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FINAL

CONSTRUCTION SAFETY AND PHASING PLAN

DOT&PF Statewide PFAS
Nome - Initial Site Characterization

NOME, ALASKA

SHANNON & WILSON

October 2020

Shannon & Wilson No: 105745-002

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Submitted To: Alaska Department of Transportation & Public Facilities
2301 Peger Road
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Attn: Contact Name

Subject: FINAL CONSTRUCTION SAFETY AND PHASING PLAN, DOT&PF STATEWIDE PFAS NOME - INITIAL SITE CHARACTERIZATION, NOME, ALASKA

Shannon & Wilson prepared this Construction Safety and Phasing Plan (CSPP) on behalf of the Alaska Department of Transportation & Public Facilities (DOT&PF). This CSPP is a supplement to the *DOT&PF Statewide General Work Plan Revision 1* (GWP) dated July 2020 and the *General Work Plan Addendum DOT&PF Statewide Addendum 003-OME-01* dated August 2020. The Addendum 003-OME-01 provides details regarding initial site characterization activities associated with per- and polyfluorinated substances (PFAS) at the Nome Airport (OME).

The information provided in this CSPP is to coordinate field activities with DOT&PF, the Federal Aviation Administration (FAA), and Shannon & Wilson to minimize disruptions of airport operations while maintaining airport and contractor safety.

Initial PFAS site characterization is addressed by our proposal dated September 2, 2020, and authorized on October 15, 2020 by NTPs 10-2 and 10-3 under Professional Services Agreement Number 25-19-013 Per- and Polyfluorinated Substances (PFAS) Related Environmental & Engineering Services. Shannon & Wilson appreciates the opportunity to be of service to you on this project. If you have questions concerning this report, or we may be of further service, please contact us.

This CSPP was prepared and reviewed by:

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ACRONYMS

AOA	Airport Operation Areas
ARFF	Airport Rescue and Fire Fighting
CSPP	Construction Safety and Phasing Plan
CTAF	Common Traffic Advisory Frequency
DOT&PF	Alaska Department of Transportation & Public Facilities
ESA	Endangered Species Act
FAA	Federal Aviation Administration
FOD	foreign object debris
FSS	Flight Service Station
IAW	in accordance with
ILS	instrument landing system
MMPA	Marine Mammal Protection Act
NAVAIDS	navigation aids
NOTAM	Notice to Airmen
OFA	Object Free Area
OFZ	Obstacle Free Zone
OME	Nome Airport
PAPI	precision approach path indicators
PFAS	per- and polyfluorinated alkyl substances
ROFA	Runway Object Free Area
RSA	Runway Safety Area
SAE	Society of Automotive Engineers
SIDA	Security Identification Display Area
STA	Security Threat Assessment
TOFA	Taxiway Object Free Area
TSA	Transportation Security Administration
TW	Taxiway
TWSA	Taxiway Safety Area
USFWS	US Fish & Wildlife Service

1 COORDINATION

Initial PFAS site characterization activities at the OME require coordination with multiple parties. This CSPP focuses on Shannon & Wilson's planned drilling effort and other sampling activities that will take place within OME Restricted Areas. Shannon & Wilson will coordinate with the OME badging office for site access.

Project preparation calls for coordination, notification, contact or other interaction with airport management, maintenance and operations, Airport Rescue and Fire Fighting (ARFF) personnel, airport tenants, airport users, and the general public. Such activities shall be done through or with the approval of the following DOT&PF staff:

- Darrin Otton, Airport Manager, for OME personnel;
- Sammy Cummings, PFAS Program Manager, for airport tenants and the general public.

Contact information can be found in Exhibit 9-1, DOT&PF Contacts.

1.1 Scope or Schedule Change

Shannon & Wilson shall schedule and sequence the drilling and sampling work in accordance with the *General Work Plan Addendum DOT&PF Statewide Addendum 003-OME-01* dated August 2020 and Section 2 of this CSPP. If changes to the schedule are required, Shannon & Wilson will inform the Airport Manager as soon as possible.

2 PHASING

OME initial PFAS site characterization activities include drilling environmental borings, installing long-term and temporary groundwater monitoring wells, and collecting surface soil, water, and sediment samples from within the OME Restricted Area. In addition to site characterization activities requiring a drill rig, Shannon & Wilson will collect surface soil, surface water, sediment, and water supply well samples on OME property outside the Restricted Area, and offsite. This CSPP is prepared for site characterization activities within the fenced OME Restricted Area only. Please refer to Figures 1 through 3 for soil boring, monitoring well, and other sampling locations. Below is a summary of applicable phase elements from most to least complex.

Exhibit 2-1: Site Characterization Phases

Name	Personnel	Time of Day
Phase 1	Shannon & Wilson and drilling contractor GeoTek Alaska	Drilling adjacent to and within runways. Requires runway closure, nighttime from 1900 to 0700.
Phase 2		Drilling away from runways. Does not require runway closure, primarily at nighttime.
Phase 3	Shannon & Wilson	Soil and water sampling. Daytime, no time restrictions.

2.1 Duration of Closures

Phase 1 of this project will require nighttime closure of both runway 10-28 and 3-21. Closures will occur as follows:

- Runway 3-21 will be closed for takeoff and landing from 1900 to 0700 on Saturday, October 24;
- Runway 10-29 will be closed for two consecutive nights, starting at 1900 on Saturday, October 24 and ending at 0700 on Monday, October 26; and
- Runway 3-21 will be closed from 1900 on Monday, October 26 and 0700 on Tuesday, October 25

This proposed schedule assumes four nights of runway closure, two on each runway. Phase 1 will involve drilling six soil borings adjacent to and four one-foot soil borings within the two OME runways (Figure 1). The soil borings adjacent to the runways will be completed as temporary groundwater monitoring wells.

