STORMWATER POLLUTION PREVENTION PLAN FOR TED STEVENS ANCHORAGE INTERNATIONAL AIRPORT (ANC)

JANUARY 2020 v.2 AUGUST 2021

Ted Stevens
Anchorage
International Airport

State of Alaska Department of Transportation and Public Facilities
"Providing for the safe and efficient movement of people and goods and the delivery of state services"

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Chapter 1 – Permittee

The Alaska Department of Transportation and Public Facilities, Ted Stevens Anchorage International Airport (ANC) is the facility under which this Storm Water Pollution Plan (SWPPP) has been developed to abide by requirements in the Alaska Department of Environmental Conservation (ADEC) Ted Stevens Anchorage International Airport (ANC-GP) Permit Number AKR061000 for storm water discharges associated with the facility effective November 1, 2019 (permit issued to ANC March 16, 2020).

Table 1-1 provides a summary of the ANC facility.

Table 1-1 – Facility Data Sheet

Site Name	Ted Stevens Anchorage International Airport (ANC)
Location	5000 W. International Airport Road, Anchorage, AK 99502
Geographic Location (Google Maps)	61˚10′27″N 149˚58′54″W
Owner/Operator	State of Alaska, Department of Transportation and Public Facilities
Telephone / Email	907-266-2467 / tracy.mitchell@alaska.gov
Point of Contact	Tracy L. Mitchell
Standard Industrial Classification (SIC) Codes	4581 (Air Transportation)
Receiving Waters	Turnagain Arm, Unnamed Creek and, Lakes Hood & Spenard
APDES Permit Number	AKR061001
APDES Permitting Authority	Alaska Department of Environmental Conservation

Chapter 2 – Storm Water Pollution Prevention Team

The ANC-GP requires each facility to identify specific individuals as members of a Storm Water Pollution Prevention Team. The team is responsible for developing, implementing, maintaining, and revising the SWPPP. The team is comprised of people who are familiar with the facility and its operations and a person in a senior management position has overall responsibility for the document. The responsibilities of the team include the following:

a) Assisting environmental manager in developing and revising the SWPPP;
b) Maintaining control measures and implementing SWPPP requirements;
c) Taking corrective actions when and where required; and
d) Certifying the annual review of the SWPPP (in Appendix E).

Figure 2-1 lists personnel and/or positions designated as members of ANC's Pollution Prevention Team. Table 2-1 provides a synopsis of individual responsibilities of the team.

Figure 2-1 – ANC Pollution Prevention Team

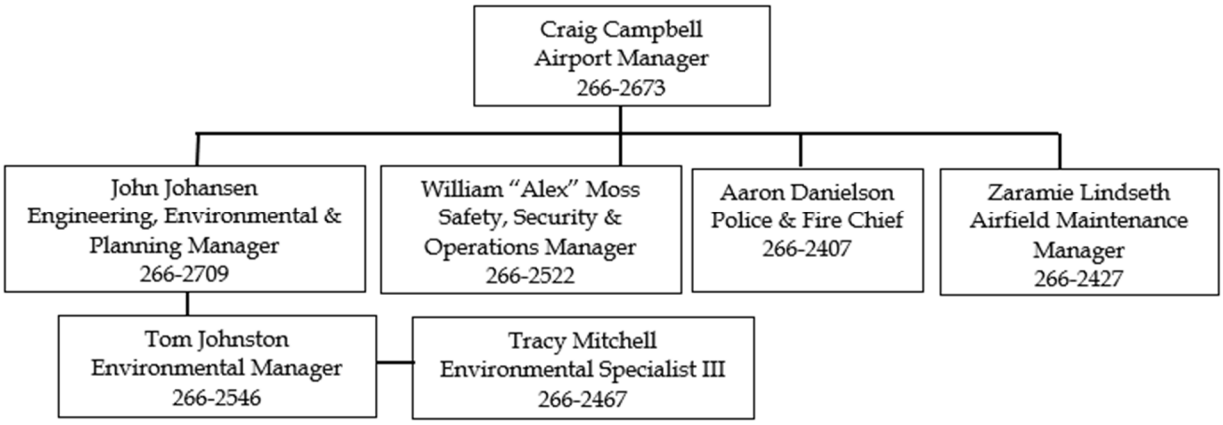


Table 2-1 – Team Member Responsibilities

Craig Campbell, Airport Manager	Directs airport landside and airside operations, supervising building, airfield and equipment maintenance, engineering, environmental and airport safety. Oversight of all ANC functions.
John Johansen, Engineering, Environmental & Planning Manager	Oversight of the Engineering and Environmental sections at ANC.
William "Alex" Moss, Safety, Security & Operations Manager	Daily guidance and supervision to several sections including Lake Hood Seaplane Base, Airport Security, Landside Operations and Airport Operations.
Aaron Danielson, Police & Fire Chief	Operations of the Airport Police & Fire Section, fire prevention, airport crash/fire rescue, law enforcement, Airport Dispatch and security duties.
Zaramie Lindseth, Airfield Maintenance Manager	Planning, coordination and management of Airfield Maintenance & Equipment Maintenance Sections. Repair of runways, taxiways and winter snow removal of same.
Tom Johnston, Environmental Manager	Supervises regulatory compliance for environmental programs at ANC.
Tracy Mitchell, Environmental Specialist III	Conducts most inspections, submits reports etc. Maintains SWPPP.

Chapter 3 – Site Description

3 - A Activities at Facility -Overview:

ANC is situated on approximately 4,700 acres at the west end of the Municipality of Anchorage, Alaska, overlooking the Knik and the Turnagain Arms of Cook Inlet (Figure 3-1), about 3 miles southwest of the Anchorage downtown business district. The estimated area of industrial activity exposed to storm water includes an approximate 1,291 acres of pervious surfaces and 1,352 acres of impervious surfaces for a total acreage of 2,643 acres.

Aviation related facilities include the North and South passenger terminals, North Airpark, East Airpark, and South Airpark. ANC is also the site of Lake Hood Sea Plan Base which provides light aircraft sea/ski lanes and a 2,200-foot gravel runway for wheeled light aircraft. ANC leases property to many aviation-related businesses that operate at the airport.

Industrial activities on ANC property include runway, ramp, and apron maintenance, aircraft maintenance and fueling, aircraft and vehicle washing, building maintenance, vehicle maintenance and fueling, cargo shipping and receiving, and fuel storage and delivery. Products such as deicing and anti-icing materials, fuel, lubricants, solvents, and paints are stored, transferred, used and disposed of while conducting the industrial activities by ANC and tenants.

Areas of ANC industrial activity where pollutants might mix with storm water include:

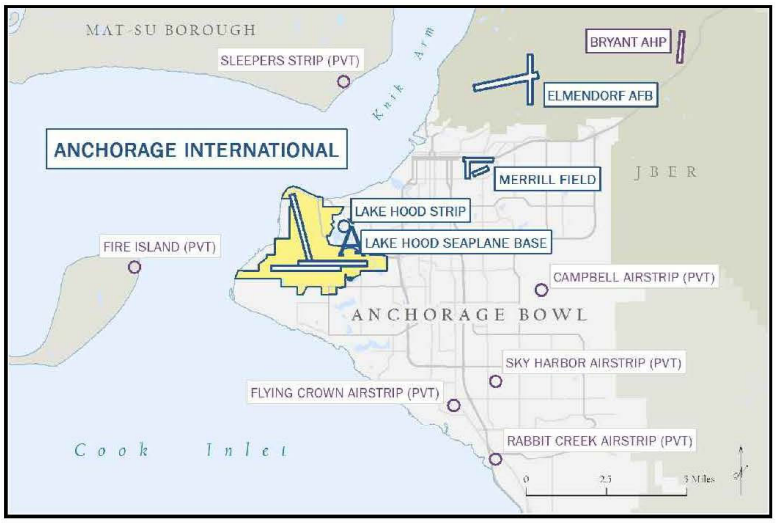
a) Areas where vehicle maintenance, fueling, and cleaning occur;
b) Runway deicing areas;
c) Raw material storage and/or handling sites;
d) Refuse sites;
e) Site access roads;
f) Sites used for storage and maintenance of material handling equipment;
g) Shipping and receiving areas; and
h) Areas of past industrial activity where significant materials remain and are exposed to water.

ANC does not discharge storm water into an MS4 (Municipal Separate Storm Sewer System) and is not subject to effluent guidelines for MS4 facilities. (See email in SWPPP binder from Kevin Jackson, DOT, on August 13, 2021.)

Figure 3-1 – Location & Vicinity Maps

LOCATION MAP

VICINITY MAP



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Ted Stevens Anchorage International Airport

2020 STORM WATER POLLUTION PREVENTION PLAN (SWPPP)

Alaska Department of Transportation
Ted Stevens Anchorage International Airport
Anchorage, Alaska

Vicinity Maps

3-1

3 – B Site Maps

Maps of the ANC facility are in Appendix A and a list of these is as follows:

a) A-1 shows the regulated facilities;
b) A-2 provides an overview of ANC and shows pervious and impervious surfaces as well as drinking water protection area ;
c) A-3 is a detail of the Fire Training Facility;
d) A-4 shows the runways, taxiways, and aprons where aircraft, runway and taxiway deicing occur;
e) A-5 shows the location of ANC's above-ground and underground storage tanks (ASTs and USTs);
f) A-6 shows the present location of snow collection and storage sites throughout ANC;
g) A-7 provides locations and types of structural BMPs that are installed and maintained by ANC;
h) A-8 shows locations of pesticide, herbicide, soil conditioners and fertilizer application areas;
i) A-9 provides locations where spills and leaks have occurred during last permit term (MSGP 2015); and
j) A-10 provides locations for receiving water monitoring locations.
k) Outfall monitoring locations are in Figures 6-1 through 6-4.

3 – C Tenants

ANC has several hundred leaseholders who provide or support domestic and international air transportation. The leaseholders are regulated independently as co-permittees under ANC's GP for storm water discharges, with each regulated tenant responsible for its own SWPPP (if eligible for coverage). Regulated tenants perform aircraft deicing (at gates and tenant leaseholds), aircraft servicing, equipment and vehicle maintenance, and fueling.

A "Co-Permittee" is defined as a person or entity that performs an activity at the ANC Airport or ANC leased areas that is related to or required for compliance with the terms of the GP. Any person or entity that either (a) contracts for or performs vehicle maintenance activities, such as vehicle and equipment maintenance, deicing, fueling, and cleaning; and has a primary SIC Code of 4512, 4513, 4522, and/or 4581 or (b) contributes to the discharge(s) authorized under the permit constitutes a Co-Permittee. Co-Permittees may include, but are not limited to, the following categories conducting any of the aforementioned activities: (i) commercial aircraft carriers operating at ANC Airport, (ii) air cargo carriers operating at ANC, (iii) fixed-based operators and/or service providers involved in either deicing or fueling operations, (iv) armed services entities operating at ANC, (v) ground service providers at ANC, and (vi) general aviation activities at ANC.

ANC supports its tenants in preventing storm water pollution by providing maps, discharge monitoring reports (based on storm water laboratory sampling and visual observation forms) and through contractual controls. ANC also encourages its tenants to comply with environmental regulations through its review of required ANC building permits. Pollution prevention and spill response is part of the required training for the issuance of ANC badge privileges (ability to operate within the Aircraft Operations Area (AOA)).

Standard language in ANC building permits requires attention to environmental issues. These issues include erosion control, stabilizing and re-seeding disturbed sites, and design of storm drains to handle a 10-year, 3-hour storm. Building permits are reviewed on a case-by-case basis, and special language may be added to address specific concerns, permits, and mitigation needs.

ANC lease agreements contain language requiring tenants to comply with all federal, state, and local environmental regulations. Also, lease agreements specifically require that spill reporting, environmental assessments, and other environmental information be submitted promptly to the appropriate regulatory agencies and to ANC.

Chapter 4 – Summary of Potential Pollutant Sources

4 – A Activities, Pollutants and Spills & Leaks

Table 4-1 lists facilities at ANC where industrial activity has been identified in which pollutants might mix with storm water and the associated potential pollutant. These potential pollutants may be exposed to storm water during/after application, during handling or, track-out. Usage quantities of deicing chemicals by ANC is logged in ANC's AIS database and a copy of the Safety Data Sheets associated with the chemicals are in Appendix B.

A log of ANC's usage of deicing chemicals and Co-Ps reported usage of aircraft deicers and/or pavement deicers will be maintained in Appendix B, updated annually.

Appendix C has a table for significant spills and leaks that have occurred in areas exposed to storm water since the last MSGP in 2015. ANC tracks and reports on spills and leaks that have been generated by its own regulated facilities. Spills and leaks generated by tenants and users are reported separately under the tenant's own SWPPP (ANC may provide additional response assistance and oversight as necessary to ensure that proper actions have been taken). Potential spills and leaks could occur throughout the facility and affect the outfall associated with the drainage basin in which it occurred.

Table 4-1 – Facilities and Industrial Activities

Facility	Industrial Activity	Pollutant
Airfield Maintenance Warm Storage, Equipment Maintenance Yard, Quick Turnaround Facility and, Airfield Maintenance Annex Warm Storage	Vehicle and equipment maintenance and storage; grounds maintenance support; covered bulk material storage, handling and loading; waste handling areas (dumpsters)	Asphalt Cement, Asphalt, Solid Deicer - (NaAc), Sodium Formate, Sodium Formate/Acetate blend, Liquid Deicer – Potassium Acetate, Road Sand, Salt
~~Main Safety Building~~	~~Airport Rescue and Fire Fighting (ARFF) and Fire Fighter Training~~	Fire-fighting foam*
Safety Building #2	Vehicle and material storage	Runway sand
~~Fire Training Facility (Fire Pit)~~	~~Fire Fighter Training~~	Fire-fighting foam*
Runways, taxiways, and aprons	Runway snow removal, pavement deicing, pavement painting, and maintenance	Norline Traffic Paint, Joint and Crack Sealer, Asphalt Pavement Surface Sealer, Runway Sand, Solid Deicer - (NaAc), Sodium Formate, Sodium Formate/Acetate blend, Liquid Deicer – Potassium Acetate
Above ground and underground storage tanks	Chemical and fuel storage; vehicle fueling; power generation (emergency generators)	Diesel fuel, Unleaded fuel
Snow storage	Snow collection and storage	Contaminated snow containing pavement and/or aircraft deicing chemicals

*Fire-fighter training is conducted off-site and no-foam certification for retrofitted trucks. Fire-fighting foam is no longer considered a current pollutant at ANC but these sites will remain on inspection forms.

4 – B Non-Storm Water Discharges

An evaluation for the presence of non-storm water discharges was conducted in June 2019. Non-storm water discharges to waters of the United States that are not authorized are unlawful and must be terminated. Examples of non-storm water discharges include any water used directly in the manufacturing process (process water), vehicle and ground support equipment wash water, dry weather deicing, or sanitary wastes. Connections of non-storm water discharges to a storm water collection system are common yet are often unidentified. These types of discharges are significant sources of water quality problems. If such connections are discovered, ANC will assess the potential for the discharge to enter storm water and take steps to prevent any such discharge from occurring. This could include disconnecting the discharge or submitting an APDES permit application to ADEC.

The ANC-GP does authorize the following types of non-storm water discharges:

- Discharges from fire-fighting activities;
- Fire hydrant flushings;
- Potable water sources including waterline flushings;
- Irrigation drainage;
- Landscape watering provided all pesticides, herbicides, and fertilizer have been applied in accordance with the approved labeling;
- Pavement wash waters where no detergents or hazardous cleaning products are used (e.g., bleach, hydrofluoric acid, muriatic acid, sodium hydroxide, nonylphenols), and the wash waters do not come into contact with oil and grease deposits or any other toxic or hazardous materials (unless cleaned up using dry clean-up methods).

NOTE: Pavement wash waters are prohibited from being directed into any surface water or storm drain inlet unless appropriate control measures that meet non-numeric effluent limits in Permit Part 4.0. Where control measures are not in place, wash water runoff must first undergo treatment prior to discharge such as filtration, detention, or settlement;

- Routine external building washdown/power washwater that does not use detergents or hazardous cleaning products, (such as those containing bleach, hydrofluoric acid, muriatic acid, sodium hydroxide, nonylphenols);
- Individual private aircraft washing that does not use detergents or hazardous cleaning products;
- Uncontaminated ground water or spring water;
- Foundation or footing drains where flows are not contaminated with process materials;
- Incidental windblown mist from cooling towers that collects on rooftops or adjacent portions of the facility, but not intentional discharges from the cooling tower (e.g., "piped" cooling tower blowdown or drains; and
- Discharges of storm water listed in Permit Parts 1.2.2 or authorized non-storm water discharges in 1.2.3, commingled with a discharge authorized by a different APDES permit and/or a discharge that does not require APDES permit authorization.

4 – C Non-Storm Water Discharge Inspections

There are three dry weather methods to check for non-storm water discharges. These include (1) visual inspection; (2) storm water drainage plan review; and (3) dye testing. The easiest method for detecting non-storm water connections into the storm water collection system is to observe all discharge points during dry weather. As a rule, the discharge point should be dry during periods of extended dry weather. However, drainage from a rain event can continue for three days or more after the rain has stopped.

A review of ANC's storm water maps can also be used to determine if there are any interconnections into a storm water collections system. Dye testing can be a one-time test used to establish positively if a facility or fixture in question is connected to a storm water collection system. The use of dye testing would be coordinated with the Municipality of Anchorage (MOA) Public Works Department. Table 4-2 documents the non-storm water discharge assessment.

Table 4-2 - Non-Storm Water Discharge Assessment

Date of Evaluation	Outfall Observed	Method Used to Evaluate Discharge	Non-Storm Water Discharge Observed?	Type of Non-Storm Water Discharge & Source Location	If any Non-Storm Water Discharges were identified, what action was taken?
6/13/2019	001A	Visual, Dry Weather	No	N/A	N/A
6/13/2019	002B	Visual, Dry Weather	No	N/A	N/A
6/13/2019	003C	Visual, Dry Weather	No	N/A	N/A
6/13/2019	004D	Visual, Dry Weather	No	N/A	N/A
6/13/2019	005E	Visual, Dry Weather	No	N/A	N/A

4 – D Salt Storage

Salt, which is mixed with ANC road sand, used mainly on road intersections outside of the AOA, is stored inside a building in the Old Field Maintenance shop area. Deicing materials for ANC operations (inside the AOA), sodium formate, potassium and sodium acetate are enclosed, either within a storage building or tanks.

4 – E Sampling Data

Appendix D summarizes the storm water discharge sampling conducted since the previous permit term (MSGP 2015). There were benchmark exceedances of BOD, COD and ammonia and there were also occasions, although not as frequent, for the pH to read lower than the benchmark.

The Best Management Practices (BMPs) that are in place at ANC are providing treatment to the discharge and ANC is certifying that urea is no longer used as an airfield deicer (Appendix E).

4 – F Vehicle and Equipment Washwater Requirements

Vehicle and equipment washwater discharges into the sanitary sewer system and initially goes through an oil-water separator. The Anchorage Wastewater Utility (AWWU) does not consider ANC a significant industrial user and a discharge permit is not needed (as per phone call with Mario Croce, AWWU, July 25, 2018).

Chapter 5 – Description of Control Measures

5 – A Control Measures to Meet Technology-Based and Water Quality-Based Effluent Limits

The location and type of control measures installed and implemented at ANC can be found on various site maps, most specifically A-7. These control measures address the pollutant sources identified previously in Chapter 4. No storm water run-on commingles with any discharges covered under this permit.

5 – B Documentation of Control Measures Used for Management of Runoff

During continuous snow removal Airfield Maintenance personnel plows snow from runways, taxiways and some ramp areas. This snow is temporarily stored in various areas on the AOA until all essential movement surfaces have been cleaned. Snow is then hauled from these temporary holding areas to designated snow dump areas. These snow dump areas are generally in, or melt into, areas where natural attenuation can occur (see site map A-6).

5 – C Schedules & Procedures

Pertaining to Control Measures Used to Comply with the Effluent Limits in Permit Part 4

5 – C(1) Best Management Practices

Best Management Practices (BMPs) are measures or controls that ANC implements wherever the possibility of storm water contamination exists. They may involve implementation of, or changes to, a process, an activity, or a physical structure. BMPs may be procedural (such as spill response procedures); structural (such as vegetated swales that serve as retention and treatment areas, or oil/water separators); or administrative (such as record keeping). In general, most BMPs are simple and can be put into practice immediately, but some may require

installation of equipment, engineering, and significant capital expenditures. Whether simple or complex, though, effective BMPs can prevent pollutants from being added to storm water.

In some situations, where baselines BMPs are not adequate to solve storm water pollution problems, additional BMPs may be implemented. Additional BMPs are tailored to address specific needs. They are usually structural and may involve changes in a process, containment and diversion, recycling, material substitution, or treatment. The grassy swales that serve as retention, filtering and treatment areas for storm water runoff are examples of additional BMPs. These BMPs must conform to, or be consistent with, other facility development and environmental plans before they can be implemented.

This SWPPP identifies BMPs for each identified potential source of pollution. BMPs should be reviewed and evaluated by the pollution prevention team to determine if it is effective in preventing pollution. A list of BMPs specific to each activity is included in Appendix F.

Good Housekeeping

The essence of good housekeeping is keeping the facility clean and orderly. The implementation of good housekeeping practices eliminates or reduces the potential for pollutants to enter storm water.

Preventive Maintenance

The primary objective of preventive maintenance as part of a SWPPP is to minimize or eliminate pollution from improperly functioning vehicles and equipment. Equipment that is maintained in good working order is less likely to drip or spill fluids, such as lubricants or oil, onto areas where these pollutants could be mobilized in storm water runoff and transported off-site.

Spill Prevention and Response Procedures

Spills and leaks together can be one of the largest sources of storm water pollutants, and in most cases are avoidable. Establishing standard operating procedures such as safety and spill prevention procedures along with proper employee training can reduce these accidental releases. The pertinent portions of the SPCC plan are in Appendix G.

Database Maintenance for Recording Spills and Leaks on ANC Property. Spill reporting is required under several regulatory programs. Spills and leaks are reported to and recorded in a database maintained by ANC. Petroleum and other spills (10 gallons or less) will be reported monthly to ADEC (as agreed with ADEC Spill Response Program). Those in excess of that amount will be reported within 24 hours and follow-up as per the flow chart in Appendix F, BMP Number 43.

Spill Response/Notification. If a spill does occur, the following procedures can minimize the impact:

a. immediately eliminate the source of the spill, if it is safe to do so, and contain the spill to the extent possible;
b. report the spill to ANC's Operations Supervisor (266-2600) and Environmental Specialist (266-2546);
c. any size of spill requires notification to ADEC including unintentional releases of deicing fluids and lavatory wastes from aircraft;
d. maintain a log of spills and corrective measures at ANC's Environmental Section (log should include date, time and location of spill, substance and volume spilled, corrective measures taken, and people and responders contacted); and
e. the responsible party is required to clean up after the spill.

Employee Training

General storm water pollution prevention training is included in the initial badging process via video and is available Monday through Friday, year-round at the ANC badging office. These training records are maintained in the Badging Office. Storm water (and spill prevention and response training) is conducted annually for airport personnel, specifically Airfield Maintenance, because they work in areas where industrial materials or activities are exposed to storm water. Annual training is also provided to members of the storm water pollution prevention team. Training records can be found in Appendix H.

Annual employee training should be designed to:

a. familiarize new employees with applicable BMPs and other SWPPP requirements;
b. remind existing employees of applicable BMPs and other SWPPP requirements;
c. introduce new storm water pollution prevention techniques recently incorporated into the plan; and
d. provide a forum where new ideas for improving storm water management can be shared.

Training will cover applicable BMPs, routine facility inspections, quarterly visual assessments, water monitoring, reporting, and recordkeeping. The following areas will be addressed:

a. control measures used at ANC (oil water separators, seepage pits, grassy swales);
b. monitoring;
c. inspections;
d. reporting and documentation requirements; and
e. locations and use of spill response kits.

Additional BMPs

Below is a list of some of the additional BMPs at ANC and projects/systems that have been implemented to assist in the reduction of pollutants to the storm water runoff associated with the operation of ANC.

a. The construction of a covered and heated storage building for airside sand. The new building has radiant floors and walls to ensure dry and warm sand, even if it was delivered with high moisture content. Having dry sand minimizes its tendency to clump and therefore allows it to be spread more evenly. This in turn reduces the amount of sand that is required to be applied to effectively ensure the safety of the runways and taxiways. The facility also includes two potassium acetate (KAc) tanks, each with a capacity of 50,000 gallons.

b. The installation of a 100,000-gallon tank for additional storage of KAc. The tank was installed next to the existing KAc tanks mentioned above and connects into the existing dispensing system.
c. The purchase of additional liquid deicer vehicles for the application of the KAc to runways and taxiways. ANC has purchased two of these vehicles, the most current one in 2010. Three new deicing trucks were purchased in 2019.
d. Construction and utilization of the Postmark Snow Dump. This snow dump allows for a large volume of ADF contaminated snow to be stored and treated prior to entering the storm water drainage system (this snow dump is utilized by co-permittees).
e. Ramp Drainage Mapping/Surveying: ANC initiated a project to map the storm water drainage system on the ramps and began with the drainage around the South Terminal. It was discovered that the existing surveys that were conducted for the drainage system had errors and missing information. The current survey is utilized a camera to visually record each drainage segment for: type and condition of pipe, all inverts at the beginning and end and, each catch basin's top and bottom elevation. Among other things, this will provide better information for future designs and response to spills.
f. Remote Over-Night Spots (RONS) Upgrades. The RONS 7-11 and 12-14 have been upgraded which included reconfiguring drainage so that they could be modified more easily in the future for use as deicing pads in case the Federal ELG ruling required this in its final determination. The actual percentage capture would not be 100% because of limitations on surrounding contours and aircraft operational limitations (taxiing) and FAA design restrictions. These upgrades do not allow for their use as deicing pads now but will minimize construction costs if and/or when they are converted.
g. Multiple weather stations and in-pavement sensors which allow for more efficient utilization of products used to ensure safety of operational surfaces (runways and taxiways).
h. Improvements in runway cleaning equipment such as plows and brooms. Some of the improvements to the runway brooms are associated with innovations by our own Airfield Maintenance personnel. These improvements made the brooms more efficient and allowed for faster cleaning of operational surfaces which, in certain circumstances, allows personnel to reduce the amount of product needed to treat these surfaces.
i. A change to ANC's Operations Manual, August 2020 (updated from July 2015) that requires deicing equipment be equipped with glycol usage reduction tools and prohibiting the use of ethylene glycol (see Appendix I).
j. A large aerator is placed in the Victor ditch and in the cattail area, just south of the well house near Lake Hood, and are operated during open water conditions. These aerators provide some treatment before discharge to Outfall 004D and Outfall 002B respectively.
k. Constructed wetlands installed between the airfield and Lake Hood to assist in storing and treating storm water before its discharge into Outfall 002B.
l. Kulis and South Airpark Airside Snow Dump. This snow dump does not currently drain to any waterbodies; runoff is mainly routed to a low spot where it infiltrates into the soil. The new snow dump, that will eventually replace the current one in this area, was installed with the same type of design.
m. Pump Station K. A pump station was installed along the Kilo taxiway which receives storm water from the East Airpark drainage. This pump station will, depending on the storm's peak intensity and time of concentration, divert flow from Lake Spenard to Outfall 004D. (Pump station "West 50th" also manages storm water from the East Airpark drainage but does not have a bypass. If it is at full capacity, pump station K will bypass to Outfall 004D until West 50th can catch up.

Chapter 6 – Monitoring

6-A Effluent Monitoring

Effluent monitoring will occur at:

- Outfall 001A (near Lake Spenard)
- Outfall 002B (near Lake Hood)
- Outfall 003C (open ditch adjacent to Taxiway Victor & Aircraft Drive)
- Outfall 004D (from manhole south of Pt. Woronzof Road)
- Outfall 005E (open ditch located on western end of ANC, parallel to Taxiway Kilo)

Parameters, schedules and numeric limits for monitoring are in Table 6-1. Samples will be collected when there is personnel, equipment and laboratory available.
Procedures for monitoring are in the Quality Assurance Project Plan (as per Permit Part 8.1) in Appendix J. Refer to Figures 6-1 through 6-4 for the drainage system overall site plan, outfall locations and drainage basins.

Note:

1. Drainage Basin C, which discharges at Outfall 003C, does not typically have storm water that is exposed to pollutants from activities at ANC. However, ANC will continue sampling at this outfall because ANC has historically done so and there have been events which required the opening of the diversion valve in the Victor ditch (which discharges to Outfall 003C when the valve is open).
2. ANC is unable to determine when the pumping station, that was installed on Kilo, is diverting stormwater from Outfall 001A to Outfall 004D. Therefore, if co-permittees are operating within Drainage Basin 001A, they should also review sampling results from Outfall 004D.

A mixing zone has been authorized for effluent at Outfall 004D for dissolved oxygen, color, and pH. The chronic mixing zone is defined as the length of 109 meters and a width of 55 meters with a dilution factor of 5.1. The acute mixing zone is defined as the rectangle with a length of 7.4 meters and a width of 5.8 meters extending perpendicular from shore with a dilution factor of 1.6. The area extends from the marine bottom to the surface of the water and is oriented with the tidal flow. In addition, the point of compliance is at the edge of the mixing zone, not the end of pipe. (See ANC SWPPP January 2020 Appendix J QAPP, Section B9 for calculation information).

All monitoring data must be submitted to ADEC no later than the 15th day of the following month after laboratory results are received. This submittal will be done electronically through the Network Discharge Monitoring Report (Net DMR) as per Section 10.7 of permit. If adverse weather conditions prevent collection of effluent samples such as dangerous, local flooding or extended frozen conditions a report must still be submitted monthly to ADEC indicating there was no discharge for that monitoring period.

If a discharge exceeds a numeric effluent limit ANC will conduct follow-up monitoring within 30 calendar days of implementing corrective action. Monitoring will be performed for any pollutant that exceeds the effluent limit. If this follow-up monitoring exceeds the applicable

effluent limitation ANC will:

1. Submit a Noncompliance Notification Form no later than five days after receipt of the lab result; and
2. Continue to monitor monthly.

If the follow-up monitoring exceeds a numeric effluent limit a Noncompliance Notification Form will be submitted to ADEC. ANC's report must include the following:

1. APDES permit tracking number;
2. Facility name, physical address and location;
3. Name of receiving water;
4. Monitoring data from this and the preceding monitoring event(s);
5. An explanation of the situation; what ANC has done and intend to do (should corrective actions not yet be complete) to correct the violation;
6. An appropriate contact name and phone number; and
7. A list of co-permittees that have industrial activity in the basin discharging to the outfall with the numeric effluent limit exceedance.

ANC will submit water monitoring reports to co-permittees and the quarterly visual assessments for their own review, reporting and record keeping purposes. Tenants are responsible for providing current email contact information to ANC's Environmental Section for this purpose. However, ANC will not be responsible for tracking tenants who have an ANC-GP. Co-permittees will be responsible for reviewing the water monitoring reports and quarterly visual assessments to determine if any corrective actions need to be implemented on their operational area or within the drainage basin in which they conduct their operations. ANC will not be responsible for co-permittees ANC-GP obligations.

Table 6-1 Effluent Limits and Monitoring Requirements for Outfalls

Once Per Month (unless otherwise noted) Sample Outfalls 001A, 002B, 003C, 004D, 005E					
Parameter	Limits - Outfalls A, B, C, E		Limits - Outfall D		
	Min	Max	Min	Max	
Biochemical Oxygen Demand (BOD_5) mg/L					
Chemical Oxygen Demand (COD) mg/L					
Sheen [a] - visual					
pH - S.U	6.5	8.5	6.5	8.5	
Temperature - °C					
Dissolved Oxygen (DO) – mg/L	5	17	6	17	
Residues - visual [b]	Outfall 004D – Weekly check March 1 to May 31; Monthly check June 1 to February 28 Outfalls 001A, 002B, 003C, and 005E - Monthly check				
Ethylene Glycol (EG)[c] – mg/L					
Propylene Glycol (PG)[c] – mg/L					
Flow – gpd					Estimate for Outfalls 001A, 002B, 003C, , 004D, 005E

Notes:

a. If sheen is observed must sample for TAqH and TAH
b. Residues may not, alone or in combination with other substances or wastes, make the water unfit or unsafe for the use, or cause acute or chronic problem levels as determined by bioassay or other appropriate methods. Residues may not, alone or in combination with other substances, cause a film, sheen, or discoloration on the surface of the water or adjoining shorelines; cause leaching of toxic or deleterious substances; or cause a sludge, solid, or emulsion to be deposited beneath or upon the surface of the water, within the water column, on the bottom, or upon adjoining shorelines.
c. Only during months November – May

All samples are grab samples.

6-B Receiving Water Monitoring

Receiving water monitoring will begin May 2020 and continue for four summers (May to September). Samples must be collected within two weeks of effluent sampling and monitoring locations are as follows:

1. Approximately 200 feet north of Outfall 002B;
2. Approximately 100 feet off the western end of Gull Island; and
3. Approximately 100 feet off the eastern end of Gull Island.

Sampling locations can be found in Appendix A, Site Maps, A-10.

Table 6-2 Receiving Water Monitoring Requirements (for Lakes Hood and Spenard)

Parameter	Two samples per year, minimum 60 days apart
Biochemical Oxygen Demand (BOD_5) mg/L	Grab
Chemical Oxygen Demand (COD) mg/L	Grab
Dissolved Oxygen (DO) mg/L	In-Situ
Temperature - °C	In-Situ
pH - S.U	In-Situ
Sheen	Visual
Turbidity - NTU	Grab

Reports must be submitted to ADEC with ANC's Annual Report, and include at a minimum:

1. Sample location;
2. Date of sample collection and analyses;
3. Results of analyses; and
4. Relevant QA/QC information.

In addition, the lake monitoring (receiving water monitoring) must be included in an Annual Water Quality Monitoring Summary report and submitted with Annual Report.

6-C Whole Effluent Toxicity (WET) Monitoring Requirements

Two locations are required to have chronic toxicity tests conducted on effluent samples once per year for the permit term during breakup at Outfalls 002B and 004D (breakup typically occurs between April 7th to April 21st). Toxicity testing must be performed on a four-hour composite sample (four distinct grab samples, once an hour, composited into one sample) per sample location. In addition, a split of the composite sample must be analyzed for the chemical and physical parameters required in Table 6-1 of this SWPPP for the respective outfalls.

A copy of the permit section for testing and reporting for the WET monitoring will be sent to the laboratory conducting the analyses to assure that protocols and reporting are consistent with permit requirements.

Two test species per outfall will be used. For Outfall 002B these species are the Fathead Minnow (Larval Growth & Survival) and the Water Flea (Survival & Reproduction); for Outfall 004D these species are the Pacific Oyster or Mussel (Shell Development) and the Topsmelt (Larval Growth & Survival). if Topsmelt is not available Inland Silverside may be used as a substitute. If an alternative species is to be used for chronic toxicity testing, ANC shall perform screening first and provide results to ADEC for review and written approval prior to implementing the use of the new test species.

Toxicity testing on each organism must include a series of five test dilutions and a control. The dilution series for Outfall 002B shall consist of effluent concentrations of 100%, 50%, 25%, 12.5% and, 6.25%. The dilution series for Outfall 004D shall consist of effluent concentrations of 78.4%, 39.2%, 19.6%, 9.8% and, 4.9%.

The "No Observed Effect Concentration" (NOEC) and 25% inhibition concentration (IC_{25}) or effective concentration (EC_{25}), must be provided in the full WET report. The chronic toxicity results reported with the DMR must use chronic toxicity units (TU_c) where:

$$TU_C = 100/ IC_{25};$$
$$TU_C = 100/ EC_{25}; \text{ or}$$
$$TU_C = 100/NOEC$$

If the endpoint is estimated to be above the highest dilution this must be indicated with the DMR by reporting a less than value for TU_C, IC_{25}, or, EC_{25} with one based on the NOEC during evaluation of data during next permit issuance. An estimate for NOEC for acute toxicity, based on observations of total mortality recorded for chronic tests, will be included in WET report.

Toxicity test analyses and results shall be reported according to the guidance as specified in permit Section 3.5.2.3 for Outfall 002B and Section 3.5.1.4 for Outfall 004D.

Figure 6-1

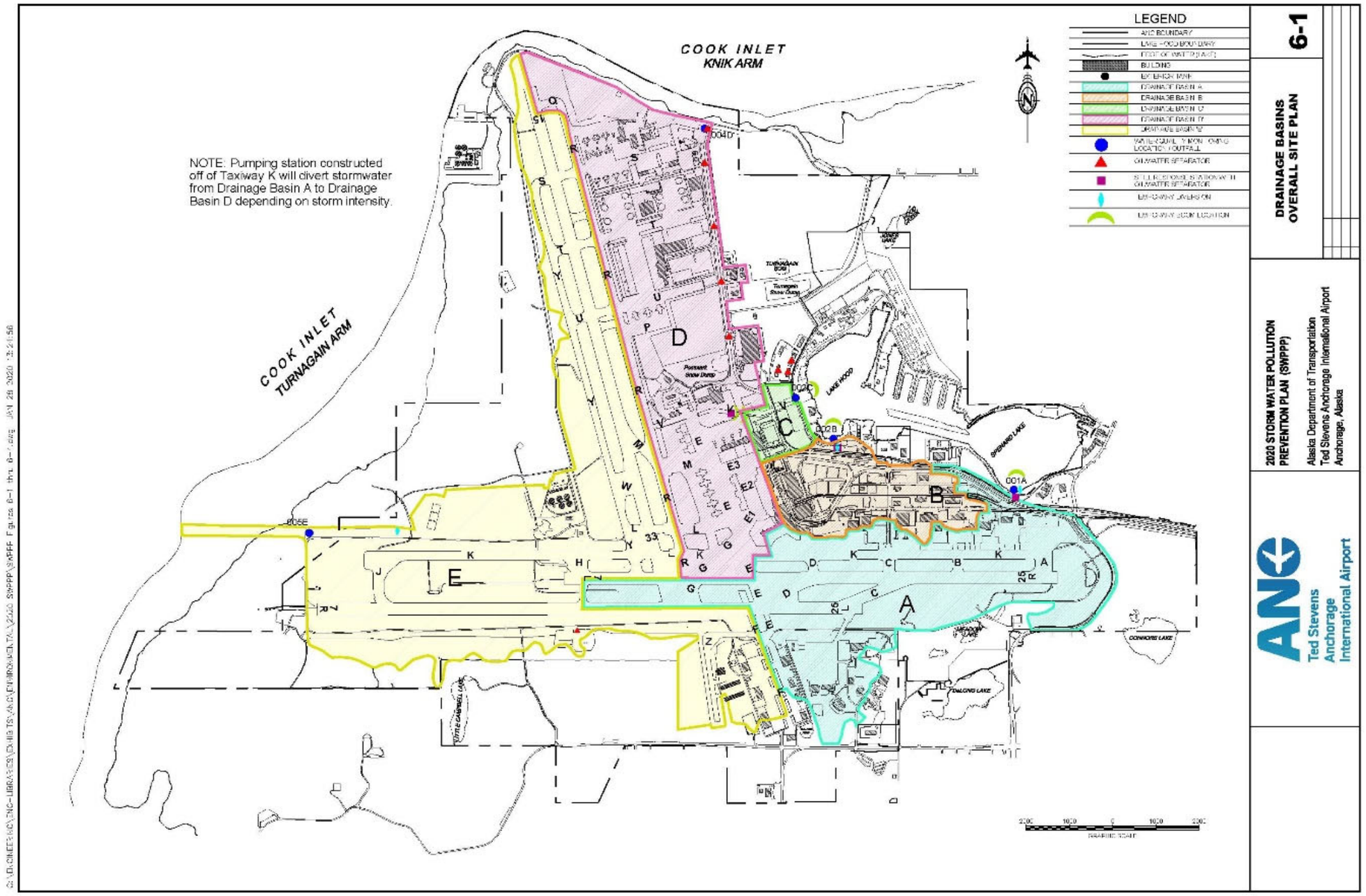
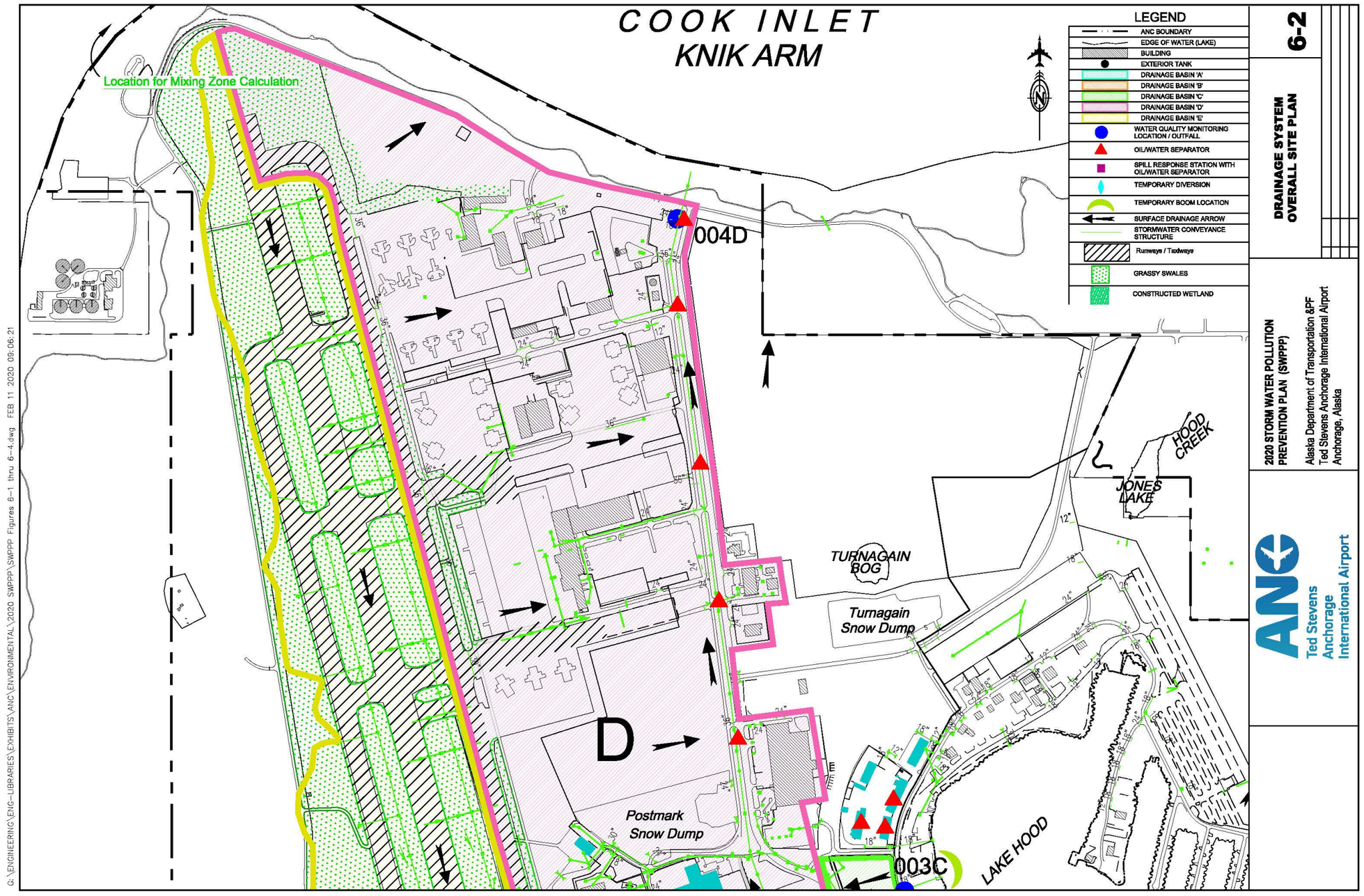

COOK INLET
KNIK ARM
COOK INLET
TURNAGAIN ARM
NOTE: Pumping station constructed off of Taxiway K will divert stormwater from Drainage Basin A to Drainage Basin D depending on storm intensity.
LEGEND
DRAINAGE BASINS
OVERALL SITE PLAN
6-1
2020 STORM WATER POLLUTION PREVENTION PLAN (SWPPP)
Alaska Department of Transportation
Ted Stevens Anchorage International Airport
Anchorage, Alaska
Ted Stevens Anchorage International Airport

Figure 6-2


COOK INLET
KNIK ARM
Location for Mixing Zone Calculation
004D
D
003C
TURNAGAIN BOG
Turnagain Snow Dump
Postmark Snow Dump
HOOD CREEK
JONES LAKE
LAKE HOOD
LEGEND
ANC BOUNDARY
EDGE OF WATER (LAKE)
BUILDING
EXTERIOR TANK
DRAINAGE BASIN 'A'
DRAINAGE BASIN 'B'
DRAINAGE BASIN 'C'
DRAINAGE BASIN 'D'
DRAINAGE BASIN 'E'
WATER QUALITY MONITORING LOCATION / OUTFALL
OIL/WATER SEPARATOR
SPILL RESPONSE STATION WITH OIL/WATER SEPARATOR
TEMPORARY DIVERSION
TEMPORARY BOOM LOCATION
SURFACE DRAINAGE ARROW
STORMWATER CONVEYANCE STRUCTURE
Runways / Taxiways
GRASSY SWALES
CONSTRUCTED WETLAND
6-2
DRAINAGE SYSTEM OVERALL SITE PLAN
2020 STORM WATER POLLUTION PREVENTION PLAN (SWPPP)
Alaska Department of Transportation &PF
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Anchorage, Alaska
ANC
Ted Stevens Anchorage International Airport
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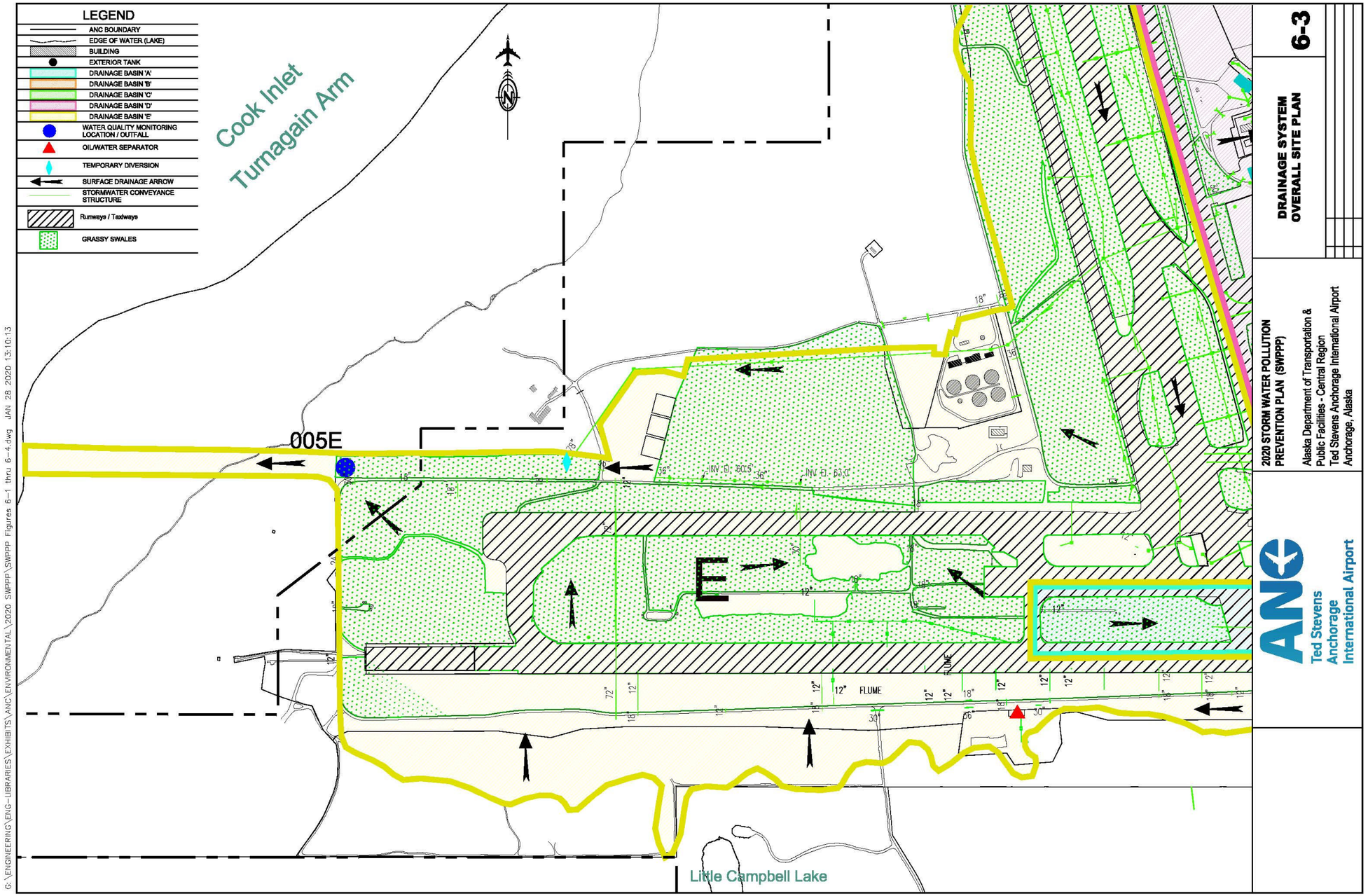
Figure 6-3


LEGEND
ANC BOUNDARY
EDGE OF WATER (LAKE)
BUILDING
EXTERIOR TANK
DRAINAGE BASIN 'A'
DRAINAGE BASIN 'B'
DRAINAGE BASIN 'C'
DRAINAGE BASIN 'D'
DRAINAGE BASIN 'E'
WATER QUALITY MONITORING LOCATION / OUTFALL
OIL/WATER SEPARATOR
TEMPORARY DIVERSION
SURFACE DRAINAGE ARROW
STORMWATER CONVEYANCE STRUCTURE
Runways / Taxiways
GRASSY SWALES
Cook Inlet
Turnagain Arm
005E
E
12" FLUME
Little Campbell Lake
6-3
DRAINAGE SYSTEM
OVERALL SITE PLAN
2020 STORM WATER POLLUTION
PREVENTION PLAN (SWPPP)
Alaska Department of Transportation &
Public Facilities - Central Region
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Anchorage, Alaska
ANC
Ted Stevens
Anchorage
International Airport
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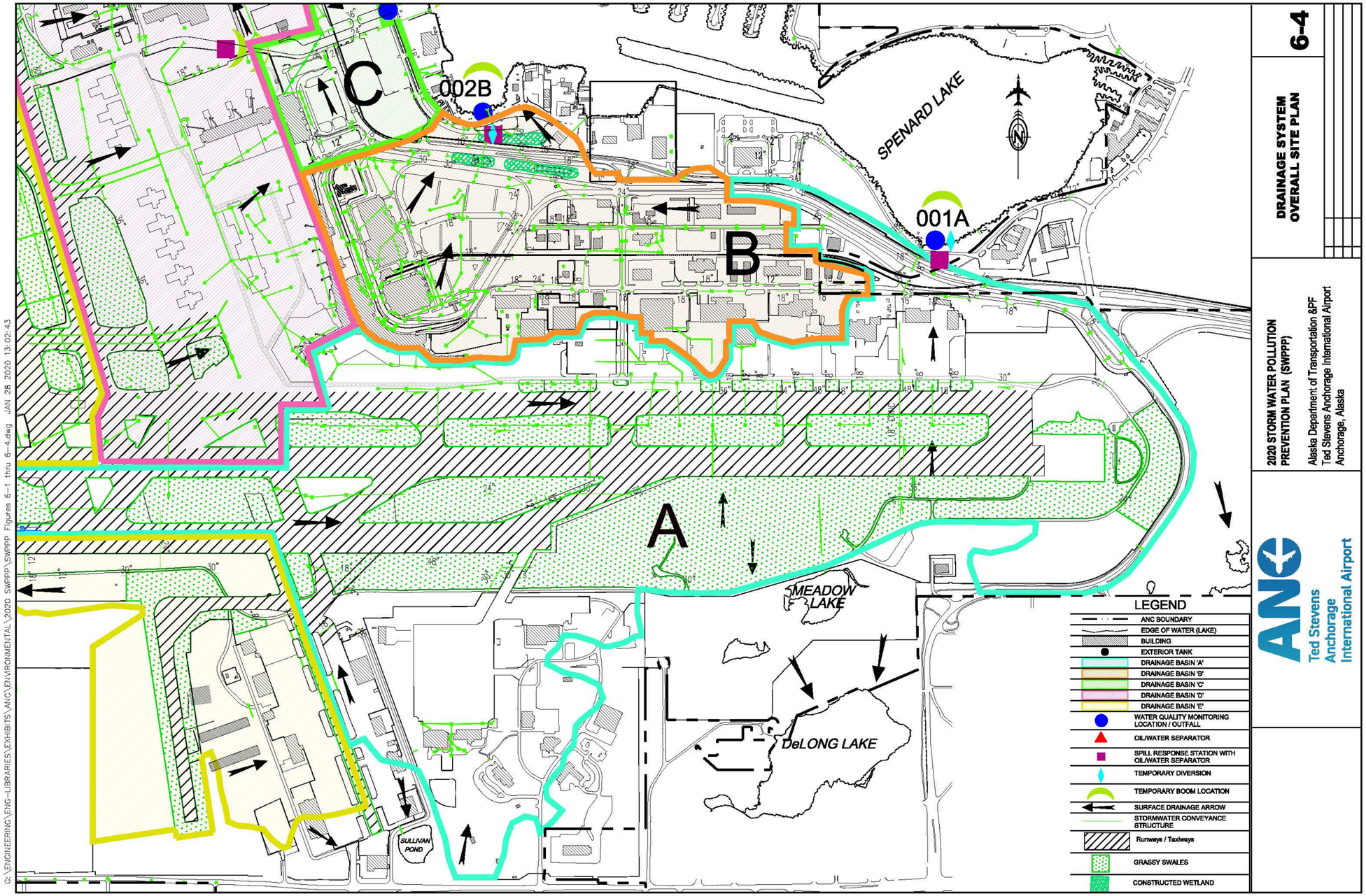
Figure 6-4


C
B
A
002B
001A
SPENARD LAKE
MEADOW LAKE
DeLONG LAKE
SULLIVAN POND
LEGEND
ANC BOUNDARY
EDGE OF WATER (LAKE)
BUILDING
EXTERIOR TANK
DRAINAGE BASIN 'A'
DRAINAGE BASIN 'B'
DRAINAGE BASIN 'C'
DRAINAGE BASIN 'D'
DRAINAGE BASIN 'E'
WATER QUALITY MONITORING LOCATION / OUTFALL
OIL/WATER SEPARATOR
SPILL RESPONSE STATION WITH OIL/WATER SEPARATOR
TEMPORARY DIVERSION
TEMPORARY BOOM LOCATION
SURFACE DRAINAGE ARROW
STORMWATER CONVEYANCE STRUCTURE
Runways / Taxiways
GRASSY SWALES
CONSTRUCTED WETLAND
DRAINAGE SYSTEM OVERALL SITE PLAN
6-4
2020 STORM WATER POLLUTION PREVENTION PLAN (SWPPP)
Alaska Department of Transportation &PF
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ANC
Ted Stevens Anchorage International Airport
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Chapter 7 - Inspections

7-A Overview

In general, ANC will conduct weekly BMP inspections, routine facility inspections, quarterly visual assessments of representative storm water discharges and, annual comprehensive site inspections.

