor work activities. A total of six unannounced inspections were conducted on a regular basis throughout 2019.

In general, the Port facilities are maintained in good, clean condition. The most commonly noted issues are open trash receptacles and the presence of debris, particularly in and around snow storage areas. Additionally, temporary BMPs such as sorbent socks, witches hats, and wattles should be removed as soon as the area of ground disturbance is stabilized, they become damaged and no longer effective, or are no longer necessary to protect water quality. If not promptly removed, these

BMPs may become debris themselves and/or prohibit flow into the storm drain conveyance system. BMPs in poor condition were noted in multiple areas around the Port; these should have been removed or replaced promptly. These issues did not warrant enforcement actions; however, good housekeeping and the importance of removing debris and unnecessary BMPs was reiterated at each quarterly meeting and during the annual education sessions.

2.3.3 INFILTRATION FROM PETROLEUM-CONTAMINATED SITES

Historical contamination in various concentrations exists throughout the Port property and it has been determined that historical soil and groundwater contamination may be infiltrating the storm system in certain areas. The Port continues to survey and inspect the storm drain system to identify any additional deficiencies. A comprehensive condition assessment for all Port facilities, including the storm drain system, was conducted in 2019 as a result of the 30 November 2018 earthquake (Appendix G). Portions of the storm drain system were flushed and inspected with a camera to identify issues and/or failures within the system. The results of this effort are still being prepared.

As deficiencies in the storm drain system are identified and as funding allows, a description of controls, timeline, and resources to mitigate groundwater infiltration from petroleum-contaminated sites to the MS4 will be submitted with the corresponding Detailed Annual Report.

2.3.4 ANNUAL EVALUATION

The Illicit Discharge and Detection and Elimination MCM was successfully implemented in 2019. Wet weather screening activities were conducted as required in consideration of precipitation events, tide schedules, and logistical constraints.

The measurable goals proposed for the Illicit Discharge and Detection and Elimination (IDDE) program are on track for achievement according to the schedule proposed in Table 1, Appendix A. Wet and dry weather monitoring/screening was completed in 2019 in accordance with the MS4 permit requirements and the comprehensive storm sewer system map was finalized. Establishment of controls to limit infiltration of seepage into the MS4 is ongoing and will be continued in the upcoming year. The screening of all outfalls during dry weather conditions will be completed by the permit expiration date of 1 August 2020 or before. The Port considers this plan to be effective and in compliance with the current MS4 permit; no changes to the program itself or associated measurable goals are proposed for the upcoming year.

2.4 CONSTRUCTION SITE STORM WATER RUNOFF CONTROL

The Construction Site Storm Water Runoff Control program was successfully implemented in 2019. For active construction projects disturbing greater than one acre within the jurisdiction of the Port, the Contractor shall obtain authorization under the APDES Construction General Permit (CGP). Projects disturbing greater than 10,000 square feet must coordinate improvements with the Port to avoid, minimize, and mitigate adverse impacts to water quality. A Construction Site Form must be prepared by the Contractor and signed by the Port before construction may commence.

The Port reviewed three construction storm water pollution prevention plans (SWPPP) for construction projects during 2019 to ensure compliance with the Port's SWMP. Coverage under the CGP was required for a Port construction project associated with the Modernization Program and for a fiberoptic installation project for the GCI. One additional storm water plan was reviewed for the ML&P Feeder Loop Project. A Construction Site Form for each construction project was completed and signed by the Contractor and Port representative documenting each review.

Unannounced site inspections of Port facilities were conducted on a semi-regular basis throughout 2019. Active construction projects were observed for general compliance with storm water regulations and informally inspected at least once during active construction. The Port required copies of weekly inspections for projects with CGP coverage to ensure compliance.

The measurable goal for the Constructions Site Storm Water Runoff Control MCM is to implement this program for new construction projects (Appendix A, Table 1). This goal was achieved and all applicable construction projects were reviewed for compliance in 2019. The Port considers this program to be effective and in compliance with the current MS4 permit. No substantial changes to the program itself or the associated measurable goal are proposed for the upcoming year. It is recommended that the construction contractor update ground disturbance area calculations as the project evolves to determine if the project requires coverage under the CGP.

2.5 POST-CONSTRUCTION STORM WATER MANAGEMENT IN NEW DEVELOPMENT AND REDEVELOPMENT

The Post-Construction Storm Water Management in New Development and Redevelopment program was successfully implemented in 2019. To address post-construction runoff control, the Port requires a plan review of proposed permanent storm water conveyance, drainage, and/or treatment designs. The Port reviews preliminary design plans to ensure consistency with the SWMP and Port-wide drainage plan. A Post-Construction Site Form must be prepared by the Contractor and signed by the Port before design may proceed. To ensure that post-construction storm water quality controls have been addressed, the responsible party for each construction project is required by applicable state and federal storm water regulations to prepare a post-construction design for permanent storm water controls, if applicable. Designs for permanent storm water controls must also receive a storm water design plan review and letter of non-objection from ADEC prior to construction. The post-construction storm water controls design should incorporate plans and specifications, including explanations of the proposed storm water quality control measures, BMPs, and standard operating procedures (SOP) that will be used to prevent discharge of pollutants to the MS4 upon completion of project construction.

Operational and structural BMPs intended to minimize post-construction water quality impacts are summarized in the SWMP. Information on the Port's post-construction SWMP will be conveyed to the applicable parties (project designers and/or contractors) as early as possible for proper incorporation of controls and BMPs into final designs.

The measurable goal for the Post-Construction Storm Water Management in New Development and Redevelopment MCM was to implement this program and develop a strategy for LID pilot projects by 31 December and 1 August 2016, respectively (Appendix A, Table 1). These goals were achieved and the Port considers this program to be effective and in compliance with the current MS4 permit; no changes to the program itself or associated measurable goals are proposed for the upcoming year.

2.6 POLLUTION PREVENTION AND GOOD HOUSEKEEPING

The Port is a 220-acre area with approximately 81 acres under long-term lease to various Port Stakeholders and 31 acres available for temporary staging. The Port is personally responsible for public areas while lease areas are the responsibility of the respective Stakeholders. A description of Stakeholder pollution prevention, good housekeeping, and storm water controls can be found in Section 3.0 of the SWMP. The areas under Port responsibility include:

- Streets, roads, and Port employee parking lots – Facilities with paved areas continue to implement street sweeping procedures to minimize the accumulation of suspended solids in storm water and to reduce air pollution. This effort is particularly important during spring breakup. Parking lots leased by Stakeholders are the responsibility of the Stakeholder.
- Port maintenance and storage areas – These yards are controlled, covered areas of the site where traffic patterns are not a hazard. As necessary, materials are stored within a secondary containment unit or above a sealed ground surface to avoid incidental contact with surface water runoff.
- Waste transfer stations – Solid wastes are disposed of in non-leaking dumpsters and are kept covered at all times to prevent garbage from blowing away and precipitation from entering and corroding the dumpsters. Any solid waste container leaks are contained so that the leakage and/or solid waste will not enter the storm drain system. A leaking dumpster is repaired or replaced immediately. Solid waste containers are located at least 50 feet from the nearest storm drain inlet.
- Port fleet or maintenance shops with outdoor storage areas – All maintenance and fabrication activities on vehicles and equipment are performed inside or under cover unless it is not possible to do so. Outdoor storage areas have materials stored within secondary containment units or above a sealed ground surface to avoid incidental contact with surface water runoff.
- Salt/sand storage locations – Sand is stored in a large Quonset hut tent. As such, the sand is covered 24/7, all year round. Only the amount needed is removed from the hut. When no sand is being loaded or removed from the hut, the doors are shut.
- Snow storage sites operated by the Port – Snow storage sites comply with ADEC snow storage site requirements and guidelines. Dumping, pushing, placing, or blowing snow into any drainage ditch or storm drain inlet is strictly prohibited. The Port is currently working with JBER to create a dedicated snow disposal site on JBER property.
- Maintenance of ditches, catch basins, culverts, outfalls and storm drains – The cleaning and repair of ditches, catch basins, culverts, and outfalls is an ongoing effort at the Port. Storm drain system and outfall 003 was upgraded and/or replaced in 2015. Remaining funds were utilized to inspect, clean, and repair storm drain catch basins as needed. The MS4 is reported to be functioning and in serviceable condition. The Port will continue to evaluate and inspect the storm drain system for functionality and propose improvements and/or repairs as necessary.

2.6.1 EFFECTIVENESS OF CONTROLS

Tables 2 through 8 (Appendix A) summarize the effectiveness of BMPs, source reduction and elimination measures, and source control measures that the Port and its Stakeholders have installed or implemented in accordance with the SWMP. It also identifies any discrepancies between current measures and controls of the Port and its Stakeholders and those required by the SWMP. This

section of the annual report will provide a discussion of discrepancies, why they should be corrected, and prudent remedies or suggestions that would bring each facility into compliance with the SWMP, thereby minimizing the potential for pollutants to enter the storm water system. If no discrepancy currently exists, the Port or Stakeholder facility is not mentioned here.

2.6.2 MAINTENANCE SCHEDULES AND RECORDS

The Port itself and each Stakeholder are responsible for adhering to their facility-specific maintenance schedules and for documenting and retaining associated maintenance records. Such records are extensive and are not included in this report but will be made available upon request. In an effort to improve maintenance record tracking, retention, and availability an Oil-Grit Separator and Sump Inspection Plan along with associated maintenance log were created in March 2017. This Plan and Inspection Log is retained in the POA Maintenance Building for easy reference and documentation.

2.6.3 LONG-TERM INSPECTION PROCEDURES

The long-term inspection procedures include a preventative maintenance program and regular inspections of the Port and Stakeholder lease areas. The preventive maintenance program involves regular inspections of storm water management devices and other equipment and systems being used. The following systems and equipment are regularly inspected at each Port and/or Stakeholder facility.

- The entire storm water system is inspected from the surface at least once annually and at the first sign of clogging or other problems. Throughout the year, any debris that has collected in ditches or catch basins is removed and disposed of properly to promote proper drainage and prevent pollutants from entering the storm water system. Deficiencies are documented and repaired as logistics and funding allow.
- Vehicle fueling areas, bulk fuel storage, and tank truck loading racks are visually inspected periodically and/or whenever the facility is manned. Areas to be inspected for corrosion, leaks, cracks, or other physical damage include pump foundations, connections, valves, hoses, and other fittings. Secondary containment areas are checked regularly. If fuel has entered a secondary containment area, or if a part is found to be obviously damaged, the equipment will be shut down until the problem is determined and repaired. Should a leak or other threatening condition be found anywhere, corrective action(s) will be taken immediately, or the fueling facility shut down until the problem is resolved.
- Maintenance personnel periodically inspect oil water separators (OWS), and clean or otherwise service them as necessary. Should a leak or other threatening condition occur, corrective action will be taken immediately.

2.6.4 ANNUAL EVALUATION

The Pollution Prevention and Good Housekeeping MCM was successfully implemented in 2019. The Port and Stakeholders adhered to pollution prevention and good housekeeping measures outlined in the SWMP. The measurable goals proposed for Pollution Prevention and Good Housekeeping program are on track for achievement according to the schedule in Table 1, Appendix A. The storm drain system is regularly assessed for maintenance needs and a more systematic and

comprehensive maintenance schedule for the Port facilities was initiated. The Port is currently working to integrate facility systems (utilities, as-builts, inspection records, maintenance activities, etc.) into a GIS database system. The current goal is to incorporate maintenance activities/records and pollution prevention and good housekeeping (IDDE) into this new tracking system. The Port considers this plan to be effective and in compliance with the current MS4 permit; no changes to the program itself or associated measurable goals are proposed for the upcoming year.

3.0 MONITORING, EVALUATION, REPORTING, AND RECORD KEEPING REQUIREMENTS

3.1 MONITORING PROGRAM PLAN AND QAPP

The MS4 Monitoring Program Plan and QAPP were adopted in February 2016 to comply with the 2015 MS4 permit and implemented in 2019. Results of dry and wet weather monitoring efforts have been presented in the preceding sections and indicate that monitoring and screening programs are effective at detecting illicit discharges and/or connections or other water quality impacts. Both the MS4 Monitoring Program Plan and QAPP were reviewed in 2019, however no substantial changes were made to either plan. These Plans will be updated in 2020 based on the reissued MS4 permit.

3.2 EVALUATION OF OVERALL PROGRAM EFFECTIVENESS

A review of the adequacy and efficacy of the overall Storm Water Management Program will be provided in this section of current and future Annual Reports. The Port has had a storm water management plan in effect since 1995 when the MS4 permit was issued by the U.S. Environmental Protection Agency (EPA) under the National Pollutant and Discharge Elimination System (NPDES). As a result, the importance of protecting storm water quality has always been a priority for the Port. Certain programs and plans were enhanced to meet current regulatory requirements and provide more public participation and monitoring consistency. However, BMPs, structural controls, education programs, and maintenance practices to protect water quality have always been a common goal amongst the Port and Stakeholders. Highlights of the 2019 reporting period were referenced in Section 2.0 and are summarized below.

Protocols, inspection procedures, and compliance forms were improved/updated to assist in tracking various permit requirements including the construction site form, post-construction site form, assessment of controls, material inventory, inventory of exposed significant materials, and an illicit discharges tracking form.

The active construction site form allows the Port to review proposed construction projects occurring on Port property for compliance with the Port's SWMP, the Port's Construction Site Storm Water Runoff Control from New Development and Redevelopment Project Program, and the CGP. The form must be completed prior to the start of a new construction project.

The assessment of controls determines if BMPs, source reduction and elimination measures, and source control measures are adequate for various concerns involving storm water in the Port and/or Stakeholder's areas.

The material inventory lists all the materials used, stored, or produced on the Port. It also evaluates these materials for their potential to contribute pollutants to storm water runoff. The exposed significant materials inventory takes a look at the material inventory mentioned above and describes the significant materials that are currently exposed to storm water.

The illicit discharge tracking form is to be filled out when an illicit discharge is discovered. The form's purpose is to provide a formal method for tracking any illicit discharges made at the Port.

An assessment of controls is summarized in Appendix A, Tables 2 through 8. These controls have been deemed adequate as long as proper maintenance and best management practices are adhered to.

3.3 REPORTING

3.3.1 SPILL REPORTING

Table 9 provides a narrative description of spills or leaks that occurred at each Port facility in 2019 (Appendix A). This table is updated annually. A list of significant spills or leaks that occurred on the Port between March 1992 and December 2018 were included in previous System Wide Reports (SWR) and Annual Reports.

3.3.2 ANNUAL REPORTING

Summary and Detailed Annual reports will be prepared annually to document MS4 compliance during the previous year. These reports and supporting documentation, including the current SWMP, will be submitted to ADEC each year by 15 February, posted on the Port's storm water webpage, and distributed to all SWPP team members/Stakeholders.

3.4 RECORD KEEPING REQUIREMENTS

The Port maintains records and copies of all information including: copies of all reports required by this permit; copies of DMRs; a copy of the APDES permit; and records of all data used to complete the application for the permit. These records will be retained for a period of at least three years from the date of the sample, measurement, report or application, or for the term of the permit, whichever is longer. Records also include all information used in the development of the storm water management program, all monitoring data, copies of all reports, and all data used in the development of the permit application. These records, including the permit application and the SWMP, will be made available to ADEC or the public if requested to do so in writing.

APPENDIX A
TABLES

TABLE 1: MEASURABLE GOALS

Measurable Goals	Achievement Date
Public Education and Outreach	
Complete Port staff and Stakeholder trainings	16 December 2019
Public Involvement and Participation	
Maintain 100% stencil coverage for all storm drain inlets	31 July 2020
Create a storm water management section on the Port's existing website	1 March 2017
Create a list-serve for interested parties to receive storm water updates	1 March 2017
Obtain a minimum of 10 sign-ups to the list-serve	31 July 2020
Illicit Discharge Detection and Elimination	
Conduct wet weather screening	12 June 2019 and 25 September 2019
Conduct dry weather screening	12 November 2019
Finalize comprehensive storm sewer system map	November 2016
Establish controls to limit infiltration of seepage into the MS4 as needed	1 August 2017
Screen all outfalls during dry weather	29 August 2019
Construction Site Storm Water Runoff	
Implement the construction site runoff control program	31 December 2019
Post-Construction Storm Water Management in New Development and Redevelopment	
Implement the Post-Construction Run-off Program	31 December 2019
Develop Strategy for LID pilot projects	1 August 2016
Pollution Prevention and Good Housekeeping	
Assess the storm drain system for maintenance needs	31 December 2019
Establish a more systematic and comprehensive maintenance schedule for Port facilities	31 March 2017
Incorporate maintenance and IDDE into a GIS database/tracking system	31 July 2020

Note: The six minimum control measures are bolded.

TABLE 2: ASSESSMENT OF CONTROLS – PORT OF ALASKA

Concern	BMPs	Source Reduction and Elimination Measures	Source Control Measures
Petroleum Hydrocarbons, Antifreeze, and Batteries	☒ Adequate ☐ Not Adequate	☒ Adequate ☐ Not Adequate	☒ Adequate ☐ Not Adequate
Hazardous Chemicals and Wastes, Paints, and PHFs	☒ Adequate ☐ Not Adequate	☒ Adequate ☐ Not Adequate	☒ Adequate ☐ Not Adequate
Floatables	☒ Adequate ☐ Not Adequate	☒ Adequate ☐ Not Adequate	☒ Adequate ☐ Not Adequate
Roadways	☒ Adequate ☐ Not Adequate	☒ Adequate ☐ Not Adequate	☒ Adequate ☐ Not Adequate
Illicit Discharges and Connections and Improper Disposal	☒ Adequate ☐ Not Adequate	☒ Adequate ☐ Not Adequate	☒ Adequate ☐ Not Adequate
Spill Prevention and Control	☒ Adequate ☐ Not Adequate	☒ Adequate ☐ Not Adequate	☒ Adequate ☐ Not Adequate
Public Education	☒ Adequate ☐ Not Adequate	☒ Adequate ☐ Not Adequate	☒ Adequate ☐ Not Adequate
Vehicle Wash Area	☒ Adequate ☐ Not Adequate ☐ Not Applicable	☒ Adequate ☐ Not Adequate ☐ Not Applicable	☒ Adequate ☐ Not Adequate ☐ Not Applicable

TABLE 3: ASSESSMENT OF CONTROLS – MATSON

Concern	BMPs	Source Reduction and Elimination Measures	Source Control Measures
Petroleum Hydrocarbons, Antifreeze, and Batteries	☒ Adequate ☐ Not Adequate	☒ Adequate ☐ Not Adequate	☒ Adequate ☐ Not Adequate
Hazardous Chemicals and Wastes, Paints, and PHFs	☒ Adequate ☐ Not Adequate	☒ Adequate ☐ Not Adequate	☒ Adequate ☐ Not Adequate
Floatables	☒ Adequate ☐ Not Adequate	☒ Adequate ☐ Not Adequate	☒ Adequate ☐ Not Adequate
Roadways	☒ Adequate ☐ Not Adequate	☒ Adequate ☐ Not Adequate	☒ Adequate ☐ Not Adequate
Illicit Discharges and Connections and Improper Disposal	☒ Adequate ☐ Not Adequate	☒ Adequate ☐ Not Adequate	☒ Adequate ☐ Not Adequate
Spill Prevention and Control	☒ Adequate ☐ Not Adequate	☒ Adequate ☐ Not Adequate	☒ Adequate ☐ Not Adequate
Public Education	☒ Adequate ☐ Not Adequate	☒ Adequate ☐ Not Adequate	☒ Adequate ☐ Not Adequate
Vehicle Wash Area	☒ Adequate ☐ Not Adequate ☐ Not Applicable	☒ Adequate ☐ Not Adequate ☐ Not Applicable	☒ Adequate ☐ Not Adequate ☐ Not Applicable

TABLE 4: ASSESSMENT OF CONTROLS – MENZIES AVIATION (AFSC)

Concern	BMPs	Source Reduction and Elimination Measures	Source Control Measures
Petroleum Hydrocarbons, Antifreeze, and Batteries	☒ Adequate ☐ Not Adequate	☒ Adequate ☐ Not Adequate	☒ Adequate ☐ Not Adequate
Hazardous Chemicals and Wastes, Paints, and PHFs	☒ Adequate ☐ Not Adequate	☒ Adequate ☐ Not Adequate	☒ Adequate ☐ Not Adequate
Floatables	☒ Adequate ☐ Not Adequate	☒ Adequate ☐ Not Adequate	☒ Adequate ☐ Not Adequate
Roadways	☒ Adequate ☐ Not Adequate	☒ Adequate ☐ Not Adequate	☒ Adequate ☐ Not Adequate
Illicit Discharges and Connections and Improper Disposal	☒ Adequate ☐ Not Adequate	☒ Adequate ☐ Not Adequate	☒ Adequate ☐ Not Adequate
Spill Prevention and Control	☒ Adequate ☐ Not Adequate	☒ Adequate ☐ Not Adequate	☒ Adequate ☐ Not Adequate
Public Education	☒ Adequate ☐ Not Adequate	☒ Adequate ☐ Not Adequate	☒ Adequate ☐ Not Adequate
Vehicle Wash Area	☐ Adequate ☐ Not Adequate ☒ Not Applicable	☐ Adequate ☐ Not Adequate ☒ Not Applicable	☐ Adequate ☐ Not Adequate ☒ Not Applicable

TABLE 5: ASSESSMENT OF CONTROLS – MARATHON PETROLEUM (FORMERLY ANDEAVOR AND TESORO)

Concern	BMPs	Source Reduction and Elimination Measures	Source Control Measures
Petroleum Hydrocarbons, Antifreeze, and Batteries	☒ Adequate ☐ Not Adequate	☒ Adequate ☐ Not Adequate	☒ Adequate ☐ Not Adequate
Hazardous Chemicals and Wastes, Paints, and PHFs	☒ Adequate ☐ Not Adequate	☒ Adequate ☐ Not Adequate	☒ Adequate ☐ Not Adequate
Floatables	☒ Adequate ☐ Not Adequate	☒ Adequate ☐ Not Adequate	☒ Adequate ☐ Not Adequate
Roadways	☒ Adequate ☐ Not Adequate	☒ Adequate ☐ Not Adequate	☒ Adequate ☐ Not Adequate
Illicit Discharges and Connections and Improper Disposal	☒ Adequate ☐ Not Adequate	☒ Adequate ☐ Not Adequate	☒ Adequate ☐ Not Adequate
Spill Prevention and Control	☒ Adequate ☐ Not Adequate	☒ Adequate ☐ Not Adequate	☒ Adequate ☐ Not Adequate
Public Education	☒ Adequate ☐ Not Adequate	☒ Adequate ☐ Not Adequate	☒ Adequate ☐ Not Adequate
Vehicle Wash Area	☐ Adequate ☐ Not Adequate ☒ Not Applicable	☐ Adequate ☐ Not Adequate ☒ Not Applicable	☐ Adequate ☐ Not Adequate ☒ Not Applicable

TABLE 6: ASSESSMENT OF CONTROLS – TOTE MARITIME ALASKA

Concern	BMPs	Source Reduction and Elimination Measures	Source Control Measures
Petroleum Hydrocarbons, Antifreeze, and Batteries	☒ Adequate ☐ Not Adequate	☒ Adequate ☐ Not Adequate	☒ Adequate ☐ Not Adequate
Hazardous Chemicals and Wastes, Paints, and PHFs	☒ Adequate ☐ Not Adequate	☒ Adequate ☐ Not Adequate	☒ Adequate ☐ Not Adequate
Floatables	☒ Adequate ☐ Not Adequate	☒ Adequate ☐ Not Adequate	☒ Adequate ☐ Not Adequate
Roadways	☒ Adequate ☐ Not Adequate	☒ Adequate ☐ Not Adequate	☒ Adequate ☐ Not Adequate
Illicit Discharges and Connections and Improper Disposal	☒ Adequate ☐ Not Adequate	☒ Adequate ☐ Not Adequate	☒ Adequate ☐ Not Adequate
Spill Prevention and Control	☒ Adequate ☐ Not Adequate	☒ Adequate ☐ Not Adequate	☒ Adequate ☐ Not Adequate
Public Education	☒ Adequate ☐ Not Adequate	☒ Adequate ☐ Not Adequate	☒ Adequate ☐ Not Adequate
Vehicle Wash Area	☒ Adequate ☐ Not Adequate ☐ Not Applicable	☒ Adequate ☐ Not Adequate ☐ Not Applicable	☒ Adequate ☐ Not Adequate ☐ Not Applicable

TABLE 7: ASSESSMENT OF CONTROLS – DELTA WESTERN

Concern	BMPs	Source Reduction and Elimination Measures	Source Control Measures
Petroleum Hydrocarbons, Antifreeze, and Batteries	☒ Adequate ☐ Not Adequate	☒ Adequate ☐ Not Adequate	☒ Adequate ☐ Not Adequate
Hazardous Chemicals and Wastes, Paints, and PHFs	☒ Adequate ☐ Not Adequate	☒ Adequate ☐ Not Adequate	☒ Adequate ☐ Not Adequate
Floatables	☒ Adequate ☐ Not Adequate	☒ Adequate ☐ Not Adequate	☒ Adequate ☐ Not Adequate
Roadways	☒ Adequate ☐ Not Adequate	☒ Adequate ☐ Not Adequate	☒ Adequate ☐ Not Adequate
Illicit Discharges and Connections and Improper Disposal	☒ Adequate ☐ Not Adequate	☒ Adequate ☐ Not Adequate	☒ Adequate ☐ Not Adequate
Spill Prevention and Control	☒ Adequate ☐ Not Adequate	☒ Adequate ☐ Not Adequate	☒ Adequate ☐ Not Adequate
Public Education	☒ Adequate ☐ Not Adequate	☒ Adequate ☐ Not Adequate	☒ Adequate ☐ Not Adequate
Vehicle Wash Area	☐ Adequate ☐ Not Adequate ☒ Not Applicable	☐ Adequate ☐ Not Adequate ☒ Not Applicable	☐ Adequate ☐ Not Adequate ☒ Not Applicable

TABLE 8: ASSESSMENT OF CONTROLS – ALASKA BASIC INDUSTRIES

Concern	BMPs	Source Reduction and Elimination Measures	Source Control Measures
Petroleum Hydrocarbons, Antifreeze, and Batteries	☒ Adequate ☐ Not Adequate	☒ Adequate ☐ Not Adequate	☒ Adequate ☐ Not Adequate
Hazardous Chemicals and Wastes, Paints, and PHFs	☒ Adequate ☐ Not Adequate	☒ Adequate ☐ Not Adequate	☒ Adequate ☐ Not Adequate
Floatables	☒ Adequate ☐ Not Adequate	☒ Adequate ☐ Not Adequate	☒ Adequate ☐ Not Adequate
Roadways	☒ Adequate ☐ Not Adequate	☒ Adequate ☐ Not Adequate	☒ Adequate ☐ Not Adequate
Illicit Discharges and Connections and Improper Disposal	☒ Adequate ☐ Not Adequate	☒ Adequate ☐ Not Adequate	☒ Adequate ☐ Not Adequate
Spill Prevention and Control	☒ Adequate ☐ Not Adequate	☒ Adequate ☐ Not Adequate	☒ Adequate ☐ Not Adequate
Public Education	☒ Adequate ☐ Not Adequate	☒ Adequate ☐ Not Adequate	☒ Adequate ☐ Not Adequate
Vehicle Wash Area	☐ Adequate ☐ Not Adequate ☒ Not Applicable	☐ Adequate ☐ Not Adequate ☒ Not Applicable	☐ Adequate ☐ Not Adequate ☒ Not Applicable

TABLE 9: NOTABLE SPILLS AND LEAKS: 1 JANUARY TO 31 DECEMBER 2019

Facility	Date	Description
Port	15 May 2019	The construction contractor for a Port-owned project was responsible for a release of approximately 30 gallons of hydraulic oil to the ground surface. The release was due to a faulty hydraulic hose fitting on a piece of construction equipment. Sorbent pads and socks were deployed and NRC Alaska responded immediately for site cleanup. Approximately seven 55-gallon drums of impacted soil were removed from the site and disposed of. Spill #19239913402
	17 June 2019	The construction contractor for a Port-owned project was responsible for a release of approximately 2 gallons of hydraulic oil to a contained area. No further action was required. Spill #19239916802
Port/Matson	7 April 2019	A sheen from an unknown source was observed offshore near the Matson terminal. No further action was taken or required. Spill #19239909701
ABI	2019	None reported within MS4 jurisdictional area.
Delta Western	2019	None reported within MS4 jurisdictional area.
Marathon Petroleum	2019	None reported within MS4 jurisdictional area.
Menzies Aviation/AFSC	2019	None reported within MS4 jurisdictional area.
Matson	2019	None reported within MS4 jurisdictional area.
TOTE	2019	None reported within MS4 jurisdictional area.

TABLE 10: EVENT 1 TAH RESULTS

Analyte	Sample Numbers (Results in µg/L)			
	201906-01	201906-08 (Duplicate of 201906-01)	201906-02	201906-03
18 AAC 70 Action Level	10 µg/L			
Benzene	0.200 U	0.200 U	0.200 U	0.650
Toluene	0.500 U	0.500 U	0.500 U	0.500 U
Ethylbenzene	0.500 U	0.500 U	0.500 U	11.5
Xylenes (total)	1.50 U	1.50 U	1.50 U	3.69
1,2-Dichlorobenzene	0.500 U	0.500 U	0.500 U	0.500 U
1,3-Dichlorobenzene	0.500 U	0.500 U	0.500 U	0.500 U
1,4-Dichlorobenzene	0.250 U	0.250 U	0.250 U	0.250 U
Chlorobenzene	0.250 U	0.250 U	0.250 U	0.250 U
Chloromethane	0.380 J	0.500 U	0.320 J	0.360 J
TAH Summation	**4.58**	**4.70 U**	**4.52**	**18.2**

NOTES:
For definitions, see the Acronyms and Abbreviations table, except for the following:
0.200 U = Non-detect (U-flag) with a limit of detection (LOD) of 0.200 µg/L.
J-flags indicate that the result is estimated as it is between the LOD and the limit of quantitation (LOQ).
TAH was calculated based on 18 AAC 75 using SW 8260B, EPA Method 602, xylenes, and chloromethane data.

TABLE 11: EVENT 2 TAH RESULTS

Analyte	Sample Numbers (Results in µg/L)			
	201909-001	201909-004 (Duplicate of 201909-001)	201909-002	201909-003
18 AAC 70 Action Level	10 µg/L			
Benzene	0.200 U	0.200 U	0.200 U	0.170 J
Toluene	0.500 U	0.500 U	0.500 U	0.500 U
Ethylbenzene	0.500 U	0.500 U	0.500 U	2.55
Xylenes (total)	1.50 U	1.50 U	1.50 U	1.50 U
1,2-Dichlorobenzene	0.500 U	0.500 U	0.500 U	0.500 U
1,3-Dichlorobenzene	0.500 U	0.500 U	0.500 U	0.500 U
1,4-Dichlorobenzene	0.250 U	0.250 U	0.250 U	0.250 U
Chlorobenzene	0.250 U	0.250 U	0.250 U	0.250 U
Chloromethane	0.500 U	0.500 U	0.500 U	0.500 U
TAH Summation	**4.70 U**	**4.70 U**	**4.70 U**	**6.72**

NOTES:
For definitions, see the Acronyms and Abbreviations table, except for the following:
0.200 U = Non-detect (U-flag) with a limit of detection (LOD) of 0.200 µg/L.
J-flags indicate that the result is estimated as it is between the LOD and the limit of quantitation (LOQ).
TAH was calculated based on 18 AAC 75 using SW 8260B, EPA Method 602, xylenes, and chloromethane data.

TABLE 12: EVENT 1 TAQH RESULTS

Analyte	Sample Numbers (Results in µg/L)			
	201906-01	201906-08 (Duplicate of 201906-01)	201906-02	201906-03
18 AAC 70 Action Level	**15 µg/L**			
Acenaphthene	0.0288 J	0.0236 U	0.0236 U	0.133
Acenaphthylene	0.0236 U	0.0236 U	0.0236 U	0.0227 U
Anthracene	0.0236 U	0.0236 U	0.0236 U	0.0227 U
Benzo(a)Anthracene	0.0236 U	0.0236 U	0.0236 U	0.0227 U
Benzo[a]pyrene	0.00945 U	0.00945 U	0.00945 U	0.00910 U
Benzo[b]Fluoranthene	0.0236 U	0.0236 U	0.0236 U	0.0227 U
Benzo[g,h,i]perylene	0.0236 U	0.0236 U	0.0236 U	0.0227 U
Benzo[k]fluoranthene	0.0236 U	0.0236 U	0.0236 U	0.0227 U
Chrysene	0.0236 U	0.0236 U	0.0236 U	0.0227 U
Dibenzo[a,h]anthracene	0.00945 U	0.00945 U	0.00945 U	0.00910 U
Fluoranthene	0.0236 U	0.0236 U	0.0236 U	0.0364 J
Fluorene	0.0236 U	0.0236 U	0.0236 U	0.120
Indeno[1,2,3-c,d] pyrene	0.0236 U	0.0236 U	0.0236 U	0.0227 U
Naphthalene	0.0471 U	0.0471 U	0.0303 U	0.581
Phenanthrene	0.0236 U	0.0236 U	0.0236 U	0.0684
Pyrene	0.0160 J	0.0236 U	0.0236 U	0.0651
PAH Summation	**0.370**	**0.373**	**0.356**	**1.20**
TAH Summation	4.58	4.70 U	4.52	18.2
TAqH Summation	**4.95**	**5.07**	**4.88**	**19.4**

NOTES:
For definitions, see the Acronyms and Abbreviations table, except for the following:
0.200 U = Non-detect (U-flag) with a limit of detection (LOD) of 0.200 µg/L.
J-flags indicate that the result is estimated as it is between the LOD and the limit of quantitation (LOQ).
TAqH was calculated based on 18 AAC 75 using SW 8270D, EPA Methods 610 and 602, xylenes, and chloromethane data.

TABLE 13: EVENT 2 TAQH RESULTS

Analyte	Sample Numbers (Results in µg/L)			
	201909-001	201909-008 (Duplicate of 201909-001)	201909-002	201909-003
18 AAC 70 Action Level	**15 µg/L**			
Acenaphthene	0.0319 U	0.0063 U	0.00645 U	0.0065 U
Acenaphthylene	0.0319 U	0.0063 U	0.00645 U	0.0065 U
Anthracene	0.0319 U	0.0063 U	0.00645 U	0.0065 U
Benzo(a)Anthracene	0.0319 U	0.0063 U	0.00645 U	0.0065 U
Benzo[a]pyrene	0.0127 U	0.00252 U	0.00258 U	0.00259 U
Benzo[b]Fluoranthene	0.0319 U	0.00630 U	0.00645 U	0.0065 U
Benzo[g,h,i]perylene	0.0453 J	0.0397	0.00645 U	0.0065 U
Benzo[k]fluoranthene	0.0319 U	0.00630 U	0.00645 U	0.0065 U
Chrysene	0.0319 U	0.00630 U	0.00645 U	0.0065 U
Dibenzo[a,h]anthracene	0.0127 U	0.00252 U	0.00258 U	0.00259 U
Fluoranthene	0.0736	0.0582	0.0115 J	0.0065 U
Fluorene	0.0319 U	0.00630 U	0.00645 U	0.00797 J
Indeno[1,2,3-c,d] pyrene	0.0319 U	0.0063 U	0.00645 U	0.0065 U
Naphthalene	0.0640 U	0.0127 U	0.0129 U	0.0354
Phenanthrene	0.0569 J	0.0398 J	0.0145 J	0.0136 J
Pyrene	0.140 J	0.108	0.0160 J	0.0149 J
PAH Summation	**0.692**	**0.320**	**0.125**	**0.142**
TAH Summation	4.70 U	4.70 U	4.70 U	6.72
TAqH Summation	**5.39**	**5.02**	**4.83**	**6.86**

NOTES:
For definitions, see the Acronyms and Abbreviations table, except for the following:
0.200 U = Non-detect (U-flag) with a limit of detection (LOD) of 0.200 µg/L.
J-flags indicate that the result is estimated as it is between the LOD and the limit of quantitation (LOQ).
TAqH was calculated based on 18 AAC 75 using SW 8270D, EPA Methods 610 and 602, xylenes, and chloromethane data.

