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ACRONYMS AND ABBREVIATIONS

4MP Marine Mammal Monitoring and Mitigation Plan micropascal (sound level reference unit) μPa **AEWC** Alaska Eskimo Whaling Commission **ABWC** Alaska Beluga Whale Committee BA Biological Assessment **BMP** best management practice Crowley Fuels, LLC Crowley dB decibel **ESA** Endangered Species Act (of 1973) Incidental Harassment Authorization **IHA IRA** Indian Reorganization Act **ISC** Ice Seal Committee **KIC** Kikiktagruk Iñupiat Corporation m meters Marine Mammal Protection Act (of 1972) **MMPA** Northwest Arctic Borough NAB National Marine Fisheries Service **NMFS** NOAA National Oceanic and Atmospheric Administration OPEN CELL SHEET PILE® **OCSP PND** PND Engineers, Inc. Plan of Cooperation **POC RMS** root mean square SPL sound pressure level







Introduction

This Plan of Cooperation (POC) was developed in accordance with Marine Mammal Protection Act (MMPA) requirements for the issuance of an Incidental Harassment Authorization (IHA) for the Crowley Fuels, LLC (Crowley) Kotzebue Dock Upgrade Project. A Biological Assessment (BA) was prepared in accordance with Section 7(c) of the Endangered Species Act (ESA) regarding the potential effects on federally listed species and marine mammals and their habitats. Additional details of the proposed project, environmental baseline, and potential impacts are described in the project's BA and IHA Application.

Potentially affected communities, subsistence organizations, and co-management groups that have been provided with a draft copy of this POC are listed in Section 3. Crowley will continue to consult with these listed parties as plans develop and the project progresses. Communications will be through direct and indirect means, including in-person and radio broadcast presentations and a distributed summary of the project plan, scope, and schedule.

The Crowley Kotzebue Fuel Dock provides berthing for Crowley's bulk fueling operations. The dock also provides essential access for community barges, cargo-loading, transloading, subsistence harvest, and other community events; all of which are necessary operations to the City of Kotzebue, its residents, and adjacent villages supported by Kotzebue's connections to marine-based transportation.

The existing bulkhead is corroding and has reached the end of its useful service life. Over the past 15 years, the dock has been repaired multiple times. Several areas of localized erosion are also present along the length of the wall and pose a risk to stability of the bulkhead. The bulkhead must be replaced to restore the dock serviceability and prevent further damage to the facility and impacts to operations.



Figure 1. Crowley Facility, Kotzebue, AK





The new dock will be constructed with an OPEN CELL SHEET PILE® (OCSP) structure, a bulkhead utilizing flat-web sheet piles, fabricated connector wyes, and anchor piles. This type of bulkhead is a flexible steel sheet pile membrane supported by soil contact with the embedded steel pile tail walls. No demolition is planned for this project, so the new sheet pile bulkhead will provide additional protection for the existing fuel header system and associated piping. A new potable water service, lighting and 120/208-volt power service will be provided.

Construction is anticipated to begin June, 2020 with an expected duration of approximately three months resulting in construction completion by September, 2020. A detailed description of the project materials and construction methods is included in the BA and IHA Application.

Affected Communities

The Crowley Kotzebue Dock Upgrade Project is located in Qikiqtagruq (Kotzebue) on the northernmost shoreline of the Baldwin Peninsula between Kotzebue Sound and Hotham Inlet. Kotzebue Sound is an embayment on the western coast of Alaska of the Chukchi Sea, which is itself an embayment of the Arctic Ocean (extending from Wrangel Island to Point Barrow and south to the Bering Strait).