7-B BMP Inspections

ANC BMP inspections will be conducted weekly and are similar to routine facility inspections. The ANC baseline inspection program includes the following principal elements:

a. visual inspection of solid and hazardous materials areas, storm water outfalls, and spill weirs;
b. assessment of the proper operation and adequacy of structural controls implemented under the facility SWPPP;
c. visual inspections of regulated ANC-operated facilities; shops; and fueling, solid waste, and hazardous materials areas; and
d. visual inspections of ANC-operated oil spill response stations and weirs.

Examples of potential problems that visual inspections might identify include:

a. oil sheen or other contaminants on or in standing or running water;
b. stains on the ground or unusual discoloration of earth or other surfaces at outfalls or drainage areas;
c. unclean areas (e.g., storage area in disarray, poor housekeeping);
d. poorly maintained, corroded, or damaged containers (e.g., drums, tanks); and
e. leaking equipment.

The weekly BMP inspection form and subsequent reports can be found in Appendix K.

7-C Routine Facility Inspections

Routine facility inspections must be conducted monthly for all areas of the facility where industrial materials or activities are exposed to storm water; areas that are potential pollutant sources; areas where spills and leaks have occurred within the past 3 years; storm water control measures and; discharge points (outfalls).

The inspector should examine/observe the following:

a. industrial materials, residue or trash that may have, or could, come into contact with storm water;
b. leaks or spills from industrial equipment, drums, tanks, and other containers;
c. offsite tracking of industrial or waste materials, or sediment where vehicles enter or exit the site;
d. tracking or blowing of raw, final or waste materials from areas of no exposure to exposed areas; and
e. control measures needing replacement, maintenance or repair.

Facility inspections must be performed by qualified personnel with at least one member of the

storm water pollution prevention team participating and certified signature as per Permit Appendix A, Subsection 1.12. The routine facility inspection form and subsequent reports can be found in Appendix L.

7-D Quarterly Visual Assessment

Quarterly visual assessments will be conducted on storm water samples from each outfall. These samples should be collected:

a. in a clean, clear glass container and examined in a well-lit area;
b. within the first 30 minutes of an actual discharge from a storm event. If it is not possible to collect with the first 30 minutes, it should be collected as soon as possible and document why it was not possible to take samples within the first 30 minutes. In snowmelt situations samples shall be taken when there is a measurable discharge from the site;
c. for storm events, collection will be made on discharges that occur at least three days from previous discharge. If it is not possible to collect the sample on discharges that occur at least 3 days from previous discharge, the sample shall be collected as close to this storm interval as possible;
d. at least one quarterly visual assessment shall capture snowmelt;
e. when adverse weather conditions prevent the collection of samples during the quarter a substitute sample must be taken during the next qualifying storm event; and
f. quarters are identified as follows:
    - Quarter 1: July 1 – September 30
    - Quarter 2: October 1 – December 31
    - Quarter 3: January 1 – March 31
    - Quarter 4: April 1 – June 30

Appendix M has a copy of the Quarterly Visual Assessment form and subsequent reports which require a certified signature as per Permit Appendix A, Subsection 1.12. (There is no requirement to submit visual assessment findings to ADEC, unless specifically requested to do so.)

7-E Comprehensive Site Inspections

The annual period to conduct the comprehensive site inspections begins July 1 to June 30. Comprehensive site inspections must:

a . be conducted by qualified personnel with at least one member of the storm water pollution prevention team participating during periods of actual deicing operations.
b. cover all areas of the facility affected by the requirements of the 2019 ANC-GP, including areas identified in the SWPPP as:
    i. potential pollutant sources where industrial materials or activities are exposed to storm water;
    ii. any areas where spills and leaks have occurred in the past 3 years;
    iii. a review of all monitoring data including visual assessments;
    iv. industrial (e.g., deicing) materials, residues, or trash that may, or could, come into contact with storm water;
    v. leaks or spills from equipment, drums, tanks, and other containers;
    vi. offsite tracking of industrial or waste materials, or sediment where vehicles enter or exit a site;

vii. tracking or blowing of raw, final, or waste materials from areas of no exposure to exposed areas; and
viii. control measures needing replacement, maintenance, or repair.

The 2019 ANC-GP allows the Annual Comprehensive Site Inspection to count as one of the Routine Facility Inspections. Both routine and annual comprehensive site inspections use the same inspection form.

Appendix N has a copy of the Comprehensive Site Inspection form and subsequent reports which require a certified signature as per Permit Appendix A, Subsection 1.12. In addition, the inspection documentation must be submitted in an annual report as required by Part 10.2 of the 2019 ANC-GP.

Chapter 8 – Corrective Actions

Co-permittees must participate in correction action for water quality standard (WQS) exceedances from basins in which they have industrial activity (such as fueling and deicing activities).

1. Conditions Requiring Review and Revision to Eliminate Problem

ANC will review and revise the selection, design, installation and implementation of the control measures if any of the following conditions occur at ANC to ensure that the condition is eliminated and will not be repeated in the future and provide appropriate notification to ADEC.

a. An unauthorized release or discharge (e.g., spill, leak, or discharge of non-storm water not authorized by the permit);
b. A discharge violates a numeric effluent limit;
c. ANC becomes aware, or ADEC determines, that their control measures are not stringent enough for the discharge to meet applicable water quality standards;
d. An inspection or evaluation of ANC by an ADEC official determines that modifications to the control measures are necessary to meet the reasonable effectiveness of the control measures/BMPs or effluent limits in the permit; or
e. ANC finds in their routine facility inspection, quarterly visual assessment, or comprehensive site inspection that the control measures are not being properly operated and maintained.

2. Conditions Requiring Review to Determine if Modifications are Necessary

A review of the selection, design, installation, and implementation of the control measures will be done to determine if modifications are necessary to meet Permit Part 3.2 (effluent limits and monitoring) if any of the following conditions occur:

a. Construction or a change in design, operation, or maintenance at ANC that significantly changes the nature of the pollutants discharge, or significantly increase the quantity of pollutants discharged; or
b. Sampling results exceeds a numeric effluent limit.

Corrective Action Deadlines

Document within 24 hours of any conditions listed in numbers 1 and 2 (above) and within 5 days any corrective action that need to be taken to eliminate or further investigate the deficiency, or if no corrective action is needed and the basis for that determination.

Corrective action is the responsibility of ANC and co-permittees in the event of conditions described in numbers 1.b. and 2.b. (the exceedance of a numeric effluent limit). ANC will notify the co-permittees within 24 hours and ANC will work with the co-permittees to address the corrective action that may be needed.

If it is determined that changes are necessary, any modifications to the control measures shall be made before the next storm event if possible, or as soon as possible following the storm event.

Corrective Action Report

Within 24 hours of any condition listed in numbers 1 and 2 (above) a report will be filed to ADEC. The report will document:

a. identification of the condition prompting the corrective action review;
b. description of the problem identified; and
c. date the problem was identified.

Spills and leaks are reported to and recorded in a database maintained by ANC. Petroleum and other spills (10 gallons or less) will be reported monthly to ADEC (as agreed between ANC and ADEC Spill Response Program). Those in excess of that amount will be reported within 24 hours and follow-up as per the flow chart in Appendix F, BMP Number 43.

Within 5 days ANC will document the information in Section IV of the Corrective Actions section in the Annual Reporting Form (Appendix O).

If the event prompting the review is non-compliance with an effluent limit it must be documented using ADEC's Noncompliance Notification Form (Appendix P).

Chapter 9 - Reporting

9 - A Water Monitoring Reports

All water monitoring results must be submitted to ADEC no later than the 15th day of the following month after ANC has received the complete laboratory results for all outfalls and receiving water. These results will be submitted as a discharge monitoring report (DMR) electronically through Network Discharge Monitoring Report (NetDMR). DMRs submitted this way are not required to be submitted as described in Appendix A – Standard Conditions of the ANC GP.

Any water monitoring results that cannot be reported in a NetDMR field (e.g., mixing zone, receiving water, or WET testing data) shall be included as an attachment to the Net DMR submittal. The full report of the WET test results will be submitted with the monthly DMR following the receipt of the results.

A spreadsheet will be maintained for lab results and attachments submitted in Appendix Q and the day they were e-filed.

9 - B Annual Report

An annual report must be submitted to ADEC that includes findings from the comprehensive site inspection and any corrective action documentation. If corrective action is not yet completed at the time of the submission of the annual report ANC will describe the status of any outstanding corrective action(s). The annual report shall consist of an ADEC provided form filled out and a written narrative report submitted no later than 2 months after the completed deicing season (by September 1) and cover the period July 1 – June 30. The following information will be included in the annual report:

1. Facility name;
2. APDES permit tracking number;
3. Facility physical address;
4. Contact person name, title, and phone number;
5. Site map revisions where necessary to identify any new outfalls, sampling points, structural controls, or other noteworthy changes in the SWPPP;
6. Assessment of the effectiveness of the control measures, and whether any amendments are proposed to the SWPPP to address operational issues;
7. Describe what follow-up was taken in response to any issues identified in the annual inspection and quarterly visual inspections;
8. A summary of the monitoring data collected from Outfalls 001A, 002B, 003C, 004D, 005E and receiving water monitoring locations (3) in Lakes Hood and Spenard. Summary must include a presentation of the analytical results and an evaluation of the results. The evaluation must include an electronic spreadsheet (Excel) containing all historical data for water quality, a graphical presentation of the data at each outfall and receiving water locations, and a comparison of monitoring results for each over time. The summary may reference the monthly reports for QA/QC information. The quarterly visual inspection notes do not have to be submitted (retain in SWPPP), but when unusual or unexpected observations are noted, summarize what was observed and the suspected cause;
9. Observations on receiving water quality improvements or degradation resulting from airport activities;
10. Evaluation of whether over-application of pavement deicing chemicals occurs by analyzing application rates, and adjust as necessary, consistent with considerations of flight safety (Section 4.2.2.7.1);
11. Evaluation of using alternative deicing/anti-icing agents as well as containment measures for all applied chemicals (Section 4.2.2.8.1.2); and
12. A statement signed and certified according to Permit Appendix – A, Part 1.12.

Other ANC-GP permit annual submittal requirements include:

1. Adaptive Management Plan Report;
2. Facility-Wide Deicing Committee Meeting Summaries;
3. Urea Certification;
4. Certified Signature regarding the Annual Review of SWPPP by SWPPP Team members;
5. Comprehensive Site Inspection; and
6. 4th year Annual Report to include Analysis of Recycling Spent Aircraft Deicing Fluid for Re-use as Aircraft Deicing Fluid.

Appendix R has a copy of the Annual Report Form and other submittals for Annual Report.

Submission Deadlines for Annual Reports

Reporting Period	Submission Deadline
1st year Annual Report (permit authorization issuance date – June 30, 2020)	September 1, 2020
2nd year Annual Report (July 1, 2020 – June 30, 2021)	September 1, 2021
3rd year Annual Report (July 1, 2021 – June 30, 2022)	September 1, 2022
4th year Annual Report (July 1, 2022 – June 30, 2023)	September 1, 2023
5th year Annual Report (July 1, 2023 – June 30, 2024)	September 1, 2024
Note: Unless the permit is extended to or past June 30, 2024; in that case use June 30, 2024. Subsequent reporting periods will follow similar format for the reporting year with submission deadline of September 1st of the ending year.	

9 – C Addresses for Reports

Notice of Intent (NOI), SWPPPs, and Notice of Termination (NOT) should be submitted to:
State of Alaska
Department of Environmental Conservation
Division of Water
Wastewater Discharge Authorization Program
555 Cordova Street
Anchorage, AK 99501
Email: DEC.Water.WQPermit@alaska.gov

Reports required in Permit Part 6.0 (Adaptive Management Plan), Part 9.0 (Corrective Actions), and Part 10.2 (Annual Report) must be sent to:
State of Alaska
Department of Environmental Conservation
Division of Water
Compliance and Enforcement Program
555 Cordova Street
Anchorage, AK 99501
Email: dec-wqreporting@alaska.gov

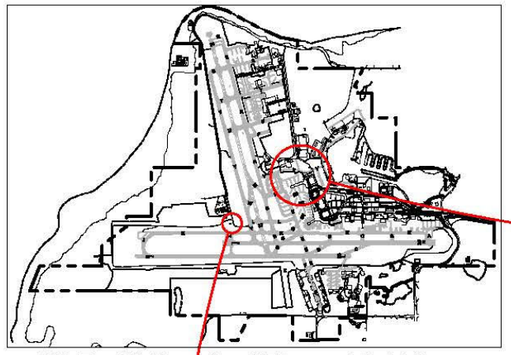
ANC will retain copies of SWPPP (including any modifications made during the permit term), including documentation related to corrective actions taken per Permit Part 9.4, all reports, and certifications required by this permit, monitoring data, and records of all data used to complete the NOI to be covered by this permit, for a period of at least 3 years from the expiration date of this permit or its termination.

APPENDIX A

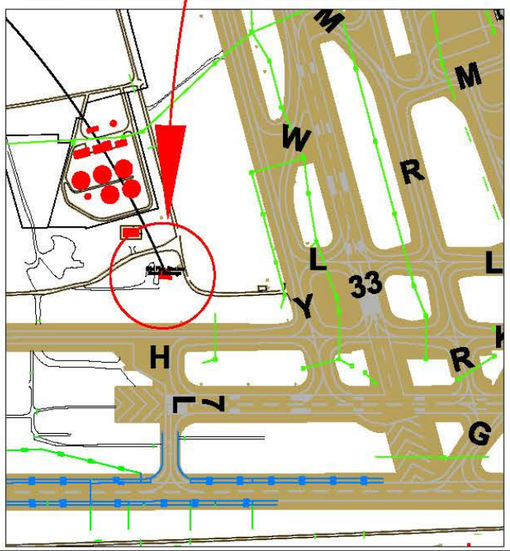
SITE MAPS

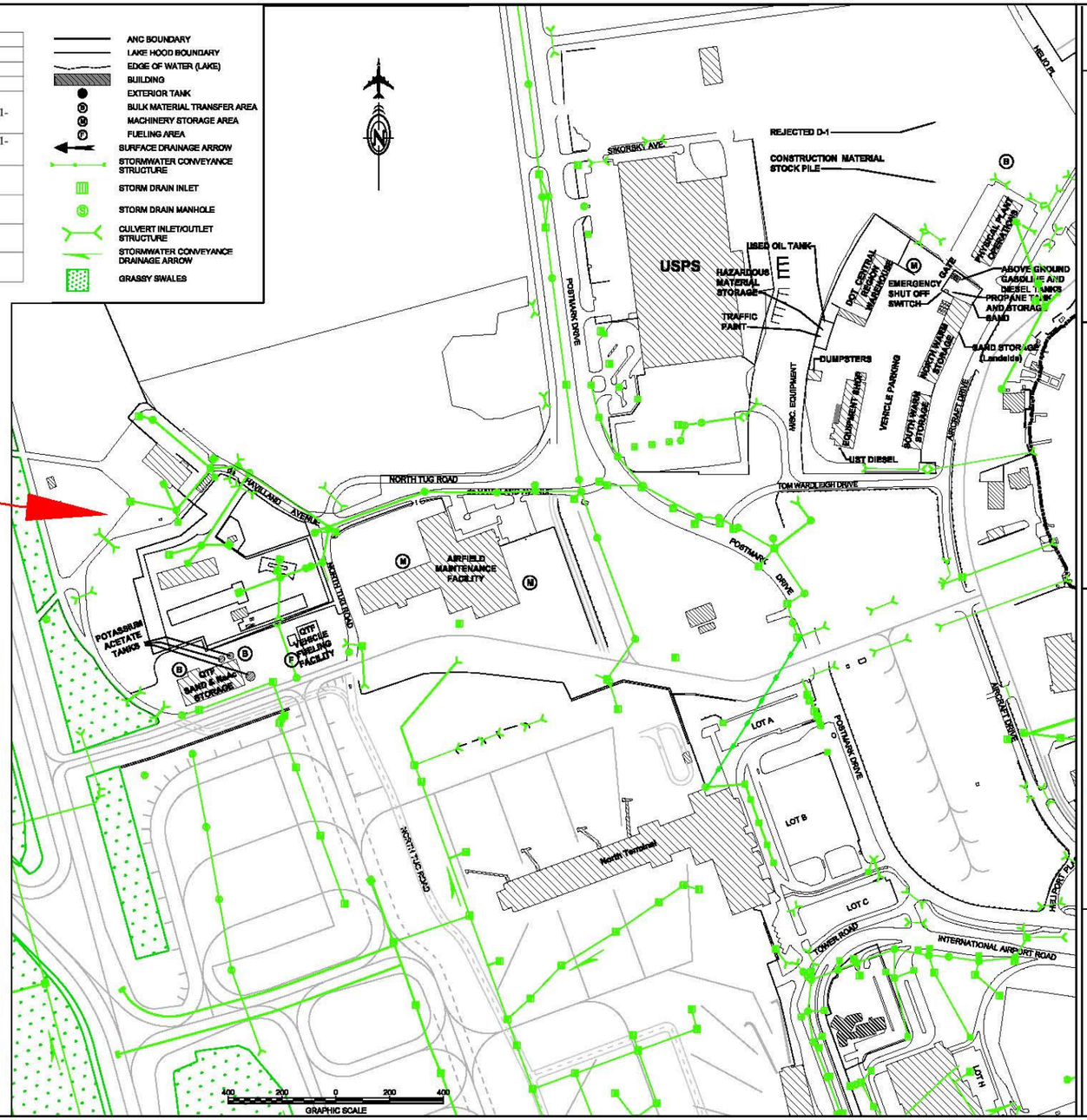
DUMPSTER LOCATIONS		
	Address	Size
OLD FIELD MAINTENANCE		
PPO Warehouse	3950 Aircraft Drive	4cy
Various Locations	4100 Aircraft Drive	1-4cy, 4-2.5cy 1-4cy cardboard recycle, 1-marathon compactor
NORTH TERMINAL	4600 Postmark Drive	1-4cy cardboard recycle, 1-Marathon compactor
SOUTH TERMINAL	5000 W. International Airport Road	1-Marathon compactor
AIRFIELD MAINTENANCE	5740 DeHavilland Drive	2-4cy, 1-12cy roll-off
AIRPORT POLICE AND FIRE	6040 DeHavilland Drive	1-4cy
KULIS	6101 Malone (Kulis Fire Station)	1-2.6cy

ANC BOUNDARY
LAKE HOOD BOUNDARY
EDGE OF WATER (LAKE)
BUILDING
EXTERIOR TANK
BULK MATERIAL TRANSFER AREA
MACHINERY STORAGE AREA
FUELING AREA
SURFACE DRAINAGE ARROW
STORMWATER CONVEYANCE STRUCTURE
STORM DRAIN INLET
STORM DRAIN MANHOLE
CULVERT INLET/OUTLET STRUCTURE
STORMWATER CONVEYANCE DRAINAGE ARROW
GRASSY SWALES



Old Fire Station - Sand Storage (airside)





A-1

ANC Regulated Facilities

2020 STORM WATER POLLUTION PREVENTION PLAN (SWPPP)

Alaska Department of Transportation & Public Facilities - Central Region
Ted Stevens Anchorage International Airport
Anchorage, Alaska

ANC
Ted Stevens Anchorage International Airport

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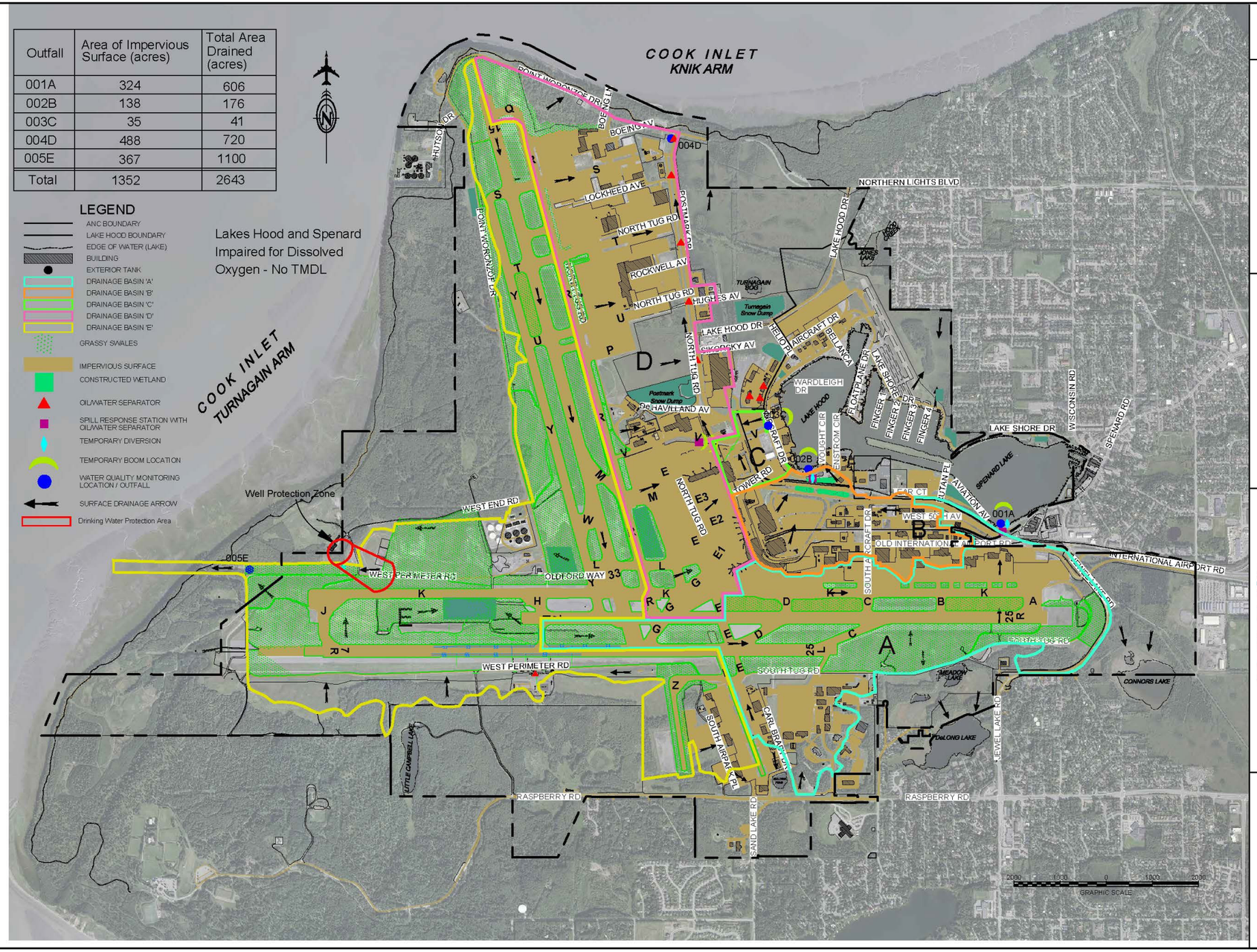
Outfall	Area of Impervious Surface (acres)	Total Area Drained (acres)
001A	324	606
002B	138	176
003C	35	41
004D	488	720
005E	367	1100
Total	1352	2643

LEGEND

- ANC BOUNDARY
- LAKE HOOD BOUNDARY
- EDGE OF WATER (LAKE)
- BUILDING
- EXTERIOR TANK
- DRAINAGE BASIN 'A'
- DRAINAGE BASIN 'B'
- DRAINAGE BASIN 'C'
- DRAINAGE BASIN 'D'
- DRAINAGE BASIN 'E'
- GRASSY SWALES
- IMPERVIOUS SURFACE
- CONSTRUCTED WETLAND
- OIL/WATER SEPARATOR
- SPILL RESPONSE STATION WITH OIL/WATER SEPARATOR
- TEMPORARY DIVERSION
- TEMPORARY BOOM LOCATION
- WATER QUALITY MONITORING LOCATION / OUTFALL
- SURFACE DRAINAGE ARROW
- Drinking Water Protection Area

Lakes Hood and Spenard Impaired for Dissolved Oxygen - No TMDL



IMPERVIOUS SURFACES OVERALL SITE PLAN

A-2

2020 STORM WATER POLLUTION PREVENTION PLAN (SWPPP)

Alaska Department of Transportation
Ted Stevens Anchorage International Airport
Anchorage, Alaska

Ted Stevens Anchorage International Airport

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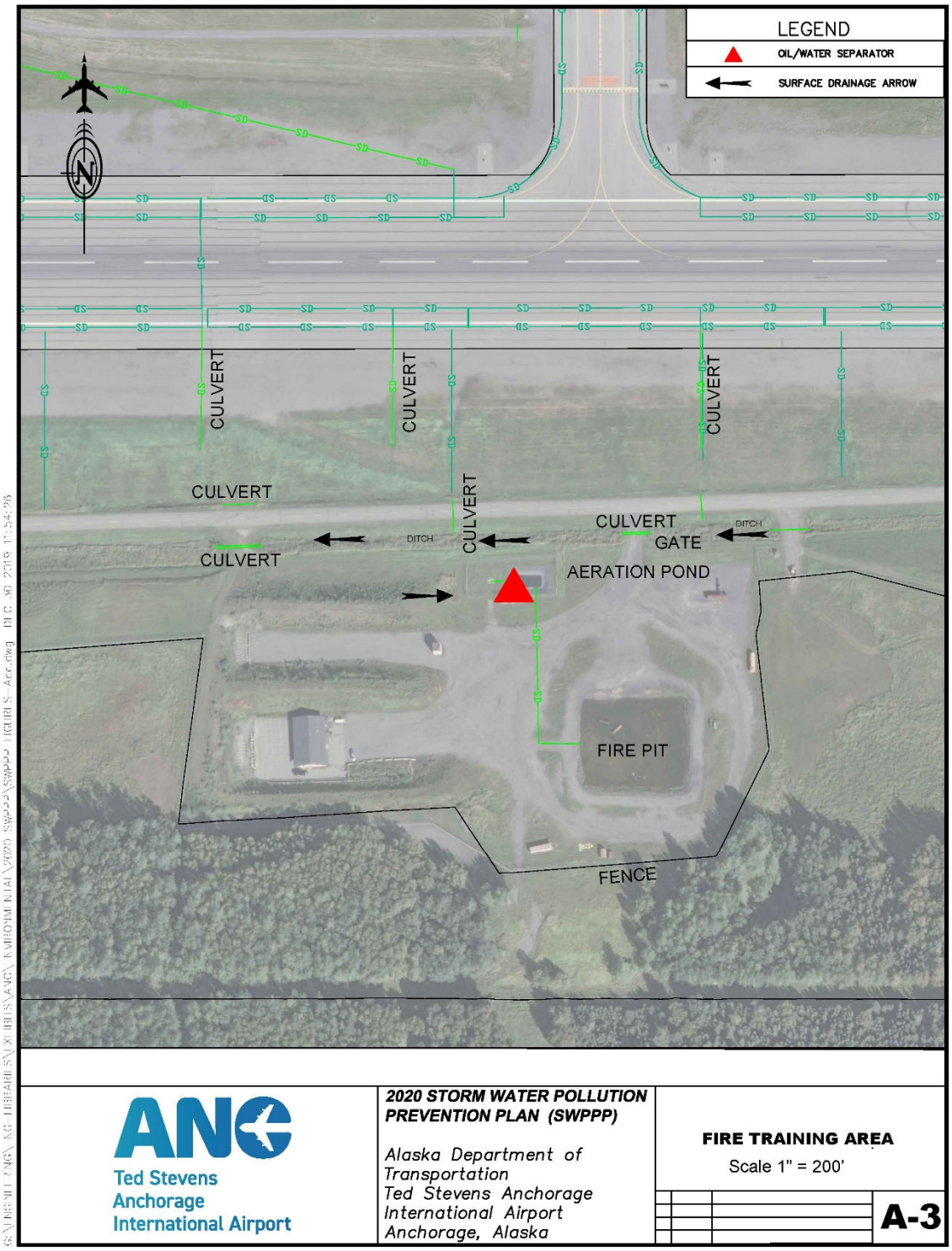
LEGEND
OIL/WATER SEPARATOR
SURFACE DRAINAGE ARROW
CULVERT
CULVERT
CULVERT
CULVERT
CULVERT
CULVERT
DITCH
DITCH
GATE
AERATION POND
FIRE PIT
FENCE
Ted Stevens Anchorage International Airport
2020 STORM WATER POLLUTION PREVENTION PLAN (SWPPP)
Alaska Department of Transportation
Ted Stevens Anchorage International Airport
Anchorage, Alaska
FIRE TRAINING AREA
Scale 1" = 200'
A-3

KNIK ARM
COOK INLET

TURNAGAIN ARM
COOK INLET

POINT WORONZOF DR

BOEING AV

LOCKHEED AVE

NORTHERN LIGHTS BLVD

HUTSON DR

POSTMARK DR

NORTH TUG RD

ROCKWELL AV

HUGHES AV

LAKE HOOD DR

SIKORSKY AV

HELIO AV

AIRCRAFT DR

BELLANCA AV

FLOATPLANE DR

LAKE SHORE DR

WISCONSIN RD

SPENARD RD

WARDLEIGH DR

DeHAVILLAND AV

LAKE HOOD CIR

TOUGHT CIR

FINGER 1

FINGER 2

FINGER 3

FINGER 4

TOWER RD

RUTAN PL

AVIATION AV

SPENARD LAKE

LEAR CT

WEST 50TH AVE

SOUTH AIRCRAFT DR

OLD INTERNATIONAL AIRPORT RD

INTERNATIONAL AIRPORT RD

JEWEL LAKE RD

WEST END RD

WEST PERIMETER RD

OLDFORD AV

SOUTH TUG RD

CARL BRADY DR

SOUTH AIRPARK PL

SAND LAKE RD

RASPBERRY RD

004D

003C

002B

001A

005E

A

B

C

D

E

E1

E2

E3

LEGEND

- ANC BOUNDARY
- LAKE HOOD BOUNDARY
- EDGE OF WATER (LAKE)
- BUILDING
- EXTERIOR TANK
- DRAINAGE BASIN 'A'
- DRAINAGE BASIN 'B'
- DRAINAGE BASIN 'C'
- DRAINAGE BASIN 'D'
- DRAINAGE BASIN 'E'
- RUNWAY DEICING AREA
- AIRCRAFT DEICING
- WATER QUALITY MONITORING LOCATION / OUTFALL
- OIL/WATER SEPARATOR
- SPILL RESPONSE STATION WITH OIL/WATER SEPARATOR
- TEMPORARY DIVERSION
- TEMPORARY BOOM LOCATION
- SURFACE DRAINAGE ARROW

2000 1000 0 1000 2000
GRAPHIC SCALE

A-4

DEICING APPLICATION AREAS

2020 STORM WATER POLLUTION PREVENTION PLAN (SWPPP)

Alaska Department of Transportation
Ted Stevens Anchorage International Airport
Anchorage, Alaska

Ted Stevens
Anchorage
International Airport

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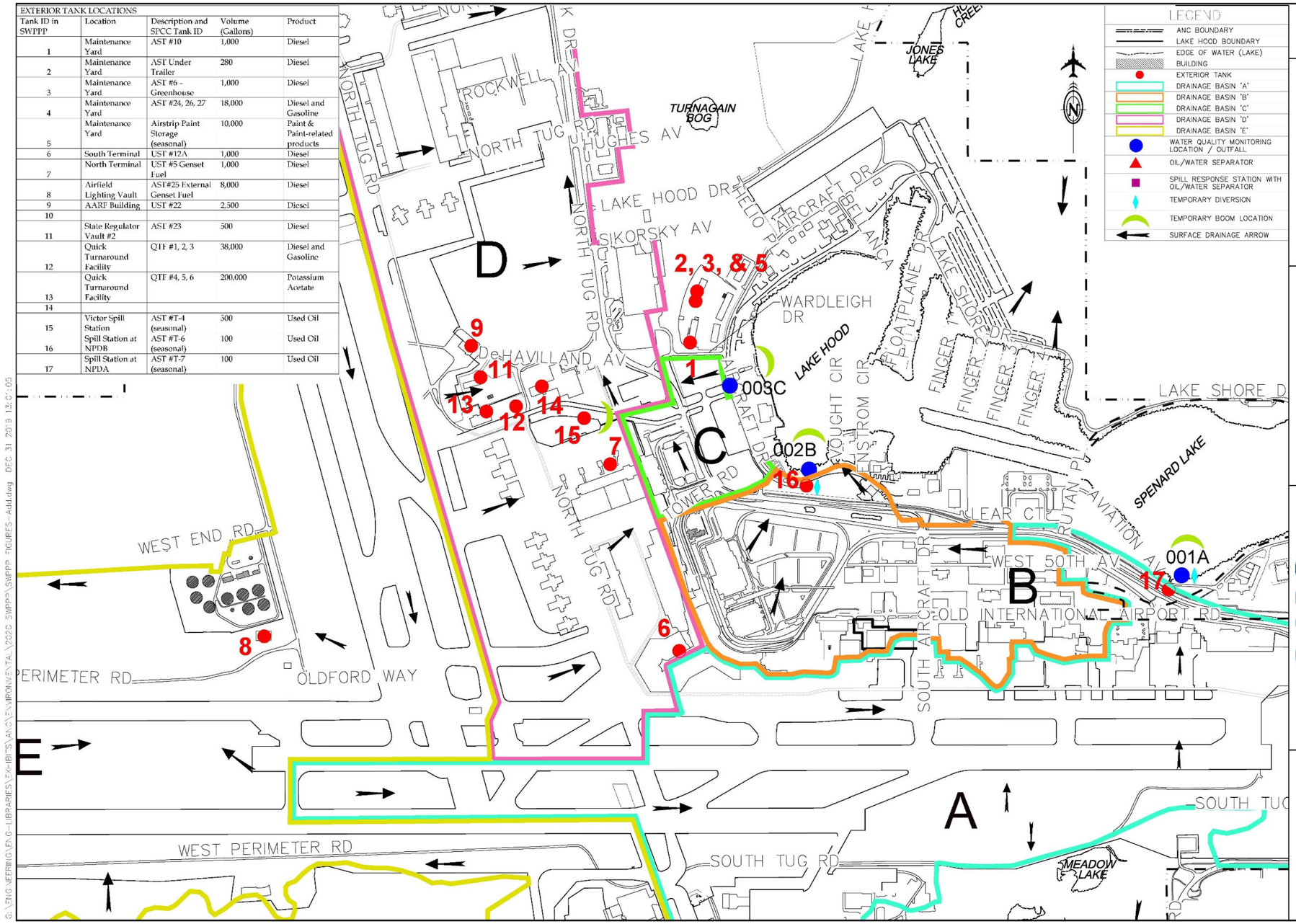
EXTERIOR TANK LOCATIONS

Tank ID in SWPPP	Location	Description and SPCC Tank ID	Volume (Gallons)	Product
1	Maintenance Yard	AST #10	1,000	Diesel
2	Maintenance Yard	AST Under Trailer	280	Diesel
3	Maintenance Yard	AST #6 – Greenhouse	1,000	Diesel
4	Maintenance Yard	AST #24, 26, 27	18,000	Diesel and Gasoline
5	Maintenance Yard	Airstrip Paint Storage (seasonal)	10,000	Paint & Paint-related products
6	South Terminal	UST #12A	1,000	Diesel
7	North Terminal	UST #5 Genset Fuel	1,000	Diesel
8	Airfield Lighting Vault	AST#25 External Genset Fuel	8,000	Diesel
9	AARF Building	UST #22	2,500	Diesel
10				
11	State Regulator Vault #2	AST #23	500	Diesel
12	Quick Turnaround Facility	QTF #1, 2, 3	38,000	Diesel and Gasoline
13	Quick Turnaround Facility	QTF #4, 5, 6	200,000	Potassium Acetate
14				
15	Victor Spill Station	AST #T-4 (seasonal)	500	Used Oil
16	Spill Station at NPDB	AST #T-6 (seasonal)	100	Used Oil
17	Spill Station at NPDA	AST #T-7 (seasonal)	100	Used Oil



FUEL STORAGE EXTERIOR TANK LOCATIONS OVERALL SITE PLAN A-5

2020 STORM WATER POLLUTION PREVENTION PLAN (SWPPP)

Alaska Department of Transportation & Public Facilities - Central Region
Ted Stevens Anchorage International Airport
Anchorage, Alaska

ANC Ted Stevens Anchorage International Airport

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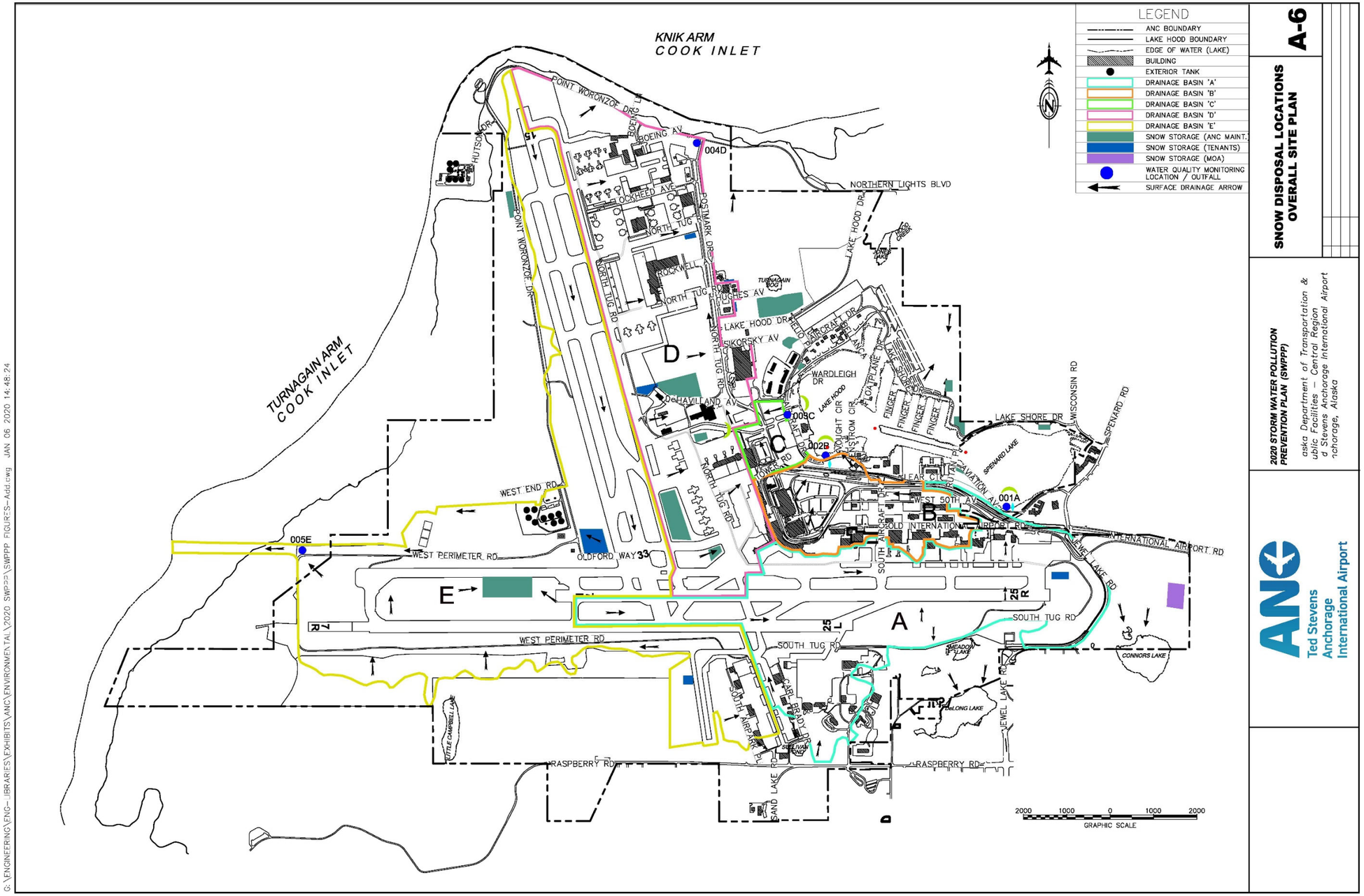

SNOW DISPOSAL LOCATIONS OVERALL SITE PLAN **A-6**

2020 STORM WATER POLLUTION PREVENTION PLAN (SWPPP)

Alaska Department of Transportation & Public Facilities – Central Region
Ted Stevens Anchorage International Airport
Anchorage, Alaska

ANC
Ted Stevens Anchorage International Airport

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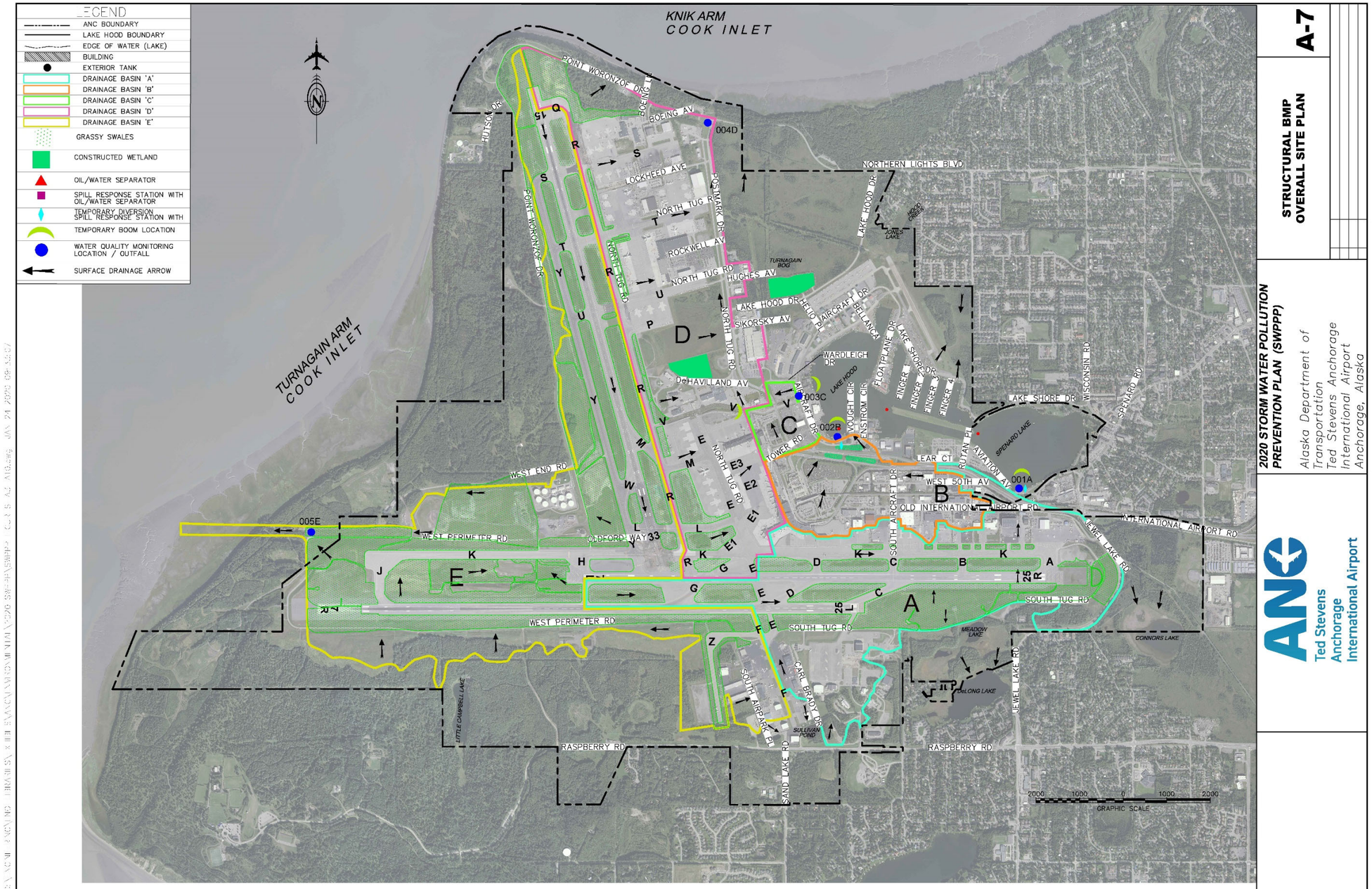
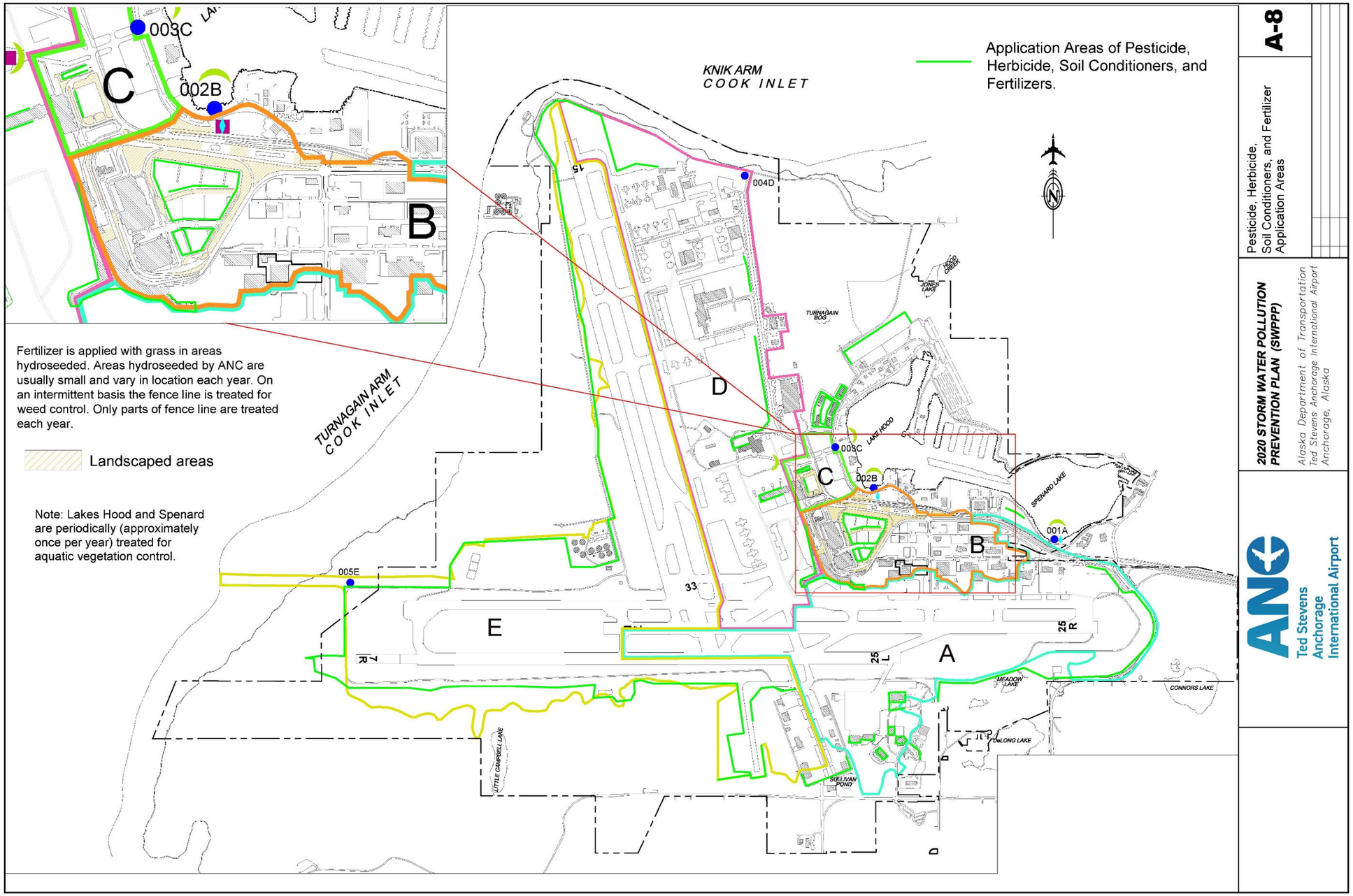


STRUCTURAL BMP OVERALL SITE PLAN **A-7**

2020 STORM WATER POLLUTION PREVENTION PLAN (SWPPP)

Alaska Department of Transportation
Ted Stevens Anchorage International Airport
Anchorage, Alaska

ANC Ted Stevens Anchorage International Airport


003C
002B
C
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D
E
A
004D
005E
001A
KNIK ARM
COOK INLET
TURNAGAIN ARM
COOK INLET
Application Areas of Pesticide, Herbicide, Soil Conditioners, and Fertilizers.
Fertilizer is applied with grass in areas hydroseeded. Areas hydroseeded by ANC are usually small and vary in location each year. On an intermittent basis the fence line is treated for weed control. Only parts of fence line are treated each year.
Landscaped areas
Note: Lakes Hood and Spenard are periodically (approximately once per year) treated for aquatic vegetation control.
LAKE HOOD
SPENARD LAKE
JONES LAKE
TURNAGAIN BOG
MEADOW LAKE
CONNORS LAKE
DeLONG LAKE
SULLIVAN POND
LITTLE CAMPBELL LAKE
15
33
7 R
25 L
25 R
A-8
Pesticide, Herbicide, Soil Conditioners, and Fertilizer Application Areas
2020 STORM WATER POLLUTION PREVENTION PLAN (SWPPP)
Alaska Department of Transportation
Ted Stevens Anchorage International Airport
Anchorage, Alaska
ANC
Ted Stevens Anchorage International Airport

Note: Refer to Appendix C for description of Significant Spills and Leaks.