TABLE 14: OUTFALL WATER QUALITY PARAMETER READINGS

Parameter[1]	Project Screening Level	Outfall 001 (Event 1/Event 2)	Outfall 002 (Event 1/Event 2)	Outfall 003 (Event 1/Event 2)
Visually Estimated Flow (cfs)[2]	Not Applicable	<1 / <1	1 / <1	Not Required by Permit
Visually Estimated Volume (gallons)[2]	Not Applicable	Not Required by Permit	Not Required by Permit	500 / Not Estimated
Temperature	< 15 °C	11.76 / 8.3	10.03 / 9.4	10.30 / 8.4
pH	6.5 to 8.5	7.03 / 8.82	7.96 / 8.74	7.38 /6.77
Dissolved Oxygen	> 6.0 mg/L and <17 mg/L	10.34 / Not Tested	13.92 / Not Tested	Not Required by Permit
Turbidity (NTU)	< 50 NTU or the natural condition of Cook Inlet (400 to 600 NTU).	74.64 / Not Tested	417.8 / Not Tested	Not Required by Permit
Sheen	Virtually None	None Observed / Petroleum Sheen	None Observed	None Observed
Biochemical Oxygen Demand (mg/L)	Not Applicable	11.5 / Not Tested	2.0 / Not Tested	Not Required by Permit
Chemical Oxygen Demand (mg/L)	Not Applicable	133 / Not Tested	705 / Not Tested	
Total Suspended Solids (mg/L)	Not Applicable	62.6 / Not Tested	1,800 / Not Tested	
Total Dissolved Solids (mg/L)	Not Applicable	6,920/ Not Tested	650 / Not Tested	
Nitrate plus Nitrite Nitrogen (mg/L)	Not Applicable	428 / Not Tested	388 / Not Tested	
Total Kjeldahl Nitrogen (mg/L)	Not Applicable	1,430 / Not Tested	608 / Not Tested	
Cadmium	Not Applicable	0.00100 U / Not Tested	0.00276 U / Not Tested	
Copper	Not Applicable	0.0172 / Not Tested	1.04 / Not Tested	
Lead	Not Applicable	0.00316 / Not Tested	0.180 / Not Tested	
Zinc	Not Applicable	0.127 / Not Tested	1.88 / Not Tested	
Hardness	Not Applicable	1.49 / Not Tested	1.72 / Not Tested	
Phosphorus	Not Applicable	0.0999 / Not Tested	17.3 / Not Tested	

NOTES:
1 Duplicate results for metals, hardness, phosphorus, BOD, COD, TSS, TDS, nitrate plus nitrate nitrogen, and total Kjeldahl nitrogen are not displayed. Only the higher result (primary or duplicate) is displayed.
2 Flow and Estimated volume are based on visual estimates at the time of sampling.
U-flags on results indicate that the result was non-detect with the number indicating the LOD.
J-flags indicate that the result is estimated as it is between the LOD and the LOQ,

APPENDIX B
MS4 JURISDICTIONAL MAP

R&M CONSULTANTS, INC.

Drainage Basin	Storm Manhole	Storm Drain (w/ flow arrow)	Storage Area	Vegetated Area
MS4 Boundary	Catch Basin Manhole	Runoff Flow Direction_Legend	Aggregate/Soil Surface	Bulk Fuel Tank
Storm Water Outfall	Catch Basin	Building/Structure	Paved Area	Wetland

NOTES:
1. Port of Alaska features based on the Port of Alaska GIS.
2. Drainage basin boundaries are from Municipality of Anchorage GIS.
3. Aerial photograph is from ESRI Online World Imagery.

ALL LOCATIONS ARE APPROXIMATE

0 150 300 600

APPROXIMATE SCALE IN FEET

N

PORT OF ALASKA

STORMWATER SITE PLAN

PROJ. NO.:	2600.01
DATE:	NOV 2019
REF:	N/A
DRAWING NO.:	A-01

APPENDIX C
COPIES OF EDUCATION MATERIALS

Storm Water Pollution Prevention Training Acknowledgment 2019

Company Name (circle):	**Port of Alaska**	**Matson**
	Menzies Aviation/AFSC	**TOTE Maritime Alaska**
	Delta Western	**AS&G/ABI**
	Marathon	
Company Address:	2000 Anchorage Port Road	
Trainer's Name:	Kristi McLean	

The undersigned acknowledges that on 3/20/2019 (date), I attended a training session on **Storm Water Pollution Prevention** (SWPP) and **Illicit Discharge Detection & Elimination** (IDDE).

This SWPP training session presented information on industrial storm water discharges and what can be done to prevent or minimize contamination of storm water runoff from industrial materials.

During this session, we viewed the video entitled **"IDDE -- A Grate Concern"**. This video informed me on Illicit Discharge Detection & Elimination (IDDE) and illustrated several Best Management Practices (BMPs) and good housekeeping measures that can prevent storm water contamination. It presented information about how I can play an active role in protecting the storm water runoff at this facility. I was given adequate time to ask questions about my particular job activities and how I can best conduct them in compliance with storm water discharge regulations.

Employee Name (print, then sign)	Employee Department
Will Christy	Port Maint.
PAUL BOTHIS	PORT
Zacharia Simonsen	Port Maint.
Ken Sleeper	PORT
A. Sandy Faulstich	PORT
Timothy W. Terwilliger	Port.
Jim Simpson	PORT MAINTENANCE.
[illegible] FRED	Port
Travis Stemper	Port
Jason Shea	PORT
Russell Kallis	Port Maint.

Storm Water Pollution Prevention Training Acknowledgment 2019

Company Name (circle):	**Port of Alaska**	**Matson**
	Menzies Aviation/AFSC	**TOTE Maritime Alaska**
	Delta Western	**AS&G/ABI**
	Marathon	

Company Address: Port of Alaska cement storage facility

Trainer's Name: Krish McLean

The undersigned acknowledges that on 4/10/2019 (date), I attended a training session on **Storm Water Pollution Prevention** (SWPP) and **Illicit Discharge Detection & Elimination** (IDDE).

This SWPP training session presented information on industrial storm water discharges and what can be done to prevent or minimize contamination of storm water runoff from industrial materials.

During this session, we viewed the video entitled **"IDDE -- A Grate Concern"**. This video informed me on Illicit Discharge Detection & Elimination (IDDE) and illustrated several Best Management Practices (BMPs) and good housekeeping measures that can prevent storm water contamination. It presented information about how I can play an active role in protecting the storm water runoff at this facility. I was given adequate time to ask questions about my particular job activities and how I can best conduct them in compliance with storm water discharge regulations.

Employee Name (print, then sign)	Employee Department
Ryan Kircher	ABI
Joe Boyle	ABI
Devon Eskelson	ABI
Toby Ferrari	ABI
Roger LaFrance	ABI

Storm Water Pollution Prevention Training Acknowledgment 2019

Company Name (circle):	**Port of Alaska**	**Matson**
	Menzies Aviation/AFSC	**TOTE Maritime Alaska**
	Delta Western	**AS&G/ABI**
	Marathon	

Company Address: Methanol Facility @ Port of Alaska

Trainer's Name: Kristi McLean

The undersigned acknowledges that on 4/10/2019 (date), I attended a training session on **Storm Water Pollution Prevention** (SWPP) and **Illicit Discharge Detection & Elimination** (IDDE).

This SWPP training session presented information on industrial storm water discharges and what can be done to prevent or minimize contamination of storm water runoff from industrial materials.

During this session, we viewed the video entitled **"IDDE -- A Grate Concern"**. This video informed me on Illicit Discharge Detection & Elimination (IDDE) and illustrated several Best Management Practices (BMPs) and good housekeeping measures that can prevent storm water contamination. It presented information about how I can play an active role in protecting the storm water runoff at this facility. I was given adequate time to ask questions about my particular job activities and how I can best conduct them in compliance with storm water discharge regulations.

Employee Name (print, then sign)	Employee Department
	Methanol Terminal
Connor Tiplady	Methanol Terminal
Tor Yang	DWP

Storm Water Pollution Prevention Training Acknowledgment 2019

Company Name (circle):	**Port of Alaska**	**Matson**
	Menzies Aviation/AFSC	**TOTE Maritime Alaska**
	Delta Western	**AS&G/ABI**
	Marathon	

Company Address: Matson - Port of Alaska Facility

Trainer's Name: Kristy McLean

The undersigned acknowledges that on 6/14/2019 (date), I attended a training session on **Storm Water Pollution Prevention** (SWPP) and **Illicit Discharge Detection & Elimination** (IDDE).

This SWPP training session presented information on industrial storm water discharges and what can be done to prevent or minimize contamination of storm water runoff from industrial materials.

During this session, we viewed the video entitled **"IDDE -- A Grate Concern"**. This video informed me on Illicit Discharge Detection & Elimination (IDDE) and illustrated several Best Management Practices (BMPs) and good housekeeping measures that can prevent storm water contamination. It presented information about how I can play an active role in protecting the storm water runoff at this facility. I was given adequate time to ask questions about my particular job activities and how I can best conduct them in compliance with storm water discharge regulations.

Employee Name (print, then sign)	Employee Department
John Roy Lamothe..	Maint.
Chris Bayer	Maint
Jason Knowles	Parts
Jared Rega	Maint. Mech
James Watkins	Maint
Greg Alley	Maintenance
Glen Windel	MAINT
Adam Bacher	Parts
Jon Hillman	Maint
Chris Finley	Maint
Ron Herndon	MAINT
Sid Anderson	Maint.
ALLAN PIMENTEL	MAINT.
KURT HAA	MAINT
Willie Cajima	MAINT
Jesse Koon	Maint
John Jorgen	Maint.
Jerry	Maint.
Steve Rogue	MAINT
DENNIS HUBBARD	MAINT.

0630

1130

Storm Water Pollution Prevention Training Acknowledgment 2019

Company Name (circle):	**Port of Alaska**	**Matson**
	Menzies Aviation/AFSC	**TOTE Maritime Alaska**
	Delta Western	**AS&G/ABI**
	Marathon	

Company Address: Matson - Port of Alaska Facility

Trainer's Name: Kristi McLean

The undersigned acknowledges that on 6/13/2019 (date), I attended a training session on **Storm Water Pollution Prevention** (SWPP) and **Illicit Discharge Detection & Elimination** (IDDE).

This SWPP training session presented information on industrial storm water discharges and what can be done to prevent or minimize contamination of storm water runoff from industrial materials.

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Employee Name (print, then sign)	Employee Department
Siaosi Soane	Shop
Derek Lea	Shop
Scott Ellsworth	Shop
Mark Haugstad	Shop
TROY F. ALEXANDER	SHOP
M. Lewis	SHOP
J-CLARKE	SHOP
	Shop
	Main Shop
MONIQUE CORTEZ	SQES

Storm Water Pollution Prevention Training Acknowledgment Compliance with Port of Alaska MS4 Permit & TOTE Maritime Alaska MSGP Coverage 12 November 2019

Company Name:	**TOTE Maritime Alaska** **2511 Tidewater Road** **Anchorage, AK 99501**
Trainer's Name/Company:	**Kristi McLean, CESCL #AGC-19-0348** **R&M Consultants, Inc.** **9101 Vanguard Drive** **Anchorage, Alaska 99507**

The undersigned acknowledges that on 12 November 2019, I attended a training session on **Storm Water Pollution Prevention** (SWPP), **Illicit Discharge Detection & Elimination** (IDDE), and the requirements/regulations associated with coverage under the **Alaska Pollutant Discharge and Elimination System** (APDES) **Multi-Sector General Permit** (MSGP). This training is being conducted to comply with APDES MS4 Permit #AKS052426 (Section 3.6.13) and MSGP #AKR060000 (Section 4.2.9) authorized under tracking #AKR06AF36.

This SWPP training session presented information on industrial storm water discharges and **facility-specific (Port of Alaska TOTE facility) controls** to prevent or minimize contamination of storm water runoff from industrial materials and activities.

During this session, we viewed the video entitled **"IDDE -- A Grate Concern"**. This video informed me on Illicit Discharge Detection & Elimination (IDDE) and illustrated several Best Management Practices (BMPs) and good housekeeping measures that can prevent storm water contamination. It presented information about how I can play an active role in protecting the storm water runoff at this facility. I was given adequate time to ask questions about my particular job activities and how I can best conduct them in compliance with APDES storm water discharge regulations. Additional information was provided regarding TOTE's compliance requirements under the MSGP including ***monitoring, inspection, planning, reporting, and documentation.*** The video and subsequent Q&A session was followed by a short quiz regarding storm water quality protection.

Employee Name (print, then sign)	Employee Department
ALAN KULASZEWICZ	SEA STAR
WILL GAY	SEA STAR
KELLY PEGENSTEIN	~~SEA~~ AILU
Gerry Donegan	AILU
PAUL SHADURA III	SEA STAR
CATHY CHARLTON	Sea Star
TIMOTHY DIAZ	
Gentry Miller	
JOHN MARTINEZ	SEA STAR
James Michou	Sea Star
Terry P. Hebert	Sea Star
PAUL BARKSHIRE	AILU

Employee Name (print, then sign)	Employee Department
SCOTT VANDERLOOVEN	SEA STAR
Don Nelson	SeaStar
Trevor Hadwig	Sea Star
Brian Bontrager	SEAStar
BRIAN B. KOWALSKI	SEA STAR MAINT
Ken Schmitt	SEA STAR Maint

Storm Water Pollution Prevention Training Acknowledgment Compliance with Port of Alaska MS4 Permit & TOTE Maritime Alaska MSGP Coverage 12 November 2019

Company Name:	**TOTE Maritime Alaska** **2511 Tidewater Road** **Anchorage, AK 99501**
Trainer's Name/Company:	**Kristi McLean, CESCL #AGC-19-0348** **R&M Consultants, Inc.** **9101 Vanguard Drive** **Anchorage, Alaska 99507**

The undersigned acknowledges that on 12 November 2019, I attended a training session on **Storm Water Pollution Prevention** (SWPP), **Illicit Discharge Detection & Elimination** (IDDE), and the requirements/regulations associated with coverage under the **Alaska Pollutant Discharge and Elimination System** (APDES) **Multi-Sector General Permit** (MSGP). This training is being conducted to comply with APDES MS4 Permit #AKS052426 (Section 3.6.13) and MSGP #AKR060000 (Section 4.2.9) authorized under tracking #AKR06AF36.

This SWPP training session presented information on industrial storm water discharges and **facility-specific (Port of Alaska TOTE facility) controls** to prevent or minimize contamination of storm water runoff from industrial materials and activities.

During this session, we viewed the video entitled **"IDDE -- A Grate Concern"**. This video informed me on Illicit Discharge Detection & Elimination (IDDE) and illustrated several Best Management Practices (BMPs) and good housekeeping measures that can prevent storm water contamination. It presented information about how I can play an active role in protecting the storm water runoff at this facility. I was given adequate time to ask questions about my particular job activities and how I can best conduct them in compliance with APDES storm water discharge regulations. Additional information was provided regarding TOTE's compliance requirements under the MSGP including ***monitoring, inspection, planning, reporting, and documentation***. The video and subsequent Q&A session was followed by a short quiz regarding storm water quality protection.

Employee Name (print, then sign)	Employee Department
Colton Cordell	Shop
Jared Bodenmer	Shop
Derrick Brandt	Shop
Lincoln TRigg	Shop

Storm Water Pollution Prevention Training Acknowledgment 2019

Company Name (circle): Port of Alaska | Matson | Menzies Aviation/AFSC | TOTE Maritime Alaska | Delta Western | AS&G/ABI | Marathon

Company Address: Marathon / Port of Alaska Facility 1076 Ocean Dock Rd.

Trainer's Name: Kristi McLean

The undersigned acknowledges that on 10 December 2019 (date), I attended a training session on **Storm Water Pollution Prevention** (SWPP) and **Illicit Discharge Detection & Elimination** (IDDE).

This SWPP training session presented information on industrial storm water discharges and what can be done to prevent or minimize contamination of storm water runoff from industrial materials.

During this session, we viewed the video entitled **"IDDE -- A Grate Concern"**. This video informed me on Illicit Discharge Detection & Elimination (IDDE) and illustrated several Best Management Practices (BMPs) and good housekeeping measures that can prevent storm water contamination. It presented information about how I can play an active role in protecting the storm water runoff at this facility. I was given adequate time to ask questions about my particular job activities and how I can best conduct them in compliance with storm water discharge regulations.

Employee Name (print, then sign)	Employee Department
Pat Hallett	OPS
Cody Sloan	OPS
Sean O'Reilly	Safety
Kirk Wilder	OPS
George Andary III	OPS
Dawn Lester	Contract Enviro
Ryan Finch	OPS
Gabe Titus	OPS
Jeremy Conner	OPS
Ryan Perreault	OPS
Jason Kincannon	OPS
Casey Bridges	OPS

Storm Water Pollution Prevention Training Acknowledgment 2019

Company Name (circle):	**Port of Alaska**	**Matson**
	Menzies Aviation/AFSC	**TOTE Maritime Alaska**
	Delta Western	**AS&G/ABI**
	Marathon	
Company Address:	Port of Alaska / ANC Facility	
Trainer's Name:	Kristi McLean	

The undersigned acknowledges that on 12/12/2019 (date), I attended a training session on **Storm Water Pollution Prevention** (SWPP) and **Illicit Discharge Detection & Elimination** (IDDE).

This SWPP training session presented information on industrial storm water discharges and what can be done to prevent or minimize contamination of storm water runoff from industrial materials.

During this session, we viewed the video entitled **"IDDE – A Grate Concern"**. This video informed me on Illicit Discharge Detection & Elimination (IDDE) and illustrated several Best Management Practices (BMPs) and good housekeeping measures that can prevent storm water contamination. It presented information about how I can play an active role in protecting the storm water runoff at this facility. I was given adequate time to ask questions about my particular job activities and how I can best conduct them in compliance with storm water discharge regulations.

Employee Name (print, then sign)	Employee Department
Kyle Stettner	QC
Al Young	Plant operations
DYLAN CLOWERS	OPERATOR
Theodore	OPERATOR
Michael Prevost	Maintenance
Juwan Andre	Plant operations
CASSIE EVANS	QC
DAVID	PLANT
Richson	Plant
Ralph Common	PLANT
MARI MCCAFFERTY	TERMINAL MANAGER

Storm Water Pollution Prevention Training Acknowledgment 2019

Company Name (circle): **Port of Alaska** | **Menzies Aviation/AFSC** | **Delta Western** | **Marathon** | **Matson** | **TOTE Maritime Alaska** | **AS&G/ABI**

Company Address: Port of Alaska / Airport Facility

Trainer's Name: Marc McCafferty 13, 14, 15 & 16

The undersigned acknowledges that on 12/12/2019; 400pm (date), I attended a training session on **Storm Water Pollution Prevention** (SWPP) and **Illicit Discharge Detection & Elimination** (IDDE).

This SWPP training session presented information on industrial storm water discharges and what can be done to prevent or minimize contamination of storm water runoff from industrial materials.

During this session, we viewed the video entitled **"IDDE -- A Grate Concern"**. This video informed me on Illicit Discharge Detection & Elimination (IDDE) and illustrated several Best Management Practices (BMPs) and good housekeeping measures that can prevent storm water contamination. It presented information about how I can play an active role in protecting the storm water runoff at this facility. I was given adequate time to ask questions about my particular job activities and how I can best conduct them in compliance with storm water discharge regulations.

Employee Name (print, then sign)	Employee Department
Iolamo Isaako	Plant MX
Brandon Stiner	Plant
NORBERT GUEVARRA	QC
Steven Pirot	Plant
Chin Sacdey	Plant
FERDINAND MENDOZA FMENDOZA	PLANT
Mitchell Rucker	HS+T
Laurie Butler	
Robert Buffone	

IDDE
a grate concern

Employee Quiz

Name _____

Dept. _____ Date _____

The following questions all have multiple choice answers. Please circle the best answer for each question.

1. Pure stormwater run-off…
   a. is cloudy.
   b. is foamy.
   c. is clear and bright.
   d. has a rainbow sheen.
   e. all of the above

2. What information about a suspected illicit discharge would not be useful to collect and report?
   a. weather conditions
   b. date and time
   c. location
   d. description of the discharge

3. How long after the last significant rainfall should flow in a stormwater outfall make you suspicious?
   a. 1 hour
   b. 8 hours
   c. 1 day
   d. 2-3 days

4. Municipal separate storm sewer systems are designed to perform only the following function:
   a. clean-up stormwater run-off
   b. control and divert stormwater run-off
   c. treat stormwater run-off
   d. treat sanitary wastes

5. Which of the following materials are common illicit discharges?
   a. pet wastes
   b. grass clippings
   c. paint wastes
   d. trash
   e. all of the above

6. Which of the following materials should never be disposed in a non-leak tight outdoor dumpster or trash can?
   a. paper and plastic
   b. any liquids
   c. floatables
   d. broken concrete

7. Which of the following would be suspicious if observed at a stormwater outfall?
   a. vapors or fumes
   b. dead or dying vegetation
   c. discolored water
   d. all of the above

8. What does a 'rainbow sheen' on stormwater indicate?
   a. a recent rain storm
   b. waste paint
   c. gasoline
   d. sewage contamination

9. Which of the following types of operations can be a source of illicit discharges?
   a. private homes
   b. industrial facilities
   c. restaurants
   d. municipal facilities
   e. all of the above

10. A stained storm drain inlet is probably a sign of...
   a. recent MS4 maintenance work.
   b. a marking to indicate it needs repair.
   c. past illicit discharges.
   d. dye testing.

11. Everything that enters an MS4 eventually winds up in...
   a. a sanitary sewer treatment works.
   b. an underground aquifer.
   c. a drinking water treatment plant.
   d. a stream, river, lake or bay.

12. Which of the following are allowed in municipal separate storm sewer systems (MS4s)?
   a. rainwater run-off
   b. sanitary wastes from hospitals and long-term care facilities
   c. milk
   d. floor mat rinse water

13. What is the most likely illicit discharge from a construction site?
   a. silt and sediments
   b. waste oil
   c. floatables
   d. pet wastes
   e. waste pesticides

14. A suspected illicit discharge from which of the following types of operations would not need to be reported?
   a. apartment complex
   b. retail shopping center
   c. service station
   d. public park
   e. report all of them

15. What could cause a strong odor at a stormwater outfall?
   a. sanitary sewage
   b. garbage
   c. gasoline
   d. any of the above

APPENDIX D

STORM WATER POLLUTION PREVENTION TEAM MEETING MINUTES

Meeting Minutes

Port of Alaska MS4 Implementation
Storm Water Pollution Prevention Team Quarterly Meeting

Where:	Port of Alaska Administration Building Conference Room
When:	Thursday, 28 February 2019
Call to Order:	10:00am

Attendees:

Paul	Rotkis	Port of Alaska	paul.rotkis@anchorageak.gov
Stuart	Greydanus	Port of Alaska	stuart.greydanus@anchorageak.gov
Sandy	Imlach	Port of Alaska	sandy.imlach@anchorageak.gov
Jim	Rypkema	ADEC (phone)	james.rypkema@alaska.gov
Tou	Yang	Delta Western	touy@deltawestern.com
Monique	Cortez	Matson	mcortez@matson.com
Kristi	McLean	R&M	kmclean@rmconsult.com
Chris	Adams	Andeavor	christopher.adams@andeavor.com
Nathan	Dennis	R&M	ndennis@rmconsult.com
Kris	Shippen	AS&G/ABI	kris.shippen@anchsand.com
Timothy	Diaz	TOTE	tdiaz@totemaritime.com

I. **Team Member Introductions and Updates:**
   a. Jim Rypkema participated via teleconference.
   b. Menzies Aviation/AFSC was not represented at the meeting.
   c. ABI/ASG – Kris Shippen has replaced Brad Quade as storm water team member.

II. **Reviewed Quarterly SWPPP Team Meeting Goals:**
   a. Facilitate collaboration and cooperation between all Port users and employees regarding storm water management
   b. Promote education and provide an open forum to discuss storm water management issues: new BMPs/controls, new development/construction that may affect storm water, maintenance activities, general storm water concerns, etc.
   c. Ensure compliance with POA's MS4 Permit (quarterly meetings are required)

III. **Discussion Topics:**
   a. 2018 Annual Report and updated storm Water Management Program Plan was submitted electronically to ADEC on 2/14/2019 (compliance due date is 2/15/2019)
      i. Hard copies were distributed to stake holders and the Port. Copies are also available online at: https://www.portofalaska.com/operations/storm-water-management
      ii. End of year review:
         1. 2018 construction projects were discussed: AWWU terminal road, ground improvements at south backlands to support the Modernization Program, lighting improvements, security gates, and pile jacketing.
         2. Wet weather sampling was conducted twice in 2018 in accordance with the permit. Results for TAH/TAqH came back below action levels. Full results can be

found in the 2018 annual report in section 2.3.1 and Appendix F, along with the monitoring plan and QAPP.

3. Overall, facilities were noted in good condition during inspections. Trash, including old/ineffective BMPs need to be picked up. Snow disposal sites in 2018 needed more attention to debris removal during breakup.
4. R&M conducts inspections during dry weather but it is good housekeeping to look at storm water flow during rain events for possible sheen and to identify the potential for pollutants to enter the MS4.

b. Inspections, monitoring, and trainings
   i. Be aware, look for signs of illicit discharges and report accordingly.
   ii. Spring breakup is a good time for training; consider scheduling soon.
c. Spring 2019 - be alert for EQ related damage to inlets, pipe connections at manholes, outfalls, etc. Watch for this as soon as conditions become more visible after breakup. Port/R&M will be doing a thorough inspection but reports from all hands are welcome.
   i. Snow storage - Maintain good housekeeping practices as snow begins to melt.
      1. Clean up any trash that becomes visible after melting.
      2. Keep snow in designated areas.
      3. Install proper BMPs as necessary.
      4. Move temporary snow piles as soon as practical. There is no hard time frame, but the sooner the better.
d. Port of Alaska construction projects
   i. Tract J fencing repair – includes removal of vegetation/old fence and installation of new fence between JBER/POA property boundary along Tract J.
   ii. Fender repair and pile jacketing will occur in 2019.
   iii. ML&P Feeder Loop –Tentatively planned for late spring/early summer 2019.
   iv. Modernization Program – relocation of south floating dock and stabilization of the south backlands planned for 2019.
e. Other construction projects
   i. TOTE – Asphalt repair and resurfacing will be taking place at some point this summer.
   ii. As new construction projects arise please inform the port as early as possible.
f. Stakeholder roundtable: No issues or questions where brought forward at this time.

IV. Action Items:

a. Encourage good housekeeping and be a good neighbor
b. Report non-compliance violations immediately
c. Complete annual training
d. Maintain MSGP coverage
e. 2019 meetings: 5/15, 8/21, 11/20

V. Q&A/General Discussion/ Action Items:

a. (Tenants) Review Respective sections of SWMP and contact POA/R&M with any edits.
b. **NOTE: Quarterly meetings are a requirement of the POA's MS4 permit and should be attended by at least one representative from each company.**

VI. Handouts:

a. The 2018 SWMP final report was handed out to all stakeholders present.

VII. Adjournment: 10:30 am

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Event: STORMWATER POLLUTION PREVENTION

Date: 2.28.2019

Time: 10:00 AM

Name	Affiliation	Phone Number
Monique Cortez	Matson	907 223 6286
Chris Adams	Andeavor	469.328.9871
Tom YANG	DWP	(907)378-4644
PAUL PORTUS	PORT	907-343-6226
Kris Shippen	AST&G / ABI	907-441-2912
Kristi McLean	R&M	907.646 9689
Nathan Dennis	R&M	907-646-9685
TIM DIAZ	TOTE	907-602 6189
Stuart Greydanus	POA	907343-6202
Jim Rypkema	ADEC - phone	334.2288

Storm Water Meeting Sign-In Sheet

Subject:	Port of Alaska MS4 Implementation Storm Water Pollution Prevention Team 2019 Quarterly Meeting
Date/Time:	Thursday, 28 February 2019; 10:00am
Location:	Port of Alaska Administration Building Conference Room

NAME	AFFILIATION	EMAIL
Monique Cortez	Watson	MCORTEZ@WATSON.COM
Chris Adams	Andeavor	christopher.adams@andeavor.com
Tou YANG	DWP	TONY@DELTAWESTERN.COM
Paul Ratliff	PORT	ratkispd@muni.org
Kris Shippen	AST&G/ABI	Kris.Shippen@anchSand.com
A. Sandy Tmlach	PORT	imlachs@muni.org
Nathan Dennis	R+M	ndennis@rmconsult.com
Kristi Mclean	R&M	kmclean@rmconsult.ca
TIMOTHY DIAZ	TOTE	tdiaz@totemaritime.com
Jim Rypkema	ADEC-phone	james.rypkema@alaska.gov

Meeting Minutes

Port of Alaska MS4 Implementation
Storm Water Pollution Prevention Team Quarterly Meeting

Where:	Port of Alaska Administration Building Conference Room
When:	Wednesday, 29 May 2019
Call to Order:	10:00am

Attendees:

Sharen	Walsh	Port of Alaska	sharen.walsh@anchorageak.gov
Paul	Rotkis	Port of Alaska	paul.rotkis@anchorageak.gov
Stuart	Greydanus	Port of Alaska	stuart.greydanus@anchorageak.gov
Sandy	Imlach	Port of Alaska	sandy.imlach@anchorageak.gov
Jim	Rypkema	ADEC (phone)	james.rypkema@alaska.gov
Shannon	Oelkers	Integrity Enviro.	shannon@integrity-environmental.com
Connor	Tiplady	Delta Western	connort@deltawestern.com
Monique	Cortez	Matson	mcortez@matson.com
Jerry	Ravlin	Matson	jravlin@matson.com
Kristi	McLean	R&M	kmclean@rmconsult.com
Chris	Adams	Andeavor	christopher.adams@andeavor.com
Nichole	Rehm	PTS	nicholerehm@ptsincalaska.com
Kris	Shippen	AS&G/ABI	kris.shippen@anchsand.com
Timothy	Diaz	TOTE	tdiaz@totemaritime.com
Laurie	Butler	Menzies (phone)	laurie.butler@menziesaviation.com

I. **Team Member Introductions and Updates:**
   a. Jim Rypkema and Laurie Butler participated via teleconference.
   b. Shannon Oelkers with Integrity Environmental will be providing a presentation on MSGP permit coverage and compliance. Most of the Port stakeholders require coverage under the MSGP.

II. **Reviewed Quarterly SWPPP Team Meeting Goals:**
   a. Facilitate collaboration and cooperation between all Port users and employees regarding storm water management
   b. Promote education and provide an open forum to discuss storm water management issues: new BMPs/controls, new development/construction that may affect storm water, maintenance activities, general storm water concerns, etc.
   c. Ensure compliance with POA's MS4 Permit (quarterly meetings are required)

III. **Discussion Topics:**
   a. 2018 Annual Report and updated Storm Water Management Program Plan
      i. Reminder to review applicable sections and notify R&M or the Port of any updates. Electronic version available online at: https://www.portofalaska.com/operations/storm-water-management
   b. Inspections, monitoring, and trainings
      i. Be aware, look for signs of illicit discharges, and report immediately.

ii. Earthquake damage: Be alert for EQ related damage to inlets, pipe connections at manholes, outfalls, etc. Port/R&M are conducting a thorough inspection but reports from all hands are welcome. Sink holes are a potential problem resulting from storm system issues.
    1. **Notification protocol**: Email Nichole Rehm (PTS) and Kristi McLean (R&M) (clearinghouse) with any observations of damage or potential issues; they will make the appropriate notifications. Include potential cause, locations, contact information, photos, etc. with notification.

c. Snow storage
    i. JBER snow disposal area is moving forward; stay tuned for updates.
    ii. Good Housekeeping: clean up trash (yours or not), keep snow in designated areas, and install proper BMPs as necessary.
    iii. Move temporary snow piles as soon as practical. There is no hard time frame, but the sooner the better.
d. Port of Alaska construction projects
    i. Tract J fencing repair – includes removal of vegetation/old fence and installation of new fence between JBER/POA property boundary along Tract J.
    ii. Fender repair and pile jacketing projects are ongoing.
    iii. Trestle 3A/3C ramp repair – out to bid week of 6/3
    iv. ML&P Feeder Loop – planned to start early June.
    v. Modernization Program – relocation of south floating dock, stabilization of the south backland, and transitional dredging planned for 2019.
    vi. Coordination with JBER regarding erosion issue near Tract J property boundary is ongoing.
e. Other construction projects
    i. TOTE – gate upgrade anticipated (small footprint).
    ii. Petro Star improvements – Ocean Dock Road will become a small service access
    iii. As new construction projects arise please inform the Port as early as possible.
f. Stakeholder roundtable: No issues or questions where brought forward at this time.

IV. MSGP Compliance Presentation

a. Shannon Oelkers with Integrity Environmental provided an approximately 45-minute presentation on MSGP compliance and implementation.

V. Action Items:

a. Encourage good housekeeping and be a good neighbor
b. Report non-compliance violations immediately
c. Complete annual training
d. Maintain MSGP coverage
e. Remaining 2019 meetings: 8/21 and 11/20

VI. Q&A/General Discussion/ Action Items:

a. (Tenants) Review Respective sections of SWMP and contact POA/R&M with any edits.
b. **NOTE: Quarterly meetings are a requirement of the POA's MS4 permit and should be attended by at least one representative from each company.**

VII. Handouts: None

VIII. Adjournment: 11:30 am

PORT of ALASKA

Storm Water Meeting Sign-In Sheet

Subject:	Port of Alaska MS4 Implementation Storm Water Pollution Prevention Team 2019 Quarterly Meeting
Date/Time:	Wednesday, 29 May 2019; 10:00am
Location:	Port of Alaska Administration Building Conference Room

NAME	AFFILIATION	EMAIL
Paul Rotkis	POA SAFETY	rotkispd@muni.org
Kristi McLean	R&M Consultants	kmclean@rmconsult.com
Chris Adams	Tesoro	christopher.adams@andeavor.com
Shannon Oelkers	Integrity Env	shannon@integrity-environmental.com
Mariane Cortez	Matson	mcortez@matson.com
Jerry Ravlin	MATSON	JRAVLIN@matson.com
Conner Tiplady	Delta western	Conner.T@Deltawestern.com
Kris Shippen	ABI	Kris.Shippen@anchsand.com
TIMOTHY DIAZ	TOTE MARITIME	tdiaz@totemaritime.com
Stuart Coreydamus	POA	Stuart.ryptema@pfalaska.gov
A. Sandy Imlach	P.O.A.	imlachs@muni.org
James Ryptema	ADEC - Phone	james.ryptema@alaska.gov
Sharen Walsh	PORT	sharen.walsh@anchorageak.gov
Nichole Rehm	PORT/PTS	nicholerehm@ptsincalaska.com
Laurie Butler	Manzics - Phone	

Storm Water Pollution Prevention Plan (SWPPP) Annual Training – Sector P: Land Transportation and Warehousing

In compliance with Section 4.2.9 of the 2015 Multi-Sector General Permit for Storm Water Discharges Associated with Industrial Activity, General Permit Number: AKR060000

INTEGRITY ENVIRONMENTAL

Note: Complete presentation not included with annual report

Meeting Minutes

Port of Alaska MS4 Implementation
Storm Water Pollution Prevention Team Quarterly Meeting

Where:	Port of Alaska Administration Building Conference Room
When:	Wednesday, 21 August 2019; 10:00am
Call to Order:	10:00am

Attendees:

Kristi	McLean	R&M	kmclean@rmconsult.com
Paul	Rotkis	Port of Alaska	paul.rotkis@anchorageak.gov
Stuart	Greydanus	Port of Alaska	stuart.greydanus@anchorageak.gov
Jim	Rypkema	ADEC (phone)	james.rypkema@alaska.gov
Tou	Yang	Delta Western	touy@deltawestern.com
Monique	Cortez	Matson	mcortez@matson.com
Chris	Adams	Andeavor	christopher.adams@andeavor.com
Nichole	Rehm	PTS	nicholerehm@ptsincalaska.com
Kris	Shippen	AS&G/ABI	kris.shippen@anchsand.com
Timothy	Diaz	TOTE	tdiaz@totemaritime.com
Laurie	Butler	Menzies	laurie.butler@menziesaviation.com

I. **Team Member Introductions and Updates:**
   a. Jim Rypkema participated via teleconference.
   b. Sandy Imlach, Port of Alaska Maintenance Supervisor, has retired.