Drilling for phase 1 shall not begin until the last aircraft has left for the day. The ramp will remain open for helicopter traffic. The runways shall be reopened to medevac flights with 30-minute notification. Shannon & Wilson and the drilling subcontractor can be reached at (907) 371-9022 in the event of a medevac or other emergency. Additional contact information can be found in Exhibit 3-1.

Phase 2 will involve drilling at seven locations near the ARFF building and south of the Alaska Army Air National Guard hangar (Figure 2). This phase will not require runway closure. Four of these soil borings will be completed as long-term groundwater monitoring wells and one as a temporary well point. This effort will occur between 1700 on October 22 and 1200 on October 30, 2020, primarily at nighttime.

Phase 3 of this project will require Shannon & Wilson field staff to access groundwater monitoring wells, drainage ditches, runway aprons, and the ARFF building vicinity for sampling purposes between 0900 on October 20 and 1200 on October 30, 2020 (Figure 3). Staff will be escorted by OME personnel, obtain an OME issued ID badge, or will be within line-of-sight of staff who are badged. Surface soil sample, water, and sediment sample collection will take one hour or less per location. Groundwater monitoring well development and sampling are expected to take four hours or less per location. These site characterization activities will occur during the daytime.

2.2 Taxi Routes

Taxiways (TWs) D, E, H, and J will be closed when runway 3-21 is closed and TWs F North, F South, and G North when runway 10-28 is closed.

2.3 Emergency Access Routes

Emergency access routes will remain open at all times. Shannon & Wilson will need one-hour notice to exit the runway safety area (RSA).

2.4 Impacts to Navigation Aids (NAVAIDS)

State-owned navigation aids (NAVAIDS) on runway 10-28 are controlled by pilots. These NAVAIDS are off by default. There are no state-owned NAVAIDS on runway 3-21. FAA-owned NAVAIDS are discussed in Section 4.1.1.

2.5 Lighting and Marking Changes

Runway lights will be turned off during runway closure.

2.6 Required Hazard Marking and Lighting

DOT&PF staff will provide Shannon & Wilson with cones, barricades, and any other required visual aids. Hazard cones will be placed around the drill rig during drilling operations. Low level barricades will be placed on each taxiway during runway closure. Both ends of the runway will be marked with lighted X's to indicate closure. Shannon & Wilson and their drilling contractor will put up and take down the hazard markings each night or as needed for emergency operations, in accordance with DOT&PF instructions.

2.7 Lead Times for Required Notifications

Shannon & Wilson will notify the Airport Manager no later than 7 days prior to commencement of field work so the required Notices to Airmen (NOTAMs) will be in place. The Airport Manger will issue the NOTAM no less than 72 hours before Phase 1 drilling will begin.

3 AREAS AND OPERATIONS AFFECTED BY PROJECT ACTIVITY

3.1 Identification of Affected Areas

Areas that are anticipated to be affected by the performance of work for this project are the runway and safety areas.

3.1.1 Closing, or Partial Closing of Runways, Taxiways and Aprons

Runways 10-28 and 3-21 and associated TWs will be closed to take-offs and landings at night as described in Sections 2.1 and 2.2. Medevac services may request the runway to be reopened for emergency services with a one-hour notification. OME Operations personnel can reach Shannon & Wilson by radio (see Section 5.2) or using the contact information below.

Exhibit 3-1: Shannon & Wilson Contacts

Role	Name	Contact Phone	Contact Email
Drilling / Nighttime Contact	Adam Wyborny	Nome: (907) 371-9022 Office: (907) 458-3159	APW@shanwil.com
Project Manager / Daytime Contact	Marcy Nadel	Nome: (907) 434-2464 Office: (907) 458-3150	MDN@shanwil.com
Office Contact	Kasey Montoto	(907) 479-0600	KDM@shanwil.com
Statewide Project Manager	Kristen Freiburger	(907) 458-3146	KRF@shanwil.com
Principal-in-charge	Chris Darrah	(907) 458-3143	CBD@shanwil.com

3.1.2 Closing of ARFF Access Routes

No closing of ARFF routes is anticipated. The scope of this project will not prevent access to any area of the airport, or surrounding properties. Movement of ARFF vehicles will be allowed through closed areas.

3.1.3 Closing of Access Routes Used by Airport and Airline Support Vehicles

No closing of these access routes is anticipated.

3.1.4 Interruption of Utilities, Including Water Supplies for Firefighting

No interruption of utilities is required for this project. Buried power supply for runway edge lighting, runway end identifier lights, and medium intensity approach lighting system with runway alignment indicators are within the work limits.

DOT&PF will be responsible for locating, identifying, and marking buried utilities. Shannon & Wilson will submit an Alaska Digline utility locate request 7 days prior to the planned drilling effort and meet with locators to identify non-DOT&PF utilities. Buried electrical and/or communication lines will be located by OME personnel prior to drilling and well-installation activities to protect them from damage. Shannon & Wilson will work with OME personnel to change drilling locations, where required, if DOT&PF identified conflicts with underground utilities. Shannon & Wilson will not begin drilling until utility locates are complete.