8
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GRAPHIC SCALE

2020 STORM WATER POLLUTION PREVENTION PLAN (SWPPP)

Alaska Department of Transportation
Ted Stevens Anchorage International Airport
Anchorage, Alaska

Significant Spills and Leaks

A-9

Ted Stevens Anchorage International Airport

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Ted Stevens Anchorage International Airport

2020 STORM WATER POLLUTION PREVENTION PLAN (SWPPP)

Alaska Department of Transportation
Ted Stevens Anchorage International Airport
Anchorage, Alaska

Recieving Water Monitoring Locations Lakes Hood and Spenard

A-10

APPENDIX B

DEICING CHEMICAL SAFETY DATA SHEETS
ANC USAGE AMOUNT
&
CO-PERMITTEES AIRCRAFT DEICING USAGE

CRYOTECH E36®
Liquid Runway Deicer
Safety Data Sheet

Section 1: IDENTIFICATION

PRODUCT IDENTIFIER
CRYOTECH E36®
Liquid Runway Deicer
Complies with Specification AMS 1435

RECOMMENDED USE OF CHEMICAL AND RESTRICTIONS ON USE
Deicing/anti-icing runways, taxiways, and airside pavements

DETAILS OF THE SUPPLIER OF THE SAFETY DATA SHEET
Name/Address: Cryotech Deicing Technology
6103 Orthoway
Fort Madison, IA 52627
United States

Contact Information: Telephone: (800) 346-7237
Fax: (319) 372-2662
Email: deicers@cryotech.com
Website: www.cryotech.com

EMERGENCY TELEPHONE NUMBER
CHEMTREC (800) 424-9300
Outside USA and Canada (703) 741-5970

Section 2: HAZARD(S) IDENTIFICATION

CLASSIFICATION ACCORDING TO OSHA HAZCOM 2012
Hazard Class Not classified as hazardous

LABEL ELEMENTS ACCORDING TO OSHA HAZCOM 2012
There are no OSHA required label elements for this product.

CLASSIFICATION ACCORDING TO WHMIS (Canada)
Hazard Class Not controlled
WHMIS Hazard Symbols Not applicable
WHMIS Signal Word Not applicable

HAZARDS NOT OTHERWISE CLASSIFIED (HNOC)
May be harmful if swallowed.

Section 3: COMPOSITION / INFORMATION ON INGREDIENTS

MIXTURES

Ingredient	CAS No	Wt. %
Potassium Acetate	127-08-2	50
Water	7732-18-5	50
Corrosion Inhibitors		< 1

Section 4: FIRST- AID MEASURES

DESCRIPTION OF FIRST AID MEASURE

Eye In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. If easy to do, remove contact lenses, if worn. If irritation persists, seek medical attention.

Skin As a precaution, wash skin thoroughly with soap and water. Remove and wash contaminated clothing.

Inhalation If inhaled, remove to fresh air and get medical advice

Ingestion If swallowed, give milk or water to drink and telephone for medical advice. Do NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person.

MOST IMPORTANT SYMPTOMS / EFFECTS

Eye May cause temporary eye irritation. Symptoms may include temporary discomfort, excessive blinking, tear production, redness, and/or swelling.

Skin May cause itching or irritation of any cut or abraded skin. Symptoms of prolonged contact may include dry skin.

Inhalation Inhalation of aerosol during spraying may cause respiratory tract irritation and coughing. This product is not otherwise expected to be an inhalation hazard.

Ingestion Ingestion of large quantities may cause nausea, vomiting, diarrhea and abdominal discomfort.

INDICATION OF IMMEDIATE MEDICAL ATTENTION AND SPECIAL TREATMENT

Note to physicians This product contains potassium acetate. Though ingestion of large amounts of potassium salts usually results in vomiting, excessive potassium absorption can cause hyperkalemia.

Specific treatments If you feel unwell, seek medical advice immediately. Show the label or safety data sheet to medical personnel if possible.

Section 5: FIRE FIGHTING MEASURES

FLAMMABILITY

Flash Point (close cup)	Nonflammable by OSHA/WHMIS criteria
Auto Ignition	Not applicable

EXTINGUISHING MEDIA

Suitable Extinguishing Media	Water, carbon dioxide, or dry chemical. Use extinguishing media appropriate for surrounding materials.
Unsuitable Extinguishing Media	Not applicable

SPECIAL HAZARDS

Hazardous Combustion Products	Normal combustion forms carbon dioxide and water.
Explosion Limits	Data not available. Not considered to be an explosion hazard.
Unusual Fire Hazards	None expected

SPECIAL PROTECTIVE EQUIPMENT AND PRECAUTIONS FOR FIREFIGHTERS

Special Protective Equipment for Firefighters	Wear protective equipment suitable for surrounding environment.

Section 6: ACCIDENTAL RELEASE MEASURES

PERSONAL PRECAUTIONS, PROTECTIVE EQUIPMENT, AND EMERGENCY PROCEDURES

Avoid eye/skin contact with spilled material. Refer to Section 7 for additional handling precautions

Methods for Containment	Contain and/or absorb spill with inert material (e.g. sawdust, sand, vermiculite).
Methods for Cleaning-Up	Scoop up material and transfer to disposal container. If needed, wash spillage area with plenty of water.

Section 7: HANDLING AND STORAGE

PRECAUTIONS FOR SAFE HANDLING

Handling	Avoid eye contact. Avoid breathing mist when spraying.

PRECAUTIONS FOR SAFE STORAGE, INCLUDING ANY INCOMPATIBILITIES

Storage	Store in tightly sealed original containers, away from direct heat and strong oxidizing agents. Do not store or handle product in systems constructed of wetted parts consisting of galvanized steel, zinc, or brass components.

Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

EXPOSURE LIMITS

Exposure Limits — No specific limits have been established for this product.

EXPOSURE CONTROLS

Engineering Controls — No special ventilation is usually necessary; however if operating conditions create high airborne concentrations of this material, special ventilation may be needed to keep exposure to airborne contaminants below the exposure limit.

INDIVIDUAL PROTECTIVE MEASURES/PERSONAL PROTECTIVE EQUIPMENT

Eye Protection — Safety glasses or goggles are recommended if splashing/spraying is possible.

Skin Protection — No special skin protection is usually necessary. Chemical-resistant gloves and clothing should be used if prolonged exposure is possible to prevent drying of skin.

Respiratory Protection — No special respiratory protection is usually necessary. Breathing of mist/aerosol should be avoided. If operating conditions create high airborne concentrations of this material, the use of an approved respirator is recommended.

Section 9: PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE	Clear, colorless to light straw colored liquid. (May be dyed blue at customer request.)
ODOR	Odorless to slight vinegar odor
ODOR THRESHOLD	No data available
pH (20°C, 68°F)	10.5 – 11.5
FREEZING POINT	-60°C (-76°F)
BOILING POINT	~ 110°C (230°F)
FLASH POINT	Not applicable
EVAPORATION RATE	No data available
FLAMMABILITY/EXPLOSION LIMITS	Not applicable
VAPOR PRESSURE (20°C)	15 mm Hg
VAPOR DENSITY (AIR = 1)	No data available
RELATIVE DENSITY	1.28
SOLUBILITY IN WATER	Completely miscible
PARTITION COEFFICIENT; n-OCTANOL/WATER	No data available
AUTO-IGNITION TEMPERATURE	No data available
DECOMPOSITION TEMPERATURE	No data available
VISCOSITY (20°C)	6.5 cP
OXIDIZING PROPERTIES	Not oxidizing
EXPLOSIVE PROPERTIES	Not explosive

Section 10: STABILITY AND REACTIVITY

REACTIVITY
No dangerous reactions known under conditions of normal use.

CHEMICAL STABILITY
Stable. Polymerization will not occur.

POSSIBILITY OF HAZARDOUS REACTIONS
No dangerous reactions known under conditions of normal use.

CONDITIONS TO AVOID
Avoid prolonged contact with reactive metals such as magnesium and zinc, especially in closed systems where hydrogen gas from the oxidation of these materials may accumulate over time.

INCOMPATIBLE MATERIALS
Strong oxidizing agents; strong acids.

HAZARDOUS DECOMPOSITION PRODUCTS
May decompose into oxides of carbon.

Section 11: TOXICOLOGICAL INFORMATION

ACUTE TOXICITY
LD50 rat-oral: > 5 g/kg.

LIKELY ROUTES OF EXPOSURE
Skin contact, eye contact, ingestion.

SYMPTOMS RELATED TO THE PHYSICAL, CHEMICAL, AND TOXICOLOGICAL CHARACTERISTICS

Eye	May cause temporary eye irritation. Corneal injury is unlikely.
Skin	Repeated contact may cause minor skin irritation or dry skin.
Inhalation	Inhalation of aerosol during spraying may cause respiratory tract irritation and coughing. This product is not otherwise expected to be an inhalation hazard.
Ingestion	Ingestion of large quantities may cause nausea, vomiting, diarrhea and abdominal discomfort.

DELAYED AND IMMEDIATE EFFECTS AND CHRONIC EFFECTS FROM SHORT- AND LONG-TERM EXPOSURE/NUMERICAL MEASURES OF TOXICITY

Skin Corrosion/Irritation	Based on available data, the classification criteria are not met.
Serious Eye Damage/Irritation	Based on available data, the classification criteria are not met.
Respiratory or Skin Sensitization	Based on available data, the classification criteria are not met.
Germ Cell Mutagenicity	Based on available data, the classification criteria are not met.
Carcinogenicity	This product does not contain any ingredients that are considered to be carcinogens by IARC, NTP, or OSHA.

Reproductive Toxicity	Based on available data, the classification criteria are not met.
STOT-Single Exposure	Based on available data, the classification criteria are not met.
STOT-Repeated Exposure	Based on available data, the classification criteria are not met.
Aspiration Hazard	Based on available data, the classification criteria are not met.

Section 12: ECOLOGICAL INFORMATION

ECOTOXICITY (AQUATIC AND TERRESTRIAL)
Not expected to cause long-term adverse effects in the aquatic or terrestrial environments.

PERSISTENCE AND DEGRADABILITY
Readily biodegradable. COD (TOD): 0.34 g O_2/g deicer; BOD_5 (20°C): 0.25 g O_2/g deicer

BIOACCUMULATIVE POTENTIAL
Bioaccumulation is not expected.

MOBILITY IN SOIL
Adverse effects not expected.

OTHER ADVERSE EFFECTS
None expected.

Section 13: DISPOSAL CONSIDERATIONS

WASTE TREATMENT AND METHODS OF DISPOSAL
Based on available information, this product is neither listed as a hazardous waste nor does it exhibit any of the characteristics that would cause it to be classified as a characterized hazardous waste under RCRA. This product may be absorbed onto suitable materials and disposed of in a sanitary landfill unless local, state, or provincial regulations prohibit such disposal.

Section 14: TRANSPORT INFORMATION

TRANSPORT INFORMATION
Not regulated as dangerous goods per US DOT or IATA.

Section 15: REGULATORY INFORMATION

INVENTORY LISTS
All of the components in this product are on the following inventory lists: USA (TSCA), Canada (DSL/NDSL); Europe (EINECS)

TSCA SECTION 12(b)
None of the chemicals in this product are listed under TSCA Section 12(b).

CERCLA HAZARDOUS SUBSTANCES
There is no CERCLA Reportable Quantity for this material.

SARA 311/312 CATEGORIES

Physical hazards	
Explosive	No
Flammable (gases, aerosols, liquids or solids	No
Oxidizer (liquid, solid or gas)	No
Self- reactive	No
Pyrophoric (liquid or solid)	No
Pyrophoric Gas	No
Self-heating	No
Corrosive to metal	No
Gas under pressure (compressed gas)	No
In contact with water emits flammable gas	No
Combustible Dust	No
Hazard Not Otherwise Classified (HNOC)	No

Health hazards	
Acute toxicity (any route of exposure)	No
Skin corrosion or irritation	No
Serious eye damage or eye irritation	No
Respiratory or skin sensitization	No
Germ cell mutagenicity	No
Carcinogenicity	No
Reproductive toxicity	No
Specific target organ toxicity (single or repeated exposure)	No
Aspiration hazard	No
Simple Asphyxiant	No
Hazard Not Otherwise Classified (HNOC)	No

SARA 313
None of the components in this product are subject to reporting under SARA Section 313.

CLEAN WATER ACT
None of the chemicals in this product are listed as Priority Pollutants under the CWA.
None of the chemicals in this product are listed as Toxic Pollutants under the CWA.

STATE RIGHT-TO-KNOW:
This product does not contain components at levels which are required to be reported under the statutes of the following states: PA, MA, MN, and NJ.

This product does not contain materials known to the State of California (Proposition 65) to cause cancer and/or reproductive harm at levels which would require a warning under the statute.

NFPA 704	
Health	1
Fire	0
Physical Hazard	0
Hazard Rating 0-4	0-least hazardous; 4-most hazardous

HMIS – Hazardous Materials Identification System	
Health	1
Fire	0
Physical Hazard	0
Hazard Rating: 0 = minimal, 1 = slight, 2 = moderate, 3 = serious, 4 = severe	

Section 16: OTHER INFORMATION

SDS REVISION DATE

Revision date: August 1, 2019
Expiration date: August 1, 2022
Latest version of this SDS can be obtained from Cryotech.

NOTE TO EMPLOYER

This Safety Data Sheet contains environmental, health and toxicology information for your employees. Please ensure this information is provided to them. It also contains information to help you meet community right-to-know/emergency response reporting requirements under SARA Title III and many other laws. If you resell this product, this SDS must be given to the buyer or the information incorporated in your SDS. Discard any previous edition of this SDS.

DISCLAIMER

The above information is accurate to the best of our knowledge. However, since data, safety standards, and government regulations are subject to change and the conditions of handling and use or misuse are beyond our control, GENERAL ATOMICS INTERNATIONAL SERVICES CORPORATION dba Cryotech Deicing Technology makes no warranty, either express or implied, with respect to the completeness or continuing accuracy of the information contained herein and disclaims all liability for reliance thereon. GENERAL ATOMICS INTERNATIONAL SERVICES CORPORATION dba Cryotech Deicing Technology assumes no responsibility for any injury or loss resulting from the use of the product described herein. User should satisfy himself that he has all current data relevant to his particular use.

End of Safety Data Sheet

FORCECLEAR LIQUID RUNWAY DEICER
SAFETY DATA SHEET (SDS)

Section 1: Identification of the Substance or Mixture and of the Supplier

1.1. Product Identifier

Product Name: Potassium Acetate, 50% Aqueous Solution

Product Form: Mixture

Synonyms: Potassium salt Ethanoic acid, Acetic acid Potassium Salt

CAS #: 127-08-2

1.2. Relevant Identified Uses of The Substance or Mixture and Uses Advised Against

Product Uses: Commercial Use Only

Recommended Restrictions: No specific restrictions recommended.

1.3. Details of The Supplier of The Safety Data Sheet

Company Identity: Pelican Chemicals, Inc.

Company Address: 2901 West Broadway, Suite 200

Company City & State: Missoula, MT 59808

Company Phone: (888) 526-1952

1.4. Emergency Phone(s)

US (24 Hours): CHEMTREC: (800) 424-9300

Section 2: Hazard(s) Identification

2.1. Classification of The Substance or Mixture

GHS-US: Not classified as dangerous for supply/use

EC: Not classified as dangerous for supply/use

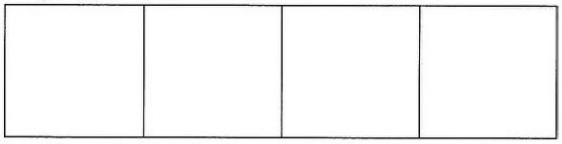
Hazards Summary: This substance is considered non-hazardous according to GHS classifications for the Hazard Communication Standard. Treat all chemical substances with caution. Although this substance is considered to be non-hazardous, unpredictable reactions among chemicals are always possible. Prudent handling practices should be observed.

2.2. Label Elements

Signal Word: Not applicable

Hazard Statements: Not applicable

Pictograms: NONE



Precautionary Statements: May cause mild eye irritation. After contact with skin, wash immediately and thoroughly with water and soap. If in eyes, rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

2.3 Hazards not otherwise classified: Caution- spillages may be slippery.

Section 3: Composition/Information on Ingredients

CHEMICAL NAME	COMMON NAME	SYNONYM(S)	CAS #	CLASSIFICATION	EINECS#	WT %
Dihydrogen monoxide (H2O)	Water	none	7732-18-5	GHS-US: None	231-791-2	50%
Potassium Acetate	Potassium Acetate	Potassium salt Ethanoic acid, Acetic acid Potassium Salt	127-08-2	GHS-US: None	204-822-2	50%
Corrosion Inhibitor (proprietary)	Trade Secret	Trade Secret	Trade Secret	GHS-US: None	N/A	< 1.0%

Section 4: First Aid Measures

4.1. Description of first aid measures

General advice: If you feel unwell, obtain medical attention.

Eye contact: If substance has got into the eyes, immediately wash out with plenty of water. Remove contact lenses if present and easy to do so. Continue rinsing for at least 15 minutes. If symptoms persist, obtain medical attention.

Skin contact: Wash with plenty of water for 15 minutes. If irritation (redness, rash, blistering) develops, obtain medical attention.

Inhalation: Remove patient from exposure and move to fresh air immediately. If breathing is difficult, give oxygen. Get medical aid if cough or other symptoms appear.

Ingestion: Do not induce vomiting. Wash out mouth with water or milk. If large amount swallowed or symptoms develop obtain medical attention.

4.2 Most important symptoms and effects, both acute and delayed

General Symptoms/Injuries: Not expected to present significant symptoms under anticipated conditions of normal use.

Inhalation: May cause slight respiratory irritation.

Ingestion: May cause slight gastrointestinal irritation.

Section 5: Fire-fighting Measures

5.1. Extinguishing Media

Suitable Extinguishing Media: Compatible with all standard extinguishing media and firefighting techniques.

Unsuitable Extinguishing Media: Not applicable

5.2. Special Hazards Arising from The Substance or Mixture

Description: Non-Flammable, Non-Combustible liquid, that is not expected to be reactive under normal conditions.

5.3. Advice for Fire-Fighters

Special Protective Equipment: Goggles, a self-contained breathing apparatus and suitable protective clothing should be worn in fire conditions.

Unusual Explosion and Fire Procedures: Not applicable

Section 6: Accidental Release Measures

6.1 Personal precautions, protective equipment, and emergency procedures

- Wear protective equipment before acting.
- In case of spillage, contain for proper disposal or recycling/ no special consideration for disposal.
- Safety shower in work area.
- Eye wash station in work area.

6.2. Environmental Precautions

See section 12 for more ecological information

6.3. Methods and Materials for Containment and Cleaning Up

- Soak up with inert material and properly dispose of in labeled container

Section 7: Handling and Storage

7.1 Precautions for Safe Handling

- All equipment, storage tanks, and surfaces that are exposed to potassium acetate deicers should be regularly cleaned to maintain equipment integrity and reduce deterioration.
- Proper use of safety glasses and personal protective equipment required.
- Do not eat, drink or smoke when handling this product.
- Handle product with efficient industrial hygiene and wash hands after each use. Contain for proper disposal or recycling.
- Use with adequate ventilation of the workstation.

7.2 Recommendations for Safe Storage

- Store in polyethylene, stainless steel, or carbon steel containers that have not been oxidized.
- Do not store with brass, zinc, or galvanized steel, aluminum should be avoided for long term storage
- Store in dry area protected from weather and sunlight.

Section 8: Exposure Controls and Personal Protection

Appropriate Ventilation Controls:

No specific OES assigned, however keep well ventilated as to keep dust exposure from exceeding the LTEL (8-hour TWA ref. period) 10 mg.m3 for total inhalable dust or PNOR (Particulates not otherwise regulated). For ACGIH follow: 10mg.mg$^{3\ TWA}$ (inhalable particles).

Respiratory Exposure Controls: Use with adequate ventilation.

Eye Protection: Wear safety glasses or goggles.

Hand Protection: Wash hands after handling of the material and wear protective gloves.

Body Protection: Wear suitable protective clothing.

Work & Hygienic Practices: wash thoroughly after handling, wash contaminated clothes before next use.

Section 9: Physical and Chemical Properties

PROPERTIES	REMARKS	PROPERTIES	REMARKS
Appearance	clear colorless liquid	Upper/lower flammability	none
Odor	Mild odor	Vapor pressure	no information
Odor Threshold	none	Vapor density	no information
pH	8.0-11.5	Relative density	1.27-1.29
Melting point/freezing point	< -59°C (-74°F)	Solubility	no information
Initial Boiling point	no information	Partition coefficient	no information
Boiling range	no information	Auto-Ignition temperature	no information
Flash point	No flash to 212°F	Decomposition temperature	no information
Evaporation rate	no information	Viscosity	6 - 10 cP
Flammability	no information		

Section 10: Stability and Reactivity

Reactivity: Non-reactive under normal conditions.

Chemical Stability: Stable under normal conditions.

Stabilizers: no information available

Conditions to Avoid: strong oxidizers

Hazardous Reactions: None known

Incompatible Materials: Strong oxidizing agents, nitrates, chlorates

Hazardous Decomposition Products: Carbon monoxide

Section 11: Toxicology Information

Delayed, immediate and chronic effects from short- and long-term exposure

Eye contact: May cause eye irritation

Skin contact: May cause skin irritation

Inhalation: May cause respiratory tract irritation if inhaled

Ingestion: May be harmful if swallowed

Numerical Measures of Toxicity: N/A

Toxicity Listings: Not found to be a potential carcinogen by OSHA, NTP, or the IARC

Toxicity: No acute toxicity information available.

Section 12: Ecological Information

Environmental: None available

Physical: None Available

Other: Do not dispose down drain.

Biodegradability:

Percent of product biodegraded in five days at 68ºF (20ºC):

BOD= 0.21 Kg O2/Kg fluid

5-day total oxygen demand (TOD) of the product based on theoretical oxygen demand (Thod), whether calculated computationally or via chemical oxygen demand (COD), expressed in kilograms of oxygen per kilograms of product:

COD= 0.33 Kg O2/Kg fluid

Aquatic Toxicity:

EPA 40 CFR 797.1300 DAPHNID ACUTE TOXICITY

Daphnia magna, static system: 48-hour LC50: 1,175 mg/L

EPA 40 CFR 797.1400 FISH ACUTE TOXICITY

Pimephales promelas, static system: 96 hour LC50: 2,050 mg/L

Section 13: Disposal Considerations

Waste Disposal Method: Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. US EPA guidelines for the classification determination are listed in 40 CFR Parts 261. Additionally, waste generators must consult state and local hazardous waste regulations to ensure complete and accurate classification.

Section 14: Transport Information

- Not DOT regulated
- Not a dangerous goods in transport regulations.
- Not classified as a Dangerous Good under the criteria of the International Maritime Dangerous Good Code (IMDG).

Section 15: Regulatory Information

EPA SARA (Superfund Amendments and Reauthorization Act of 1986) Lists

CAS #	Hazardous Components	S. 302 (EHS)	S.304 RQ	S313 (TRI)
127-08-2	Potassium acetate {Acetic acid, potassium salt)	No	No	No

SARA Title III Sections 311/312 Applicable Hazard Categories

Acute (immediate) Health Hazard: **No**

Chronic (delayed) Health Hazard: **No**

Fire Hazard: **No**

Sudden Release of Pressure Hazard: **No**

Reactive Hazard: **No**

USA:

CAS #	Hazardous Components	USA
127-08-2	Potassium acetate {Acetic acid, potassium salt)	Toxic Substances Control Act (TSCA)

Canada:

CAS #	Hazardous Components	Canada
127-08-2	Potassium acetate {Acetic acid, potassium salt)	Canadian DSL

Section 16: Other Information

Revised July 3, 2018

Manufacturer Disclaimer: This SDS is provided to be used only as a guide, and is believed to be accurate by Pelican Chemicals, Inc. The information provided in this sheet relates strictly to the designated product as it is shipped by Pelican Chemicals, Inc. The responsibility of the buyer of this product is to comply with all applicable governmental requirements and to determine safety conditions for the use of this product. Pelican Chemicals, Inc. is not responsible or liable for any damages that result from handling or contact with this product. Since the actual use by others is beyond our control it is the purchaser's responsibility to determine the suitability of the product for their own use and purpose. Pelican Chemicals, Inc. makes no representations or warranties, either expressed, or implied for a particular purpose. No suggestions for use are intended, and nothing herein shall be construed as a recommendation to infringe any existing patents or to violate any Federal, State or local laws, rules or regulations.

NASi
Because QUALITY Creates Value!

SAFETY DATA SHEET

Name of Product:
Ecoway SF

Product #: I0000131
Revision Date: Nov 14, 2013

SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME:	**Ecoway *SF***		
SYNONYMS:	Formic acid sodium salt		
PRODUCT CODES:	I000131; I000132		
COMPANY IDENTIFICATION:	NACHURS ALPINE SOLUTIONS		
DIVISION:	Marion		
ADDRESS:	421 Leader Street, Marion, OH 43302, United States		
EMERGENCY PHONE:	United States:	Chemtrec: 800-424-9300	(CCN 15189)
	Canada:	CANUTEC: 1-613-996-6666 I TECH: 1-877-324-4402	
CHEMICAL NAME:	Sodium Formate		
CHEMICAL FAMILY:	Formic Acid, Sodium Salt		
CHEMICAL FORMULA:	HCOONa		

SECTION 1 NOTES:

SECTION 2: HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW: Use with care!

ROUTES OF ENTRY: Inhalation, Ingestion, Injection, Absorption

POTENTIAL HEALTH EFFECTS

EYES:	May cause irritation.
SKIN:	May cause irritation.
INGESTION:	May cause irritation.
INHALATION:	May cause irritation.

ACUTE HEALTH HAZARDS: N/A

CHRONIC HEALTH HAZARDS: N/A

MEDICAL CONDITIONS GENERALLY AGGRAVATED BY EXPOSURE: N/A

CARCINOGENICITY:

OSHA:	N/A
ACGIH:	N/A
NTP:	N/A
IARC:	N/A
OTHER:	N/A

SECTION 2 NOTES: Human health effects of overexposure may cause skin or eye irritation or skin rash, tearing, or blurring of vision.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

INGREDIENT:	Sodium Formate	>98%	CAS# 141-53-7

SARA 313 REPORTABLE: N/A

OSHA PEL-TWA:	N/A
OSHA PEL STEL:	N/A
OSHA PEL CEILING:	N/A
ACGIH TLV-TWA:	N/A
ACGIH TLV STEL:	N/A

ACGIH TLV CEILING: N/A

SECTION 3 NOTES:

SECTION 4: FIRST AID MEASURES

EYES: Flush with water immediately and thoroughly for 15 minutes. If irritation persists, seek medical attention.
SKIN: May be harmful if absorbed through skin. May cause skin irritation. Wash thoroughly with soap and water. If irritation persists, seek medical attention.

INGESTION: No specific intervention is indicated as compound is not likely to be hazardous by ingestion. Consult a physician if necessary.

INHALATION: May be harmful if inhaled. May cause respiratory tract irritation. If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Call a physician.

NOTES TO PHYSICIANS OR FIRST AID PROVIDERS: N/A

SECTION 4 NOTES:

SECTION 5: FIRE-FIGHTING MEASURES

FLAMMABLE LIMITS IN AIR: (% BY VOLUME) UPPER: N/A LOWER: N/A

FLASH POINT: N/A

METHOD USED: N/A

AUTOIGNITION TEMPERATURE: N/A

NFPA HAZARD CLASSIFICATION:
HEALTH: 1
FLAMMABILITY: 0
REACTIVITY: 0
OTHER: 0

HMIS HAZARD CLASSIFICATION
HEALTH: 1
FLAMMABILITY: 0
REACTIVITY: 0
PROTECTION: B

EXTINGUISHING MEDIA: Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

SPECIAL FIRE FIGHTING PROCEDURES: Use self-contained breathing apparatus and full protective clothing.

UNUSUAL FIRE AND EXPLOSION HAZARDS: None.

HAZARDOUS DECOMPOSITION PRODUCTS: Carbon oxides, Sodium/sodium oxides

SECTION 5 NOTES:

SECTION 6: ACCIDENTAL RELEASE MEASURES

ACCIDENTAL RELEASE MEASURES: Before handling any spills, always observe the safety precautions described in Section 8. Spills can be removed in the dry form with suitable equipment or flushed away with large quantities of water.

SECTION 6 NOTES:

SECTION 7: HANDLING AND STORAGE

HANDLING AND STORAGE: Store in a cool dry, well-ventilated area in tightly closed containers. Keep away from acids.

OTHER PRECAUTIONS: N/A

SECTION 7 NOTES:

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

ENGINEERING CONTROLS: Keep container tightly closed and protect from moisture. Use ventilation that is adequate to keep employee exposure to airborne dust limited.

VENTILATION: Use ventilation that is adequate to keep employee exposure to airborne dust limited. A dust mask is recommended when handling large quantities in small confined non-ventilated area.

RESPIRATORY PROTECTION: Respiratory protection is not required under normal circumstances. If material is misted, use appropriate NIOSH approved respirator of self-contained breathing apparatus.

EYE PROTECTION: Coverall Chemical splash goggles and full face shield.

SKIN PROTECTION: Rubber or plastic gloves.

OTHER PROTECTIVE CLOTHING OR EQUIPMENT: N/A

WORK HYGIENIC PRACTICES: Always follow good safety and industrial hygienic practices.

EXPOSURE GUIDELINES: See section 2.

SECTION 8 NOTES:

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE: white granules

ODOR: slight specific odor.

PHYSICAL STATE: Solid/ crystalline granular

pH : 10.0-12.0 (10% solution)

BOILING POINT:
F°: Unknown
C°: Unknown

MELTING POINT:
F°: >608
C°: >320

FREEZING POINT:
F°: N/A
C°: N/A

VAPOR PRESSURE (mmHg): N/A

VAPOR DENSITY (AIR = 1): N/A

DENSITY @ 20°C 0.92-0.95 g/cc

EVAPORATION RATE: N/A

SOLUBILITY IN WATER: soluble (>3.75 lbs./gal.)

PERCENT SOLIDS BY WEIGHT: >98

PERCENT VOLATILE: N/A

VOLATILE ORGANIC COMPOUNDS (VOC): N/A

MOLECULAR WEIGHT: 174.2

VISCOSITY: N/A

SECTION 9 NOTES:

SECTION 10: STABILITY AND REACTIVITY

	STABLE	UNSTABLE
STABILITY:	x	
CONDITIONS TO AVOID (STABILITY):	Prevent contamination with other chemicals	
INCOMPATIBILITY (MATERIAL TO AVOID):	Contact with acids	
HAZARDOUS DECOMPOSITION OR BY-PRODUCTS:	Thermal decomposition may generate carbon monoxide and carbon dioxide.	
HAZARDOUS POLYMERIZATION:	Will not occur.	
CONDITIONS TO AVOID (POLYMERIZATION):	N/A	

SECTION 10 NOTES:

SECTION 11: TOXICOLOGICAL INFORMATION

TOXICOLOGICAL INFORMATION: Acute oral toxicity LD50: >2000 mg/kg (rats).IE
Acute inhalation toxicity LC50: >670 mg/m³ (dust, rats, 4 hrs.).
Skin irritation: nonirritant (Rabbits).
Eye irritation: nonirritant (Rabbits).

SECTION 11 NOTES:

SECTION 12: ECOLOGICAL INFORMATION

ECOLOGICAL INFORMATION: Biological elimination: >90% (Static test, 7 days) DIN 38 412-L25) Toxicity to bacteria ECo:> 10000 (OECD 209, after 3 hours)
Chemical oxygen demand COD: - 211 mg oxygen/g. (DIN 38409-H41) Daphnia acute toxicity ECo: 3.3 g/l (24h); 3.2 g/l (48h)
EC50: 4.8 g/l (24h); 4.4 g/l (48h)
Fish Toxicity LC50:..1000 mg/l (96 h, Zebra fish, OECD 203)

SECTION 12 NOTES:

SECTION 13: DISPOSAL CONSIDERATIONS

WASTE DISPOSAL METHOD: Reclaim and reuse as much as possible. Dispose in accordance with all federal, state, and local regulations.

RCRA HAZARD CLASS: N/A

SECTION 14: TRANSPORT INFORMATION

U.S. DEPARTMENT OF TRANSPORTATION:

PROPER SHIPPING NAME:	Ecoway SF (Sodium Formate)
HAZARD CLASS:	N/A
ID NUMBER:	N/A
PACKING GROUP:	N/A
LABEL STATEMENT:	N/A

WATER TRANSPORTATION:

PROPER SHIPPING NAME:	Ecoway SF (Sodium Formate)
HAZARD CLASS:	N/A
ID NUMBER:	N/A
PACKING GROUP:	N/A
LABEL STATEMENTS:	N/A

AIR TRANSPORTATION:

PROPER SHIPPING NAME:	Ecoway SF (Sodium Formate)
HAZARD CLASS:	N/A
ID NUMBER:	N/A
PACKING GROUP:	N/A
LABEL STATEMENTS:	N/A

SECTION 14 NOTES:

SECTION 15: REGULATORY INFORMATION

U.S. FEDERAL REGULATIONS:

TSCA (TOXIC SUBSTANCE CONTROL ACT): No

CERCLA (COMPREHENSIVE RESPONSE COMPENSATION, AND LIABILITY ACT): No

SARA TITLE III (SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT): N/A

311/312 HAZARD CATEGORIES: N/A

313 REPORTABLE INGREDIENTS: N/A

SECTION 15 NOTES:

SECTION 16: OTHER INFORMATION

PREPARATION INFORMATION: ***Technical Services***

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NEWDEAL® BLEND SOLID AIRFIELD DEICER
GHS SAFETY DATA SHEET (SDS)

SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: **NEWDEAL® Blend Solid Airfield Deicer**
Low corrosion environmentally friendly deicer. Meets FAA specifications (SAE AMS 1431) for use on airport runways, taxiways, and ramps.

PRODUCT USE: Runway deicer. For deicing pavement surfaces.

EMERGENCY: **1-(303) 459-2500; 1-(303) 459-2859**

SUPPLIER: New Deal Deicing
6883 E 47TH Avenue Drive
Denver, CO 80216 USA
Tel: 1-(303) 459-2500
www.newdealdeicing.com

SECTION 2: HAZARD IDENTIFICATION

GHS CLASSIFICATION:

SIGNAL WORD: **WARNING**

PICTOGRAM: NONE REQUIRED

HEALTH HAZARDS	ENVIRONMENTAL HAZARDS	PHYSICAL HAZARDS
Acute Toxicity: Oral; Category 5 Acute Toxicity: Inhalation; Category 5 Skin Irritation: Category 3 Eye Irritation: Category 2B	Acute Toxicity: None Known Chronic Toxicity: None Known	Not Hazardous

HAZARD STATEMENTS	PRECAUTIONARY STATEMENTS
H303: May be harmful if swallowed. H316: May cause mild skin irritation. H320: Causes eye irritation. H333: May be harmful if inhaled.	P312: Call a POISON CENTER or doctor if you feel unwell P332+P313: IF SKIN irritation occurs: Get medical advice/attention. P264: Wash hands thoroughly after handling. P305+P351+P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P337+P313: IF eye irritation persists: Get medical attention. P261: Avoid breathing dust. P271: Use outdoors or in a well-ventilated area. P304+P340: IF INHALED: Remove victim to fresh air and Keep at rest in a position comfortable for breathing. P304+P312: IF INHALED: Call a POISON CENTER or doctor if you feel unwell.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

COMPOSITION:	CAS#	CONTENTS	EINECS#	RTECS#
NEWDEAL® Blend Deicer		100%		
CONTAINING:				
Sodium Formate	141-53-7	68-78%	205-488-0	LR0350000
Sodium Acetate	127-09-3	20-30%	204-823-8	AJ4300010
Proprietary Corrosion Inhibitors		<2%		

SECTION 4: FIRST AID MEASURES

SKIN CONTACT: Wash thoroughly with soap and water. Wash contaminated clothing before reuse. Seek medical advice if irritation persists.

EYE CONTACT: Immediately flush eyes with plenty of water for at least 15 minutes. Remove contact lenses. If irritation persists, see a doctor.

INHALATION: Remove to fresh air. If breathing is difficult, give oxygen. If breathing stops, give artificial respiration. Seek medical attention.

INGESTION: If conscious, wash out mouth with water. Give 1 or 2 glasses of water to dilute. Immediately seek medical attention. Do NOT induce vomiting unless instructed by medical personnel.

SYMPTOMS: Overexposure may cause skin, eye, and respiratory tract irritation. Symptoms may include sore throat and coughing.

SECTION 5: FIRE-FIGHTING MEASURES

EXTINGUISHING EQUIPMENT: Water, foam, carbon dioxide, dry chemical

EXPOSURE HAZARDS: Smoke & vapor inhalation

COMBUSTION PRODUCTS: Carbon monoxide, carbon dioxide, and oxides of sodium. If heated above 662°F, decomposition will create flammable hydrogen gas.

FIREFIGHTER PROTECTION: Protective clothing including self-contained breathing apparatus

	NFPA	HMIS	0-MINIMAL
HEALTH:	1	1	1-SLIGHT
FLAMMABILITY:	1	1	2-MODERATE
REACTIVITY:	0	0	3-SERIOUS
			4-SEVERE

SECTION 6: ACCIDENTAL RELEASE MEASURES

PERSONAL PRECAUTIONS: Avoid contact with skin or eyes. Avoid breathing dust. See Section 8 for exposure protection recommendations

ENVIRONMENTAL PRECAUTIONS: Concentrated releases may increase oxygen demand and lower dissolved oxygen content in receiving waters.

CLEAN-UP METHODS: Spills can be removed by sweeping and shoveling material into a suitable waste disposal container. Small spills or residue can be flushed away with large quantities of water. Product is readily biodegradable.

SECTION 7: HANDLING AND STORAGE

HANDLING: Avoid contact with skin or eyes. Avoid breathing dust.
Practice good industrial hygiene. Do not eat, drink, or smoke while handling product. Always wash hands after handling material.

STORAGE: Keep in tightly closed container. Protect from moisture.
Keep product in a cool, dry, and well-ventilated area.
Avoid storing or handling product in systems constructed of galvanized steel, zinc, or brass.

Prepared in accordance with OSHA Hazard Communication Standard (29 CFR 1910.1200)
by New Deal Deicing; Denver, CO USA

Revision Date | **23-SEP-2020**
Supersedes Revision | **12-JUL-2018**

SECTION 8: EXPOSURE CONTROLS / PERSONAL PROTECTION

EXPOSURE LIMITS:

COMPONENT	CAS#	ACGIH TLV	OSHA PEL
Sodium Formate	141-53-7	NONE	NONE
Sodium Acetate	127-09-3	NONE	NONE
Proprietary Additives		NONE	NONE

ACGIH TLV: No specific limits have been established for any of the components of NEWDEAL® Blend Deicer. As a guideline, ACGIH has established the following limits which are generally recognized for inert or nuisance dust. Particulates (insolubles) Not Otherwise Classified (PNOC): Inhalable Particulates TWA TLV - 10mg/m³. Respirable Particulates TWA TLV - 3mg/m³.

OSHA PEL: No specific limits have been established for any of the components of NEWDEAL® Blend Deicer. As a guideline, OSHA has established the following limits which are generally recognized for inert or nuisance dust. Particulates not otherwise regulated (PNOR): Respirable Dust 8-Hour TWA PEL - 5mg/m³; Total Dust 8-Hour TWA PEL – 15mg/m³.

ENGINEERING CONTROLS: Use local exhaust ventilation or other means to keep airborne dust levels below recommended exposure limits.

PERSONAL PROTECTIVE EQUIPMENT (PPE):

EYE/FACE PROTECTION: If engaging in activities that generate large amounts of airborne dust, safety goggles/glasses are recommended.

SKIN PROTECTION: Impervious gloves and appropriate work clothing.

RESPIRATORY PROTECTION: When exposure levels may be exceeded, use a NIOSH-approved respirator or filtering face piece.

GENERAL HYGIENE: Use good industrial hygiene practices while handling. Wash hands with soap and water after handling the product.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE: Granular solid. Light blue.
ODOR: Slight
pH: 9.5-11
MELTING/FREEZING POINT: 487°F (253°C)
BOILING POINT: 860°F (460°C)
SPECIFIC GRAVITY: 1.8
SOLUBILITY (H_2O): Complete
PARTITION COEFFICIENT: N-OCTANOL/WATER: Not available
AUTO-IGNITION TEMPERATURE: Not available
DECOMPOSITION TEMPERATURE: 662°F (350°C)

ODOR THRESHOLD: Not applicable
BOILING RANGE: Not available
EVAPORATION RATE: Not applicable
FLASH POINT: Not available
FLAMMABILITY: Category 1
FLAMMABILITY LIMITS: **LEL:** Not applicable
UEL: Not applicable
VAPOR PRESSURE: Zero (at 68°F)
VAPOR DENSITY: Not applicable
VISCOSITY: Not applicable

SECTION 10: STABILITY AND REACTIVITY

STABILITY: Stable in solid form.
CONDITIONS TO AVOID: Heat, flames, sparks, or sources of ignition. Product is deliquescent. Protect from moisture until ready to use.
INCOMPATIBLE MATERIALS: Strong oxidizers, acids. Fire risk if exposed strong oxidizers. Vigorous reaction may occur if exposed to strong acids.
HAZARDOUS DECOMPOSITION PRODUCTS: Carbon monoxide, carbon dioxide, and oxides of sodium. When heated above 662°F (350°C) product will decompose into highly flammable hydrogen gas.
HAZARDOUS POLYMERIZATION: Will not occur.

SECTION 11: TOXICOLOGICAL INFORMATION

LIKELY ROUTES OF EXPOSURE: Eye/skin contact. Inhalation.
ACUTE SYMPTOMS & EFFECTS: Mildly toxic by ingestion, inhalation, and subcutaneous routes. Overexposure may cause skin and eye irritation. Inhalation may cause respiratory tract irritation including coughing, sore throat, labored breathing, and chest pain. Ingestion may cause digestive tract irritation including abdominal pain, nausea, and vomiting.
CHRONIC EFFECTS: Long term skin overexposure to this product may lead to dermatitis (red, itchy skin).
TOXICITY: Oral LD_{50}: 9,700 mg/kg (rat)
CARCINOGENICITY: None of the components of this product have been identified by ACGIH, IARC, NTP, or OSHA as carcinogenic.

SECTION 12: ECOLOGICAL INFORMATION

DEGRADABILITY: Readily biodegradable
AQUATIC TOXICITY: 48 hr LC_{50}: 4,125 mg/l (Daphnia magna)
96 hr LC_{50}: 8,050 mg/l (Pimephales promelas)

BOD_5 (20°C): 0.13 kg O_2/kg solid
TOD/COD: 0.42 kg O_2/kg solid

SECTION 13: WASTE DISPOSAL CONSIDERATIONS

Follow applicable federal, state, and local environmental control regulations. Based on information available, this product is not listed as a hazardous material nor exhibits any characteristics that would cause it to be classified or disposed of as an RCRA hazardous waste.

SECTION 14: TRANSPORT INFORMATION

US DOT CLASSIFICATION: Not regulated or restricted
UN NUMBER/HAZARD CLASS: None
ICAO/IATA CLASSIFICATION: Not regulated or restricted. Does not meet the definition of an Environmentally Hazardous Substance (UN/IATA)

SECTION 15: REGULATORY INFORMATION

FEDERAL REGULATIONS: TSCA 8(b) Inventory. None of the components of this product are regulated under TSCA Section 12(b).
CLEAN WATER ACT: None of the components of this product are listed as Priority Pollutants or Toxic Pollutants under the CWA.
SARA SECTION 302/311 HAZARDOUS SUBSTANCES: No
WHMIS (CANADA) STATUS: Not controlled

SECTION 16: OTHER INFORMATION

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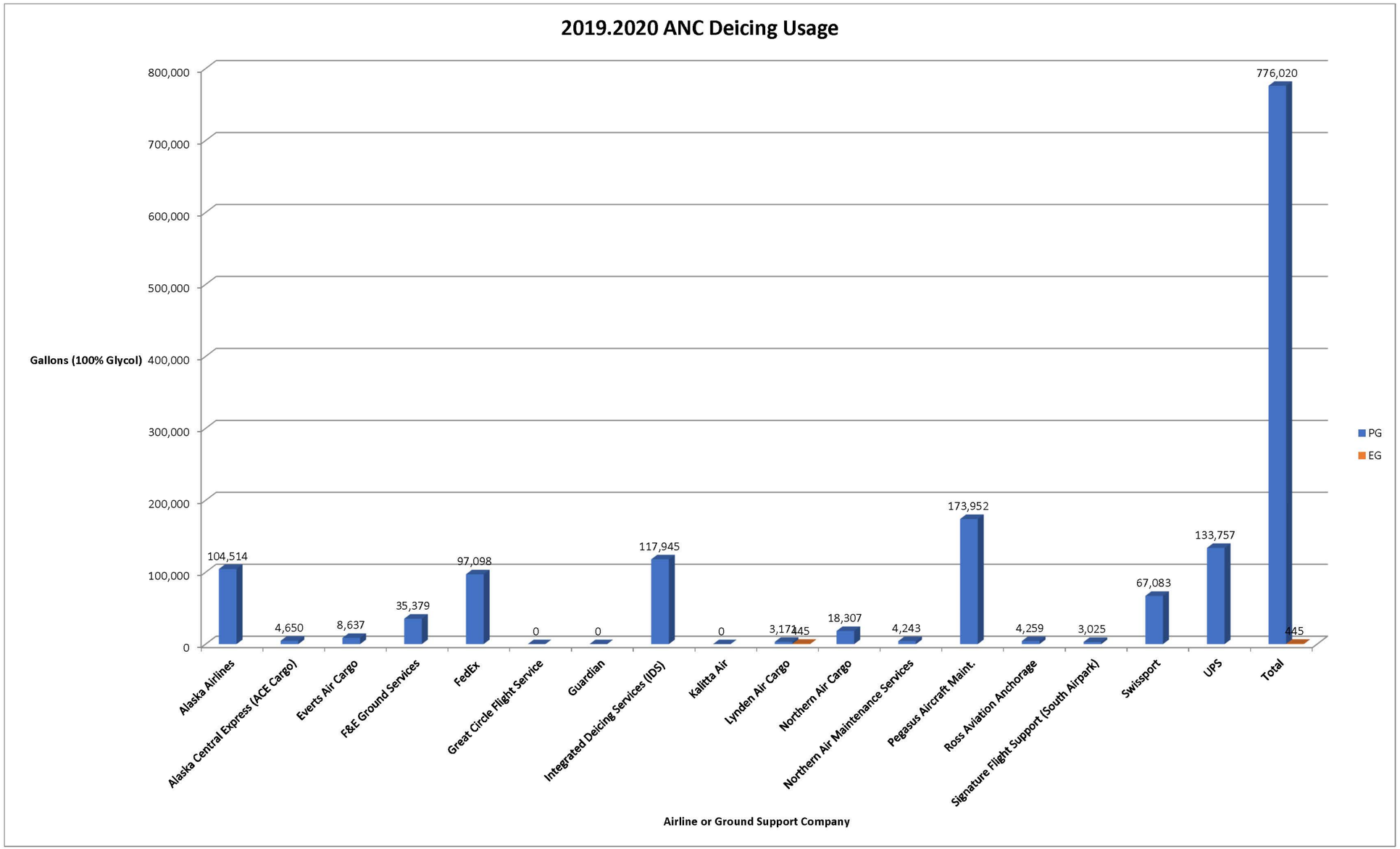
Prepared in accordance with OSHA Hazard Communication Standard (29 CFR 1910.1200)
by New Deal Deicing; Denver, CO USA


2019.2020 ANC Deicing Usage
Gallons (100% Glycol)
800,000
700,000
600,000
500,000
400,000
300,000
200,000
100,000
0
PG
EG
104,514
4,650
8,637
35,379
97,098
0
0
117,945
0
3,171
445
18,307
4,243
173,952
4,259
3,025
67,083
133,757
776,020
445
Alaska Airlines
Alaska Central Express (ACE Cargo)
Everts Air Cargo
F&E Ground Services
FedEx
Great Circle Flight Service
Guardian
Integrated Deicing Services (IDS)
Kalitta Air
Lynden Air Cargo
Northern Air Cargo
Northern Air Maintenance Services
Pegasus Aircraft Maint.
Ross Aviation Anchorage
Signature Flight Support (South Airpark)
Swissport
UPS
Total
Airline or Ground Support Company

APPENDIX C

SIGNIFICANT SPILLS AND LEAKS
SINCE PREVIOUS PERMIT TERM (MSGP 2015)

Significant Spills and Leaks Since Last Permit Term (MSGP 2015)

Site No.	Date	Responsible Party	Aircraft / Equipment	Material	Amount (gallons)	Location	Cause	Action/Comment	Environmental Concerns
	2015								
1	17-Feb-15	Airfield Maintenance, Brendon Knox	Volvo 330 Front end loader	Hydraulic Fluid	10	Gravel just off south side of Taxiway Kilo & East of Echo (Abeam gate B2)	Hydraulic hose failure.	Airfield Maintenance cleaned up spill using sand and absorbent pads. Ground was frozen but thawing. In-house report on file. ADEC was notified, sent pictures, OK'd cleanup plan.	Area where spill occurred was inspected on 3/4/15 and looks okay with no visible evidence of oil. TSJ
2	24-Feb-15	Airfield Maintenance, Angela Berke	Diesel Pump #1	Diesel Fuel	3	Quick Turnaround Facility fuel pumps	Nozzle of fuel pump slipped out of fuel tank.	Airfield Maintenance cleaned up spill using absorbent pads. In-house report on file.	All fuel was contained on concrete at fuel pumps.
	2016								
3	30-Oct-16	Airfield Maintenance Allen Meuser, AFM Mechanic	Shop Truck	Motor oil, 15w40	25	AFM shop building near fuel pumps	Drum fell off shop truck.	Report states boom used to protect storm drains and pads used to clean up spilled motor oil.	None noted.
4	7-Dec-16	ANC Facilities, JD Miller, Facilities	Gate N5 Jetbridge	Hydraulic Fluid	4	Gate N5	Seal failed on hydraulic ram used to raise and lower jetbridge.	Spill was cleaned up by Facilities using absorbent pads. They then used sand to remove residuals, swept it up and placed it into lined drum with absorbents.	None , released hydraulic fluid was contained to a small footprint ~6' diameter. No storm drains in proximity.
	2017								
5	6-Feb-17	Airfield Maintenance, Eric Siebels	Runway Broom #1 Plate 39631	Hydraulic Fluid	10	Echo taxiway in front of R-13	Hydraulic hose failure.	Snow scooped up with loader bucket and put in wash bay, so meltwater goes through OWS, pads put in drum.	Spill occurred on pavement and was entrained in snow, none entered storm drains.
6	25-Mar-17	Airfield Maintenance, Tom Rogers	Curb & gutter broom	Hydraulic Fluid	4	Gate B-9	Loose fitting on hydraulic hose.	AFM used absorbent pads to clean up liquids and dry absorbent to remove residuals.	None noted.
7	15-Apr-17	Airfield Maintenance	Surplus vehicle	Diesel Fuel	Unknown	Clean snow dump	Vandalism	Someone drilled holes into fuel tank to steal fuel. It was reported they were successful and only spilled a very small amount during their act of thievery.	Contaminated soil shoveled up and placed in drum with absorbent pads.