II. **Reviewed Quarterly SWPPP Team Meeting Goals:**
   a. Facilitate collaboration and cooperation between all Port users and employees regarding storm water management
   b. Promote education and provide an open forum to discuss storm water management issues: new BMPs/controls, new development/construction that may affect storm water, maintenance activities, general storm water concerns, etc.
   c. Ensure compliance with POA's MS4 Permit (quarterly meetings are required)

III. **Discussion Topics:**
   a. 2018 Annual Report and updated Storm Water Management Program Plan
      i. Reminder to review applicable sections and notify R&M or the Port of any updates. Electronic version available online at: https://www.portofalaska.com/operations/storm-water-management
   b. Inspections, monitoring, and trainings
      i. Be aware, look for signs of illicit discharges, and report immediately.
      ii. Earthquake damage: Be alert for EQ related damage to inlets, pipe connections at manholes, outfalls, etc. Port/R&M are conducting a thorough inspection but reports from all hands are welcome. Sink holes are a potential problem resulting from storm system issues.

c. Sheen (handout provided)
    i. Along with odor, sheen is good indicator of contamination and/or an illicit discharge
    ii. Important to differentiate between 2 types: biogenic/organic and oily/petroleum
        1. Document observations, location of sheen, odors, any signs of a release nearby?
        2. Both types of sheen may be present
        3. Stick Test (stick or rock) – use a stick or rock to disturb the sheen and observe/document how it reacts
            a. Organic sheens tend to break apart into platelets and appear brittle. They may heal but this generally takes some time
            b. Petroleum sheens swirl and quickly come back together
        4. Jar Shake Test – fill a clean/clear jar with water
            a. Organic sheens may disperse or dissipate
            b. Petroleum sheens may form on the surface
d. Snow storage
    i. JBER snow disposal area is moving forward; stay tuned for updates.
    ii. Good Housekeeping: clean up trash (yours or not), keep snow in designated areas, and install proper BMPs as necessary.
    iii. Move temporary snow piles as soon as practical. There is no hard time frame, but the sooner the better.
e. Port of Alaska construction projects
    i. Modernization Program – south backlands stabilization and transitional dredging is ongoing; should be completed by September.
    ii. Tract J fencing repair – removal of vegetation/old fence is complete and installation of new fence between JBER/POA property boundary along Tract J is out to bid.
    iii. Fender repair and pile jacketing projects are ongoing.
    iv. Trestle 3A/3C ramp repair – contract awarded to Alaska Diversified
    v. Asphalt repairs – small patches around the Port
f. Other construction projects
    i. ML&P Feeder Loop – nearly complete
    ii. TOTE – asphalt repair (small footprint, < 10,000 sf).
    iii. Delta Western – automatic gate installation
    iv. As new construction projects arise please inform the Port as early as possible.
g. Stakeholder roundtable: No issues or questions where brought forward at this time.

IV. Action Items:

a. Encourage good housekeeping and be a good neighbor
b. Report non-compliance violations immediately
c. Complete annual training
d. Maintain MSGP coverage
e. Remaining 2019 meeting: 11/20

V. Q&A/General Discussion/ Action Items:

a. (Tenants) Review Respective sections of SWMP and contact POA/R&M with any edits.
b. **NOTE: Quarterly meetings are a requirement of the POA's MS4 permit and should be attended by at least one representative from each company.**

VI. Handouts: Sheen Determination

VII. Adjournment: 10:30 am

PORT of ALASKA

Storm Water Meeting Sign-In Sheet

Subject: Port of Alaska MS4 Implementation
Storm Water Pollution Prevention Team 2019 Quarterly Meeting

Date/Time: Wednesday, 21 August 2019; 10:00am

Location: Port of Alaska Administration Building Conference Room

NAME	AFFILIATION	EMAIL
Stuart Greydanus	POA	Stuart.greydanus@anchorageak.gov
Tou Yang	DELTA WESTERN	Tou.y@DELTAWESTERN.com
Monique Cortez	Matson	mcortez@matson.com
Chris Adams	Marathon	christopher.adams@andeavor.com
Paul Rothis	Port Safety	rothis.pd@muni.org
Timothy Diaz	TOTE	tdiaz@totemaritime.com
Nichole Rehm	PTS/PORT	nicholerehm@ptsinc.com
Laurie Butler	AFSC	Laurie.Butler@mcnziesaviation.com
Kris Shippen	ABI	Kris.Shippen@anchSand.com
~~Krista Mclean~~	R+M	kmclean@rmconsult.com
Jim Rypkema (phone)	ADEC	james.rypkema@alaska.gov

Nonpetroleum sheens on water

Each year the Minnesota Pollution Control Agency (MPCA) receives calls from concerned citizens who have discovered apparent color sheens on water in ditches, ponds, wetlands, lakes and other areas with stagnant, standing water.

Often these sheens have an iridescent or rainbow-like appearance similar to what one sees when a small amount of oil, gasoline or other petroleum product is spilled on water. In some cases, a reddish precipitate can be seen also in the water where these sheens occur.

If there is no obvious source of petroleum that could have been spilled, the sheen may be an organic nonpetroleum, or humic, sheen caused by bacteria.

When disturbed, a bacterial sheen will break up into small platelets, unlike a petroleum sheen, which will quickly try to reform.

Is it a bacterial or petroleum sheen?

A nonpetroleum sheen can usually be distinguished from a petroleum sheen by attempting to break up the sheen. When a stick is poked into a bacterial sheen or a stone is dropped into it, the sheen will typically break into small platelets. In contrast, a petroleum sheen will quickly try to reform after any disturbance.

Another difference is odor; a sheen produced by bacteria usually has none, while a sheen caused by a spilled petroleum product may smell like gasoline or diesel fuel.

If you see a sheen on surface water or in a wet area, investigate the sheen if you can safely do so. If, after disturbing the sheen a bit, the sheen appears to be caused by spilled petroleum rather than bacteria, a pollution situation exists and you should report your finding to the Minnesota Duty Officer by calling 800-422-0798.

An exception to this would be sheens that result from rainfall washing residual petroleum and sheens from road surfaces and parking lots. Should you find, within a day or two of a rain, a petroleum sheen on standing water that you know for certain is runoff from a nearby road or parking lot, you need not report your finding to the Minnesota Duty Officer because the small amount of oil will evaporate or be degraded naturally by microbes. In addition, there is very little, if anything that can be done to collect a very thin petroleum sheen.

Of course, the owner of a suspected oily parking lot should act to clean the surface of the lot and prevent future contamination. Information about controlling stormwater runoff can be found at www.pca.state.mn.us/water/stormwater.

For more information

For more information on spill prevention, cleanup and disposal, call the MPCA at 651-296-6300 or toll-free at 800-657-3864 and ask for a member of the Emergency Management Unit (EMU) or go to https://www.pca.state.mn.us/waste/emergency-response.

More information is also available on the website of the U.S. Environmental Protection Agency at www.epa.gov/oilspill/.

SHEEN DETERMINATION

The primary visual parameter is sheen, which may be petroleum or biologic in nature. Based on ADEC Listing Methodology for Determining Water Quality Impairments from Petroleum Hydrocarbons, Oils and Grease Guidance, Appendix A – Visible Oil Sheen Standard Operating Procedure (ADEC, 2015). This document notes that biogenic sheens are often present in ditches, wetlands, and in other stagnant water bodies. These sheens are often bacterial (iron and manganese reducing) in nature and can produce reddish or blackish precipitates in some waters. Organic sheens (organic oils and iron bacteria) can be differentiated by a lack of petroleum odor and that they are typically brittle. Touching them with a stick, spoon, etc. or dropping a stone on them will cause the sheen to shatter or break apart in a brittle fashion. Petroleum sheen may break apart, but will typically flow back together or "heal". The appearance of sheen can be highly variable based on concentration and the presence of organic sheen can provide a false positive for petroleum contamination (Ecology, 2011 and MPCA, 2008)

Two tests are proposed by the guidance to differentiate between biogenic and petroleum sheen, the stick test and the jar shake test. A stick test uses a stick or stone to break up the sheen. The jar shake test requires collecting water with sufficient sheen in a jar and shaking. Classification based on these tests are provided in the table below

Stick Test

Use a stick or a rock/rocks to break up the observed sheen. Observe the reaction of the sheen to disturbance and record the results. If the reaction is not clear, perform the jar shake test.

Jar Shake Test

Collect water with sheen in a clean 8-ounce glass jar by scooping the sheen with the jar. Multiple scoops are allowed and may be necessary. The approximate surface area of sheen collected should be estimated and recorded. The jar is then sealed and vigorously shaken. After allowing the water to stop moving (minimum of 30 seconds), remove the lid and observe the condition.

SHEEN SOURCE DETERMINATION

Sheen Appearance	Test Type	Test Result	Sheen Classification
Complete surface covered by iridescent or silvery sheen or Partial surface coverage (including spotty) by iridescent or silvery sheen	Stick Test	Breaks into platelets that stay separate and do not re-coalesce (brittle)	Biogenic
		Breaks into platelets that entirely dissipate (brittle)	
		Swirling action and quickly re-coalesces on the surface	**Petroleum**
		Result is not clear (may occur for light sheens with limited coverage)	Indeterminate
	Jar Shake Test	Sheen is dispersed or dissipated	Biogenic
		Sheen re-coalesces on the surface	**Petroleum**
		Result is not clear (may occur for light sheens with limited coverage)	Indeterminate

ADEC, 2015. Listing Methodology for Determining Water Quality Impairments from Petroleum Hydrocarbons, Oils & Grease. December 2015.

Ecology (Washington State Department of Ecology), 2011. Guidance for Remediation of Petroleum Contaminated Sites. September 2011.

MPCA (Minnesota Pollution Control Agency), 2008. "Nonpetroleum sheens on water." April 2008.

Meeting Minutes

Port of Alaska MS4 Implementation
Storm Water Pollution Prevention Team Quarterly Meeting

Where:	Port of Alaska Administration Building Conference Room
When:	Wednesday, 20 November 2019; 10:00am
Call to Order:	10:00am

Attendees:

Sharen	Walsh	Port of Alaska	sharen.walsh@anchorageak.gov
Kristi	McLean	R&M	kmclean@rmconsult.com
Paul	Rotkis	Port of Alaska	paul.rotkis@anchorageak.gov
Stuart	Greydanus	Port of Alaska	stuart.greydanus@anchorageak.gov
Tou	Yang	Delta Western	touy@deltawestern.com
Nichole	Rehm	PTS	nicholerehm@ptsincalaska.com
Kris	Shippen	AS&G/ABI	kris.shippen@anchsand.com
Timothy	Diaz	TOTE	tdiaz@totemaritime.com
Laurie	Butler	Menzies	laurie.butler@menziesaviation.com
Pat	Hallett	Marathon	pphallett@marathonpetroleum.com

I. **Team Member Introductions and Updates:**
   a. Representatives from ADEC and Matson were not in attendance
   b. Laurie Butler (Menzies) participated via teleconference
   c. Marathon's storm water team member is now Serena Lewellyn; Chris Adams is no longer in Alaska.

II. **Reviewed Quarterly SWPPP Team Meeting Goals:**
   a. Facilitate collaboration and cooperation between all Port of Alaska users and employees regarding storm water management
   b. Promote education and provide an open forum to discuss storm water management issues: new BMPs/controls, new development/construction that may affect storm water, maintenance activities, general storm water concerns, etc.
   c. Ensure compliance with the Port of Alaska's MS4 Permit (quarterly meetings are required)

III. **Discussion Topics:**
   a. 2018 Annual Report and updated Storm Water Management Program Plan
      i. Reminder to review applicable sections and notify R&M or the Port of any updates by 13 December 2019. Electronic version available online at: https://www.portofalaska.com/operations/storm-water-management
   b. Port of Alaska MS4 permit expires in 2020. A request for renewal is being submitted in February 2020. Provide any comments on proposed changes by 13 December 2019. Permit available on ADEC and Port storm water websites.
   c. Inspections, monitoring, and trainings
      i. Be aware, look for signs of illicit discharges, and report immediately.
      ii. Earthquake damage: Be alert for EQ related damage to inlets, pipe connections at manholes, outfalls, etc. Seven storm drain outfalls/systems have been inspected with CCTV to identify issues.
   d. Snow storage

i. Proposed snow disposal site on JBER is still being pursued but will not be ready for 2019/2020 winter season.
ii. Good Housekeeping: clean up trash (yours or not), keep snow in designated areas, and install proper BMPs as necessary.
iii. Move temporary snow piles as soon as practical. There is no hard time frame, but the sooner the better.

e. Port of Alaska construction projects
   i. Modernization Program – Phase I is complete.
   ii. Earthquake repairs as needed.
f. Other construction projects
   i. GCI fiber optic installation ongoing; providing service to Matson and TOTE
   ii. Matson water line repair
g. Stakeholder roundtable
   i. (Walsh) Recommend inviting other stakeholders to quarterly meetings: JBER, Watershed Management (Muni), ARRC, PetroStar, Crowley

IV. Team Action Items:

a. Encourage good housekeeping and be a good neighbor
b. Report non-compliance violations immediately
c. Complete annual training
d. Maintain MSGP coverage
e. Review respective sections of SWMP and contact POA/R&M with any edits by 12/13

V. Q&A/General Discussion/ Action Items:

a. 2020 meetings: third Wednesday of the month 2/19, 5/20, 8/19, and 11/18
b. **Quarterly meetings are a requirement of the POA's MS4 permit and should be attended by at least one representative from each company.**

VI. Handouts: None

VII. Adjournment: 11:00 am

PORT of ALASKA

Storm Water Meeting Sign-In Sheet

Subject:	Port of Alaska MS4 Implementation Storm Water Pollution Prevention Team 2019 Quarterly Meeting
Date/Time:	Wednesday, 20 November 2019; 10:00am
Location:	Port of Alaska Administration Building Conference Room

NAME	AFFILIATION	EMAIL
Tou Yang	DWP	Tou@DeltaWesternCo.com
Timothy Diaz	TOTE MARITIME	tdiaz@totemaritime.com
Nichole Rehm	PTS / POA	nicholerehm@ptsincalaska.com
Kris Shippen	ARI	Kris.Shippen@arcsand.com
Paul Rotkis	PONT	paul.rotkis@anchorageak.gov
Stuart Greydanus	Port	Stuart.greydanus@anchorageak.gov
Kristi McLean	R&M	kmclean@rmconsult.com
Laurie Butler	Menzies (phone)	
Sharon Walsh	Port	sharon.walsh@anchorageak.gov
Pat Hallett	Marathon	pphallett@marathonpetroleum.com

Not in attendance Jim Rypkema (ADEC)
Mo Cortez (Matson)
Chris Adams (Andeavor)

APPENDIX E

MUNICIPALITY OF ANCHORAGE CODE ORDINANCE 15.50.020

MUNICIPALITY OF ANCHORAGE CODE OF ORDINANCES

15.50.020 - PROHIBITED ACTS.

A. Within the watershed district no person shall commit any of the following acts without having a permit issued by the department:

1. Make use of any surface water, springs or groundwater, whether flowing or not.

2. Obstruct, interrupt or interfere with any surface or underground drainage, runoff, flow of water or watercourse.

3. Construct any dam, ditch, dike, road or trail.

4. Dig, excavate, drill or otherwise disturb the surface or underground.

5. Remove, clear or otherwise destroy by mechanical or chemical means any trees, brush, grass, plants or other natural ground cover.

6. Cultivate, plow, sow or plant any land.

7. Start or maintain any fire.

8. Maintain or store any combustible or flammable material.

9. Pollute, contaminate, discharge or dump any water, refuse, debris or material into any reservoir, pipeline, stream, rill, drainage, runoff, watercourse or other groundwater and surface water source or supply.

10. Use any spray, chemicals or insecticides.

11. Otherwise damage, injure, contaminate, pollute, obstruct or interfere with the surface or underground in any manner that may affect the rainfall or precipitation and the collection, drainage, sources, supply, runoff or watercourses of groundwater and surface water.

12. Fish or hunt except as permitted by state law.

B. No person shall cause or permit a sewage disposal system to be located within the drainage of any watershed area used for or reserved for use as a source of public water supply.

(CAC 10.56.030, 10.56.130; GAAB 16.45.030.C)

APPENDIX F
DISCHARGE MONITORING REPORT CHAIN-OF-CUSTODY

PERMITTEE NAME/ADDRESS (Includes Facility Name/Location if Different)

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)

DISCHARGE MONITORING REPORT (DMR)

NAME: Port of Alaska

ADDRESS 2000 Anchorage Port Road
Anchorage, Alaska 99501

FACILITY LOCATION Port of Alaska
2000 Anchorage Port Road
Anchorage, Alaska 99501

AKS052426	
PERMIT NUMBER	**DISCHARGE NUMBER**

MONITORING PERIOD						
	YEAR	**MO**	**DAY**		**YEAR**	**MO**	**DAY**
FROM	2019	1	1	TO	2019	12	31

PARAMETER		**QUANTITY OR LOADING**			**QUALITY OF CONCENTRATION**				**NO. EX.**	**FREQUNCY OF ANALYSIS**	**SAMPLE TYPE**
		AVERAGE	**MAXIMUM**	**UNITS**	**MINIMUM**	**AVERAGE**	**MAXIMUM**	**UNITS**			
Flow	**SAMPLE**			cfs	Not Applicable	Not Applicable	Not Applicable	cfs	0	Twice Annually	Grab
	PERMIT REQUIREMENT	None	None		Not Applicable	Not Applicable	Not Applicable		0	Twice Annually	Grab
Temperature	**SAMPLE**	Not Applicable	Not Applicable	°C	**8.30**	**9.70**	**11.76**	°C	0	Twice Annually	Grab
	PERMIT REQUIREMENT	Not Applicable	Not Applicable		None	None	< 15		0	Twice Annually	Grab
pH	**SAMPLE**	Not Applicable	Not Applicable	S.U.	**6.77**	**7.80**	**8.82**	S.U.	0	Twice Annually	Grab
	PERMIT REQUIREMENT	Not Applicable	Not Applicable		6.5	None	8.5		0	Twice Annually	Grab
Dissolved Oxygen	**SAMPLE**	Not Applicable	Not Applicable	mg/L	**10.18**	**11.50**	**13.92**	mg/L	0	Once Annually	Grab
	PERMIT REQUIREMENT	Not Applicable	Not Applicable		6	None	17		0	Once Annually	Grab
Biochemical Oxygen Demand	**SAMPLE**	Not Applicable	Not Applicable	mg/L	**Non-detect**	**Not Calculated**	**11.50**	mg/L	0	Once Annually	Grab
	PERMIT REQUIREMENT	Not Applicable	Not Applicable		None	None	None		0	Once Annually	Grab
Chemical Oxygen Demand	**SAMPLE**	Not Applicable	Not Applicable	mg/L	**133**	**419**	**705**	mg/L	0	Once Annually	Grab
	PERMIT REQUIREMENT	Not Applicable	Not Applicable		None	None	None		0	Once Annually	Grab
Turbidity	**SAMPLE**	Not Applicable	Not Applicable	NTU	**74.64**	**335.3**	**513.4**	NTU	0	Once Annually	Grab
	PERMIT REQUIREMENT	Not Applicable	Not Applicable		None	None	400 to 600		0	Once Annually	Grab

COMMENT AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)

Yellow Highlights show an exceedance of a parameter in comparison with the MS4 permit.

PERMITTEE NAME/ADDRESS (Includes Facility Name/Location if Different)

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)

DISCHARGE MONITORING REPORT (DMR)

NAME: Port of Alaska

ADDRESS 2000 Anchorage Port Road
Anchorage, Alaska 99501

FACILITY LOCATION Port of Alaska
2000 Anchorage Port Road
Anchorage, Alaska 99501

AKS052426	
PERMIT NUMBER	**DISCHARGE NUMBER**

MONITORING PERIOD						
	YEAR	**MO**	**DAY**		**YEAR**	**MO**	**DAY**
FROM	2019	1	1	TO	2019	12	31

PARAMETER		**QUANTITY OR LOADING**			**QUALITY OF CONCENTRATION**				**NO. EX.**	**FREQUNCY OF ANALYSIS**	**SAMPLE TYPE**
		AVERAGE	**MAXIMUM**	**UNITS**	**MINIMUM**	**AVERAGE**	**MAXIMUM**	**UNITS**			
Total Suspended Solids	**SAMPLE**	Not Applicable	Not Applicable	mg/L	**62.6**	**931**	**1,800**	mg/L	0	Once Annually	Grab
	PERMIT REQUIREMENT	Not Applicable	Not Applicable		None	None	None		0	Once Annually	Grab
Total Dissolved Solids	**SAMPLE**	Not Applicable	Not Applicable	mg/L	**650**	**3,790**	**6,920**	mg/L	0	Once Annually	Grab
	PERMIT REQUIREMENT	Not Applicable	Not Applicable		None	None	None		0	Once Annually	Grab
Sheen	**SAMPLE**	**None Observed**	**None Observed**	Visual	Not Applicable	Not Applicable	Not Applicable	Visual	0	Twice Annually	Grab
	PERMIT REQUIREMENT	Virtually None	Virtually None		Not Applicable	Not Applicable	Not Applicable		0	Twice Annually	Grab
TAH	**SAMPLE**	Not Applicable	Not Applicable	mg/L	**4.52**	**7.30**	**18.2**	ug/L	0	Twice Annually	Grab
	PERMIT REQUIREMENT	Not Applicable	Not Applicable		None	None	10		0	Twice Annually	Grab
TAqH	**SAMPLE**	Not Applicable	Not Applicable	mg/L	**4.82**	**7.70**	**19.4**	ug/L	0	Twice Annually	Grab
	PERMIT REQUIREMENT	Not Applicable	Not Applicable		None	None	15		0	Twice Annually	Grab
Nitrate plus Nitrite Nitrogen	**SAMPLE**	Not Applicable	Not Applicable	mg/L	**0.388**	**3790**	**6,920**	mg/L	0	Once Annually	Grab
	PERMIT REQUIREMENT	Not Applicable	Not Applicable		None	None	None		0	Once Annually	Grab
Total Kjeldahl Nitrogen	**SAMPLE**	Not Applicable	Not Applicable	mg/L	**0.608**	**1.00**	**1.43**	mg/L	0	Once Annually	Grab
	PERMIT REQUIREMENT	Not Applicable	Not Applicable		None	None	None		0	Once Annually	Grab

COMMENT AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)

Yellow Highlights show an exceedance of a parameter in comparison with the MS4 permit.

PERMITTEE NAME/ADDRESS (Includes Facility Name/Location if Different)

NAME: Port of Alaska

ADDRESS 2000 Anchorage Port Road
Anchorage, Alaska 99501

FACILITY LOCATION Port of Alaska
2000 Anchorage Port Road
Anchorage, Alaska 99501

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)

DISCHARGE MONITORING REPORT (DMR)

AKS052426	
PERMIT NUMBER	**DISCHARGE NUMBER**

MONITORING PERIOD	YEAR	MO	DAY		YEAR	MO	DAY
FROM	2019	1	1	TO	2019	12	31

PARAMETER		QUANTITY OR LOADING			QUALITY OF CONCENTRATION				NO. EX.	FREQUNCY OF ANALYSIS	SAMPLE TYPE
		AVERAGE	MAXIMUM	UNITS	MINIMUM	AVERAGE	MAXIMUM	UNITS			
Estimated Volumes	SAMPLE	100	160	Gallons	Not Applicable	Not Applicable	Not Applicable	Gallons	0	Once Annually	Grab
	PERMIT REQUIREMENT	None	None		Not Applicable	Not Applicable	Not Applicable		0	Twice Annually	Grab
	SAMPLE										
	PERMIT REQUIREMENT										
	SAMPLE										
	PERMIT REQUIREMENT										
	SAMPLE										
	PERMIT REQUIREMENT										
	SAMPLE										
	PERMIT REQUIREMENT										
	SAMPLE										
	PERMIT REQUIREMENT										
	SAMPLE										
	PERMIT REQUIREMENT										

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER			TELEPHONE		DATE		
Sharen Walsh / Deputy Port Director	I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.	Sharen A. Walsh	907	343.6200	2019	01	29
TYPED OR PRINTED		SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT	AREA	NUMBER	YEAR	MO	DAY

COMMENT AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)

*Estimated volume represents the approximate quantity in the catch basin at the time of sampling. It does not represent the total flow through Outfall 003 during the wet weather event.
Yellow Highlights show an exceedance of a parameter in comparison with the MS4 permit.

R&M CONSULTANTS, INC.

1193008

Profile: 336166 JKJ

CHAIN OF CUSTODY RECORD

Client:	R&M Consultants, Inc	Analytical Laboratory	SGS Anchorage	No	Cooler ID:	Tango	Page	1	of 1

Project No. / NPDL No.:	2600.01.03	Project Name:	Port MS4 Wet Weather Screening
Contact Name:	Christopher Fell	Phone Number:	907.229.1617
Reports To:	Christopher Fell	Email:	cfell@rmconsult.com
	Kristi McLean		kmclean@rmconsult.com

Invoice To: R&M Consultants, Inc
Attn: Accounting Department/Courtney Maillet
9101 Vanguard Drive, Anchorage, AK, 99507
cmaillet@rmconsult.com / 907.522.1707

PO #: 2600.01.03
Quote #: 360189

RESERVED for lab use	Sample Identification	LocID	Sampler	Date (mm/dd/yy)	Time (hhmm)	Matrix/ Matrix Code	No. Containers	Sample Type (i.e. Grab(G), Comp.(c), etc)	Preservative/Analysis: VOC (SW8260) HCl 0-6°C	PAH (SW8270 SIM) 0-6°C	BOD, 5-day (SM5210B) TSS (SM2540D) TDS (SM2540C) 0-6°C	Total Phosphorus (SM4500P-B,E) H_2SO_4 0-6°C	NO_3-NO_2(SM4500NO3-F) COD (EPA 410.4) TKN (EPA 4500N-D) H_2SO_4 0-6°C	Total Metals (Cd, Cu, Pb, Zn)(SW6020A) HNO_3 0-6°C	Hardness as $CaCO_3$ (SM2340B) HNO_3 0-6°C			Remarks
1 A-J	201906-001	001	CDF	06/12/19	0950	Water		G	X	X	X	X	X	X	X			
2 A-J	201906-002	002	CDF	06/12/19	1020	Water		G	X	X	X	X	X	X	X			
3 A-E	201906-003	003	CDF	06/12/19	1050	Water		G	X	X								
4 A-J	201906-008	004	CDF	06/12/19	0955	Water		G	X	X	X	X	X	X	X			
5 A-C	201906-WA-QC01	QC	SGS	06/12/19	0811	Water	3	QC	X									TRIP BLANK

Relinquished By (1):	Christopher R Fell	Date: 6/12/19	Time: 1218	Received By:
Relinquished By (2):		Date:	Time:	Received By:
Relinquished By (3):		Date:	Time:	Received By:
Relinquished By (4):		Date: 6/12/19	Time: 12:19	Received For By Laboratory: AMG

Turnaround Time, Deliverable Req., and/or Special Instructions
48-HOUR HOLD TIME ON BOD, Standard TAT with Level 2 PDF deliverable.

Laboratory Check In Information

Temp Blank °C	Chain of Custody Seal (Circle):
5.5°/D23	Intact
	Broken
	Absent HD

R&M CONSULTANTS, INC.

CHAIN OF CUSTODY RECORD

Client:	R&M Consultants, Inc	Analytical Laboratory	SGS-Anchorage	DOD Project?:	No	Cooler ID:	N/A	Page	1 of 1
Project No. / NPDL No.:	2600.01.03	Project Name:	Port MS4 Wet Weather Screening						
Contact Name:	Christopher Fell	Phone Number:	907.646.9655						
Reports To:	Christopher Fell Kristi McLean	Email:	cfell@rmconsult.com kmclean@rmconsult.com						
Invoice To:	R&M Consultants, Inc Attn: Accounting Department/Courtney Maillet 9101 Vanguard Drive, Anchorage, AK, 99507 cmaillet@rmconsult.com / 907.522.1707		PO #: 2600.01.03 Quote #: 360189						

1195732

RESERVED for lab use	Sample Identification	LocID	Sampler	Date (mm/dd/yy)	Time (hhmm)	Matrix/ Matrix Code	No. Containers	Sample Type (i.e. Grab(G), Comp.(c), etc)	Preservative/Analysis: HCl 0-6°C VOC (SW8260)	Preservative/Analysis: 0-6°C PAH (SW8270 SIM)	Remarks
	201909-001	001	ND	09/25/19	1230	Water	5	G	X	X	
	201909-002	002	ND	09/25/19	1315	Water	5	G	X	X	
	201909-003	003	ND	09/25/19	1430	Water	5	G	X	X	
	201909-008	004	ND	09/25/19	1235	Water	5	G	X	X	
	201909-TB01	MS4	ND	09/25/19	1051	Water	1BOX	QC	X		TRIP BLANK

Relinquished By (1): Nathan Deuik	Date: 9/25/19	Time: 1548	Received By:
Relinquished By (2):	Date:	Time:	Received By:
Relinquished By (3):	Date:	Time:	Received By:
Relinquished By (4):	Date: 9/25/19	Time: 15:48	Received For By Laboratory:

Turnaround Time, Deliverable Req., and/or Special Instructions
Level 2 PDF and SGS Access EDD
Standard TAT

Laboratory Check In Information

Temp Blank °C	Chain of Custody Seal (Circle):
-0.5 D21	Intact Broken Absent HD

APPENDIX G

2019 CONDITION ASSESSMENT REPORT (STORM WATER EXCERPTS ONLY)

Port of Alaska

2019 CONDITION INSPECTIONS

Port of Alaska

Anchorage, Alaska

Final Report

August 19, 2019

Prepared by:

R&M CONSULTANTS, INC.

COFFMAN ENGINEERS

With input from:

Foldenauer Engineering

CIVIL/STRUCTURAL INSPECTION: WORK RECORD

PORT OF ALASKA

2019 CONDITION ASSESSMENT

DATE: JUNE 5, 2019

R&M CONSULTANTS, INC.

FAC. ID	#	FACILITY NAME / DESCRIPTION	RAT -ING	ITEM DESCRIPTION
OF01	CS - 1	Outfall 01	4	Storm drain outfall pipe near Transit Yard C

LATITUDE	61.24207	LONGITUDE	-149.8855	WGS84 Decimal Degrees

ANALYSIS:

Embankment and rip rap at outfall has impeded discharge at the outfall. Pipe appears to be damaged (out of round).

ACTION TO BE TAKEN:

Excavate embankment sufficient distance to accommodate work. Save rip rap for reuse. Remove approximately 10' to 20' of damaged pipe. Splice in new section. Repair slope. Replace rip rap.

For questions regarding this work, call:

Name: John Daley/Josh Crowe

Firm: R&M Consultants, Inc.

Phone: 907.522.1707

jdaley@rmconsult.com

jcrowe@rmconsult.com

646.9602 / 646.9604

OF01 - Pipe at Outfall 01

WORK RECORD:

Work By:

Completion Date:

Supervisor Appr:

Engineer Appr:

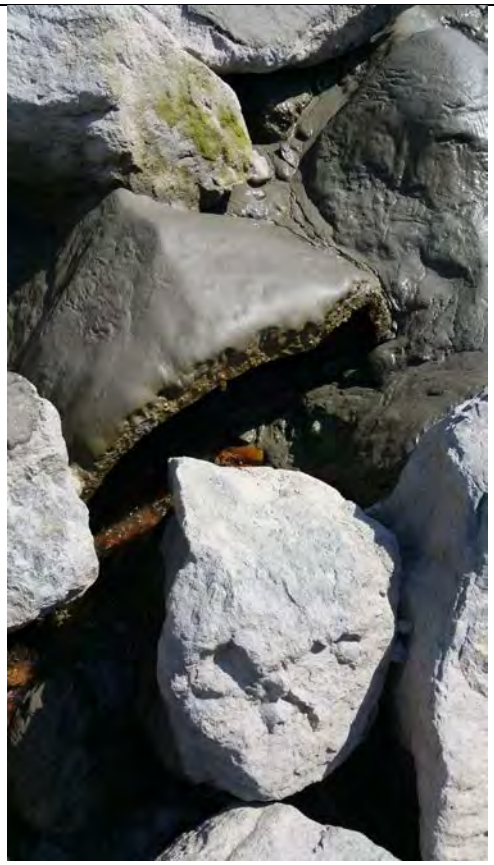
Condition Rating:

1 = Critical (Life/Safety); 2 =Serious (Use Restrictions);

3 = Poor (Moderate Urgency); 4 = Fair (Low Priority Repairs)

5 = Satisfactory (Minor issues/No Repairs); 6 = Good (No issues)

COMMENTS: Possible EQ damage

	
OF01 – Damaged pipe and blocked discharge	

CIVIL/STRUCTURAL INSPECTION: WORK RECORD

R&M CONSULTANTS, INC.

PORT OF ALASKA
2019 CONDITION ASSESSMENT
DATE: MAY 25, 2019

FAC. ID	#	FACILITY NAME / DESCRIPTION	RAT -ING	ITEM DESCRIPTION
OF02	CS - 1	Outfall 002	6	Outfall 02 near Transit Area D

LATITUDE	61.244	LONGITUDE	-149.884	WGS84 Decimal Degrees

ANALYSIS:
Pipe and slope protection in satisfactory condition.

ACTION TO BE TAKEN:

None.

For questions regarding this work, call:

Name: John Daley/Josh Crowe
Firm: R&M Consultants, Inc.
Phone: 907.522.1707
jdaley@rmconsult.com
jcrowe@rmconsult.com
646.9602 / 646.9604

WORK RECORD:

OF02 – Outfall 02

Work By:
Completion Date:
Supervisor Appr:
Engineer Appr:

Condition Rating:

1 = Critical (Life/Safety); 2 =Serious (Use Restrictions);
3 = Poor (Moderate Urgency); 4 = Fair (Low Priority Repairs)
5 = Satisfactory (Minor issues/No Repairs); 6 = Good (No issues)

COMMENTS:

CIVIL/STRUCTURAL INSPECTION: WORK RECORD

R&M CONSULTANTS, INC.

PORT OF ALASKA

2019 CONDITION ASSESSMENT

DATE: JUNE 5, 2019

FAC. ID	#	FACILITY NAME / DESCRIPTION	RAT -ING	ITEM DESCRIPTION
OF03	CS - 1	Outfall 03	6	Outfall 03 at South Transit Yard

LATITUDE	61.2373	LONGITUDE	-149.8895	WGS84 Decimal Degrees

ANALYSIS:

Pipe and outfall in satisfactory condition

ACTION TO BE TAKEN:

None

For questions regarding this work, call:

Name: John Daley/Josh Crowe

Firm: R&M Consultants, Inc.

Phone: 907.522.1707

jdaley@rmconsult.com

jcrowe@rmconsult.com

646.9602 / 646.9604

WORK RECORD:

OF03 - Pipe at Outfall 03

Work By:

Completion Date:

Supervisor Appr:

Engineer Appr:

Condition Rating:

1 = Critical (Life/Safety); 2 =Serious (Use Restrictions);

3 = Poor (Moderate Urgency); 4 = Fair (Low Priority Repairs)

5 = Satisfactory (Minor issues/No Repairs); 6 = Good (No issues)

COMMENTS:

CIVIL/STRUCTURAL INSPECTION: WORK RECORD

PORT OF ALASKA

2019 CONDITION ASSESSMENT

DATE: JUNE 5, 2019

R&M CONSULTANTS, INC.

FAC. ID	#	FACILITY NAME / DESCRIPTION	RAT-ING	ITEM DESCRIPTION
OF04	CS - 1	Outfall 04	4	Outfall 04 at South Transit Yard

LATITUDE		-	LONGITUDE	-	
					WGS84 Decimal Degrees

ANALYSIS:

Pipe not found. Likely buried in rip rap slope protection.

ACTION TO BE TAKEN:

Locate and expose pipe outfall. Repair embankment and pipe as required to ensure proper drainage.

For questions regarding this work, call:

Name: John Daley/Josh Crowe

Firm: R&M Consultants, Inc.

Phone: 907.522.1707

jdaley@rmconsult.com

jcrowe@rmconsult.com

646.9602 / 646.9604

No Photo – Outfall Not Found

WORK RECORD:

Work By:

Completion Date:

Supervisor Appr:

Engineer Appr:

Condition Rating:

1 = Critical (Life/Safety); 2 =Serious (Use Restrictions);

3 = Poor (Moderate Urgency); 4 = Fair (Low Priority Repairs)

5 = Satisfactory (Minor issues/No Repairs); 6 = Good (No issues)

COMMENTS: Possible EQ damage

CIVIL/STRUCTURAL INSPECTION: WORK RECORD

R&M CONSULTANTS, INC.

PORT OF ALASKA

2019 CONDITION ASSESSMENT

DATE: JUNE 5, 2019

FAC. ID	#	FACILITY NAME / DESCRIPTION	RAT -ING	ITEM DESCRIPTION
OF05	CS - 1	Outfall 05	6	Outfall 05 at POL1

LATITUDE	61.2383	LONGITUDE	-149.8891	WGS84 Decimal Degrees

ANALYSIS:

Pipe and outfall in satisfactory condition

ACTION TO BE TAKEN:

None

For questions regarding this work, call:

Name: John Daley/Josh Crowe

Firm: R&M Consultants, Inc.

Phone: 907.522.1707

jdaley@rmconsult.com

jcrowe@rmconsult.com

646.9602 / 646.9604

WORK RECORD:

OF05 - Pipe at Outfall 05

Work By:

Completion Date:

Supervisor Appr:

Engineer Appr:

Condition Rating:

1 = Critical (Life/Safety); 2 =Serious (Use Restrictions);

3 = Poor (Moderate Urgency); 4 = Fair (Low Priority Repairs)

5 = Satisfactory (Minor issues/No Repairs); 6 = Good (No issues)

COMMENTS:

CIVIL/STRUCTURAL INSPECTION: WORK RECORD

PORT OF ALASKA

2019 CONDITION ASSESSMENT

DATE: JULY 16, 2019

R&M CONSULTANTS, INC.

