

APPENDIX L—DRAFT PROGRAMMATIC AGREEMENT

Note: The Programmatic Agreement, including the Cultural Resources Management Plan, is in draft form and is being developed in consultation with the Advisory Council on Historic Preservation, the Alaska State Historic Preservation Office, Tribes, and other Consulting Parties in accordance with Section 106 of the National Historic Preservation Act.

**Programmatic Agreement
Among the
US Army Corps of Engineers,
the Alaska State Historic Preservation Officer,
and the Advisory Council on Historic Preservation
Regarding
The Pebble Project**

WHEREAS, the United States Army Corps of Engineers, Alaska District (USACE) receives and considers applications for permits under Section 10 of the Rivers and Harbors Act of 1899 (Section 10) (33 U.S.C. § 403) and Section 404 of the Clean Water Act (Section 404) (33 U.S.C. § 1251 et. Seq.); and

WHEREAS, the USACE received a permit application (POA-2017-271) pursuant to Section 10 and Section 404 from Permittee (as defined in Attachment G) to develop and operate a copper-gold-molybdenum mine in southwest Alaska, approximately 200 air miles southwest of Anchorage and 20 miles north of Iliamna Lake, an associated transportation corridor connecting this location to the west side of Cook Inlet, and a pipeline across Cook Inlet to existing infrastructure on the Kenai Peninsula (the Pebble Project or Project); and

WHEREAS, the Pebble Project includes construction, operations, maintenance, and reclamation activities and consists of an open pit mine, tailings storage facilities, power plant, transportation corridor, a port and jetty to support offshore lightering locations in Cook Inlet, spur roads, and a natural gas pipeline from the Kenai Peninsula across Cook Inlet to the mine site within the transportation corridor (as more fully described in Attachment A); and

WHEREAS, the USACE has determined the activities that require authorization under Section 404 and Section 10 are an undertaking as defined by 36 C.F.R. § 800.16(y) that has the potential to affect historic properties and therefore is subject to Section 106 of the National Historic Preservation Act of 1966 (NHPA) (54 U.S.C. § 306108) and its implementing regulations at 36 C.F.R. Part 800 (hereinafter referred to as “Section 106”); and

WHEREAS, the USACE also applies regulations entitled “Procedures for the Protection of Historic Properties” found at 33 C.F.R. Part 325, Appendix C¹ that the USACE has developed for Section 106 compliance for the USACE regulatory program; and

WHEREAS, the Bureau of Safety and Environmental Enforcement (BSEE) is authorized under the Outer Continental Shelf Lands Act (30 C.F.R. Part 250, Subpart J) to grant a right-of-way for natural gas pipelines located on the Outer Continental Shelf (OCS) of Cook Inlet; and

WHEREAS, the BSEE received an application pursuant to 30 C.F.R. Part 250 Subpart J for a natural gas pipeline right-of-way across the OCS of Cook Inlet and has determined that evaluation and/or authorization of the right-of-way for the Pebble Project's pipeline across the OCS in Cook Inlet is a federal action that makes the Pebble Project an undertaking subject to review by BSEE under Section 106; and

¹ For the purposes of this PA, when “33 C.F.R. Part 325, Appendix C” is referenced, readers should note that the USACE prepared Interim Guidance for Implementing Appendix C of 33 C.F.R. Part 325 that was published and/or revised in 2005, 2007, and 2009. The USACE's implementation of the Appendix C regulations, as they apply to the Pebble Project, is informed by this guidance.

1 **WHEREAS**, the United States Coast Guard (USCG) is granted authority under 33 C.F.R.
2 Parts 114-118 to review and approve locations and clearances of bridges and causeways in or
3 over navigable waters; and

4 **WHEREAS**, the USCG has determined that evaluation and/or authorization of the
5 construction of bridges over navigable waters for the Pebble Project's transportation corridor is a
6 federal action that makes the Pebble Project an undertaking subject to review by USCG under
7 Section 106; and

8 **WHEREAS**, the BSEE and USCG each designated the USACE as the lead federal agency
9 per 36 C.F.R. § 800.2(a)(2); and

10 **WHEREAS**, the USACE notified the Advisory Council on Historic Preservation (ACHP) on
11 August 20, 2018 of the preparation of this Programmatic Agreement (PA) and ACHP formally
12 decided to participate in the Section 106 review on May 9, 2019; and

13 **WHEREAS**, the USACE initiated consultation with the Alaska State Historic Preservation
14 Officer (SHPO) on August 20, 2018; and

15 **WHEREAS**, the USACE, SHPO, and ACHP determined that a PA for the project is
16 appropriate because some of the effects on historic properties cannot be fully determined prior to
17 agencies' permit decisions and/or authorizations pursuant 36 C.F.R. § 800.14(b); and

18 **WHEREAS**, the USACE, as the lead federal agency and in consultation with SHPO and
19 consulting parties, has established the Pebble Project's Area of Potential Effect (APE) per 36
20 C.F.R. § 800.4(a)(1) to encompass direct and indirect effects on historic properties for the project.
21 The APE description and a figure are contained in Attachment B of this PA; and

22 **WHEREAS**, the USACE has also defined the Permit Area for the Pebble Project as the
23 project footprint which includes the waters of the U.S. and uplands areas directly affected as a
24 result of authorizing the work or structures per 33 C.F.R. Part 325, Appendix C(1)(g). The permit
25 area description and a figure are contained in Attachment B of this PA; and

26 **WHEREAS**, the effort to identify historic properties in the APE that may be affected by the
27 undertaking will not be completed prior to execution of this PA; and

28 **WHEREAS**, the USACE initiated Section 106 consultation with Indian Tribes that may
29 attach religious and cultural significance to historic properties that may be affected by the Pebble
30 Project, (listed in Attachment D) per 36 C.F.R. § 800.2(c) and 800.3(f); inviting them into the
31 consultation under Section 106 for the Pebble Project, and the development of this PA and
32 attached Cultural Resources Management Plan (CRMP) and other appendices; and

33 **WHEREAS**, the USACE has invited Indian Tribes that participated in consultation to sign
34 as Concurring Parties to this PA, consistent with 36 C.F.R. § 800.6(c)(3); and

35 **WHEREAS**, the USACE recognizes the obligation to consult with Indian Tribes that may
36 attach religious and cultural significance to historic properties that may be affected by the Pebble
37 Project in a manner appropriate for government-to-government consultation and will continue to
38 consult with such Tribes regarding their concerns under Section 106 (54 U.S.C. § 302706(b); 36
39 C.F.R. § 800.2(c)(2)(ii)); and

40 **WHEREAS**, the USACE has identified and invited other individuals and organizations,
41 including local governments with jurisdiction over areas or historic properties within the APE to be
42 consulting parties, and noted others who have requested to participate in the consultation as
43 consulting parties, as listed in Attachment D of this PA, per 36 C.F.R. § 800.3(f); and

1 **WHEREAS**, the USACE has provided the public with information about the undertaking
2 and its potential effects on historic properties and sought public comment and input consistent
3 with 36 C.F.R. § 800.2(d) and 33 C.F.R. Part 325; and

4 **WHEREAS**, the Permittee has participated in consultation and has responsibilities to carry
5 out under this PA and therefore is invited to sign this PA as an Invited Signatory to this PA.; and

6 **WHEREAS** the USACE has invited USCG and BSEE to sign this PA as an Invited
7 Signatories; and

8 **NOW THEREFORE**, the USACE, SHPO, and the ACHP agree that the Pebble Project
9 shall be implemented in accordance with the following stipulations in order to take into account
10 the effects of the Pebble Project on historic properties thus satisfying requirements of Section 106
11 of the NHPA:

12 **STIPULATIONS**

13 The USACE shall ensure that the following measures are carried out:

14 **I. Administrative Considerations**

- 15 A. The USACE and BSEE shall attach this PA or the stipulations listed in this legally
16 enforceable PA to any agency-specific permits, licenses, and other approvals that are
17 subject to 36 C.F.R. § 800.16(y) so that appropriate provisions of this PA and its
18 requirements become binding on the Permittee, so long as the underlying PA remains
19 in effect for the area covered by the relevant permits, licenses, and other approvals.
20 The Permittee shall comply with this PA as implemented through these measures and
21 failure to do so could result in suspension, modification, or revocation of the applicable
22 agency's permits, licenses, and/or other approvals.
- 23 B. The USCG shall legally enforce this PA as it applies to the agency's action.
- 24 C. If the Pebble Project is permitted, the USACE shall ensure that this PA and all of its
25 requirements shall be binding on the Permittee, its successors, and assigns. The
26 Permittee shall include a provision requiring compliance with the PA in any contract of
27 sale or transfer of ownership or management of the Pebble Project or appurtenant
28 project facilities as described in Attachment A (Project Description) of this PA.
- 29 D. Because of both singular and overlapping legal authorities and responsibilities among
30 the USACE, BSEE, and USCG and any federal agency that may become party to this
31 PA under Stipulation XVII (referred to hereafter as the Federal Agencies), regarding
32 individual Project Components (as defined in Attachment G), some stipulations in this
33 PA may be carried out by an individual Federal Agency or by a combination of the
34 Federal Agencies. The USACE will remain the lead federal agency. USACE will
35 consult with Federal Agencies prior to making a decision on areas or actions that are
36 under that agency's federal authority. The Federal Agencies may carry out the terms
37 of this PA, so long as doing so is within the scope of their legal authorities under
38 Section 106 of the NHPA. Nothing in this PA is intended to expand the role of the
39 USACE beyond that afforded by Section 106 and its respective regulations.
- 40 E. The USACE shall enforce the terms of this PA. Within three (3) calendar days of a
41 Federal Agency becoming aware of an instance of possible noncompliance by the
42 Permittee, each shall notify the others of an instance of possible non-compliance with
43 the terms and conditions of this PA or permit or conditions as they relate to this PA. In
44 such case, the responsible agency shall ensure that the Permittee complies with the
45 PA consistent with the applicable federal agency's legal authorities and consult with
46 the other Signatories, Invited Signatories, and Consulting Parties as described in this

- 1 PA. USACE, as lead federal agency, is responsible for the stipulations of this PA to be
2 carried out, regardless of the participation and/or actions of other permitting agencies.
- 3 F. This PA shall apply to the Pebble Project as described in Attachment A (Project
4 Description) including aspects of the project not known at this time or not specified in
5 the permits, permit applications, or other project documents.
- 6 G. The Federal Agencies shall implement this PA in compliance with the requirements of
7 other statutes, as applicable.

9 **II. Roles and Responsibilities**

- 10 A. To comply with Section 106, the Federal Agencies shall incorporate this PA into their
11 decisional process on any permits, licenses, and/or other approvals they may issue
12 for the Project, and will require that the Permittee abide by the responsibilities assigned
13 to the Permittee under this PA.
- 14 B. The USACE will complete a reasonable and good faith effort to identify historic
15 properties, make determinations of eligibility (DOEs) for the NRHP, assess effects,
16 resolve adverse effects, and consult with Signatories, Invited Signatories, and
17 Consulting Parties consistent with 36 C.F.R. § 800.4-7 and 33 C.F.R. Part 325,
18 Appendix C.
- 19 C. The USACE shall ensure that all work conducted as a result of this PA will be
20 performed in accordance with the Secretary of the Interior's Standards for Archeology
21 and Historic Preservation (Standards and Guidelines) (48 FR 44716-44742).
- 22 D. The USACE shall ensure that consultation with the Signatories, Invited Signatories,
23 and Consulting Parties is consistent with Stipulation III and other stipulations of the
24 PA.
- 25 E. The USACE shall ensure compliance with the terms of the PA and related historic
26 properties work provided by the Permittee to the USACE, including but not limited to
27 identification and evaluation of historic properties, assessment of effects, resolution of
28 adverse effects, report content and preparation, plan development, unanticipated
29 discoveries, required monitoring of construction, and curation of artifacts.
- 30 F. The USACE, for the duration of the PA, shall schedule Annual Meetings in consultation
31 with the Signatories, Invited Signatories, and Consulting Parties and shall maintain an
32 associated contact list for these government agencies, Indian Tribes, and
33 organizations.
- 34 G. The USACE shall ensure that no construction activities that may affect historic
35 properties take place in a Project Component until identification, evaluation, and on-
36 site resolution of adverse effects have been completed for the area.
- 37 H. The Permittee will be responsible for funding and overseeing, either directly or through
38 qualified consultants or contractors, work that is determined by the USACE as
39 necessary to ensure compliance with Section 106 and the terms of the PA.
- 40 I. The Permittee, its contractors, and persons supervising historic properties work on the
41 Permittee's behalf will hold federal or State permits and/or authorizations necessary
42 to complete the requirements of this PA, as well as meet the Standards and
43 Guidelines, and the Secretary of the Interior's Professional Qualification Standards (36
44 C.F.R. Part 61 Appendix A and 62 Federal Register 33708 (June 30, 1997)) for the
45 applicable discipline.

47 **III. Consultation**

- 1 A. The USACE shall ensure that Signatories, Invited Signatories, and Consulting Parties
2 are kept informed on the implementation of this PA, and shall provide opportunities for
3 review and comment on all pertinent documents. USACE shall consult with
4 Signatories, Invited Signatories, and Consulting Parties throughout the life of this PA
5 on actions required by Stipulations of this PA, to include, but not limited to the
6 following:
- 7 1. Developing the CRMP;
 - 8 2. Developing research designs and investigative methods for potential
9 Historic Properties (e.g., archaeological, ethnographic, historic, socio-cultural)
10 studies;
 - 11 3. Identifying measures and developing plans to avoid, minimize, and/or
12 mitigate adverse effects to historic properties within the APE;
 - 13 4. Identifying tribal members who have been designated by the Indian Tribes
14 to fulfill the role of Tribal Advisors;
 - 15 5. Developing protocols and procedures for inadvertent discoveries;
16 unanticipated effects on historic properties; discoveries of newly identified
17 historic properties; and discoveries of human burials and remains;
 - 18 6. Reviewing documentation provided by the Permittee in accordance with
19 the terms of this PA; and
 - 20 7. Amendments to this PA.
- 21 B. The consultation process for considering DOEs shall follow the process outlined in
22 Stipulation VI.C.
- 23 C. The implementing regulations of Section 106 of the NHPA (36 C.F.R. § 800.2) and the
24 USACE's procedures for protecting historic properties (33 C.F.R. Part 325 Appendix
25 C) require USACE to:
- 26 1. Consult with any Indian Tribe that attaches religious and cultural
27 significance to historic properties that may be affected by the Project;
 - 28 2. Provide Indian Tribes with a reasonable opportunity to identify their
29 concerns about historic properties, to advise on the identification and
30 evaluation of historic properties, including those of traditional religious and
31 cultural importance, to articulate their views on the Project's effects on such
32 properties, and to participate in the resolution of adverse effects;
 - 33 3. Consult with Indian Tribes in a sensitive manner respectful of tribal
34 sovereignty, in a manner appropriate for government-to-government
35 consultation between the Federal Government and Indian Tribes, and sensitive
36 to the concerns and needs of the Indian Tribes; and
 - 37 4. Acknowledge that Indian Tribes possess special expertise in assessing the
38 eligibility of historic properties that may possess religious and cultural
39 significance to them;
- 40 D. USACE will send documents (e.g., plans, reports) prepared under this PA or requests
41 for input to the Signatories, Invited Signatories, and Consulting Parties for review and
42 comment for at least 30 days. USACE will consider timely comments and direct the
43 Permittee to revise the document, as necessary, prior to finalizing the document or a
44 decision. USACE will provide Signatories, Invited Signatories, and Consulting Parties
45 with a notification that the document has been finalized and will distribute the final
46 document to all parties. If USACE directs the Permittee to make revisions to a
47 document that are substantial, USACE may provide Signatories, Invited Signatories,

1 and Consulting Parties an additional 30 days of review and comment on the revised
2 document or decision and consider timely comments received prior to finalizing the
3 document.

- 4 E. USACE will ensure that agendas and handouts are provided to Signatories, Invited
5 Signatories, and Consulting Parties at least 15 calendar days prior to consultation
6 meetings and the Annual Meeting.
- 7 F. The Signatories, Invited Signatories, and Consulting Parties will be prepared to
8 discuss comments at consultation meetings and/or Annual Meetings. The Permittee,
9 as directed by the USACE, will address all comments within 30 calendar days of
10 receipt from the USACE.
- 11 G. Consultation periods discussed in the stipulations of this PA may be reduced or
12 extended upon request by Signatories, Invited Signatories, and/or Consulting Parties.
13 These requests must be received by USACE before the end of the initial review and
14 comment period. Requests will be considered by USACE, and a response will be
15 distributed to Signatories, Invited Signatories, and Consulting Parties within five (5)
16 calendar days of receiving the request.
- 17 H. The USACE, at its discretion, may expand the Consulting Parties list to include
18 additional consulting parties consistent with the requirements of 36 C.F.R. §§ 800.2(c)
19 800.3(f).
20

21 **IV. Confidentiality Requirements**

- 22 A. Consistent with the confidentiality requirements in 36 C.F.R. § 800.11(c) and Section
23 304 of the NHPA (54 U.S.C. § 307103), the USACE shall withhold from public
24 disclosure information about the location, character, or ownership of a historic property
25 when disclosure may cause a significant invasion of privacy, risk harm to the historic
26 property, or impede the use of a traditional religious site by practitioners. Disclosure of
27 such information may be exempt from requests under Freedom of Information Act.
- 28 B. Information regarding the location, character, or ownership of specific historic
29 properties of traditional religious and cultural significance to an Indian Tribe provided
30 to USACE during the course of the Project will, upon request by one or more Indian
31 Tribes, be treated as information subject to Section 304 of the NHPA and 36 C.F.R. §
32 800.11(c).
- 33 C. Under the provisions of the Archaeological Resources Protection Act (54 U.S.C. §
34 470hh), the location of archaeological sites on Federal Lands is restricted in
35 distribution; disclosure of such information may be exempt from requests under
36 Freedom of Information Act.
- 37 D. The USACE will provide SHPO all reports prepared under this PA. The SHPO will
38 retain location information about all cultural resources and historic properties, including
39 properties of religious and cultural significance to Indian Tribes identified during the
40 project, in keeping with its mission to identify and maintain inventories of cultural
41 resources and historic properties (Section 101 of NHPA [54 U.S.C. § 302301] and
42 Section 41.35.070(a) of the Alaska Historic Preservation Act). Information regarding
43 the location, character, or ownership of a historic property of traditional religious and
44 cultural significance to an Indian Tribe provided to SHPO during the course of the
45 Pebble Project will, upon request by one or more Indian Tribes, be treated as
46 information subject to Section 304 of the NHPA and 36 C.F.R. § 800.11(c), as well as
47 applicable state laws.
48

V. Cultural Resource Management Plan

A. The USACE shall direct the Permittee to prepare a CRMP to guide compliance with the stipulations in this PA in accordance with the Secretary of the Interior's Standards and Guidelines for Archaeology and Historic Preservation (48 FR 44716, September 29, 1983). The CRMP will be finalized and approved by the USACE, in consultation with the Signatories, Invited Signatories, and Consulting Parties within six (6) months of the execution of the PA.

B. The CRMP will contain:

1. References to cultural resource investigations conducted to date within the APE and the Data Gap Analysis (prepared as set forth in Stipulation VI, below);
2. Lists of historic properties identified to date within the APE in the following forms;
 - i. Summary of DOEs that have completed SHPO and Consulting Parties review and comment
 - ii. Summary of preliminary DOEs that have not completed SHPO and Consulting Parties review and comment
3. Statement of additional identification efforts needed;
4. Methods for identification and evaluation of historic properties;
5. Summary of Effects Assessment for Historic Properties;
 - i. Summary of assessments of effect that have completed SHPO and Consulting Parties review and comment
 - ii. Summary of preliminary assessments of effect that have not completed SHPO and Consulting Parties review and comment
 - iii. Summary of Treatment Plans that have completed SHPO and Consulting Parties review and comment
 - iv. Summary of proposed Treatment Plans that have not completed SHPO and Consulting Parties review and comment
6. Preapproved and standardized avoidance, minimization, and/or mitigation options for resolving adverse effects to historic properties;
7. A monitoring plan (as described in Stipulation X);
8. Artifact curation protocols; and
9. An employee and consultant training program consistent with Stipulation XI.