3.1.5 Approach/Departure Surfaces Affected by Heights of Objects

The proposed work will include the use of a vertical drill rig on the closed runways. The drill rig mast height will be up to 16 feet above the local ground surface. The use and movement of this equipment is subject to approval and will require coordination with the Airport Management for issuance of a NOTAM. Refer to Section 19.2.1 below for additional restrictions regarding tall equipment.

Shannon & Wilson will complete an Airport Sponsor Strategic Event Submission Form and provide it to DOT&PF for review prior to submission to the FAA.

3.1.6 Project Areas Near Airport Operation Areas (AOAs)

The staging area for the drill will be kept away from AOAs where possible. During Phases 1 and 2, the drill rig and other equipment will be staged outside the object free area (OFA) or at least 400 feet from the runway center line when not actively in use. During Phase 3, field

staff will limit their entrance into the OFA to the extent practicable. Sampling-related materials including 55-gallon drums will be staged outside the OFA.

3.2 Mitigation of Effects

3.2.1 Temporary Changes to Runway and/or Taxi Operations

All site characterization related activities within the active AOAs will be coordinated with the Airport Manager.

4 PROTECTION OF NAVAIDS AND VISUAL AIDS

Certain NAVAIDS and Visual Aids will be turned off during runway closure.

4.1 Other Affected NAVAIDS

Runway lighting and taxiway lighting will be taken out of service by the airport during the hours of nighttime closure and put back into service when the airport is reopened. The rotating beacon will remain in service.

4.1.1 Coordination with FAA

DOT&PF will coordinate with the FAA to turn off certain NAVAIDS and Visual Aids during Phase 1 runway closures. The FAA will turn off the instrument landing system (ILS) during runway 10-28 closure. There are no ILS lights on runway 3-21. Precision Approach Path Indicators (PAPI) are controlled by pilots; these NAVAIDS are off by default.

4.1.2 Issuance of NOTAMs

NOTAMs will be issued as detailed in Section 9.2.

4.1.3 Protection of Underground Utilities Serving NAVAIDS

DOT&PF is responsible for utility locates on OME property. DOT&PF has notified the contractor of the presence of underground power supply to NAVAIDS, maintained by the FAA. The FAA's Nome Technician is Duke McGuffy (907-434-1113, duke.mcguffey@faa.gov). Shannon & Wilson will not begin drilling at each location until utility locates for the area are complete.

5 CONTRACTOR ACCESS

DOT&PF contractors for this project include Shannon & Wilson and drilling subcontractor GeoTek Alaska.

5.1 Vehicle and Pedestrian Operations

5.1.1 Authorized Vehicles

All contractor vehicles requiring access to Restricted Areas shall be registered with the OME badging office and/or Airport Manager. Each vehicle shall also display a permanent or temporary ramp vehicle permit as issued and instructed by the OME. Temporary ramp permits shall be returned upon completion of work or expiration of the ramp permit(s), whichever is sooner. The project will require issuance of vehicle permits to Shannon & Wilson and GeoTek Alaska.

All vehicles operating on aircraft movement surfaces (runways, taxiways, ramps, and parking aprons) shall be in good operating condition and free of fluid leaks. The badging office and/or Airport Manager may refuse to permit access or direct the removal of any vehicles not meeting these requirements.

When any vehicle must travel over any portion of an aircraft movement or non-movement area, other than properly closed and marked areas, they shall be driven by a vehicle operator who has received radio communication training and airport driver training, and has a working aviation-band, two-way radio and a properly marked, lighted, and permitted vehicle, and have an airport issued ID badge with the proper endorsement . Drivers in the aircraft movement area are required to monitor Common Traffic Advisory Frequency (CTAF).

All vehicles must meet the following conditions as specified in AC 150/5210-5.

5.1.2 Vehicle Color

Vehicles may be any color or combination of colors other than solid black or white, in accordance with (IAW) AC 150/5210-5 paragraph 3f.

5.1.3 Vehicle Lighting

Vehicles not escorted by a properly lighted vehicle must be identified during periods of low visibility by a yellow flashing light. Lights must flash at 75 ± 15 flashes per minute. Lights must have peak intensity within the range of 40 to 400 candelas (effective) from 0°

(horizontal) up to 10˚ above the horizontal and from 360˚ horizontally. The upper limit of 400 candelas (effective) is necessary to avoid damage to night vision. From 10˚ to 15˚ above the horizontal plan, the light output must be 1/10th the peak intensity or between 4 to 40 candelas (effective) IAW AC 150/5210-5, paragraph 5b and c.

Shannon & Wilson will borrow a DOT&PF vehicle affixed with appropriate lighting fixtures for nighttime use on this project.

5.1.4 Vehicle Markings

Flags must be provided on all vehicles. The flag must be at least a 3-foot by 3-foot square having a checkered pattern of international orange and white squares at least 1-foot on each side IAW AC 150/5210-5, paragraph 4d.

5.1.5 Authorization to Operate Contractor Vehicle

Vehicle operators must present a valid Driver's License to the OME badging office and/or Airport Manager to receive authorization to operate contractor vehicles in the Restricted Areas.

All Shannon & Wilson and drilling subcontractor employees who operate vehicles must complete airport driver training annually prior to receiving the driving endorsement on their badge. Training records will be maintained by the DOT&PF for each authorized driver.