Significant Spills and Leaks Since Last Permit Term (MSGP 2015)

Site No.	Date	Responsible Party	Aircraft / Equipment	Material	Amount (gallons)	Location	Cause	Action/Comment	Environmental Concerns
	2018								
8	26-Apr-17	Unknown						0117: Observed small oil spill, approx. 1 quart, on TWY S east of TWY R. Reported to MX1.	This report is from a blurb in Ops shift report.
9	25-Mar-18	SOA AFM	Tractor #6	Hydraulic Fluid	2	Yankee snow dump	Hydraulic hose failure.	Absorbent pads used to clean up liquids, contaminated snow placed in wash bay to melt and go through oil/water separator.	All contaminated snow was cleaned up. Pads placed in with other pads for disposal through waste disposal contractor.
10	11-Jul-18	Unknown	Unknown	Hydraulic oil	5	Kulis Rotak Hangar construction site	Unknown	Police report 18-112022 says <5 gallons	No other information.
11	3-Aug-18	Unknown	Natural gas line	Natural gas	Unknown	FedEx	Contractor broke low pressure natural gas line.	Called by Enstar responded and determined that gas line did not belong to them. Line was shut off however.	No environmental damage from leaking natural gas.
12	7-Sep-18	Airfield Maintenance	Loader #2	Hydraulic oil	10	Pad just north of AFM equipment shop	Hydraulic hose failure.	Pads used initially to remove free liquids, contaminated soil removed and placed into 2 drums. AFM report states "fluid spilled on very dry soil. It did not soak in but sort of set on top. No potential runoff, area flat.	Kenton Curtis checked area and found that cleanup was thorough.
13	18-Sep-18	Facilities	Gate N1 Jetbridge	Hydraulic oil	5	Gate N-1	Facilities maintenance swapped out hydraulic cylinder from N-5 to N-1. Either someone didn't properly tighten fittings, or a hose blew	Absorbent pads used to clean up liquids, cellulose absorbent used after that.	Nothing entered storm drains.
14	25-Oct-18	Airfield Maintenance	Hagie tractor	Hydraulic oil	20	QTF deicer loading rack.	Valve not fully closed.	Absorbent pads used to clean up free liquids, oily dirt and sand shoveled up and placed into 2-55-gallon drums.	Nothing entered storm drains.

Significant Spills and Leaks Since Last Permit Term (MSGP 2015)

Site No.	Date	Responsible Party	Aircraft / Equipment	Material	Amount (gallons)	Location	Cause	Action/Comment	Environmental Concerns
	2019								
15	14-Dec-18	Airfield Maintenance	Broom #24	Hydraulic oil	10	Echo taxiway in front of R-13, R14	Hydraulic hose failure.	Liquids absorbed with pads; pads put into used pad drum in equipment shop. Contaminated snow placed into wash bay to melt and go through OWS. ADEC spill #18239934801	10sq ft affected according to AFM spill report, nothing made it off pavement or into storm drains.
16	12-Feb-19	Facilities	Rooftop glycol dry chiller	Dowfrost glycol	50	B concourse roof	Leak in piping and/or flange.	Glycol appears to have been absorbed into snow, some may have made it down rain leaders into storm drain.	If glycol went down storm drain it entered the trench drain along B concourse which leads to Lake Hood.
17	19-Mar-19	Facilities, JD Miller	Jetbridge at N-1	Hydraulic oil	35 (preliminary guesstimate)	Gate N1 Jetbridge	Hydraulic hose failure.	Free liquids cleaned up with absorbent pads, floor dry used to get residual oil. More floor dry added once unit was repaired and it was swept up using curb and gutter broom. Spill reported to ADEC. ADEC spill number 19239907401. G:\Environmental\ANC & Airline Spill Reports\Photos\2019 Photos\Gate N1 jetbridge hydraulic spill 3-15-19	Nothing left immediate area but there is staining on the asphalt
18	9-Apr-19	Facilities, Jesus Benevides	North terminal trash compactor	Hydraulic oil	3.0	North Terminal employee parking area	Hydraulic hose failure.	Free liquids cleaned up with absorbent pads. Spill reported to ADEC on monthly spill log. G:\Environmental\ANC & Airline Spill Reports\Photos\2019 Photos\NT compactor hydraulic spill 4-9-19	Staining on concrete and asphalt.
19	21-May-19	ARFF	Crash truck	AFFF	<5	Taxiway Kilo, west of AIS Critical Hold Line		Testing of fire apparatus foam system. G:\Environmental\ANC & Airline Spill Reports\Photos\2019 Photos\PFAS release1 5-21-19	Reported to ADEC.
20	22-May-19	ARFF	Crash truck	AFFF	~50	Lined Fire Pit		Testing of fire apparatus foam system. G:\Environmental\ANC & Airline Spill Reports\Photos\2019 Photos\PFAS release2 - 5-22-19	Reported to ADEC.
21	29-Jun-19	Unknown	Unknown	Fuel	6-May	Gate C3	Unknown	At 1820 fuel spill discovered at C3, 5-6 gallons; site cleaned with no fuel emptying into drainage.	From swingshift report.

Significant Spills and Leaks Since Last Permit Term (MSGP 2015)

Site No.	Date	Responsible Party	Aircraft / Equipment	Material	Amount (gallons)	Location	Cause	Action/Comment	Environmental Concerns
	2019								
22	2-Jul-19	Airfield Maintenance, Tom Jenkins	Weed harvester	Hydraulic oil	1	Lake Hood at Delta Parking	Leak on hose to hydraulic pressure gauge.	Boomed off weed harvester in lake and placed pads within boom to collect oil. I was first called at 8:35am, arrived at site ~8:45am and found a purplish sheen near shoreline. Airfield Maintenance arrived in work boat with boom and boomed off vessel. Looked things over at 3:00pm and only a very light localized sheen was observed (within boom). Placed some of the existing pads (flipped them over) in areas where sheen was observed.	Notified ADEC at 9:25am.
23	15-Aug-19	ARFF	Crash truck	AFFF	3	AARF Building/Airside		Testing of fire apparatus foam system.	Reported to ADEC.
24	12-Sep-19	Unknown	Blue Dodge truck DPS114	Motor oil	<1	Parking garage stall 1B-06	Leak from truck.	Cleaned up using pads and floor dry. AFM mechanic Pete Renaldi said the owner had contacted him since he works on vehicle for them. He is going to check to see if there are any leaks when he gets off work.	None

APPENDIX D

SUMMARIZATION OF STORMWATER DISCHARGE SAMPLING
SINCE PREVIOUS PERMIT TERM (MSGP 2015)

Summarization of Storm Water Discharge Since Last Permit Term (MSGP 2015)

LOCATION:	001A													
PARAMETER	**BOD (mg/L)**	**COD (mg/L)**	**Total Ammonia-Nitrogen (mg/L)**	**pH (S.U.)**	**DO (mg/L)**	**T (°C)**	**Ethylene Glycol (ug/L)**	**Propylene Glycol (ug/L)**	**Oil & Grease (mg/L)**	**Salinity (ppT)**	**Total Organic Carbon (mg/L)**	**Total Suspended Solids (mg/L)**	**Turbidity (NTU)**	**Color (PCU)**
7/13/2015*	*2.00 U*	24.9	0.11	8.7	8.8	17.3	< 500	< 500	4.0U	0.014	7.41	1.6	1.9	30
15-Aug-15	*2.00 U*	27.2	0.77	7.3	5.0	16.8	N/A	N/A	4.0 U	0.02	7.1	2.5	3.8	20.0
3-Sep-15	*2.00 U*	212	0.15	6.6	7.0	12.5	N/A	N/A	4.0 U	0.02	7.5	4.8	2.5	15.0
9/26/2015*	*2.00 U*	24.6	0.81	6.5	7.4	7.2	N/A	N/A	4.0 U	0.02	7.6	3.7	2.2	20.0
16-Oct-15	*2.00 U*	*20.0 U*	4.06	6.0	5.5	6.7	N/A	N/A	4.0 U	0.03	6.2	21.0	19.0	55.0
30-Dec-15	1000	1500	0.63	7.1	13.3	-0.09								
24-Mar-16	23.6	91.2	0.39	6.7	7.9	-2.4								
6-Jun-16	2.9	39	0.26	4.6	10.1	11.2								
15-Sep-16	2	19	0.40	6.3	7.7	13.6								
5-Apr-17	19.40	110.0	N/A	6.5	11.10	-0.13								
4/20/2017*	0.00	40.0	N/A	6.2	6.80	0.5								
5/18/2017*	47.6	75.0	N/A	6.6	8.30	12.0								
11-Aug-17	2.8	31.3	N/A	6.3	4.00	18.2								
27-Oct-17	3.5	77.0	N/A	6.2	7.50	3.9								
19-Mar-18	16.7	123.0	N/A	6.4	16.00	-0.04								
18-May-18	2.9	*20.0 U*	N/A	6.6	15.30	9.5								
24-Sep-18	2.1	20.0	N/A	5.8	8.00	11.80								
26-Nov-18	4.2	0.0	N/A	6.0	5.50	2.20								
28-Mar-19	NF	NF	N/A	NF	NF	NF								
24-Jul-19	NF	NF	N/A	NF	NF	NF								
9/25/2019*	2.7	23.7	N/A	NE	NE	NE								
25-Oct-19	NF	NF	N/A	NF	NF	NF								
14-Nov-19	8.4	77.4	N/A	6.50	NE	NE								
NOTES:														
1) U-Flag and italics indicates the analyte was analyzed but not detected.														
2) N/A means the sample was not analyzed. For Ammonia entries ANC certifies annually that urea is not used; for EG & PG these months were not required to be tested.														
3) Monitoring for months with no measurable discharge were made up with a substitute sampling event during other months in compliance with Section 308 sampling requirements; make up events are indicated with an asterisk.														
4) Section 308 Sampling ended with October 2015 sampling event. Data following that date were conducted as per MSGP 2015, Quarterly Benchmark Monitoring (QBM).														
5) NF means no flow/measurable discharge.														
6) NE means field instrument was not available.														
7) Yellow Highlight indicates exceedance of benchmark: BOD = 30 mg/L; COD = 120 mg/L; or numeric limit: pH = 6.5 - 8.5 S.U.; DO = 5 - 17 mg/L														

Summarization of Storm Water Discharge Since Last Permit Term (MSGP 2015)

LOCATION:	002B													
PARAMETER	**BOD (mg/L)**	**COD (mg/L)**	**Total Ammonia-Nitrogen (mg/L)**	**pH (S.U.)**	**DO (mg/L)**	**T (°C)**	**Ethylene Glycol (ug/L)**	**Propylene Glycol (ug/L)**	**Oil & Grease (mg/L)**	**Salinity (ppT)**	**Total Organic Carbon (mg/L)**	**Total Suspended Solids (mg/L)**	**Turbidity (NTU)**	**Color (PCU)**
7/13/2015*	4.06	53.7	1.95	6.6	1.3	16.4	< 500	< 500	4.12U	0.0347	17.9	5.15	9.9	80
15-Aug-15	2.61	38.3	1.57	6.7	1.6	16.0	N/A	N/A	*4.17 U*	0.0243	12.6	5.00	12.00	60
3-Sep-15	*2.00 U*	*20.0 U*	0.504	7.2	4.3	4.7	N/A	N/A	*4.00 U*	0.0145	2.95	1.90	4.40	5.00 U
9/26/2015*	0.0182	69.5	1.60	6.8	4.4	5.5	N/A	N/A	*4.00 U*	*2.00 U*	11.0	5.05	7.80	30
16-Oct-15	5.65	28.6	2.12	6.7	4.2	6.7	N/A	N/A	*4.04 U*	0.0323	12.2	12.0	13.0	30
30-Dec-15	3300.0	2500.0	1.90	6.7	8.9	-0.3								
24-Mar-16	23.60	91.2	0.39	6.7	16.7	-2.4								
6-Jun-16	2.90	39.0	0.26	4.6	7.1	0.2								
15-Sep-16	2.00	19.0	0.40	6.3	3.9	11.6								
5-Apr-17	2000.0	3200.0	N/A	5.90	9.4	-0.22								
20-Apr-17	108.0	210.0	N/A	6.30	3.1	0.5								
18-May-17	630.0	970.0	N/A	5.30	0.5	8.5								
11-Aug-17	7.1	45.2	N/A	5.6	4.0	16.3								
27-Oct-17	7.9	76.3	N/A	6.6	7.5	1.9								
19-Mar-18	1040.0	1940.0	N/A	6.4	12.0	-0.1								
18-May-18	29.6	49.4	N/A	6.1	7.5	6.9								
24-Sep-18	2.6	48.9	N/A	6.6	13	11.0								
26-Nov-18	248.0	423.0	N/A	7.1	4	0.0								
28-Mar-19	145.0	412.0	N/A	6.5	5	0.0								
24-Jul-19	11.3	86.9	N/A	4.5	4	1.8								
9/16/2019*	< 2.5	37.4	N/A	7.6	4	12.3								
25-Oct-19	39.2	77.8	N/A	6.5	9.8	5.8								
NOTES:														
1) U-Flag and italics indicates the analyte was analyzed but not detected.														
2) N/A means the sample was not analyzed. For Ammonia entries ANC certifies annually that urea is not used; for EG & PG these months were not required to be tested.														
3) Monitoring for months with no measurable discharge were made up with a substitute sampling event during other months in compliance with Section 308 sampling requirements; make up events are indicated with an asterisk.														
4) Section 308 Sampling ended with October 2015 sampling event. Data following that date were conducted as per MSGP 2015, Quarterly Benchmark Monitoring (QBM).														
5) Yellow Highlight indicates exceedance of benchmark: BOD = 30 mg/L; COD = 120 mg/L; or numeric limit: pH = 6.5 - 8.5 S.U.; DO = 5 - 17 mg/L														

Summarization of Storm Water Discharge Since Last Permit Term (MSGP 2015)

LOCATION:	**003C**													
PARAMETER	**BOD (mg/L)**	**COD (mg/L)**	**Total Ammonia-Nitrogen (mg/L)**	**pH (S.U.)**	**DO (mg/L)**	**T (°C)**	**Ethylene Glycol (ug/L)**	**Propylene Glycol (ug/L)**	**Oil & Grease (mg/L)**	**Salinity (ppT)**	**Total Organic Carbon (mg/L)**	**Total Suspended Solids (mg/L)**	**Turbidity (NTU)**	**Color (PCU)**
7/13/2015*	5.77	64.3	4.33	6.7	5	14.3	< 500	< 500	4.08U	0.016	17.4	7.78	10	50
15-Aug-15	3.18	44.4	8.74	6.7	5	14.2	N/A	N/A	*4.00 U*	0.026	14	6.36	10.00	40.00
3-Sep-15	5.19	52.9	7.11	6.8	5	12.5	N/A	N/A	*4.00 U*	0.051	15.7	16.30	27.00	42.50
9/26/2015*	4.06	35.0	4.49	6.9	7.2	9.5	N/A	N/A	*4.00 U*	0.030	11.3	9.8	13.0	30.0
16-Oct-15	2.97	*20.0 U*	2.02	7.3	9.3	7.6	N/A	N/A	*4.04 U*	0.006	6.86	17.5	16.0	25.0
30-Dec-15	140.00	170	0.91	6.9	11.9	-0.1								
24-Mar-16	144.00	273	0.15	7.0	10.6	-1.6								
6-Jun-16	2.30	24	0.30	5.2	10.1	11.7								
15-Sep-16	0.00	20	0.30	6.7	8.9	12.1								
5-Apr-17	156.0	400.0	N/A	6.6	18.2	-0.1								
20-Apr-17	41.1	90.0	N/A	6.5	5	0.9								
18-May-17	201.0	300.0	N/A	6.6	5	11.2								
11-Aug-17	41.1	92.8	N/A	5.5	7.0	14.2								
27-Oct-17	50.3	126.0	N/A	6.7	8.0	6.6								
19-Mar-18	288.0	529.0	N/A	7.1	13.0	0.6								
18-May-18	108.0	284.0	N/A	6.5	8.0	5.2								
24-Sep-18	8.9	70.3	N/A	6.6	8.2	12.0								
26-Nov-18	1080.0	1820.0	N/A	7.6	12.3	1.7								
28-Mar-19	2290.0	5800.0	N/A	7.1	11.0	2.5								
24-Jul-19	6.1	48.2	N/A	4.8	6.0	1.8								
9/16/2019*	< 2.5	50.6	N/A	7.9	5.0	12.9								
25-Oct-19	9.0	28.1	N/A	5.1	14.6	5.4								
NOTES:														
1) U-Flag and italics indicates the analyte was analyzed but not detected.														
2) N/A means the sample was not analyzed. For Ammonia entries ANC certifies annually that urea is not used; for EG & PG these months were not required to be tested.														
3) Monitoring for months with no measurable discharge were made up with a substitute sampling event during other months in compliance with Section 308 sampling requirements; make up events are indicated with an asterisk.														
4) Section 308 Sampling ended with October 2015 sampling event. Data following that date were conducted as per MSGP 2015, Quarterly Benchmark Monitoring (QBM).														
5) Yellow Highlight indicates exceedance of benchmark: BOD = 30 mg/L; COD = 120 mg/L; or numeric limit: pH = 6.5 - 8.5 S.U.; DO = 5 - 17 mg/L														

Summarization of Storm Water Discharge Since Last Permit Term (MSGP 2015)

LOCATION:	004D													
PARAMETER	**BOD (mg/L)**	**COD (mg/L)**	**Total Ammonia-Nitrogen (mg/L)**	**pH (S.U.)**	**DO (mg/L)**	**T (°C)**	**Ethylene Glycol (ug/L)**	**Propylene Glycol (ug/L)**	**Oil & Grease (mg/L)**	**Salinity (ppT)**	**Total Organic Carbon (mg/L)**	**Total Suspended Solids (mg/L)**	**Turbidity (NTU)**	**Color (PCU)**
7/13/2015*	20	126	2.14	6.4	3.8	9.9	< 500	880	4.17U	0.0065	33.8	8.8	16	125
15-Aug-15	49.7	198	1.04	6.9	7.8	15.1	N/A	N/A	*4.17 U*	0.00723	56	19.50	17	100
3-Sep-15	39.8	151	8.24	6.9	7.7	11.6	N/A	N/A	*4.00 U*	0.00907	43.2	15.00	22	65
9/26/2015*	37.0	144	3.80	7.1	9.1	7.8	N/A	N/A	*4.00 U*	0.00880	27.8	77.0	19	50
16-Oct-15	11.7	55.8	0.854	6.5	10.1	6.6	N/A	N/A	*4.00 U*	0.00218	13.1	96.0	45.0	45.0
30-Dec-15	2000	2700	0.470	7.2	14.2	0.5								
24-Mar-16	1920	3370	0.130	6.9	13.7	-1.4								
6-Jun-16	0.0	35.0	0.300	5.5	10.0	11.4								
15-Sep-16	0.0	23.0	0.400	6.0	11.4	10.8								
5-Apr-17	1540	2400	N/A	6.7	15.1	3.0								
19-Apr-17	2050	3600	N/A	6.7	17	4.5								
18-May-17	324	610	N/A	6.5	8.9	7.3								
11-Aug-17	22.5	87.4	N/A	6.2	10.0	13.8								
27-Oct-17	2890	4730	N/A	7.2	13.4	3.7								
19-Mar-18	1760	3090	N/A	7.4	13.0	1.6								
18-May-18	186	354	N/A	7.2	10.2	7.5								
24-Sep-18	9.2	47.0	N/A	6.3	9.5	10.3								
26-Nov-18	1740	2870	N/A	6.4	11.9	2.2								
28-Mar-19	2430	4330	N/A	7.0	13.0	0.8								
24-Jul-19	9.5	80.7	N/A	4.8	14.0	1.8								
9/16/2019*	4.9	71.1	N/A	6.8	9.0	12.4								
25-Oct-19	56.0	106.0	N/A	6.5	14.6	5.4								
NOTES:														
1) U-Flag and italics indicates the analyte was analyzed but not detected.														
2) N/A means the sample was not analyzed. For Ammonia entries ANC certifies annually that urea is not used; for EG & PG these months were not required to be tested.														
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5) Yellow Highlight indicates exceedance of benchmark: BOD = 30 mg/L; COD = 120 mg/L; or numeric limit: pH = 6.5 - 8.5 S.U.; DO = 6 - 17 mg/L														

LOCATION:	005E													
PARAMETER	**BOD (mg/L)**	**COD (mg/L)**	**Total Ammonia-Nitrogen (mg/L)**	**pH (S.U.)**	**DO (mg/L)**	**T (°C)**	**Ethylene Glycol (ug/L)**	**Propylene Glycol (ug/L)**	**Oil & Grease (mg/L)**	**Salinity (ppT)**	**Total Organic Carbon (mg/L)**	**Total Suspended Solids (mg/L)**	**Turbidity (NTU)**	**Color (PCU)**
15-Aug-15	4.15	45.8	2.66	6.3	3.1	12.2	N/A	N/A	*4.17 U*	0.00512	6.78	70.00	80	40
9/26/2015*	4.30	47.7	6.96	7.3	8.3	5.1	N/A	N/A	*4.00 U*	0.00566	15.5	28.3	11	45
16-Oct-15	4.18	38.6	5.71	6.9	8.0	5.8	N/A	N/A	*4.04 U*	0.00321	13.8	50.0	23.0	100
30-Dec-15	1400	1700	0.56	7.7	13.9	-0.33								
24-Mar-16	39.9	146	0.17	7.5	13.1	-2.62								
6-Jun-16	0	53	1.4	6.1	8.8	10.1								
15-Sep-16	2.2	23	0.3	6.9	10.2	10.4								
5-Apr-17	1400.0	2400.0	N/A	6.7	14.6	-0.2								
20-Apr-17	27.2	95.0	N/A	6.4	14.5	1.7								
18-May-17	17.2	78.0	N/A	6.8	2.6	7.0								
11-Aug-17	6.0	54.2	N/A	6.3	7.0	11.8								
27-Oct-17	17.5	66.1	N/A	7.3	7.9	2.7								
19-Mar-18	1680.0	2920.0	N/A	8.5	10.0	0.3								
18-May-18	16.3	76.8	N/A	7.2	3.9	7.7								
24-Sep-18	5.6	57.0	N/A	6.3	9.7	9.2								
26-Nov-18	> 2270	3560.0	N/A	7.9	8.9	-0.6								
22-Mar-19	114.0	182.0	N/A	7.5	10	1.6								
24-Jul-19	4.8	63.3	N/A	4.9	11	1.5								
9/16/2019*	2.0	38.2	N/A	7.8	8	11.4								
25-Oct-19	9.2	43.2	N/A	6.0	12.30	5.30								
NOTES:														
1) U-Flag and italics indicates the analyte was analyzed but not detected.														
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3) Monitoring for months with no measurable discharge were made up with a substitute sampling event during other months in compliance with Section 308 sampling requirements; make up events are indicated with an asterisk.														
4) Section 308 Sampling ended with October 2015 sampling event. Data following that date were conducted as per MSGP 2015, Quarterly Benchmark Monitoring (QBM).														
5) Yellow Highlight indicates exceedance of benchmark: BOD = 30 mg/L; COD = 120 mg/L; or numeric limit: pH = 6.5 - 8.5 S.U.; DO = 5 - 17 mg/L														

APPENDIX E

UREA CERTIFICATION STATEMENT

AND

SWPPP CERTIFICATION STATEMENT

ANC CERTIFICATION STATEMENT FOR UREA

This is to certify that the ANC facility does not utilize urea as a pavement deicer. (This certification must be done annually.)

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.

Name: Craig Campbell Title: Airport Manager

Signature: _____ Date: _____

SWPPP 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.

Name: Craig Campbell Title: Airport Manager

Signature: _____ Date: _____

ANC STORMWATER POLLUTION PREVENTION PLAN TEAM ANNUAL REVIEW CERTIFICATION

This is to certify that the annual review of the Stormwater Pollution Prevention Plan (SWPPP) has been conducted and the SWPPP fulfills the requirements set forth in the ANC-GP. (This certification must be done annually.)

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.

Name:	Craig Campbell	Title:	Airport Manager
Signature:		Date:	
Name:	John Johansen	Title:	Engineering, Environmental & Planning Manager
Signature:		Date:	
Name:	William "Alex" Moss	Title:	Safety, Security & Operations Manager
Signature:		Date:	
Name:	Aaron Danielson	Title:	Police & Fire Chief
Signature:		Date:	
Name:	Zaramie Lindseth	Title:	Airfield Maintenance Manager
Signature:		Date:	
Name:	Tom Johnston	Title:	Environmental Manager
Signature:		Date:	
Name:	Tracy Mitchell	Title:	Environmental Specialist III
Signature:		Date:	

ANC STORMWATER POLLUTION PREVENTION PLAN TEAM TRAINING CERTIFICATION

This is to certify that the ANC SWPPP Team Training has been completed. (This certification must be done annually.)

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.

Name:	Craig Campbell	Title:	Airport Manager
Signature:		Date:	
Name:	John Johansen	Title:	Engineering, Environmental & Planning Manager
Signature:		Date:	
Name:	William "Alex" Moss	Title:	Safety, Security & Operations Manager
Signature:		Date:	
Name:	Aaron Danielson	Title:	Police & Fire Chief
Signature:		Date:	
Name:	Zaramie Lindseth	Title:	Airfield Maintenance Manager
Signature:		Date:	
Name:	Tom Johnston	Title:	Environmental Manager
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Name:	Tracy Mitchell	Title:	Environmental Specialist III
Signature:		Date:	

APPENDIX F

BEST MANAGEMENT PRACTICES

BMP TABLE OF CONTENTS

Ted Stevens Anchorage International Airport	BMP 1 GENERAL – BASELINE BEST MANAGEMENT PRACTICES
Applicability: This BMP applies to all facilities	

TARGETED ACTIVITIES

- Aircraft/pavement deicing & anti-icing.
- All maintenance.
- All fueling.
- All washing.
- Aircraft, equipment, and vehicle parking.
- Cleaning and degreasing.
- Catch basin/storm drain cleaning.
- Cargo handling.
- Chemical, hazardous waste and fuel storage and handling.
- Painting/stripping.
- Pavement & floor wash-downs.
- Snow removal activities.
- Solid waste storage/transfer.
- Aircraft lavatory service.
- Fire-fighting equipment & testing.
- Runway rubber removal.
- Landscaping operations.
- Street sweeping.

KEY APPROACHES

- Implement baseline BMPs:

✓ Good Housekeeping
✓ Employee Training
✓ Preventative Maintenance
✓ Inspections
✓ Spill Prevention and Response

PURPOSE

Storm water regulations protect storm water quality using both "activity-specific" best management practices (BMPs) and "baseline" BMPs. Baseline BMPs are those practices that are applicable to all Co-Permittees, regardless of the specific industrial operations conducted. Baseline BMPs are developed in recognition of the fact that, through improper or sloppy practices and inadequate training, inspection, and preventative maintenance programs, all Co-permittees have the potential to cause adverse impact to storm water quality. Baseline BMPs, therefore, provide a foundation over which other BMPs are built.

APPROACH

All Airport Co-Permittees must adhere to the policies and procedures contained in the Baseline and applicable, activity specific BMPs.

BEST MANAGEMENT PRACTICES

The following is a list of baseline BMPs that are applicable to all ANC Co-Permittees:

- **Good Housekeeping** - Employ good housekeeping practices to ensure facility grounds and equipment are maintained in a neat and orderly fashion and significant materials are not exposed to storm water unnecessarily. Good housekeeping practices include such actions as

Ted Stevens Anchorage International Airport	BMP 1 (continued) GENERAL – BASELINE BEST MANAGEMENT PRACTICES
Applicability: This BMP applies to all facilities	

BEST MANAGEMENT PRACTICES (continued)

frequent equipment cleanings, maintaining clean floor and pavement areas, proper centralized storage of chemical containers, etc. Good housekeeping practices must be utilized by all employees involved in the management and handling of significant materials.

- **Employee Training –** Conduct employee training programs designed to educate all appropriate personnel regarding storm water regulations and to meet APDES program requirements. Training must be conducted on at least an annual basis and shall comply with BMP 2.
- **Preventive Maintenance** - Implement preventive maintenance programs designed to reduce the occurrence of equipment failures that could result in a release of potential storm water pollutants. The programs should focus on identifying and proactively replacing worn or deteriorated parts, such as hydraulic hoses, valves, pipes, chemical containers, etc.
- **Inspections –** Develop and conduct regular maintenance and inspection program to identify, and prevent or mitigate facility, equipment, and operational conditions that do not meet applicable activity-specific BMPs or minimum APDES compliance requirements. Maintain documentation of maintenance and inspections conducted for at least 3 years from the date of permit coverage expires.
- **Spill Prevention and Response** - Implement procedures and practices designed to prevent spills, and in the event of a spill, follow proper spill notification and response procedures in accordance with ANC's existing Spill Response Flowchart (BMP #43). Spill Prevention and Response procedures and practices are outlined in BMP 43.
- **Design loading/unloading areas** - to prevent storm water run-on use the following practices:
  - ✓ Grading or berming.
  - ✓ Positioning roof downspout to direct storm water away from loading/unloading areas.
  - ✓ Providing cover for loading/unloading areas.
  - ✓ Incorporate oil/water separators into exposed loading dock designs.

Ted Stevens Anchorage International Airport	BMP 2 Storm Water Pollution Prevention Training
Applicability: This BMP applies to all facilities	

TARGETED ACTIVITIES

- Aircraft/pavement deicing & anti-icing.
- All maintenance.
- All fueling.
- All washing.
- Aircraft, equipment, and vehicle parking.
- Cleaning and degreasing.
- Catch basin/storm drain cleaning.
- Cargo handling.
- Chemical, hazardous waste and fuel storage and handling.
- Painting/stripping.
- Pavement & floor wash-downs.
- Snow removal activities.
- Solid waste storage/transfer.
- Aircraft lavatory service.
- Fire-fighting equipment & testing.
- Runway rubber removal.
- Landscaping operations.
- Street sweeping.

KEY APPROACHES

- Train employees in the processes and materials they are working with.
- Train employees in the field.
- Conduct spill response drills.

PURPOSE

Train employees in storm water pollution prevention, potential sources of contaminants, and BMPs.

BEST MANAGEMENT PRACTICES

- Adequately train employees in the processes and materials they are working with, safety hazards, and practices for preventing discharges. All employees should be trained in proper spill prevention and response procedures (Refer for BMP 43).
- Develop training program that show areas of potential storm water contamination and associated pollutants, followed by discussion of site-specific BMPs by trained personnel.
- Develop operating manuals and standard procedures.
- Integrate storm water pollution prevention training with other employee training programs.
- Communicate frequently to ensure adequate understanding of storm water pollution prevention goals and objectives.
- Acceptance and awareness are critical factors to the success of training. Information and training must be disseminated yearly.
- Adapt and modify training programs as storm water management needs change.
- Employee training programs shall inform personnel at all levels of their responsibility under the SWPPP. Employees responsible for activities with the potential to release pollutants to the storm sewer should be trained in the requirements of applicable BMPs.

Ted Stevens Anchorage International Airport	BMP 2 (continued) Storm Water Pollution Prevention Training
Applicability: This BMP applies to all facilities	

BEST MANAGEMENT PRACTICES (continued)

- Refer to the "Training" sections in the Airport's or Co-Permittees' SWPPP for specific training topics and schedules.
- As per the Permit, all training sessions should be documented (i.e. log of BMP training). These logs include name of personnel, date of training, and sign-off by supervisor and employee. Training logs may be signed-off and retained electronically but must be accessible upon request.

Ted Stevens Anchorage International Airport	BMP 3 Aircraft Deicing/Anti-Icing
Applicability: This BMP applies to all aircraft deicing & anti-icing activities to prevent or reduce the discharge of pollutants	

TARGETED ACTIVITIES

- Aircraft deicing.
- Aircraft anti-icing.

KEY APPROACHES

- Correlate glycol/water mixture to temperature.
- Adequately train employees to minimize over application of fluid.
- Train employees in spill prevention and response and storm water pollution prevention.

PURPOSE

Reduce the discharge of pollutants from aircraft deicing and anti-icing procedures to storm water.

BEST MANAGEMENT PRACTICES

- Store deicing materials under cover or properly maintained in storage tanks.
- Assure that deicing materials are stored in such a way as to avoid unintended release to storm water system.
- To the extent possible and dependent upon each carriers' Winter Operations Plan, use source reduction technologies such as blend to temperature and forced air deicing to reduce the amount of fluid used during each event.
- Conduct deicing prior to anti-icing unless aircraft is being treated in anticipation of a storm event.
- Monitor, track, and report deicing and anti-icing chemical usage. Refer to "Monitoring" section of the Airport's or co-permittee's SWPPP for specific requirements and schedules.
- Keep deicing trucks and equipment in good working order.
- Comply with good housekeeping, maintenance, and inspections as outlined in BMP 1 and co-permittee's SWPPP.
- Comply with training as outlined in BMP 2.
- Comply with spill prevention and response as outlined in BMP 43.

Ted Stevens Anchorage International Airport	BMP 4 Aircraft Fueling
Applicability: This BMP applies to all aircraft fueling activities to prevent fuel spills and leaks and reduce their impact on storm water	

TARGETED ACTIVITIES

- Aircraft fueling.

KEY APPROACHES

- Use absorbent materials and/or dry clean-up methods in response to a spill.
- Inspect fueling equipment and designated fueling areas.
- Use drain inserts/mats during fueling within a 50-foot radius of catch basin or storm drain if possible.
- Train employees in spill prevention and response and storm water pollution prevention.

PURPOSE

Minimize or reduce the impact of fuel spills and leaks to storm water during aircraft fueling.

BEST MANAGEMENT PRACTICES

- Automatic shut-off mechanisms should be in place on fuel tankers. These valves should remain in the closed position unless manually opened during fueling.
- Use absorbent materials and spot cleaning for small spills; do not hose down the area, use dry clean-up methods. Never discharge materials to a catch basin or storm drain.
- Operator must actively monitor equipment during fueling.
- Storm drains within a 50-foot radius should be identified prior to aircraft fueling and protected during fueling/defueling procedures. If it is not possible to protect the drain, operator shall identify location of nearest spill cart and ensure that it is accessible.
- Comply with good housekeeping, maintenance, and inspections as outlined in BMP 1 and co-permittee's SWPPP.
- Comply with training as outlined in BMP 2.
- Comply with spill prevention and response as outlined in BMP 43 and the Spill Prevention Control and Countermeasures (SPCC) Plan, if required.

Ted Stevens Anchorage International Airport	BMP 5 Aircraft Lavatory Service
Applicability: This BMP applies to all aircraft lavatory service activities	

TARGETED ACTIVITIES

- Aircraft lavatory service.

KEY APPROACHES

- Do not discharge lavatory waste to sanitary sewer connections other than the Biffy Dump.
- Utilize buckets or pans to capture drips from aircraft lavatory access fittings.
- Carry absorbent and other containment equipment on the lavatory service equipment.
- Train employees in spill prevention and response and storm water pollution prevention.

PURPOSE

Minimize the potential for discharges to the storm drain system associated with ground servicing of aircraft lavatory facilities. The sanitary sewage and associated rinse waters produced during the servicing of aircraft lavatory facilities must be discharged to the Biffy Dump. Trucks or trailers equipped with bulk storage tanks are typically used to service lavatory facilities.

BEST MANAGEMENT PRACTICES

- Do not discharge lavatory waste to sanitary sewer connections other than the "Biffy Dump".
- Drain the aircraft connecting hose as completely as possible into the storage tank after servicing an aircraft. Properly secure all hoses, valves, and equipment when transporting waste to eliminate leakage and spills.
- Utilize buckets or pans to capture drips from aircraft lavatory access fittings. Immediately dump the captured drips into the bulk storage tank on the service cart or truck.
- Do not hose down spills unless the discharge enters the sanitary sewer system through the Biffy Dump.
- Carry absorbent and other containment equipment on the lavatory service equipment.
- Keep equipment in good working order; replace worn equipment before leaks develop.
- Comply with good housekeeping, maintenance, and inspections as outlined in BMP 1 and co-permittee's SWPPP.
- Comply with training as outlined in BMP 2.
- Comply with spill prevention and response as outlined in BMP 43.

Ted Stevens Anchorage International Airport	BMP 6 Aircraft Maintenance
Applicability: This BMP applies to all aircraft maintenance activities including fluid changes and mechanical repairs to prevent and reduce the discharge of pollutants to storm water	

TARGETED ACTIVITIES

- Aircraft maintenance

KEY APPROACHES

- Conduct maintenance indoors.
- Prevent discharge to storm water system.
- Provide training in spill response and pollution prevention.
- Perform inspections.
- Train employees in spill prevention and response and storm water pollution prevention.

PURPOSE

Prevent or minimize the discharge of pollutants to storm water from aircraft maintenance and repair.

BEST MANAGEMENT PRACTICES

- Where possible, aircraft maintenance with spill potential should be performed indoors.
- Use designated washing, steam cleaning, and degreasing areas to clean equipment.
- Store mechanical parts and equipment under cover and away from storm drains.
- Maintenance and cleaning areas located outside should be equipped with runoff controls that prevent discharge to storm sewers. Floor drains in indoor maintenance areas should discharge to the sanitary sewer.
- When outdoor maintenance is conducted, it should be performed in a designated area, which is paved with impervious concrete.
- Use drip pans.
- Oily parts should not be placed directly on the ground and instead should be placed in drip pans or on absorbent pads.
- Hot drain oil filters (minimum of 12 hours recommended), then dispose of container as a non- hazardous waste.
- Do not hose down work areas to storm drainage system or use concrete cleaning products.
- Drain and properly dispose of all fluids and remove batteries from salvage aircraft.
- Storm drains within a 50-foot radius should be identified prior to outdoor aircraft maintenance and protected during maintenance activity.

Ted Stevens Anchorage International Airport	BMP 6 (continued) Aircraft Maintenance
Applicability: This BMP applies to all aircraft maintenance activities including fluid changes and mechanical repairs to prevent and reduce the discharge of pollutants to storm water	

BEST MANAGEMENT PRACTICES (continued)

- Install and maintain catch basin filter inserts that assist in the removal of oil and grease, sediments and floatables for catch basins that regularly receive runoff from maintenance areas.
- Adhere to maintenance and inspection programs for oil/water separators and practices outlined in BMP 11.
- Comply with good housekeeping, maintenance, and inspections as outlined in BMP 1 and co-permittee's SWPPP.
- Comply with training as outlined in BMP 2.
- Comply with spill prevention and response as outlined in BMP 43.

Ted Stevens Anchorage International Airport	BMP 7 Aircraft Painting/Stripping
Applicability: This BMP applies to all aircraft painting or stripping of paint	

TARGETED ACTIVITIES

- Aircraft painting and stripping operations.

KEY APPROACHES

- Conduct aircraft painting or stripping at an approved facility or off site.
- Do not allow solvents or wash water from painting equipment cleaning operations to discharge to storm drains.
- Train employees in spill prevention and response and storm water pollution prevention.

PURPOSE

Painting operations may involve the use of water and oil-based paints, petroleum distillate and solvents, chemical stripping solutions, and sanding, grinding, and sand blasting operations. The performance of painting operations can generate wastes including paint dusts and chips, chemical residues, spent solvents and stripping solutions, and discarded equipment and materials. Many of the products and wastes associated with painting operations represent a potential chemical or suspended solids pollutant source for storm water.

BEST MANAGEMENT PRACTICES

- Perform painting operations indoors with proper ventilation and emission controls.
- Conduct aircraft painting at an approved facility, one that meets building codes for painting/stripping practices, or off site.
- Do not allow solvents or wash water from painting equipment cleaning operations to discharge to storm drains.
- Operate spray equipment to minimize waste overspray.
- Use only non-halogenated solvents.
- Store containers of paint and solvents indoors.
- Empty containers with residual paint must be closed and stored such that they are not exposed to precipitation.
- Support equipment must be stored indoors or on a paved surface with use of drip pans and absorbent materials to collect drips and leaks.
- Waste materials must be disposed according to local, state, and federal regulations.
- If storm drains are in the immediate vicinity of outdoor painting or paint stripping operations, utilize catch basin inserts and storm water management devices to minimize the potential for discharge to storm water.

Ted Stevens Anchorage International Airport	BMP 7 (continued) Aircraft Painting/Stripping
Applicability: This BMP applies to all aircraft painting or stripping of paint	

BEST MANAGEMENT PRACTICES (continued)

- Inspect parts prior to painting to ensure they are dry and prepared properly to accept paint.
- Adhere to practices outlined in BMP 23.
- Comply with good housekeeping, maintenance, and inspections as outlined in BMP 1 and co-permittee's SWPPP.
- Comply with training as outlined in BMP 2.
- Comply with practices as outlined in BMP 11.
- Comply with spill prevention and response as outlined in BMP 43.

Ted Stevens Anchorage International Airport	BMP 8 Aircraft Parking
Applicability: This BMP applies to all aircraft parking to prevent or reduce the discharge of pollutants to storm water drains	

TARGETED ACTIVITIES

- Aircraft parking

KEY APPROACHES

- Immediately clean up spills and leaks.
- Immediately repair leaking aircraft.
- Train employees in spill prevention and response and storm water pollution prevention.

PURPOSE

Minimize or reduce debris or fluids from aircrafts that may impact to storm water.

BEST MANAGEMENT PRACTICES

- Do not park aircraft within the vicinity (20 feet) of storm drain system if possible.
- Park aircraft indoors when possible.
- Out of service aircraft should be stored indoors, if feasible.
- Never flush spilled materials into the storm drain system.
- Immediately conduct maintenance and repairs of aircraft that are leaking fluids. Where immediate maintenance is not practical, use a drip pan to contain leaking fluids until the aircraft can be repaired.
- Comply with good housekeeping, maintenance, and inspections as outlined in BMP 1 and co-permittee's SWPPP
- Comply with training as outlined in BMP 2.
- Comply with spill prevention and response as outlined in BMP 43.

Ted Stevens Anchorage International Airport	BMP 9 Aircraft Washing
Applicability: This BMP applies to all aircraft washing activities to Prevent or reduce the discharge of pollutants to storm water drains	

TARGETED ACTIVITIES

- Aircraft washing
- Equipment Degreasing

KEY APPROACHES

- Use designated area.
- Use dry washing techniques
- Discharge wash water appropriately
- Cover catch basins
- Use designated wash station for aircraft located at Lakes Hood and Spenard.
- Train employees in spill prevention and response and storm water pollution prevention.

PURPOSE

Minimize or reduce debris/fluids that may impact storm water during aircraft washing.

BEST MANAGEMENT PRACTICES

- Use designated wash areas, inside hangars connected to sanitary sewer and oil/water separator and install berms to prevent contamination of storm water by contact with wash water wastes.
- Use "dry" washing and surface preparation techniques where feasible. Remove all materials (i.e., drippings and residue) using vacuum methods and dispose of properly.
- Provide secondary containment for containers of washing and steam cleaning additives if used.
- Use drain mats to cover catch basins within the vicinity (50 ft) of the aircraft during outdoor wash activity and comply with BMP 11.
- Use biodegradable phosphate-free detergents.
- Keep washing area clean and free of waste.
- Comply with good housekeeping, maintenance, and inspections as outlined in BMP 1 and co-permittee's SWPPP.
- Comply with training as outlined in BMP 2.
- Comply with spill prevention and response as outlined in BMP 43.

PROHIBITIONS

- Aircraft at Lakes Hood and Spenard are required to wash planes (using detergents) at the designated wash station; do not wash aircraft in slips in or adjacent to lakes.

Ted Stevens Anchorage International Airport	BMP 10 Cargo Storage/Transfer
Applicability: This BMP applies to the handling and transport of cargo loaded and unloaded from airplanes and transported across the airfield (e.g., plane-to-plane, plane to other transport vehicle, plane to cargo bays, etc.) to prevent or reduce the discharge of pollutants to storm water drains	

TARGETED ACTIVITIES

- Cargo handling.

KEY APPROACHES

- Conduct loading/unloading under cover.
- Transfer cargo in paved areas, away from storm drain inlets.
- Contain and absorb leaks/spills that occur during cargo transfer.
- Train employees in spill prevention and response and storm water pollution prevention.

PURPOSE

Minimize or reduce debris/fluids that may impact storm water during cargo storage/transfer.

BEST MANAGEMENT PRACTICES

- Protect all loading/unloading activities from rainfall, run-on and wind dispersal to the maximum extent practicable. Where possible, conduct loading/unloading under existing cover or move indoors.
- Position equipment or delivery vehicles so that spills or leaks can be contained.
- Actively monitor equipment by operator during transfer.
- Contain and adsorb leaks from vehicles and equipment during transfers.
- Provide contractors and haulers with copies of pertinent BMPs. Require contractor/hauler adherence to BMP specifications.
- Where possible, cover loading/unloading areas/docks to reduce exposure of materials to rain.
- Where possible, construct roofing structure over material handling area, or move indoors.
- Comply with good housekeeping, maintenance, and inspections as outlined in BMP 1 and co-permittee's SWPPP.
- Comply with training as outlined in BMP 2.
- Comply with spill prevention and response as outlined in BMP 43.

Ted Stevens Anchorage International Airport	BMP 11 Catch Basin/Storm Drain Cleaning
Applicability: This BMP applies to the proper maintenance and repair of existing drainage system, catch basins inclusive of trench drains, and oil/water separators	

TARGETED ACTIVITIES

- Aircraft/Vehicle/Equipment Maintenance and Fueling.
- Equipment Maintenance/Degreasing.
- Deicing/Anti-icing.

KEY APPROACHES

- Inspect and clean catch basins, trench drains, and other storm drainage system components.
- Maintain spill response equipment and storm water management devices.
- Train employees in spill prevention and response and storm water pollution prevention.

PURPOSE

Proper maintenance and repair of existing drainage systems will greatly improve water quality and allows the storm drainage system to function at peak levels. This BMP applies to routine storm-drain and catch basin inspection, maintenance, and repair to prevent clogging and to remove accumulated pollutants from the storm drain system.

BEST MANAGEMENT PRACTICES

- Tenants are responsible for all trench drains, catch basins, and oil/water separators that are included in their lease lot.
- Tenants should have a complete understanding of their storm water drain and sanitary sewer connections.
- Perform routine inspections of catch basins, oil/water separators, and storm drain inlets. Document all inspections and maintenance.
- Clean catch basins, oil/water separators, and storm drain inlets as frequently as needed, especially those in which receive runoff from maintenance areas regularly. Catch basins, oil/water separators, and storm drains should be kept free of pollutants, floating debris and sediments to prevent clogging.
- Cleaning should include pumping out the catch basins and oil/water separators and taking residual material offsite for proper disposal.
- Do not flush the pipe system without having means to remove any sediments or pollutants that are deposited into the storm drainage system.
- Maintain storm water management devices such as catch basin inserts and berms.
- Discharge from catch basins or oil/water separator should be monitored for oil sheen during the routine inspections.
- Comply with good housekeeping, maintenance, and inspections as outlined in BMP 1 and co-permittee's SWPPP and with training as outlined in BMP 2.

Ted Stevens Anchorage International Airport	BMP 12 Chemical/Hazardous Waste Storage
Applicability: This BMP applies to the proper storage of chemical and hazardous waste	

TARGETED ACTIVITIES

- Storage of fuel, chemicals, and hazardous waste/oils in drums, tanker trucks and bulk tanks.
- Storage of absorbent materials, batteries, and filters.