C. Preparation and Finalization of the CRMP

[Note: The USACE intends to revise the PA to remove the language in Stipulation V.C if the CRMP is finalized prior to execution of the PA.]

1. The Permittee will prepare a draft CRMP which will be reviewed and finalized in accordance with consultation timelines discussed in Stipulation V.C.3. The draft CRMP is not interim guidance and cannot be used to implement the PA until the CRMP is finalized.
2. The Permittee, as directed by the USACE, will facilitate meetings, incorporate timely comments/revisions, and provide revised draft documents to the Signatories, Invited Signatories, and Consulting Parties.
3. The timeline to finalize the CRMP will be as follows: The CRMP shall be finalized no later than six (6) months after the execution of the PA.

- i. The Permittee shall submit the draft CRMP to the USACE no later than 30 calendar days following PA execution. The USACE will review and provide comment or direct the Permittee to incorporate changes to the draft CRMP. The USACE will distribute the revised draft CRMP to Signatories, Invited Signatories, and Consulting Parties for review and comment in accordance with Stipulation III.
- ii. Within 30 calendar days of receipt of comments, the Permittee, as directed by USACE, will revise the draft CRMP to incorporate input from Signatories, Invited Signatories, and Consulting Parties and submit a revised CRMP to the USACE.
- iii. The USACE will consider the need for additional consultation with Signatories, Invited Signatories, and Consulting Parties in accordance with Stipulation III. The USACE shall approve the final CRMP within 30 calendar days of receiving the revised draft final CRMP unless the USACE determines further revisions are necessary.
- iv. Within 30 calendar days of finalizing the CRMP, the USACE will distribute the final CRMP to the Signatories, Invited Signatories, and Consulting Parties.

D. Future Modifications of the CRMP

1. After initial approval of the CRMP by the USACE, the Permittee will review the CRMP each year to identify modifications to the CRMP that are necessary to reflect the implementation of this PA. The Permittee will provide the results of this review to Signatories, Invited Signatories, and Consulting Parties in accordance with Stipulation XIII.C. The CRMP may be updated to include updated identification and evaluation results, revised methods/methodologies, changes to the list of contacts, treatment plans for newly identified historic properties, and monitoring plans or other documentation that has been developed in consultation with Signatories, Invited Signatories, and Consulting Parties.
2. If the USACE determines that the CRMP requires revision, the Permittee will revise the CRMP as directed by the USACE. The Permittee will provide the revised draft CRMP to USACE.
3. The USACE will distribute the revised draft CRMP to Signatories, Invited Signatories, and Consulting Parties for review and comment in accordance with Stipulation III. Within 30 calendar days of receipt of comments, the Permittee, as directed by USACE, will revise the draft CRMP to incorporate input from Signatories, Invited Signatories, and Consulting Parties and submit a revised CRMP to the USACE. The USACE shall approve the final CRMP within 30 calendar days of receiving the revised draft final CRMP unless the USACE determines further revisions are necessary. Within 30 calendar days of finalizing the CRMP, the USACE will provide copies of the finalized CRMP to Signatories, Invited Signatories, and Consulting Parties.

VI. Identification and Evaluation of Historic Properties and Assessment of Effects

- A. The USACE will use phased identification and evaluation consistent with 36 C.F.R. §800.4(b)(2) to complete the Section 106 process for the Pebble Project and shall direct the Permittee to gather sufficient data to fulfill documentation standards consistent with 36 C.F.R. § 800.11 in a manner that accommodates project phasing.

1. The Pebble Project consists of large areas and transportation corridors, and it may not be reasonable to require identification efforts for the entirety of the APE. The reasonable and good-faith effort standard will consider available information regarding potential Historic Properties, including archaeological resources, historic resources, and ethnographic resources.
2. The level, scope, and phasing of identification and evaluation efforts will be consistent and commensurate with the methods outlined in the CRMP.
3. The identification and evaluation of historic properties will conform to Federal and State guidelines for historic property research in Alaska, will be compatible with previous Project research, and include a phased approach to identification and evaluation.
4. Where the Permittee cannot gain access to private lands for the purpose of historic property identification and evaluation, these efforts may be deferred until access is gained.

B. Considerations for Identifying Historic Properties

1. Data Gap Analysis: The Permittee has conducted identification efforts in portions of the APE. The Permittee will complete a Data Gap Analysis to ascertain where further identification efforts within the APE may be needed. The Data Gap Analysis will identify the extent of existing knowledge about known historic properties in the APE, by providing the following information:
 - i. Summary description of historic property investigations that have been completed, by Project Component;
 - ii. Total acres and percent of the construction footprint (see Glossary in Attachment G) and areas of the APE outside the construction footprint that have been field-investigated for historic properties;
 - iii. Total acres and percent of construction footprint and areas of the APE outside the construction footprint that will not be investigated due to low potential, previous field investigations, and/or because they have been removed from consideration;
 - iv. Status of identification-related research within the construction footprint and areas of the APE outside the construction footprint;
 - v. Status of investigation and evaluation of resources identified within the construction footprint and areas of the APE outside the construction footprint; and
 - vi. Bibliography that identifies reports completed by the Permittee for areas located within the APE which have been submitted to the USACE and SHPO to date.
2. [Note: The USACE intends to revise the PA to remove the language in Stipulation VI.B.2 if the CRMP is finalized prior to execution of the PA. PLP has included the data gap analysis as part of the draft CRMP.] The Permittee shall provide the USACE the Data Gap Analysis for the entire project within ten (10) calendar days following the execution of the PA. The USACE will distribute the Data Gap Analysis to the Signatories, Invited Signatories, and Consulting Parties for a 30 calendar day review and comment period in accordance with Stipulation III. After consultation with Signatories, Invited Signatories, and Consulting Parties in accordance with Stipulation III, the USACE will consider timely comments received and direct the Permittee to revise and finalize the Data Gap Analysis before approving the final document. As directed by

USACE, the Permittee will revise the Data Gap Analysis within 30 calendar days of the closure of the comment period. The USACE will provide copies of the final document to the Signatories, Invited Signatories, and Consulting Parties within 90 calendar days of the execution of the PA.

3. The Permittee shall employ a qualified consultant to create a Geographic Information System (GIS) model of archaeological resource potential within the APE for the permitted alternative. The model will categorize areas within the APE for the potential presence of archaeological resources. The Permittee shall provide the model and summary documentation regarding the variables used to create it and how the model will be tested during implementation, to USACE within six (6) months after the PA is executed. USACE will distribute the model and documentation to Signatories for review and comment in accordance with Stipulation III to determine whether it will be acceptable to use as one of the tools to inform archaeological survey strategy. Annually throughout the construction phase, or as determined by the PA Signatories, the model will be refined based on new data obtained through identification efforts or based on updated or new environmental GIS datasets.
4. The USACE will ensure that archaeological surveys are conducted in accordance with the following guidelines:
 - i. Within the construction footprint, the Permittee or a contractor hired on their behalf, will complete archaeological survey, which will include subsurface testing, for 100 percent of high-potential areas, at least 50 percent of medium potential areas, and at least ten (10) percent of low potential areas, as determined via the GIS model;
 - ii. Areas that are wetlands, perennially inundated, or slopes over 15° generally do not require archaeological survey or subsurface testing, unless identified as a high-potential area through consultation and/or research;
 - iii. Consultation and/or research may reveal additional areas of high or low potential that will be surveyed consistent with the guidelines in Stipulation VI.B.4.i; and
 - iv. Other inventory methods, such as remote sensing or geophysical methods, may be used in addition to the methods listed above.

C. Evaluation of Potential Historic Properties

1. The USACE will require that known or newly discovered cultural resources in the construction footprint, including properties of traditional religious and cultural importance to Indian Tribes, are evaluated regarding eligibility for listing in the NRHP based on the criteria established in 36 C.F.R. § 60.4.
2. The Permittee will provide the NRHP eligibility recommendations to the USACE for its use in preparing DOEs. The Permittee may provide eligibility recommendations in individual reports or as part of the Annual Report. If the USACE determines that the Permittee must provide additional information regarding a resource's NRHP eligibility status, the Permittee shall conduct additional research to gather adequate information to support the Permittee's eligibility recommendation prior to the USACE's presentation of the DOE for consultation.
3. The USACE will submit DOEs to the SHPO and Consulting Parties for a 30 calendar day review and comment.

4. If USACE and SHPO cannot reach an agreement through consultation regarding the NRHP eligibility status of a resource within 30 calendar days, or if the ACHP or the Keeper of the NRHP (Keeper) so request, the USACE shall seek a formal determination of eligibility from the Keeper pursuant to 36 C.F.R. Part 63.

5. Signatories, Invited Signatories, and Consulting Parties will use the National Park Service Bulletin *How to Apply the National Register Criteria for Evaluation* in conjunction with other National Register bulletins as guidelines when considering NRHP eligibility recommendations and determinations.

D. Assessment of Effects to Known Historic Properties

1. For each known historic property in the APE, the Permittee shall provide a recommendation concerning the potential for the Project to affect the historic property and whether the effect would be adverse.

2. Upon receipt of Permittee recommendations concerning Project effects to known historic properties within the APE, the USACE will review the recommendations, request modifications to the recommendations by the Permittee (if applicable), and provide the USACE's finding of effect to the Signatories, Invited Signatories, and Consulting Parties for review and comment consistent with Stipulation III.

3. If an adverse effect is unavoidable, the USACE will coordinate with the Signatories, Invited Signatories, and Consulting Parties to resolve adverse effects consistent with Stipulation VII.

4. If, after consultation, there is a disagreement concerning the USACE's finding of effect by the SHPO, the disagreement will be resolved through the dispute resolution stipulation of the PA (Stipulation XIV).

VII. Resolving Adverse Effects on Historic Properties

A. The USACE shall consult with Signatories, Invited Signatories, and Consulting Parties on ways to avoid, minimize, and/or mitigate adverse effects to historic properties in accordance with Stipulation III.

B. The CRMP will contain lists of options and implementation plans for resolving adverse effects to historic properties including, but not limited to:

1. Avoidance and Minimization options (i.e., monitoring, construction area/transportation corridor neckdowns, project design modifications, environmental resource signage, exclusion fencing);

2. Historic American Building Survey/Historic American Engineering Record documentation of historic structures;

3. Site specific and/or resource-specific mitigation measures, including but not limited to research plans, data recovery, artifact analysis and curation, resource transport/moving (if a structure), and timing of construction and operations to avoid, minimize, and/or mitigate effects to historic properties that involve traditional use;

4. Preparation of ethnographic overviews that include place name studies and oral histories for areas that lie outside of the APE;

5. Yup'ik, Dena'ina, and Alutiiq language revitalization funding as it relates to areas outside of the APE; and

6. Assessments of broader cultural landscapes and traditional ecological knowledge for areas that lie outside of the APE.
- C. In lieu of such standard approaches for resolution of adverse effects as referenced in VII.B., the Permittee, under the direction of the USACE, and in consultation with Signatories, Invited Signatories, and Consulting Parties, may identify and develop creative treatment plans that adopt alternative approaches to resolve adverse effects to historic properties. Whenever feasible, these types of mitigation measures will focus on the communities associated with the types and locations of adversely affected historic properties as determined by the USACE and following the consultation noted above. The scope of the treatment plans will be determined through consultation with the Consulting Parties after adverse effects to historic properties are identified. Some additional examples of creative mitigation measures are listed in the CRMP (Attachment C).
- D. Creative mitigation measures may include, but are not limited to:
 1. Assisting in the development of tribal or community historic preservation plans, developing detailed historic contexts for the region;
 2. Developing educational materials or programs for use by Borough School Districts, Indian Tribes, and/or communities;
 3. Providing improvements to or maintenance for historic trails;
 4. Purchasing and maintaining properties containing historic resources or historic trail rights-of-way;
 5. Developing historic property management plans;
 6. Creating, updating, and maintaining a website (for a time period not to exceed the duration of federal jurisdiction over the Project unless otherwise agreed to by the Permittee) with videos, digitized artifacts, and other information on the historic properties found during the Project, for the duration of this PA; and
 7. Public presentations related to the history or prehistory of communities along the project area.
- E. The Permittee will ensure that persons developing the mitigation deliverables are supervised by individuals who meet the Secretary of the Interior's Professional Qualification Standards (36 C.F.R. § 61 Appendix A) for the applicable disciplines. Materials may be developed in coordination with other professionals of other disciplines such as education, public history, ethnography, folklore, traditional cultural practices and ecological knowledge, as well as tribal elders and members, and/or local or regional traditional lifeways practitioners.
- F. Following the consultation process for Project effects to historic properties outlined in Stipulation VI.D concerning the USACE's finding of adverse effect, the Permittee will submit a Plan to Minimize and Mitigate Adverse Effects (Treatment Plan), for each newly identified historic property that would be adversely affected by the Project. This Treatment Plan will include possible site-specific avoidance and minimization measures, and proposed mitigation measures for historic properties found to be adversely affected by the Project. The plan will contain individual or specific treatment plans for each adversely affected historic property. Site-specific Treatment Plans can include standard approaches described in the CRMP or alternative approaches recommended and prepared by the Permittee.
- G. After consultation with Signatories, Invited Signatories, and Consulting Parties in accordance with Stipulation III, the USACE will finalize the Treatment Plan. The

USACE will provide copies of the Treatment Plan to the Signatories, Invited Signatories, and Consulting Parties.

- H. Under the direction of the USACE, the Permittee shall carry out mitigation measures contained in the Treatment Plan. The Permittee shall not commence activities with potential to adversely affect known historic properties and which require Federal authorization unless the Treatment Plan has been approved by the USACE. A construction buffer of at least 100 feet must be provided from the outer extent of known historic properties until on-site mitigation is complete. The CRMP will include a process to coordinate concurrent construction and completion of measures contained in the Treatment Plan.

VIII. Procedures for Inadvertent Discoveries (Not Including Human Burials and Remains)

- A. The CRMP (Attachment C) of this PA contains a protocol in case of the inadvertent discovery of potential historic properties or unanticipated effects to potential historic properties, which identifies a clear chain of command for the notification of discovery, including the federal and state agencies and Consulting Parties that will be involved in notification and consultation for the discovery, review time frames, and site protection measures to be implemented in the event of a discovery. It also includes a schedule for the investigation, evaluation and consultation regarding the NRHP eligibility of the discovery and provisions for implementation of avoidance, minimization, and/or mitigation if the discovery is determined or assumed to be eligible for the NRHP. The USACE and permittee will implement the appropriate protocols set forth In Attachment C in response to Inadvertent Discoveries (Not Including Human Burials and Remains).
- B. Under 30 C.F.R. § 250.194(C) and 30 C.F.R. § 1010(C), the Permittee will notify the BSEE Regional Director and the USACE in the event of an inadvertent discovery of any archaeological resource offshore. The USACE, in coordination with BSEE, will ensure the Permittee follows the procedures in Attachment C concerning offshore inadvertent discoveries.

IX. Procedures for Inadvertent Discovery of Human Burials and Remains

- A. Several laws establish procedures for treatment of human remains and treatment of objects of cultural patrimony. Applicable laws are determined by land ownership and ancestry. On federal land (including Native Allotments managed by the Bureau of Indian Affairs and the Outer Continental Shelf), the federal land manager must comply with the Native American Graves and Repatriation Act (NAGPRA) (25 U.S.C. § 3001–3013). The requirements regarding the implementation of NAGPRA are set forth in 43 C.F.R. § 10.3-10.6. NAGPRA covers both intentional excavation and inadvertent discoveries. In addition, several State laws, including AS 12.65.5, 11.46.482(a)(3), 41.35.200, and 18.50.250, are applicable to the discovery of human remains in Alaska; and the State Medical Examiner has jurisdiction over all human remains in the state (with rare exceptions, such as military aircraft deaths), regardless of age. Attachment C of this PA contains a protocol in case of the inadvertent discovery of the Human Burials and Remains. The USACE and Permittee will implement the appropriate protocols set forth In Attachment C in response to Inadvertent Discoveries of Human Burials and Remains.
- B. Under 30 C.F.R. § 250.194(C) and 30 C.F.R. § 1010(C), the Permittee will notify the BSEE Regional Director and the USACE in the event of an inadvertent discovery of any archaeological resource offshore (including Human Burials and Remains). The

USACE, in coordination with BSEE, will ensure the Permittee follows the procedures in Attachment C concerning offshore inadvertent discoveries of human remains and associated artifacts.

X. Monitoring Plan

- A. Within four (4) months of the execution of the PA, the USACE will begin consultation with Indian Tribes to identify Tribal Advisors.
- B. The Permittee will prepare a draft Monitoring Plan as part of preparation of the CRMP. The Monitoring Plan shall be consistent with the Alaska Office of History and Archaeology Historic Preservation Series 15 *Monitoring Guidelines*.
- C. The Monitoring Plan will include, but not be limited to:
 1. Reporting requirements and schedule to track progress and monitoring results;
 2. Role and responsibilities of monitors and Tribal Advisors;
 3. Stop work protocols;
 4. Collection and curation protocols;
 5. Hand signals for monitors, Tribal Advisors, and equipment operators;
 6. Procedures and safety around heavy equipment; and
 7. Qualification standards of monitors.
- D. The Monitoring Plan will be updated every year as part of the annual review of the CRMP.
- E. The Permittee shall adhere to all requirements in the Monitoring Plan.
- F. The Permittee shall report the results of the previous year's monitoring activities and the proposed monitoring for the upcoming year in the Annual Report.
- G. In cases where historic properties are not directly affected by construction, but construction activities are anticipated to occur within 100 feet of a historic property, it may be appropriate to have monitors and Tribal Advisors present to confirm effects to such properties are avoided. Monitors and Tribal Advisors may also be appropriate at historic properties previously subjected to data recovery, since there is a possibility for a discovery of significant features or other cultural materials in previously unexcavated areas.
- H. All monitors and Tribal Advisors shall be subject to the monitoring stipulations in the Monitoring Plan.

XI. Employee and Contractor Historic Properties Training

- A. The Permittee shall provide historic properties training to Pebble Project personnel, contractors, and subcontractors. As practicable, the Permittee will conduct the training in concert with existing environmental, health, and safety training on the Pebble Project during all phases of the Pebble Project. The historic properties training component will inform Pebble Project personnel of their responsibilities under the law, and clearly list procedures to follow in the event they encounter previously undiscovered potential historic properties or find unanticipated effects to historic properties.
- B. The Permittee shall be responsible for developing the training curriculum and will make a good faith effort to seek input and collaborate with Indian Tribes to develop and teach the curriculum. At least 120 calendar days prior to initiation of any activities which require Federal authorization, the Permittee will provide USACE with a copy of the

curriculum; USACE will submit the material to the Signatories, Invited Signatories, and Consulting Parties for a 60-day review and comment period. USACE will consider all comments received, and require the Permittee to incorporate any changes, before approving of the curriculum. USACE will provide a copy of the final curriculum to all Signatories, Invited Signatories, and Consulting Parties for informational purposes. In subsequent years after the initial review of the curriculum, the review of the curriculum, including an assessment of the effectiveness of the curriculum, will be included in the Annual Report.

C. At a minimum, the curriculum during the construction stage will provide information on the following topics:

1. What are historic properties and why are they important;
2. Traditional cultural practices and subsistence use along the Project corridor that may aid staff, monitors, Tribal Advisors, in fulfilling their respective roles and responsibilities under the PA;
3. Legal context for historic properties protection and applicable federal, state, and local laws;
4. Penalties for disturbing historic properties and human remains;
5. Historic property types that may be encountered in the project area;
6. Monitoring procedures, including safety around heavy equipment, buffer areas, hand signals between monitors, Tribal Advisors, and equipment operators;
7. The Inadvertent Discovery Plan; and
8. The Human Remains Discovery Plan.

D. In addition to using personnel meeting the Secretary of the Interior's Professional Qualification Standards (36 C.F.R. § 61 Appendix A) for the applicable disciplines, the curriculum may be developed and/or presented in coordination with other professionals of other disciplines such as education, public history, ethnography, folklore, traditional cultural practices and ecological knowledge, as well as applicable tribal elders and members, and/or local or regional traditional lifeways practitioners.

