

STORM WATER POLLUTION PREVENTION PLAN
JOINT BASE ELMENDORF-RICHARDSON, ALASKA



UPDATE JANUARY 2016
EFFECTIVE DATES OF THIS PERMIT
JULY 31, 2015 TO MARCH 31, 2020



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Storm Water Pollution Prevention Team

Joint Base Elmendorf-Richardson (JBER) has established a storm water pollution prevention team with responsibilities as described in Table 1. The Chief of the Civil Engineering Squadron/Civil Engineering Integrated Environmental Compliance (CES/CEIEC) has primary responsibility for ensuring compliance with the 2015 Alaska Department of Environmental Conservation (ADEC) Multi-Sector General Permit (MSGP) and Storm Water Pollution Prevention Plan (SWPPP) requirements, and for documenting compliance. These compliance responsibilities are summarized in Table 2. All members of the pollution prevention team have reviewed this SWPPP and are aware of their roles and responsibilities. Team members with the most direct responsibilities for preventing pollution of storm water runoff include facility personnel, unit environmental coordinators (UECs), in-house maintenance personnel and contractors, and the Water Program Manager.

Table 1. Installation-Wide Storm Water Pollution Prevention Team Members and Responsibilities

Storm Water Team Responsibilities	JBER Commander	Chief, CES/CEIEC	773 CES/Command Director	Water Program Manager, 673 CES/CEIEC	Maintenance Contractors/In-House	UECs and/or Unit Activity Supervisor
Level of Responsibility	Installation	Installation	Installation	Installation	Installation	Facility
Signs Certification of Compliance with SWPPP (or delegates signatory authority)	X					
Signs Certification of Non-Storm Water Discharge Evaluation				X		
Establishment and ongoing operation and maintenance for advanced Best Management Practices (BMPs)		X	X	X	X	X
Overall MSGP and SWPPP compliance		X		X		
Annual Comprehensive Site Compliance Evaluation (CSCE)		X		X		
Update SWPPP		X		X		
Coordinate SWPPP training and inspections				X		
Conduct outfall survey and non-storm water discharge investigation				X		

Table 2. Water Program Manager Responsibilities

Activity	Frequency/Due Date	Citation in 2015 MSGP
Plan/Permit Maintenance:		
Prepare and implement an SWPPP according to the requirements in Part 5 of the 2015 MSGP.	Before submitting your Notice of Intent (NOI) for permit coverage	2.1.3 and 5
Submit a complete NOI in accordance with APDES guidelines by either using ADEC's Electronic Notice of Intent (NOI) system or submitting paper forms to ADEC.	See MSGP Table 2-1	2.1.5
<ul style="list-style-type: none"> • Modify your SWPPP whenever necessary to address any of the triggering conditions for corrective action in MSGP Part 8.1 and to ensure that they do not reoccur, or to reflect changes implemented when a review following the triggering conditions in MSGP Part 8.2 indicates that changes to your control measures are necessary to meet the effluent limits in this permit. • Modify the SWPPP if inspections or investigations by facility staff or by state, federal, local or tribal officials determine that SWPPP modifications are necessary for compliance with this permit. • Modify the SWPPP to reflect any revisions to applicable state, federal, local or tribal law or regulations that affect the control measures implemented at the facility. • Keep a log showing dates, name of person authorizing the change and a brief summary of changes for all significant SWPPP modifications (e.g., adding a new control measure, changes in facility layout or design, or significant storm events that cause for replacement of control measures) • Whenever there is a change in design, construction, operation or maintenance, which has a significant effect on the potential for the discharge of pollutants to waters of the U.S., or if the SWPPP proves to be ineffective in eliminating or significantly minimizing pollutants from sources identified in the SWPPP, or in otherwise achieving the general objectives of controlling pollutants in storm water discharges associated with industrial activity, then the SWPPP must be amended within thirty (30) days. • SWPPP must be updated at least annually 	<p>If there is a change that will affect the amount of pollutant discharged, then the SWPPP must be modified within 30 days. If there are no changes, then the SWPPP must only be updated annually.</p>	5.6
Retain a copy of the current SWPPP at the facility and make immediately available to: <ul style="list-style-type: none"> • ADEC • U.S. Environmental Protection Agency (EPA) • Representatives of the U.S. Fish and Wildlife Service (USFWS) or the National Marine Fisheries Service (NMFS) • The general public upon request 	Ongoing	5.7

Activity	Frequency/Due Date	Citation in 2015 MSGP
Control Measures and Effluent Limits:		
Select, design, install, and implement control measures including Best Management Practices (BMPs) to address the selection and design considerations in MSGP Part 4.1, meet the non-numeric effluent limits in MSGP Part 4.2, and meet limits contained in applicable effluent limitations guidelines in MSGP Part 4.3.	Ongoing	4
Corrective Actions:		
Document the location and type of control measures installed and implemented at the site. Review, revise, and modify (as needed) the selection, design, installation, and implementation of the control measures to ensure they are performing correctly.	Document in the SWPPP; Ongoing	5.2.5, 8.1 and 8.2
If control measures were revised or modified, document any corrective action(s) to be taken to eliminate or further investigate the deficiency, or if no corrective action is needed, the basis for that determination. (See MSGP Part 8.4.)	Within 14 days of discovery; Modify before the next storm event if possible or as soon after as practicable	8.2
Inspections:		
Conduct routine facility inspections of all areas of the facility where industrial materials or activities are exposed to storm water, and of all storm water control measures used to comply with the effluent limits contained in the MSGP.	At least once each calendar quarter for the entire permit term.	6.1
Collect a storm water sample from each outfall and conduct a visual assessment of each of these samples.	Once each quarter for the entire permit term	6.2.1
Conduct comprehensive site inspections. <i>This inspection may also be used as one of the routine inspections, as long as all components of both types of inspections are included.</i>	Annually	6.3.1
Documentation:		
<p>Keep the following inspection, monitoring, and certification records, plans, guidelines and reports with your SWPPP:</p> <ul style="list-style-type: none"> • A copy of the NOI submitted to ADEC along with any correspondence exchanged between you and ADEC specific to coverage under this permit. • A copy of the acknowledgment letter or email you receive from the NOI processing center or ADEC's Online Application System assigning your permit tracking number. • A copy of the 2015 MSGP (an electronic copy easily available to SWPPP personnel is also acceptable). • Descriptions and dates of any significant spills, leaks, or other releases that resulted in discharges of pollutants to waters of the U.S. (See Part 4.2.4). • Records of employee training (see MSGP Part 4.2.9). • Documentation of maintenance and repairs of control measures (see MSGP Part 4.2.3). • All inspection reports, including the Routine Facility Inspection Reports (see MSGP Part 6.1), the 	Ongoing	5.8

Activity	Frequency/Due Date	Citation in 2015 MSGP
<p>Quarterly Visual Assessment Reports (see MSGP Part 6.2), and the Comprehensive Site Inspection Reports (see MSGP Part 6.3).</p> <ul style="list-style-type: none"> • Description of any deviations from the schedule for visual assessments and/or monitoring, and the reason for the deviations (see MSGP Parts 6.2.1, 7.1.4, and 7.2.1.2). • Description of any corrective action taken at your site, including triggering event and dates when problems were discovered and modifications occurred. • Documentation of any benchmark exceedances and how they were responded to. • Documentation to support any determination that pollutants of concern are not expected to be present above natural background levels if you discharge directly to impaired waters, and that such pollutants were not detected in your discharge or were solely attributable to natural background sources (see MSGP Part 7.2.3.2). • Documentation to support any claims that the permittees facility has changed its status from active to inactive and unstaffed with respect to the requirements to conduct routine facility inspections (see Part 6.1.3), quarterly visual assessments (see Part 6.2.3), and/or benchmark monitoring (see Part 7.2.1.6). • Any additional documents referenced in the SWPPP (i.e., plans, policies, memorandums, etc.) that satisfy specific MSGP requirements [e.g., the JBER Spill Prevention, Control, and Countermeasure Plan / Oil Discharge Prevention and Contingency Plan (SPCC/C-Plan) and JBER OPLAN 19-3 Environmental Management Plan (OPLAN 19-3)]. 		
Monitoring:		
Monitor allowable non-storm water discharges (as delineated in Part 1.2.3) when they are commingled with storm water discharges associated with industrial activity.	Ongoing	7.1.8
Collect and analyze storm water samples and document monitoring activities consistent with the procedures described in MSGP Part 7 and Appendix A, Subsections 3.0, and any additional sector-specific requirements in MSGP Part 11. Refer to Part 9 for reporting and recordkeeping requirements	Frequency depends on type of monitoring. Region 10 monitoring requirements begin in the first full quarter following submittal of NOI.	7.2
Continue to monitor, at least quarterly, until your discharge is in compliance with the effluent limit or until ADEC waives the requirement for additional monitoring.	Ongoing	7.2
Reporting and Recordkeeping:		
All monitoring data collected must be submitted to ADEC. The MSGP Industrial Discharge Monitoring Report (MDMR) can be used for this purpose.	No later than 30 days after complete laboratory results for all monitored outfalls for the	9.1

Activity	Frequency/Due Date	Citation in 2015 MSGP
	reporting period have been received	
Submit an annual report to ADEC that includes the findings from the comprehensive site inspection and any corrective action documentation.	Report must be submitted by February 15 of the year following the reporting year	9.2
If follow-up monitoring pursuant to MSGP Part 7.2.2.3 exceeds a numeric effluent limit, submit an Exceedance Report to ADEC.	No later than 30 days after lab results have been received	9.3
Retain copies of your SWPPP (including any modifications made during the term of this permit), additional documentation requirements pursuant to MSGP Part 5.8 (including documentation related to corrective actions taken pursuant to MSGP Part 5), all reports and certifications required by this permit, monitoring data, and records of all data used to complete the NOI to be covered by this permit.	For a period of at least three years from the date that your coverage under this permit expires or is terminated. This period may be extended by request of ADEC at any time.	9.5
Submit No Exposure Certification(s) to ADEC every five years.	Every five years	1.3
MSGP Part 11 – Sector-Specific Requirements:		
Sector K – Hazardous Waste Treatment, Storage, or Disposal Facilities		
NA		
Sector P – Land Transportation and Warehousing		
Document whether activities occurring at the following areas may be exposed to precipitation/surface runoff: Fueling stations; vehicle/equipment maintenance or cleaning areas; storage areas for vehicle/equipment with actual or potential fluid leaks; loading/unloading areas; areas where treatment, storage or disposal of wastes occur; liquid storage tanks; processing areas; and storage areas.		11.P.4.1
Assess the potential for the following activities and facility areas to contribute pollutants to storm water discharges: Onsite waste storage or disposal; dirt/gravel parking areas for vehicles awaiting maintenance; illicit plumbing connections between shop floor drains and the storm water conveyance system(s); and fueling areas.		11.P.4.2
Document good housekeeping measures implemented.		11.P.4.3
If applicable, attach to or reference a copy of the APDES permit issued for vehicle/ equipment wash water; if an APDES permit has not been issued, a copy of the pending application. If an industrial user permit is issued under a local pretreatment program, attach a copy to the SWPPP. In any case, implement all non-storm water discharge permit conditions or pretreatment conditions in the SWPPP. If wash water is handled in another manner, describe the disposal method and attach all pertinent documentation/ information in the plan.		11.P.4.4
Sector S – Air Transportation Facilities		
Determine the seasonal timeframe (e.g., December – February, October – March, etc.) during which deicing	Annually	11.S.4.2

Activity	Frequency/Due Date	Citation in 2015 MSGP
activities typically occur at the facility.		
Conduct routine facility inspections.	Monthly	11.S.6.1
Conduct Comprehensive Site Compliance Evaluations during periods of actual deicing operations (if any).	Annually	11.S.6.2

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LIST OF ACRONYMS AND ABBREVIATIONS

AAC	Alaska Administrative Code
ADEC	Alaska Department of Environmental Conservation
AK ARNG	Alaska Army National Guard
AMS	Aerospace Material Specifications
APDES	Alaska Pollutant Discharge Elimination System
AST	Aboveground Storage Tank
BMP	Best Management Practice
BOD	Biochemical Oxygen Demand
CBI	Confidential Business Information
CES/CEIEC	Civil Engineering Squadron / Civil Engineering Integrated Environmental Compliance
CFR	Code of Federal Regulations
COD	Chemical Oxygen Demand
CSCE	Comprehensive Site Compliance Evaluation
CWA	Clean Water Act
DLA	Defense Logistics Agency
EMS	Environmental Management System
EPA	U.S. Environmental Protection Agency
FES	Fire and Emergency Services
FWS	Fuel / Water Separator
HM	Hazardous Material
HW	Hazardous Waste
JBER	Joint Base Elmendorf-Richardson
JBER-E	JBER-Elmendorf
JBER-R	JBER-Richardson
JP	Jet Propellant
MDMR	ADEC MSGP Industrial Discharge Monitoring Report

MS4	Municipal Separate Storm Sewer System
mg/L	Milligrams per Liter
MSDS	Material Safety Data Sheets
MSGP	Storm Water Multi-Sector General Permit
NMFS	National Marine Fisheries Service
NOI	Notice of Intent
NPDES	National Pollutant Discharge Elimination System
OPLAN 19-3	JBER OPLAN 19-3 Environmental Management Plan
OWS	Oil / Water Separator
POC	Point of Contact
POL	Petroleum, Oil, and Lubricants
RCRA	Resource Conservation and Recovery Act
SDS	Safety Data Sheets
SIC	Standard Industrial Classification
SPCC/C-Plan	Spill Prevention, Control, and Countermeasure Plan / Oil Discharge Prevention and Contingency Plan
SWMP	Storm Water Management Plan
SWPPP	Storm Water Pollution Prevention Plan
s.u.	Standard Unit
TMDL	Total Maximum Daily Load
TSDf	Treatment, Storage, or Disposal Facility
TSS	Total Suspended Solids
UEC	Unit Environmental Coordinator
USAEC	U.S. Army Environmental Center
USFWS	U.S. Fish and Wildlife Service
UST	Underground Storage Tank
WLA	Waste Load Allocation
WQS	Alaska Water Quality Standard

1 FACILITY DESCRIPTION

Joint Base Elmendorf-Richardson (JBER) has prepared this Storm Water Pollution Prevention Plan (SWPPP) in compliance with the provisions of the Clean Water Act (CWA) and the Alaska Pollutant Discharge Elimination System (APDES) Multi-Sector General Permit (MSGP) for storm water discharge associated with industrial activities. This SWPPP documents storm water management practices of industrial facilities at JBER and is a guide for the installation's pollution prevention team. The plan is organized according to Section 5 of the 2015 Alaska Department of Environmental Conservation (ADEC) General Permit AKR060000 as follows:

- Section 1.0 provides facility information about JBER, a description of both the JBER-Elmendorf (JBER-E) and JBER-Richardson (JBER-R) storm water conveyance systems, identification and responsibilities of the storm water pollution prevention team, and industrial activities and facilities covered by this plan.
- Section 2.0 describes the potential pollutant sources of the industrial activities at JBER.
- Section 3.0 discusses storm water control measures including basic, activity-specific, and sector-specific measures.
- Section 4.0 presents schedules and procedures for monitoring.
- Section 5.0 discusses routine, quarterly, and comprehensive site inspection information.
- Section 6.0 describes the SWPPP signatory requirement and certification.
- Section 7.0 addresses SWPPP modifications and availability requirements for this document.

1.1 Facility Information

JBER is the largest military installation in Alaska and is comprised of JBER-E (formerly Elmendorf Air Force Base, located at north 61°15' latitude, west 149° 48' longitude) and JBER-R (formerly Fort Richardson, located at north 61° 15' latitude, west 149° 40' longitude). JBER is located in south-central Alaska within the Municipality of Anchorage and consists of approximately 74,455 acres, including ranges. JBER is bounded on the southwest by the city of Anchorage and on the northwest by the Knik Arm of the Cook Inlet. The community of Eagle River is located along the northeastern border, and the southern and eastern boundaries traverse Chugach State Park and undeveloped land. The location of JBER is depicted on Figure 1.

Surface relief ranges from tidewater on the northwest to a 4,000-foot ridge of the Chugach Mountains within Arctic Valley on the east. The developed area that is the focus of this SWPPP is located between these two extreme elevations on a relatively flat plateau that ranges from roughly 450 feet in the higher elevations down to less than 200 feet where JBER abuts Ship Creek.

The centrally located developed area consists of troop and family housing, administration, industrial, and community facilities. Most of the developed area is unpaved, except for roads, facility parking areas, and airfield areas. A majority of the surrounding open space is devoted to training activities and also supports a variety of wildlife species.

Specific drainage features of JBER-E and JBER-R are described in the following sections.