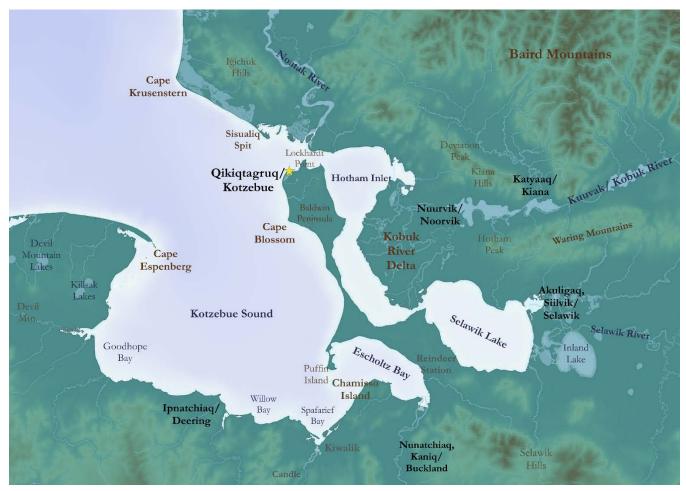


Figure 2. Vicinity Map





2.1.1 Affected Area

Primary effects of the action are anticipated to be increased underwater noise levels during construction, which may affect marine species within range of the project. No negative impacts to water quality are anticipated, and the project is not expected to increase vessel traffic in the area. The project's BA provides additional detail of all anticipated effects and species-by-species analysis of the impacts.

Sources of underwater noise for this project include pile driving and removal and fill placement. Anticipated sound source levels and their associated ensonification isopleths are summarized in Table 1. Details of source level and regulatory protocols are described in the project's BA.



Figure 3. Installing sheet piles with a vibratory hammer.

Table 1. Predicted sound source levels and ensonified areas - Updated

	Construc- tion Method	Predicted Source Level (SPL RMS) ¹	Peak Source Level ² (SPL RMS)	Predicted Injury Isopleth³ (m)	Predicted Disturbance Isopleth (m)	Polar Bear & Walrus Isopleth (m)
Temporary template pipe piles	Vibratory Installation /Removal	158.0	174.0	0.03 - 8.9	3,414.5	N/A
(Alternative) Temporary H-piles	Vibratory Installation /Removal	158.8	173.8	0.03 – 10.15	3871.5	N/A
Anchor piles	Vibratory Installation	158.8	173.8	0.03 - 10.15	3871.5	N/A
Sheet piles	Vibratory Installation	160.7	171.5	0.04 – 1.36	5,168.1	11.1

³ Predicted injury isopleths are presented here as a range, dependent upon species type and intended for general reference.







¹ Average underwater root mean square (RMS) sound pressure levels (SPLs) are reported in dB re: 1 μPa @ 10 meters

² Average underwater peak sound pressure levels are reported in dB re: 1 μPa @ 10 meters

	Construc- tion Method	Predicted Source Level (SPL RMS) ¹	Peak Source Level ² (SPL RMS)	Predicted Injury Isopleth³ (m)	Predicted Disturbance Isopleth (m)	Polar Bear & Walrus Isopleth (m)
Gravel Fill	Conventional Machinery	132.8	Not Avail.	0.002 - 0.06	71.4	N/A

Community Outreach – Updated 7/1/2020

Crowley has published a summary description of the project plan, scope and schedule and distributed it to the affected communities and entities of the region. In addition, Crowley has held meetings with affected communities and organizations to discuss the project, its potential effects, and proposed mitigation measures. Community-requested mitigation will be incorporated into the project to the extent feasible.

Subsistence-related disputes resulting from the project will be addressed by direct communication between Crowley and designees of the affected organization(s). Ongoing communication and mitigation measures will seek to prevent disputes before they arise. Organizations with which Crowley will maintain communication are listed in Table 2.

Table 2. Community organization contacts

Agency	Contact Personnel	Phone	Contact email			
	Cities and IRA Councils					
Native Village of Kotzebue/Kotzebue IRA	Alex Whiting, Environmental Protection	(907) 442-3467 (907) 442-5303 (direct)	alex.whiting@qira.org			
City of Kotzebue (Qikiqtaġruq)	Gayle Ralston, Mayor; Shawn Gilman; Carl Jennings, Public Works Director; Jeff Congdon, City Manager	(907) 442-3401	SGilman@ Kotzebue.org; DJennings@ Kotzebue.org; JCongdon@ Kotzebue.org			
Native Village of Deering/Deering IRA	Deloris Iyatunguk	(907) 363-2138	tribeadmin@ ipnatchiaq.org			
City of Deering (Ipnatchiaq)	Ron Moto, Mayor; Robert Moto	(907) 363-2136	cityofdeering@ yahoo.com			
Native Village of Buckland/Buckland IRA	Percy Ballot, Sr., President; Mona Washington	(907) 494-2171	tribeadmin@ nunachiak.org			
City of Buckland (Nunatchiaq)	Tim Gavin, Mayor; Esther Hadley	(907) 494-2121	cityofbucklandalaska@ gmail.com			
Native Village of Noatak/Noatak IRA	Vernon Adams, President	(907) 485-2173	tribeadmin@ nautaaq.org			