E. It may be appropriate for contractors to receive differing levels of training depending on project stage and job role. The USACE will consult with Signatories, Invited Signatories, and Consulting Parties at the Annual Meeting regarding the curriculum and the Permittee's compliance with Stipulation XI.A. Following the consideration of comments received at the Annual Meeting, the USACE will direct the Permittee to maintain or modify the existing curriculum for use during the next year.

XII. Collection and Curation

A. Materials collected under this PA are the property of the land managing agency, or landowner if collected from privately owned property.

B. The Permittee shall incur all costs necessary to ensure curation of materials collected in conjunction with actions taken under this PA, unless other arrangements have been made. Curation costs may include, but are not limited to, curation fees charged by approved institutions, acquisition of archival materials, shipping, and conservation actions. Cost should be reasonable and consistent with curation standards, such as 36 C.F.R. Part 79 or the University of Alaska Museum of the North Curation Guidelines (UAMN).

C. The Permittee, and associated contractors, will safeguard collections from theft and damage by providing interim storage facilities and conservation actions consistent with curation standards (such as those found in 36 C.F.R. Part 79 and/or the Curation

- Guidelines of the UAMN), as necessary and in consultation with approved repository and landowners or land managing agency.
- D. All collections will be returned by the Permittee to their private owners or deposited in the approved repository six (6) months after approval of the final Annual Report or within one (1) year of completion of the fieldwork that generated the collection. All collections will be curation-ready, as determined by the repository, unless otherwise stipulated in an agreement with the landowner or land managing agency.
- E. Artifacts, faunal materials, and/or samples collected on State lands during activities covered by this PA shall be deposited by the Permittee in the UAMN, along with records, field notes, and related materials in accordance with their curation procedures and requirements in force at the time of submission of materials. A provisional curation agreement for collections will be established by the Permittee during the State Cultural Resources Investigation Permitting process and finalized prior to submission of collections to the UAMN.
- F. For collections recovered from private lands, the Permittee will work with landowners to arrange for the disposition of materials. The Permittee will encourage landowners to curate any materials collected on their property at UAMN. If a landowner chooses to curate the materials at UAMN or another repository, the Permittee will provide the USACE with documentation of the transfer within 30 calendar days following the transfer. In the event that a landowner chooses to retain a collection, the Permittee will provide documentation of this to USACE. If materials collected from private lands are of a traditional religious or sacred importance to Indian Tribes, the USACE will make a good faith effort to facilitate consultation between the landowner and Indian Tribe(s) to reach a resolution for the disposition of the materials; however, this will be negotiated outside of the terms of this PA.

XIII. Annual Review and Reports

- A. Annual Meeting: the USACE shall hold a meeting of the Signatories, Invited Signatories, and Consulting Parties, no later than April 15th of each year, to discuss the previous year's activities, and activities scheduled for the upcoming year. The meeting will be held in Anchorage at the Alaska Office of History and Archaeology, or at another location by consensus of the Signatories. The parties may participate by telephone if they so desire. The Annual Meeting will discuss all the major components of the Annual Report, outlined below in Stipulation XIII.C as well as other issues of concern that relate to the implementation of the PA. Meeting minutes will be distributed by the USACE within 30 calendar days of the meeting. The USACE will amend the minutes after consultation in accordance with Stipulation III and distribute finalized minutes within 30 calendar days of the end of the review and comment period.
- B. Additional Meetings: If a Signatory, Invited Signatory, or Consulting Party deems a meeting necessary, in addition to the annual meeting described above, USACE will decide whether to convene additional meetings, within 30 calendar days of the initial request, after consultation with the other Signatories, Invited Signatories, and Consulting Parties in accordance with Stipulation III.
- C. Annual Report: Each year the Permittee shall provide USACE with a written report of previous and upcoming activities as they relate to compliance with the stipulations of this PA. The report will be provided to USACE no later than January 15th of each year. USACE will distribute it to Signatories, Invited Signatories, and Consulting Parties for review and comment. The Signatories, Invited Signatories, and Consulting Parties shall have 60 calendar days for review and comment. The Annual Report shall include

the results of fieldwork over the period from October 1st through September 30th. The USACE may direct the Permittee to revise the report following receipt of timely comments received before and at the Annual Meeting. Consistent with 36 C.F.R. § 800.11(c) and Section 304 of the NHPA, sensitive historic properties information shall be confidential. The report will include the following:

1. A description of the past year's progress on Project Components and activities which require Federal authorization;
2. A projection of the upcoming year's Federally authorized activities, including information about possible Federally authorized permit modifications, and proposed revisions to methods based on findings or results from the previous year(s);
3. A description of the past year's efforts to identify and evaluate historic properties;
4. A description of the identification and evaluation efforts in the APE planned for the upcoming year;
5. Descriptions of artifacts, ethnographic resources, or other archaeological or historic materials encountered, including representative photographs or drawings, a description of analyses, and other recordation documents collected or developed in the past year;
6. A description of any adverse effects to historic properties identified in the past year;
7. A summary of the past year's efforts to resolve adverse effects and protect historic properties, including monitoring activities;
8. A description of the monitoring planned for the upcoming year;
9. A summary of artifacts sent to an approved facility for curation, returned to the landowner, or collected but not yet curated;
10. Clear maps of areas investigated or monitored, historic properties identified, and alternative routes to be followed to avoid any identified historic properties;
11. The Employee and Contractor Historic Properties Training Curriculum, and any recommended changes to the curriculum;
12. An evaluation of the PA and whether any amendments or changes are needed;
13. An evaluation of the CRMP and whether any changes are needed; and
14. List of reports submitted and/or deliverables finalized during the previous year.

D. Certain archaeological surveys, ethnographic research, special excavations, and/or testing efforts may require individual reports outside the normal reporting cycle to facilitate decision-making processes. The Permittee shall prepare technical reports describing the results of background research, ethnographic research, fieldwork activities, and laboratory analyses according to the standards and permit guidelines appropriate to the resource. The Permittee will submit reports within nine (9) months from the completion of research or field activities to the USACE. The USACE will finalize these reports after consultation with Signatories, Invited Signatories, and Consulting Parties in accordance with Stipulation III.

E. Project Stage Completion Report: The Permittee shall complete a Project Stage Completion Report following the end of each Project Stage (construction and operations) to demonstrate compliance with the stipulations in this PA.

1. The report will include the following:

- i. Identify which stage of the Project has been completed; including progress on Project activities requiring Federal authorization, and a map of the built facilities and restored or reclaimed areas;
 - ii. A description of any Federally authorized permit modifications;
 - iii. List of the effective date of the PA (as amended) and the latest version of the CRMP to be incorporated into the PA;
 - iv. A bibliography of all Annual Reports, and Individual Reports submitted during the Project stage;
 - v. A list of the dates of consultation meetings held during the Project stage;
 - vi. A summary of the ongoing monitoring efforts; and
 - vii. A summary of efforts to resolve adverse effects to historic properties that are ongoing or not yet completed.
2. The Permittee will provide the draft report to the USACE within 90 days of the end of the Project stage of the Project. The USACE will finalize the report after consultation in accordance with Stipulation III. The USACE will distribute the final report to Signatories, Invited Signatories, and Consulting Parties.

XIV. Dispute Resolution

- A. Should any of the Signatories to this PA object at any time to any actions proposed or the manner in which the terms of this PA are implemented, the USACE will consult with such party to resolve the objection. If USACE determines that such objection cannot be resolved, the USACE will:
 1. Forward all documentation relevant to the dispute, including the USACE proposed resolution, to the ACHP. The ACHP will provide the USACE with its advice on the resolution of the objection within 30 calendar days of receiving adequate documentation. Prior to a final decision on the dispute, the USACE will prepare a written response that takes into account any timely advice or comments regarding the dispute from the Signatories, Invited Signatories, and Consulting Parties, and provide them with a copy of this written response. The USACE will then proceed according to its final decision; and
 2. If the ACHP does not provide its advice regarding the dispute within the 30 calendar-day time period, the USACE may make a final decision on the dispute and proceed accordingly. Prior to a final decision, the USACE will prepare a written response that takes into account any timely comments regarding the dispute from the Signatories, Invited Signatories, and Consulting Parties, and provide them and the ACHP with a copy of such written response.
- B. Consulting Parties may bring objections or concerns to any of the Signatories who may then utilize the dispute resolution process outlined in Stipulation XIV.
- C. The USACE will carry out all other actions subject to the stipulations of this PA, and that are not the subject of the dispute, as provided for by this PA.

XV. Amendments

- A. Any Signatory or Invited Signatory to this PA may request that that this PA be amended, whereupon the USACE shall consult with the Signatories, Invited Signatories, and Consulting Parties to consider the amendment(s). Consulting Parties may suggest proposed amendments to one or more Signatories and/or Invited

Signatories, who may consider proposing them. Consultation timelines shall follow the requirements of Stipulation III.

- B. Amendments to the PA will be executed when signed by the date of the last signature of the Signatories and Invited Signatories. The USACE will notify all Signatories, Invited Signatories, and Consulting Parties of the amendment within 30 calendar days of the amendment approval date and file a copy of the amendment with ACHP.
- C. Attachment F has been reserved to log amendments. Following approval of each amendment, USACE will update the PA and distribute the revised PA to all Signatories, Invited Signatories, and Consulting Parties.
- D. PA Attachments: The Signatories and Invited Signatories may agree to amend or add Attachments to this PA through consultation, as documented with a written email exchange or comparable written record, without requiring amendment to the body of the PA, unless the Signatories and Invited Signatories, through such consultation, decide otherwise. Approved plans, such as treatment plans, which are approved through consultation in accordance with Stipulation III will become part of Attachment C and logged in Attachment F in accordance with Stipulation XV.C.

XVI. Termination

- A. If any Signatory or Invited Signatory to this PA determines that the terms of the PA will not or cannot be carried out, that party shall immediately consult with the other Signatories and Invited Signatories to attempt to develop an amendment or agreement on other actions that would avoid termination of the PA. If, within 30 calendar days, an amendment or agreement on other actions that would avoid termination cannot be reached, any Signatory or Invited Signatory may terminate the PA upon written notification to the other Signatories and Invited Signatories.
- B. Once the PA is terminated, and prior to work continuing on the Pebble Project, the USACE must either (a) execute a PA or Memorandum of Agreement, as appropriate, pursuant to 36 C.F.R. § 800.6 or (b) request, take into account, and respond to the comments of the ACHP in accordance with 36 C.F.R. § 800.7. The USACE shall notify the Signatories, Invited Signatories, and Consulting Parties as to the course of action it will pursue.

XVII. Coordination with Other Federal Reviews

- A. In the event that another federal agency not initially a party to or subject to this PA receives an application for assistance, license, permit, or funding for the Project, that agency may fulfill its Section 106 responsibilities by stating in writing that it concurs with the terms of this PA, and notifying the USACE, SHPO, and the ACHP that it intends to do so. The agency's agreement shall be evidenced by implementation of the terms of this PA and attachments.

XVIII. Communications

- A. Electronic mail (e-mail) shall serve as the official correspondence method for all communications regarding this PA and its provisions, with an alternative method of postal mail delivery if the contacts do not have reliable e-mail. The CRMP will contain a list of two contacts, their phone numbers, and their email addresses, along with postal mail addresses for those contacts who indicate they do not have reliable e-mail. It is the responsibility of each Signatory, Invited Signatory, and Consulting Party to immediately inform USACE of any change in name, address, e-mail address, or phone

number of any point-of-contact. The USACE will forward this information to all Signatories, Invited Signatories, and Consulting Parties by e-mail or mail as will be specified in the CRMP.

XIX. Closing Out the PA

- A. If, prior to any federally authorized construction associated with the Pebble Project actually beginning, the USACE decides to modify, suspend, or withdraw the permit, the USACE may no longer have any Section 106 responsibilities. If so, the USACE may elect to terminate the PA by sending written notice to all Signatories, Invited Signatories, and Consulting Parties of the change in circumstances and its decision to terminate the PA.
- B. If federally authorized construction related to the Pebble Project has already begun, the Signatories and Invited Signatories cannot terminate the PA as provided in Stipulation XVI.A until all identification, evaluation, and resolution of adverse effects have been completed within those portions of the construction footprint affected by Project activities. In this event, the USACE, in consultation with Signatories, Invited Signatories, and Consulting Parties, will determine the extent and duration of additional data collection activities and post fieldwork activities prior to closure of this PA.
- C. When all of the terms of the PA have been carried out or the PA has expired in accordance with Stipulation XX, the USACE will send written notice to the Signatories, Invited Signatories, and Consulting Parties informing them to that effect.
- D. If the terms of the PA have been met but the PA remains in effect due to a longer duration stipulation, the USACE should consider amending the PA to alter its duration stipulation, recognize the work completed, and provide for the completion of its Section 106 responsibilities, following the amendment process outlined in Stipulation XV.

XX. Duration of this PA

- A. Unless amended or terminated in accordance with Stipulations XV or XVI, this PA will expire 24 years from the Effective Date.
- B. Prior to expiration, USACE may consult with the other Signatories, Invited Signatories, and Consulting Parties to reconsider the terms of the PA and amend in accordance with Stipulation XV. The USACE will notify Signatories, Invited Signatories, and Consulting Parties as to the course of action it intends to pursue at least 90 calendar days before the PA would expire.
- C. The USACE will review this PA every five (5) years to update outdated statutes, best practices, contact information, and to consider whether organizations who may have originally declined participation may wish to participate as a Consulting Party. If USACE determines the PA may need to be updated, USACE will notify the Signatories, Invited Signatories, and Consulting Parties and invite them to consult on the proposed changes in accordance with Stipulation III. The USACE will propose any necessary Amendments to the PA according to Stipulation XV, Amendments.

XXI. Effective Date

- A. This PA shall be effective as of the date [*the Effective Date*] when it has been signed (Executed) by the last Signatory (SHPO, USACE, and ACHP).

XXII. Anti-Deficiency Provision

- A. Any obligation of the federal agencies set forth in this PA is subject to and dependent on appropriations by Congress and allocation of sufficient funds for that purpose.

XXIII. Execution of PA in Counterparts

- A. This PA may be executed in counterparts, with a separate page for each signatory. The USACE will ensure that each Signatory, Invited Signatory, and Consulting Party is provided with a copy of the fully executed PA.

XXIV. Transfer of Ownership

- A. If the Permittee transfers ownership of the Pebble Project to another entity, the responsibilities of the Permittee described in this PA shall be transferred to the new Permittee.

XXV. Scope of the PA

- A. This PA is limited in scope to actions related to the proposed construction, and operations of the Pebble Project and related facilities, as permitted by the Federal Agencies and the associated consideration of historic properties, consistent with Section 106, and other federal laws and regulations and is entered into solely for these purposes.
- B. This PA in no way restricts any of the Signatories, Invited Signatories or Consulting Parties from participating in similar activities with other public or private agencies, organizations, and individuals.
- C. This PA is neither a fiscal nor a funds obligation document. Any endeavor involving reimbursement or contribution of funds between the parties to this instrument will be handled in accordance with applicable laws, regulations, and procedures including those for Federal Government procurement and printing. Such endeavors will be outlined in separate agreements that will be made in writing by representatives of the parties and will be independently authorized by appropriate statutory authority. This instrument does not provide such authority.

EXECUTION of this PA by the USACE, ACHP, and SHPO, and implementation of its terms, evidences the USACE, BSEE, and USCG have taken into account the effects of the Pebble Project on historic properties and afforded the ACHP an opportunity to comment.

List of Attachments:

- A. Project Description
- B. APE & Permit Area Description
- C. CRMP
- D. List of Consulting Parties
- E. Treatment Plans
- F. Amendment Log
- G. Definitions/Glossary of Terms and Acronyms

DRAFT

ATTACHMENT A**PROJECT DESCRIPTION**

The Pebble Limited Partnership (Applicant) has applied for permits to develop the Pebble copper-gold-molybdenum porphyry deposit (Pebble deposit). The deposit is located under rolling permafrost-free terrain in the Iliamna region of southwest Alaska, approximately 200 miles southwest of Anchorage and 60 miles west of Cook Inlet. The closest communities are the villages of Iliamna, Newhalen, and Nondalton, each approximately 17 miles from the Pebble deposit.

The Applicant has advanced development of an open pit mine and associated infrastructure with plans for approximately 20 years of mining operations. The project would have an operating schedule of two (2) 12-hour shifts per day for 365 days per year and employ approximately 2,000 personnel for construction and 850 for operations.

In addition to the mine site, the project would have three (3) other major components: a transportation corridor to move the concentrate to port and bring goods to the project site, a port site to facilitate transportation, and a natural gas pipeline from the Kenai Peninsula to the mine site for power generation.

[NOTE TO REVIEWERS: The project description found in the Pebble Project Environmental Impact Statement and identified as the applicant's preferred alternative has been modified by the applicant. Changes to the applicant's preferred alternative are described in Requests for Information (RFI) numbers 071b and 143 and are found on the project website (pebbleprojecteis.com).]

The project description may continue to change during USACE review of the permit application. Upon issuance of the USACE permit, the project description shall be as described in the permit.

ATTACHMENT B**AREA OF POTENTIAL EFFECT**

On December 22, 2017, Pebble Limited Partnership submitted an application for Department of the Army (DA) authorization under Section 10 of the Rivers and Harbors Act of 1899 (Section 10) and Section 404 of the Clean Water Act (Section 404). The applicant has proposed activities which require Department of the Army authorization in order to construct the Pebble Project (Project), which includes an open pit mine, tailings, storage facilities, power plant, transportation corridor, a port and jetty to support offshore lightering locations in Cook Inlet, spur roads, and a gas pipeline from the Kenai Peninsula across Cook Inlet to the mine site.

In a memorandum dated December 26, 2017, USACE determined that, in accordance with the National Environmental Policy Act (NEPA), the scope and scale of the Federal control and responsibility are over all major components of the larger project as the consequences of the large project are essentially products of the USACE permit action. This scope and scale of the Federal control and responsibility establish the scope of analysis of the project's environmental effects under NEPA.

Section 106 of the National Historic Preservation Act (Section 106) requires that federal agencies with jurisdiction over a proposed undertaking take into account the effect of the undertaking on historic properties. The USACE has determined the activities that require authorization under Section 404 and Section 10 are an Undertaking subject to Section 106. The implementing regulations of Section 106, 36 C.F.R. Part 800, state that undertakings include activities requiring a Federal permit. USACE also follows 33 C.F.R. Part 325 Appendix C, including the subsequent 2005, 2007, and 2009 interim guidance, (referred to collectively as 33 C.F.R. Part 325 Appendix C) to comply with NHPA. 33 C.F.R. Part 325 Appendix C states that the undertaking is the work, structure, or discharge that requires a Department of the Army permit. The 2005 Interim Guidance (6)(c) states that the scope of the undertaking is also dependent on the amount of Federal control and responsibility, and that work required as part of a permit condition is also part of the undertaking.

Therefore, the USACE has determined that the undertaking for analysis in the Section 106 process is the direct footprint of the areas where dredged or fill material would be discharged into waters under USACE jurisdiction and where facilities or structures would be constructed in navigable waters under USACE jurisdiction. In addition, any activities that become a condition of the permit, if issued, would be part of the undertaking, such as compensatory mitigation.

In accordance with 33 C.F.R. Part 325 Appendix C, the permit area includes those areas in waters of the United States that will be directly affected by the proposed work or structures and uplands directly affected as a result of authorizing the work or structures. The inclusion of uplands in the permit area is based upon three tests listed in 33 C.F.R. Part 325 Appendix C. In light of the scope of the undertaking, all uplands within the direct footprint of construction are part of the permit area. The USACE has defined the permit area to be the direct footprint of the entire project, which includes all areas where fill, dredging, sidecast of material, or excavation would occur, where facilities or structures would be installed, and the areas used for construction of the project. On land, the areas used for construction of the project would consist of a 30-foot-wide buffer around the areas where placement of fill or excavation would occur and where facilities or structures would be installed. In marine waters, the areas used for construction of the project would consist of the area outside of the direct footprint of construction, and which is used for anchoring of barges and equipment used to construct authorized structures, dredging, discharges of dredged material, or placement of fill. The maximum width of the area where anchors and anchor cables may occur would be 8,202 feet.