FAC. ID	#	FACILITY NAME / DESCRIPTION	RAT -ING	ITEM DESCRIPTION
OF06	CS - 1	Outfall 06	4	Outfall 06 at south backlands

LATITUDE	61.2320	LONGITUDE	-149.8963	WGS84 Decimal Degrees

ANALYSIS:

At the time of inspection, outfall is part of an active work site at the south backlands. Pipe currently inundated with fill as a result of active slope work.

ACTION TO BE TAKEN:

Contractor should clear outfall from soil and debris to maintain unobstructed flow at outfall.

For questions regarding this work, call:

Name: John Daley/Josh Crowe

Firm: R&M Consultants, Inc.

Phone: 907.522.1707

jdaley@rmconsult.com

jcrowe@rmconsult.com

646.9602 / 646.9604

WORK RECORD:

OF06 – Pipe at outfall 06

Work By:

Completion Date:

Supervisor Appr:

Engineer Appr:

Condition Rating:

1 = Critical (Life/Safety); 2 =Serious (Use Restrictions);

3 = Poor (Moderate Urgency); 4 = Fair (Low Priority Repairs)

5 = Satisfactory (Minor issues/No Repairs); 6 = Good (No issues)

COMMENTS:

	
OF06 – Manhole above outfall 06	OF06 – Active work slope around outfall

CIVIL/STRUCTURAL INSPECTION: WORK RECORD

PORT OF ALASKA

2019 CONDITION ASSESSMENT

DATE: JUNE 5, 2019

R&M CONSULTANTS, INC.

FAC. ID	#	FACILITY NAME / DESCRIPTION	RAT -ING	ITEM DESCRIPTION
OF07	CS - 1	Outfall 07	4	Manhole at outfall 07 in North Extension

LATITUDE	61.2506	LONGITUDE	-149.8822	WGS84 Decimal Degrees

ANALYSIS:

No outfall pipe visible as this location. Not sure if there is a pipe. Water springs out from embankment below manhole.

ACTION TO BE TAKEN:

Reset dislodged manhole rings.

OF07 - Manhole at Outfall 07

For questions regarding this work, call:

Name: John Daley/Josh Crowe

Firm: R&M Consultants, Inc.

Phone: 907.522.1707

jdaley@rmconsult.com

jcrowe@rmconsult.com

646.9602 / 646.9604

WORK RECORD:

Work By:

Completion Date:

Supervisor Appr:

Engineer Appr:

Condition Rating:

1 = Critical (Life/Safety); 2 =Serious (Use Restrictions);

3 = Poor (Moderate Urgency); 4 = Fair (Low Priority Repairs)

5 = Satisfactory (Minor issues/No Repairs); 6 = Good (No issues)

COMMENTS: Possible EQ damage.

	
OF07 - Water springs from embankment below manhole	OF07 – Upper ring dislodge from lower ring

STORM WATER MANAGEMENT PROGRAM PLAN

PORT OF ALASKA
STORM WATER MANAGEMENT PROGRAM
ANCHORAGE, ALASKA

PREPARED FOR:

PORT OF ALASKA
2000 ANCHORAGE PORT ROAD
ANCHORAGE, ALASKA 99501

PREPARED BY:

R&M CONSULTANTS, INC.
9101 VANGUARD DRIVE
ANCHORAGE, ALASKA 99507

UPDATED 7 FEBRUARY 2020

R&M CONSULTANTS, INC.

TABLE OF CONTENTS

TABLE OF CONTENTS (CONTINUED)

LIST OF TABLES

LIST OF APPENDICES

ACRONYMS AND ABBREVIATIONS

AAC	Alaska Administrative Code
ABI	Alaska Basic Industries
ADEC	Alaska Department of Environmental Conservation
AFSC	Anchorage Fueling and Service Company (a subsidiary of ASIG)
AIA	Anchorage International Airport
APDES	Alaska Pollutant Discharge Elimination System
ASIG	Aircraft Service International Group
AST	aboveground storage tank
BMP	best management practices
CFR	Code of Federal Regulations
CGP	construction general permit
CP	Oil Discharge and Prevention Contingency Plan
CWA	Clean Water Act
DMR	discharge monitoring report
EPA	Environmental Protection Agency (U.S.)
EPCRA	Emergency Planning and Community Right-to-Know Act
IDDE	Illicit Discharge Detection and Elimination
JBER	Joint Base Elmendorf-Richardson
LID	low Impact development
MS4	Municipal Separate Storm Sewer System
MEP	maximum extent practicable
MOA	Municipality of Anchorage
MSGP	Multi-Sector General Permit
NAICS	North American Industry Classification System
NOI	notice of intent
NPDES	National Pollutant and Discharge Elimination System
O&M	operations and maintenance
OWS	oil water separator
PHF	pesticides, herbicides, and fertilizers
PAMP	Port of Alaska Modernization Program
Port	Port of Alaska
QAPP	quality assurance project plan
R&M	R&M Consultants, Inc.
SIC	standard industrial classification
SOP	standard operating procedure
SPCC	Spill Prevention, Control, and Countermeasure
SWMP	storm water management program
SWPPP	storm water pollution prevention plan

ACRONYMS AND ABBREVIATIONS (CONTINUED)

SWR	system-wide report
TAqH	total aqueous hydrocarbon
Tesoro	Tesoro Alaska Petroleum Company
TOTE	TOTE Maritime Alaska
TTLR	tank truck loading rack
U.S.C.	U.S. Code
UST	underground storage tank
VFA	vehicle fueling area
WQS	water quality standards

STORM WATER MANAGEMENT PROGRAM PLAN

PORT OF ALASKA
STORM WATER MANAGEMENT PROGRAM
ANCHORAGE, ALASKA

1.0 INTRODUCTION

This Storm Water Management Program (SWMP) plan document has been prepared by for the Port of Alaska (Port) and its Stakeholders. The plan was prepared in accordance with the requirements of the Alaska Pollutant Discharge Elimination System (APDES) Port of Anchorage [Alaska] Municipal Separate Storm Sewer System (MS4) Permit No. AKS052426 – authorized 1 August 2015. The Port's storm water discharges were originally covered under the U.S. Environmental Protection Agency's (EPA) 1995 National Pollutant and Discharge Elimination System (NPDES) Port of Anchorage [Alaska] MS4 Permit. Waste water management and discharges permitting was transferred in phases from the EPA to the Alaska Department of Environmental Conservation (ADEC) beginning in 2008; authority for regulating storm water permitting was transferred in 2009. In 2015, the Port's MS4 Permit was reissued under the APDES. To fulfill the requirements of the new 2015 permit, previous Storm Water Pollution Prevention Plans (SWPPP) and System-Wide Reports (SWRs) were reorganized into the current SWMP plan document, Summary and Detailed Annual Reports. The purpose of this SWMP plan document is to provide guidance to the Port and its Stakeholders on a continual basis and to reduce the potential for pollutants to enter storm water runoff and affect surface water quality.

The overall goal of APDES regulations is to improve water quality in lakes, streams, rivers, oceans, and wetlands across Alaska. During periods of rainfall or snowmelt runoff, pollutants are washed from the surfaces of roads, roofs, parking lots, loading docks, storage areas, and other impermeable areas exposed to precipitation. In turn, these pollutants may dissolve, become suspended, or float on the surface of the runoff and eventually flow into local receiving waters. The quality of the receiving water is thus influenced by the materials and activities occurring on surfaces exposed to storm water. Water quality is also adversely impacted by pollutants entering storm drain systems directly – from discharges associated with illicit connections or illegal dumping – during dry weather periods.

One of the main objectives of APDES regulations are to reduce or eliminate illegal dumping and illicit connections, to reduce – preferably at their sources – the total number of pollutants, and to reduce the overall amount of pollution in storm water. The Port will accomplish these objectives at their facility by developing and continually implementing a SWMP to systematically monitor and address the following:

- Facility site characteristics and drainage systems
- Potential sources of storm water pollution
- Effective Best Management Practices (BMP)

- Implementation and maintenance of selected BMPs
- Evaluation of the measures, controls, and practices selected to reduce potential pollution
- Required annual SWMP updates and reporting

1.1 ORGANIZATION

The current SWMP is included with each Annual Report to provide an overview and assessment of the Port's implementation of the SWMP for the preceding year.

1.2 CERTIFICATIONS

Appendix A, Part 1.12 of the Port's MS4 permit requires that any application, report, or information submitted to the ADEC in compliance with a permit requirement must be signed and certified in accordance with 18 Alaska Administrative Code (AAC) 83.38 (Appendix A).

1.3 DISCHARGES AUTHORIZED UNDER THIS PERMIT

Subject to the conditions set forth herein and in the permit, the Port is authorized to discharge storm water to waters of the U.S. from all portions of the MS4 owned and operated by the Port. This permit also authorizes the discharge of storm water commingled with flows contributed by process wastewater, non-process wastewater, and storm water associated with industrial activity, provided that the storm water in these flows is only commingled with those categories of allowable non-storm water discharges set forth in Permit Section 1.3. This permit will consider any and all activities conducted by Stakeholders of the Port while within the jurisdictional boundaries of the Port, and which activity leads to a discharge either to or from the MS4, to be an activity of the Port and subject to the conditions of the Port's MS4 permit.

1.4 PORT DESCRIPTION

The Port is located in an industrial area of Anchorage, Alaska, and currently comprises roughly 220 acres of land. It is bordered by Cook Inlet to the west; Joint Base Elmendorf Richardson (JBER) to the north and east; and bulk fuel facilities to the south owned by Marathon Petroleum (formerly Andeavor and Tesoro Alaska Petroleum Co.) and Crowley Maritime Corporation. The Port initially began operations in September 1961, with 38,000 tons of marine cargo moving across its single berth during that first year. The Port has since expanded to a five-berth terminal providing facilities for the movement of containerized freight, iron and steel products, wood products, methanol, bulk petroleum, and cement.

The Port is used regularly by two major cargo carriers that bring several ships weekly from the Pacific Northwest. The Port is also used by petroleum tankers and barges that supply jet fuel for Ted Stevens Anchorage International Airport operations and petroleum products bound for western Alaska. Overseas cargo carriers from Japan and Korea use the Port to import and export pipe, drilling mud, construction materials, automobiles, cement, and other freight.

Current Port facilities include petroleum hydrocarbon transfer terminals, a petroleum hydrocarbon pipeline valve yard, cargo ship terminals, container cranes, equipment and material staging yards, vehicle transit areas, an administrative building with associated vehicle parking areas, a Security Center, and a maintenance facility. The Port maintenance facility consists of a maintenance building/shop, an aboveground storage tank (AST) vehicle fueling area (VFA) including a liquid

magnesium chloride storage tank, a used-oil AST, a semi-permanent sand storage tent, and a dry storage building. The Security Center consists of a security/visitor building, a vehicle screening tent, and an emergency generator with supporting AST. Four underground petroleum hydrocarbon pipelines and a pneumatic cement pipeline are located in utility easements. In addition to the above, the Port is also responsible for maintaining shared areas including transit areas, road rights-of-way, and vacant lease properties.

The Port acquired 48 acres of previously leased land from the U.S. Army in 2011; this area was recently platted and incorporated into Tract J. The land is mostly undeveloped and vegetated, with the exception of a rail spur, the Port's Security Center, and associated access roads (both paved and unpaved). For the undeveloped areas, storm water flows overland and downhill to receiving drainage ditches located along Terminal Road. In the Security Center area, storm water collected from the paved surfaces either sheet flows into drainage ditches or passes through a small network of storm drains that discharge to the drainage ditches.

The demand for Port services has grown steadily in recent years, and this growth is expected to continue into the future. To keep pace with future trends in the shipping industry and to better serve existing and potential clients, the Port planned to expand its facilities. Actual construction began in 2006 and was halted in 2012 pending additional design and scope changes. Areas of ground disturbance – the North Extension and South Backlands areas — have been stabilized. A notice of termination for coverage under the Alaska Construction General Permit (CGP) was submitted and until construction resumes, storm water discharges from these areas are included in the existing Port MS4 permit and the SWMP. The proposed design has significantly changed and strategic improvements/replacements rather than expansion are proposed under the new Port of Alaska Modernization Program (PAMP). Phase I of the PAMP began in 2018 with ground stabilization efforts for construction of a new Petroleum Cement Terminal and was completed in 2019. Storm water discharges from new and reconstructed facilities within the Port's jurisdiction will be covered under this Plan.

1.5 DESCRIPTION OF THE STAKEHOLDER FACILITIES

A 220-acre industrial park adjoins the cargo docks of the Port to the east. Approximately 81 acres of the industrial park are under long-term lease to various Port Stakeholders. The majority of the Port's acreage is presently occupied by the two major cargo carriers, Matson and TOTE Maritime Alaska (TOTE). Three other Stakeholders include Marathon, Menzies Aviation (Anchorage Fueling and Service Company [AFSC]), and Delta Western, Inc., all of which operate bulk fuel and/or methanol storage facilities. The last Stakeholder is Alaska Basic Industries (ABI) which operates a storage and transfer facility for cement. As a neighbor to JBER, the Port provides support services related to military deployment and staging areas for military equipment and cargo. The Port industrial park also has approximately 31 acres available for the temporary staging and storage of marine cargo in transit. In coordination with the Port, McFarland Cascade is currently using a portion of this acreage for lumber and material storage.

1.5.1 MENZIES AVIATION/AFSC

This bulk fuel storage facility is owned by Menzies Aviation and operated by AFSC. Menzies' facility includes a control building, a parking area, an emergency generator intermodal shipping container with a 300-gallon fuel storage tank, a tank truck loading rack (TTLR), a pump station, a bulk fuel tank farm with nine ASTs within a secondary containment area, and an undeveloped wetlands area.

Additionally, Menzies Aviation operates an underground pipeline system for transporting fuel from the docks to the tank farm, and from the tank farm to Ted Stevens Anchorage International Airport (AIA) with the main purpose to store and transport jet fuel for use at AIA.

1.5.2 MARATHON PETROLEUM

Marathon's bulk fuel storage facility includes an administrative/operations building, a parking area, an operations area containing a TTLR that drains to a 12,000-gallon underground storage tank (UST), a valve line-up box, a warehouse facility, a bulk fuel tank farm with 19 ASTs within a secondary containment berm, and an underground pipeline system for transporting fuel from the docks to the tank farm. Marathon's main purpose is to store and supply a variety of petroleum products to western Alaska.

1.5.3 MATSON

Matson's facilities include an administrative/warehouse building, equipment and material staging yards, cargo and vehicle transit areas, shipping container cranes on the docks, two maintenance buildings (one of which contains a vehicle wash bay), a VFA, and vehicle parking areas. Matson facilities also include a portable, inflatable hazardous substance containment unit that can be deployed anywhere on the yard. Matson is one of two major users of the Port's cargo ship terminals. They provide marine shipping services between Anchorage and the Pacific Northwest as well as other overseas locations.

1.5.4 TOTE MARITIME ALASKA

TOTE's facilities include an administrative building, a vehicle inspection facility with vehicle wash bays, an operations center (located in the vehicle maintenance building), equipment and material staging yards, a VFA, cargo and vehicle transit areas, a vehicle maintenance building with a vehicle wash bay, inbound and outbound hazardous cargo container areas, and parking areas. TOTE is one of two major users of the Port's cargo ship terminals. They provide marine shipping services between Anchorage and the Pacific Northwest.

1.5.5 DELTA WESTERN

Delta Western's current facilities include one 50,000-barrel methanol tank with a vapor combustion unit, control building, a dedicated methanol pipe system and marine manifold to transfer methanol from cargo ships through the Port valve yard to the methanol tank, and a truck loading rack and pump to load methanol into transporters (tanker trucks). Delta Western's main purpose is to store and distribute methanol. As market demands, Delta Western may construct up to five additional tanks for methanol storage.

1.5.6 ALASKA BASIC INDUSTRIES (ABI)

ABI is leasing a portion of the South Backlands area for a cement storage and transfer facility. The cement storage facility has the capacity to contain up to 40,000 tons of cement product. For clarification, there are a number of ABI facilities — cement storage silos, truck and rail container loading facilities, etc. — located at the greater Port complex, however, only facilities sited within the South Backlands area fall within the jurisdictional boundaries of the Port's MS4 permit. All other

structures, systems, and associated storm water discharges are managed by the Municipality of Anchorage (MOA).

1.6 STORM WATER DRAINAGE SYSTEM

The Port's storm water system is permitted and regulated by the APDES program as a regulated small MS4. It consists of seven outfalls that discharge into the Cook Inlet tidelands: outfalls 001, 002, 003, 004, 005, 006, and 007. The system includes numerous structural controls, such as solid piping, perforated piping, containment berms, drainage valves, catch basins, a sedimentation basin, manholes, sumps, grating, drainage ditches, and curbing. Outfalls 001, 002, and 003 have been monitored and included in the Port's MS4 since permit issuance. Outfall 006 collects and discharges storm water from the South Backlands. Outfall 007 drains the North Extension Area which is part of the PAMP. These areas are covered under the Port's existing MS4 permit.

There are currently two other outfalls located at the Port that discharge into Cook Inlet, the Petroleum Hydrocarbon Valve Yard outfall (Outfall 004) and the Gaylor Gulch outfall (Outfall 005). . Gaylor Gulch drains storm water from JBER to the east; JBER is covered under a separate APDES MS4 permit. Storm water traveling through Gaylor Gulch discharges into the Gaylor Gulch Weir at the foot of Cherry Hill. The weir is drained by a buried storm drain line that trends north along Terminal Road before turning sharply to the west and traversing Port property to empty into Cook Inlet near Trestle No. 1-A. Both the weir and the buried line belong to JBER. In the current configuration of the Port's MS4, several storm drain catch basins on Port property discharge runoff into this line. Although this commingling of storm water does occur, the quality and quantity of storm water in the line remain the general responsibility of JBER. It is roughly estimated that greater than 90 percent of the flow in this line originates on JBER.

A storm water outfall under JBER jurisdiction was identified in 2018 near the northeast corner of Tract J. This outfall is causing notable erosion downstream on Port property. Coordination between the Port and JBER is ongoing to identify both a short-term fix to the issue and determine a long-term engineered solution.

The Petroleum Hydrocarbon Valve Yard has its own storm drain outfall (Outfall 004), which is not interconnected to the Port's storm drain system. The valve yard is also equipped with a manual discharge valve and oil/water separator.

2.0 GENERAL REQUIREMENTS

The Port must revise, as necessary, implement, and enforce this SWMP, which is designed to reduce the discharge of pollutants from the MS4 to the maximum extent practicable (MEP) to protect the water quality of receiving waters. The SWMP must include BMPs, control techniques, system design, engineering methods, and other provisions as appropriate to control and minimize the discharge of pollutants to and from the MS4.

This SWMP covers the effective term of the current MS4 Permit (1 August 2015 through 31 July 2020) and will be updated as necessary or as required by ADEC, to ensure compliance with Section 402(p)(3)(B) of the Clean Water Act (CWA), 33 U.S. Code (U.S.C.) §1342(p)(3)(B). Modifications to the SWMP will be made in accordance with Part 2.4 of the MS4 permit. All components and requirements of the SWMP are enforceable conditions of the permit. The Port will conduct an annual review of the SWMP, its implementation effectiveness, and submit an updated version with the Annual Reports to ADEC annually by 15 February.

The Port must submit any plan revisions or documents that require review and approval by ADEC to the address listed in Part 4.5 of this document and in accordance with Parts 2.4 and 4.0 of the permit. Within 60 days of receipt of such plans or documents, ADEC has the right to disapprove or require modifications to the plans or documents for approval. The SWMP will clearly identify the roles and responsibilities of the Port as well as activities required of the Stakeholders by the Port.

2.1 APPLICATION FOR PERMIT REISSUANCE

The Port will apply for permit reissuance on or before 2 February 2020.

2.2 NOTIFICATION OF NONCOMPLIANCE

Incidences of non-compliance that may endanger human health or the environment must be orally reported to ADEC within 24 hours from the time the Port and/or Stakeholder becomes aware of the circumstances of noncompliance. Within 5 days after the Port and/or Stakeholder becomes aware of the circumstances, ADEC will be given written notification of the noncompliance incident. Details of the required documentation are outlined in Appendix A, 3.4 of the MS4 Permit.

2.3 ANNUAL REPORTING

Results and details of annual inspections, the number and type of official enforcement actions, and the type of public education activities and outcomes will be documented in the Detailed and Summary Annual Reports. Refer to the SWMP, Section 4.3 for additional information.

2.4 TRANSFER OF OWNERSHIP, OPERATIONAL AUTHORITY, OR RESPONSIBILITY FOR IMPLEMENTATION

Transfer of ownership, operational authority, or responsibility for SWMP implementation requires submittal of all corrected documentation to ADEC for a 60-day review before implementation of transfer.

The Port must implement the SWMP in all new areas added or transferred to the Port's MS4 (or for which the Port becomes responsible for implementation of storm water quality controls) as expeditiously as practicable, but within one year from the date upon which the new areas were

added. Such additions and schedules for implementation must be documented in the next Detailed Annual Report following the transfer.

2.5 STAKEHOLDERS AND MSGP

ADEC assumed responsibility for the storm water program effective 31 October 2009 as part of the phased transition of the NPDES permitting program from the EPA to the ADEC. In the past, the Port has maintained coverage under the NPDES for storm water discharges; all of the Port Stakeholders had coverage by extension under the Port's Individual NPDES Permit. Now that authority for the storm water program has transferred, the Port's MS4 permit was re-issued by ADEC as an Individual APDES Permit. As a result, Stakeholders will no longer be directly covered under the Port's MS4 permit, and will be responsible for obtaining their own storm water discharge permit coverage under the Multi-Sector General Permit (MSGP). Current Stakeholder coverage status is listed in Table 2-1 below.

TABLE 2-1: PORT OF ALASKA STAKEHOLDERS

Facility Name	Nature of business or activity	North American Industry Classification System (NAICS)	MSGP Coverage Status (Effective – Expiration)
Menzies	Bulk fuel transfer and storage	424710	12/30/2015 – 3/31/2020
Marathon	Bulk fuel transfer, storage and blending	424710	11/9/2016 – 3/31/2020
Matson	Containerized freight handling	483113	8/16/2016 – 3/31/2020
TOTE	Roll-on/Roll-off containerized freight handling	483113	2/1/2018 – 3/31/2020
Delta Western	Methanol transfer and storage	424690[1]	11/2/2015 – 1/31/2019
ABI	Cement transfer and storage	423320	Non-Exposure Certification Filed

[1] Delta Western filed a Notice of Termination for MSGP coverage on 31 January 2019; the current NAICS/SIC codes does not require MSGP coverage.

2.6 STORM WATER POLLUTION PREVENTION TEAM

Roles and responsibilities of the Storm Water Pollution Prevention Team are summarized in this section. Names and contact information are contained in Appendix B.

Team Leader - The responsibilities of the Port's SWPP Team Leader are outlined below:

- Serve as primary point of contact for all communications concerning SWMP implementation.
- Coordinate annual updates and revisions to the SWMP and annual reports.
- Serve as a liaison between Port management and individual team members.
- Define and communicate to team members the APDES Storm Water Discharge Permit requirements, due dates for implementation, and set clear and reasonable goals for the Port's SWMP.

SWPP Team Members - The responsibilities of individual SWPP Team Members are outlined below:

- Serve as the point of contact for issues concerning storm water discharge compliance and inspections at Port tenant facilities and leased properties.
- Coordinate their respective company's response to APDES storm water discharge compliance issues.
- Annually help facilitate employee training program with Port-provided or approved materials.
- Evaluate any existing environmental or general operations and management plans – including preventive maintenance for their respective Port facility – and incorporate storm water management practices into facility operations to the extent not already addressed by those plans.
- Annually review this SWMP and discuss the results of an inspection of their respective Port facility or leased properties.
- As part of the annual SWMP review, report whether their facility is in compliance with the SWMP, communicate any deficiencies in the SWPPP as it concerns their operations, and report any changes in the facility or operations and management practices which are relevant to storm water pollution prevention.
- As part of the annual SWMP review, provide verbal assurance that an assessment for non-storm water discharges from their leased properties has been performed.
- Be designated as responsible for spill prevention, response, and reporting at their respective Port facility.

3.0 MINIMUM CONTROL MEASURES

3.1 PUBLIC EDUCATION AND OUTREACH

Table 3-1 summarizes the requirements of the MS4 Permit and outlines the corresponding activities at the Port related to Public Education and Outreach.

TABLE 3-1: PUBLIC EDUCATION AND OUTREACH

Permit Requirements	Planned and Ongoing Activities
Revise as necessary, implement, and evaluate an ongoing Port education program to educate the permittee's Stakeholders and users about the impacts of storm water discharges on water quality.	The Port or its representative will implement an annual storm water pollution prevention education program. All Port and Stakeholder employees and contractors who are involved in activities having the potential to impact storm water quality will be required to participate in the education program. The purpose of the education program will be to promote, publicize, and facilitate the following: • Implementation of technologies and techniques to prevent pollution through source reduction and recycling. • Reporting of the presence and improper disposal (illicit discharges) of materials into the Port's MS4 • Proper management and disposal of vehicle fluids, common hazardous wastes and materials, and solid waste. • Proper use, application, and disposal of pesticides, herbicides, and fertilizers by commercial and private applicators and distributors conducting such business within the area covered by the Port's MS4 permit. The annual education program will consist of presenting a relevant storm water pollution prevention training video that will provide training on Illicit Discharge Detection and Elimination (IDDE), BMPs, and good housekeeping measures that can prevent storm water contamination from occurring. Following presentation of the video, a quiz on the video's content will be administered, and trainees will sign a training acknowledgment form stating the date training was received. In addition, the training session will include a brief time during which trainees may ask questions and seek clarification on storm water related issues. If the trainer(s) is not able to provide adequate answers, the Port or its representative will be responsible for providing additional information.
The education program must include the steps that the following key audiences – employees, contractors, Stakeholders, and visitors – can take to reduce pollutants in storm water runoff.	Steps that can be taken to reduce pollutants in storm water runoff: • Properly install BMPs. • Attend trainings. • Follow good housekeeping. • Use proper spill prevention and response procedures.

TABLE 3-1: PORT OF ALASKA STAKEHOLDERS (CONTINUED)

Permit Requirements	Planned and Ongoing Activities
Primary goal of the education program is to reduce or eliminate behaviors and practices that cause or contribute to adverse storm water impacts. The permittee must develop a prioritized schedule and plan in addition to the items listed in Part 3.1.3 of the Permit to reach the key audiences through the ongoing education efforts.	The education program will cover these items listed in Part 3.1.3 of the Permit: • Reporting the presence of illicit discharges or improper disposal of materials into the MS4. • Proper management and disposal of used oil and commonly used hazardous materials. • Proper use, application, and disposal of pesticides, herbicides, and fertilizers by commercial and private applicators and distributors conducting such business within the Port's jurisdictional area. • Pollution prevention and good housekeeping practices. The education program is a year-round effort consisting of various activities to disseminate information to the key audiences. Port and Stakeholder employees who are involved in activities having the potential to impact storm water quality will be required to participate annually in the public education program described above. At quarterly meetings, educational material will be disseminated to the Storm Water Pollution Prevention Team Members who in turn will distribute the information to their staff. As the Port is a secure facility, unescorted visitors are infrequent (other than vehicle transfers) and likely will have limited to no contact with storm water. Visitors are typically escorted by Stakeholder or Port representatives for the entirety of their visit. For vehicle shipment/receipt through TOTE, the public must check in with security but are otherwise unescorted. As needed throughout the year, trainings will be conducted to address violations or incidents involving storm water and pollution prevention.

3.2 PUBLIC INVOLVEMENT AND PARTICIPATION

TABLE 3-2: PUBLIC INVOLVEMENT AND PARTICIPATION

Permit Requirements	Planned and Ongoing Activities
Make the latest updated version of the SWMP Plan and Annual Report available to the public.	Each year, the Port will post the latest version of the SWMP Plan and Annual Report on the Port's website: https://www.portofalaska.com/business/storm-water-management/
Within one year of the effective date of this permit, the permittee will develop and implement a storm drain stenciling program with attainment of stenciling 50 percent of the storm drain inlets within two years and stenciling 100 percent of the storm drain inlets within four years.	As of August 2015, 100 percent of the storm drains at the Port have been stenciled. Storm drains are remarked as needed.
Storm Water Pollution Prevention Team is to meet at least quarterly to coordinate and accomplish the goals of the SWMP. Meetings must be made known to lessees and ADEC through direct mail or e-mail notification, if possible. Document SWPP Team meeting minutes in the Annual Report.	The Storm Water Pollution Prevention Team will meet quarterly to coordinate and accomplish the goals of the SWMP. Meeting notifications will be sent via e-mail to the Port, Stakeholders, and ADEC. See Appendix B for the list of Storm water Pollution Prevention Team members. The meeting minutes will be made available on the website and documented in the reports.

3.3 ILLICIT DISCHARGE DETECTION AND ELIMINATION (IDDE)

"Illicit discharge" means any discharge to the Port's MS4 that is not composed entirely of storm water. Illicit discharges of liquid or solid waste into any storm drain inlet including, but not limited to, ditches, surface water bodies, floor drains, sinks, catch basins, manholes, sheet flow runoff, or other storm drain inlets, are prohibited and considered illicit discharges. Table 3-3 summarizes the requirements of the MS4 and outlines the corresponding activities at the Port related to Illicit Discharge Detection and Elimination.

TABLE 3-3: ILLICIT DISCHARGE DETECTION AND ELIMINATION

Permit Requirements	Planned and Ongoing Activities
Conduct wet and dry weather outfall inspections to identify and investigate any illicit, inappropriate, or undocumented non-storm water discharge to the storm sewer system.	Refer to the Monitoring Program Plan appended to the SWMP.
Implement a program to detect and eliminate illicit discharges. Specifically, the program must incorporate detection, identification of the source, and removal of non-storm water discharges, including illegal dumping into the storm sewer system. The permittee must, as part of this activity, develop a system to track illicit discharges.	The Port and its Stakeholders implement an ongoing, year-round awareness program to encourage employees to report any illicit discharges to their respective SWPP team member or supervisor. The intent of the awareness program is to encourage employees to be mindful of storm water management practices and discuss storm water related issues during safety or staff meetings. The program is implemented each year with a brief storm water-specific training session conducted by the Port's representative for each Stakeholder. The current topic and training focus is IDDE. If an illicit discharge is discovered, an Illicit Discharging Tracking Form (Appendix C) will be completed and submitted to the Port. Details, resolutions, and enforcement actions (if any) will be documented and included in the Annual Reports.
Effectively prohibit non-storm water discharges into the MS4 through an ordinance or other regulatory mechanism to the extent allowable under federal, state, or local law. Implement appropriate enforcement procedures and actions, including enforcement escalation procedures for recalcitrant or repeat offenders.	MOA ordinance (15.50.020) prohibits non-storm water discharges into the MS4. As an entity of the MOA, the Port will enforce this ordinance in addition to Port-specific enforcement regulations. In addition, Stakeholders will be financially responsible for costs incurred by the Port to resolve Stakeholder MS4 incidents; if incidents are repetitive, the Port reserves the right to revoke the existing lease.

TABLE 3-3: ILLICIT DISCHARGE DETECTION AND ELIMINATION (CONTINUED)

Permit Requirements	Planned and Ongoing Activities
Update the existing comprehensive storm sewer system map. At a minimum, the map must show jurisdictional boundaries, location of all inlets and outfalls, names and locations of all waters that receive discharges from those outfalls, and locations of all operated facilities, including snow storage sites.	An updated comprehensive storm sewer system map is included in Appendix D and depicts current MS4 jurisdictional boundaries.
Describe the controls to limit infiltration of seepage from municipal sanitary sewers to the MS4 where necessary; submit to ADEC as part of the corresponding Annual Report.	The Port continuously monitors/surveys the storm drain system to identify any deficiencies. As additional deficiencies in the storm drain system are identified, a description of controls, timeline, and resources to mitigate infiltration of seepage from municipal sanitary sewers to the MS4 is compiled. A description of the controls will be submitted in the corresponding Detailed Annual Report when they are completed and incorporated into the SWMP as necessary.
Describe the controls, timeline, and resources to mitigate groundwater infiltration from petroleum-contaminated sites to the MS4 where necessary.	The Port periodically surveys the storm drain system to identify deficiencies. As sections of the storm drain system with deficiencies are identified, a description of controls, a timeline, and resources to mitigate groundwater infiltration from petroleum-contaminated sites to the MS4 will be submitted with the corresponding Detailed Annual Report.
The Port must investigate any illicit discharge within 15 days of detection and must take action to eliminate the source of the discharge within 45 days of detection; raw data and narrative review of screening and mapping will be included in the following year's Annual Report from the year the data was collected	Upon identification of an illicit discharge, the Port or its representative will complete an Illicit Discharge Tracking Form (Appendix C) and notify the appropriate individuals of the discharge. Refer to Section 3.5 for enforcement.
The Port must document information related to illicit discharge detection and elimination in the Annual Report.	If illicit discharges have occurred, the Port will review documentation of the discharges as part of the Detailed Annual Reporting process and include descriptions of the criteria used to prioritize investigations in areas suspected of having illicit discharges, procedures used to locate and remove illicit discharges (with all detection methods), a summary of all dry weather testing conducted to date, description of the methods used over the previous twelve-month period to inform/train users, and a copy of the established ordinance or other regulatory mechanism used to prohibit illicit discharges into the MS4 in the Annual Report.

3.4 CONSTRUCTION SITE STORM WATER RUNOFF

All construction projects at the Port will adhere to the conditions of applicable local, state, and federal laws which require construction site operators to practice appropriate erosion, sediment, and waste control through authorization under the APDES CGP.

Per the MS4 permit, "Construction Activities" are considered ground disturbing activities involving a total land disturbance of 10,000 square feet or more at a single construction site or as part of a plan of common development having the potential to discharge to waters of the U.S. Table 3-4 summarizes the requirements of the MS4 permit and outlines the corresponding activities at the Port related to Construction Site Storm Water Runoff.

TABLE 3-4: CONSTRUCTION SITE STORM WATER RUNOFF

Permit Requirements	Planned and Ongoing Activities
The Permittee must develop, implement, and enforce a program to reduce pollutants into storm water runoff and the MS4 during construction activities.	To document that storm water quality controls have been addressed prior to the beginning of any construction project, the responsible party (construction contractor) will complete the Construction Site Form (Appendix C) and submit to the Port for a consistency review against the SWMP for all ground disturbance projects exceeding 10,000 square feet. If the project area equals or exceeds one acre, the Contractor must complete this form prior to filing a Notice of Intent (NOI) with ADEC.
The permittee must adopt or develop and implement procedures for site inspection and enforcement of control measures. The permittee will inspect all construction sites and maintain documentation of the inspection findings in their jurisdictions for appropriate erosion/sediment/waste control at least once per year.	The Port will facilitate inspections by ADEC as necessary to document regulatory compliance. The Contractor for each project will conduct regular SWPPP inspections and will submit inspection records to the Port within seven calendar days of the inspection. The Port may conduct announced and unannounced construction site inspections at any time.
The Procedures must include provisions for receipt and consideration of information submitted by the public.	NOIs submitted for authorization under the CGP are posted on ADEC's website. The Port will respond to any comments received by the public regarding storm water compliance.
Implement a program that provides appropriate education and training for construction site operators.	Part of the ongoing educational program; refer to SWMP Part 3.1.
The permittee must adopt or publish and distribute requirements for construction site operators to implement appropriate erosion and sediment control BMPs and to control waste such as discarded building material, concrete truck washout, chemicals, litter and sanitary waste at the construction site that may cause adverse impacts to water quality.	The Port will adhere to the requirements of the CGP and educate Port employees, Stakeholders, and Contractors as necessary with new BMPs, control technology, and relevant regulations.

3.5 ENFORCEMENT

The Stakeholder is responsible for the clean-up and resolution of an MS4 incident (illicit discharge, etc.) and associated costs to remedy the issue. If incidents become repetitive and/or the Stakeholder is recalcitrant, the Port reserves the right to revoke or modify the Stakeholder's lease as deemed appropriate. Below is a table that presents the warning system and repercussions for each time an incident occurs.

TABLE 3-5: ILLICIT DISCHARGE WARNING SYSTEM AND REPERCUSSIONS

Number of Times the Incident Occurs	Repercussion
First Incident (Blue Flag)	Verbal warning.
Second Incident (Yellow Flag)	Written warning – Documentation and notification to ADEC as necessary.
Third Incident (Orange Flag)	Training – The Port, at its discretion, may require a storm water training session specific to the incident at the Stakeholder's/Contractor's expense.
Fourth Incident and onward (Red Flag)	The Port, at its discretion, may choose to fine the Stakeholder/Contractor for the incident and reserves the right to revoke the Stakeholder's lease.