Native Village of Noorvik/Noorvik IRA	Wilbur Howarth Sr., President; Jacob Wells	(907) 636-2144	tribemanager@ nuurvik.org	
City of Noorvik (Nuurvik)	Vern Cleveland, Mayor; Stacy Jack	(907) 636-2100	cityofnoorvik@ gmail.com	
Native Village of Selawik/Selawik IRA	Diana Ramoth, Chairperson; Tanya Ballot	(907) 484-2132	tribeadmin@ akuligaq.org	
City of Selawik (Akuligaq)	Raven Sheldon, Mayor; Lenora Foxglove	(907) 484-2132	city_of_selawik@ hotmail.com	
Native Village of Kiana/Kiana Tribal Council	Delores Barr, President; Crystal Johnson	(907) 475-2109	tribedirector@ katyaaq.org	
City of Kiana (Katyaaq)	Nelson Walker, Mayor; Clara Stein	(907) 475-2136	administrator@ cityofkiana.org	
Native Village of Ambler /Ambler Tribal Council	Virginia Commack, General Manager	(907) 445-2196	tribemanager@ ivisaappaat.org	
City of Ambler (Ivasaappaat)	Morgan Johnson, Mayor; Kristy Walton	(907) 445-2122	amblercity@gmail.com	
Native Village of Kobuk /Kobuk IRA	Johnetta Horner, President; Christie Jones	(907) 948-2203	tribeclerk@laugvik.org	
City of Kobuk (Laugvik)	Herbert Cleveland, Mayor; Johnetta Horner	(907) 948-2217	kobukcity@yahoo.com	
Native Village of Shugnak /Shugnak IRA	Billy Lee, President; Glenda Douglas	(907) 437-2163	tribeadmin@ issingnak.org	
City of Shugnak (Issingnak)	Melvin Lee, Mayor; Helen Mitchell	(907) 437-2161	shungnak@ gmail.com	
Native Village of Kivalina /Kivalina IRA	Millie Hawley, President; Stanley Hawley	(907) 645-2153	tribeadmin@ kivaliniq.org, clerk@kivaliniq.org	
City of Kivalina (Kivaliniq)	Austin Swan, Mayor	(907) 645-2137	kivalinacity@aol.com	
Other Community Entities				
Northwest Arctic Borough (NAB)	Siikauraq Martha Whiting, Planning Director	(907) 442-8209	mwhiting@nwabor.org	
NANA Regional Corporation	Damon Schaeffer, Sr. Director of Lands and Facilities	(907) 442-8104	Damon.schaeffer@ nana.com	





Kikiktagruk Iñupiat Corporation (KIC)	Noah Nayler, Shareholder Relations and Land Manager	(907) 442-3165	nnaylor@ kikiktagruk.com	
Maniilaq Association	Charlie Nelson, Vice President	(907) 442-7669	Charlie.nelson@ maniilaq.org	
NAB School District	Craig McConnell, Director of Maintenance	(907) 442-1848	cmcconnell@ nwarctic.org	
Kotzebue Electric Association	Martin Shroyer, Principle Officer	(907) 442-3491	M_shroyer@ kea.coop	
Alaska Eskimo Whaling Commission (AEWC)	Arnold Brower	(907) 852-2392	ABrower@aewc- alaska.com	
Alaska Beluga Whale Committee (ABWC)	Kathy Frost Secretary, Exec. Committee		kjfrost@hawaii.rr.com	
Additional contacts added following consultation				
Ice Seal Committee	NSB-DWM: Billy Adams, Andy Von Duyke Executive Manager: Carla Kayotuk	(907) 852-2611 (907) 852-0350		
Alaska Nannut Co- management Council	Katya Wassillie Gray Executive Directive	907-443-6890 907-304-2274	alaska.nannut@gmail.c om	

Community meetings held to date are summarized in Table 3. Meetings were generally initiated by Crowley (e.g. Northwest Arctic Borough Assembly and Kotzebue City Council meetings). Crowley has received no requests for additional meetings at this time.