As part of development of a National Historic Preservation Act Programmatic Agreement under 36 C.F.R. § 800.14(b), an Area of Potential Effects (APE) has been defined.

As defined by 36 C.F.R. § 800.16(d), the APE is the geographic extent where direct and indirect effects to historic properties may occur. Effects to historic properties are those that may alter the characteristics of a historic property qualifying it for inclusion in or eligibility for the NRHP. Adverse effects to a historic property are those that would diminish the integrity of the historic property. Types of adverse effects that may occur from the activities requiring a DA permit could include physical destruction of or damage to all or part of the property, removal of the property from its historic location, change of the character of the property's use or of physical features within the property's setting, and introduction of visual, atmospheric, or audible elements. The proposed project activities requiring a DA permit could cause direct and/or indirect effects that may include, but are not limited to, destruction as a result of fill or excavation; changes of the view from historic properties; increases in the noise level and types of noises at historic properties; changes in integrity as a result of ground vibration; and increases of dust deposition at historic properties.

Modeled information on the potential extent of visual, auditory, or atmospheric effects was used to determine the size of the APE for portions of the undertaking which would not be submerged in navigable waters of the United States. The portions of the APE which are outside of navigable waters include the direct footprint of the project and the area that is within the foreground and of strongest visual contrast, the distance where more than 10 weighed decibels (dBA) above ambient noise would be expected, and areas which would be affected by fugitive dust. A change in 10 dBA is perceived by most humans as a doubling in loudness and where sleep disturbance would occur for a person in a structure. The immediate foreground visual effects, the auditory effects, and the fugitive dust effects are based on modelling incorporated in the Pebble Project Environmental Impact Statement prepared under NEPA.

The APE has been separately defined for three distinct areas of the undertaking:

At the mine site, APE has been defined as the direct footprint and the area within three (3) miles of the outer extent of the direct construction footprint of the mine site components.

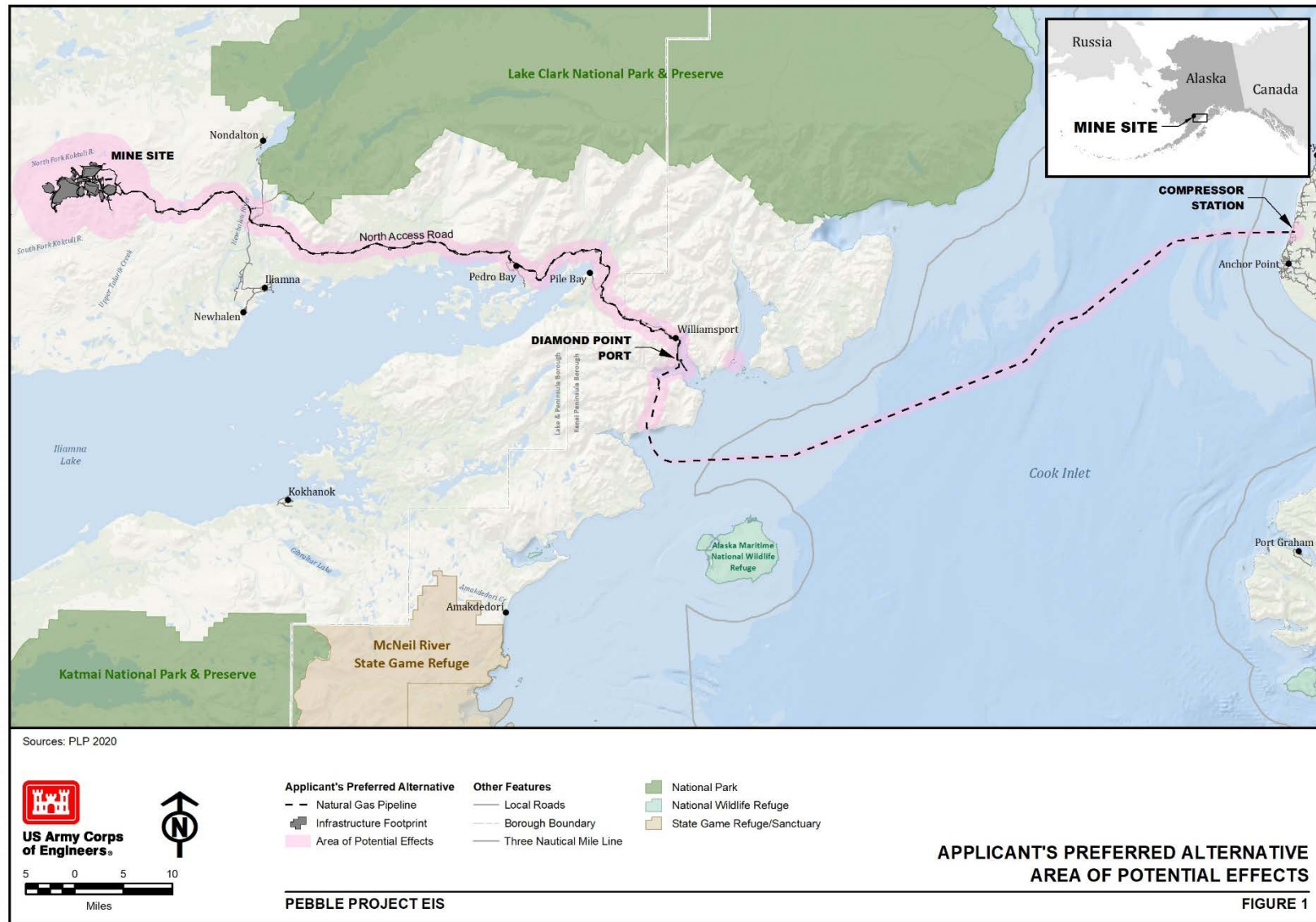
For all other linear and non-linear features outside the mine site, with the exception of the portion of the natural gas pipeline from Ursus Cove to Anchor Point, the APE is defined as the direct construction footprint and the area within one (1) mile of the direct construction footprint of the linear features and non-linear features. The linear and non-linear features outside the mine site include the transportation corridor, the port facility, the one mooring spread, the remaining portions of the natural gas pipeline, the concentrate and return water pipeline, and the natural gas compressor station.

For the natural gas pipeline in navigable waters of the United States, between Ursus Cove and Anchor Point, the APE is defined as the direct construction footprint of the natural gas pipeline, including the dredging, discharges of dredged material, and installation of structures, and the area where anchoring of the pipe laying barges may occur. The width of the anchor spread would be variable; the maximum anchor spread width would be 4,101 feet on each side of the pipeline. The maximum total width of the anchor spread would be 8,202 feet. The permit area and the APE for the natural gas pipeline in navigable waters of the United States are the same area.

The proposed bridges which require authorization from the US Coast Guard and the right-of-way across the Outer Continental Shelf that requires an authorization from the Department of the Interior's Bureau of Safety and Environmental Enforcement each lie within the permit area and the APE which are defined above.

The permit area and APE will be re-assessed if additional changes to the proposed project occur.

1 Figure 1. APE for Pebble Project



- 1 **ATTACHMENT C**
- 2 **CULTURAL RESOURCES MANAGEMENT PLAN**
- 3
- 4
- 5
- 6

DRAFT

Cultural Resources Management Plan

Pebble Project

Prepared for

Pebble Limited Partnership

and

US Army Corps of Engineers

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LIST OF ACRONYMS AND ABBREVIATIONS

ACHP	Advisory Council on Historic Preservation
ADNR	Alaska Department of Natural Resources
AHRS	Alaska Heritage Resources Survey
APE	Area of Potential Effects
BOEM	Bureau of Ocean Energy Management
BSEE	Bureau of Safety and Environmental Enforcement
CFR	Code of Federal Regulations
cm	centimeter
CORS	Continuously Operating Reference Station
CRMP	Cultural Resources Management Plan
CRS	Cultural Resource Specialist
DOE	Determination of Eligibility
EBD	Environmental Baseline Document
FR	Federal Register
ft	feet
GIS	Geographic Information System
GNSS	Global Navigation Satellite System
GPS	Global Positioning System
in	inch
INL	Iliamna Natives Limited
m	meter
mm	millimeter
NHPA	National Historic Preservation Act
NRB	National Register Bulletin
NRHP	National Register of Historic Places
OHA	Office of History and Archaeology
PA	Programmatic Agreement
PLP	Pebble Limited Partnership
SHPO	State Historic Preservation Office/Officer
SOI	Secretary of the Interior
SRB&A	Stephen R. Braund & Associates
TCP	Traditional Cultural Property
UAMN	University of Alaska Museum of the North
USACE	U.S. Army Corps of Engineers
WAAS	Wide Area Augmentation System

1. INTRODUCTION

On behalf of the Pebble Limited Partnership (PLP), Stephen R. Braund & Associates (SRB&A) has prepared this Cultural Resources Management Plan (CRMP) to describe the process by which PLP will comply with the stipulations outlined in the Programmatic Agreement (PA) for PLP's Project (described below in *Section 1.1 Project Description*). In short, the CRMP describes how PLP will carry out the stipulations of the PA whereas the PA outlines the Section 106 requirements for the Project. The CRMP does not attempt to restate topics/stipulations addressed in the PA but rather provides further clarity on PLP's implementation methods to achieve those topics/stipulations.

1.1 Project Description

PLP has applied for permits to develop the Pebble copper-gold-molybdenum porphyry deposit (Pebble deposit). The deposit is located under rolling permafrost-free terrain in the Iliamna region of southwest Alaska, approximately 200 miles southwest of Anchorage and 60 miles west of Cook Inlet. The closest communities are the villages of Iliamna, Newhalen, and Nondalton, each approximately 17 miles from the Pebble deposit (PA Attachment A).

PLP has advanced development of an open pit mine and associated infrastructure with plans for approximately 20 years of mining operations. The project would have an operating schedule of two 12-hour shifts per day for 365 days per year and employ approximately 2,000 personnel for construction and 850 for operations.

In addition to the mine site, the project would have three other major components: a transportation corridor to move the concentrate to port and bring goods to the project site, a port site to facilitate transportation, and a natural gas pipeline from the Kenai Peninsula to the mine site for power generation.

1.2 Area of Potential Effects (APE) and Permit Area

As part of development of a National Historic Preservation Act (NHPA) PA under 36 Code of Federal Regulation (CFR) § 800.14(b), the US Army Corps of Engineers (USACE) has defined the Area of Potential Effects (APE) and the Permit Area for the project (PA Attachment B).

The USACE has defined the APE for three distinct areas of the undertaking:

- At the mine site, APE is the direct footprint and the area within three miles of the outer extent of the direct construction footprint of the mine site components.
- For all other linear and non-linear features outside the mine site, with the exception of the portion of the natural gas pipeline from Ursus Cove to Anchor Point, the APE is the direct construction footprint and the area within one mile of the direct construction footprint of the linear features and non-linear features. The linear and non-linear features outside the mine site include the transportation corridor, the port facility, one mooring spread, the remaining portions of the natural gas pipeline, the concentrate and return water pipeline, and the natural gas compressor station.
- For the natural gas pipeline in navigable waters of the United States, between Ursus Cove and Anchor Point, which are in the Cook Inlet, the APE is the direct construction footprint of the natural gas pipeline, including the dredging, discharges of dredged material, and installation of structures, and the area where anchoring of the pipe laying barges may occur. The width of the anchor spread would be variable; the maximum anchor spread width would be 4,101 feet on each side of the pipeline. The maximum total width of the

anchor spread would be 8,202 feet. The permit area and the APE for the natural gas pipeline in navigable waters of the United States are the same area.

Furthermore, and in accordance with 33 C.F.R. Part 325 Appendix C, USACE has defined the permit area for this project to be the direct footprint of the entire project, which includes all areas where fill, dredging, sidecast of material, or excavation would occur, where facilities or structures would be installed, and the areas used for construction of the project. On land, the areas used for construction of the project would consist of a 30 foot wide buffer around the areas where placement of fill or excavation would occur and where facilities or structures would be installed. In marine waters, the areas used for construction of the project would consist of the area outside of the direct footprint of construction, and which is used for anchoring of barges and equipment used to construct authorized structures, dredging, discharges of dredged material, or placement of fill. The maximum width of the area where anchors and anchor cables may occur would be 8,202 feet.. If changes to the proposed Project occur, the USACE will revise the APE and Permit Area, after consultation with the Advisory Council on Historic Preservation (ACHP), State Historic Preservation Officer (SHPO) and Consulting Parties as described by the PA. Map 1 provides a depiction of the currently defined Permit Area (i.e., construction footprint) and APE for the Pebble Project.

Map 1: Pebble Project Construction Footprint and APE

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1.3 Cultural Resources Management Plan (CRMP) Purpose and Objective

This CRMP describes PLP's program to identify, manage, and protect historic properties during the construction and operation stages of the Project in compliance with applicable laws and regulations. It is written to be consistent with the stipulations of the PA. This plan is intended to be a dynamic document, which will be updated and revised as outlined in *Stipulation V: Cultural Resource Management Plan* of the PA.

The phased nature of the undertaking requires a process and plan be in place for the continued identification, and evaluation, of cultural resources, as well as the assessment of effects on historic properties that may exist in areas of the Project. This CRMP provides the USACE, the SHPO, PLP staff and contractors, and other Signatory and Consulting Parties with a detailed plan identifying how outstanding identification and evaluation efforts, as well as assessments of effect will be addressed for the Project. In addition, this plan outlines protocols for consultation, the development of steps required to resolve adverse effects, and how PLP will address situations that may arise which have the potential to affect historic properties during the construction and operations stages of the Project.

The main objectives of this plan are to present an overview of known historic properties within the APE, provide a summary of identification work that has been carried out within the APE, and to outline clear and concise procedures and guidance for PLP staff and contractors to follow while conducting work related to the Project that fosters the consideration, responsible management, and wherever possible, protection of the area's historic properties.

1.4 Duration

This CRMP will remain in effect for the Pebble Project as long as the PA for the Project remains in effect (See in PA *Stipulation XX: Duration of this PA*).

1.5 Roles, Responsibilities and Applicable Standards

Stipulation II: Roles and Responsibilities of the PA identifies the high level roles and responsibilities required for implementing the PA including ensuring that all work conducted as a result of the PA is performed in accordance with the Secretary of the Interior's Standards for Archeology and Historic Preservation (Standards and Guidelines) (48 Federal Register [FR] 44716-44742) and that the necessary individuals meet, at a minimum, the Secretary of the Interior's Historic Preservation Professional Qualification Standards in the appropriate discipline as specified in the 1997 revised and updated proposed standards (62 FR 33708 [June 20, 1997]).

This CRMP section further outlines the specific roles and responsibilities of personnel that are integral to the successful implementation of this CRMP. Where relevant, the applicable professional standards are identified for the various personnel.

The participants specified below will have the following roles, responsibilities, and necessary experience:

- **PLP:** developer of the proposed Pebble Project, PA signatory, and legal entity ultimately responsible for ensuring the obligations of the CRMP are met.
- **General Manager:** PLP staff member responsible for overall project compliance, including CRMP and PA stipulations.
- **Environmental Supervisor:** individual within PLP's organization that is responsible for oversight of environmental programs and ensuring PLP's CRMP obligations are implemented. Reports directly to the General Manager.

- **On-Site Supervisors:** individuals within PLP's organization that are responsible for overseeing field operation activities and who will coordinate with the Environmental Supervisor to ensure PLP's CRMP field obligations are implemented.
- **Cultural Resource Specialist (CRS):** cultural resource consultant/company hired by PLP to broadly implement the CRMP. Consultant will have 10 years or more of experience supervising and conducting cultural resources research, fieldwork, and related studies in Alaska.
- **Lead Archaeologist:** CRS individual in direct charge of ensuring the CRMP obligations of the CRS are implemented. This individual will have a master's degree in archaeology or closely related field, plus at least 5 years of supervisory experience planning, organizing, conducting, and reporting on archaeological fieldwork in Alaska. Reports directly to the CRS.
- **Field Crew Chief:** CRS individual who leads fieldwork survey activities of one crew. Individual must have at least 2 years of supervisory experience conducting archaeological fieldwork in Alaska. Reports directly to the Lead Archaeologist.
- **Field Crew:** CRS individuals who assist in fieldwork survey activities. Individuals must have a bachelor's degree in anthropology or at least one season of previous experience conducting archaeological fieldwork.
- **Supervisory Monitoring Archaeologist:** CRS individual in the field in charge of monitoring activities. This individual will have a master's degree in archaeology or closely related field, plus at least 2 year of supervisory experience conducting archaeological fieldwork in Alaska. Reports directly to the Lead Archaeologist.
- **Monitoring Archaeologist:** CRS individual who conducts monitoring activity at specific Project locations and is under the direct supervision of the Supervisory Monitoring Archaeologist. This individual will have a bachelor's degree in archaeology or closely related field, plus at least 1 year of experience conducting archaeological fieldwork in Alaska. Reports directly to the Supervisory Monitoring Archaeologist.
- **Tribal Advisor:** on-site tribal representative who supports the monitoring archaeologist in monitoring activities. In accordance with *Stipulation III: Consultation* of the PA, Tribal Advisors are identified through consultation amongst USACE, Signatories, Invited Signatories, and Consulting Parties.
- **Signatories, Invited Signatories, and Consulting Parties:** USACE, Signatories, Invited Signatories, and Consulting Parties to the PA with various responsibilities in the CRMP.

2. CULTURAL RESOURCES INFORMATION AND DATA GAPS

2.1 Cultural Resources Identification/Survey Efforts to Date

Past identification efforts for the Project include the baseline compilation of cultural resources information (Environmental Baseline Document [EBD] Reports), pedestrian and helicopter field surveys within areas of proposed ground disturbance (Permit Reports), development of a GIS-based landscape analysis to guide field survey efforts (described in Permit and EBD Reports), and interviews with communities closest to the Project to identify cultural resources (2013 Cultural Resource Interview Reports¹). These identification efforts have resulted in the documentation of several types of cultural resources including Alaska Heritage Resource Survey (AHRS) sites, Interview Identified Cultural Resource

¹ Results of the first set of cultural resource interviews in 2007 were included in the EBD.

(IICR), indigenous place names, and RS 2477 trails. These cultural resources are described in the following sections. Table 1 contains a list of the identification effort reports associated with the Pebble Project.