KEY APPROACHES

- Where feasible, drums should be stored indoors with secondary containment.
- Where feasible, used empty drums should be stored indoors.
- Train employees in spill prevention and response, storm water pollution prevention and, hazardous materials management.

PURPOSE

Chemicals and hazardous waste stored outdoors represent a potential source for storm water pollutants. Chemicals, including petroleum products, stored outdoors include those that are stored in drums, tanker trucks, and bulk tanks. Waste materials include soil stockpiles, spent solvents, used oils and hydraulic fluids, excess deicing and anti-icing fluids, used oil filters, batteries and tires, and lavatory waste fluids. This BMP concerns only issues related to storm water pollution prevention and is not intended to fulfill compliance requirements with other Federal and State regulations pertaining to chemical or hazardous materials waste or storage.

BEST MANAGEMENT PRACTICES

- Minimize the quantities of chemicals and hazardous waste stored outside to what is practically feasible.
- Chemicals and hazardous waste shall be stored in designated areas or in buildings where feasible. If materials cannot be stored indoors, the area must be paved and equipped with cover and secondary containment.
- Drum openings and/or bungholes should be capped or securely closed when not in use.
- Drums shall be labeled as to their contents and stored in/on secondary containment.
- Empty drums should be stored with drum lids securely closed; bungholes capped and labeled 'EMPTY'.
- Eliminate unnecessary drum storage (i.e. excess product storage, obsolete product, empty drum storage).
- Drums and drum storage area should be kept free of spillage and staining.
- Used drums not intended for reuse should be removed as soon as practical.
- Stockpiles containing remediation waste soil shall be placed on, and covered with, polyethylene sheeting and surrounded with containment berms. Stockpiles containing non-remediation waste soil shall be surrounded with erosion controls, such as fiber rolls.

Ted Stevens Anchorage International Airport	BMP 12 (continued) Chemical/Hazardous Waste Storage
Applicability: This BMP applies to the proper storage of chemical and hazardous waste	

BEST MANAGEMENT PRACTICES (continued)

- Storm water collected from secondary containment areas shall be disposed of in accordance with Federal and State regulations
- Visible signs shall be clearly posted at all chemical storage locations and shall include the materials stored, emergency contacts, and spill cleanup procedures.
- Store all materials in their original containers or containers approved for that use. Properly label all chemical and waste containers with information as required by applicable regulations including contents, hazards, appropriate spill response and first aid procedures, manufacturer's name and address and storage requirements.
- Place spent absorbent, batteries, and oil/fuel filters in appropriate secondary containment at designated waste disposal areas. Dispose of waste materials in accordance with applicable Federal and State regulations.
- Maintain Safety Data Sheets (SDS) for stored materials.
- Drums should be stored with adequate aisle space to allow inspection of each drum and for the cleaning of leaks or spills, as needed.
- Store all deicing and anti-icing chemicals at facilities equipped with proper controls.

Storage of chemical/ hazardous materials/wastes is regulated by Federal and State regulations. Storage tanks, including USTs and secondary containment systems must be tested and monitored as required by Federal and State laws.

- Comply with good housekeeping, maintenance, and inspections as outlined in BMP 1 and co-permittee's SWPPP.
- Comply with training as outlined in BMP 2.
- Comply with applicable Spill Prevention Control and Countermeasure (SPCC) regulations (40 CFR Part 112.7) and all other measures outlined in BMP 43.

Ted Stevens Anchorage International Airport	BMP 13 Chemical/Hazardous Waste Handling
Applicability: This BMP applies to the proper handling of chemical and hazardous waste	

TARGETED ACTIVITIES

- Handling of fuel, chemicals, and hazardous waste.

KEY APPROACHES

- Conduct material transfer away from catch basins and storm drainage systems.
- Utilize drain covers and other storm water controls.
- Contain and adsorb leaks/spills that occur during the transfer of material.
- Train employees in spill prevention and response, storm water pollution prevention and, hazardous materials management.

PURPOSE

Chemicals and hazardous waste handled outdoors represent a potential source for storm water pollutants. Materials may be spilled or leaked during loading and unloading operations. Outdoor handling operations commonly involve transferring of liquids from one container to the other, filling of containers, relocating materials, temporary coverings and other activities that create a potential for exposure to rainfall.

BEST MANAGEMENT PRACTICES

- Each employer will maintain a list of all the hazardous chemicals used on the premises.
- Each container containing a hazardous chemical will be labeled with the identity and the appropriate hazard warning of the contents. Containers containing hazardous chemicals, when received from a supplier or shipped to a customer, will also have the name and address of the manufacturer or the responsible party.
- The identity and the hazard warnings must be placed on all containers that have been transferred from the original drum or container.
- Material transfer from drums or other large containers into smaller containers for employee use should be completed indoors. A spill control kit should be present in proximity to the material transfer area.
- Drum openings and/or bungholes should be capped when not in use.
- Where possible, avoid dispensing material from drums positioned horizontally in cradles. Dispensing materials from upright drums equipped with hand pumps is preferred.
- Protect all material handling activities, including loading and unloading, from rainfall, run on, and wind dispersal to the maximum extent practicable. Where possible, conduct loading/unloading under existing cover or move indoors.
- Do not transfer materials at locations near storm drains. Utilize drain covers and other storm water controls during material handling.
- Position tank trucks or delivery vehicles so that possible spills or leaks can be contained.

Ted Stevens Anchorage International Airport	BMP 13 (continued) Chemical/Hazardous Waste Handling
Applicability: This BMP applies to the proper handling of chemical and hazardous waste	

BEST MANAGEMENT PRACTICES (continued)

- Contain and absorb leaks during transfers and spillage from hose disconnects; dispose of residue properly. Use drip pans under hose connections or dispenser nozzle.
- Actively monitor equipment during transfer.
- Transfer liquids on paved surfaces.
- Retain a licensed transported and disposal facility for removal of chemical wastes and used absorbent materials.
- Storage of chemical/ hazardous materials/wastes is regulated by Federal and State regulations. Storage tanks, including USTs and secondary containment systems must be tested and monitored as required by Federal and State laws.
- Comply with good housekeeping, maintenance, and inspections as outlined in BMP 1 and co-permittee's SWPPP.
- Comply with training as outlined in BMP 2.
- Comply with applicable Spill Prevention Control and Countermeasure (SPCC) regulations (40 CFR Part 112.7) and all other measures outlined in BMP 43.

Ted Stevens Anchorage International Airport	BMP 14 Equipment Degreasing
Applicability: This BMP applies to the prevention of storm water exposure to degreasing activities	

TARGETED ACTIVITIES

- Equipment degreasing.

KEY APPROACHES

- Prevent waste contact with storm water.
- Provide employee training in spill prevention and response and storm water pollution prevention.

PURPOSE

Minimize or reduce debris/fluids that may impact storm water during equipment degreasing.

BEST MANAGEMENT PRACTICES

- Where possible, conduct equipment degreasing operations indoors.
- Maintenance and cleaning areas should be equipped with runoff controls that prevent discharge to storm sewers.
- Install and maintain catch basin filter inserts that assist in the removal of oil and grease, sediments and floatables for catch basins that regularly receive runoff from degreasing areas.
- Adhere to maintenance and inspection programs for oil/water separators and practices outlined in BMP 11.
- Storm drains within a 50-foot radius should be identified prior to equipment degreasing and protected during degreasing activities.
- Label storm drain inlets to indicate wastes discharges are prohibited.
- Recycle or properly dispose of the following: greases, oils, antifreeze, brake fluid, cleaning solutions, hydraulic fluid, batteries, transmission fluid, and filters.
- Use biodegradable phosphate-free degreasers.
- Use designated degreasing areas to prevent waste contact with storm water.
- Comply with good housekeeping, maintenance, and inspections as outlined in BMP 1 and co-permittee's SWPPP.
- Comply with training as outlined in BMP 2.
- Comply with spill prevention and response as outlined in BMP 43.

Ted Stevens Anchorage International Airport	BMP 15 Equipment Fueling
Applicability: This BMP applies to the prevention of fuel spills or leaks to reduce their impact on storm water	

TARGETED ACTIVITIES

- Equipment fueling.

KEY APPROACHES

- Install berms or curbing around fueling areas.
- Use absorbent materials and/or vacuum equipment for spills.
- Install proper equipment for fuel dispensing to prevent spills, leaks, and overflows.
- Use drain inserts/mats during fueling.
- Provide employee training in spill response and prevention, storm water pollution prevention, and hazardous materials management

PURPOSE

Minimize or reduce the impact of fuel spills and leaks to storm water during fueling.

BEST MANAGEMENT PRACTICES

- Minimize the use of mobile fueling of equipment wherever feasible.
- Cover the fueling area if possible.
- Divert storm water runoff away from fueling area using berms or curbing to avoid storm water contact with contaminated surfaces.
- Storm drains within a 50-foot radius should be identified prior to equipment fueling and protected during fueling/defueling procedures.
- Provide appropriate monitoring for tanks containing fuel, such as:
  - ✓ Level indicators and gauges.
  - ✓ Overfill protection with alarms.
  - ✓ Interstitial leak detection for double-walled tanks.
  - ✓ Routine inspection/lockout for drainage valves for tank containment areas.
- Fuel dispensing equipment should be equipped with "breakaway" hose connections that will provide emergency shut down of flow should the fueling connection be broken through movement.
- Automatic shut-off mechanisms should be in place on fuel tankers. These valves should remain in the closed position unless manually opened during fueling.
- Use absorbent materials and spot cleaning for small spills; do not hose down the area unless the storm drain is blocked, and drainage is collected by vacuum truck and properly disposed.
-

Ted Stevens Anchorage International Airport	BMP 15 (continued) Equipment Fueling
Applicability: This BMP applies to the prevention of fuel spills or leaks to reduce their impact on storm water	

BEST MANAGEMENT PRACTICES (continued)

- Properly dispose of any waste material from fuel spills and leaks. Vacuum equipment/trucks are recommended for collection. Always dispose of materials in an approved manner; use an approved treatment facility or discharge through a permitted connection. Never discharge materials to a catch basin or storm drain.
- Manage the disposal of water that collects in fuel tanks and fueling hydrant sumps according to state and federal regulations.
- Operator must actively monitor equipment during fueling.
- Comply with good housekeeping, maintenance, and inspections as outlined in BMP 1 and co-permittee's SWPPP. Comply with training as outlined in BMP 2.
- Refer to BMP 20 for fuel storage practices and requirements.
- Comply with spill prevention and response as outlined in BMP 43 and the Spill Prevention Control and Countermeasures (SPCC) Plan, if required.

Ted Stevens Anchorage International Airport	BMP 16 Equipment Maintenance
Applicability: This BMP applies to the prevention of storm water exposure to equipment maintenance activities	

TARGETED ACTIVITIES

- Equipment maintenance.

KEY APPROACHES

- Maintenance conducted indoors.
- Maintain catch basins.
- Use dry clean-up methods.
- Perform walk-around inspections prior to equipment use to check for leaks/drips.
- Provide employee training in spill response and prevention and storm water pollution prevention.

PURPOSE

Prevent or minimize the discharge of pollutants to storm water from equipment maintenance and repair.

BEST MANAGEMENT PRACTICES

- Where possible, conduct maintenance activities indoors.
- Use designated washing, steam cleaning, and degreasing areas to clean equipment.
- Store mechanical parts and equipment under cover and away from storm drains.
- Maintenance and cleaning areas should be equipped with runoff controls that prevent discharge to storm sewers. Floor drains in indoor maintenance areas should discharge to the sanitary sewer.
- Install and maintain catch basin filter inserts that assist in the removal of oil and grease, sediments and floatables for catch basins that regularly receive runoff from maintenance areas.
- Use drip pans.
- Use absorbent materials at potential problem areas. Adequately collect/remove absorbent materials from area immediately after use and dispose in an appropriate manner.
- Hot drain oil filters (minimum of 12 hours recommended) then dispose of container as a non- hazardous waste.
- Do not hose down work areas to the storm drainage system or use concrete cleaning products unless the storm drain inlet is blocked, and wash water is collected and properly disposed of through a permitted sewer connection. As an alternative, use mops, dry sweeping compound, or contract professional cleaning services. Confirm the use of appropriate disposal practices by contract cleaning services.
-

Ted Stevens Anchorage International Airport	BMP 16 (continued) Equipment Maintenance
Applicability: This BMP applies to the prevention of storm water exposure to equipment maintenance activities	

BEST MANAGEMENT PRACTICES (continued)

- Recycle or properly dispose of the following: greases, oils, antifreeze, brake fluid, cleaning solutions, hydraulic fluid, batteries, transmission fluid, and filters.
- Maintain clean equipment by eliminating excessive amounts of external oil and grease buildup. Use water-based cleaning agents or non-chlorinated solvents to clean equipment.
- Use biodegradable products and substitute materials with less hazardous properties.
- Storm drains within a 50-foot radius should be identified prior to outdoor equipment maintenance and protected during maintenance activity. Adhere to maintenance and inspection programs for oil/water separators and practices outlined in BMP 11.
- Comply with good housekeeping, maintenance, and inspections as outlined in BMP 1 and co-permittee's SWPPP.
- Comply with training as outlined in BMP 2.
- Comply with spill prevention and response as outlined in BMP 43.

Ted Stevens Anchorage International Airport	BMP 17 Equipment Storage
Applicability: This BMP applies to the prevention of storm water exposure to the storage of equipment, obsolete or not	

TARGETED ACTIVITIES

- Equipment maintenance.

KEY APPROACHES

- Inspect stored equipment monthly for drips/leaks.
- Provide employee training in spill prevention and response and storm water pollution prevention

PURPOSE

This BMP covers the outdoor storage of obsolete equipment and scrap material that has the potential to impart pollutants if exposed to storm water. Materials meeting these criteria are those that have residues or may otherwise be degraded by storm water. Representative example materials include: 1) engine, transmission or drive line components with oil/grease residue; 2) scrap metal from machining operations with cutting oil residue; and 3) paper or cardboard products or other materials that may degrade and release pollutants when exposed to storm water.

BEST MANAGEMENT PRACTICES

- Prior to outdoor storage of any engine, transmission, or similar mechanical component, all fuel, engine oil, transmission fluid, antifreeze, and any other fluids should be drained. The exterior of the equipment should be stored under an overhang, canopy, tarp, or otherwise protected to prevent exposure to storm water.
- Where out-of-service equipment is intended to be repaired or reused, fluids may remain in the equipment to protect against corrosion provided the exterior is cleaned and all other protections cited are in place to prevent leakage.
- Motorized equipment should be maintained so that drips or leaks of any fluid will be minimal. Where a piece of equipment is prone to drips or leaking fluids, drip pans should be used and maintained to contain the leaking fluid.
- Do not store equipment near storm drainage features or catch basins.
- Scrap materials that are not clean, exhibit a residual pollutant, or are corroded, should be stored under an overhang, canopy, tarp, or otherwise protected so they will not be exposed to storm water.
- Comply with good housekeeping, maintenance, and inspections as outlined in BMP 1 and co-permittee's SWPPP.
- Comply with training as outlined in BMP 2 and spill prevention and response as outlined in BMP 43.

Ted Stevens Anchorage International Airport	BMP 18 Equipment Washing
Applicability: This BMP applies to the prevention of storm water exposure to equipment washing	

TARGETED ACTIVITIES

- Equipment washing.

KEY APPROACHES

- Do not discharge wash water to storm water drainage system.
- Conduct washing indoors
- Use dry washing techniques
- Cover catch basins.
- Perform inspections.
- Provide employee training in spill prevention and response and storm water pollution prevention.

PURPOSE

Minimize or reduce debris/fluids that may impact storm water during equipment washing.

BEST MANAGEMENT PRACTICES

- Use designated wash areas indoors, or outdoors covered and bermed, to prevent contamination of storm water by contact with wastes.
- Filter and recycle wash water where practical.
- Use "dry" washing and surface preparation techniques where feasible. Remove all materials (i.e., drippings and residue) using vacuum methods and dispose of properly.
- Provide secondary containment for containers of washing and steam cleaning additives if used.
- Use drain mats to cover catch basins within the vicinity (50 ft) during outdoor wash activity and comply with BMP 11.
- Use biodegradable phosphate-free detergents.
- Keep washing area clean and free of waste.
- Include proper signage to prohibit the discharge of waste oils into the drains.
- Collect and discharge wash water to an approved treatment facility (sanitary sewer system) through a permitted connection.
- Consider off-site commercial washing and steam cleaning where feasible.
- Comply with good housekeeping, maintenance, and inspections as outlined in BMP 1 and co-permittee's SWPPP.
- Comply with training as outlined in BMP 2.
- Comply with spill prevention and response as outlined in BMP 43.

Ted Stevens Anchorage International Airport	BMP 19 Fuel Storage Mobile Fuel Tank Trucks & Bulk Tanks
Applicability: This BMP applies to the prevention of storm water exposure to outdoor storage of fuel in tanker trucks or bulk tanks	

TARGETED ACTIVITIES

- Storage of fuel tanker trucks and bulk tanks.

KEY APPROACHES

- Maintain storm drain covers and other storm water management controls.
- Immediately clean up spills.
- Perform inspections.
- Provide employee training in spill prevention and response and storm water pollution prevention.

PURPOSE

Minimize or reduce materials, that if spilled or leaked during storage/transfer operations, may impact storm water.

BEST MANAGEMENT PRACTICES

- If feasible, construct a canopy over containment area to minimize accumulation of rainwater.
- Fuel trucks must park at least 20 feet from catch basins and 50 feet from building entrances.
- Storm water collected from secondary containment areas must be discharged according applicable regulations.
- Storage tanks, including USTs and secondary containment systems, must be tested and monitored as required by Federal and State laws.
- Maintain drain covers and other storm water management controls in the fuel storage area.
- Comply with good housekeeping, maintenance, and inspections as outlined in BMP 1 and co-permittee's SWPPP.
- Comply with training as outlined in BMP 2.
- Comply with applicable Spill Prevention Control and Countermeasure (SPCC) regulations (40 CFR Part 112.7) and all other measures outlined in BMP 43.

Ted Stevens Anchorage International Airport	BMP 20 Painting/Stripping
Applicability: This BMP applies to the prevention of exposure of pollutants to storm water from painting or stripping activities	

TARGETED ACTIVITIES

- Painting and stripping operations.
- Sanding, grinding, and sand blasting operations.

KEY APPROACHES

- Perform painting operations indoors whenever possible.
- Use water-based paints.
- Do not allow solvents or wash water from painting equipment cleaning operations to discharge to storm drains.
- Immediately clean up spills.
- Provide employee training in spill prevention and response and storm water pollution prevention.

PURPOSE

Painting operations may involve the use of water and oil-based paints, petroleum distillate and solvents, chemical stripping solutions, and sanding, grinding, and sand blasting operations. The performance of painting operations can generate wastes including paint dusts and chips, chemical residues, spent solvents and stripping solutions, and discarded equipment and materials. Many of the products and wastes associated with painting operations represent a potential chemical or suspended solids pollutant source for storm water.

BEST MANAGEMENT PRACTICES

- Store containers of paint and solvents indoors.
- Empty containers with residual paint must be closed and stored such that they are not exposed to precipitation.
- Do not allow solvents or wash water from painting equipment cleaning operations to discharge to storm drains.
- Paint trucks and support equipment must be stored indoors or on a paved surface with use of drip pans and absorbent materials to collect drips and leaks.
- Perform painting operations indoors with proper ventilation and emission controls.
- Perform painting-related preparation activities indoors.
- Operate spray equipment to minimize waste overspray.
- Use only non-halogenated solvents.
- Use water-based paints.

Ted Stevens Anchorage International Airport	BMP 20 (continued) Painting/Stripping
Applicability: This BMP applies to the prevention of exposure of pollutants to storm water from painting or stripping activities	

BEST MANAGEMENT PRACTICES (continued)

- If outdoor painting must be conducted, schedule outdoor painting activities based on weather forecast. Do not paint before predicted rain events and avoid sanding or blasting on windy days.
- Waste materials must be disposed according to local, state, and federal regulations.
- Perform regular maintenance on paint trucks and support equipment.
- Inspect parts prior to painting to ensure they are dry and prepared properly to accept paint.
- Comply with good housekeeping, maintenance, and inspections as outlined in BMP 1 and co-permittee's SWPPP.
- Comply with training as outlined in BMP 2.
- Comply with spill prevention and response as outlined in BMP 43.

Ted Stevens Anchorage International Airport	BMP 21 Sanding
Applicability: This BMP applies to reducing exposure of winter traction material from storm water while maintaining winter mobility and public safety	

TARGETED ACTIVITIES

- Roadway sanding.

KEY APPROACHES

- Apply only the amount necessary.
- Utilize appropriate spreading speeds and patterns.
- Provide employee training in spill prevention and response and storm water pollution prevention.

PURPOSE

Prevent or minimize the discharge of pollutants to storm water from sanding operations.

BEST MANAGEMENT PRACTICES

- Use "clean" (free of fine materials) sand. Fine particles mixed with sand can increase stream turbidity and carry pollutants such as phosphorous and metals. Street sweeping during the spring melt can reduce pollutant loads from road sanding.
- Limit use of abrasives to parts of the road where motorists must break, accelerate, or maneuver.
- Evaluate road and weather conditions and trends to ensure that the proper type and timing of treatment is made.
- Conduct storage and handling operations on impervious surfaces.
- Plow off snow or slush prior to applying materials to decrease dilution and increase effectiveness of the materials and comply with snow removal practices as outlined in BMP 29.
- Do not overload the material spreader to avoid spillage.
- Control spreading speeds to reduce bounce and scatter.
- Control spread patterns to concentrate material where it is most effective on the road. When re-applying material, consider the possibility of partial vs. full and spot vs. blanket treatments where appropriate.
- Alter application methods and rates in sensitive areas. Place barriers in site-specific locations to direct drainage away from catch basins. Reduce quantity of sand applied where appropriate. Clean inlets prior to first rain as feasible.
- Return unused materials to stockpiles and avoid heavy "end of beat" applications that empty the load.

Ted Stevens Anchorage International Airport	BMP 21 (continued) Sanding
Applicability: This BMP applies to reducing exposure of winter traction material from storm water while maintaining winter mobility and public safety	

BEST MANAGEMENT PRACTICES (continued)

- Keep accurate records of materials usage to allow monitoring and improvement of operations.
- Comply with good housekeeping, maintenance, and inspections as outlined in BMP 1 and co-permittee's SWPPP.
- Comply with training as outlined in BMP 2.
- Comply with spill prevention and response as outlined in BMP 43.

Ted Stevens Anchorage International Airport	BMP 22 Snow Removal
Applicability: This BMP applies to reducing exposure of pollutants entrained in snow to be released during melting events	

TARGETED ACTIVITIES

- Roadway and pavement snow removal.

KEY APPROACHES

- Pile snow in designated snow storage areas.
- Provide employee training in spill prevention and response and storm water pollution prevention.

PURPOSE

Reduce storm water pollution associated with snow removal activities. When snow is removed from paved surfaces during plowing and snow disposal operations, part of the sand and chemical applications is removed, along with additional pollutants released by vehicles and equipment. When the snow melts and discharges from snow stored at the snow disposal sites, some of these pollutants are carried away with the melt water.

BEST MANAGEMENT PRACTICES

- Pile snow only in designated areas and segregate airside snow from non-airside.
- Do not store snow adjacent to storm drains.
- If possible, store snow in grassed areas. Direct runoff from snow piles into detention areas so that soil and other particles can settle out before the water is discharged as airport runoff.
- Do not dump snow directly into wetlands, streams, or lakes.
- Distinguish between areas where plowed snow will be stored for the season and areas where snowed will be hauled off site.
- Plow off snow or slush prior to applying sand or chemicals to decrease dilution and increase effectiveness of the materials.
- Avoid pushing snow into the storm water drainage system.
- When selecting snow disposal sites locate sites that allow sediments to settle out before the melt water is discharged as runoff.
- Add a fine layer of organic material to the disposal site each year at the completion of the deicing season.
- Clean snow storage sites at the end of the season to minimize potential debris accumulated from plowed surfaces.
- Comply with the BMPs outlined in 1 (general practices), 2 (training), 11 (catch basins/storm drains), 28 (sanding), and 43 (spill prevention) to maximize the reduction of pollutant to storm water from snow removal activities.

Ted Stevens Anchorage International Airport	BMP 23 Solid Waste Storage/Transfer
Applicability: This BMP applies to reducing exposure of pollutants associated with solid waste storage and transfer	

TARGETED ACTIVITIES

- Solid waste storage and transfer.

KEY APPROACHES

- Cover waste storage areas
- Recycle materials
- Regularly inspect and clean waste storage areas.
- Berm waste storage areas to prevent contact with run-on or run-off.
- Perform dumpster cleaning in designated areas.
- Properly dispose of all fluids.
- Provide employee training in spill prevention and response and storm water pollution prevention.

PURPOSE

Prevent or reduce the discharge of pollutants to storm water from waste handling and disposal by tracking storage, and disposal; reducing waste generation and disposal through source reduction, re-use, and recycling; and preventing run-on and runoff from waste management areas, including garbage collection areas.

BEST MANAGEMENT PRACTICES

- Perform regular housekeeping activities in waste storage areas and surroundings and comply with all other practices outlined in BMP 1 and co-permittee's SWPPP.
- Recycle materials whenever possible.
- Ensure that sediments and wastes are prevented from being washed, leached, or otherwise carried off-site.
- Schedule frequent waste pickup to minimize waste storage and avoid overloaded/overfilled disposal containers.
- Minimize spills and fugitive losses such as dust or mist from loading areas.
- Enclose or berm waste storage areas, if possible, to prevent contact with run-on or runoff.
- Avoid locating solid waste storage in areas with storm drain inlets/catch basins.
- Locate waste storage areas beneath cover, if possible.
- Use covered dumpsters and keep them closed and locked.
- Use only dumpsters with plugged drain holes to prevent leaks from waste materials.

Ted Stevens Anchorage International Airport	BMP 23 (continued) Solid Waste Storage/Transfer
Applicability: This BMP applies to reducing exposure of pollutants associated with solid waste storage and transfer	

BEST MANAGEMENT PRACTICES (continued)

- Do not dispose of liquid wastes such as oils or hazardous materials into dumpsters.
- Perform dumpster cleaning in designated areas that are bermed to contain wash water for a subsequent disposal or discharge to the sanitary sewer. Ramp scrubbers are effective in removing wash water from paved areas. Dispose of or recycle all fluids collected.
- Comply with training as outlined in BMP 2.
- Comply with spill prevention and response as outlined in BMP 43.

Ted Stevens Anchorage International Airport	BMP 24 Steam Cleaning
Applicability: This BMP applies to reducing exposure of pollutants associated with cleaning equipment with steam	

TARGETED ACTIVITIES

- Steam cleaning.

KEY APPROACHES

- Conduct steam cleaning of equipment indoors.
- Direct wash waters to permitted connection to sanitary sewer or reclaim all wash water.
- Provide employee training in spill prevention and response and storm water pollution prevention.

PURPOSE

Steam cleaning of equipment occurs as part of routine housekeeping measures. Oil, grease, and chemical residues that have accumulated on the equipment are picked up by the wash waters and can be carried into the storm water drainage system.

BEST MANAGEMENT PRACTICES

- Conduct steam cleaning indoors whenever possible.
- Steam cleaning of equipment is only allowed where there is a permitted connection for wash water and rinsate to discharge to the sanitary sewer system or where wash waters are reclaimed.
- Retain a qualified pressure wash contractor to perform cleaning and reclamation of wash waters. Refer to BMP 39.
- Comply with training as outlined in BMP 2.
- Comply with spill prevention and response as outlined in BMP 43.

Ted Stevens Anchorage International Airport	BMP 25 Vehicle Fueling
Applicability: This BMP applies to reducing fuel spills and leaks associated with fueling vehicles	

TARGETED ACTIVITIES

- Vehicle fueling.

KEY APPROACHES

- Install berms or curbing around fueling areas.
- Use absorbent materials and/or vacuum equipment for spills.
- Install proper equipment for fuel dispensing and tank monitoring to prevent spills, leaks, and overflows.
- Provide employee training in spill prevention and response and storm water pollution prevention

PURPOSE

Minimize or reduce the impact of fuel spills and leaks to storm water during fueling.

BEST MANAGEMENT PRACTICES

- Fuel pumps intended for vehicular use (not aircraft) should be posted with signs stating "No Topping Off" to prevent overflow.
- Fuel dispensing equipment should be equipped with "breakaway" hose connections that will provide emergency shut down of flow should the fueling connection be broken through movement.
- Automatic shut-off mechanisms should be in place on fuel tankers. These valves should remain in the closed position unless manually opened during fueling.
- Provide appropriate monitoring for tanks containing fuel, such as:
  - ✓ Level indicators and gauges.
  - ✓ Overfill protection with alarms.
  - ✓ Interstitial leak detection for double-walled tanks.
  - ✓ Routine inspection/lockout for drainage valves for tank containment areas.
- Divert storm water runoff away from fueling area using berms or curbing to avoid storm water contact with contaminated surfaces.
- Install gate valves at catch basins for use during fueling activity.
- Storm drains within a 20-foot radius should be identified prior to vehicle fueling and protected during fueling/defueling procedures.
- Fuel equipment and vehicles at designated fueling areas.
- Operator must actively monitor equipment during fueling.

Ted Stevens Anchorage International Airport	BMP 25 (continued) Vehicle Fueling
Applicability: This BMP applies to reducing fuel spills and leaks associated with fueling vehicles	

BEST MANAGEMENT PRACTICES (continued)

- Use absorbent materials and spot cleaning for small spills; do not hose down the area unless the storm drain is blocked, and drainage is collected by vacuum truck and properly disposed.
- Properly dispose of any waste material from fuel spills and leaks. Vacuum equipment/trucks are recommended for collection. Always dispose of materials in an approved manner; use an approved treatment facility or discharge through a permitted connection. Never discharge materials to a catch basin or storm drain.
- Manage the disposal of water that collects in fuel tanks and fueling hydrant sumps according to state and federal regulations. Comply with good housekeeping, maintenance, and inspections as outlined in BMP 1 and co-permittee's SWPPP.
- Comply with training as outlined in BMP 2.
- Refer to BMP 20 for fuel storage practices and requirements.
- Comply with spill prevention and response as outlined in BMP 43 and the Spill Prevention Control and Countermeasures (SPCC) Plan, if required.

Ted Stevens Anchorage International Airport	BMP 26 Vehicle Maintenance
Applicability: This BMP applies to reducing exposure of pollutants associated with the maintenance of vehicles	

TARGETED ACTIVITIES

- Vehicle maintenance.

KEY APPROACHES

- Maintenance and cleaning areas should be equipped with runoff controls that prevent discharge to storm sewers.
- Perform inspections.
- Provide employee training in spill prevention and response and storm water pollution prevention

PURPOSE

Prevent or minimize the discharge of pollutants to storm water from equipment maintenance and repair.

BEST MANAGEMENT PRACTICES

- Where possible, move maintenance activities indoors.
- Use designated washing, steam cleaning, and degreasing areas to clean equipment.
- Store mechanical parts and equipment under cover and away from storm drains.
- Use drip pans.
- Hot drain oil filters (minimum of 12 hours recommended) then dispose of container as a non- hazardous waste.
- Use absorbent materials at potential problem areas. Adequately collect/remove absorbent materials from area immediately after use and dispose in an appropriate manner.
- Do not hose down work areas to the storm drainage system or use concrete cleaning products unless the storm drain inlet is blocked, and wash water is collected and properly disposed of through a permitted sewer connection. As an alternative, use mops, dry sweeping compound, or contract professional cleaning services. Confirm the use of appropriate disposal practices by contract cleaning services.
- Drain and properly dispose of all fluids and remove batteries from salvage vehicles.
- Recycle or properly dispose of the following: greases, oils, antifreeze, brake fluid, cleaning solutions, hydraulic fluid, batteries, transmission fluid, and filters.
- Maintain clean equipment by eliminating excessive amounts of external oil and grease buildup. Use water-based cleaning agents or non-chlorinated solvents to clean equipment.
- Use biodegradable products and substitute materials with less hazardous properties.

Ted Stevens Anchorage International Airport	BMP 26 (continued) Vehicle Maintenance
Applicability: This BMP applies to reducing exposure of pollutants associated with the maintenance of vehicles	

BEST MANAGEMENT PRACTICES (continued)

- Maintenance and cleaning areas should be equipped with runoff controls that prevent discharge to storm sewers. Floor drains in indoor maintenance areas should discharge to the sanitary sewer.
- Install and maintain catch basin filter inserts that assist in the removal of oil and grease, sediments and floatables for catch basins that regularly receive runoff from maintenance areas.
- Storm drains within a 50-foot radius should be identified prior to outdoor vehicle maintenance and protected during maintenance activity.
- Adhere to maintenance and inspection programs for oil/water separators and practices outlined in BMP 11. Comply with good housekeeping, maintenance, and inspections as outlined in BMP 1 and co-permittee's SWPPP.
- Comply with training as outlined in BMP 2.
- Comply with spill prevention and response as outlined in BMP 43.

Ted Stevens Anchorage International Airport	BMP 27 Vehicle Painting
Applicability: This BMP applies to reducing exposure of pollutants associated with the painting vehicles	

TARGETED ACTIVITIES

- Painting and stripping operations.

KEY APPROACHES

- Conduct vehicle painting at an approved facility or off site.
- Do not allow solvents or wash water from painting equipment cleaning operations to discharge to storm drains.
- Provide employee training in spill prevention and response and storm water pollution prevention.

PURPOSE

Painting operations may involve the use of water and oil-based paints, petroleum distillate and solvents, chemical stripping solutions, and sanding, grinding, and sand blasting operations. The performance of painting operations can generate wastes including paint dusts and chips, chemical residues, spent solvents and stripping solutions, and discarded equipment and materials. Many of the products and wastes associated with painting operations represent a potential chemical or suspended solids pollutant source for storm water.

BEST MANAGEMENT PRACTICES

- Perform painting operations indoors with proper ventilation and emission controls.
- Do not allow solvents or wash water from painting equipment cleaning operations to discharge to storm drains.
- Evaluate efficiency of spray equipment to minimize waste overspray.
- Use only non-halogenated solvents.
- Store containers of paint and solvents indoors.
- Empty containers with residual paint must closed and stored such that they are not exposed to precipitation.
- Support equipment must be stored indoors or on a paved surface with use of drip pans and absorbent materials to collect drips and leaks.
- Waste materials must be disposed according to local, state, and federal regulations.
- If storm drains are in the immediate vicinity of painting or paint stripping operations, utilize catch basin inserts and storm water management devices to minimize discharge to storm water.

Ted Stevens Anchorage International Airport	BMP 27 (continued) Vehicle Painting
Applicability: This BMP applies to reducing exposure of pollutants associated with the painting vehicles	

BEST MANAGEMENT PRACTICES (continued)

- Inspect parts prior to painting to ensure they are dry and prepared properly to accept paint.
- Comply with good housekeeping, maintenance, and inspections as outlined in BMP 1 and co-permittee's SWPPP.
- Comply with practices as outlined in BMP 11.
- Comply with training as outlined in BMP 2.
- Comply with spill prevention and response as outlined in BMP 43.

Ted Stevens Anchorage International Airport	BMP 28 Vehicle Washing
Applicability: This BMP applies to reducing exposure of pollutants associated with the washing of vehicles	

TARGETED ACTIVITIES

- Vehicle washing.
- Equipment washing.
- Equipment degreasing.

KEY APPROACHES

- Do not discharge wash waters to storm drains.
- Utilize off-site commercial washing facilities.
- Use dry washing techniques.
- Recycle wash water or discharge appropriately.
- Cover catch basins.
- Provide employee training in spill prevention and response and storm water pollution prevention.

PURPOSE

Minimize or reduce debris/fluids that may impact storm water during vehicle washing.

BEST MANAGEMENT PRACTICES

- Use designated wash areas indoors, or outdoors covered and bermed, to prevent contamination of storm water by contact with wastes.
- Filter and recycle wash water where practical.
- Use "dry" washing and surface preparation techniques where feasible. Remove all materials (i.e., drippings and residue) using vacuum methods and dispose of properly.
- Provide secondary containment for containers of washing and steam cleaning additives, if used
- Use drain mats to cover catch basins within the vicinity (50 ft) during wash activity and comply with BMP 11.
- Use biodegradable phosphate-free detergents.
- Keep washing area clean and free of waste.
- Include proper signage to prohibit the discharge of waste oils into the drains.
- Collect and discharge wash water to an approved treatment facility (sanitary sewer system) through a permitted connection.
- Comply with good housekeeping, maintenance, and inspections as outlined in BMP 1 and co-permittee's SWPPP.
- Comply with training as outlined in BMP 2 and spill prevention and response as outlined in BMP 43.

Ted Stevens Anchorage International Airport	BMP 29 Vehicle Parking
Applicability: This BMP applies to reducing exposure of pollutants associated with the parked vehicles including ground equipment, bus, and commercial vehicle parking areas including car rental facilities, and wrecked vehicle storage	

TARGETED ACTIVITIES

- Vehicle parking.

KEY APPROACHES

- Do not park vehicles within 20 feet of storm drains if possible.
- Immediately clean up spills and leaks.
- Immediately repair leaking vehicles.
- Provide employee training in spill prevention and response and storm water pollution prevention.

PURPOSE

Minimize or reduce debris or fluids from vehicles that may impact to storm water.

BEST MANAGEMENT PRACTICES

- Do not park vehicles within the vicinity (20 feet) of storm drain system if possible.
- Park vehicles indoors when possible.
- Prior to long term storage of vehicles, all fuel, engine oil, transmission fluid, antifreeze, and any other fluids should be drained.
- Where a vehicle part is intended for reuse, fluids may remain in the equipment and protect against corrosion, provided the exterior is cleaned and all other protections to prevent leakage are in place.
- Wrecked or out of service vehicles should be stored under an overhang, canopy, and tarp or otherwise protected to prevent exposure to storm water, if feasible.
- Never flush spilled materials into the storm drain system.
- Immediately conduct maintenance and repairs of leaking vehicles. Where immediate maintenance is not practical, use a drip pan to contain leaking fluids until the vehicle can be repaired.
- Comply with good housekeeping, maintenance, and inspections as outlined in BMP 1 and co-permittee's SWPPP.
- Comply with training as outlined in BMP 2.
- Comply with spill prevention and response as outlined in BMP 43.

Ted Stevens Anchorage International Airport	BMP 30 Construction
Applicability: This BMP applies to reducing exposure of pollutants associated with construction activities that disturbs less than one acre	

TARGETED ACTIVITIES

- Construction activities that disturb less than 1 acre.

KEY APPROACHES

- Practice good housekeeping.
- Install and maintain erosion and sediment controls.
- Provide employee training in spill prevention and response and storm water pollution prevention.

PURPOSE

This BMP applies to construction that **disturbs less than one acre** and is not intended to serve as a comprehensive summary of all applicable construction BMPs. To protect receiving water quality from impacts due to construction activities. Of paramount importance is erosion control and to prevent sediment infiltration into the storm drain system. Construction activity at ANC that disturbs one acre, or more must comply with the Alaska Department of Environmental Conservation's Construction General Permit and requires the development and implementation of a project-specific construction SWPPP. The permit can be found on the following website:
http://dec.alaska.gov/water/wnpspc/stormwater/sw_construction.htm

BEST MANAGEMENT PRACTICES

- Practice good housekeeping.
- Implement BMPs for controlling the discharge of pollutants in storm water from vehicles and equipment used during construction and any pollutants that may be generated during excavation and dewatering activities. Contractor shall be equipped with spill kits, berms, catch basin inserts, erosion controls such as storm wattles, and secondary containment where/when required.
- As appropriate, implement appropriate erosion control BMPs such as:
  - ✓ Slope stabilization.
  - ✓ Structural controls to divert storm water.
  - ✓ Sediment controls such as silt fences, storm drain inlet protection, and street sweeping.
- Reasonable measures must be employed to prevent dust from becoming airborne such as the application of water to dampen the dust.
- Remove sediment from controls on a regular basis.

Ted Stevens Anchorage International Airport	BMP 30 (continued) Construction
Applicability: This BMP applies to reducing exposure of pollutants associated with construction activities that disturbs less than one acre	

BEST MANAGEMENT PRACTICES (continued)

- Implement appropriate BMPs for management of concrete, soil, and construction debris.
- Properly cover soil stockpiles and contain with perimeter controls such as berms.
- Manage contaminated material in accordance with state and federal regulations.
- Conduct weekly inspections and maintenance of erosion and sediment controls.
- Comply with good housekeeping, maintenance, and inspections as outlined in BMP 1 and co-permittee's SWPPP.
- Comply with training as outlined in BMP 2.
- Comply with spill prevention and response as outlined in BMP 43.

PROHIBITIONS

- Equipment and vehicle washing unless fully contained and wash waters are completely captured and disposed of off-site.

Ted Stevens Anchorage International Airport	BMP 31 Contract Airport-Related Services
Applicability: This BMP applies to reducing exposure of pollutants associated with activities performed by contractors or vendors who perform services for Co-Permittees	

TARGETED ACTIVITIES

- Aircraft, vehicle, equipment maintenance.
- Aircraft and vehicle fueling.

KEY APPROACHES

- Co-permittees shall issue advisory notice to contractor/vendor and attach applicable BMPs.

PURPOSE

To prevent or reduce the discharge of pollutants to storm water related to activities performed by contractors or vendors who perform services for Co- Permittees.

BEST MANAGEMENT PRACTICES

- Contractors shall utilize Good Housekeeping practices for services they provide to Co-Permittees under contract (Refer to BMP 1).
- Co-Permittees shall issue advisory to vendors and/or contractors that ANC is subject to the regulatory requirements of the APDES Storm Water Permit and the provisions of the Clean Water Act.
- The advisory shall state that all efforts shall be made by the contractor/vendor and that applicable Best Management Practices shall be implemented while performing services at the Airport.
- Contractors shall utilize all BMPs for services they provide to Co-Permittees under contract as determined by the Co-Permittee.
- Regardless of service, all contractors must comply with spill prevention and response outlined in BMP 43.

Contractor/Vendor Advisory Template is provided on the next page.

Contractor/Vendor Advisory
Ted Stevens Anchorage International Airport APDES Storm Water Permit XXXX

Date:

Dear Contractor/Vendor:

Ted Stevens Anchorage International Airport is required to comply with its APDES Storm Water Permit issued by the Alaska Department of Environmental Conservation. As Co-Permittees under the Permit, we are required to ensure that all contract-related services are performed in accordance with the provisions of the Permit.

While performing contract-related services on our leasehold, the following Best Management Practices shall be implemented:

BMP:

BMP:

BMP:

BMP:

BMPs received:_____ _____
Contractor/Vendor Signature Date

Co-Permittee:_____ _____
Date

Ted Stevens Anchorage International Airport	BMP 32 Security
Applicability: This BMP applies to accidental or intentional releases of pollutants caused by vandalism, theft, or sabotage	

TARGETED ACTIVITIES

- Security on airport property.

KEY APPROACHES

- Be mindful of security needs.
- Do your part to follow security procedures.
- Train personnel on following established security systems and procedures.

PURPOSE

Prevent or minimize the discharge of pollutants to storm water that may results from accidental or intentional security breaches.

BEST MANAGEMENT PRACTICES

- Be mindful of security needs:
  - ✓ Report or repair broken fences or barricades.
  - ✓ Report or correct problems with signs (missing, weathered, damaged, inappropriate, or ineffective).
  - ✓ Report evidence of trespassing or vandalism and ensure equipment in the area has not been damaged or tampered with.
- Do your part to follow and enforce security procedures.
  - ✓ If someone or something looks out of place, take a moment to verify that nothing is amiss.
  - ✓ Follow the correct procedures concerning badging and notifications.
- Establish security systems and procedures and ensure personnel are trained to follow those procedures
- Add lighting, or contact Airport personnel to add lighting, to key areas to facilitate operations as well as promote security.
- Control access to the site by:
  - ✓ Posting signs that indicate who is or is not authorized in certain areas or that otherwise direct the flow of traffic or pedestrians
  - ✓ Providing fencing or other physical barriers that impede access to vehicular or pedestrian traffic
  - ✓ Considering the placement of guard houses or security personnel
- Ensure aboveground obstacles to traffic are clearly visible.

Ted Stevens Anchorage International Airport	BMP 33 Runoff Management
Applicability: This BMP applies to slope grading, drainage swales, berms, culverts, drains, and other storm water system components	

TARGETED ACTIVITIES

- Storm water conveyance maintenance.

KEY APPROACHES

- Keep storm water conveyance system free from debris and sediment.
- Proper sloping of drainage ditches.
- Work on ditches during dry weather conditions, May to September, to allow for re-seeding and stabilization prior to winter.
- Provide employee training in spill prevention and response and storm water pollution prevention.

PURPOSE

Prevent or minimize the discharge of pollutants to storm water.

BEST MANAGEMENT PRACTICES

- Remove sediment from sediment traps and filter fences when silted to half capacity.
- Ensure drainage slopes, ditches, and culverts are free of accumulated debris and not developing erosion channels.
- Do not undercut slopes when cleaning silt and debris from storm water conveyances.
- When cleaning ditches or re-grading an area minimize the damage to existing vegetation and be sure to re-vegetate bare areas.
- Ditches should have a 2 to 1 slope, flat, or rounded bottoms.
- Clean ditches between May and September during dry weather to reduce sediment discharge and allow re-seeding and stabilization prior to winter.
- Inspect the storm water runoff system routinely, especially after a major storm or warming trend that increases storm water discharge. Repair any damage or remove any accumulated debris or sediment before next rainfall or snowmelt event.
- Inspect absorbent booms regularly and replace when necessary.
- Conduct inspections of pavement for any cracks or other irregularities that could allow contaminants to seep into the ground.
- Comply with good housekeeping, maintenance, and inspections as outlined in BMP 1 and co-permittee's SWPPP.
- Comply with training as outlined in BMP 2.
- Comply with practices as outlined in BMP 11.
- Comply with spill prevention and response as outlined in BMP 43.

Ted Stevens Anchorage International Airport	BMP 34 Spill Prevention & Response
Applicability: This BMP applies to activities related to prevention of spills including fueling operations, deicing products, lavatory service and response to these spills	

TARGETED ACTIVITIES

- Spill Prevention & Response.

KEY APPROACHES

- Establish standard operating procedures to reduce accidental releases.
- Immediately clean up spills and leaks as they occur.
- Report spills to appropriate authorities.
- Provide employee training in spill prevention and response and storm water pollution prevention.

PURPOSE

Broadly highlight spill prevention and response procedures and practices.
NOTE: Separate, site specific Spill Prevention Control and Countermeasure Plan (SPCC) can be obtained from ANC's Environmental Section. Co-permittees must develop their own site-specific procedures in accordance with Alaska Department of Environmental Conservations requirements.

BEST MANAGEMENT PRACTICES

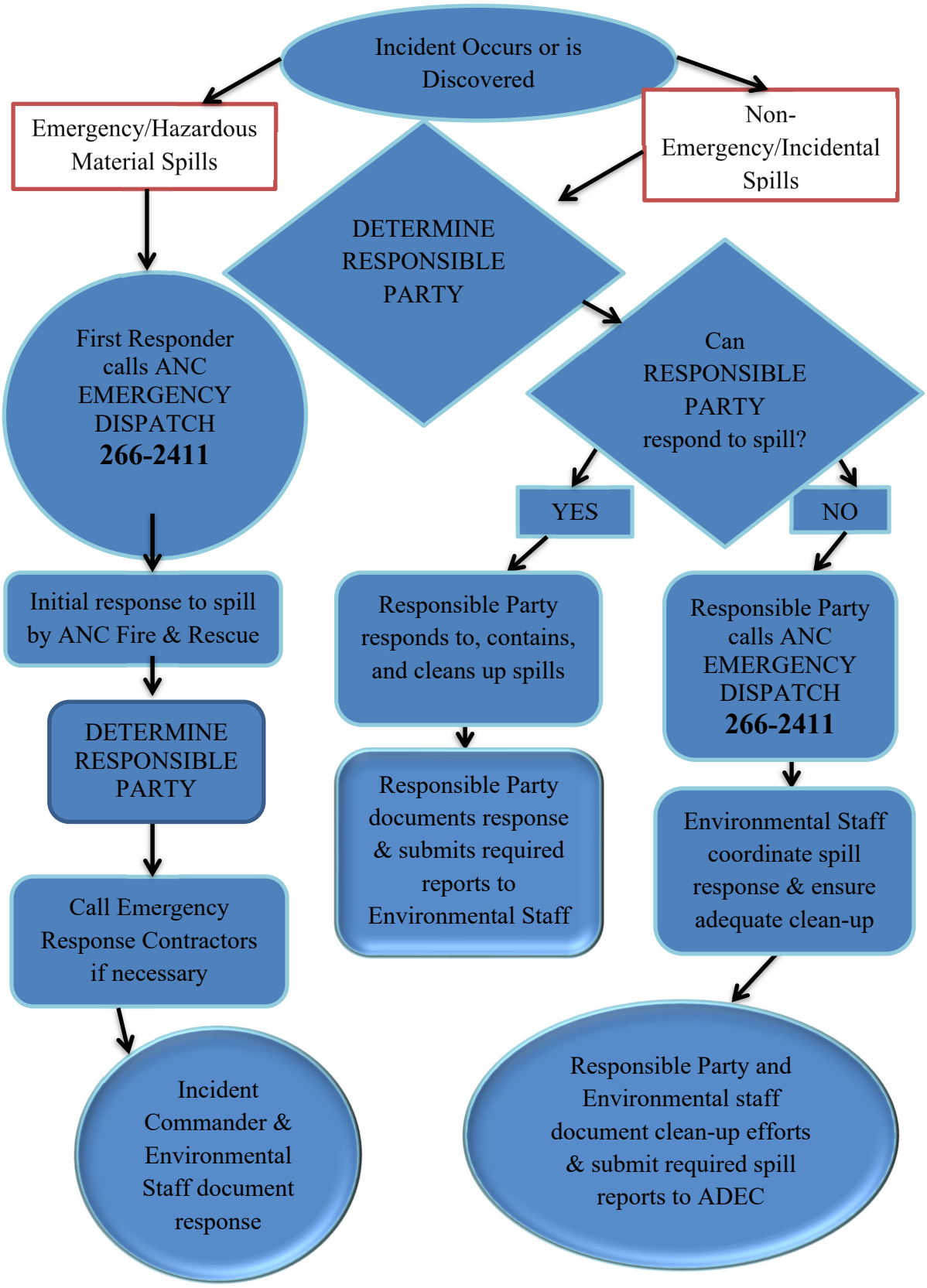
- Standard operating procedures should be in place to train employees and reduce or eliminate accidental releases.
- Avoiding spills and leaks is preferable to cleaning them up. Special attention should be given to activities and areas where spills are likely to occur such as:
  - ✓ Fuel loading and unloading areas
  - ✓ Storage areas for deicing materials
  - ✓ Equipment maintenance activities
  - ✓ Dust or particulate generating processes
  - ✓ Waste disposal activities (including aircraft lavatory servicing)
- Maximize recycling, reclamation, and/or reuse of materials to reduce the volume brought into the facility.
- Install leak detection devices and overflow controls.
- Use filling and material transfer procedures that minimize the risk of spills.
- Maintain adequate supplies of spill response equipment and materials in accessible locations near areas where spills may occur.
- Supply adequate spill response information, equipment, and materials on vehicles.