Vehicle operations on airports face conditions that are not normally encountered during highway driving. Therefore, those persons who have vehicular access to the movement area of the airport must have an appropriate level of knowledge of airport rules, regulations, and signs.

5.1.6 Area of Authorization

Shannon & Wilson and the drilling subcontractor personnel and vehicles are only authorized in the area where contract work is being performed, and on the designated access routes to and from that area.

5.1.7 Keys and Key-way Devices

The OME badging office and/or Airport Manager may issue keys and key-way devices as required to enable Shannon & Wilson and the drilling subcontractor to access Restricted Areas. Shannon & Wilson and the drilling subcontractor shall not duplicate any key or key-way device or allow any person other than those authorized to receive and use these devices. The Contractor will be responsible for lost or unrecovered keys or key-way devices

and must pay all costs associated with lock replacement, or re-keying, at the Airport Manager's discretion. Keys may only be given to personnel with an OME issued ID badge.

5.1.8 Staging and Parking Areas

Shannon & Wilson will coordinate vehicle and staging areas for field staff with the OME badging office in advance. Contractors will not park or store equipment within 15 feet of a road open to traffic. Temporary use and staging areas will be placed as close to the work area as practical. Shannon & Wilson will limit parking and driving on vegetated, unimproved surfaces where possible. Vehicles and equipment not actively employed in the work will be placed outside the object free area (OFA).

5.2 Two-Way Radio Communications

At least one person must monitor the Common Traffic Advisory Frequency (CTAF) frequency while personnel or equipment is on the closed runway. This person will communicate with any pilots, Flight Service Station (FSS) and OME operations staff, and with the work crew.

- **Radio Frequency**: Common Traffic Advisory Frequency – 123.6 MHz

Personnel engaged in activities involving unescorted operation on aircraft active movement areas will be trained by the OME badging office. Training on proper communication procedures is essential for maintaining airport operational safety.

If the Nome FSS is closed, staff will communicate with the Fairbanks FSS via the remote communications outlet, using the CTAF. The Fairbanks FSS covers radio traffic at the OME between 2245 and 0715 nightly.

5.3 Airport Security

The contractor must maintain security of the airport during site characterization activities. Upon entry and exit, Shannon & Wilson will wait for each gate to close and latch before continuing to the work site. OME gates will not be left open when unattended.

Federal Regulations require the OME to control access and prevent unauthorized persons from entering the Security Identification Display Area (SIDA) and AOA. In compliance with this requirement, DOT&PF has established procedures to authorize or deny access to Restricted Areas and to identify and control persons and vehicles while in these areas.

Transportation Security Administration (TSA) regulations require everyone with access to an airport AOA to undergo a Security Threat Assessment (STA) and display an OME issued

ID badge. The STA includes an additional Criminal History Records Check, which requires fingerprinting. The OME badging office anticipates the STAs will take two to three days. However, an STA can take up to two weeks before approval is granted.

Persons without an OME issued ID badge will be provided with a qualified, badged escort. Escorted persons must be within sight and auditory range of an approved escort at all times when working within the SIDA or AOA. Only persons meeting these requirements are permitted access to Restricted Areas. The drill crew will be escorted into the AOA by a Shannon & Wilson staff member with escort authority. The drill crew must remain with the escort at all times and cannot leave the escort's area of positive control.

In order to complete the badging process, Shannon & Wilson staff will visit the OME badging office on October 20, 2020 and provide two forms of identification to begin the STA. Accepted forms of identification include a driver's license, passport, birth certificate, or social security card. One form of identification must include a photograph. After STA approval is granted staff will undergo required badge and vehicle training.

Security violations may result in a $10,000 fine, or any other amount as assessed by the TSA. Persons found in Restricted Areas not in compliance with these requirements will be removed from the area and action will be taken against violators as appropriate under Alaska Administrative Code.

The Airport Manager has full authority for control of access to Restricted Areas. Proper individual access application, airport issued photo identification badges, vehicle operator authorization, vehicle registration and ramp permits, and issuance of gate keys and locks will be obtained from the OME badging office. Shannon & Wilson will ensure badges are returned at completion of the project. The following badging fees will be paid at the time of badge issuance:

- Airport Photo Identification Badge $50
- Fingerprinting Fees (for badges requiring SIDA access) $31
- Lost, unaccounted, or unreturned badges $200

6 WILDLIFE MANAGEMENT

The primary wildlife safety concern at OME is birds. Birds are attracted by possible sources of food, standing water, or areas that may provide shelter. Of secondary concern are mammals such as bears, caribou, moose, muskoxen, bears, arctic foxes, or other animals that

would constitute a danger to operating aircraft, or possibly cause damage to airfield fences or other equipment.

Project staff will report the presence of birds or animals within the airport property to the OME badging office or other OME personnel in accordance with the airport's wildlife hazard management plan. Shannon & Wilson will not attempt to disperse birds or other animals.

6.1 Trash

Shannon & Wilson and GeoTek Alaska will control and contain trash within the work areas. It is the responsibility of all personnel who work at OME to pick up trash and debris on and off the airfield. Fish or animal carcasses can also attract birds or wildlife, causing a safety hazard. Project staff will report the presence of carcasses to OME staff so they can be removed.

6.2 Disruption of Existing Wildlife Habitat

Disruption of existing wildlife habitat is not anticipated and will not be allowed. If a large animal approaches the site, workers will keep their distance and seek shelter in the vehicles or buildings, as appropriate. Unusual sightings or questions/concerns regarding wildlife can be referred to the Fairbanks Fish & Wildlife Field Office (FFWFO) at (907) 456-0239.