Table 1: Reports Associated with Cultural Resource Identification Efforts for Pebble Project

Type of Report	Title of Report	Reference
Permit	Pebble Gold-Copper Project, Cultural Resources Report: Cultural Resources Field Study, 2004 Progress Report	(SRB&A 2005)
Permit	Cultural Resources Pebble Project: Cultural Resources Field Survey, 2005 Progress Report	(SRB&A 2006)
Permit	Cultural Resources Pebble Project: Cultural Resources Field Survey, 2006 Progress Report	(SRB&A 2007)
Permit	Cultural Resources Pebble Project: Cultural Resources Field Survey: 2007 Progress Report	(SRB&A 2008)
Permit	Cultural Resources, Pebble Project: Cultural Resources Field Survey, 2008 Progress Report	(SRB&A 2009)
Permit	Cultural Resources, Pebble Project: Cultural Resources Field Survey, 2009 Progress Report	(SRB&A 2010)
Permit	Cultural Resources Pebble Project: Cultural Resources Summary Report, 2004-2010	(SRB&A 2011b)
Permit	Cultural Resources, Pebble Project: Cultural Resources Field Survey, 2010 Progress Report	(SRB&A 2011a)
Permit	Cultural Resources, Pebble Project: Cultural Resources Field Survey, 2011 Progress Report	(SRB&A 2012b)
Permit	Cultural Resources Pebble Project: Diamond Point Meteorological Monitoring Station.	(SRB&A 2012a)
Permit	Cultural Resources Pebble Project: Cultural Resources Field Study, 2012 Progress Report	(SRB&A 2013)
Permit	Cultural Resources, Pebble Project: Cultural Resources Field Study, 2013 Progress Report	(SRB&A 2014)
Permit	Cultural Resources Report Drill Site Field Survey and Recommendations: Pebble Project	(SRB&A 2019a)
Permit	Annual Fieldwork Report of 2019 Cultural Resource Activities: Pebble Project.	(SRB&A 2020)
Permit	Cook Inlet Pipeline Project – Archaeological Assessment. Cook Inlet, Alaska. Project No. 2019-017	(Terrasond 2019)
EBD	Pebble Project, Environmental Baseline Document, 2004 through 2008	(PLP 2012)
EBD	Pebble Project Supplemental Environmental Baseline Data Report: 2004-2012 - 22. Cultural Resources Bristol Bay Drainages	(SRB&A 2015a)
EBD	Pebble Project Supplemental Environmental Baseline Data Report: 2004-2012 - 50. Cultural Resources Cook Inlet Drainages	(SRB&A 2015b)
2013 CR Interview	2013 Cultural Resource Workshops - Igiugig, Alaska. Environmental Baseline Studies. Pebble Project.	(SRB&A 2018a)
2013 CR Interview	2013 Cultural Resource Workshops - Iliamna, Alaska. Environmental Baseline Studies. Pebble Project.	(SRB&A 2018b)
2013 CR Interview	2013 Cultural Resource Workshops - Kokhanok, Alaska. Environmental Baseline Studies. Pebble Project.	(SRB&A 2018c)
2013 CR Interview	2013 Cultural Resource Workshops - Newhalen, Alaska. Environmental Baseline Studies. Pebble Project.	(SRB&A 2018d)
2013 CR Interview	2013 Cultural Resource Workshops - Nondalton, Alaska. Environmental Baseline Studies. Pebble Project.	(SRB&A 2018e)
2013 CR Interview	2013 Cultural Resource Workshops - Pedro Bay, Alaska. Environmental Baseline Studies. Pebble Project.	(SRB&A 2018f)
2013 CR Interview	2013 Cultural Resource Workshops - Port Alsworth, Alaska. Environmental Baseline Studies. Pebble Project.	(SRB&A 2018g)

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Prior to the 2019 field season, the majority of survey efforts for the Pebble Project have been either focused on potential project components and exploratory drill areas in the mine site area or on potential port sites in Cook Inlet coastal locations. In 2019, field surveys occurred at locations of potential bridge and ferry terminals. To date, little of the proposed transportation corridor and natural gas pipeline has been evaluated by pedestrian survey. Table 2 and Table 3 provides a summary of the pedestrian survey coverage based on the construction footprint/APE and Geographic Information System (GIS) Model developed by SRB&A for the CRMP; PLP will update the table each year as new surveys occur. Appendix F contains a detailed map book of survey coverage, documented cultural resources, and output of the GIS model.

[PLACEHOLDER – TABLE 2 AND DESCRIPTIVE TEXT TO BE ADDED FOLLOWING SELECTION OF FINAL ALTERNATIVE AND COMPLETION OF GIS MODEL]

Table 2: Pebble Project Components and Cultural Resource Survey Coverage through 2019 in Construction Footprint

GIS Model	Acres Surveyed				Total / Percent Acres Surveyed
	Mine Site	Transportation Corridor	Natural Gas Pipeline	Port Site	
Low Potential					
Moderate Potential					
High Potential					
Total / Percent Acres Surveyed					
Notes: Compressor Station on Kenai Peninsula not included in GIS Model coverage and will be 100 percent pedestrian surveyed. Marine portions of the natural gas pipeline are not included in GIS Model coverage and will be inventoried in their entirety by a qualified marine archaeologist. Total acres based on USACE-defined construction footprint					

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Table 3: Pebble Project and Cultural Resource Survey Coverage through 2019 in APE

GIS Model	Total Acres Surveyed	Percent Acres Surveyed
Low Potential		
Moderate Potential		
High Potential		
Total / Percent Acres Surveyed		

2.2 Alaska Heritage Resource Survey (AHRS)

A total of 46 AHRS sites are located within the currently proposed APE, many of which were identified as part of cultural resource surveys for the Project. Appendix E tables provide the following information related to AHRS sites within the Project APE:

- – Provides descriptions of the 46 AHRS within the Pebble Project APE including AHRS number, site name, description (verbatim from AHRS), and relevant sources identified in the AHRS document repository.
- – Summarizes the 46 AHRS sites within the APE and construction footprint. This table also provides information related to the current eligibility status of AHRS sites related to the National Register of Historic Places (NRHP) and a column identifying the cultural resource type based on SRB&A's typology.

The following summary provides a breakdown of the AHRS sites by SRB&A's cultural resource type. For some AHRS there may be multiple cultural resource types present at the location. Therefore, the sum of the various cultural resource types is greater than the individual number of AHRS locations:

1. Archaeological Site – 29 AHRS sites are associated with having possible archaeological remains
2. Cabin – 1 AHRS sites include mention of a cabin (standing or partially collapsed)
3. Camp – 9 AHRS sites identified various types of hunting, trapping, or other subsistence camps
4. Grave/Burial – 1 AHRS sites are associated with human remains
5. Material Source – 1 AHRS site included a tool stone material source
6. Other Historic Structures – 4 AHRS sites are historic structures, other than cabins, and included structures such as old churches, mining camp, and bridge
7. Place Name – 1 AHRS site include place name of "AC Point" and no additional details
8. Trail/Route – 2 AHRS sites included the Sterling Highway and Williamsport to Pile Bay Road
9. Village – 2 AHRS sites reference an old village

In regards to determinations of eligibility (DOE) for the National Register of Historic Places (NRHP) under consideration by USACE for the Project, of the five AHRS sites within the construction footprint, two have some form of eligibility determination (e.g., one determined eligible, one determined not eligible) and the remaining have no determinations (Table 4). Furthermore, of the 41 sites outside the construction footprint but within the APE, five have some form of eligibility determination. SRB&A has provided recommendations of eligibility for the three sites with no determinations of eligibility within the construction footprint in addition to recommendations for seven of the remaining 36 sites with no determinations of eligibility in the APE (see SRB&A (2020), (2019b)).

Table 4: Status of DOEs for AHRS Sites within the Construction Footprint and APE

DOE Status	Number of AHRS Sites in Construction Footprint	Number of AHRS Sites in APE
DOE-S	1	2
DREJ-S	1	2
NDE	3	36
NHR	-	1
Total	5	41
Notes: DOE-S - Determined Eligible through SHPO and agency; DREJ-S - Determined not eligible by agency and SHPO concurs; NDE – No Determination of Eligibility; NHR – Listed National Register		

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2.3 Interview Identified Cultural Resource (IICR)

A total of 106 IICRs are located within the APE. Appendix E provides the following information related to IICRs within the Project APE:

- Provides descriptions of the 106 IICRs within the APE and construction footprint including IICR number, community(ies) that identified the IICR, the cultural resource type based on SRB&A's typology, and a description of the IICR.

The following summary provides a breakdown of the IICRs by SRB&A's cultural resource type. Note, the cultural resource type is based on the descriptions provided by the respondents during the interviews, and for some IICRs there may be multiple cultural resource types present at the location. Therefore, the sum of the various cultural resource types is greater than the individual number of IICR locations:

1. Archaeological Site – 11 IICRs were identified by respondents as having archaeological remains
2. Battleground – 3 IICRs included locations where battles had occurred
3. Cabin – 6 IICRs included mention of a cabin (standing or partially collapsed)
4. Camp – 23 IICRs identified various types of hunting, fishing, or other subsistence camps
5. Grave/Burial – 12 IICRs are associated with human remains
6. Harvest Location/Traditional Use Area – 14 IICRs were identified as being a traditional use area for various subsistence resources
7. Historic Objects – 2 IICRs are historic objects including an airplane crash site and a cairn
8. Other Historic Structures – 4 IICRs are historic structures, other than cabins, and included structures such as old churches, reindeer stations/corrals, and Russian fort location
9. Place Name – 3 IICRs are place names marking geographical features
10. Place to Avoid/Spooky Place – 2 IICRs are locations that respondents identified as being haunted/spooky and generally places to avoid
11. Places with Legends or Beings – 1 IICR included Roadhouse Mountain associated with legends or beings such as hairy man
12. Portage – 1 IICR included portages across Knutson Creek
13. Spiritually Important Place – 4 IICR locations were identified by respondents as being spiritually important places

14. Trail/Route – 29 IICRs included trails or routes to various subsistence locations, cabins, camps, or other communities
15. Trapline – 5 IICRs included a reference to a traditional trapline
16. Village – 9 IICRs referenced a Native village

SRB&A began systematic investigation of IICRs during the 2019 cultural resource field season, which included aerial investigations of a number of IICRs located in the APE and pedestrian investigations for IICR that crossed into the 2019 survey areas. SRB&A attempted to collect field documentation for 20 IICRs during the 2019 field season. The majority (n=11) of the IICRs that SRB&A investigated were trail/routes that passed through 2019 survey areas. An additional two IICRs were traplines. The remaining IICRs included a large battleground/burial area, large hunting/fishing areas, a clay material source, and a camp. Of these 20, only 14 are currently within or intersect with the current APE for the Project. Table 5 includes a summary of the investigation status to date of IICRs located within the current construction footprint and APE.

Table 5: Status of IICR Investigations within the Construction Footprint and APE

IICR Number	Site / Feature Type	Summary of Investigation Results
IICR-0014	Harvest Location/ Traditional Use Area	2019: SRB&A did not identify direct evidence of subsistence activities within the relatively small drill site survey buffers overlapped by this large harvest location/traditional use area.
IICR-0015	Harvest Location/ Traditional Use Area	2019: SRB&A did not identify direct evidence of subsistence activities within the relatively small drill site survey buffers overlapped by this large harvest location/traditional use area.
IICR-0094	Trail/Route	2019: Aerial investigation of the general route identified portions of the trail going from Kokhanok to Amakdedori. SRB&A did not see evidence of the trail where its reported location overlapped with survey areas although there were a number of trails nearby to the east of the survey area.
IICR-0121	Trail/Route	2019: Aerial and pedestrian investigation documented several trail segments within the survey area that are potentially portions of this IICR.
IICR-0131	Trail/Route	2019: SRB&A aerially surveyed various portions of this route on the south and north sides of Iliamna Lake. Because SRB&A's survey areas did not intersect with this IICR, SRB&A did not conduct any pedestrian survey investigations for the trail.
IICR-0138	Trapline	2019: Except for the possible camp (see IICR-0177), SRB&A did not identify direct evidence of trapping activities within the relatively small areas surveyed that were overlapped by the large trapping area
IICR-0144	Trail/Route	2019: SRB&A did not observe any evidence of the dogsled trail in the survey area. As with other reported winter trails this could be due in part to the older age of the reported use (e.g., delivering mail by dog team) and the fact that it was used in winter on the snow and would leave less of a visible trace on the snowfree landscape. Furthermore, the nature of the reported use (e.g., a winter travel event versus intensively used fish camp) is such that there is a low likelihood of material remains that would be left behind to be discovered.
IICR-0156	Trail/Route	2019: This trail is a general winter route rather than defined trail, and travel during winter over more wide-open terrain

IICR Number	Site / Feature Type	Summary of Investigation Results
		allowed for multiple paths of access. SRB&A's pedestrian surveys within the survey areas along the Newhalen River identified trails and it is possible that the trail segments identified are portions of this IICR.
IICR-0170	Trail/Route	2019: SRB&A aerially surveyed various portions of this route on north side of Iliamna Lake. Because SRB&A's survey areas did not intersect with this IICR, SRB&A did not conduct any pedestrian survey investigations for the trail.
IICR-0171	Trail/Route	2019: SRB&A aerially surveyed various portions of this route on north side of Iliamna Lake. Because SRB&A's survey areas did not intersect with this IICR, SRB&A did not conduct any pedestrian survey investigations for the trail.
IICR-0172	Trapline	2019: Because SRB&A's survey areas did not intersect with this IICR, SRB&A did not conduct any pedestrian survey investigations for the trapline. However, SRB&A did identify a possible trapping/hunting camp (see IICR-0177) nearby.
IICR-0177	Camp	2019: SRB&A's investigations at AHRs site ILI-00254 identified the possible remains of the IICR-0177 camp, as well as evidence for both hunting and trapping activities in the area. A field visit to the reported location of IICR-0177 (one mile to the north) would be necessary to be more certain that IICR-0177 is ILI-00254 or whether another camp is located at IICR-0177.
IICR-0179	Harvest Location/ Traditional Use Area	2019: Traditional fishing grounds of the Nondalton people along the Newhalen River from Nondalton south to the area near the mouth of Alexcy Creek. At one location (ILI-00303) within this large IICR area, SRB&A located a previously unreported archaeological site containing historic and prehistoric artifacts.
IICR-0183	Harvest Location/ Traditional Use Area	2019: SRB&A did not identify direct evidence of subsistence activities within the relatively small drill site survey buffers overlapped by this large harvest location/traditional use area.

Stephen R. Braund & Associates, 2020

2.4 Indigenous Place Names

A total of 48 place names fall within the APE. Appendix E provides the following information related to place names within the Project APE:

- Provides descriptions of the 48 place names within the Pebble Project APE including the place name number, Native name, place description, English translation, and source.

Of the 48 place names, 18 of the mapped GIS locations are located within the construction footprint or the geographic feature represented by the place name location extends into the construction footprint. The place names that intersect with the APE represent various geographic features including lakes, rivers, portages, mountains, and passes. The majority of features are water related.

2.5 RS 2477 Trails

One RS 2477 trail exists within the Pebble Project APE. RST-396 is the Iliamna-Pile Bay trail and crosses the construction footprint. The trail does not have an AHRs designation and its eligibility for listing in the NRHP has not been evaluated. The following is the description of the trail from the Alaska Department of Natural Resources Case File (ADNR MLW 2020)

Starting at the East End of A State Road (Aa 8791) Near Seversen's On Iliamna Lake, the Trail Heads Eastward and Inland Approximately 0.5 Miles From the North Shore of Iliamna Lake. at Knutson Bay, the Trail Veers Southeastward To Pedro Bay. the Trail Passes South of Dumbbell Lake, Continues On To Lonesome Bay, and Heads Around Pile Bay To Pile Bay Village. at Pile Bay, A State Road Continues 15 Miles To Iliamna Bay On Cook Inlet. the Route Is Located On USGS 1:63,360 Iliamna D-3, D-4, D-5 and D-6 Quadrangle Maps. the Trail Is Approximately 36 Miles Long.

2.6 Additional Identification Efforts Needed

Based on the results provided in this section, the following identification efforts are needed in order for PLP to meet the “reasonable and good faith effort” clause of 36 CFR § 800.4(b)(1) implementing regulations for Section 106 of the National Historic Preservation Act:

1. Field survey of the construction footprint with pedestrian survey of 100 percent of high potential for archaeological resources, at least 50 percent of moderate potential, and at least 10 percent of low potential areas as identified in the GIS model
 - a. For the currently proposed construction footprint, this would equate to a total of X acres of survey in high potential areas, X acres in moderate potential, and X acres in low potential.
2. Pedestrian survey of entire compressor station footprint
3. Geophysical investigation of natural gas pipeline corridor across Cook Inlet (currently scheduled for summer 2020)
4. Review results of USACE 2020 consultation visits to Bristol Bay communities and incorporate into the IICR database with particular focus on identifying non-duplicate features within the Project APE
5. Continue investigations for IICRs focusing on those intersecting the construction footprint
6. Conduct analyses of potential historic districts within APE following completion of all field surveys

3. METHODS AND PROCEDURES

3.1 Cultural Resource Identification in the APE

The implementing regulations for Section 106 require federal agencies to identify historic properties within the APE that may be affected by their undertakings through a “reasonable and good faith effort.” The federal agency must consider certain factors “in making the effort both *reasonable* in terms of intensity and scale, and carried out in *good faith* through its development and execution” (ACHP 2011), these factors include:

- Considering past planning, research, and studies;
- Considering the magnitude and nature of the undertaking and the degree of federal involvement;
- Considering the nature and extent of potential effects on historic properties; and
- Considering the likely nature and location of historic properties within the APE.

The reasonable and good faith inventory effort for the Project will consider three broad resource categories: historic, ethnographic (including traditional cultural properties [TCPs]), and archaeological resources. Inventory methods for these resource types vary but will be consistent with the Secretary of the Interior (SOI) Standards for Identification (NPS 1983).

3.1.1 Archaeological and Historic Resources

3.1.1.1 GIS Model

[PLACEHOLDER – METHODS AND VARIABLES WILL BE ADDED FOLLOWING SELECTION OF THE FINAL ALTERNATIVE AND COMPLETION OF THE FINAL GIS MODEL OUTPUT]

3.1.1.2 Documentation Standards

All archaeological field activities completed on behalf of the Project will be recorded on standardized field forms and commensurate with industry standard practices. The purpose of standardized field forms is to provide consistent and complete reporting of cultural resource investigations throughout the life of the Project. The number and type of forms for a particular field effort will be determined by the extent and content of a site and the intensity of the archaeological investigation. Site forms will provide accurate and concise information that allows others to find the site at some point in the future; to ensure that sufficient information is gathered to complete data required for AHRs cards and site reports; and to ensure consistency in data collection.

Standardized forms will include the following:

- Comprehensive site forms
- Site maps
- Logs of collected artifacts
- Test logs and/or soil profiles
- Excavation unit profiles, maps, and soil descriptions
- Logs of historic artifacts left in the field
- Photo logs
- Daily logs

In addition to the list above, the Field Crew Chief (and other crew members as appropriate) will also keep detailed notes of the activities and resources encountered each day. When appropriate, the forms will

include a field for associated photographs and GIS ID(s) so that they can be cross-referenced with the other data.

3.1.1.3 Spatial Data Collection Standards

Spatial locations of cultural resources and inventory efforts will be recorded with devices capable of receiving positioning, navigation, and timing signals from a global navigation satellite system (GNSS). Throughout this document, these devices are referred to as Global Positioning System (GPS).

3.1.1.3.1 Recreational-Grade GPS

At a minimum, pedestrian and aerial survey (including overflights) efforts will be recorded by recreational-grade GPS devices (Wide Area Augmentation System [WAAS] enabled) collecting track log data at no less than 30-second intervals.

3.1.1.3.2 Mapping/Survey-Grade GPS

The spatial location of all cultural resource will be mapped using mapping/survey-grade GPS devices. These devices will be capable of post-processing with nearby Continuously Operating Reference Station (CORS) stations or with local base corrections whose spatial location meets the requirements of and has been submitted to the National Geodetic Survey's Online Positioning User Service. Processing must include the published reference frame for the CORS- and GIS-formatted data and must be properly aligned with NAD83 (2011) Epoch 2010 (Horizontal) and NAVD88, Geoid 12B (Alaska), or a more recent geometric reference frame and geopotential datum defined by the National Spatial Reference System. All units will be recorded in meters.

Mapping/survey-grade GPS data collected in the field will include attributes relevant to the feature being recorded. This includes a unique identifier, dimensions and/or characteristics of the recording subject, date, and any other relevant data. Subjects to be recorded by mapping/survey-grade GPS devices include:

- Site locations and boundaries
- All cultural resource/historic properties features (cabins, artifact scatters and surface isolates, culturally modified trees, cairns, etc.)
- Surface collections
- Testing locations, including type, depth, and results (positive/negative)

3.1.1.4 Field Survey

Field surveys will utilize a combination of in-field landscape assessments, aerial reconnaissance, pedestrian survey, and subsurface testing to survey an area for archaeological and historic resources. While the overall field survey efforts will be initially guided by the output of the GIS Model (see above), the field crews will further utilize in-field observations to identify landscape characteristics of high, moderate, and low potential for the presence, preservation, and identification of sites. These observations will help to supplement/confirm the GIS Model outputs and potentially allow for future refinements to the Model. The field crew will document, through photographs and field notation, the landscape features present that characterize the archaeological potential of a given survey area.

If changes to the project occur, USACE will determine, after consultation with Signatories, Invited Signatories, and Consulting Parties, whether changes to inventory and/or monitoring are required.