Table 3. Community meetings – *Updated 7/1/2020*

Date	Attendees	Topics	Notes		
	Cities and IRA Councils				
05/01/2019	City of Kotzebue management team: City Planner, Public Works	Project introduction, property resolution, tax implications	Not open to public		
08/27/2019	NWAB Assembly members ⁴ , staff, and guests	Introduction of project.	Public meeting, broadcast on radio, attended by representatives of all NWAB villages. Minutes available on NWAB website: http://www.nwabor.org/wp-content/uploads/SKM_C754e190924 11440.pdf		

⁴ The NWAB general assembly consists of 11 members representing each of the villages withing the Borough.







	City of Kotzebue		
09/12/2019	management team: City Manager, Planner, Public Works, Capital Projects, Fire Chief, and Police Chief	Update and consultation on design and construction plans	Not open to public
12/11/2019	City of Kotzebue, planning commission regular meeting	Update on project plans	Public meeting, attended by planning commission members and interested public
03/25/2020	NWAB Assembly members, staff, and guests	Update on project, discussion of staging and coordination plans.	Public meeting, broadcast on radio, attended by representatives of NWAB villages. (Minutes not yet available on Assembly website)
5/20/2020	Discussion with Damon Schaeffer, NANA Senior Director of Lands and Facilities	Update on project, schedule, and construction sequence. Also discussed PSO staging and traffic planning.	Mr. Schaffer asked about local hire and was informed that Drake Construction, Inc. has been hired to perform gravel fill and some local PSOs will also be utilized.
Two conversations (unknown dates)	Discussions with Marty Shroyer, KEA	Discussed project overview and addressed specific easement resolutions. Later ongoing updates and finalization of utility installation details.	N/A
6/3/2020	Meeting with City of Kotzebue management officials	Update on project, discussions of personnel mobilization and COVID-19 BMPs. Discussed traffic control and public service announcements (PSAs).	PSAs will include direct notification to affected households as well as regular project updates via available public media. Public notification regarding the purpose PSO observation stands were discussed.
6/26/2020	Informal discussion with Siikauraq Martha Whiting (NAB Planning Director)	Request for advice regarding public communications	N/A





Community Comments

A letter and copy of the draft of this POC was distributed to the listed contacts on November 12, 2019, with the exception of the recently added Ice Seal Committee and the Alaska Nannut Co-management Council. This updated plan will be provided to these organizations.

Acknowledgement of receipt of the draft POC and comment solicitation was received from several parties. Only one direct comment has been received at this time, from Mr. Arnold Brower with AEWC. Mr. Brower acknowledged that the June - September construction dates would not unduly affect AEWC whaling communities except possibly Kivalina. He noted that the NANA Subsistence Committee has raised concerns about the lack of belugas at regular hunting sites by Sisoalik (referred to as Sisualiq in project planning documents and maps). Mr. Brower also noted that noise disturbance can create negative access to resources for coastal villages.

During the meetings summarized in Table 3, project plans were presented. Public comments were received that mostly addressed impacts of construction on local neighborhoods and travel around the dock. Comments are summarized below.