1.2 JBER-E Drainage Network

There are six storm water outfalls located on JBER-E, as indicated on Figure 2. Photos of each outfall are displayed on Figure 3. These outfalls are associated with different drainage areas, which are described below. In addition to discharging to the outfalls, storm water runoff from JBER-E drainage areas may also evaporate, flow overland into Ship Creek and Knik Arm, or infiltrate into the ground. Seventeen drainage areas have been identified on JBER-E, but only six of those areas have discrete end-of-pipe outfalls to waters of the U.S. For purposes of this SWPPP, only the drainage areas that discharge to one of the six defined industrial storm water outfalls are discussed in this section.

Drainage Area 1 receives runoff from the majority of developed areas of the installation, including the JBER-E airfield, which covers approximately 3,586 acres. Storm water in this drainage area enters the subsurface storm sewer system via catch basins located throughout the drainage area and eventually empties into the Cherry Hill Ditch at JBER-E Outfall 1. Water from the ditch discharges to a weir designed to trap sediment on Port of Anchorage property. From there, the water subsequently flows to Knik Arm. JBER-E Outfall 1 receives and discharges water from Drainage Area 1. JBER-E Outfall 1 is associated with air transportation facilities, and falls under Sector S.

Drainage Area 2 includes approximately 378 acres of the installation. Storm water in this area enters the subsurface storm sewer system via catch basins and empties from a discharge pipe located outside the installation boundary to the west, approximately 300 feet south of the Cherry Hill Ditch. This drainage water eventually flows into the same weir as Drainage Area 1, with subsequent discharge to Knik Arm. Water from this drainage area is discharged from JBER-E Outfall 2. JBER-E Outfall 2 is associated with air transportation facilities, and falls under Sector S.

Drainage Area 3 encompasses approximately 96 acres of the installation. Storm water in the area is channeled into culverts and then it discharges on the south side of the installation (JBER-E Outfall 3) into an engineered wetland located on property owned by the Alaska Railroad Corporation. The wetland was designed as part of a system for remediating contaminated groundwater. JBER-E Outfall 3 is associated with Hazardous Waste storage, and falls under Sector K.

Drainage Area 4 encompasses approximately 97 acres of the installation and is located north of the railroad right-of-way, east of Kenny Avenue, and northwest of Pease Avenue. The

northern boundary is Arctic Warrior Drive. Storm water in this drainage area is channeled through culverts, eventually draining into Ship Creek at JBER-E Outfall 4. This drainage area is not associated with industrial facilities, and for this reason, storm water sampling and inspections are not required to be conducted at JBER-E Outfall 4.

Drainage Area 5 is situated north of the railroad, between Vandenberg Avenue to the east and Talley Avenue to the west, covering an approximate area of 154 acres. Storm water from this area is piped underneath the railroad tracks to the south, where it eventually drains to Ship Creek at JBER-E Outfall 5. JBER-E Outfall 5 is associated with air transportation facilities, and falls under Sector S.

Drainage Area 10 is north of the developed portions of JBER-E, north of Drainage Area 1, and encompasses approximately 2,517 acres. JBER-E Outfall 6 is located at Six Mile Lake and releases storm water from Drainage Area 10. Six Mile Lake is considered a water of the U.S., and it drains to an outlet stream (Six Mile Creek) at the west end of the lake, which continues to flow west to the Knik Arm. JBER-E Outfall 6 is not associated with deicing, as recreational pilots land on the lake when the lake is not frozen. Because the lake is associated with Air Transportation, it falls under Sector S in the 2015 MSGP. However, because no deicing occurs, benchmark sampling for deicing parameters will be discontinued. Visual inspections will continue to be performed on a quarterly basis for flotsam, jetsam, and spills.

Figure 4 depicts storm water conveyances on JBER-E and shows the direction of storm water flow and surface water detention areas. Impervious surface areas for JBER-E are depicted on Figure 5.

1.3 JBER-R Drainage Network

Natural and urban runoff on JBER-R is generally directed toward a single outfall at Ship Creek referred to as JBER-R Outfall 1. This outfall is shown on Figures 2 and 3. Surface water within the developed area of JBER-R infiltrates into the ground or enters the storm sewer system via three separated drainage networks. The water eventually reaches daylight in the southeast section of the developed area and flows into a single, unlined ditch that leads to an infiltration basin before discharging to Ship Creek. The drainage area boundary of the developed portion of JBER-R is breached by two Alaska Department of Transportation off-site sources of surface water that ultimately reach Ship Creek by way of the developed drainage system. The off-site storm water flows from the Glenn Highway onto JBER-R through a 24-inch culvert at Arctic Road and from a ditch along Glenn Highway near the main JBER-R gate. Both of these off-site areas have minor flooding and pooling during spring break-up. JBER-R Outfall 1 is not currently associated with any industrial facilities. For this reason, benchmark sampling is no longer required at this outfall. Visual inspections will continue to occur on a quarterly basis.

Bryant Army Aviation Support Facility, which is operated by the Alaska Army National Guard (AK ARNG) and operates under a separate MSGP, is also located within the JBER-R drainage

network. Typically, surface water runoff from the active AK ARNG airfield and taxiways/hangars flows to either side of the runway and then infiltrates into the ground.

Figure 6 presents storm water conveyances at JBER-R, the direction of storm water flow, and surface water detention areas. Impervious surface areas for JBER-R are depicted on Figure 7.

1.4 Sector Code Discussion and Evaluation

U.S. EPA has categorized industrial activities into 29 regulated sectors. Standard Industrial Classification (SIC) codes were developed to further classify sectors based on the type of activity and determine the need for regulation. The four-digit codes are assigned to manufacturing and commercial operations based on common characteristics shared in the products, services, production and delivery system of the industry. The first two digits of the SIC code represent the major industry sector, and the third and fourth digits describe the sub-classification of the business group and specialization, respectively.

1.5 Activities at the Facility

Most facilities on JBER can be divided into two sectors: those necessary to support aircraft/airfield operations including vehicle maintenance, equipment cleaning, and deicing/anti-icing (Sector S – Air Transportation); and those necessary to support transportation of military personnel and equipment including vehicle maintenance activities, cleaning, and refueling (Sector P – Land Transportation). Additionally, other industrial facilities include the Defense Logistics Agency (DLA) Document Services (Building 984; Sector X – Printing and Publishing), two Sector K (Hazardous Waste Treatment, Storage, or Disposal Facilities) buildings that support the installation's hazardous waste program operations, Sector J (Mineral Mining and Dressing [Quarry Operations]), and Sector D (Asphalt Paving).

JBER operates the military airfield and is the airport authority for all tenants (176th Air National Guard, various commercial cargo transport air companies, and various commercial passenger companies contracted by the military) and training units from other states and nations that use the JBER-E airfield. As such, this SWPPP represents the only MSGP document for Sector S activity on JBER-E.

The coal-fired steam power plant (Building 36012; Sector O) is not presently used for power generation but has not been officially decommissioned. The power plant is now privately owned and operated on JBER property. In the future, if Building 36012 is reactivated as a coal-fired steam plant, the responsibility for obtaining an industrial permit will fall to the privatization contractor.

1.5.1 Inclusion of Motor Pools in Sector P

Selecting the appropriate sector code for a facility or activity is typically straightforward. For example, Sector S – Air Transportation Facilities applies when airfields and aircraft hangars are present. However, application of sector codes to Army motor pool and maintenance facilities are

less clear. For a motor pool, the sector is generally selected based on the specific activities supported by the vehicles (e.g., servicing deicing trucks that deice aircraft, or conducting maintenance on dump trucks that haul crushed gravel from base gravel pits, etc.). Army motor pools service vehicles and equipment that transport Soldiers, supplies, and munitions to training ranges for military exercises. As such, whether or not they meet the definition of a Sector P facility (Land Transportation and Warehousing) is not clear.

Sector P specifically discusses storm water discharges from land transportation and warehousing activities that are defined by SIC as being one of the following five major groups:

- Motor freight transportation facilities (SIC 4212-4231)
- Passenger transportation facilities (SIC 4111-4173)
- Petroleum bulk oil station and terminal (SIC 5171)
- Rail transportation facilities (SIC 4011, 4013)
- United States Postal Service facilities (SIC 4311)

In 2000, the EPA provided the following paragraph (Section IV.B.3 of the Fact Sheet for the 2000 MSGP; 65 FR 64760) in an attempt to clarify when sector-specific requirements do not apply regarding Sector P:

“...unless you are actually hauling substantial amounts of freight or materials with your own truck fleet or are providing a trucking service to outsiders, simple maintenance of vehicles used at your facility is unlikely to meet the Standard Industrial Classification (SIC) code group 42 description of a motor freight transportation facility. Even though Sector P may not apply directly, the runoff from your vehicle maintenance facility would likely still be considered storm water associated with industrial activities. As such, your SWPPP would be required to address the runoff from the vehicle maintenance facility, although not necessarily with the same degree of detail as required by Sector P. “

While this helped to address non-military motor pool facilities, it still left questions regarding military motor pools used to support troop training. In 2005, the U.S. Army Environmental Center provided guidance for Army installations in addressing this issue (USAEC, Storm Water Guidance Manual, July 2005). In that guidance, the USAEC states that:

“If an installation has a small (unit-sized) motor pool that provides only minor maintenance, as a facility, it may not be required to obtain a storm water permit. The maintenance activities: however, do meet the definition of an “industrial activity.” The permitting authority may require an installation with only a unit sized motor pool to obtain a storm water permit if runoff from the facility is impacting local water quality, but it may not be necessary to carry out the monitoring requirements per Sector P.” However, “if an installation has a regulated industrial activity (such as a landfill, Resource Conservation and Recovery Act (RCRA) permitted treatment, storage, or disposal facility (TSDF), airfield where deicing is performed, or operation subject to effluent limitations guidelines), then any motor pools (i.e. vehicle or aircraft maintenance shops) that are

related to that industrial activity would be included in the SWPPP. If small motor pools are located elsewhere on the installation, they still need to be addressed in the SWPPP, but it may not be necessary to carry out the monitoring requirements as per Sector P.”

JBER sought clarification from ADEC in 2013 with regard to how to address small motor pools. ADEC determined JBER needed to include these “industrial-like” Sector P facilities within the JBER Municipal Separate Storm Sewer System (MS4) Management Plan being developed.

ADEC felt inclusion in the MS4 plan would allow JBER to monitor any potential storm water discharges from these locations, while not being required to carry out all of the monitoring requirements of Sector P within the MSGP SWPPP.

The JBER internal review team removed the Army motor pool facilities during the finalization process of the MS4 Plan, because the team felt these “industrial-like” facilities did not belong within the MS4 document. As a result, the motor pools on JBER-R were once again placed in unknown status with regard to storm water monitoring.

In an effort to resolve this issue for this SWPPP, Colorado State University – Center Environmental Management Military Lands contacted Mr. William Ashton with ADEC requesting clarification. Mr. Aston provided the following response on April 27, 2015:

“In terms of the MSGP and the military, here is a quote from the 1995 MSGP Federal Register / Vol. 60, No. 189 / Friday, September 29, 1995

Eligibility. Discharges Covered. Military installations must comply with the permit and monitoring requirements for all sectors that describe industrial activities that such installations perform.

From this I would surmise that military installations (such as JBER) must comply with the MSGP for industrial activities on the base that meet the Sector P activities. (Subsequent MSGPs dropped the language, even though this language is not explicitly stated in the 2015 MSGP, I believe it is required by Executive Order or Military requirements.)

In the 2000 MSGP Federal Register / Vol. 65, No. 210 / Monday, October 30, 2000 EPA agrees that municipalities and military or other governmental installations are only responsible for obtaining permits for storm water associated with industrial activity for those portions of their municipality or installations where they have a storm water discharge that is covered under the definition of “storm water associated with industrial activity.” Under this interpretation, even though a military base may choose to submit a single NOI for all industrial activities on the base, the SWPPP would only need to identify facilities/areas associated or not associated with industrial activities and that have a SWPPP covering the industrial activity areas. The SWPPP required under the MSGP would not need to address storm water controls for the non-industrial areas of the base.

So the “industrial-like” Sector P facilities within the industrial areas of the base would need to be included in the 2015 MSGP SWPPP.”

Therefore, based on this latest communication with the regulating agency, this SWPPP includes all motor pool vehicle maintenance, cleaning, and refueling as activities regulated under Sector P.

Industrial facilities at JBER are listed in Table 3.

Table 3. List of Industrial Buildings and Associated Activities

Facility ID	Description	Activity with Potential to Pollute Storm Water									Sector
		Fueling Defueling	Liquid Storage Tanks	Vehicle, Aircraft, Equipment Maintenance	Vehicle, Aircraft, Equipment Washing	Loading and Unloading Materials	Industrial Waste Management	Outdoor Storage	Salt Storage	Deicing/Anti-icing	
704	Vehicle/Equipment Maintenance		X	X	X	X	X	X			P
732	Vehicle/Equipment Maintenance	X	X	X	X	X	X	X			P
740	Vehicle Maintenance		X	X	X	X	X				P
750	Vehicle/Equipment Maintenance	X	X	X	X	X	X				P
756	Vehicle Maintenance			X	X	X	X				P
778	Vehicle/Equipment Maintenance										P
784	Vehicle Maintenance			X	X	X	X				P
796	Tactical Vehicle Shop	X		X		X	X	X			P
798	Vehicle/Equipment Maintenance	X		X	X	X	X	X			P
806	Vehicle Maintenance	X		X		X	X	X			P
812	ESSM Navy Base and Maintenance Shop			X	X	X	X				P
940	Army, Facility, Refueler Storage/Maintenance	X	X	X		X	X	X			P
974	SPERS Maintenance Shop	X		X		X	X	X			P
975	Vehicle/Equipment Maintenance	X		X		X	X	X			P
976	Vehicle/Equipment Maintenance	X		X	X	X	X	X			P
979	Vehicle/Equipment Maintenance	X		X	X	X	X	X			P
982	Vehicle/Equipment Maintenance	X		X	X	X	X	X			P
45715	Vehicle/Equipment Maintenance			X	X	X	X	X			P
45726	Vehicle Maintenance	X	X	X		X	X	X			P
4314	Hazardous Waste Storage					X	X	X			K
6211	Vehicle/Equipment Maintenance/Wash Facility	X	X	X		X	X	X		X	P/S
7228	Fueler Maintenance Facility (673 LRS/LGRF)	X		X	X	X	X	X			S
8288	Heavy Equipment Shop (D29/673 LRS)	X		X	X	X	X	X			S
8317/8319	Outdoor Vehicle/Equipment Storage					X	X	X			S
8549/8574	Vehicle/Equipment Maintenance Facility (Jet Engine Shop)				X	X		X			S

Facility ID	Description	Activity with Potential to Pollute Storm Water									Sector
		Fueling Defueling	Liquid Storage Tanks	Vehicle, Aircraft, Equipment Maintenance	Vehicle, Aircraft, Equipment Washing	Loading and Unloading Materials	Industrial Waste Management	Outdoor Storage	Salt Storage	Deicing/Anti-icing	
8681	Maintenance Hangar (Hangar 19 Fighter Fuel Cell)		X	X		X	X				S
8691	Equipment Maintenance Facility (F-22 Engine Shop)			X	X	X	X				S
9311	Maintenance Hangar (Hangar 6 ARMY)			X	X	X	X				S
9361	Vehicle/Equipment Maintenance Facility (Snow Barn)	X	X	X	X	X	X	X			S
9561	Engine Test Facility (Hush House)		X	X		X	X				S
9563	Engine Test Facility (Hush House)		X	X		X	X				S
9569	Engine Storage/Cleaning (SPAR Barn)	X			X	X	X				S
9684	Maintenance Hangar (Hangar 24 Weather Shelter)	X		X			X				S
9694	Maintenance Hangar (Hangar 25 AMU)			X	X	X	X				S
9696	Maintenance Hangar (Hangar 22 LO Maint. Facility)		X	X	X	X	X	X			S
10286	Maintenance Hangar (Hangar 7 AERO Club)	X	X	X	X	X	X				S
10550	Salt/Sand/Urea Storage Facility					X			X		S
10571	Maintenance Hangar (Hangar 3 C-12/Red Flag)			X	X	X	X				S
10682	Maintenance Hangar (Hangar 26 Weather Shelter)	X		X							S
10694	Equipment Storage Facility (AGE Facility)	X	X	X	X	X	X	X			S
11525	Maintenance Hangar (Hangar 2 3 rd EMS)	X	X	X		X					S
11567	Farm 3 Jet Fuel and Military Service Station (MSS)	X	X					X			S
11583	Fuel Farm (Farm 3 JP-5)	X	X								S
11673	Equipment Maintenance Facility (Fueller truck storage and staging)	X	X					X			S
11735	Hazardous Waste Transfer Facility					X	X				K
13196	Fuel Pump House	X	X								S
14313	Deicer Storage and Transfer Facility		X								S