3.1.1.4.1 Aerial Survey

To inform field survey strategies, the CRS will conduct an aerial reconnaissance of survey areas prior to deploying field crews for pedestrian surveys. The goal of aerial survey will be to identify areas that should

be pedestrian surveyed or tested within moderate and low potential areas of the construction footprint, without having to walk over the entire area. Aerial survey will also be used for areas that are considered low potential for the presence of archaeological and historic resources. Aerial survey may also be used to identify isolated higher-potential areas for targeted field survey. Aerial surveys will consist of a helicopter traveling low and slow enough to visually inspect the survey area terrain for indications that the area should be pedestrian surveyed. During aerial survey, the crew(s) will collect the following data:

- Aerial photographs of the area that was surveyed
- GPS tracks of the flight lines
- Notations on field maps regarding the vegetation and terrain conditions observed in the survey areas
- Written description of the surveyed area, vegetation type, and explanation of why the area did not warrant pedestrian survey
- Overview and/or ground surface photos of all areas where pedestrian survey is warranted

3.1.1.4.2 Pedestrian Survey

The CRS will conduct pedestrian surveys and discretionary subsurface testing to investigate survey locations for the presence of undocumented sites, locations, remains, and objects. Per the PA (*Stipulation VI: Identification and Evaluation of Historic Properties and Assessment of Effects*), PLP's CRS will complete pedestrian survey and testing in 100 percent of high potential areas, 50 percent of moderate potential, and 10 percent of low potential areas within the construction footprint, as it is categorized by the GIS Model. The USACE, in consultation with Signatories, Invited Signatories and Consulting Parties, will determine survey requirements for the APE after Project design plans are completed. Field methods will follow federal and state standards and guidelines, or industry standard practices if no guidelines exist. PLP's CRS will acquire all necessary federal, state, or other authorizations and permits before initiating archaeological work. In addition, PLP will obtain written permission or authorizations from private landowners granting the CRS access to private lands.

Crews will conduct pedestrian survey, including subsurface testing, in areas identified through the GIS Model. The goal of the pedestrian survey is to identify surface sites and areas to be subsurface tested. Crew members will complete transects to survey the ground surface for cultural materials within the construction footprint.

Transects spacing for crew members may be at the discretion of the Field Crew Chief but will be no more than 20 meters (m) (66 feet [ft]) apart and will be recorded on field forms or notebooks. At the discretion of the Field Crew Chief, more intense pedestrian survey may occur in areas that are likely to have a higher potential to contain cultural materials on in areas where thick vegetation may obscure the ability to identify potential cultural materials, in order to ensure adequate coverage.

If areas designated for pedestrian survey are not surveyed using this method, or are surveyed using a different or altered method, then the CRS will take photos of the area and provide a written explanation of why an area was not surveyed according to the standard method.

Field Crews will collect the following data during pedestrian survey:

- Survey overview photos showing the surrounding terrain that was surveyed (approximately every 0.5 kilometer)
- GPS tracks of individual field crew transect lines

- Written description of the surveyed area, vegetation type, landforms surveyed, general observations on the natural environment, or any other information that is considered relevant
- If subsurface testing is conducted, the field crew will record tests per *Section 3.1.1.4.3 Subsurface Testing*. If subsurface testing is not conducted, written justification by the Field Crew Chief will be provided explaining why an area was not tested

3.1.1.4.3 Subsurface Testing

Field crews will conduct subsurface testing at locations identified in the field during surveys. The number and density of subsurface tests will be determined by the Field Crew Chief and based on the potential to find archaeological resources (i.e., areas with high to moderate potential will receive more subsurface testing than areas of low potential). Subsurface testing will consist of shovel tests, soil probes, or bucket augers. Shovel tests are the primary method for subsurface testing and are typically 20 inches (in) (50 centimeters [cm]) square. Field crews will use gravel, bedrock, sterile C soil horizons, frozen soil, the water table, or the limits of hand tool testing depth (approximately 1m) as limits for subsurface testing. All displaced sediments from subsurface tests will be screened using ¼ in (~6 millimeter [mm]) hardware mesh.

Crewmembers will record the locations and results of all subsurface tests with GPS receivers and photographs and collect detailed stratigraphy diagrams of all tests that are positive for cultural materials. Depending on the sediment matrix, soil probes and/or bucket augers may be used to help inform subsurface testing strategies by quickly allowing field crews to determine the soil deposition and sediment characteristics in an area.

3.1.1.4.4 Metal Detectors

To increase the likelihood of finding archaeological and historical sites, the CRS will use a metal detector during the field survey. A metal detector enhances field survey methods because it provides an additional method to aid in identifying metallic artifacts, particularly ones that are not readily identifiable in obscured surface areas. Metal detecting survey transects will involve one operator who sweeps the detector from side to side while walking back and forth in parallel lines across each area of investigation using (5m [16ft]) spaced transects (2.5m [8ft] on each side of the operator). Each 'hit' registered by the metal detector will be flagged and investigated upon completing survey transects with a second, more precise metal detecting wand used to pinpoint the exact location of the signal in the ground. The crew will document positive hits in field notes, GPS waypoints, and digital photographs. Due to the slower nature of the metal detector sweeps, the field crew will prioritize metal detector use at locations of known or suspected protohistoric and historic sites, higher potential landforms within the survey area, and at each newly recorded AHRS site.

3.1.1.4.5 Site Documentation

Site documentation standards will follow an evaluation level approach (ADNR OHA 2018b). Assessment of effects on historic properties and plans for mitigating any adverse effects to historic properties are a necessary part of the Section 106 process. A DOE for NRHP listing must be completed in order to determine if the resource is a historic property upon which the Project may have an adverse effect. The DOE level of effort for site (i.e., evaluation level) documentation typically includes:

- site, artifact, and subsurface test locations using mapping-grade GPS units with submeter accuracy
- plan view (to scale) of visible features, artifacts, and subsurface test placement
- site area, feature, and artifact photographs

- descriptions of artifact provenience, types, and distribution
- chronology (e.g., typological analysis of artifacts, radiometric analysis of recovered carbon, obsidian hydration analysis)
- preliminary assessment of site formation and site integrity based on stratigraphy and other site characteristics
- approximate site boundary and appropriate buffer based on subsurface testing via soil probe, shovel test, and/or landform extent
- in-field assessment of the site's integrity as defined in National Register Bulletin (NRB) 15 (NPS 1997b)

In addition to the above requirements, documentation of historic era built resources will follow the Alaska Historic Buildings Survey Manual and Style Guide (ADNR OHA 2016c) to document buildings and structures. Sufficient information must be obtained in order to complete the AHRS Building Inventory Form, unless the building or structure is a ruin, in which case sufficient information must be obtained in order to complete the AHRS site card.

The Alaska Architectural Study Guide will be used as a tool for identifying and evaluating architectural styles. While not a comprehensive list of all styles and types of buildings, more detailed descriptions of architectural styles and the history of neighborhood development in the U.S. are found in *A Field Guide to American Houses: The Definitive Guide to Identifying and Understanding America's Domestic Architecture* (McAlester, Matty, McAlester, Clicque, Jarrett, and Rodriguez-Arnaiz 2013). Since not all buildings in Alaska and elsewhere have a style, it is acceptable to say they have no style or are vernacular architecture (ADNR OHA 2016c). Documentation of mining properties will follow the NRB 42 *Guidelines for Identifying, Evaluating, and Registering Historic Mining Properties* (NPS 1997a).

GPS lines will be recorded along roads, ditches, fences or other types of linear features. Line features may range from simple straight entities composed of a start and end vertices to more complex features with many vertices to accurately represent curved or multipart lines. Crews will document width of linear features on standardized field forms.

This DOE level of effort may not fully delineate the extent of a given site. If the site is eligible for listing in the NRHP, additional field time may be required to fully delineate site extent in order to avoid, minimize, or mitigate adverse effects.

3.1.1.4.6 Site Delineation

In certain cases, such as informing Project design, it may be necessary to delineate the boundaries of a site. To achieve this, the field crew will delineate each site with subsurface components by setting a replicable north-south and east-west oriented subsurface testing grid off the center of the initial positive test(s) or identified surface artifact(s). The field crew will generally space subsurface tests 5m-10m (16ft-33ft) apart depending on the size of the landform and will align the tests in a systematically oriented, recorded, and replicable grid pattern. Grid size, number of tests, grid spacing, and grid orientation are all ultimately dictated by the size and shape of the landform being investigated and the extent of cultural material identified.

In general, the field crew will place gridded, subsurface tests every 10m (33ft) in each of the four cardinal directions leading from the center of each positive test and will stop in one direction when two consecutive negative tests have been recorded. In instances where all eight initial tests are negative, the field crew will place four additional tests 5m (16ft) from the original positive. Should all these 5m spaced

tests be negative, the field crew will record a site polygon using a survey grade GPS around the outside of each of the negative 5m (16ft) test pits. If one or more of the subsurface tests in a test grid is positive, the crew will add new tests to the grid, in the four cardinal directions, spaced every 5m (16ft) to 10m (33ft) apart until two negative tests in a row are completed. Thus, the site boundary is established based on the location of positive and negative tests.

For surface sites lacking soil deposition (e.g., lithic scatter on bedrock with minimal soil accumulation) or for historic sites identified by surface components (e.g., cabin, camp), delineation will include documentation of the extent of surface artifacts/features with a survey grade GPS while also accounting for landform configuration (knoll overlook, stream confluence) that may have contributed to the activity that created the site (e.g., hunting overlook, fish camp site). The surface artifacts/features and immediately associated landform will become the boundary of the site.

3.1.1.4.7 Artifact Collection Policy

On state lands, field crews will collect culturally diagnostic artifacts from the ground surface and all artifacts found in subsurface tests. Artifacts lacking culturally diagnostic traits found on the ground surface will be left *in situ* unless the site shows evidence of noticeable deterioration and/or recent human activities. Crewmembers will photograph and analyze non-diagnostic artifacts left in situ and record detailed notes about the artifact(s). In the event that field crews encounter a large previously unknown historic scatter (e.g., can/bottle dump, refuse pits), the field crew will photograph and describe the scatter as encountered in the field, but may also contact the Alaska Department of Natural Resources, Office of History and Archaeology (ADNR, OHA) and seek guidance regarding the necessity of collecting historic material depending on the nature of the find. The field crew will collect carbon, midden, and/or tephra samples from subsurface contexts when available. The above policies will also apply to private lands unless otherwise stipulated by the landowner. See *Section 3.4 Artifact Curation Standards and Protocols* for additional details on artifact curation standards.

3.1.1.4.8 AHRS Site Revisits

Previously documented AHRS sites may require revisits during survey activities. The primary purpose of this effort would be to update existing site location information if needed, confirm/update integrity of the site, and to collect sufficient info to inform a recommendation of NRHP eligibility. Documentation of known resources will follow the requirements for Site Documentation (*Section 3.1.1.4.5*). Crews may complete standardized site forms in advance, if the appropriate information is known, and can revise the forms in the field, as necessary. No testing should be conducted at known AHRS sites, unless necessary to complete an NRHP recommendation or to delineate the site. If an AHRS site cannot be located during survey, then the Field Crew Chief will document all attempts to locate it, and PLP's CRS will update the site description in the AHRS database to note the unsuccessful relocation attempt.

3.1.1.5 Marine Investigation

Marine investigations for archaeological and historic resources are required by Bureau of Ocean Energy Management/Bureau of Safety and Environmental Enforcement (BOEM/BSEE) regulations that address potential adverse effects to archaeological and historic resources resulting from sea bottom disturbance authorized by BOEM/BSEE, in addition to being required as part of the Section 106 process (Terrasond 2019). To satisfy these requirements, marine archaeologists review high-resolution geophysical survey data (e.g., multi-beam echo sounder, sub-bottom profiler, side scan sonar, magnetometer) collected by vessels equipped with the necessary sensors which transect the proposed area of disturbance or survey grid. The data is analyzed to identify geomorphological characteristics which may possess an elevated

potential of containing archaeological deposits, identify and examine contacts recorded to determine if they represent natural or cultural phenomena, and if appropriate, determine adequate rerouting/avoidance measures to minimize potential effects to cultural phenomena which may exist within the planned area of disturbance. The results of marine investigations are presented in reports submitted to PLP.

3.1.1.6 Other Inventory Effort Considerations

Small-scale Project activities, such as geotechnical testing and associated activities prior to the Construction Stage, may need to be initiated before the inventory effort is complete. In that case, PLP will propose an appropriate inventory effort and the USACE, in consultation with the Signatories, Invited Signatories, and Consulting Parties, will determine the appropriate inventory effort required to take historic properties into consideration. In some cases, this may need to be addressed on a case-by-case basis but should be consolidated as part of the Annual PA Report to the extent possible. Monitoring may be the most appropriate method to ensure work prior to the Construction Stage does not affect any resources that may be eligible to the NRHP.

If PLP expands, revises, or alters Project segments, components or footprints, and the area was inventoried more than 10 years prior, the USACE may require PLP to re-survey the area using methods determined appropriate by USACE in consultation with the Signatories, Invited Signatories, and Consulting Parties. PLP will provide any proposed changes in the Annual PA Report, which will be discussed at the Annual Meeting to determine appropriate levels of effort for re-survey. Considerations for the need for additional inventory may include environmental changes that occurred that could affect the identification of historic properties, resources that could have reached the 50-year threshold, new information that may be available regarding historic or traditional uses of the area, new survey methods or technology, or other factors. The USACE will provide final inventory requirements to PLP after consultation with Signatories, Invited Signatories, and Consulting Parties.

3.1.2 Ethnographic Resources

3.1.2.1 Ethnographic Information

Ethnographic resources include places of traditional religious or cultural importance to Tribes, cultural landscapes or districts, TCPs, place names, or travel corridors. These types of resources may or may not have physical properties that can be identified in the field, and other methods of documentation may be necessary. Ethnographic resources are generally only identifiable by the community sharing the values, traditions, beliefs, or social institutions associated with such places. As described in the PA, *Stipulation III.A.2.*, the USACE will consult with Tribes and other Signatories, Invited Signatories, and Consulting Parties to develop research designs and investigative methods for potential historic properties of an ethnographic nature.

Documentation of ethnographic resources will largely be determined through consultation between the USACE, Tribe or community identifying the resource, PLP, and the SHPO. However, general requirements for recording ethnographic resources will follow industry best practices to ensure that individuals who are participating in the research have secure and protected confidentiality. Each person participating in the research will sign a form indicating written informed consent. The consent form will include a description of the research procedures and methods, identified risks and benefits of participating in the research, and an opportunity for the individual to opt out of participation. The consent form will also describe how the data collected from the research will be securely stored and for how long. PLP, or contractor leading any ethnographic research or studies on PLP's behalf, will also ensure that data collection methods are the

same to ensure that consistent data are collected among various research participants and at various times.

Information shared during consultation and public scoping for the both the EIS and the Section 106 processes indicates that lands within the APE are considered culturally important to the communities that live nearby. USACE will continue to consult with these communities, and others as requested, to determine the types of ethnographic properties that may be present within the APE and the appropriate documentation methods to record them. Methods may include oral interviews, GIS mapping of place names or use areas, archival research, or other inventory methods (such as pedestrian survey). If further research is needed, the USACE will direct PLP, after consultation with Signatories, Invited Signatories, and Consulting Parties, to complete the appropriate research and documentation measures. Ethnographic studies may be phased as the Project progresses, and the level of effort will be proportionate to the decisions being made at any given phase. The further research and documentation measures would be designed to evaluate the significance of the ethnographic resources and whether they meet the criteria of a historic property, and must be approved in advance by the USACE, after consultation with Signatories, Invited Signatories, and Consulting Parties. These research design and documentation measures will be included in this section once they have been identified and finalized through consultation.

3.1.2.2 Traditional Cultural Properties

Comments received during consultation and public meetings identified the need for continued consultation with Tribes to identify TCPs and other places of cultural significance. While information regarding these resources may be gathered, in part, from further research into previous studies (including place name studies), focused in-person interviews and research with Tribes or knowledgeable individuals is the best way to address this topic. In some cases, a field survey with traditional knowledge holders may be needed to determine where these resources are within the APE. Additional methods could include mapping place names with community members, recording oral stories, or other methods that are determined appropriate by the Tribe.

Compilation of TCPs will generally follow the guidelines and procedures outlined above for ethnographic resources and in NRB 38 (NPS 1998). The USACE will continue to consult with groups and individuals who may have special knowledge about the history and/or culture of the area, or who ascribe traditional cultural significance to specific locations within the APE. Direct consultation with these groups or individuals is essential in the identification of TCPs. Depending on the level of initial information provided to the USACE regarding TCPs, the USACE may facilitate coordination between PLP and Consulting Parties to collect further information necessary to support determinations of eligibility of potential TCPs.

Special considerations for the identification of TCPs include: establishing appropriate boundaries; defining who is best suited to undertake identification and evaluation work; agreeing what constitutes sufficient documentation; deciding how integrity should properly be considered; and determining how traditional cultural groups can best be defined (Lusignan 2009). The USACE, in consultation with the Tribe(s), PLP, and SHPO, will establish appropriate TCP data collection methods.

3.1.2.3 IICR Investigations

Investigations for IICRs, which are a form of ethnographic resource, will follow the general procedures outlined below. For the aerial component of project surveys, the field crew will use digital photography and GPS documentation to record features associated with an IICR when present. Photos and/or videos of the IICR will be taken by one crewmember while coordinating with another crewmember to record

waypoints and relevant information/details that correspond to each photograph. In situations where pedestrian surveys for an IICR occur, the field crew will conduct close order transects (approximately 5m) of the reported location while also using a combination of subsurface testing and metal detector sweeps (depending on the nature of the reported IICR) to systematically investigate the area. If clear physical evidence of the IICR is located and observed on the ground by the field crew, and depending on the site type (e.g., traditional use area, travel routes, old cabin), the site is documented according to standard site documentation methods described above.

In some instances, particularly for IICRs that cover large areas (e.g., battlegrounds, trails/routes, harvest areas), the field crew will perform aerial fly-overs and pedestrian surveys of only the portion of the IICR that intersects with the defined survey area. It should be noted that the lack of direct visible or physical evidence for the presence of an IICR at a particular location does not necessarily mean the IICR does not exist. Factors that can potentially affect the ability to positively identify an IICR in the field include the following:

- Evidence of the activity (e.g., harvest location within a larger harvest area) may not be present in survey area or visible from the air
- Several IICRs describe winter travel via snowmachine or dog sled and physical evidence of these trails in the summer may or may not be visible
- Animal trails (e.g., caribou, moose) may occur in the same general location as the reported IICR trail making identification difficult, particularly from the air
- The broad scale of the mapping and georeferencing process for plotting the IICRs may not have placed them in their exact location
- The sometimes generalized nature of the information provided by the respondents regarding the precise nature and/or location of the identified resource

Due to the above factors, the CRS may need to seek additional information from the community(ies) that reported the resource depending on the nature of visible or physical evidence to confirm the cultural material documented in the field is the same as the reported IICR. This consultation should occur prior to the inclusion of the site into the AHRS. Additionally, the CRS may need to consult with OHA regarding the most appropriate way to record these resources as AHRS sites.

3.2 Determinations of Eligibility

Evaluating cultural resources for their eligibility to be listed in the NRHP is a key part in implementing the PA. Resources that are listed or are eligible to be listed in the NRHP are considered “historic properties” and therefore any adverse effects to those properties that could result from Project activities must be considered. Cultural resources that are not eligible for the NRHP are no longer subject to the Section 106 process or terms of the PA.

The USACE will ensure that PLP, or contractors hired on their behalf, evaluate all identified cultural resources within the construction footprint to determine if those resources are eligible for the NRHP.

Evaluation will follow 36 CFR 63, and NRB 15, How to Apply the National Register Criteria for Evaluation (NPS 1997b), and/or other National Register guidance as appropriate.

3.2.1 Evaluation Criteria

For a property to be eligible to the NRHP, it must meet one or more of the Criteria for Evaluation by being associated with an important historic context and retaining historic integrity of those features necessary

to convey its significance. Typically, a property must be at least 50 years old, and can be considered significant at the local, state, and national levels. The Criteria for Evaluation are described in NRB 15 (NPS 1997b) and are outlined below:

- Criterion A: Association with events that have made a significant contribution to the broad patterns of our history; or
- Criterion B: Association with the lives of persons significant in our past; or
- Criterion C: Embodiment of the distinctive characteristics of a type, period, or method of construction, or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction; or
- Criterion D: Have yielded, or may be likely to yield, information important in prehistory or history.