3.6 POST-CONSTRUCTION SITE STORM WATER RUNOFF

Table 3-6 summarizes the requirements of the MS4 and outlines the corresponding activities at the Port related to Post-Construction Site Storm Water Runoff.

TABLE 3-6: POST-CONSTRUCTION SITE STORM WATER RUNOFF

Permit Requirements	Planned and ongoing activities
The permittee must develop a strategy that outlines the methods of evaluating Green Infrastructure/ Low-Impact Development (LID) pilot projects. The Program must ensure that controls are in place that would prevent or minimize water quality impacts and comply with the evaluating Green Infrastructure/LID pilot projects strategy.	The Port will incorporate LID structures/Green Infrastructure into any future construction projects that will occur at the Port to the maximum extent practical. All construction and/or development proposals will be required to consider LID components in their design. If not practicable, supporting documentation regarding the prohibitive factors is required and must be communicated to the Port.
The permittee must adopt or develop, implement, and enforce a program to address post-construction storm water runoff from new development and redevelopment projects that disturb greater than or equal to 10,000 sq. ft. that discharge into the MS4.	To document that post-construction storm water runoff controls from new development and redevelopment projects that disturb greater than or equal to one acre have been addressed , the responsible party for each construction project is required by applicable state and federal storm water regulations to prepare a post-construction design for permanent storm water controls and submit to the Port for review. The proposed designs must consider LID components to the extent practicable. The post-construction storm water control design should incorporate plans and specifications, including explanations of the proposed storm water quality control measures, BMPs, and Standard Operating Procedures (SOP) that will be used to prevent the discharge of pollutants to the MS4 upon completion of project construction. The responsible party must also complete the Port's Post-Construction Site Form (Appendix C) and submit it, along with a drainage plan to the Port. The responsible party will comply with the submitted drainage plan or the Port holds the right to revoke the Stakeholder's lease. If the responsible party should divert from the plan and it results in an incident, the responsible party will be responsible for any costs (time, effort, and materials) incurred by the Port to resolve the incident.
The permittee must carry out a planning process, for example, a master plan, to develop, implement and enforce controls to reduce post-construction runoff from new development and redevelopment projects.	The current Port Master Plan was completed in 1999. It requires developing, implementing, and enforcing storm water quality controls during all future planning sessions. Consideration will be given to the impacts that new and redevelopment projects may have on storm water quality.

3.7 POLLUTION PREVENTION AND GOOD HOUSEKEEPING

Table 3-7 summarizes the requirements of the MS4 and outlines the corresponding activities at the Port related to Pollution Prevention and Good Housekeeping.

TABLE 3-7: POLLUTION PREVENTION AND GOOD HOUSEKEEPING

Permit Requirements	Planned and Ongoing Activities
Must conduct storm water pollution prevention inspections including: bulk fuel facilities including their perimeters and catch basins.	The Port will conduct storm water pollution prevention inspections for its facilities. Stakeholders will conduct inspections for facilities that are their responsibilities and maintain records of inspections.
Provide an area for the washing of Port owned or operated vehicles that will not result in a discharge to waters of the U.S. Encourage the use of detergent-free methods of vehicle washing and require regular maintenance of the area to ensure wash waters do not enter waters of the U.S.	The Port provides an indoor area for washing of Port owned or operated vehicles within the maintenance and cold storage buildings. If outdoor washing of vehicles is required, it will be in a designated pervious area with storm water controls to prevent a discharge to waters of the U.S. or the MS4 system. The Port does not provide a vehicle washing area to Port Stakeholders. If applicable, individual Port Stakeholders maintain their own vehicle washing area and are responsible for proper operation and maintenance of this area. The Port Stakeholders ensure proper management practices are adhered to at all times in the respective Stakeholder's vehicle washing area(s).
Implement a program to identify, monitor, and control pollutants in storm water discharges to the MS4 from: hazardous waste treatment, storage, and disposal facilities that are subject to Emergency Planning and Community Right-to-Know Act (EPCRA) Title III, Section 313; bulk storage facilities; and any other industrial or commercial discharges the Port determines are contributing a substantial pollutant loading to the MS4. The program will include priorities and procedures for inspections and establishing and implementing control measures for such discharges. The program will also include an inventory listing the facility name, address, nature of business or activity, and Standard Industrial Classification (SIC) code(s) that best reflect the facilities produce or service.	Two bulk fuel storage facilities at the Port – operated by Menzies Aviation and Marathon – have the potential to contribute pollutant loading to the MS4. Industrial dischargers are required to have a program that includes the following: • Priorities and procedures for inspections and establishing and implementing control measures for their storm water discharges into the MS4 • A self-monitoring program, including the collection of quantitative data on the constituents listed in Permit Part 4.1.2.3.2. Maintenance and inspection activities for facilities and equipment that have the potential to affect storm water quality will be recorded and kept on file at each respective facility. Records will include the name of the person conducting the activity, the date, time, exact place, and description of the activities conducted, as well as findings and follow-up. Materials tracking and inventory practices will be continually reviewed and improved so that wastes resulting from overstocking and the disposal of outdated materials can be reduced and/or eliminated (Appendix E).
Operate and maintain storm water structural controls, public streets, roads, parking areas, and cargo storage/staging areas under its jurisdiction in a manner to reduce, to the MEP, discharge of pollutants (including those related to deicing or sanding activities).	In addition, each facility will continue to implement litter control procedures to keep their areas free of debris that might otherwise enter the storm drain. This effort is particularly important during spring break up when the accumulated debris of the winter begins melting out of the snow and ice.

TABLE 3 7: POLLUTION PREVENTION AND GOOD HOUSEKEEPING (CONTINUED)

Permit Requirements	Planned and Ongoing Activities
Implement controls to reduce, to the MEP, the discharge of pollutants related to the application of pesticides, herbicides, and fertilizers applied by the permittee's employees, contractors, or lessees to public rights-of-way, and all Port lands and facilities.	The use and application of pesticides, herbicides, and fertilizers (PHF) that are not in accordance with Pesticide Control Regulations 18 AAC 90 is prohibited. All other use of PHFs will be minimized to the maximum extent practicable.
The Port must complete a study of the effectiveness of current street sweeping operations and storm drain cleaning operations with potential for storm water impacts.	Currently, street sweeping operations are conducted on an as needed basis. The Port is only 220 acres and minimal street sweeping is needed. The Port will begin an effort to track and measure the effectiveness of its street sweeping operations and storm drain cleaning operations in the future.

3.8 OPERATION AND MAINTENANCE PROGRAM

The following Operation and Maintenance (O&M) Program refers to Port-maintained facilities; each Stakeholder will be required to prepare and implement their own operation and maintenance program, schedule, and maintain records. Copies of individual O&M programs and records must be made available upon request.

The Permit requires the program to address Port activities with the potential to negatively impact storm water quality including: the use of sand and road deicers; fleet maintenance and vehicle washing operations; street sweeping, cleaning and maintenance; grounds and open space maintenance operations; building maintenance; solid waste transfer activities; storm water system maintenance; snow storage site operation and maintenance; snow removal practices; materials storage; scrap metal bins, hazardous materials storage; industrial-like facilities; used oil recycling; spill control and prevention measures for refueling facilities; and new construction and land disturbances.

TABLE 3-8: OPERATIONS AND MAINTENANCE ACTIVITY

Activity	Source Measure(s)
Use of Sand and Road Deicer	Road sanding with deicer will be done on an as needed basis during the winter. During spring break up, sand will be swept.
Street Sweeping, Cleaning, and Maintenance	Facilities with paved areas will continue to implement street sweeping procedures to minimize the accumulation of suspended solids in storm water and to reduce air pollution. This effort is particularly important during spring break up.
Grounds and Open Space Maintenance Operations	Relocation of Outdoor Activities – All maintenance and fabrication activities on vehicles and equipment will be performed inside or under cover unless it is not possible to do so. Ground Shielding – Impermeable drop cloths or other shielding means will be used during all outdoor work activities that have the potential to impact storm water quality. These activities typically include, but are not limited to, painting, metal work, and mechanical work. The purpose of ground shielding will be to catch debris, chips, drips, or over spray so that these materials do not enter the storm drain system.
Fleet Maintenance	All vehicle maintenance will be performed indoors or under a covered area. All vehicle maintenance areas will have controlled drainage, such as floor drains that do not discharge to the storm water system. Vehicle and equipment maintenance will be strictly limited to these controlled areas.
Vehicle Washing Operations	All vehicle washing will be performed indoors or under a covered area. All vehicle wash areas will have controlled drainage, such as floor drains that do not discharge to the storm water system. If outdoor washing of vehicles is required, it will be in a designated pervious area with storm water controls to prevent a discharge to waters of the U.S. or the MS4 system. Engine and vehicle washing will be strictly limited to these controlled areas. Use of detergents will be minimized. Regular maintenance of the area will be performed to ensure wash waters and the resulting contaminants will not be transported by storm water to waters of the U.S.

TABLE 3-8: OPERATIONS AND MAINTENANCE ACTIVITY (CONTINUED)

Activity	Source Measure(s)
Unused Materials	Unused materials will be stored in controlled, covered areas of the site where traffic patterns are not a hazard. As necessary, materials will be stored within a secondary containment unit to avoid incidental contact with surface water runoff.
Drum Storage	Empty drums and drums containing petroleum products, waste, and/or recyclable materials will be stored with closed lids or bungs in controlled, covered areas of the site where traffic patterns are not a hazard. Drums will be stored within a secondary containment unit to avoid incidental contact with surface water runoff. Alternatively, empty drums may be stored sideways in a covered drum storage rack with bungs placed at nine o'clock and three o'clock.
Battery Storage	Old batteries will be stored in controlled, covered areas of the site where traffic patterns are not a hazard. Old batteries will be stored within a secondary containment unit or above a sealed ground surface to avoid incidental contact with surface water runoff.
Scrap metal	Scrap metal will be stored in controlled, covered areas of the site where traffic patterns are not a hazard. As necessary, materials will be stored within a secondary containment unit to avoid incidental contact with surface water runoff.
Hazardous Material Storage	When not in use, hazardous materials will be stored in locked cabinets and segregated according to their chemical properties. Hazardous cargo storage areas will have secondary containment to contain spills and to prevent storm water runoff from flowing across these areas and thereby collecting pollutants. Secondary containment valves will be kept locked at all times and be inspected regularly. Inspection records will be maintained at each facility. Hazardous cargo storage areas will be located where traffic patterns are not a hazard.
Solid Waste Transfer Activities	Solid waste will be disposed of in non-leaking dumpsters, and will be kept covered at all times to prevent garbage from blowing away and precipitation from entering and corroding the dumpsters. Any solid waste container leak will be contained so that the leakage and/or solid waste will not enter the storm drain system. The leaking dumpster will be repaired or replaced immediately. Solid waste containers will be located at least 50 feet from the nearest storm drain inlet.
Recycling	Used oil, spent fluid, old parts, old batteries, and other recyclable wastes will be collected and transported to a commercial recycling facility. Wastes will be separated and properly stored until they are picked up by the recycling company.
Storm Water System Maintenance	The entire storm water system will be inspected from the surface at least once annually and at the first sign of clogging or other problems. Throughout the year, any debris that has collected in ditches or catch basins will be removed and disposed of properly to promote proper drainage and prevent pollutants from entering the storm water system. Storm water system deficiencies will be documented and repaired as logistics and funding allow.

TABLE 3-8: OPERATIONS AND MAINTENANCE ACTIVITY (CONTINUED)

Activity	Source Measure(s)
Oil Water Separators (OWS)	Maintenance personnel will periodically inspect OWS and clean or otherwise service them as necessary. Should a leak or other threatening condition occur, corrective action will be taken immediately. Maintenance and pumping activities will be documented/logged accordingly by Port staff.

3.9 SOURCE CONTROL MEASURES

In general, source control measures are implemented to prevent potential pollutants from coming into contact with areas exposed to precipitation and to prevent potential pollutants from being discharged into the storm drain system. The Port will use the following source control measures to protect and improve the quality of storm water discharges.

3.9.1 VEHICLE FUELING AREAS

Vehicle Fueling Areas (VFA) will be visually inspected periodically and/or whenever the facility is manned. Records of these inspections will be maintained at each facility.

Record keeping may be abbreviated by allowing a check-off certifying the performance of periodic inspections. Areas to be inspected for corrosion, leaks, cracks, or other physical damage include pump foundations, connections, valves, hoses, and other fittings. Secondary containment areas will be checked regularly. If fuel has entered a secondary containment area, or if a part is found to be obviously damaged, the equipment will be shut down until the nature of the problem is determined and repaired. Should a leak or other threatening condition be found anywhere, corrective action will be taken immediately, or the fueling facility will be shut down until the problem is resolved.

- VFAs will be in compliance with all federal, state, and local regulations.
- VFAs will be covered so as to prevent leaks, spills, and oily residues from washing off the equipment and into the storm drain system.
- VFAs will have drainage controls to minimize the chance of storm water contamination from drips, spills, or leaks. New VFAs will have drainage controls and provisions to monitor or collect product residue before it can enter the storm drain.
- Secondary containment systems will be kept free of debris, excessive accumulated snow or rain water, and other materials that might interfere with the systems' effectiveness.
- Drainage from secondary containment areas that discharge directly to the Port's MS4 will be controlled by locally operated positive failsafe valves, or other positive means, to prevent unintended discharge. Valves will be kept closed and locked when not in use.
- VFAs will be located where traffic patterns are not a significant hazard.
- VFAs will have protective bollards to prevent spills due to collisions.
- Fueling BMPs will be used in VFAs and spill kits will be readily available (spill prevention and response procedures are detailed in Section 3.10).

3.9.2 TANK TRUCK LOADING RACKS

- TTLRs will be in compliance with all federal, state, and local regulations.
- TTLRs will have secondary containment to contain drips, spills, leaks, or product residue that may wash off of the TTLR equipment, and to prevent runoff from discharging directly into the Port's storm drain system.
- Secondary containment systems will:
    - Be designed to contain the maximum capacity of any single tank car or tank truck compartment.
    - Include containment curbing and a trenching system or drains with drainage to a collection tank or other device designed to handle a discharge.
    - Be paved or otherwise surfaced with sufficiently impermeable materials.

  - Be kept free of debris, excessive accumulated snow or rain water, and other materials that might interfere with the system's effectiveness.
  - Have warning lights, warning signs, or a physical barrier to prevent premature vehicle movement.
- Drainage from secondary containment areas will be controlled by locally operated positive failsafe valves, or other positive means, to prevent unintended discharge. Valves will be kept closed and locked when not in use.
- TTLRs will be located where traffic patterns are not a significant hazard.
- TTLRs will have protective bollards to prevent spills due to collisions.

3.9.3 ABOVEGROUND STORAGE TANKS

- ASTs will have secondary containment to contain drips, spills, leaks, or product residue that may wash off of the AST equipment, and to prevent runoff from discharging directly into the Port's storm drain system.
- Secondary containment systems will be kept free of debris, excessive accumulated snow or rain water, and other materials that might interfere with the systems' effectiveness.
- Drainage from secondary containment areas will be controlled by locally operated positive failsafe valves, or other positive means, to prevent unintended discharge. Valves will be kept closed and locked when not in use.
- ASTs will be located where traffic patterns are not a significant hazard.
- ASTs that are not located within a tank farm will have protective bollards to prevent spills due to collisions.

3.9.4 HAZARDOUS CARGO STORAGE

- Hazardous cargo storage areas will have secondary containment to contain spills and to prevent storm water runoff from flowing across these areas and thereby collecting pollutants.
- Secondary containment valves will be kept locked at all times and be inspected regularly. Inspection records will be maintained at each facility.
- Hazardous cargo storage areas will be located where traffic patterns are not a significant hazard.

3.9.5 SNOW DISPOSAL

The Port is not authorized to discharge snow or snow melt directly to waters of the U.S. The Port's snow storage and disposal practices are authorized under this permit when such practices are operated using appropriate BMPs. Storm water controls and BMPs may include silt fencing, straw wattles, detention basins, dikes, berms, ditches, and vegetative buffers. BMPs will be designed, operated, and maintained to prevent and reduce pollutants in the discharges to the MEP to avoid excursions above water quality standards (WQS) in the receiving water. All snow removal contractors will be familiar with these guidelines prior to snow removal at the responsibility of the Stakeholder (Table 3-9).

TABLE 3-9: SNOW STORAGE GUIDELINES

Component	Source Measure
Snow Disposal Locations	The Port snow storage and management program has been developed in accordance with ADEC guidance and regulations. The current primary snow storage site is located within the Northern Extension area. The Port is presently negotiating a teaming agreement with JBER to allow the Port to construct a snow disposal area on base property. This section will be updated accordingly in future revisions to the SWMP. Snow will initially be placed at the back/far end of the disposal area gradually working towards the front of the designated area. Pushing the snow piles up is paramount to maintaining the volume of the area. Snow disposal users will push stockpiled snow after *two rows* of piles accumulate. This ensures maximum usage of the area especially during heavy snow storms. Temporary stockpiling of snow within Stakeholder transit yards and facilities is allowed. Temporary snow stockpiles should be sited away from storm drain inlets and surface waters. Snow will be relocated to long-term snow storage locations as soon as practicable.
Vehicles	All snow removal vehicles traveling to and from a snow storage area are required to use headlights at all times. If equipped, snow removal equipment will utilize amber beacons when in operation.
Operators	Operators of snow removal equipment will not drive in an unsafe manner. All posted speed limit signs will be adhered to.
Silt Fencing	In order to prevent snow storage contaminants from entering the MS4, silt-fencing is installed along the down-gradient edge. The fence will not be disturbed as it is an environmental control to prevent contaminants from reaching the storm drain system and receiving waters. Snow must be maintained 10' from the silt fence for effective storm water control. Silt fence damage or any storm water violations will be reported immediately to the Port Maintenance Supervisor or the Port O&M Manager. If neither can be reached, contact the Port Safety Coordinator.
Ditches	Dumping, pushing, placing, or blowing snow into *any* conveyance ditch is strictly prohibited. All snow must be stored at least 10' from the edge of any ditch, storm drain inlet, or surface water.

3.10 SPILL PREVENTION AND RESPONSE PROCEDURES

Spill prevention and response procedures are a vital part of the SWMP. Employees will be trained in material handling procedures, storage requirements, and cleanup procedures that minimize the potential for spills and guide spill countermeasure action. They will be trained on how to respond and/or who to contact in the event of a spill. Containment and diversion also have an important role in preventing pollutants from entering storm water runoff. The Port and its Stakeholders will implement their respective spill prevention and contingency plans in concert with the SWMP. Spill prevention and response procedures to be implemented at the Port include the following measures, many of which are covered in greater detail in Stakeholder-specific and/or the Port's Spill Prevention, Control, and Countermeasure (SPCC) and Oil Discharge and Prevention Contingency Plans (CP).

- Spill clean-up materials will be located in an unlocked area that is readily visible and/or accessible from any VFA, TTLR, AST (not located within a lined tank farm), and hazardous cargo storage area.
- Signs or placards will be posted at all VFAs stating that topping-off and unattended vehicle fueling are not permitted. Completely filling or "topping off" fuel tanks often results in overfilling the tank and is prohibited.
- Drip pans or adsorbent pads will be placed underneath all hose connections during fuel transfers.
- Dispensing nozzles will be held with the opening upwards immediately before and after vehicle fueling so that residual fuel is not spilled on the ground surface.
- All vehicle and equipment leaks will be reported and repaired as soon as possible. Leaking fluids from vehicles, equipment, or piping will be collected in drip pans or containers until appropriate repairs can be effected.
- Used fluids will be promptly transferred to the proper waste or recycling drums. Full drip pans or other containers will not be left unattended.
- Storage tanks, equipment, and piping will be inspected for leaks whenever used.
- All petroleum products, solvents, and cleaners will be stored inside a contained area so that spills and leaks are controlled.
- Tanks, containers, and drums will be stored away from direct traffic routes to prevent collisions and accidental spills.
- Fuel transfers will be monitored continuously to prevent overfilling.
- Mops, rags, or sorbent materials (cat litter, straw, sawdust, etc.) will be conveniently located next to all hazardous material storage locations and used to clean up and contain petroleum or chemical spills. Spills will not be washed into storm drains.
- Overfill protection and leak detection devices will be installed and maintained on all USTs or ASTs.
- Valves connected to the storm drain system will be clearly labeled to reduce the potential for human error.
- In the event of a spill, vacuum and pump systems will be used at the facility to collect both wet and dry materials in material handling areas and work areas.
- Spills will be reported to the appropriate personnel and/or response agency as soon as they are identified.

3.11 INDUSTRIAL AND HIGH RISK RUNOFF MONITORING PROGRAM

Each Stakeholder will be responsible for their own Industrial and High Risk Runoff locations and their own monitoring program. Each Stakeholder will submit their procedures and records of any monitoring activity to the Port upon request.

3.11.1 INDUSTRIAL HIGH RISK RUNOFF LOCATIONS

Potential pollution sources at the Port include the following:

- Materials that are used, stored, or handled
- Exposed significant materials such as those potentially found at the following locations:
  - VFAs
  - TTLRs
  - Outdoor work and storage areas

  - Transit and parking areas
  - Solid waste dumpsters
- Past spills or leaks where residual soil or groundwater contamination may be present.

3.11.2 RISK IDENTIFICATION

A potential pollutant source at the Port is past spills of petroleum hydrocarbons that contaminated the underlying soil and groundwater. This existing contamination may be infiltrating the storm drain system through joints, line breaks, and perforated subdrain sections of the system. Damage resulting from the 1964 earthquake and past poor fuel storage and transfer practices have contaminated a sizeable portion of the subsurface at the Port. In November 2012, the ADEC listed the Port in its contaminated sites database. Ongoing remediation is not being conducted at this time due to three factors: high groundwater table, tidal influence of the groundwater table, and lack of downstream receptors. Inspection, reconstruction, and/or repair of the storm drain system is ongoing to help alleviate the infiltration of contaminated groundwater.

Other processes, activities, and materials storage practices at the Port that have reasonable potential to contribute pollutants to storm runoff – if proper procedures and precautions are not implemented – are listed below:

- Bulk Fuel Storage: Bulk fuel storage facilities are considered high risk runoff facilities because of the volume of fuel storage and transfer and the potential for petroleum products to come in contact with storm water through spills, drips, or leaks.
- Vehicle Maintenance: Vehicle maintenance facilities at the Port use materials and generate wastes that have the potential to pollute storm water if leaks, drips, or spills occur in areas exposed to precipitation and if runoff is allowed to enter the storm drain. Activities that can pollute storm water include parts and shop cleaning, vehicle washing, improper storage of vehicle fluids, and improper storage of recyclable parts containing oils and lubricants.
- Chemical and Petroleum Product Use and Storage: The use and storage of chemicals and chemical-containing products – such as pesticides, herbicides, and fertilizers – and the use and storage of oil-based petroleum products has the potential to pollute storm water if leaks, drips, or spills occur in areas exposed to precipitation and if runoff is allowed to enter the storm drain.
- Fuel Pipelines: Underground and aboveground fuel pipelines have the potential to pollute storm water if they are not properly maintained and tested. Leaks, drips, and spills from pipelines can enter the storm water system or subsurface, or can be exposed to precipitation, allowing runoff to enter the storm drain.
- Vehicles, Freight Trucks, and Container Cranes: Drips or leaks of fluids from vehicles, freight trucks, and container cranes could potentially have an adverse impact on storm water quality in areas exposed to precipitation.
- Hazardous Cargo Storage: Storage of hazardous inbound and outbound cargo has the potential to pollute storm water runoff if exposed to precipitation and runoff and allowed to enter the storm drain.
- Vehicle Fueling Areas and Tank Truck Loading Racks: Vehicle and truck fueling areas that are exposed to rainfall and/or do not have secondary containment, diversionary structures, and well established SOPs to control spills have the potential to pollute storm water through leaks, drips, spills, or via rainfall washing pollutants off of the machinery.

- Loading/Unloading Operations: Materials spilled, leaked, or lost during loading or unloading may collect on pavement, soil, or on other surfaces and may be carried away by storm runoff or when the area is cleaned. Rainfall may also wash off pollutants from machinery used to load or unload cargo.
- Solid Waste Storage: Dumpsters that are exposed to rainfall (uncovered), are poorly maintained, and/or do not have secondary containment or diversionary structures to control spills have the potential to contribute chemicals and solid waste to the storm drain system.
- Outdoor Work Activities: Outdoor work activities including painting, metal, or mechanical work can create debris or over spray that may enter the storm drain system if proper precautions are not followed.
- Construction Activities: Construction activities have the potential to degrade water quality through the introduction of sediment laden or polluted runoff to the storm drain system.
- Cement Storage: Cement storage and conveyance systems have the potential to pollute storm water if a release were to occur. Facilities should be maintained properly and inspected regularly to ensure the safety of workers and storm water quality.

3.12 INDIVIDUAL CONTROLS AND MEASURES

The following is a description of BMPs, source reduction and elimination measures, and source control measures that are unique to each Port Stakeholder facility.

3.12.1 MENZIES AVIATION

Menzies has two storm water collection areas: the operations area (including the TTLR) outside the lined tank farm and the lined tank farm in which the bulk storage tanks are located.

The TTLR in the operations area is exclusively for emergency use and is only to be used if the pipeline to AIA should become inoperable and fuel must be transferred by truck. Storm water accumulations in the TTLR will be visually inspected for petroleum sheen prior to discharge. Storm water without sheen will be discharged onto grade, eventually flowing to the MS4. If sheen is present, the water will be collected for off-site disposal or on-site treatment prior to disposal pending ADEC approval.

For the lined tank farm area, Menzies will use the "no sheen" criterion to determine whether to release the storm water to the Port's MS4. This criterion is based on Alaska law, which allows discharge from secondary containment areas based on the absence of sheen. As an added protection measure, all storm water will be discharged through an OWS prior to flowing to the MS4. If sheen is detected, however, further testing and investigation will be conducted to determine its source prior to discharge. Whether or not sheen is detected, Menzies will conduct annual quantitative testing of storm water that is discharged through the OWS. Menzies will collect and test storm water from two locations: a surface sample from the secondary containment and at the point of discharge just beyond the OWS. Process waste water discharged from the tank bottom water collection unit will be collected in a separate tank for partial treatment on-site; residual water will be treated off-site.

Menzies has implemented a new BMP for snow storage. This effort includes monitoring snow melt for debris and excess sediment. If debris or sediments are detected, actions will be taken to remove and/or eliminate the pollutant. Controls will be established as necessary. Records are kept on site and are available upon request.

3.12.2 MARATHON

Marathon has two storm water collection areas: the operations area (including the TTLR and the VFA) outside the lined tank farm and the lined tank farm in which the bulk storage tanks are located. The storm water that collects in the operations area, with the exception of the TTLR, drains to the MS4. The TTLR is covered and captures little storm water; the TTLR drains to an UST, the contents of which are disposed of off-site.

For the lined tank farm area, Marathon will use both the "no sheen" criterion and a total aqueous hydrocarbons (TAqH) test to determine whether to release the storm water to the Port's MS4. The TAqH test is typically an annual effort, performed as an additional safeguard to checking for sheen. Alaska law allows discharge from secondary containment areas based upon the absence of sheen. If there is no sheen, storm water may be discharged without a discharge permit. If there is sheen, Marathon will call a third party contractor to come and pump out the contaminated water for offsite treatment and disposal. Records are kept on site and are available upon request.

3.12.3 MATSON

Matson utilizes a 6,000-gallon fuel tank south of the maintenance building adjacent to a previously abandoned fueling bay. This VFA provides a covered fueling area for freight trucks and maintenance and support vehicles. An underground storage tank collects and contains potential drips and spills. During refueling, adsorbent pads will be placed on the ground or held beneath the fueling nozzle to catch small drips. Fueling nozzles will be of the type designed to automatically shut off to prevent overfills.

A floor-drain system with an OWS is installed in the Mini-Maintenance Building at the southern end of Matson's lease area.

Matson uses oversized awnings to cover scrap metal bins thereby minimizing the amount of precipitation entering the bins.

Matson stores spent batteries in controlled, covered areas of the site where traffic patterns are not a hazard. Old batteries will be stored within a secondary containment unit to avoid incidental contact with surface water runoff. Additionally Matson will use a contracted service to remove used batteries from the facility for proper disposal on a weekly basis. This minimizes the amount of time that batteries are susceptible to accidents, spills, or storm water contamination.

3.12.4 TOTE

TOTE has a unique fuel delivery system requiring that special precautions be taken to prevent inadvertent spills from occurring in the yard. TOTE's fuel delivery system consists primarily of one to two (depending on workload) roving tanker trucks that deliver fuel to the freight trucks and refrigeration generators located throughout the yard. TOTE also uses two other roving dispenser/tanker trucks: one that dispenses diesel and another that dispenses gasoline to fuel their licensed vehicles. Fuel contained in these trucks is delivered by an off-site company. In order to handle drips and spills, all roving tank trucks will have available spill response materials. During refueling, adsorbent pads will be placed on the ground or held beneath the fueling nozzle to catch small drips. Fueling nozzles are equipped with automatic shut off devices to prevent overfills.

To avoid storing hazardous materials any longer than necessary, TOTE generally will not allow outgoing hazardous material shipments to arrive at the TOTE terminal any earlier than 96 hours prior to departure. Incoming hazardous material shipments will be transported off-site as soon as practicable. In the meantime, they will be stored in a designated area near a trailer containing hazardous material spill response supplies.

Snow will not be stockpiled over or adjacent to any storm drains.

TOTE will use trash receptacles and scrap metal bins with solid covers.

3.12.5 ABI

The concrete storage dome operated by ABI is completely enclosed. Potential for storm water to come into contact with stored concrete is minimal. Storm water sheet flows into the MS4 facilities without contact with concrete.

3.12.6 DELTA WESTERN

Delta Western collects storm water in a secondary containment area. Prior to discharging from a containment unit, tests are conducted and results recorded on a storm water inspection form. Test results include sensory detection of methanol (organoleptic confirmation), confirmation of Draeger tube test, visible signs of leaks or spills, and other observations. Records are kept on site and available upon request.

Delta Western has their control station located within the containment at the TTLR. A non-metallic cargo hose is utilized to connect the tank barge to the TTLR when cargo is being transferred. The first valve is located outside the tank farm containment wall, located within a secondary containment pad that drains into the tank farm secondary containment area.

4.0 MONITORING, EVALUATION, RECORDKEEPING, AND REPORTING REQUIREMENTS

4.1 MONITORING PROGRAM PLAN

The Monitoring Program Plan is designed to:

- Assess compliance with the permit
- Measure the effectiveness of this SWMP
- Measure the chemical, physical, and biological impacts to the receiving waters resulting from storm water discharges according to the Port's Quality Assurance Project Plan (QAPP)
- Characterize storm water discharges
- Identify sources of specific pollutants
- Detect and eliminate illicit discharges and illegal connections to the MS4

4.1.1 CONDUCTING WATER QUALITY MONITORING

When the Port conducts water quality monitoring, it will comply with the following:

- Representative Monitoring – All sample and measurements will be representative of monitored activity.
- Test Procedures - Monitoring will be conducted according to test procedures approved under 40 Code of Federal Regulations (CFR) Part 136 (adopted by reference at 18 AAC 83.010) – unless otherwise specified.
- Industrial and High Risk Runoff Monitoring - Refer to Section 3.11 of this SWMP.

4.1.2 STORM WATER DISCHARGE MONITORING (WET WEATHER)

The Port is required to conduct a storm water discharge monitoring program (MS4 Monitoring Program Plan under separate cover) which meets the following minimum requirements:

- Develop a MS4 Monitoring Program Plan consistent with monitoring objectives described in Permit Part 4.1.
- The Port is required to monitor representative outfalls and/or instream monitoring locations to characterize the quality of storm water discharges from the MS4. The outfalls selected by the Port in the MS4 Monitoring Program Plan must be representative of major land uses at the Port or from the major Industrial and High Risk Runoff locations (Permit Part 4.1.2.3).
- The Port monitors storm water outfalls identified in the MS4 Monitoring Program Plan during a measurable storm event at the frequency identified in Table 2-3 of the MS4 Monitoring Program Plan.
- Refer to the MS4 Monitoring Program Plan for more information regarding dry and wet weather outfall monitoring.

4.1.3 DISCHARGE MONITORING REPORT

Monitoring results must be recorded on a Discharge Monitoring Report (DMR) form (EPA No. 3320-1) or equivalent, and submitted annually for the previous twelve-month period along with the Detailed Annual Report.

4.1.4 QAPP

A QAPP has been developed for analytical monitoring activities intended to identify illicit discharges. The QAPP is designed to assist in planning for collection and analysis of water samples in support of the SWMP and in explaining data anomalies when they occur. Adequacy of the QAPP is reviewed annually based on permit compliance activities and sampling results and documented in the Detailed Annual Report.

4.1.5 NO SAMPLE COLLECTED

If no sample was collected due to adverse climatic or tidal conditions, a description of why samples could not be collected, including available documentation of the event, must be submitted. Adverse climatic conditions which may prohibit the collection of samples include weather that create dangerous conditions for personal (such as local flooding, high winds, tsunamis, high tides, electrical storms, etc.) or otherwise make the collection of a sample impractical (drought, extended frozen conditions, etc.). This waiver may not be used more than once during a two year period.

4.1.6 ONGOING EFFORTS

Continue ongoing efforts to detect presence of illicit connections and improper discharges to MS4. All portions (but not necessarily all outfalls) of the MS4 must be screened at least once during the permit term.

4.1.7 COPIES TO ADEC

Copies of the Monitoring Program Plan and QAPP must be made available to ADEC upon request.

4.1.8 RECORD OF MONITORING INFORMATION

Requirements for records of Monitoring Information must include:

- The date, exact place, and time the samples or measurements were taken
- The names(s) of the individual(s) who performed the sampling or measurements
- The date(s) upon which analysis of each sample was performed
- The names of the individuals who performed each analysis
- The analytical techniques or methods used
- The results of each analysis

4.1.9 EXTRA MONITORING

If monitoring occurs more frequently than required by the permit, the results of this additional monitoring will be included in the Annual Report.

4.2 ANNUAL EFFECTIVENESS ASSESSMENT

The Port will, at least annually, report on the effectiveness of its SWMP. Included in this assessment will be an evaluation of the SWMP's compliance with permit conditions, appropriateness of identified BMPs, and progress toward achieving identified measurable goals for each of the

minimum control measures set throughout this document. The assessment will be documented in the Detailed Annual Report. The annual effectiveness assessment will:

- Use the monitoring and assessment data to specifically assess the effectiveness of the following:
  - Each significant activity/control measure or type of activity/control measure implemented;
  - Implementation of each major component of the SWMP (Public Education/Involvement, Illicit Discharges, Construction, Post-Construction, Pollution Prevention and Good Housekeeping); and
  - Implementation of the SWMP as a whole.
- Identify and use measurable goals, assessment indicators, and assessment methods for each of the items listed above.
- Document compliance with permit conditions.
- Based on the results of the effectiveness assessment, the Port must annually review its activities or control measures to identify modifications and improvements needed to maximize SWMP effectiveness, as necessary to achieve compliance with the permit. The Port must develop and implement a plan and schedule to address the identified modifications and improvements. Port activities/control measures that prove to be ineffective or less effective than needed must be replaced or improved upon until effective.
- The effectiveness assessment will be included in the Detailed Annual Report.

4.3 ANNUAL REPORTS

4.3.1 SUBMISSION DEADLINES

The Detailed and Summary Annual Reports for the previous twelve months must be submitted to the ADEC at the address in Part 4.5. The Detailed and Summary Annual Reports must clearly refer to the permit requirements and describe in quantifiable terms the status of activities undertaken to comply with each requirement.

Copies of all Detailed Annual Reports will be made available to the public through the Port maintained website.

TABLE 4-1: OPERATIONS AND MAINTENANCE ACTIVITY

Reporting Period	Submission Deadline
First year Annual Report (1 August 2015 – December 2015)	February 15, 2016
Second year Annual Report (January 1, 2016 – December 31, 2016)	February 15, 2017
Third year Annual Report (January 1, 2017 – December 31, 2017)	February 15, 2018
Fourth year Annual Report (January 1, 2018 – December 31, 2018)	February 15, 2019
Fifth year Annual Report (January 1, 2019 – December 31, 2019)	February 15, 2020

4.3.2 SUMMARY ANNUAL REPORT

The Summary Annual Report template will be completed to document the past year's activities.