Table 4. Assembly meeting comment summary

The new dock will project out 30 feet into the channel. How will we reduce the danger to travelers on the ice?	Adding lighting and/or reflective fixtures to the dock. Typical travel routes are already well away from shore and the proposed new bulkhead line.	
Visibility of dock and Crowley vessels to snow machine users?	Same as above.	
Lack of ladders or other means of extracting person from the water	Added (removable) steel ladders in three places along the face of the dock. Dock is already fitted with life rings.	
Noise from construction and pile driving going "all night long".	Work hours will be restricted from 7 am to 7 pm.	
Construction site hazards	Shore Avenue will be closed to traffic during the period of construction, except City emergency vehicles. Contractor will provide traffic control measures.	
How will we address local hire concerns?	Swalling General Contractors (selected construction contractor) is hiring local contractor Drake Construction to handle gravel haul and placement, and will also use local persons for the marine mammal observation work.	
Height of the sheet pile of the new dock bulkhead relative to snow. West winds cause rapid snow buildup.	Front street usually cleaned of snow by City before buildup becomes a problem.	
Impact of construction on fuel deliveries	Land and water deliveries of fuel will continue as normal, throughout the project period.	





Mitigation Measures – Updated 7/1/2020 5

The proposed project includes the following measures to prevent or reduce effects to species of concern:

- New sheet piles will be installed seaward of the existing dock, containing it and removing the need for demolition or disturbance of the existing dock. Enclosing the existing dock will also provide more dockside space for safe handling of bulk fuel deliveries. A silt curtain will be utilized during pile driving to reduce the potential for increased turbidity levels.
- A silt curtain will be deployed during pile driving operations to prevent turbidity and negative impacts to water quality. This measure will also prevent fish from entering the injury isopleth for fish during pile driving. Both results will reduce the potential for impacts to prey species.⁵
- Fill placed in the tidelands will be clean gravel fill. Fill will contain relatively few fines to reduce impacts to turbidity and/or sedimentation. Fill placement will be placed in completed sheet pile cells, providing containment and removing the need for a silt curtain.
- The dock will be maintained in a manner that does not introduce any pollutants or debris into the harbor or cause a migration barrier for fish.
- Fuels, lubricants, and other hazardous substances will not be stored below the ordinary high-water mark. All chemicals and petroleum products will be properly stored to prevent spills. No petroleum products, cement, chemicals, or other deleterious materials will be allowed to enter surface waters.
- Oil booms will be readily available for containment should any releases occur.
- The contractor will check for leaks regularly on any equipment, hoses, and fuel storage that occur at the project site.
- Noise levels will be minimized during construction by the use of appropriately sized piles. The use of vibratory pile driving methods will also reduce sound levels entering the water during construction and reduce the impacts to marine mammals, fish, and seabirds. Properly sized equipment will be used to drive piles.
- To minimize impacts from vessels interactions with marine mammals, the crews aboard project vessels will follow National Marine Fisheries Service (NMFS) marine mammal viewing guidelines and regulations as practicable. (https://alaskafisheries.noaa.gov/protectedresources/mmv/guide.htm).
- Crowley will station observers as described in the Marine Mammal Monitoring and Mitigation Plan (4MP) accompanying the IHA Application. In-water work will stop if a protected species enters a shutdown zone, as described in the 4MP.6

⁶ Measure added following consultations with NMFS.







⁵ Measure added following consultations with NMFS.

In addition to those mitigation measures included in the project permits (many of which are intended to prevent impacts to subsistence species), Crowley has agreed to implement the following measures at the request of the affected communities:

- Regular communications will be made throughout the project by broadcast public radio announcement and periodic activity reports to interested parties via email.
 - o Radio interview with Crowley Project Manager scheduled for 7/2/2020, providing an overview of the project, planned safety measures, and other relevant information.
 - o Weekly public service announcements planned to update the public on progress.
- Beluga whales have been traditionally harvested in abundance at Sisualiq. Project impacts are not expected to reach traditional harvest areas, but Crowley will coordinate with local subsistence groups to avoid or mitigate impacts to beluga whale harvests.
- Project activities avoid traditional ice seal harvest windows, so are not expected to negatively impact hunting of bearded or ringed seals. Crowley will coordinate with local communities and subsistence groups to avoid or mitigate impacts to ice seal harvests.
- Polar bears are unlikely to occur in Kotzebue Sound during the ice-free season, and so are unlikely to experience any of the potential direct effects of this project.

Crowley may be required to adapt these mitigation measures in response to changing environmental conditions or operational safety. Affected parties will be notified, should that occur.