7 FOREIGN OBJECT DEBRIS (FOD) MANAGEMENT

Control of FOD is a primary concern to safe airport operation. All debris must be removed from operational surfaces upon discovery or notification. The drill crew will keep a clean workspace to prevent work supplies and trash from being blown away by the wind.

Shannon & Wilson will participate in inspections as defined by Section 10, below. Field staff will take immediate action as required to cleanup and prevent FOD on operational surfaces.

8 HAZARDOUS MATERIALS MANAGEMENT

Shannon & Wilson and their drilling subcontractor will be prepared to readily contain and clean up spills from fuel or hydraulic fluid leaks. The drilling subcontractor will have a spill kit available to address any such spills, if they occur.

9 NOTIFICATION OF CONSTRUCTION ACTIVITIES

9.1 Points of Contact

Below is a list of DOT&PF employees that field staff may contact during site characterization activities. Shannon & Wilson contact information is included in Exhibit 3-1.

Exhibit 9-1: DOT&PF Contacts

Department	Interest	Contact Name	Contact Phone	Contact Email
Airport	Manager*	Darrin Otton	(907) 443-2500 or (907) 443-3443	Darrin.otton@alaska.gov
Design	FAA Point of Contact	Christopher Johnston	(907) 451-2322 or (907) 460-1108	chris.johnston@alaska.gov
Statewide Aviation	Safety and Security	Tammi Schreier	(907) 451-5250 or (907) 687-3918	tammi.schreier@alaska.gov
Airport	OME Badging	Heather Evans	(907) 443-3443	heather.evans2@alaska.gov
Maintenance & Operations	M&O Superintendent	Calvin Schaeffer	(907) 443-3443	calvin.schaeffer@alaska.gov
Engineering	Project Lead	Daniel Phillips	(907) 451-2926	daniel.phillips@alaska.gov
Aviation	PFAS Coordinator	Sammy Cummings	(907) 888-5671	sammy.cummings@alaska.gov
Environmental	Soil Contamination	Sam Myers	(907) 451-5291	sam.myers@alaska.gov

* 24-hour contact information for emergencies – (907) 443-2500.

9.2 Notices to Airmen (NOTAM)

Before beginning Phase 1, Shannon & Wilson will coordinate with the Airport Manager to provide information for all required NOTAMs. The NOTAM for any runway closures must be entered into the system 72 hours in advance of the closure. Typically, the contractor would provide the Airport Manager with the intended runway closure dates and times one week prior to the required issuance of NOTAMs. The accelerated schedule for this project does not allow for such notice.

Work that requires a closure cannot begin until confirmation and approval of the Airport Manager nightly. Shannon & Wilson will maintain communication with the Airport Manager to determine cancellation of NOTAMs, as required. Shannon & Wilson will notify the FSS via radio if drilling ends early on any given night.

The following guidance will apply regarding NOTAMs:

- The Airport Manager will notify the FAA Western Flight Procedures Team 3 with the project start date to initiate the NOTAM action.
- The Airport Manager will provide information on closed or hazardous conditions on airport movement areas to the FSS so it can issue a NOTAM.
- The Airport Manager will coordinate the issuance, maintenance, and cancellation of NOTAMs about airport conditions resulting from project activities with tenants and local air traffic facility.
- Only the Airport Manager may issue or cancel NOTAMs on airport conditions. The airport owner/operator is the only entity that has authorized to close or open a runway or taxiway.

Other required documentation submitted to the FAA is detailed in Section 3.1.5.

9.3 Emergency Notification Procedures

For all non-airport related emergencies staff dial 911. This includes required medical, fire, or police response on or off airport property. Under emergency conditions involving immediate loss of human life, or threat to wellbeing, drill crew personnel may allow access to OME Restricted Areas by uniformed emergency services.

In matters involving airport safety and security, the Airport Manager is the primary contact. The project team will notify the Airport Manager immediately following a 911 emergency call or upon discovery of any other airport related safety or security concern.

10 INSPECTION REQUIREMENTS

Shannon & Wilson will perform a safety inspection prior to opening closed runways for aircraft operations. The drill rig and other project materials will be staged outside the OFA. Staff will verify that all runway edge lights and airport markings are serviceable and correct, and remove all FOD. The inspection will occur with sufficient time for any corrections to be completed prior to the scheduled runway re-opening time.

11 UNDERGROUND UTILITIES

Refer to Section 3.1.4 for discussion regarding underground utilities.

12 PENALTIES

All Contractor, and Subcontractor personnel must abide by this CSPP, and other contract requirements. Penalties can include payment of any fines levied by any federal, state, or local agency having authority, suspension of the contract, and individual workers are subject to removal from the project as stated in section 80-05, third paragraph:

The Contractor shall comply with any written order by the Engineer to remove workers, who, in the opinion of the Engineer, violate operational regulations, violate construction safety plan requirements, violate security plan requirements, perform the work in an unskilled manner, who are intemperate or disorderly, or who jeopardize the safety of the public, other workers or Engineer's personnel. The Contractor shall allow removed workers to return to the project only with the Engineer's written permission. The Engineer may suspend the work if the Contractor fails to furnish suitable and sufficient personnel necessary to perform the work, or fails to remove any worker at the Engineer's order.