Facility ID	Description	Activity with Potential to Pollute Storm Water									Sector
		Fueling Defueling	Liquid Storage Tanks	Vehicle, Aircraft, Equipment Maintenance	Vehicle, Aircraft, Equipment Washing	Loading and Unloading Materials	Industrial Waste Management	Outdoor Storage	Salt Storage	Deicing/Anti-icing	
14408	AGE Storage Facility			X	X	X	X	X			S
14410	Maintenance Hangar (Hangar 8 AWACS)	X	X	X	X	X	X				S
14415	Equipment Maintenance Facility – Large AGE Storage			X	X	X	X	X			S
14416	Vehicle Fueling Facility	X									S
15365	North Ramp Pump House		X								S
15380	Air Freight Terminal	X	X	X	X	X	X				S
15455	Maintenance Hangar (Hangar 10 210-RQS)	X	X	X	X	X	X	X			S
15658	Maintenance Hangar (Hangar 16 Combat Alert Cell)	X	X			X	X	X			S
15699 / 15710	Fuel Farm 5 FP-4/90 th Military Service Station	X	X								S
16385 / 16387	Pump House 3	X	X								S
16430	Maintenance Hangar (Hangar 11/210 RQS)	X	X	X	X	X	X	X			S
16456	Maintenance Hangar (Hangar 12 ANG Corrosion Control)	X		X	X	X	X	X			S
16468	Maintenance Hangar (ANG Maintenance Complex)			X	X	X	X				S
16521	Maintenance Hangar (Hangar 14 Mobility Maintenance)	X		X		X	X	X			S
16670	Maintenance Hangar (Hangar 17 Weather Shelter)		X			X					S
16710	F-22 AGE (AGE Storage)	X	X				X				S
16716	Maintenance Hangar (Hangar 15 90 th Fighter Squadron)	X	X	X	X	X	X	X			S
17470	Maintenance Hangar (Hangar 18 176 th ANG)			X	X	X	X				S
17494	C-17 Engine Shop					X					S
17508	Maintenance Hangar (Hangar 21 C-17 Maintenance)	X	X	X	X	X	X	X			S
17534	Hangar 20 Aircraft and Tank Maintenance	X				X	X				S
17660	Maintenance Hangar (Hangar 23 Weather Shelter)	X				X		X			S
18471	Pump House Office	X	X								S

Facility ID	Description	Activity with Potential to Pollute Storm Water									Sector
		Fueling Defueling	Liquid Storage Tanks	Vehicle, Aircraft, Equipment Maintenance	Vehicle, Aircraft, Equipment Washing	Loading and Unloading Materials	Industrial Waste Management	Outdoor Storage	Salt Storage	Deicing/Anti-icing	
29453	Airfield Fueling Point at Six Mile Lake	X	X								S
76195/76197	Fuel Farm	X	X								S
JBER-E Airfield	Airstrip, Taxiways, and Tarmacs	X	X	X	X	X		X		X	S

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2 POTENTIAL POLLUTANT SOURCES

The identification of potential pollutant sources associated with the industrial activities covered by this permit is required under Section 5.2.4 of the Alaska storm water MSGP. This section of the SWPPP discusses those potential sources associated with the industrial activities that occur on JBER.

In addition to this SWPPP, JBER relies on procedures outlined in the OPLAN 19-3 Environmental Management Plan (August 2014) to reduce and/or eliminate the potential exposure of pollutants to storm water. The OPLAN 19-3 provides guidance for compliance with Air Force Environmental Management System requirements and the proper management of all hazardous materials and hazardous waste used on JBER. All base personnel, including all tenants, contractors and military personnel, must follow the requirements of the OPLAN 19-3. A copy of the document can be found on JBER's environmental website at www.jber.af.mil/environmental/index.asp.

2.1 Industrial Activity and Associated Pollutants

Principal activities at JBER that present a potential impact to storm water include the following:

- Fueling
- Aircraft and support equipment maintenance
- Aircraft and support equipment washing
- Vehicle and motor pool equipment maintenance
- Vehicle and motor pool support equipment washing
- Loading and unloading materials
- Runway deicing/anti-icing
- Locations used for the treatment, storage or disposal of wastes
- Liquid storage tanks
- Outdoor storage areas

The industrial facilities where these activities are performed are presented in Table 3. Attachment B contains a series of maps that depicts the locations of potential pollutant sources at JBER.

2.1.1 Fueling and Aircraft and Support Equipment Maintenance

The majority of fueling operations at JBER involves military aircraft, military and contractor vehicles and equipment, and privately owned vehicles. Fuel is stored in a variety of containers including aboveground storage tanks (ASTs), underground storage tanks (USTs), mobile tanker

trucks, and bowsers (portable tow-behind tanks). Fuels include diesel, gasoline, and jet fuel, which are transferred by a variety of methods including fixed dispensers and mobile tanker vehicles. The JBER Spill Prevention, Control, and Countermeasure Plan / Oil Discharge Prevention and Contingency Plan (SPCC/C-Plan) details the locations of bulk fuel storage, types of fuels stored, and descriptions of the storage tanks. The most recent copy of the SPCC/C-Plan is maintained in the same office as this SWPPP by 673 CES/CEIEC by the SPCC Program Manager. The JBER Fire and Emergency Services (FES) and fueling and fuel maintenance flights also retain a copy of the plan.

Activity-specific best management practices (BMPs) for fuel transfer and storage in ASTs and USTs are referenced in Section 3.2.1.

2.1.1.1 Pollutants Associated with Fueling

Pollutants associated with diesel fuel, gasoline and jet propellant (JP-8) are primarily saturated and aromatic hydrocarbons.

2.1.2 Aircraft and Support Equipment Maintenance

Aircraft and equipment maintenance is conducted at designated locations at JBER. These locations include aircraft hangars, vehicle and equipment maintenance facilities that support aircraft operations, and industrial trade shops. Activities include maintenance on hydraulic systems, engines, sheet metal work, batteries, avionic electronics, and painting work.

A program has been implemented to conduct maintenance activities indoors where spills and leaks can be contained and directed to oil/water separators (OWSs) and/or fuel/oil separators, preventing contact with storm water. Although the majority of aircraft and vehicle maintenance occurs indoors, some maintenance is conducted outside as necessary. BMPs described in Section 3.2.2 are implemented when possible and/or safe to do so, when outdoor maintenance must occur. Over the years, JBER has made an effort to reduce the inventory of stored materials, re-stock products only as necessary, and store smaller containers of materials.

Additionally, facilities use less hazardous products when practicable.

The OPLAN 19-3 details proper materials management that is effective in reducing accidents that could expose hazardous material (HM) to run-on and runoff.

Activity-specific BMPs for aircraft and support equipment maintenance are presented in Section 3.2.2.

2.1.2.1 Pollutants Associated with Aircraft and Support Equipment Maintenance

- Lubricating oil and grease
- Fuel
- Sediment

- Paint
- Transmission and hydraulic fluids
- Antifreeze
- Parts-cleaning solvent
- Battery acid

2.1.3 Aircraft and Support Equipment Washing

Discharge of water used to wash aircraft and supporting equipment to the storm drainage system is not allowed under the MSGP. Aircraft and equipment washing is conducted in designated areas at JBER. These areas include maintenance facility wash racks, aircraft maintenance hangars, dedicated exterior wash pads for helicopters, and dedicated vehicle and equipment wash facilities on the installation. Wash racks at these facilities contain all wash water, sediment, and associated contaminants. Washing protocols at JBER, including the use of OWSs, prevent discharge of wash water to JBER's storm sewer system and waters of the U.S.

Wash racks on the installation are plumbed to an OWS. Only soaps approved for OWS use are allowed, unless the wash rack is designed to process other soaps and detergents. Typically, only water or steam is used on wash racks plumbed to an OWS.

Aircraft and supporting equipment are routinely washed in maintenance hangars and maintenance bays using non-emulsifying aircraft soap. These facilities have strip drains that are plumbed to OWSs. The OWSs pass water to the sanitary sewer after separating out petroleum, oil, and lubricants (POLs). The wash bay floors are typically made of concrete and sloped toward the drains so wash water does not leave the facility.

The systems described above are included in JBER's OWS preventive maintenance program. They are serviced at regular intervals and/or when necessary. JBER's existing permit #13 with the Anchorage Water and Wastewater Utility allows for the discharge of aircraft and equipment wash water within certain parameters. A copy of the wastewater discharge permit is on file at the JBER Environmental Office.

Activity-specific BMPs for aircraft and support equipment washing are presented in Section 3.2.3.

2.1.3.1 Pollutants Associated with Aircraft and Support Equipment Washing

- Lubricating oil and grease
- Fuel
- Antifreeze (from support vehicles)
- Salt from aircraft sea spray

- Solvents
- Detergents (containing nutrients such as phosphates or surfactants)
- Human waste (from latrine port cleaning/servicing)

2.1.4 Vehicle and Motor Pool Support Equipment Maintenance

Vehicle and motor pool equipment maintenance occurs at designated facilities at JBER. These include vehicle motor pool shops, industrial trade shops, and associated facilities. Activities include engine maintenance, hydraulic system repairs, minor body and sheet metal repair, electronic system maintenance and updating, battery servicing, and minor painting.

Activity-specific BMPs for vehicle and motor pool support equipment washing are presented in Section 3.2.4.

2.1.4.1 Pollutants Associated with Vehicle and Motor Pool Support Equipment Maintenance

- Lubricating oil and grease
- Fuel
- Antifreeze
- Windshield fluid
- Detergents (containing nutrients such as phosphates or surfactants)

2.1.5 Vehicle and Motor Pool Support Equipment Washing

Similar to aircraft and support equipment washing discussed previously, vehicle and motor pool washing is only authorized in approved locations connected directly to OWS units. Only soaps and detergents that have been approved may be used. Vehicle wash racks and wash bays are specifically designed to drain toward a central collection point that is plumbed to the installation's sanitary sewer system. JBER's existing permit #13 with the Anchorage Water and Wastewater Utility allows for the discharge of vehicle and equipment wash water within certain parameters. A copy of the wastewater discharge permit is on file at the JBER Environmental Office. No storm water is discharged from wash bays or wash racks.

Activity-specific BMPs for vehicle and motor pool support equipment washing are presented in Section 3.2.5.

2.1.5.1 Pollutants Associated with Vehicle and Motor Pool Support Equipment Washing

- Lubricating oil and grease
- Fuel
- Antifreeze (from support vehicles)

- Sediment
- Paint
- Transmission and hydraulic fluids
- Parts-cleaning solvents
- Battery acid

2.1.6 Loading and Unloading Materials

Materials that are regularly loaded or unloaded at JBER are those associated with the fueling and maintenance of vehicles, equipment, and aircraft, such as oil, fuel, parts cleaner solvents, coolants, batteries, etc. The most common containers are 55-gallon drums and 5-gallon cans, although products come in a variety of container types and sizes. Loading and unloading activities present a potential threat for the release of chemicals, as materials are often moved multiple times with the use of equipment such as forklifts. Operational BMPs have been implemented to address this concern.

Activity-specific BMPs for loading and unloading materials are presented in Section 3.2.6.

2.1.6.1 Pollutants Associated with Loading and Unloading

- Lubricating oils and greases
- Fuels
- Transmission and hydraulic fluids
- Antifreeze
- Parts-cleaning solvents
- Battery acid
- Detergents (containing nutrients such as phosphates or surfactants)
- Paint

2.1.7 Deicing and Anti-Icing at JBER-E Airfield

There are two general deicing and anti-icing activities conducted at JBER: deicing and anti-icing of aircraft, and deicing and anti-icing of ground surfaces. Storm water runoff from the road system for ground vehicles on the installation is managed under the JBER Storm Water Management Plan (SWMP). Deicing and anti-icing of aircraft and “airside” ground surfaces are discussed below. Sector S (Air Transportation Facilities) requirements for deicing and anti-icing are presented in Section 3.3.2.3 of this SWPPP. All airfields at JBER are shown on Figure 8.

Two products are generally used at JBER for deicing and anti-icing of aircraft: Aerospace Material Specifications (AMS) 1424, Type I Deicing Defrosting Fluid, for deicing; and AMS 1428, Type IV Anti-icing Fluid, for anti-icing. A copy of the Material Safety Data Sheets (MSDS) or Safety Data Sheets (SDS) for these products is available at either the Environmental Office, the 732d Air Mobility Squadron or the 773d Civil Engineer Squadron offices upon request, and in Appendix J of this SWPPP. AMS 1424, Type I Deicing Defrosting Fluid, is applied to aircraft by a nozzle mounted on the boom of a deicer truck dispatched to the aircraft. Advanced nozzles are used that increase air pressure in the mixture, which, in turn, reduces the amount of product required for deicing aircraft. The glycol/water solution is a preset mixture adjusted according to ambient temperature, with the average being 60% glycol and 40% water.

AMS 1428, Type IV Anti-icing Fluid, is used to prevent ice from forming on aircraft. The fluid is applied in the same manner as the defrosting fluid, from an on-site boom truck, and utilizes the same nozzle technology described above, thus minimizing the amount of necessary fluid. Unlike the defrosting fluid, AMS 1428, Type IV Anti-icing Fluid, is not diluted prior to application.

Airside pavement at the JBER-E airfield receives direct application of potassium acetate and sodium acetate for anti-icing purposes. Runway sensors provide data on surface temperatures, subsurface temperature, icing conditions, and depth of ice. Dosage requirements are determined based on consideration of sensor data and planned use of the respective runways, to minimize the likelihood of over-application. The fluids are applied from vehicles with computer-metered application equipment. Repeated applications of potassium acetate can create a slick surface, so sand is periodically applied to the runway surface to provide traction. A monthly record of deicer/anti-icing chemicals used on aircraft and the airfield is maintained by the Environmental Office as well as the 732 Air Mobility Squadron and the 773d Civil Engineer Squadron and in Appendix J of this SWPPP.

Applied pavement anti-icing materials are not collected. A portion of the deicing fluid applied to aircraft evaporates after application. The remaining fluid drips to the runway or parking ramp. Deicing/anti-icing fluids that reach the asphalt or pavement either evaporate or are diluted with water from melted snow and generally flow to surrounding grassy swales. Except for the far west side of the flight line and along the north side of the east/west runway, there are no storm drain catch basins or culverts along the flight line. Runoff at the JBER-E airfield is directed to JBER-E Outfall 1. Prior to reaching this outfall and subsequently discharging to the Knik Arm, runoff must travel a significant distance, through culverts and vegetated ditches, until being discharged to a large, grassy swale on Cherry Hill, above the outfall. It is expected that most deicing fluid residue will not reach the outfall. Benchmark monitoring of deicing parameters required by the MSGP will provide data that JBER can use to assess whether further BMPs for deicing/anti-icing activities are necessary. Activity-specific BMPs for deicing and anti-icing are presented in Section 3.2.7 of this document.

Table 3-1 of the 2012 JBER SPCC/C-Plan lists the size and locations of deicing/anti-icing fluid storage tanks used for Sector S activities at JBER-E airfield.

2.1.7.1 Pollutants Associated with Deicing/Anti-Icing

The chemicals used at JBER-E airfield for deicing/anti-icing are glycol based products and inorganic salts. These products may contain:

- Propylene glycol
- Potassium acetate
- Sodium acetate

2.1.8 Locations Used for the Treatment, Storage, or Disposal of Wastes

Industrial waste management, including hazardous waste (HW) management and handling, occurs at numerous facilities at JBER. 673 CES/CEIEC operates a short-term (less than 90 day) hazardous waste and recyclable materials storage facility on the installation. Facilities that generate HW and/or HM suitable for recycling operate satellite accumulation areas, hazardous waste accumulation areas, recyclable materials accumulation areas, and/or used oil tanks, and are scheduled for regular pickup of these materials by a contractor. Prior to transportation of wastes off the installation, HM/HW is brought to the JBER Conforming Storage Facility operated by the DLA Disposition Services.

Accumulation areas are located indoors or in grounded, vented, and contained outdoor storage units (commonly referred to as “white elephants”) designed for that purpose. Accumulation areas are managed with adherence to appropriate safeguards and controls against spills, such as secondary containment pallets and spill response kits. Facility personnel maintain inventories of HM at their individual facilities, as well as Resource and Conservation and Recovery Act (RCRA) required recordkeeping, as applicable.

Specific procedures for industrial waste management at JBER are described in OPLAN 19-3 and must be implemented in addition to the requirements of this SWPPP, where applicable.

Activity-specific BMPs for industrial waste management are presented in Section 3.2.8.