Ted Stevens Anchorage International Airport	BMP 34 (continued) Spill Prevention & Response
Applicability: This BMP applies to activities related to prevention of spills including fueling operations, deicing products, lavatory service and response to these spills	

BEST MANAGEMENT PRACTICES (continued)

- Immediately clean up spills and leaks using absorbent material and dispose of properly.
- Spill Control Kits should be present on the mobile fueling trucks, near fueling operations and all storage areas.
- Never flush spilled materials into storm drain system.
- Where drip pans are used:
  - ✓ Ensure drip pan will not be disturbed
  - ✓ Place drip pans on secure and level surfaces
  - ✓ Locate drip pans so there is little risk of their being overturned by pedestrian or vehicular traffic
  - ✓ Ensure the drip pan is heavy enough not to be overturned by wind or is otherwise anchored in place
  - ✓ Ensure drip pans are not located where precipitation can add to the accumulated liquid and cause overflow
  - ✓ Place drip pans so they can be seen (checked for liquid level) and handled easily for emptying
  - ✓ Inspect, empty, and clean drip pans on a regular basis to prevent overflowing; dispose of accumulated liquids and cleaning materials properly.
- See the flow chart on the following page for proper notification response.
- Comply with good housekeeping, maintenance, and inspections as outlined in BMP 1 and co-permittee's SWPPP.
- Comply with training as outlined in BMP 2.
- Comply with applicable Spill Prevention Control and Countermeasures (SPCC) regulations (40 CFR Part 112.7).

Ted Stevens Anchorage International Airport



REPORT ALL

OIL AND HAZARDOUS SUBSTANCE SPILLS

ALASKA LAW REQUIRES REPORTING OF ALL SPILLS

ANC
Ted Stevens
Anchorage
International Airport

Contact:

Airport Operations (24 hrs) 266-2600
Airport Environmental 266-2546
fax: 266-2622

and

Alaska Department of Environmental Conservation

ADEC Central Area Response Team 269-3063 fax: 269-7648
Outside normal business hours, call 1-800-478-9300

Ted Stevens Anchorage International Airport	BMP 35 Landspreading Area
Applicability: This BMP applies to activities related to soil disposal in the Landspreading Area	

The landspreading area is in an isolated area of ANC and any runoff from the area would enter Outfall E. In order to minimize erosion and minimize changes in the quality of stormwater discharges from the area, the following best management practices will be in place:

- Soil disposal in the landspreading area will be limited to discreet areas.
- Storm water discharges will be controlled using straw wattles that will be placed downstream.
- When soil disposal takes place protection of Outfall E will be with perimeter controls such as straw wattles. Storm water retention and treatment will be via grassy swales and vegetated areas prior to entry into storm water system.
- After soil disposal is complete, effected site will be track walked and vegetated for stabilization.

Dust will be controlled by wetting the dirt in the area with water trucks if needed and street sweepers will be used to control any dust/dirt along haul route.

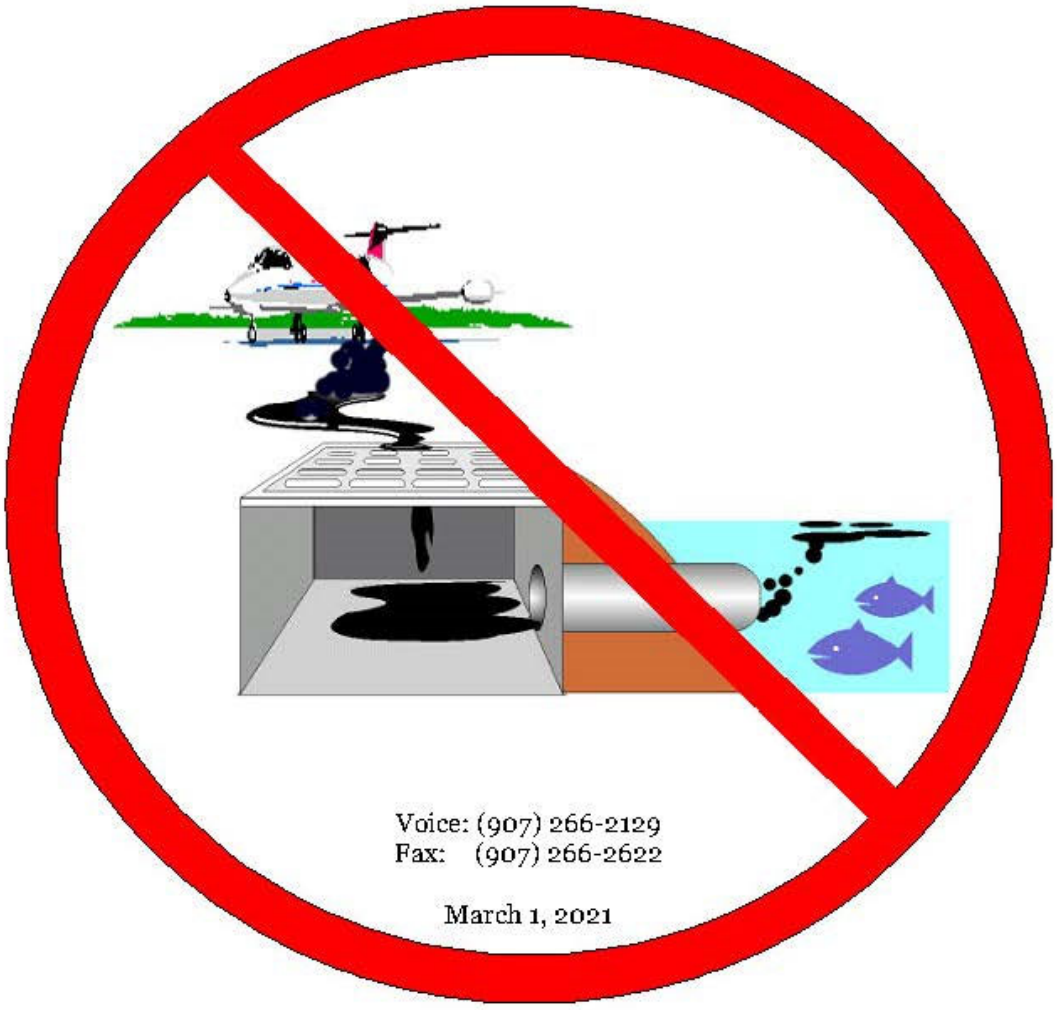
APPENDIX G

SPILL PREVENTION, CONTROL AND COUNTERMEASURE PLAN
(PERTINENT SECTION ONLY)

Spill Prevention Control and Countermeasure Plan

Ted Stevens Anchorage International Airport

Anchorage, Alaska



Voice: (907) 266-2129
Fax: (907) 266-2622

March 1, 2021

Spill Prevention Control and Countermeasure Plan
Compliance Inspection Review History

In accordance with 40 CFR 112, a review and evaluation of this SPCC Plan is required at least once every five (5) years. As a result of this review and evaluation, this SPCC Plan will require amendment within six (6) months of the review to include more effective prevention and control technology if (1) such technology will significantly reduce the likelihood of a spill event from the facility, and (2) such technology has been field-proven at the time of review. Any amendment to this SPCC Plan shall be certified by a Registered Professional Engineer within six (6) months after a change in the facility design, construction, operation, or maintenance occurs which materially affects the facility's potential for the discharge of oil into or upon navigable waters of the United States or adjoining shorelines. Non-technical SPCC Plan revisions are permitted by the facility Owner/Operator without engineer certification.

Management Approval

The Ted Stevens Anchorage International Airport (ANC) is committed to the prevention of discharges of oil to navigable waters and the environment, and maintains the spill prevention control and countermeasures readiness in accordance with 40 CFR 112 through regular review, updating, training, and implementation of this SPCC Plan for the:

- ANC Owned and/or Operated Bulk Storage Containers

I hereby certify that this SPCC Plan will be implemented as described herein.

Authorized Representative	Signature	Title	Date
Jim Szczesniak		Airport Manager	5/10/21

Registered Professional Engineer Certification

I have reviewed the SPCC Plan for this facility and attest that (1) I am familiar with the requirements of this part; (2) either myself or my agent has visited and examined the facility; (3) this SPCC Plan has been prepared in accordance with good engineering practice, including consideration of applicable industry standards, and with the requirements of 40 CFR 112; (4) procedures for required inspections and testing have been established; and (5) this SPCC Plan is adequate for this facility, pending implementation of items listed in Appendix D.

Engineer: Jennifer Carle, PE

Signature:

Registration Number: CE12167

Registration State: Alaska

Date: 5/21/21

(Professional Seal)

If a release of oil to ground or water occurs that might threaten navigable waters of the United States, the following immediate notifications are required:

- National Spill Response Center
  (800) 424-8802

- Alaska Department of Environmental Conservation (ADEC)
  (800) 478-9300

If a release to the ground or water should occur that does **not** threaten navigable waters of the United States, notification to the ADEC is required as follows:

Release to Land

- Any release of oil in ***excess of 55 gallons*** must be reported as soon as the person has knowledge of the discharge.

- Any release of oil in ***excess of 10 gallons but less than 55 gallons*** must be reported within 48 hours after the person has knowledge of the discharge.

- A person in charge of a facility or operation shall maintain and provide to the Department on a monthly basis, a written record of any discharges of oil ***from 1 to 10 gallons***.

Release to Impermeable Secondary Containment Areas

- Any release of oil ***in excess of 55 gallons*** must be reported within 48 hours after the person has knowledge of the discharge.

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List of Abbreviations

ADEC	Alaska Department of Environmental Conservation
ADOT	Alaska Department of Transportation
A/G	Aboveground
ANC	Ted Stevens Anchorage International Airport
AOA	Air Operations Area
ARFF	Aircraft Rescue and Fire Fighting
ASIG	Aircraft Service International Group (Anchorage Operations)
AST	Aboveground Storage Tank
AWWU	Anchorage Water and Wastewater Utility
CFR	Code of Federal Regulations
F.O.R.	Fuel Oil Return
F.O.S.	Fuel Oil Supply
FRP	Facility Response Plan
KAc	Potassium Acetate
LOA	Landside Operations Area
OSWER	EPA Office of Solid Waste and Emergency Response
POL	Petroleum Oils and Lubricants
SPCC	Spill Prevention Control and Countermeasure
TSAIA	Ted Stevens Anchorage International Airport
USEPA	United States Environmental Protection Agency
U/G	Underground
UST	Underground Storage Tank
WPS	Watershed Protection Station

Overview

This Spill Prevention Control and Countermeasure (SPCC) Plan has been prepared specifically to address only those facilities owned and operated by the State of Alaska Department of Transportation & Public Facilities at the Ted Stevens Anchorage International Airport (ANC). This plan covers SPCC-related issues for the bulk storage of petroleum fuels, oils and lubricants (POLs), and other hazardous substances and products stored and used by ANC as well as hazardous wastes generated by the ANC operations. Management of regulated hazardous substances, products and wastes is addressed under separate ANC documents.

This plan does not, nor is intended to, address SPCC requirements for tenants who conduct business, park aircraft or otherwise use ANC property for their purposes.

ANC lease stipulations require these leaseholders independently prepare and maintain SPCC and other environmental control documents, as required.

For SPCC Plan presentation purposes, the ANC owned and/or operated bulk storage containers are divided into six (6) zones for SPCC planning convenience. The zones were defined based on ANC facility security access requirements, particularly for AOA operations within the active terminal or flight line areas:

- Equipment Storage and Supplies Zone;
- AOA Terminal Zone;
- Aircraft Rescue and Fire Fighting (ARFF) Zone;
- Vehicle Fueling and Potassium Acetate (Vehicle Fueling) Zone
- Watershed Protection Zone
- Kulis Zone

Within each zone, SPCC regulated bulk storage containers are identified and discussed. In addition to SPCC regulated fluids, the plan includes details on specific non-SPCC regulated bulk storage containers, such as potassium acetate (KAc) deicing fluids and traffic paint. The information presented on these containers is for internal training and planning purposes.

Regulations established under 40 CFR 112.1 exempt certain state [and federal] regulated Underground Storage Tank (UST) from the UST volume threshold determination. Nearly all ANC owned and/or operated UST volumes inspected for this SPCC Plan are subject to State of Alaska UST regulations, thus would be exempt from SPCC planning requirements. Again, the information presented on these regulated USTs is to provide continuity for SPCC and emergency spill response training and planning.

This SPCC Plan is prepared to meet regulator needs and serve as an internal planning and control document for ANC personnel. ANC owns and operates a wide variety of SPCC-regulated bulk storage containers in each of the “zones” listed above. To maintain consistency in field terminology, most bulk storage containers discussed in this SPCC Plan will use the following general definitions.

- Aboveground Storage Tanks (ASTs); generally larger volume (500-gallon and greater) primarily for diesel fuel, gasoline and potassium acetate. These are termed "**ASTs**" in this SPCC Plan.

- Underground Storage Tanks (USTs); generally larger volume (1,000-gallon and greater) primarily for diesel fuel. These are termed "**USTs**" in this SPCC Plan.

- Dispensers for vehicle fluids (oil, hydraulic fluid, antifreeze, windshield washer fluid) are located inside the three warm storage buildings. These are termed "**lube dispensers**" in this SPCC Plan. Each lube dispenser contains two or three 70-gallon tanks for storage of these fluids.

- 55-gallon drums of new or used SPCC-regulated fluids. These are termed "**drums**" in this SPCC Plan.

- Day tanks associated with emergency generators for storing diesel fuel; approximately 25 to 100-gallon volume each. These are termed "**day tanks**" in this SPCC Plan.

- Separate oil storage tanks associated with subfloor oil/water separators for temporary storage of oil recovered from floor drains at the oil/water separators. These are termed "**oil/water separator tanks**" in this SPCC Plan.

These storage tanks and containers, although at separate locations, are compiled under a single SPCC Plan since they are:

- Located relatively near each other.
- Managed by the same ANC Responsible-in-Charge person.
- Serviced by the same ANC maintenance crews for AST inspections.
- Managed under the same release response action protocols.

All bulk storage containers identified in this SPCC Plan are owned and operated by ANC. None of the facilities meet the threshold requirements specified under the Certification of the Applicability of Substantial Harm Criteria Checklist for a Facility Response Plan (FRP) per 40 CFR 112.20. The completed checklist is attached in Appendix A for the ANC.

Summary of Site Descriptions

ANC is the largest airport in Alaska. The principal mission of ANC is the safe operation of an airport and associated facilities in support of domestic and international air commerce. ANC has two main East-West Runways (10,600 feet long), a North-South Runway (11,584 feet long), a seaplane runway (4,540 feet useable), and a gravel airstrip (2,200 feet long). ANC staff manage over 2 million gross square feet in over 40 buildings including the largest state-owned building in Alaska (South Terminal) and four of the top 10 state facilities by square footage. Major operations include local, domestic and international passenger and air cargo operations, passenger rail transfer operations, and a wide variety of air commerce support services. The airport has been in operation at this location since approximately 1950.

Stormwater and surface drainage from the majority of developed areas at ANC are generally directed from a series of catch basins, storm sewers and open channels through one of three Watershed Protection Stations (spill stations) that are designed to intercept, contain and recover any oils before entering either Lake Hood, Lake Spenard (fresh water) or Cook Inlet (marine waters). ANC has implemented a comprehensive site planning effort to direct surface drainage through these Watershed Protection Stations. Currently, most surface drainage east of the north-south runway and north of the east-west runway is directed though these Watershed Protection Stations.

The ANC facility has a large volume of SPCC regulated oil. Again, this SPCC Plan addresses only those bulk storage containers owned and/or operated by ANC. All regulated bulk storage containers are primarily used for diesel fuel and gasoline. Summary bulk storage volumes of SPCC regulated oil include:

ANC Bulk Storage Container System	Volume (U.S. Gallons)	
Oil in Aboveground Storage Tanks (ASTs)	44,240	
Oil in Underground Storage Tanks (USTs)*	43,010	
Potassium Acetate*	200,000	
Oil in Haz Mat Storage (drums)	150	est.
Traffic Paint (ASTs) *	3,000	est.
Total	290,400	
* indicates non-SPCC regulated item		

As discussed previously, this SPCC Plan has grouped bulk storage containers into six general zones for presentation purposes. Major groups and bulk storage volumes encountered during SPCC inspections are summarized below.

Equipment Storage and Supplies Zone

This zone consists of bulk storage containers located at the Equipment Storage and Supplies Complex at 3950, 4000, 4055, 4100 and 4155 Aircraft Drive (Figure 1, Figures ES-1 to ES-5). The Equipment Storage and Supplies Zone is characterized by four exterior ASTs for fuel (3

diesels, 1 gasoline) and exterior storage for traffic striping paint and hazardous materials (hazmat) for disposal.
The primary SPCC regulated containers in this zone are three 6,000-gallon double-walled ASTs that were previously used for gasoline and diesel fuel storage at the former vehicle fueling station. This fuel station strictly for State of Alaska vehicles is no longer in use, however, until permanently closed, the three ASTs are considered SPCC-regulated tanks as they may be used to store fuel if needed. The tanks only contain residual fuels currently.

A 1000-gallon double-walled tank containing diesel fuel for a backup emergency generator is located on the south end of the former equipment maintenance shop.

All liquid hazardous materials and petroleum products stored for disposal are typically kept inside a secure fenced yard which has hazardous materials storage building (Chem-Stor building) that is constructed with integral secondary containment. Non-regulated materials and non-regulated environmental wastes slated for disposal are also stored within the hazmat yard.

Both the North and South Warm Storage buildings contain dispensers for vehicle fluids (motor oil, hydraulic oil, windshield washer fluid & antifreeze).

Oil / water separators within the former Airfield Maintenance Facility building and heavy equipment warm storage buildings are considered part of the SPCC containment system. Accordingly, USTs classified as oil / water separator underground storage tanks are not subject to SPCC-planning requirements at the ANC facility.

Summary bulk storage volumes of SPCC regulated oil include:

Equipment Storage and Supplies Zone Bulk Storage Container System	**Volume (U.S. Gallons)**	
Oil in Aboveground Storage Tanks (ASTs)	22,810	
Oil in Underground Storage Tanks (USTs)*	400	
Oil in Haz Mat Storage (drums)	150	Est.
Traffic Paint (ASTs) *	3,000	Est.
Total	26,360	
* indicates non-SPCC regulated item		

Air Operations Area (AOA) Terminal Zone (Secure Access Zone)
The AOA Terminal Zone fuel storage consists of UST's and associated day tanks for emergency generators in the North and South Passenger Terminals (Figure 1, Figures TZ-1 to TZ-5). The Airfield Lighting Vault, with its associated emergency generators, also has an exterior AST for diesel fuel storage and day tanks inside the buildings.

The South Terminal also has a 500-gallon diesel AST (AST # 28) located inside room C1569B. This AST serves as a backup fuel supply for the building heating, ventilation and air conditioning systems during an emergency. (Figure TZ-3).

Summary volumes encountered during SPCC site inspections are summarized below:

AOA Terminal Zone Bulk Storage Container System	Volume (U.S. Gallons)
Oil in Aboveground Storage Tanks (ASTs)	7,100
Oil in Underground Storage Tanks (USTs) *	2,000
Total	9,100

* indicates non-SPCC regulated item

ARFF Zone

The ARFF Zone is in a secure area at the end of DeHavilland Drive, northeast of the intersection of taxiways "Romeo" and "Victor" (Figure 1, Figures AR-1 to AR-2). The only exterior bulk storage containers within the ARFF Zone is a 500-gallon double walled AST outside Electrical Regulator Vault No. 2. The ARFF zone also has an UST and day tanks for the generators in both the ARFF building and Electrical Regulator Vault. Site drainage is generally over paved surfaces to storm drainage systems that flow easterly along roadways to the Postmark Drive interceptor system or possibly northerly to wetlands areas. Summary volumes of oil storage are shown below:

ARFF Zone Bulk Storage Container System	Volume (U.S. Gallons)
Oil in Aboveground Storage Tanks (ASTs)	700
Oil in Underground Storage Tanks (USTs) *	2,610
Total	3,310

* indicates non-SPCC regulated item

Vehicle Fueling Zone

The Vehicle Fueling Zone consists of the Vehicle Fueling Facility, Runway Deicer and Sand Storage Building, and the Airfield Equipment Maintenance Facility. These facilities are located immediately north of taxiway" Victor" (Figure 1, Figures VF-1, VF-2, VF-3, VF-4 and VF-5).

All containers and fluids located at the Vehicle Fueling Facility and the Sand/ Storage Building are SPCC exempt but are included for planning purposes. The bulk storage containers at the Vehicle Fueling Facility and Sand & Runway Deicer Storage Building consist of three Potassium Acetate (KAc) deicing fluid ASTs and three UST's with fuel for vehicles and heavy equipment. Potassium Acetate is not a SPCC-regulated fluid. The USTs are not SPCC-regulated items but are included for planning purposes.

The Airfield Equipment Maintenance Facility is located immediately east of the Vehicle Fueling Facility. The Airfield Equipment Maintenance Facility includes a heavy equipment shop, light duty equipment shop, seven maintenance bays, lube bay, wash bay, welding shop, machine shop, parts storage room, and lube storage room and dispensing system, and office areas.

A warm storage building for equipment parking is also incorporated into the Airfield Maintenance Facility. The Airfield Maintenance Facility has the following SPCC regulated bulk storage

containers: a 500-gallon diesel double-walled interior AST located in the Boiler Room; three oil water separators located in the heavy equipment shop, warm storage building and boiler room; five 55-gallon drums of motor and lube oils located in the Light Duty Shop lube storage room; three 55-gallon drums of used oil and fifteen 55-gallon drums of lube oil with hydraulic pumps located in the Heavy Duty Shop (number of drums will vary). The Airfield Equipment Maintenance Facility also has a Lube Storage Room with eight 250-gallon single walled ASTs and 55-gallon drums of motor oil and/or other vehicle fluids. The quantity of drums stored in these locations varies depending on operational needs.

Site drainage for all facilities in the Vehicle Fueling Zone is over paved surfaces south and easterly to storm drainage systems that flow easterly to the Victor Watershed Protection Station. Drainage in the vicinity of the Vehicle Fueling Zone (Airfield Maintenance Facility) is also over paved surfaces but on the north side of the facility is expected to flow north to storm drains along DeHavilland Avenue (Figures VF-2 and VF-3). These storms drains lead to the Postmark Drive storm drain system. Summary volumes of oil storage are shown below:

Vehicle Fueling Zone Bulk Storage Container System	**Volume (U.S. Gallons)**
Oil in Aboveground Storage Tanks (ASTs)	9,765
Oil in Underground Storage Tanks (USTs) *	38,000
Potassium Acetate (ASTs) *	150,000
Total	197,765

* indicates non-SPCC regulated item

Watershed Protection Zone

ANC maintains three separate watershed protection stations, or spill stations, identified as the Victor, Lake Hood and Lake Spenard stations (Figure 1). These stations are located over the primary drainage channels leading to stormwater outfalls. The spill stations are intended to prevent oil and other contaminants from entering Lake Hood, Lake Spenard and/or Cook Inlet. Each spill station is equipped with a floating weir to contain any oil and an oil skimmer to remove any oil before it reaches the lakes or Cook Inlet. The Victor Spill station has a larger oil collection AST due to its proximity to aircraft fueling operations. The spill stations are checked regularly, and the skimmers are operated any time a 'sheen' is observed. (Figure 1).

No oil or other SPCC-regulated materials are stored at these facilities and once activated, are monitored during recovery operations. Owing to their intended use and no storage of SPCC-regulated materials, these bulk storage containers are not considered SPCC-regulated systems. Summary volumes of potential oil storage in this area are shown below:

Watershed Protection Station Bulk Storage Container System	**Volume (U.S. Gallons)**
Aboveground Storage Tanks Capacity (ASTs) *	865
Total	865

* indicates non-SPCC regulated item

Kulis Zone

The former Kulis Air National Guard Base occupies an area of approximately 130 acres and is located directly south of runway 25L. Formerly, the base was the home of the 176th wing of the Alaska Air National Guard until their operations were relocated to Joint Base Elmendorf Richardson (JBER). In 2011 the property was transferred over to the Ted Stevens International Airport. Previous versions of this SPCC plan detailed included buildings and fuel storage tanks that are no longer owned by the State of Alaska and information regarding those items have been deleted from this version.

There are two exterior ASTs within the Kulis zone. Both ASTs are for emergency generators with associated indoor day tanks. The two ASTs located outside are at buildings 00003-1 (hangar 3), and 00042-2 (fire station).

Drainage within the Kulis Zone flows into five separate basins around the site. These basins and flow patterns are illustrated in Figure E1. Generally, drainage from the site flows north from Raspberry Road towards runway 25L.

Kulis Zone Bulk Storage Container System	Volume (U.S. Gallons)
Oil in Aboveground Storage Tanks (ASTs)	3,000
Oil in Underground Storage Tanks (USTs) *	0
Total	3,000

* indicates non-SPCC regulated item

112 Oil Pollution Prevention

40 CFR 112 (July 17, 2002) requires facilities meeting certain criteria to prepare site-specific SPCC Plans to reduce the likelihood of releases of oil to navigable waters of the United States. Based on observed conditions, the ANC facility requires preparation of a site-specific SPCC Plan under 40 CFR 112.

This SPCC Plan is subject to requirements under 40 CFR 112.1 through 112.8, with particular emphasis on Sections 40 CFR 112.7 (General Information) and 40 CFR 112.8 (SPCC Plan Requirements for Onshore Facilities), as detailed in the following sections.

112.7 General Requirements for SPCC Plans

112.7 (a) General Information

ANC is generally located at the western margin of the Municipality of Anchorage, bounded roughly by Cook Inlet to the north and west and residential / commercial areas along the east

and south. The facility encompasses approximately 4,750 acres roughly centered around the ANC Control Tower located at:

N 61° 10.6'
W 149° 58.8'
Elevation: 144 ft MSL (approximate)

The ANC owned and/or operated bulk storage containers identified in this SPCC Plan are summarized on the following tables. While several ANC owned and operated bulk storage containers listed below are not considered subject to SPCC Planning, ANC has elected to include them within this SPCC Plan for inventory and general emergency response procedures. The following summary tables present total fluid volumes for drum storage areas and new lube dispensers inside equipment shops rather than listing inventory counts as these areas are expected to have varying drum counts over the term of this SPCC plan.

Accordingly, of the bulk storage containers identified in the following summary tables, 29 separate bulk storage containers, are considered subject to SPCC planning requirements at this time. The following tables detail the bulk storage containers inspected for this SPCC Plan. *Non-SPCC regulated bulk storage containers are listed in an italicized lighter font.*

Since the ANC facility owned and/or operated bulk storage containers do not require FRPs, 40 CFR 112.7(a) (3) requires addressing specific items as below:

Type of Oil and Compatibility
The type of oil, size and secondary containment methods for the AST and associated piping are summarized in the following tables. ASTs and piping are compatible with the contained fluids. None of the SPCC regulated ASTs have had a reported release. At the time of SPCC inspection, no oil was observed on the pavement, gravel fill or concrete floors under ASTs.

Several ANC equipment maintenance and storage buildings have subfloor oil / water separator systems installed. While these 'process flow through' systems are generally exempt from SPCC planning requirements, ANC relies on several of these oil / water separators and their separate subfloor tanks as part of their system for intercepting oil spilled inside the buildings. Since these oil / water separator systems (primary separator and adjacent oil storage UST) are considered an integral element SPCC plan to protect waters of the United States, they are listed as SPCC-regulated bulk storage containers in this SPCC Plan.

Table 1:
Equipment Storage and Supplies Zone Bulk Storage Container Inventory Summary

ANC Tank ID	Volume (US Gallons)	Product	Year Tank / Piping Installed	Secondary Containment	Overfill Alarm	Automatic Shut-off Device	Visual Fill Gauge	Interstitial Monitoring
South Warm Storage Building (Interior)								
17 (UST) (Oil/Water Separator)	*110*	*Used Oil*	*1971 **	*No*	*No*	*No*	*No*	*No*
ASTs (Lube Dispenser w/3ea. - 70-gallon tanks)	210	New Lube Oil	1995 *	√**	No	No	No	No
North Warm Storage Building (Interior)								
18 (UST) (Oil/Water Separator)	*180*	*Used Oil*	*1971 **	*√***	*No*	*No*	*No*	*No*
ASTs (Lube Dispenser w/3ea. - 70-gallon tanks)	210	New Lube Oil	1995 *	√**	*No*	*No*	*No*	*No*
Former Vehicle Fueling ASTs (North Warm Storage Building Exterior)								
26 (AST) (Diesel Fuel Tank)	6,000	Diesel	1992	√	√	√	√	√
25 (AST) (Diesel Fuel Tank)	6,000	Diesel	1992	√	√	√	√	√
24 (AST) (Gasoline Fuel Tank)	6,000	Unleaded Gasoline	1992	√	√	√	√	√
Former Airfield Maintenance Equipment Building (Interior, except for Genset AST)								
10 (AST) (Genset Fuel Tank)	1,000	Diesel (exterior)	1998	√	√	√	√	√
AST (Genset Day Tank)	100	Diesel	1995 *	√**	√	No	No	No
16 (UST) (Oil/Water Separator)	110	Used Oil	1971 *	√**	No	No	No	No
Central Region Warehouse (Exterior)								
AST under Trailer	280	Diesel	1990 *	No	No	No	No	No
6 (AST) (greenhouse heating oil)	1,000	Diesel	1997	√	√	√	√	√
Airfield Paint Storage Yard (Exterior)								
ASTs (UN31HA1 containers)	*3,000 (est)*	*Paint*	2003	*√***	*No*	*No*	*No*	*No*

Table 2: AOA Terminal Zone Bulk Storage Container Inventory Summary

Tank ID	Volume (US Gallons)	Product	Year Tank / Piping Installed	Secondary Containment	Overfill Alarm	Automatic Shut-off Device	Visual Fill Gauge	Interstitial Monitoring
South Terminal (Exterior UST, Interior ASTs)								
12 A (UST) (Genset Fuel UST)	*1,000*	*Diesel*	*1997*	√	√	√	√	√
AST (Genset A Day Tank)	100 (est)	Diesel	1997 *	√**	√	No	No	No
(AST) (Genset B Day Tank)	100 (est)	Diesel	1997 *	√**	√	No	No	No
28 (AST) (backup fuel for boilers, chillers)	500	Diesel	2004	√**	√	√	√	√
North Terminal (Exterior UST, Interior AST)								
5 (UST) (Genset Fuel UST)	*1,000*	*Diesel*	*1997*	√	√	√	√	√
AST (Genset Day Tank)	100 (est)	Diesel	1997 *	√**	**No**	No	No	No
Airfield Lighting Vault (Exterior and Interior ASTs)								
25 (AST) (Exterior Genset Fuel)	6,000	Diesel	2003	√	√	√	√	√
AST (Interior Day Tank)	300	Diesel	2003	√**	√	No	No	√
AST (Interior lube oil drum)	55	Lube oil	2003	√**	No	No	No	No

* Estimated Age and/or Installation Date
** Secondary containment provided by Oil/Water Separator or Building and/or flooring construction
Italic and lighter font bulk storage containers are considered non-SPCC regulated

* Estimated Age and/or Installation Date
** Secondary containment provided by Oil/Water Separator or Building and/or flooring construction
***Used oil heater is empty, no longer in-use, and scheduled for permanent closure
Italic and lighter font bulk storage containers are considered non-SPCC regulated

Table 3: ARFF Zone Bulk Storage Container Inventory Summary

Tank ID	Volume (US Gallons)	Product	Year Tank / Piping Installed	Secondary Containment	Overfill Alarm	Automatic Shut-off Device	Visual Fill Gauge	Interstitial Monitoring
ARFF Building (Exterior UST, Interior ASTs)								
22 (UST) (Genset Fuel Tank)	*2,500*	*Diesel*	*1998*	√	√	√	√	√
(AST) (Genset Day Tank)	100 (est)	Diesel	1998 *	√**	√	√	No	No
(UST) (Oil/Water Separator)	*110 (est)*	*Used Oil*	*1990 **	√**	√	*No*	*No*	*No*
(UST) (Oil/Water Separator)	*110 (est)*	*Used Oil*	*~2007*	√**	√	*No*	*No*	*No*
Electrical Regulator Vault No. 2 (Exterior AST, Interior ASTs)								
23 (AST) (Exterior Genset Fuel)	500	Diesel	1997	√	√	√	√	√
AST (Genset Day Tank)	100 (est)	Diesel	1997 *	√**	√	√	No	No

* Estimated Age and/or Installation Date
** Secondary containment provided by Oil/Water Separator or Building and/or flooring construction
Italic and lighter font bulk storage containers are considered non-SPCC regulated

Table 4: Vehicle Fueling Zone Bulk Storage Container Inventory Summary

Tank ID	Volume (US Gallons)	Product	Year Tank / Piping Installed	Secondary Containment	Overfill Alarm	Automatic Shut-off Device	Visual Fill Gauge	Interstitial Monitoring
Vehicle Fueling Facility (Quick Turnaround) (Exterior)								
QTF-1 (UST)	*8,000*	*Unleaded Gasoline*	*2002*	√	√	√	√	√
QTF-2 (UST)	*15,000*	*Diesel Fuel*	*2002*	√	√	√	√	√
QTF-3 (UST)	*15,000*	*Diesel Fuel*	*2002*	√	√	√	√	√
Potassium Acetate [deicer] Tanks (Exterior Sand and Runway Deicer storage bldg.)								
QTF-4 (AST) (common manifold)	*50,000*	*Potassium Acetate*	*2002*	*No*	√	√	√	*N/A*
QTF-5 (AST) (common manifold)	*50,000*	*Potassium Acetate*	*2002*	*No*	√	√	√	*N/A*
QTF-6 (AST) (common manifold)	*100,000*	*Potassium Acetate*	*2012*	*No*	*Yes*	√	√	*N/A*
Airfield Equipment Maintenance Facility - Lube Storage Room (Interior ASTs)								
29 AST - BK006735	250	ATF Fluid	2005	√	*No*	*No*	√	√
30 AST - BK004281	250	Hydraulic Fluid	2005	√	*No*	*No*	√	√
31 AST -BK004283	250	80-90Wt Oil	2005	√	*No*	*No*	√	√
32 AST - BK004278	250	40Wt Oil	2005	√	*No*	*No*	√	√
33 AST - BK004282	250	15-40Wt Oil	2005	√	*No*	*No*	√	√
34 AST - BK004279	250	10-30Wt Oil	2005	√	*No*	*No*	√	√
AST - BK004280	250	Used Oil	2005	√	*No*	*No*	√	√
AST - BK004277	250	Antifreeze	2005	√	*No*	*No*	√	√
AST (Interior Lube Oil Drums)	330	New Lube Oil	2005	√	*No*	*No*	*No*	

Table 4 (continued): Vehicle Fueling Zone Bulk Storage Container Inventory Summary

Tank ID	Volume (US Gallons)	Product	Year Tank / Piping Installed	Secondary Containment	Overfill Alarm	*No*	Visual Fill Gauge	Interstitial Monitoring
Airfield Equipment Maintenance Facility (Interior ASTs) Heavy Duty Shop (Maintenance Bay)								
AST (Interior Used Oil Drums)	165	Used Oil	2005	√		*No*		
AST (Interior Lube Oil Drums)	750	New Lube Oil	2005	√		*No*		
Airfield Equipment Maintenance Facility Light Duty Shop								
AST (Interior Lube Oil Drums)	275	New Lube Oil		√		*No*		
Airfield Equipment Maintenance Facility Boiler Room								
AST (Emergency generator fuel)	500	Diesel	2005	√	√	√	√	√

* Estimated Age and/or Installation Date
** Secondary containment provided by Oil/Water Separator or Building and/or flooring construction
Italic and lighter font bulk storage containers are considered non-SPCC regulated

Table 5: Watershed Protection Zone Bulk Storage Container Inventory Summary

Tank ID	Volume (US Gallons)	Product	Year Tank / Piping Installed	Secondary Containment	Overfill Alarm	Automatic Shut-off Device	Visual Fill Gauge	Interstitial Monitoring
Victor Watershed Protection Station								
T-4 (AST)	*500*	*Used Oil*	*1998*	√	√	√	√	√
AST (Primary recovery drum)	*55*	*Used Oil*	*1998*	√	*No*	*No*	*No*	*No*
Lake Hood Watershed Protection Station								
T-6 (AST) (Emergency Only)	*100*	*Used Oil*	*1998*	√	√	√	√	√
AST (Primary recovery drum)	*55*	*Used Oil*	*1998*	√	*No*	*No*	*No*	*No*
Lake Spenard Watershed Protection System								
T-7 (AST) (Emergency Only)	*100*	*Used Oil*	*1998*	√	√	√	√	√
AST (Primary recovery drum)	*55*	*Used Oil*	*1998*	*No*	*No*	*No*	*No*	*No*

* Estimated Age and/or Installation Date
** Secondary containment provided by Oil/Water Separator or Building and/or flooring construction
Italic and lighter font bulk storage containers are considered non-SPCC regulated

Table 6 Kulis Zone Bulk Storage Container Inventory Summary

Tank ID	Volume (US Gallons)	Product	Year Tank / Piping Installed	Secondary Containment	Overfill Alarm	Automatic Shut-off Device	Visual Fill Gauge	Interstitial Monitoring
Former Kulis Air National Guard Base								
00003-1	*2,000*	*Diesel*	1995	√	*No*	*No*	√	*No*
00003-5	*280*	*Diesel*	NA	No	*No*	*No*	√	*No*
00003-No ID	*150*	*Waste Oil*	NA		drained		√	
00042-2	*250*	*Diesel*	2000	√			√	√
00042-3	*275*	*Diesel*	2000	√	√	√	√	√

* Estimated Age and/or Installation Date
** Secondary containment provided by Oil/Water Separator or Building and/or flooring construction
Italic and lighter font bulk storage containers are considered non-SPCC regulated

Discharge Prevention Methods
All exterior diesel and gasoline fuel bulk storage containers (ASTs and USTs) are refilled by a private commercial fuel supplier under contract to the State of Alaska who is responsible for all fuel and oil transfer into ANC owned and/or operated bulk storage ASTs. The contractor trains their employees to maintain full 'hands on' visual observation during fueling. Lubricating oils are currently transferred into the bulk storage dispensers inside the lube storage room by a contractor using compartmented oil delivery trucks. All such lubrication oil transfers are in general conformance with the procedures the fuel supplier uses, as follows:

Fuel truck transfer procedures followed at each bulk storage container (ASTs and USTs) are:

- Prior to commencing fuel transfer, the existing fuel level in the storage tank must be measured and verified by the driver to confirm that sufficient storage tank volume is available to receive the volume of fuel to be transferred.
- Fuel transfer personnel must be properly trained in fuel handling and transfer procedures, personal protection equipment, and emergency response actions.
- Smoking is not allowed at any time during fuel transfer.

- Fuel tanker trucks will be equipped with emergency spill response equipment adequate to handle small releases.
- The fuel transfer truck must have wheel chocks.
- The fuel transfer driver must conduct a visual reconnaissance of the area and the storage tank prior to initiating fuel transfer to confirm site conditions.
- The driver is required to remain at the vehicle at all times while fuel is being transferred.
- Throughout the fuel transfer process, the driver will remain alert and must maintain unobstructed visual contact of the delivery truck, transfer hose(s) and the storage tank.
- Throughout the fuel transfer process, the driver must remain within 25-feet of all components of the fuel transfer process, including the tank truck pumps and valves, fuel transfer line and storage tank.
- Unless specifically needed for fuel transfer, all vehicle engines and motors will be turned "off."
- Fuel transfer operations are to be performed only in areas designated for such purposes.
- The drain valve on the delivery truck is to be closed and all fuel in the transfer line annulus is to be drained into the storage tank prior to disconnecting the fuel transfer line.
- Prior to departure, the driver will confirm all tank truck valves are secure and no leakage is present, as well as confirm the storage tank valves and access gates are locked and secure. Fuel volume transfer will be logged as part of the delivery report.
- Any deviation from these procedures or observed problems must be immediately reported by the fuel and/or oil supplier to appropriate ANC personnel.

All used oil ASTs are filled by ANC personnel on an 'as-necessary' basis. All recovered used oil is currently transported off-site for recycling by US Ecology, Inc.

Discharge or Drainage Controls
All ASTs inspected at this site provide secondary containment structures deemed adequate to protect waters of the United States from releases. All ASTs have integral secondary containment systems such as double-walled construction or specifically designed and constructed external secondary containment. All 55-gallon drums and portable oil collection tanks are of sufficiently low volume and within concrete floored and walled buildings or shallow bermed exterior pavement areas. An isolated release would be contained within the structure and only a remote possibility of oil escaping is present before response actions are initiated.

These smaller containers are not considered a threat to the waters of the United States, provided they are visually inspected regularly for leaks and or releases during the normal course of site operations by ANC personnel.

All ANC owned and operated diesel and gasoline USTs conform to ADEC Underground Storage Tank regulations and as such meet or exceed SPCC required containment and overfill protection device requirements.

Three structures rely on internal oil/water separators for primary and/or secondary spill containment:

- South Warm Storage Building: Equipment Storage and Supplies Zone
- Former Airfield Maintenance Building: Equipment Storage and Supplies Zone
- Airfield Equipment Maintenance Facility (three internal oil/water separators located in Wash Bay # 9, north of Maintenance Bay # 1, and Light Duty Shop): Vehicle Fueling Zone

The North Warm Storage Building within the Equipment Storage and Supplies Zone has an oil/water separator system, but this building does not contain any SPCC-regulated bulk storage containers.

The Airfield Equipment Maintenance Facility has a variety of single-walled SPCC regulated containers with the largest (control volume) being the eight ASTs in the lube storage room. These tanks all have integral double-walled containment and the lube room itself is constructed with a blind containment sump. While the potential of a catastrophic (265-gallon) release from the lube room ASTs is considered remote, ANC considers the blind sump, building flooring, trench drains and three separate oil / water separator systems as adequate containment to protect waters of the United States.

The ARFF Building, Electrical Regulator Vault No. 2, and the Airfield Lighting Vault have SPCC-regulated bulk storage containers inside these structures and have either integral double-walled containments (genset day tanks). In these locations concrete slab flooring provides containment sufficient to retain oil, or in the case of the oil the ARFF Building, are equipped with an oil/water separator for the floor drain near the generator day tank.

SPCC regulated ASTs with secondary containment (integral or external) are summarized below:

<u>Equipment Storage and Supplies Zone: Former Vehicle Fueling Facility Diesel ASTs (ANC ID No. 25 and 26)</u>

- Double-walled welded steel ASTs, sealed all sides
- Secondary Containment Volume Requirements for Oil and Precipitation
  Total Needed: 6,000 gal (ea.) Available: 6,500 gal (est, ea.) **Adequate**
- No drainage valves from secondary containment are present

Equipment Storage and Supplies Zone: Former Vehicle Fueling Facility Gasoline AST (ANC ID No. 24)

- Double-walled welded steel ASTs, sealed all sides
- Secondary Containment Volume Requirements for Oil and Precipitation
  Total Needed: 6,000 gal (ea.) Available: 6,500 gal (est, ea.) **Adequate**
- No drainage valves from secondary containment are present

Equipment Storage and Supplies Zone: Former Airfield Maintenance Bldg. Exterior Genset AST (ANC ID No. 10)

- Double-walled welded steel AST, sealed all sides
- Secondary Containment Volume Requirements for Oil and Precipitation
  Total Needed: 1,000 gallons Available: 1,200 gal (est) **Adequate**
- No drainage valve from secondary containment is present

Equipment Storage and Supplies Zone: Former Airfield Maintenance Bldg. Interior Genset Day Tank

- Double-walled welded steel AST, open top secondary containment
- Secondary Containment Volume Requirements for Oil and Precipitation
  Total Needed: 100 gal (est) Available: 110 gal (est) **Adequate**
- No drainage valve from secondary containment is present

Equipment Storage and Supplies Zone: Mobile Electrical Generator

- Single-walled welded steel AST, under Genset trailer
- Secondary Containment Volume Requirements for Oil and Precipitation
  Total Needed: 280 gallons Available: none **Adequate*****
- No drainage valve from primary containment is present
- Trailer is mobile and similar to other heavy equipment stored in this zone

Equipment Storage and Supplies Zone: Double Walled Fuel Tank (ANC ID No. 6) behind Greenhouse

- Double-walled welded steel AST, sealed all sides
- Secondary Containment Volume Requirements for Oil and Precipitation
  Total Needed: 1,000 gal Available: 1,100 gal (est) **Adequate**
- No drainage valve from secondary containment is present

AOA Terminal Zone: South Terminal Interior Genset Day Tank (2 each)

- Double-walled welded steel ASTs, open top secondary containment
- Secondary Containment Volume Requirements for Oil and Precipitation
  Total Needed: 100 gal (est, ea.) Available: 110 gal (est, ea) **Adequate**
- No drainage valves from secondary containment are present

AOA Terminal Zone: South Terminal Backup Fuel Oil AST (ANC ID No 28)

- Double-walled welded steel AST, sealed all sides
- Secondary Containment Volume Requirements for Oil and Precipitation
  Total Needed: 500 gal (est) Available: 600 gal (est) **Adequate**
- No drainage valve from secondary containment is present

AOA Terminal Zone: North Terminal Interior Genset Day Tank
- Double-walled welded steel AST, open top secondary containment
- Secondary Containment Volume Requirements for Oil and Precipitation
  Total Needed: 100 gal (est) Available: 110 gal (est) **Adequate**
- No drainage valve from secondary containment is present

AOA Terminal Zone: Airfield Lighting Vault Exterior Genset Fuel Tank
- Double-walled welded steel AST, sealed all sides
- Secondary Containment Volume Requirements for Oil and Precipitation
  Total Needed: 6,000 gal Available: 6,500 gal (est) **Adequate**
- No drainage valve from secondary containment is present
- AST Heating Element Installed

AOA Terminal Zone: Airfield Lighting Vault Interior Genset Day Tank
- Double-walled welded steel ASTs, open top secondary containment
- Secondary Containment Volume Requirements for Oil and Precipitation
  Total Needed: 300 gal (est) Available: 330 gal (est) **Adequate**
- No drainage valve from secondary containment is present

Vehicle Fueling Zone: Airfield Equipment Maintenance Facility Lube Storage Room ASTs (8ea.)
- Double-walled welded steel ASTs, sealed all sides, secondary containment floor
- Secondary Containment Volume Requirements for Oil and Precipitation
  Total Needed: 250 gal (ea.) Available: 300 gal (est, ea.) **Adequate**
- No drainage valves from secondary containment are present

ARFF Zone: ARFF Building Interior Genset Day Tank
- Double-walled welded steel ASTs, open top secondary containment
- Secondary Containment Volume Requirements for Oil and Precipitation
  Total Needed: 100 gal (est) Available: 110 gal (est) **Adequate**
- No drainage valve from secondary containment is present

ARFF Zone: State Reg. Vault No. 2 Exterior Genset Fuel AST (ANC ID No. 23)
- Double-walled welded steel AST, sealed all sides
- Secondary Containment Volume Requirements for Oil and Precipitation
  Total Needed: 500 gal Available: 550 gal (est) **Adequate**
- No drainage valve from secondary containment is present

ARFF Zone: State Reg. Vault No. 2 Interior Genset Day Tank
- Double-walled welded steel ASTs, open top secondary containment
- Secondary Containment Volume Requirements for Oil and Precipitation
  Total Needed: 100 gal (est, ea.) Available: 110 gal (est, ea.) **Adequate**
- No drainage valve from secondary containment is present

Kulis Zone: 5001 Captain Hill Court Interior Genset Day Tank (ID 00003-5)
- Single-walled tank located within building

- Secondary Containment Requirements for Oil and Precipitation
  Total Needed: 280 gal Available: 0 gal **Adequate***
- Drains inside building leads to 1,000 gal OWS

Kulis Zone: 5001 Captain Hill Court Exterior Genset AST (ID 00003-1)

- Double-walled welded steel AST, sealed all sides
- Secondary Containment Requirements for Oil and Precipitation
  Total Needed: 2,000 gal Available: NA **Adequate**
- No drainage valve from secondary containment

Kulis Zone: 5001 Captain Hill Court Interior Used Oil Tank (No ID)

- Double-walled welded steel AST, sealed all sides
- Secondary Containment Requirements for Oil and Precipitation
  Total Needed: 150 gal Available: NA **Adequate**
- No drainage valve from secondary containment

Kulis Zone: 6101 Malone Street Exterior Genset Day Tank (ID 00042-2)

- Double-walled steel tank, sealed all sides
- Secondary Containment Requirements for Oil and Precipitation
  Total Needed: 250 gal Available: NA **Adequate**
- No drainage valve from secondary containment

Kulis Zone: 6101 Malone Street Interior Genset Day Tank (ID 00042-3)

- Steel berm, inside building
- Secondary Containment Requirements for Oil and Precipitation
  Total Needed: 275 gal Available: 391 gal **Adequate**
- No drainage valve from secondary containment

* Engineering judgment determined secondary containment through oil / water separator system is adequate for normal operations

*** Mobile generator is considered "operating equipment" when in-use thus would not require secondary containment. Genset trailer is stored at the Equipment Storage and Supplies Zone when not in-use. Secondary containment for Genset is asphalt pavement and absorbent material. When stored and not in-use, engineering judgment recommends secondary containment for the genset fuel AST.

The remaining ANC owned and/or operated ASTs and all USTs are considered non-SPCC regulated (i.e. potassium acetate storage) or are not the control volume (largest single container) for containment calculation purposes. Although potassium acetate is not an SPCC regulated material, ANC's policy is to avoid unregulated releases of potassium acetate. ANC personnel are required to follow strict procedures for potassium acetate transfers similar to procedures stated in this SPCC Plan for oil transfers.

Oil Transfer from Tank Trucks
The contracted automotive fluids supplier and fueler providers do not use secondary containment during fuel transfers into the storage tanks. The most likely causes for a release at the tank truck during fuel transfer are:

- Human error
- Pump, valve and/or discharge line breakage
- Catastrophic tank structural failure

Tank truck pumps, valves and discharge lines are inspected each day and are repaired immediately by the contract fueling company. Catastrophic structural failure is considered a rare occurrence. Human error is considered the most likely cause of a release during fuel transfer with the most likely result being overfill at the receiving tank. Since ANC tanks (above and underground tanks) have secondary containment and overfill protection devices, most releases at this facility are expected to be controlled within the secondary containment structures, the concrete flooring, or pavement areas.