A Detailed Annual Report addressing the activities described in the SWMP document required in Part 2.0 of the permit must also be submitted per Table 4-1. At minimum, the Detailed Annual Report must include:

- An updated SWMP document as required in Permit Part 2.4.
- A description of the effectiveness of each SWMP program component or activity.
- Planned activities and changes for the next reporting period for each SWMP program component or activity.
- An evaluation of compliance with requirements of this permit, the appropriateness of identified BMPs, and progress toward achieving identified measureable goals of the SWMP for each minimum control measure.
- Results of any information collected and analyzed during the previous twelve month reporting period, including monitoring data used to assess the success of the program at reducing the discharge of pollutants to the MEP.
- A summary of the activities the permittee plans to undertake during the next reporting cycle (including an implementation schedule) for each minimum control measure.
- Proposed changes and complete changes to the SWMP, including changes to any BMPs or any identified measureable goals for any minimum control measure.
- Description and schedule for implementation of additional BMPs that may be necessary, based on monitoring results, to ensure compliance with applicable WQS.
- Notice if the permittee is relying on another entity to satisfy some part of the permit obligations, if applicable.

4.4 RECORDKEEPING

4.4.1 RETENTION OF RECORDS

The permittee must retain records and copies of all information including: all monitoring, calibration and maintenance records and all original strip chart recordings for any continuous monitoring instrumentation; copies of all reports required by this permit; copies of DMRs; a copy of the APDES permit; and records of all data used to complete the application for the permit. These records must be retained for a period of at least three years from the date of the sample, measurement, report or application, or for the term of the permit, whichever is longer. This period may be extended at the request of the ADEC at any time. Records also include all information used in the development of the storm water management program, all monitoring data, copies of all reports, and all data used in the development of the permit application.

4.4.2 AVAILABILITY OF RECORDS

The Port is required to submit the records referred to in Part 4.4.1 to ADEC only when specifically asked to do so. The permittee must retain the SWMP required by the permit (including a copy of the permit language and all Annual Reports) at a location accessible to the ADEC. The Port is required to make records, including the permit application and the SWMP, available to the public if requested to do so in writing. The public may view the records during normal business hours.

4.5 ADDRESS

Submittals required by this permit must be made to the following address specified below:

State of Alaska
Department of Environmental Conservation
Division of Water
Compliance and Enforcement Program
555 Cordova Street
Anchorage, Alaska 99501
Telephone Nationwide (877) 569-4114
Anchorage Area / International (907) 269-4114
Fax (907) 269-4604
Email: dec-wqreporting@alaska.gov

In addition, copies will be provided to the team leader (Port) and to each team member.

APPENDIX A

STORM WATER MANAGEMENT PROGRAM CERTIFICATION

STORM WATER MANAGEMENT PROGRAM CERTIFICATION

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

PORT OF ALASKA:

Signature: Sharen A. Walsh

Name: Sharen Walsh, PE, AMPE

Title: Deputy Port Director

Date: 2/06/2020

PREPARED BY:

Signature: K McLean

Name: Kristi M. McLean, LEED AP BD+C

Title: Group Manager, Environmental Services (R&M Consultants, Inc.)

Date: 6 February 2020

APPENDIX B

STORM WATER POLLUTION PREVENTION TEAM

STORM WATER POLLUTION PREVENTION TEAM

TEAM LEADER:

Port of Alaska: Stuart Greydanus, AMPE; Superintendent of Operations, Maintenance, and Security
907.343.6202; stuart.greydanus@anchorageak.gov

TEAM MEMBERS:

Port of Alaska: Stephen Ribuffo, AMPE; Port Director
907.343.6201; steve.ribuffo@anchorageak.gov

Port of Alaska: Sharen Walsh, PE, AMPE; Deputy Port Director
907.343.6203; sharen.walsh@anchorageak.gov

Port of Alaska: Ted Frey, Maintenance Supervisor
907.343.6208; theodore.frey@anchorageak.gov

Port of Alaska: Paul Rotkis; Port Safety Coordinator
907.343.6226; paul.rotkis@anchorageak.gov

Menzies Aviation: Laurie Butler; Environmental Manager
907.249.4205; laurie.butler@menziesaviation.com

Marathon Petroleum: Serena Lewellyn; Environmental Coordinator
907.490.6217; slewellyn@marathonpetroleum.com

Matson: Monique Cortez; Safety, Quality and Environmental Manager
907.263.5045; mcortez@matson.com

TOTE: Billy Godwin; Terminal Operations Manager
907.265.7218; billy.godwin@totemaritime.com

AS&G/ABI: Scott DeWandel; Operations Manager
907.348.3333; scott.dewandel@anchsand.com

Delta Western, Inc.: Tou Yang; Terminal Operator
907.376.4644; touy@deltawestern.com

ADEC: Jim Rypkema; Storm Water and Wetlands Program Manager
907.334.2288; james.rypkema@alaska.gov

APPENDIX C
FORMS

Illicit Discharge Tracking Worksheet

- Illicit discharges must be investigated within 15 days of detection
- Action must be taken to eliminate the source of the discharge within 45 days of detection
- This worksheet may be supplemented with raw data from any tests/screenings, a narrative review of tests/screenings, or a map showing the location of the incident.

Type of Discharge:
Date of Discovery:
Location of Discharge:
Discovery made by (Name/Affiliation):
Responsible party:
Description of Incident:
Resolution:
Steps taken to reach resolution:

Future mitigation:
Date Port Notified:
Comments:

Construction Site Form – Storm Water Compliance

Name of Project: _____

Location of Project: _____

Construction Contractor: _____

Estimated Project Start Date: _____

Estimated Project End Date: _____

Submittal of this document equates a letter of non-objection for the project and compliance with the Port of Alaska's (Port) Construction Site Stormwater Runoff Control from New development and Redevelopment Projects Program, the Port's Storm Water Management Program Plan, and the Alaska Construction General Permit (ACGP).

1. Is the total land disturbance greater than or equal to 10,000 square feet at a single construction site or as part of a plan of common development?	YES	NO
2. Have appropriate erosion and sediment controls BMPs been chosen and included in the Storm Water Pollution Prevention Plan (SWPPP) (if required)?	YES	NO
3. Have appropriate BMPs to control discarded building materials, concrete truck washout, chemicals, litter and sanitary waste at the construction site that may cause adverse impacts to water quality been chosen?	YES	NO
4. Is the project in compliance with the ACGP?	YES	NO
5. Has a SWPPP for the construction job been prepared?	YES	NO
6. Was a Notice of Intent (NOI) filed with ADEC?	YES	NO
7. Have all construction site operators been given appropriate education and training?	YES	NO

Notes (include any other permits required for this project):

_____

_____

_____

_____

By signing this document, there are no objections to the project-specific storm water plan (i.e. SWPPP). The plan is in compliance with the Port's SWMP and the ACGP. If any significant changes are made to the plan, this form will need to be resubmitted.

CONSTRUCTION CONTRACTOR

Name: _____

Signature: _____

Title: _____

Date: _____

PORT OF ALASKA

Name: _____

Signature: _____

Title: _____

Date: _____

LEASEHOLDER REPRESENTATIVE
(only complete if *not* a Port of Alaska project)

Name: _____

Signature: _____

Title: _____

Date: _____

Post Construction Site Form – Storm Water Compliance

Name of Project: _____

Location of Project: _____

Construction Contractor: _____

Estimated Project Start Date: _____

Estimated Project End Date: _____

Submittal of this document equates a letter of non-objection for the project and compliance with the Port of Alaska's (Port) Post-Construction Site Stormwater Runoff Control from New development and Redevelopment Projects Program and the Port's Storm Water Management Program Plan. Circle Yes or No for questions 1 through 8 below and provide an explanation or documentation to support each response.

1. Are permanent control proposed to prevent or minimize water quality impacts? YES NO
2. Have low impact development strategies been incorporated into the proposed design? YES NO
3. Will post-construction site drainage change significantly? YES NO
4. Was offsite migration of sediment and pollutants considered and mitigated? YES NO
5. Is there a potential for the introduction of new pollutants? YES NO
6. Were any specific storm water controls and/or BMPs required by the Port? YES NO
7. Does the project comply with the Port's MS4 Permit? YES NO
8. Does the project comply with applicable APDES regulations per 18 AAC 83; Section 402(p) of the Clean Water Act and 40 CFR 122.32 for MS4s?

Comments (include any other environmental and/or water permits or authorizations below:

_____

_____

_____

_____

By signing this document, the Port states there are no objections to the proposed permanent storm water control plan as long as the facility operator maintains compliance with the above stated regulations and MS4 permit conditions. It is acknowledged that appropriate BMPs and structural considerations have been taken to minimize storm water impacts and discharges where practicable. Significant changes to the plan must be reapproved with a new form.

CONSTRUCTION CONTRACTOR

Name: _____

Signature: _____

Title: _____

Date: _____

PORT OF ALASKA

Name: _____

Signature: _____

Title: _____

Date: _____

LEASEHOLDER REPRESENTATIVE
(only complete if *not* a Port of Alaska project)

Name: _____

Signature: _____

Title: _____

Date: _____

APPENDIX D
MS4 JURISDICTIONAL MAP

Date Saved: 11/19/2019 11:05:58 AM by CFell   Z:\ GIS\Projects\2600.01 MOA Port of Alaska Contract Year 1\Map Documents\Task 3 APDES\22x34-APDES_SWMP_MAP 2019-1108v2.mxd

R&M CONSULTANTS, INC.

Drainage Basin	Storm Manhole	Storm Drain (w/ flow arrow)	Storage Area	Vegetated Area
MS4 Boundary	Catch Basin Manhole	Runoff Flow Direction_Legend	Aggregate/Soil Surface	Bulk Fuel Tank
Storm Water Outfall	Catch Basin	Building/Structure	Paved Area	Wetland

NOTES:
1. Port of Alaska features based on the Port of Alaska GIS.
2. Drainage basin boundaries are from Municipality of Anchorage GIS.
3. Aerial photograph is from ESRI Online World Imagery.

ALL LOCATIONS ARE APPROXIMATE
0 150 300 600
APPROXIMATE SCALE IN FEET
N

PORT OF ALASKA

STORMWATER SITE PLAN

PROJ. NO.:	2600.01
DATE:	NOV 2019
REF:	N/A
DRAWING NO.:	A-01

APPENDIX E
STAKEHOLDER MATERIAL INVENTORY FOR INDUSTRIAL AND HIGH-RISK RUNOFF MONITORING

A. PORT OF ALASKA							
MATERIAL INVENTORY					**Update Provided By:** **Date of Last Update:**	Carl Cartwright, Former Maint. Super. February, 2015	
Instructions: List all materials used, stored, or produced on-site. Assess and evaluate these materials for their potential to contribute pollutants to storm water runoff.							
Material	**Purpose/Location**	**Quantity (units)**			**Likelihood of contact with storm water. If yes, describe reason.**	**Past Significant Spill or Leak**	
		Used	**Produced**	**Stored**		**Yes**	**No**
Diesel Fuel	Fueling vehicles-Double walled AST located at VFA west of maintenance shop			2,000 gallons	Low - VFA is double-walled and covered, but storm water run-off could come in contact with accidental drips or spills		X
Used Oil	Used oil collection & storage prior to trucking to recycler. AST located at northwest corner of maintenance shop			300 gallons	Low - AST is double walled and is partially uncovered. Only storm water contact may be from incidental drips and spills during transfers, if not properly cleaned, or due to collision		X
Oil/Water Separator	Filter out greases and oil before releasing H2O to sanitary sewer. Maintenance shop			10-30 gallons	None - Quantity represents residual in system		X
Liquid Magnesium Chloride	Road sanding additive. VFA west of maintenance shop			300 gallons			X
Thinners, Mineral Spirits	Cleaning & painting. Maintenance shop	Small quantities		Varies	None - Stored indoors in a locked storage cabinet, used-up		X
Waste Floor Dry, Adsorbents, Other Wastes	Used to clean up spills. The hazardous material storage shed is located southeast of the maintenance building		1 to 2 55-gallon drums		Low - Stored covered in an outdoor, locked cabinet. Possible exposure during transfer from cabinet to disposal truck		X
Petroleum, Oils, and Lubricants	Refined petroleum products are transported on and off freight ships via pipelines			Varies	Low- Problems anticipated are below grade and would not directly affect storm water		X
Assorted Lubricating Fluids	Used in equipment/machinery. Maintenance shop			Up to 830 gallons	None – Fluids are contained in polyethylene storage tanks inside the maintenance shop with secondary containment		X
Diesel Fuel	Supply fuel to back-up generator. Double-walled AST located adjacent to vehicle screening/security area.			150 gallons	Low – AST is double-walled, but storm water run-off could come in contact with accidental spills or drips.		X

B. MENZIES AVIATION/AFSC							
MATERIAL INVENTORY					**Update Provided By:** **Date of Last Update:**	Amber Deem, Former Environmental Manager January, 2013	
Instructions: List all materials used, stored, or produced on-site. Assess and evaluate these materials for their potential to contribute pollutants to storm water runoff.							
Material	**Purpose/Location**	**Quantity (units)**			**Likelihood of contact with storm water. If yes, describe reason.**	**Past Significant Spill or Leak**	
		Used	**Produced**	**Stored**		**Yes**	**No**
Recyclable Product	Fuel collected during tank cleaning - Transferred to a fuel truck		1,000 gallons		Low - Barrels stored within secondary containment during duration of work, then transferred to truck	X	
Jet A Fuel	Bulk fuel storage - ASTs in bermed tank farm			540 K barrels	Low - Fully lined secondary containment installed in '98.	X	
Jet A Fuel	Emergency Generator Fuel - AST located in Emergency Generator Connex			300 gallons	Low - Possible exposure during fuel transfer process		X
Bottom Water, Tank Scales & Sludge	Tank cleaning residue - stored in 55-gallon drums outside tank bermed area, and only after periodic tank cleaning		5 to 6, 55-gallon drums per AST		Low - Barrels stored within secondary containment during duration of work, then transferred to truck	X	
Diesel	Fuel used in the aqueous firefighting foam (AFFF) tank located in the control building.	285 gallons			Low – Diesel is located within the AFFF pump tank within the enclosed control building.		X
Recyclable Product	Fuel collected during tank cleaning - Transferred to a fuel truck		Variable		Low - Possible exposure from drips, leaks, or spills during transfer from ASTs to trucks.		X

C. MARATHON PETROLEUM (Formerly TESORO and Andeavor)

MATERIAL INVENTORY	Update Provided By:	Bob Cole, Former Terminal Supervisor
	Date of Last Update:	December, 2007

Instructions: List all materials used, stored, or produced on-site. Assess and evaluate these materials for their potential to contribute pollutants to storm water runoff.

Material	Purpose/Location	Quantity (units)			Likelihood of contact with storm water. If yes, describe reason.	Past Significant Spill or Leak	
		Used	Produced	Stored		Yes	No
Motor Gas, Avgas, Jet Fuels	Bulk Fuel Sales - ASTs in bermed tank farm			400K to 600K barrels	Low - Fully lined secondary containment installed in '98. TTLR also has secondary containment.	X	
Recyclable Product	Fuel collected during tank cleaning - Transferred to a fuel truck		1,000 gallons		Low - Barrels stored within secondary containment during duration of work, then transferred to truck		X
Bottom Water, Tank Scales, & Sludge	Tank cleaning residue - Stored in 55-gallon drums inside the tank bermed area		5-6 each, 55-gallon drums		Low - Barrels stored within secondary containment during duration of work, then transferred to truck		X
Gasoline Additive	Gasoline additive – ASTs in bermed tank farm			167 to 952 barrels			X

D. MATSON							
MATERIAL INVENTORY					**Update Provided By:** **Date of Last Update:**	Monique Cortez, Environmental Compliance Manager May, 2018	
Instructions: List all materials used, stored, or produced on-site. Assess and evaluate these materials for their potential to contribute pollutants to storm water runoff.							
Material	**Purpose/Location**	**Quantity (units)**			**Likelihood of contact with storm water. If yes, describe reason.**	**Past Significant Spill or Leak**	
		Used	**Produced**	**Stored**		**Yes**	**No**
Engine Oil	Vehicle maintenance - UST located in maintenance building			1,200 gallons	None - In building and underground		X
Used Oil	Vehicle maintenance – UST located in maintenance building			750 gallons	None - In building and underground		X
Lubricants	Vehicle maintenance - Located in maintenance building and warehouse	55-gallon drums		10 - 15 drums	Low - Possible exposure during transfer from warehouse to maintenance building		X
Cleaning Solvents	Used for cleaning - Stored in metal lockers in maintenance building	Small quantities			None - Stored indoors in a locked storage cabinet.		X
Oil/Water Separator	Filter out oil and grease before releasing into sanitary sewer - UST located in warehouse building			Small quantities	None - In building and underground		X
Hydraulic Fluid	Used in hydraulic system of container cranes located on the docks	Varies		Varies	Low - Only due to accidents or equipment malfunctions	X	
Waste Antifreeze and Lube Oil	Vehicle maintenance - Located in maintenance building		12 to 15 55-gallon drums/year	3 to 4, 55-gallon drums	Low - Possible exposure during transfer		X
Diesel	Fuel for vehicles - Located in double-walled AST on the south side of maintenance building			6,000 gallons	Moderate - Possible exposure during transfer or fueling operations		X

E. TOTE MARITIME ALASKA

MATERIAL INVENTORY	Update Provided By:	Billy Godwin, Marine and Maintenance Manager
	Date of Last Update:	June 2017

Instructions: List all materials used, stored, or produced on-site. Assess and evaluate these materials for their potential to contribute pollutants to storm water runoff.

Material	Purpose/Location	Quantity (units)			Likelihood of contact with storm water. If yes, describe reason.	Past Significant Spill or Leak	
		Used	Produced	Stored		Yes	No
Diesel Fuel/Gasoline	Tank trucks roam the site to fill freight truck generators and engines with fuel			8,500 gallons diesel in 2 fuel trucks + 300 gallons gas on service truck	Moderate - Possible exposure from faulty valves and drips or spills Note: Only 1 fuel truck is in regular use; second is used as back-up only		X
Oil/Water Separator	Filter out oil and grease before discharging H2O to sanitary sewer-located in maintenance and vehicle inspection buildings			10-30 gallons residual in system	None - Oil contained in an indoor UST and transfer from tank to truck is done indoors		X
Used Oil	Vehicle maintenance - AST located inside of the maintenance building			100 gallons	Low - Possible exposure in the event of a defective tank or during transfer to off-site recycler		X
Waste Antifreeze	Vehicle maintenance - located in maintenance building			1, 55-gallon drum	Low - Possible exposure during storage and transfer to off-site recycler		X
Hydraulic Fluid	Vehicle Maintenance - located inside Maintenance Building			1, 55-gallon drum	Low - Possible exposure during storage and transfer to off-site recycler		X

F. DELTA WESTERN, INC.							
MATERIAL INVENTORY					**Update Provided By:** **Date of Last Update:**	Cheryl Fultz, Former Environmental Compliance Specialist December, 2016	
Instructions: List all materials used, stored, or produced on-site. Assess and evaluate these materials for their potential to contribute pollutants to storm water runoff.							
Material	**Purpose/Location**	**Quantity (units)**			**Likelihood of contact with storm water. If yes, describe reason.**	**Past Significant Spill or Leak**	
		Used	**Produced**	**Stored**		**Yes**	**No**
Methanol	Double walled tank in a lined secondary containment area – the product is distributed via a TTLR			48,000 barrels	Low-tank storage is lined and the Stormwater discharge is subject to inspection prior to discharge into the storm drain. TTLR has concrete containment greater than the largest tank receiving product. This system is closed.		X
Road Grime	Tank Truck Residues discharged during tank loading		Varies		Low – Stormwater collected from the TTLR is filtered through an Oil Water Separator		X

MATERIAL INVENTORY

A. PORT OF ALASKA							
DESCRIPTION OF EXPOSED SIGNIFICANT MATERIAL					Update Provided By: Date of Last Update::	Carl Cartwright, Former Maintenance Supervisor February, 2015	
Instructions: Based on your material inventory, describe the significant materials that are currently exposed to storm water.							
Description of Exposed Significant Material	**Period of Exposure**	**Quantity Exposed (units)**	**Location**	**Method of Storage or Disposal**	**Description of Material Management Practice**	**Past Spill or Leak**	
						Yes	**No**
Diesel Fuel	Ongoing	2,000 gallons	VFA located west of maintenance building	AST used to dispense diesel to maintenance vehicles	Diesel fuel is delivered by truck into a double-walled AST with leak & over-fill detection. The VFA was covered in 1996.		X
Used Oil	Ongoing	300 gallons	Adjacent to the maintenance building at the northwest corner	AST used to store used oil prior to transport to an off-site recycler	Used oil is pumped in small increments into a double-walled AST. The tank is visually inspected to determine when the recycler should be called to pick it up. The used oil is transferred from the AST into a truck for off-site recycling.		X

B. MENZIES AVIATION/AFSC							
DESCRIPTION OF EXPOSED SIGNIFICANT MATERIAL					**Update Provided By:** **Date of Last Update:**	Amber Deem, Former Environmental Manager February, 2014	
Instructions: Based on your material inventory, describe the significant materials that are currently exposed to storm water.							
Description of Exposed Significant Material	**Period of Exposure**	**Quantity Exposed (units)**	**Location**	**Method of Storage or Disposal**	**Description of Material Management Practice**	**Past Spill or Leak**	
						Yes	**No**
Jet A Fuel	Ongoing	540K barrels	Tank farm and TTLR	Aboveground storage bulk fuel tanks with valve and pipeline system and truck loading rack to transfer fuel in emergencies only	Typically arrives by ocean tankers and is delivered via underground pipelines. Bulk fuel is transferred to the airport by underground pipeline. The TTLR is an old system that was put back into service in 1997 during a peak demand period but is not currently in use. A new pipeline network should eliminate use of TTLR except in emergencies.	X	
Bottom Water, Tank Scales and Sludge	Temporarily for 2 to 3 weeks every year	5 to 6, 55-gallon drums	Inside and outside tank farm	55-gallon drums	Bottom water, tank scales and sludge are generated during normal tank cleaning maintenance and stored in 55-gallon drums on pallets exposed to precipitation until they are picked up by off-site recycler.	X	

C. MARATHON PETROLEUM (Formerly TESORO and Andeavor)

DESCRIPTION OF EXPOSED SIGNIFICANT MATERIAL	Update Provided By: Date of Last Update:	Bob Cole, Former Terminal Supervisor December, 2005

Instructions: Based on your material inventory, describe the significant materials that are currently exposed to storm water.

Description of Exposed Significant Material	Period of Exposure	Quantity Exposed (units)	Location	Method of Storage or Disposal	Description of Material Management Practice	Past Spill or Leak	
						Yes	No
Motor Gas, Avgas, Jet Fuels	Ongoing (past spills)	400K to 600K barrels	Tank farm	ASTs with valve and pipeline system, TTLR, and vehicle fuel dispensing area	Bulk fuel typically arrives by ocean tanker and is delivered via underground pipelines. Bulk fuel is transferred to customers via underground pipelines or TTLR. Facility vehicles are refueled at the VFA. Both areas are covered and have a drainage system that drains to an underground holding tank.	X	
Bottom Water, Tank Scales and Sludge	Temporarily 2 to 5 weeks every year.	Five to six 55-gallon drums	Inside the tank farm.	55-gallon drums	Bottom water, tank scales and sludge are generated during normal tank cleaning maintenance and stored in 55-gallon drums on pallets exposed to precipitation until they are picked up by an off-site recycling company.		X
Gasoline Additive	Ongoing (no past spills)	167 to 952 barrels	Tank farm	ASTs with pipeline system	Additive typically arrives by ocean tanker or container ship and is delivered from the Port's dock to Tesoro via truck		X

D. MATSON							
DESCRIPTION OF EXPOSED SIGNIFICANT MATERIAL					**Update Provided By:** **Date of Last Update:**	Monique Cortez, Environmental Compliance Manager May, 2018	
Instructions: Based on your material inventory, describe the significant materials that are currently exposed to storm water.							
Description of Exposed Significant Material	**Period of Exposure**	**Quantity Exposed (units)**	**Location**	**Method of Storage or Disposal**	**Description of Material Management Practice**	**Past Spill or Leak**	
						Yes	**No**
Diesel Fuel	Ongoing (past spills)	6,000 gallons	AST located on the south side of maintenance building	Aboveground dispensing	Fuel is delivered by truck to the AST. Fuel is dispensed as needed to run freight trucks and other vehicles.		X

EXPOSED SIGNIFICANT MATERIALS

E. TOTE MARITIME ALASKA							
DESCRIPTION OF EXPOSED SIGNIFICANT MATERIAL					**Update Provided By:** **Date of Last Update:**	Billy Godwin, Marine and Maintenance Manager June 2017	
Instructions: Based on your material inventory, describe the significant materials that are currently exposed to storm water.							
Description of Exposed Significant Material	**Period of Exposure**	**Quantity Exposed (units)**	**Location**	**Method of Storage or Disposal**	**Description of Material Management Practice**	**Past Spill or Leak**	
						Yes	**No**
Diesel Fuel and Gasoline	Ongoing	8,500 gallons diesel + 300 gallons gasoline	Roving, site-wide	Roving tanker trucks are used as mobile AST's. A mobile trailer-type AST is used as a stationary fueling point.	Fuel is delivered by truck and transferred to TOTE's stationary and mobile fuel trucks. The roving fuel trucks drive around the yard and fill freight trucks and their refrigeration generators.		X

F. DELTA WESTERN, INC.							
DESCRIPTION OF EXPOSED SIGNIFICANT MATERIAL					**Update Provided By:** **Date of Last Update:**	Cheryl Fultz, Former Environmental Compliance Specialist December, 2015	
Instructions: Based on your material inventory, describe the significant materials that are currently exposed to storm water.							
Description of Exposed Significant Material	**Period of Exposure**	**Quantity Exposed (units)**	**Location**	**Method of Storage or Disposal**	**Description of Material Management Practice**	**Past Spill or Leak**	
						Yes	**No**
Methanol	Ongoing	48,000 (barrels)	Tank	AST Used to dispense methanol to trucks	Methanol is delivered via tanker or truck into a double-walled AST with leak & over-filled detection.	X	

EXPOSED SIGNIFICANT MATERIALS

MS4 Monitoring Program Plan

Port of Alaska
Storm Water Management Program
Anchorage, Alaska

Prepared For:

Port of Alaska
2000 Anchorage Port Road
Anchorage, Alaska 99501

Prepared By:

R&M Consultants, Inc.
9101 Vanguard Drive
Anchorage, Alaska 99507

Updated 7 February 2020

R&M CONSULTANTS, INC.

TABLE OF CONTENTS

LIST OF TABLES

LIST OF APPENDICES

ACRONYMS AND ABBREVIATIONS

°C	degrees Celsius
AAC	Alaska Administrative Code
ABI	Alaska Basic Industries
ADEC	Alaska Department of Environmental Conservation
AFSC	Anchorage Fueling and Service Company
APDES	Alaska Pollutant Discharge Elimination System
AST	aboveground storage tank
BMPs	Best Management Practices
BOD_5	biochemical oxygen demand, five day
$CaCO_3$	calcium carbonate
CFR	Code of Federal Regulations
cfs	cubic foot per second
CGP	construction general permit
COD	chemical oxygen demand
DMR	Discharge Monitoring Report
EPA	U.S. Environmental Protection Agency
EPCRA	Emergency Planning and Community Right-to-Know Act
JBER	Joint Base Elmendorf – Richardson
MS4	Municipal Separate Storm Sewer System
NPDES	National Pollutant Discharge Elimination System
NTU	nephelometric turbidity units
pH	potential of hydrogen
Port	Port of Alaska
QAPP	Quality Assurance Project Plan
R&M	R&M Consultants, Inc.
SWMP	Storm Water Management Program
TAH	total aromatic hydrocarbons
TAqH	total aqueous hydrocarbons
TDS	total dissolved solids
Tesoro	Tesoro Alaska Petroleum Company
TKN	total kjeldahl nitrogen
TOTE	TOTE Maritime Alaska

ACRONYMS AND ABBREVIATIONS (CONTINUED)

TSS	total suspended solids
TTLR	tank truck loading rack
UST	underground storage tank
VFA	vehicle fueling area

MS4 MONITORING PROGRAM PLAN

PORT OF ALASKA
STORM WATER MANAGEMENT PROGRAM
ANCHORAGE, ALASKA

1.0 INTRODUCTION

The Municipal Separate Storm Sewer System (MS4) Monitoring Program Plan is designed to allow the Port of Alaska (Port) and associated Stakeholders to monitor the quality and quantity of water being discharged by the MS4 system. A separate Quality Assurance Project Plan (QAPP) details collection methods and analysis of chemical monitoring data as required by the MS4 Monitoring Program Plan.

1.1 PROJECT/TASK ORGANIZATION

The Port MS4 Monitoring Program Plan from Section 4.1 of the MS4 Permit and Section 4.1 of the Storm Water Management Program (SWMP) is designed to:

- Assess compliance with the Port MS4 permit
- Measure the effectiveness of the Port SWMP
- Measure the chemical, physical, and biological impacts to the receiving waters resulting from storm water discharges in accordance with the Port QAPP
- Characterize storm water discharges
- Identify sources of specific pollutants
- Detect and eliminate illicit discharges and illegal connections to the MS4

To that end, the MS4 Monitoring Program Plan includes a description of the various types of monitoring conducted by the Port and its Stakeholders. The Port MS4 permit stipulates that a number of requirements be met when conducting water quality monitoring:

- All samples will be representative of the monitoring activity
- Monitoring will be conducted according to test procedures approved under 40 CFR Part 136 (adopted by reference in 18 AAC 83.010(f)), unless otherwise specified
- Monitoring will comply with Industrial and High Risk Runoff Monitoring and Storm Water Discharge Monitoring programs (Port MS4 Permit Sections 4.1.2.3 and 4.1.2.4).
- Monitoring results will be recorded on a Discharge Monitoring Report form (EPA No. 3320-1) and submitted annually for the previous twelve-month period along with the Detailed Annual Report
- The QAPP will be annually reviewed for adequacy based on permit compliance activities and sampling results. The review will be documented in the Detailed Annual Report

- Based on the Detailed Annual Report, the Port will amend the QAPP whenever there are modifications to sampling collection, sample analysis, or other conditions or requirements of the plan. A copy of the amended Monitoring Program Plan and QAPP will be included in the Detailed Annual Report
- If the Port is unable to collect samples due to adverse climatic or tidal conditions, the Port will submit in lieu of sampling data a description of why the samples could not be collected, including documentation of the event. Adverse climatic conditions which may prohibit the collection of samples includes weather conditions that create dangerous conditions for personnel (such as local flooding, high winds, tsunamis, high tides, electrical storms, etc.) or otherwise make the collection of a sample impracticable (drought, extended frozen conditions, etc.). The Port is precluded from exercising this waiver more than once during a two year period (MS4 Permit Section 4.1.2.8)
- The Port will continue ongoing efforts to detect the presence of illicit connections and improper discharges to the MS4. All portions (but not necessarily all outfalls) of the MS4 must be screened at least once during the permit term
- Copies of the Monitoring Program Plan and QAPP shall be made available to Alaska Department of Environmental Conservation (ADEC) upon request.

The MS4 permit requires that monitoring records include:

- The date, exact place, and time the samples or measurements were taken
- The names(s) of the individual(s) who performed the sampling or measurements
- The date(s) upon which analysis of each sample was performed
- The names of the individuals who performed each analysis
- The analytical techniques or methods used
- The results of each analysis

It should also be noted that if the Port or its Stakeholders (See Table 1-1) monitor more frequently than required by the MS4 permit using test procedures approved under 40 CFR Part 136 (adopted by reference at 18 AAC 83.010(f)), or as otherwise specified by the permit, the results of this monitoring must be included with the data submitted as part of the Detailed Annual Report.

TABLE 1-1: PORT OF ALASKA STAKEHOLDERS

Stakeholder	Type of Activity
Menzies Aviation/AFSC	Bulk fuel transfer and storage
Marathon Petroleum (formerly Tesoro and Andeavor)	Bulk fuel transfer, storage, and blending
Matson	Containerized freight handling
TOTE Maritime Alaska	Roll-on/Roll-off Containerized freight handling
Delta Western	Methanol transfer and storage
Alaska Basic Industries	Cement transfer and storage

1.2 PROJECT BACKGROUND

Under the National Pollutant Discharge Elimination System (NPDES) storm water program, operators of MS4 systems require permit authorization for storm water discharges. The Port was

issued its own individual MS4 permit under the NPDES by the Environmental Protection Agency (EPA) in 1995. ADEC reissued permit coverage under the Alaska Pollutant Discharge Elimination System (APDES) system effective 1 August 2015. As an MS4 operator, the Port is required to develop a SWMP designed to prevent pollutants from being introduced into surface waters due to storm water runoff. Part of the SWMP is development of this Monitoring Program Plan and the QAPP to detail plans and procedures used to collect, document, and analyze samples in support of the SWMP.

1.2.1 PORT OF ALASKA BACKGROUND

The Port is located in an industrial portion of Anchorage, Alaska, and currently comprises of roughly 220 acres of land. It is bordered by Cook Inlet to the west, Joint Base Elmendorf-Richardson (JBER) to the north and east, and bulk fuel facilities to the south owned by Marathon Petroleum (formerly Andeavor and Tesoro) and Crowley Maritime Corporation. A site plan is provided as Drawing 1 of Appendix A.

The Port is used regularly by two major cargo carriers that dock several ships from the Pacific Northwest each week. The Port is also used by petroleum tankers and barges that supply jet fuel for operations at Ted Stevens Anchorage International Airport and various petroleum products bound for Western Alaska. Overseas cargo carriers from Japan and Korea use the Port to import and export of various materials including pipe, drilling mud, construction materials, automobiles, cement, and other freight. Cruise ships also use the Port terminals on an irregular basis during the summer.

Current Port facilities include petroleum hydrocarbon transfer terminals, a petroleum hydrocarbon pipeline valve yard, cargo/cruise ship terminals, container cranes, equipment and material staging yards, vehicle transit areas, an administrative building with associated vehicle parking areas, a Security Center, and a maintenance facility. The Port Maintenance Facility consists of a maintenance building/shop, an aboveground storage tank (AST) vehicle fueling area (VFA) including a liquid magnesium chloride storage tank, a used-oil AST, a semi-permanent sand storage tent, and a new marine storage building. The Security Center consists of a security/visitor building, a vehicle screening tent, and an emergency generator with 150-gallon diesel storage capacity. Four underground petroleum hydrocarbon pipelines and a pneumatic cement pipeline are located in utility easements. In addition to the above, the Port is also responsible for maintaining shared areas including transit areas, road rights-of-way, and vacant lease properties.

Storm water from the Port discharges to the Knik Arm of Cook Inlet. Cook Inlet is a 192-mile long estuary that stretches from the Gulf of Alaska between the Kenai Peninsula and main-land of Southcentral and Southwestern Alaska. Knik Arm begins at the Inlet's northern edge located north of Anchorage. Cook Inlet is not listed as impaired by ADEC as of January 2020. However, Cook Inlet is designated as a Tier 2 water, which is the default designation for waters in Alaska. Tier 2 means Cook Inlet is considered high quality water. Cook Inlet is also critical habitat for the Cook Inlet beluga whales.

1.2.2 PORT OF ALASKA OPERATORS

A 220-acre industrial park is located immediately adjacent to the east of the Port's cargo docks. Approximately 81 acres of the industrial park are under long-term lease to various Port Stakeholders. The majority of the Port's acreage is presently occupied by the two major cargo carriers: Matson and TOTE Maritime Alaska (TOTE). Three other Stakeholders, which operate bulk fuel storage facilities,

include Marathon Petroleum (Marathon), Menzies Aviation/Anchorage Fueling and Service Company (AFSC), and Delta Western, Inc.. The last Stakeholder is Alaska Basic Industries (ABI) which operates a storage and transfer facility for cement. The Port industrial park also has approximately 31 acres available for the temporary staging and storage of marine cargo.

MENZIES AVIATION/ANCHORAGE FUELING AND SERVICE COMPANY (AFSC)

The Menzies Aviation facility includes a control building, a parking area, an emergency generator located in an intermodal shipping container with a 300-gallon fuel storage tank, a tank truck loading rack (TTLR), a pump station, a bulk fuel tank farm with nine aboveground storage tanks (AST) within a secondary containment area, and an undeveloped wetlands area. Additionally, Menzies Aviation operates an underground pipeline system for transporting fuel from the docks to the tank farm, and from the tank farm to Ted Stevens Anchorage International Airport.

MARATHON PETROLEUM (MARATHON) – FORMERLY TESORO AND ANDEAVOR

The Marathon bulk fuel storage facility includes an administrative/operations building, a parking area, an operations area containing a TTLR that drains to a 12,000-gallon underground storage tank (UST), a valve line-up box, a warehouse facility, a bulk fuel tank farm with 19 ASTs within a secondary containment berm, and an underground pipeline system for transporting fuel from the docks to the tank farm.