2.1.8.1 Pollutants Associated with Industrial Waste Management

- Used lubricating oils and greases
- Used fuels
- Used transmission and hydraulic fluids
- Used antifreeze
- Used parts-cleaning solvents
- Used batteries (and associated chemicals)
- Used aerosol cans

2.1.9 Liquid Storage Tanks

The JBER SPCC/C-Plan lists 160 active ASTs and 90 active USTs on the installation containing fuel, used oil or deicing fluid. The majority of these tanks store fuel for vehicle, equipment and aircraft fueling activities, and collect used oil. JBER ASTs range in capacity from 60 gallons to 3,500,000 gallons. Three 3,500,000-gallon capacity tanks storing JP-8 exist at the bulk fuel storage complex north of the JBER- E airfield. JBER USTs range in capacity from 300 gallons to 50,000 gallons. Eight 50,000-gallon USTs containing JP-8 are located at Farms 3, 4 and 5, south of JBER-E airfield. Two 420,000-gallon ASTs for deicing fluid storage are located north of the airfield.

The management of liquid storage tanks at JBER, including training and fuel handling requirements and procedures, are detailed in the JBER SPCC/C-Plan. The SPCC/C-Plan is maintained in the same office with this SWPPP by the 673 SPCC Program Manager, and copies are provided to the JBER FES and fueling and fuel maintenance flights.

JBER manages liquid storage tanks and fueling activities that involve them. Operational requirements of the SPCC/C-Plan ensure a high standard for management of these activities. Activity-specific BMPs for fuel handling are referenced in Section 3.2.1. Sector-specific requirements for fueling at Sector S facilities are presented in Section 3.3.2.3.

POL storage in liquid storage tanks at JBER is managed under the JBER SPCC/C-Plan.

2.1.9.1 Pollutants Associated with Liquid Storage Tanks

- Diesel fuel
- Gasoline
- JP-8
- Lube oil
- Used oil
- Used fuel
- Deicing/anti-icing fluid

2.1.10 Outdoor Storage Areas

Most materials at JBER that present potential sources of storm water pollution are stored indoors or under fixed cover, such as a pole barn. Outdoor storage at industrial facilities is intermittent, depending on season, facility operations, and mission. Under the MSGP, even releases of non-hazardous chemicals (e.g., biodegradable soap) from industrial facilities to storm water runoff is prohibited. Outdoor storage occurs secondary to indoor storage when indoor space is limited. Materials stored outdoors can include POLs, antifreeze, and batteries. Whenever materials with a potential for storm water contamination are stored outdoors, BMPs must be implemented to safeguard against accidental spills.

Activity-specific BMPs addressing the outdoor storage of materials, vehicles and equipment are presented in Section 3.2.10 of this SWPPP. Additional requirements for outdoor storage of HM at JBER can be found in the OPLAN 19-3 available at the Environmental Office.

2.1.10.1 Pollutants Associated with Outdoor Storage Areas

- Fuels
- Lubrication oils
- Antifreeze
- Battery acid
- Metals

2.2 Spills and Leaks

If not properly controlled and promptly addressed, spills and leaks could be significant sources of storm water pollution at JBER. Section 5.2.4.3 of the MSGP requires the SWPPP to document all significant spills and leaks of oil or toxic or hazardous pollutants that occurred at exposed areas or that drained to a storm water conveyance during the three years prior to the date of SWPPP preparation or amendment. The prior three years of spills which have occurred on JBER are shown on Figure 9 and summarized in Appendix B.

Additionally, the MSGP requires that the SWPPP identify the locations where potential spills and leaks could occur. Due to the nature of activities at JBER and the number of vehicles, equipment, and aircraft, spills could occur virtually anywhere on the installation. To mitigate this impact, JBER has an aggressive spill prevention and response program, requiring (1) spills and leaks to be immediately reported when discovered, (2) applicable personnel be trained in spill prevention and response, and (3) preventive maintenance to be made a cornerstone of the program. Personnel at industrial facilities must adhere to provisions in this SWPPP as well as JBER's SPCC/C-Plan and OPLAN 19-3.

Locations where spills and leaks may be likely to occur include fuel transfer areas, vehicle and equipment storage yards and parking areas, and airfields and associated areas. Multiple military operating procedures exist that are designed to help reduce the likelihood of spills and leaks.

These include, but are not limited to, aircraft refueling procedures (Air Force Instruction [AFI] 21-101), vehicle maintenance procedures (Army Regulation [AR]-58-1), and vehicle refueling and maintenance (AFI 23-201).

2.3 Salt Storage

Uncovered salt stockpiles or aggregate and/or sand mixed with salt have the potential to impact both surface water and groundwater quality. While JBER does not store pure salt stockpiles, it does store a combination of sand/ice melt mix at several locations. Additionally, many individual buildings store small amounts of ice melt material. Depending on the product being applied to the roadways, sidewalks, and runways, a combination of different pollutants can result. These include the following:

- Sand, gravel, and aggregate material
- Calcium chloride
- Magnesium chloride
- Potassium chloride
- Calcium magnesium acetate

3 STORM WATER CONTROL MEASURES

Part 5.2.5 of the MSGP requires permittees document in the SWPPP the types and locations of control measures implemented that address, where applicable, the requirements presented in MSGP Parts 4.1, 4.2, 4.3. JBER has implemented a wide range of storm water best management practices (BMPs) under previous MSGPs to ensure that every reasonable effort is taken to reduce the likelihood of contaminating storm water runoff at the installation. The 2015 MSGP uses the term “control measures” to include both structural measures and non-structural BMPs. The storm water pollution prevention team continuously evaluates the effectiveness of BMPs and modifies them or implements new ones where and when necessary.

There are three main categories of storm water control measure BMPs: (1) basic, (2) activity-specific, and (3) sector-specific. Basic BMPs are those that all industrial facilities at JBER must implement, where applicable and practicable. Activity-specific BMPs only apply to specific activities, such as fuel storage or equipment cleaning. Sector-specific BMPs address sector-specific components and must only be followed at facilities that fall under a specific industrial sector. There is overlap between these BMP categories, but it is this redundancy that helps ensure compliance at every level of the organization.

3.1 Basic Storm Water Control Measures

Basic BMPs are required at all facilities identified in this plan and are typically operational in nature. Basic BMPs are very effective and typically inexpensive and easy to implement.

Therefore, they are used on a large scale, and implementation is the responsibility of the installation-wide pollution prevention team. Basic BMPs are divided into the following categories:

- Minimize exposure
- Good housekeeping
- Preventive maintenance
- Spill prevention and response
- Erosion and sediment controls
- Management of runoff
- Salt storage piles or piles containing salt
- Employee training
- Non-storm water discharges
- Waste, garbage, and floatable debris
- Dust generation and vehicle tracking of industrial materials

3.1.1 Minimize Exposure BMPs

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 storm water runoff. It can also prevent debris from being picked up by storm water and carried into drains and surface water. Examples of BMPs for exposure minimization include covering materials or activities with a temporary structure (tarp) when wet weather is expected or moving materials or activities to existing or new permanent structures (buildings, pole-barns, sheds).

Simple practices such as keeping a dumpster lid closed and secure can minimize exposure and be an effective pollution prevention measure.

3.1.2 Good Housekeeping BMPs

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 storm water. The practice includes establishing protocols to reduce the possibility of mishandling materials or equipment and training employees in good housekeeping techniques. Examples of areas where good housekeeping is an important BMP 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 military personnel, contractors, and civilians in routine monitoring of housekeeping practices has proven to be an effective means of ensuring the continued implementation of these measures.

3.1.3 Preventative Maintenance BMPs

Preventive maintenance of equipment alleviates the potential for leaks and spills. A preventive maintenance program that includes regular inspecting, testing, maintaining, and repairing of all industrial equipment and systems helps avoid situations that may result in leaks, spills, and other releases. These activities can greatly reduce breakdowns or failures that could result in the discharge of pollutants to surface waters.

JBER's SPCC/C-Plan describes the multi-faceted program for performing inspections and monitoring of the fuel pipeline system, pump houses, fill stands, and large POL storage tanks, including ASTs and USTs. Regular inspections are performed to identify any maintenance or other issues that may result in a discharge. This information is detailed in the SPCC/C-Plan, included with this SWPPP.

JBER's operations and maintenance schedule includes regular servicing of OWSs by a contractor. Preventive maintenance ensures proper functioning of pumps, floats, and switches and, if necessary, cleaning in-line filters and sediment traps. Additional, less frequent maintenance includes vacuuming out separator tanks, sediment trap pits, oil collection basins, and cleaning out petro-pak filter layers. Exterior wash racks and their sediment and collection

tanks are winterized in the fall and remain out of service until spring, when they are de-winterized and prepared for use.

Preventive maintenance for JBER's storm sewer system occurs during the spring, summer, and fall. In the spring, this may include inspecting culverts, storm drain manhole pits, storm drain catch basins and grates, and drainage ditches for obstructions. Obstructed drainage structures are cleaned/repared as soon as practicable. In the fall, culvert end markers are repaired or replaced at culverts, as necessary.

Storm drainage structures are washed on a rotating schedule with a high-pressure jet washer. Jet-washing operations clear drainage pipes, manhole pits, catch basins, and culverts of obstructions and accumulated silt.

A combination of scheduled and on-call maintenance accompanied by routine inspections is expected to address preventive maintenance concerns on the installation. Appendix E has been reserved for records of maintenance and repairs to storm water control measures, including structural BMPs.

3.1.4 Spill Prevention and Response BMPs

The bulk of spill prevention and response requirements at JBER can be found in the OPLAN 19-3 and SPCC/C-Plan. The OPLAN 19-3 details all HM/HW handling, use, and storage protocols at JBER and complies with Air Force Environmental Management System (EMS) requirements. The SPCC/C-Plan was prepared in accordance with 40 Code of Federal Regulations (CFR) 112 (Oil Pollution Prevention) and Title 18, Alaska Administrative Code (AAC), Part 75 (Oil and Other Hazardous Substances Pollution Control), which regulate the storage, handling, and dispensing of POLs.

OPLAN 19-3 protocols help ensure all HM/HW are handled and stored in a manner that reduces the opportunity for stored materials to become exposed to storm water. The protocols include key storm water BMPs such as good housekeeping and minimizing exposure. For example, all containers must be clearly labeled and have tight-fitting lids, and all liquids stored in 55-gallon containers or larger must be stored with secondary containment and protected from weather.

Management practices described in OPLAN 19-3 that mirror or complement storm water BMPs are not duplicated in this SWPPP.

The SPCC/C-Plan describes methods in use at JBER to prevent potential spills from reaching waters of the U.S. The plan includes spill prevention, discovery, and emergency notification procedures, along with POL handling/dispensing, inspection, testing, and maintenance procedures. Spill response strategies, recovery strategies, and protocols for the disposal of contaminated materials are detailed in the SPCC/C-Plan and are not duplicated in this SWPPP. The SPCC/C-Plan must be reviewed and, if necessary, amended by 673 CES/CEIEC at least once every five years. The plan is maintained by 673 CES/CEIEC, and copies are provided to the JBER FES and fueling and fuel maintenance flights.

3.1.5 Erosion and Sediment Controls BMPs

BMPs must be selected and implemented to limit erosion on erosion-prone areas due to topography, activities, soils, cover, materials, and other factors. Erosion control BMPs such as seeding, mulching, and wood chipping prevent soil from becoming dislodged and should be considered first. Sediment control BMPs such as check dams, vegetation swales, sediment ponds and detention/retention ponds trap sediment are applied after the soil has eroded.

Sediment control BMPs should be used to support erosion control BMPs.

3.1.6 Management of Runoff BMPs

Similar to erosion and sediment controls, the management of storm water runoff that flows through a site is an effective way to reduce the pollutants that are discharged from that area. Installing measures such as vegetative swales, berms, collection and reuse storm water, inlet controls, snow management, infiltration devices, and wet retention measures all reduce and/or eliminate runoff. A combination of preventive and treatment control measures usually results in the most effective approach to storm water management for minimizing the offsite discharge of pollutants in storm water runoff.

3.1.7 Salt Storage Piles or Piles Containing Salt BMPs

Part 5.2.4.5 of the MSGP states the following: “A permittee must document the location of any storage piles containing salt used for deicing or other commercial or industrial purposes.”

Building 10550 is the sand storage facility at JBER-E. A mixture of road salt and sand is staged inside a bay that is open on one end, allowing equipment to mix the materials as well as load/unload. A small bay on the side of the building stores cold batch asphalt for minor, as-needed road repairs. Curbing between the street and building entrance prevents run-on from entering the bays.

Building 743 is the sand storage facility at JBER-R. The building has two full walls, a roof, and large openings on the end walls for equipment to enter and exit. Inside the building is a large pile of gravel mixed with magnesium chloride, which is spread on roads when they are slippery. Spreading only occurs as necessary. Site grading does not allow run-on from entering the building. An aboveground poly-tank is set atop a concrete pedestal near the northwest corner of the west building entrance. The roughly 1,000-gallon poly-tank is labeled “MgCl Liquid.” A ball valve and hose connect to the side of the tank. This facility is surrounded by permeable areas and offers little opportunity for runoff to transport residual or spilled material to the JBER MS4.

3.1.8 Employee Training BMPs

The MSGP requires training for the storm water pollution prevention team as well as personnel who are responsible for implementation of, and compliance with, provisions of the permit. ADEC recommends administering this training annually, at a minimum, and more frequently at facilities with high turnover of personnel. Facility storm water coordinators and/or Unit Environmental Coordinators (UECs) at JBER receive annual storm water pollution prevention training that covers the components and goals of the SWPPP, basic BMPs described in this section, sector-

specific BMPs and activity-specific BMPs that must be implemented at facilities, and the responsibilities of facility personnel required by the MSGP and SWPPP. Special attention is given to activities and pollutants associated with different facility operations, and instruction on how to avoid contamination of storm water is provided. In-house training materials are available at 673/CES/CEIEC for new personnel and those personnel who could not attend the formal training sessions. All personnel who work in areas where industrial materials or activities are exposed to storm water are responsible for implementing activities identified in this SWPPP and are encouraged to participate in storm water training.

Annual storm water training documentation is maintained by 673 CES/CEIEC with this SWPPP.

3.1.9 Non-Storm Water Discharges BMPs

The 2015 MSGP states, "You [permittee] must eliminate all non-storm water discharges not authorized by a National Pollutant Discharge Elimination System (NPDES) permit." The MSGP authorizes uncontaminated storm water discharges from industrial facilities, when complying with terms of the permit. The MSGP also identifies the following allowable non-storm water discharges from permitted facilities:

- Discharges from fire-fighting activities.
- Fire hydrant flushing.
- Potable water, including water line flushing.
- Uncontaminated condensate from air conditioners, coolers, and other compressors and from the outdoor storage of refrigerated gases or liquids.
- Irrigation drainage.
- Landscape watering, provided all pesticides, herbicides, and fertilizer have been applied in accordance with the approved labeling.
- Pavement wash waters where no detergents are used and no spills or leaks of toxic or hazardous materials have occurred (unless all spilled material has been removed).
- Routine external building wash-down that does not use detergents.
- Uncontaminated groundwater or spring water.
- Foundation or footing drains where flows are not contaminated with processed materials.
- Incidental windblown mist from cooling towers that collects on rooftops or adjacent portions of the facility, but not intentional discharges from the cooling tower. (e.g., "piped" cooling tower blow-down or drains)

Although the above discharges are not subject to NPDES industrial storm water permitting requirements, appropriate measures must be implemented to prevent pollutants from entering the storm water drainage system from non-storm water discharges.

3.1.10 Waste, Garbage and Floatable Debris BMPs

The highest potential for waste, garbage, or floatable debris to enter receiving waters at JBER occurs at snow stockpiling areas, where snow is stored after plowing. This is due to the large volume of melt water and the fact that waste and debris is not visible until the pile melts. JBER has identified stockpile areas to prevent or limit potential impacts to storm water.

At JBER, trash is picked up, transported, and disposed of by several contractors on a regular schedule. Facility personnel are instructed during quarterly inspections to keep lids on their dumpsters at all times. A copy of the trash pickup schedules is available at the Air Force Contracting Office on request.

Most industrial activities on the installation are conducted indoors and at a significant distance from waters of the U.S. Quarterly inspections of these sites and their surrounding areas help ensure good housekeeping measures such as trash removal and proper waste disposal are occurring. Garbage cans and/or dumpsters at industrial facilities are regularly emptied. Spring-cleaning occurs at industrial facilities to ensure that any garbage or debris uncovered by snow melt is properly disposed of.

The following BMPs are implemented at JBER industrial facilities to ensure that garbage and debris do not enter receiving waters.

- Provide dedicated, clearly marked containers or dumpsters for disposal of garbage.
- Place trash receptacles in convenient locations.
- Keep containers protected from weather so that containers are not blown over during wind events or filled with snow or rain.
- Empty containers on a regular basis.
- Regularly inspect site to ensure that loose trash is picked up and disposed of properly.
- Conduct thorough spring-cleaning after snow melt.
- Remove and properly dispose of all trash and garbage from grounds, snow stockpiles, parking areas and roadways.
- Follow BMPs for proper disposal of hazardous waste and materials.