Except for a very rare catastrophic structural failure of the truck tank, the delivery truck tank is equipped with an emergency shutdown system that is activated by the driver to immediately stop all fuel and oil transfer at the tank.

Due to these provisions, temporary secondary containment at the truck tank is not considered necessary for these types of oil transfer.

The contracted commercial fueling company refills the tank truck at an offsite facility. The fuel loading/unloading procedures for those facilities are addressed under each fuel supplier's SPCC Plan.

Discharge Countermeasures
Countermeasures to be implemented in the event of a release are:

- Minor Release

Minor releases are defined as small releases that are contained within secondary containment and will not pose a threat to navigable waters of the United States at the ANC facility. Countermeasures for minor releases include the following:

1. Collect released oil on absorbent materials.

Minor releases at all ANC owned and operated bulk storage containers may come into direct contact with flooring, soil or pavement at several ANC locations during fuel or oil transfer. Minor releases will be collected on absorbent materials.

- Moderate Release

Moderate releases are defined as releases that result in free product and oily water but remain contained within secondary containment structures. Moderate releases will not pose a threat to

navigable waters of the United States. Countermeasures for moderate releases include the following:

1. For releases at facilities with secondary containment, oil and oil/water mixtures will be pumped into containers by ANC emergency spill response personnel and third-party contractors as required. Oil and/or oil/water mixtures will be immediately contained following emergency response protocols, then recovered with absorbent materials or pumping equipment. Recovered water and fuel will be transferred to an Anchorage area facility for gravity separation and treatment/disposal. Contaminated soils will be excavated and treated at an on or off-site location.

2. Moderate releases may result in petroleum products contacting soil, pavement or flooring materials surrounding the storage tank. Free product will be immediately contained with absorbent then recovered following emergency response protocols. Emergency response actions may be required to remove soils. Moderate releases are not expected to result in petroleum fluids reaching navigable waters of the United States.

- Catastrophic Release

Catastrophic releases are defined as any release of oil or fuel that might threaten navigable waters of the United States. Countermeasures include:

1. The following information must be provided to Response Action Contacts:

   - National Spill Response Center
     (800) 424-8802
   - Alaska Department of Environmental Conservation (ADEC)
     (800) 478-9300

If contact to any of the Response Actions Contacts provided above is made, the following information must be provided as listed in Table 6: Release Reporting Checklist.

2. ANC maintains emergency response equipment and materials sufficient to address a spill at the facility. This includes personnel trained in spill response. Equipment will be located in the connexes and trailers in the Equipment Storage and Supplies Zone and at the Airfield Equipment Maintenance facility. ANC emergency spill response contacts and materials are summarized in Appendix H.

Table 7: Release Reporting Checklist

Facility	Ted Stevens Anchorage International Airport
Address	5000 West International Airport Road
Phone	(907) 266-2411 (24-hr dispatch)
Potential Release	AST: 6,000 gallon (Nominal, Largest Expected Volume) Piping: 50 gallon (Nominal, Largest Expected Volume)
Other Required SPCC Reporting Information (Reference Appendix E for Spill Release Log)	
Date and Time of Release	

Type of Material Discharged	
Estimated Total Quantity Discharged	
Source of Discharge	
Area Affected by Discharge (ditches, soil, water body)	
Cause of Discharge	
Damages and Injuries	
Actions used to stop, remove, and mitigate effects of discharge	
Evacuation Requirements	
Individuals and Organizations Contacted	

Disposal of Recovered Materials

- Minor Release

Minor releases are contained on absorbents that are disposed of at permitted facilities by commercial third-party vendors.

- Moderate Release

Moderate releases of free product are recovered with either ANC or third-party vacuum trucks and disposed in accordance with applicable regulations.

- Catastrophic Release

In the rare event of a catastrophic failure resulting in secondary containment breach or truck tank failure, ANC will institute oil spill response actions as specified in this SPCC Plan.

112.7 (b) Direction, Rate and Total Quantity of Discharge

The potential for equipment failure at subject locations resulting in oil discharge threatening navigable waters of the United States is considered remote. However, in the unlikely event a release should occur, Table 7 presents reasonably expected discharge direction, rate and quantity estimates. Discharge rates are estimated on reasonably anticipated containment breach impacts rather than catastrophic failure rates. Catastrophic failure discharge rates are provided in parenthesis. ANC maintains emergency response equipment strategically located around the airport property to contain and cleanup spills. In addition, the airport maintains a Spill Response Trailer stocked with a variety of spill containment and cleanup equipment. Each fuel tank discussed in this plan has a spill kit with absorbent materials staged within close proximity. The airport also has its own fire department with trained personnel ready to respond to most spill scenarios.

Table 8: Discharge Direction, Rate and Quantity

Facility	Discharge Direction	Discharge Rate (gallons per minute)	Total Potential Discharge Quantity (gallons)
Former Airfield Maintenance Equipment Shop Gen Set AST	Southeasterly along pavement to lift station, drainage swales and culverts to Lake Hood	10 most likely *(100 catastrophic)*	1,000
AOA Terminal Zone Lighting Vault	Northerly then Westerly along unpaved surfaces and drainage swales to low lying areas	20 most likely *(200 catastrophic)*	6,500
ARFF Zone ARFF UST	Westerly along pavement to storm inlet and culverts to the Storm Sewer Interceptor along Postmark Drive	20 most likely *(200 catastrophic)*	1,500
Electrical Regulator Vault No. 2 *	Northerly along surface to drainage swales, culverts to the wetlands along DeHavilland Avenue.	5 most likely *(50 catastrophic)*	500
Vehicle Fueling Zone Ext. USTs*, surface release from pump only	Southwesterly along pavement to storm inlet to the Victor WPS.	5 most likely *(10 catastrophic)*	50 (estimate before pump auto shutdown occurs)
Airfield Equipment Maintenance Facility Lube Storage Room surface release from tank truck or hose	South or southeasterly along pavement to storm inlet to the Victor WPS	5 most likely *(10 catastrophic)*	50
Emergency Generator Day Tank surface release from tank truck or hose during filling	North along pavement into to storm inlet to the DeHavilland storm drain	5 most likely *(10 catastrophic)*	500
Kulis Zone			
5001 Captain Hill Court	North along pavement until entering drainage swales paralleling the runway (Basin 1)	5 most likely *(10 catastrophic)*	2,280
6101 Malone Street	East along pavement into storm drains located on aircraft tarmac or into drainage swales paralleling the tarmac (Basin 1)	5 most likely *(10 catastrophic)*	525
5275 Freyholtz Lane	North along tarmac pavement into storm inlets (Basin 1)	5 most likely *(10 catastrophic)*	1,060
* Drainage also intercepted by Watershed Protection Stations			

112.7 (c) Containment and Diversionary Structures

All listed oil storage tanks are located at onshore facilities. All SPCC-regulated bulk storage containers have secondary containment consisting of integral double-walled steel, bermed pavement, or poly overpack containers.

The SPCC planning control volume inside the South Warm Storage Building, Former Airfield Maintenance Equipment Building, and new Airfield Maintenance Building may exceed the containment volume available in their respective oil/water separator systems. Oil/water separators with separate recovered oil USTs act as primary containment systems for these control volumes. In the unlikely event of a catastrophic failure the volume of these oil/water separator containment systems may be exceeded. Also, while these oil/water separator systems are not SPCC regulated, by their use as primary containment systems, these oil/water separator systems will be included in the SPCC monitoring program.

Although the oil/water separator systems do not appear to have secondary containment, engineering judgment does not consider these tanks a potential threat to navigable waters of the United States. ANC personnel routinely measure fluid levels in these storage tanks and have the separators and storage tanks cleaned and pumped by a third-party contractor.

Engineering judgment does not consider potential containment volume deficiency a threat to waters of the United States since any possible excess would be contained at the Anchorage Water and Wastewater Utility (AWWU) treatment plant. While the potential for an oil release entering the AWWU wastewater treatment system is considered remote, this SPCC Plan has established procedures for alerting AWWU personnel if such an event were to occur.

All interior 55-gallon drums and lube dispensers are not considered a threat to navigable waters of the United States since any oil released is expected to be contained within the building footprint and the oil/water separator systems.

112.7 (d) Exceptions to Containment and Diversionary Structures

No exceptions to containment and diversionary structures are present.

112.7 (e) Inspections, Tests, and Records

Visual and mechanical inspections are conducted at all SPCC-regulated bulk storage containers owned and/or operated by ANC on a monthly inspection schedule. Inspection records should be signed by the ANC Responsible-in-Charge or his/her designee for these bulk storage containers and maintained for five years as usual and customary business records.

The following reporting forms are attached in the Appendix E:

- Monthly Visible Inspection Log
- Monthly Mechanical System (Alarm) Check

ANC uses a different records format, in either hard copy or electronic format, to meet the inspection records requirement. In addition to SPCC inspections ANC facility maintenance personnel also conduct a daily inspection of each mechanical area covered under this plan and those records are kept separate from SPCC inspection records.

112.7 (f) Personnel, Training, and Discharge Prevention Procedures

Routine facility inspections are conducted by designated ANC personnel specifically trained in AST visual inspection and mechanical system checks. Furthermore, ANC emergency response personnel will be trained in health and safety procedures in working with oil and non-RCRA fluids with at least current OSHA 24-hr HAZWOPER training. ANC SPCC and spill response supervisors are required to have current 24-hr HAZWOPER training.

In general, ANC personnel are regularly trained for emergency response actions and have a well-established program for employee training.

At least annually, ANC personnel will conduct SPCC discharge prevention training for all personnel active with SPCC inspections, oil or fuel transferring, and other practices related to handling oils.

Specifically, this annual training will be conducted by the ANC Responsible-in-Charge for SPCC planning efforts and, at a minimum, must address:

- Review fuel and oil transfer procedures stated previously in this SPCC.
- Summarize findings of weekly visual inspections and monthly mechanical checklist items.
- All known discharges in the past review period and full explanation of cause of discharge.
- Malfunctioning equipment and components at ASTs, UST, and associated piping.
- New or revised precautionary measures to prevent discharges.

Table 9: Designated Responsible-in-Charge

Role	Facility	Person	Contact Number
Overall Responsible-in-Charge	All Sites	Tom Johnston	(907) 266-2546
Individual Zones Presented in this SPCC Plan	Equipment Storage and Supplies Zone AOA Terminal Zone ARFF Zone Vehicle Fueling Zone Watershed Protection Zone Kulis Zone	Tom Johnston	(907) 266-2546

112.7 (g) Security

40 CFR 112 requires a minimum level of site security at each facility and storage tank, as well as engineering judgment regarding higher levels of facility protection and security as site-specific conditions warrant. ANC maintains its own uniformed police and fire department which performs regular patrols of all areas discussed in this plan. Specific SPCC-required security measures include:

Fencing or Controlled Access around ASTs with Locks

The entire ANC facility has secure and controlled access and is routinely monitored by ANC police, security, and operations personnel. As such, the entire facility is in a secured environment.

Bollards

Bollards are generally not required at any tank site if fencing is installed. However, protective bollards have been installed where the potential for collision with tanks exists. Pumping islands and all exterior ASTs in the Equipment Storage and Supplies Zone and Vehicle Fueling Facility have bollards.

Locked Valves

None of the observed SPCC-regulated bulk storage containers had unlocked basal drain valves. If basal drain valves are installed at a later date on any of these storage tanks, locks must be installed on these valves.

Transfer Pump Starter Lockout/Tagout

None of the ANC owned and/or operated SPCC-regulated tanks have transfer pumps for bulk oil transfer. The UST fueling system has two dispenser islands for vehicle refueling through underground pipelines. Genset day tanks are equipped with suction and hand pumps connected to the tanks for transferring fuel at low level conditions. These fuel transfer systems are equipped with automatic level gauges and controls and high-level alarms for fuel transfer and lockout/tagout systems are not required.

Pipeline Loading/Unloading Connections Capped and Locked

All exterior bulk storage containers have locking fill ports and are inside locked/secure structures. No other loading/unloading connections are present.

Lighting

All bulk storage container sites have adequate overhead lighting from security lighting and/or general ANC lighting and interior building lighting.

112.7 (h) Tank Car / Truck Loading / Unloading Racks

None of the four regulated AST Zones have tank car / truck loading / unloading racks. All exterior tanks are filled from a tanker truck. The unregulated Potassium Acetate ASTs are equipped with a loading rack.

112.7 (i) Brittle Fracture Assessment

Based on site inspections and engineering judgment, brittle facture analysis does not appear warranted at these sites. If mechanical repair or modification requiring welding to any tank is performed, an engineer evaluation must be conducted by a structural engineer to determine if brittle fracture analysis is required.

112.7 (j) Conformance to State and Local SPCC Regulations

All tanks inspected at this site appeared to be in compliance with state and local SPCC regulations. Conformance with non-SPCC related regulations, such as worker safety, SWPPP, NPDES discharge, air quality, etc. are not addressed under this SPCC Plan.

112.8 SPCC Plan Requirements for Onshore Facilities

112.8 (a) General Requirements

These facilities are considered Onshore Facilities under 40 CFR 112 and as such are required to meet the requirements set forth under 40 CR 112.7 above and the following requirements established under 40 CFR 12.8.

112.8 (b) Facility Drainage

The ANC facility is extensively developed with large areas of pavement (asphalt and concrete), surface drainage channelization (drainage swales and culverts) and an extensive subgrade storm water drainage system. Discharges from most bulk storage containers that escape secondary containment will discharge to either the subgrade storm water piping system through catch basins and or through surface swales and culverts to the watershed protection stations.

<u>Equipment Storage and Supplies Zone</u>

Primary drainage pathway is along the surface to catch basins or culverts and in some cases to curbed or depressed paved areas. Drainage directions vary considerably and are detailed in Figures ES-1 through ES-5. A surface catch basin and lift station is located southeast of the Genset Fuel AST (ANC ID No. 10). The lift station discharges to a drainage swale equipped with a wooden weir followed by additional culverts and draining to Lake Hood. The southern area of the Equipment Storage and Supplies Zone generally drains southerly with the area west of the Former Airfield Maintenance Equipment Shop draining northward or ponding on asphalt depressions. Striping Paint and Hazmat Storage areas have a 3" asphalt curb around the perimeter for containment. All hazmat liquids are stored inside the Hazmat Storage Building (Chem-Stor), which includes integral secondary containment.

Surface storm drains systems originate at each major building in this area, most likely for roof drains, which lead to a common manhole at the western edge of the pavement near the Striping Paint Storage area. This storm drain then ties to the main storm drain interceptor on the west side of Postmark Drive which discharges into Cook Inlet (Figure 1).

SPCC-regulated fluid releases exiting main buildings in the Equipment Storage and Supplies Zone are generally expected to flow over pavement to surface drainage swales and culverts and southeasterly or north or northwesterly. SPCC-regulated fluid releases inside buildings within this zone are expected to be contained on the floor, in floor sumps and in the oil/water separator system within each structure.

AOA Terminal Zone

Primary drainage is northerly from each location to local storm drain inlets, swales or culverts. All SPCC regulated facilities in the AOA Terminal Zone contain diesel fuel associated with emergency power generators. Drainage directions are detailed in Figures TZ-1 through TZ-5.

Interior releases exceeding the secondary containment capacity of the generator day tanks will be contained within the building. All floor drains in the generator rooms have been plugged to prevent a release from entering the sanitary sewer. Exterior releases from Genset Day ASTs overfills or UST discharges in South and North Terminal areas will be collected at storm drain inlets and trench drains and discharge toward the Victor WPS.

ARFF Zone

A release from the ARFF 100-gallon Genset Day Tank to inside the ARFF building would likely be contained within the building or the tank secondary containment. It is possible a larger release could exit access door(s) then over pavement to storm drains of surface drainage swales surrounding the ARFF Building pad.

Electrical Regulator Vault No. 2 is east of and adjacent to the ARFF Building pad. The double walled exterior AST (ANC I.D. 23) is located on a gravel pad and surrounded by a grassy area. Release from this exterior AST would drain northerly toward the main drainage swale then and if not collected at that point, possibly flow to the wetlands area north of deHavilland Avenue (Figure AR-1).

Vehicle Fueling Zone

Fuel releases from the Vehicle Fueling Facility while filling USTs (QTF #1, 2 and 3), or releases at the pump islands during vehicle fueling would discharge over pavement and into a storm drain inlet southwest of the dispensers. This storm drain flows directly to the Victor Watershed Protection Station and through storm drains that connect to the Postmark Drive interceptor system (Figures VF-1, VF-2, and VF-3). Potassium acetate, a non-SPCC regulated fluid, is also stored in this area and if spilled would flow similarly but may also flow to a depressed area due north of the Potassium acetate ASTs.

Kulis Zone

There are two drainage basins associated with SPCC regulated tanks within the Kulis Zone. These basins are illustrated in Figure E-2 & E-8.

Within the Kulis Zone there are two ASTs located outside (tank IDs 00003-1 & 00042-2). Both tanks are located within drainage Basin 001. A release from tank 00042-2 would flow east onto the aircraft tarmac before entering the storm inlets or would flow north into the drainage swale that parallels the runway. Tank 00003-1 would flow north into the same drainage swale.

New Airfield Equipment Maintenance Facility

Lube Storage Room

Fluid releases from the Airfield Equipment Maintenance Facility while filling ASTs inside the Lube Storage Room would be contained within the integral secondary containment sump built into the floor. Were the secondary containment sump to overflow, a release would discharge onto the pavement and into a storm drain catch basin located just east of the lube storage room that discharges directly to the Victor Watershed Protection Station and through storm drains that connect to the Postmark Drive Interceptor system (Figures VF-1, VF-2, and VF-3).

Emergency Generator Day Tank in Boiler Room

Fluid releases from the Airfield Equipment Maintenance Facility while filling the 500-gallon Day Tank AST from the exterior overfill protection spill port canister would discharge over pavement north and northwest to a storm drain inlet or possibly into footer drain approximately 20 feet northwest of the AST spill port. Storm drain inlets flow into the DeHavilland storm drain and then east and into the Postmark Drive storm drain. .

Watershed Protection Stations

The three watershed protection stations are located along the major stormwater drainages leading from the ANC facilities. These stations are designed to contain and allow efficient removal of any pollutants before they reach the receiving water bodies, Lakes Hood and Spenard, and Cook Inlet (Figure 1).

Discharges from Secondary Containment

Any areas with separate (non-integral) secondary containment drainage will be conducted under the following procedures:

40 CFR 110.3 describes the threshold limit for allowable discharges as the "Sheen Rule," summarized below. The regulation establishes the criteria for determining whether an oil spill may be harmful to public health or welfare, thereby triggering the reporting requirements, as follows:

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

If the secondary containment fluids do not violate the above threshold levels, the containment fluids may be discharged to stormwater systems or under permit to the sanitary sewer system, assuming all other local or utility discharge requirements are satisfied.

However, if the secondary containment fluids do violate any of the above threshold levels, the fluids must be treated prior to discharge. ANC will collect such fluids for transport to the third party permitted facilities for treatment and disposal.

112.8 (c) Bulk Storage Containers

Stored Fluid Compatibility
All tanks are compatible with the fluids stored within them. Non-automated pumping is required for removal of secondary containment fluids at all SPCC regulated bulk storage containers with secondary containment, including the oil/water separator systems.

Secondary Containment
All tanks (ASTs and USTs) have adequate secondary containment structures, except as noted. Precipitation design for freeboard calculations are the 25-year, 24-hour event for Anchorage; 1.25-inches (U.S. Department of Commerce, Technical Paper 47).

Cathodic Protection and Piping Systems
ASTs at this facility are not in contact with soil; hence cathodic protection is not required. All USTs are constructed of non-conductive materials and have double-walled piping systems between the USTs and Day Tank or dispensers. The former Vehicle Fueling system in the Equipment Storage and Supplies Zone is not in use and scheduled for permanent closure. This system has double-walled underground piping between the tanks and the dispensers. Underground storage tanks and associated piping at the vehicle fueling facility are non-conductive and don't require cathodic protection.

Record Keeping
ANC maintenance personnel will maintain secondary containment fluid discharge treatment and disposal records as part of the monthly checklist, Appendix E. These records will be maintained as customary and regular business practices.

Integrity Testing
40 CFR 112 specifically mandates non-destructive integrity testing in conjunction with regular visual inspection on any bulk storage container (i.e. AST) in contact with soil. Under certain conditions, engineering judgment-based exemptions to the integrity testing requirement may be permitted for ASTs not in contact with soil in any manner.

Specific requirements for exemptions include:

- Internal corrosion poses a minimal risk of failure
- Visual inspections are conducted at least monthly
- All sides of the AST are visible (i.e. the tank has no contact with the ground or concrete slab)
- Sound engineering practices and judgment is exercised

All ASTs at the Ted Stevens Anchorage International Airport meet these requirements and as such do not warrant integrity testing currently. Any repair or modification to the AST or their associated piping involving welding, cutting, or mechanical coupling will require integrity testing in addition to visual inspection.

ANC owned and/or operated USTs at this facility require periodic testing and constant leak detection monitoring to satisfy ADEC UST regulations. These regulations meet or exceed all SPCC required integrity testing requirements.

Heating Coils
The Airfield Lighting Vault exterior AST has a heating coil system. This system is mounted on the top of the AST and would not pose a release threat.

Discharge (Overfill) Protection
40 CFR 112.8(c) specifically requires discharge protection to reduce the likelihood of overfill for AST within separate secondary containment including:

- High level liquid alarms with audible or visual signal at constantly attended operation
- High level liquid pump cutoff system
- Direct audible or code signal communication systems
- Fast response system for liquid level determination

Shop fabricated integral double-walled ASTs without separate secondary containment, EPA Office of Solid Waste and Emergency Response (OSWER) directive 9360.8-38 requires the following overfill protection devices:

- Constant monitoring of all fuel transfers, institution of an interstitial space and inner AST wall inspection, installation of an overfill alarm system on each AST, and;

- Installation of an automatic flow restrictor or an automatic flow shut-off system.

The SPCC regulated ASTs at the ANC facility meet the requirements for overfill protection devices except the following:
Equipment and Supplies Zone:
Mobile generator fuel tank (no overfill protection systems)

Discharge protection systems must be tested on a routine basis. ANC personnel conduct routine audible alarms testing at least monthly with integral alarm testing systems, where such systems are installed.

112.8 (d) Facility Transfer Operations, Pumping, and Facility Process

40 CFR 112.8(d)(1) specifies that existing underground (buried) piping systems installed prior to August 18, 2002 do not require modification to meet SPCC protective wrapping and/or cathodic protection and/or fully enclosed secondary containment. If sections of such buried piping are

exposed, they must be inspected and repaired or replaced, as necessary, to meet corrosion protection requirements specified under this section. If any portion of the existing buried piping is repaired or replaced, these sections must include corrosion protection in accordance with SPCC specific methods or alternatives designed by corrosion professional.

All underground SPCC regulated (as well as UST regulated) product lines are double walled with corrosion resistant secondary containment. These product lines should be visual inspected at daylighted sections and at any section exposed during site work. All visible piping sections will be routinely inspected for corrosion and leakage as part of the regularly scheduled AST inspections. Specifically, visual inspections must include assessing above grade:

- Valves and Valve Locks
- Flange and Expansion Joints
- Catch Pans
- Pipeline Supports
- Paint or Coating, if present

Also, pipeline integrity testing is required during initial installation, modification, construction, relocation, and replacement. For the smaller diameter fuel oil supply and return lines observed at these sites, integrity testing must include the above listed visual inspection and pressure testing in accordance with adopted current mechanical building and fire codes.

No blank-flanges were observed nor required at these facilities.

Above grade pipe supports appeared adequate. No special site access restrictions appear necessary to warn site vehicular traffic of above grade or underground pipeline conflicts in normally trafficked areas.

APPENDIX H

EMPLOYEE TRAINING RECORD

Ted Stevens
Anchorage
International Airport

SAFETY MEETING/TRAINING RECORD

DATE: _____ **SECTION:** _____ **SHIFT:** _____

Briefer/Trainer: _____

Summary of Topics Discussed (Please write legibly):

_____
_____
_____
_____
_____
_____
_____

Length of Meeting/Training (Hours/Minutes) _____

ATTENDANCE:

Print Name	**Signature**
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____

Use Next Page for Additional Signatures

ATTENDANCE:

Print Name	**Signature**

Make Additional Copies of This Page if Necessary

APPENDIX I

ANC OPERATIONAL MANUAL, AUGUST 2020

(PERTINENT SECTION ONLY)

Ted Stevens Anchorage International Airport

Airport Operations Manual

August 20, 2020

ANC

All fire extinguishers shall be subjected to maintenance at intervals of not more than 1 year; at the time of hydrostatic test, or when specifically indicated by an inspection or electronic notification. Persons performing maintenance and recharging of extinguishers shall be certified.

4.13 Aircraft Deicing

Background

It is the responsibility of the Airport, Airlines and Tenants to ensure that aircraft deicing operations do not cause a violation of the State of Alaska Water Quality Standards and Federal/State Pollution Discharge Elimination System requirements. Also, the Airport wants to ensure that airlines and deicing companies doing business at the airport are taking measures to reduce the use of aircraft deicing fluids (ADF) and to make it easier in the future to recycle and/or treat deicing fluids that end up in storm water.

Tenants are responsible for clearing snow and controlling ice build-up on their leasehold, including precipitation that falls on their aircraft. Aircraft deicing operations are the responsibility of the airlines and their deicing service providers in accordance with FAA regulations and their own Ted Stevens Anchorage International Airport general permits (ANC-GP). Aircraft specific deicing operations are detailed by the FAA, but companies performing deicing operations are also required (as per the ANC-GP) to deice aircraft in a manner that reduces the amount of glycol discharged into the storm water system.

ADF

Effective at the beginning of the 2020-2021 deicing season, the Airport will no longer allow the use of ethylene glycol. Only propylene glycol will be allowed. This will make future recycling of ADF easier to accomplish.

Deicing Equipment

As of August 1, 2017, ADF Users using more than 30,000 gallons of glycol annually, measured as undiluted product, shall use only deicing trucks specifically designed for reducing glycol usage that are equipped with two or more of the following glycol usage reduction tools.

- Forced air
- Proportional mix nozzles
- Low flow nozzles
- Any other FAA or Airport approved glycol usage reduction tool

APPENDIX J

QUALITY ASSURANCE PROJECT PLAN

Ted Stevens Anchorage International Airport (ANC)
Storm Water Discharge Quality Assurance Project Plan

January 2020

List of Abbreviations

ADEC	Alaska Department of Environmental Conservation
ANC	Ted Stevens Anchorage International Airport
APDES	Alaska Pollutant Discharge Elimination System
BMP	Best Management Practices
BOD5	Biochemical Oxygen Demand
COC	Chain of Custody
COD	Chemical Oxygen Demand
CWA	Clean Water Act
DMR	Discharge Monitoring Report
DO	Dissolved Oxygen
DOT&PF	Alaska Department of Transportation and Public Facilities
DOW	Division of Water
EPA	Environmental Protection Agency
GP	General Permit
H2SO4	Sulfuric Acid
HCl	Hydrochloric Acid
L	Liter
MDL	Method Detection Limits
mL	Milliliter
MSGP	Multi-Sector General Permit
N	Nitrogen
NPDES	National Pollutant Discharge Elimination System
PQAO	Project Quality Assurance Officer
PQL	Practical Quantitation Limits
QAP	Quality Assurance Plan
QAPP	Quality Assurance Project Plan
QA/QC	Quality Assurance/Quality Control
RPD	Relative Percent Difference
SAP	Sampling and Analysis Plan
SOP	Standard Operating Procedures
SWPPP	Storm Water Pollution Prevention Plan
TAH	Total Aromatic Hydrocarbons
TAqH	Total Aqueous Hydrocarbons
U.S.	United States
WET	Whole Effluent Toxicity
WQS	Water Quality Standards

A1. Approvals:

Name	Title	Signature	Date
Tom Johnston 907-266-2129 Scott.lytle@alaska.gov	Environmental Manager and Project Quality Assurance Officer		
Tracy Mitchell 907-266-2467 Tracy.mitchell@alaska.gov	Environmental Program Specialist III		
ADEC DOW	Project Manager		
ADEC DOW	Water Quality Assurance Officer		
Charles Homestead 907-562-2343 Charles.homestead@sgs.com	DEC Certified Laboratory Manager		
Steve Ziegler 907-770-9041 Ancservice1@tttenviro.com	Service Technician, TTT Environmental		
Kasey Skrivseth 858-587-7333 x 14044 Kasey.skrivseth@enthalpy.com	Project Manager, Enthalpy Analytical NELAP Certified		

TABLE OF CONTENTS

A3. Distribution List

This list includes the names and addresses of those who receive copies of this approved QAPP and subsequent revisions. It is not the list of those who receive data reports.

Name	Title	Address/Phone	Date Sent
Tom Johnston	Environmental Manager and Project Quality Assurance Officer	ADOT-PF/ANC POB 196960 Anchorage, Alaska 99519-6960 (907) 266-2129 Scott.lytle@alaska.gov	
Tracy Mitchell	Environmental Program Specialist III	ADOT-PF/ANC POB 196960 Anchorage, Alaska 99519-6960 (907) 266-2467 Tracy.mitchell@alaska.gov	
ADEC DOW (TBD)	Project Manager	ADEC 555 Cordova Street Anchorage, AK 99501 (907)	
ADEC DOW (TBD)	Water Quality Assurance Officer	ADEC 555 Cordova Street Anchorage, AK 99501 (907)	
Charles Homestead	ADEC Certified Laboratory Manager	SGS North America, Inc. 200 West Potter Drive Anchorage, AK 99518 Phone: (907) 562-2343 charles.homestead@sgs.com	
Steve Ziegler	Service Technician	TTT Environmental Instruments & Supplies 4201 B Street Anchorage, AK 99503 Phone: (907) 770-9041 ancservice1@tttenviro.com	
Kasey Skrivseth	Project Manager	Enthalpy Analytical 4340 Vandever Avenue San Diego, CA 92120 kasey.skrivseth@entalpy.com	

A4. Project/Task Organization

ADEC issued an APDES General Permit No. AKR061000 with an effective date of November 1, 2019 (ANC permit ANC-GP AKR061001 issued March 16,2020). This approval authorizes ANC and Co-permittees to discharge storm water to:

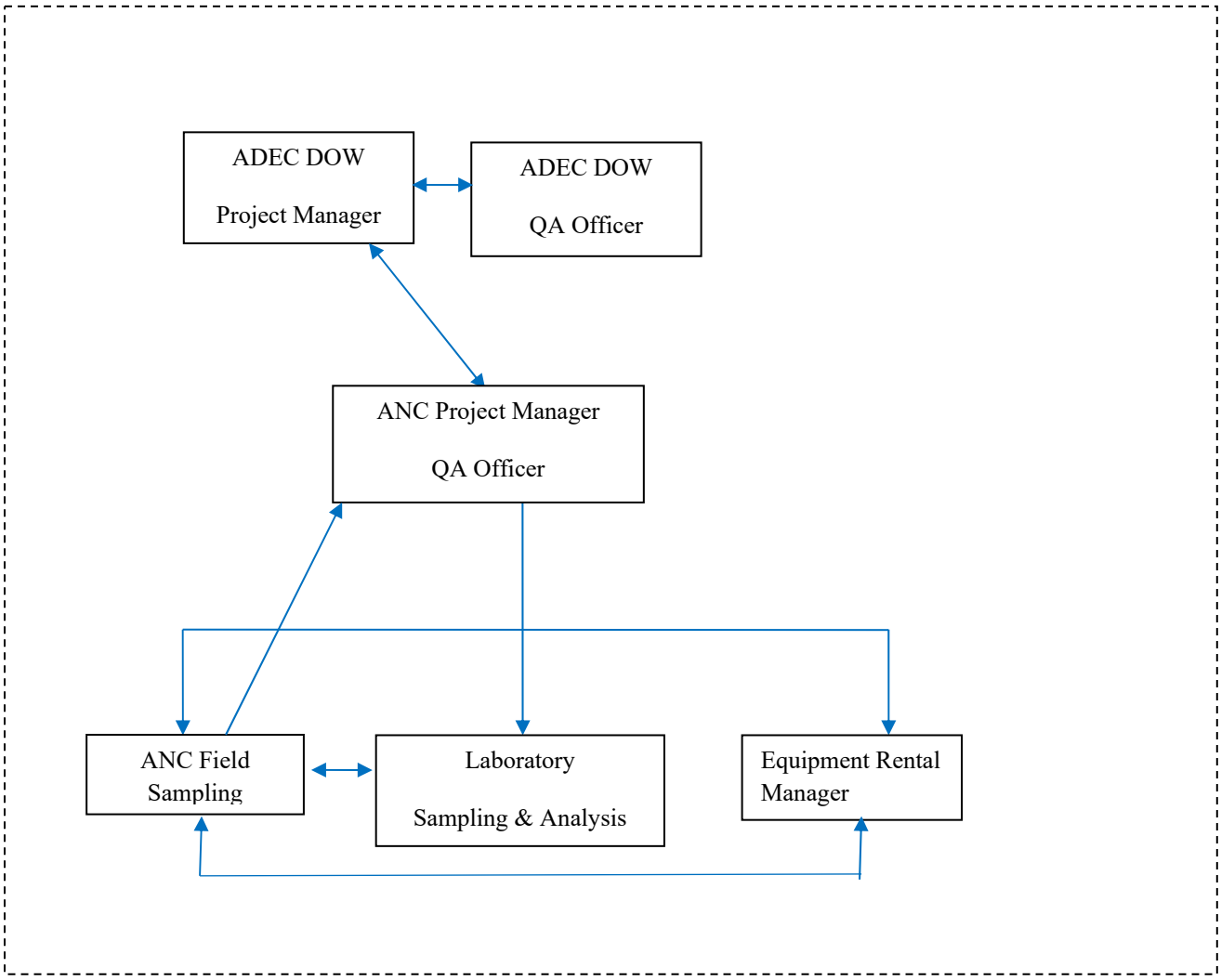
Outfall	Receiving Water or Body	Latitude	Longitude
001A	Lake Spenard	61°10′ 30′′	-149°57′ 08′′
002B	Lake Hood	61°10′ 43′′	-149°58′ 30′′
003C	Lake Hood	61°10′ 53′′	-149°58′ 42′′
004D	Knik Arm/ Cook Inlet	61°11′ 58′′	-149°59′ 29′′
005E	Unnamed Creek	61°10′ 22′′	-150°02′ 57′′

Discharge will be in accordance with effluent limitations, monitoring requirements and other conditions set forth in the permit. Duties and responsibilities are listed below.

Project Organizational Responsibilities			
Position Title	Agency or Company	Division Branch/Section	Responsibilities
Project Quality Assurance Officer Tom Johnston	ANC	Environmental	Responsible for ensuring ANC Environmental staff perform the collection and delivery of samples to the lab. Ensure that field and laboratory forms are complete when checking for errors. Compare approximately 20% of the data sheets or logbook entries with the DMR entries. If any errors are found, verification of correct entry by comparing an additional 20% of the data sheets.
Tracy Mitchell Kenton Curtis Field Sampling staff	ANC	Environmental	Responsible for ordering bottles, filling COC, picking up field equipment, sampling and delivering samples to laboratory.
Project Manager TBD	ADEC	Division of Water	Responsible for overall technical and contractual management of the project. For Permit related monitoring projects, responsible for ensuring permittee complies with permit required water quality monitoring as specified in the approved QAPP.

Project Organizational Responsibilities			
Position Title	Agency or Company	Division Branch/Section	Responsibilities
Water Quality Assurance Officer TBD	ADEC	Division of Water	Responsible for QA review and approval of plan and oversight of QA activities ensuring collected data meets project's stated data quality goals.
Charles Homestead Laboratory Manager	SGS, Inc.		Responsible for the overall review and approval of laboratory analytical work, responding to sample result inquiries and method specific details. Responsible for QA/QC of laboratory analysis as specified in the QAPP and reviews and verifies the validity of sample data results as specified in the QAPP and appropriate EPA approved analytical methods.
Mary McDonald Laboratory Quality Assurance Manager/Officer	SGS, Inc.		Laboratory Quality Assurance Manager/Officer – Responsible for QA/QC of water quality laboratory analyses as specified in the QAPP. Along with Laboratory Manager, the Lab QA Officer reviews and verifies the validity of sample data results as specified in the QAPP and appropriate EPA approved analytical methods.
Steve Ziegler Service Technician	TTT Environmental		Responsible for calibration of YSI meter used for field measurements.
Kasey Skrivseth Project Manager	Enthalpy Analytical		Conduct WET testing in accordance with permit conditions.

Figure 1: Project Team Organization Chart



A5. Problem Definition/Background and Project Objectives

ANC and Co-permittees were issued an APDES GP (Permit No. AKR061000) which became effective on November 1, 2019 authorizing discharge of storm water in accordance with effluent limitations, monitoring, reporting and other conditions set forth in the permit. The purpose of collecting this monitoring data is to comply with this permit's requirement. This QAPP is being developed, and monitoring conducted, based on the ANC-GP.

ANC is situated on approximately 4,700 acres at the west end of the Municipality of Anchorage, Alaska, overlooking the Knik and the Turnagain Arms of Cook Inlet, about 3 miles southwest of the Anchorage downtown business district. The estimated area of industrial activity exposed to storm water includes an approximate 1,291 acres of pervious surfaces and 1,352 acres of impervious surfaces for a total acreage of 2,643 acres.

Aviation related facilities include the North and South passenger terminals, North Airpark, East Airpark, and South Airpark. ANC is also the site of Lake Hood Sea Plan Base which provides

light aircraft sea/ski lanes and a 2,200-foot gravel runway for wheeled light aircraft. ANC leases property to many aviation-related businesses that operate at the airport.

Industrial activities on ANC property include runway, ramp, and apron maintenance, aircraft maintenance and fueling, aircraft and vehicle washing, building maintenance, vehicle maintenance and fueling, cargo shipping and receiving, and fuel storage and delivery. Products such as deicing and anti-icing materials, fuel, lubricants, solvents, and paints are stored, transferred, used and disposed of while conducting the industrial activities by ANC and tenants.

Some of the monitoring parameters do not have numeric ADEC WQS associated with them. This QAPP ensures that data collected and analyzed are valid and verifiable. Sampling should never be conducted during conditions that threaten human health or safety.

Previous monitoring (from MSGP 2015) can be found in ANC SWPPP January 2020 Appendix D.

A6. Project Task Description and Schedule

The amount of storm water discharge is dependent on the amount of precipitation during any given year. Effluent monitoring will occur at Outfalls 001A, 002B, 003C, 004D, and 005E. The receiving water location is approximately 150-200 feet north of Outfall 002B in Lake Hood. Additional water monitoring is required approximately 100 feet east and west of Gull Island (Lake Spenard (LS) and Lake Hood (LH) This lake monitoring must start May 2020 after the effective date of the permit and continue for four summers. Whole Effluent Toxicity tests are required at Outfalls 002B and 004D once per year during breakup. Sampling/monitoring locations and overall geographic location are in ANC SWPPP January 2020, Figure 3-1, Figures 6-1 through 6-4 and in ANC SWPPP January 2020 v.2 August 2021 Appendix A, Site Map A-10.

Outfall	Receiving Water or Body	Latitude	Longitude
001A	Lake Spenard	61°10′ 30′′	-149°57′ 08′′
002B	Lake Hood	61°10′ 43′′	-149°58′ 30′′
003C	Lake Hood	61°10′ 53′′	-149°58′ 42′′
004D	Knik Arm/ Cook Inlet	61°11′ 58′′	-149°59′ 29′′
005E	Unnamed Creek	61°10′ 22′′	-150°02′ 57′′
Receiving Water (Lakes Hood & Spenard) Monitoring			
RW	Lake Hood	61°10′ 44′′	-149°58′ 31′′
LH	Lake Hood	61°10′ 49′′	-149°58′ 8′′
LS	Lake Spenard	61°10′ 43′′	-149°57′ 25′′

Table A6-1 Effluent Limits and Monitoring Requirements for Outfalls

Once Per Month (unless otherwise noted) Sample Outfalls 001A, 002B, 003C, 004D, 005E					
Parameter	Limits - Outfalls A, B, C, E Minimum		Limits - Outfall D		
	Min	Max	Min	Max	
Biochemical Oxygen Demand (BOD_5) mg/L					
Chemical Oxygen Demand (COD) mg/L					
Total Aqueous Hydrocarbons (TAqH)[a]					
Total Aromatic Hydrocarbons (TAH)[a]					
Sheen - visual					
pH - S.U	6.5	8.5	6.5	8.5	
Temperature - °C					
Dissolved Oxygen (DO) – mg/L	5	17	6	17	
Residues - visual [b]	Outfall 004D – Weekly check March 1 to May 31; Monthly check June 1 to February 28 Outfalls 001A, 002B, 003C, and 005E - Monthly check				
Ethylene Glycol (EG) – mg/L	November – May only				
Propylene Glycol (PG) – mg/L	November – May only				
Flow – gpd					Estimate for Outfalls A, B, C, D, and E
Whole Effluent Toxicity (WET)	Composite on a four-hour composite sample (four distinct grab samples, once an hour, composited into one sample) per sample location. In addition, a split of the composite sample must be analyzed for the chemical and physical parameters required in this table for effluent monitoring.				WET testing only at Outfall 002B and Outfall 004D. Once per year for permit term during spring break-up (typically between April 7th to the 21st).

Notes:

a. TAH and TAqH shall only be monitored if a visual sheen is detected. Samples to determine concentrations of TAH and TAqH must be collected in marine and fresh waters below the surface and away from any observable sheen; concentrations of TAqH must be determined and summed using a combination of: (A) EPA Method 602 (plus xylenes) or EPA Method 624 to quantify monoaromatic hydrocarbons and to measure TAH; and (B) EPA Method 610 or EPA Method 625 to quantify polynuclear aromatic hydrocarbons listed in EPA Method 610; use of an alternative method requires department approval; the EPA methods referred to in this note may be found in Appendix A of 40 C.F.R. §136, Appendix A, as revised as of July 1, 2003 and adopted by reference.

b. Residues may not, alone or in combination with other substances or wastes, make the water unfit or unsafe for the use, or cause acute or chronic problem levels as determined by bioassay or other appropriate methods. Residues may not, alone or in combination with other substances, cause a film, sheen, or discoloration on the surface of the water or adjoining shorelines; cause leaching of toxic or deleterious substances; or cause a sludge, solid, or emulsion to be deposited beneath or upon the surface of the water, within the water column, on the bottom, or upon adjoining shorelines.

Table A6-2 Receiving Water Monitoring Requirements (Lakes Hood and Spenard)

Parameter	Two samples per year, minimum 60 days apart
Biochemical Oxygen Demand (BOD_5) mg/L	Grab
Chemical Oxygen Demand (COD) mg/L	Grab
Dissolved Oxygen (DO) mg/L	In-Situ
Temperature - °C	In-Situ
pH - S.U	In-Situ
Sheen	Visual
Turbidity - NTU	Grab

a. This monitoring must start May 2020 after the effective date of the permit and continue for four summers.
b. Sampling will be conducted twice per year between May and September a minimum of 60 days apart.
c. Sample collection must occur within 2 weeks of Outfall 002B effluent storm water collection.

A7. Data Quality Objectives and Criteria for Measurement of Data

Project Data Quality Objectives

The overall Quality Objective of this QAPP is to ensure that the requirements of ANC-GP are fulfilled, and that data collected are scientifically verifiable and valid.

All field and visual results will be recorded in field logbooks and then entered an Excel spreadsheet. When laboratory results are received these will be entered the same Excel spreadsheet.

ANC will engage SGS North America, Inc. or ARS Aleut Analytical – Anchorage to conduct the laboratory analysis, WET testing will be conducted with an outside laboratory, Enthalpy Analytical or another accredited WET testing laboratory. Field parameters will be obtained using equipment from TTT Environmental. Tables A6-1 and A6-2 lists the parameters, sample locations, and sample frequency for monitoring required by the ANC-GP.

Table A7-1 – Project Measurement Quality Objectives

Analyte	Method	MDL	PQL	AK WQS	Precision (RPD)	Accuracy (%Recovered)
BOD_5	SM21 5210B	2 mg/L	2 mg/L	NA	84.6% - 115.4%	18%
COD	EPA 410.4	6.2 mg/L	20 mg/L	NA	90% - 110%	25%
Glycol, Ethylene[a]	SW 8015	10 mg/L	10 mg/L	NA	73% - 129%	20%
Glycol, Propylene[a]	SW 8015	10 mg/L	10 mg/L	NA	72% - 123%	20%
TAqH	8270 SIM LV (PAH)			15 ug/L		
Acenaphthene		0.015 ug/L	0.05 ug/L		48%-114%	20%
Acenaphthylene		0.015 ug/L	0.05 ug/L		35%-121%	20%
Anthracene		0.015 ug/L	0.05 ug/L		53%-119%	20%
Benzo(a)Anthracene		0.015 ug/L	0.05 ug/L		59%-120%	20%
Benzo[a]pyrene		0.0062 ug/L	0.02 ug/L		53%-120%	20%
Benzo[b]Fluoranthene		0.015 ug/L	0.05 ug/L		53%-126%	20%
Benzo[g,h,i]perylene		0.015 ug/L	0.05 ug/L		44%-128%	20%
Benzo[k]fluoranthene		0.015 ug/L	0.05 ug/L		54%-125%	20%
Chrysene		0.015 ug/L	0.05 ug/L		57%-120%	20%
Dibenzo[a,h]anthracene		0.0062 ug/L	0.02 ug/L		44%-131%	20%
Fluoranthene		0.015 ug/L	0.05 ug/L		58%-120%	20%
Fluorene		0.015 ug/L	0.05 ug/L		50%-118%	20%
Indeno[1,2,3-c,d] pyrene		0.015 ug/L	0.05 ug/L		48%-130%	20%
Naphthalene		0.031 ug/L	0.1 ug/L		43%-114%	20%
Phenanthrene		0.015 ug/L	0.05 ug/L		53%-115%	20%
Pyrene		0.015 ug/L	0.05 ug/L		53%-121%	20%

Analyte	Method	MDL	PQL	AK WQS	Precision (RPD)	Accuracy (%Recovered)
TAH	EPA 602 Aromatics by 624			10 ug/L		
1,2-Dichlorobenzene		0.31 ug/L	1 ug/L		80%-119%	20%
1,3-Dichlorobenzene		0.31 ug/L	1 ug/L		80%-119%	20%
1,4-Dichlorobenzene		0.15 ug/L	0.5 ug/L		79%-118%	20%
Benzene		0.12 ug/L	0.4 ug/L		79%-120%	20%
Chlorobenzene		0.15 ug/L	0.5 ug/L		82%-118%	20%
Ethylbenzene		0.31 ug/L	1 ug/L		79%-121%	20%
o-Xylene		0.31 ug/L	1 ug/L		78%-122%	20%
P & M -Xylene		0.62 ug/L	2 ug/L		80%-121%	20%
Toluene		0.31 ug/L	1 ug/L		80%-121%	20%
Whole Effluent Toxicity	EPA/600/R-95-136, EPA-821-R-02-014, and EPA-821-R-02-013			NA		
Field Measurements						
Dissolved Oxygen (mg/L)	In Situ (electronic probe) EPA 360.1	NA	±0.01 mg/L	5 mg/L for fresh water; 5 6 mg/L for marine; <17 mg/L for either	±20%	NA
pH (S.U.)	In Situ (electronic probe) EPA 150.1	NA	±0.01 pH units	6.5 – 8.5	±0.01 pH units	±0.01 pH units
Temperature (°C)	In Situ (electronic probe) EPA 170.1	NA	0.1 °C	NA	±0.2°C	±0.2°C
NTU	In Situ (electronic probe) EPA 180.1			See Note below	±10%	
Note: May not exceed 10 NTU above natural conditions when natural turbidity is 50 NTU or less and may not have more than 20% increase in turbidity when the natural turbidity is greater than 50 NTU, not to exceed a maximum increase of 15 NTU. For all lake waters, turbidity may not exceed 5 NTU above natural turbidity.						

Criteria for Measurement of Data
Criteria for Measurements of Data are the performance criteria: the detectability, precision, accuracy, completeness, representativeness, and comparability. These criteria must be met to ensure that the data are verifiable and that project quality objectives are met.

Detectability
This is the ability of the method to reliably measure a pollutant concentration above background. DEC DOW uses two components to define detectability: method detection limit (MDL) and practical quantification limit (PQL) or reporting limit (RL).

If a value is less than the MDL, report "less than [numeric value of MDL]". If value is less than a minimum level (ML) report "less than [numeric value of ML]".

For purposes of calculating a monthly average, zero may be assigned for values less than the MDL, and the numeric value of the MDL may be assigned for values between the MDL and the ML. If the average value is less than the MDL, the permittee must report "less than (numeric value of MDL)". If the average is less than the ML, the permittee must report "less than (numeric value of ML)".If a value is equal to or greater than the ML, the permittee must report and use the actual value. The resulting average value must be compared to the compliance level in assessing compliance.

Precision
Precision is the degree of agreement among repeated measurements of the same characteristic, or parameter, and gives information about the consistency of methods. Precision is expressed in terms of the relative percent difference (RPD) between two measurements (A and B).

For field measurements, precision is assessed by measuring replicate (paired) samples at the same locations and as soon as possible to limit temporal variance in sample results. Overall project precision is measured by collecting blind (to the laboratory) field replicate samples. Laboratory precision is determined similarly via analysis of laboratory duplicate samples. For paired and small data sets, project precision is calculated using the following formula:

$$RPD = 100 * \frac{(A - B)}{\left({}^{(A+B)}/_{2}\right)}$$

Where: RPD = relative percent difference
A = primary sample
B = replicate field sample or laboratory duplicate sample

For larger paired precision data sets (e.g. overall project precision) or multiple replicate precision data, use the following formula:

$$\text{RSD} = 100 * \sigma / \text{mean}$$

$$\sigma = \int \frac{\Sigma d^2}{2k}$$

Where: RSD = relative standard deviation
σ = standard deviation
k = number of paired replicate samples (A and B)
d = A - B
A = primary sample
B = replicate field sample or laboratory duplicate sample

Lab precision is measured by collecting blind (to the laboratory) duplicate samples. Contracted laboratories (per their QMPs) ensure laboratory precision by measuring Matrix Spike/Matrix Spike Duplicate (MS/MSD) samples and by the analysis of laboratory duplicate samples. The laboratory usually performs the analysis of one set of MS/MSD and duplicate samples per matrix measured. RPD is usually <20% but can vary widely depending on the analytical method.

Control charts are a graphical representation showing the limits of acceptable data. Charts are produced by analysts to document accuracy and precision in their testing. These charts are kept in the laboratory for data validation purposes. ANC will provide accuracy and precision records to ADEC if requested.