13 SPECIAL CONDITIONS

13.1 Emergency Landings

Aircraft declaring an emergency will be allowed to land on the runway. The drill crew shall be prepared to exit the runway at all times. The drill crew require a minimum of one hour notice to remove equipment and personnel from the RSA. Refer to Exhibit 3-1 for emergency contact information.

14 RUNWAY AND TAXIWAY VISUAL AIDS

Airfield lighting will be turned off during Phase 1 of drilling. Refer to Section 2.6 for additional information on hazard marking and visual aids during runway closure.

15 MARKING AND SIGNS FOR ACCESS ROUTES

Shannon & Wilson will coordinate required markings, signs, and flagging with the OME badging office prior to commencing site characterization activities. These materials will be supplied by DOT&PF staff in OME. Staff will follow the Airport Manager and OME staff instructions for accessing work areas.

15.1 Runway Safety Area (RSA)

The RSA width is 500 feet, centered on the runway centerline. Phases 1 and 3 of Shannon & Wilson's site characterization efforts require entrance into the RSA. The drill rig, sampling equipment, 55-gallon drums, and other work materials will be removed from the RSA when they are not actively in use. During Phase 3, field staff will limit incursions into the RSA to the extent practicable. Shannon & Wilson will contact the Airport Manager prior to commencing any well point sampling within the RFA for runway 10-28 to determine the day's flight schedule. Staff will exit the RSA during active aircraft operations.

15.2 Runway Object Free Area (ROFA)

The ROFA width is 800 feet, centered on the runway centerline. Phases 1 through 3 may require entrance into the ROFA. During Phases 1 and 2 drilling equipment will be removed from the ROFA during the daytime or when it is not in use.

15.3 Taxiway Safety Area (TWSA)

The TW's TWSA is 118 feet, centered on the taxiway centerline. The TWs associated with each runway will be closed nightly during Phase 1, as described in Section 2.

15.4 Taxiway Object Free Area (TOFA)

The width of TW's TOFA is 186 feet, centered on the taxiway centerline. Phases 1 and 3 of Shannon & Wilson's site characterization efforts may require entrance into the TOFA. The drill rig, sampling equipment, 55-gallon drums, and other work materials will be removed from the TOFA when they are not actively in use.

15.5 Obstacle Free Zone (OFZ)

The OFZ width is 400 feet, centered on the runway centerline. Sampling related equipment and materials will be removed from the OFZ when they are not actively in use.

16 HAZARD MARKING AND LIGHTING

Refer to Sections 2.6, 5.1.3, 5.1.4, and 19.2.1 for discussion on marking and lighting for vehicles and other equipment.

17 NIGHTTIME WORK ZONE LIGHTING

The work area must be adequately illuminated for nighttime projects. Reference AC 150/5370-10 for minimum lighting requirements for nighttime projects. Shannon & Wilson and their drilling subcontractor will set up and take down the lighting each night during Phases 1 and 2. Lighting will be directed downwards in order to avoid interfering with aircraft operations.

18 PROTECTION OF SAFETY AREAS

Protection of runway and taxiway safety areas, OFZs, OFAs, and approach surfaces includes limitation of the location and height of equipment in these areas. Please refer to Sections 3.1.5 and 19.2.1 for additional information related to equipment height. Refer to Figures 1 through 3 for locations of proposed soil borings, temporary well points, and monitoring wells.

19 OTHER INFORMATION

19.1 Prohibitions

19.1.1 Airport Closures

The drilling operation will require nightly closures between the hours of 1900 and 0700, or as determined by the Airport Manager. Closures may be delayed due to operational requirements.

19.1.2 No Crossing of Active Runway

Crossing of an active runway during any phase will not be allowed without prior authorization from the Airport Manager.

19.1.3 Flare Pots

The use of flare pots on airport property is prohibited at any time.

19.2 Restrictions

19.2.1 Use of Tall Equipment

Use of tall equipment that must routinely operate more than 16 feet above ground level requires inclusion on form 7460-1 as specified under 14 CFR part 77. Refer to Sections 2.6, 5.1.3, 5.1.4, and 19.2.1 for information on markings and lighting. The drill rig will be lowered to be as close to ground level as practical when not actively employed, including when parked outside the RSA.

The temporary well points will rise no more than two feet from the ground surface and below the level of runway lighting. The long-term monitoring wells will be completed using flush mount monuments; there will be no change to the height of objects in the AOAs upon project completion.

19.2.2 Use of Tools with Open Flames

Open-flame welding or torch cutting operations are permitted only with the approval of the Airport Manager and only when adequate fire safety precautions are in place.

Shannon & Wilson intends to use a gasoline-powered 2,000 watt or 3,200 watt generator to provide power to the rotary hammer used for frozen-soil sampling, depending on site conditions. The generator will be used within the RSA.

19.2.3 Open Trenches, Excavations, and Stockpiles

There will be no open trenches, excavation, or stockpiles during this operation. The drill holes will be refilled following temporary well point removal, or completed as long-term groundwater monitoring wells.

19.2.4 Discovery of Contaminated Soils

If petroleum-contaminated soils are encountered within the work area, the contractor will notify the Airport Manager.