3.1.11 Dust Generation and Vehicle Tracking of Industrial Material BMPs

Dust, also known as fugitive dust, comes from gravel roads, cleared ground, stockpiles, and open areas, and is considered a form of air pollution. Construction activities that disturb soil can also be a significant source of fugitive dust especially during heavy construction activities, such

as land grading for road construction and runway/airfield construction and maintenance. JBER institutes dust control measures as necessary.

3.2 Activity-Specific Control Measures

The MSGP requires permittees to describe in their SWPPP the control measures implemented to address the activities at their facilities with the potential to contaminate storm water. BMPs highlighted in this section address activities that regularly occur at various industrial and non-industrial facilities at JBER. All personnel engaging in these activities, regardless of whether or not the facility in which the activity is occurring is an identified sector under the MSGP, must comply with applicable control measures.

Activities at JBER that could potentially impact storm water are:

- Fueling and fuel storage.
- Aircraft and supporting equipment maintenance.
- Aircraft and supporting equipment washing.
- Vehicle and motor pool equipment maintenance.
- Vehicle and motor pool support equipment washing.
- Loading and unloading materials.
- Runway deicing/anti-icing.
- Management of HM/HW.
- Salt storage.
- Outdoor storage areas.

The activity-specific control measures below complement the basic measures discussed in Section 3.1 of this SWPPP and the sector-specific control measures in Section 3.3.

3.2.1 Fueling and Fuel Storage BMPs

Fueling activities at JBER include small volume fuel transfer and bulk fuel transfer. Small volume fuel transfer includes fueling vehicles, equipment, and aircraft at fixed fuel points, as well as to/from portable sources such as fuel trucks, bowsers, and hand-held containers. Bulk fuel is transferred to ASTs and USTs via delivery fuel trucks and fixed piping. The JBER SPCC/C-Plan describes the management of fuel storage and transfer on the installation, contingency planning, and response strategies, and training requirements or fuel handler personnel. The SPCC/C-Plan is maintained by 673 CES/CEIEC with this SWPPP, and copies are provided to the JBER FES and fuel maintenance units. Detailed information on all major aspects of the JBER fueling program are included in the SPCC/C-Plan and are not reproduced in this SWPPP. The following BMPs are used for all fueling and fuel storage activities:

- Always use the two person policy for any refueling.
- Establish product rotation procedures for hydrant and bulk storage tanks.
- Regularly use all tanks, transfer pipelines, pumps, fill stands, and meters to help prevent deterioration of pumps, seals, and gaskets.
- Inspect refueling vehicles and equipment and regular intervals.
- Take inventory and verify results regularly.

3.2.2 Aircraft and Supporting Equipment Maintenance BMPS

Aircraft and supporting equipment maintenance activities at JBER are conducted indoors, in designated places whenever practicable. Designated maintenance areas have non-permeable surfaces that drain to OWS or fuel/oil/water separators (FWS) prior to discharging to the sanitary sewer system. Occasional aircraft maintenance occurs on the flight line as mission dictates. When maintenance must occur outdoors, proper BMPs to minimize potential contamination of surface water run-on and runoff, include access to stocked spill kits, HM/HW handling procedures and spill prevention and response. The following BMPs can reduce the potential impact to storm water:

- Ensure maintenance is only performed by personnel who are trained, qualified and certified for the equipment they are working on.
- Enforce procedures to prevent foreign object damage and dropped objects.
- Ensure that only HAZMAT and MIL-SPEC approved materials are used.
- Inspect aircraft and support equipment per manufactures specifications.
- Follow all AFI and AR procedures regarding aircraft and support equipment maintenance.

3.2.3 Aircraft and Support Equipment Washing BMPs

The following list summarizes activity-specific BMPs for vehicle, aircraft, and equipment washing activities at JBER industrial facilities:

- Wash only in designated facilities/areas.
- Only use approved soaps over drains leading to an OWS.
- Prevent wash water from entering the storm water drainage system.
- Do not dispose of any materials or waste down wash rack drains.
- Liquid HM containers stored in unused wash bays must have secondary containment.
- Regularly inspect containment features, traps, sumps, drains, etc., for proper function and repair/replace as necessary.

3.2.4 Vehicle and Motor Pool Support Equipment Maintenance BMPs

Vehicle and equipment maintenance/repair can be a significant source of storm water pollution due to the use of environmentally harmful materials and wastes. Engine repair and service (e.g., parts cleaning), replacement of fluids (e.g., oil changes), and outdoor equipment storage and parking (dripping engines) can impact water quality. Implementation of the following activities will prevent or reduce the discharge of pollutants to storm water from vehicle and motor pool support maintenance:

- Move maintenance and repair activities indoors whenever feasible.
- Store idle equipment containing fluids under cover if possible.
- Store materials and waste only in approved areas.
- Drip pans must be used under all government and military vehicle when not in use. Vehicles used and/or parked within the flight line must either secure the drip pan to the vehicle or weigh the drip pan down to prevent the drip pan from becoming a flight hazard.
- Monitor parked vehicles closely for leaks and drips.
- Empty drip pans that have liquid in them into appropriate containers.

3.2.5 Vehicle and Motor Pool Support Equipment Washing BMPs

Wash water from vehicle and equipment cleaning activities performed outdoors or in areas where water flows onto the ground can contribute pollutants to storm water runoff. All government vehicles must be washed in approved wash areas. Only approved biodegradable, phosphate-free detergents should be used. To help reduce the potential impact of vehicle and motor pool wash water to storm water runoff, the following procedures should be followed on JBER:

- Wash only in designated facilities/areas.
- Only use approved soaps over drains leading to an OWS.
- Prevent wash water from entering the storm water drainage system.
- Do not dispose of any materials or waste down wash rack drains.
- Liquid HM containers stored in unused wash bays must have secondary containment.
- Regularly inspect containment features, traps, sumps, drains, etc., for proper function and repair/replace as necessary.
- Disposal of any loose trash in containers and disposal of properly.

3.2.6 Loading and Unloading Materials BMPs

The following list summarizes activity-specific BMPs for loading and unloading materials at JBER industrial facilities:

- Follow all material handling procedures in the OPLAN.
- Keep new chemical containers unopened until they are to be used.
- Do not load/unload liquid materials over storm drains; if necessary, cover and place booms around drains prior to activity.
- Load/unload materials inside or under covered areas whenever practicable.
- If already opened, ensure container lids are tightly secured when not in use.
- Manage traffic accordingly during loading/unloading activities to reduce the chance of an accident.

3.2.7 Runway Deicing/Anti-icing BMPs

A variety of BMP options may be used to eliminate or minimize the presence of pollutants in storm water discharges from air transportation deicing/anti-icing operations. These include the following:

- Evaluate current chemical application rates to avoid over-application.
- Use sand where possible to enhance friction.
- Plow and broom runways prior to application of deicing chemicals.
- Install and calibrate devices to meter the amount of deicer being applied.
- Emphasize anti-icing operations, which minimize the need to deice.
- Use deicers that have less environmental impact.
- Ensure proper handling and disposal of unused deicing chemicals in vehicles.

3.2.8 Management of HM/HW BMPs

673 CES/CEAN operates the Treatment, Storage, or Disposal Facility (TSDF) on the installation. Regulated waste at industrial facilities accumulates at approved accumulation areas before being brought to the TSDF by the waste turn-in contractor. Requirements for HM/HW accumulation and handling at JBER are strictly dictated by RCRA and OPLAN 19-3 and are therefore not duplicated in this SWPPP. The proper management of HM/HW at JBER under the RCRA and OPLAN 19-3 programs prevents exposure of HM/HW to weather and run-on/runoff.

3.2.9 Salt Storage BMPs

Salt spilled or blown onto the ground during loading and unloading, or salt exposed to rain or snow, can dissolve into storm water runoff. The following BMPs will help reduce storm water contamination from salt storage and transfer activities:

- Store salt/sand stockpiles under a roof.
- If materials must be stored outside for any period of time, cover the pile with a temporary covering material and secure it.
- If excess salt/sand is spilled during transfer or mixing operations, it should be picked up as soon as possible.

3.2.10 Outdoor Storage Areas BMPs

The following list summarizes activity-specific BMPs for outdoor storage activities at JBER industrial facilities:

- Materials stored outdoors must be out of contact with run-on and runoff and covered from weather.
- Liquids (even non-hazardous) stored outdoors should have secondary containment.
- Materials should be stored away from high traffic areas and/or consider creating a barrier between storage and high traffic areas.

The following BMPs for storing tactical vehicles, equipment, and aircraft are implemented when practicable at JBER:

- Store vehicles, equipment, and aircraft indoors or under cover whenever possible.
- Drip pans should be placed and maintained under leaking tactical vehicles, equipment, and aircraft.
- Drip pans should be positioned to catch leaks and drips and be properly emptied/replaced as necessary.
- Cover oily parts or those containing chemical residue from weather.
- Empty and properly dispose of all fluids prior to vehicle/equipment disposal.
- Maintain leaky vehicles/equipment/aircraft prior to long-term storage.
- Regularly inspect vehicle, equipment, and aircraft storage areas for leaks and promptly address as necessary.

3.3 Sector-Specific Control Measures

This section of the SWPPP provides sector-specific requirements that are in addition to/or more detailed than the activity-specific BMPs. In many cases, these sector-specific BMPs complement the basic BMPs described in Section 3.1 and activity-specific BMPs in Section 3.2. Requirements in this section must be implemented as applicable.

Section 1.3 of the MSGP discusses conditions for determining if and when a facility is eligible for a no exposure exclusion from permitting in 40 CFR 122.26(g). Under the 2015 MSGP, the No Exposure Certification for Exclusion applies to an entire facility and not individual outfalls or areas located within the facility covered under a single permit. Facilities where multiple industrial sectors are covered under one permit, and it is determined that none of the sectors have the potential to impact storm water, must be noted in the facility-wide SWPPP and inspected annually during the comprehensive site inspections to ensure that conditions have not changed. No additional monitoring and/or sector-specific monitoring is required for these sectors. It is JBER's position that No Exposure Certification for Exclusion applies to all Sector D activities, all Sector J activities, and all Sector X activities on the installation.

3.3.1 No Exposure Sectors

3.3.1.1 Sector D – Asphalt Paving, Roofing Materials and Lubricant Manufacturing

The asphalt batch plant at JBER is operated intermittently by a contractor for the installation. At a batch asphalt plant, aggregate is loaded into bins using front-end loaders and/or conveyors. The aggregate is dried in an industrial fuel-fired dryer, then conveyed to a screening bin where aggregates are sorted, weighed, and mixed with hot-mix asphalt and reclaimed asphalt. The final material is transported via truck to the project site for immediate use. JBER has established control measures around the stockpiled materials to ensure no pollutants are discharged with storm water off-site. Therefore, unless current operations and conditions are noted to change, all Sector D activity currently does not have the potential to impact waters of the U.S. and therefore fall under the No Exposure category.

3.3.1.2 Sector J – Non-Metallic Mineral Mining and Dressing

This sector designation applies to multiple gravel borrow pit sites on JBER. Gravel pits at JBER are used intermittently, depending on what construction or maintenance projects are underway. Typically, the gravel pits are used during the construction season, between May and October. However, use of these pits varies, and they are not used during every construction season. Gravel from the pit is primarily unclassified fill for vertical construction foundations and parking lots. Gravel is extracted and crushed/processed in the gravel pit prior to being transported to the site for use. Locations of Sector J activities at JBER are shown in Figure 10.

Sector J activity does not have a potential to discharge to waters of the U.S., based upon individual site grading, and therefore is included in the No Exposure category.

3.3.1.3 Sector X – Printing and Publishing

The MSGP Sector X designation applies to JBER's reproduction and printing facility. Activities conducted on premises at this facility are limited to document reproduction, binding, and laminating documents and forms. Document reproduction and printing is done on printers that use toner. All activities are done indoors. There is no offset printing performed on site.

Sector X activity does not have a potential to discharge to waters of the U.S. as all activities and storage occur indoors only and are therefore included in the No Exposure category.

3.3.2 Potential Exposure Sectors

3.3.2.1 Sector K – Hazardous Waste Treatment, Storage, or Disposal Facilities

Storm water discharges from hazardous waste treatment, storage, or disposal facilities including those operated under interim status or permit. At JBER, the Hazardous Waste Storage Facilities are operated under contract for the government. The two sector K facilities on JBER are building 11735 (Hazardous waste Transfer Station one-year TSD) and Building 4313 (Hazardous Waste Transfer Station, 90-day accumulation facility). These facilities are associated with JBER-E Outfall 3, and have little to no chance of releasing contaminants to storm water. JBER plans to conduct a hydrologic study of these facilities to determine whether storm water runoff would migrate off site. Once complete, a "Letter of Exception" from ADEC regarding sampling at these sites will be requested. Until a hydrological study or Letter of Exception has been approved by ADEC, benchmark sampling and inspections will continue at JBER-E Outfall 3 under Sector K. Given the types of materials and waste streams that are handled at these facilities, specific BMPs are required for ensuring that storm water does not come in contact with these materials.

Minimize Exposure BMPs

- Confine loading/unloading activities to a designed area that is covered if possible.
- Inspect all containers prior to loading/unloading to ensure containers are closed and secured.
- Avoid loading/unloading in the rain.

Good Housekeeping BMPs

- Clean pavement surface to remove oil and grease.
- Confirm storage of hazardous materials to designated areas.
- Ensure sufficient aisle space to ease inspections and handling.
- Implement schedule to conduct inspections of all storage areas included both indoors and outdoors.

Maintenance BMPs

- Conduct fueling operations of forklifts only on impervious areas or under contained pads or under a covered roof or canopy.
- Use drip pans under any equipment left outside at all times.
- Never perform any maintenance on vehicles and/or equipment outside if possible.

Spill Prevention and Response BMPs

Spill prevention and response are the most critical BMPs for addressing potential storm water impacts. The following sector-specific BMPs must be followed:

- Keep spill cleanup material readily available and clean up spills and leaks immediately.
- Use dry clean-up methods instead of washing the area down.
- Use spill and overflow devices.
- Follow all directions as specified in JBER's SPCC/C-Plan.
- Contact 911 for all spills of reportable quantities.

Erosion and Sediment Controls BMPs

- Minimize and/or eliminate storm water run-on in storage areas by ensuring site grading directs water away from building and storage areas.
- Ensure existing drainage ditches are clear of trash and debris.
- Avoid stockpiling snow in drainage swales/ditches during winter months.

Management of Runoff BMPs

JBER uses vegetated swales, ditches, and berms to manage runoff on the installation, to the extent possible. The following BMPs should be used in support of the standard BMPs discussed in this SWPPP when possible.

- Avoid loading/unloading materials in the rain.
- Conduct visual inspection of drainage ditches, berms, and swales to ensure that storm water is not migrating off-site if possible.
- Use oil absorbent pads to remove any sheens observed on standing water in parking and storage areas.
- Clean all spills, leaks and drips as quickly as possible.

Salt Storage Piles or Piles Containing Salt BMPs

Salt storage or piles containing salt do not apply to this sector-specific activity at JBER.

MSGP Sector-Specific Non-Numeric Effluent Limits BMPs

The only sector-specific requirement for the JBER TSDf is the sector-specific benchmark monitoring addressed in the analytical monitoring section of this SWPPP (Section 4).

Employee Training BMPs

Employee training must include at a minimum:

- Hazardous waste/hazardous material storage and handling.
- Storm water training.
- SPCC training and implementation.

Non-Storm Water Discharges BMPs

There are no non-storm water discharges that are authorized at these locations.

Waste, Garbage and Floatable Debris BMPs

The following sector-specific BMPs should always be used to eliminate impacts to water quality resulting from storm water and snow melt from Sector K facilities:

- Conduct regular inspection of all exterior areas where trash and debris might collect.
- Ensure that trash containers lids are always closed and secured.
- Ensure that scrap metal containers are covered and secured.
- Ensure that all trash and scrap containers have drain bungs installed and closed to prevent any discharges.

Dust Generation and Vehicle Tracking of Industrial Material BMPs

Dust generation and vehicle tracking are not believed to be a concern at these locations. If conditions resulting in the generation of dust or vehicle tracking occur at Sector K facilities, this SWPPP will be modified to include specific BMPs.

3.3.2.2 Sector P – Land Transportation and Warehousing

Vehicle motor pools and maintenance shops have the potential to generate loads of hydrocarbons, trace metals, and other pollutants that can affect the quality of storm water. To effectively minimize that impact to storm water, the following sector-specific BMPs should be utilized.

Minimize Exposure BMPs

The following BMPs should be used to minimize the exposure of storm water to chemicals and pollutants at motor pool maintenance shops:

- Perform all cleaning operations indoors or under a covered area when possible.
- Park equipment and vehicles indoors if possible.
- Store all parts and supplies indoors in approved storage areas.