3.2.1.1 Other Criteria Considerations

Ordinarily, a property is not eligible for inclusion in the NRHP if it represents one of the following property types: cemeteries, birthplaces, or graves of historical figures; properties owned by religious institutions or used for religious purposes; structures that have been moved from their original locations; reconstructed historic buildings; properties primarily commemorative in nature; and properties that have achieved significance within the past 50 years. However, these properties can be considered eligible for listing on the NRHP if they are integral components of districts that otherwise meet the criteria, or if they are:

- a) A religious property deriving primary significance from architectural or artistic distinction or historical importance;
- b) A building or structure removed from its original location, but which is significant primarily for architectural value, or which is the surviving structure most importantly associated with a historic person or event;
- c) A birthplace or grave of a historical figure of outstanding importance if there is no appropriate site or building directly associated with his or her productive life;
- d) A cemetery which derives its primary significance from graves of persons of transcendent importance, from age, from distinctive design features, or from association with historic events;
- e) A reconstructed building when accurately executed in a suitable environment and presented in a dignified manner as part of a restoration master plan, and when no other building or structure with the same association has survived;
- f) A property primarily commemorative in intent if design, age, tradition, or symbolic value has invested it with its own exceptional significance; or
- g) A property achieving significance within the past 50 years if it is of exceptional importance.

3.2.2 Integrity Aspects

In addition to meeting one or more of the four NRHP Criteria (A, B, C, and/or D) a historic property must also possess one or more aspects of integrity. Per NRB 15, integrity is the ability of a property to convey its significance. The evaluation of integrity is sometimes a subjective judgment, but it must always be grounded in an understanding of a property's physical features and how they relate to its significance. There are seven aspects of integrity as follows (and are described in more detail in NRB 15):

- Location – the place where the historic property was constructed or the place where the historic event occurred. The relationship between the property and its location is often important to understanding why the property was created or why something happened.
- Design – the combination of elements that create the form, plan, space, structure, and style of a property. Design includes such elements as organization of space, proportion, scale, technology, ornamentation, and materials.
- Setting – the physical environment of a historic property and refers to the character of the place in which the property played its historical role. It involves how, not just where, the property is situated and its relationship to surrounding features and open space.
- Materials – the physical elements that were combined or deposited during a particular period of time and in a particular pattern or configuration to form a historic property. A property must retain the key exterior materials dating from the period of its historic significance. If the property has been rehabilitated, the historic materials and significant features must have been preserved.
- Workmanship – the physical evidence of the crafts of a particular culture or people during any given period in history or prehistory. It is the evidence of artisans' labor and skill in constructing or altering a building, structure, object, or site.
- Feeling – a property's expression of the aesthetic or historic sense of a particular period of time. It results from the presence of physical features that, taken together, convey the property's historic character.
- Association – the direct link between an important historic event or person and a historic property. A property retains association if it is the place where the event or activity occurred and is sufficiently intact to convey that relationship to an observer. Like feeling, association requires the presence of physical features that convey a property's historic character.

3.2.3 Making Recommendations of Eligibility

Some known resources within the APE have not been evaluated for NRHP eligibility. For this reason, this section provides guidance on how eligibility will be assessed. The CRS will make DOE recommendations that PLP will provide to the USACE that will consider both individual and district-level eligibility. District level evaluations will not commence until the bulk of field survey work has been completed. A piecemeal approach to historic districts, when not all areas of the Project have been surveyed, would be inefficient and could result in inaccurate recommendations (e.g., no recommendation for historic district, incomplete application of potential significance criteria, inadequate integrity assessments). Resources of a similar nature may be evaluated as a multiple property listing or historic district to create more efficiencies in the process. Multiple property evaluations may be used for a single determination for thematically related historic properties or to establish the requirements for properties that may be nominated in the future, and should follow NRB 16, How to Complete the National Register Multiple Property Documentation Form (NPS 1999). When considering DOE recommendations for these resource types, it is also important to consider their significance cumulatively as historic districts. Eligibility determinations for districts and individual sites will be completed before construction activities that would affect historic properties would occur within a project component.

Per NRB 15 (NPS 1990), the steps for evaluation should be completed as follows, and should be informed through both physical examination of the property as well as through background research:

1. Categorize the property: A property must be classified as a district, site, building, structure, or object for inclusion in the NRHP.

2. Determine which prehistoric or historic context(s) the property represents: A property must possess significance in American history, architecture, archaeology, engineering, or culture when evaluated within the historic context of a relevant geographic area.
3. Determine whether the property is significant under the NRHP Criteria: This is done by identifying the links to important events or persons, design or construction features or information potential that make the property important.
4. Determine if the property represents a type usually excluded from the NRHP: If so, determine if it meets any of the Criteria Considerations.
5. Determine whether the property retains integrity: Evaluate the aspects of location, design, setting, workmanship, materials, feeling, and association that the property must retain to convey its historic significance.

PLP will submit the DOE recommendations made by the CRS to USACE who will follow the PA procedures for DOEs in *PA Stipulation VI.C. Evaluation of Potential Historic Properties*. Resources that are not eligible to the NRHP will no longer be subject to the terms of the PA.

3.3 Effects Assessments

Assessments of effects will only occur once a cultural resource has been determined eligible by the USACE and review and comment by Signatories, Invited Signatories, and Consulting Parties, or if SHPO and USACE cannot agree on NRHP eligibility a formal determination of eligibility from the Keeper of the NRHP for a final decision. If the resource is eligible for the NRHP, the CRS will make the initial recommendations regarding the assessment of effects to historic properties and will follow the ACHP's regulations at 36 CFR 800.5 for assessing adverse effects. As summarized in ACHP guidance regarding assessing effects (ACHP 2015), if a project may alter characteristics that qualify a specific property for inclusion in the National Register in a manner that would diminish the integrity of the property, that project is considered to have an adverse effect. Integrity is the ability of a property to convey its significance, based on its location, design, setting, materials, workmanship, feeling, and association. Adverse effects can be direct or indirect and include the following:

- physical destruction or damage
- alteration inconsistent with the Secretary of the Interior's Standards for the Treatment of Historic Properties
- relocation of the property
- change in the character of the property's use or setting
- introduction of incompatible visual, atmospheric, or audible elements
- neglect and deterioration
- transfer, lease, or sale of a historic property out of federal control without adequate preservation restrictions

PLP will submit the CRS recommendations regarding potential effects to USACE who will follow the PA procedures for assessing effects in *PA Stipulation VI.D. Assessment of Effects to Known Historic Properties*.

3.4 Artifact Curation Standards and Protocols

Artifact collection and curation is discussed in *Stipulation XII: Collection and Curation* of the PA. In short, these PA stipulations require PLP to ensure the responsible collection, processing, cataloguing, and curating of artifacts recovered as a result of identification efforts for the Project or inadvertent discoveries

from Project activities. Curation guidelines, artifact tracking forms, and agreements that will be utilized by PLP are provided in *Appendix C: Artifact Curation Guidelines, Forms, and Agreements*.

In order to maintain consistency and organization throughout the curation process, the CRS will use University of Alaska Museum of the North (UAMN) standards as the guiding principles for curation of all artifacts recovered as a result of Project activities regardless of land ownership (see UAMN curation guidelines in *Appendix C*). For example, artifacts collected from State of Alaska lands deposited at UAMN receive an accession number assigned by the museum (e.g., UA2019-001-xxxx). The 'UA' indicates that the collection is registered with University of Alaska, which is followed by the year the accession number was issued; in this example 2019. The '-001' indicates it is the first collection accessioned by UAMN that year. The number that follows is the catalog number assigned to that particular artifact or group of artifacts by the researcher/cataloger. The accession and catalog number correlate with an extensive and unique dataset detailing the artifact's provenance. An example of how this curation method translates to a collection accessioned for a private landowner, such as Iliamna Natives Limited (INL), would be 'INL2019-001-xxxx'. If more than one collection is made on INL lands in the same year the subsequent accession number would be 'INL2019-002-xxxx' and so on.

Using the UAMN accession and cataloging method for artifacts recovered from all Project lands is beneficial in several ways. It requires and maintains a high standard of consistency, organization, and provenance for the artifact collections throughout the curation process. It also employs an existing professional documentation format so that if a private landowner elects to have their collections temporarily stored at UAMN they will be ready for transfer with little additional work. Furthermore, it provides a means for someone unfamiliar with the collections to easily identify, inventory, and track them through an appropriate chain of custody. PLP will employ an artifact custody tracking form whenever artifacts are transferred between repositories (e.g., CRS to UAMN, landowner to UAMN, CRS to landowner) (see example form in *Appendix C*).

4. AVOIDANCE, MINIMIZATION, AND MITIGATION PROCEDURES

4.1 Avoidance and Minimization Measures

PLP will consult with the USACE, Signatories, Invited Signatories, and Consulting Parties on ways to avoid, minimize, and/or mitigate adverse effects to historic properties in accordance with *Stipulation III: Consultation* and *Stipulation VII: Resolving Adverse Effects on Historic Properties* of the PA. Options for resolving adverse effects to a historic property include avoidance, minimization, and mitigation measures and procedures. For the purposes of this CRMP, avoidance measures involve changes or revisions to planned or proposed Project activities that avoid adverse effects to the integrity of a historic property, while minimization measures involve changes or revision to planned or proposed Project activities that reduce, but do not eliminate, the adverse effects to a historic property.

After consultation on any DOE and assessment of effect(s) is completed as described above in *Section 3.2 Determinations of Eligibility* and *Section 3.3 Effects Assessments*, and USACE determines that the proposed Project will have an adverse effect, PLP will submit to USACE a proposed avoidance or minimization Treatment Plan that outlines modifications to the proposed Project that would avoid or minimize adverse effects to the historic property. USACE will submit the draft Treatment Plan to Signatories, Invited Signatories, and Consulting Parties for review and comment for 30 calendar days. Following consideration of timely comments, USACE will direct PLP to make any appropriate revisions to the proposed Treatment Plan and execute the plan to avoid or minimize adverse effects on the historic property. PLP will not commence activities with potential to adversely affect known historic properties

until the Treatment Plan has been approved by the USACE, any on-site measures have been implemented, and USACE has approved PLP's Implementation Report. The final Treatment Plan will be included in the Annual Report for the year in which the work was proposed and conducted.

Avoidance and minimization options may include, but are not limited to:

- Project design modifications
- Construction area and transportation corridor footprint constrictions
- Scheduled inspections of historic properties to monitor their condition
- Seasonal schedule changes
- Monitoring during ground disturbing activities
- Cultural resource signage
- High visibility flagging and/or exclusion fencing

4.1.1 Approved and Proposed Treatment Plans to Avoid and/or Minimize Adverse Effects

At this time, PLP has not proposed and the USACE has not approved any treatment plans to avoid and/or minimize adverse effects for the Pebble Project. PLP will update this section prior to the Annual PA Meeting for each year.

4.1.2 Monitoring Protocols

Monitoring involves the presence of an on-site archaeologist to observe construction activities in areas where archaeological or historic resources may inadvertently be discovered. Monitoring for unknown but suspected historic properties or monitoring when Project activities are in close proximity to a known historic property may be necessary during Project activities, especially those involving ground disturbance. The most common situations in which monitoring may be required are:

- when unforeseen project design changes and subsequent construction activities occur in areas where identification efforts have not occurred,
- where the proposed activity must occur within the boundaries of a known archaeological or historic site that has not been fully delineated or evaluated,
- or the activity occurs in an area that has high potential for archaeological, cultural, or human remains.

Depending on the specific instance, monitoring may also involve the presence of one or more Tribal Advisors. The USACE and PLP will determine the number of Tribal Advisors that may participate in a given monitoring activity on a case-by-case basis, and will consider factors such as safety, logistics, and the nature and location of the proposed monitoring activity.

To track progress, monitoring schedules will be managed as follows. Thirty days prior to initiating a monitoring event, PLP will provide the USACE with a memo informing the USACE of the planned activity, its location(s), expected number of monitoring archaeologist(s) and Tribal Advisor(s), and expected completion date. USACE will consult with Tribes to request that they identify tribal advisors to assist in monitoring activities. Interested Tribes will forward the names of proposed Tribal Advisors to the USACE commensurate with PLP's staffing needs. If the number of proposed advisors exceeds the need for or the number of advisors that can safely accommodate, the USACE may consider a first-come-first served approach to the selection of monitors, the proximity of the discovery to current communities, and landowner preferences in selecting a Tribal Advisor(s). The USACE will provide the PLP with the names and contact information of Tribal Advisors within fourteen calendar days from receipt of PLP's notification. PLP will coordinate the participation of the Tribal Advisors and CRS to the field; both Tribal Advisors and

the CRS will be required to undergo the relevant PLP on-site orientation requirements for PLP staff and contractors conducting fieldwork. PLP will provide a final summary memo to the USACE upon completion of the monitoring event. The full reporting of monitoring results will be included in an individual Technical Report (see below).

A monitoring archaeologist is required to be present for all ground-disturbing work within 100 feet of a known historic property, in high potential areas for archaeological or historic resources where past testing may not have been adequate (as determined by USACE after consultation between Signatories, Invited Signatories, and Consulting Parties as described in *Stipulation III: Consultation of the PA*), or as determined necessary by the CRS based on professional judgement while in the field. A monitoring archaeologist will also be required following an inadvertent discovery (after the inadvertent discovery notification procedures have been followed; see *Section 5.1: Standard Process for Inadvertent Discoveries* below). *Appendix A: Monitoring Plan* provides the specific guidelines and procedures for implementation of the on-site monitoring protocols.

Should a monitored construction activity inadvertently disturb known or unknown precontact or historic archaeological material, the monitoring archaeologist has the authority to issue a Stop Work Order and will immediately call a halt to work in the vicinity of the find. PLP's on-site supervisor will ensure that the work stoppage is understood and enacted by all personnel, and the monitoring archaeologist and PLP's on-site supervisor will follow procedures for reporting inadvertent discoveries (including human remains) detailed in *Section 5.1: Standard Process for Inadvertent Discoveries* and *Appendix A: Monitoring Plan* of this CRMP and implement interim protection measures.

4.2 Mitigating Adverse Effects to Historic Properties

In any case where avoidance and/or minimization options are not possible or feasible, and USACE determines that adverse effects to a historic property are likely to occur as a result of planned Project activities, PLP may initiate discussions regarding the specific conditions of the planned Project activity and potential adverse effects to the historic property with Signatories, Invited Signatories, and/or Consulting Parties. PLP will develop a draft Treatment Plan to guide appropriate mitigation measures and procedures for the historic property in question in accordance with Treatment Plan development as described in *Section 4.1 Avoidance and Minimization Measures*. Whenever feasible, the Treatment Plan will prioritize and address the recommendations of the communities associated with the types and locations of the adversely affected historic property as determined by the USACE in consultation with Signatories, Invited Signatories, and Consulting Parties. USACE will distribute the Treatment Plan to Signatories, Invited Signatories, and Consulting Parties for review and comment consistent with *Stipulations III: Consultation* and *VI: Identification and Evaluation of Historic Properties and Assessment of Effects of the PA*.

A list of potential approaches for mitigating adverse effects to historic properties is provided below and are not limited to this list only:

- Site and/or resource-specific research plans
- Excavation and data recovery
- Artifact analysis and curation
- Historic American Building Survey/Historic American Engineering Record documentation of buildings and structures
- Yup'ik, Dena'ina, and Alutiiq language revitalization funding as it relates to areas outside of the APE
- Transport or relocation/repositioning of the property (in the case of a structure or large object)

- 3D scanning and printing artifacts to build collections that can be shared with communities and Tribes
- Timing/scheduling of construction and operations activities to avoid, minimize, and/or mitigate effects to historic properties that involve traditional use
- Assisting in the development of tribal or community historic preservation plans and developing detailed regional historic contexts
- Developing cultural educational materials or programs for use by borough school districts, Tribes, and/or communities
- Community training and employment in archaeological excavations
- Providing improvements to or maintenance for historic trails
- Purchasing and maintaining properties containing historic resources or historic trail rights-of-way
- Developing historic property management plans
- Creating, updating, and maintaining a website with videos, digitized artifacts, and other information on the historic properties found during the Project, for the duration of this PA
- Creation of an educational curriculum related to the history or prehistory of Alaska or region
- Public outreach and education programs related to the history or prehistory of communities near the Project area

After consideration of timely comments from Signatories, Invited Signatories, and Consulting Parties, the USACE will direct PLP to revise the Treatment Plan as appropriate prior to finalizing and approving the plan. Under the direction of the USACE, PLP will carry out mitigation measures contained in the finalized Treatment Plan. PLP will not commence activities with potential to adversely affect known historic properties until the Treatment Plan has been approved by the USACE, any on-site measures have been implemented, and USACE has approved PLP's Implementation Report. The USACE will distribute the final Treatment Plan to Signatories, Invited Signatories, and Consulting Parties, and the Plan will be included in the Annual PA Report for the year in which the work was proposed and initiated (in the case of Treatment Plans that span multiple years) or completed.

PLP will ensure that Treatment Plans are developed and that their implementation is directed by persons who meet Secretary of the Interior's Historic Preservation Professional Qualification Standards in the appropriate discipline as specified in the 1997 revised and updated proposed standards (62 FR 33708 [June 20, 1997]). Materials will be developed in coordination with other professionals of other disciplines such as education, public history, ethnography, folklore, cultural heritage, and ecological knowledge, as well as tribal elders and council members, and/or local or regional traditional lifeways practitioners, as applicable.

4.2.1 Approved and Proposed Treatment Plans to Mitigate Adverse Effects

At this time, PLP has not proposed and the USACE has not approved any Treatment Plans to mitigate adverse effects for the Pebble Project. PLP will update this section to include a list/table of the approved and proposed treatment plans and associated references to the individual plans prior to the Annual PA Meeting for each year.

5. INADVERTENT DISCOVERIES AND TREATMENT OF HUMAN REMAINS

5.1 Standard Process for Inadvertent Discoveries or Unanticipated Effects

In the event of an inadvertent discovery of cultural resources that appear to be 50 years or more in age or unanticipated effects on a historic property are found, PLP's on-site supervisor overseeing the Project activity will immediately halt any work that may further disturb the resource and notify PLP's

Environmental Supervisor of the discovery, who will in turn immediately notify PLP's General Manager. PLP's on-site supervisor will ensure that all employees and contractors follow the protocols outlined below. If the unanticipated discovery includes suspected human remains, the additional steps listed in *Section 5.2 Treatment of Human Remains* will also be followed.

1. PLP's Environmental Supervisor will ensure that PLP employees, operators, and contractors halt all activity in the area of the discovery and establish an appropriate work stoppage area where further discoveries can be reasonably expected to occur, to be no less than a 100 foot radius buffer.
 - a. Unless it would cause additional disturbance to the discovery, PLP will fence off or establish some form of visible barrier around the work stoppage area to prevent further disturbance to the area.
2. PLP's Environmental Supervisor will immediately notify PLP's CRS of the discovery and arrange for the CRS to travel to the discovery site.
 - a. PLP's CRS will inspect the discovery within five calendar days of the discovery and collect sufficient information to determine (if possible):
 - i. The extent of cultural materials associated with the unanticipated discovery;
 - ii. The degree of integrity; and,
 - iii. The approximate age and/or cultural affiliation of the materials.
 - b. After PLP's CRS has arrived on-site and observed the inadvertent discovery, the CRS may make recommendations to modify the work stoppage distance.
 - i. If the CRS recommends that the work stoppage distance be increased, PLP's on-site supervisor will immediately increase the work stoppage distance as recommended. PLP's Environmental Supervisor will notify USACE (and BSEE, if applicable), SHPO, and the landowner of the expansion of the work stoppage distance.
 - ii. If the CRS recommends that the work stoppage distance can be decreased, PLP will notify USACE (and BSEE, if applicable), SHPO, and the landowner of the recommendation to decrease the work stoppage distance, but will not take any action to reduce the distance until directed by USACE, after consultation with Signatories, Invited Signatories, and Consulting Parties.
3. PLP's Environmental Supervisor will notify USACE, SHPO, and the landowner within one business day following the inadvertent discovery protocol outlined in *Appendix B: Inadvertent Discovery and Human Remains Field Procedures and Contact Sheet*.
 - a. If the discovery occurs offshore, within PLP's right-of-way authorized by BSEE, PLP will also notify BSEE Regional Director within one business day following the discovery, consistent with 30 C.F.R. § 250.194(C) and 30 C.F.R. § 1010(C).
4. The USACE will notify the Signatories, Invited Signatories, and Consulting Parties within two business days of the discovery.
5. Subject to landowner consent, PLP will offer Tribes the opportunity to send a representative to accompany the CRS during the site inspection.
6. Within two calendar days following the CRS' inspection, PLP will provide to the USACE the information collected at the place of discovery, which will include a description of the discovery, measures taken to protect the discovery, and the CRS' recommendation of the NRHP eligibility of the discovery; PLP will submit the necessary information and location data to have the discovery listed on the AHRS. If the USACE determines that PLP must provide additional information, PLP will conduct additional research to gather adequate information.
7. Within seven calendar days of receipt of PLP's information, USACE will make a finding whether the discovery encountered is eligible for listing in the NRHP and submit this finding to the SHPO (along

with Signatories, Invited Signatories, and Consulting Parties comments on the DOE recommendation) for review and comment for a period of seven calendar days.