LEGEND

Soil boring

Potential AFFF release site

N

0 0.25 0.5

Miles

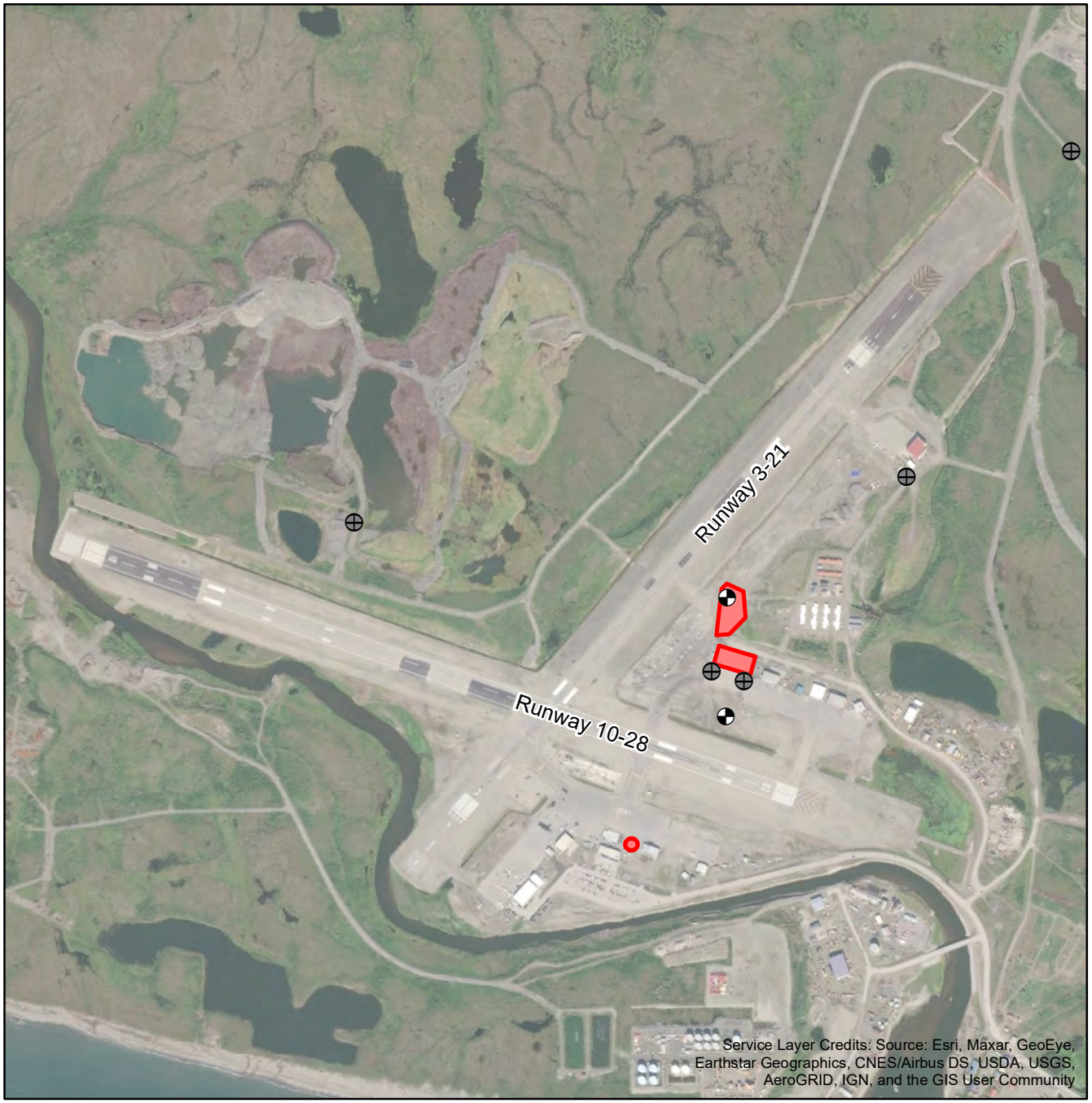
Nome Airport
Nome, Alaska

PHASE 1 SAMPLE LOCATIONS

October 2020 105745-002

SHANNON & WILSON, INC.
GEOTECHNICAL AND ENVIRONMENTAL CONSULTANTS

Figure 1



LEGEND

- Soil boring
- Monitoring well nest
- Potential AFFF release site

N

0 0.25 0.5

Miles

Nome Airport
Nome, Alaska

PHASE 2 SAMPLE LOCATIONS

October 2020 105745-002

SHANNON & WILSON, INC.
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Figure 2

LEGEND

- Surface soil
- Surface water
- Monitoring well nest (new)
- Monitoring well (existing)
- Temporary well point
- Potential AFFF release site

N

0 0.25 0.5

Miles

Nome Airport
Nome, Alaska

PHASE 3 SAMPLE LOCATIONS

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SHANNON & WILSON, INC.
GEOTECHNICAL AND ENVIRONMENTAL CONSULTANTS

Figure 3

IMPORTANT INFORMATION

Important Information

About Your Report

IMPORTANT INFORMATION

CONSULTING SERVICES ARE PERFORMED FOR SPECIFIC PURPOSES AND FOR SPECIFIC CLIENTS.

Consultants prepare reports to meet the specific needs of specific individuals. A report prepared for a civil engineer may not be adequate for a construction contractor or even another civil engineer. Unless indicated otherwise, your consultant prepared your report expressly for you and expressly for the purposes you indicated. No one other than you should apply this report for its intended purpose without first conferring with the consultant. No party should apply this report for any purpose other than that originally contemplated without first conferring with the consultant.

THE CONSULTANT'S REPORT IS BASED ON PROJECT-SPECIFIC FACTORS.

A geotechnical/environmental report is based on a subsurface exploration plan designed to consider a unique set of project-specific factors. Depending on the project, these may include the general nature of the structure and property involved; its size and configuration; its historical use and practice; the location of the structure on the site and its orientation; other improvements such as access roads, parking lots, and underground utilities; and the additional risk created by scope-of-service limitations imposed by the client. To help avoid costly problems, ask the consultant to evaluate how any factors that change subsequent to the date of the report may affect the recommendations. Unless your consultant indicates otherwise, your report should not be used (1) when the nature of the proposed project is changed (for example, if an office building will be erected instead of a parking garage, or if a refrigerated warehouse will be built instead of an unrefrigerated one, or chemicals are discovered on or near the site); (2) when the size, elevation, or configuration of the proposed project is altered; (3) when the location or orientation of the proposed project is modified; (4) when there is a change of ownership; or (5) for application to an adjacent site. Consultants cannot accept responsibility for problems that may occur if they are not consulted after factors that were considered in the development of the report have changed.

SUBSURFACE CONDITIONS CAN CHANGE.

Subsurface conditions may be affected as a result of natural processes or human activity. Because a geotechnical/environmental report is based on conditions that existed at the time of subsurface exploration, construction decisions should not be based on a report whose adequacy may have been affected by time. Ask the consultant to advise if additional tests are desirable before construction starts; for example, groundwater conditions commonly vary seasonally.

Construction operations at or adjacent to the site and natural events such as floods, earthquakes, or groundwater fluctuations may also affect subsurface conditions and, thus, the continuing adequacy of a geotechnical/environmental report. The consultant should be kept apprised of any such events and should be consulted to determine if additional tests are necessary.

MOST RECOMMENDATIONS ARE PROFESSIONAL JUDGMENTS.

Site exploration and testing identifies actual surface and subsurface conditions only at those points where samples are taken. The data were extrapolated by your consultant, who then applied judgment to render an opinion about overall subsurface conditions. The actual interface between materials may be far more gradual or abrupt than your report indicates. Actual conditions in areas

IMPORTANT INFORMATION

not sampled may differ from those predicted in your report. While nothing can be done to prevent such situations, you and your consultant can work together to help reduce their impacts. Retaining your consultant to observe subsurface construction operations can be particularly beneficial in this respect.

A REPORT'S CONCLUSIONS ARE PRELIMINARY.

The conclusions contained in your consultant's report are preliminary, because they must be based on the assumption that conditions revealed through selective exploratory sampling are indicative of actual conditions throughout a site. Actual subsurface conditions can be discerned only during earthwork; therefore, you should retain your consultant to observe actual conditions and to provide conclusions. Only the consultant who prepared the report is fully familiar with the background information needed to determine whether or not the report's recommendations based on those conclusions are valid and whether or not the contractor is abiding by applicable recommendations. The consultant who developed your report cannot assume responsibility or liability for the adequacy of the report's recommendations if another party is retained to observe construction.

THE CONSULTANT'S REPORT IS SUBJECT TO MISINTERPRETATION.

Costly problems can occur when other design professionals develop their plans based on misinterpretation of a geotechnical/environmental report. To help avoid these problems, the consultant should be retained to work with other project design professionals to explain relevant geotechnical, geological, hydrogeological, and environmental findings, and to review the adequacy of their plans and specifications relative to these issues.

BORING LOGS AND/OR MONITORING WELL DATA SHOULD NOT BE SEPARATED FROM THE REPORT.

Final boring logs developed by the consultant are based upon interpretation of field logs (assembled by site personnel), field test results, and laboratory and/or office evaluation of field samples and data. Only final boring logs and data are customarily included in geotechnical/environmental reports. These final logs should not, under any circumstances, be redrawn for inclusion in architectural or other design drawings, because drafters may commit errors or omissions in the transfer process.

To reduce the likelihood of boring log or monitoring well misinterpretation, contractors should be given ready access to the complete geotechnical engineering/environmental report prepared or authorized for their use. If access is provided only to the report prepared for you, you should advise contractors of the report's limitations, assuming that a contractor was not one of the specific persons for whom the report was prepared, and that developing construction cost estimates was not one of the specific purposes for which it was prepared. While a contractor may gain important knowledge from a report prepared for another party, the contractor should discuss the report with your consultant and perform the additional or alternative work believed necessary to obtain the data specifically appropriate for construction cost estimating purposes. Some clients hold the mistaken impression that simply disclaiming responsibility for the accuracy of subsurface information always insulates them from attendant liability. Providing the best available information to contractors helps prevent costly construction problems and the adversarial attitudes that aggravate them to a disproportionate scale.

IMPORTANT INFORMATION

READ RESPONSIBILITY CLAUSES CLOSELY.

Because geotechnical/environmental engineering is based extensively on judgment and opinion, it is far less exact than other design disciplines. This situation has resulted in wholly unwarranted claims being lodged against consultants. To help prevent this problem, consultants have developed a number of clauses for use in their contracts, reports, and other documents. These responsibility clauses are not exculpatory clauses designed to transfer the consultant's liabilities to other parties; rather, they are definitive clauses that identify where the consultant's responsibilities begin and end. Their use helps all parties involved recognize their individual responsibilities and take appropriate action. Some of these definitive clauses are likely to appear in your report, and you are encouraged to read them closely. Your consultant will be pleased to give full and frank answers to your questions.

The preceding paragraphs are based on information provided by the ASFE/Association of Engineering Firms Practicing in the Geosciences, Silver Spring, Maryland