Good Housekeeping BMPs

Outdoor areas, especially parking areas for vehicles awaiting repairs, should be inspected regularly for drips, spills and improperly stored materials (unlabeled containers, auto parts that might contain grease or fluids, etc.). The following BMPs should always be applied where practicable:

- Store vehicles and equipment awaiting maintenance or vehicles suspected of leaks in a designed, roofed, impervious area or garage.
- Conduct all body repair and painting indoors.
- Place drip pans under all government vehicles and equipment when not in use and ensure that any liquid inside drip pans is disposed of properly.
- Prohibit the practice of hosing down shop floors and areas and instead use dry-sweep methods to clean.

Maintenance BMPs

Maintenance of vehicles and motor pool equipment can have a significant impact to water quality. Reducing the exposure of vehicle fluids to storm water represents the most effective means of protecting water quality. The following sector-specific BMPs should be followed:

- Only store vehicle maintenance products in approved, covered areas.
- HW/HM storage and handling must follow the OPLAN 19-3.
- Only approved materials may be used on JBER (Contact the HM/HW Program Manager with questions).
- Quickly clean up all spills and leaks and report per the SPCC/C-Plan.

Spill Prevention and Response BMPs

The bulk of spill prevention and response requirements at JBER can be found in the OPLAN 19-3 and SPCC/C-Plan. The OPLAN 19-3 details all HM/HW handling, use, and storage protocols at JBER and complies with Air Force EMS requirements. The SPCC/C-Plan was prepared in accordance with 40 CFR 112 (Oil Pollution Prevention) and ADEC's 18 AAC 75 (Oil and Other

Hazardous Substances Pollution Control), which regulate the storage, handling, and dispensing of POLs. The OPLAN 19-3 and SPCC/C-Plan are maintained by the 673d CES/CEIEC, and copies are provided to JBER FES, and fueling and fuel maintenance flights. A copy of both is also available on the JBER public website.

Erosion and Sediment Control BMPs

Erosion and sediment control is not a significant issue at JBER for Sector P facilities. Most facilities are located on level areas of the cantonment area with little to no changes in topography. If erosion and/or sediment control is identified as a problem, work with the Environmental Office to include BMPs such as seeding, mulching, and sodding to prevent further erosion and sediment loss.

Management of Runoff BMPs

To the maximum extent possible, JBER uses berms, curbs, grassed swales or other diversion measures to ensure that storm water runoff from Sector P activities are directed to infiltration areas as opposed to direct runoff to waters of the U.S. Regular maintenance of the conveyance system is important to ensure proper operation. The following BMPs should be applied:

- Remove all debris and trash from runoff areas and drainage channels.
- Ensure that check-dams are free of any built-up materials and functioning correctly.
- Excess vegetation growth is removed as needed.
- Any exposed soils be stabilized and seeded quickly to reduce suspended soil runoff.

Salt Storage Piles or Piles Containing Salt BMPs

Salt storage piles or sand piles that contain salt are only stored at two locations on JBER (Building 10550 and Building 740). All material is stored indoors to prevent storm water from coming in contact with the material. No other areas on JBER are approved for salt piles.

MSGP Sector-Specific Non-Numeric Effluent Limits BMPs

There are no sector-specific, non-numeric effluent limiting BMPs.

Employee Training BMPs

Sector-specific training includes a combination of SPCC training, annual storm water training, HM/HW training and EMS training. Copies of the training material are available at the Environmental Office at Building 724.

Non-Storm Water Discharge BMPs

There is no permitted, non-storm water discharge associated with any sector-specific activity to the JBER storm water conveyance system. All vehicle washing must occur in an approved, designed vehicle wash bay or wash facility only as discussed in Section 3.2.5 of this SWPPP as well as Section 3.1.3.1 of JBER's MS4 Management Plan. Military tactical vehicles should be washed at the Tactical Wash Facility on JBER-Richardson.

Waste, Garbage and Floatable Debris BMPs

There is no sector-specific activity at JBER Sector P sites that is expected to produce waste, garbage or floatable debris. Any waste from vehicle maintenance and servicing will be managed according to the OPLAN 19-3.

3.3.2.3 Sector S – Air Transportation Facilities

Most Sector S facilities at JBER that are managed by this SWPPP are immediately adjacent to the JBER-E airfield, though a few are elsewhere on the installation. Examples include locations where fuel trucks are staged when not actively fueling and the airstrip at Six Mile Lake, north of the JBER-E airfield. Airfield areas have the potential to generate fuel spills and other, pollutants that can affect the quality of storm water. To effectively minimize that impact to storm water, the following sector-specific BMPs should be utilized.

Minimize Exposure BMPs

Store all aircraft, ground vehicles, and equipment awaiting maintenance in designated areas only and minimize the contamination of storm water from these areas. Consider the following control measures:

- Store all materials indoors and only in approved areas.
- All aircraft cleaning should only occur in approved wash bay areas with OWS units.
- If material must be stored outside, place materials away from flight lines and taxiways.

Good Housekeeping BMPs

The following BMPs should always be applied where practicable:

- Store vehicles and equipment awaiting maintenance or vehicles suspected of leaks in a designed, roofed, impervious area or garage.
- Conduct all body repair and painting indoors.
- Place drip pans under all bowser vehicles and ensure that drip pans are chained and/or secured to bowser to prevent flight line hazard.
- Prohibit the practice of hosing down hardstands and taxiways areas and instead use dry-sweep methods to clean.

Maintenance BMPs

Maintenance of aircraft and equipment can have a significant impact to water quality. Reducing the exposure of fluids to storm water represents the most effective means of protecting water quality. The following sector-specific BMPs should be followed:

- Only store products in approved, covered areas.
- HW/HM storage and handling must follow the OPLAN.
- Only approved materials may be used on JBER. Contact the HM/HW Program Manager with questions.
- Quickly clean up all spills and leaks and report per the SPCC/C-Plan.

Spill Prevention and Response BMPs

The bulk of spill prevention and response requirements at JBER can be found in the OPLAN 19-3 and SPCC/C-Plan. The OPLAN 19-3 details all HM/HW handling, use, and storage protocols at JBER and complies with Air Force Environmental Management System (EMS) requirements. The SPCC/C-Plan was prepared in accordance with 40 CFR 112 (Oil Pollution Prevention) and ADEC's 18 AAC 75 (Oil and Other Hazardous Substances Pollution Control), which regulate the storage, handling, and dispensing of POLs. The OPLAN 19-3 and SPCC/C-Plan are maintained by the 673d CES/CEIEC and copies are provided to JBER FES, and fueling and fuel maintenance flights. A copy of both is also available on the JBER public website.

Erosion and Sediment Control BMPs

There is no sector-specific erosion and sediment control BMP.

Management of Runoff BMPs

The management of runoff from aircraft activities, particularly aircraft deicing and airfield deicing/anti-icing, is a significant issue at JBER. Recent analytical results from monthly sampling events indicates that discharges of "spent" deicer/anti-icing products for parameters including biochemical oxygen demand (BOD) and chemical oxygen demand (COD) have exceeded ADEC benchmark limits during periods of rapid melting and Chinook (warm) rain events.

While exceeding a benchmark limit in itself is not a violation of JBER existing MSGP permit, steps to address and potentially reduce future runoff are needed. The following sector-specific BMPs will be implemented to manage storm water runoff:

- Continue to evaluate and use only environmentally friendly products.
- The use of urea for deicing is prohibited without prior communication with the Environmental Office.

- Continue to evaluate source reduction with existing equipment.

In addition to these BMPs, JBER is in the process of conducting an airfield deicing/anti-icing alternative study to determine the most effective options that are available without impact to the military mission. It is expected that this study will be completed and recommendations made within this permit. Additional work and implementation of any findings are subject to military funding.

Salt Storage Piles or Piles Containing Salt BMPs

Salt storage piles or sand piles that contain salt are only stored at two locations on JBER (Building 10550 and Building 740). All material is stored indoors to prevent storm water from coming in contact with the material. No other areas on JBER are approved for salt piles.

MSGP Sector-Specific Non-Numeric Effluent Limits BMPs

There are no sector-specific, non-numeric effluent limiting BMPs.

Employee Training BMPs

As part of the required annual training to all individuals assigned as the “storm water point of contact (POC)” at each facility, the JBER storm water team members include additional material specifically geared to Sector S activities. These include information on aircraft fueling procedures, aircraft washing, aircraft fluid handling and storage, and spill clean-up and reporting.

Non-Storm Water Discharge BMPs

There is no permitted, non-storm water discharge associated with any sector-specific activity to the JBER storm water conveyance system. All vehicle washing must occur in an approved, designed vehicle wash bay or wash facility only as discussed in Section 3.2.5 of this SWPPP as well as Section 3.1.3.1 of JBER’s MS4 Management Plan. Military tactical vehicles should be washed at the Tactical Wash Facility on JBER-Richardson.

Waste, Garbage and Floatable Debris BMPs

There is no sector-specific activity at JBER Sector S sites that are expected to produce waste, garbage or floatable debris. Any waste from vehicle maintenance and servicing will be managed according to the OPLAN.

4 SCHEDULES AND PROCEDURES FOR MONITORING

Part 5.2.6.2 of the MSGP states that the SWPPP must document procedures for conducting the four types of analytical monitoring specified by this permit, where applicable to the facility, and describes what must be documented. Part 7.0 of the permit describes required monitoring and procedures.

The four types of analytical monitoring are:

- Benchmark monitoring (See Part 7.2.1 of the ADEC 2015 MSGP);
- Effluent limitations guidelines monitoring (See Part 7.2.2 of the ADEC 2015 MSGP);
- Impaired waters monitoring (See Part 7.2.3 of the ADEC 2015 MSGP); and
- Other monitoring as required by ADEC (See Part 7.2.4 of the ADEC 2015 MSGP).

This section describes analytical monitoring requirements of the MSGP applicable to JBER. JBER's analytical monitoring program for compliance with the MSGP is summarized in Table 4 at the end of this section.

4.1 Benchmark Monitoring

At this time, six industrial sectors have been identified at JBER: Sectors D, J, K, P, S, and X. While some of these sectors may not either discharge to waters of the U.S. or have a potential to discharge to waters of the U.S., they are still discussed in this section as required under the Alaska MSGP. Sector-specific benchmark monitoring for pollutants in storm water is described below. Benchmark sampling will no longer occur at JBER-R Outfall 1 and JBER-E Outfall 4, as these outfalls are no longer associated with industrial activity. Additionally, benchmark sampling for deicing parameters will no longer be performed at JBER-E Outfall 6 (Six Mile Lake), as deicing is not associated with this outfall. Descriptions and drainages for each outfall are described in Section 1.2 and 1.3 above.

4.1.1 Benchmark Parameters and Control Values

4.1.1.1 Sector D – Asphalt Paving, Roofing Materials and Lubricant Manufacturing

As discussed in Section 3.3.1.1 of this SWPPP, the only asphalt batch operations at JBER is managed by BMPs to prevent any storm water from coming in contact with either the batch plant or material stockpiles and migrating to waters of the U.S. Therefore there are no benchmark parameters and control values that apply at JBER. However, if conditions change at the batch plant, then the sector-specific benchmark for total suspended solids may apply.

Total Suspended Solids (TSS)	100 mg/L
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4.1.1.2 Sector J – Non-Metallic Mineral, Mining and Dressing

At the time this SWPPP was prepared, storm water at all gravel extraction sites at JBER infiltrated on-site. If conditions change at these sites (i.e., grading, the addition of new entry/exits, dewatering, etc.) such that runoff has the potential to drain to conveyances leading to waters of the U.S., or if new sites operate with this potential, JBER will have to implement the Sector J sampling requirements discussed in this section. These requirements refer to Subsector J1 (sand and gravel mining). The following benchmark parameters and benchmark monitoring concentrations for these parameters apply to Subsector J1.

Nitrate plus Nitrite Nitrogen	0.68 mg/L
Total Suspended Solids (TSS)	100 mg/L

4.1.1.3 Sector K – Hazardous Waste Treatment, Storage or Disposal Facilities

Sector K at JBER does not include a hazardous waste landfill, so only the benchmark monitoring required for Subsector K1, “ALL” is required. The hazardous waste buildings associated with JBER-E Outfall 3 have little to no chance of releasing contaminants to storm water. JBER plans to conduct a hydrological study at these facilities in order to determine whether sampling stormwater would need to continue. Should ADEC grant JBER a Letter of Exception regarding stormwater sampling at JBER-E Outfall 3, benchmark sampling would no longer continue for Sector K facilities. However, until that is achieved, benchmark sampling will continue to be performed at JBER-E Outfall 3 for Sector K parameters. Benchmark monitoring parameters for Sector K at JBER and associated monitoring concentrations for these parameters are:

Ammonia	2.14 mg/L
Total Magnesium	0.064 mg/L
Chemical Oxygen Demand (COD)	120 mg/L
Total Arsenic	0.15 mg/L
Total Cadmium	Hardness Dependent
Total Cyanide	0.022 mg/ L
Total Lead	Hardness Dependent
Total Mercury	0.0014 mg/L
Total Selenium	0.005 mg/L
Total Silver	Hardness Dependent

Soils in Alaska can have high background concentrations of some parameters listed above. The following language is taken from Part 7.2.1.5 of the MSGP and describes the process to follow when high background levels exist:

Natural background pollutant levels: Following the first 4 quarters of benchmark monitoring (or sooner if the exceedance is triggered by less than 4 quarters of data, see above [in MSGP]), if the average concentration of a pollutant exceeds a benchmark value, and you determine that exceedance of the benchmark is attributable solely to the presence of that pollutant in the natural background, you are not required to perform corrective action or additional benchmark monitoring provided that:

- *The average concentration of the permittees benchmark monitoring results is less than or equal to the concentration of that pollutant in the natural background;*
- *The permittee must document and maintain with the SWPPP, as required in Part 5.8, the supporting rationale for concluding that benchmark exceedances are in fact attributable solely to natural background pollutant levels. The permittee must include in their supporting rationale any data previously collected by the permittee or others (including literature studies) that describe the levels of natural background pollutants in their storm water discharge; and*
- *The permittee must notify ADEC on their final quarterly benchmark monitoring report that the benchmark exceedances are attributable solely to natural background pollutant levels.*

Natural background pollutants include those substances that are naturally occurring in soils or groundwater. Natural background pollutants do not include legacy pollutants from earlier activity at the facility, or pollutants in run-on from neighboring sources which are not naturally occurring.

4.1.1.4 Sector P – Land Transportation and Warehousing

There are no sector-specific benchmark monitoring requirements for Sector P.

4.1.1.5 Sector S – Air Transportation Facilities

JBER does not use urea-based products for deicing/anti-icing (See Annual Certification Statement in Appendix J), and typically uses less than 100,000 gallons of glycol-based deicing chemicals annually (AMS 1424 Type I Deicing Defrosting Fluid at a 60% glycol to 40% water per mixed rate). However, JBER will continue benchmark sampling under Sector S of the ADEC 2015 MSGP for deicing parameters in order to ensure compliance at JBER-E Outfall 1, JBER-E Outfall 2, and JBER-E Outfall 5. These outfalls discharge from airfield areas at which deicing/anti-icing occurs. Because JBER does not use urea-based products for deicing/anti-icing, ammonia will not be sampled for in accordance with Part 11.S.7 (Table 11.S.7-1) of the ADEC 2015 MSGP. All four quarterly benchmark samples must be collected during the deicing season (October to April). Below is a list of parameters that must be monitored.

Biochemical Oxygen Demand (BOD ₅)	30 mg/L
COD	120 mg/L
pH	6.5 – 8.5 s.u.

4.1.1.6 Sector X – Printing and Publishing

There are no sector-specific benchmark monitoring requirements for Sector X.

4.1.2 Summary of Required Benchmark Monitoring

Benchmark monitoring must be conducted for the above Sector K and S parameters. Should changes at Sector J activity sites occur disqualifying the No Exposure category, benchmark monitoring for Sector J parameters above would be required for those operations.

4.1.3 Benchmark Monitoring Schedule

Benchmark monitoring will be performed quarterly for the first four full quarters of permit coverage. In accordance with Part 7.1.7 of the 2015 MSGP, monitoring requirements under the 2015 MSGP begin in the first full quarter following either January 1, 2015 or the permittees date of discharge authorization, whichever date comes later. Quarterly monitoring must be conducted at least once in each of the following three-month intervals:

- **Quarter 1:** January 1 – March 31;
- **Quarter 2:** April 1 – June 30;
- **Quarter 3:** July 1 – September 30;
- **Quarter 4:** October 1 – December 31.

Because JBER obtained permit coverage authorization on August 11, 2015, quarterly monitoring began during the fourth quarter of 2015 (October 1 – December 31). Additionally, all

quarterly monitoring and benchmark sampling for Sector S (Air Transportation) must occur during the deicing season (approximately October – April for JBER).

As stated in the MSGP, if the average of the four monitoring values for any of the above parameters (the metals, COD, and ammonia for Sector K and BOD, COD, and pH for Sector S) does not exceed the respective benchmark value, no additional benchmark monitoring is required. If the average value for any of the above parameters exceeds the benchmark value, control measures in this SWPPP must be reviewed, modified as appropriate and technically feasible, and the parameter of concern monitored for another four quarters (or once per year if it is determined that no further pollutant reductions are practicable). This cycle will be repeated in subsequent years if the benchmark monitoring results for a parameter continue to exceed the benchmark for that parameter. Refer to Part 7.2.1.4 of the MSGP for details of this requirement and associated reporting.

4.2 Effluent Limitations Monitoring

4.2.1 Effluent Parameters and Limits

Table 1-1 of the 2015 MSGP lists those sectors that are subject to numeric storm water-specific effluent limitation guidelines. That table includes Sectors J and K, which are present at JBER. The sector-specific sections of the ADEC 2015 MSGP detail the monitoring required to comply with applicable numeric effluent limits set forth in the ADEC 2015 MSGP.

Sector D – Asphalt Paving, Roofing Materials and Lubricant Manufacturing

The only effluent limitation guidelines for Sector D facilities are for those that operate an asphalt emulsion facility. Since JBER operates a batch facility and does not discharge, as discussed in Section 3.3.1.1 of this SWPPP, there are no effluent parameters that apply to JBER under Sector D.

Sector J – Non-Metallic Mineral Mining and Dressing

For Sector J facilities, the only effluent limitation guideline applies to any mine dewatering discharges that occur as part of the overall mineral mining activity. Currently, all Sector J operations on JBER do not discharge to waters of the U.S. (as discussed in Section 3.3.1.2 of this SWPPP) and do not conduct any dewatering operations. If, however, activities and operations change at any of JBER's gravel/quarry pits and dewatering is required, then the following effluent limits might apply under the ADEC 2015 MSGP:

pH 6.5 – 8.5 s.u.

Sector K – Hazardous Waste Treatment, Storage or Disposal Facilities

Only discharges from hazardous waste landfills are subject to numeric effluent limitations. Since JBER does not operate a hazardous waste landfill, there are no applicable numeric

effluent limitations for monitoring for this sector at the installation.

Sector P – Land Transportation and Warehousing

There are no numeric effluent limitation guidelines for Sector P facilities under the ADEC 2015 MSGP.

Sector S – Air Transportation Facilities

The only sector-specific effluent limitation guideline that currently applies to Sector S is associated with airfield pavement deicer discharges containing urea. At JBER, urea is no longer used for either airfield or aircraft deicing/anti-icing operations. Therefore, the requirement for the monitoring of ammonia as nitrogen in storm water runoff does not apply to JBER. If the use of urea changes in the future, the JBER Environmental Office will update this SWPPP and evaluate any additional sampling and monitoring requirements.

Sector X – Printing and Publishing

As discussed in Section 3.3.1.3 of this SWPPP, the only Sector X facility at JBER conducts all operations indoors and has no potential exposure to storm water and therefore no pathway to waters of the U.S. Additionally, the ADEC 2015 MSGP currently does not have any additional SWPPP requirements or effluent limitation guideline for any Sector X facilities.

4.2.2 Summary of Required Effluent Monitoring

Should changes at Sector J activity sites occur, disqualifying No Exposure, effluent monitoring for pH at Sector J would be required for those operations.

4.2.3 Schedule

Effluent limitations monitoring for Sector J must be performed annually, should changes at Sector J activity sites occur which results in stormwater discharge off site.

4.3 Impaired Waters Monitoring

The ADEC 2015 MSGP defines impaired waters as those which have been listed pursuant to Section 303(d) of the Clean Water Act (CWA) as not meeting applicable State water quality standards under 40 CFR 30.2(j). The ADEC 2015 MSGP states that if the permittee discharges to an impaired water body, each pollutant for which the water body is impaired must be monitored (if there is a standard analytical method for that parameter). Ship Creek, which receives storm water discharges from JBER facilities, has been listed as an impaired water body.

The segment of Ship Creek from the mouth to the Glenn Highway Bridge was originally Section 303(d) listed because fecal coliform bacteria and petroleum hydrocarbons, oil, and grease exceeded the respective water quality standards for these parameters. Three outfalls at JBER discharge storm water to Ship Creek: JBER-R Outfall 1, JBER-E Outfall 4, and JBER-E Outfall 5. The only outfall that discharges storm water to Ship Creek and is associated with industrial facilities is JBER-E Outfall 5.

At the time this SWPPP was prepared, Ship Creek had a Total Maximum Daily Load (TMDL) for fecal coliform bacteria. At the time of SWPPP preparation, Ship Creek was listed as impaired by petroleum hydrocarbons, oil, and grease which still requires a TMDL.

4.3.1 Discharges to Impaired Waters with an Established TMDL

Ship Creek has an established TMDL for fecal coliform bacteria. Part 7.2.3.2 of the ADEC 2015 MSGP states “For storm water discharges to waters for which there is an EPA approved or established TMDL waste load allocation (WLA), the permittee is not required to monitor for the pollutant for which the TMDL was written unless DEC informs the permittee, upon examination of the applicable TMDL and/or WLA, that they are subject to such a requirement consistent with the assumptions of the applicable TMDL and/or WLA.” As of the time of this SWPPP’s preparation, neither EPA nor ADEC has informed JBER of the need to monitor for fecal coliform bacteria as a requirement of the MSGP. As a result, there is no requirement for JBER to monitor for fecal coliform bacteria in order to comply with the MSGP.

4.3.2 Discharges to Impaired Waters without an Established TMDL

Ship Creek does not currently have an established TMDL for petroleum hydrocarbons, oil and grease from the Glenn Highway Bridge to the Mouth of Ship Creek. Part 7.2.3.2 of the ADEC 2015 MSGP states “Beginning in the first full calendar quarter following January 1, 2015 or the permittees date of discharge authorization, whichever date comes later, the permittee must monitor once per year at each outfall (except substantially identical outfalls) discharging storm water to impaired waters without an EPA approved or established TMDL.” In this instance, the discharge water at outfall JBER-E Outfall 5 should be sampled for petroleum hydrocarbons and oil and grease as identified in 18 AAC 70 *Water Quality Standards* (ADEC 2012). In accordance with Part 7.2.3.2 of the ADEC 2015 MSGP and 18 AAC 70.020(b)(5)(C), the following limits apply to stormwater discharges at JBER-E Outfall 5:

Total Aromatic Hydrocarbons (TAH) 10 micrograms/Liter (ug/L)

Total Aqueous Hydrocarbons (TAqH) 15 ug/L

Surface waters and adjoining shorelines must be virtually free from floating oil, film, sheen, or discoloration

This annual monitoring requirement does not apply after one year if the pollutant for which the water body is impaired is not detected above natural background levels in storm water discharge, at which point JBER must document, as required in part 5.8 of the ADEC 2015 MSGP, that this pollutant is not expected to be present above natural background levels in the discharge.

If the pollutant is not present and not expected to be present in the discharge, or it is present but is caused solely by natural background sources, the permittee should include a notification to this effect in their first monitoring report, after which they may discontinue annual monitoring. To support this determination, JBER must keep the following documentation with their SWPPP records:

- An explanation of why the permittee believes that the presence of the pollutant causing the impairment in their discharge is not related to the activities at their facility; and
- Data and/or studies that ties the presence of the pollutant causing the impairment in their discharge to natural background sources in the watershed.

4.4 Other Monitoring As Required by ADEC

State of Alaska Monitoring Requirements

Part 3.2.1 of the ADEC 2015 MSGP states:

A permittees discharge must be controlled as necessary to meet a Alaska Water Quality Standard (WQS) (18 AAC 70) in relation to the pollutants of concern...If at any time the permittee becomes aware, or DEC determines that the permittees discharge causes or contributes to an exceedance of a WQS in the receiving water, the permittee must take corrective action as required in Part 8.1 [of the ADEC 2015 MSGP], document the corrective actions as required in Parts 8.4 and 5.8, and report the corrective actions to DEC as required in Part 9.2.

The following provides the instances where the Alaska Water Quality Standards shall be used as the benchmark values:

For Sectors A, D, E, G, J, K, L, O, and S, the acceptable range for pH is 6.5 to 8.5 and may not vary more than 0.5 pH units from natural conditions. See 18 AAC 70.020(b)(6).

Sectors K and X do not have sector-specific benchmarks identified in the MSGP. The sector-specific benchmark requirements for pH in the MSGP for Sectors J and S are 6.0 – 9.0 s.u. The MSGP includes the identical pH requirement in the sector-specific effluent limits for Sectors J, and K, and none for Sectors S and X.

The allowable pH effluent range applicable to JBER industrial discharges is 6.5 – 8.5 s.u. and may not vary more than 0.5 s.u. from natural conditions, as stipulated by 18 AAC 70.020(b)(6).

4.4.1.1 Additional Monitoring Required By ADEC

ADEC may notify the permittee of additional discharge monitoring requirements. Any such notice will briefly state the reasons for the monitoring, locations, and parameters to be monitored, frequency and period of monitoring, sample types, and reporting requirements. At such time that ADEC specifies additional industrial storm water monitoring requirements for JBER, this SWPPP will be updated to reflect the additional requirements.

At this time, ADEC has not specified any additional monitoring for JBER to comply with the MSGP.

4.5 Monitoring Responsibilities and Procedures

4.5.1 Monitoring Periods

Quarterly monitoring (e.g., benchmark monitoring), must occur at least once in each of the following three month intervals:

- January 1 – March 31

- April 1 – June 30
- July 1 – September 30
- October 1 – December 31

JBER's monitoring requirements began in the first full quarter following the date of discharge authorization, which follows submittal of the NOI. On August 11, 2015, JBER received authorization under the ADEC 2015 MSGP. The first full quarter following that date was the fourth quarter of calendar year 2015 (October 1 – December 31, 2015). It is important to note that all four Sector S benchmark samples for deicing parameters must be collected during the deicing season. The deicing season at JBER is October through April.

4.5.2 Responsible Staff

The JBER Environmental Flight will ensure that benchmark monitoring is performed in compliance with the MSGP.

4.5.3 Sampling and Analysis Procedures

Sampling and analysis will be conducted in accordance with 40 CFR 136 and follow the guidelines described in EPA's "Industrial Storm Water Monitoring and Sampling Guide," included in Appendix I of this SWPPP. Samples will be analyzed by an Alaska certified laboratory.

4.5.4 Sampling Logistics

One or more grab samples will be taken from applicable outfalls within 30 minutes of a discharge resulting from a measureable storm event as detailed in Part 7.1.3 of the ADEC 2015 MSGP. If it is not possible to collect the sample within the first 30 minutes of a measurable storm event, the sample will be collected as soon as practicable after the first 30 minutes and documentation kept with the SWPPP explaining why it was not possible to sample within the first 30 minutes. In the case of snow melt, (the) sample(s) will be taken during a period with a measurable discharge.

4.5.5 Adverse Weather Conditions

When adverse weather conditions, as described in Part 7.1.5 of the ADEC 2015 MSGP, prevents sampling as scheduled, a substitute sample will be obtained during the next qualifying storm event. Adverse weather does not exempt JBER from having to file a benchmark monitoring report in accordance with the sampling schedule. The permittee must report any failure to monitor, as specified in Part 9.1 of the ADEC 2015 MSGP, and indicate the reason for not sampling during the usual reporting period.

4.5.6 Climates with Irregular Storm Water Runoff

This MSGP provides alternatives for facilities located in areas where limited rainfall occurs during parts of the year (e.g., arid or semi-arid climates) or in areas where freezing conditions exist that prevent runoff from occurring for extended periods. The latter applies to JBER. Thus, required monitoring events for JBER may be distributed during seasons when precipitation occurs or when snow melt results in a measurable discharge. The required number of samples must still be collected.

4.5.7 Exception for Inactive and Unstaffed Sites

The requirement for benchmark monitoring does not apply at a facility that is inactive and unstaffed, as long as there are no industrial materials or activities exposed to storm water. This exception does not presently apply to JBER's industrial sectors.

4.6 Analytical Monitoring Program

Table 4 and 5 summarize JBER's analytical monitoring program for compliance with the MSGP.

Table 4. JBER Analytical Monitoring Program

Industrial Sector	Monitoring Location (Outfalls)	Benchmark Monitoring		Effluent Monitoring		Impaired Waters Monitoring	
		Schedule	Analytical Parameters	Schedule	Analytical Parameter	Schedule	Analytical Parameters
J	NA	NA	Nitrate plus nitrate nitrogen, total suspended solids (TSS)	NA	pH (only if dewatering occurs, otherwise NA)	NA	NA
K	JBER-E 3	First 4 full quarters of permit. More if exceed benchmark.	Ammonia, total magnesium, COD, total arsenic, total cadmium, total cyanide, total lead, total mercury, total selenium, total silver	NA	NA	NA	NA
S	JBER-E 1, JBER-E 2, JBER-E 5	First 4 full quarters of permit. More if exceed benchmark.	BOD ₅ , COD, pH	NA	NA	Once the first year of permit (for JBER-E5). Annually if exceed background levels.	Petroleum Hydrocarbons, Oil and Grease
X	NA	NA	NA	NA	NA	NA	NA

Table 5. JBER Analytical Monitoring, Inspection, and Reporting Frequency

Monitoring/ Inspection	Inspector/ Sampler	Frequency*	Sampling**	Triggers	Reporting	Submittal Deadline	Notes
Routine Quarterly Inspections	Member of Pollution Prevention Team (must be a qualified person)	Quarterly Jan 1 – Mar 31 Apr 1 – Jun 30 Jul 1 – Sep 30 Oct 1 – Dec 31	None	One of the four during a calendar year must be during a storm water discharge event.	None, but keep documentation with the SWPPP	None	
Quarterly Visual Assessments	Qualified Person	Quarterly	In-house visual inspection of each sample-Outfalls: JBER-E-1, JBER-E-2, JBER-E-3, JBER-E-5, JBER-E-6, JBER-R-1	1. At least 72 hours after last rain event that produced discharge and within 30 minutes of current rain event; 2. At least one sample must be during snow melt.	None, but keep documentation with SWPPP	None	1. Sampling must be in a clean clear container and assessed in a well-lit area; 2. Document in SWPPP the rationale of deferred samples for missed quarters.
Benchmark Monitoring	Qualified Person	Quarterly	Outfalls: JBER-E-1, JBER-E-2, JBER-E-3 JBER-E-5	1. Quarterly during first year; 2. Sampling may be terminated if average of four samples is below benchmarks; 3. JBER-E-1, JBER-E-2, JBER-E-5 sampled four quarters during deicing season (Oct-Apr).	1. Annual Quarter for JBER-E-3; 2. Deicing Quarters for JBER-E-1, JBER-E-2, JBER-E-5	File with ADEC electronically within 30 days of receipt of full data package	Consult with SWPPP manager after first 4 quarters to determine if further sampling is required.
SECTOR	OUTFALL	BENCHMARK SAMPLING PARAMETERS	BENCHMARK MONITORING LIMITS				COMMENTS
S	JBER-E-1, JBER-E-2, JBER-E-5,	BOD ₅ , COD, pH	BOD ₅ (30 mg/L), COD (120 mg/L), pH (6.5-8.5 s.u.)				All four quarters must be conducted during deicing season (Oct-Apr).
K	JBER-E-3	Ammonia, Total Magnesium, COD, Arsenic, Cadmium, Cyanide, Lead, Mercury, Selenium, Silver	Ammonia (2.14 mg/L), Total Magnesium (0.064 mg/L), COD (120 mg/L), Total Arsenic (0.15 mg/L), Total Cadmium (hardness Dependent), Total Cyanide (0.022 mg/L), Total Lead (Hardness Dependent), Total Mercury (0.0014 mg/L), Total Selenium (0.005 mg/L), Total Silver (Hardness Dependent)				No discharges from hazardous waste landfills
Impaired Waters Monitoring	Qualified Person	Annually sample for: TAH (limit 10 ug/L) TAqH (limit 15 ug/L) Oil and Grease	Outfall JBER-E-5	Annually first year of permit, annually thereafter if impaired waters limit is exceeded.	Annually	File with ADEC electronically within 30 days of receipt of full data package	Urea is no longer used at JBER; therefore no monitoring requirements.

4.7 Sampling Data from Previous Permit Term

JBER had collected several quarters of outfall samples to monitor for compliance, as required under the former Joint 2012 MSGP. Table 6 shows the results from the FY 12/13 and FY 13/14 deicing/anti-icing season. For the FY12/13 time period, JBER exceeded the sector-specific benchmark values for BOD5 and COD. As a result, JBER conducted another full round of benchmark monitoring to verify previous results and to determine if changes to BMPs has address the exceedances. For FY13/14, JBER again exceeded the benchmark concentrations for BOD5 and COD. JBER is currently in the process of evaluating options to address the issue.

Additionally, JBER collected outfall samples quarterly from all outfalls covered under the 2012 MSGP. Table 7 shows the results of those events. Note that samples were not always collected at some locations as no flow was present at some locations during the sampling period.

Table 6. Outfall Monitoring, FY 12/13 and FY 13/14

<i>Date</i>	<i>Nitrate-Nitrite as Nitrogen (mg/L)</i>	<i>MRL (mg/L)</i>	<i>Comp mg/L</i>	<i>BOD₅ (mg/L)</i>	<i>MRL (mg/L)</i>	<i>Comp mg/L</i>	<i>Ammonia as N (mg/L)</i>	<i>MRL (mg/L)</i>	<i>Comp mg/L</i>	<i>COD (mg/L)</i>	<i>MRL (mg/L)</i>	<i>Comp mg/L</i>
Monday 14Jan 2013	0.135	0.03	0.68	96.60	2.0	30	0.336	0.031	2.14	327	6.20	120
Thursday 4Apr 2013	0.128	0.10	0.68	24.3	6.0	30	0.37	0.050	2.14	370	12	120
Friday 19Apr 2013	0.111	0.10	0.68	114	40.0	30	0.20	0.050	2.14	160	12	120
Tuesday 23Apr 2013	0.165			93.4			0.26	0.031	2.14	205		
FY 12/13 Average Outfall Result	0.135			82.08			0.291			266		
24Jan 2014	0.280	0.50	0.68	112.0	2.0	30	0.88	0.050	2.14	211	12	120
28Feb 2014	0.285	0.10	0.68	22.4	6.000	30	0.350	0.200	2.14	43	60	120
31Mar 2014	0.143	0.10	0.68	43.80	2.40	30	0.379	0.050	2.14	48.9	12	120
04Apr 2014	0.150	0.10	0.68	17.2	2.40	30	0.147	0.050	2.14	244	12	120
FY 13/14 Average Outfall Result	0.215			48.9			0.44			137		

Table 7. Data from Sampling Events

		Benchmark Monitoring Limits	4/23/13	8/11/13	11/25/13	1/14/13	1/17/14	4/14/14
Outfall								
JBER-E Outfall 1	BOD ₅	30 mg/L	93.4	ND	8.07	96.6	2.21	12.1
	COD	120 mg/L	205	ND	40	327	10.8	45.4
	Ammonia	2.14 mg/L	ND	ND	0.721	0.336	0.335	0.141
	pH	6.5-8.5 s.u.	7.60	7.90	7.60	7.00	7.50	7.20
JBER-E Outfall 2	BOD ₅	30 mg/L	15.1	ND	ND	4.83	4.87	ND
	COD	120 mg/L	104	16	23.3	49.5	35.8	63.7
	Ammonia	2.14 mg/L	ND	ND	0.03	0.1662	0.205	ND
	pH	6.5-8.5 s.u.	7.30	7.70	7.70	6.80	7.10	7.05
JBER-E Outfall 5	BOD ₅	30 mg/L	6.24	No Flow	No Flow	No Flow	3.37	4.27
	COD	120 mg/L	50.4	No Flow	No Flow	No Flow	12.9	43.2
	Ammonia	2.14 mg/L		No Flow	No Flow	No Flow	ND	ND
	pH	6.5-8.5 s.u.	7.10	No Flow	No Flow	No Flow	6.20	5.90
JBER-E Outfall 6	BOD ₅	30 mg/L	ND	ND	ND	ND	ND	2.22
	COD	120 mg/L	ND	9.56	27.5	14.9	ND	58.6
	Ammonia	2.14 mg/L	ND	ND	0.114	0.204	0.108	0.08
	pH	6.5-8.5 s.u.	7.60	7.80	7.60	7.50	7.60	7.50
JBER-E Outfall 3	Ammonia	2.14 mg/L	0.311	No Flow	No Flow	0.08	No Flow	No Flow
	Total Magnesium	0.064 mg/L	2.53	No Flow	No Flow	1.3	No Flow	No Flow
	COD	120 mg/L	128	No Flow	No Flow	38.7	No Flow	No Flow
	Total Arsenic	0.15 mg/L	0.002	No Flow	No Flow	0.002	No Flow	No Flow
	Total Cadmium	-	0.0001	No Flow	No Flow	ND	No Flow	No Flow
	Total Cyanide	0.022 mg/L	ND	No Flow	No Flow	0.0036	No Flow	No Flow
	Total Lead	-	0.2	No Flow	No Flow	0.00475	No Flow	No Flow
	Total Mercury	0.0018 mg/L	ND	No Flow	No Flow	0.0001	No Flow	No Flow
	Total Selenium	0.29 mg/L	ND	No Flow	No Flow	0.0001	No Flow	No Flow
	Total Silver	-	ND	No Flow	No Flow	ND	No Flow	No Flow

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5 INSPECTIONS

All records of inspection and corrective action taken must be retained with this SWPPP for a period of at least three years from the date the permit coverage expires or is terminated.

5.1 Routine Facility Inspections

Part 6.1 of the MSGP requires routine facility inspections be conducted at all areas of JBER where industrial materials or activities are exposed to storm water. All storm water control measures used to comply with the effluent limits contained in the MSGP must also be inspected. Routine storm water inspections must be conducted quarterly at a minimum, though the permit states that in some cases more frequent inspections may be appropriate at *“areas of the facility with significant activities and materials exposed to storm water.”*

The following routine facility inspection requirements must be implemented at JBER industrial facilities:

- The inspections must occur while the facility is in operation.
- At least one quarter’s inspection (each year) must be conducted when a storm water discharge is occurring.
- For the airfield (Sector S), routine facility inspections must be conducted monthly during the deicing season.
- The inspections must be conducted by qualified personnel.
- At least one member of the JBER storm water pollution prevention team must participate in each quarterly inspection.

Personnel qualified to conduct routine storm water inspections at JBER are those personnel trained in storm water pollution prevention. 673 CES/CEIEC staffs the primary personnel for inspection tasks. Members of JBER’s storm water pollution prevention team are presented in Table 1. Routine storm water inspections are conducted quarterly at JBER, and inspection findings are documented on a form maintained by 673 CES/CEIEC. Corrective actions required as a result of a routine inspection must be performed consistent with Part 8 of the ADEC 2015 MSGP.

Part 6.1.2 of the MSGP requires the following documentation for each routine facility inspection:

- The inspection date and time.
- The name(s) and signature(s) of the inspector(s).
- Weather information.

- All observation relating to the implementation of control measures at the facility, including:
 - A description of any discharges occurring at the time of the inspection
 - Any previously unidentified discharges of pollutants from the site
 - Any evidence or the potential for, pollutants entering the drainage system
 - Observations regarding the physical condition of and around all outfalls including any flow dissipation devices, and evidence of pollutants in discharges and/or the receiving water
 - Any control measures needing maintenance, repairs, or replacement
- Any incidents of noncompliance observed.
- Any additional control measures needed to comply with the permit requirements.

Blank copies of the forms used at JBER for routine storm water inspections are provided in Appendix C.

5.2 Quarterly Visual Assessment of Storm Water Discharges

Part 6.2.1 of the MSGP states the following: “Once each calendar quarter for the entire permit term, the permittee must collect a storm water sample from each outfall (except as noted in Part 6.2.3) and conduct a visual assessment of each of these samples. These samples are not required to be collected consistent with 40 CFR Part 136 procedures but should be collected in such a manner that the samples are representative of the storm water discharge. If no discharge occurs during the quarterly visual assessment period, the permittee must still report no discharge for this monitoring period and follow the requirements of Part 7.1.6.”

5.2.1 Quarterly Visual Assessment Procedure

The visual assessment must be made:

- Of a sample in a clean, clear glass, or plastic container, and examined in a well-lit area;
- On samples collected within the first 30 minutes of an actual discharge from a storm event. If it is not possible to collect the sample within the first 30 minutes of discharge, the sample must be collected as soon as practicable after the first 30 minutes and the permittee must document why it was not possible to take samples within the first 30 minutes. In the case of snowmelt, samples must be taken during a period with a measurable discharge from the site; and
- For storm events, on discharges that occur at least 72 hours from the previous discharge. The 72-hour storm interval does not apply if the permittee documents that less than a 72-hour interval is representative for local storm events during the sampling period.

The samples must be visually inspected for the following water quality characteristics:

- Color;
- Odor;
- Clarity;
- Floating solids;
- Settled solids;
- Suspended solids;
- Foam;
- Oil sheen; and
- Other obvious indicators of storm water pollution.

5.2.2 Quarterly Visual Assessment Documentation

Results of these visual assessments must be documented and maintained with this SWPPP. Documentation must include:

- Sample location(s);
- Sample collection date and time, and visual assessment date and time for each sample;
- Personnel collecting the sample and performing visual assessment, and their signatures;
- Nature of the discharge (i.e., runoff or snowmelt);
- Results of observations of the storm water discharge;
- Probable sources of any observed storm water contamination; and
- If applicable, why it was not possible to take samples within the first 30 minutes.

5.2.3 Exceptions to Quarterly Visual Assessments

The following exceptions to conducting quarterly visual assessments are provided in Part 6.2.3 of the MSGP. At JBER, *Adverse Weather Conditions* and *Areas Subject to Snow* are directly applicable.

- *Adverse Weather Conditions*: When adverse weather conditions prevent the collection of samples during the quarter, take a substitute sample during the next qualifying storm event. Documentation of the rationale for no visual assessment for the quarter must be included with SWPPP records as described in MSGP Part 5.8. Adverse conditions are those that are dangerous or create inaccessibility for personnel, such as local flooding, high winds, or electrical storms, or situations that otherwise make sampling impractical, such as drought or extended frozen conditions.

- *Climates with Irregular Storm Water Runoff:* If the facility is located in an area where limited rainfall occurs during many parts of the year (e.g., arid or semi-arid climate) or in an area where freezing conditions exist that prevent runoff from occurring for extended periods, then the samples for the quarterly visual assessments may be distributed during seasons when precipitation runoff occurs.
- *Areas Subject to Snow:* In areas subject to snow, at least one quarterly visual assessment must capture snowmelt discharge, as described in MSGP Part 7.1.3, taking into account the exception described above for climates with irregular storm water runoff.
- *Inactive and Unstaffed Sites:* The requirement for a quarterly visual assessment does not apply at a facility that is inactive and unstaffed, as long as there are no industrial materials or activities exposed to storm water. To invoke this exception, maintain a statement in the SWPPP as required in MSGP Part 5.2.6.2 indicating that the site is inactive and unstaffed, and that there are no industrial materials or activities exposed to precipitation, in accordance with the substantive requirements in 40 CFR 122.26(g)(4)(iii). The statement must be signed and certified in accordance with MSGP Appendix A, Subsection 1.12. If circumstances change and industrial materials or activities become exposed to storm water or the facility becomes active and/or staffed, this exception no longer applies, and quarterly visual assessments must be immediately resumed. If the permittee is not qualified for this exception at the time the permittee is authorized under this permit, but during the permit term the permittee becomes qualified because the facility is inactive and unstaffed, and there are no industrial materials or activities that are exposed to storm water, then the permittee must include the same signed and certified statement as above and retain it with the records pursuant to Part 5.8.
- Inactive and unstaffed facilities covered under Sectors G (Metal Mining), H (Coal Mines and Coal Mining-Related Facilities), and J (Non-Metallic Mineral Mining and Dressing), are not required to meet the “no industrial materials or activities exposed to storm water” standard to be eligible for this exception from quarterly visual assessment, consistent with the requirements established in MSGP Parts 11.G.8.4, 11.H.8.1, and 11.J.8.1.
- *Substantially Identical Outfalls:* If the facility has two or more outfalls believed to discharge substantially identical effluents, as documented in MSGP Part 5.2.6.2, the permittee may conduct quarterly visual assessments of the discharge at just one of the outfalls and report that the results also apply to the substantially identical outfall(s), provided that the permittee perform visual assessments on a rotating basis of each substantially identical outfall throughout the period of the coverage under this permit.

If storm water contamination is identified through visual assessment performed at a substantially identical outfall, the permittee must assess and modify the control measures as appropriate for each outfall represented by the monitored outfall.

5.3 Comprehensive Site Compliance Evaluation (CSCE)

The CSCE includes inspections of each industrial facility and associated grounds covered by the MSGP and the installation-wide storm water management system, and evaluates the overall effectiveness of JBER’s SWPPP. Part 6.3.1 of the ADEC 2015 MSGP requires the CSCE be conducted by qualified personnel, with at least one member of the storm water pollution

prevention team participating. JBER's storm water pollution prevention team is responsible for conducting the CSCE. The comprehensive site inspection for the airfield operations (Sector S) should be conducted during periods of actual deicing activities (Section 11.S.6.1 of the Alaska MSGP).

5.3.1 Contents of the CSCE

The ADEC 2015 MSGP requires the following components be examined for the CSCE:

- Areas where spills and leaks have occurred in the past three years;
- 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;
- Off-site tracking of industrial or waste materials, or sediment where vehicles enter or exit the site;
- Tracking or blowing of raw, final, or waste materials from areas of no exposure to exposed areas;
- Control measures needing replacement, maintenance, or repair; and
- Areas of no exposure.

The inspections must also include a review of monitoring data collected in accordance with Part 7.2 of the ADEC 2015 MSGP. Inspectors must consider the results of the past year's visual and analytical monitoring in addition to the elements above.

5.3.2 CSCE Documentation

Findings must be documented for each CSCE and maintained with this SWPPP. In addition, CSCE documentation must be submitted in an annual report as required in Part 9.2 of the ADEC 2015 MSGP. At a minimum, CSCE documentation must include the following:

- The date of the inspection;
- The name(s) and title(s) of the personnel making the inspection;
- Findings from the inspection of facility areas identified in Part 6.3.1 of the MSGP, including inspections of the individual industrial sectors listed as having no exposure in the SWPPP;
- All observations relating to the implementation of control measures including:
 - Previously unidentified discharges from the site
 - Previously unidentified pollutants in existing discharges
 - Evidence of, or the potential for, pollutants entering the drainage system

- Evidence of pollutants discharging to receiving waters at all facility outfall(s), and the condition of and around the outfall, including flow dissipation measures to prevent scouring
- Additional control measures needed to address any conditions requiring corrective action identified during the inspection
- Any required revisions to the SWPPP resulting from the inspection;
- Any incidents of noncompliance observed or a certification stating the facility is in compliance with this permit (if there is no noncompliance); and
- A statement, signed and certified in accordance with MSGP Appendix A, Subsection 1.12, of the ADEC 2015 MSGP.

Any corrective action required as a result of the CSCE must be performed consistent with Part 8 of the ADEC 2015 MSGP. JBER uses ADEC's standard form for the annual reporting required by this permit. A copy of that form is included in Appendix F.

6 SWPPP CERTIFICATION

This SWPPP must be signed and dated in accordance with Appendix A, Subsection 1.12, of the ADEC 2015 MSGP. The SWPPP certification is below.

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: _____

Title: _____

Signature: _____

Date: _____

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7 SWPPP MODIFICATIONS

7.1 Required SWPPP Modifications

This SWPPP must be modified whenever necessary to address any of the triggering conditions for corrective action in Part 8.1 of the ADEC 2015 MSGP, to ensure that they do not reoccur, or to reflect changes implemented when a review following the triggering conditions in Part 8.2 of the ADEC 2015 MSGP indicates that changes to control measures are necessary to meet the effluent limits under the permit. Changes to this SWPPP must be made in accordance with the corrective action deadlines in MSGP Parts 8.3 and 8.4, and must be signed and dated in accordance with the ADEC 2015 MSGP Appendix A, Subsection 1.12.

7.2 SWPPP Availability

Part 5.7 of the ADEC 2015 MSGP states: “A permittee must retain a copy of the current SWPPP required by this permit at the facility, and it must be immediately available to DEC or EPA at the time of an onsite inspection or upon request. If the facility is inactive the SWPPP must be retained at a readily available location or the office of the operator. DEC may provide access to portions of the SWPPP to a member of the public upon request. Confidential Business Information (CBI) may be withheld from the public, but may not be withheld from those staff cleared for CBI review within DEC, EPA, USFWS, or NMFS.”

DEC encourages permittees to post their SWPPP online and provide the website address on the NOI (the SWPPP does not need to be reposted on the internet each time it is updated).

JBER Water Program staff maintains a copy of this SWPPP at the 673 CES/CEIEC Office. It is readily available to state, federal, tribal and regulatory agencies, and available to the public at

www.jber.af.mil/environmental/index.asp.

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ATTACHMENTS

Attachment A. Figures

Attachment B. Industrial Buildings and Associated Activities

Attachment C. ADEC 2015 MSGP

Attachment D. Notice of Intent (NOI)

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FIGURES

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INDUSTRIAL BUILDINGS AND ASSOCIATED ACTIVITIES

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ADEC 2015 MSGP

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