Accuracy
Accuracy is a measure of confidence that describes how close a measurement is to its "true" value. Methods to determine and assess accuracy of field and laboratory measurements include, instrument calibrations, various types of QC checks (e.g., sample split measurements, sample spike recoveries, matrix spike duplicates, continuing calibration verification checks, internal standards, sample blank measurements (field and lab blanks), external standards), performance audit samples (DMRQA, blind Water Supply or Water Pollution PE samples from American Association for Laboratory Accreditation (A2LA) certified, etc. Bias/Accuracy is usually assessed using the following formula:

$$Accuracy = \frac{MeasuredValue}{TrueValue} \times 100$$

Completeness
Completeness is a measure of the percentage of valid samples collected and analyzed to yield enough information to make informed decisions with statistical confidence. As with representativeness, data completeness is determined during project development and specified in the QAPP. Project completeness is determined for each pollutant parameter using the following formula:

$$\frac{T - (I+NC)}{T} \times (100\%) = Completeness$$

Where T = Total number of expected sample measurements.
I = Number of invalid sample measured results.
NC = Number of sample measurements not completed (e.g. spilled sample, etc).

ANC will determine completeness by comparing sampling and analyses completed with the requirements in the permit. ANC's goal is to complete 100% of required monitoring.

Representativeness
Representativeness of data collected was considered in the permit development process and assigns what parameters to sample for, where to sample, type of sample (grab, continuous, etc.) and frequency of sample collection.

Comparability
Comparability is the degree to which data can be compared directly to similar studies. Using standardized sampling and analytical methods and units of reporting with comparable sensitivity ensures comparability. ANC will use EPA approved methods as listed in Table A7-1.

A8. Training
ANC Environmental staff are professionals with the knowledge and expertise to perform sampling, handle samples, take accurate field notes, and conform to quality assurance requirements.

A9. Documents and Records
If changes occur to the QAPP electronic versions will be sent to those identified on the distribution list (Section A3). An e-file and hard copy will be kept with the permit and accompanying SWPPP.

Field notebooks will be filled out using "write in the rain" ink. Changes are made by crossing out errors and adding correct information. Laboratory data results are provided in report format (from the laboratory) to ANC for each sampling event.

Both the field readings and lab report data will be entered an Excel spreadsheet in order to consolidate and for ease of reporting (see ANC SWPPP Appendix Q). Electronic reporting of results to NetDMR (for effluent results) is required in the permit no later than the 15th day of the following month. The WET test report and receiving water monitoring results are submitted with monthly NetDMR following receipt of the WET test and laboratory reports.

Any procedural or equipment problems are recorded along with the data results. Any deviation from this QAPP is noted. Chain-of-Custody will be included with laboratory report results.

TTT Environmental, or similar organization that provides field sampling equipment, will provide calibration verification. This documentation will be retained as part of this QAPP. All records and documents will be kept by the ANC Environmental Section at least 3 years after permit expiration.

B. Data Generation and Acquisition

B1. Sampling Process

1. Outfall Effluent Monitoring. Tests to be performed are according to the requirements of the APDES permit and include parameters in Table A6-1 and methods listed in Table A7-1.
2. Receiving Water Monitoring. Tests to be performed are according to the requirements of the APDES permit and include parameters in Table A6-2 and methods listed in Table A7-1.
3. WET Testing. Tests to be performed are according to the requirements of the APDES permit and EPA Reference documents EPA/600/R-95/136, EPA-821-R-02-014, and EPA-821-R-02-013. Samples will be taken from Outfall 002B and Outfall 004D monitoring locations.

B1.1. Monitoring Objectives and Appropriate Data Quality Objectives

Samples and measurements taken as required by the ANC-GP must be representative of the discharge. Previous monitoring results (from MSGP 2015) can be found in the ANC SWPPP January 2020 v.2 August 2021, Appendix D.

B1.2. Characterize the General Monitoring Locations

Monitoring locations were based on storm water discharge locations from the facility. Site maps may be found in ANC SWPPP January 2020 v.2 August 2021, Figures 6-1 through 6-4 and Appendix A, A-10. See also Section A of QAPP for longitude/latitude.

B1.3 Identify Site-Specific Sample Collection Locations, Parameters to be Measured and Frequencies of Collection

See Section A6.

B.2 Sampling Method Requirements

Project sampling staff should wear disposable gloves and safety eyewear, if needed, and observe precautions while collecting samples. Sampling staff need to be aware of the potential chemical and biological hazards present. The Project Sampling Staff collecting samples must take care not to touch the insides of bottles or lids/caps during sampling.

B2.1 Sample Types

Samples will be listed as "composite" or "grab" on the Chain-of- Custody or Transmission Form.

B2.2 Sample Containers and Equipment

All sampling equipment and sample containers must be cleaned according to the equipment specifications and/or the analytical laboratory. Bottles supplied by a laboratory are pre-cleaned, must never be rinsed, and will be filled only once with a sample.

For samples requiring cooling preservation, a temperature blank shall accompany each cooler (min/max thermometer preferred). Any min/max thermometer used shall be readable to at least 0.2°C. Samples taken within 2 hours of delivery to laboratory do not require a temperature blank.

Table B2-1 – EPA Approved Methods

Laboratory Parameter	Lab Method	Container Size	Container Type	Preservative	Hold Time
BOD_5	SM21 5210B	1 x 1L	HDPE	None	48 hours
COD	EPA 410.4	1 x 250 ml	HDPE	H_2SO_4	28 days
Glycol, Ethylene[a]	SW 8015	1 x 125 ml	Amber glass	HCl	14 days
Glycol, Propylene[a]	SW 8015	1 x 125 ml	Amber glass	HCl	14 days
TAqH	8270 SIM LV (PAH)	2 x 250 ml	Amber glass	None	7 days
TAH	EPA 602 Aromatics by 624	3 x 40 ml	VOA vials	HCl	14 days
Whole Effluent Toxicity	EPA/600/R-95-136, EPA-821-R-02-014, and EPA-821-R-02-013	2.5-gallon cubitaner	LDPE	None	36 hours

a. Glycols, Ethylene and Propylene, are sampled from same bottle

Flow Measurements

Flow measurements shall be estimated at Outfalls 001A, 002B, 003C, and 005E. At Outfall 004D measurements will be taken at the mouth of the outfall only when conditions are safe to do so otherwise this outfall flow will also be estimated. Flow measurements shall be recorded in gallons per day (gpd) and recorded on the field form or data sheet for the project. This will be used as a snapshot of flow conditions because flow varies over time.

Field Measurements

Dissolved oxygen (DO), temperature (°C), pH, and turbidity (NTU) are fundamental water quality parameters and measured in the field using water quality meters. For purposes of this project, a YSI 556 MPS multi-parameter handheld instrument, or equivalent water quality meter, shall be used. Calibration of these water quality instruments are required prior to the monthly sampling events and will be conducted by the equipment rental company. A copy of proof of the calibrations will be obtained by ANC field staff and maintained in the project file for quality assurance purposes and consideration of data evaluation.

With the exception of Outfall 004D, the multi-parameter probe shall be placed within the water column (completely submerged either vertically or horizontally) in a manner which is representative of the sample collection area (i.e. in the middle of the water column, suspended so as not to touch the bottom, but below the water surface). Enough time will be allowed for the instrument to stabilize and record readings in the field logbook. At Outfall 004D a gallon-sized Ziploc® bag will be used to collect the sample. It will be brought to the surface and the meter will be placed in the bag to obtain the readings. Enough time will be allowed for the instrument to stabilize and record readings in the field logbook.

Visual Observations
Residues and sheen are not allowed in surface waters as described in 18 AAC 70. The field technician shall make visual observations of residues including, floating solids, debris, sludge, deposits, foam, scum or other residues at each sample collection point. Observations of residues and sheen will be noted in the field notebook and transferred to Excel spreadsheet for each Outfall and Receiving water sampling event. Notes shall include the type of residue(s), color, and other physical characteristics as observed. These notes will then be transferred from the field notebook to an Excel spreadsheet for each sampling event.

Laboratory Sample Methods
Samples will be identified as "composite" or "grab" on the Chain-of-Custody forms. Outfall effluent and receiving water samples are grab samples – bottles filled to the shoulder of the bottle, leaving a small space for expansion.

Grab samples will be collected by:

1. Submersible bailer (disposable);
2. Direct collection into laboratory provided method-specific container (discouraged as loss of sample preservative is possible); or
3. Using an unpreserved sample container to transfer the water sample to the method specific containers.

Composite samples (WET Test only) – a four-hour composite sample, consisting of four distinct grab samples once an hour composited into one sample.

VOC samples – water sample will be obtained in un-preserved bottle, or in a baler with the water transferred into an unpreserved bottle. This sample will then be used to fill VOC sample container free of any air bubbles.

Sample shall be placed into method-specific containers (bottles containing appropriate preservatives) provided by the contract laboratory. All sample containers shall be placed into a clean cooler and maintained between 2°C and 6°C, or delivered to laboratory within 2 hours of sample collection (WET sample with 36 hours). See Table B2-1 for sample holding times, preservation, etc.

The samples (contained in the sample cooler) shall be transported under chain-of-custody (COC) to the contract laboratory. The method-specific information described within the QAPP is based on information provided by SGS North America, Inc. (SGS) located in Anchorage, AK.

Each sample bottle shall be labeled for the parameter to be tested and the location name as the sample ID. Sample collection time and date will be included on the COC.

Any deviations from accepted sample collection methods shall be documented and considered during data evaluation.

B3. Sample Handling and Custody

All sampling equipment and sample containers will be cleaned according to equipment specifications, the analytical laboratory and the equipment rental company. Bottles supplied by a laboratory are pre-cleaned, must never be rinsed, and will be filled only once with a sample.

Samples brought to laboratory for analysis will include a COC. Contracted laboratory will maintain custody of bottles and samples using their normal custody procedures.

B4. Analytical Methods

Monitoring shall be conducted in accordance with EPA-approved analytical procedures and in compliance with 40 CFR Part 136, *Guidelines Establishing Test Procedures for Analysis of Pollutants*. Reference the Project's MQO table (Section A7) of this QAPP for list of parameters of concern, approved analytical methods, method-specific detection and reporting limits, accuracy and precision values applicable to this project.

Under direction of the Project Manager, project staff will ensure that all equipment and sampling kits used in the field and laboratories use EPA CWA approved methods. The project's QA officer will verify that only EPA CWA approved methods (or in specific incidences ADEC DOW pre- approved methods) are used.

SGS has a current QAP and relevant SOPs on file with ADEC DOW QA Officer.

B5. Quality Control Requirements

Details of quality control procedures for this sampling project are detailed in Section A7. The ADEC certified laboratory will analyze an unknown sample from an EPA-approved laboratory on an annual basis. EPA performance evaluation results are kept on file at the ADEC certified laboratory.

B6. Instrument/Equipment Testing, Inspection and Maintenance Requirements

Prior to sampling event, all sampling instruments and equipment will be inspected and calibrated prior to use. The sampler is responsible for assuring that field instruments and equipment are clean and in good working order before they are used for monitoring.

Routine maintenance for all meters will be conducted according to schedules and procedures described in manuals provided by the manufacturers.

The ADEC certified laboratory will follow their Quality Assurance Manual and maintain their own equipment.

B7. Instrument Calibration and Frequency

All field and laboratory instruments and equipment will be calibrated according to the manufacturers' instructions prior to sampling. Copies of field equipment calibrations will be kept within this Appendix for the QAPP (ANC SWPPP January 2020 v.2 August 2021 Appendix J).

B8. Inspection/Acceptance of Supplies and Consumables

All field equipment, meters, kits and supplies will be checked and calibrated before use. All samples, sample preservation procedures and holding times will be checked upon receipt of samples at the ADEC certified laboratory by the Laboratory Manager or his/her designee to ensure that they are within technical specifications before analysis. All reagents will be dated with the expiration date. Reagent expiration dates will be documented and kept on file in the laboratory. This documentation will be updated each time new or replacement equipment or

reagents are received and will be available for review upon request. Contracted and sub-contracted laboratories will follow procedures in their laboratory's QAP and SOPs for inspection/acceptance of supplies and consumables.

B9. Data Acquisition Requirements (Non-Direct Measurements)

A mixing zone is authorized for Outfall 004D for dissolved oxygen, color, and pH and will only be used if these parameters are not met with sampling protocols described previously. The chronic mixing zone is defined as 109 meters in length and 55 meters wide with a dilution factor of 5.1. the acute mixing zone is defined as a rectangle with a length of 7.4 meters and a width of 5.8 meters extending perpendicular from shore with a dilution factor of 1.6. The area extends from the marine bottom to the surface of the water and is oriented with the tidal flow. The point of compliance with the effluent limits is at the edge of the mixing zone, not the end of pipe.

The DO for Outfall 004D will be calculated based on the measured DO at Outfall 004D sampling point and the DO of the inlet at Point Woronzof Overlook Park (approximate location can be found in ANC SWPPP January 2020 v. 2 August 2021 Figure 6-2). The modeled acute dilation factor will be used, and the DO will be measured in mg/L.

$$DO = [Inlet + (1-DF)*Outfall\ 004D]/DF$$

Dilution Factor based on modeling = DF

Similarly, the pH for Outfall 004D will be calculated based on the measured pH at Outfall 004D sampling point and the pH of the inlet at Point Woronzof Overlook Park. The modeled acute dilution factor will be used.

Calculate the H^+ concentrations of mixture:

$$pH\ of\ mixture = Log\ [[10^{-pHOutfall} + (1-DF)*10^{-pHInlet}]/DF]$$

$$pH\ of\ Outfall\ (measured) = pH_{Outfall}$$

$$pH\ of\ Inlet\ (measured) = pH_{Inlet}$$

B10. Data Management

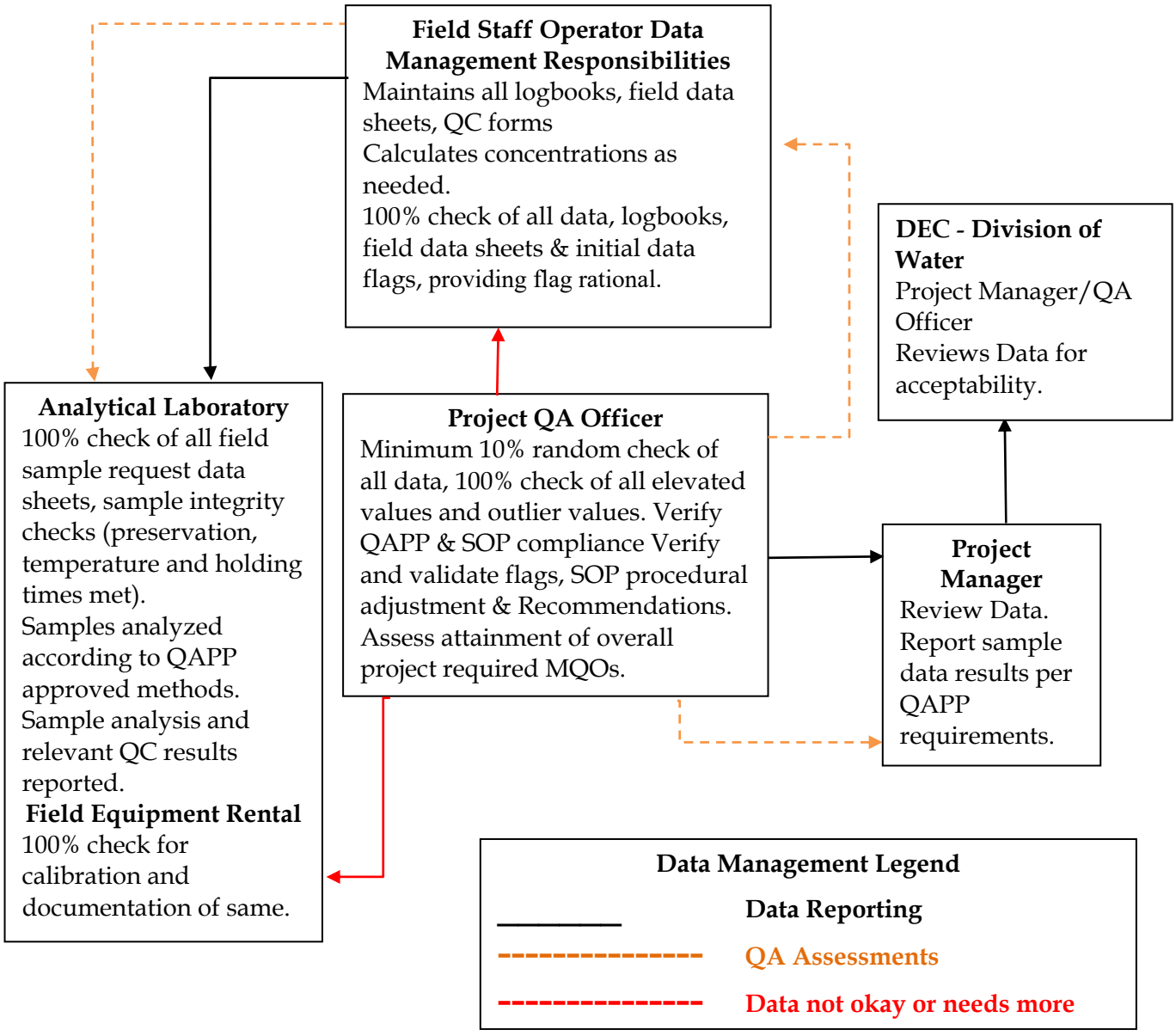
Data will be entered into field notebooks and sample results will be delivered as laboratory reports. The Quality Assurance Officer or her/his designee will enter field and laboratory data into Excel spreadsheet for electronic filing and then into the NetDMR for each month sampling was conducted. Calibration records will be filed within this Appendix for the QAPP (ANC SWPPP January 2020 Appendix J).

Laboratories are responsible to comply with the data quality objectives specified in the QAPP and as specified in the laboratory QAP and method specific SOPs. Validated sample laboratory data results with respective analytical method QA/QC results and acceptance criteria are reported to the sampling manager or project supervisor.

The Project QA officer is responsible for performing routine independent reviews of data to ensure the monitoring projects data quality objectives are being met. ADEC DOW Project Manager conducts a final review and submits the validated data to appropriate EPA data management program.

Data management files will be stored on a secure computer. Project records will be retained a minimum of three years after permit expiration.

Figure 2: Data Management Flow Chart



C. Assessment and Oversight

C1. Assessments and Response Actions

The Airport is responsible for the following:

- Preparation of a sampling kit (e.g., ordering bottles, labeling);
- Filing of hard and electronic (if feasible) copies of all sample data;
- Comparing the laboratory results to the regulatory levels;
- Completion of the NetDMR;
- Verification that every task, from sample collection to data compilation is accomplished and the project files are maintained; and
- Meeting non-compliance reporting requirements.

The Project Quality Assurance Officer (PQAO) will ensure that the field and laboratory forms are complete when he/she checks for any errors. He/she will compare approximately 10% of the data sheets or logbook entries with the NetDMR entries. If any errors are found, the quality assurance officer will verify correct entry by comparing an additional 10% of the data sheets.

Should the sampling staff, laboratory personnel or quality assurance officer find errors in sampling or analysis, the quality assurance officer will notify the project manager and the party responsible for the error or deficiency and will recommend methods of correcting the deficiency. The responsible party will take actions to correct the problem and will report corrections to the quality assurance officer and project manager.

The ADEC certified laboratory is responsible for the laboratory sample analysis, laboratory QA/QC, reports and the associated documentation.

C2. Reports to Management

A report detailing sampling and analyses for this project is required on an annual basis. The report will be distributed to individuals listed on the distribution page of this QAPP. It should include a discussion of the project status, results of performance evaluations/audits, data quality assessments, and discussion of any significant quality assurance problems. In addition to the annual report:

1. NetDMRs are to be completed for each sampling event and stored for delivery with the Annual Report.
2. Discussion of items to be elevated to management will occur at Airport Environmental staff meetings.
3. The Airport must achieve compliance with the WQS.
4. This QAPP must be evaluated yearly.

D. Data Validation and Usability

D1. Data Review, Validation, and Verification Requirements

The PQAO will perform at least yearly quality checks of data packages to detect correctable problems. Processes for data validation are detailed in Section A7. Any problems noted will be immediately brought to the attention of the Project Manager. Items to be checked include data sheets, logbooks, data entry, NetDMRs, calibration logs, and custody/transmission forms.

Questions to be considered during these quality checks include:

- Were correct methods used?
- Were holding times met?
- Were accuracy and precision within data quality objectives?
- Were reporting limits correct?
- Were lab qualifiers provided and explanations and corrective actions taken if there were anomalies in the data?
- Was the data package for each sampling event complete?

D2. Validation and Verification Methods

All data generated shall be validated in accordance with the QA/QC requirements specified in the methods and the technical specification outlined in this QAPP. Raw sample data will be maintained by ANC. Raw laboratory data shall be maintained by the laboratory. The laboratory may archive the analytical data into their laboratory data management system.

The summary of all laboratory analytical results will be reported to the field sampling staff. Data validation will be performed by the laboratory for all analyses prior to the release of data. All laboratory data will be validated according to the laboratory's QAP and SOPs and, as specified in this QAPP. The rationale for any anomalies in the QA/QC of the laboratory data will be provided to the Project Manager 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 defined, flagged appropriately and data use clearly delimited and justified. Any actions taken to correct QA/QC problems in sampling, sample handling, and analysis must be noted. Under the direction of the PQAO, project staff will document any QA/QC problems and the respective QA/QC corrective actions taken.

The PQAO or his/her designee is responsible for reviewing field log notebooks and field data sheets for accuracy and completeness within 48 hours of each sample collection activity, if possible. Sample results provided by the laboratory will be verified and validated by the laboratory QA Officer prior to issuing the laboratory report. Laboratory results will include the results of all QA/QC results as part of the sample data report. The laboratory report will become part of the permanent file for the monitoring project. The PQAO or his/her designee 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 verify project QA/QC criteria have been met (e.g., percent analyte recovery results for matrix spike and matrix spike duplicate (MS/MSD) results, etc).

Laboratories calculate and report the RPD and percent analyte recovery of analytical duplicate samples and MS/MSD samples.

D3. Reconciliation with User Requirements

The Project Manager and PQAO will review the ADEC permit monitoring requirements on an annual basis. If there are any problems with quality sampling and analysis, these issues will be discussed with ADEC to ensure that permit requirements and QAPP data quality objectives are being met. Modifications to monitoring required by permit will require modifications to the approved QAPP.

APPENDIX K

WEEKLY BMP INSPECTION FORM

&

REPORTS

Anchorage International Airport
Weekly Inspection Form

Date	Time	Inspected By: Tracy Mitchell Initials:_____	Company: ANC Environmental
Weather	Temperature		
Precipitation	Type: (rain, snow)	Visible Runoff	Snow on ground NO ≈ None Observed

BMPs to Look for	Comments / Observations - Enter into AFM Enviro Request any BMPs requiring action
Open swales mowed, cleaned out or excavated	
Swales, outlets free of sediment build-up, brush & other debris	
Absorbent booms to lakes & other pertinent areas in need of replacement	
Oil Weirs @ NPDB & Victor ditch (outfalls to 004D) in good condition?	
Snow dumps being separated as "clean" and "dirty"	
Leaking vehicles/equipment/spills	
Temporary Coverings intact	
Tank corrosion, deformation or signs of leaking	
Areas needing temporary covering or hydroseeding	
Any broken fencing observed	
Dumpster rust, corrosion, damage. Lids closed. Cleaning needed	
Aerator in Victor ditch and near well house operational	
Any erosion channels observed in need of maintenance	
Offsite tracking where vehicles enter or exit	
Other: e.g., hydro-seeded areas growing	

Areas to Inspect

C Ramp / RON 1-3	Postmark SD	RON 12-14	Alpha SD	Outfalls 001A, 002B, 003C, 004D, and 005E	Outfall - North Pothole of Lake Hood
NT	PAPA 1-3	B Ramp	Kulis	Safety Building #2 (Old Fire Station)	Old AFM
QTF / AFM	NAP	A Ramp	SAP	Electrical Vault	Victor Ditch
AARF	RON 7-11	EAP	Fire Training Site	Western SD	

APPENDIX L

ROUTINE FACILITY INSPECTION FORM

&

REPORTS

Anchorage International Airport Routine Facility Site Inspection Form (Monthly)										
Date: Time:			Temperature:		Precipitation:					
Inspector's Name(s):						Inspector's Signature:				
Area of Airport Inspected	Any previously unidentified discharges from the site?		Any previously unidentified pollutants in existing discharges?		Any evidence of, or potential for, pollutants entering drainage system?		Any control measures needing installation, maintenance or repairs?		Any incidents of noncompliance observed?	
Field and Equipment Maintenance Yard and Quick Turnaround Facility										
Vehicle and equipment maintenance and storage;	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No
Grounds maintenance support;	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No
Covered bulk material storage, handling and loading;	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No
Waste handling areas (dumpsters)	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No
Main Safety Building										
Airport Rescue and Fire Fighting (ARFF)	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No
Safety Building #2										
Vehicle and material storage	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No
Fire Training Facility										
Fire Fighter Training (Fire Pit)	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No
Runways, taxiways, and aprons										
Runway snow removal;	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No
Pavement deicing;	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No
Pavement painting and maintenance	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No
Above ground and underground storage tanks										
Chemical and fuel storage;	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No
Vehicle fueling;	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No
Power generation (emergency generators)	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No

Area of Airport Inspected	Any previously unidentified discharges from the site?		Any previously unidentified pollutants in existing discharges?		Any evidence of, or potential for, pollutants entering drainage system?		Any control measures needing installation, maintenance or repairs?		Any incidents of noncompliance observed?	
Snow storage										
Snow collection and storage	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No
Outfalls										
001A	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No
002B	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No
003C	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No
004D	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No
005E	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No
Any additional control measures needed to comply with permit requirements?										
Certification Statement										
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 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.										
Signed: _____ Print Name: Craig Campbell										
Date: _____ Title: Airport Manager										

APPENDIX M

QUARTERLY VISUAL ASSESSMENT FORM

&

REPORTS

ANCHORAGE INTERNATIONAL AIRPORT

QUARTERLY VISUAL ASSESSMENT OF STORMWATER DISCHARGE

ANC-GP Quarterly Visual Assessment Form

(Complete a separate form for each outfall)

Name of Facility:	Anchorage International Airport	APDES Tracking No.	AKR061001

Outfall Name:	Person(s)/Title(s) collecting/examining sample: Tracy Mitchell, Environmental Specialist III Signature of collector/examiner:
Date & Time Sample Collected:	Date & Time Sample Examined:
Substitute Sample? ☐ No	☐ Yes (identify quarter/year when sample was originally scheduled to be collected):
Nature of Discharge: ☐ Rainfall ☐ Snowmelt	

If rainfall: Rainfall Amount (inches):_ _	Previous Storm Ended 72 hours Before Start of This Storm?	☐ Yes	☐ No* (explain):

Parameter		
Color	☐ None ☐ Other	(describe):
Odor	☐ None ☐ Musty ☐ Sewage ☐ Sulfur ☐ Sour ☐ Petroleum/Gas _____ ☐ Solvents ☐ Other (describe):	
Clarity	☐ Clear ☐ Slightly Cloudy ☐ Cloudy ☐ Opaque ☐ Other	
Floating Solids	☐ No ☐ Yes (describe):	
Settled Solids**	☐ No ☐ Yes (describe):	
Suspended Solids	☐ No ☐ Yes (describe):	
Foam (gently shake sample)	☐ No ☐ Yes (describe):	
Oil Sheen	☐ None ☐ Flecks ☐ Globs ☐ Sheen ☐ Slick ☐ Other (describe):	Other Obvious Indicators of Storm Water Pollution ☐ No ☐ Yes (describe):

* The 72-hour interval can be waived when the previous storm did not yield a measurable discharge or if you are able to document (attach applicable documentation) that less than a 72-hour interval is representative of local storm events during the sampling period.

** Observe for settled solids after allowing the sample to sit for approximately one-half hour.

If applicable, why was it not possible to take samples within the first 30 minutes of an actual discharge from a measurable storm water event?	
Probable sources of any storm water contamination.	

Detail any concerns, additional comments, descriptions of pictures taken, and any corrective actions taken below (attach additional sheets as necessary).

Certification by Facility Responsible Official (Refer to ANC-GP Appendix A, Subsection 1.12)

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.

Name:	Craig Campbell	Title:	Airport Manager
Signature:		Date Signed:	

APPENDIX N

COMPREHENSIVE SITE INSPECTION FORM

&

REPORT

Anchorage International Airport Comprehensive Site Inspection Form (Annual – During Deicing Season)										
Date: Time:		Temperature:		Precipitation:		Inspector's Name(s):				
Monitoring Data Reviewed: □ Yes □ No						Inspector's Signature:				
Checked Areas where Spills & Leaks occurred for past 3 years (Only ANC RP): □ Yes □ No						Visual Assessments Reviewed: □ Yes □ No				
Area of Airport Inspected	Any previously unidentified discharges from the site?		Any previously unidentified pollutants in existing discharges?		Any evidence of, or potential for, pollutants entering drainage system?		Any control measures needing installation, maintenance or repairs?		Any incidents of noncompliance observed?	
Field and Equipment Maintenance Yard and Quick Turnaround Facility										
Vehicle and equipment maintenance and storage;	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No
Grounds maintenance support;	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No
Covered bulk material storage, handling and loading;	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No
Waste handling areas (dumpsters)	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No
Main Safety Building										
Airport Rescue and Fire Fighting (ARFF)	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No
Safety Building #2										
Vehicle and material storage	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No
Fire Training Facility										
Fire Fighter Training (Fire Pit)	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No
Runways, taxiways, and aprons										
Runway snow removal;	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No
Pavement deicing;	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No
Pavement painting and maintenance	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No
Above ground and underground storage tanks										
Chemical and fuel storage;	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No
Vehicle fueling;	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No
Power generation (emergency generators)	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No

Area of Airport Inspected	Any previously unidentified discharges from the site?		Any previously unidentified pollutants in existing discharges?		Any evidence of, or potential for, pollutants entering drainage system?		Any control measures needing installation, maintenance or repairs?		Any incidents of noncompliance observed?	
Snow storage										
Snow collection and storage	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No
Outfalls										
001A	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No
002B	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No
003C	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No
004D	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No
005E	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No	□ Yes	□ No

Any additional control measures needed to comply with permit requirements?
Any industrial materials, residues, or trash that may have, or could have, come into contact with storm water?
Any leaks or spills from industrial equipment, drums, tanks and other containers?
Any offsite tracking of industrial or waste materials, or sediment where vehicles enter or exit the site?
Any tracking or blowing of raw, final, or waste materials from areas of no exposure to exposed areas?
Any evidence of pollutants discharging to receiving waters at outfalls?
Any revisions needed to SWPPP?
Observations of condition of, and around, outfalls.

Certification Statement

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 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.

Signed: _____ Print Name: Craig Campbell

Date: _____ Title: Airport Manager

APPENDIX O

CORRECTIVE ACTIONS

For Agency Use

Permit Tracking #: _____

Section IV. Corrective Actions

Complete this page for each specific condition requiring a corrective action or a review determining that no corrective action is needed. Copy this page for additional corrective actions or reviews.

Include both corrective actions that have been initiated or completed since the last annual report, and future corrective actions needed to address problems identified in the comprehensive storm water inspection. Include an update on any outstanding corrective actions that had not been completed at the time of your previous annual report.

1. Corrective Action # of for this reporting period.

2. Is this corrective action:

- ☐ An update on a corrective action from a previous annual report; or
- ☐ A new corrective action?

3. Identify the condition(s) triggering the need for this review:

- ☐ Unauthorized release of discharge
- ☐ Numeric effluent limitation exceedance
- ☐ Control measures inadequate to meet applicable water quality standards
- ☐ Control measures inadequate to meet non-numeric effluent limitations
- ☐ Control measures not properly operated or maintained
- ☐ Change in facility operations necessitated change in control measures
- ☐ Other (describe):

4. Briefly describe the nature of the problem identified:

5. Date problem identified:

6. How problem was identified:

- ☐ Comprehensive site inspection
- ☐ Routine facility inspection
- ☐ Quarterly visual assessment
- ☐ Notification by EPA or DEC
- ☐ Other (describe):

7. Description of corrective action(s) taken or to be taken to eliminate or further investigate the problem (e.g., describe modifications or repairs to control measures, analysis to be conducted, etc.) or if no modification is needed, basis for that determination.

8. Did/will this corrective action require modification of your SWPPP? ☐ Yes ☐ No

9. Date corrective action initiated:

10. Date corrective action completed: Or expected to be completed:

11. If corrective action not yet completed, provide the status of the corrective action at the time of the comprehensive site inspections and describe any remaining steps (including timeframes associated with each step) necessary to complete the corrective action:

Section V. Annual Report Certification

Compliance Certification

Do you certify that your annual inspection has met the requirements of Part 7.3 of the permit, and that, based upon the results of this inspection, to the best of your knowledge, you are in compliance with the permit? ☐ Yes ☐ No

If NO, summarize why you are not in compliance with the permit:

For Agency Use

Permit Tracking #: _____

VI. Certification Information

An Alaska Pollutant Discharge Elimination System (APDES) permit application or report must be signed by an individual with the appropriate authority per 18 AAC 83.385. For additional information, please refer to 18 AAC 83.385 at the following link: http://www.legis.state.ak.us/basis/aac.asp#18.83.385.

Corporate Executive Officer 18 AAC 83.385 (a)(1)(A)	For a corporation, a president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy- or decision-making functions for the corporation.
Corporate Operations Manager 18 AAC 83.385 (a)(1)(B)	For a corporation, the manager of one or more manufacturing, production, or operating facilities, if (i) the manager is authorized to make management decisions that govern the operation of the regulated facility, including having the explicit or implicit duty of making major capital investment recommendations, and initiating and directing other comprehensive measures to assure long term environmental compliance with environmental statutes and regulations; (ii) the manager can ensure that the necessary systems are established or actions taken to gather complete and accurate information for permit application requirements; and (iii) authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures.
Sole Proprietor or General Partner 18 AAC 83.385 (a)(2)	For a partnership or sole proprietorship, the general partner or the proprietor respectively.
Public Agency, Chief Executive Officer 18 AAC 83.385 (a)(3)(A)	For a municipality, state, or other public agency, the chief executive officer of the agency.
Public Agency, Senior Executive Officer 18 AAC 83.385 (a)(3)(B)	For a municipality, state, or other public agency, a senior executive officer having responsibility for the overall operations of a principal geographic unit or division of the agency.

Any report required by an APDES permit, and a submittal with any other information requested by the department, must be signed by a person described in above, or by a duly authorized representative of that person.
**For Delegated Authority: the delegation must be made in writing and submitted to the DEC.*
Your signature will not be approved until DEC receives the written delegation.
An Example of written authorization delegating authority can be found on the Division of Water website:
http://dec.alaska.gov/Water/OASysHelp/attachments/Delegation_Authorization_Form.pdf

Operations Manager *(Delegated Authority)** 18 AAC 83.385 (b)(2)(A)	For a duly authorized representative, an individual or a position having responsibility for the overall operation of the regulated facility or activity, including the position of plant manager, operator of a well or a well field, superintendent or position of equivalent responsibility.
Environmental Manager *(Delegated Authority)** 18 AAC 83.385 (b)(2)(B)	For a duly authorized representative, an individual or position having overall responsibility for environmental matters for the company.

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.

Organization:	Name:	Title:
Phone:	Fax (optional):	Email:

Mailing Address: ☐ Check if same as Operator Information	Street (PO Box):		
	City:	State:	Zip:

Signature/Responsible Official _____ Date _____

APPENDIX P

NONCOMPLIANCE NOTIFICATION FORM

&

REPORTS

Alaska Department of Environmental Conservation
Division of Water, Compliance and Enforcement Program
555 Cordova Street
Anchorage, Alaska 99501
Nationwide Toll Free: 1(877) 569-4114 Anchorage/International: (907) 269-4114
Fax: (907) 269-4604 E-mail address: dec-wqreporting@alaska.gov.

NONCOMPLIANCE NOTIFICATION

GENERAL INFORMATION	PERMIT# (if any):	
Owner or Operator:	**Facility Name:**	**Facility Location:**
Person Reporting:	**Phone Numbers of Person Reporting:**	**Reported How? (e.g. by phone):**
Date/Time Event was Noticed:	**Date/Time Reported:**	**Name of DEC Staff Contacted:**

VERBAL NOTIFICATION MUST BE MADE TO ADEC WITHIN 24 HOURS OF DISCOVERY OF NONCOMPLIANCE

INCIDENT DETAILS (attach additional sheets, lab reports, and photos as necessary)

Period of Noncompliance	**Start Date/Time** (exact)**:**	**End Date/Time** (exact)**:**

If noncompliance has not been corrected, provide a statement regarding the anticipated time the noncompliance is expected to continue:

Estimated Quantity involved (volume or weight):

Description of the noncompliance and its cause (be specific):

Actions taken to reduce, eliminate, and prevent reoccurrence of noncompliance and Actual/Potential Impact on Environmental Health (describe in detail) (e.g. Supplied drinking water to nearby well owners and informed well owners not to drink from wells until further notice)

Permit Condition Deviation (Identify each permit condition exceeded during the event.)

Parameter (e.g. BOD pH)	**Permit Limit**	**Exceedance (sample result)**	**Sample Date**

Corrective Actions (Attach a description of corrective actions taken to restore the system to normal operation and to minimize or eliminate chances of recurrence.)

Environmental Damage: (if yes, provide details below) ☐ **Yes** ☐ **No** ☐ **Unknown**

Actual /Potential Impact on Environment/Public Health (describe in detail)

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.

Name: **Title:** **Signature:** **Date:**

FORMS MUST BE SENT TO ADEC WITHIN FIVE DAYS OF BECOMING AWARE OF THE EVENT.

Updated May 2010

APPENDIX Q

LABORATORY RESULT SPREADSHEET

&

DATES E-FILED

EXAMPLE SHEET ONLY FOR PURPOSES OF SWPPP SUBMITTAL

JANUARY														
FRESH WATER OUTFALLS	001A	002B	003C	005E	MARINE OUTFALL	004D								
Field Parameters					Field Parameters									
Total Discharge Flow - Estimate (gpd)					Total Discharge Flow - Continuous (gpd)									
pH (SU) 6.5 - 8.5					pH (SU) 6.5 - 8.5									
Temperature (°C)					Temperature (°C)									
Dissolved Oxygen (mg/L) fresh: 5 to 17					Dissolved Oxygen (mg/L) Marine: 6 to 17									
Visual					Visual									
Sheen (none)					Sheen (none)									
Residues					Residues									
Laboratory Parameters					Laboratory Parameters									
BOD (mg/L)					BOD (mg/L)									
TAqH (µg/L) - Only if Sheen is present					TAqH (µg/L) - Only if Sheen is present									
Acenaphthene					Acenaphthene									
Acenaphthylene					Acenaphthylene									
Anthracene					Anthracene									
Benzo(a)Anthracene					Benzo(a)Anthracene									
Benzo[a]pyrene					Benzo[a]pyrene			DMR						
Benzo[b]Fluoranthene					Benzo[b]Fluoranthene			3.2.5 - If a value is less than the MDL, report "less than [numeric value of MDL]". If value is less than a minimum level (ML) report "less than [numeric value of ML]".						
Benzo[g,h,i]perylene					Benzo[g,h,i]perylene									
Benzo[k]fluoranthene					Benzo[k]fluoranthene									
Chrysene					Chrysene									
Dibenzo[a,h]anthracene					Dibenzo[a,h]anthracene			3.2.6 - For purposes of calculating a monthly average, zero may be assigned for values less than the MDL, and the numeric value of the MDL may be assigned for values between the MDL and the ML.If the average value is less than the MDL, the permittee must report "less than (numeric value of MDL)". If the average is less than the ML, the permittee must report "less than (nemeric value of ML)".If a value is equal to or greater than the ML, the permittee must report and use the actual value. The resulting average value must be compared to the compliance level in assessing compliance.						
Fluoranthene					Fluoranthene									
Fluorene					Fluorene									
Indeno[1,2,3-c,d] pyrene					Indeno[1,2,3-c,d] pyrene									
Naphthalene					Naphthalene									
Phenanthrene					Phenanthrene									
Pyrene					Pyrene									
TAH (µg/L) - Only if Sheen is present					TAH (µg/L) - Only if Sheen is present									
1,2-Dichlorobenzene					1,2-Dichlorobenzene									
1,3-Dichlorobenzene					1,3-Dichlorobenzene									
1,4-Dichlorobenzene					1,4-Dichlorobenzene									
Benzene					Benzene									
Chlorobenzene					Chlorobenzene									
Ethylbenzene					Ethylbenzene									
o-Xylene					o-Xylene									
P & M -Xylene					P & M -Xylene									
Toluene					Toluene									
COD (mg/L)					COD (mg/L)									
EG (mg/L) - Nov. to May					EG (mg/L) - Nov. to May									
PG (mg/L) - Nov. to May					PG (mg/L) - Nov. to May									
DATE EFILED														

G:\Environmental\Tracy\ANC GP AKR061000\SWPPP Related\Monitoring\Monthly Monitoring Worksheet

APPENDIX R

ANNUAL REPORT FORM

&

OTHER ANNUAL SUBMITTALS

Summary of Monitoring Data
Adaptive Management Plan Report
Facility-Wide Deicing Committee Meeting Summaries
Urea Certification
Certified Signature regarding the Annual Review of SWPPP by SWPPP Team members
Comprehensive Site Inspection

For Agency Use
Permit Tracking #: _____

Alaska Department of Environmental Conservation
ANC-GP Annual Reporting Form

Section I. General Information

Facility Name		APDES Permit Tracking Number	
Facility Physical Address			
Street	City: Anchorage	State: Alaska	Zip Code: 99502
Contact Person	Title	Phone	Email
Lead Inspector's Name	Additional Inspector's Name	Additional Inspector's Name	Inspection Date

Section II. General Inspection Findings

1. As part of this comprehensive site inspection, did you inspect all potential pollutant sources, including areas where industrial activity may be exposed to storm water? ☐ Yes ☐ No
   If NO, describe why not:

***Note**: Complete Section III of this form for each industrial activity area inspected and included in your SWPPP or as newly defined, in Section II parts 2 and 3 below, where pollutants may be exposed to storm water.*

2. Did this inspection identify any storm water or non-storm water outfalls not previously identified in your SWPPP? ☐ Yes ☐ No
   If YES, for each location, describe the sources of those storm water and non-storm water discharges and any associated control measures in place:

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3. Did this inspection identify any sources of storm water or non-storm water discharges not previously identified in your SWPPP? ☐ Yes ☐ No

   If YES, describe these sources of storm water or non-storm water pollutants expected to be present in these discharges, and any control measures in place:

4. Did you review storm water monitoring data as part of this inspection to identify potential pollutant hotspots? ☐ Yes ☐ No ☐ NA, no monitoring performed

   If YES, summarize the findings of that review and describe any additional inspection activities resulting from this review:

5. Describe any evidence of pollutants entering the drainage system or discharging to surface waters, and the condition of and around outfalls, including flow dissipation measure to prevent scouring:

6. Have you taken or do you plan to take corrective actions, as specified in Part 9 of the permit, since your last annual report submission (or since you received authorization to discharge under this permit if this is your first annual report), including any corrective actions identified as a result of this annual comprehensive site inspection? ☐ Yes ☐ No

   If YES, how many conditions requiring review for corrective action as specified in Parts 9.1 and 9.2 of the ANC-GP were addressed by these corrective actions?

Note: *Complete the attached Corrective Action Form (Section IV) for each condition identified, including any conditions identified as a result of this comprehensive storm water inspection.*

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Section III. Industrial Activity Area Specific Findings

Complete one block for each industrial activity area where pollutants may be exposed to storm water. *Copy this page for additional industrial activity areas. In reviewing each area, you should consider:*

- *Industrial materials, residue, or trash that may have or could come into contact with storm water;*
- *Leaks or spills from industrial equipment, drums, tanks, and other containers;*
- *Offsite tracking of industrial or waste materials from areas of no exposure to exposed areas; and*
- *Tracking or blowing of raw, final, or waste material from areas of no exposure to exposed areas.*

Industrial Activity Area:

1. Brief Description:

2. Are any control measures in need of maintenance or repair?	☐ Yes	☐ No
3. Have any control measures failed and require replacement?	☐ Yes	☐ No
4. Are any additional/revised control measures necessary in this area?	☐ Yes	☐ No

If YES, to any of these three questions, provide a description of the problem: *(Any necessary corrective actions should be described on the attached Corrective Action Form.)*

Industrial Activity Area:

1. Brief Description:

2. Are any control measures in need of maintenance or repair?	☐ Yes	☐ No
3. Have any control measures failed and require replacement?	☐ Yes	☐ No
4. Are any additional/revised control measures necessary in this area?	☐ Yes	☐ No

If YES, to any of these three questions, provide a description of the problem: *(Any necessary corrective actions should be described on the attached Corrective Action Form.)*

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Industrial Activity Area: 1. Brief Description:		
2. Are any control measures in need of maintenance or repair?	☐ Yes	☐ No
3. Have any control measures failed and require replacement?	☐ Yes	☐ No
4. Are any additional/revised control measures necessary in this area?	☐ Yes	☐ No
If YES, to any of these three questions, provide a description of the problem: *(Any necessary corrective actions should be described on the attached Corrective Action Form.)*		
Industrial Activity Area: 1. Brief Description:		
2. Are any control measures in need of maintenance or repair?	☐ Yes	☐ No
3. Have any control measures failed and require replacement?	☐ Yes	☐ No
4. Are any additional/revised control measures necessary in this area?	☐ Yes	☐ No
If YES, to any of these three questions, provide a description of the problem: *(Any necessary corrective actions should be described on the attached Corrective Action Form.)*		

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Section IV. Corrective Actions

Complete this page for each specific condition requiring a corrective action or a review determining that no corrective action is needed. Copy this page for additional corrective actions or reviews.

Include both corrective actions that have been initiated or completed since the last annual report, and future corrective actions needed to address problems identified in the comprehensive storm water inspection. Include an update on any outstanding corrective actions that had not been completed at the time of your previous annual report.

1. Corrective Action # of for this reporting period.

2. Is this corrective action:
   - ☐ An update on a corrective action from a previous annual report; or
   - ☐ A new corrective action?

3. Identify the condition(s) triggering the need for this review:
   - ☐ Unauthorized release of discharge
   - ☐ Numeric effluent limitation exceedance
   - ☐ Control measures inadequate to meet applicable water quality standards
   - ☐ Control measures inadequate to meet non-numeric effluent limitations
   - ☐ Control measures not properly operated or maintained
   - ☐ Change in facility operations necessitated change in control measures
   - ☐ Other (describe):

4. Briefly describe the nature of the problem identified:

5. Date problem identified:

6. How problem was identified:
   - ☐ Comprehensive site inspection
   - ☐ Routine facility inspection
   - ☐ Quarterly visual assessment
   - ☐ Notification by EPA or DEC
   - ☐ Other (describe):

7. Description of corrective action(s) taken or to be taken to eliminate or further investigate the problem (e.g., describe modifications or repairs to control measures, analysis to be conducted, etc.) or if no modification is needed, basis for that determination.

8. Did/will this corrective action require modification of your SWPPP? ☐ Yes ☐ No

9. Date corrective action initiated:

10. Date corrective action completed: Or expected to be completed:

11. If corrective action not yet completed, provide the status of the corrective action at the time of the comprehensive site inspections and describe any remaining steps (including timeframes associated with each step) necessary to complete the corrective action:

Section V. Annual Report Certification

Compliance Certification

Do you certify that your annual inspection has met the requirements of Part 7.3 of the permit, and that, based upon the results of this inspection, to the best of your knowledge, you are in compliance with the permit? ☐ Yes ☐ No

If NO, summarize why you are not in compliance with the permit:

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VI. Certification Information

An Alaska Pollutant Discharge Elimination System (APDES) permit application or report must be signed by an individual with the appropriate authority per 18 AAC 83.385. For additional information, please refer to 18 AAC 83.385 at the following link: http://www.legis.state.ak.us/basis/aac.asp#18.83.385.

Corporate Executive Officer 18 AAC 83.385 (a)(1)(A)	For a corporation, a president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy- or decision-making functions for the corporation.
Corporate Operations Manager 18 AAC 83.385 (a)(1)(B)	For a corporation, the manager of one or more manufacturing, production, or operating facilities, if (i) the manager is authorized to make management decisions that govern the operation of the regulated facility, including having the explicit or implicit duty of making major capital investment recommendations, and initiating and directing other comprehensive measures to assure long term environmental compliance with environmental statutes and regulations; (ii) the manager can ensure that the necessary systems are established or actions taken to gather complete and accurate information for permit application requirements; and (iii) authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures.
Sole Proprietor or General Partner 18 AAC 83.385 (a)(2)	For a partnership or sole proprietorship, the general partner or the proprietor respectively.
Public Agency, Chief Executive Officer 18 AAC 83.385 (a)(3)(A)	For a municipality, state, or other public agency, the chief executive officer of the agency.
Public Agency, Senior Executive Officer 18 AAC 83.385 (a)(3)(B)	For a municipality, state, or other public agency, a senior executive officer having responsibility for the overall operations of a principal geographic unit or division of the agency.

Any report required by an APDES permit, and a submittal with any other information requested by the department, must be signed by a person described in above, or by a duly authorized representative of that person.
**For Delegated Authority: the delegation must be made in writing and submitted to the DEC.*
Your signature will not be approved until DEC receives the written delegation.
An Example of written authorization delegating authority can be found on the Division of Water website:
http://dec.alaska.gov/Water/OASysHelp/attachments/Delegation_Authorization_Form.pdf

Operations Manager *(Delegated Authority)** 18 AAC 83.385 (b)(2)(A)	For a duly authorized representative, an individual or a position having responsibility for the overall operation of the regulated facility or activity, including the position of plant manager, operator of a well or a well field, superintendent or position of equivalent responsibility.
Environmental Manager *(Delegated Authority)** 18 AAC 83.385 (b)(2)(B)	For a duly authorized representative, an individual or position having overall responsibility for environmental matters for the company.

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.

Organization:	Name:	Title:
Phone:	Fax (optional):	Email:
Mailing Address: ☐ Check if same as Operator Information	Street (PO Box):	
	City:	State: / Zip:

Signature/Responsible Official _____ Date _____

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Section VII. Document Attachments

Documents attached with this report

- ☐ Revised sitemap (Permit Part 10.2.5)
- ☐ Assessment of the effectiveness of the control measures (Permit Part 10.2.6)
- ☐ For the Airport Authority only: A summary of the monitoring data collected from Outfalls 001A, 002B, 003C, 004D, and 005E; and Lake Hood and Lake Spenard (Permit Part 10.2.8)
- ☐ Observations of receiving water quality improvements or degradation resulting from airport activities (Permit Part 10.2.9)
- ☐ Other: