Stormwater Pollution Prevention Plan

for:

Cold Bay Airport
100 St. Louis Bay Road
Cold Bay, Alaska, 99571
(907) 532-5000

SWPPP Contact(s):

Alaska DOT&PF
Cold Bay Airport Manager
P.O. Box 97
Cold Bay, AK 99571
(907) 532-5000
(907) 543-2416 (fax)

SWPPP Preparation Date:

11/12/2010

Contents

SECTION 1: FACILITY DESCRIPTION AND CONTACT INFORMATION

1.1 Facility Information

Facility Information

Name of Facility: Cold Bay Airport

Street: 100 St. Louis Bay Road / P.O. Box 97

City: Cold Bay State: AK ZIP Code: 99571

County or Similar Subdivision: Aleutians East Borough

Permit Tracking Number: _____ (if covered under a previous permit)

Latitude/Longitude (Use one of three possible formats, and specify method)

Latitude:	Longitude:
1. _ _ º _ _ ' _ _" N (degrees, minutes, seconds)	1. _ _ º _ _ ' _ _" W (degrees, minutes, seconds)
2. º. ' N (degrees, minutes, decimal)	2. º .' W (degrees, minutes, decimal)
3. 55.2056º N (decimal)	3. 162.72º W (decimal)

Method for determining latitude/longitude (check one):

☐ USGS topographic map (specify scale:_____) ☐ EPA Web site ☐ GPS

Other (please specify): FAA website

Is the facility located in Indian Country? No

If yes, name of Reservation, or if not part of a Reservation, indicate "not applicable."_____

Is this facility considered a Federal Facility? No

Estimated area of industrial activity at site exposed to stormwater: 60 acres

Discharge Information

Does this facility discharge stormwater into an MS4? No

If yes, name of MS4 operator: __

Name(s) of water(s) that receive stormwater from your facility: Stapp Creek, Trout Creek, and Cold Bay

Are any of your discharges directly into any segment of an "impaired" water? Yes

If Yes, identify name of the impaired water (and segment, if applicable): Cold Bay Category 5 Section 303(d) listed

Identify the pollutant(s) causing the impairment: Petroleum hydrocarbons; oil and grease (from Military and Fuel Storage)

For pollutants identified, which do you have reason to believe will be present in your discharge? The

potential exists for petroleum residues to be present in discharge from Cold Bay Airport as a result of DOT&PF equipment and tenant fueling operations.

For pollutants identified, which have a completed TMDL? None

Do you discharge into a receiving water designated as a Tier 2 (or Tier 2.5) water? No

Are any of your stormwater discharges subject to effluent guidelines? No

If Yes, which guidelines apply?

Primary SIC Code or 2-letter Activity Code: 4581 (refer to Appendix D of the permit)

Identify your applicable sector and subsector: Sector S / S1

1.2 Contact Information/Responsible Parties

Facility Operator (s):

Name: Alaska DOT&PF – Central Region
Address: 100 St. Louis Drive/ PO Box 97
City, State, Zip Code: Cold Bay, AK 99571
Telephone Number: (907) 532-5000
Email address: jeff.doerning@alaska.gov
Fax number: (907) 543-2416

Facility Owner (s):

Name: Alaska DOT&PF – Central Region; Southwest District
Address: 4111 Aviation Drive
City, State, Zip Code: Anchorage, AK 99519
Telephone Number: (907) 269-0751
Email address: troy.larue@alaska.gov
Fax number: (907) 269-0750

SWPPP Contact:

Name: Cold Bay Airport Manager
Telephone number: (907) 532-5000
Email address: jeff.doerning@alaska.gov
Fax number: (907) 543-2416
Cell number: (907) 532-8163

SWPPP Preparer:

Name: Environmental Impact Analyst
Telephone number: (907) 269-0714

Email address: jennifer.hillman@alaska.gov
Qualifications: Jennifer has a B.S. in Environmental Policy, 4 years of experience working in a wide range of federal and state environmental policy issues, has achieved AK-CESCL certification (ID#10036), and completed SWPPP trainings through EPA including 'EPA's New Industrial Stormwater Permit: What You Need to Know about the MSGP 2008' and 'Monitoring and reporting for the 2008 MSGP'.

1.3 Stormwater Pollution Prevention Team

Staff Names*	Individual Responsibilities
DISTRICT SUPERINTENDENT	Oversight of Airport Operations; SWPPP Implementation
AIRPORT MANAGER	Airport Operations, Control Measures and Corrective Actions, and Facility Inspections
CENTRAL REGION M&O ENVIRONMENTAL ANALYST	SWPPP Development, Facility Inspections and Annual Report
CENTRAL REGION M&O ENVIRONMENTAL ANALYST	SPCC Plan and Facility Inspections
CENTRAL REGION M&O ENVIRONMENTAL ANALYST	Routine Inspections and Annual Report

*See Appendix J – for list of current staff names associated with the above titles and responsibilities.

1.4 Activities at the Facility

The Cold Bay Airport is located in Cold Bay, AK, on the Alaska Peninsula (Appendix A). The Cold Bay Airport facility consists of one main 10,415-foot-long asphalt-surfaced runway (14/32) and a shorter 4,235-foot-long asphalt runway (8/26). Three paved taxiways, each between 330 and 400 feet long, connect the runways with terminals and other buildings. Other facilities include a fueling station, sand storage building, maintenance shop, Aircraft Rescue Fire Fighting (ARFF) building and office manager's office, leased buildings, the airport lighting, generator enclosure, and generator switch gear building, and FAA flight service station. Equipment fueling occurs outside from two aboveground storage tanks (ASTs) located to the west of the maintenance shop. Diesel fuel is stored in a 1,000 gallon AST for use in equipment and gasoline is stored in a 1,00 gallon AST for use in vehicles. Equipment maintenance takes place indoors at the maintenance shop. Vehicle washing occurs indoors at both the maintenance shop and fire fighting building. The maintenance shop and fire fighting building have concrete floors and floor drains. The floor drains in each building are connected to an oil/water separator. Upon passing through the oil/water separator, the water generated from the floor drains is discharged into the sanitary sewer system. Runway maintenance is limited to repainting runway markings (once a year) and sealing stress cracks in the asphalt surface (once every 2 to 3 years). These activities are performed in accordance with DOT&PF procedures and require dry weather. No deicing activities occur at the Cold Bay Airport.

Drainage patterns for the Cold Bay Airport are shown on figure(s) in Appendix A. In general, storm water runoff from the leased ramps, taxiways, runways, and roads flows to a series of drainage ditches and culverts which connect into a main drainage ditch that runs towards the north and discharges into Cold Bay. Two streams, Trout Creek and Stapp Creek, are located to the west and south of the runways, respectively, and discharge into Cold Bay. The creeks do not receive direct storm water from the runways. The locations of the streams, watershed area, and storm water outfalls are depicted in Appendix A.

1.5 General Location Map

The general location map for this facility has been placed in Appendix A.

1.6 Site Map

Site map(s) for this facility are placed in Appendix A.

SECTION 2: POTENTIAL POLLUTANT SOURCES

2.1 Industrial Activity and Associated Pollutants

Industrial Activity	Associated Pollutants
DOT&PF runway deicing	Sand
DOT&PF equipment/vehicle fueling	Diesel fuel, gasoline
DOT&PF snow removal	Diesel fuel, hydraulic fluid
DOT&PF runway maintenance	Paint, asphalt solvent, concrete*, crack sealant*
DOT&PF runway sweeping	Sand and sediment
DOT&PF building heating	Fuel oil
Tenant aircraft deicing	Propylene glycol
Tenant aircraft fueling & lubrication	Aviation fuel, lubricants

*Purchased commercially.

DOT&PF maintains Material Safety Data Sheets (MSDS) at the maintenance and airport stations which discloses uses and hazards associated with chemicals to prevent harm to human health and the environment including proper uses, clean-up, storage, and disposal.

2.2 Spills and Leaks

Areas of Site Where Potential Spills/Leaks Could Occur

Location	Outfalls
Vehicle fueling area/oil tank locations	Outfall A
Vegetated areas between apron and runway and off edges of runways	Outfall B, Outfall A and watersheds A, B,C and D

Description of Past Spills/Leaks

Date	Description	Outfalls
	No significant spills or leaks within last 3 years	

2.3 Non-Stormwater Discharges Documentation

The 2008 MSGP provides limitations on stormwater discharges under Subpart S 8.S.1. The MSGP 'authorizes stormwater discharges from only those portions of the air transportation facility that are involved in vehicle maintenance (including vehicle rehabilitation, mechanical repairs, painting, fueling and lubrication), equipment cleaning operations or deicing operations."

Specifically prohibited under Sector S (Air transportation) coverage of the MSGP is "discharge of aircraft, ground vehicle, runway and equipment washwaters; nor the dry weather discharge of deicing chemicals." Discharges associated with snowmelt are not dry weather discharges.

- Date of evaluation: October 2010
- Description of the evaluation criteria used: Field site visit conducted of airport facilities. Visual inspection.
- List of the outfalls or onsite drainage points that were directly observed during the evaluation: Outfalls, drainage points, and ditches previously identified were observed during dry weather conditions.
- Different types of non-stormwater discharge(s) and source locations: No non-stormwater discharges identified during site visit.
- Action(s) taken, such as a list of control measures used to eliminate unauthorized discharge(s), if any were identified. For example, a floor drain was sealed, a sink drain was re-routed to sanitary, or an NPDES permit application was submitted for an unauthorized cooling water discharge: N/A at this time.

2.4 Salt Storage

No salt is used at the airport facility for deicing purposes because these products are corrosive to aircraft surfaces and mechanical parts. No salted is stored on the airport or supporting facilities.

2.5 Sampling Data Summary

Because this is the initial permit term for this facility, no stormwater discharge sampling data is available to report at this time.

SECTION 3: STORMWATER CONTROL MEASURES

3.1 Minimize Exposure

Though Cold Bay experiences a high average snowfall (average 61 inches/year), no chemical deicers are used on the runways of the Cold Bay Airport. Mechanized clearing is used to clear the majority of snow and ice, while sand is used to provide aircraft traction when needed. Sand for use on airport surfaces is stored in the sand storage building (see figure in Appendix A).

DOT&PF airport equipment is all stored indoors on the airport property. DOT&PF equipment maintenance is performed indoors at the maintenance shop (see figure in Appendix A). Equipment is kept in good working condition (minimizes leaks) and older equipment is replaced. Spill kits are available at the M&O facility and an SPCC Plan is in place to minimize potential for fuel spills (see Appendix K).

Best Management Practice (BMP)	
Minimizing Exposure – Vehicle and Equipment Maintenance Areas	1. Perform all cleaning operations indoors or under covering when possible. Conduct the cleaning operations in an area with a concrete floor with no floor other than those to approved disposal methods (including sanitary sewers or treatment facilities, oil/water separators, etc.) 2. Park vehicles and equipment indoor or under a roof whenever possible and maintain proper control of oil leaks/spills. 3. Check vehicles closely for leaks and use pans to collect fluid when leaks occur. 4. Use berms, curbs, grassed swales, or other diversion measures to ensure that stormwater runoff from other parts of the facility does not flow over the maintenance area. 5. Discharge vehicle wash or rinse water to the sanitary sewer (if allowed by sewer authority), wastewater treatment, a land application site, or recycle on-site. Do not discharge washwater to a storm drain or to surface water. 6. Inspect the maintenance area regularly to ensure BMPs are implemented. 7. Train employees on waste control and disposal procedures. 8. Inspect the maintenance area regularly for proper implementation of control measures.
Minimizing Exposure – Vehicle and Equipment Storage Areas	1. Store vehicles and equipment indoors. 2. Store vehicles and equipment awaiting maintenance in designated areas only. 3. Use absorbents to cleanup spills and leaks.

	4. Use drip pans under all vehicles and equipment for the collection of fluids. 5. Regularly seep area to minimize debris on the ground. 6. Train employees on procedures for storage and inspection items.
Minimizing Exposure –Materials Storage Areas	1. Store materials indoors. 2. Maintain good integrity of all storage containers (e.g., used oil, hydraulic fluids, solvents, waste aircraft fuel). 3. Create a centralized storage area for waste materials. 4. Provide secondary containment around chemical storage areas. 5. Locate storage areas away from high traffic area and surface waters. 6. Inspect storage tanks and piping systems (pipes, pumps, flanges, couplings, hoses, and valves) for failures or leaks and perform preventative maintenance. 7. Plainly label containers. 8. Provide fluid level indicators. 9. Properly dispose of chemicals that are no longer in use. 10. Store and handle reactive, ignitable, or flammable liquids in compliance with applicable local fire codes, local zoning codes, and the National Electric Code. 11. Develop and implement spill plans or spill prevention, containment and countermeasure (SPCC plans). 12. Train employees in spill prevention and proper materials management.
Minimizing Exposure – Fuel System and Fueling Areas	1. Use fueling hoses with check valves to prevent hose draining after filling. 2. Provide spill kits on all fuel trucks, at fueling stations, in each hangar and at strategic locations. Each kit should be properly stocked and maintained. Store used materials in individual sealed container and labeled to ensure proper handling and disposal as a hazardous material. 3. Keep spills cleanup materials readily available. 4. Clean up spills and leaks immediately. 5. Use dry cleanup methods for fuel areas rather than hosing down the fuel area. Sweep up

	absorbents as soon as spilled substances have been absorbed. 6. Use spill and overflow protection devices. 7. Provide curbing or posts around fuel pumps to prevent collisions from vehicles. 8. Regularly inspect and perform preventative maintenance on fuel storage tanks to detect potential leaks before they occur. 9. Inspect the fueling area for leaks and spills. 10. Do not allow "topping off" of the fuel in the receiving equipment. 11. Train personnel on vehicle fueling BMPs.
Minimizing Exposure – Storing Liquid Fuels	1. Develop and implement spill plans. 2. Train employees in spill prevention and control. 3. For ASTs – use double walled tanks with overflow protection. 4. For ASTs – Keep liquid transfer nozzle/hoses in secondary containment area. 5. Store drums indoors when possible. 6. Clearly label drums with contents.

3.2 Good Housekeeping

Due to weather conditions, waste materials generated are kept indoors and/or in containers prior to proper disposal. Fuel tanks are fairly new and in good condition. Tanks and fueling area are regularly monitored for leaks and spills. Work areas are kept free of clutter and debris.

Best Management Practice (BMP)	
Good Housekeeping – Vehicle and Equipment Maintenance Areas	1. Prevent and contain spills and drips 2. Perform all cleaning at a centralized station so the solvents stay in one area. 3. Remove any parts that are dipped in liquid slowly to avoid spills. 4. Use drip pans, drain boards, and drying racks to direct drips back into fluid holding tank for reuse. 5. Drain all parts of fluids prior to disposal. Oil filters can be crushed and recycled. 6. Transfer used fluids to the proper container promptly; do not leave full drip pans or other containers around the shop. Empty and clean drip pans and containers. 7. Clean up leaks, drips, and other spills without

	using large amounts of water. Use absorbents to for dry cleanup whenever possible. 8. Prohibit the practice of hosing down an area where the practice would result in the discharge of pollutants to a stormwater system. 9. Prohibit pouring liquid waste into floor drains, sinks, outdoor storm drain inlets, or other storm drains or sewer connections. 10. Eliminate or reduce the number and amount of hazardous materials and waste by substituting nonhazardous or less hazardous waste materials. 11. Label and track the recycling of waste material. 12. Store batteries and other significant materials inside. 13. Dispose of greasy rags, oil filters, air filters, batteries, spent coolant, and degreasers in compliance with environmental regulations.

3.3 Maintenance

DOT&PF M&O facility has an SPCC Plan, dated November 2010. A spill kit is kept stocked and on-site. Fuel tanks are inspected to ensure compliance, and the staff trained to inspect for leaks.

Equipment is regularly maintained and kept in proper working order, thereby minimizing leak potential.

Best Management Practice (BMP)	
Maintenance – Vehicle and Equipment Monitoring and Repairs	1. Regularly inspect vehicles for leaks and maintenance 2. Vehicles are kept in good working condition and monitored for leaks to prevent discharges 3. Leaking equipment is kept indoors until repairs can be made with drip pans and absorbents in place as necessary. 4. Equipments maintenance is conducted indoors 5. All storage containers are monitored for leaks and stored indoors when possible. 6. Fuel tanks are inspected regularly for leaks and integrity.

3.4 Spill Prevention and Response

Structural Controls (Inspection Procedures)

Tanks, lines, and pumps are inspected in accordance with the SPCC plan. A spill kit is staged in the fueling area, and all oil-handling employees are trained annually in spill prevention, control, and countermeasures.

Container Labeling

All containers with new products are labeled with the manufacturer's labeling. Container labeling is standard operating procedure at the airport and all containers are labeled when generated. Containers such as drums are labeled with USED OIL or Non-Hazardous Waste labels. No hazardous waste is generated during airport maintenance and operational activities. All tank containers are labeled with both the product type and tank number.

Preventative Measures

All equipment fuel tanks have secondary containment (double walled tanks), overfill prevention, and valves that prevent equipment overfills. Bollards surround the tanks providing additional spill protection. A spill kit is located in the equipment fueling area. In addition, equipment fuel tanks are situated away from any roadways. Heating oil is stored in ASTs at the following facilities: maintenance shop, fire fighting building, warm storage building, and sand storage building. Used oil from equipment maintenance is stored indoors in 55-gallon steel drums.

Spill Response Materials

Spill kits contain at a minimum: booms, absorbents, kitty litter, and safety gloves.

Spill Response Procedures

1. Assess the situation. Confirm there is no potential risk from fires, confined spaces, safety hazards. If the cause of the spill can be fixed quickly (tank overfill), stop the release.
2. Get help. If you are alone at the site, find someone to assist you.
3. If possible, stop the spill. Spill kit(s) contain tank repair putty.
4. If stopping the spill is not possible, then contain the spill. Spill kit(s) contain booms or spill socks. The goal is to reduce the amount of ground surface that gets contaminated.
5. If there is equipment available, an earthen berm can stop the flow of oil.
6. Report the spill to Environmental Specialist, and then your supervisor. If the spill is a reportable quantity (see below), DOT&PF will need to notify the ADEC Response Team. Even if the spill is not reportable, log the spill and our response in the SPCC Plan.
7. Replace used material after spill response.

Notification Procedures

The supervisor will notify ADEC immediately of any discharge of hazardous substance or oil to surface water. In the event of a release to land, the supervisor will notify ADEC immediately of a discharge of oil in excess of 55 gallons, or of any discharge of a hazardous substance. The supervisor will notify ADEC within 48 hours of a discharge of oil in excess of 10 gallons, but less than 55 gallons. If a discharge of oil from 1 to 10 gallons occurs, the supervisor will notify ADEC by writing within 30 days. The supervisor will notify ADEC within 48 hours of discharge in excess of 55 gallons to an impermeable secondary containment area or structure.

3.5 Erosion and Sediment Controls

The airport is situated above Cold Bay. Although the airport gets a fair amount of precipitation annually, significant potential for erosion does not currently exist at Cold Bay Airport. A series of drainage ditches and culverts is in place to concentrate conveyances.

Appropriate BMPs during maintenance work that includes ground disturbance or potential discharges, followed by re-seeding will be enacted as additional erosion and sediment controls (see Appendix L for examples of typical BMPs).

3.6 Management of Runoff

Due to the coastal climate conditions, the Cold Bay area gets moderate precipitation, with an average annual precipitation of approximately 36 inches distributed throughout the year. In general, storm water runoff from the leased ramps, taxiways, runways, and roads flows to a series of drainage ditches and culverts which connect into a main drainage ditch that runs towards the north and discharges into Cold Bay (see Appendix A figure). In the winter, runway and taxiways are plowed to the edge. Snow is stored in the Safety Areas of the runways, and taxiways. Snow from the aprons is stored in a vehicle parking lot west of the terminal building.

Best Management Practice (BMP)	
Management of Runoff	1. Maintain as much vegetation as possible in maintenance areas and areas where stormwater leaves impermeable surfaces. 2. Utilize velocity dissipaters such as; vegetation, rock outfalls, and check dams. 3. Create opportunities for filtration and settling such as gently sloped vegetated ditches.

3.7 Salt Storage Piles or Piles Containing Salt

Because salts are corrosive to aircraft surfaces and mechanical parts, salt is not used on airport facilities for deicing activities. Salt is not stored on the airport or at supporting facilities.

3.8 MSGP Sector-Specific Non-Numeric Effluent Limits

In general, storm water runoff from the leased ramps, taxiways, runways, and roads flows to a series of drainage ditches and culverts which connect into a main drainage ditch that runs towards the north and discharges into Cold Bay (see Appendix A figure).

8.S.3.1.1 – Aircraft, Ground Vehicle and Equipment Maintenance Areas. All equipment maintenance takes place indoors.

8.S.3.1.2 – Aircraft, Ground Vehicle and Equipment Cleaning Areas. Dust and dirt is occasionally sprayed from equipment during the summer, as needed.

8.S.3.1.3 – Aircraft, Ground Vehicle and Equipment Storage Areas. Equipment is stored indoors the vast majority of the time. Exceptions would be occasionally parking equipment outside during the summer. Equipment utilized is relatively new and kept in proper working order.

8.S.3.1.4 – Material Storage Areas. Loading and unloading of materials occurs inside in the maintenance bays. Heating oil is stored in ASTs at the following facilities: maintenance shop, fire fighting building, warm storage building, and sand storage building.

8.S.3.1.5 – Airport Fuel System and Fueling Areas. The equipment fuel tanks (located in 2 ASTs to the west of the maintenance shop) are relatively new and properly maintained, with an automatic shut-off device. Both ASTs are located in a gravel-surfaced area. A spill kit is on-site and an SPCC Plan in place.

8.S.3.1.6 – Source Reduction. Mechanical means are used to keep the runway clear of snow and ice, when possible. Sand is also utilized for traction. No chemical deicers are used on the runway of the Cold Bay Airport.

8.S.3.1.7 – Management of Runoff. Due to the coastal climate conditions, the Cold Bay area gets moderately frequent precipitation, with an average annual precipitation of approximately 36 inches distributed throughout the year. The airport is situated above Cold Bay. In general, storm water runoff from the leased ramps, taxiways, runways, and roads flows to a series of drainage ditches and culverts which connect into a main drainage ditch that runs towards the north and discharges into Cold Bay. In the winter, runway and taxiways are plowed to the edge and stored in safety areas.

8.S.3.2 – Deicing Season. The deicing season typically runs from mid-October through mid-May. No chemical deicers are used on the runway of the Cold Bay Airport.

3.9 Employee Training

Storm water training for airport staff will take place annually during the deicing season and will coincide with an inspection of the airport facility. In addition to training on the inspection process, training will include any updates to MSGP requirements, procedures for Quarterly Visual Assessment and discussion of operational activities at the airport facility. Training for airport staff will also include fuel handling and spill reporting procedures. Besides scheduled annual training, new staff will be trained on an as-needed basis. Staff training logs area found in Appendix G.

The level of training provided will be commensurate with each worker's assignments and responsibilities. Training may be accomplished in a number of ways:

- Through workshops, classes, working groups, conference calls, and/or shop level tailgate briefings.

- Through discussions and presentations at pollution prevention team meetings, periodic environmental compliance briefings, and similar group gatherings.
- Through signs/posters posted in significant locations in facilities.
- Through providing written copies of BMPs.
- Through online training such as EPA webcasts.

3.10 Non-Stormwater Discharges

See Section 2.3 for discussion

3.11 Waste, Garbage, and Floatable Debris

Wastes and debris are covered and/or stored indoors prior to landfill disposal. Garbage is taken by staff to the landfill as needed. Outside areas around the airport are kept clear of debris and clutter. Shop waste water passes through an oil water separator and then is treated through the Cold Bay municipal waste water treatment facility. Human waste is also treated through the municipal facility.

Best Management Practice (BMP)	
Waste, Garbage, and Floatable Debris	1. Waste and debris are stored in cover containers or indoors and removed regularly. 2. Maintenance and airport areas are kept clear of debris and clutter. 3. The oil water separator is cleaned out annually. 4. Human waste and all water is treated through a waste water facility.

3.12 Dust Generation and Vehicle Tracking of Industrial Materials

Airport runway, taxiways, and apron areas are paved. Some access roads and areas are gravel. Transition areas between gravel and pavement are swept clear of rocks and debris that could damage aircraft.

SECTION 4: SCHEDULES AND PROCEDURES FOR MONITORING

For each type of monitoring, your SWPPP must include a description of:

1. Sample Location(s). Describe where samples will be collected, including any determination that two or more outfalls are substantially identical. Outfall A (see Appendix A) will be sampled since stormwater is discharged into an impaired water, Cold Bay, which does not have a TMDL (see section 6.2.4.2 Impaired Waters Monitoring Schedule of the 2008 MSGP). Sampling only needs to take place during the second quarter and performed annually. If after multiple year sampling it is found that the pollutant for which the water is impaired is not present and not expected to be present, then this should be documented and annual sampling can be discontinued.

   Samples should be sent to a qualified lab in Anchorage, Alaska. Contact the environmental analyst for locations and payment.

   Cold Bay is scheduled to have an established TMDL, in June of 2012. Upon the establishment of TMDL limits, the SWPPP must be re-evaluated for consistency. More information is available at: http://www.dec.state.ak.us/water/tmdl/scheduled_tmdl.htm

2. Pollutant Parameters to be Sampled. Include a list of the pollutant parameters that will be sampled and the frequency of sampling for each parameter. Petroleum hydrocarbons; oil and grease (associated with the impaired water body, conducted annually.

3. Monitoring Schedules. Include the schedule you will follow for monitoring your stormwater discharge, including where applicable any alternate monitoring periods to be used for facilities in climates with irregular stormwater runoff (MSGP, Part 6.1.6). Monitoring will take place quarterly as the Cold Bay region does not have typical frozen conditions. In the event that frozen conditions persist sampling will be made at the next possible time. The sample for Outfall A will be collected during the second quarter. Quarterly visual monitoring is to take place according to the dates below during stormwater/melt events.

   Quarters are defined as
   - January 1 – March 31
   - April 1 – June 30
   - July 1 – September 30
   - October 1 – December 31.

4. Numeric Limitations. List here any pollutant parameters subject to numeric limits (effluent limitations guidelines), and which outfalls are subject to such limits. Note that numeric limits are only included for Sectors A, C, D, E, J, K, L, and O. Numeric limitations are not applicable to Sector S facilities.

5. Procedures. Describe procedures you will follow for collecting samples, including responsible staff who will be involved, logistics for taking and handling samples, laboratory to be used, etc. Collect a grab sample within the first 30 minutes from a discharge resulting from a measurable storm event or as soon as practicable after the first 30 minutes. If the 30 minute period is exceeded, document it in the SWPPP explaining why it was not possible to take a sample within the first 30 minutes. A measurable storm event is one that results in a discharge from the outfall. The storm event is proceeded by at least 72 hours of dry weather (or 72 hours since the last measurable storm event). In the case of snowmelt, the monitoring must be performed at a time when a measurable discharge occurs. For each monitoring event, except snowmelt monitoring, identify the date and duration (in hours) of the rainfall event, rainfall total (in inches) for that

rainfall event, and time (in days) since the previous measurable storm event. For snowmelt monitoring, you must identify the date of the sampling event. When adverse weather conditions prevent the collection of samples, take a substitute sample during the next qualifying storm event.

Note: It may be helpful to create a table with columns corresponding to # 1 - 5 above for each type of monitoring you are required to conduct.

SECTION 5: INSPECTIONS

For the routine facility inspections and the comprehensive site inspections to be performed at your site, include a description of the following:

- The names of the person(s), or the positions of the person(s), responsible for inspection: Airport Manager
- The schedules to be used for conducting inspections. Include here any tentative schedule that will be used for facilities in climates with irregular stormwater runoff discharges (MSGP, Part 4.2.3):
  Routine visual inspections will take place monthly during the deicing season (typically mid-October through mid-May), as denoted in table below. Though the Cold Bay Airport does not utilize chemical deicers, monitoring should be completed for sedimentation and discharges. An additional routine inspection will take place when stormwater discharge is occurring, ideally during the first 30 minutes of the rain event (document timing) during the months of July – September as site conditions warrant. The annual comprehensive inspection will take the place of a routine inspection during the deicing season, likely in March or April when day length is longer and sufficient time remains to complete annual reporting (due by end of September of each permit year).

Month	Deicing Season	Inspection Schedule
January	x	One
February	x	routine inspection
March	x	per quarter
April	x	Comprehensive
May	x	replaces routine
June		inspection
July		One
August		routine inspection
September		per quarter
October	x	One
November	x	routine inspection
December	x	per quarter

and

- Specific areas of the facility to be inspected, including schedules for specific outfalls: Areas that are subject to deicing due to aircraft operations will be inspected during each inspection, as will equipment fueling, deicing material storage areas, and snow storage areas. Additionally, during the summer routine inspection, any potential discharges and drainages will also be inspected.

For the quarterly visual assessments to be performed at your site, include a description of the following:

- The names of the person(s), or the positions of the person(s), responsible for inspection: Airport Manager.
- The schedules to be used for conducting inspections. Include here any tentative schedule that will be used for facilities in climates with irregular stormwater runoff discharges (MSGP, Part 4.2.3): Due to the long winter season, the four quarterly visual assessments will take place quarterly unless frozen conditions prevent this. If frozen conditions persist for an entire quarter, preventing visual inspection two visual inspections will be conducted during the following quarter. It is anticipated that a visual assessment during April will capture snowmelt discharge.

Month	Visual Assessment Schedule
January	Take one quarterly
February	visual assessment
March	
April	Take visual assessment
May	during breakup conditions
June	
July	Take one quarterly
August	visual assessment
September	
October	Take one quarterly
November	visual assessment
December	

- Specific areas of the facility to be inspected, including schedules for specific outfalls: Visual assessment samples will be collected at Outfall A and B as depicted on Figure 1 in Appendix A.

SECTION 6: DOCUMENTATION TO SUPPORT ELIGIBILITY CONSIDERATIONS UNDER OTHER FEDERAL LAWS

6.1 Documentation Regarding Endangered Species.

In checking the ESA Listed Species Consultation Guide – Anchorage Fish and Wildlife Field Office, it was determined that endangered species are present or migrate through the general area at varying points in the year. ESA listed species include: Stellar's Eiders Winter and Molting Habitat, the Northern Sea Otter, Kittlitz's Murrelet, Humpback Whale, and Stellar Sea Lions.

Eligibility Criterion E of the MSGP (see appendix E of the 2008 MSGP) is met (see Appendix J), no further action is required.

6.2 Documentation Regarding Historic Properties

No subsurface disturbances resulting from building or installing control measures are occurring at this facility, therefore discharge-related activities do not have the potential to have an effect on historic properties. Eligibility Criterion A of the MSGP is met, no further action is required.

6.3 Documentation Regarding NEPA Review (if applicable)

No operations related to New Source Performance Standards (NSPS) take place at this facility.

SECTION 7: 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: Jeff Doerning Title: Cold Bay Airport Manager

Signature:  Date: 11-5-10

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES

DELEGATION OF SIGNATURE AUTHORITY, SWPPP AND OTHER NPDES MSGP RELATED REPORTS AND DOCUMENTS

Airport Name: Cold Bay Airport

I, Lance Wilber, hereby designate Jeff Doerning assigned to Cold Bay Airport to be the DOT&PF duly authorized representative for the purpose of overseeing compliance with the NPDES Multi-Sector General Permit, at the Cold Bay. By signing this authorization, I confirm that I meet the requirements to make such a designation as set forth in Appendix B, Subsection 11.A of EPA's Multi-Sector General Permit (MSGP), and that the designee above meets the definition of a "duly authorized representative" as set forth in Appendix B, Subsection 11.B.

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: Lance Wilber

Title: Regional Director

Signature: Lance Wilber

Date: 11/29/10

SECTION 8: SWPPP MODIFICATIONS

Description of SWPPP Modification	Name	Date	Signature

SWPPP APPENDICES

Attach the following documentation to the SWPPP:

Appendix A – General Location Map & Site Map(s)

Appendix B – 2008 MSGP

Appendix C – NOI and Letters

Appendix D – Visual Assessments

Appendix E – Inspections

Appendix F – Corrections

Appendix G – Training

Appendix H – Annual Report

Appendix I – Blank Forms

Appendix J – Miscellaneous

Appendix K – SPCC Plan (Cold Bay)

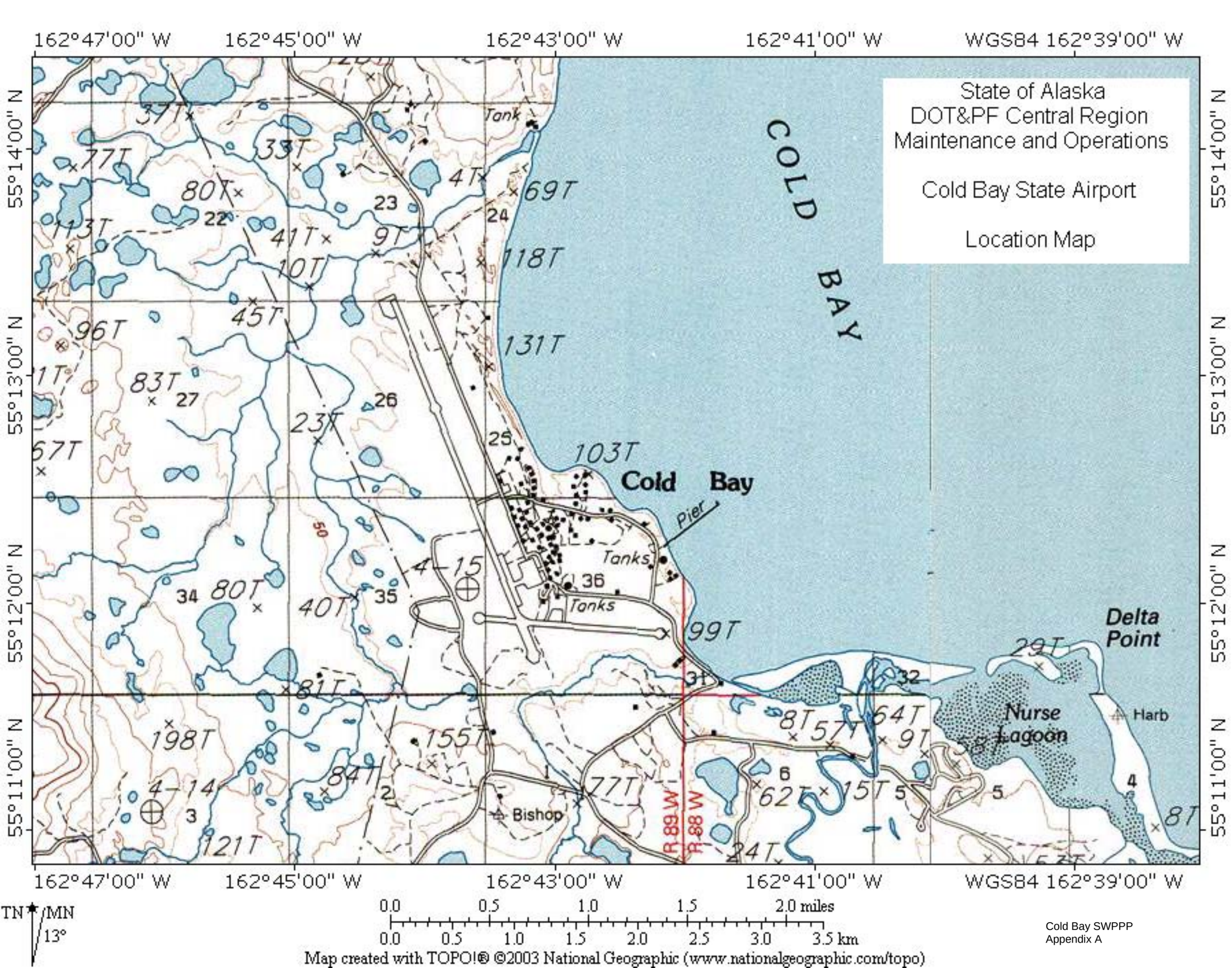
Appendix L – Best Management Practices and Typicals

Appendix A – General Location Map & Site Map(s)

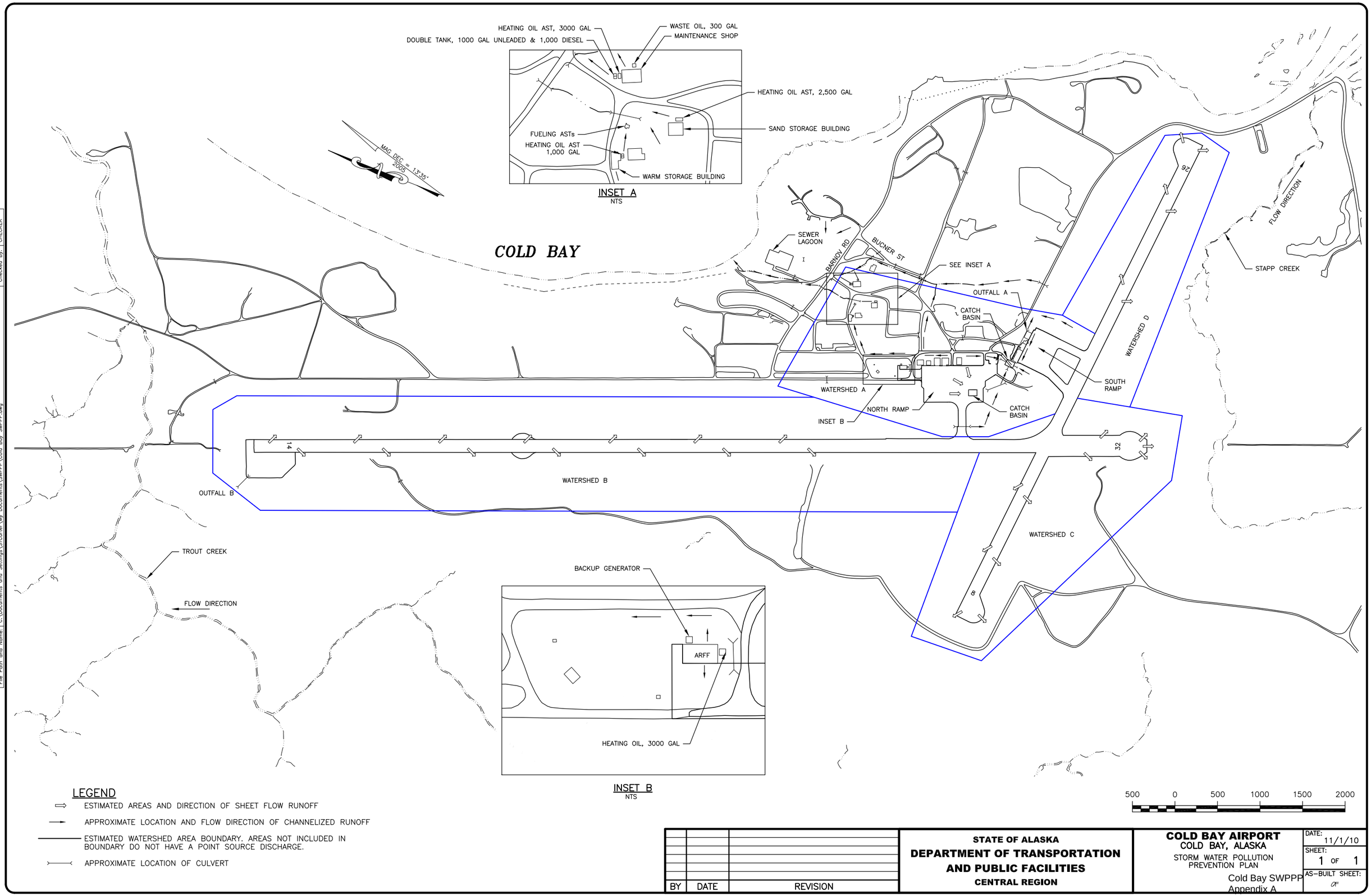
Cold Bay State Airport Location Map

Cold Bay Airport Watershed Map

Cold Bay Airport Layout Plan



Map created with TOPO!® ©2003 National Geographic (www.nationalgeographic.com/topo)



Designed By: DESIGNER
Drawn By: DRAFTER
Checked By: CHECKER

Date Revised: 11/05/2010, 9:40 AM
Layout Name: SWPPP
File Path and Name: C:\Documents and Settings\STCarter\My Documents\SWPPP\Cold Bay SWPPP.dwg

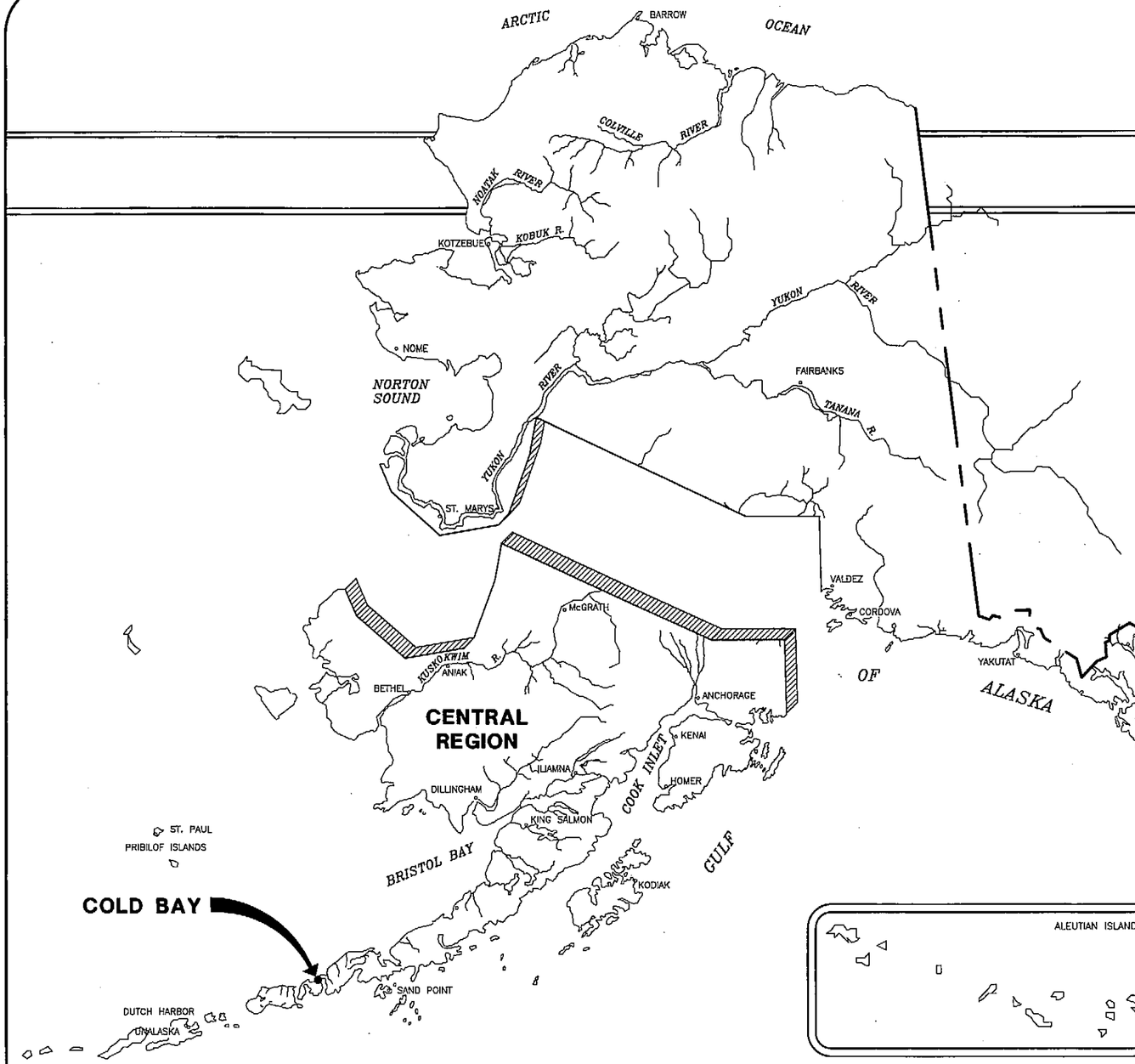
BY	DATE	REVISION

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES
CENTRAL REGION

COLD BAY AIRPORT
COLD BAY, ALASKA
STORM WATER POLLUTION PREVENTION PLAN

DATE: 11/1/10
SHEET: 1 OF 1
AS-BUILT SHEET: OF

Cold Bay SWPPP
Appendix A

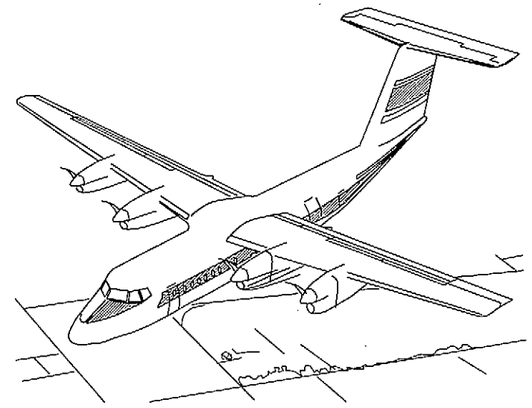


AIRPORT LAYOUT PLAN FOR

COLD BAY

APRIL 23, 2004

DRAWING INDEX



SPONSORED BY
STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION
AND PUBLIC FACILITIES
CENTRAL REGION

CONCUR Gordon C. Keith **DATE** 5/6/04
GORDON C. KEITH, P.E. — DIRECTOR OF CONSTRUCTION AND OPERATIONS

APPROVED **DATE** 5-6-04
ROBERT A. CAMPBELL, P.E. — REGIONAL PRECONSTRUCTION ENGINEER

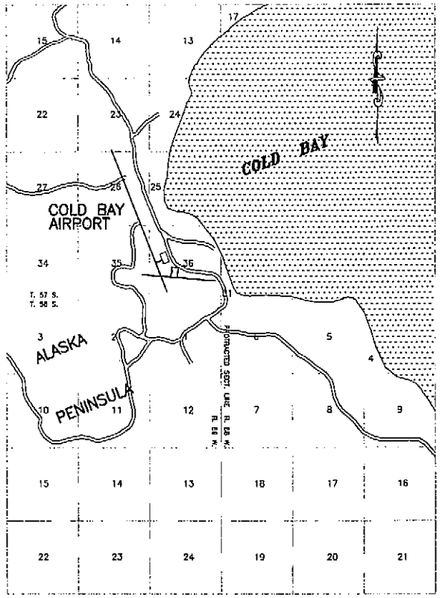
AIRPORT LAYOUT PLAN CONDITIONAL APPROVAL SUBJECT TO ALP APPROVAL LETTER DATED 5/18/04
By: [signature] DATE: 5/26/04
FAA AIRPORTS DIVISION
ALASKAN REGION, AAL-610

FAA AIRSPACE REVIEW NUMBER
02-AAL-166NRA

COLD BAY
AIRPORT LAYOUT PLAN

SHEET 1 OF 14

File:Z:\07072\201\CAD\ALP Date of Last Revision: 5/5/04

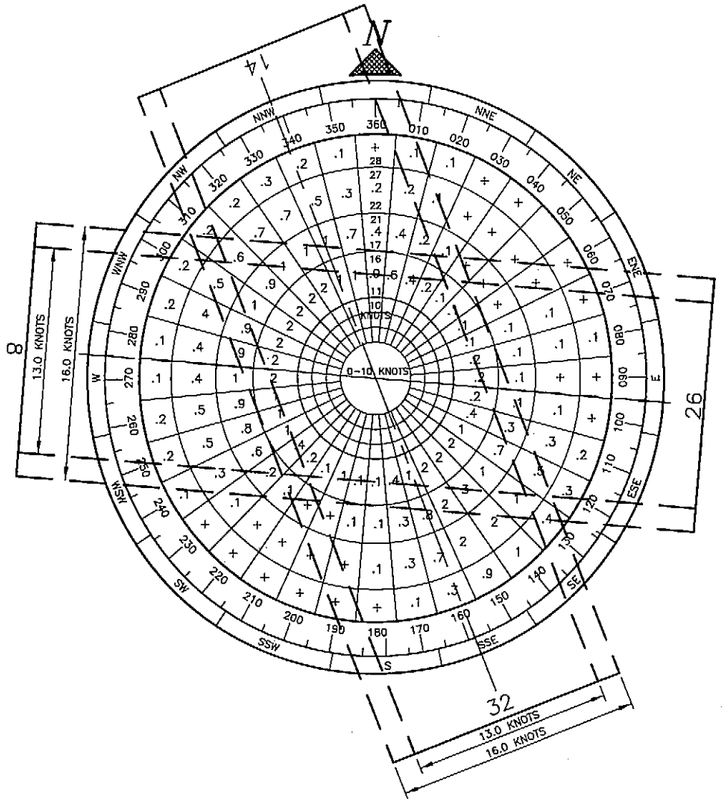


VICINITY MAP

1"=1 MILE
T 57 & 58 S, R 88 & 89 W
SEWARD MERIDIAN
U.S.G.S. COLD BAY, ALASKA

LEGEND

ITEM	EXISTING	ULTIMATE
PROPERTY LINE		
BUILDING RESTRICTION LINE	BRL	BRL
AVIGATION & HAZARD EASEMENT		
AIRPORT REFERENCE POINT (A.R.P.)		
WIND CONE AND SEGMENTED CIRCLE		
BUILDINGS		
BUILDING NUMBER	(1)	
LOT NUMBER	(6A)	
FENCE		
UNPAVED ROADWAYS		
PAVED ROADWAYS/RUNWAYS		
SHORELINE		
ANTENNA	(A)	(A)
VASI OR PAPI		
CONTOURS	100	100
ROTATING BEACON		
MALSF		
REIL		
RUNWAY SAFETY AREA		
AVIATION NAVIGATION LIGHTS		
RUNWAY OBJECT FREE AREA		
SURVEY MONUMENT		
THRESHOLD		



WIND DATA

CROSSWIND COMPONENT	R/W 14/32	R/W 08/26	COMBINED
13 KNOTS (APPROACH CAT. B)	81.92%	72.88%	95.04%
16 KNOTS (APPROACH CAT. C)	89.27%	83.34%	98.10%
20 KNOTS (APPROACH CAT. D)	95.00%	N/A	N/A

SOURCE:
U.S. DEPARTMENT OF COMMERCE, NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION, NATIONAL CLIMATIC DATA CENTER
REPORT PERIOD: 01/1992– 11/1999
WIND SPEED SAMPLED IN MILES PER HOUR

NON STANDARD CONDITIONS

ITEM	EXISTING	STANDARD	FUTURE	ULTIMATE
R/W 08 SAFETY AREA LENGTH BEYOND THRESHOLD	60'	1000'	1000'	1000'
R/W 26 SAFETY AREA LENGTH BEYOND THRESHOLD	75'	1000'	1000'	1000'
R/W 14 SAFETY AREA LENGTH BEYOND THRESHOLD	225'	1000'	225'	1000'
R/W 32 SAFETY AREA LENGTH BEYOND THRESHOLD	405'	1000'	405'	1000'
R/W 14/32 SAFETY AREA WIDTH	300'	500'	500'	500'
R/W 08/26 SAFETY AREA WIDTH	300'	500'	500'	500'
FAA FSS BEYOND BRL	OBSTRUCTION	NO OBST.	OBSTRUCTION	NO OBST.
FENCE WITHIN O.F.A. WIDTH OF R/W 26, STA. 10+00 RT.	393.5'	400'	393.5'	393.5'
FENCE/ROAD WITHIN O.F.A. BEYOND R/W 26	255'	1000'	1000'	1000'
RVZ AT THE INTERSECTION OF R/W 8/26 & R/W 14/32	OBSTRUCTION	NO OBST.	OBSTRUCTION	NO OBST.
LANDFILL SEPERATION R/W 14/32	2400'	5000'	2400'	2400'

NOTE: THERE ARE NO OFZ OBJECT PENETRATIONS AND NO THRESHOLD SITING SURFACE OBJECT PENETRATIONS FOR THIS AIRPORT

BASIC DATA TABLE

RUNWAY DATA

ITEM	RUNWAY 14/32 EXISTING	RUNWAY 14/32 ULTIMATE	RUNWAY 8/26 EXISTING	RUNWAY 8/26 FUTURE
EFFECTIVE GRADE	0.20%	SAME	0.21%	0.31%
% WIND COVERAGE APPROACH CAT. B 13 KNOTS	81.92%	SAME	72.88%	SAME
APPROACH CAT. C 16 KNOTS	89.27%	SAME	83.34%	SAME
INSTRUMENT RUNWAY	PRECISION	SAME	VISUAL	NON-PRECISION
RUNWAY SURFACE	ASPH CONC	SAME	ASPH CONC	SAME
PAVEMENT STRENGTH (max)* [lb.]	345,000	SAME	345,000	SAME
APPROACH SURFACES	50:1/34:1	SAME	34:1	SAME
VISIBILITY MINIMUM	(< 3/4 MILE)	SAME	[1 MILE]	(< 1 MILE)
RUNWAY LIGHTING	H.I.R.L.	SAME	H.I.R.L.	SAME
RUNWAY MARKING	PRECISION	SAME	NON-PRECISION	SAME
RUNWAY NAVIGATION AIDS	NDB,ILS/VASI,VOR LOC/DME, MALS	SAME	VASI	REIL/PAPI
AIRCRAFT APPROACH CATAGORY	C	SAME	C	SAME
AIRCRAFT DESIGN GROUP	III	SAME	III	SAME
RUNWAY SAFETY AREA DIMENSION	300'x11,050'	500'x12,000'	300'x5,295'	500'x6,235'
RUNWAY DIMENSION **	150'x10,420'	150'x10,000'	150'x5,160'	150'x6,235'
RUNWAY OBJECT FREE AREA DIMENSION	800'x12,420'	800'x12,000'	800'x5,295'	800'x6,235'
RUNWAY OBSTACLE FREE ZONE DIMENSION	400'x10,820'	400'x10,400'	400'x5,550'	400'x6,235'
GEODETIC POSITIONS (NAD 83)				
THRESHOLD 14 LAT.	55°13'20.62"N	SAME		
LONG.	162°44'16.51"W	SAME		
THRESHOLD 32 LAT.	55°11'45.16"N	55°11'49.01"N		
LONG.	162°43'10.26"W	162°43'12.93"W		
THRESHOLD 8 LAT.			55°11'56.31"N	SAME
LONG.			162°43'38.87"W	SAME
THRESHOLD 26 LAT.			55°11'52.08"N	55°11'52.84"N
LONG.			162°42'10.27"W	162°42'26.15"W
END RUNWAY 8 LAT.			55°11'56.31"N	55°11'57.13"N
LONG.			162°43'38.87"W	162°43'56.05"W
END RUNWAY 26 LAT.			55°11'52.08"N	SAME
LONG.			162°42'10.27"W	SAME

* PAVEMENT STRENGTHS -- SINGLE WHEEL: 99,000 lbs., DUAL WHEEL: 200,000 lbs., DUAL TANDEM: 345,000 lbs.
** SEE DECLARED DISTANCES BELOW FOR TORA/TODA/LDA DISTANCES.

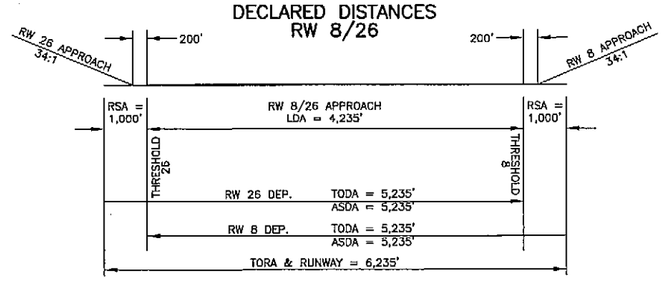
BASIC DATA TABLE

AIRPORT DATA

ITEM		EXISTING	ULTIMATE
AIRPORT ELEVATION (M.L.L.W.)*		101.6	101.5
AIRPORT REFERENCE POINT (A.R.P.) (NAD 83)	LAT.	–	55°12'22.62"N
	LONG.	–	162°43'27.43"W
TAXIWAY LIGHTING		M.I.T.L.	SAME
RAMP LIGHTING		FLOOD	SAME
MEAN MAX. TEMPERATURE, HOTTEST MONTH (°F)		56°	SAME
MAGNETIC DECLINATION, YEAR		14°15'E, 2000	–
AIRPORT REFERENCE CODE		C–III	SAME
AIRPORT NAVIGATION AIDS		NDB, VOR	SAME
		ILS, MALS, VASI	SAME

*THE VERTICAL DATUM USED FOR THIS PROJECT IS MEAN LOWER LOW WATER (M.L.L.W.).
THE M.L.L.W. ELEVATIONS CAN BE CONVERTED TO NGVD29 ELEVATIONS BY SUBTRACTING 4.43'.

DECLARED DISTANCES
RW 8/26



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By: [signature] DATE: 5/26/04
FAA AIRPORTS DIVISION
ALASKAN REGION, AAL-610

FAA AIRSPACE REVIEW NUMBER: 02-AAL-166NRA

BY	DATE	REVISIONS

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES
CENTRAL REGION

APPROVED: [signature]
STEPHEN M. RYAN, P.E. DESIGN SECTION CHIEF

APPROVED: [signature]
HARVEY M. DOUTHIT, P.E. PROJECT MANAGER

DATE 05/12/04
DESIGN LMB
DRAWN SJM
CHECKED ESW

FILE: C9-ALP2.DWG
DATE: 05/12/04 1=1 v=plan daveb

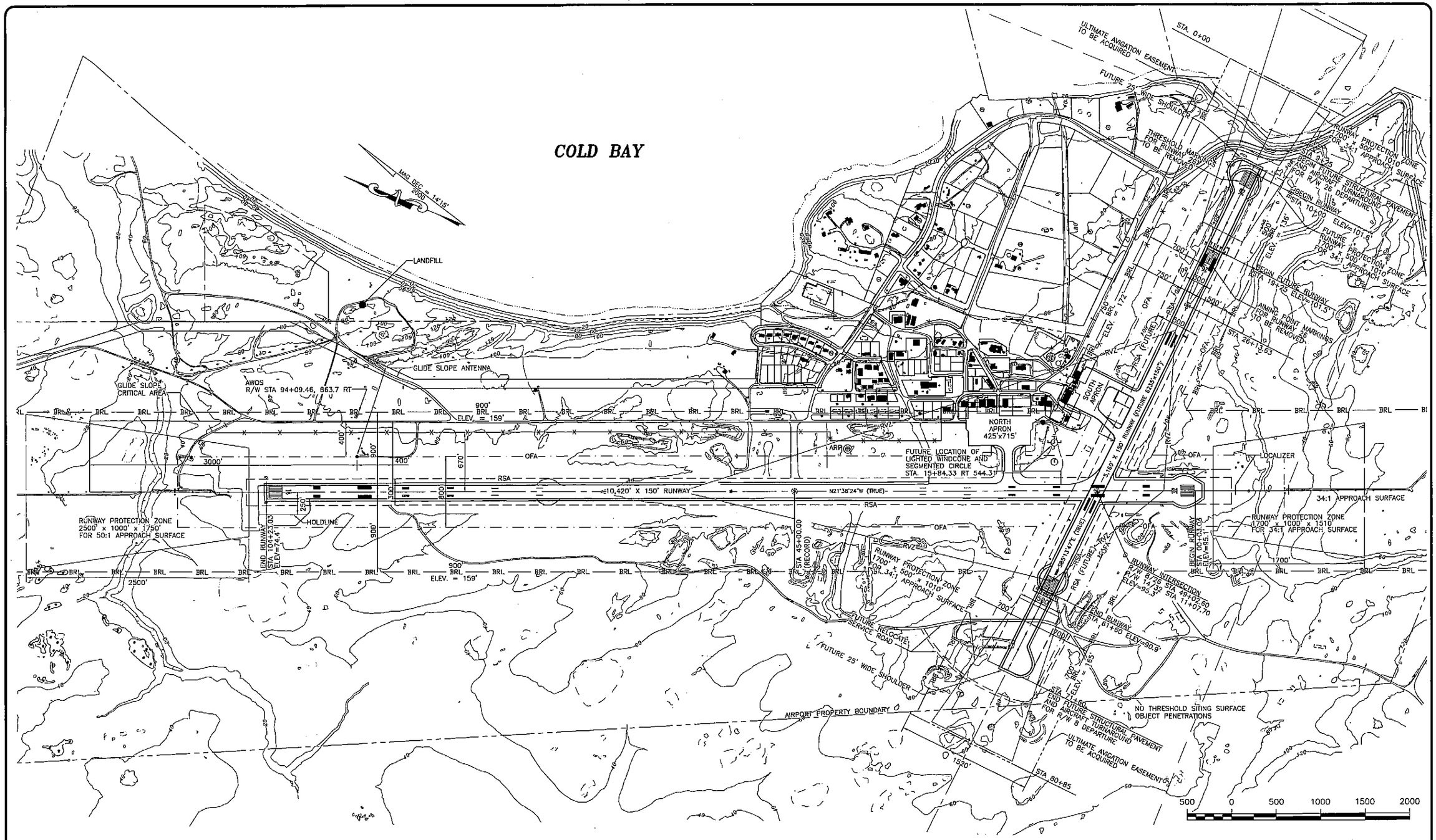
COLD BAY AIRPORT

AIRPORT LAYOUT PLAN

VICINITY MAP AND DATA TABLES

SHEET 2 OF 14

COLD BAY



AIRPORT LAYOUT PLAN CONDITIONAL APPROVAL SUBJECT TO ALP APPROVAL LETTER DATED 5/12/04

By: _____ DATE: 5/12/04
FAA AIRPORTS DIVISION
ALASKAN REGION, AAL-610

FAA AIRSPACE REVIEW NUMBER: 02-AAL-166NRA

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BY	DATE	REVISIONS

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES
CENTRAL REGION

APPROVED: _____
STEPHEN M. RYAN, P.E. — DESIGN SECTION CHIEF

APPROVED: _____
HARVEY M. DOUTHIT, P.E. — PROJECT MANAGER

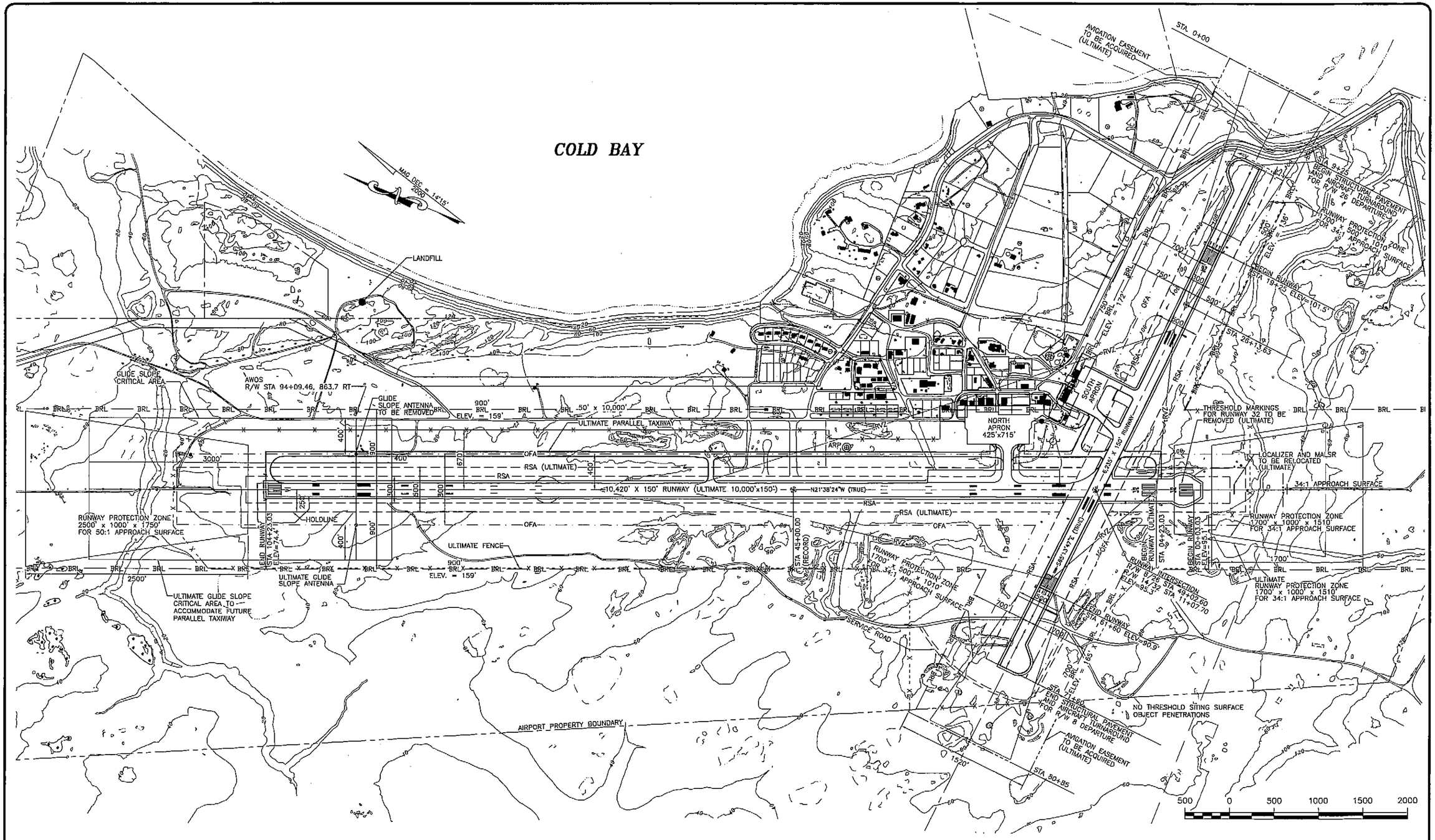
DATE 04/09/04
DESIGN LMB
DRAWN SJM
CHECKED ESW

COLD BAY AIRPORT

AIRPORT LAYOUT PLAN

AIRPORT LAYOUT PLAN – NEAR TERM

SHEET 3 OF 14



AIRPORT LAYOUT PLAN CONDITIONAL APPROVAL SUBJECT TO ALP APPROVAL LETTER DATED 5/26/04

By: [signature] DATE: 5/26/04
FAA, AIRPORTS DIVISION
ALASKAN REGION, AAL-610

FAA AIRSPACE REVIEW NUMBER: 02-AAL-166NRA

BY	DATE	REVISIONS

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES
CENTRAL REGION

APPROVED: [signature]
STEPHEN M. RYAN, P.E. DESIGN SECTION CHIEF

APPROVED: [signature]
HARVEY M. DOUTHIT, P.E. PROJECT MANAGER

DATE 04/09/04
DESIGN LMB
DRAWN SJM
CHECKED ESW

FILE: Z:\ALP4
DATE: 02/17/04 1=1 vmplan daveb

COLD BAY AIRPORT

AIRPORT LAYOUT PLAN

AIRPORT LAYOUT PLAN – ULTIMATE

SHEET 4 OF 14

TERMINAL AREA BUILDING TABLE

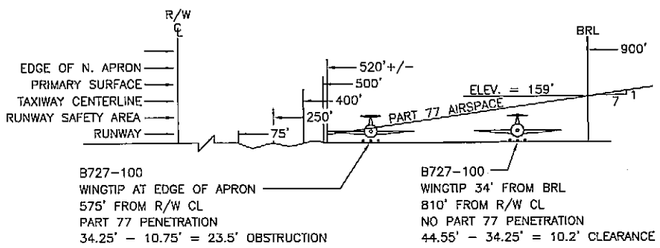
No.	Description	Top Elev.	Obstruction Marking		Comment
			Current	Future	Blk. 10 Lot 2A
①	US Weather Service Balloon Building	117.552	–	–	Blk. 10 Lot 5
②	DOT/PF Air Rescue Fire Fighting Building and Airport Managers Office	116.289	–	–	Blk. 10 Lot 2A
③	Cold Sea International	117.972	–	–	Blk. 3 Lot 1
④	Department of Interior Fish and Wildlife	115.374	–	–	Blk. 3 Lot 2
⑤	Hanger Peninsula Airways Inc. Hanger	114.685	–	–	Blk. 3 Lot 3B
⑥	Peninsula Airways Inc. Hanger/Terminal	114.071	–	–	Blk. 3 Lot 3B
⑦	Evergreen Avation Inc. Hanger	113.576	–	–	Blk. 3 Lot 6
⑧	DOT/PF Airport Lighting, Generator Enclosure and Generator Switch Gear	100.653	–	–	Blk. 3 Lot 5
⑨	DOT/PF Old Fire Station	121.94 (Tower) 111.932 (High Bldg. Point) 108.771 (Main Bldg.)	–	–	Blk. 3 Lot 5

TERMINAL AREA BUILDING TABLE (CONT.)

No.	Description	Top Elev.	Obstruction Marking		Comment
⑩	Cold Bay Emergency Medical Council – Clinic	103.520	–	–	
⑪	FAA – Flight Service Station	117.743 Antenna Above Tower Elevations 135.200 (Tower A) 135.200 (Tower B) 135.200 (Tower C)			FSS Lot Antenna A penetrates PART 77 – 7:1 Transitions by 1.79' Runway 14/32 Obstruction Lighting Required
⑫	Reeve Aleution Airways – Passenger Terminal	116.827	–	–	Blk. 1 Lot 1A
⑬	Frosty Fuels	106.427	–	–	Blk. 1 Lot 2A
⑭	Frosty Fuels	117.743	–	–	Blk. 1 Lot 3A

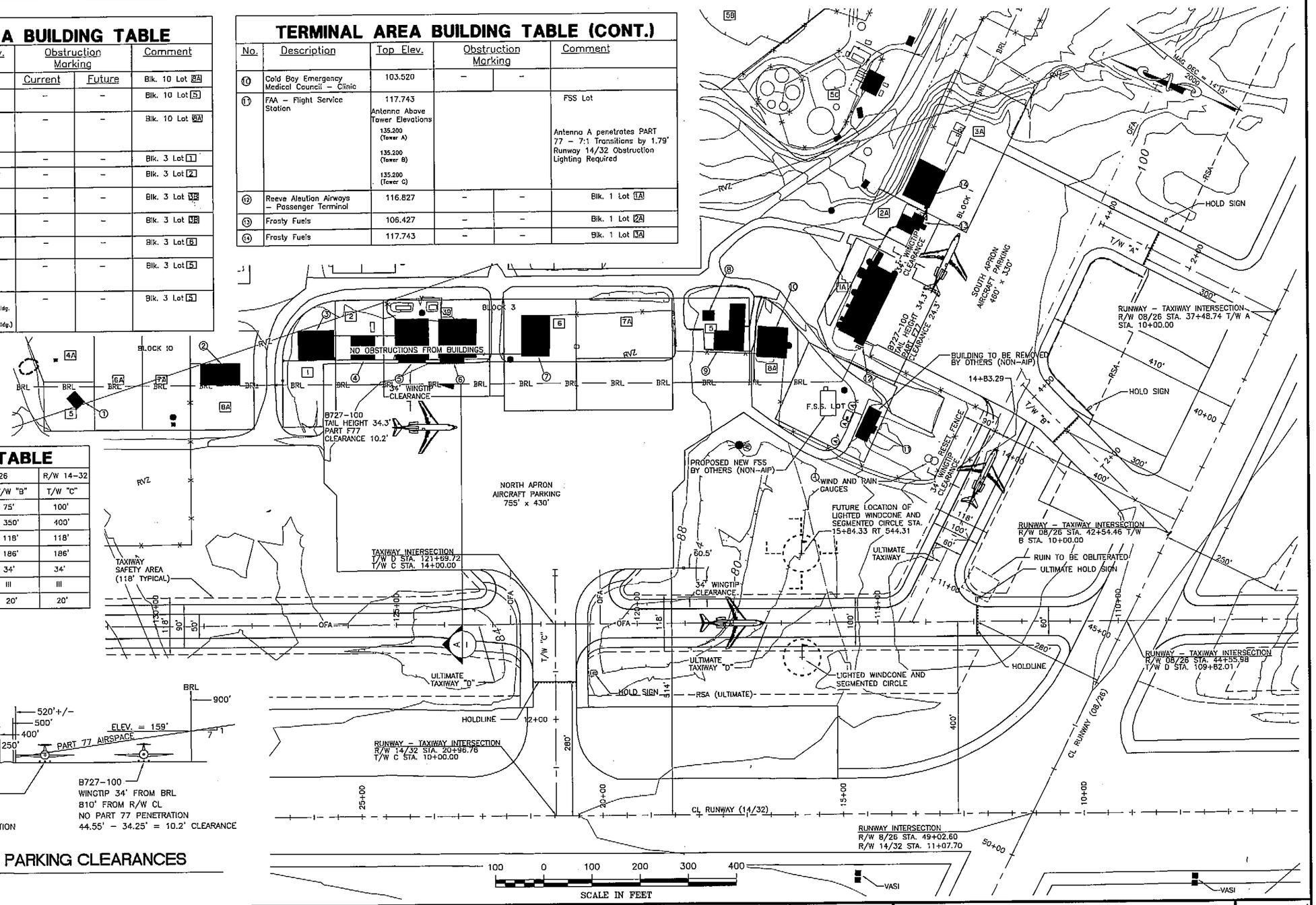
TAXIWAY DATA TABLE

	R/W 8–26		R/W 14–32
	T/W "A"	T/W "B"	T/W "C"
TAXIWAY WIDTH	75'	75'	100'
TAXIWAY LENGTH	330'	350'	400'
TAXIWAY SAFETY AREA WIDTH	118'	118'	118'
TAXIWAY OFA	186'	186'	186'
TAXIWAY WINGTIP CLEARANCE	34'	34'	34'
TAXIWAY DESIGN GROUP	III	III	III
TAXIWAY SHOULDER WIDTH	20'	20'	20'



A — NTS

R/W 14/32 AIRCRAFT PARKING CLEARANCES



AIRPORT LAYOUT PLAN CONDITIONAL APPROVAL SUBJECT TO ALP APPROVAL LETTER DATED 5/16/04
By: [signature] DATE: 5/20/04
FAA AIRPORTS DIVISION
ALASKAN REGION, AAL-610

FAA AIRSPACE REVIEW NUMBER: 02-AAL-166NRA

BY	DATE	REVISIONS

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES
CENTRAL REGION

APPROVED: [signature] STEPHEN M. RYAN, P.E. DESIGN SECTION CHIEF
APPROVED: [signature] HARVEY M. DOUTHIT, P.E. PROJECT MANAGER

DATE 04/09/04
DESIGN LMB
DRAWN SJM
CHECKED ESW

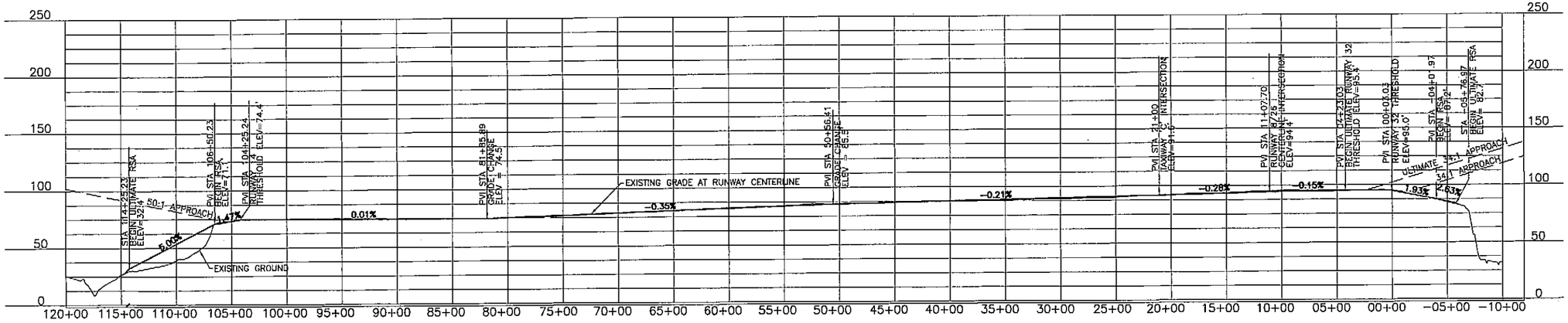
FILE: 2A.07072\201\CAD
DATE: 02/17/04 1=1 v=plan

COLD BAY AIRPORT

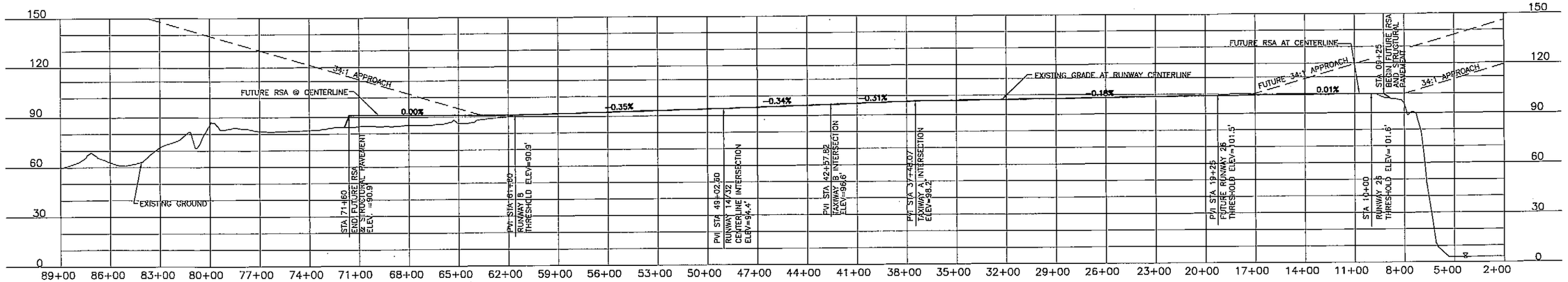
AIRPORT LAYOUT PLAN

TERMINAL AREA PLAN

SHEET 5 OF 14



RUNWAY PROFILE14/32
SCALE : 1" = 500'



RUNWAY PROFILE 8/26
SCALE : 1" = 300'

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DATE: 02/17/04 1=1 v=plan daveb

AIRPORT LAYOUT PLAN CONDITIONAL APPROVAL
SUBJECT TO ALP APPROVAL LETTER DATED 5/18/04
By: [signature] DATE: 5/26/04
FAA, AIRPORTS DIVISION
ALASKAN REGION, AAL-610

FAA AIRSPACE REVIEW NUMBER: 02-AAL-166NRA

BY	DATE	REVISIONS

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES
CENTRAL REGION

APPROVED: [signature]
STEPHEN M. RYAN, P.E. DESIGN SECTION CHIEF

APPROVED: [signature]
HARVEY M. DOUTHIT, P.E. PROJECT MANAGER

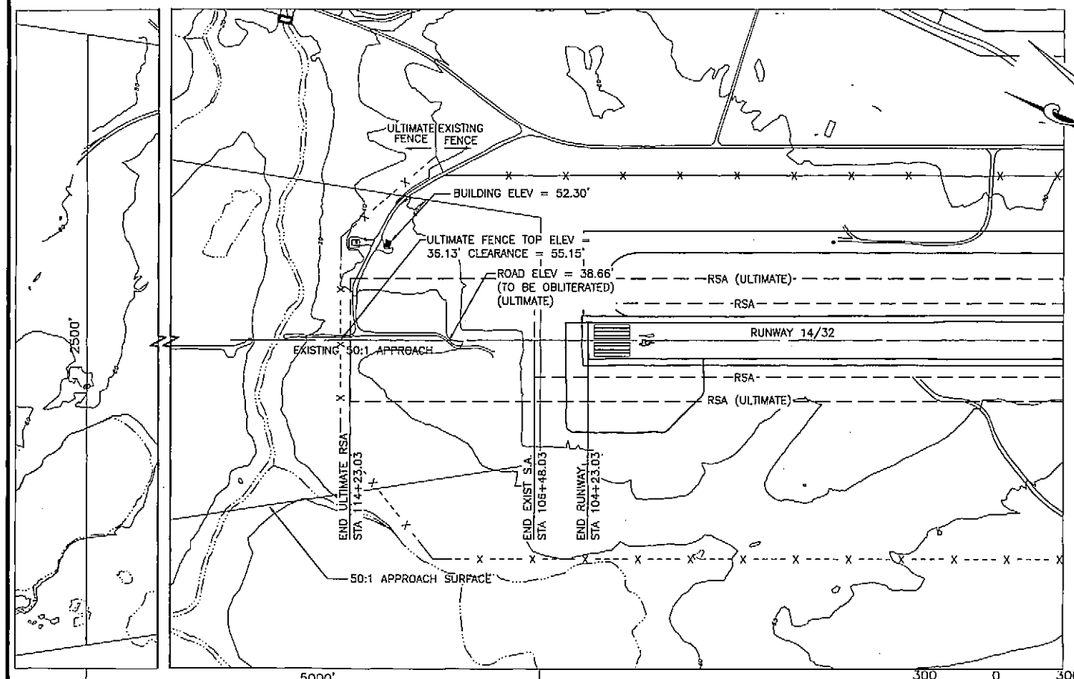
DATE 02/17/04
DESIGN LMB
DRAWN SJM
CHECKED ESW

COLD BAY AIRPORT

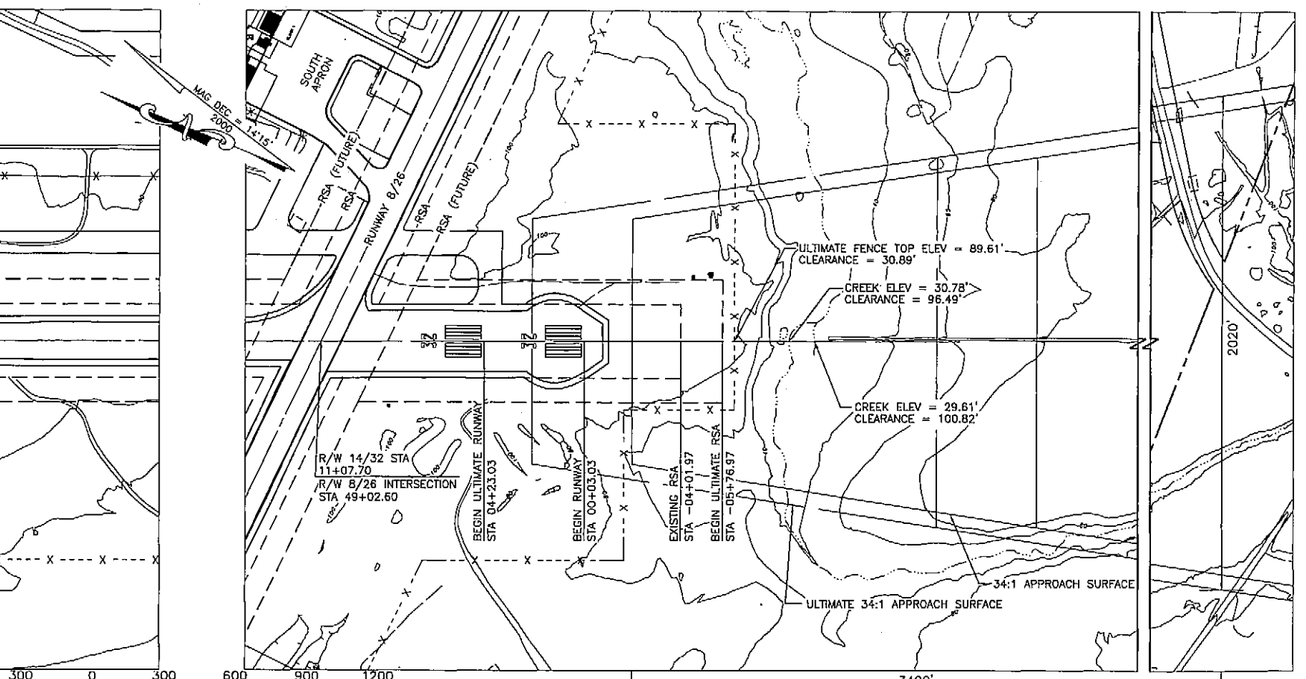
AIRPORT LAYOUT PLAN

RUNWAY PROFILES

SHEET 6 OF 14



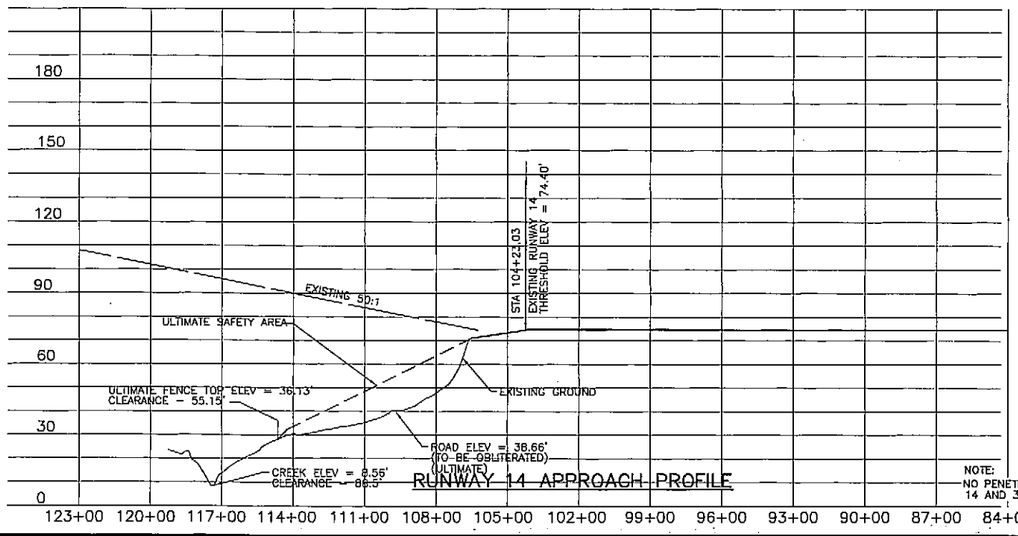
RUNWAY 14 APPROACH PLAN



RUNWAY 32 APPROACH PLAN

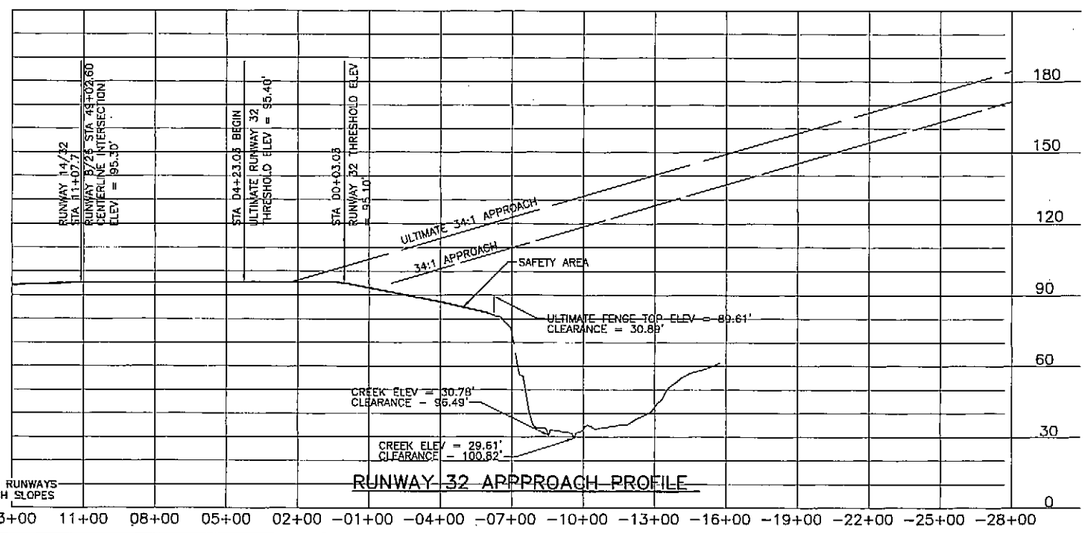
300 0 300 600 900 1200

1" = 300'



RUNWAY 14 APPROACH PROFILE

NOTE:
NO PENETRATIONS TO RUNWAYS 14 AND 32 APPROACH SLOPES



RUNWAY 32 APPROACH PROFILE

AIRPORT LAYOUT PLAN CONDITIONAL APPROVAL 5/26/04
SUBJECT TO ALP APPROVAL LETTER DATED

By: [signature] DATE: 5/26/04
FAA, AIRPORTS DIVISION
ALASKAN REGION, AAL-610

FAA AIRSPACE REVIEW NUMBER: 02-AAL-166NRA

FILE: Z:\ALP7
DATE: 02/17/04 1=1 v=plan davob

BY	DATE	REVISIONS

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES
CENTRAL REGION

APPROVED: [signature]
STEPHEN M. RYAN, P.E. DESIGN SECTION CHIEF

APPROVED: [signature]
HARVEY M. DOUTHIT, P.E. PROJECT MANAGER

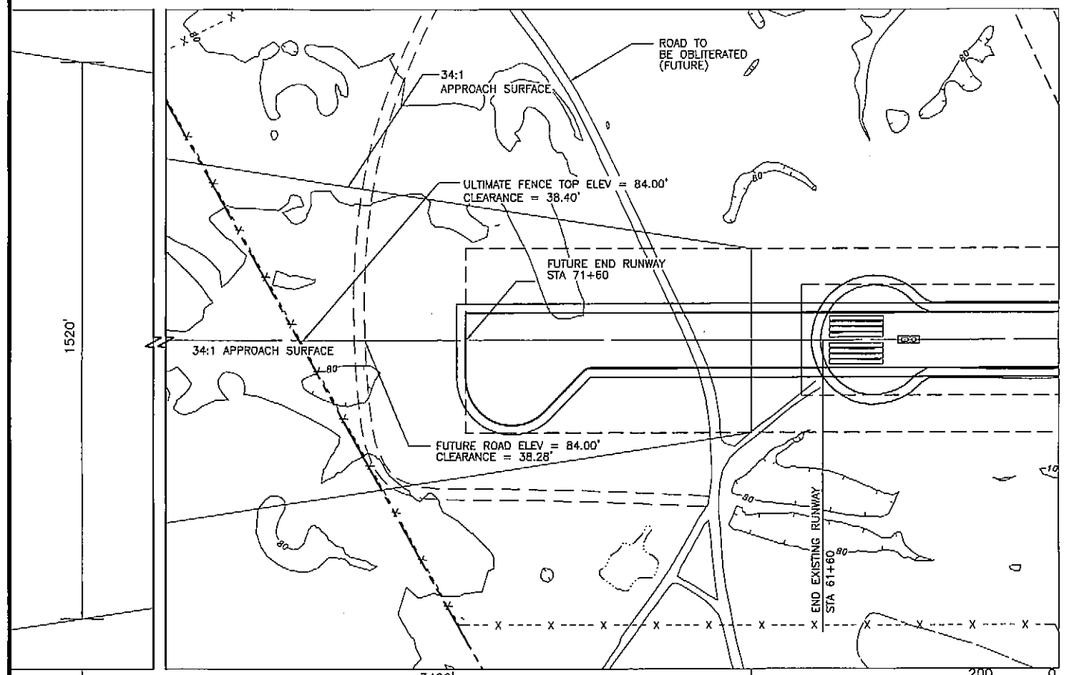
DATE 02/17/04
DESIGN LMB
DRAWN SJM
CHECKED ESW

COLD BAY AIRPORT

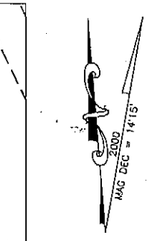
AIRPORT LAYOUT PLAN

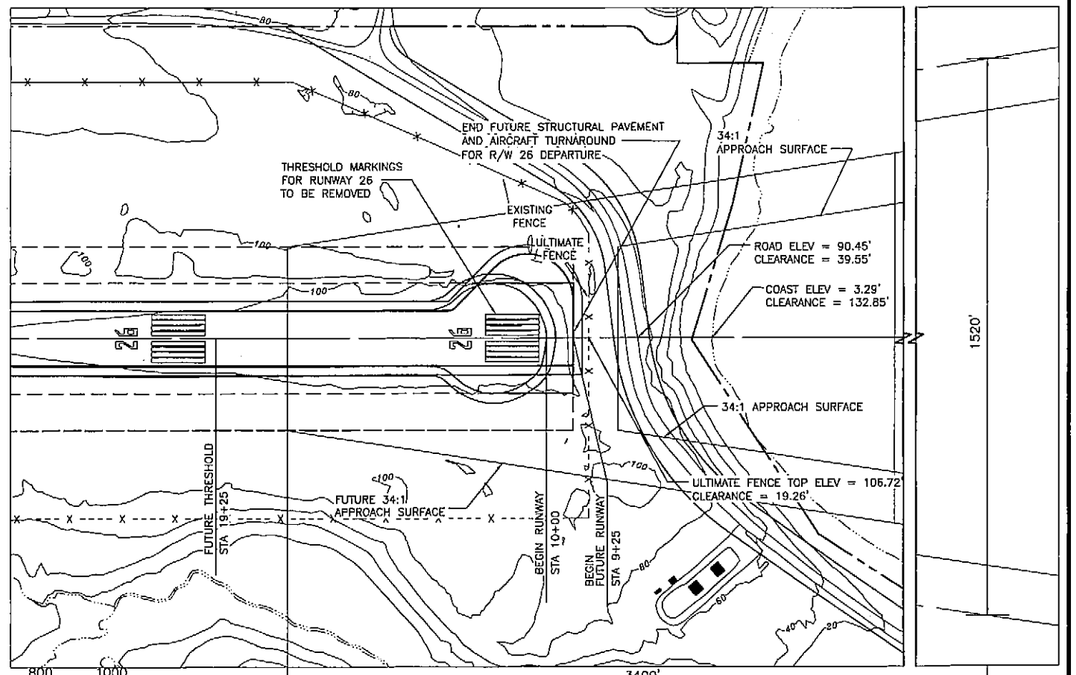
RUNWAY 14/32 APPROACH SURFACES PLAN & PROFILE

SHEET 7 OF 14



RUNWAY 08 APPROACH PLAN

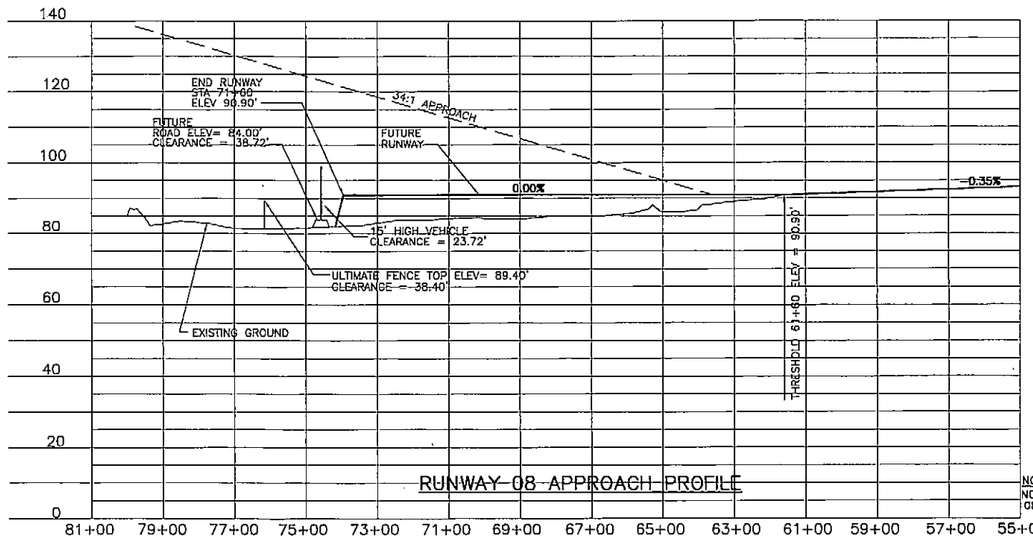




RUNWAY APPROACH 26 PLAN

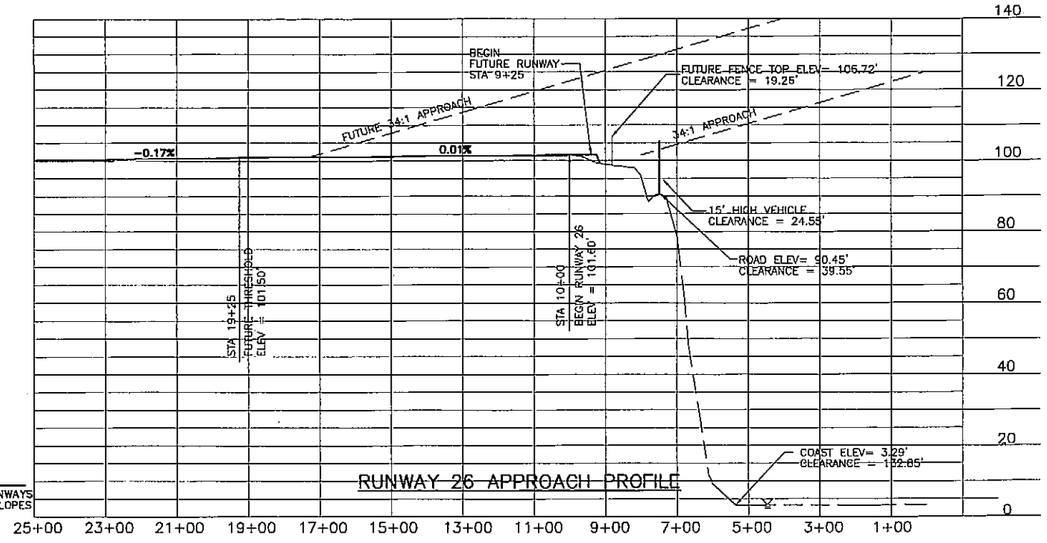
200 0 200 400 800 1000

1" = 200'



RUNWAY 08 APPROACH PROFILE

NOTE:
NO PENETRATIONS TO RUNWAYS 08 AND 26 APPROACH SLOPES



RUNWAY 26 APPROACH PROFILE

AIRPORT LAYOUT PLAN CONDITIONAL APPROVAL 5/28/04
SUBJECT TO ALP APPROVAL LETTER DATED

By: [signature] DATE: 5/26/04
FAA, AIRPORTS DIVISION
ALASKAN REGION, AAL-610

FAA AIRSPACE REVIEW NUMBER: 02-AAL-166NRA

FILE: Z:\ALP8
DATE: 02/17/04 1=1 version dwcb

BY	DATE	REVISIONS

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES
CENTRAL REGION

APPROVED: [signature] DESIGN SECTION CHIEF
STEPHEN M. RYAN, P.E.

APPROVED: [signature] PROJECT MANAGER
HARVEY M. DOUTHIT, P.E.

DATE 02/17/04
DESIGN LMB
DRAWN SJM
CHECKED FSW

COLD BAY AIRPORT

AIRPORT LAYOUT PLAN

RUNWAY 08/26 APPROACH SURFACES PLAN & PROFILE

SHEET 8 OF 14

RUNWAY END ELEVATIONS			
RUNWAY	EXISTING	FUTURE	ULTIMATE
14	74.4'	74.4'	74.4'
32	95.5'	95.5'	95.5'
8	90.9'	90.9'	90.9'
26	101.6	101.6	101.5

OBSTRUCTION DATA TABLE

NUMBER	PENETRATION DISTANCE (FEET)	DESCRIPTION	DISPOSITION	MAX. HEIGHT OBSTR. (MSL)
1	525'	TOPOGRAPHY IN CONICAL SURFACE	-	925'

FAA AIRSPACE REVIEW NUMBER:
02-AAL-166NRA

AIRPORT LAYOUT PLAN CONDITIONAL APPROVAL
SUBJECT TO ALP APPROVAL LETTER DATED 5/6/04

By: _____ DATE: 5/6/04
FAA, AIRPORTS DIVISION
ALASKAN REGION, AAL-610

FILE: Z:\ALP9
DATE: 02/17/04

BY	DATE	REVISIONS

DATE 02/17/04
DESIGN LMB
DRAWN SJM
CHECKED ESW

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES
CENTRAL REGION

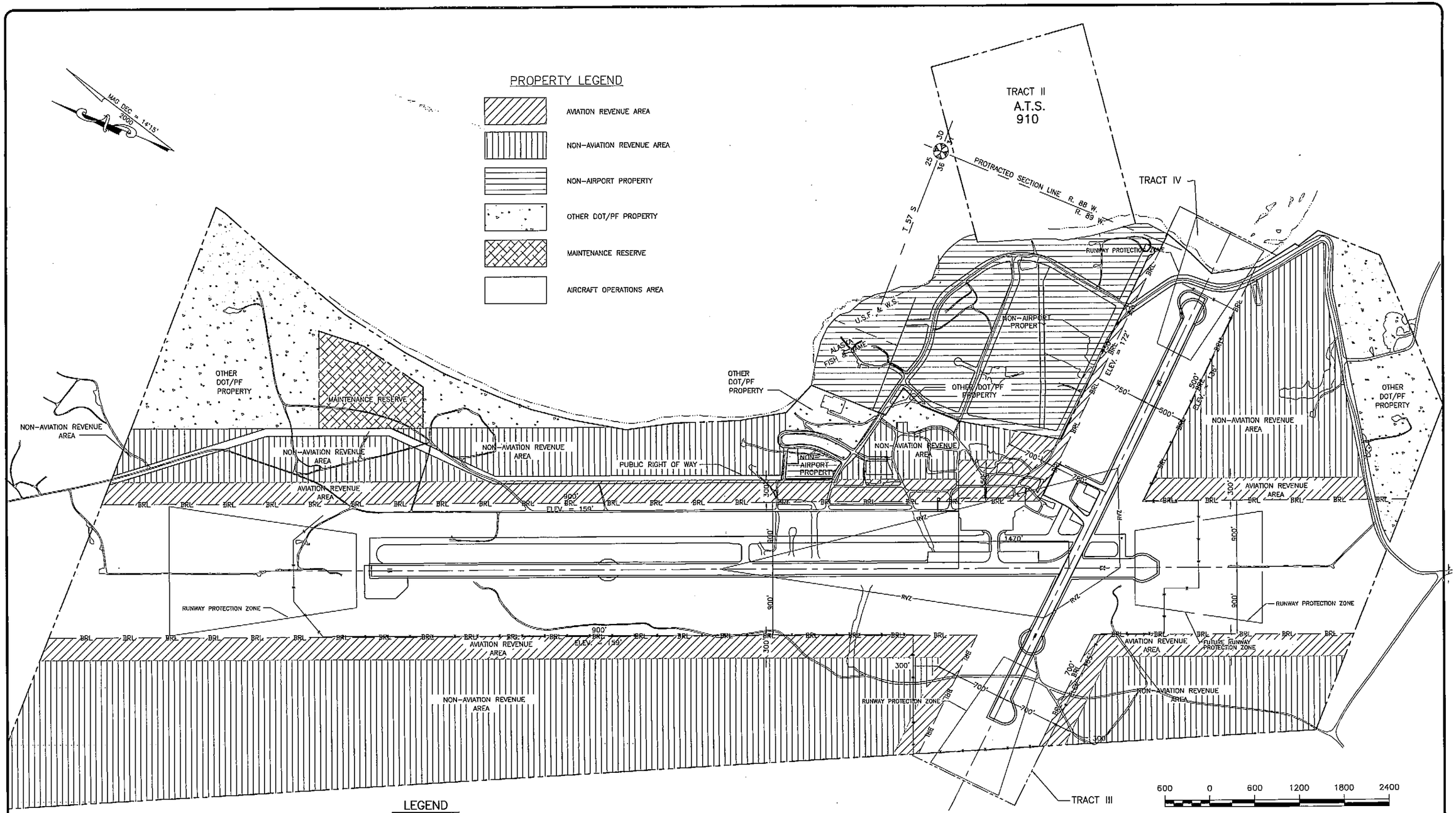
APPROVED: _____ DESIGN SECTION CHIEF
STEPHEN M. RYAN, P.E.
APPROVED: _____ PROJECT MANAGER
HARVEY N. DOUTHIT, P.E.

COLD BAY AIRPORT

AIRPORT LAYOUT PLAN

F.A.R. PART 77

SHEET 9 OF 14



AIRPORT LAYOUT PLAN CONDITIONAL APPROVAL SUBJECT TO ALP APPROVAL LETTER DATED 5/26/04

By: [signature] DATE: 5/26/04

FAA AIRPORTS DIVISION
ALASKAN REGION, AAL-610

FAA AIRSPACE REVIEW NUMBER: 02-AAL-166NRA

FILE: Z:\ALP10
DATE: 02/17/04 1=1 v=plan daveb

BY	DATE	REVISIONS

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES
CENTRAL REGION

APPROVED: [signature]
STEPHEN M. RYAN, P.E. — DESIGN SECTION CHIEF

APPROVED: [signature]
HARVEY M. DOUTHIT, P.E. — PROJECT MANAGER

DATE 02/17/04
DESIGN LMB
DRAWN SJM
CHECKED ESW

COLD BAY AIRPORT

AIRPORT LAYOUT PLAN

LAND USE PLAN

SHEET 10 OF 14

SURVEY NOTES

1. This field survey was executed on May 12–15, 2001, by McClintock Land Associates, Inc.
2. All horizontal positions were surveyed using Ashtech GPS dual frequency recievers. All processed GPS data meets or exceeds loop closures of 1:10,000.
3. The Basis of bearing is between centerline monuments on the cross wind runway (6–26) with a forward NAD 83 geodetic bearing, (S 85° 13' 47" E) from centerline intersection, STA. 49+02.6, to centerline monument of cross wind runway (6–26), STA. 26+13.63.
4. The bearings shown are local plane bearings as oriented to the basis of bearing, and distances shown are reduced to horizontal ground distances
5. Local grid coordinate system is based on a 2 1/4" brass cap monument, in case, at the intersection of runway (08–26) and runway (14–32). Local coordinates were assigned to found brass cap of, N 50,000.000(ft); E 50,000.000(ft), in U. S. Survey feet,
6. Vertical datum is based on Cold Bay Airport triangulation station T4A, which was held at the published elevation, by the Alaska Department of Transportation and Public Facilities, of (68.09'). A differential level loop through monuments T4A (625) and NGS benchmark DM4 (644), produced a elevation of (07.64') for T4A, approximately .5' lower than the elevation used for this project.
7. The magnetic declination of 14 1/4° E was computed at point "T4A" using GeoMagix software based upon year 2000 magnetic model.
8. All Township information shown is protracted.
9. Foot to Meter conversion is 1200/3937
10. On 9-4-79 a portion of Tract I was conveyed to the state department of Natural Resources by commissioners deed. An avigation and hazard easement was retained over the lands by DOT/PF. The lands conveyed were lots 4–17, block B of ASLS 79–82, Cold Bay Subdivision.
11. On 1-5-95 a portion of Tract I was conveyed to the state department of Natural Resources by commissioners Quitclaim deed. An avigation and hazard easement over the lands by DOT/PF. The lands conveyed were tract A,C,D,E,F, and I of ASLS 90–298; a portion of tracts G and K of ASLS 90–298 shown as parcel L and M.
12. On 7-16-73 an interagency land management transfer (ILMT) was granted by DNR for Tract II identified as ATS 910. On 4-23-93 DOT/PF relinquished the ILMT to DNR and on 6-3-52 DNR issued a permit, avigation and hazard easement to DOT/PF over these lands.

PROPERTY STATUS

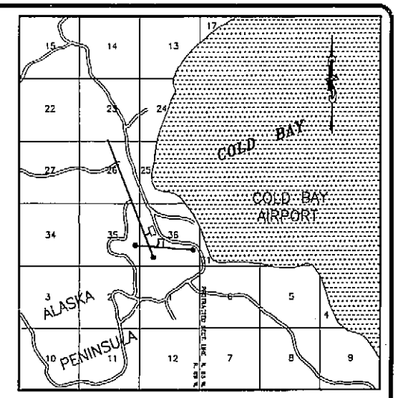
TRACT	PARCEL	DESCRIPTION	ACRES	OWNER	D.O.T. & P.F. INTEREST	DATE ACQUIRED
I	A	TRACT A OF ASLS-90-298	141.05	ALEUTIANS EAST BOROUGH	AV & HAZ EASEMENT	1/5/95
I	B	TRACT B OF ASLS-90-298	30.67	STATE OF ALASKA, D.O.T. & P.F.	FEE SIMPLE, SEC. 45, AK, OMNIBUS ACT	6/1/66
I	C	TRACT C OF ASLS-90-298	12.63	ALEUTIANS EAST BOROUGH	AV & HAZ EASEMENT	1/5/95
I	D	TRACT D OF ASLS-90-298	69.47	ALEUTIANS EAST BOROUGH	AV & HAZ EASEMENT	1/5/95
I	E	TRACT E OF ASLS-90-298	10.89	ALEUTIANS EAST BOROUGH	AV & HAZ EASEMENT	1/5/95
I	F	TRACT F OF ASLS-90-298	2.33	ALEUTIANS EAST BOROUGH	AV & HAZ EASEMENT	1/5/95
I	G	TRACT G OF ASLS-90-298	.22	STATE OF ALASKA, D.O.T. & P.F.	FEE SIMPLE, SEC. 45, AK, OMNIBUS ACT	6/1/66
I	H	TRACT H OF ASLS-90-298	58.47	STATE OF ALASKA, D.O.T. & P.F.	FEE SIMPLE, SEC. 45, AK, OMNIBUS ACT	6/1/66
I	I	TRACT I OF ASLS-90-298	10.52	ALEUTIANS EAST BOROUGH	AV & HAZ EASEMENT	1/5/95
I	J	TRACT J OF ASLS-90-298	10.52	STATE OF ALASKA, D.O.T. & P.F.	FEE SIMPLE, SEC. 45, AK, OMNIBUS ACT	6/1/66
I	K	TRACT K OF ASLS-90-298	1,828.24	STATE OF ALASKA, D.O.T. & P.F.	FEE SIMPLE, SEC. 45, AK, OMNIBUS ACT	6/1/66
I	L	METES & BOUNDS	5.90	ALEUTIANS EAST BOROUGH	AV & HAZ EASEMENT	1/5/95
I	M	TRACTS K-3,K-4,K-5,K-6,K-7 & K-8 OF ASLS 94-13B	2.44	ALEUTIANS EAST BOROUGH	AV & HAZ EASEMENT	1/5/95
		LOTS 1-9, BLOCK 7, ASLS 79-82		STATE OF ALASKA, D.O.T. & P.F.	FEE SIMPLE, SEC. 45, AK, OMNIBUS ACT	6/1/66
		LOTS 1-3, BLOCK 8, ASLS 79-82		STATE OF ALASKA, D.O.T. & P.F.	FEE SIMPLE, SEC. 45, AK, OMNIBUS ACT	6/1/66
		LOTS 4-17, BLOCK 8, ASLS 79-82			AVIGATION & HAZARD EASEMENT	9/4/79
II		ALASKA TIDAL SURVEY 910		STATE OF ALASKA, D.O.T. & P.F.	AVIGATION & HAZARD EASEMENT	8/3/93
III		AVIGATION ESMT. FOR FUTURE RUNWAY PROTECTION ZONE	15.98		TO BE ACQUIRED	
IV		AVIGATION ESMT. FOR FUTURE RUNWAY PROTECTION ZONE	13.97		TO BE ACQUIRED	

LINE TABLE [ft]

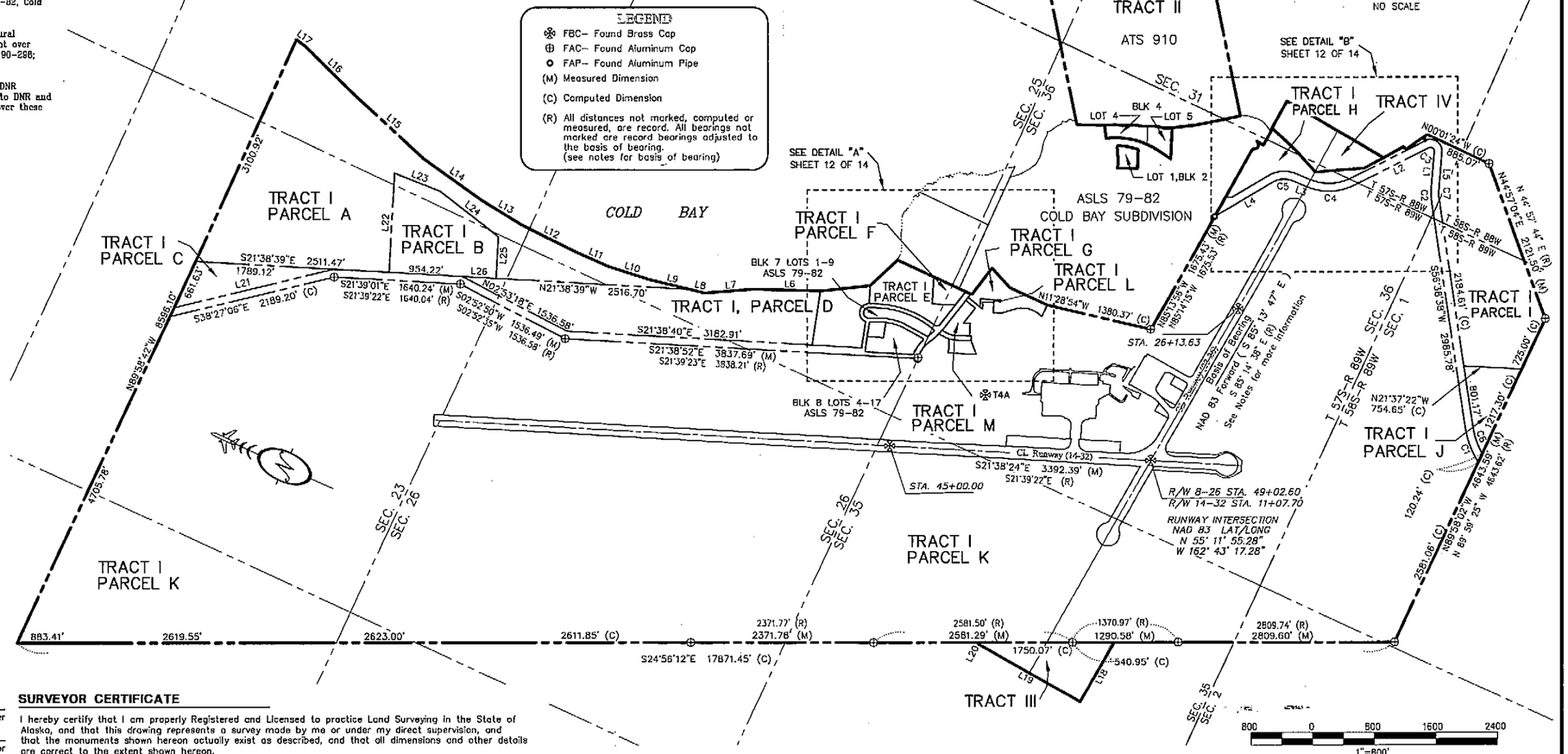
LINE	LENGTH (R)	BEARING
L1	491.32	S69°43'18"W
L2	1074.97	N50°51'12"W
L3	200.62	N02°37'42"W
L4	865.79	S55°04'34"E
L5	491.32	N69°43'18"E
L6	872.27	S23°26'50"E
L7	645.45	S29°15'14"E
L8	197.76	S11°14'20"E
L9	542.90	S11°14'17"E
L10	549.67	S07°08'42"E
L11	490.91	S00°55'19"E
L12	769.05	S01°11'43"W
L13	595.73	S06°15'08"W
L14	926.50	S10°10'47"W
L15	1221.70	S17°06'41"W
L16	862.55	S19°04'08"W
L17	142.96	S12°02'13"W
L18	891.77	N85°13'47"W
L19	1520.00	N04°46'13"E
L20	24.39	N85°13'47"W
L21	2124.33	S38°28'10"E
L22	1266.91	N69°21'21"E
L23	633.18	S03°28'10"E
L24	951.26	S12°23'26"W
L25	537.00	S68°21'21"W
L26	435.67	S21°38'39"E

CURVE TABLE [ft]

CURVE	CHORD BEARING	CHORD LENGTH	LENGTH (R)	RADIUS
C1	S44°16'57"W	480.23	483.99	1119.31
C2	S63°10'47"W	125.32	125.59	550.00
C3	N09°26'13"E	86.85	105.22	50.00
C4	S26°44'28"E	612.60	631.27	750.00
C5	N28°51'12"W	265.14	274.63	300.00
C6	S46°03'53"W	375.18	377.33	1019.31
C7	S63°10'48"W	102.53	102.76	450.00



VICINITY MAP



STATE OF ALASKA 49TH CARY D. KOWAL LS 6855 REGISTERED PROFESSIONAL LAND SURVEYOR

Date — Registration Number

Gary D. Kowal — Registered Land Surveyor

SURVEYOR CERTIFICATE

I hereby certify that I am properly Registered and Licensed to practice Land Surveying in the State of Alaska, and that this drawing represents a survey made by me or under my direct supervision, and that the monuments shown hereon actually exist as described, and that all dimensions and other details are correct to the extent shown hereon.

AIRPORT LAYOUT PLAN CONDITIONAL APPROVAL SUBJECT TO ALP APPROVAL LETTER DATED 5/16/04

By: _____ DATE: 5/26/04
FAA, AIRPORTS DIVISION
ALASKAN REGION, AAL-610

FAA AIRSPACE REVIEW NUMBER: 02AAL-166NRA

BY	DATE	REVISIONS

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES
CENTRAL REGION – AVIATION

APPROVED: STEPHEN M. RYAN, P.E. — DESIGN SECTION CHIEF
APPROVED: HARVEY M. DOUTHIT, P.E. — ENGINEERING MANAGER

FILE: Z:ALP11-12
DATE: 02/16/04
PLOT SCALE: 1=1
REVISED BY: KQ

Date Drawn: 02/16/04
Designer:
Drawn by: KQ
Checked by: GDK

COLD BAY AIRPORT

AIRPORT PROPERTY PLAN

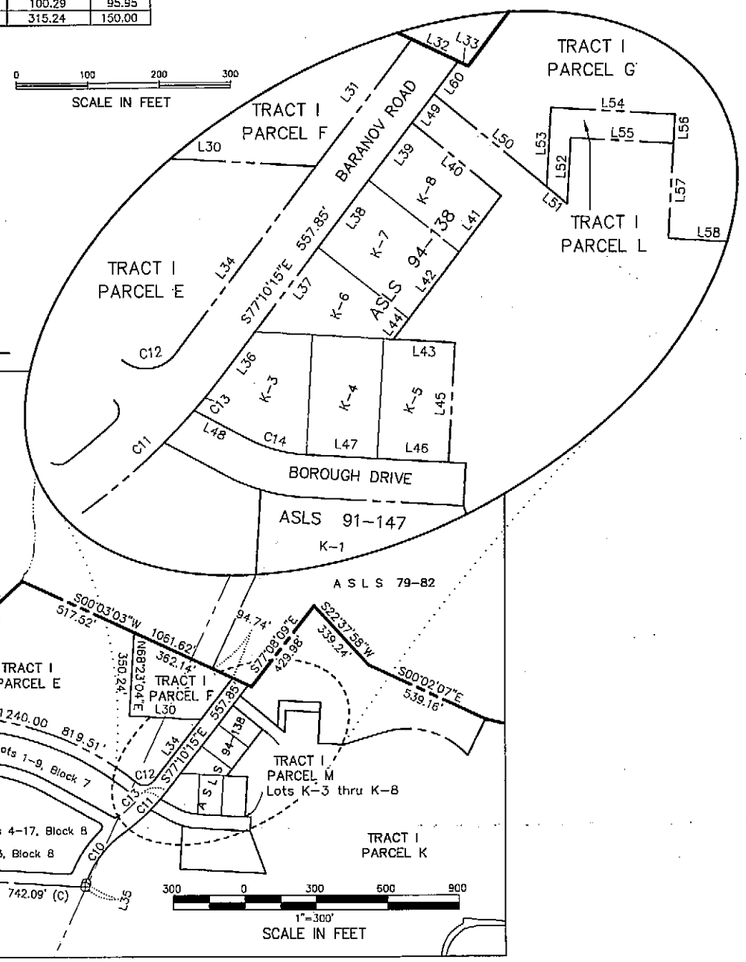
SHEET 11 OF 14

CURVE TABLE [ft]				
CURVE	CORD BEARING	CORD LENGTH	LENGTH (R)	RADIUS
C1	S44°16'57"W	480.23	483.99	1119.31
C2	S63°10'47"W	125.32	125.59	550.00
C3	N09°26'13"E	86.85	105.22	50.00
C4	S26°44'28"E	612.80	631.27	750.00
C5	N28°51'12"W	265.14	274.63	300.00
C6	S46°03'53"W	375.18	377.33	1019.31
C7	S63°10'48"W	102.53	102.76	450.00
C8	S79°19'53"W	233.91	322.81	120.00
C9	N37°53'34"E	23.30	24.87	20.00
C10	N76°27'51"W	261.80	266.10	426.30
C11	S68°54'53"E	258.45	259.35	900.00
C12	S31°27'39"E	75.49	84.14	52.73
C13	S75°41'35"E	46.39	46.40	900.00
C14	S09°00'59"E	88.21	88.93	201.86
C15	N09°29'14"W	366.94	387.58	340.00
C16	N55°13'56"W	49.99	52.35	50.00
C17	N79°56'34"E	96.51	130.58	50.00
C18	S26°44'26"E	531.10	547.11	550.00
C19	N28°51'13"W	353.52	366.17	400.00
C20	S25°08'03"E	95.79	100.29	95.95
C21	N09°28'45"E	260.35	315.24	150.00

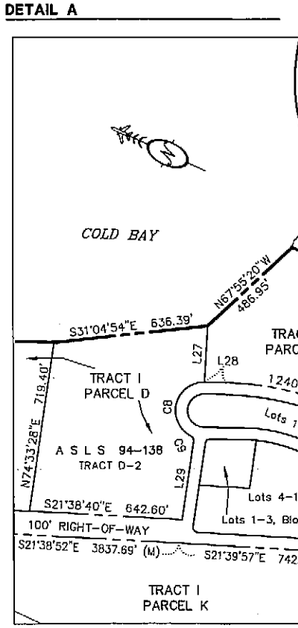
LEGEND

- FBC– Found Brass Cap
- FAC– Found Aluminum Cap
- FAP– Found Aluminum Pipe
- (M) Measured Dimension
- (C) Computed Dimension
- (R) All distances not marked, computed or measured, are record. All bearings not marked are record bearings adjusted to the basis of bearing. (see notes for basis of bearing)

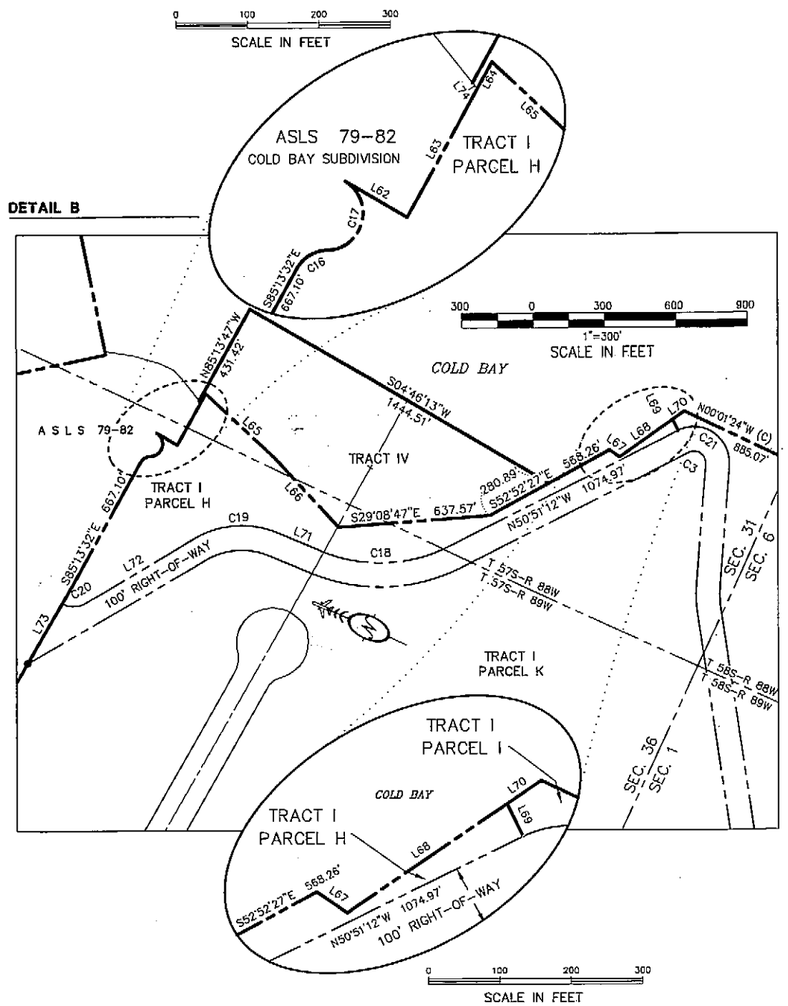
LINE TABLE [ft]		
LINE	LENGTH (R)	BEARING
L1	491.32	S69°43'18"W
L2	1074.97	N50°51'12"W
L3	200.62	N02°37'42"W
L4	865.79	S55°04'34"E
L5	491.32	N69°43'18"E
L6	872.27	S23°26'50"E
L7	645.45	S29°15'14"E
L8	197.76	S11°14'20"E
L9	542.90	S11°14'17"E
L10	549.67	S07°08'42"E
L11	490.91	S00°55'19"E
L12	769.05	S01°11'43"W
L13	595.73	S06°15'08"W
L14	925.50	S10°10'47"W
L15	1221.70	S17°05'41"W
L16	862.55	S19°04'08"W
L17	142.96	S12°02'13"W
L18	599.71	N85°13'47"W
L19	720.00	N04°46'13"E
L20	188.87	N85°13'47"W
L21	2124.33	S38°28'10"E
L22	1266.91	N68°21'21"E
L23	633.18	S03°28'10"E
L24	951.26	S12°23'26"W
L25	537.00	S68°21'21"W
L26	435.67	S21°38'39"E
L27	235.84	N68°21'18"E
L28	91.51	S23°36'33"E
L29	335.34	N73°31'10"E
L30	300.23	N21°39'34"W
L31	219.88	N77°10'15"W
L32	71.85	N00°03'03"E
L33	15.37	S00°03'03"W
L34	321.46	N77°10'15"W
L35	16.11(M)	N83°16'22"E
L36	92.02	S77°10'15"E
L37	145.00	S77°10'15"E
L38	115.00	S77°10'15"E
L39	100.00	S77°10'15"E
L40	160.05	S14°12'32"W
L41	96.15	N77°10'15"W
L42	115.00	N77°10'15"W
L43	86.00	S21°39'44"E
L44	35.07	N77°10'15"W
L45	167.85	S68°20'16"W
L46	100.00	S21°39'44"E
L47	99.25	S21°34'44"E
L48	82.01	S03°36'18"W
L49	50.00	S77°10'15"E
L50	203.25	S14°15'44"W
L51	37.04	S14°15'44"W
L52	90.71	N68°21'21"E
L53	108.99	N68°21'21"E
L54	173.88	S21°38'39"E
L55	143.88	S21°38'39"E
L56	40.00	S68°21'21"W
L57	130.00	S68°21'21"W
L58	108.00	S21°38'39"E
L59	173.47	S42°08'40"E
L60	55.83	S77°10'15"E
L61	169.37	S88°44'07"E
L63	199.76	S85°15'16"E
L64	41.76	S85°15'16"E
L65	393.21	S17°23'45"W
L66	388.59	S21°46'52"W
L67	51.72	S09°41'20"W
L68	270.73	S59°05'22"E
L69	51.20	N39°08'57"E
L70	58.38	S59°07'29"E
L71	200.62	N02°37'42"W
L72	528.38	N55°04'42"W
L73	294.22	N85°13'52"W
L74	10.52	N25°36'18"E



DETAIL A



DETAIL B



FILE: Z:ALP11–12 DATE: 02/16/04 PLOT SCALE: 1=1 REVISED BY: KQ	AIRPORT LAYOUT PLAN CONDITIONAL APPROVAL SUBJECT TO ALP APPROVAL LETTER DATED 5/18/04 By: [signature] DATE: 5/26/04 FAA AIRPORTS DIVISION ALASKAN REGION, AAL–610 FAA AIRSPACE REVIEW NUMBER: 02–AAL–166NRA	BY / DATE / REVISIONS	STATE OF ALASKA DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES CENTRAL REGION – AVIATION APPROVED: STEPHEN M. RYAN, P.E. DESIGN SECTION CHIEF APPROVED: HARVEY M. DOUTHIT, P.E. ENGINEERING MANAGER

Date Drawn: 02/16/04
Designer:
Drawn by: KQ
Checked by: GDK

COLD BAY AIRPORT

AIRPORT PROPERTY PLAN

SHEET 12 OF 14

A. Introduction

Cold Bay is a second-class city in the Aleutians East Borough, located at 55.12° North latitude, 162.43° West longitude. The Aleutians East Borough is a municipal government that spans over 15,000 square miles, encompassing 6 communities and roughly 2,700 people. Preliminary 2000 U.S. Census data indicate that Cold Bay has 88 residents, a decrease from 148 people in 1990. The city is approximately 40 miles from the western end of the Alaska Peninsula on Cold Bay near Izembek Lagoon. Manufacturing, which includes seafood processing, the service industry (including tourism), and government (both state and federal, which focuses on Aleutian transportation and wildlife protection) provide the majority of local employment. Cold Bay provides facilities to assist the fishing industry and has a promising future as a service and fueling center for the bottom fish industry.

During World War II, Cold Bay was the site of Fort Randall, a strategic air base. The airport, built in 1942, consists of a 10,420-foot by 150-foot primary runway (Runway 14/32) that is paved and lighted and has a precision instrument approach. The airport also has a 5,150-foot by 150-foot paved and lighted crosswind runway. The airport is attended six days per week and also has an attended flight service station (FSS) operated by FAA.

The present role of the airport is as a regional transportation center and transfer point for passengers and cargo traveling from Anchorage or Fairbanks to outlying communities including False Pass, King Cove, and Nelson Lagoon. The airport also accommodates flights diverted from other destinations due to inclement weather or other reasons, and for the refueling of flights to other Aleutian destinations and to some international flights. In addition, the airport is used for medevac flights for patients from surrounding communities, as well as being a base for U.S. Coast Guard search and rescue missions.

Table 1
Distances from Cold Bay Airport to other airports in the region

Airport	Nautical Miles
Adak	536
Anchorage	539
Dillingham	269
Unalaska	155
King Salmon	269
Shemya	830
St Paul	278

B. Airport usage and fleet mix

Cold Bay currently receives scheduled service from Peninsula Airways and Evergreen International Aviation. Because Reeve Aleutian Airways no longer provides scheduled service in Alaska, Peninsula Airways has recently increased scheduled service to Cold Bay to seven days a week using the Fairchild Metroliner III and 23, and the Saab 340.

The Federal government does not have an essential air services contract for ADAK service. In the past holders of this contract have served Cold Bay on weekly basis with C-III jet aircraft.

ERA Aviation and Kenai Float Plane offer on-demand (charter) service for passengers and cargo. Evergreen Helicopters provides service to Cold Bay by charter or contract for cargo and passengers. Northern Air Cargo provides cargo service to Cold Bay.

Data reported in the FAA 5010 Airport Master Record for Cold Bay Airport collected during the May 2000 inspection, indicates that 53% of air operations were by air taxi, 30% by transient GA aircraft, 9% by commercial operators, 4% by based GA aircraft and 4% were military operations. The record reports an average of 73 operations per week at Cold Bay Airport.

Large Certificated Aircraft Activity. Aircraft operations by large certificated aircraft are reported in the FAA Airport Activity Statistics of Certificated Air Carriers for the last nine years. During this period of time, the Boeing 727-100C performed 53% of the total operations. The Lockheed 188 Electra performed 26% of the total operations and the Boeing 737-200C performed 12% of the total operations. The remaining 9% was distributed among a variety of other aircraft. It should be noted, however, that the operator of the Boeing 727-100C, Reeve Aleutian Airways, discontinued service to Cold Bay in 2000. Evergreen and Northern Air Cargo have reported that they plan a similar number of operations with similar aircraft as the Reeve historical activity.

Small Certificated Aircraft Activity. In addition to the large certificated aircraft operations, smaller aircraft like the Saab 340 and Fairchild Metroliners operated by Peninsula Airways provide service to and from Cold Bay. Peninsula Airways' Fairchild Metroliners and Saab 340 will perform approximately 1400 annual operations each (daily service plus 5% for charter and unscheduled cargo flights, plus fuel stops for their Adak service). Though not scheduled, ERA Aviation provides service to Cold Bay via Adak. ERA Aviation estimates a total of 48 annual operations with either the DASH-8 or Convair 580 (ARC B-III aircraft).

Historical trends in passenger enplanements and aircraft operations as reported to the U.S. Department of Transportation and estimated during airport inspections performed by the FAA Office of Airport Certification have been analyzed. Total passenger enplanements at Cold Bay Airport peaked at 11,756 in 1992. Enplanement lows (9,495) were reported in 1990 and 2000. This data indicates that passenger enplanements have remained fairly steady during the last ten years even though there has been a 40% decrease in the population of this small community.

Aircraft operations data for all types of air service were acquired from the FAA Terminal Area Forecast and 5010 Airport Master Record. According to this data, total aircraft operations peaked at 3,819 in 1990 and dipped to a period low of 2,255 in 1995 and 1998. The decrease in air carrier activity and corresponding increase in commuter/air taxi activity is likely the result of a shift experienced in many communities in Alaska. Overall, the aircraft operations data presented indicate a relatively steady rate of activity without significant growth or decline.

Table 2
Historical Passenger Enplanements and Aircraft Operations (1990-2000)

Year	Passenger Enplanements			Aircraft Operations				
	Air Carrier	Commuter	Total	Itinerant Air Carrier	Commuter Air Taxi	GA	Local GA	Total
1990	6,290	4,085	10,375	1,564	950	1,155	150	3,819
1991	6,555	3,129	9,684	1,522	950	1,155	150	3,777
1992	7,099	4,657	11,756	876	876	1,155	150	3,057
1993	6,843	4,474	11,317	888	950	1,155	150	3,143
1994	5,999	4,800	10,799	888	950	1,155	150	3,143
1995	9,183	4,667	13,850	0	950	1,155	150	2,255
1996	6,582	5,018	11,600	1,000	1,500	1,155	150	3,805
1997	6,185	4,361	10,546	500	2,000	1,155	150	3,805
1998	6,180	3,912	10,092	200	750	1,155	150	2,255
1999	5,726	3,763	9,489	350	2,000	1,155	150	3,655
2000	5,726	3,763	9,489	350	2,000	1,155	150	3,655

Commercial Cargo and mail service provides residents with a means of importing and exporting goods to and from the community. Data reported for Cold Bay Airport in the FAA Airport Activity Statistics of Certificated Air Carriers database for 1990 to 1996 indicates that combined cargo and mail averaged 1,386,000 pounds per year. Cargo ranged from a high of 1,236,000 pounds in 1994 to a low of 450,000 pounds in 1996. Mail ranged from a low of 132,000 pounds in 1991 to a high of 954,000 pounds in 1996.

C. Aviation demand Forecast

The tables below present the comprehensive 20-year forecast for the Cold Bay Airport. The values below were projected under a moderate growth scenario for operations, passenger enplanements, cargo enplanements, and based aircraft. There are 5 based aircraft at Cold Bay, this is not expected to change during the forecast period.

Table 3
20-Year Aviation Forecast

	Base Year 2001	5-Year 2005	10-Year 2010	20-Year 2020
Aircraft Operations				
Air Carrier	781	817	863	955
Commuter/Air Taxi	1,389	1,454	1,535	1,698
General Aviation	1,503	1,574	1,662	1,837
Total	3,673	3,845	4,080	4,490
Enplaned Passengers	9,521	9,693	9,908	10,338

Table 4
Forecast Large and Commuter Fleet Mix with Scheduled Service, 2020

Aircraft	Category	Approach Speed (knots)	Wingspan (ft)	ARC	Maximum Takeoff Weight (lbs.)	Forecast Operations
Boeing 727-100	Medium-Haul Airliner	125	108	C-III	160,000	250
MDC DC-6*	Medium-Haul Airliner	108	118	B-III	104,000	24
Fairchild Metroliner	Short-Haul Airliner	112	57	B-II	16,500	700
Saab 340	Short-Haul Airliner	91-121	70	B-II	29,000	700
DASH-8	Short-Haul Airliner	90	90	A-III	41,000	50
Convair 580	Short-Haul Airliner	107	105	B-III	51,600	

Airport Reference Code, Maximum takeoff weight, Not ascertained
Source: Compiled by HDR Alaska, Inc. October 2001
* flag stop only for MDC DC-6

Based on an evaluation of the aircraft performance specifications for the forecast fleet mix, the Boeing 727-100 Combi will require the greatest runway length which is 8,350 feet – for operations at 100% of its maximum operational weight. The Fairchild Metroliner and Saab 340 require between 3,550 and 4,230 feet of runway for maximum weight operations, respectively.

According to operator reports, conditions of cooler maximum monthly temperatures, sea level or near sea level elevations, and stage lengths for the region indicate that approximately 6,500 ft is a useful "full length" runway for 727-100 Combi operations.

Cold Bay however, also serves as an alternate destination for transpacific flights. These flights are large aircraft such Boeing 747-200, 747-400, 757 and 767 aircraft. These airplanes require approximately 10,000 ft. for a useful full length runway. Because these flights may need to use this runway and because of the remote situation of the Cold Bay airport, the main runway should be maintained at a length of 10,000 ft.

The existing primary Runway 14/32 has sufficient length to accommodate maximum takeoff and landing operations by the Boeing 727, Fairchild Metroliner, and Saab 340. Operations on crosswind Runway 8/26 by the Boeing 727 are currently weight restricted to 84% of the aircraft's maximum takeoff weight and 78% of the aircraft's maximum landing weight. The existing crosswind runway has sufficient length to accommodate maximum takeoff and landing operations by the Fairchild Metroliner and Saab 340.

According to an analysis of the wind at Cold Bay Airport, aircraft below ARC C-IV, such as the Boeing 727-100 Combi (ARC C-III), Fairchild Metroliner, and Saab 340 (ARC B-II) do not have sufficient wind coverage on Runway 14/32. Therefore a crosswind runway is required. The length of this runway should be 80% of the full length required for the design aircraft. Therefore the crosswind runway should be approximately 6,680 ft in length. Operator reports indicate that take off operations are the critical operation for the runway, since the stage lengths to Cold Bay burn off a considerable quantity of fuel.

The property available for the crosswind runway constrains the embankment length to 6,235 ft. Obtaining 5,235 ft for take off operations, and allowing for full 1,000 ft safety areas will necessitate the use of declared distances. Accordingly the declared distances are as follows:

Table 5
Declared Distances

Runway	Operation	Parameter	Distance
8	Landing	Landing distance available	4,235 ft.
8	Take Off	Accelerate stop distance	5,235 ft.
8	Take Off	Take off run available	5,235 ft
8	Take Off	Take off distance available	5,235 ft.
26	Landing	Landing distance available	4,235 ft.
26	Take Off	Accelerate stop distance	5,235 ft.
26	Take Off	Take off run available	5,235 ft.
26	Take Off	Take off distance available	5,235 ft

Runway 14/32 and Runway 8/26 should be designed to accommodate the 727-100 Combi and meet ARC standards for C-III aircraft as shown in Table 6 below.

Table 6
Design Criteria

Parameter	C-III Design Value
Runway Width	150'
Runway Shoulder Width	25'
Runway Blast Pad Width	140'
Runway Blast Pad Length	200'
Runway Safety Area Width	500'
Runway Safety Area Length Beyond RW End	1,000'
Obstacle Free Zone Width	500'
Obstacle Free Zone Length Beyond RW End	200'
Runway Object Free Area Width	800'
Runway Object Free Area Length Beyond RW End	1,000'

D. Airport Development Rationale

Runway 14/32. The length and width of this runway are sufficient for the expected fleet mix and the condition of the runway is good. This runway is deficient in safety areas and in not having a parallel taxiway. PCI for this runway is generally 87-96. At present the pavement is degenerating at a rate of 2 points per year. Therefore the runway should be scheduled to be resurfaced in 2005-2007. The lights on this runway are 25 years old. They should be reviewed for replacement in conjunction with the resurfacing project.

The safety areas on both ends of this runway are deficient. On the south (32) end of the runway the ground drops of sharply to a creek drainage that is 64 feet below the runway end elevation. This creek is incised in its channel and presents a constraint to expanding the runway safety area. On the north (14) runway end the ground also falls off in elevation and there is a creek about 1,300 feet north of the present threshold, however it is feasible to construct a safety area of standard dimension at maximum acceptable grade in this location without shifting the 14 threshold.

Because of this the following ultimate development is recommended for R/W 14-32:

(a) Construct a 1,000 ft x 500 ft safety area behind the 14 threshold. This will preserve the current location of the 14 threshold and thus the cat. 1 ILS approach for this runway will remain unchanged.
(b) Move the 32 threshold north 420 ft so that a 1,000 ft x 500 ft safety area can be constructed without impacting the creek channel south of the runway. This will necessitate relocating the MALSR approach lighting system for this runway and will shorten R/W 14-32 from present length of 10,420 ft to 10,000 ft. Changing the length of this runway is not expected to adversely affect operations at this runway even for D-IV aircraft because of the long stage lengths and cool temperatures in Cold Bay.

FAA AC150/5300-13 change 6 appendix sixteen suggests a parallel taxiway for instrument approach runways. A full parallel taxiway 50 ft wide should be provided in long term development. This taxiway should be provided with connecting taxiways at each runway end, one connecting taxiway located 5,000 ft from the 14 runway end in addition to taxiway C which already exists. This parallel taxiway should be extended to connect the south terminal apron to allow refueling operations without traversing the active runways.

Runway 8/26. Runway safety areas for R/W 8-26 are deficient at both ends. On the east (26) end extension of the safety area is constrained by the steep fall off of ground towards Cold Bay 100 ft below the runway elevation and by the presence of a road that leads towards Russell Creek. On the west (8) end there is generally flat terrain falling off gently for about 1,400 ft until the airport property line is encountered. Expansion of the airport beyond the property line is constrained by the presence of the Izembek National Wildlife Refuge.

AIRPORT LAYOUT PLAN CONDITIONAL APPROVAL SUBJECT TO AIP APPROVAL LETTER DATED 5/12/04
By: _____ DATE: 5/12/04
FAA AIRPORTS DIVISION
ALASKAN REGION, AAL-610

FAA AIRSPACE REVIEW NUMBER: 02-AAL-166NRA

BY	DATE	REVISIONS

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES
CENTRAL REGION

APPROVED: _____ DESIGN SECTION CHIEF
STEPHEN M. RYAN, P.E.
APPROVED: _____ PROJECT MANAGER
HARVEY M. DOUTHIT, P.E.

DATE 02/17/04
DESIGN LMB
DRAWN SJM
CHECKED ESW

FILE: A:\ALP13
DATE: 02/17/04 1=1 v=plan daveb

COLD BAY AIRPORT

AIRPORT LAYOUT PLAN

NARRATIVE REPORT

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Because of these constraints the following development is recommended for R/W 8–26:

(a) Construct a 1,000 ft x 500 ft safety area behind threshold 8. The location of threshold 8 should remain unchanged. This ensures that approach and departure patterns over the refuge to the west remain unchanged which is a stated concern of refuge managers.
(b) Move the 26 threshold west 925 feet to provide 1,000 ft x 500 ft safety area behind the threshold. This has the effect of shortening the threshold to threshold length of the cross wind runway from 5,160 ft to 4,235 ft.
(c) In order to accommodate the C–III design aircraft take offs, both safety areas should be constructed with full strength pavement sections extending 1,000 feet behind each threshold for a width of 150 ft. This will provide a Take off Run Available (TORA) of 5,235 ft for both runways. Forecasting information indicates that the take offs are the critical operation at Cold Bay because the long stage lengths require a large fuel load at take off and result in a large fuel burn off before landing at Cold Bay. Forecasting information indicates that design aircraft landing operations will not be adversely affected by the 4,235 ft landing distance available.

Runway 8/26: This runway should be reconstructed to rectify the failing pavement, lighting in need of replacement, and the safety areas are deficient. The runway safety areas should constructed to a width of 500 ft, extending 1,000 ft beyond each threshold. This will require relocating a small gravel service road at the 26 runway end. Pavement strength should match that of the rest of the airport. The keel section which was reconstructed in 1989 should remain. Presently the shoulders are not paved on this runway and this should remain unpaved because no operational problems have been reported due to the lack of paved shoulders. The current HIRL runway lighting is more than twenty years old, has many leaning standards and should be replaced. The runway should be striped with non–precision runway markings. To accommodate the declared distances for additional take off run the safety areas should be paved with a full strength structural section to create 1,000 ft x 150 ft additional ASD and TORA for each runway end.

The light traffic at Cold Bay and the fact that most operators strongly prefer the main runway due to increased instrumentation and length, indicates that a parallel taxiway is not warranted for runway 8/26. Because the design aircraft will have difficulty turning around on the 150 ft width of runway, a "bulb" type of turnaround should be provided at each end of the runway. This should consist of a 300 ft diameter full strength paved area centered on the end of the safety area structural section. This will allow the design aircraft to proceed past the threshold, make the turn and be positioned for the take off to be able to make use of the airport's declared distances.

Because of the deteriorating pavement condition and the need for full safety areas, reconstruction of runway 8/26 should be accomplished in the near term.

Aids to navigation: Cold Bay Airport has an instrument landing system (ILS) on Runway 14 and non–precision approach on
Runway 32. All four runway approaches at Cold Bay have VASI's. There is also a VOR and a rotating beacon for the airport. The instrument aids to navigation should be retained. The VASI's should be replaced with precision approach path indicators, (PAPI), and REIL provided for all runway ends.

Standby power generation and lighting controls: It is advantageous to consolidate the standby power generation and airport lighting controls in one location. The present generators and regulators are old and are in need of replacement. Moving both to the ARFF building would have the advantage of providing standby power for the building, which would be useful during emergencies, and would make the emergency response independent of the public electric power utility. This would also allow the airport lighting circuits to be located entirely on airport property.

Terminal Aprons: Presently most aircraft use the north terminal apron, largely because the Peninsula Airways terminal is attended and has a telephone and rest room available. This concentration of activity means that both large and small aircraft use the same apron. It is desirable to shift large aircraft activity to the south terminal apron, this would be facilitated by an active tenant on the south terminal apron. The building that was used by Reeve for a passenger facility does have a segregated gate and passenger screening equipment. In order to encourage and facilitate use of the south terminal apron by large aircraft it is necessary to reconstruct a portion of the pavement on this apron and to correct drainage problems around the passenger terminal building. This should be scheduled for near term development.

ARFF building paving: The airside approach to the ARFF building, which is used by the emergency response vehicle, is via the north terminal apron. This paved driveway is in poor condition and is adjacent to a partially paved outside parking area. Maneuvering the response vehicle into and out of the garage involves traversing the unpaved portion of this parking area. FAA guidance on access roads states that if they are unpaved, then the final 300 feet should be paved to avoid tracking mud and debris onto areas where aircraft operate. Three hundred feet of separation between the parking area and the north terminal apron is not possible. Therefore, the simplest and best solution is to pave the entire area, including replacement of the cracked asphalt on the driveway to the apron. This should be scheduled for near term development.

Taxiway system: In conjunction with the apron work problems with the connecting taxiways should be addressed. Both of the connecting taxiways between Runway 8/26 and the south terminal apron have a hump that has been reported to cause operational difficulties for airplanes. The sustained high winds and concurrent icing conditions experienced in Cold Bay warrant correcting these grades so that aircraft can operate safely on the ground. As discussed for RW 14/32 a parallel taxiway is planned for future development, this taxiway should also be extended to the south terminal apron to allow fuel trucks and airplanes to access both aprons without using the runways for ground movements.

Non Standard Conditions:

Many important buildings in Cold Bay fall within a recommended line of site triangle defined by AC 150/5300–13 (paragraph 503) as the Runway Visibility Zone (RVZ). The AC recommends maintaining visibility between runway 14 and runway 26 within this zone from an elevation of 5 feet above either runway. Most of the structures within this zone are airport support facilities and while others are community buildings not directly associated with the airport. Some of the buildings include the FSS, ARFF, community clinic, church, post office, store, hangers, fuel vendor and various operators' terminal buildings. Moving these structures out of the runway visibility zone is not warranted and the costs associated with doing so are not justified by this situation and conditions at Cold Bay. The arguments presented below outline why these buildings do not represent a significant risk when evaluated for the specific situation and operations at Cold Bay. Until or unless operational forecasts change, it does not make economic sense to relocate the existing structures outside of the RVZ. In effect, full compliance with the recommended RVZ would require relocation of the majority of the community of Cold Bay and would represent an economic hardship on the community that is unnecessary and unwarranted for the following reasons:

· The Cold Bay Airport currently experiences a relatively low number of operations. While there are efforts to stimulate regional economic development, there is nothing definite to increase operational forecasts. As such, simultaneous operations are not required during the forecast period to meet current or projected demand.

· There is a staffed flight service station at Cold Bay that represents a level of observation, communication and guidance for aircraft operations during working hours. Most flights occur during hours that the FSS is staffed.

· In low wind conditions pilots have no reason to taxi almost a mile to the end of runway 26 to take off. It follows that in these low wind conditions there is virtually no chance of aircraft taking off toward each other from runways 14 and 26. When landing in calm conditions, larger jet aircraft will always use the longer runways 14 or 32 and small to medium commuter sized aircraft that choose to land on runway 26 at the same time would be taxiing, or off of the runway, long before reaching the intersection of the two runways.

· In high wind conditions operations would be forced to one runway or the other to avoid crosswind operations. At Cold Bay it is only calm (0–3 knots) 1.3% of the time. Winds over 10.5 knots occur 76% of the time. So Cold Bay is very windy most of the time. In these conditions most operations will be forced to use one runway or the other. Again, minimizing the possibility of conflicting operations.

Non Standard Conditions Continued:

· Currently most of the aircraft that regularly use the airport are ARC B–II or below. The most demanding of these aircraft require less than half the length available between the RW 14 threshold and the intersection of RW 14 and 26. This also applies to C–III aircraft. Even with a full load, these larger aircraft require less distance to land or take off than is available between the runway 14 threshold and the intersection of the two runways. In almost any case, aircraft using a RW 14 departure will be airborne and off the runway well before encountering the intersection. The only exceptions to this argument are the rare occasions where larger than C–III aircraft make emergency landings at Cold Bay or when small aircraft choose to start landing or departure rolls (toward the intersection) at mid–field of either runway. The first case, larger than C–III jets using Cold Bay is a rare occurrence and it would be an unreasonable to include these operations (perhaps 1 a year) as an operational risk. And in the second case where small aircraft take off starting at mid–field we would argue that the "effective end of runway" is at the start of rollout and thus there are no obstructions within this alternately defined RVZ to begin with.

All of the factors listed above suggest that simultaneous operations on runways 26 and 14 are unlikely and/or represent little risk for conflicting operations. Regional development could change some of these arguments. If the number of operations or the size of aircraft increases due to regional economic development, there are several remedies the Department could pursue. An Air Traffic Control Tower could be considered if the airport became busy enough to warrant one. Another possible solution would be to shift the main runway north or to displace the threshold of runway 32 so that the runways don't intersect. In addition, future development of the airport should be done with the RVZ in mind.

The long–term goal of the Department and the basis for managing and developing the airport should always consider and attempt to mitigate obstructions within the RVZ. Regional economic development may or may not happen. But if it does, new apron space at Cold Bay should be developed outside of the RVZ. In addition, as the non–airport related facilities that are now within the RVZ are replaced, they should be relocated outside of the RVZ.
Any future evaluation of a consolidated passenger terminal should fully consider the RVZ. That consideration might conclude that the terminal should be constructed on a new apron outside of the RVZ entirely. Or it might conclude that many of the existing structures should be replaced and relocated into a single structure to minimize the visual obstructions between the runways.

One of the FSS antennae, labeled "A" on the terminal area plan interferes by 1.79 feet with the Part 77 7:1 transitional surface. This antenna is outside of the OFZ and is behind the BRL. No modifications are planned.

Safety areas for both runways are deficient in both length and width. Construction of standard safety areas for the crosswind runway is scheduled for near term development in conjunction with reconstruction of this runway. Construction of standard safety areas for the main runway is scheduled for midterm development.

The Municipal Solid Waste landfill for Cold Bay is located 2,340 feet east of R/W end 14. Waste is reportedly burned to avoid animal attractions. Operations at the landfill are currently under review as part of a study funded by the Department of Environmental Conservation, Village Safe Water (VSW) program. The VSW project manager is George Wilson, phone number 907–269–7610.

E. Airport Development Schedule:

Near term development

· Reconstruct runway 8/26 including safety areas
· Relocation of service road at RW 8
· Construct runway turnarounds for 8/26
· Reconstruct a portion of south terminal apron
· Replacement of regulators and new standby power generator at ARFF building

Mid term development:

Relocation of FAA FSS. Presently the existing FAA Flight Service Station violates the building restriction line. This building interrupts visibility to some extent between the two runways. The present building is three stories high. The FAA under a separate project is in the process of constructing a new FSS behind the BRL. This will improve the inter–visibility between the runways, but will not allow inter–visibility between the RW 26 midpoint and the RW 14 midpoint.

Security improvements. Currently the side of the airport that is most accessible from the inhabited portion of Cold Bay is fenced. There are security gates at the ARFF building and At the Penn Air building on the north terminal apron. The entire runway perimeter should be fenced. This fencing should be routed adjacent to the BRL, and across the end of the runway safety areas. Gates and fencing should be installed to meet FAA guidance.
Portions of the RPZ's for Runway 8 and 26 lie outside of the airport boundary. Acquisition of an avigation easement of approximately 30 acres of land, shown as Tract III and IV on the airport property plan would give the sponsor complete control of the RPZ. At the airport boundary the RPZ is approximately a minimum of 30 feet above the ground surface. Acquisition of Tract III to protect the RPZ for Runway 8 should be pursued as part of mid term development. There are presently no plans by the current land owner, Izembek National Wildlife Refuge, to construct any facilities in the RPZ. There is no road access to this portion of the refuge's land. The mission for the refuge does not have any development plans for this land. Nevertheless acquisition of the RPZ is recommended to assure the airport sponsor of full control of approach airspace for runway 8. Tract IV should also be pursued as part of mid term development. The tidelands are 100 ft. below the runway elevation and there are no scheduled improvements or plans for development which interfere with the RPZ.

Long term development:

Construction of increased safety areas for Runway 14/32. Presently the safety area for the main runway is deficient in length and width. The runway safety area should be constructed to a five hundred foot width, and extended an additional 800 ft beyond runway 14. This will provide a standard runway safety area for runway 14 without resorting to changing the 14 threshold location. For runway 32, the existing 580 ft safety area is constrained to the south by a sharp declivity and a creek. Therefore the threshold for runway 32 should be moved 420 ft to the north to provide a standard 1000 ft safety area for this runway. This will require relocating the VASI's, the MALSR lighting pylons and the Localizer for this runway. Construction of east parallel taxiway for RW 14 and RW 32. Appendix 16 of the AC150/5300 change 6 addresses runway requirements for instrument approaches, this includes the requirement for a parallel taxiway. A parallel taxiway that accesses both runway ends with a hold position outside of the RSA should be provided. The parallel taxiway should be provided with connecting taxiways as shown on the layout plan, and should be extended to allow access to the south terminal apron for refueling without using runway 8/26.

Costs:

Estimated construction costs for near term development are as follows:

Table 7
Estimated Near Term Construction Costs

Item	Cost
Reconstruct R/W 8–26, including full strength pavement on safety areas for additional TORA	$6,432,500
Widen R/W 8–26 Safety Area from 300ft to 500ft.	$506,700
South Apron Reconstruction	$826,000
Electrical Generator, switch gear modifications, and lighting replacement for R/W 8–26, T/W A and B	$481,700
Total	$8,246,900

Costs for mid term and long term improvements have not yet been developed.

F. Coordination

Coordination and public involvement was accomplished on this project by a public scoping process and development of an environmental document, project permits and Finding of No Significant Impact. The scoping meetings were held on August 14 and September 7, 2001. The most significant coordination issue is acquiring avigation easements of 30 acres of Izembek National Wildlife Refuge property from the US Fish and Wildlife Service and the State DNR. This is described as Tract's III and IV on the property plan. The required property interest (avigation easement only) for these parcels will be acquired by the project sponsor as part of mid term development. Coordination with FHWA is not warranted.

AIRPORT LAYOUT PLAN CONDITIONAL APPROVAL SUBJECT TO ALP APPROVAL LETTER DATED 5/18/04
By: [signature] DATE: 5/26/04
FAA, AIRPORTS DIVISION
ALASKAN REGION, AAL–610

FAA AIRSPACE REVIEW NUMBER: 02–AAL–166NRA

BY	DATE	REVISIONS

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES
CENTRAL REGION
APPROVED: [signature] DESIGN SECTION CHIEF
STEPHEN M. RYAN, P.E.
APPROVED: [signature] PROJECT MANAGER
HARVEY M. DOUTHIT, P.E.

DATE 04/23/04
DESIGN LMB
DRAWN SJM
CHECKED ESW

COLD BAY AIRPORT
AIRPORT LAYOUT PLAN
NARRATIVE REPORT

SHEET 14 OF 14

FILE: Z:\ALP14
DATE: 04/23/04 1=1 v=plan dgnb

Appendix B –Multi-Sector General Permit

Sector S Specifications from MSGP

A disc with an electronic version of the 2008 MSGP is located in the back of this binder or can be found at:
http://www.epa.gov/npdes/pubs/msgp2008_finalpermit.pdf

Part 8 – Sector-Specific Requirements for Industrial Activity

Subpart S – Sector S – Air Transportation.

You must comply with Part 8 sector-specific requirements associated with your primary industrial activity and any co-located industrial activities, as defined in Appendix A. The sector-specific requirements apply to those areas of your facility where those sector-specific activities occur. These sector-specific requirements are in addition to any requirements specified elsewhere in this permit.

8.S.1 Covered Stormwater Discharges.

The requirements in Subpart S apply to stormwater discharges associated with industrial activity from Air Transportation facilities identified by the SIC Codes specified under Sector S in Table D-1 of Appendix D of the permit.

8.S.2 Limitation on Coverage

8.S.2.1 *Limitations on Coverage.* This permit authorizes stormwater discharges from only those portions of the air transportation facility that are involved in vehicle maintenance (including vehicle rehabilitation, mechanical repairs, painting, fueling and lubrication), equipment cleaning operations or deicing operations.

Note: "deicing" will generally be used to imply both deicing (removing frost, snow or ice) and anti-icing (preventing accumulation of frost, snow or ice) activities, unless specific mention is made regarding anti-icing and/or deicing activities.

8.S.2.2 *Prohibition of Non-Stormwater Discharges.* (See also Part 1.1.4 and Part 8.S.3) This permit does not authorize the discharge of aircraft, ground vehicle, runway and equipment washwaters; nor the dry weather discharge of deicing chemicals. Such discharges must be covered by separate NPDES permit(s). Note that a discharge resulting from snowmelt is not a dry weather discharge.

8.S.3 Additional Technology-Based Effluent Limits.

8.S.3.1 *Good Housekeeping Measures.* (See also Part 2.1.2.2)

8.S.3.1.1 Aircraft, Ground Vehicle and Equipment Maintenance Areas. Minimize the contamination of stormwater runoff from all areas used for aircraft, ground vehicle and equipment maintenance (including the maintenance conducted on the terminal apron and in dedicated hangers). Consider the following practices (or their equivalents): performing maintenance activities indoors; maintaining an organized inventory of material used in the maintenance areas; draining all parts of fluids prior to disposal; prohibiting the practice of hosing down the apron or hanger floor; using dry cleanup methods; and collecting the stormwater runoff from the maintenance area and providing treatment or recycling.

8.S.3.1.2 Aircraft, Ground Vehicle and Equipment Cleaning Areas. (See also Part 8.S.3.6) Clearly demarcate these areas on the ground using signage or other

appropriate means. Minimize the contamination of stormwater runoff from cleaning areas.

8.S.3.1.3 Aircraft, Ground Vehicle and Equipment Storage Areas. Store all aircraft, ground vehicles and equipment awaiting maintenance in designated areas only and minimize the contamination of stormwater runoff from these storage areas. Consider the following control measures, including any BMPs (or their equivalents): storing aircraft and ground vehicles indoors; using drip pans for the collection of fluid leaks; and perimeter drains, dikes or berms surrounding the storage areas.

8.S.3.1.4 Material Storage Areas. Maintain the vessels of stored materials (e.g., used oils, hydraulic fluids, spent solvents, and waste aircraft fuel) in good condition, to prevent or minimize contamination of stormwater. Also plainly label the vessels (e.g., "used oil," "Contaminated Jet A," etc.). Minimize contamination of precipitation/runoff from these areas. Consider the following control measures (or their equivalents): storing materials indoors; storing waste materials in a centralized location; and installing berms/dikes around storage areas.

8.S.3.1.5 Airport Fuel System and Fueling Areas. Minimize the discharge of fuel to the storm sewer/surface waters resulting from fuel servicing activities or other operations conducted in support of the airport fuel system. Consider the following control measures (or their equivalents): implementing spill and overflow practices (e.g., placing absorptive materials beneath aircraft during fueling operations); using only dry cleanup methods; and collecting stormwater runoff.

8.S.3.1.6 Source Reduction. Minimize, and where feasible eliminate, the use of urea and glycol-based deicing chemicals, in order to reduce the aggregate amount of deicing chemicals used and/or lessen the environmental impact. Chemical options to replace ethylene glycol, propylene glycol and urea include: potassium acetate; magnesium acetate; calcium acetate; and anhydrous sodium acetate.

8.S.3.1.6.1 Runway Deicing Operation: Minimize contamination of stormwater runoff from runways as a result of deicing operations. Evaluate whether over-application of deicing chemicals occurs by analyzing application rates, and adjust as necessary, consistent with considerations of flight safety. Also consider these control measure options (or their equivalents): metered application of chemicals; pre-wetting dry chemical constituents prior to application; installing a runway ice detection system; implementing anti-icing operations as a preventive measure against ice buildup.

8.S.3.1.6.2 Aircraft Deicing Operations. Minimize contamination of stormwater runoff from aircraft deicing operations. Determine whether excessive application of deicing chemicals occurs and

adjust as necessary, consistent with considerations of flight safety. This evaluation should be carried out by the personnel most familiar with the particular aircraft and flight operations in question (versus an outside entity such as the airport authority). Consider using alternative deicing/anti-icing agents as well as containment measures for all applied chemicals. Also consider these control measure options (or their equivalents) for reducing deicing fluid use: forced-air deicing systems, computer-controlled fixed-gantry systems, infrared technology, hot water, varying glycol content to air temperature, enclosed-basket deicing trucks, mechanical methods, solar radiation, hangar storage, aircraft covers, and thermal blankets for MD-80s and DC-9s. Also consider using ice-detection systems and airport traffic flow strategies and departure slot allocation systems.

8.S.3.1.7 Management of Runoff. (See also 2.1.2.6) Where deicing operations occur, implement a program to control or manage contaminated runoff to minimize the amount of pollutants being discharged from the site. Consider these control measure options (or their equivalents): a dedicated deicing facility with a runoff collection/ recovery system; using vacuum/collection trucks; storing contaminated stormwater/deicing fluids in tanks and releasing controlled amounts to a publicly owned treatment works; collecting contaminated runoff in a wet pond for biochemical decomposition (be aware of attracting wildlife that may prove hazardous to flight operations); and directing runoff into vegetative swales or other infiltration measures. Also consider recovering deicing materials when these materials are applied during non-precipitation events (e.g., covering storm sewer inlets, using booms, installing absorptive interceptors in the drains, etc.) to prevent these materials from later becoming a source of stormwater contamination. Used deicing fluid should be recycled whenever possible.

8.S.3.2 *Deicing Season.* You must determine the seasonal timeframe (e.g., December-February, October - March, etc.) during which deicing activities typically occur at the facility. Implementation of control measures, including any BMPs, facility inspections and monitoring must be conducted with particular emphasis throughout the defined deicing season. If you meet the deicing chemical usage thresholds of 100,000 gallons glycol and/or 100 tons of urea, the deicing season you identified is the timeframe during which you must obtain the four required benchmark monitoring event results for deicing-related parameters, i.e., BOD, COD, ammonia and pH. See also Part 8.S.6.

8.S.4 Additional SWPPP Requirements.

An airport authority and tenants of the airport are encouraged to work in partnership in the development of a SWPPP. If an airport tenant obtains authorization under this permit and develops a SWPPP for discharges from his own areas of the airport, prior to authorization, that SWPPP must be coordinated and integrated with the SWPPP for the entire airport. Tenants of the airport facility include air passenger or cargo companies, fixed based operators and other parties

who have contracts with the airport authority to conduct business operations on airport property and whose operations result in stormwater discharges associated with industrial activity.

8.S.4.1 *Drainage Area Site Map.* (See also Part 5.1.2) Document in the SWPPP the following areas of the facility and indicate whether activities occurring there may be exposed to precipitation/surface runoff: aircraft and runway deicing operations; fueling stations; aircraft, ground vehicle and equipment maintenance/cleaning areas; storage areas for aircraft, ground vehicles and equipment awaiting maintenance.

8.S.4.2 *Potential Pollutant Sources.* (See also Part 5.1.3) In your inventory of exposed materials, describe in your SWPPP the potential for the following activities and facility areas to contribute pollutants to stormwater discharges: aircraft, runway, ground vehicle and equipment maintenance and cleaning; aircraft and runway deicing operations (including apron and centralized aircraft deicing stations, runways, taxiways and ramps). If you use deicing chemicals, you must maintain a record of the types (including the Material Safety Data Sheets [MSDS]) used and the monthly quantities, either as measured or, in the absence of metering, as estimated to the best of your knowledge. This includes all deicing chemicals, not just glycols and urea (e.g., potassium acetate), because large quantities of these other chemicals can still have an adverse impact on receiving waters. Tenants or other fixed-based operations that conduct deicing operations must provide the above information to the airport authority for inclusion with any comprehensive airport SWPPPs.

8.S.4.3 *Vehicle and Equipment Washwater Requirements.* Attach to or reference in your SWPPP, a copy of the NPDES permit issued for vehicle/equipment washwater or, if an NPDES permit has not been issued, a copy of the pending application. If an industrial user permit is issued under a local pretreatment program, include a copy in your SWPPP. In any case, if you are subject to another permit, describe your control measures for implementing all non-stormwater discharge permit conditions or pretreatment requirements in your SWPPP. If washwater is handled in another manner (e.g., hauled offsite, retained onsite), describe the disposal method and attach all pertinent documentation/information (e.g., frequency, volume, destination, etc.) in your SWPPP.

8.S.4.4 *Documentation of Control Measures Used for Management of Runoff:* Document in your SWPPP the control measures used for collecting or containing contaminated melt water from collection areas used for disposal of contaminated snow.

8.S.5 Additional Inspection Requirements.

8.S.5.1 *Inspections.* (See also Part 4.1) At a minimum conduct routine facility inspections at least monthly during the deicing season (e.g., October through April for most mid-latitude airports). If your facility needs to deice before or after this period, expand the monthly inspections to include all months during which deicing chemicals may be used. The Director may specifically require you to increase inspection frequencies.

8.S.5.2 *Comprehensive Site Inspections.* (See also Part 4.3) Using only qualified personnel, conduct your annual site inspection during periods of actual deicing operations, if possible. If not practicable during active deicing because of weather, conduct the

inspection during the season when deicing operations occur and the materials and equipment for deicing are in place.

8.S.6 Sector-Specific Benchmarks. (See also Part 6 of the permit.)

Monitor per the requirements in Table 8.S-1.

Table 8.S-1.

Subsector (You may be subject to requirements for more than one sector/subsector)	Parameter	Benchmark Monitoring Concentration
For airports where a single permittee, or a combination of permitted facilities use more than 100,000 gallons of glycol-based deicing chemicals and/or 100 tons or more of urea on an average annual basis, monitor the first four parameters in ONLY those outfalls that collect runoff from areas where deicing activities occur (SIC 4512-4581).	Biochemical Oxygen Demand (BOD_5)[1]	30 mg/L
	Chemical Oxygen Demand (COD)[1]	120 mg/L
	Ammonia[1]	2.14 mg/L
	pH[1]	6.0 - 9.0 s.u.

[1] These are deicing-related parameters. Collect the four benchmark samples, and any required follow-up benchmark samples, during the timeframe defined in Part 8.S.3.2 when deicing activities are occurring.

Appendix C –NOI

Acknowledgement of Coverage for Modified NOI

Notice of Intent

MEMORANDUM

State of Alaska
Department of Transportation & Public Facilities
Central Region - Division of Maintenance & Operations

To: William Ashton
Storm Water and Wetlands Manager
ADEC

Date: November 29, 2010

Project Name: Cold Bay State Airport

From: Jennifer Hillman
Environmental Impact Analyst
ADOT&PF

Project No: Maintenance and Operations

Subject: NOI Form

Attached is the Notice of Intent (NOI) form for coverage under the Alaska Pollutant Discharge Elimination System (APDES) Multi-Sector General Permit (MSGP) for stormwater discharges associated with industrial activity at the Cold Bay Airport, Cold Bay, Alaska (see attached area map).

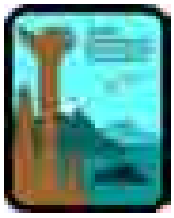
An interagency journal entry is being processed for this permit.

If you have questions regarding this permit application, please contact me at 907-269-0714 and Jennifer.Hillman@alaska.gov.

Attachments:
1) NOI Form
2) Endanger Species Documentation
3) USFWS Consultation No. 2011-0020
4) NOAA NMFS Consultation

cc: Lance Wilber, Regional Director, ADOT&PF

For Agency Use
Permit #_____



Notice of Intent (NOI) For Storm Water Discharges Associated With Industrial Activity Under the APDES Multi-Sector General Permit

Submission of this completed Notice of Intent (NOI) constitutes notice that the operator identified in Section I of this form requests authorization to discharge pollutants to waters of the United States from the facility or site identified in Section III under Alaska's APDES Storm Water Multi-Sector General Permit (MSGP) for industrial storm water. Submission of this NOI constitutes your notice to ADEC that the facility identified in Section III of this form meets the eligibility conditions of Part 1.1 of the MSGP. Please read and make sure you comply with all eligibility requirements, including the requirement to prepare a storm water pollution prevention plan. Refer to the instructions at the end of this form to complete your NOI.

Section I. Operator Information

Organization: Alaska Department of Transportation and Public Facilities (DOT&PF)

Contact Person: M&O Environmental Analyst (Jennifer Hillman)

Mailing Address:

Street (PO Box): P.O. Box 196900

City: Anchorage State: Alaska Zip: 99519

Phone: 907-269-0714 Fax(optional):

Email: jennifer.hillman@alaska.gov

Section II Billing Contact Information

Organization: Alaska Department of Transportation and Public Facilities (DOT&PF)

Contact Person: Administrative Officer (Barbara Griffin)

Mailing Address:

☑ Check here if same as Operator Information

Street (PO Box):

City: State: Zip:

Phone: 907-269-0758 Fax(optional):

Email: barbara.jordan@alaska.gov

Section III. Facility Information

Facility Name: Cold Bay Airport

Have storm water discharges from your site been covered previously under an NPDES or APDES Permit?	☐ Yes	■ No	
a. If Yes, provide the Tracking Number if you have coverage under EPA's MSGP 2000 or the NPDES permit number if you had coverage under an EPA individual permit.			
b. If no, was your facility in operation and discharging storm water prior to October 30, 2005?	■ Yes	☐ No	
c. If no to "b", did your facility commence discharging after October 30, 2005 and before January 5, 2009?	☐ Yes	☐ No	

Location Address:

Street: 100 St. Louis Road / P.O. Box 97

City: Cold Bay State: Alaska Zip: 99571

Borough or similar government subdivision: Aleutians East Borough

Latitude: 55.205 N Longitude: 162.72 W

Determined By: ☐ GPS ☐ USGS topographic map ■ Other

If you used a USGS topographic map, what was the scale?

Estimated area of industrial activity at your site exposed to storm water: 900 (acres)

Is this a federal facility? ☐ Yes ☑ No

For Agency Use
Permit #_____

Section IV. Discharge Information

Does your facility discharge into a Municipal Separate Storm Sewer System (MS4)? ☐ Yes ■ No

If yes, name of MS4 operator:

Receiving Water and Wetlands information: (if additional space is needed for this question, fill out Attachment 1.)

a. What is the name(s) of your receiving water(s) that receive storm water directly and/or through a MS4? If your receiving water is impaired, then identify the name of the impaired segment, if applicable, in parenthesis following the receiving water name.	b. Are any of your discharges directly into any segment of an "impaired" water?	c. If you answered yes to question b, then answer the following three questions:		
		i. What pollutant(s) are causing the impairment?	ii. Are the pollutant(s) causing the impairment present in your discharge?	iii. Has the TMDL been completed for the pollutant(s) causing the impairment?
Stapp Creek	☐ Yes ■ No		☐ Yes ☐ No	☐ Yes ☐ No
Trout Creek	☐ Yes ■ No		☐ Yes ☐ No	☐ Yes ☐ No
Cold Bay	☐ Yes ■ No		☐ Yes ■ No	☐ Yes ■ No
	☐ Yes ☐ No		☐ Yes ☐ No	☐ Yes ☐ No
	☐ Yes ☐ No		☐ Yes ☐ No	☐ Yes ☐ No
	☐ Yes ☐ No		☐ Yes ☐ No	☐ Yes ☐ No
	☐ Yes ☐ No		☐ Yes ☐ No	☐ Yes ☐ No

Water Quality Standards (for new dischargers only)

Are any of your discharges into any portion of a receiving water designated by the state under it's antidegradation policy as a Tier 2 (or Tier 2.5) water (water quality exceeds levels necessary to support propagation of fish, shellfish, and wildlife and recreation in and on the water)? ■ Yes ☐ No

Has the receiving water(s) been designated by the state under its antidegradation policy as Tier 3 water (Outstanding Natural Resource Water)? ☐ Yes ■ No

Federal Effluent Limitation Guidelines and Sector-Specific Requirements

a. Are you requesting permit coverage for any storm water discharges subject to effluent limitation guidelines? ☐ Yes ☐ No

b. If yes, which effluent limitation guidelines apply to your storm water discharge?

40 CFR Part/Subpart	Eligible Discharges	Affected MSGP Sector	Check if applicable
Part 411, Subpart C	Runoff from material storage piles at cement manufacturing facilities.	E	☐
Part 418, Subpart A	Runoff from phosphate fertilizer manufacturing facilities that comes into contact with any raw materials, finished products, by-products, or waste products (SIC 2874).	C	☐
Part 423	Coal pile runoff at steam electric generating facilities.	O	☐
Part 429, Subpart I	Discharges resulting from spray down or intentional wetting of logs at wet deck storage areas.	A	☐
Part 436, Subpart B, C, or D	Mine dewatering discharges at crushed stone mines, construction sand and gravel mines, or industrial sand mines.	J	☐
Part 443, Subpart A	Runoff from asphalt emulsion facilities.	D	☐
Part 445, Subparts A & B	Runoff from hazardous waste and non-hazardous waste landfills.	K,L	☐

c. If you are a Sector S (Air Transportation) facility, do you anticipate using more than 100,000 gallons of glycol-based deicing/anti-icing chemicals and/or 100 tons or more of urea on an average annual basis? ☐ Yes ■ No

Identify the 4-digit Standard Industrial Classification (SIC) code or 2-letter Activity Code that best represents the products produced or services rendered for which your facility is primarily engaged, as define in MSGP:	Primary SIC Code: 4581	Or	Primary Activity Code:		
Identify the applicable sector(s) and subsector(s) of industrial activity, including co-located industrial activity, for which you are requesting permit coverage.					
a. Sector: S	Subsector: S1	b. Sector:	Subsector:	c. Sector:	Subsector:
d. Sector:	Subsector:	e. Sector:	Subsector:	f. Sector:	Subsector:

Is your site presently inactive or unstaffed? ☐ Yes ■ No

a. If yes, is your site expected to be inactive and unstaffed for the entire permit term? ☐ Yes ☐ No

b. If no to a, then indicate the length of time that you expect your facility to be inactive and unstaffed.

Section V. Storm water Pollution Prevention Plan (SWPPP) Contact Information

SWPPP Contact Name: DOT&PF M&O Environmental Impact Analyst (Jennifer Hillman)

Phone: 907-269-0714 Email: jennifer.hillman@gmail.com

URL of SWPPP (if applicable): N/A

Section VI. Endangered Species Protection

Using the instructions in Appendix E of the MSGP, under which criterion listed in Part 1.1.4.5 are you eligible for coverage under this permit?

☐ A ☐ B ☐ C ☐ D ■ E ☐ F

If you select criterion E from Part 1.1.4.5:

What federally-listed species or federally-designated critical habitat are in your "action area"? see attachment 2

List the pollutants expected to be present in your discharge: petroleum products, sand/sediment

If you are an existing discharger, do you have effluent monitoring data from EPA's MSGP 2000 or another previous NPDES permit? ☐ Yes ☐ No

1. If no, why not? ☐ No monitoring required for my sector ☐ Inactive/unstaffed site ☐ Other:

2. Do you have any other data characterizing pollutants in your storm water (describe)?

3. If you have benchmark monitoring data, did you exceed any of the applicable benchmarks? ☐ Yes ☐ No

4. Did you exceed any applicable effluent limitation guideline or cause or contribute to an exceedance of a state water quality standard? ☐ Yes ☐ No

5. If you answered "yes" to either question 3 or 4 above, for what pollutant(s)?

Attach documentation supporting criterion E eligibility. Documentation should address species and habitat listed above and the potential effects of pollutants in your discharge on the listed species and habitat.

If you select criterion F from Part 1.1.4.5, provide the operator's NPDES Tracking Number under which you are certifying eligibility:

Section VII. Historic Preservation

Using the instructions in Appendix F of the MSGP, under which criterion listed in Part 1.1.4.6 are you eligible for coverage under this permit? ■ A ☐ B ☐ C ☐ D

For Agency Use:
Permit #_____

Section VIII. Certification Information
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.
Principal Name: Lance Wilber — Title: Regional Director
Signature: [signature] — Date: 11/29/16 — Email: lance.wilber@alaska.gov
NOI Preparer (Complete if NOI was prepared by someone other than the certifier)
Prepared By: DOT&PF M&O Environmental Impact Analyst, Jennifer Hillman
Organization: DOT&PF
Phone: 907-269-0714 — Email: jennifer.hillman@alaska.gov

Attachment 1. (Fill in as necessary if more space is required for Receiving water and Wetlands Information.)

a. What is the name(s) of your receiving water(s) that receive storm water directly and/or through a MS4? If your receiving water is impaired then identify the name of the impaired segment, if applicable, in parenthesis following the receiving water name.	b. Are any of your discharges directly into any segment of an "impaired" water?	c. If you answered yes to question b, then answer the following three questions:		
		i. What pollutant(s) are causing the impairment?	ii. Are the pollutant(s) causing the impairment present in your discharge?	iii. Has the TMDL been completed for the pollutant(s) causing the impairment?
	☐ Yes ☐ No		☐ Yes ☐ No	☐ Yes ☐ No
	☐ Yes ☐ No		☐ Yes ☐ No	☐ Yes ☐ No
	☐ Yes ☐ No		☐ Yes ☐ No	☐ Yes ☐ No
	☐ Yes ☐ No		☐ Yes ☐ No	☐ Yes ☐ No
	☐ Yes ☐ No		☐ Yes ☐ No	☐ Yes ☐ No
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	☐ Yes ☐ No		☐ Yes ☐ No	☐ Yes ☐ No
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	☐ Yes ☐ No		☐ Yes ☐ No	☐ Yes ☐ No
	☐ Yes ☐ No		☐ Yes ☐ No	☐ Yes ☐ No

NOI Submittal Deadlines/Discharge Authorization Dates		
Category	**NOI Deadline**	**Discharge Authorization Date[1]**
Existing Dischargers - in operation as of October 30, 2005 and authorized for coverage under MSGP 2000.	No later than May 27, 2009.	30 days after ADEC posts your NOI. Your authorization under the MSGP 2000 is automatically continued until you have been granted coverage under this permit, or coverage is otherwise terminated.
New Dischargers or New Sources – have commenced discharging between October 30, 2005 and May 27, 2009.	As soon as possible but no later than May 27, 2009.	30 days after ADEC posts your NOI.
New Dischargers or New Source - commence discharging after May 27, 2009	A minimum of 60 days prior to commencing operation of the facility or a minimum of 30 days if your SWPPP is posted on the Internet during this period and the Internet address (i.e., URL) to your SWPPP is provided on the NOI form.	If you post your SWPPP on the Internet, 30 days after ADEC posts your NOI. Otherwise, 60 days after ADEC posts your NOI.
New Owner/Operator of Existing Discharger - transfer of ownership and/or operation of a facility whose discharge is authorized under this permit.	A minimum of 30 days prior to date that the transfer will take place to the new owner/operator.	30 days after ADEC posts your NOI.
Other Eligible Dischargers - in operation prior to October 30, 2005 but not covered under the MSGP 2000 or another APDES permit.	Immediately, to minimize the time discharges from the facility will continue to be unauthorized.	If you post your SWPPP on the Internet, 30 days after ADEC posts your NOI. Otherwise, 60 days after ADEC posts your NOI.

[1] Based on a review of your NOI or other information, ADEC may delay your authorization for further review, notify you that additional effluent limitations are necessary, or may deny coverage under this permit and require submission of an application for an individual APDES permit, as detailed in MSGP Part 1.6. In these instances, ADEC will notify you in writing of the delay or the request for submission of an individual permit application. ADEC will post these NOIs on its website at: http://www.dec.state.ak.us/water/wwdp/index.htm.

Who Must File a Notice of Intent with ADEC?

Under section 402(p) of the Clean Water Act (CWA) and regulations at 40 CFR Part 122.26, adopted by reference at 18 AAC 83.010 (3) storm water discharges associated with industrial activity are prohibited to waters of the United States unless authorized under an Alaska Pollutant Discharge Elimination System (APDES) permit. You can obtain coverage under the MSGP by submitting a completed NOI if you operate a facility that:

- is located in a jurisdiction where ADEC is the permitting authority, listed in Appendix C of the MSGP;
- discharges storm water associated with industrial activities, identified in Appendix D of the MSGP;
- meets the eligibility requirements in Part 1.1 of the permit;
- develops a storm water pollution prevention plan (SWPPP) in accordance with Part 5 of the MSGP; and
- installs and implements control measures in accordance with Part 2 to meet numeric and non-numeric effluent limits.

If you are unsure if you need an APDES storm water permit, contact your APDES storm water permit program. Contacts are listed at:

http://www.dec.state.ak.us/water/wnpspc/stormwater/stormwater.htm

One NOI must be submitted for each facility or site for which you are seeking permit coverage. You do not need to submit separate NOIs for each type of industrial activity present at your facility, provided your SWPPP covers all activities.

When to File the NOI Form

Do not file your NOI until you have obtained and thoroughly read a copy of the MSGP. A copy of the MSGP is located on the EPA website (http://www.epa.gov/npdes/stormwater/msgp). The MSGP describes procedures to ensure your eligibility, prepare your SWPPP, install and implement appropriate storm water control measures, and complete the NOI form questions – all of which must be done before you sign the NOI certification statement attesting to the accuracy and completeness of your NOI. You will also need a copy of the MSGP once you have obtained coverage so that you can comply with the implementation requirements of the permit.

Completing the NOI Form

To complete this form, type or print in the appropriate areas only. Please make sure you complete all questions. Make sure you make a photocopy for your records before you send the completed form to the address above. You may also use this paper form as a checklist for the information you will need when filing an NOI electronically via ADEC's OASys system.

Section I. Operator Information

- Provide the name of the contact person and the legal name of the firm, public organization, or any other public entity that operates the facility described in this application. An operator of a facility is a legal entity that controls the operation of the facility.
- Provide the operator's mailing address, telephone number, fax number (optional), and email address. Correspondence will be sent to this address.

Section II Billing Contact Information

- Provide the name of the contact person and the legal name of the firm, public organization, or any other public entity that is responsible for accounts payable for this facility.
- Provide the billing contact's mailing address, telephone, number , fax number (optional, and email address. Correspondence for billing purposes will be sent to this address. If the billing contact address is that same as the operator, check the box and continue to Section III Facility Information. See 18 AAC 72.956 for applicable authorization fee to be paid with the submittal of the NOI.

Section III. Facility Information

- Enter the facility's official or legal name. Unless the name of your facility has changed, please use the same name provided on prior NOIs or permit applications.
- Indicate if industrial storm water discharges from your facility were previously covered by an NPDES or APDES permit.
  - a If your facility was covered by EPA's MSGP-2000, please include the tracking number that you received in your

confirmation letter or email from ADEC's or EPA's Storm water Program. You can find the tracking number assigned to your previous NOI on ADEC's Online Permit Search: www.dec.state.ak.us/water/WaterPermitSearch/Search.aspx Or EPA's NOI Search website www.epa.gov/npdes/noisearch) if you submitted your NOI to EPA.

b If your facility was not previously covered by an NPDES or APDES permit and discharged industrial storm water, then indicate if it was in operation before October 30, 2005 and not covered under the MSGP 2000. If you select "yes" to this question, then you have a 30-day waiting period before you are authorized to discharge.

c If you select "no", then indicate if your facility discharged storm water between October 30, 2005 and May 27, 2009. If you select "yes" to this question then you have a 30 day waiting period before you are authorized to discharge. If you select "no" to this question and you post your SWPPP on the Internet and provide the URL, then you have a 30 day waiting period before you are authorized to discharge. If you select "no" to this question, then you have a 60 day waiting period before you are authorized to discharge.

- Enter the street address, including city, state, zip code, borough or similar government subdivision of the actual physical location of the facility. Do NOT use a P.O. Box.
- Provide the facility latitude and longitude in one of three formats: (1) degrees, minutes, seconds; (2) degrees, minutes, decimal; or (3) degrees decimal. You can obtain your facility's latitude and longitude though Global Positioning System (GPS) receivers, U.S. Geological Survey (USGS) quadrangle or topographic maps, or EPA's web-based siting-tools, among other methods. Refer to http://www.epa.gov/npdes/stormwater/msgp for guidance on the use of these methods. For consistency, ADEC requests you take measurements from the location of your facility's storm water outfall. Outfalls are locations where the storm water exits the facility, including pipes, ditches, swales, and other structures that transport storm water. If there is more than one outfall present, measure at the primary outfall (i.e., the outfall with the largest volume of storm water discharge associated with industrial activity).
- Identify the data source that you used to determine the facility latitude and longitude. If you did not use a USGS quadrangle or topographic map or GPS receivers, then select "Other" and write the method used on the line provided. If you used a USGS quadrangle or topographic map, write the map scale on the line provided. Scale should be identified on the map.
- Enter the estimated area of industrial activity at your site exposed to storm water, in acres.
- Indicate if the facility is considered a "federal facility" Federal facilities include any buildings, installations, structures, land, public works, equipment, aircraft, vessels, and other vehicles and property, owned or leased by the federal government.

Section IV. Discharge Information

Discharge to MS4

- Indicate whether storm water from your site will be discharged into a municipal separate storm sewer system (MS4). An MS4 is a conveyance or system of conveyances, including roads with drainage systems, municipal streets, catch basins, storm drains, curbs and gutters, ditches and man-made channels owned or operated by a state, city, town, borough, county, parish, district, association or other public body used to collect or convey storm water. If you check "Yes" then identify the name of the MS4 operator on the line provided. If you are uncertain of the MS4 operator, contact your local government for that information. MS4s are different than combined sewers, which are designed to convey both storm water and sanitary wastewater. Discharges to combined sewers do not require an APDES permit but may be subject to other CWA requirements (contact the combined sewer operator for more information).

Receiving Waters and Wetlands

- Enter information regarding your discharge. If additional space is needed fill out Attachment 1, as follows.

a Indicate in column "a" of the table the name(s) of the receiving water(s) into which storm water from your facility will discharge. Also provide in parentheses the name of the impaired water (and segment, if applicable) into which your storm water is discharged. If you identified more than one receiving water for your facility, indicate the first receiving water and complete question b and c (if applicable), before entering the next receiving water. The EPA's Water Locator Tool can help you identify the closest receiving water to your facility (www.epa.gov/npdes/msgp). Your receiving water may be a lake, stream, river, ocean, wetland or other water body, and may or may not be located adjacent to your facility. Your storm water may discharge directly to the receiving water or indirectly via a storm sewer system, an open drain or ditch, or other conveyance structure. Do NOT list a man-made conveyance, such as a storm sewer system, as your receiving water. Indicate the first receiving water your storm water discharge enters. For example, if your discharge enters a storm sewer system that empties into Trout Creek, which flows into Pine River, your receiving water is Trout Creek, because it is the first water body your discharge will reach. Similarly, a discharge into a ditch that feeds Spring Creek should be identified as "Spring Creek" since the ditch is a manmade conveyance. If you discharge into a MS4, you must identify the water body into which that portion of the storm sewer discharges. That information should be readily available from the operator of the MS4.

b Indicate in column "b" of the table whether you discharge directly to an impaired water (lake, stream segment, estuary, etc), listed as "impaired" under section 303(d) of the Clean Water Act. Each state water quality agency maintains a list of waters that are impaired. Most state agencies publish these lists online. You can view the ADEC impaired water body list at: http://www.dec.state.ak.us/water/wqsar/index.htm If you discharge into a stream segment that is upstream of a listed impaired water but which is not itself on the state's impaired waters list, answer "no" to this question. In this case, requirements in the MSGP for discharges into impaired waters do not apply to you, unless notified otherwise by ADEC.

- Answer the following three questions only if you answered "Yes" to b:

i Provide the pollutant(s) listed as causing the impairment in the water identified in b. Enter each pollutant individually on a separate row in the table.

ii Out of the pollutant(s) that you identified in c(i), indicate which pollutants you believe will be present in your discharge. If you do not expect the pollutant(s) to be in your discharge, then select "no."

iii Indicate the pollutant(s) that have a Total Maximum Daily Load (TMDL) for the impaired stream segment that you identified in ii. Check with your state water quality agency for lists of waters with approved or established TMDLs.

Water Quality Standards

- If storm water discharges from your facility have not been previously covered under an APDES or NPDES permit, then you are considered a new discharger and must provide this information; otherwise you are considered an existing discharger and may skip this section. State water quality

agencies are responsible for setting water quality standards for waters within the state's boundaries. Check EPA's website (www.epa.gov/npdes/msgp) to determine if the water(s) that you discharge into are designated as a "Tier 2 (or Tier 2.5) water" (See Appendix A of the MSGP 2008 for definitions of "Tier 2 water" and "Tier 2.5 water"). If you discharge into these waters, ADEC may impose additional permit conditions to ensure that you do not violate the State's antidegradation policy.

- Identify whether your receiving water is designated as a Tier 3 water body. Go to www.epa.gov/npdes/msgp for a list of Tier 3 water bodies. Note that new discharges into designated Tier 3 waters are not eligible for coverage under the MSGP 2008.

Federal Effluent Limitation Guidelines and Sector-Specific Requirements

- Depending on your industrial activities, your facility may be subject to effluent limitation guidelines which include additional effluent limits and monitoring requirements for your facility. Please review these requirements, described in Part 2.1.3 of the MSGP and check any appropriate boxes on the NOI form.
- For Sector S facilities (Air Transportation), indicate whether you anticipate that the entire airport facility will use more than 100,000 gallons of glycol-based deicing/anti-icing chemicals and/or 100 tons or more of urea on an average annual basis. If so, additional effluent limits and monitoring conditions apply to your discharge (see Part 8 Sector S of the MSGP 2008).
- List the four-digit Standard Industrial Classification (SIC) code and/or two character activity code that best describes the primary industrial activities performed by your facility under which you are required to obtain permit coverage. Your primary industrial activity includes any activities performed on-site which are (1) identified by the facility's one SIC code for which the facility is primarily engaged; and (2) included in the narrative descriptions of 40 CFR 122.26(b)(14)(i), (iv), (v), or (vii), and (ix). See Appendix D of the MSGP for a complete list of SIC codes and activities codes.
- If your site has co-located industrial activities that are not identified as your primary industrial activity, identify the sector and subsector codes that describe these other industrial activities. For a complete list of sector and subsector codes, see Appendix D of the MSGP.
- Indicate whether your facility is currently inactive and unstaffed.
    a. If so then indicate whether your facility will be inactive and unstaffed for the entire permit term; or if not, specify the specific length of time in units of days, weeks, months, or years (e.g. 3 months) that you expect the facility to be inactive and unstaffed.

Section V. Storm Water Pollution Prevention Plan (SWPPP) Contact Information

- Identify the name, telephone number, and email address of the person who will serve as a contact for ADEC on issues related to storm water management at your facility. This person should be able to answer questions related to storm water discharges, the SWPPP, and other issues related to storm water permit coverage or have immediate access to individuals with that knowledge. This person does not have to be the facility operator but should have intimate knowledge of storm water management activities at the facility.
- If you are making your SWPPP publicly available on a website, provide the appropriate Internet URL address. (Please note that by posting your SWPPP on the web, you may qualify for a shortened authorization waiting period. See Table 9.10-1 of the MSGP for more information.)

Section VI. Endangered Species Protection

- Based on the instruction provided in Appendix E of the MSGP 2008, indicate which permit criterion (A,B,C,D,E, or F) listed in Part 1.1.4.5 you are using to satisfy your eligibility obligations for protection of endangered and threatened species and designated critical habitat.
- If you select criterion E (not likely to adversely affect), list those federally-listed endangered or threatened species and any federally-listed designated critical habitat expected to exist in proximity to your facility.
- List the pollutants that you expect to be present in your storm water discharge. Include and pollutants that you may have included in Section III c(i) above.
- If you are an existing discharger who was previously covered under the MSGP 2000 or other NPDES or APDES permit, indicate whether you have any previous effluent monitoring data.
    1. If you select "No," then indicate why you don't have any data.
    2. Also indicate if you have any other data characterizing pollutants in your storm water discharge.
    3. If you select "Yes," then indicate whether you exceeded any benchmark.
    4. Indicate whether you have exceeded any applicable effluent limitation guideline or caused or contributed to an exceedance of state water quality requirement(s).
    5. If you answered "Yes" to either questions 3 or 4, indicate the pollutant parameters for which you exceeded the benchmark, applicable effluent limitation guideline or state water quality requirement(s).
- Attach your supporting rationale for your determination of the applicability of Criterion E for your facility (applies to both new and existing dischargers). Your documentation should address species and habitat listed above and the potential effects of pollutants you provided on the listed species and habitat. This should include consideration of any available data characterizing pollutants in your storm water discharge, or in the discharge of similar facilities if data for you facility is not available, that may be of concern to listed species.
- If you select Criterion F (already addressed in another operator's valid certification), provide the tracking number that the operator received in their confirmation letter or email from ADEC or EPA's NOI Processing Center (see Appendix E of the 2008 MSGP). If you do not know the tracking number, you can find the tracking number assigned to your facility on ADEC's Water Permit Search www.dec.state.ak.us/water/WaterPermitSearch/Search.aspx or EPA's Notice of Intent (NOI) Search website (www.epa.gov/npdes/noisearch) if you submitted your NOI on EPA's website. An example where criterion F may apply includes airports where several individual airlines have applied for coverage under the MSGP, and the entire airport also has applied for or obtained coverage. If the airport has already certified under Appendix E, and that certification addresses any potential impacts from the individual airlines, then the airlines may reference the airport's permit tracking number.

Section VII. Historic Preservation

- Based on the instruction provided in Appendix F of the MSGP 2008, indicate which permit criterion (A, B, C, or D) listed in Part 1.1.4.6 of the MSGP you used to satisfy your eligibility obligations for protection of historic properties.

Section VIII. Certification Information
The NOIs, must be signed as follows:

(1) For a corporation, a responsible corporate officer shall sign the NOI, a responsible corporate officer means:

(A) 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; or

(B) 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.

(2) For a partnership or sole proprietorship, the general partner or the proprietor, respectively; or

(3) for a municipality, state, or other public agency, either a principal executive officer or ranking elected official shall sign the application; in this subsection, a principal executive officer of an agency means

(A) the chief executive officer of the agency; or

(B) a senior executive officer having responsibility for the overall operations of a principal geographic unit or division of the agency.

Include the name, title, and email address of the person signing the form and the date of signing. An unsigned or undated NOI form will not be considered valid application for permit coverage.

If the NOI was prepared by someone other than the certifier (for example, if the NOI was prepared by the facility SWPPP contact or a consultant for the certifier's signature), include the name, organization, telephone number, and email address of the NOI preparer.

Where to File the NOI Form
ADEC encourages you to complete the NOI form electronically via the Internet. ADEC's Online Application System (OASys) can be found at https://myalaska.state.ak.us/dec/water/opa. Filing electronically is the fastest way to obtain permit coverage and help ensure that your NOI is complete. If you choose not to file electronically, you must send the NOI to the address listed below.

If you file by mail, please submit the original form with a signature in ink. ADEC will not accept a photocopied signature. Remember to retain a copy for your records.

NOIs sent by mail:

Alaska Dept. of Environmental Conservation
Wastewater Discharge Authorization Program
555 Cordova Street
Anchorage, AK 99501
Phone: (907) 269-6285

Your SWPPP needs to be submitted for review as required in Part 9 of the MSGP (State, Territory, and Tribal requirements). You must keep a copy of your SWPPP on-site or otherwise make it available to facility personnel responsible for implementing provisions of the permit.

Appendix D – Visual Assessments

Visual Assessment Forms

QUARTERLY VISUAL ASSESSMENT

Visual assessments needed quarterly for each outfall location, with one sample/year taken from snowmelt runoff. Collect sample using clean, clear container within 30 minutes of beginning of discharge event (if not possible, describe situation below). Examine sample in well lit area and record results below.

Name of Facility		Discharge/Outfall Location	
NPDES Tracking No.		Date & Time	
Name of Inspector(s)		Outfall Name	
Weather Conditions			
Additional Notes			

Nature of Discharge	Runoff (Need 3 annually)	Snow Melt (Need 1 annually)

Observation	Description (Circle)			Comments and/or Source of Contamination
Color	Clear	Cloudy	Dark	
Odor	Absent	Sewage	Rotten Eggs	
Clarity	Clear	Cloudy	Dark	
Floating Solids	Absent	Present		
Settled Solids	Absent	Present		
Suspended Solids	Absent	Present		
Foam	Absent	Present		
Oil Sheen	Absent	Present	Smell	
Stains at Outfall	Absent	Present	Other	
Dry Weather Flow	Absent	Present		
Dead Vegetation	Absent	Present		

Sample taken in clean, clear container?	Yes	No
Sample inspected in well lit area?	Yes	No

If applicable, describe why it was not possible to take samples within the first 30 minutes of precipitation event:

_____

_____

_____

Inspector Name/Title: _____ Signature: _____

Appendix E – Inspections

Inspection Forms

ROUTINE FACILITY INSPECTION REPORT

Facility inspections needed quarterly (monthly during deicing season) – annual comprehensive inspection counts for one. Inspections need to include all Industrial areas/activities exposed to stormwater: fuel tanks and dispensing areas, equipment parking areas, material storage/stockpile sites, waste material and trash disposal locations, off-site tracking areas (entrances/exits), aircraft deicing areas, snow dumps, and any implemented control measures.

Name of Facility		NPDES Tracking No.	
Inspector's Name(s)		Date & Time	
Weather Conditions			
Runoff Occurring	Yes / No	Describe:	

Any previously unidentified discharges of pollutants since last inspection?	Yes	No	If Yes, describe:
Any previously unidentified pollutants in existing discharges?	Yes	No	If Yes, describe:
Evidence of, or potential for, pollutants entering the drainage system?	Yes	No	If Yes, describe:
Evidence of pollutants discharging to receiving waters at outfalls?	Yes	No	If Yes, describe:

Area/Activity Inspected (Brief description)	**Control Measures Operating Effectively** (Yes or No, and description)	**Corrective Action Needed/Notes** (Identify needed maintenance and repairs, or control measures needing replacement)

Notes	

Inspector Name/Title: _____ Signature: _____

Appendix F –Corrections

Corrections Log

CORRECTIVE ACTION LOG

Date	Description of Corrective Action (Include repair/maintenance of control measures)	Name	Signature

Appendix G –Training

Annual Employee Training Log

TRAINING RECORD

Training Date	
Training Description	
Trainer	

Employee(s) trained	Employee signature

Training Date	
Training Description	
Trainer	

Employee(s) trained	Employee signature

Training Date	
Training Description	
Trainer	

Employee(s) trained	Employee signature

Appendix H –Annual Report

MSGP Annual Reporting Form

For Agency Use

Permit Tracking #_____

Alaska Department of Environmental Conservation

MSGP Annual Reporting Form

Section I. General Information

Facility Name: Cold Bay Airport

APDES Permit Tracking Number:

Facility Physical Address

Street: 100 St. Louis Bay Road

City: Anchorage State: Alaska Zip: 99519

Lead Inspector's Name: Title:

Additional Inspectors Names:

Contact Person: M&O Environmental Analyst (Jennife Title:

Phone: 907-269-0714 Email: jennifer.hillman@alaska.gov

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:

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 and corrective actions, as specified in Part 3 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 active as specified in Parts 3.1 and 3.2 of the MSGP were addressed by these corrective actions?

Note: Complete the attached Corrective Action Form (Section IV) for each condition indentified, including any conditions identified as a result of this comprehensive storm water inspection.

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.)

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.)

Note: Copy this page and attach additional pages as necessary.

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.)

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.)

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
- ☐ Average benchmark value exceedance
- ☐ Other (describe):

4. Briefly describe the nature of the problem identified:

5. Date problem identified:

6. How problem was identified:

- ☐ Comprehensive site inspection
- ☐ Quarterly visual assessment
- ☐ Routine facility inspection
- ☐ Benchmark monitoring
- ☐ Notification by EPA or ADEC
- ☐ 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, analyses to be conducted, etc.) or if no modification are needed, basis for that determination:

8. Did/will this corrective action require modification of you 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 as 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 4.2 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:

Annual Report 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 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 of Authorized Representative: Title:

Signature: Date Signed: Email: jennifer.hillman@alaska.gov

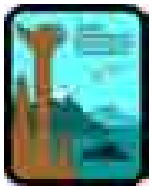
Appendix I – Blank Forms

MSGP Industrial Discharge Monitoring Report (MDMR)

Airport Deicer Tracking Form

For Agency Use

Permit Tracking #_____



Alaska Department of Environmental Conservation

MSGP Industrial Discharge Monitoring Report (MDMR)

Reason(s) for Submission (Check all that apply):	
☐	Submitting monitoring data (fill in all Sections).
☐	Reporting no discharge for all outfalls for this monitoring period (fill in Sections I, II, III, IV, and VI).
☐	Reporting that your site status has changed to inactive and unstaffed (fill in Sections I, II, VI and include date of status change in comments field in Section V).
☐	Reporting that your site status has changed to active (fill in all sections and include date of status change in comments field in Section V).
☐	Reporting that no further pollutant reductions are achievable for all outfalls and for all pollutants via Part 6.2.1.2 of the MSGP (fill in Sections I, II, and VI).

Section I. Permit Information

Permit Tracking Number:

Section II. Facility Information

Facility Name: Cold Bay Airport

Facility Physical Address

Street: 100 St. Louis Bay Road

City: Anchorage State: Alaska Zip: 99519

Contact Name: Email: jennifer.hillman@alaska.gov

MDMR Preparer (Complete if MDMR was prepared by someone other than the person signing the certification in Section VI):

Prepared By: Organization: Alaska Department of Transportation and Public Facilities (DOT&PF)

Email: jennifer.hillman@alaska.gov Phone: 907-269-0714

Section III. Discharge Information

Identify Monitoring Period:	☐ Check here if proposing alternative monitoring periods due to irregular storm water runoff. Identify alternative monitoring schedule and indicate for which alternative period you are reporting monitoring data.
☐ Quarter 1 (April 1 – June 30)	☐ Quarter 1: From To
☐ Quarter 2 (July 1 – September 30)	☐ Quarter 2: From To
☐ Quarter 3 (October 1 – December 31)	☐ Quarter 3: From To
☐ Quarter 4 (January 1 – March 31)	☐ Quarter 4: From To

Are you required to monitor for cadmium, copper, chromium, lead, nickel, silver, or zinc? ☐ Yes ☑ No (Skip to Section IV)

What is the hardness level of the receiving water? mg/L

Section IV. Outfall Information

How many outfalls are identified in your SWPPP? List names of outfalls required to be monitored in the table below.

Do any of your outfalls discharge substantially identical effluents? ☐ Yes ☑ No

If YES, for each monitored outfall, indicate outfall names that are substantially identical in the table below.

a. Monitored Outfall Name*	b. Substantially Identical Outfalls [List name(s) of outfall(s) that are substantially identical to outfall in a.]	c. No Discharge?
		☐
		☐
		☐
		☐

*Reference attachment if additional space is needed to complete the table.

Section V. Monitoring Information

Permit Tracking Number:

Nature of Discharge: ☐ Rainfall (complete a, b, and c below) ☐ Snowmelt

a. Duration of the rainfall event (hours): b. Rainfall amount (inches): c. Time since previous measurable storm event (days):

Outfall Name	Monitoring Type (QBM, ELG, S, I, O)*	Parameter	Quality or Concentration	Units	Results Description	Collection Date	Exceedance due to natural background pollutant levels	No further pollutant reductions achievable?
							☐	☐
							☐	☐
							☐	☐
							☐	☐
							☐	☐
							☐	☐
							☐	☐
							☐	☐
							☐	☐
							☐	☐
							☐	☐
							☐	☐

* (QBM) – Quarterly benchmark monitoring; (ELG) – Annual effluent limitation guidelines monitoring; (S) – State specific monitoring; (I) – Impaired waters monitoring; (O) – Other monitoring as required by ADEC

Comment and/or Explanation of Any Violations (Reference all attachments here)

Section VI. 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 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.		
Printed Name and Title of Principal Executive Officer or Authorized Agent		Signature of Principal Executive Officer or Authorized Agent	Date

Email of Principal Executive Officer or Authorized Agent:

Instructions for Completing the MSGP Industrial Discharge Monitoring Report (MDMR)

Who Must Submit A Discharge Monitoring Report to ADEC?
An operator or owner of a facility covered under the Multi-Sector General Permit (MSGP or permit) that are required to monitor pursuant to Parts 6.2, 6.3, and 8 of the permit must submit the MSGP Discharge Monitoring Report (MDMR) consistent with the reporting requirements specified in Part 7.1 of the permit.

Completing the Form

Type or print, in the appropriate areas only. "NA" can be entered in areas that are not applicable. If you have any questions about how or when to use this form, contact the ADEC Storm Water Program at (907) 269-6285 or online at http://www.dec.state.ak.us/water/wnpspc/stormwater/stormwater.htm.

Reasons for Submission
Indicate your reason(s) for submitting this MDMR by checking all boxes that apply. The reasons for submission are defined as follows:

- *Submitting monitoring data*: For each storm event sampled, submit one MDMR form with data for all outfalls sampled. Select this reason even if you only have monitoring data for some of your outfalls (i.e., some outfalls did not discharge). If you select this reason, you are required to complete all Sections of the form.
- *Reporting no discharge for all outfalls for this monitoring period*: Indicates that there were no discharges from all outfalls during this monitoring period. If you select this reason, you are only required to complete Sections I, II, III , IV, and VI.
- *Reporting that your site status has changed to inactive and unstaffed*: Indicates that your facility is currently inactive and unstaffed (See Part 6.2.1.3 of the permit for more information). If you select this reason, you are only required to complete Sections I, II, and VI and include date of status change in the comment field in Section V.
- *Reporting that your site status has changed from inactive to active*: Indicates that your facility is currently active (See Part 6.2.1.3 of the permit for more information). If you select this reason, you are required to complete all Sections of the form and include date of status change in the comment field in Section V.
- *Reporting that no further reductions are achievable for all outfalls and for all pollutants via Part 6.2.1.2 of the permit*: Indicates that your facility has determined that no further pollutant reductions are technologically and economically practicable in light of best industry practice to meet the technology-based effluent limitations or are necessary to meet the water-quality-based effluent limitations in Parts 2 of the permit (See Part 6.2.1.2 of the permit for more information). If you select this reason, you are required to complete Sections I, II and VI. However, if you can make this finding for some outfalls and pollutants, but not for others, you cannot select this reason; you will instead be able to identify which outfalls and which pollutants you can make this finding for in Section V.

Section I. Permit Tracking Number
Enter the APDES or NPDES tracking number assigned by ADEC's or EPA's Storm water Program to the facility. If you do not know the tracking number, you can find the tracking number assigned to your facility on ADEC's Water Permit Search www.dec.state.ak.us/water/WaterPermitSearch/Search.aspx or EPA's Notice of Intent (NOI) Search website (www.epa.gov/npdes/noisearch) if you submitted your NOI on EPA's website.

Section II. Facility Information

- Enter the facility's official or legal name. Unless the name of your facility has changed, please use the same name provided on your NOI. You can use ADEC's Water Permit Search, www.dec.state.ak.us/water/WaterPermitSearch/Search.aspx or EPA's NOI Search website (www.epa.gov/npdes/noisearch) to view your NOI if you submitted your NOI on the EPA website.
- Enter the street address, including city, state, and zip code of the actual physical location of the facility. Do not use a P.O. Box.
- Identify the name, telephone number, and email address of the person who will serve as a contact for ADEC on issues related to monitoring at your facility. This person should be able to answer questions related to storm water discharges and monitoring or have immediate access to individuals with that knowledge. This person does not have to be the facility operator but should have intimate knowledge of monitoring activities at the facility.
- If the form was prepared by someone other than the person who is signing the certification statement in Section VI (for example, if the MDMR was prepared by a member of the facility's storm water pollution prevention team or a consultant for the certifier's signature), include the name, organization, telephone number, and email address of the MDMR preparer.

Section III. Discharge Information

- Indicate the appropriate monitoring period (Quarter 1, 2, 3, or 4) covered by the MDMR. "Alternative" monitoring periods can apply to facilities located in arid and semi-arid climates or in areas subject to snow or prolonged freezing. To use alternative monitoring periods, you must provide a revised monitoring schedule here in the first monitoring report submitted and indicate for which alternative monitoring period you are reporting monitoring data. If using alternative monitoring periods, identify the first day of the monitoring period through the last day of the monitoring period for each of the four periods. The dates should be displayed as month (Mo) / day (Day). See Parts 6.1.6 and 6.1.7 of the permit for more information.
- If you are submitting benchmark monitoring data, identify if your facility is required to collect benchmark samples for one or more hardness-dependent metals (i.e., cadmium, copper, lead, nickel, silver, and zinc). If you select "yes" to this question you must also complete the table in Section III., and if you select "no" to this question, you may skip to Section IV.
- If you selected "yes" for the previous question, then you are required to submit to ADEC with your first benchmark report a hardness level established consistent with the procedures in Appendix J of the permit, which is representative of your receiving water. If your outfalls discharge to more than one receiving water, as reported in your NOI form, you should report hardness for the receiving water with the lowest hardness values. Hardness values must be reported in milligrams per liter (mg/L).

Section IV. Outfall Information

- Enter the total number of outfalls identified in your SWPPP. Outfalls are locations where storm water exits the facility, including pipes, ditches, swales, and other structures used to remove storm water from the facility.
- Indicate if your facility has two or more outfalls that you believe discharge substantially identical effluents (i.e., storm water), based on the similarities of the general industrial activities and control measures, exposed materials that may significantly contribute pollutants to storm water, and runoff coefficients of their drainage areas. See Parts 5.1.5.2 and 6.1.1 of the permit for more information on substantially identical outfalls.
- If you selected "yes" for the previous question, then you must list the outfall name(s) in Column b that you expect to be substantially identical to the corresponding outfall in Column a.
  a. *Monitored Outfall Name:* List name(s) of outfall(s) you are required to monitor.
  b. *Substantially Identical Outfalls:* List name(s) of outfall(s) substantially identical to "*Monitored Outfall*" in Column a. (if applicable)].
  c. *No Discharge:* Check box if you are reporting "No Discharge" for the monitored outfall for the reporting period identified in Section III.

Example:

a. Monitored Outfall Name	b. Substantially Identical Outfall	c. No Discharge
Outfall A	Outfall B; Outfall C	☐
Outfall D		☒

Reference attachments if additional space is needed to complete the table in Section IV.

Section V. Monitoring Information

- Enter the APDES or NPDES tracking number assigned to the facility reported in Section I.
- For the reported monitoring event, indicate whether the discharge was from a rainfall or snowmelt event. If you select "rainfall" ,then indicate:
  a. the duration (in hours) of the rainfall event;
  b. rainfall total (in inches) for that rainfall event; and
  c. time (in days) since the previous measurable storm event.
- If the discharge occurs during a period of both rainfall and snowmelt, check both the rainfall and snowmelt boxes and report the appropriate rainfall information in items a-c. To report multiple monitoring events in the same reporting period, copy Page 2 of this Form and enter each monitoring event separately with data for all outfalls sampled.

- For each pollutant monitored at an outfall, you must complete one row in the Table as follows:
  - *Outfall Name*: Provide the outfall name for which you monitored (e.g., Outfall 1, Outfall 2, Outfall 3).
  - *Monitoring Type*: Provide the type of monitoring using the specified codes below:
    - QBM – Quarterly benchmark monitoring;
    - ELG – Annual effluent limitations guidelines monitoring;
    - S – State specific monitoring;
    - I - Impaired waters monitoring; or
    - O – Other monitoring as required by ADEC.

- *Parameter(s)*: Enter each "Parameter" (or "pollutant") monitored. For QBM and ELG monitoring, use the same parameter name as in Part 8 of the permit.
- *Quality or Concentration*: Enter sample measurement value for each parameter analyzed and required to be reported. Enter "ND" (i.e., not detected) for any sample results below the method detection limit or "BQL" (i.e., below quantitation limit) for sample results above the detection limit but below the quantitation limit.
- *Units*: Enter the units for sample measurement values (e.g., "mg/L" for milligrams per liter) for each parameter analyzed and required to be reported. For monitoring results reported as ND or BQL, this space will be left blank and the units will be reported under *Results Description*.
- *Results Description*: This section must be completed for any monitoring results reported as ND or BQL in the "Quality or Concentration" column. For ND, report the laboratory detection level and units in this column. For BQL, report the laboratory quantitation limit and units in this column.
- *Collection Date*: Identify the sampling date for each parameter monitoring result reported on this form.
- *Exceedance due to natural background pollutant levels:* Check box if following the first 4 quarters of benchmark monitoring (or sooner if the exceedance is triggered by less than 4 quarters of data) you have determined that the exceedance of the benchmark is attributable solely to the presence of that pollutant in the natural background for that outfall and any substantially identical outfalls. See Part 6.2.4.2 of the permit for more information. Attach supporting rationale for your determination to the submitted MDMR and reference attachment in comments portion of Section V.
- *No further pollutant reductions achievable:* Check box if after collection of 4 quarterly samples (or sooner if the exceedance is triggered by less than 4 quarters of data), the average of the 4 monitoring values for any parameter exceeds the benchmark and you have made the determination that no further pollutant reductions are technologically available and economically practicable and achievable in light of best industry practice to meet the technology-based effluent limitations or are necessary to meet the water-quality-based effluent limitations in Parts 2 of the permit (See Part 6.2.1. of the permit for more information) for that outfall and any substantially identical outfalls. Attach supporting rationale for your determination to the submitted MDMR and reference attachment in comments portion of Section V.

- Where violations of the permit requirements are reported, include a brief explanation to describe the cause and corrective actions taken and reference each violation by date. Also, this section should include any additional comments such as are required when changing site status from inactive and unstaffed to active or vice versa. Attach additional pages if you need more space.

Attach additional copies of Section V as necessary to address all outfalls and parameters.

Section VI. Certification

Enter *Printed Name and Title of Principal Executive Officer or Authorized Agent* with *Signature of Principal Executive Officer or Authorized Agent*, and the *Date* this form was signed and the email address of the "*Principal Executive Officer or Authorized Agent*." If you submit multiple pages of Section V monitoring data, each page must be appropriately signed and certified as described below.

The MDMRs must be signed as follows:

(1) For a corporation, a responsible corporate officer shall sign the MDMR, a responsible corporate officer means:

(A) 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; or

(B) 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.

(2) For a partnership or sole proprietorship, the general partner or the proprietor, respectively; or

(3) for a municipality, state, or other public agency, either a principal executive officer or ranking elected official shall sign the application; in this subsection, a principal executive officer of an agency means

(A) the chief executive officer of the agency; or

(B) a senior executive officer having responsibility for the overall operations of a principal geographic unit or division of the agency.

Include the name, title, and email address of the person signing the form and the date of signing. An unsigned or undated MDMR will not be considered valid.

Where to File the MDMR Form

Monitoring data collected pursuant to Parts 6.2, 6.3, and 8 of the permit must be reported on the paper MDMR form and sent to the following address:

If you file by mail, please submit the original form with a signature in ink. ADEC will not accept a photocopied signature. Remember to retain a copy for your records.

MSMRs sent by mail:

Alaska Dept. of Environmental Conservation
Wastewater Discharge Authorization Program
555 Cordova Street
Anchorage, AK 99501
Phone: (907) 269-6285

MONTHLY AIRPORT
RUNWAY DEICER TRACKING FORM

The stormwater discharge permit requires tracking the amount of deicing materials used on a monthly basis. These records must be maintained with the SWPPP. Record type and amount of deicer (pure product) used during each application. Also record the general location of the application. Sand application can also be noted.

Date	Deicer Used	Quantity Applied	Location of Application	Temp/Weather Conditions	Initials	Comments

Appendix J – Miscellaneous

Airport Tennant Letter – 10/27/2009

Airport Tennant Letter – 11/9/2010

Fish and Wildlife Service Endangered Species Consultation

National Oceanic and Atmospheric Administration
Endangered Species Consultation

SWPPP Staff Title and Responsibility Table

Alternate Authority Authorization Letter

SEAN PARNELL, GOVERNOR

STATE OF ALASKA

DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES

ANCHORAGE OFFICE OF AVIATION LEASING

4111 AVIATION AVENUE
P.O. BOX 196900
ANCHORAGE, AK 99519-6900
(907) 269-0450 FAX: (907) 243-5092

October 27, 2009

Dear Airport Tenant:

As you may already be aware, the U.S. Environmental Protection Agency (EPA) regulations on stormwater runoff from specific industrial operations have been revised. The EPA Multi-Sector General Permit (MSGP) specifies stormwater management requirements for industrial operations, including Air Transportation (Sector S). As required by these EPA regulations, the Department of Transportation and Public Facilities (DOT&PF) has applied for the EPA general stormwater permit for operation of the airport and common areas. The primary requirement is to write a storm water pollution prevention plan (SWPPP).

The SWPPP we have developed only covers DOT&PF activities, not your activity. Therefore, it is your responsibility to research and determine if a stormwater permit is required for your operations and if so, to comply with the EPA rules and the Clean Water Act. Failure to comply could result in a significant penalty.

To assist you in determining your responsibilities, we have attached an EPA fact sheet. You will also need to review the regulations at http://cfpub.epa.gov/npdes/stormwater/msgp.cfm. Each regulated tenant must develop a SWPPP, apply for permit coverage, and implement the SWPPP. The MSGP permit requires various inspections and training requirements. For you information, Alaska is located within Region 10 for EPA.

If you decide that you are regulated and intend to file for the permit, please check with your airport manager as it is recommended that we coordinate our SWPPPs. Also, if you perform deicing, the airport manager will be contacting you regarding a monthly reporting requirement.

If you prepare a SWPPP, please send a copy of the final plan to our office. Thank you.

Sincerely yours,

Tina Schimschat

Tina Schimschat
Chief, Central Region Aviation Leasing

cc: Airport Manager
Matt Decaro, Environmental Analyst (269-0714)
Attachment: EPA Industrial Stormwater Fact Sheet (9 pages)

STATE OF ALASKA
SEAN PARNELL, GOVERNOR

DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES
MAINTENANCE & OPERATIONS – CENTRAL REGION

4111 AVIATION AVENUE
P.O. BOX 196900
ANCHORAGE, ALASKA 99519
TEXT (907) 269-0473
PHONE (907) 248-1573
FAX (907) 269-0780

In Reply Refer To:
Cold Bay SWPPP

November 9, 2010

Dear Airport Tenant,

As you may already be aware from the letter dated October 27, 2009 which you should have received from the DOT&PF Aviation Leasing Division, the U.S. Environmental Protection Agency (EPA) regulations on stormwater runoff from specific industrial operation have been revised and permitting authority is being transferred to the Alaska Department of Environmental Conservation (ADEC). The Multi-Sector General Permit (MSGP) specifies stormwater management requirements for industrial operations, including Air Transportation (Sector S). As required by these regulations, the Department of Transportation and Public Facilities (DOT&PF) has applied for the general stormwater permit for operation of the airport and common areas. The primary requirement is to write a Stormwater Pollution Prevention Plan (SWPPP).

The SWPPP we have developed for the Cold Bay Airport only covers DOT&PF activities, not your activity. Therefore, it is your responsibility to research and determine if a stormwater permit is required for your operations and if so, to comply with the EPA/ADEC rules and the Clean Water Act. Failure to comply could result in a significant penalty.

To assist you in determining your responsibilities, we have attached an EPA fact sheet on stormwater. You will also need to review the regulations at http://cfpub.epa.gov/npdes/stormwater/msgp.cfm. Each regulated tenant must develop a SWPPP, apply for permit coverage through the Alaska Department of Environmental Conservation (ADEC), and implement the SWPPP. The MSGP permit requires various inspections and training requirements. More information can be found at http://www.dec.state.ak.us/water/wnpspc/stormwater/MultiSector.htm.

If you decide that you are regulated and need to file for the permit, please check with your airport manager as it is recommended we coordinate our SWPPPs. We are working to have our SWPPP electronically available on the DOT&PF website at http://dot.alaska.gov/stwdav/SWPPP.shtml, the SWPPP should be available no later than January 1, 2010. Also, if you perform deicing, the airport manager will be contacting you regarding monthly reporting requirements.

If you prepare a SWPPP, please send an electronic copy of the final plan to our office (either via email or CD). Please call with any questions you may have (907)269-0714 or email me at jennifer.hillman@alaska.gov.

Sincerely yours,

Jennifer Hillman

Environmental Impact Analyst, Maintenance and Operations

Attachments:

EPA Stormwater Factsheet

cc:

Jeff Doerning, Cold Bay Airport Manager
Misty Ott, Cold Bay Airport Leasing Specialist

INDUSTRIAL STORMWATER

FACT SHEET SERIES

Sector S: Vehicle Maintenance Areas, Equipment Cleaning Areas, or Deicing Areas Located at Air Transportation Facilities

U.S. EPA Office of Water
EPA-833-F-06-036
(November 2006)

What is the NPDES stormwater permitting program for industrial activity?

Activities, such as material handling and storage, equipment maintenance and cleaning, industrial processing or other operations that occur at industrial facilities are often exposed to stormwater. The runoff from these areas may discharge pollutants directly into nearby waterbodies or indirectly via storm sewer systems, thereby degrading water quality.

In 1990, the U.S. Environmental Protection Agency (EPA) developed permitting regulations under the National Pollutant Discharge Elimination System (NPDES) to control stormwater discharges associated with eleven categories of industrial activity. As a result, NPDES permitting authorities, which may be either EPA or a state environmental agency, issue stormwater permits to control runoff from these industrial facilities.

What types of industrial facilities are required to obtain permit coverage?

This fact sheet specifically discusses stormwater discharges from airports, airport terminals, airline carriers, and establishments as defined by Standard Industrial Classification (SIC) Major Group 45. Facilities and products in this group fall under the following categories, all of which require coverage under an industrial stormwater permit:

- Servicing, repairing, or maintaining aircraft and ground vehicles
- Equipment cleaning and maintenance (including vehicle and equipment rehabilitation mechanical repairs, painting, fueling, lubrication)
- Deicing/anti-icing operations which conduct the above described activities

The operator and the tenants of the airport that conduct industrial activities as described above and which have stormwater discharges are required to apply for coverage under an NPDES stormwater permit for the discharges from their areas of operation. The airport management and tenants of the airport are encouraged to apply as co-permittees under a permit, and to work in partnership in the development and implementation of a stormwater pollution prevention plan.

Non-stormwater discharges, including discharges from aircraft, ground vehicle and equipment wash waters, dry weather discharges from airport deicing/anti-icing operations, and dry weather discharges resulting from runway maintenance are not required to obtain coverage under an industrial stormwater permit. Dry weather discharges are generated from processes other than those described in the definition of stormwater. The definition of stormwater includes stormwater runoff, snow melt runoff, and surface runoff and drainage.

What does an industrial stormwater permit require?

Common requirements for coverage under an industrial stormwater permit include development of a written stormwater pollution prevention plan (SWPPP), implementation of control measures, and submittal of a request for permit coverage, usually referred to as the Notice of Intent or NOI. The

SWPPP is a written assessment of potential sources of pollutants in stormwater runoff and control measures that will be implemented at your facility to minimize the discharge of these pollutants in runoff from the site. These control measures include site-specific best management practices (BMPs), maintenance plans, inspections, employee training, and reporting. The procedures detailed in the SWPPP must be implemented by the facility and updated as necessary, with a copy of the SWPPP kept on-site. The industrial stormwater permit also requires collection of visual, analytical, and/or compliance monitoring data to determine the effectiveness of implemented BMPs. For more information on EPA's industrial stormwater permit and links to State stormwater permits, go to www.epa.gov/npdes/stormwater and click on "Industrial Activity."

What pollutants are associated with my facilities activities?

Pollutants conveyed in stormwater discharges from air transportation facilities will vary. Generally, the concern with the use of ethylene and propylene glycols is that they exert high oxygen demands when released into receiving waters. Additionally, the concentration of nitrogen and possibly ammonia are the concern with the respect to deicing/anti-icing operations where urea is used. There are a number of factors that influence to what extent industrial activities and significant materials can affect water quality.

- Geographic location
- Topography
- Hydrogeology
- Extent of impervious surfaces (e.g., concrete or asphalt)
- Type of ground cover (e.g., vegetation, crushed stone, or dirt)
- Outdoor activities (e.g., material storage, loading/unloading, vehicle maintenance)
- Size of the operation
- Type, duration, and intensity of precipitation events

The activities, pollutant sources, and pollutants detailed in Table 1 are commonly found at air transportation facilities.

Table 1. Common Activities, Pollutants Sources, and Associated Pollutants at Air Transportation Facilities

Activity	Pollutant Source	Pollutant
Runoff deicing/anti-icing	Runoff of spent deicing chemicals (e.g. ethylene glycol or propylene glycol) from aircraft exteriors	Biochemical oxygen demand (BOD)
Runway deicing/anti-icing	Runoff of spent deicing chemicals (e.g. ethylene or propylene glycol, urea, potassium or sodium acetate, potassium or sodium formate) from deicing areas	BOD, nitrogen, ammonia
Aircraft servicing	Spills or leaks during servicing	Engine oil, hydraulic fluid, fuel, lavatory waste
Aircraft fueling	Spills and leaks during fuel transfer, spills due to "topping off" tanks, runoff from fueling areas, washdown of fueling areas, leaking storage tanks	Jet fuel, fuel additives, oil, lubricants, heavy metals
Aircraft, ground vehicle, and equipment maintenance and washing	Spills and leaks during maintenance	Engine oil, hydraulic fluids, transmission oil, radiator fluids, and chemical solvents
	Disposal of waste parts	Batteries, oil, fuel filters, oily rags
	Spent washwater	TSS, metals, fuel, hydraulic fluid, oil, lavatory waste
Runway maintenance	Materials removed from runway surface	Tire rubber, oil and grease, paint chips, jet fuel
	Chemicals used to clean the runway surface	Chemical solvents

What BMPs can be used to minimize contact between stormwater and potential pollutants at my facility?

A variety of BMP options may be applicable to eliminate or minimize the presence of pollutants in stormwater discharges from air transportation facilities. You will likely need to implement a combination or suite of BMPs to address stormwater runoff at your facility. Your first consideration should be for pollution prevention BMPs, which are designed to prevent or minimize pollutants from entering stormwater runoff and/or reduce the volume of stormwater requiring management. Prevention BMPs can include regular cleanup, collection and containment of debris in storage areas, and other housekeeping practices, spill control, and employee training. It may also be necessary to implement treatment BMPs, which are engineered structures intended to treat stormwater runoff and/or mitigate the effects of increased stormwater runoff peak rate, volume, and velocity. Treatment BMPs are generally more expensive to install and maintain and include oil-water separators, wet ponds, and proprietary filter devices.

BMPs must be selected and implemented to address the following:

Good Housekeeping Practices

Good housekeeping is a practical, cost-effective way to maintain a clean and orderly facility to prevent potential pollution sources from coming into contact with stormwater. It includes establishing protocols to reduce the possibility of mishandling materials or equipment and training employees in good housekeeping techniques. Common areas where good housekeeping practices should be followed include trash containers and adjacent areas, material storage areas, vehicle and equipment maintenance areas, and loading docks. Good housekeeping practices must include a schedule for regular pickup and disposal of garbage and waste materials and routine inspections of drums, tanks, and containers for leaks and structural conditions. Practices also include containing and covering garbage, waste materials, and debris. Involving employees in routine monitoring of housekeeping practices has proven to be an effective means of ensuring the continued implementation of these measures.

Minimizing Exposure

Where feasible, minimizing exposure of potential pollutant sources to precipitation is an important control option. Minimizing exposure prevents pollutants, including debris, from coming into contact with precipitation and can reduce the need for BMPs to treat contaminated stormwater runoff. It can also prevent debris from being picked up by stormwater and carried into drains and surface waters. Examples of BMPs for exposure minimization include covering materials or activities with temporary structures (e.g., tarp) when wet weather is expected or moving materials or activities to existing or new permanent structures (e.g., buildings, silos, sheds). Even the simple practice of keeping a dumpster lid closed can be a very effective pollution prevention measure.

Erosion and Sediment Control

BMPs must be selected and implemented to limit erosion on areas of your site that, due to topography, activities, soils, cover, materials, or other factors are likely to experience erosion. Erosion control BMPs such as seeding, mulching, and sodding prevent soil from becoming dislodged and should be considered first. Sediment control BMPs such as silt fences, sediment ponds, and stabilized entrances, trap sediment after it has eroded. Sediment control BMPs should be used to back up erosion control BMPs.

Management of Runoff

Your SWPPP must contain a narrative evaluation of the appropriateness of stormwater management practices that divert, infiltrate, reuse, or otherwise manage stormwater runoff so as to reduce the discharge of pollutants. Appropriate measures are highly site-specific, but may include, among others, vegetative swales, collection and reuse of stormwater, inlet controls, snow management, infiltration devices, and wet retention measures.

A combination of preventive and treatment BMPs will yield the most effective stormwater management for minimizing the offsite discharge of pollutants via stormwater runoff. Though not specifically outlined in this fact sheet, BMPs must also address preventive maintenance records or logbooks, regular facility inspections, spill prevention and response, and employee training.

All BMPs require regular maintenance to function as intended. Some management measures have simple maintenance requirements, others are quite involved. You must regularly inspect all BMPs to ensure they are operating properly, including during runoff events. As soon as a problem is found, action to resolve it should be initiated immediately.

Implement BMPs, such as those listed below in Table 2 for the control of pollutants at air transportation facilities, to minimize and prevent the discharge of pollutants in stormwater. Identifying weaknesses in current facility practices will aid the permittee in determining appropriate BMPs that will achieve a reduction in pollutant loadings. BMPs listed in Table 2 are broadly applicable to air transportation facilities; however, this is not a complete list and you are recommended to consult with regulatory agencies or a stormwater engineer/consultant to identify appropriate BMPs for your facility.

Table 2. BMPS for Potential Pollutant Sources at Air Transportation Facilities

Pollutant Source	BMPs
Deicing/anti-icing aircraft	❑ Establish a centralized aircraft deicing system with containment of surface and subsurface drainage ❑ To reduce deicing fluid applied: – Freezing point sensors – Computer-controlled fixed-gantry systems – Infrared technology – Hot water – Varying glycol mixtures to air temperature – Enclosed bucket deicing trucks – Mechanical methods – Solar radiation – Hangar storage – Aircraft covers – Thermal blankets for MD-80s and DC-9s ❑ Apply deicing fluid and anti-ice to planes via deicing pads, if available ❑ Apply anti-ice to aircraft that will be parked overnight to make it easier to remove accumulated snow and ice in the morning ❑ Apply anti-ice to aircraft immediately after deicing to prevent extended hold-over time prior to take-off ❑ Ensure that stormwater inlets are blocked when deicing/anti-icing during dry weather ❑ Use mechanical vacuum systems or other devices to collect aircraft deicing runoff from the apron surface for proper disposal ❑ Dispose collected aircraft deicing runoff to sanitary sewage facility (if allowed by sewer authority), on-site treatment, or recycle (reuse) as needed ❑ Use portable tanks, retention and detention ponds for temporary storage of collected deicing runoff ❑ Collect contaminated runoff in a wet pond for biochemical decomposition (be aware of attracting wildlife that may prove hazardous to flight operations) ❑ Recover and recycle/dispose of unused deicing fluids in deicing trucks ❑ Recover deicing materials when applied during non-precipitation events (e.g., covering storm sewer inlets using booms, installing absorptive interceptors in the drains, etc.) to prevent materials from later contaminating stormwater

Table 2. BMPS for Potential Pollutant Sources at Air Transportation Facilities (continued)

Pollutant Source	BMPs
Deicing/anti-icing runways and pads	❑ Evaluate and optimize present chemical application rates. ❑ Use sand where possible to enhance friction. ❑ Plow and broom runways prior to application of deicing chemicals. ❑ Heat solid deicers and sand prior to application. ❑ Install and calibrate devices to meter the amount of pavement deicer being applied. ❑ Emphasize anti-icing operations which minimize the need to deice. ❑ Install runway ice detection systems ("pavement sensors") to monitor pavement temperatures. ❑ Pre-wet with liquid deicers to improve adhesion of solid deicers to the iced surface. ❑ Use deicers which have less of an environmental impact (e.g., sodium formate and potassium acetate as opposed to urea and glycol). ❑ Ensure proper handling and disposal of unused deicing chemicals in vehicles. ❑ Use ice detection systems. ❑ Use airport traffic flow strategies and departure slot allocation systems.
Aircraft, ground vehicle, and equipment maintenance areas (including aircraft service areas)	Good Housekeeping ❑ Eliminate floor drains that are connected to the storm or sanitary sewer; if necessary, install a sump that is pumped regularly. Collected wastes should be properly treated or disposed of by a licensed waste disposal company. ❑ Prevent and contain spills and drips. ❑ Do all cleaning at a centralized station so the solvents stay in one area. ❑ Remove any parts that are dipped in liquid slowly to avoid spills. ❑ Use drip pans, drain boards, and drying racks to direct drips back into a fluid holding tank for reuse. ❑ Drain all parts of fluids prior to disposal. Oil filters can be crushed and recycled. ❑ Transfer used fluids to the proper container promptly; do not leave full drip pans or other open containers around the shop. Empty and clean drip pans and containers. ❑ Clean up leaks, drips, and other spills without using large amounts of water. Use absorbents for dry cleanup whenever possible. ❑ Prohibit the practice of hosing down an area where the practice would result in the discharge of pollutants to a stormwater system. ❑ Prohibit pouring liquid waste into floor drains, sinks, outdoor storm drain inlets, or other storm drains or sewer connections. ❑ Maintain an organized inventory of materials. ❑ Eliminate or reduce the number and amount of hazardous materials and waste by substituting nonhazardous or less hazardous materials. ❑ Label and track the recycling of waste material (e.g., used oil, spent solvents, batteries). ❑ Store batteries and other significant materials inside. ❑ Dispose of greasy rags, oil filters, air filters, batteries, spent coolant, and degreasers in compliance with RCRA regulations.

Table 2. BMPS for Potential Pollutant Sources at Air Transportation Facilities (continued)

Pollutant Source	BMPs
Aircraft, ground vehicle, and equipment maintenance areas (including aircraft service areas) (continued)	Minimizing Exposure ❑ Perform all cleaning operations indoors or under covering when possible. Conduct the cleaning operations in an area with a concrete floor with no floor drainage other than to sanitary sewers or treatment facilities. ❑ If operations are uncovered, perform them on a concrete pad that is impervious and contained. ❑ Park vehicles and equipment indoors or under a roof whenever possible and maintain proper control of all leaks/spills. ❑ Check vehicles closely for leaks and use pans to collect fluid when leaks occur. Management of Runoff ❑ Use berms, curbs, grassed swales, or other diversion measures to ensure that stormwater runoff from other parts of the facility does not flow over the maintenance area. ❑ Collect the stormwater runoff from the cleaning area and provide treatment or recycling. ❑ Discharge vehicle wash or rinse water to the sanitary sewer (if allowed by sewer authority, wastewater treatment, a land application site, or recycle (never DISCHARGE discharge wastewater to a storm drain or to surface water). Inspections and Training ❑ Inspect the maintenance area regularly to ensure BMPs are implemented. ❑ Train employees on waste control and disposal procedures. ❑ Inspect the maintenance area regularly for proper implementation of control measures. ❑ Train employees on proper waste control and disposal procedures.
Aircraft, ground vehicle, and equipment cleaning areas	❑ Perform all cleaning operations indoors. ❑ Confine activities to designated areas outside drainage pathways and away from surface waters. ❑ If washing outdoors, cover the cleaning operation and ensure that all washwaters drain to the industrial collection system. ❑ Use phosphate-free biodegradable detergents. ❑ Contain and recycle washwaters. ❑ Collect stormwater runoff from the cleaning area and provide treatment or recycling. ❑ Inspect cleaning area regularly to ensure BMPs are implemented and maintained. ❑ Train employees on proper washing procedures.
Aircraft, ground vehicle, and equipment storage areas	❑ Store aircraft, ground vehicles and equipment indoors. ❑ Cover the storage area with a roof. ❑ Store aircraft, ground vehicles, and equipment awaiting maintenance in designated areas only. ❑ Park awaiting deicing trucks in contained areas. ❑ Install perimeter drains, berms, and dikes around storage areas to limit runoff. ❑ Use absorbents for dry cleanup for spills and leaks. ❑ Use drip pans under all vehicles and equipment for the collection of fluid leaks. ❑ Clean pavement surface to remove oil and grease without using large amounts of water.

Table 2. BMPS for Potential Pollutant Sources at Air Transportation Facilities (continued)

Pollutant Source	BMPs
Aircraft, ground vehicle, and equipment storage areas (continued)	❑ Regularly sweep area to minimize debris on the ground ❑ Provide dust control if necessary. When controlling dust, sweep and/or apply water or materials that will not impact surface or ground water ❑ Inspect the drainage yard for filling drip pans regularly to ensure BMPs are implemented ❑ Train employees on procedures for storage and inspection items
Material storage areas	❑ Store materials indoors ❑ Maintain good integrity of all storage containers (e.g., used oils, hydraulic fluids, spent solvents, waste anti-ice fluid) ❑ Create a centralized storage area for waste materials ❑ Cover and/or enclose chemical storage areas (including temporary cover such as a tent that prevents contact with precipitation) ❑ Provide secondary containment around chemical storage areas ❑ If containment structures have drains, ensure that the drains have valves, and that valves are maintained in the closed position. Institute protocols for checking/treating stormwater in containment areas prior to discharge ❑ Locate storage areas away from high traffic areas and surface waters ❑ Inspect storage tanks and piping systems (pipes, pumps, flanges, couplings, hoses, and valves) for failures or leaks and perform preventive maintenance ❑ Clearly label all containers ❑ Maintain an inventory of items to identify leakage ❑ Provide fluid level indicators ❑ Properly dispose of chemicals that are no longer in use ❑ Store and handle explosive, ignitable, or flammable liquids in compliance with applicable local fire codes, local zoning codes, and the National Electric Code ❑ Provide drip pads/pans where chemicals are transferred from one container to another to allow for recycling of spills and leaks ❑ Develop and implement spill plans or spill prevention, containment, and countermeasure (SPCC) plans, if required for your facility ❑ Train employees in spill prevention and control and proper materials management
Aircraft fuel apron and fueling areas	❑ Conduct fueling operations including the transfer of fuel to tank trucks on an impervious or contained pad and under a roof or canopy where possible. Covering should extend beyond spill containment pad to prevent rain from entering ❑ When fueling in unpaved area, use concrete pad (asphalt is not chemically resistant to the fuels being handled) ❑ Develop and implement a system to report any spill exceeding 5 feet in any direction or which has entered the storm drainage system ❑ Use drip pans and absorptive materials beneath aircraft during fueling operations where leaks or spills of fuel can occur and where making and breaking hose connections ❑ Use fueling hoses with check valves to prevent hose drainage after filling ❑ Ensure that storm water valves, plugs and similar appurtenances are closed during fuel transfer operations

Table 2. BMPS for Potential Pollutant Sources at Air Transportation Facilities (continued)

Pollutant Source	BMPs
Airport fuel system and fueling areas (continued)	❑ Provide spill kits on all fuel trucks, at fueling stations, in each hangar and at strategic locations. Each kit should have at a minimum, loose absorbent, pigs, broom and shovel. Store used materials in individual sealed container and labeled to ensure proper handling and disposal as a hazardous material. ❑ Keep spill cleanup materials readily available. ❑ Clean up spills and leaks immediately. ❑ Use dry cleanup methods for fuel when safer than hosing down the fuel area. Sweep up absorbents as soon as spilled substances have been absorbed. ❑ Use spill and overflow protection devices. ❑ Minimize run-on of stormwater into the fueling area by grading the area such that stormwater only runs off. ❑ Collect stormwater runoff and provide treatment or recycling. ❑ Provide curbing or posts around fuel pumps to prevent collision from vehicles. ❑ Regularly inspect and perform preventive maintenance on fuel storage tanks to detect potential leaks before they occur. ❑ Inspect the fueling area for leaks and spills. ❑ Do not allow "topping-off" of the fuel in the receiving equipment. ❑ Train personnel on proper fueling BMPs.
Storing liquid fuels	❑ If area is uncovered, connect sump outlet to sanitary sewer (if allowed by the sewer authority) or an oil/water separator, catch basin filter, etc. If connecting to a sanitary sewer check with the system operator to ensure that the discharge is acceptable. If implementing separator or filter technologies ensure that regular inspections and maintenance procedures are in place. ❑ Develop and implement spill plans. ❑ Train employees in spill prevention and control. Above ground tanks ❑ Provide secondary containment, such as dikes, with a height sufficient to contain a spill the greater of 10 percent of the total enclosed tank volume or 110 percent of the volume contained in the largest tanks. ❑ If containment structures have drains, ensure that the drains have valves, and that valves are maintained in the closed position. Institute protocols for draining/treating stormwater in containment areas prior to discharge. ❑ Use double-walled tanks with overflow protection. ❑ Keep liquid transfer hoses/hoses in secondary containment area. Portable containers/drums ❑ Store drums indoors when possible. ❑ Store drums, including empty or used drums, in secondary containment with a roof or cover (including temporary cover such as a tarp that prevents contact with precipitation). ❑ Provide secondary containment, such as dikes or portable containers, with a height sufficient to contain a spill the greater of 10 percent of the total enclosed tank volume or 110 percent of the volume contained in the largest tank. ❑ Clearly label drum with its contents.
Deicing chemical loading area	❑ Store bulk aircraft deicing fluids in contained areas. ❑ Load deicing trucks in contained areas.

What if activities and materials at my facility are not exposed to precipitation?

The industrial stormwater program requires permit coverage for a number of specified types of industrial activities. However, when a facility is able to prevent the exposure of ALL relevant activities and materials to precipitation, it may be eligible to claim no exposure and qualify for a waiver from permit coverage.

If you are regulated under the industrial permitting program, you must either obtain permit coverage or submit a no exposure certification form, if available. Check with your permitting authority for additional information as not every permitting authority program provides no exposure exemptions.

Where do I get more information?

For additional information on the industrial stormwater program see www.epa.gov/npdes/stormwater/msgp.

A list of names and telephone numbers for each EPA Region or state NPDES permitting authority can be found at www.epa.gov/npdes/stormwatercontacts.

References

Information contained in this Fact Sheet was compiled from EPA's past and current Multi-Sector General Permits and from the following sources:

- City of Phoenix, Street Transportation Department. 2004. Best Management Practices for Section S - Vehicle Maintenance Equipment Cleaning, or Deicing at Air Transportation Facilities. http://phoenix.gov/STREETS/vehmnt2.pdf
- Orange County, California, Watershed & Coastal Resources Division. "Airplane Maintenance and Repair." www.ocwatersheds.com/StormWater/documents_bmp_existing_development.asp
- Pierce County Washington Public Works and Utilities. 2002. "Stormwater Pollution Prevention Manual: A Guide to Best Management Practices for Industries, Businesses, and Homeowners." www.co.pierce.wa.us/pc/services/home/environ/water/swq/bmpmanual.htm
- Switzenbaum, et. al., 1999. Workshop: Best Management Practices for Airport Deicing Stormwater: Publication 173. www.umass.edu/tei/wrrc/WRRC2004/pdf/Swtz173.pdf
- U.S. EPA. 1992. Stormwater Management for Industrial Activities: Developing Pollution Prevention Plans and Best Management Practices. EPA 832-R-92-006 www.epa.gov/npdes/stormwater
- U.S. EPA, Office of Science and Technology. 1999. Preliminary Data Summary of Urban Stormwater Best Management Practices. EPA-821-R-99-012 www.epa.gov/OST/stormwater/
- U.S. EPA, Office of Water. 2002. Source Water Protections Practices Bulletin: Managing Aircraft and Airfield Deicing Operations to Prevent Contamination of Drinking Water. EPA 816-F-02-018. www.epa.gov/safewater/sourcewater/pubs/fs_swpp_deicingair.pdf
- U.S. EPA, Office of Wastewater Management. *NPDES Stormwater Multi-Sector General Permit for Industrial Activities (MSGP).* www.epa.gov/npdes/stormwater/msgp

United States Department of the Interior

FISH AND WILDLIFE SERVICE
Anchorage Fish & Wildlife Field Office
605 West 4th Avenue, Room G-61
Anchorage, Alaska 99501-2249

In reply refer to:
AFWFO

November 9, 2010

EMAILED TO:

Jen Hillman
Environmental Impact Analyst
Alaska Department of Transportation & Public Facilities
P.O. Box 196900
Anchorage, AK 99519-6900

Re: Cold Bay Airport SWPPP (*Consultation number 2011-0020*)

Dear Ms. Hillman,

On November 1, we received your request for technical assistance pertaining to potential impacts of issuance of the Cold Bay airport Storm Water Pollution Prevention Plan (SWPPP) on threatened and endangered species.

The Cold Bay airport is located very near one of the State's most biologically productive and diverse areas. Lands and waters to the south and east of the village are included in the Alaska Peninsula National Wildlife Refuge, managed by the US Fish and Wildlife Service (the Service). Uplands to the north and west are part of the Izembek National Wildlife Refuge. These areas are internationally recognized for use by large numbers of migratory waterbirds, particularly geese. Izembek Lagoon is also designated by the State of Alaska as a State Game Refuge. Together, Izembek, Moffet, and Kinzarof Lagoons constitute an Important Bird Area designated by the Audubon Society. Among the diverse and plentiful bird species that live in and near Cold Bay are the Steller's eider and Kittlitz's murrelet. The North American breeding Steller's eider (*Polysticta stelleri)* is protected under the Endangered Species Act; it was listed as threatened in 1997. The Kittlitz's murrelet (*Brachyramphus brevirostris)* was listed as a candidate species in 2004.

Steller's eiders occur in Cold Bay and Izembek Lagoon during spring, fall, and winter where they occupy shallow marine water and feed on mollusks and crustaceans. They are regularly found on the west side of Cold Bay in winter, and may increase their use of the protected bays on the south side of the Alaska Peninsula when extreme cold or icy conditions prevent the use of regular wintering grounds in Izembek and Nelson lagoons (Laubhan and Metzner 1999).

The Kittlitz's Murrelet nests in unvegetated scree (rock) fields, on coastal cliffs, barren ground, rock ledges, and talus slopes above timberline in coastal mountains. Nests have been found near the village of Cold Bay. These birds feed in coastal waters and winter in offshore marine areas adjacent to the breeding areas. They are small-bodied birds that spend much of their time in the nearshore marine environment diving for small fish.

Cold Bay is also home to the sea otter. The southwest Alaska distinct population segment of northern sea otter (*Enhydra lutris kenyoni)* was listed as threatened in 2005. Cold Bay is designated as critical habitat for the sea otter. Critical habitat in this area extends from the mean high tide line seaward for a distance of 100 meters, or to a water depth of 20 meters. Habitat types favored by sea otters include areas adjacent to rocky coasts near points of land, or large bays where kelp beds occur. Otters can also be found in areas with soft sand and mud substrates where they will forage for clams. They do not occupy inland waters far from sea, although they will enter bays on outer sea coasts.

Your proposal to issue the Cold Bay airport SWPPP could result in adverse impacts to species listed under the Endangered Species Act of 1973 (16 U.S.C. 1531 et seq., as amended, ESA). The discharge of storm water containing chemicals such as solvents, deicers, and petrochemicals could cause contamination of marine waters. Accidents or mismanagement of these types of chemicals could likewise contaminate areas used by wildlife. High concentrations of contaminants are directly harmful to Steller's eider and sea otters and may degrade habitat. Contaminants can have long-term indirect effects when incorporated into the food chain: marine invertebrates take up contaminants and are in turn ingested by ESA-listed species.

You have identified several means by which the contaminant load of storm water runoff will be reduced and maintained at minimal levels. These include spill prevention and response, facilities maintenance, good housekeeping practices, employee training, use of oil/water separators, use of mechanical snow removal rather than chemical deicers, planned and maintained drainage pathways, regular monitoring and inspection, and a plan for implementing corrective actions if monitoring indicates a need.

The greatest threat to ESA listed species that could arise from the issuance of the SWPPP could occur if the SWPPP were renewed without those risk reduction techniques outlined above or if the SWPPP was not implemented as written. We therefore support the adoption and implementation of the SWPPP, inclusive of these strategies for minimizing risk of contamination.

The following additional recommendations are intended to further reduce the risk that airport storm water management may result in contamination of Cold Bay, causing harm to listed species, and resulting in violation of the ESA. These suggestions are offered as technical assistance only, and do not constitute consultation under section 7 of the ESA.

- Wastewater should not be directed toward streams or wetlands.
- Bioswales and infiltration fields should be used instead of ditches where possible.
- Vegetation and permeable surfaces should be conserved.
- Monitoring should be conducted after any major operational changes or changes to the facilities.
- Monitoring should be conducted on an ongoing basis regardless of whether previous sampling indicated there were no problems; periods between monitoring could be lengthened rather than foregoing monitoring altogether.
- The SWPPP should address any pollution or sedimentation likely to result from planned construction or excavation.
- The project area should be monitored for erosion; erosion prevention measures should be implemented where needed.
- We ask to be notified in the event that a sick or dead sea otter or Steller's eider is found in the vicinity of the outflow.

This letter relates only to federally listed or proposed species and/or designated or proposed critical habitat under jurisdiction of USFWS. It does not address species under the jurisdiction of National Marine Fisheries Service, or other legislation or responsibilities under the Fish and Wildlife Coordination Act, Migratory Bird Treaty Act, Clean Water Act, National Environmental Policy Act, or Bald and Golden Eagle Protection Act.

We appreciate the opportunity to provide recommendations for minimizing potential impacts to threatened and endangered species at this time and are happy to discuss these recommendations further. If you have any questions, please contact me at (907) 271-2066 and refer to consultation number 2010-0020.

Sincerely,

Kimberly Klein
Endangered Species Biologist

Literature Cited

Laubhan MK, Metzner KA. 1999. Distribution and diurnal behavior of Steller's eiders wintering on the Alaska Peninsula. Condor 101(3):694-698.

UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
National Marine Fisheries Service
P.O. Box 21668
Juneau, Alaska 99802-1668

November 18, 2010

Ms. Jennifer Hillman
Alaska Department of Transportation
Northern Region - Fairbanks
2301 Peger Rd
Fairbanks, AK 99709

Re: Cold Bay Airport Storm Water Pollution Prevention Plan

Dear Ms. Hillman:

National Marine Fisheries Service (NMFS) received your 5 November 2010 email stating that you are working on a Storm Water Pollution Prevention Plan (SWPPP) for Multi-Sector General Permit storm water discharge coverage at the Cold Bay Airport. NMFS understands the scope of the project as follows:

The Cold Bay Airport facility consists of one main 10,415-foot-long asphalt-surfaced runway (14/32) and a shorter 4,235-foot-long asphalt runway (8/26). Three paved taxiways, each between 330 and 400 feet long, connect the runways with terminals and other buildings. Other facilities include a fueling station, sand storage building, maintenance shop, Aircraft Rescue Fire Fighting building and office manager's office, leased buildings, airport lighting, generator enclosure, generator switch gear building, and FAA flight service station. Equipment fueling occurs outside from two aboveground storage tanks (ASTs) located to the west of the maintenance shop. Diesel fuel is stored in a 1,000 gallon AST for use in equipment and gasoline is stored in a 1,000 gallon AST for use in vehicles. Equipment maintenance takes place indoors at the maintenance shop. Vehicle washing occurs indoors at both the maintenance shop and fire fighting building. The maintenance shop and fire fighting building have concrete floors and floor drains. The floor drains in each building are connected to an oil/water separator. Upon passing through the oil/water separator, the water generated from the floor drains is discharged into the sanitary sewer system. Runway maintenance is limited to repainting runway markings (once a year) and sealing stress cracks in the asphalt surface (once every 2 to 3 years). These activities are performed in accordance with, Alaska Department of Transportation (ADOT) procedures and require dry weather. No de-icing activities occur at the Cold Bay Airport.

As a result of this action ADOT has requested from NMFS information on threatened or endangered species associated with the Cold Bay Airport SWPPP. We offer the following information under the Endangered Species Act (ESA).

Threatened and Endangered Species

Section 7(a)(2) of the ESA directs federal interagency cooperation "to insure that any action authorized, funded, or carried out by such agency is not likely to jeopardize the continued existence of any endangered species or threatened species" or result in the destruction or adverse medication of critical habitat. NMFS is responsible for administration of the ESA for cetaceans, sea turtles, anadromous fish, marine fish, seals, sea lions, marine plants, and corals. All other species (including sea otters and Steller's eiders) are administered by the US Fish and Wildlife Service. Further information on NMFS ESA species and critical habitat within Alaska can be found at: http://www.nmfs.noaa.gov/pr/species/esa/.

Humpback whales (*Megaptera novaeangliae*) and Steller sea lions (*Eumetopias jubatus*) are listed as endangered under the ESA and are observed in waters adjacent to the project both species must be considered when evaluating the effects of this project. We do not have specific information on the occurrence of these species within the project action area.

All marine mammals are also protected under the Marine Mammal Protection Act, including those documented in the project area: harbor porpoise, killer whale, minke whale, and harbor seal.

Several Pacific salmon stocks are also listed under the ESA and occur within Alaskan waters. These include the following Evolutionarily Significant Units (ESU): Lower Columbia River spring Chinook, Upper Columbia River spring Chinook, Lower Columbia River steelhead, Middle Columbia River steelhead, Upper Columbia River steelhead, Puget Sound Chinook, Snake River spring/summer Chinook, Snake River fall Chinook, Snake River basin steelhead, and Upper Willamette River steelhead,. These stocks range throughout the North Pacific. However, the specific occurrence of listed salmonids within the project area is highly unlikely.

We hope this information is useful to you in fulfilling requirements under Section 7 of the ESA. Please direct any questions to Barbara Mahoney in our Anchorage office at 907-271-3448.

Sincerely,

for Robert D. Mecum

James W. Balsiger, Ph.D
Administrator, Alaska Region

Appendix J – Staff Title and Responsibilities

Title	Staff Name
DISTRICT SUPERINTENDENT	Carl High
AIRPORT MANAGER	Jeff Doerning
AIRPORT MANAGER ALTERNATE	Paul Schaack
CENTRAL REGION M&O ENVIRONMENTAL SPECIALIST	Jennifer Hillman

STATE OF ALASKA

DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES

CENTRAL REGION - DIVISION OF MAINTENANCE & OPERATIONS

SARAH PALIN, GOVERNOR

P.O. BOX 97
COLD BAY, ALASKA 99571
PHONE (907) 532-5000
FAX (907) 532-2416

11 November, 2010

RE: Acting Airport / Station Manager

In the case of my absence from Cold Bay, Paul Schaack is the acting Airport / Station Manager for Cold Bay. He will assume full authority, control and responsibility for all emergency, inspection and incidents that occur until such time as I arrive back on station in Cold Bay.

Jeff Doerning
Cold Bay Airport / Station Manager
907-532-5000

Appendix K – SPCC Plan

Spill Prevention Control and Countermeasure Plan

Alaska Department of Transportation and Public Facilities
Anchorage, Alaska

SPILL PREVENTION, CONTROL, AND COUNTERMEASURE PLAN

Cold Bay State Airport and Facilities

Cold Bay, Alaska

November 2010

Version 1.0, 11/28/2005

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Appendices

LIST OF ACRONYMS AND ABBREVIATIONS

ARFF	Airport Rescue and Fire Fighting
AST	Aboveground Storage Tank
CFR	Code of Federal Regulations
EPA	U.S. Environmental Protection Agency
ADEC	Alaska Department of Environmental Conservation
ADOT&PF	Alaska Department of Transportation and Public Facilities
M&O	Maintenance and Operations
NPDES	National Pollutant Discharge Elimination System
PE	Professional Engineer
RA	Regional Advisor
SPCC	Spill Prevention, Control, and Countermeasure
STI	Steel Tank Institute
SWPPP	Stormwater Pollution Prevention Plan
UST	Underground Storage Tank

INTRODUCTION

Purpose

The purpose of this Spill Prevention, Control, and Countermeasure (SPCC) Plan is to describe measures implemented by Alaska Department of Transportation and Public Facilities (ADOT&PF) to prevent oil discharges from occurring, and to prepare ADOT&PF to respond in a safe, effective, and timely manner to mitigate the impacts of a discharge at the Cold Bay State Airport and Facilities.

This Plan has been prepared to meet the requirements of Title 40, *Code of Federal Regulations,* Part 112 (40 CFR part 112), and supersedes the plan developed in 2000 to meet provisions in effect since 1974.

In addition to fulfilling requirements of 40 CFR part 112, this SPCC Plan is used as a reference for oil storage information and testing records, as a tool to communicate practices on preventing and responding to discharges with employees, as a guide to facility inspections, and as a resource during emergency response. It is the policy of ADOT&PF to prevent the discharge of oil and hazardous substances and to provide for prompt and coordinated response to contain and cleanup spills, should they occur.

ADOT&PF has determined that this facility does not pose a risk of substantial harm under 40 CFR part 112, as recorded in the "Substantial Harm Determination" included in Appendix B of this Plan.

This Plan has been developed for ADOT&PF above ground storage tanks (ASTs) at the Cold Bay State Airport and Facilities and provides guidance on activities that ADOT&PF must perform to comply with the SPCC rule:

- Complete monthly and annual site inspections as outlined in the Inspection, Tests, and Records section of this Plan (Section 3.7) using the inspection checklists included in Appendix C.
- Perform preventive maintenance of equipment, secondary containment systems, and discharge prevention systems described in this Plan as needed to keep them in proper operating conditions.
- Conduct annual employee training as outlined in the Personnel, Training, and Spill Prevention Procedures section of this Plan (Section 3.8) and document them on the log included in Appendix E.
- If either of the following occurs, submit the SPCC Plan to the EPA Region 10 Regional Administrator (RA) and the Alaska Department of Environmental Conservation (ADEC), along with other information as detailed in Section 5.4 of this Plan:

- ☐ The facility discharges more than 1,000 gallons of oil into or upon the navigable waters of the U.S. or adjoining shorelines in a single spill event; or

- ☐ The facility discharges oil in quantity greater than 42 gallons in each of two spill events within any 12-month period.

☐ Review the SPCC Plan at least once every five (5) years and amend it to include more effective prevention and control technology, if such technology will significantly reduce the likelihood of a spill event and has been proven effective in the field at the time of the review. Plan amendments, other than administrative changes discussed above, must be recertified by a Professional Engineer on the certification page in Section 1.2 of this Plan.

☐ Amend the SPCC Plan within six (6) months whenever there is a change in facility design, construction, operation, or maintenance that materially affects the facility's spill potential. The revised Plan must be recertified by a Professional Engineer (PE).

☐ Review the Plan on an annual basis. Update the Plan to reflect any "administrative changes" that are applicable, such as personnel changes or revisions to contact information, such as phone numbers. Administrative changes must be documented in the Plan review log of Section 1.4 of this Plan, but do not have to be certified by a PE.

Part 1: Plan Administration

1.1 Management Approval and Designated Person (40 CFR 112.7)

ADOT &PF is committed to preventing discharges of oil to navigable waters and the environment, and to maintaining the highest standards for spill prevention control and countermeasures through the implementation and regular review and amendment to the Plan. This SPCC Plan has the full approval ADOT&PF. ADOT&PF has committed the necessary resources to implement the measures described in this Plan.

The Airport Manager is the Designated Person Accountable for Oil Spill Prevention at the facility and has the authority to commit the necessary resources to implement this Plan.

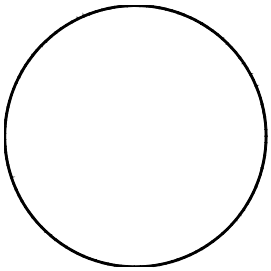
Authorized Facility Representative (facility response coordinator): Jeff Doerning
Signature:
Title: Cold Bay Airport Manager
Date: 11-5-10

1.2 Professional Engineer Certification (40 CFR 112.3(d))

The undersigned Registered Professional Engineer is familiar with the requirements of Part 112 of Title 40 of the *Code of Federal Regulations* (40 CFR part 112) and has visited and examined the facility, or has supervised examination of the facility by appropriately qualified personnel. The undersigned Registered Professional Engineer attests that this Spill Prevention, Control, and Countermeasure Plan has been prepared in accordance with good engineering practice, including consideration of applicable industry standards and the requirements of 40 CFR part 112; that procedures for required inspections and testing have been established; and that this Plan is adequate for the facility. [40 CFR 112.3(d)]

This certification in no way relieves the owner or operator of the facility of his/her duty to prepare and fully implement this SPCC Plan in accordance with the requirements of 40 CFR part 112. This Plan is valid only to the extent that the facility owner or operator maintains, tests, and inspects equipment, containment, and other devices as prescribed in this Plan.

Signature	Professional Engineer Registration Number
Name	Title
Company	Date



1.3 Location of SPCC Plan (40 CFR 112.3(e))

In accordance with 40 CFR 112.3(e), a complete copy of this SPCC Plan is maintained at the Cold Bay Maintenance facility in the office building as part of the Storm Water Pollution Prevention Plan (SWPPP). The office is attended whenever the facility is operating.

1.4 Plan Review (40 CFR 112.3 and 112.5)

1.4.1 Changes in Facility Configuration

In accordance with 40 CFR 112.5(a), ADOT&PF periodically reviews and evaluates this SPCC Plan for any change in the facility design, construction, operation, or maintenance that materially affects the facility's potential for an oil discharge, including, but not limited to:

- commissioning of containers;
- reconstruction, replacement, or installation of piping systems;
- construction or demolition that might alter secondary containment structures; or
- changes of product or service, revisions to standard operation, modification of testing/inspection procedures, and use of new or modified industry standards or maintenance procedures.

Amendments to the Plan made to address changes of this nature are referred to as technical amendments, and must be certified by a PE. Non-technical amendments can be done (and must be documented in this section) by the facility owner and/or operator. Non-technical amendments include the following:

- change in the name or contact information (i.e., telephone numbers) of individuals responsible for the implementation of this Plan; or
- change in the name or contact information of spill response or cleanup contractors.

ADOT&PF must make the needed revisions to the SPCC Plan as soon as possible, but no later than six months after the change occurs. The Plan must be implemented as soon as possible following any technical amendment, but *no later than six months* from the date of the amendment. The Airport Manager is responsible for initiating and coordinating revisions to the SPCC Plan.

1.4.2 Scheduled Plan Reviews

In accordance with 40 CFR 112.5(b), ADOT&PF will review this SPCC Plan at least once every five years (in the past, such reviews were required every three years). Revisions to the Plan, if needed, are made within six months of the five-year review. A registered Professional Engineer certifies any technical amendment to the Plan, as described above, in accordance with 40 CFR 112.3(d). The last SPCC review occurred in *July 2000*. This Plan is dated *November 2010*. The next plan review is therefore scheduled to take place on or prior to *November 2015*.

1.4.3 Record of Plan Reviews

Scheduled reviews and Plan amendments are recorded in the Plan Review Log (Table 1-1). This log must be completed even if no amendment is made to the Plan as a result of the review. Unless a technical or administrative change prompts an earlier review of the Plan, the next scheduled review of this Plan must occur by *November 2015.*

1.5 Cross-Reference with SPCC Provisions (40 CFR 112.7)

This SPCC Plan does not follow the exact order presented in 40 CFR part 112. Section headings identify, where appropriate, the relevant section(s) of the SPCC rule. Table 1-2 presents a cross-reference of Plan sections relative to applicable parts of 40 CFR part 112.

Table 1-1: Plan Review Log

By	Date	Activity	PE certification required?	Comments

* Previous PE certifications of this Plan are summarized below.

Date	Scope	PE Name	Licensing State and Registration No.
6/28/1999	Previous SPCC	Lorie M. Dilley	AK CE-9256

Table 1-2: SPCC Cross-Reference

Provision	Plan Section	Page
112.3(d)	Professional Engineer Certification	3
112.3(e)	Location of SPCC Plan	4
112.5	Plan Review	4 Table 1-1
112.7	Management Approval	3
112.7	Cross-Reference with SPCC Rule	Table 1-2
112.7(a)(3)	Part 2: General Facility Information Appendix A: Site Plan and Facility Diagram	8 Appendix A
112.7(a)(4)	5.4 Discharge Notification	25 Appendix G Appendix I
112.7(a)(5)	Part 5: Discharge Response	23
112.7(b)	3.4 Potential Discharge Volumes and Direction of Flow	11
112.7(c)	3.5 Containment and Diversionary Structures	13
112.7(d)	3.6 Practicability of Secondary Containment	14
112.7(e)	3.7 Inspections, Tests, and Records	14 Appendix C
112.7(f)	3.8 Personnel, Training and Discharge Prevention Procedures	16
112.7(g)	3.9 Security	17
112.7(j)	3.10 Conformance with Applicable State and Local Requirements	17
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112.8(c)(1)	4.2.1 Construction	19
112.8(c)(2)	4.2.2 Secondary Containment	20
112.8(c)(4)	4.2.3 Corrosion Protection	20
112.8(c)(6)	4.2.4 Inspection Appendix B - Facility Inspection Checklists	20 Appendix B

Provision	Plan Section	Page
112.8(c)(8)	4.2.5 Overfill Prevention System	21
112.8(c)(10)	4.2.6 Visible Discharges	21
112.8(d)	4.3 Transfer Operations, Pumping and In-Plant Processes	21
112.20(e)	Certification of Substantial Harm Determination	Appendix B

* Only selected excerpts of relevant rule text are provided. For a complete list of SPCC requirements, refer to the full text of 40 CFR part 112.

Part 2: General Facility Information

Name:	Alaska Department of Transportation and Public Facilities, Cold Bay Airport and Facilities
Address:	P.O. Box 97 Cold Bay, Alaska 99517 (907) 487-4952
Type:	Airport and Facilities
Owner/Operator:	Alaska Department of Transportation and Public Facilities P.O. Box 196900 4111 Aviation Drive Anchorage, Alaska 99519
Primary contact:	Jeff Doerning, Airport Manager Work: (907) 532-5000 Cell (24 hours): (907) 532-8163

2.1 Facility Description (40 CFR 112.7(a)(3))

2.1.1 Location and Activities

The Cold Bay Airport and Maintenance Station includes one sand storage building, warm storage for equipment, fueling stations, State Equipment Fleet (SEF) building and the Airport Rescue and Fire Fighting (ARFF) building. A vicinity map and site map are presented in Figures 1 and 2. The station stores equipment and resources necessary for airport maintenance, airport fire response. The aboveground storage tanks (AST) are used to store and dispense fuel to facility vehicles and to heat the facility. Used oil and lubricant tanks and a hydraulic fluid reservoir are also located at the facility. Outside activities include equipment fueling, runway maintenance, and sanding activities.

2.1.2 Oil Storage

Oil storage at the facility consists of eight ASTs: 3k gallon diesel heating oil tank and a 500 gallon fuel tank contained within the backup generator next to the ARFF building, a 2,500k gallon heating oil tank located next to the sand storage building, a 1k gallon heating oil tank located next to the warm storage building with a 200 gallon waste oil burner located indoors and a 2k gallon double fuel tank (1k diesel and 1k unleaded), a 3k gallon heating oil tank and a 300 gallon waste oil tank located next to the SEF maintenance shop (see Figure 2).

The capacities of oil containers present at the site are listed below and are also indicated on the facility diagram in Figure 2. All containers with capacity of 55 gallons or more are included. The capacity of the oil/water separator is not included in the total storage capacity for the facility since it is used to treat storm water and as a means of secondary containment for areas of the facility with potential for an oil discharge.

Table 2-1: Oil Containers

ID	Storage capacity	Content	Description
Fixed Storage			
1	3,000 gallons	Diesel	Double walled aboveground horizontal tank elevated on built-in saddles
2	100 gallons	Diesel	Generator fuel source, secondary containment is the generator housing.
3	2,500 gallons	Diesel	Double walled aboveground horizontal tank elevated on built-in saddles
4	1,000 gallons	Diesel	Double walled aboveground horizontal tank elevated on built-in saddles
5	200 gallons	Waste Oil	Waste oil burner
6	2,000 gallons	1k Diesel/ 1k unleaded	Double walled aboveground horizontal tank elevated on built-in saddles
7	3,000 gallons	Diesel	Double walled aboveground horizontal tank elevated on built-in saddles
8	300 gallons	Waste oil	Single walled aboveground horizontal tank elevated on built-in saddles

Total Oil Storage:	**12,100 gallons**

Other containers: A 150 gallon oil/water separator in the SEF building.

Note: The oil/water separator is used to treat facility drainage (i.e., wastewater) prior to treatment at the Cold Bay municipal settling ponds for waste water treatment. This equipment is used to meet certain secondary containment requirements under 40 CFR part 112, as described later in this Plan. Thus, the capacity of the oil/water separator is not counted towards the facility total storage capacity.

2.2 Evaluation of Discharge Potential

2.2.1 Distance to Navigable Waters and Adjoining Shorelines and Flow Paths

The nearest navigable water bodies that would be impacted by a spill from this facility are Cold Bay, Stapp Creek, and Trout Creek. A release from any of the facilities would flow north through a series of culverts and vegetated ditches. A release on the runways from aircraft or equipment would be largely contained in the large, relatively flat safety areas which would allow time to contain the spill before it entered vegetated low areas.

2.2.2 Discharge History

There have been no significant or reportable spills or leaks within the last three years. If this facility has a greater than 1,000 gallon release to the water, or two federally reportable spills in a 12 month period, then the SPCC Plan must be submitted to the EPA Regional Administrator and ADEC.

PART 3: Discharge Prevention - General SPCC Provisions

The following measures are implemented to prevent oil discharges during the handling, use, or transfer of oil products at the facility. Oil-handling employees have received training in the proper implementation of these measures.

3.1 Compliance with Applicable Requirements (40 CFR 112.7(a)(2))

This facility uses an oil/water separator as part of its drainage system to contain oil discharged. The separator provides environmental protection equivalent to the requirements under 112.8(b)(3) to use ponds, lagoons, or catchment basins to retain oil at the facility in the event of an uncontrolled discharge. As described in Section 3.5 of this Plan, the operational and emergency oil storage capacity of the oil/water separator is sufficient to handle the quantity of oil expected to be discharged from tank overfills or transfer operations. All tanks are double walled and have overflow protection to prevent spills.

3.2 Facility Layout Diagram (40 CFR 112.7(a)(3))

Figure 1 in Appendix A shows the general location of the facility on a U.S. Geological Survey topographic map. Figure 2 in Appendix A presents a layout of the facility and the location of storage tanks and drums. The diagram also shows the location of storm water drain inlets and the direction of surface water runoff. As required under 40 CFR 112.7(a)(3), the facility diagram indicates the location and content of ASTs.

3.3 Spill Reporting (40 CFR 112.7(a)(4))

The discharge notification form included in Appendix I will be completed upon immediate detection of a discharge and prior to reporting a spill to the proper notification contacts.

3.4 Potential Discharge Volumes and Direction of Flow (40 CFR 112.7(b))

Table 3-1 presents expected volume, discharge rate, general direction of flow in the event of equipment failure, and means of secondary containment for different parts of the facility where oil is stored, used, or handled.

Table 3-1: Potential Discharge Volumes and Direction of Flow

Potential Event	Maximum volume released (gallons)	Maximum discharge rate	Direction of Flow	Secondary Containment
Fuel Tank – ARFF Building				
Failure of aboveground tank (collapse or puncture below product level)	3,000	Gradual to instantaneous	West to isolated vegetated ditch	Double walled construction

Potential Event	Maximum volume released (gallons)	Maximum discharge rate	Direction of Flow	Secondary Containment
Tank overfill	1-55	55 gal/min	West to isolated vegetated ditch	Double walled construction
Pipe failure	3,000	32 gal/min	West to isolated vegetated ditch	Double walled construction
Leaking pipe or valve packing	3,000	3-8 gal/min	West to isolated vegetated ditch	Double walled construction
Diesel Fuel Tank – ARFF Building				
Failure of aboveground tank (collapse or puncture below product level)	100	Gradual to instantaneous	North and east to isolated low area	Box containment
Tank overfill	1 to 55	55 gal/min	North and east to isolated low area	Box containment
Pipe failure	100	10 gal/min	North and east to isolated low area	Box containment
Leaking pipe or valve packing	100	3 gal/min	North and east to isolated low area	Box containment
Warm Storage/SEF/ARFF				
Leak or failure of drum	1 to 55	Gradual to instantaneous	Stored indoors – flow into oil/water separator or maintained by structure	Oil/water Separator
Heating Fuel Tank – Sand Storage Building				
Failure of aboveground tank (collapse or puncture below product level)	2,500	Gradual to instantaneous	North to vegetated ditches and culverts	Double walled construction
Tank overfill	1 - 55	55 gal/min	North to vegetated ditches and culverts	Double walled construction
Pipe failure	2,500	32 gal/min	North to vegetated ditches and culverts	Double walled construction
Leaking pipe or valve packing	2,500	3-8 gal/min	North to vegetated ditches and culverts	Double walled construction
Fuel Tank- Warm Storage Building				
Failure of aboveground tank (collapse or puncture below product level)	1,000	Gradual to instantaneous	North to vegetated ditches and culverts	Double walled construction
Tank overfill	1-55	55 gal/min	North to vegetated ditches and culverts	Double walled construction
Pipe failure	1,000	32 gal/min	North to vegetated ditches and culverts	Double walled construction
Leaking pipe or valve packing	1,000	3-8 gal/min	North to vegetated ditches and culverts	Double walled construction
Waste Oil Burner - WarmStorage Building				

Potential Event	Maximum volume released (gallons)	Maximum discharge rate	Direction of Flow	Secondary Containment
Failure of aboveground tank (collapse or puncture below product level)	200	Gradual to instantaneous	Contained within building	Double walled construction
Tank overfill	1-5	5 gal/min	Contained within building	Double walled construction
Pipe failure	N/A	N/A	N/A	
Leaking pipe or valve packing	N/A	N/A	N/A	
Fueling Tank – SEF Building				
Failure of aboveground tank (collapse or puncture below product level)	2,000	Gradual to instantaneous	North to vegetated ditches and culverts	Double walled construction
Tank overfill	1-55	55 gal/min	North to vegetated ditches and culverts	Double walled construction
Pipe failure	2,000	15 gal/min	North to vegetated ditches and culverts	Double walled construction
Leaking pipe or valve packing	2,000	3-5 gal/min	North to vegetated ditches and culverts	Double walled construction
Heating Fuel - Equipment Storage Building				
Failure of aboveground tank (collapse or puncture below product level)	3,000	Gradual to instantaneous	North to vegetated ditches and culverts	Double walled construction
Tank overfill	1-55	55 gal/min	North to vegetated ditches and culverts	Double walled construction
Pipe failure	3,000	15 gal/min	North to vegetated ditches and culverts	Double walled construction
Leaking pipe or valve packing	3,000	3-5 gal/min	North to vegetated ditches and culverts	Double walled construction
Waste Oil Storage - Equipment Storage Building				
Failure of aboveground tank (collapse or puncture below product level)	300	Gradual to instantaneous	North to vegetated ditches and culverts	
Tank overfill	1-10	10 gal/min	North to vegetated ditches and culverts	
Pipe failure	N/A	N/A		
Leaking pipe or valve packing	N/A	N/A		

3.5 Containment and Diversionary Structures (40 CFR 112.7(c))

Methods of secondary containment at this facility include a combination of structures drainage systems (e.g., oil/water separator), and land-based spill response (e.g., drain covers, sorbents) to prevent oil from reaching navigable waters and adjoining shorelines:

< For bulk storage containers (refer to Section 4.2.2 of this Plan):

- **Double-wall tank construction.**

- **Sorbent material.** Spill cleanup kits that include absorbent material, booms, and other portable barriers are located inside the maintenance building and in the equipment storage building. The spill kits are located within close proximity of the oil product storage and handling areas for rapid deployment should a spill occur. Sorbent material, booms, and other portable barriers are stored for quick deployment in the event of a discharge during loading/unloading activities or any other accidental discharges. The response equipment inventory for the facility is listed in Appendix H of this Plan. The inventory is checked regularly to ensure that used material is replenished.

- **Oil/water separator.** The oil/water separator is designed to separate and retain oil at the facility. The oil/water separator in the SEF building has a static holding capacity for oil/water mixture of 150 gallons, 100 gallon internal oil storage, and a design flow rate of 75 gallons per minute. Best Management Practices are used to minimize the amount of solids and oil that flow into the oil/water separator. Facility personnel are instructed to avoid and address small spills using sorbents to minimize runoff of oil into the oil/water separator. The oil/water separator is inspected monthly as part of the scheduled inspection to check the level of water within the separator and measure the depth of bottom sludges and floating oils. Floating oil is removed as necessary to maintain capacity.

3.6 Practicability of Secondary Containment (40 CFR 112.7(d))

ADOT&PF management has determined that secondary containment is practicable at this facility.

3.7 Inspections, Tests, and Records (40 CFR 112.7(e))

As required by the SPCC rule, ADOT&PF performs the inspections, tests, and evaluations listed in the following table. Table 3-2 summarizes the various types of inspections and tests performed at the facility. The inspections and tests are described later in this section, and in the respective sections that describe different parts of the facility (e.g., Section 4.2.6 for bulk storage containers).

Table 3-2: Inspection and Testing Program

Facility Component	Action	Frequency/Circumstances
Aboveground container	Test container integrity. Combine visual inspection with another testing technique (non-destructive shell testing). Inspect outside of container for signs of deterioration and discharges.	Following a regular schedule (monthly, annual, and during scheduled inspections) and whenever material repairs are made.
Container supports and foundation	Inspect container's supports and foundations.	Following a regular schedule (monthly, annual, and during scheduled inspections) and whenever material repairs are made.
Liquid level sensing devices (overfill)	Test for proper operation.	Monthly

3.7.1 Daily Inspection

A DOT&PF employee performs a complete walk-through of the facility each day. This daily visual inspection involves: (1) looking for tank/piping damage or leakage, stained or discolored soils; (2) observing shop drains, ditches, and low lying areas for oil stains and the presence of oil.

3.7.2 Monthly Inspection

The checklist provided in Appendix C is used for monthly inspections by ADOT&PF personnel. The monthly inspections cover the following key elements:

- Observing the exterior of aboveground storage tanks, pipes, and other equipment for signs of deterioration, leaks, corrosion, and thinning.
- Observing the exterior of portable containers for signs of deterioration or leaks.
- Observing tank foundations and supports for signs of instability or excessive settlement.
- Observing the tank fill and discharge pipes for signs of poor connection that could cause a discharge, and tank vent for obstructions and proper operation.
- Verifying the proper functioning of overfill prevention systems.
- Checking the inventory of spill response kits.
- Observing the quantity of accumulated oil within the oil/water separator to ensure within capacity.

All problems regarding tanks, piping, containment, or spill response kits must immediately be reported to the Airport Manager. Visible oil leaks from tank walls, piping, or other components must be repaired as soon as possible to prevent a larger spill or a discharge to navigable waters or adjoining shorelines. Pooled oil is removed immediately upon discovery.

Written monthly inspection records are signed by the Airport Manager and maintained with this SPCC Plan for a period of three years.

3.7.3 Annual Inspection

Facility personnel perform a more thorough inspection of facility equipment on an annual basis. This annual inspection complements the monthly inspection described above and is performed during the summer (coupled with the SWPPP annual inspection if possible) each year using the checklist provided in Appendix C of this Plan.

The inspection will preferably take place after a large storm event to observe drainage ditches and oil/water separator functioning.

Written annual inspection records are signed by the Airport Manager and maintained with this SPCC Plan for a period of three years.

3.7.4 Periodic Integrity Testing

In addition to the above monthly and annual inspections by facility personnel, all tanks are periodically evaluated by an outside certified tank inspector.

3.8 Personnel, Training, and Discharge Prevention Procedures (40 CFR 112.7(f))

The Airport Manager is the facility designee and is responsible for oil discharge prevention, control, and response preparedness activities at this facility.

ADOT&PF management has instructed facility personnel in the operation and maintenance of oil pollution prevention equipment, discharge procedure protocols, applicable pollution control laws, rules and regulations, general facility operations, and the content of this SPCC Plan. Any new facility personnel are provided with this same training.

Annual discharge prevention briefings are held by the Airport Manager for all facility personnel involved in oil operations. The briefings are aimed at ensuring continued understanding and adherence to the discharge prevention procedures presented in the SPCC Plan. The briefings also highlight and describe known discharge events or failures, malfunctioning components, and recently implemented precautionary measures and best practices. Facility operators and other personnel will have the opportunity during the briefings to share recommendations concerning health, safety, and environmental issues encountered during facility operations.

Future training exercises will be periodically held to prepare for possible discharge responses.

Records of the briefings and discharge prevention training are kept on the form shown in Appendix E and maintained with this SPCC Plan for a period of three years.

3.9 Security (40 CFR 112.7(g))

Security issues addressed in the SPCC regulations include vandalism, accidental damage from vehicles or foot traffic, unauthorized or inappropriate access, and safety precautions for equipment that is not in service. Accordingly, security measures should be implemented to control access, emphasize operational safety, and enhance spill prevention efforts. Specific features referenced in the regulations consist of fences, locks, and lighting.

Tanks are stored in well lit areas to detect spills in darkness with the ARFF building and tank contained within a fenced in area.

When tanks are in non-operating or standby status, valves that allow outward flow of fuel are to be securely closed in non-operating status.

This lighting around tanks is adequate to observe the tanks, see potential spills in darkness, and discourage vandalism.

3.10 Conformance with State and Local Applicable Requirements (40 CFR 112.7(j))

All bulk storage tanks at this facility are in conformance with local and state laws.

PART 4: Discharge Prevention – SPCC Provisions for Onshore Facilities (Excluding Production Facilities)

4.1 Facility Drainage (40 CFR 112.8(b))

Any potential discharge from ASTs and discharges occurring during loading/unloading operations will be contained by the oil/water separator, drainage ditches or low lying areas. The maintenance station is approximately .25 miles from surface waters which allows buffering capacity for spills. The facility includes a drainage system and an oil/water separator, which are used as containment for spill sources on paved and indoor areas. This separator provides environmental protection equivalent to ponds, lagoons, or catchments basins required under 40 CFR 112.8(b)(3) and (4), as allowed in 40 CFR 112.7(a)(2). Discharges outside the containment areas, such as those occurring in the fuel dispensing area or while unloading heating oil, will flow by gravity into vegetated ditches and low-lying areas where oil will be retained until it can be pumped out.

4.2 Bulk Storage Containers (40 CFR 112.8(c))

Table 4-1 summarizes the construction, volume, and content of bulk storage containers at the Cold Bay Airport and associated facilities.

Table 4-1: List of Oil Containers

Tank	Location	Type (Construction Standard)	Capacity (gallons)	Content	Discharge Prevention & Containment
#1	ARFF	UL listed Above Ground Fire Guard Secondary Containment Storage Tank	3,000	Diesel	Double walled tank with liquid level gauge
#2	ARFF	Fuel supply for backup generator with secondary containment in generator housing.	100	Diesel	Single walled tank.
#3	Sand Storage Building	UL listed Above Ground Fire Guard Secondary Containment Storage Tank	2,500	Diesel	Double walled tank with liquid level gauge
#4	Warm Storage Building	UL listed Above Ground Fire Guard Secondary Containment Storage Tank	1,000	Diesel	Double walled tank with liquid level gauge, overfill protection and interstitial monitoring.

#5	Warm Storage	Waste oil burner with secondary containment.	200	Waste oil	Waste oil burner with secondary containment, stored indoors.
#6	SEF Building	UL listed Above Ground Fire Guard Secondary Containment Storage Tank	2,000	Diesel and Unleaded Fuel	Double walled tank with liquid level gauge, overfill protection and interstitial monitoring.
#7	SEF Building	UL listed Above Ground Fire Guard Secondary Containment Storage Tank	3,000	Diesel	Double walled tank with liquid level gauge, overfill protection and interstitial monitoring.
#8	SEF Building	UL listed Above Ground Storage Tank	300	Waste Oil	Single walled tank
	Inside warm storage and Equipment Storage Building	Steel drums	55	Motor oil and used oil	Building serves as containment since floor drains flow into oil/water separator

4.2.1 Construction (40 CFR 112.8 (c)(1))

All oil tanks used at this facility are constructed of steel, in accordance with industry specifications as described above. The design and construction of all bulk storage containers are compatible with the characteristics of the oil product they contain, and with temperature and pressure conditions.

Piping between fixed aboveground bulk storage tanks is made of steel and placed aboveground on appropriate supports designed to minimize erosion and stress.

4.2.2 Secondary Containment (40 CFR 112.8(c)(2))

All ASTs are double walled tanks with overfill protection and liquid level gauges. In the event of a spill oil will flow to low vegetated areas isolated from waterways until it is able to be retrieved.

The 55-gallon drums are stored indoors when possible and the drain system and oil water separators in the SEF and warm storage buildings serve as a source of secondary containment.

4.2.3 Corrosion Protection (40 CFR 112.8(c)(4))

All tanks are coated with White Chemline Polyurethane to prevent corrosion. Tanks are monitored and inspected regularly for leaks and wear. All piping is above ground and is made of black iron.

4.2.4 Inspections and Tests (40 CFR 112.8(c)(6))

Visual inspections of ASTs by facility personnel are performed according to the procedure described in this SPCC Plan. Leaks from tank seams, gaskets, rivets, and bolts are promptly corrected. Records of inspections and tests are signed by the inspector and kept at the facility for at least three years.

Annual inspections by certified and contracted individuals are conducted and records of certified tank inspections are kept at the facility for at least three years. Shell test comparison records are retained for the life of the tanks.

Table 4-2 summarizes inspections and tests performed on bulk storage containers ("EE" indicates that an environmentally equivalent measure is implemented in place of the inspection/test, as discussed in Section 3.1 of this Plan).

Table 4-2: Scope and Frequency of Bulk Storage Containers Inspections and Tests

	Tank ID								
Inspection/Test	**#1**	**#2**	**#3**	**#4**	**#5**	**#6**	**#7**	**#8**	**Drums**
Visual inspection by facility personnel (as per checklist of Appendix C)	M A	M A	M A	M A	M A	M A	M A	M A	M A
External inspection by certified inspector	20 yr	20 yr	20 yr	20 yr	EE	20 yr	20 yr	20 yr	EE
Internal inspection by certified inspector	20 yr*	20 yr*	20 yr*	20 yr*	EE	20 yr*	20 yr*	20 yr*	EE
Tank tightness test meeting requirements of 40 CFR 280									

Legend: M: Monthly
A: Annual
EE: Inspection not required given use of environmentally equivalent measure (refer to Section 3.1 of this Plan).
* Or earlier, as recommended by the certified inspector based on findings from an external inspection.
† Internal inspection may be recommended by the certified inspector based on findings from the external inspection.

The frequency above is based on implementation of a scheduled inspection/testing program. To initiate the program, ASTs will be inspected by the following dates:

All tanks will be visually inspected monthly beginning December 2010.
All tanks must be undergo an external inspection on or before December 31, 2011

4.2.5 Overfill Prevention Systems (40 CFR 112.8(c)(8))

All tanks are equipped with a liquid level gauge. General secondary containment is provided in the event of overfills, as described in this Plan.

Facility personnel are present, when possible, throughout the filling operations to monitor the product level in the tanks.

4.2.6 Visible Discharges (40 CFR 112.8(c)(10))

Visible discharges from any container or appurtenance – including seams, gaskets, piping, pumps, valves, rivets, and bolts – are quickly corrected upon discovery.

Oil is promptly removed and disposed of according to the waste disposal method described in Part 5 of this Plan.

4.3 Transfer Operations, Pumping, and In-Plant Processes (40 CFR 112.8(d))

Transfer operations at this facility include:

- The filling of heating oil to storage tanks.
- The filling of operations vehicles.

All piping at this facility is aboveground and cathodically protected against corrosion and is provided with a protective wrapping and coating. All pipes are visually inspected on a monthly basis. Inspection includes aboveground valves, piping, appurtenances, expansion joints, valve glands and bodies, catch pans, pipeline supports, locking of valves, and metal surfaces. Observations are noted on the monthly inspection checklist provided in this Plan. If corrosion damage is found, additional examination and corrective action must be taken as deemed appropriate considering the magnitude of the damage.

Lines that are not in service or are on standby for an extended period of time are capped or blank-flanged and marked as to their origin.

All pipe supports are designed to minimize abrasion and corrosion and to allow for expansion and contraction. Pipe supports are visually inspected during the monthly inspection of the facility.

Warning signs are posted at appropriate locations throughout the facility to prevent vehicles from damaging aboveground piping and appurtenances.

Part 5: Discharge Response

This section describes the response and cleanup procedures in the event of an oil discharge. The uncontrolled discharge of oil to groundwater, surface water, or soil is prohibited by state and federal laws. Immediate action must be taken to control, contain, and recover discharged product.

In general, the following steps are taken:

- Eliminate potential spark sources;
- If possible and safe to do so, identify and shut down source of the discharge to stop the flow;
- Contain the discharge with sorbents, berms, fences, trenches, sandbags, or other material;
- Contact the Airport Manager or his/her alternate;
- Contact regulatory authorities and the response organization; and
- Collect and dispose of recovered products according to regulation.

For the purpose of establishing appropriate response procedures, this SPCC Plan classifies discharges as either “minor” or “major,” depending on the volume and characteristics of the material released.

A list of Emergency Contacts is provided in Appendix F. A list of discharge response material kept at the facility is included in Appendix H.

5.1 Response to a Minor Discharge

A “minor” discharge is defined as one that poses no significant harm (or threat) to human health and safety or to the environment. Minor discharges are generally those where:

- The quantity of product discharged is small (e.g., may involve less than 10 gallons of oil);
- Discharged material is easily stopped and controlled at the time of the discharge;
- Discharge is localized near the source;
- Discharged material is not likely to reach water;
- There is little risk to human health or safety; and
- There is little risk of fire or explosion.

Minor discharges can usually be cleaned up by ADOT&PF personnel. The following guidelines apply:

- Immediately notify the Airport Manager.
- Under the direction of the Airport Manager, contain the discharge with discharge response materials and equipment. Place discharge debris in properly labeled waste containers.
- The Airport Manager will complete the discharge notification form (Appendix G) and attach a copy to this SPCC Plan.
- If the discharge involves between 1 and 10 gallons of oil, the Airport Manager will notify the ADEC in writing within 10 days.
- If the discharge involves between 10 and 55 gallons of oil, the Airport Manager will notify the ADEC within 48 hours.
- If the discharge involves more than 55 gallons of oil, the Airport Manager will notify the ADEC immediately.

5.2 Response to a Major Discharge

A “major” discharge is defined as one that cannot be safely controlled or cleaned up by facility personnel, such as when:

- The discharge is large enough to spread beyond the immediate discharge area;
- The discharged material enters water;
- The discharge requires special equipment or training to clean up;
- The discharged material poses a hazard to human health or safety; or
- There is a danger of fire or explosion.

In the event of a major discharge, the following guidelines apply:

- All workers must immediately evacuate the discharge site via the designated exit routes and move to the designated staging areas at a safe distance from the discharge. Exit routes are included on the facility diagram and posted in the maintenance building, in the office building, and on the outside wall of the outside shed that contains the spill response equipment.
- If the Airport Manager is not present at the facility, the senior on-site person notifies the Airport Manager of the discharge and has authority to initiate notification and response. Certain notifications are dependent on the circumstances and type of discharge.
- The Airport Manager (or senior on-site person) must call for medical assistance if workers are injured.
- The Airport Manager (or senior on-site person) must notify local response teams including fire and police departments, as applicable.
- The Airport Manager (or senior on-site person) must call the spill response and cleanup contractors listed in the Emergency Contacts list in Appendix F.

- < The Airport Manager (or senior on-site person) must immediately contact the ADEC.
- < The Airport Manager (or senior on-site person) must record the call on the Discharge Notification form in Appendix I and attach a copy to this SPCC Plan.
- < The Airport Manager (or senior on-site person) coordinates cleanup and obtains assistance from a cleanup contractor or other response organization as necessary.

If the Airport Manager is not available at the time of the discharge, then the next highest person in seniority assumes responsibility for coordinating response activities.

5.3 Waste Disposal

Wastes resulting from a minor discharge response will be contained in impervious bags, drums, or buckets. The Airport Manager will characterize the waste for proper disposal and ensure that it is removed from the facility by a licensed waste hauler within two weeks, or what is most practicable.

Wastes resulting from a major discharge response will be removed and disposed of by a cleanup contractor.

5.4 Discharge Notification

Any size discharge (i.e., one that creates a sheen, emulsion, or sludge) that affects or threatens to affect navigable waters or adjoining shorelines must be reported immediately to the National Response Center (1-800-424-8802). The Center is staffed 24 hours a day.

A summary sheet is included in Appendix I to facilitate reporting. The person reporting the discharge must provide the following information:

- Name, location, organization, and telephone number
- Name and address of the party responsible for the incident
- Date and time of the incident
- Location of the incident
- Source and cause of the release or discharge
- Types of material(s) released or discharged
- Quantity of materials released or discharged
- Danger or threat posed by the release or discharge
- Number and types of injuries (if any)
- Media affected or threatened by the discharge (i.e., water, land, air)
- Weather conditions at the incident location
- Any other information that may help emergency personnel respond to the incident

Contact information for reporting a discharge to the appropriate authorities is listed in Appendix F and is also posted in prominent locations throughout the facility (e.g. in the maintenance building and the ARFF building).

In addition to the above reporting, 40 CFR 112.4 requires that information be submitted to the United States Environmental Protection Agency (EPA) Regional Administrator and the appropriate state agency in charge of oil pollution control activities (see contact information in Appendix H) whenever the facility discharges (as defined in 40 CFR 112.1(b)) *more than 1,000 gallons of oil in a single event,* or discharges (as defined in 40 CFR 112.1(b)) *more than 42 gallons of oil in each of two discharge incidents within a 12-month period.* The following information must be submitted to the EPA Regional Administrator and to MADEP within 60 days:

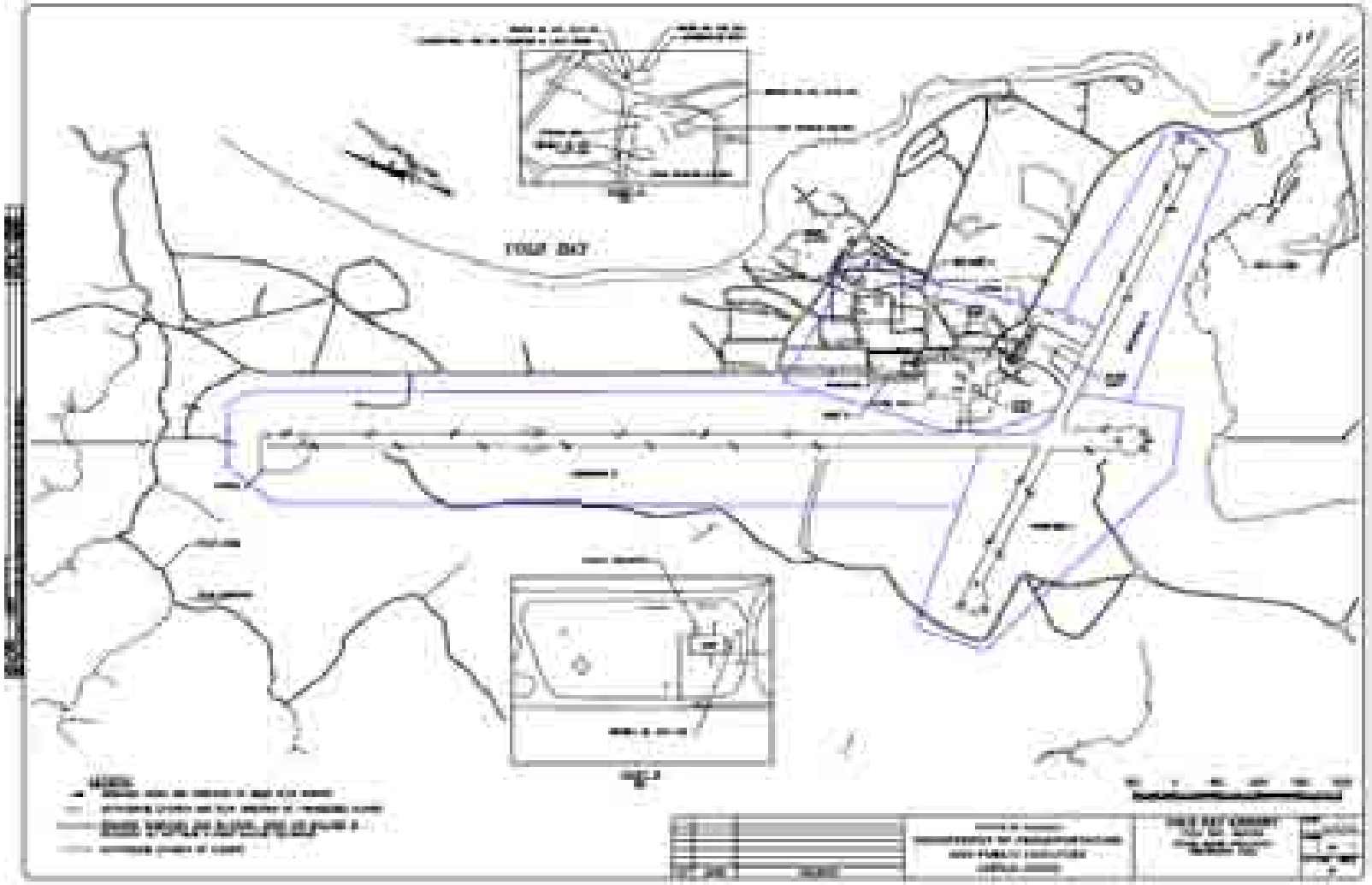
- Name of the facility;
- Name of the owner/operator;
- Location of the facility;
- Maximum storage or handling capacity and normal daily throughput;
- Corrective action and countermeasures taken, including a description of equipment repairs and replacements;
- Description of facility, including maps, flow diagrams, and topographical maps;
- Cause of the discharge(s) to navigable waters and adjoining shorelines, including a failure analysis of the system and subsystem in which the failure occurred;
- Additional preventive measures taken or contemplated to minimize possibility of recurrence; and
- Other pertinent information requested by the Regional Administrator.

A standard report for submitting the information to the EPA Regional Administrator and to ADEC is included in Appendix K of this Plan.

Appendix A
Site Plan and Facility Diagram

Figure 1: Site Plan.

Figure 2: Facility Diagram.



Appendix B
Substantial Harm Determination

Facility Name:	Cold Bay Airport and Facilities
Facility Address:	P.O. Box 97 Cold Bay, Alaska 99571

1. Does the facility transfer oil over water to or from vessels and does the facility have a total oil storage capacity greater than or equal to 42,000 gallons?

Yes **No**

2. Does the facility have a total oil storage capacity greater than or equal to 1 million gallons and does the facility lack secondary containment that is sufficiently large to contain the capacity of the largest aboveground oil storage tank plus sufficient freeboard to allow for precipitation within any aboveground storage tank area?

Yes **No**

3. Does the facility have a total oil storage capacity greater than or equal to 1 million gallons and is the facility located at a distance (as calculated using the appropriate formula in 40 CFR part 112 Appendix C, Attachment C-III or a comparable formula) such that a discharge from the facility could cause injury to fish and wildlife and sensitive environments?

Yes **No**

4. Does the facility have a total oil storage capacity greater than or equal to 1 million gallons and is the facility located at a distance (as calculated using the appropriate formula in 40 CFR part 112 Appendix C, Attachment C-III or a comparable formula) such that a discharge from the facility would shut down a public drinking water intake?

Yes **No**

5. Does the facility have a total oil storage capacity greater than or equal to 1 million gallons and has the facility experienced a reportable oil spill in an amount greater than or equal to 10,000 gallons within the last 5 years?

Yes **No**

Certification

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document, and that based on my inquiry of those individuals responsible for obtaining this information, I believe that the submitted information is true, accurate, and complete.

Signature

Cold Bay Airport Manager
Title

Jeff Doerming
Name (type or print)

Date 11-5-10

APPENDIX C
Facility Inspection Checklists

The following checklists are to be used for monthly and annual facility-conducted inspections. Completed checklists must be signed by the inspector and maintained at the facility, with this SPCC Plan, for at least three years.

Monthly Inspection Checklist

This inspection record must be completed *each month* except the month in which an annual inspection is performed. Provide further description and comments, if necessary, on a separate sheet of paper and attach to this sheet. *Any item that receives "yes" as an answer must be described and addressed immediately.

	Y*	N	Description & Comments
Storage tanks			
Tank surfaces show signs of leakage			
Tanks are damaged, rusted or deteriorated			
Bolts, rivets, or seams are damaged			
Tank supports are deteriorated or buckled			
Tank foundations have eroded or settled			
Level gauges or alarms are inoperative			
Vents are obstructed			
Secondary containment is damaged or stained			
Water/product in interstice of double-walled tank			
Dike drainage valve is open or is not locked			
Piping			
Valve seals, gaskets, or other appurtenances are leaking			
Pipelines or supports are damaged or deteriorated			
Joints, valves and other appurtenances are leaking			
Buried piping is exposed			
Oil/water separator			
Oil/water separator > 2 inches of accumulated oil			
Oil/water separator effluent has a sheen			
Security			
Fencing, gates, or lighting is non-functional			
Pumps and valves are locked if not in use			
Response Equipment			
Response equipment inventory is complete			

Date: _____ **Signature:** _____

Annual Facility Inspection Checklist

This inspection record must be completed *each year.* If any response requires further elaboration, provide comments in Description & Comments space provided. Further description and comments, if necessary, must be provided on a separate sheet of paper and attached to this sheet. *Any item that receives "yes" as an answer must be described and addressed immediately.

	Y*	N	Description & Comments
Storage tanks			
Tank #1			
Tank surfaces show signs of leakage			
Tank is damaged, rusted or deteriorated			
Bolts, rivets or seams are damaged			
Tank supports are deteriorated or buckled			
Tank foundations have eroded or settled			
Level gauges or alarms are inoperative			
Vents are obstructed			
Tank #2			
Tank surfaces show signs of leakage			
Tank is damaged, rusted, or deteriorated			
Bolts, rivets, or seams are damaged			
Tank supports are deteriorated or buckled			
Tank foundations have eroded or settled			
Level gauges or alarms are inoperative			
Vents are obstructed			
Tank #3			
Tank surfaces show signs of leakage			
Tank is damaged, rusted, or deteriorated			
Bolts, rivets, or seams are damaged			
Tank supports are deteriorated or buckled			
Tank foundations have eroded or settled			
Level gauges or alarms are inoperative			
Vents are obstructed			
Tank #4			
Tank surfaces show signs of leakage			
Tank is damaged, rusted or deteriorated			
Bolts, rivets or seams are damaged			
Tank supports are deteriorated or buckled			
Tank foundations have eroded or settled			
Level gauges or alarms are inoperative			
Vents are obstructed			
Oil is present in the interstice			
Tank #5			
Tank surfaces show signs of leakage			
Tank is damaged, rusted, or deteriorated			

	Y*	N	Description & Comments
Bolts, rivets, or seams are damaged			
Tank supports are deteriorated or buckled			
Tank foundations have eroded or settled			
Level gauges or alarms are inoperative			
Leakage in exhaust from heating coils			
Tank #6			
Tank surfaces show signs of leakage			
Tank is damaged, rusted, or deteriorated			
Bolts, rivets, or seams are damaged			
Tank supports are deteriorated or buckled			
Tank foundations have eroded or settled			
Level gauges or alarms are inoperative			
Leakage in exhaust from heating coils			
Tank #7			
Tank surfaces show signs of leakage			
Tank is damaged, rusted, or deteriorated			
Bolts, rivets, or seams are damaged			
Tank supports are deteriorated or buckled			
Tank foundations have eroded or settled			
Level gauges or alarms are inoperative			
Leakage in exhaust from heating coils			
Tank #8			
Tank surfaces show signs of leakage			
Tank is damaged, rusted, or deteriorated			
Bolts, rivets, or seams are damaged			
Tank supports are deteriorated or buckled			
Tank foundations have eroded or settled			
Level gauges or alarms are inoperative			
Leakage in exhaust from heating coils			
Piping			
Valve seals or gaskets are leaking			
Pipelines or supports are damaged or deteriorated			
Joints, valves and other appurtenances are leaking			
Buried piping is exposed			
Out-of-service pipes are not capped			
Warning signs are missing or damaged			
Oil/water separator			
Oil/water separator > 2 inches of accumulated oil			
Oil/water separator effluent has a sheen			
Security			
Fencing, gates, or lighting is non-functional			
Pumps and valves are not locked (and not in use)			
Response equipment			

	Y*	N	Description & Comments
Response equipment inventory is incomplete			

Annual reminders:

< Hold SPCC Briefing for all oil-handling personnel (and update briefing log in the Plan);
< Check contact information for key employees and response/cleanup contractors and update them in the Plan as needed;

Additional Remarks:

Date: _____ Signature: _____

APPENDIX D
Record of Annual Discharge Prevention Briefings and Training

Briefings will be scheduled and conducted by the facility owner or operator for operating personnel at regular intervals to ensure adequate understanding of this SPCC Plan. The briefings will also highlight and describe known discharge events or failures, malfunctioning components, and recently implemented precautionary measures and best practices. Personnel will also be instructed in operation and maintenance of equipment to prevent the discharge of oil, and in applicable pollution laws, rules, and regulations. Facility operators and other personnel will have an opportunity during the briefings to share recommendations concerning health, safety, and environmental issues encountered during facility operations.

Date	Subjects Covered	Employees in Attendance	Instructor(s)

APPENDIX E
Records of Tank Integrity and Pressure Tests

Attach copies of official records of tank integrity and pressure tests.

APPENDIX F
Emergency Contacts

Designated person responsible for spill prevention: ***Jeff Doerning, Airport Manager***
907-532-5000

EMERGENCY TELEPHONE NUMBERS:

Facility	
Jeff Doerning, Airport Manager	907-532-5000 (cell) 907-532-8163
Response/Cleanup Contractors	
No local clean-up contractors – must hire from Anchorage	
Notification	
Alaska Department of Environmental Conservation	907-465-5250 or 800-478-9300 (24 hour number)
National Response Center	800-424-8802 (24 hour number)
United States Environmental Protection Agency, Region 10	206-553-1263 (24 hour emergency number)

APPENDIX G
Discharge Notification Form

Part A: Discharge Information	
General information when reporting a spill to outside authorities: Name: Cold Bay Airport and Facilities Address: P.O. Box 97 Cold Bay, Alaska 99571 Telephone: (907) 532-5000 Owner/Operator: ADOT&PF P.O. Box 196900 Anchorage, Alaska 99516 Primary Contact: Jeff Doerning, Airport Manager Work: (907)532-5000 Cell (24 hrs): (907)532-8163	
Type of oil:	Discharge Date and Time:
Quantity released:	Discovery Date and Time:
Quantity released to a waterbody:	Discharge Duration:
Location/Source:	
Actions taken to stop, remove, and mitigate impacts of the discharge:	
Affected media: G air G water G soil	 G storm water sewer/POTW G dike/berm/oil-water separator G other: _____
Notification person:	Telephone contact: Business: 24-hr:
Nature of discharges, environmental/health effects, and damages: Injuries, fatalities or evacuation required?	

Part B: Notification Checklist		
	Date and time	Name of person receiving call
Discharge in any amount		
Jeff Doerning, Airport Manager Work: (907)532-5000 Cell (24 hrs): (907)539-7072		
Discharge in amount exceeding 10 gallons and *not affecting a waterbody or groundwater*		
Fire/Emergency Response 911		
Alaska Department of Environmental Conservation (907)465-5250 or (800)-478-9300 (24 hour no.)		

Discharge in any amount and affecting (or threatening to affect) a waterbody		
Fire/Emergency Response		
Alaska Department of Environmental Conservation (907)465-5250 or (800)-478-9300 (24 hour no.)		
National Response Center (800) 424-8802		

APPENDIX H
Discharge Response Equipment Inventory

The discharge response equipment inventory is verified during the monthly inspection and must be replenished as needed.

Maintenance and Equipment Storage Buildings

- Empty 55-gallons drums to hold contaminated material
- Loose absorbent material
- Absorbent pads
- Neoprene gloves
- Sand bags

APPENDIX I
Agency Notification Standard Report

Information contained in this report, and any supporting documentation, must be submitted to the EPA Region 1 Regional Administrator, and to MADEP, within 60 days of the qualifying discharge incident.

Facility:	*Cold Bay Airport and Facilities*
Operator:	ADOT&PF P.O. Box 196900 Anchorage, Alaska 99516
Name of person filing report:	
Location:	*P.O. Box 97* *Cold Bay, Alaska 99571*
Maximum storage capacity:	*12,500 gallons*
Nature of qualifying incident(s): Discharge to navigable waters or adjoining shorelines exceeding 1,000 gallons Second discharge exceeding 42 gallons within a 12-month period.	

Description of facility (attach maps, flow diagrams, and topographical maps):

The Cold Bay Airport is located in Cold Bay, AK, on the Alaska Peninsula (Appendix A). The Cold Bay Airport facility consists of one main 10,415-foot-long asphalt-surfaced runway (14/32) and a shorter 4,235-foot-long asphalt runway (8/26). Three paved taxiways, each between 330 and 400 feet long, connect the runways with terminals and other buildings. Other facilities include a fueling station, sand storage building, maintenance shop, Aircraft Rescue Fire Fighting (ARFF) building and office manager's office, leased buildings, the airport lighting, generator enclosure, and generator switch gear building, and FAA flight service station. Equipment fueling occurs outside from two aboveground storage tanks (ASTs) located to the west of the maintenance shop. Diesel fuel is stored in a 1,000 gallon AST for use in equipment and gasoline is stored in a 1,00 gallon AST for use in vehicles. Equipment maintenance takes place indoors at the maintenance shop. Vehicle washing occurs indoors at both the maintenance shop and fire fighting building. The maintenance shop and fire fighting building have concrete floors and floor drains. The floor drains in each building are connected to an oil/water separator. Upon passing through the oil/water separator, the water generated from the floor drains is discharged into the sanitary sewer system. Runway maintenance is limited to repainting runway markings (once a year) and sealing stress cracks in the asphalt surface (once every 2 to 3 years). These activities are performed in accordance with DOT&PF procedures and require dry weather. No deicing activities occur at the Cold Bay Airport.

Drainage patterns for the Cold Bay Airport are shown on figure(s) in Appendix A. In general, storm water runoff from the leased ramps, taxiways, runways, and roads flows to a series of drainage ditches and culverts which connect into a main drainage ditch that runs towards the north and discharges into Cold Bay. Two streams, Trout Creek and Stapp Creek, are located to the west and south of the runways, respectively, and discharge into Cold Bay. The creeks do not receive direct storm water from the runways. The locations of the streams, watershed area, and storm water outfalls are depicted in Appendix A.

Agency Notification Standard Report (cont'd)
Cause of the discharge(s), including a failure analysis of the system and subsystems in which the failure occurred:
Corrective actions and countermeasures taken, including a description of equipment repairs and replacements:
Additional preventive measures taken or contemplated to minimize possibility of recurrence:
Other pertinent information:

APPENDIX J
Tank Specifications

Appendix L –Best Management Practices and Typicals

Best Management Practices – Summary Table

Example Typicals for Stormwater Pollution Prevention

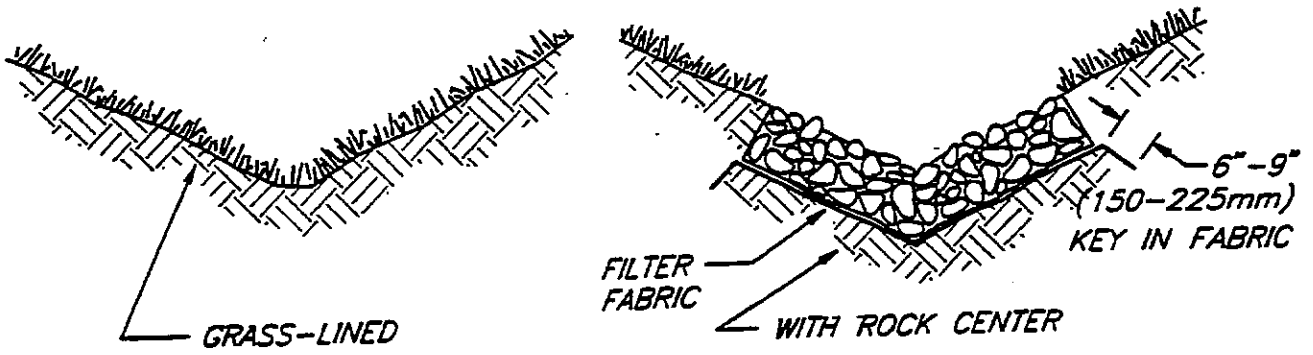
Best Management Practices – Summary Table

Best Management Practice (BMP)	
Minimizing Exposure – Vehicle and Equipment Maintenance Areas	1. Perform all cleaning operations indoors or under covering when possible. Conduct the cleaning operations in an area with a concrete floor with no floor other than those to approved disposal methods (including sanitary sewers or treatment facilities, oil/water separators, etc.) 2. Park vehicles and equipment indoor or under a roof whenever possible and maintain proper control of oil leaks/spills. 3. Check vehicles closely for leaks and use pans to collect fluid when leaks occur. 4. Use berms, curbs, grassed swales, or other diversion measures to ensure that stormwater runoff from other parts of the facility does not flow over the maintenance area. 5. Discharge vehicle wash or rinse water to the sanitary sewer (if allowed by sewer authority), wastewater treatment, a land application site, or recycle on-site. Do not discharge washwater to a storm drain or to surface water. 6. Inspect the maintenance area regularly to ensure BMPs are implemented. 7. Train employees on waste control and disposal procedures. 8. Inspect the maintenance area regularly for proper implementation of control measures.
Minimizing Exposure – Vehicle and Equipment Storage Areas	1. Store vehicles and equipment indoors. 2. Store vehicles and equipment awaiting maintenance in designated areas only. 3. Use absorbents to cleanup spills and leaks. 4. Use drip pans under all vehicles and equipment for the collection of fluids. 5. Regularly seep area to minimize debris on the ground. 6. Train employees on procedures for storage and inspection items.
Minimizing Exposure –Materials Storage Areas	1. Store materials indoors. 2. Maintain good integrity of all storage containers (e.g., used oil, hydraulic fluids, solvents, waste aircraft fuel). 3. Create a centralized storage area for waste materials. 4. Provide secondary containment around chemical

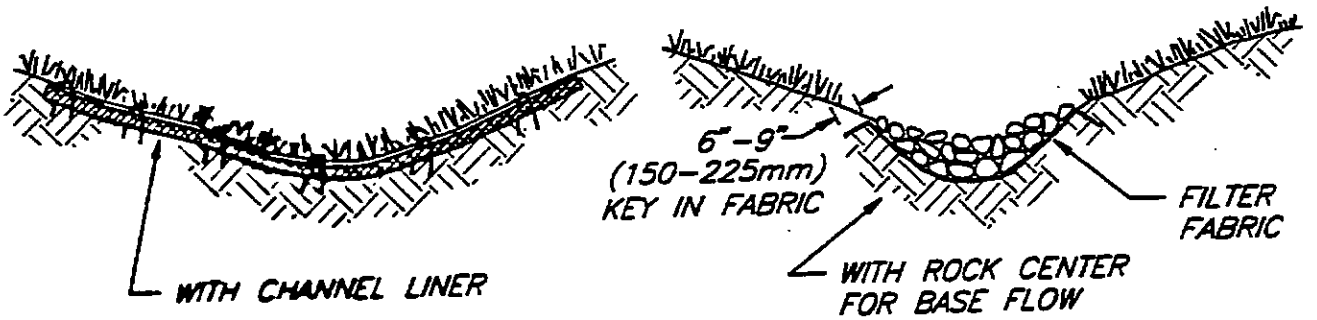
	storage areas. 5. Locate storage areas away from high traffic area and surface waters. 6. Inspect storage tanks and piping systems (pipes, pumps, flanges, couplings, hoses, and valves) for failures or leaks and perform preventative maintenance. 7. Plainly label containers. 8. Provide fluid level indicators. 9. Properly dispose of chemicals that are no longer in use. 10. Store and handle reactive, ignitable, or flammable liquids in compliance with applicable local fire codes, local zoning codes, and the National Electric Code. 11. Develop and implement spill plans or spill prevention, containment and countermeasure (SPCC plans). 12. Train employees in spill prevention and proper materials management.
Minimizing Exposure – Fuel System and Fueling Areas	1. Use fueling hoses with check valves to prevent hose draining after filling. 2. Provide spill kits on all fuel trucks, at fueling stations, in each hangar and at strategic locations. Each kit should be properly stocked and maintained. Store used materials in individual sealed container and labeled to ensure proper handling and disposal as a hazardous material. 3. Keep spills cleanup materials readily available. 4. Clean up spills and leaks immediately. 5. Use dry cleanup methods for fuel areas rather than hosing down the fuel area. Sweep up absorbents as soon as spilled substances have been absorbed. 6. Use spill and overflow protection devices. 7. Provide curbing or posts around fuel pumps to prevent collisions from vehicles. 8. Regularly inspect and perform preventative maintenance on fuel storage tanks to detect potential leaks before they occur. 9. Inspect the fueling area for leaks and spills. 10. Do not allow “topping off” of the fuel in the receiving equipment. 11. Train personnel on vehicle fueling BMPs.
Minimizing Exposure – Storing Liquid Fuels	1. Develop and implement spill plans. 2. Train employees in spill prevention and control. 3. For ASTs – use double walled tanks with overflow protection. 4. For ASTs – Keep liquid transfer nozzle/hoses in secondary containment area. 5. Store drums indoors when possible.

	6. Clearly label drums with contents. Clearly label drums with contents.
Good Housekeeping – Vehicle and Equipment Maintenance Areas	1. Prevent and contain spills and drips 2. Perform all cleaning at a centralized station so the solvents stay in one area. 3. Remove any parts that are dipped in liquid slowly to avoid spills. 4. Use drip pans, drain boards, and drying racks to direct drips back into fluid holding tank for reuse. 5. Drain all parts of fluids prior to disposal. Oil filters can be crushed and recycled. 6. Transfer used fluids to the proper container promptly; do not leave full drip pans or other containers around the shop. Empty and clean drip pans and containers. 7. Clean up leaks, drips, and other spills without using large amounts of water. Use absorbents to for dry cleanup whenever possible. 8. Prohibit the practice of hosing down an area where the practice would result in the discharge of pollutants to a stormwater system. 9. Prohibit pouring liquid waste into floor drains, sinks, outdoor storm drain inlets, or other storm drains or sewer connections. 10. Eliminate or reduce the number and amount of hazardous materials and waste by substituting nonhazardous or less hazardous waste materials. 11. Label and track the recycling of waste material. 12. Store batteries and other significant materials inside. 13. Dispose of greasy rags, oil filters, air filters, batteries, spent coolant, and degreasers in compliance with environmental regulations.
Maintenance – Vehicle and Equipment Monitoring and Repairs	1. Regularly inspect vehicles for leaks and maintenance 2. Vehicles are kept in good working condition and monitored for leaks to prevent discharges 3. Leaking equipment is kept indoors until repairs can be made with drip pans and absorbents in place as necessary. 4. Equipments maintenance is conducted indoors 5. All storage containers are monitored for leaks and stored indoors when possible. 6. Fuel tanks are inspected regularly for leaks and integrity.
Management of Runoff	1. Maintain as much vegetation as possible in maintenance areas and areas where stormwater leaves impermeable surfaces. 2. Utilize velocity dissipaters such as; vegetation, rock outfalls, and check dams. 3. Create opportunities for filtration and settling such

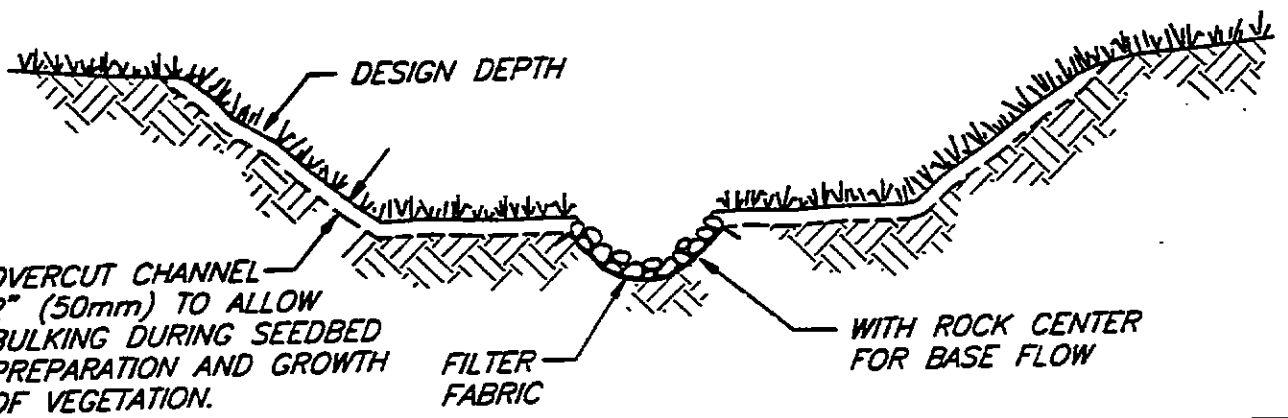
	as gently sloped vegetated ditches.
Waste, Garbage, and Floatable Debris	1. Waste and debris are stored in cover containers or indoors and removed regularly. 2. Maintenance and airport areas are kept clear of debris and clutter. 3. The oil water separator is cleaned out annually. 4. Human waste and all water is treated through a waste water facility.



TYPICAL V-SHAPED CHANNEL CROSS-SECTION



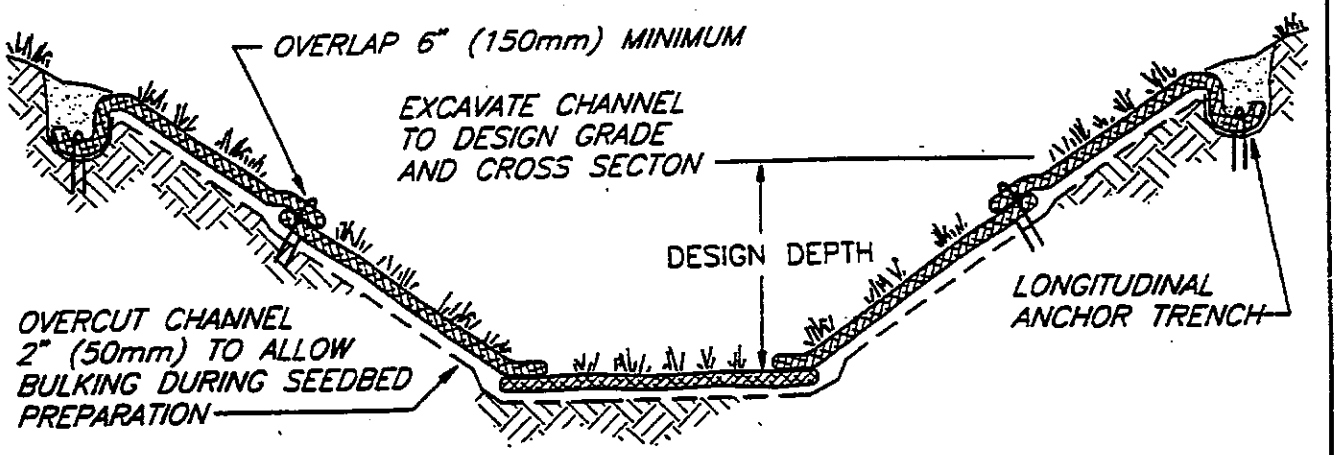
TYPICAL PARABOLIC CHANNEL CROSS-SECTION

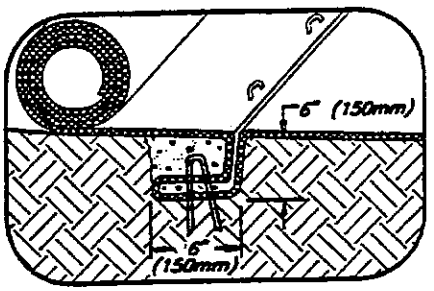


TYPICAL TRAPEZOIDAL CHANNEL CROSS-SECTION

GRASS-LINED CHANNEL TYPICAL CROSS SECTIONS

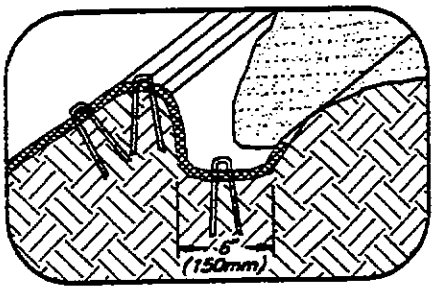
FILE: GRASS-XS



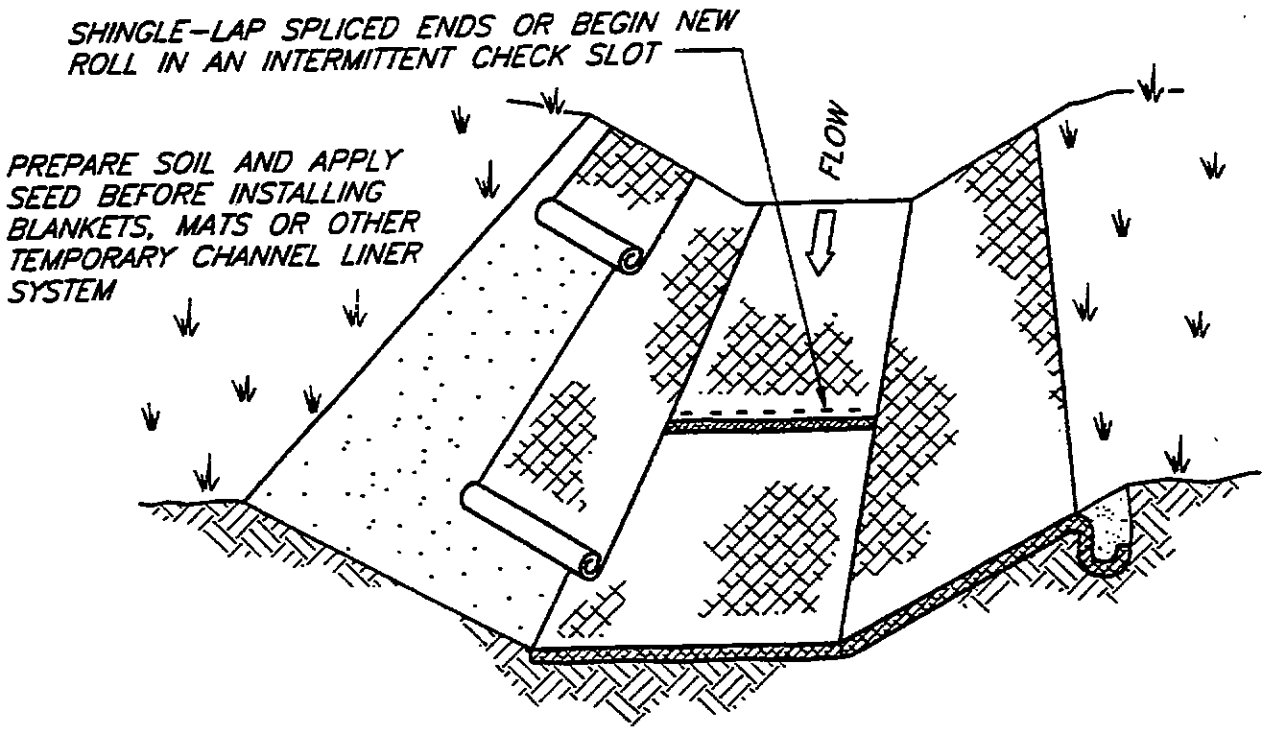


INTERMITTENT CHECK SLOT

TYPICAL INSTALLATION WITH EROSION CONTROL BLANKETS OR TURF REINFORCEMENT MATS



LONGITUDINAL ANCHOR TRENCH



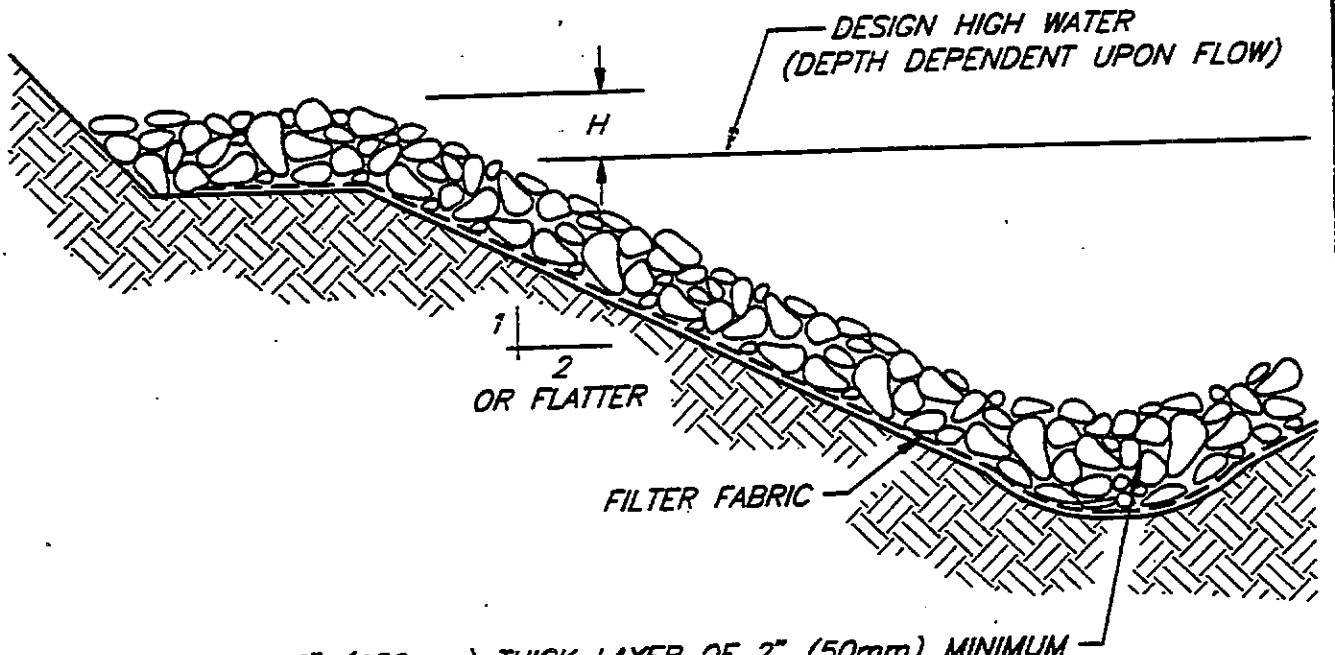
NOTES:
1. DESIGN VELOCITIES EXCEEDING 2 FT/SEC (0.5m/sec) REQUIRE TEMPORARY BLANKETS, MATS OR SIMILAR LINERS TO PROTECT SEED AND SOIL UNTIL VEGETATION BECOMES ESTABLISHED.
2. GRASS-LINED CHANNELS WITH DESIGN VELOCITIES EXCEEDING 6 FT/SEC (2m/sec) SHOULD INCLUDE TURF REINFORCEMENT MATS.

NOT TO SCALE

GRASS-LINED CHANNEL TYPICAL INSTALLATION

FILE: GRSSINST

DESIGN HEIGHT (H), WIDTH AND STONE SIZE SHALL BE DETERMINED BY THE ENGINEER

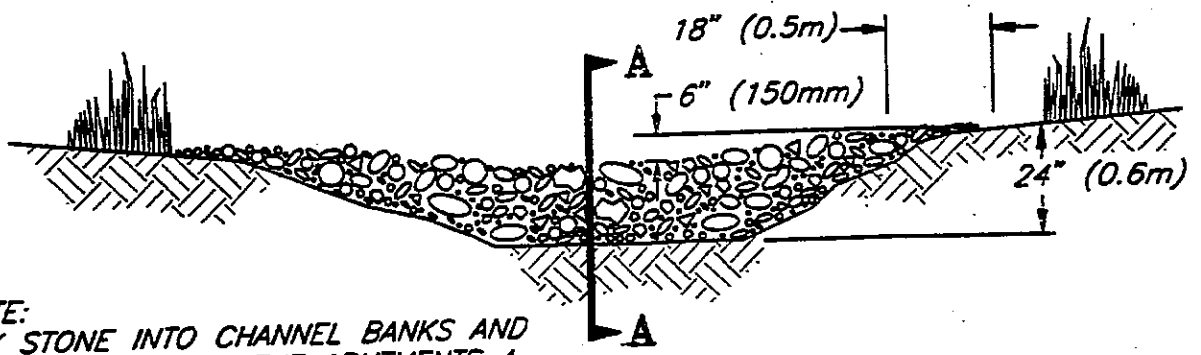


MINIMUM 6" (150mm) THICK LAYER OF 2" (50mm) MINIMUM DIAMETER DRAIN ROCK. LARGER STONE SHALL BE USED DEPENDENT UPON GRADIENT, SOIL TYPE, AND DESIGN FLOW.

TYPICAL SECTION

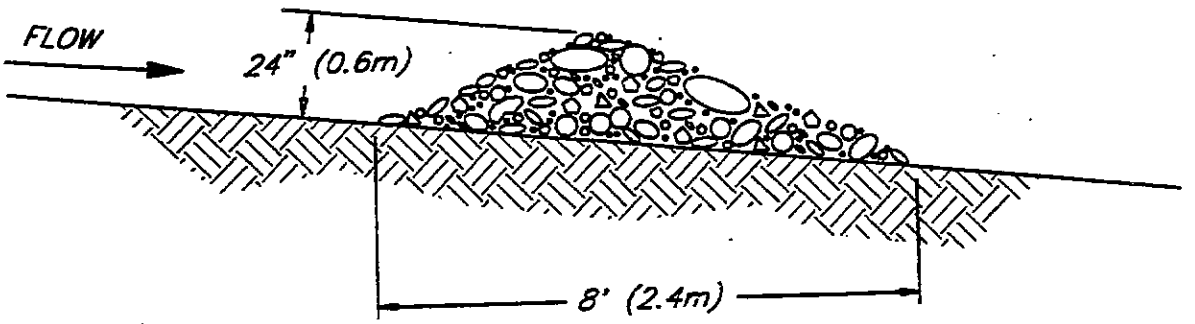
ROCK LINED CHANNEL

FILE: RCKCHNEL



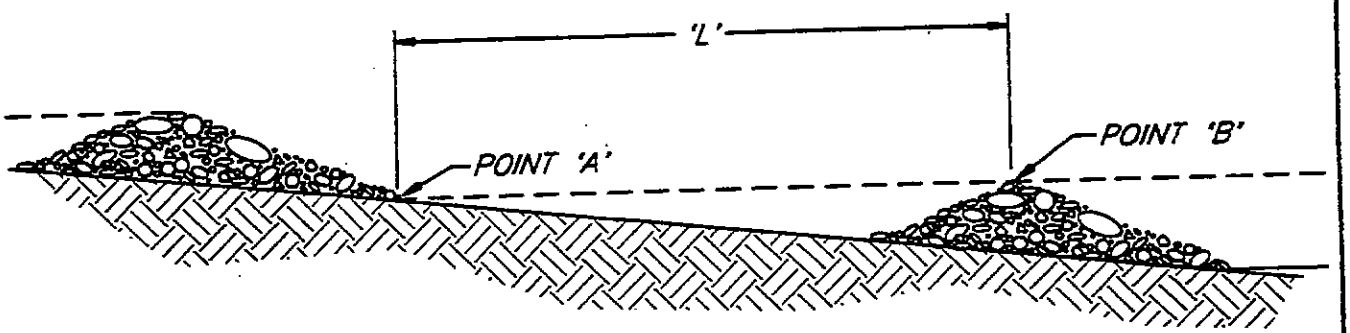
NOTE:
KEY STONE INTO CHANNEL BANKS AND EXTEND IT BEYOND THE ABUTMENTS A MINIMUM OF 18" (0.5m) TO PREVENT FLOW AROUND DAM.

VIEW LOOKING UPSTREAM



SECTION A – A

'L' = THE DISTANCE SUCH THAT POINTS 'A' AND 'B' ARE OF EQUAL ELEVATION.

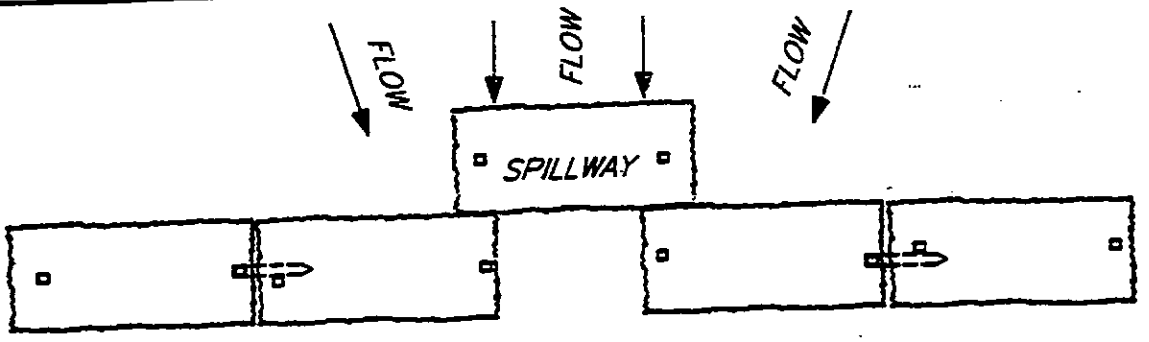


SPACING BETWEEN CHECK DAMS

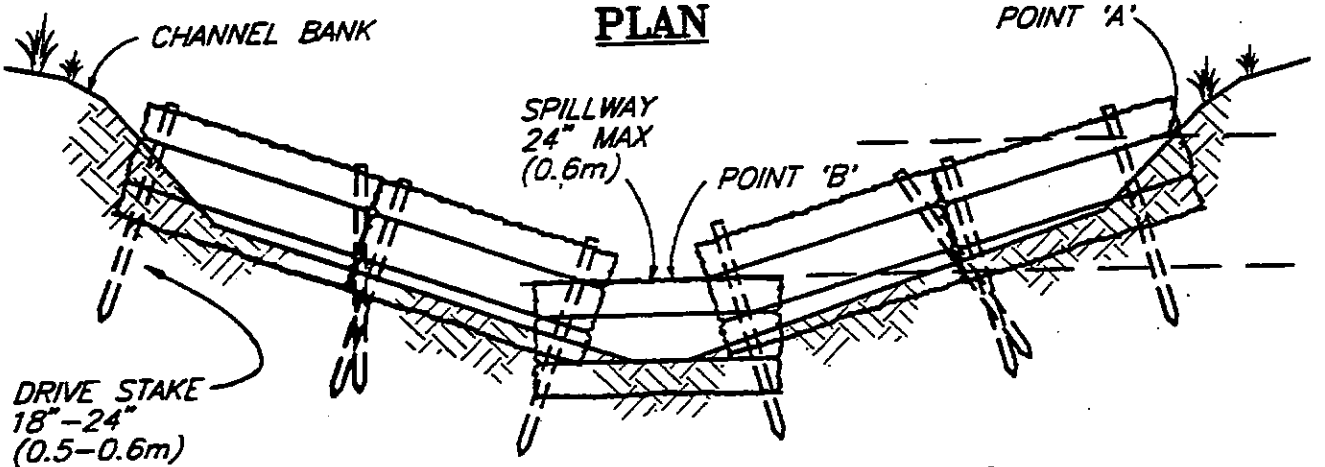
NOT TO SCALE

ROCK CHECK DAM

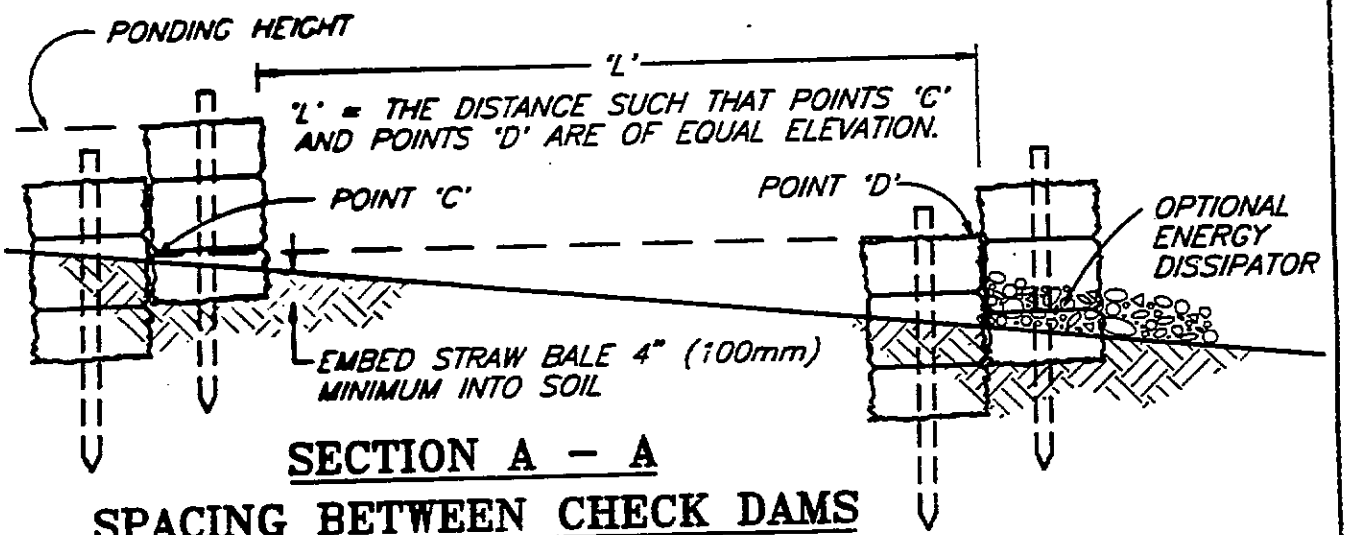
FILE: RCKCHKDM



PLAN



VIEW LOOKING UPSTREAM



SECTION A - A

SPACING BETWEEN CHECK DAMS

NOTES:

1. EMBED BALES 4" (100mm) INTO THE SOIL AND "KEY" BALES INTO THE CHANNEL BANKS.
2. POINT 'A' MUST BE HIGHER THAN POINT 'B'. (SPILLWAY HEIGHT)
3. PLACE BALES PERPENDICULAR TO THE FLOW WITH ENDS TIGHTLY ABUTTING.
4. SPILLWAY HEIGHT SHALL NOT EXCEED 24" (0.6m).
5. INSPECT AFTER EACH SIGNIFICANT STORM, MAINTAIN AND REPAIR PROMPTLY.

NOT TO SCALE

STRAW BALE CHECK DAM

FILE: STRCHKDM

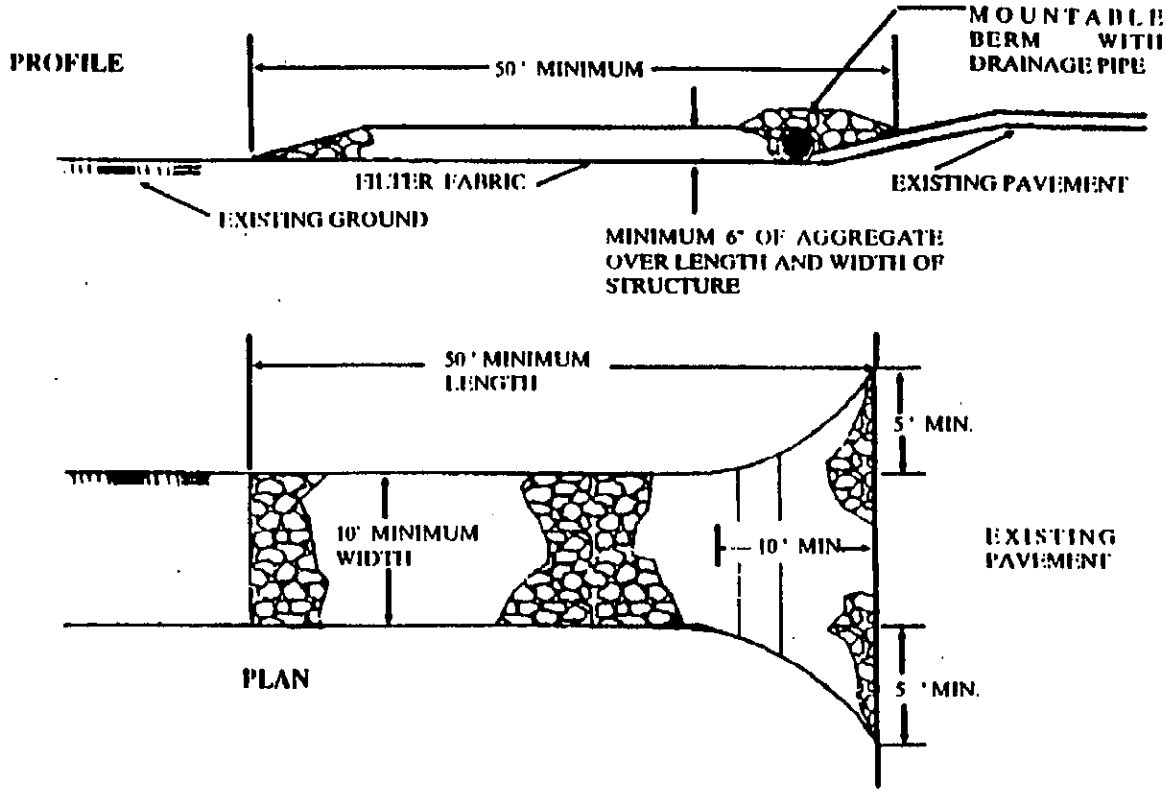
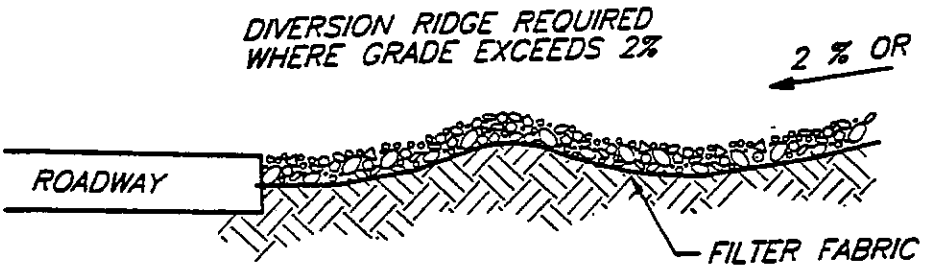
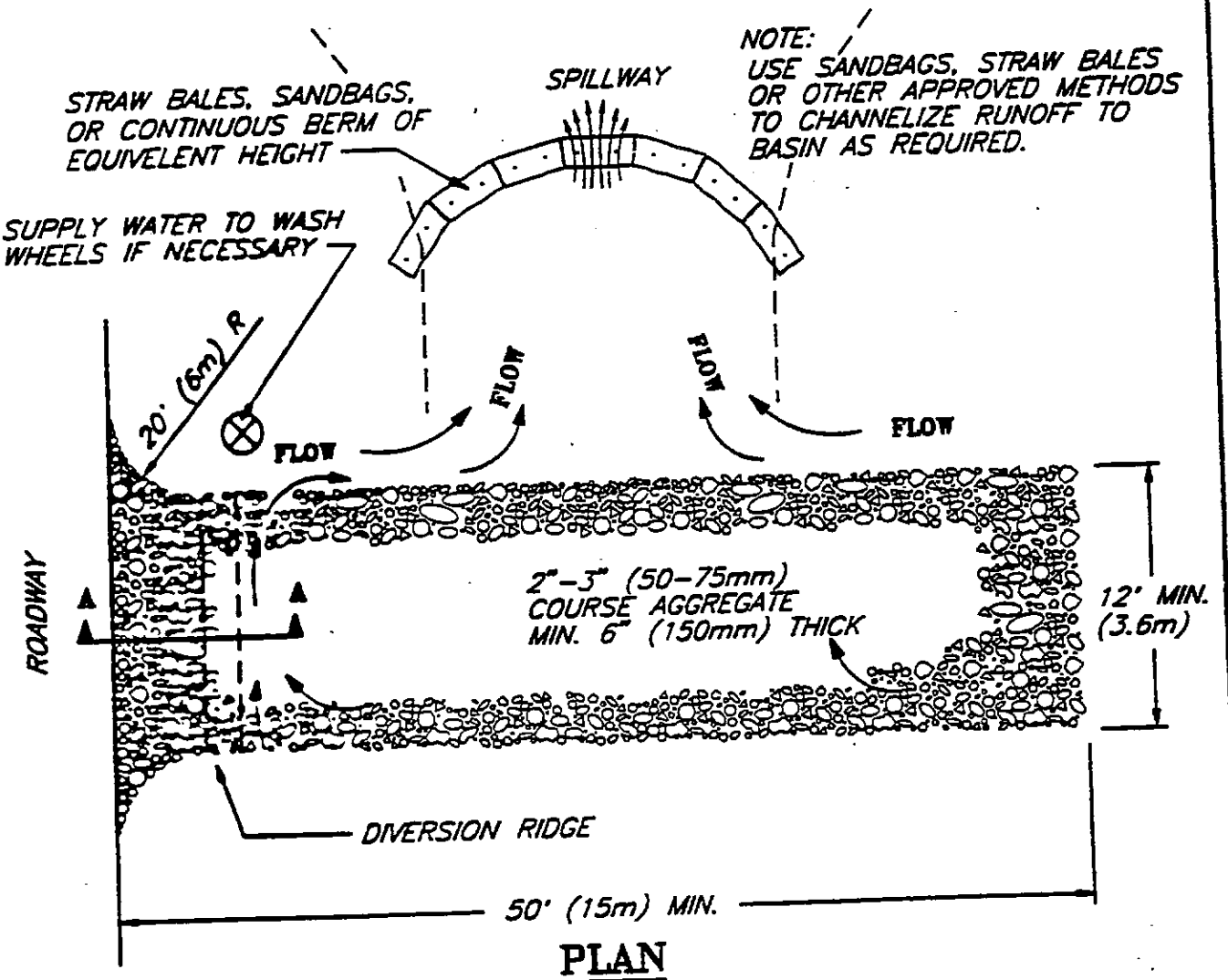


Figure 4-7
Stabilized Construction Exit

Cold Bay SWPPP
Appendix L



SECTION A – A



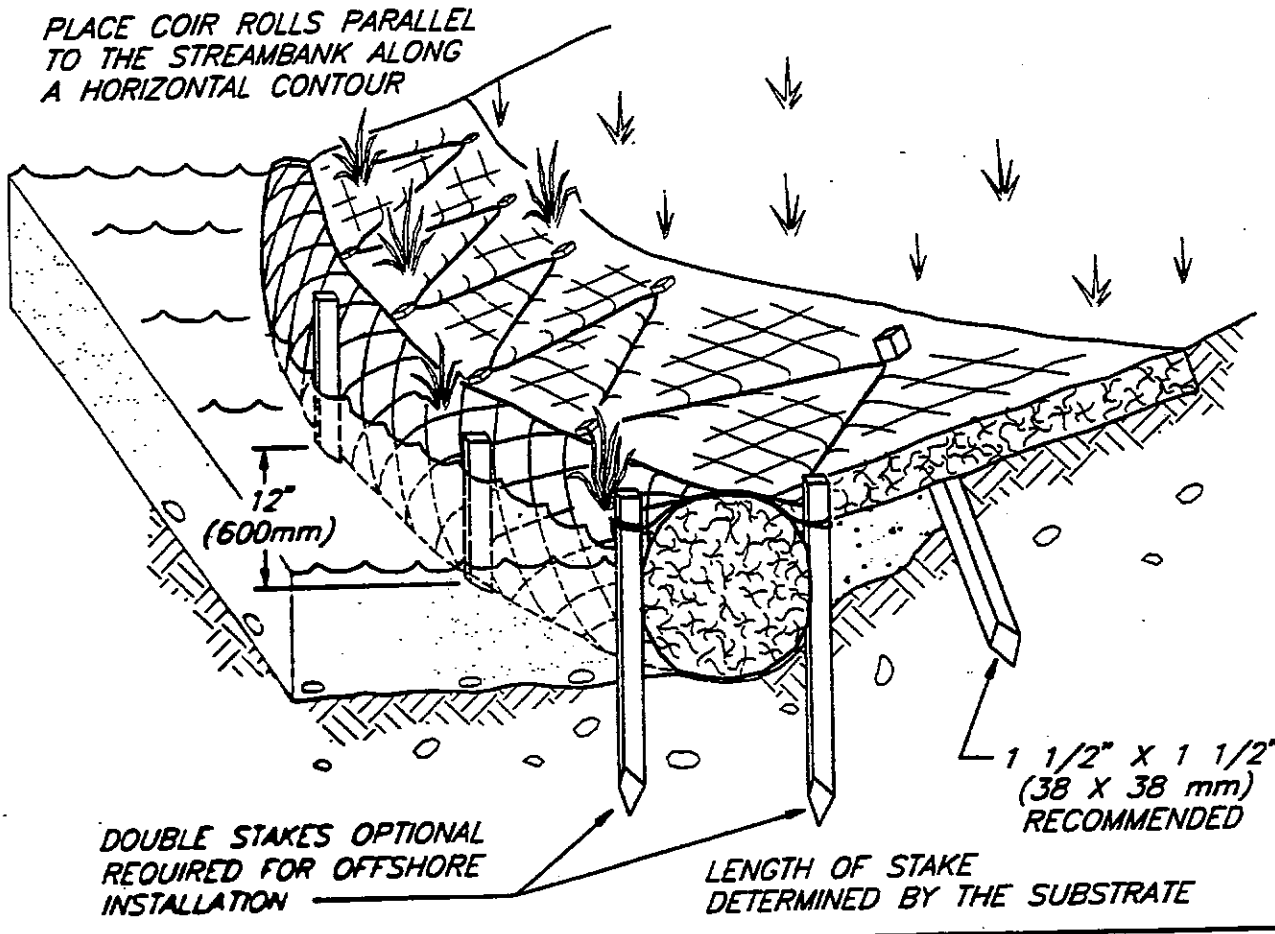
PLAN

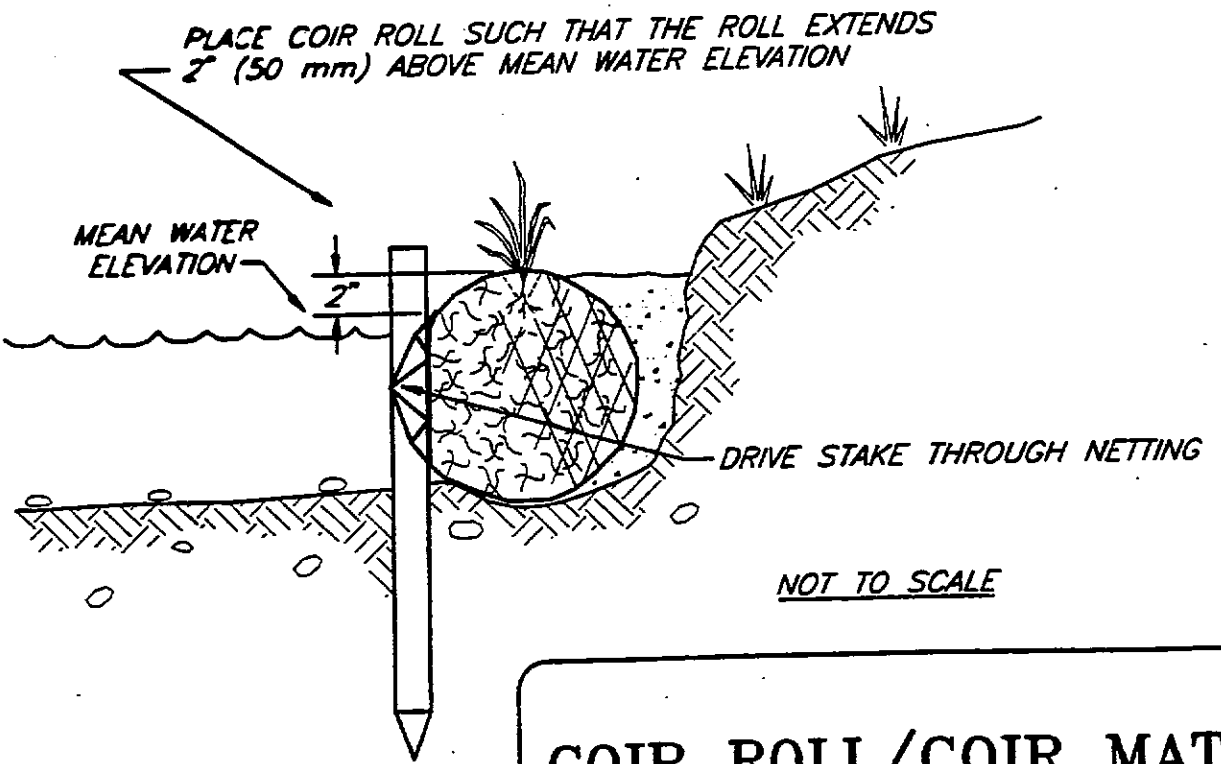
NOTES:

1. THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION THAT WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHT-OF-WAYS. THIS MAY REQUIRE TOP DRESSING, REPAIR AND/OR CLEANOUT OF ANY MEASURES USED TO TRAP SEDIMENT.
2. WHEN NECESSARY, WHEELS SHALL BE CLEANED PRIOR TO ENTRANCE ONTO PUBLIC RIGHT-OF-WAY.
3. WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON AN AREA STABLIZED WITH CRUSHED STONE THAT DRAINS INTO AN APPROVED SEDIMENT TRAP OR SEDIMENT BASIN.

TEMPORARY GRAVEL CONSTRUCTION ENTRANCE/EXIT

FILE: ENTRANCE

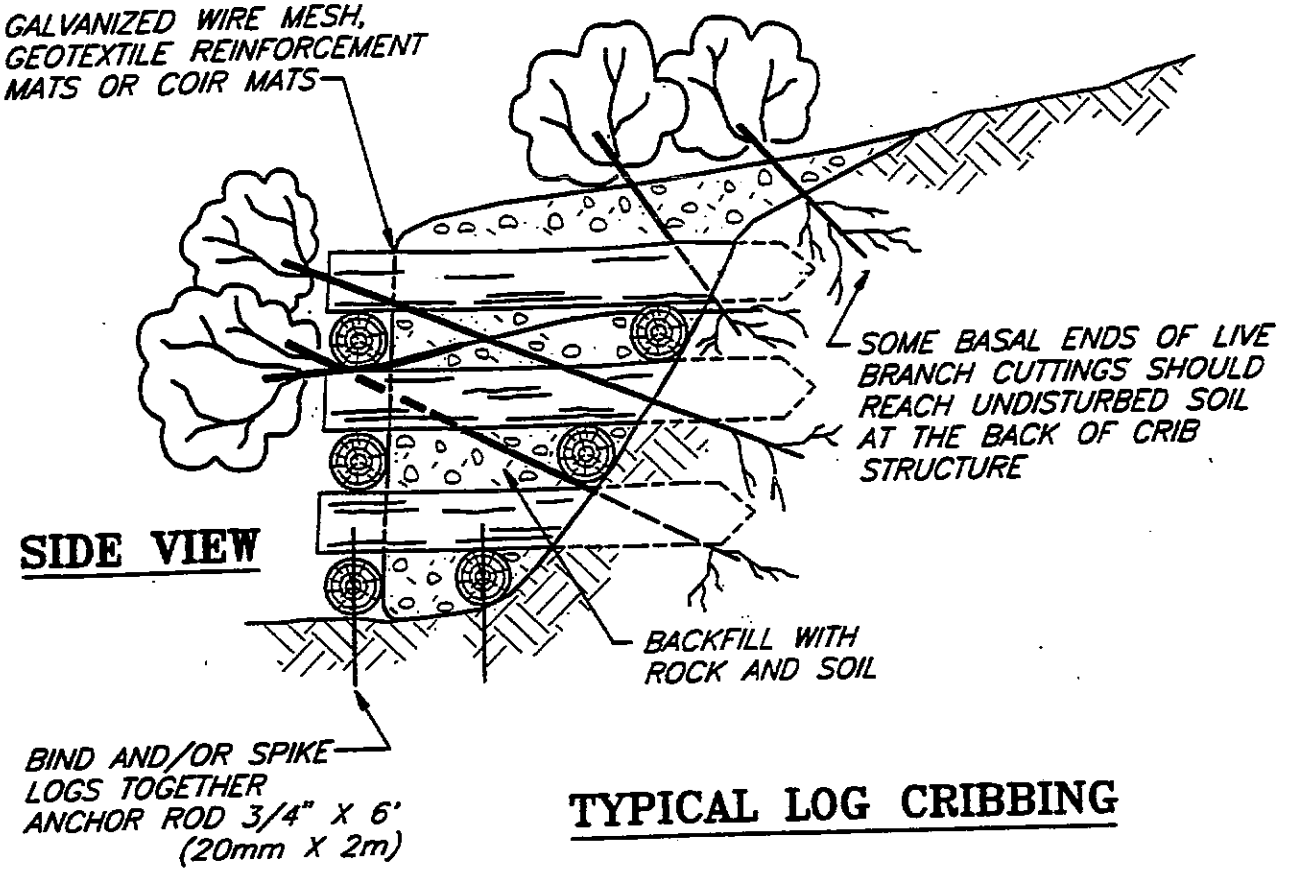




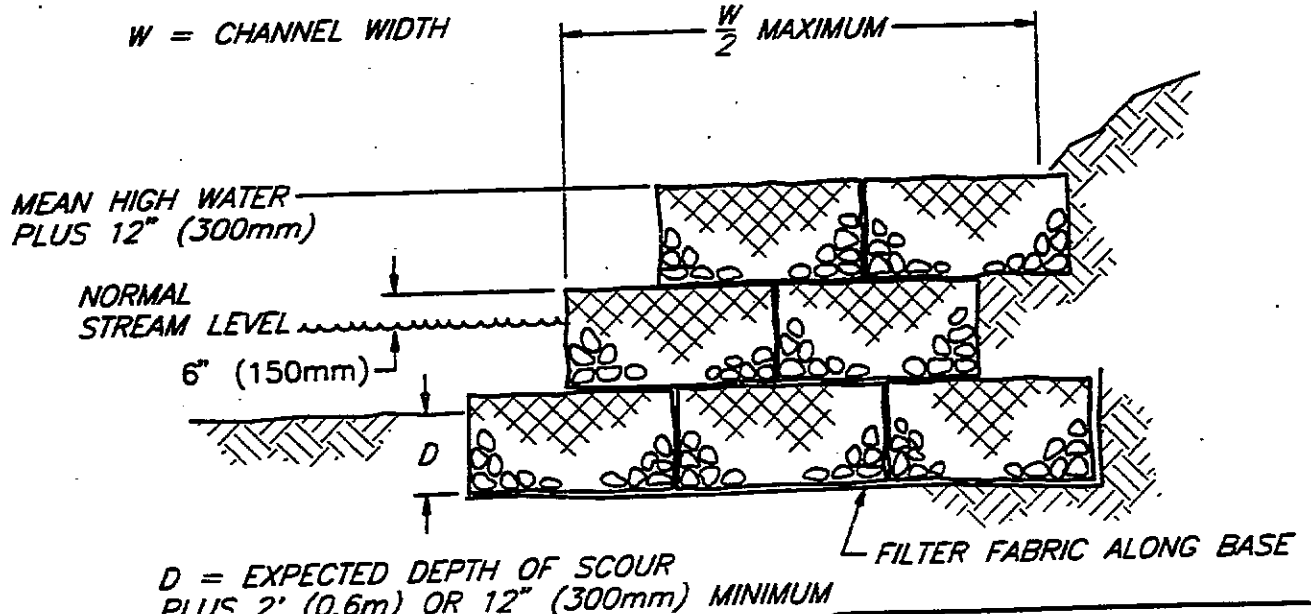
NOT TO SCALE

COIR ROLL/COIR MATS

FILE: COIRRM



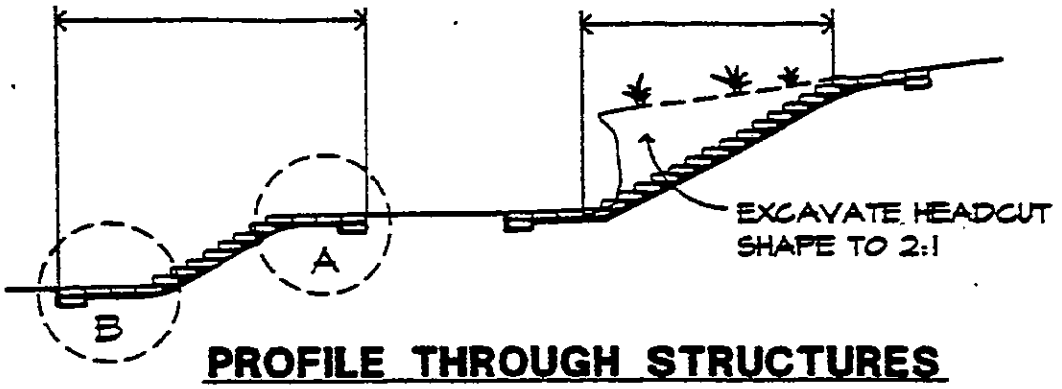
TYPICAL LOG CRIBBING



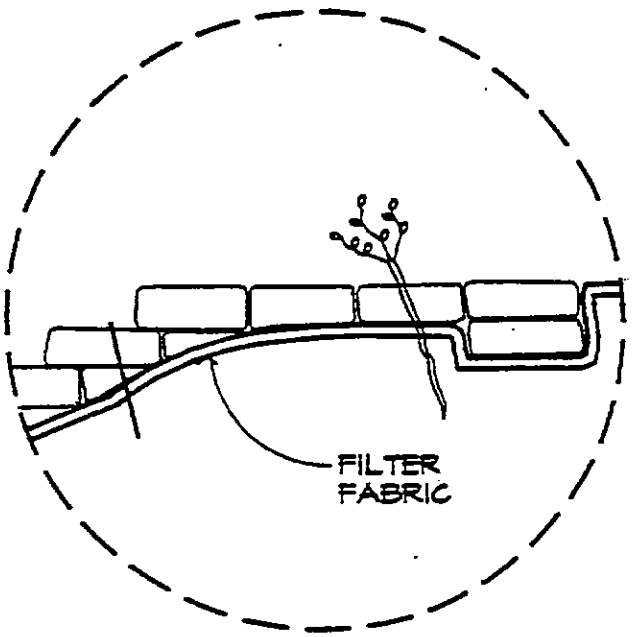
TYPICAL GABION DEFLECTOR

STREAMBANK STABILIZATION

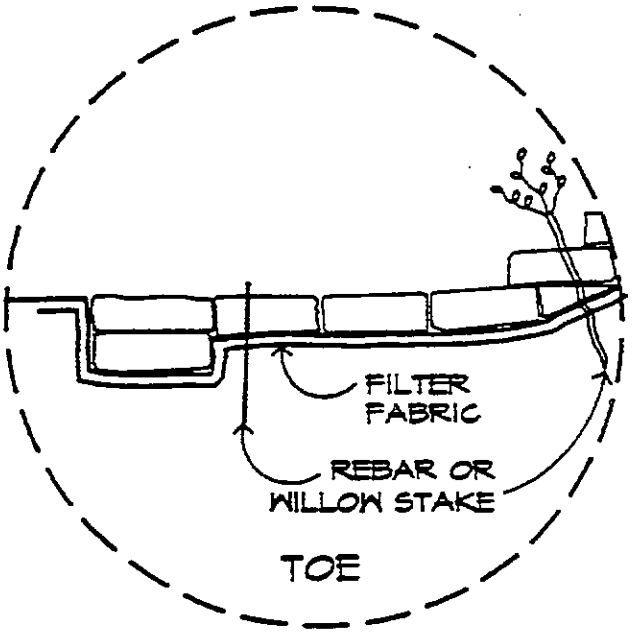
FILE: STREAMBK



PROFILE THROUGH STRUCTURES

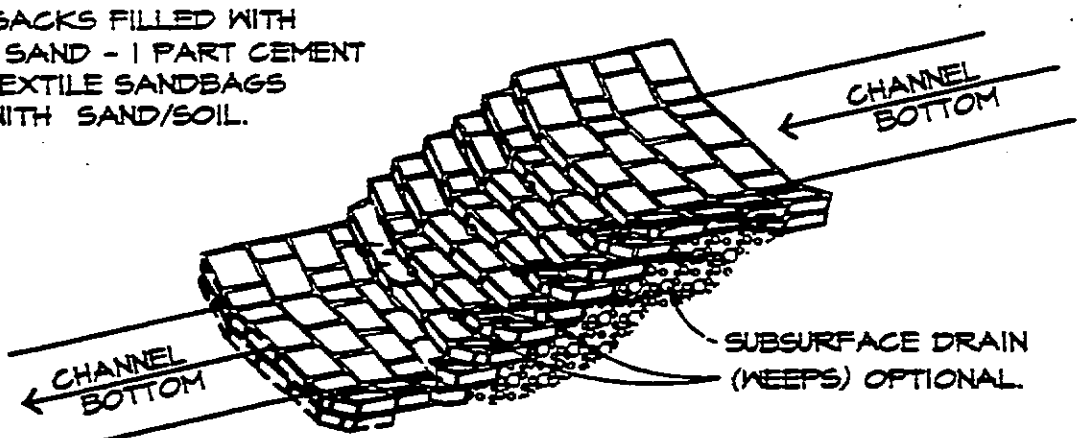


DETAIL - 'A'



DETAIL - 'B'

BURLAP SACKS FILLED WITH
4 PARTS SAND - 1 PART CEMENT
OR GEOTEXTILE SANDBAGS
FILLED WITH SAND/SOIL.



ISOMETRIC VIEW

SANDBAG HEADCUT STRUCTURE

ES:

1. GEOTEXTILE SANDBAGS MAY BE STAKED WITH LIVE WILLOW STAKES, REBAR OR 'SNAP TIE' STAKES SHOULD BE USED WITH CEMENT SANDBAGS.
2. ROCK RIPRAP MAY BE USED IN PLACE OF SANDBAGS.

SANDBAG HEADCUT STRUCTURE

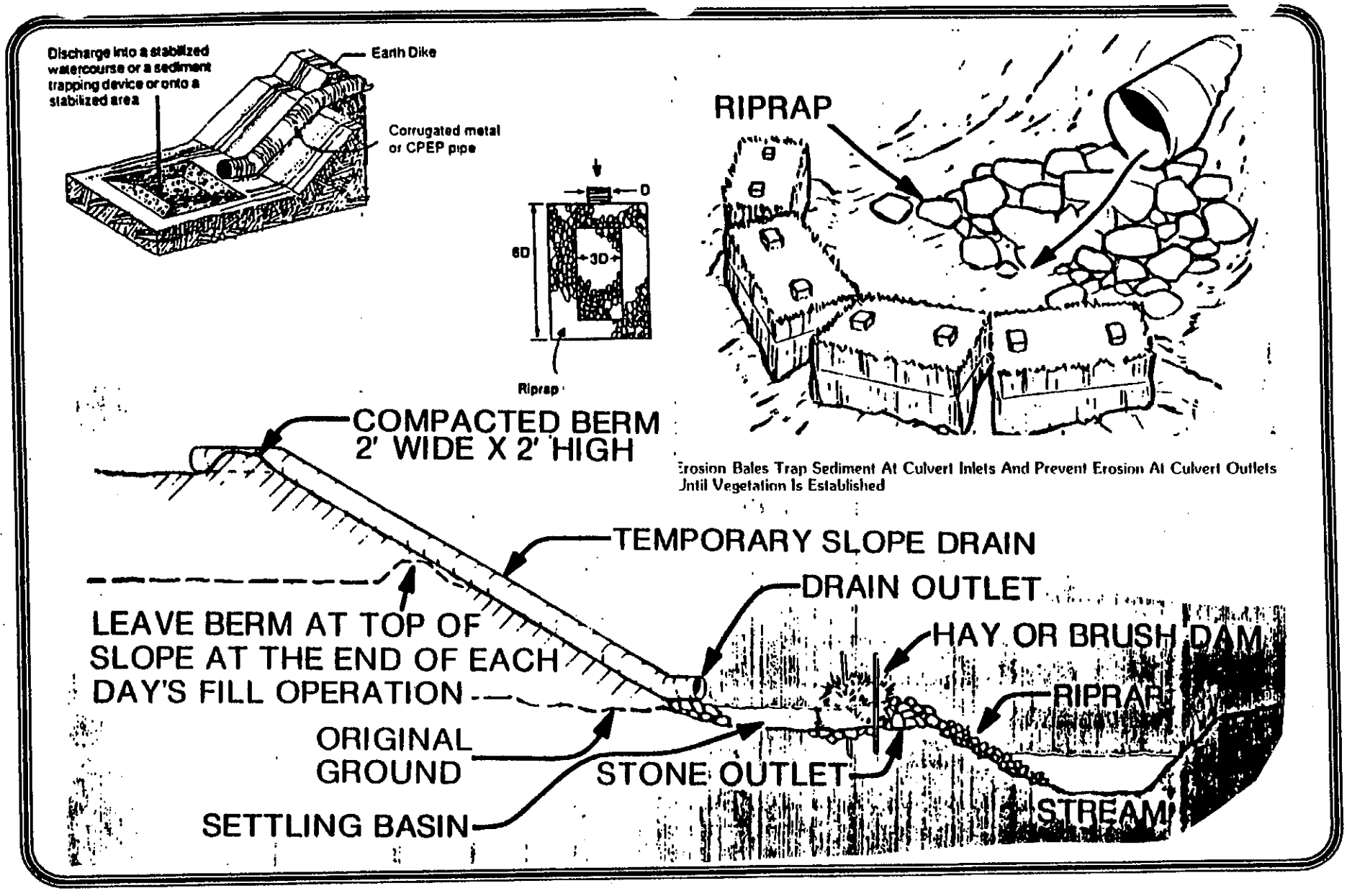
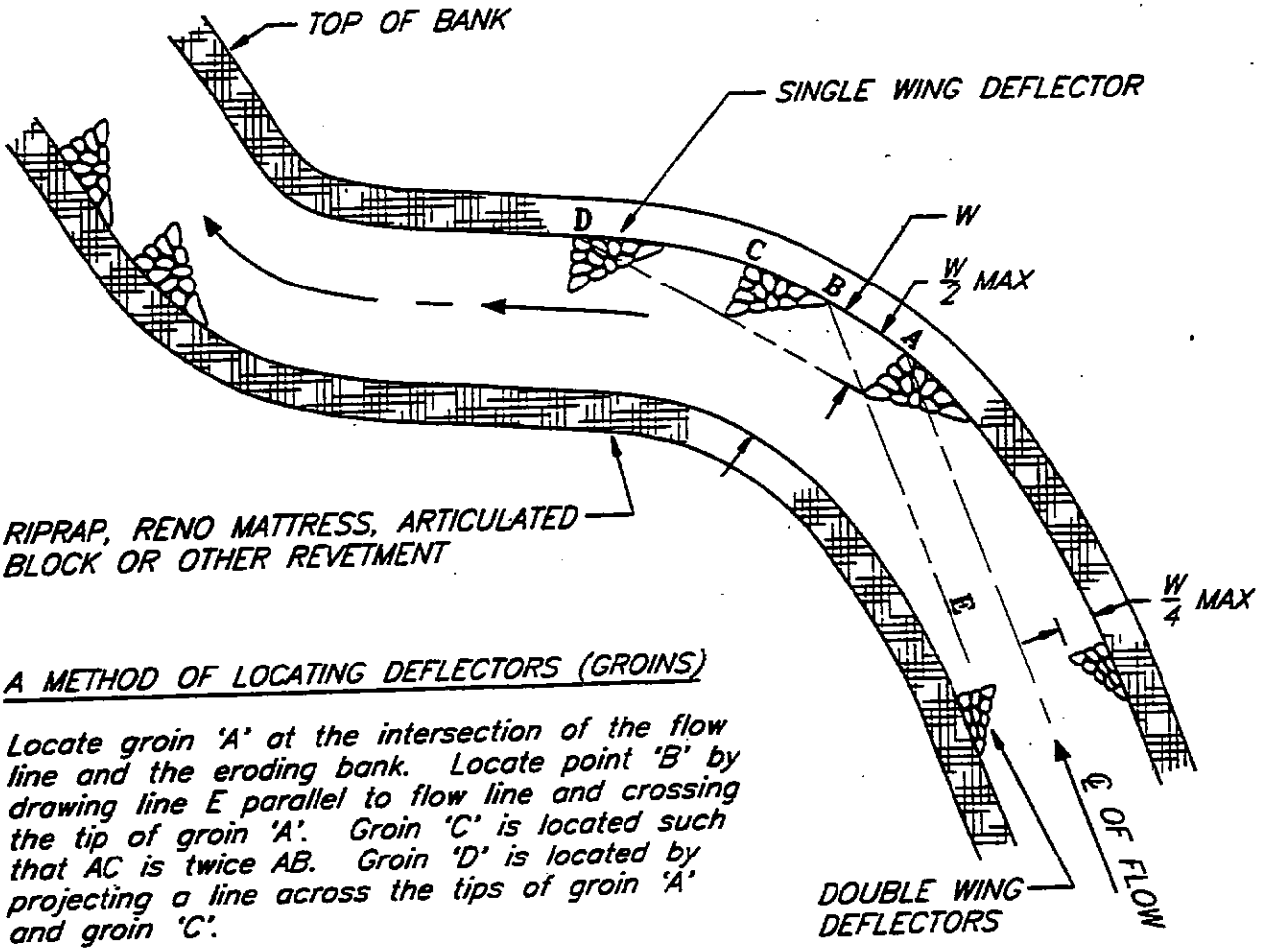
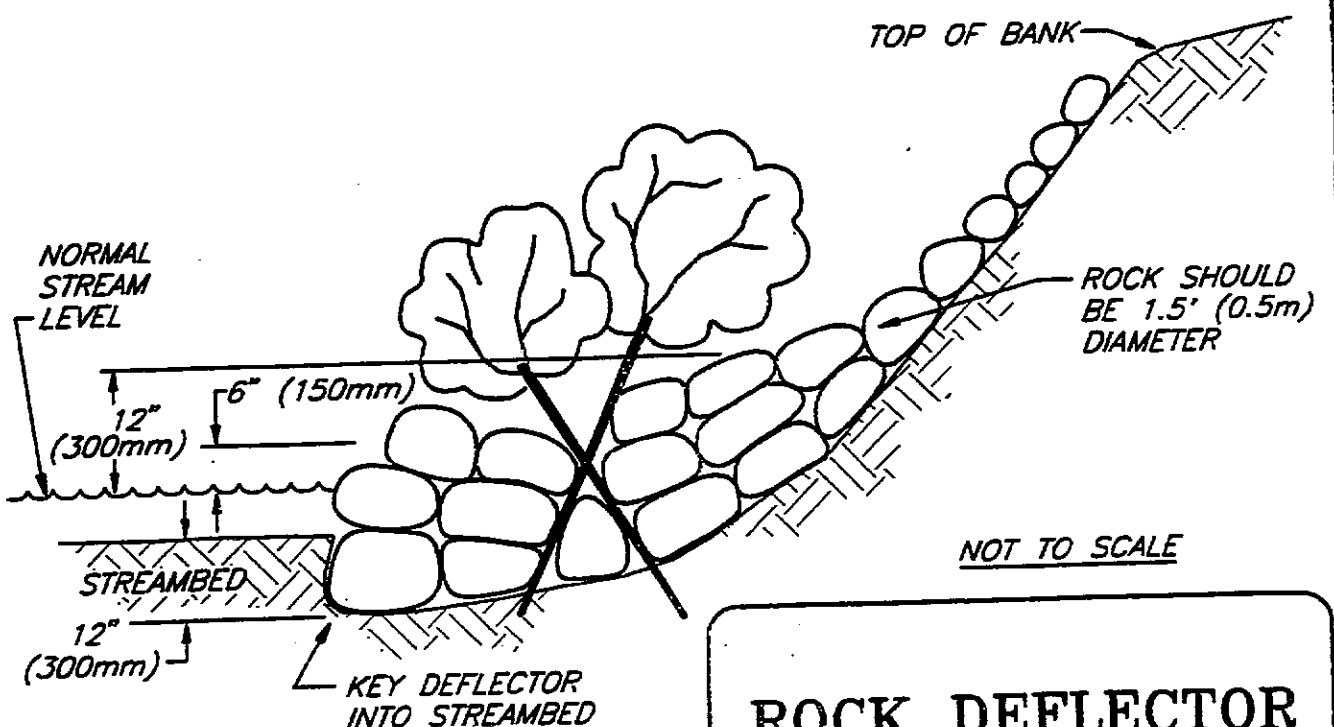


Figure 4-11
Outlet Protection



A METHOD OF LOCATING DEFLECTORS (GROINS)

Locate groin 'A' at the intersection of the flow line and the eroding bank. Locate point 'B' by drawing line E parallel to flow line and crossing the tip of groin 'A'. Groin 'C' is located such that AC is twice AB. Groin 'D' is located by projecting a line across the tips of groin 'A' and groin 'C'.

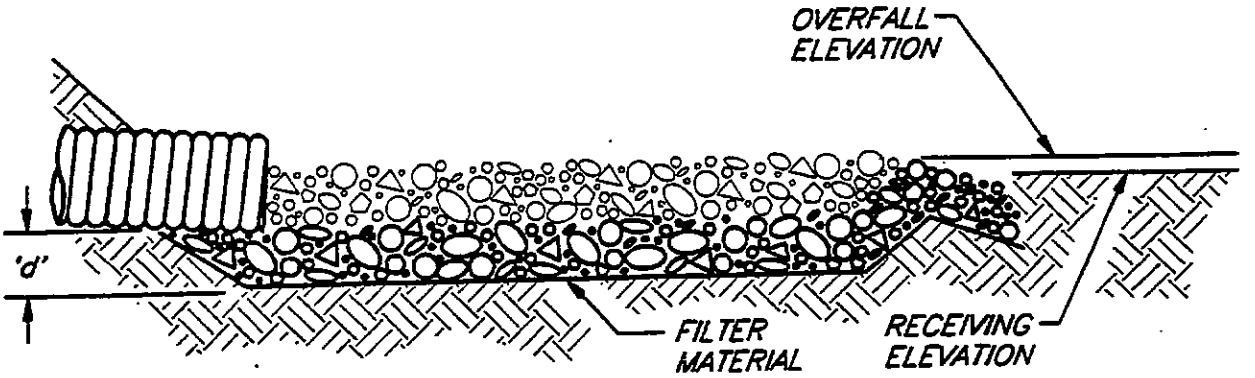


NOT TO SCALE

CROSS SECTION

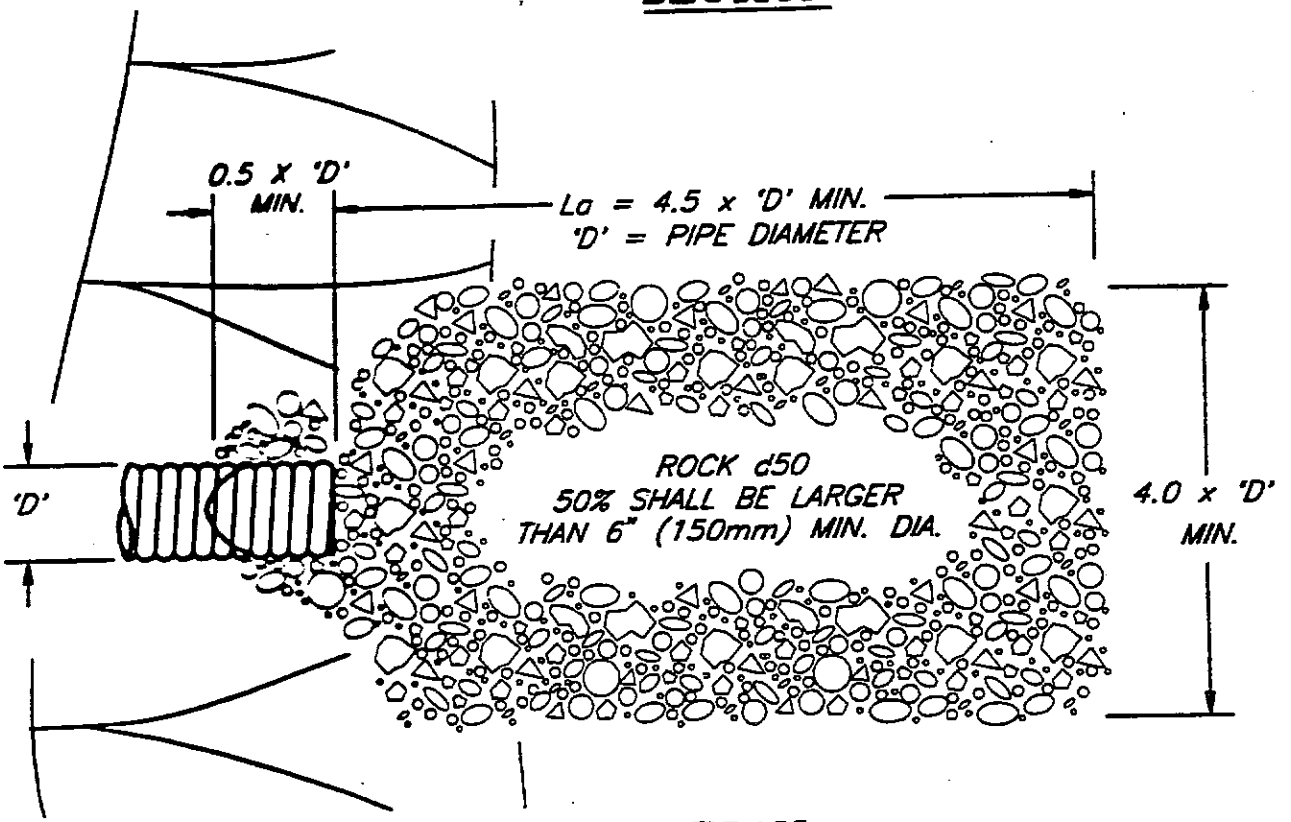
ROCK DEFLECTOR

FILE: ROCKDEFL



THICKNESS ('d') = 1.5 x MAX. ROCK DIAMETER – 6" (150mm) MIN.

SECTION



PLAN

NOTES:

1. 'La' = LENGTH OF APRON. DISTANCE 'La' SHALL BE OF SUFFICIENT LENGTH TO DISSIPATE ENERGY.
2. APRON SHALL BE SET AT A ZERO GRADE AND ALIGNED STRAIGHT.
3. FILTER MATERIAL SHALL BE FILTER FABRIC OR 6" (150mm) THICK MINIMUM GRADED GRAVEL LAYER.

ENERGY DISSIPATOR

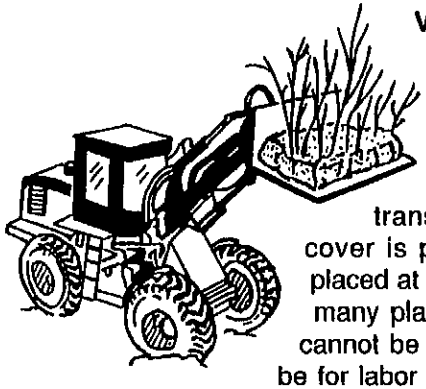
FILE: ENRGYDIS

PLUGS ; SPRIGS

TRANSPLANTING

Transplanting is a revegetation technique that removes a plant, or plants containing roots and shoots from one site to be replanted at another. Transplanting can take several forms generally distinguished by size: vegetation mats, plugs, sprigs and transplants (single plants). All forms require careful selection and handling in order for the transplanting effort to be successful. Refer to *Streambank Revegetation Plant Species Selection List* for plant material suggestions.

Locate a donor site and obtain permission to harvest plants. In cases where plants are going to be destroyed by construction, consider salvaging the plants that would otherwise be lost. The conditions of the donor site need to be relatively similar to those at the transplanting site. The best time to transplant is when plants are dormant. It is essential that the plant materials do not dry out while in transport and after planting. Transplanting efforts can be mechanized.

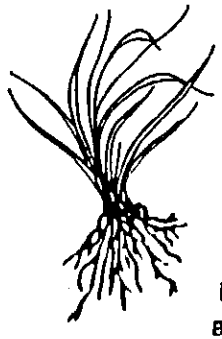


VEGETATIVE MAT

A vegetative mat is the largest transplant. Dimensions of the mats vary from one to several feet square and may contain woody and/or herbaceous vegetation. The greatest benefit of this transplanting technique is that vegetative cover is provided immediately after the mat is placed at the new location. The mats often contain many plant species, especially native plants that cannot be obtained elsewhere. Often, the cost will be for labor and machinery for moving and installing the mat.

Harvest a vegetative mat by cutting the shoots and root/soil mass into a block. The root/soil mass is cut as deeply as possible. The mat is then lifted from the ground by hand or with mechanized equipment and transported to the planting site.

Prepare the planting site by creating a depression in the soil that will accommodate the dimensions of the mat. The sides of the mat should be covered by soil. If the mat is placed directly on the surface with other mats immediately adjacent to each other, make sure that the edges of the mat are not left exposed to the air which would cause damage to the roots. If needed, soil should be placed in the spaces between mats to cover the roots.



PLUGS

Plugs are smaller than vegetative mats an not necessarily, contain only one plant spe can be harvested from a donor community tools and transported easily to the planting site particularly well suited for planting in wetlands, ing grass rolls or being divided into sprigs.

Dig a plug with a shovel. A plug may range fr inches in diameter. It is important to include as many roots and as much soil as possible with each plug.

Plant plugs so that the new soil level matches the soil level of the donor site. If the planting site is dry, the plug should be planted in the center of a small depression that will catch and retain water. The soil around the plug should be pressed firmly into place.

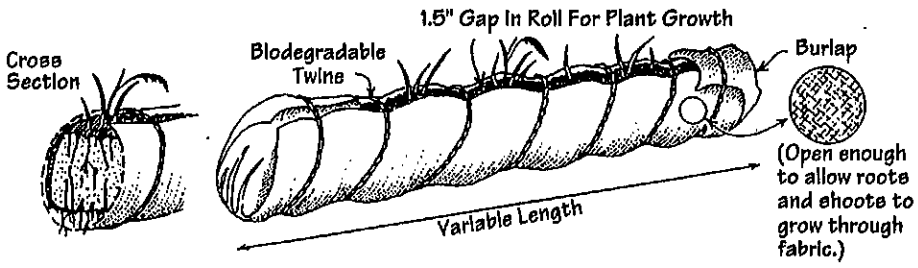
SPRIGS

A sprig is the smallest transplant unit, consisting of a single shoot and roots. Grasses and sedges are often transplanted as sprigs. Species with a rhizomatous (underground stem) growth form are most suited for sprigging. Sprigs are often planted in wetlands or into coir logs.

Prepare a sprig from a small plug that contains one plant species. The plug can be separated into sprigs either at the donor site or the planting site. The important point is to keep the plant material moist, removed from direct sunlight and wind while preparing the sprigs and transporting them to the planting site. Harvest only the number of sprigs that can be planted the same day.

Plant a sprig by sticking a shovel in the ground perpendicularly; push it forward to create a small opening; place the sprig in the opening, remove the shovel and then firm the ground around the sprig. Care should be taken to ensure that the entire root system is covered by soil. A more extensive discussion of the sprigging is found in *Beach Wildrye: Planting Guide for Alaska* (Wright, 1994).

GRASS ROLLS



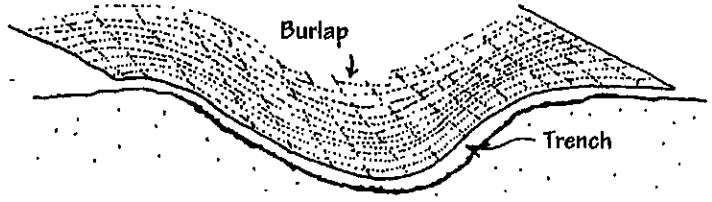
Grass rolls are often used to revegetate shorelines and streambanks where grasses and grass-like plants have been the primary vegetation type and where seeding is impractical due to fluctuating water levels or other site conditions. Clumps of grass sod are placed tightly together, side by side with shoots pointing up, in a sausage like structure and held together with burlap and twine. The roll is then anchored in place. This technique reintroduces herbaceous vegetation to a site while simultaneously providing some structural stability. Ultimately, the sod will form a dense root system along the streambank and provide structural protection to the site. When the grasses die back at the end of each growing season, their leaves hang over the streambank and provide rearing habitat for fish.

Construct a grass roll by laying out a length of burlap; place clumps of sod tightly together in the middle of the burlap. Bluejoint reedgrass, *Calamagrostis canadensis*, is the primary grass used for this technique and should be collected from sites away from streambanks. Beach wildrye, *Leymus mollis*, has also been used for streambank plantings, and although it produces a strong rhizome it does not form the dense sod characteristic of Bluejoint.

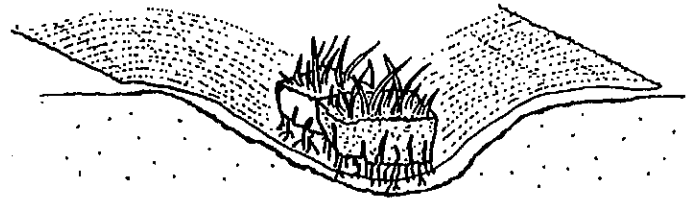
Wrap the sides of the burlap over the sod clumps to make a sausage-like roll. Tie the roll every few inches with twine. Cut holes in the burlap wrap to expose the sod shoots. Try to create the grass roll onsite so that the length of the roll or rolls match the length of the area being planted.

Constructing Grass Rolls

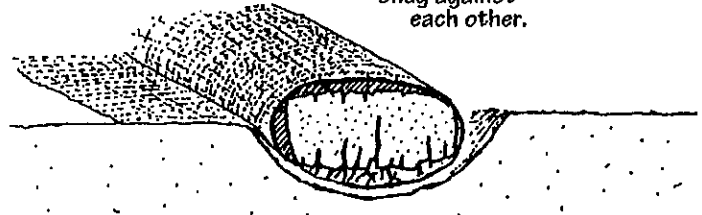
① Line trench with burlap.



② Fill with grass clumps.

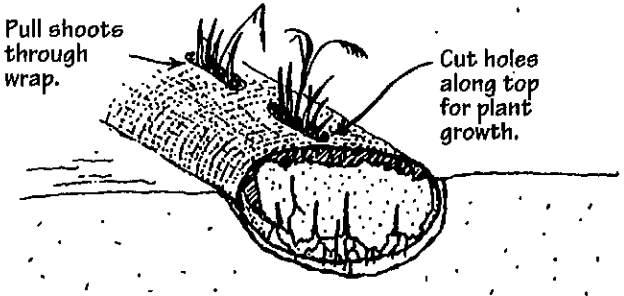


③ Fold burlap over grass clumps so clumps are snug against each other.

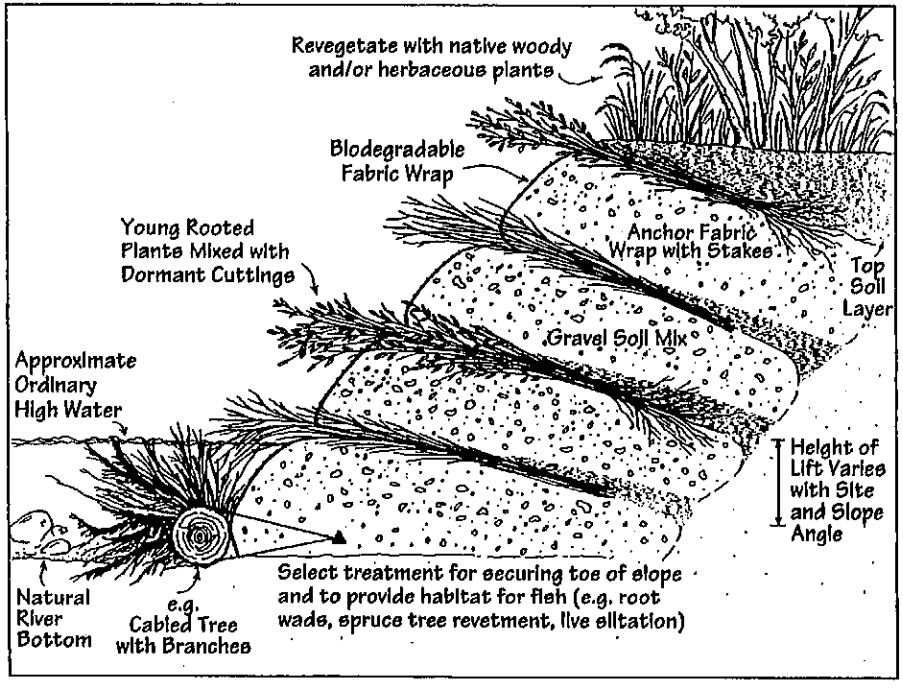


④ Pull shoots through wrap.

Cut holes along top for plant growth.



HEDGE BRUSH LAYERING



Hedge brush layering is a revegetation technique which combines layers of plant material, both dormant cuttings and rooted plants, with soil to revegetate and stabilize a streambank. Greater plant diversity can be provided with a hedge brush layer than with a simple brush layer. Rooted plants of species that do not root readily, such as alder, scouler and bebb willow, can be included in the plant layer. A mixture of species may allow the revegetation project to blend with existing vegetation.

Branches and transplants are placed on horizontal benches that follow the contour of the slope and provide reinforcement to the soil. The transplants will add stability quickly as their roots become anchored. Relatively steep slopes can be stabilized with this technique if a biodegradable revegetation fabric is used to hold the soil in place between the plant layers. The front of the wrapped soil layer can be lightly seeded with grasses to increase soil stability while the woody plants become established. Overhanging branches provide fish habitat.

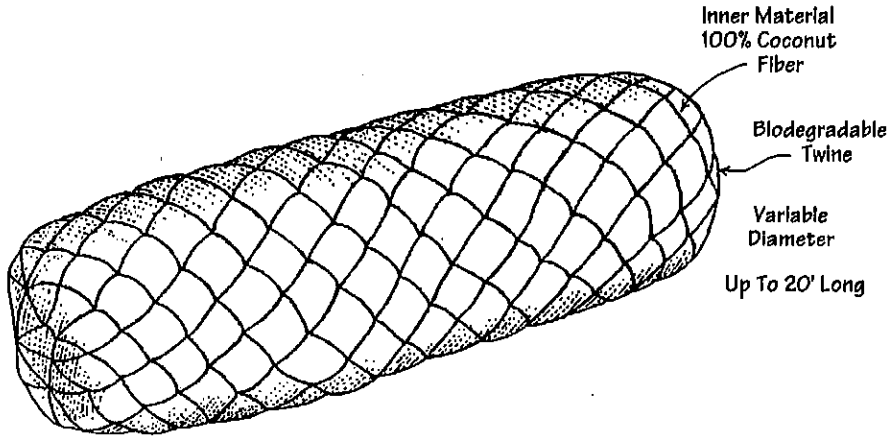
Select plant species suitable for site conditions (see *St Revegetation Plant Species Selection List, Shrubs and Trees*). F results dig transplants in spring or late summer and plant them day. If possible root prune the plants several weeks prior to tra Select plants less than 5 to 6 feet tall and root prune the plant b the shovel into the soil slightly outside of the drip line. Skip e shovel width. After the plant has been dug for transplanting, trim branches to compensate for root loss.

Collection, storage and planting information is described in the *Dormant Cuttings* and *Transplanting* sections. A hedge layer, which uses all rooted plants can be planted throughout the growing season from spring through early fall.

Choose a technique to secure the toe of the slope. Begin layering at the bottom of the slope. Along a water body, the first layer is typically installed at the ordinary high water (OHW) level. Brush layers may be installed below OHW to provide cover and fish habitat. These plants probably will not root and become established.

Excavate the first bench two to three feet deep so that it angles slightly down and into the slope (see *Hedge Brush Layering/Brush Layering, Step by Step*). Lay branches and transplants on the bench, slightly crisscrossing them. Place the cut ends of the branches and the roots of the transplants into the slope with the tips or shoots extending beyond the edge of the bench **no more than ¼ the total branch length**. Plant 20 to 25 stems per yard. Higher density plantings are needed for more erosive sites and if the diameter of the plant material is small. Fill the newly planted bench with 2 to 4 inches of soil and tamp into place. Continue building layers until the desired bank height is reached. The spacing between layers will vary with the erosion potential of the site. Sites with a shallow slope and low erosion potential can have wider spacing than sites with a steep slope and higher erosion potential. This technique can be easily mechanized, layer by layer, if it is installed during construction of a fill slope. On cut slopes and existing banks each layer must be excavated.

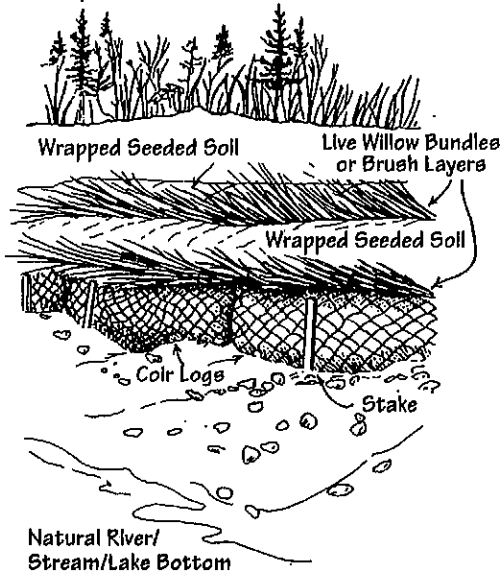
Hedge brush layering is a variation of brush layering (see *Brush Layering*).



Coir logs are constructed of interwoven coconut fibers that are bound together with biodegradable netting. Commercially produced coir logs come in various lengths and diameters. The product needs to be selected specifically for the site. Fiber logs composed of other sturdy biodegradable materials may function equally as well.

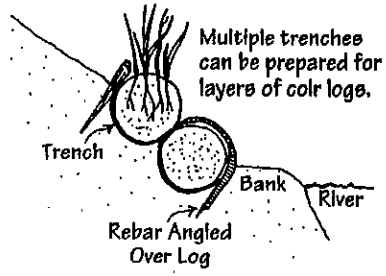
Applications for coir logs occur in many streambank, wetland and upland environments. The log provides temporary physical protection to a site while vegetation becomes established and biological protection takes over. The logs can provide a substrate for plant growth, protect plants growing adjacent to the log, can be used as a transition from one revegetation technique to another, and used to secure the toe of a slope. Both the upstream and downstream ends of the coir log(s) need to transition smoothly into a stable streambank to reduce the potential to wash out.

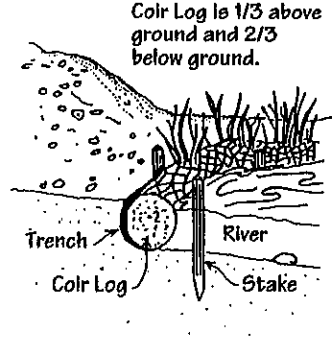
Example 1.



Install the logs to ensure contact with soil along the entire length. In most cases, excavate a shallow trench to partially bury the log. At no time should the coir log span any open space that may occur between rocks, logs or uneven ground. Tie logs together that have been placed end to end and stake into place. Flowing streams, particularly those carrying ice during breakup, could rip the log out of the streambank, if it is not adequately anchored. Wooden stakes, curved rebar and earth anchors have all been used to securely anchor these logs.

Example 2.
Logs biodegrade as plant roots develop.





Sod or **sprig** coir logs when they are placed in locations that will provide adequate moisture for plant growth. Small holes can be created in the surface of the logs and sprigs, or small plugs of suitable plant species can be transplanted into the log (see *Streambank Revegetation Plant Species Selection List, Grasses and Sedges*). These plantings should be fertilized (see *Fertilizer* section).

Partially buried coir log with live siltation immediately behind.