MATSON

Matson facilities include an administrative/warehouse building, equipment and material staging yards, cargo and vehicle transit areas, container cranes on the docks, two maintenance buildings (one of which contains a vehicle wash bay), a vehicle fueling area (VFA), and vehicle parking areas. Matson facilities also include a portable, inflatable hazardous substance containment unit that can be deployed anywhere on the yard.

TOTEM MARITIME ALASKA (TOTE)

TOTE facilities include an administrative building, a vehicle inspection facility with vehicle wash bays, an operations center (located in the vehicle maintenance building), equipment and material staging yards, a VFA, cargo and vehicle transit areas, a vehicle maintenance building with a vehicle wash bay, inbound and outbound hazardous cargo container areas, and a parking lot.

DELTA WESTERN

Delta Western facilities include one 50,000-barrel methanol tank with vapor combustion unit, a control building, a dedicated methanol pipe system and marine manifold to transfer methanol from cargo ships through the Port valve yard to the methanol tank, and a TTLR and pump to load methanol into transporters (tank trucks).

ALASKA BASIC INDUSTRIES (ABI)

ABI is leasing a portion of the South Backlands area for a cement storage and transfer facility. The cement storage facility was designed and constructed to contain 40,000 tons of cement product. For clarification, there are a number of ABI facilities — cement storage silos, truck and rail container loading facilities, etc. — located at the greater Port complex, however, only facilities sited within

the South Backlands area fall within the jurisdictional boundaries of the Port's MS4 permit. All other structures, systems, and associated storm water discharges are managed by the Municipality of Anchorage.

1.2.3 STORM WATER SYSTEM AND OUTFALL CHARACTERISTICS

The Port storm water system is permitted and regulated by the APDES program as a Phase I MS4. It consists of seven outfalls that discharge into the Cook Inlet tidelands: Outfalls 001, 002, 003, 004, 005, 006, and 007. The system includes numerous structural controls, such as solid piping, perforated piping, containment berms, drainage valves, catch basins, a sedimentation basin, manholes, sumps, grating, drainage ditches, and curbing. Outfalls 001, 002, and 003 have been included in the Port MS4 monitoring program since permit issuance in 1995. Outfall 006 collects and discharges storm water from the South Backlands; construction in this area of the Port was completed in 2011. Outfall 007 drains the North Extension Area, which is part of the Port of Alaska Modernization Program. This area is covered under the Port's existing or future MS4 permit. The locations of these features are delineated on Drawing 1 in Appendix A.

There are two other outfalls located at the Port that discharge into Cook Inlet: Petroleum Hydrocarbon Valve Yard outfall (Outfall 004) and the Gaylor Gulch outfall (Outfall 005) . Gaylor Gulch drains storm water from JBER to the east; JBER is covered under a separate NPDES authorization. Storm water traveling through Gaylor Gulch discharges into the Gaylor Gulch Weir at the foot of Cherry Hill. The weir is drained by a buried storm drain line that trends north along Terminal Road before turning sharply to the west and traversing Port property to empty into Cook Inlet near Trestle No. 1-A (Drawing 1). Both the weir and the buried line belong to JBER. In the current configuration of the Port's MS4, several storm drain catch basins on Port property discharge runoff into this line. Although this commingling of storm water does occur, the quality and quantity of storm water in the line remain the responsibility of JBER. It is roughly estimated that greater than 90 percent of the flow in this line originates on JBER.

The Petroleum Hydrocarbon Valve Yard has its own storm drain outfall (Outfall 004), which is not interconnected to the Port's storm drain system. The valve yard is also equipped with a manual discharge valve and oil/water separator.

The Port has adopted the Discharges from Large and Small Construction Activities Permit, also known as the Construction General Permit (CGP), as a regulatory mechanism to require erosion, sediment, and waste controls at construction sites. All discharges from construction sites disturbing more than one acre in Alaska are independently required to be authorized by the CGP. This control measure within the MS4 is reduced to a 10,000 square feet requirement and is necessary to enable the Port to effectively and directly control construction site discharges into their storm sewer system.

1.2.4 PAST MONITORING PROGRAMS AND CHALLENGES

During the first four years of the 1995 permit, there was difficulty with the wet weather monitoring program due to the storm drain design, nature, frequency of summer storm events, and tidal influence. The Port proposed to EPA to eliminate the wet weather monitoring program in 1999 and the wet weather monitoring was suspended. ADEC has determined that it is appropriate to reinstate the wet weather monitoring program under the current MS4 permit.

Currently, there is a potential off-site point source, a known off-site sheet flow drainage, and a spring water source that affects the Port's MS4.

The potential off-site point source is storm water from neighboring properties to the south that may be entering the Port's MS4 via the surface drainage ditch located along the eastern boundary of the South Transit Area. The Port is aware of this potential off-site point source, though to date no specific action has been taken.

2.0 MONITORING PLAN

Meeting the MS4 Permit goals requires laboratory analysis of storm water system performance in preventing discharge of pollutants to Cook Inlet waters. Monitoring, sample collection, and analytical activities will be performed in support of the following activities prescribed by the 2015 MS4 permit:

- Dry Weather Inspections
- Wet Weather Inspections
- Industrial and High Risk Runoff Monitoring.

Forms for recording inspections of the MS4 system are included in Appendix B. Collection, analysis, and interpretation of samples and the resultant chemical data will be guided by the QAPP which is part of this Annual Report.

2.1 DRY WEATHER INSPECTIONS

The purpose of the Dry Weather Inspection program is to detect the presence of illicit connections, improper discharges, or other pollution issues relating to the storm drain system. The 2015 MS4 Permit requires field tests or laboratory analysis of selected chemical compounds to detect illicit discharge to the MS4 system. The Port has designed a Dry Weather Inspection program that consists of the activities listed below.

- Ongoing Awareness Program
- Monitoring Point and Outfall Inspections
- Facility Inspections and Annual Interviews.

2.1.1 ONGOING AWARENESS PROGRAM

The ongoing awareness program is a year-round effort. It is designed to encourage all Port Stakeholders and Port users, the general public, and other interested parties to report potential storm water pollution problems or concerns to the Storm Water Pollution Prevention Team as they occur. The goal of the ongoing awareness program is to follow up on all reported potential pollution sources and determine adequate Best Management Practices (BMPs), source reduction and elimination measures, and source control measures to be added to the annual SWMP. The annual education program described in Section 3.1 of the SWMP is designed to keep Port Stakeholders mindful of storm water management practices, encouraging ongoing awareness pertaining to storm water issues at the Port.

2.1.2 MONITORING POINT AND OUTFALL INSPECTIONS

Dry weather inspections for non-storm flows from Outfalls 001 to 007 are conducted in accordance with the MS4 permit. All outfalls within the permit area have been inspected under the dry weather inspection program. Inspection of the monitoring points will occur at least once a year during a period of relatively dry weather at low tide. Outfall names and associated monitoring points are provided in Table 2-1. The outfall locations are also shown on Drawing 1 in Appendix A.

TABLE 2-1: OUTFALL AND MONITORING POINT DESCRIPTIONS

Outfall Name	Monitoring Point Name
Outfall 001	Monitoring Point 001
Outfall 002	Monitoring Point 002
Outfall 003	Monitoring Point 003
Outfall 004	Not Applicable
Outfall 005	Not Applicable
Outfall 006	Not Applicable
Outfall 007	Not Applicable

Monitoring point and outfall inspection is aimed at detecting the presence of solid waste, petroleum sheen on the water, and/or unusual odors. If any of these conditions are encountered, the amount of solid waste (estimated in cubic feet), an odor description, and a relative estimate of the heaviness of the sheen are recorded and reported. An investigation will also be conducted to determine the source of the discharge and the course of action to be taken to mitigate future illicit discharges from that source. Part of the investigation will include determining if analytical sampling is warranted. Raw data and a narrative review of the screening and a map shall be included in the corresponding Detailed Annual Report from the year the data is collected.

Outfalls are visually inspected and the general condition and functionality of each is noted to ensure that the system is discharging appropriately. The discharge flow rate and condition of the pipe are also noted.

Collection, analysis, and interpretation of samples and the resultant chemical data will be guided by the QAPP.

It should be noted that groundwater at the Port has been known to infiltrate the pipes. This can lead to there being a discharge during a period of relatively dry weather.

2.1.3 FACILITY INSPECTIONS AND ANNUAL INTERVIEWS

Site-wide visual inspections and interviews will be performed for each facility to confirm whether the Port and Port users are adhering to the SWMP. Inspections consist of inspecting the entire Port, excluding the inside of buildings, with a focus on illicit discharges, solid waste accumulation, maintenance and repair of the storm drain system, identifying on-site and off-site sources of potential pollution, and checking for prohibited outdoor work activities.

The interviews will focus on the following:

- Identifying and correcting failing best management practices (BMPs)
- Source reduction and elimination measures
- Source control measures
- Changes in programs or standard operating procedures that may have a direct effect on APDES compliance and storm water pollution prevention
- Identifying new spills
- Material and chemical handling practices

- Training
- Disposal and recycling practices.

2.2 WET WEATHER INSPECTIONS

Wet weather inspections are designed to monitor the quality of storm water in representative outfalls and/or in stream monitoring locations to characterize discharges from the MS4 during storm events.

A measurable storm event is defined as follows:

- For rainfall, a storm event that results in an actual discharge from the facility that follows the preceding measurable storm event by at least 72 hours (3 days)
- For snowmelt, an event which produces a measurable discharge from the facility, at some time following snowfall
- No specific storm magnitude (i.e., 0.1 inches or greater measured precipitation) is specified.

The purpose of the wet weather inspection of representative monitoring points is to locate areas in need of additional controls. The inspections will be conducted during measurable storm events at the frequency identified in Table 2-3. Collection, analysis, and interpretation of samples and the resultant chemical data will be guided by the QAPP.

The outfalls selected by the Port for this monitoring are representative of major land uses at the Port and were specified in Section 4.1.2.4 of the MS4 Permit.

The inspection of the quality of the three selected outfalls during storm events will provide information on the quality of runoff to the MS4, a basis for estimating annual pollutant loads, and a mechanism to evaluate reductions in pollutants discharged from the MS4.

2.2.1 STORM WATER OUTFALL INSPECTION PLAN

Wet Weather inspection will be conducted using the three monitoring points selected in the MS4 Permit and described in Table 2-2. They will be inspected at the frequency described in Table 2-3. Inspections will occur during a storm event at low tide.

TABLE 2-2: OUTFALL MONITORING POINT DESCRIPTIONS

Outfall	Location	Description
001	Transit Area B	Storm water drain for Transit Area B. This area is 52.0 total acres with 16.2 acres of impervious surface.
002	Transit Area D and Transit Area A	Storm water drain for Transit Area D and a portion of Transit Area A. Transit Area D is 43.4 total acres and has 7.8 acres of impervious surface. This portion of Transit Area A has 55 total acres covered by impervious surface. The total acreage of impervious surface draining to outfall 002 is 22.8 acres.
003	Transit Area 12-B	Storm water drain for Transit Area 12-B consists of drainage from the South Transit Area, portions of Tract H, and Lots 7B, 8B, and 8C (Tesoro and AFSC). Area 12-B is 36.7 total acres with 16.8 acres of impervious surface.

TABLE 2-3: OUTFALL MONITORING REQUIREMENTS

Parameter	Monitoring Requirements								
	Sample Location[1]			Sample Frequency[2] (Number per year)					Sample Type[3]
				Calendar Year					
	001	002	003	2016	2017	2018	2019	2020	
Flow (cfs)	X	X	–	2	2	2	2	2	Grab
Estimated Volume (gallons)	–	–	X	2	2	2	2	2	Grab
Temperature (° C)	X	X	X	2	2	2	2	2	Grab
pH	X	X	X	2	2	2	2	2	Grab
Dissolved Oxygen	X	X	–	1	1	1	1	1	Grab
Biochemical Oxygen Demand, 5-Day (BOD_5)	X	X	–	1	1	1	1	1	Grab
Chemical Oxygen Demand (COD)	X	X	–	1	1	1	1	1	Grab
Turbidity (NTU)	X	X	–	1	1	1	1	1	Grab
Total Suspended Solids (TSS)	X	X	–	1	1	1	1	1	Grab
Total Dissolved Solids (TDS)	X	X	–	1	1	1	1	1	Grab
Sheen	X	X	X	2	2	2	2	2	Grab
Total Aromatic Hydrocarbons (TAH)	X	X	X	2	2	2	2	2	Grab
Total Aqueous Hydrocarbons (TaqH)	X	X	X	2	2	2	2	2	Grab
Total Phosphorous	X	X	–	–	–	–	1	–	Grab
Nitrate plus Nitrite Nitrogen	X	X	–	1	1	1	1	1	Grab
Total Kjeldahl Nitrogen (TKN)	X	X	–	1	1	1	1	1	Grab
Total Cadmium	X	X	–	–	–	–	1	–	Grab
Total Copper	X	X	–	–	–	–	1	–	Grab
Total Lead	X	X	–	–	–	–	1	–	Grab
Total Zinc	X	X	–	–	–	–	1	–	Grab
Hardness (as $CaCO_3$)	X	X	–	–	–	–	1	–	Grab

NOTES:
– = Parameter not collected for that sample location
1. Outfall locations 001, 002, and 003.
2. Sample frequency is represented by (1) once/year or (2) twice/year, i.e., calendar year. Twice per year consists of one sample taken between January and June and one sample taken between July and December, with a minimum of 14 days separation between sampling events.
3. Grab samples may be taken manually or with an automatic water sampler.

2.2.2 INDUSTRIAL AND HIGH RISK INSPECTIONS

According to the SWMP, each Stakeholder will be responsible for establishing Industrial and High Risk Monitoring sampling locations and developing monitoring programs. The programs will identify, monitor, and control pollutants in storm water discharges to the MS4 from the sources listed below.

- Hazardous waste treatment, storage, and disposal facilities that are subject to Emergency Planning and Community Right-to-Know Act (EPCRA) Title III, Section 313
- Bulk storage facilities
- Other industrial or commercial discharges that are determined to contribute to a substantial pollutant loading that pertains to the MS4.

STAKEHOLDER MONITORING PLANS

Stakeholders will develop written sampling plans that include, at a minimum, the following:

- Specific sampling locations
- A map showing the sampling locations
- Specific analytical methods to be analyzed
- Reference to the QAPP for required procedures.

Analytical testing shall, at a minimum, include the analytes specified in Section B.4 of the QAPP. Upon request, each Stakeholder will submit their monitoring and sampling plans along with records of any monitoring or sampling activity to the Port. At a minimum, the self-monitoring program for each Stakeholder will included the collection of quantitative data on the following parameters.

TABLE 2-4: STAKEHOLDER MONITORING PARAMETERS

Parameter
Pollutants limited in an existing APDES permit for the identified facility
Sheen
TAH and TAqH
COD
pH
BOD_5
TSS
Total Phosphorous
TKN
Nitrate plus nitrite nitrogen
Any of the metals cadmium, copper, lead, and zinc which can be reasonably expected in storm water runoff from the Stakeholder site
Any information on discharges required under 20 CFR 122.21 (g)(7)(iii)-(iv)

Collection, analysis, and interpretation of samples and the resultant chemical data will be guided by the QAPP. Each Stakeholder will submit their procedures and records of any monitoring activity to the Port upon request.

STAKEHOLDER MATERIAL INVENTORIES

Waste resulting from overstocking and the disposal of outdated materials has previously been identified as a potential high risk discharge. A material inventory for the Port and its Stakeholders has been created to assist in reducing and/or eliminating waste caused by overstocking and disposal of outdated materials. The inventories are included in Appendix E of the SWMP.

3.0 PROGRAM AMENDMENTS

Based on inspection activities or changes to the Port Stakeholders, this Monitoring Program, and the QAPP will be reviewed and amended as part of the generation of the Detailed Annual Report to include altered activities or new conditions noted during inspections in monitoring of the MS4 system.

4.0 REFERENCES

ADEC (Alaska Department of Environmental Conservation). 2015. Alaska Pollutant Discharge Elimination System: Port of Anchorage [Alaska] Municipal Separate Storm Sewer System Individual Permit (AKS052426). Effective 1 August 2015.

ADEC. 2018. Oil and Other Hazardous Substances Pollution Control. 18 AAC 75.

ADEC. 2019. Underground Storage Tanks. 18 AAC 78.

ADEC. 2017. Alaska Pollutant Discharge Elimination System. 18 AAC 83.

ADEC. 2018. Water Quality Standards. 18 AAC 70.

EPA (U.S. Environmental Protection Agency). 2002. Guidance for Quality Assurance Project Plans. EPA QA/G-5.

EPA. 2001. EPA Requirements for Quality Assurance Project Plans. EPA QA/R-5.

APPENDIX A
MAPS

Cook Inlet

Alaska Railroad Facilities

South Backlands

ABI Cement Dome

MOA Outfall

Outfall 006

Outfall 003

Outfall 004

Outfall 005

Outfall 008

Outfall 001

Outfall 002

Outfall 007

South Transit Area

Tank Farm w/ Secondary Containment

Sampling Location SP-003

Sampling Location SP-001

Sampling Location SP-002

POAK1

Transit Shed

Stevedore Building No. 1

Stevedore Building No. 2

Crane No.1

Crane No.2

Crane No.3A

Crane No.3B

Crane No.3

Crane No.4

Gantry Crane

Crane Turnout

EastTrestle

Transit Area "A"

Transit Area "B" Matson Lines

Transit Area "C" TOTE

Transit Area "D" TOTE

Vehicle Fueling Area

Used Oil AST

Parts CONNEX

Maintenance Building

Material Storage Bldg. No. 2

HAZMAT Shed

Containment Shed

Sand Tent

Matson Maintenance Bldg.

Wash Bay

Used Battery Storage Area (Covered)

Drum Rack

Recycled Scrap Metal Storage

Propane Storage Shed

Covered Refrigeration Generator Storage Rack

Recycled Scrap Metal Storage

TOTE

TOTE Longshoreman Shack

Solid Waste Dumpster

Recycled Scrap Metal Storage

TOTE Vehicle Wash Area

Vehicle Inspection Facility & Wash Bay

Covered Outdoor Storage & Rack

TOTE Admin. Bldg.

Emergency Spill Response Van

North Bound HAZMAT Storage

Routing Station

Port of Alaska Lease from Joint Base Elmendorf-Richardson / MOA Right-Of-Way

Joint Base Elmendorf Richardson

Fill/Piles Scheduled for Removal

North Extension Area

General Snow Storage Area

Cascade McFarland Lumber Storage

Outfall 7 Drainage Basin (Not Mapped by MOA)

Outfall 2 Drainage Basin

Outfall 1 Drainage Basin

Outfall 4/5 Drainage Basin

Outfall 3 Drainage Basin

Outfall 6 Drainage

Matson Lines

Tank Farm w/ Secondary Containment

Tank Farm w/ Secondary Containment

Tank Farm w/ Secondary Containment

Security Command & Control Center

Security Screening Tent

Snow Storage Area

Operations Office

Maint. Bldg.

Administration Warehouse Bldg.

Paper Product Waste Bin

Fire Foam Bldg.

Government Hill Neighborhood

Tract J (Former DFSP-A)

Outfall 6 Drainage

AT&T Facility

Joint Base Elmendorf Richardson

Drainage Basin
MS4 Boundary
Storm Water Outfall
Storm Manhole
Catch Basin Manhole
Catch Basin
Storm Drain (w/ flow arrow)
Runoff Flow Direction_Legend
Building/Structure
Storage Area
Aggregate/Soil Surface
Paved Area
Vegetated Area
Bulk Fuel Tank
Wetland

NOTES:
1. Port of Alaska features based on the Port of Alaska GIS.
2. Drainage basin boundaries are from Municipality of Anchorage GIS.
3. Aerial photograph is from ESRI Online World Imagery.

ALL LOCATIONS ARE APPROXIMATE

0 150 300 600

APPROXIMATE SCALE IN FEET

N

PORT OF ALASKA

STORMWATER SITE PLAN

PROJ. NO.:	2600.01
DATE:	NOV 2019
REF:	N/A
DRAWING NO.:	A-01

R&M CONSULTANTS, INC.

Date Saved: 11/15/2019 11:05:58 AM by CFell Z:_GIS\Projects\2600.01 MOA Port of Alaska Contract Year 1\Map Documents\Task 3 APDES\2014 APDES_SWMP_MAP_2015-1109v2.mxd

APPENDIX B
FORMS

PERMITTEE NAME/ADDRESS (Includes Facility Name/Location if Different)

NAME: Port of Anchorage [Alaska]

ADDRESS 2000 Anchorage Port Road
Anchorage, Alaska 99501

FACILITY LOCATION Port of Anchorage [Alaska]
2000 Anchorage Port Road
Anchorage, Alaska 99501

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)

DISCHARGE MONITORING REPORT (DMR)

AKS052426	
PERMIT NUMBER	**DISCHARGE NUMBER**

MONITORING PERIOD						
	YEAR	**MO**	**DAY**		**YEAR**	**MO**	**DAY**
FROM				TO			

PARAMETER		**QUANTITY OR LOADING**			**QUALITY OF CONCENTRATION**				**NO. EX.**	**FREQUNCY OF ANALYSIS**	**SAMPLE TYPE**
		AVERAGE	**MAXIMUM**	**UNITS**	**MINIMUM**	**AVERAGE**	**MAXIMUM**	**UNITS**			
Flow	**SAMPLE**			cfs	Not Applicable	Not Applicable	Not Applicable	cfs			Grab
	PERMIT REQUIREMENT	None	None		Not Applicable	Not Applicable	Not Applicable				Grab
Temperature	**SAMPLE**	Not Applicable	Not Applicable	°C				°C			Grab
	PERMIT REQUIREMENT	Not Applicable	Not Applicable								Grab
pH	**SAMPLE**	Not Applicable	Not Applicable	S.U.				S.U.			Grab
	PERMIT REQUIREMENT	Not Applicable	Not Applicable								Grab
Dissolved Oxygen	**SAMPLE**	Not Applicable	Not Applicable	mg/L				mg/L			Grab
	PERMIT REQUIREMENT	Not Applicable	Not Applicable								Grab
Biochemical Oxygen Demand	**SAMPLE**	Not Applicable	Not Applicable	mg/L				mg/L			Grab
	PERMIT REQUIREMENT	Not Applicable	Not Applicable								Grab
Chemical Oxygen Demand	**SAMPLE**	Not Applicable	Not Applicable	mg/L				mg/L			Grab
	PERMIT REQUIREMENT	Not Applicable	Not Applicable								Grab
Turbidity	**SAMPLE**	Not Applicable	Not Applicable	NTU				NTU			Grab
	PERMIT REQUIREMENT	Not Applicable	Not Applicable								Grab

COMMENT AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)

PERMITTEE NAME/ADDRESS (Includes Facility Name/Location if Different)

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)

DISCHARGE MONITORING REPORT (DMR)

NAME: Port of Anchorage [Alaska]

ADDRESS 2000 Anchorage Port Road
Anchorage, Alaska 99501

FACILITY LOCATION Port of Anchorage [Alaska]
2000 Anchorage Port Road
Anchorage, Alaska 99501

AKS052426	
PERMIT NUMBER	**DISCHARGE NUMBER**

MONITORING PERIOD						
	YEAR	**MO**	**DAY**		**YEAR**	**MO**	**DAY**
FROM				TO			

PARAMETER		**QUANTITY OR LOADING**			**QUALITY OF CONCENTRATION**				**NO. EX.**	**FREQUNCY OF ANALYSIS**	**SAMPLE TYPE**
		AVERAGE	**MAXIMUM**	**UNITS**	**MINIMUM**	**AVERAGE**	**MAXIMUM**	**UNITS**			
Total Suspended Solids	**SAMPLE**	Not Applicable	Not Applicable	mg/L				mg/L			Grab
	PERMIT REQUIREMENT	Not Applicable	Not Applicable								Grab
Total Dissolved Solids	**SAMPLE**	Not Applicable	Not Applicable	mg/L				mg/L			Grab
	PERMIT REQUIREMENT	Not Applicable	Not Applicable								Grab
Sheen	**SAMPLE**			Visual	Not Applicable	Not Applicable	Not Applicable	Visual			Grab
	PERMIT REQUIREMENT	Virtually None	Virtually None		Not Applicable	Not Applicable	Not Applicable				Grab
TAH	**SAMPLE**	Not Applicable	Not Applicable	mg/L				mg/L			Grab
	PERMIT REQUIREMENT	Not Applicable	Not Applicable								Grab
TAqH	**SAMPLE**	Not Applicable	Not Applicable	mg/L				mg/L			Grab
	PERMIT REQUIREMENT	Not Applicable	Not Applicable								Grab
Nitrate plus Nitrite Nitrogen	**SAMPLE**	Not Applicable	Not Applicable	mg/L				mg/L			Grab
	PERMIT REQUIREMENT	Not Applicable	Not Applicable								Grab
Total Kjeldahl Nitrogen	**SAMPLE**	Not Applicable	Not Applicable	mg/L				mg/L			Grab
	PERMIT REQUIREMENT	Not Applicable	Not Applicable								Grab

COMMENT AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)

PERMITTEE NAME/ADDRESS (Includes Facility Name/Location if Different)

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)

DISCHARGE MONITORING REPORT (DMR)

NAME: Port of Anchorage [Alaska]

ADDRESS 2000 Anchorage Port Road
Anchorage, Alaska 99501

FACILITY LOCATION Port of Anchorage [Alaska]
2000 Anchorage Port Road
Anchorage, Alaska 99501

AKS052426	
PERMIT NUMBER	**DISCHARGE NUMBER**

	MONITORING PERIOD						
	YEAR	**MO**	**DAY**		**YEAR**	**MO**	**DAY**
FROM				TO			

PARAMETER		**QUANTITY OR LOADING**			**QUALITY OF CONCENTRATION**				**NO. EX.**	**FREQUNCY OF ANALYSIS**	**SAMPLE TYPE**
		AVERAGE	**MAXIMUM**	**UNITS**	**MINIMUM**	**AVERAGE**	**MAXIMUM**	**UNITS**			
Estimated Volumes	**SAMPLE**			Gallons	Not Applicable	Not Applicable	Not Applicable	Gallons			Grab
	PERMIT REQUIREMENT	None	None		Not Applicable	Not Applicable	Not Applicable				Grab
	SAMPLE										
	PERMIT REQUIREMENT										
	SAMPLE										
	PERMIT REQUIREMENT										
	SAMPLE										
	PERMIT REQUIREMENT										
	SAMPLE										
	PERMIT REQUIREMENT										
	SAMPLE										
	PERMIT REQUIREMENT										
	SAMPLE										
	PERMIT REQUIREMENT										

NAME/TITLE PRINCIPAL EXECUTIVE OFFICER	I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.		TELEPHONE		DATE		
TYPED OR PRINTED		SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT	AREA	NUMBER	YEAR	MO	DAY

COMMENT AND EXPLANATION OF ANY VIOLATIONS (Reference all attachments here)

MS4 Quality Assurance Project Plan

Port of Alaska
Storm Water Management Program
Anchorage, Alaska

Prepared For:

Port of Alaska
2000 Anchorage Port Road
Anchorage, Alaska 99501

Prepared By:

R&M Consultants, Inc.
9101 Vanguard Drive
Anchorage, Alaska 99507

Updated 7 February 2020

R&M CONSULTANTS, INC.

TITLE AND APPROVAL SHEET

Port of Alaska	
Name:	Sharen Walsh, PE, AMPE
Title:	Deputy Port Director

Signature: Sharen A. Walsh Date: 2/06/2020

R&M Consultants, Inc.	
Name:	Kristi M. McLean, LEED AP BD+C
Title:	Group Manager – Environmental Services

Signature: Date: 6 February 2020

TABLE OF CONTENTS

LIST OF TABLES

LIST OF APPENDICES

ACRONYMS AND ABBREVIATIONS

°C	degrees Celsius
AAC	Alaska Administrative Code
ABI	Alaska Basic Industries
ADEC	Alaska Department of Environmental Conservation
APDES	Alaska Pollutant Discharge Elimination System
AFSG	Anchorage Fueling and Service Company
BOD_5	biochemical oxygen demand, five day
$CaCO_3$	calcium carbonate
cfs	cubic foot per second
COD	chemical oxygen demand
CPR	cardiopulmonary resuscitation
EPA	Environmental Protection Agency
HAZWOPER	Hazardous Waste Operations and Emergency Response
LOD	limit of detection
mg/L	milligrams per liter
MS4	Municipal Separate Storm Sewer System
NPDES	National Pollutant Discharge Elimination System
ND	non-detect
NTU	nephelometric turbidity units
Port	Port of Alaska
pH	potential of hydrogen
QA	quality assurance
QAPP	Quality Assurance Project Plan
QC	quality control
QEP	qualified environmental professional
QMP	Quality Management Plan
QS	qualified sampler
R&M	R&M Consultants, Inc.
RPD	relative percent difference
SOPs	Standard Operating Procedure
SWMP	Storm Water Management Program
SWPP	Storm Water Pollution Prevention
TDS	total dissolved solids
TAH	total aromatic hydrocarbons

ACRONYMS AND ABBREVIATIONS (CONTINUED)

TaqH	total aqueous hydrocarbons
TKN	total kjeldahl nitrogen
TSS	total suspended solids

A. PROJECT MANAGEMENT ELEMENTS

This section of the Quality Assurance Project Plan (QAPP) includes discussion of sampling processes, sample analysis, collection of historical data, and management of data. The data generation and acquisition elements address data collection and sample handling aspects of the QAPP in accordance with U.S. Environmental Protection Agency (EPA) guidance documents (EPA QA/R-5 and EPA QA/G-5).

A.1 TITLE AND APPROVAL SHEET

See page i, above

A.2 TABLE OF CONTENTS

See pages ii and iii above.

A.3 DISTRIBUTION LIST

TABLE A-1: DISTRIBUTION LIST

Organization	Storm Water Pollution Prevention (SWPP) Position	Name	Title	Telephone Number
Port of Alaska	SWPP Team Leader	Stuart Greydanus, AMPE	Operations, Maintenance, and Security Manager	907.343.6202
	SWPP Team Member	Sharen Walsh, PE, AMPE	Deputy Port Director	907.343.6203
		Stephen Ribuffo, AMPE	Port Director	907.343.6201
		Ted Frey	Maintenance Supervisor	907.343.6208
Menzies Aviation/AFSC		Laurie Butler	Environmental Manager	907.249.4205
Marathon Petroleum		Serena Lewellyn	Environmental Coordinator	907.490.6217
Matson		Monique Cortez	Safety, Quality, and Environmental Manager	907.263.5045
TOTE Maritime Alaska		Billy Godwin	Terminal Operations Manager	907.265.7218
Alaska Basic Industries (ABI)		Scott DeWandel	Operations Manager	907.348.3333
Delta Western		Tou Yang	Terminal Supervisor	907.376.4644
Alaska Department of Environmental Conservation (ADEC)	Regulatory Oversight	Jim Rypkema	Storm Water and Wetlands Program Manager	907.334.2288

R&M Consultants, Inc. (R&M)	Environmental Compliance	Kristi McLean, LEED AP BD+C	Group Manager – Environmental Services	907.646.9689

A.4 PROJECT/TASK ORGANIZATION

TABLE A-2: PROJECT ROLES AND RESPONSIBILITIES

Organization	Name	Project Title	Responsibilities
Port of Alaska	Sharen Walsh, PE, AMPE	POA Project Manager	Ensure compliance with the SWMP, MS4 Permit, and the QAPP
ADEC	Jim Rypkema	ADEC Project Manager	Review inspection and sampling results from monitoring activities to assess regulatory compliance with the MS4 Permit.
R&M	Kristi McLean, LEED AP BD+C	R&M Project Manager	Planning and oversight of sampling and permitting activities. Preparing sampling and permitting reports. ADEC QEP
	Christopher Fell, CPG	R&M Lead Sampler and Data QA/QC reviewer	Collecting samples and reviewing analytical data for QA/QC concerns. ADEC QEP
	Brian Mullen, PE	R&M Lead Sampler	ADEC QEP
	Nathan Dennis, CESCL	R&M Backup Sampler	Sampling support, storm water compliance

NOTES:
See the Acronyms and Abbreviations section for definitions.

A.5 PROBLEM DEFINITION/BACKGROUND

Under the National Pollutant Discharge Elimination System (NPDES) storm water program, operators of municipal separate storm sewer systems (MS4) require permit authorization for storm water discharges. The Port of Alaska (Port) was issued its own individual MS4 permit under the NPDES by the EPA in 1995. The Alaska Department of Environmental Conservation (ADEC) reissued permit coverage under the Alaska Pollutant Discharge Elimination System (APDES) system effective 1 August 2015. As an MS4 operator, the Port is required to develop a Storm Water Management Program (SWMP) designed to prevent pollutants from being introduced into surface waters due to storm water runoff. Part of the SWMP is development of this QAPP to detail plans and procedures used to collect, document, and analyze samples in support of the SWMP.

Additional background details are provided in the project MS4 Monitoring Program Plan.

A.6 PROJECT/TASK DESCRIPTION

Meeting the MS4 permit goals requires laboratory analysis of storm water system performance in preventing discharge of pollutants to Cook Inlet waters. Sample collection and analytical analysis activities will be performed in support of the following activities prescribed by the 2015 MS4 permit:

- Dry Weather Inspections
- Wet Weather Inspections
- Industrial and High Risk Runoff Inspections

Additional information about the various inspections is provided in the MS4 Monitoring Program Plan.

A.7 QUALITY OBJECTIVES AND CRITERIA

This section defines quality objectives for the project and the performance criteria to achieve those objectives. A systematic planning process is utilized to define these quality objectives and performance criteria.

A.7.1 GOALS OF THE STUDY

Goals of sampling events conducted according to this QAPP are to:

- Provide analytical data to assess compliance with the MS4 permit
- Measure the effectiveness of the Port's SWMP
- Characterize storm water discharges
- Measure the chemical, physical, and biological impacts to the receiving waters resulting from storm water discharges
- Assist with detection of pollutant sources
- Detect illicit discharges to the MS4

A.7.2 INFORMATIONAL INPUTS

Informational inputs include the 2015 MS4 Permit, the SWMP, and the MS4 Monitoring Program Plan.

A.7.3 BOUNDARIES OF STUDY

The study is physically bound by the property controlled by the Port and chemically by the chemical parameters defined in the 2015 MS4 Permit.

A.7.4 ANALYTICAL APPROACH

Analytical data will be collected according to the parameters outlined in the MS4 permit and as specified in Section B of the QAPP. Analytical data will be used to evaluate the goals outlined in Section A.7.1 of the QAPP.

A.7.5 ACCEPTANCE CRITERIA

Analytical data will be evaluated according to ADEC guidance in 18 AAC 70. Specific analytes are defined in Section B.4 of the QAPP. Data must meet quality control criteria defined in Section B.5 of the QAPP to be accepted by the program. Detection of an analyte exceeding the ADEC levels (Screening Levels) specified in 18 AAC 70 will trigger additional sampling requirements as defined in Section B.1 of the QAPP.

A.7.6 SURFACE WATER ANALYSIS

Surface water samples will be collected in the quantities defined in Section B.1.

A.8 SPECIAL TRAINING NEEDS/CERTIFICATION

TABLE A-3: TRAINING AND CERTIFICATION REQUIREMENTS

Position/Organization	Training/Certification
Environmental Compliance Manager (R&M)	• ADEC Qualified Environmental Professional (18 AAC 75 333) • HAZWOPER • First Aid / CPR
Lead Sampler (R&M)	• ADEC Qualified Environmental Professional or Sampler (18 AAC 75 333) • HAZWOPER • First Aid / CPR
Assistant Samplers (R&M)	• HAZWOPER • First Aid / CPR
Analytical Laboratory (SGS North America, Inc.)	• ADEC Approval for Contaminated Sites Analysis Including Underground Storage Tank Sites (18 AAC.78.800)

NOTES:
See the Acronyms and Abbreviations table for definitions.

A.9 DOCUMENTS AND RECORDS

Complete, detailed documentation is essential for recording field sampling data and observations made as part of field work associated with this QAPP. Standard documentation procedures for field work are presented in 90-RM-SP: Environmental Field Documentation Standard Procedure included in Appendix B.

A.9.1 FIELD DOCUMENTATION

General documentation and record keeping best practices include the following:

- Taking notes in a dedicated, bound, numerated field book
- Using indelible ink
- Crossing out errors or changes with a single line and then initialing and dating the change
- For field forms, filling out or noting “not applicable” or “N/A” for any fields not used. Do not leave blank spaces
- Signing, dating, and crossing out any remaining space on a field book page at the end of each day
- Make a clear distinction between data, observations, and opinions

General content recommendations for field book notes are as follows:

- Names/titles for all personnel onsite that are associated with the project each day, including site visitors

- Site condition notes (e.g., weather)
- Sketches and maps to illustrate the field site or feature
- Note field forms completed and include identifying information
- Note the samples collected and media screened, as appropriate
- Document sample locations, if applicable
- List deviations from the QAPP and the reasoning
- Include Chain-of-Custody information

A.9.2 FIELD DOCUMENT MANAGEMENT

The MS4 Monitoring Program Plan at the Port generates multiple documents that are necessary to meet the reporting requirements of the MS4 permit.

Documents generated as part of the MS4 Monitoring Program Plan include:

- Field Books
- Discharge Monitoring Reports
- Chains-of-Custody
- Analytical Laboratory Level II Reports

Hard-copy documents will be scanned and stored in an electronic project file maintained by the entity performing the activity. Both the hard-copy documents and electronic versions shall be retained for a period of at least three years from the date of the sample, measurement, report or application, or for the term of the MS4 permit.

A.9.3 REPORTING DOCUMENTS

Formal documentation in the Detailed Annual Report will be generated based on sampling events during the year and are retained on file and are available on request. Formal documentation includes:

- Description of sampling events
- Methods and procedures used
- Analytical data summary
- Quality assessment of the analytical data
- Analytical data reports, including completed chains-of-custody
- Copies of field notes and any field forms

Reporting documents resulting from work completed under the QAPP or as part of a Stakeholder specific monitoring and sampling plan will be used in assessing discharges to the MS4 system.

B. DATA GENERATION AND ACQUISITION ELEMENTS

Data generation and acquisition elements address data collection and sample handling aspects of the QAPP in accordance with EPA guidance documents (EPA QA/R-5 and EPA QA/G-5). This section of the QAPP includes discussion of sampling processes, sample analysis, collection of historical data, and data management.

B.1 SAMPLING PROCESS DESIGN

Data generated and collected for the project should take into account the following items:

- Type and number of samples
- Sampling program objectives
- Sample locations and frequencies
- Sample matrices (water)
- Measurement parameters
- Rationale for the design

SAMPLING PROGRAM

Primary samples will be collected for analytical or field screening analysis of storm water discharge as defined in the MS4 Monitoring Program Plan in Table 2-3 for the main program and according to Stakeholder specific plans as described in Section 2.2.2 of the MS4 Monitoring Program Plan, as applicable.

Sample locations and frequencies are described in Sections 2.1.2 and 2.2.1 of the MS4 Monitoring Program Plan and in the Stakeholder specific plans. Sampling locations are shown on Drawing A-01 included in Appendix A. The sampling program is based on the 2015 MS4 Permit.

B.2 SAMPLING METHODS

Storm water discharge (surface water) samples will be collected using the dip, scoop, or peristaltic pump methods. The dip or scoop methods are preferred, but access issues may result in the peristaltic pump method being necessary to collect samples. Collection of samples will be conducted in accordance with standard field data collection and documentation procedures that are provided in Appendix B and are listed in Table B-1.

TABLE B-1: STANDARD FIELD PROCEDURES

Procedure Name	Purpose
20-RM-SP Surface Water Sampling	Provides standard sediment sampling procedures to meet ADEC Draft Field Sampling Guidance requirements for analytical sample collection.
90-RM-SP Environmental Field Documentation	Guides collection of documentation of field observations and sampling to support reporting and data analysis.

Samples will be named to show the following information:

- Year sampled
- Month sampled
- Outfall or sample location.

Sample identification will be as follows:

TABLE B-2: SAMPLE IDENTIFICATION NAMING CONVENTION

Sample Type	Year (yyyy)	Month (mm)	Outfall/Sample Location Number	Compiled Sample Identification
Primary	2020	01	001	202001-001
Duplicate	2020	01	008*	202001-008*

NOTES:
*Duplicate samples will all be given outfall number 008 as it does not exist and will keep the duplicate blind to the laboratory but easily identifiable to sampling and data management personnel.

B.3 SAMPLE HANDLING AND CUSTODY

Samples will be handled and custody managed in accordance with standard procedures 20-RM-SP. Samples should be taken to the lab within the timeframe specified by the preservative used and sampling requirements.

B.4 ANALYTICAL METHODS

Samples collected in accordance with the QAPP will be analyzed for the analytical parameters by an ADEC approved laboratory. Sampling parameters, the analytical test method, and the project screening levels are provided in Table B-3 for parameters requiring laboratory analysis and in Table B-4 for field screening parameters. Sampling frequency is discussed in the MS4 Monitoring Program Plan. The proposed analytical laboratory name, address, and phone number are provided below:

SGS North America, Inc (SGS)
200 West Potter Drive
Anchorage, Alaska, 99518
907.562.2343

TABLE B-3: ANALYTICAL PARAMETERS

Parameter	Analytical Method	Project Screening Level (mg/L)
TAH*	EPA 602 / SW 8260B	0.010
TAqH*	EPA 602 / SW 8260B and EPA 610; SW 8270 SIM	0.015
Total Cadmium	SW 6020A	None
Total Copper	SW 6020A	None
Total Lead	SW 6020A	None
Total Zinc	SW 6020A	None
Hardness (as $CaCO_3$)	SM 2340B	None
Total Phosphorous	SM 4500P-B,E	None
Nitrate plus Nitrite Nitrogen	SM 4500NO3-F	None
Total Kjeldahl Nitrogen (TKN)	EPA 4500N-D	None
Total Suspended Solids (TSS)	SM 2540D	None
Total Dissolved Solids (TDS)	SM 2540C	None
Biochemical Oxygen Demand, 5-Day (BOD_5)	SM 5210B	None
Chemical Oxygen Demand (COD)	EPA 410.4	None

NOTES:
* TAH and TAqH are the summation of multiple analytes as defined in 18 AAC 70 and as shown in Tables B-5 and B-6.
See the Acronyms and Abbreviations table for definitions.

TABLE B-4: FIELD SCREENING PARAMETERS

Parameter	Screening Method	Project Screening Level
Flow (cfs)	Visual estimate	Not Applicable
Estimated Volume (gallons)	Visual estimate	Not Applicable
Temperature	YSI Instruments, or similar	< 15 °C
pH	YSI Instruments, or similar	6.5 to 8.5
Dissolved Oxygen	YSI Instruments, or similar	> 6.0 mg/L and <17 mg/L
Turbidity (NTU)	YSI Instruments, or similar	< 50 NTU or the natural condition of Cook Inlet (400 to 600 NTU)
Sheen	Washington State Department of Ecology Publication 10-09-057, page 35	Virtually None

NOTES:
See the Acronyms and Abbreviations table for definitions.

Total aromatic hydrocarbons (TAH) will be calculated as follows:

- The summation of detected concentrations of compounds listed for EPA Method 602 will be calculated (Table B-5)
- For non-detect (ND) values, the limit of detection (LOD) value shall be used
- If no LOD value was reported, two times the method detection limit shall be used

TABLE B-5: TAH ANALYTES (SW 8260)

Parameter		
Benzene	1,2-Dichlorobenzene	Toluene
Chlorobenzene	1,3-Dichlorobenzene	Total Xylenes
Ethylbenzene	1,4-Dichlorobenzene	--

Total aqueous hydrocarbons (TAqH) will be calculated as follows.

- The summation of detected concentrations of compounds listed for EPA Method 610 and 602 will be calculated (Tables B-5 and B-6)
- For ND values, the LOD value shall be used
- If no LOD value was reported, two times the method detection limit shall be used

TABLE B-6: TAQH ADDITIONAL ANALYTES (SW 8270 SIM)

Parameter		
Acenaphthene	Benzo(g,h,i)perylene	Indeno(1,2,3-cd)pyrene
Acenaphthylene	Benzo(k)fluoranthene	Naphthalene
Anthracene	Chrysene	Phenanthrene
Benzo(a)anthracene	Dibenzo(a,h)anthracene	Pyrene
Benzo(a)pyrene	Fluoranthene	--
Benzo(b)fluoranthene	Fluorene	--

B.5 QUALITY CONTROL

Samples will be collected by a qualified environmental professional (QEP) or qualified sampler and reporting will be conducted by a QEP, as defined in 18 AAC 75.

Duplicate samples will be collected at the rate of one per 10 primary samples. Duplicate(s) will be submitted to the laboratory in the same manner as regular samples for all contaminants of concern, and the results compared to the primary samples. An ADEC laboratory data review checklist will be prepared for each set of laboratory data and included with the report.

Temperature blanks will be provided by the analytical laboratory at the rate of one per cooler. Trip blanks for volatile analyses (e.g. SW 8260) will be provided by the analytical laboratory at the rate of one per analysis per cooler. Blanks will be taken to the site and handled like all other samples during sampling efforts. The temperature blank will indicate whether the samples arrived at the laboratory within the acceptable temperature range. The trip blank(s) for volatile analyses (e.g. SW 8260) will be analyzed by the laboratory to ensure that handling has not contaminated the samples.

B.6 INSTRUMENT/EQUIPMENT TESTING, INSPECTION, AND MAINTENANCE

Initial inspection, testing, and assurance that sample collection and measurement kits meet the technical specifications as specified by the method and/or each method's Standard Procedure (Listed in Table B-1 and provided in Appendix B) are the responsibility of field sampling personnel. Inspections shall be performed upon receipt of the equipment/instrumentation and prior to use. Field personnel shall also ensure that all of the reagent bottles deployed with the kits are dated with the expiration dates prior to being used and that expiration information is included in field notes.

B.7 INSTRUMENT/EQUIPMENT CALIBRATION AND FREQUENCY

Field instruments and equipment shall be calibrated before use following the calibration procedures described in each Standard Procedure, listed in Table B-1 and provided in Appendix B, or according to manufacturer recommendations.

All commercial laboratory instrumentation and equipment used for analyses on this project shall be calibrated prior to sample analyses in accordance with the technical specifications and procedures specified in the analytical method used.

B.8 INSPECTION/ACCEPTANCE OF SUPPLIES AND CONSUMABLES

Monitoring equipment and supplies are ordered from various manufacturers (see each method's Standard Procedure, listed in Table B-1 and provided in Appendix B for criteria) and are inspected upon arrival by project personnel. Broken bottles, incomplete kits and reagents or instruments that do not meet standards will be returned to the supplier for replacement.

B.9 NON-DIRECT MEASUREMENTS

None planned.

B.10 DATA MANAGEMENT

Field notes and forms shall be scanned and retained as discussed in Section A.9.2 to prevent record loss.

C. ASSESSMENT AND OVERSIGHT ELEMENTS

The assessment and oversight elements address activities affecting project implementation and associated quality assurance / quality control (QA/QC) aspects of the QAPP in accordance with EPA guidance documents (EPA QA/R-5 and EPA QA/G-5). This section of the QAPP includes discussion of project history and objectives, roles and responsibilities, training, and documentation.

C.1 ASSESSMENTS AND RESPONSE ACTIONS

Reports generated under this plan will be provided to the Port of Alaska for coordination with ADEC. The Port and ADEC (in communication with the Port) may note deficiencies or other non-conformance resulting from sampling events or with the sampling events specifically following review of sampling reports. The Port will communicate with the report authors to address any deficiencies or other non-conformance issues as they arise. The Monitoring Program Plan and/or QAPP will be amended as necessary.

C.2 REPORTS TO MANAGEMENT

Reports to management will occur after each sampling event in the form of a memo or letter report documenting the event. Sampling events are scheduled for twice per year in accordance with Section 2.2 in the Monitoring Program Plan. Additional sampling events are likely to occur under the Stakeholder specific monitoring plans specified by the MS4 Permit.

D. DATA VALIDATION AND USABILITY ELEMENTS

The data validation and usability elements address data QA aspects of the QAPP in accordance with EPA guidance documents (EPA QA/R-5 and EPA QA/G-5). This section of the QAPP includes procedures used to assess if data conforms to the specified criteria to determine if project objectives will be satisfied after the data collection phase of the project.

D.1 DATA REVIEW, VERIFICATION, AND VALIDATION

The criteria for data validation will follow those specified in this QAPP or as specified in the EPA-approved methods. An in-depth data review audit may be performed using the EPA QA/G-8, Guidance on Environmental Data Verification and Data Validation, November 2002.

D.2 VERIFICATION AND VALIDATION METHODS

D.2.1 VERIFICATION

The primary goal of verification is to document that applicable method, procedural, and contractual requirements were met in field sampling and laboratory analysis. Verification checks to see if the data was complete, if sampling and analysis matched QAPP requirements, and if laboratory Standard Procedures (SPs) were followed.

Verification of data compiled for a sampling event is the responsibility of the sampling entity's staff.

D.2.2 VALIDATION

Data validation determines whether the data sets were of the right type, quality and quantity to meet the requirements of the project-specific intended use as described in this QAPP. Data validation also evaluates sampling and analysis anomalies and the effect that these anomalies have on the overall use of the data. All data generated will be validated in accordance with the QA/QC requirements specified in the methods and the technical specifications outlined in this QAPP. Raw field data will be maintained by the collection entity. Raw laboratory data will be maintained by the laboratory. The laboratory may archive the analytical data into their laboratory data management system. All data will be kept a minimum of 3 years. The summary of all laboratory analytical results will be reported to the collection entity. Data validation will be performed by the laboratory for all analyses prior to the release of data. All data will be validated according to the laboratory's Quality Management Plan (QMP) and Standard Operating Procedures (SOPs). The rationale for any anomalies in the QA/QC of the laboratory data will be provided with the data results. Completed Chain-of-Custody or Transmission forms will be sent back from the laboratory with the data results.

Data will be qualified as necessary. Unacceptable data (i.e., data that do not meet the QA measurement criteria of precision, accuracy, representativeness, comparability and completeness) will not be used or if used, the problems with the data will be clearly noted in the reports. Any actions taken to correct QA/QC problems in sampling, sample handling, and analysis will be noted. The collection entity will record any QA/QC issues and QA/QC corrective actions taken in the sampling event reports. The Relative Percent Difference (RPD) will be calculated between field duplicate samples to determine if QA/QC objectives for field precision have been met (based on ADEC criteria). The collection entity will compare the sample information in the field log notebooks and/or data field sheets with the laboratory analytical results to ensure that no transcription errors

have occurred, and to check the RPD between duplicate samples sent "blind" to the laboratory. Laboratories calculate and report the RPD of analytical duplicate samples and MS/MSD samples and report this information to ADEC in the QC data sheets which accompany the data results. RPDs that are greater than the project requirements will be noted. The Port or their consultants will decide if any QA/QC corrective action will be taken if the RPDs exceed the project's goals. If evidence of QA/QC non-compliance is observed with the data, additional sampling and analysis may be required.

D.3 RECONCILIATION WITH USER REQUIREMENTS

Data and related information obtained during the course of sampling events will be maintained in the project file. The original quality objectives and criteria (Section A.7) will be checked against the information obtained and determine if the data generated meet the original intent. If there are discrepancies, these will be addressed before the next sampling event.

APPENDIX A
MAPS

Cook Inlet

Alaska Railroad Facilities

South Backlands

ABI Cement Dome

MOA Outfall

Outfall 006

Outfall 003

Outfall 004

Outfall 005

Outfall 008

Outfall 001

Outfall 002

Outfall 007

South Transit Area

Tank Farm w/ Secondary Containment

Sampling Location SP-003

Sampling Location SP-001

Sampling Location SP-002

POAK1

Transit Shed

Stevedore Building No. 1

Stevedore Building No. 2

Crane No.1

Crane No.2

Crane No.3A

Crane No.3B

Crane No.3

Crane No.4

Gantry Crane

Crane Turnout

EastTrestle

Transit Area "A"

Transit Area "B" Matson Lines

Transit Area "C" TOTE

Transit Area "D" TOTE

Vehicle Fueling Area

Used Oil AST

Parts CONNEX

Maintenance Building

Material Storage Bldg. No. 2

HAZMAT Shed

Containment Shed

Sand Tent

Matson Maintenance Bldg.

Wash Bay

Used Battery Storage Area (Covered)

Drum Rack

Recycled Scrap Metal Storage

Propane Storage Shed

Covered Refrigeration Generator Storage Rack

Recycled Scrap Metal Storage

TOTE

TOTE Longshoreman Shack

Solid Waste Dumpster

Recycled Scrap Metal Storage

TOTE Vehicle Wash Area

Vehicle Inspection Facility & Wash Bay

Covered Outdoor Storage & Rack

TOTE Admin. Bldg.

Emergency Spill Response Van

North Bound HAZMAT Storage

Routing Station

Port of Alaska Lease from Joint Base Elmendorf-Richardson / MOA Right-Of-Way

Joint Base Elmendorf Richardson

Fill/Piles Scheduled for Removal

North Extension Area

General Snow Storage Area

Cascade McFarland Lumber Storage

Outfall 7 Drainage Basin (Not Mapped by MOA)

Outfall 2 Drainage Basin

Outfall 1 Drainage Basin

Outfall 4/5 Drainage Basin

Outfall 3 Drainage Basin

Outfall 6 Drainage

Matson Lines

Tank Farm w/ Secondary Containment

Tank Farm w/ Secondary Containment

Tank Farm w/ Secondary Containment

Security Command & Control Center

Security Screening Tent

Snow Storage Area

Operations Office

Maint. Bldg.

Administration Warehouse Bldg.

Paper Product Waste Bin

Fire Foam Bldg.

Government Hill Neighborhood

Tract J (Former DFSP-A)

Outfall 6 Drainage

AT&T Facility

Joint Base Elmendorf Richardson

Drainage Basin
MS4 Boundary
Storm Water Outfall
Storm Manhole
Catch Basin Manhole
Catch Basin
Storm Drain (w/ flow arrow)
Runoff Flow Direction_Legend
Building/Structure
Storage Area
Aggregate/Soil Surface
Paved Area
Vegetated Area
Bulk Fuel Tank
Wetland

NOTES:
1. Port of Alaska features based on the Port of Alaska GIS.
2. Drainage basin boundaries are from Municipality of Anchorage GIS.
3. Aerial photograph is from ESRI Online World Imagery.

ALL LOCATIONS ARE APPROXIMATE

0 150 300 600

APPROXIMATE SCALE IN FEET

N

PORT OF ALASKA

STORMWATER SITE PLAN

PROJ. NO.:	2600.01
DATE:	NOV 2019
REF:	N/A
DRAWING NO.:	A-01

R&M CONSULTANTS, INC.

Date Saved: 11/15/2019 11:05:58 AM by CFell Z:_GIS\Projects\2600.01 MOA Port of Alaska Contract Year 1\Map Documents\Task 3 APDES\2014 APDES_SWMP_MAP_2015-1109v2.mxd

APPENDIX B
STANDARD PROCEDURES

20-RM-SP Surface Water Sampling Standard Procedure
90-RM-SP Environmental Field Documentation Standard Procedure

Purpose and Scope

To provide standard surface water sampling procedures for environmental projects complying with the Alaska Department of Environmental Conservation (ADEC) Field Sampling Guidance (ADEC, 2016) and Environmental Protection Agency Groundwater and Surface Water Operating Procedures (EPA, 2013a and EPA 2013b).

This procedure applies to R&M Consultants, Inc. (R&M) Earth Sciences Department employees. This procedure is designed to work in conjunction with ADEC Field Sampling Guidance (ADEC, 2016). If project specific procedures in the work plan conflict with this standard procedure, the approved work plan shall apply.

Key Responsibilities

ADEC Qualified Environmental Professional (ADEC, 2017a and ADEC, 2017b)

- Develops and executes the work plan and associated sampling plan/procedures in accordance with regulatory guidance and instructs the ADEC Qualified Sampler (if present) on project procedures prior to initiating the field sampling effort.
- Meets the 18 AAC 75 or 18 AAC 78 qualifications as a Qualified Environmental Professional.
- Collects samples, completes field documentation, and performs site work in accordance with regulatory guidance.
- Manages and supervises the work of ADEC Qualified Samplers, if present.

ADEC Qualified Sampler (ADEC, 2017a and ADEC, 2017b)

- Meets the 18 AAC 75 or 18 AAC 78 qualifications as a Qualified Sampler
- Collects samples and performs site work in accordance with regulatory guidance.
- Completes field documentation regarding the collected samples.

Procedure Preparation

Sampling can be broken into discreet steps that include preparation and documentation. These steps are discussed below.

Preparation

Prior to beginning sample collection the following tasks should be performed to streamline the sampling process.

- Decontaminate any re-usable sampling equipment between collection of each sample or clear away any disposable sampling equipment and deposit into the appropriate waste stream
- Lay out sample containers and collection tools (i.e. tubing, pump, containers, etc) on a clean surface such as an unused trash bag or cooler top
- Most samples will require multiple containers if multiple analyses are requested. Make sure the appropriate mix of containers are available
- Complete portions of sample labels that will not vary between samples
    - Sampler name, date, analyses, preservative
    - DO NOT use a felt tip pen (i.e. sharpie) to fill out sample labels, it may cause false positives for some analyses
- Begin sample entry in the field log book or on a boring log (see Documentation)

Documentation

Proper documentation of sampling activities is critical to generation of usable data results to support analysis of the media being tested. A complete accounting of sampling activities allows a sampling event to be reviewed by regulators to assess the validity of the resultant data. At a minimum, the following data should be collected for sample labels, the logbook, and the chain-of-custody.

Sample Labels

The following information must be present on a sample label affixed to each sample container:

- Sample number or ID
- Sampler name or initials
- Date collected
- Time collected
- Analyses requested (applicable to the type of container, may vary from container to container for a sample with multiple analyses requested)
- Preservatives used (may vary per container, i.e. HNO_3, HCl, etc.)

Logbook

The following information should be entered into the logbook:

- Location of the sample (a drawing or sketch is often best), coordinates if taking recreational GPS measurements
- Sample number, sampler name or initials, date collected, time collected, analyses requested
- Preservatives used (if any)
- Number and type of containers used
- Type of sample (e.g. primary, duplicate, trip blank, MS/MSD)

Chain-of-Custody

- Provided by each laboratory.
- Ensure all data matches the sample labels and logbook exactly.
- If shipping samples, the chain-of-custody must be signed, dated, and time stamped immediately preceding sealing of the cooler.
- If delivering directly to a laboratory, the chain-of-custody must be signed, dated, and time stamped immediately preceding transferring custody of the sample cooler to the laboratory technician.

Collection Methods

Samples may be collected from a variety of locations that may include lakes, streams, outfalls, etc. using the methods described below. These procedures are adapted from ADEC and EPA guidance (ADEC, 2016, EPA 2013a, and EPA 2013b).

Prior to beginning sample collection the following tasks should be performed to streamline the sampling process. The following information must be present on a sample label affixed to each sample container:

- Sample number or ID
- Sampler name or initials
- Date collected
- Time collected
- Analyses requested (applicable to the type of container, may vary from container to container for a sample with multiple analyses requested)
- Preservatives used (may vary per container, i.e. HNO_3, HCl, etc.)

Dip Method

Samples may be collected directly into sample containers when the surface water source is safely accessible by wading or other means. The sampler should face upstream if there is a current and collect the sample without disturbing the bottom sediment. The surface water sample should always be collected prior to the collection of a sediment sample at the same location. The sampler should be careful not to displace the preservative from a pre-preserved sample container, such as the 40-ml VOC vial.

Scoop Method

Stainless steel scoops provide a means of collecting surface water samples from surface water bodies that are too deep to access by wading. They have a limited reach of about eight feet and if samples from distances too far to access using this method are needed, a mobile platform, such as a boat, may be required. Stainless steel scoops are useful for reaching out into a body of water to collect a surface water sample. The scoop may be used directly to collect and transfer a surface water sample to the sample container, or it may be attached to an extension in order to access the selected sampling location.

Peristaltic Pump Method

A peristaltic pump can be used to collect a water sample from any depth if the pump is located at or near the surface water elevation. There is no suction limit for these applications. The use of a metal conduit to which the tubing is attached, allows for the collection of a vertical sample (to about a 25-foot depth) which is representative of the water column. The tubing intake is positioned in the water column at the desired depth by means of the conduit. Using this method, discrete samples may be collected by positioning the tubing intake at one depth or a vertical composite may be collected by moving the tubing intake at a constant rate vertically up and down the water column over the interval to be composited.

Samples for VOC analysis cannot be collected directly from the peristaltic pump discharge or from the vacuum jug. If a peristaltic pump is used for sample collection and VOC analysis is required, the VOC sample must be collected using one of the "soda straw" variations. Ideally, the tubing intake will be placed at the depth from which the sample is to be collected and the pump will be run for several minutes to fill the tubing with water representative of that interval. After several minutes, the pump is turned off and the tubing string is retrieved. The pump speed is then reduced to a slow pumping rate and the pump direction is reversed. After turning the pump back on, the sample stream is collected into the VOC vials as it is pushed from the tubing by the pump. Care must be taken to prevent any water that was in contact with the silastic pump head tubing from being incorporated into the sample.

Preservation

Immediately following sample collection and labeling, the sample container(s) should be placed in a pre-chilled cooler maintained under the direct control of the ADEC qualified environmental professional or sampler until custody is relinquished through a chain-of-custody to another responsible party.

References

ADEC (Alaska Department of Environmental Conservation), 2017a. Oil and Other Hazardous Substances (18 AAC 75). 23 March 2017.

ADEC, 2017b. Underground Storage Tanks (18 AAC 78). 23 March 2017.

ADEC, 2016. Field Sampling Guidance. March 2016.

EPA (U.S. Environmental Protection Agency), 2013a, SESD Operating Procedure: Groundwater Sampling. SESDPROC-301-R3.

EPA, 2013b. SESD Operating Procedure: Surface Water Sampling. SESDPROC-201-R3.

Purpose and Scope

To provide standard documentation procedures for environmental projects complying with the Alaska Department of Environmental Conservation (ADEC) Field Sampling Guidance (ADEC, 2016).

This procedure applies to R&M Consultants, Inc. (R&M) Earth Sciences Department employees. This procedure is designed to work in conjunction with ADEC Field Sampling Guidance (ADEC, 2016). If project specific procedures in the work plan conflict with this standard procedure, the approved work plan shall apply.

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ADEC Qualified Sampler (ADEC, 2017a and ADEC, 2017b)

- Meets the 18 AAC 75 or 18 AAC 78 qualifications as a Qualified Sampler
- Collects samples and performs site work in accordance with regulatory guidance.
- Completes field documentation regarding the collected samples.

Standard Field Documentation

Field documentation is meant to allow a reader to understand sampling activities and to allow assessment of the adequacy of the practices used. Field notes should be comprehensive, legible, and descriptive. Any changes or errors need to be clearly marked and tracked to maintain data integrity. This section is based on ADEC, 2017a and ADEC, 2017c.

Error/Edit Tracking

- Errors should be crossed out with a single line and initialed and dated
- Edits should be initialed and dated, preferably with a different color indelible ink.
- Unused cells in a table, or large blank spaces on logbook pages should be lined out, signed, and dated.
- A key should be present to cross-reference initials or signatures with a specific person.

Standard Requirements

- Logbooks pages or loose forms must be paginated
- Notes must be indelible, waterproof ink is preferred, colored pencil may be appropriate on drawings.

Typical Logbook Entries

The following information should be entered into the logbook.

- Page Header
  - Date, Project Number, Project Name, Name of Person taking notes (Each Page)
- Page Text
  - Entries should include time stamps
  - Weather and other environmental observations
  - Names and purpose/title of each person on site that day
  - Description of safety or tailgate meetings
  - PPE level used
  - Daily objectives
  - Summaries of discussions with site visitors
  - Instrumentation calibration data
    - Expiration date of standard measures, if applicable
    - Calibration readings
    - Readings meet specification or manual
  - Location of activity and site conditions
    - Sketches and tables are most valuable
    - Photo locations (may need a separate sketch)
      - Use dots with arrows to show location and direction facing
    - Sampling and field screening locations
  - Field Observations and comments
  - Deviations from work plan or standard procedure protocols (Include why the change was made)
  - Sample collection information (should match sample labels and follow standard procedure documentation protocols).
  - Global positioning system (GPS) coordinates in NAD83 or WGS84 and the projection using a recreational grade GPS. Alternatively, mark locations with swing ties to site features on a sketch.
  - Presence of standalone field maps or forms that would be needed to understand site activities (e.g. groundwater sampling or boring log forms).
- Sketches
  - May be generated over multiple days, just make a note on the sketch that indicates the date range over which the sketch was generated.
  - Include an orientation arrow (typically north, but may be a prominent site feature in rare occasions).
  - Actual scale, or not to scale (N.T.S.).
- Include site features to allow the sketch to be located (e.g. building corners, concrete structures, cliffs/major slope breaks, and/or poles)
- Include descriptions of chains-of-custody (COC) and any relevant sample handling notes.
  - COC number
  - Date shipped, name of shipper, tracking number, intended destination
  - Description of cooler packing (e.g. number of ice gel packs, use of custody seals)

Typical Form Data Entry

- Fill out all fields on the form. Unused sections should be lined out, signed, and dated.
- At a minimum, forms should include the date, project number, project name, name of person taking notes.

Sample Naming Convention

If a project has a historic sample naming convention, such as for long term groundwater monitoring projects, then the historical naming convention will be continued and this section will not apply.

Table 1A: Soil / Water / Vapor Analytical Sample Identification

Project Location ID	Year	Sample Type	Sample Type Location	Sample Number	Example
ANC	16	[See Below]	01	01	ANC16-TH01-01

Table 1B: Soil Sample Type Codes

Sample Type Code	Definition	Sample Type Code	Definition
TH	Test Boring/Hole	ES	Excavation Clearance Sidewall
TP	Test Pit	EF	Excavation Clearance Floor
TT	Test Trench	LF	Land Farm
HA	Hand Auger	WC	Waste Characterization (General)
SE	Sediment	SP	Stockpile Characterization

Table 1C: Water / Vapor Sample Type Codes

Sample Type Code	Definition	Sample Type Code	Definition
MW	Monitoring Well / Piezometer	WW	Waste Water Characterization
TW	Temporary Monitoring Well	OV	Outdoor Air (Vapor)
SW	Surface Water	IV	Indoor Air (Vapor)
TW	Tap Water	SV	Soil Gas (Vapor)

Table 2A: Trip Blank Analytical Sample Identification

Project Location ID	Year	Media Type	Trip Blank Code	Sample Number	Example
ANC	16	[See Below]	QC	01	ANC16-WA-QC01

Table 2B: Media Type Codes

Media Type Code	Definition	Media Type Code	Definition
WA	Water	VA	Vapor / Soil Gas
SO	Soil	SE	Sediment

Common features in soil, water, vapor, and trip blank sampling identification include the following:

- **Project Location ID:** 3 letter alphanumeric code for the project or site location (e.g. ANC for Anchorage or KBK for Kalsin Bay, Kodiak).
- **Year:** 2 digit numeric code for the last 2 digits of the year.
- **Sample Number:** 2 digit code that auto-increments per sample type/per location.
- **Duplicates/Triplicates:** Utilize the next auto-incrementing sample number, **LOG DUPLICATES / TRIPLICATES IN NOTES**
- **Matrix Spike/Matrix Spike Duplicates:** Use the same auto-incrementing sample number as the primary, **LOG MS/MSDs IN NOTES**

Chain of Custody Record

Prior to shipment or transport of samples to an analytical laboratory, a chain of custody record must be completed (See Attached). The chain of custody is designed to provide a verifiable written record tracing samples from the time of collection to receipt by a laboratory. The chain of custody shall be completely filled out by the QEP and signed along with date and time in the event that samples pass out of the possession of the QEP. If custody seals are required, the time and date should match the chain of custody.

References

ADEC (Alaska Department of Environmental Conservation), 2017a. Oil and Other Hazardous Substances (18 AAC 75). 23 March 2017.

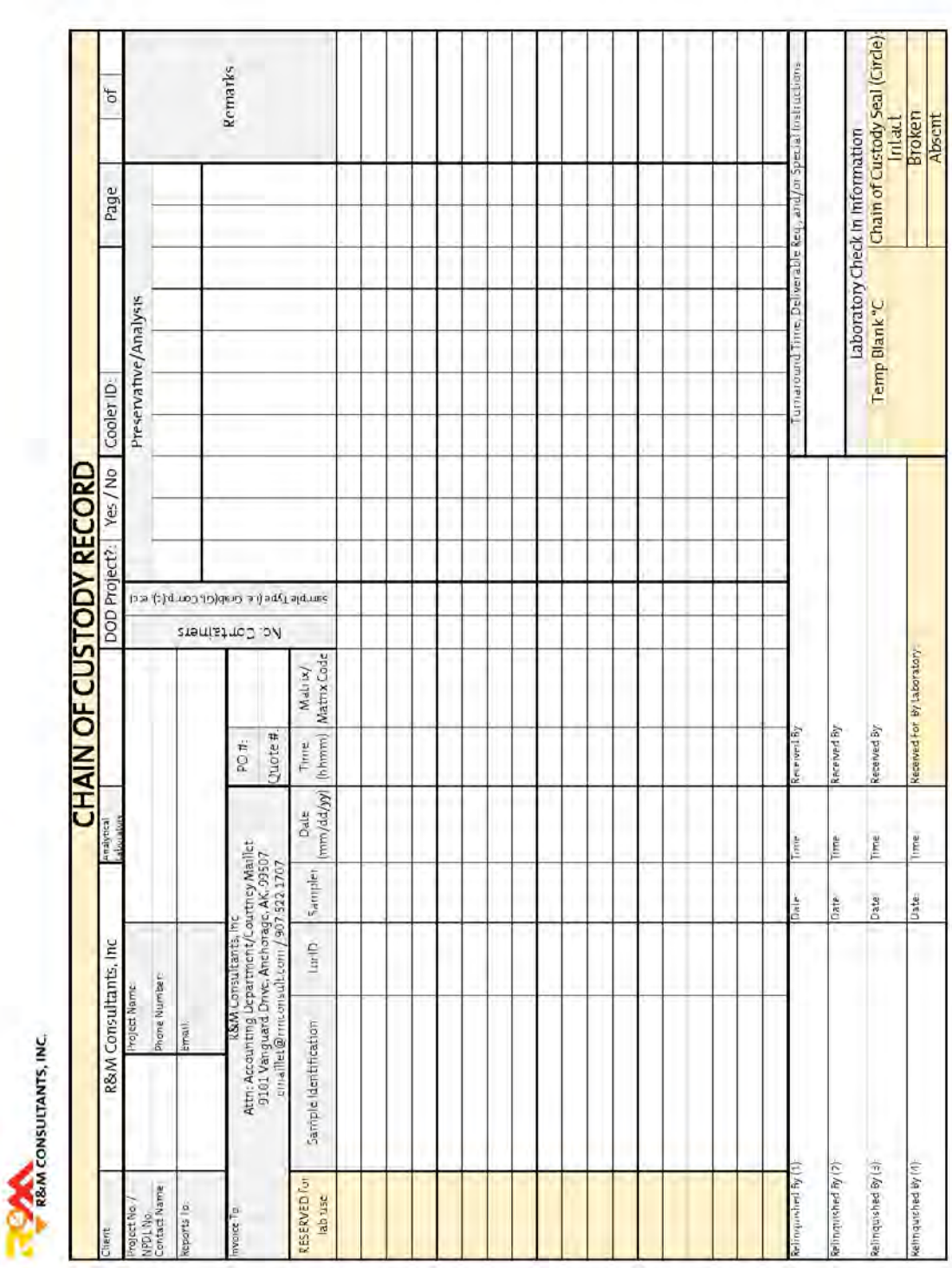
ADEC, 2017b. Underground Storage Tanks (18 AAC 78). 23 March 2017.

ADEC, 2017c. Site Characterization Work Plan and Reporting Guidance for Investigation of Contaminated Sites. 7 March 2017.

ADEC, 2016. Field Sampling Guidance. March 2016.

RAE (RAE Systems, Inc.), 2010. Technical Note TN-106, Correction Factors, Ionization Energies, and calibration characteristics.

List of Attachments


CHAIN OF CUSTODY RECORD
R&M CONSULTANTS, INC.
Client
R&M Consultants, Inc
Analytical Laboratory
DOD Project?: Yes / No
Cooler ID:
Page
of
Project No. / NPDL No. Contact Name
Project Name:
Phone Number:
Email:
Reports To:
Invoice To:
R&M Consultants, Inc
Attn: Accounting Department/Courtney Maillet
9101 Vanguard Drive, Anchorage, AK, 99507
cmaillet@rmconsult.com / 907 522 1707
PO #:
Quote #:
No. Containers
Sample Type (i.e. Grab/Composite) ect
Preservative/Analysis
Remarks
RESERVED For lab use
Sample Identification
Lab ID
Sampler
Date (mm/dd/yy)
Time (hhmm)
Matrix/ Matrix Code
Relinquished By (1):
Relinquished By (2):
Relinquished By (3):
Relinquished By (4):
Date:
Time:
Received By:
Received For By Laboratory:
Turnaround Time, Deliverable Req. and/or Special Instructions
Laboratory Check In Information
Temp Blank °C
Chain of Custody Seal (Circle)
Intact
Broken
Absent