- a. In accordance with 36 CFR 800.4(c)(2), the USACE (or BSEE if applicable), in consultation with the SHPO, may assume a newly discovered cultural resource to be eligible for the NRHP, and the USACE will specify the NRHP criteria used to assume the property's eligibility so that information can be used in determining an appropriate resolution of adverse effects.
 - b. If the USACE finds that the discovery is not eligible for listing in the NRHP after review and comment by Signatories, Invited Signatories, and Consulting Parties, USACE will authorize PLP to continue activities within the work stoppage area.
 - i. Authorization to proceed by USACE to PLP may be conditioned with a stipulation for construction monitoring within the work stoppage area depending on the nature of the discovery.
 - c. If the USACE finds that the discovery is eligible for listing in the NRHP after review and comment by Signatories, Invited Signatories, and Consulting Parties, PLP will prepare a Treatment Plan to minimize further effects to the historic property in accordance with *Section 4.1: Avoidance and Minimization Measures* above.
 - d. If minimization efforts are not possible or practical, PLP will prepare a Treatment Plan to mitigate adverse effects in accordance with *Section 4.2: Mitigating Adverse Effects to Historic Properties*. USACE will provide the Treatment Plan to Signatories, Invited Signatories, and Consulting Parties for review and comment for a period of seven calendar days. USACE will take into account timely comments prior to making its decision regarding the implementation of the Treatment Plan and the requirements that PLP must meet in order to resume construction.
8. PLP will not restart any construction work in the established work stoppage area until:
- a. USACE makes a finding that the discovery is not eligible for the NRHP, after review and comment by Signatories, Invited Signatories, and Consulting Parties, and the USACE authorizes continuation of construction within the work stoppage area; or,
 - b. For instances involving monitoring, PLP's proposed Treatment Plan to minimize adverse effects via monitoring is approved by the USACE and monitoring activities have concluded; or,
 - c. For instances where the Treatment Plan call for on-site measures to be implemented, PLP's proposed Treatment Plan to minimize adverse effects or to mitigate adverse effects to the historic property is approved by the USACE, on-site measures are implemented, and USACE has approved PLP's Implementation Memo; or,
 - d. For instances that involve alternative mitigation (i.e., assistance with preservation activities, assisting in the development of tribal or community historic preservation plans, developing detailed regional historic contexts), once the Treatment Plan is finalized and approved by the USACE.
9. USACE will address any disputes over the evaluation or treatment of inadvertent discoveries as provided in *Stipulation XIV: Dispute Resolution* of the PA.

5.2 Treatment of Human Remains

In the event that an inadvertent discovery includes or consists of human remains, PLP's on-site supervisor overseeing the Project activity will immediately halt any work that may further disturb the remains and immediately notify PLP's Environmental Supervisor of the discovery, who in turn will immediately notify PLP's General Manager. PLP's on-site supervisor will ensure that any human remains

are at all times treated with dignity and respect, and that all PLP employees, operators and contractors follow the protocols outlined below.

1. Upon notification from PLP's on-site supervisor, PLP's Environmental Supervisor will ensure that PLP employees, operators and contractors halt all activity in the area of the discovery and establish an appropriate work stoppage area where further discoveries can be reasonably expected to occur, to be no less than a 100 foot radius work stoppage area.
 - a. Unless it would cause additional disturbance to the discovery, PLP will fence off or establish some form of visible barrier around the work stoppage area to prevent further disturbance to the area.
2. PLP's Environmental Supervisor will immediately notify PLP's CRS of the discovery and arrange for the CRS to travel to the discovery site.
 - a. PLP's CRS will inspect the discovery within five calendar days of the discovery to make an initial assessment of the age of the remains and the extent and distribution of cultural materials associated with the unanticipated discovery.
3. PLP's Environmental Supervisor will also immediately notify the Alaska State Troopers Missing Persons Bureau, the Alaska State Medical Examiner, and the village public safety office (if applicable) of the discovery and inform them that PLP's CRS is en route to assess and report on the discovery.
4. PLP's Environmental Supervisor will then immediately notify the landowner, USACE, and SHPO.
 - a. PLP's Environmental Supervisor will document the contacts listed above using the field documentation and project personnel handouts provided in *Appendix B: Inadvertent Discovery and Human Remains Field Procedures and Contact Sheet*
 - b. The USACE will notify the Signatories, Invited Signatories, and Consulting Parties of the discovery within one business day of receiving notification from PLP.
5. If PLP's CRS determines that the discovered remains are recent in age (less than 50 years old), PLP's CRS will notify the Alaska State Troopers Missing Persons Bureau and State Medical Examiner who will determine if the remains are of a forensic nature and/or subject to criminal investigation. Remains that are subject to further law enforcement investigation will no longer be subject to this CRMP.
6. The USACE will notify the Signatories, Invited Signatories, and Consulting Parties of the discovery the determination of whether the remains are historic or recent.
7. If PLP's CRS determines that the discovered remains are historic in age (older than 50 years), PLP will arrange for a qualified professional physical anthropologist with experience in the analysis of human remains to inspect the discovery as soon as possible.
8. Subject to landowner consent, PLP offer Tribes the opportunity to send a representative to accompany the physical anthropologist during the site inspection.
9. The physical anthropologist will collect enough information to determine (if possible):
 - a. The extent of human remains and materials associated with the discovery;
 - b. The racial identity of the individual(s);
 - c. The degree of integrity; and
 - d. The approximate age and/or cultural affiliation of the materials.
10. PLP's physical anthropologist shall document, analyze, and photograph the remains so that an independent assessment of racial identity can be made. The physical anthropologist shall be afforded no more than 30 calendar days to conduct his or her analysis and provide a written report to USACE, PLP, SHPO, and Tribes.
11. If the discovery consists of Alaska Native human remains, USACE will consult with the SHPO, PLP, and federally recognized Tribes regarding measures to respectfully care for such a discovery. If the

USACE can adequately determine that the identified human remains have affinity to any federally recognized Tribe(s), USACE will make a reasonable effort to identify, locate, and notify the federal recognized Tribe. USACE will also contact ANCSA regional corporations and ANCSA village corporations.

- a. USACE will arrange for a meeting (via teleconference or in person if possible) with the Signatories, Invited Signatories, and Consulting Parties within five days of receipt of PLP's physical anthropologist's report to provide a complete summary of the discovery, the nature of the identified materials, and to ensure Tribes are allowed to provide culturally appropriate expertise regarding the treatment of any remains.
 - b. PLP will determine if the Project component or activity can be relocated, rerouted, modified, or adjusted to avoid any further impacts to in-situ human remains.
 - c. PLP, the landowner, and tribal representatives will work in cooperation to determine a plan for appropriate treatment, removal, and/or disposition measures for the remains.
 - d. PLP will submit the location of the human remains to the AHRS. If the remains are archaeological in nature additional consultation will be required regarding potential eligibility for the NRHP.
 - e. The plan for appropriate treatment, removal, and/or disposition measures for the remains must be approved by USACE after consultation with Signatories, Invited Signatories, and Consulting Parties before it can be implemented.
 - f. PLP will be responsible for implementing the approved plan and covering costs associated with the consultation, treatment, removal, and disposition measures. PLP will provide an Implementation Memo to the USACE that describes how and when the plan was implemented.
 - g. PLP will implement steps b. through f. within 30 days of the receipt of the physical anthropologist report.
 - h. The USACE will distribute the Implementation Memo to the Signatories, Invited Signatories, and Consulting Parties.
 - i. The USACE must approve of the Implementation Memo before it can be considered finalized. PLP will not continue Project work within the specified work stoppage area until USACE provides written notification stating that all on-site Section 106 requirements have been met.
12. If the human remains are not Alaska Native, and Alaska State Troopers and the State Medical Examiner have determined that a death investigation is not warranted, USACE and PLP, in consultation with the State Medical Examiner, will attempt to identify, locate, and inform descendants of the deceased.
 13. PLP's Environmental Supervisor will ensure that all necessary permits concerning human remains are obtained from the Alaska Bureau of Vital Statistics.

6. PLP EMPLOYEE AND CONTRACTOR CULTURAL RESOURCES AWARENESS TRAINING

Cultural resource awareness training is an essential component of building an integrated resources management strategy that engages both the communities and the Project participants in order to promote understanding and stewardship of the cultural heritage of the region. PLP will provide cultural resources awareness training to PLP employees and subcontractors as part of this CRMP for the Pebble Project. The training is intended to inform, educate, and provide clear guidance to PLP employees and

subcontractors on a variety of cultural resource subject matters including:

- Federal, state, and local cultural resource laws and regulations, including penalties for disturbing cultural resources and human remains
- History, archaeology, and cultural resources (including historic properties): what are they and why are they important
- Brief overview of monitoring procedures, including safety around heavy equipment, establishing work stoppage areas, hand signals between monitors and equipment operators
- Typical prehistoric and historic artifacts and cultural features commonly found in the region
- Required steps and procedures that must be followed in the event of an inadvertent discovery of a cultural resource site and/or human remains during any Project activities with specific reference to the Inadvertent Discoveries Plan and Human Remains Discovery Plan

PLP staff and contractors will be required to receive this training as part of their initial on-site orientation and thereafter annually at PLP facilities. The training may be administered in conjunction with other environmental or project-specific training administered by PLP. In accordance with the PA, PLP may adjust the content of the training curriculum based on the nature and role of PLP staff or contractors working on the Project.

PLP's cultural resource awareness training will be developed by personnel who meet the Secretary of the Interior's Historic Preservation Professional Qualification Standards in the appropriate discipline as specified in the 1997 revised and updated proposed standards (62 FR 33708 [June 20, 1997]). PLP will make a good faith effort to seek input and collaborate with Indian Tribes to develop and teach the curriculum, which at minimum, will include review of the draft curriculum and training and affording an opportunity for a tribal representative to administer portions of the training to PLP staff and contractors. The training will include a presentation providing an illustrated and detailed overview of the subjects listed above, with an emphasis on the responsibilities of PLP field staff in the event that a cultural resource site or human remains are encountered and the necessary steps that need to be taken in the event of an inadvertent discovery. The training may also include hands on identification training using modern replicas of prehistoric artifacts and geofacts (i.e., naturally occurring objects that may appear to be altered by humans).

In addition to the training, each PLP crew, contractor, and on-site supervisor will receive and carry while in the field a laminated information sheet that details the procedures to follow in the event of an inadvertent or unanticipated discovery of a cultural resource site and/or human remains (see *Appendix B: Inadvertent Discovery and Human Remains Field Procedures and Contact Sheet*).

7. REPORTING REQUIREMENTS

Numerous documents, plans, and reports (referred to collectively as "reports") will be generated as a result of implementing the PA and will include the Annual PA Report, Technical Reports, Treatment Plans, and Project Stage Completion Reports. PLP is responsible for compiling and providing all reports to the USACE, consistent with the terms and conditions of the PA *Stipulation XIII: Annual Review and Reports*. Table 6 provides a summary of the required reports and their associated due dates and comment review periods. *Stipulation III: Consultation* of the PA allows for additional periods of review based on input from Signatories, Invited Signatories, and/or Consulting Parties and USACE discretion.

Table 6: General Overview of Report Deliverables, Due Dates, and Review Periods

Report Title	Report Version	Submittal Due No Later Than	Review Period
Annual PA Report	Draft	January 15th each year	60 days
	Annual PA Meeting	April 15th each year	NA
	Final	May 15 th each year	NA
Technical Reports	Draft	9 months after completion of research/field activity	30 days
	Final	30 days after comments received	NA
Treatment Plans	Draft Plan	120 days after DOE and effects assessment completed	30 days
	Final Plan	30 days after comments received	NA
	Draft Implementation Report	180 days after Treatment Plan is implemented	30 days
	Final Implementation Report	30 days after comments received	NA
Project Stage Completion Report	Draft	90 days after completion of a Project Stage	30 days
	Final	30 days after comments received	NA

Stephen R. Braund & Associates, 2020

7.1 Report Formatting

All reports will follow these general guidelines:

- All reports will have a title that includes report type and year (e.g., “2024 Annual PA Report”), table of contents, page numbers, and date.
- Draft materials will be watermarked as such, with the date or version number denoted in the document. Final reports containing sensitive information will be marked “CONFIDENTIAL” pursuant to CFR80.11(c), 54 USC 307103, and PA *Stipulation IV: Confidentiality Requirements*.
- Applicable cultural resources will be assigned an AHRs Number, in accordance with OHA guidelines (ADNR OHA 2016b), and will be identified in all reports by that number, regardless of eligibility status.

- Reports will clearly identify land ownership and administrative jurisdiction for lands covered by the report and cultural resources/historic properties discussed in the report(s).
- Reports will follow OHA reporting guidelines and formats including recommendations of eligibility and effect (ADNR OHA 2016d, 2018b). Reports will include appropriate site inventory forms and recommendations of NRHP eligibility, consistent with 36 CFR 800.4(c).
- Reports will include the OHA Report Coversheet.
- If historic structures are documented, OHA Historic Preservation Series No. 5, Guidelines for Preparing a Historic Structures Report will be followed (ADNR OHA 2018a).
- Reports that include newly identified cultural resources and/or surveyed areas will include completed AHRS Site Forms and AHRS Project Forms as an appendix or attachment to the report (forms available at <http://dnr.alaska.gov/parks/oha/ahrs/useragreeform.htm>).
- Formatting and citations should follow the Society of American Archaeology style guide (available at <https://www.saa.org/publications>) or the Modern Language Association (MLA) format if the report is not CRM-related.

7.2 Review Process and Schedule

Unless otherwise specified, the submission and review of all reports will generally follow the same steps:

- PLP will submit the report to the USACE within the timeframe specified in the PA *Stipulation XIII: Annual Review and Reports* or as further specified in this CRMP (see sections below for summaries of deliverables and associated timelines).
- The USACE will submit the report to the appropriate Signatories, Invited Signatories, and Consulting Parties for review and comment.
- If no comments are received during the review period, the USACE will move forward with the report. If timely comments are received, the USACE will consider them and require PLP to incorporate changes to the report as necessary, and submit a revised version to the USACE.
- The USACE will submit the final approved versions of reports to Signatories, Invited Signatories, and Consulting Parties for informational purposes.

7.3 Required Reports

7.3.1 Annual PA Report

The PA *Stipulation XIII: Annual Review and Reports* details the required components and schedule of deliverables and review periods associated with the Annual PA Report. In short, the Annual PA Report will provide a comprehensive summary of all PLP's efforts to meet the requirements of the PA over the past year. The Annual PA Report will also include proposed plans for upcoming activities in the next year. The Annual PA Report will cover the time period from October 1 through September 30.

7.3.2 Technical Reports

The PA *Stipulation XIII: Annual Review and Reports* details the required components and schedule of deliverables and review periods associated with the Technical Reports. In short, the Technical Reports will address any additional reporting requirements that may be necessary to fully understand Project effects to historic properties. The USACE will consult with the other PA Signatories, Invited Signatories, and Consulting Parties at the Annual PA Meeting to consider whether a Technical Report(s) may be needed, and if so, what content it should contain. Possible examples of Technical Reports include the following:

- Fieldwork Reports to fulfill any necessary permit obligations

- Monitoring Results
- DOE Recommendations
- Assessments of Effects to Historic Properties
- Results of Ethnographic Research
- Specialized Laboratory Analyses
- Historic Themes/Contexts

Technical Reports are due nine months after completion of the associated research or field activities. The USACE will finalize these reports after consultation with Signatories, Invited Signatories, and Consulting Parties in accordance with *Stipulation III: Consultation of the PA*.

7.3.3 Treatment Plans

Section 4: Avoidance, Minimization, and Mitigation Procedures provides the details regarding the content and review schedule of the Treatment Plan reports. In general, the Treatment Plans will contain detailed information on treatment measures, a schedule for when the measures will be implemented, and a schedule for when deliverables will be finalized and distributed. Each Treatment Plan should be consistent with industry standard practices and minimally contain the following information (specific to each historic property), as well as any other information determined necessary by USACE after consultation with the Signatories, Invited Signatories, and Consulting Parties:

- A summary of the historic property that is comprehensive enough to provide a clear understanding of the significance of the resource including descriptions of the features, artifacts, materials, and remains present; the historic context and research questions to be addressed; and information from Tribes or other parties that is relevant.
- Comprehensive descriptions of site-specific research designs that explains how the proposed work or analyses will address relevant research questions or goals. This should include justifications for the level of effort of proposed work and why it is commensurate with the significance and eligibility of the property.
- Site-specific location maps showing all planned work (e.g., excavation units, collection transects, or other studies).
- Identification of key personnel who will be involved in carrying out the treatment, including the Primary Investigator, project/field directors, field and laboratory supervisors, subject matter experts (historians, osteologist, ethnographers, etc.), and Tribal representatives and/or knowledgeable individuals.
- Detailed descriptions of the field methods and analysis techniques, including tools and equipment necessary and estimates of the time and workforce required to complete the treatment. For properties where data recovery is the proposed treatment, location and quantitative description of the extent of the data recovery.
- Schedule of all treatment activities and deliverable preparation and dissemination

Within 120 days following PA *Stipulation VI.D. Assessment of Effects to Known Historic Properties* and the conclusion of the SHPO's 30-day review of DOEs and assessment of effects, PLP will develop proposed property-specific Treatment Plans and submit them to the USACE who will follow the review process outlined above in *Section 4: Avoidance, Minimization, and Mitigation Procedures*.

The USACE may determine that development of a Treatment Plan will require additional time beyond the timelines described above, due to the need for additional consultation, unique characteristics of the

property, or other factors. In these instances, the USACE, in consultation with Signatories, Invited Signatories, and Consulting Parties, will determine what steps must be taken for PLP to develop and implement appropriate mitigation measures. Subsequent Treatment Plan reviews will include a 30-day review and comment period.

PLP will submit a Treatment Plan Implementation Report for each historic property to the USACE, within 180 days after implementation of the Treatment Plan is complete, or within a timeframe specified in the Treatment Plan. The Treatment Plan Implementation Report will be a comprehensive record of all activities that occurred at that historic property, from inventory through implementation of treatment measures, and will describe all completed steps, analyses, methods, and results, including collections and datasets generated. In addition to summary information, the final Treatment Plan Implementation Report should also include monitoring recommendations or other considerations for future management of that historic property (including the records, remains, or materials from it). The USACE will provide the report to the Signatories, Invited Signatories, and Consulting Parties for a 30-day review and comment period. The USACE must approve of all Treatment Plan Implementation Reports before they will be considered complete and adequate to resolve adverse effects. In general, it is not until this final approval has been granted the USACE will consider that a good-faith effort for compliance with the NHPA has been completed.

7.3.4 Project Stage Completion Reports

The *PA Stipulation XIII: Annual Review and Reports* details the required components and schedule of deliverables and review periods associated with the Project Stage Completion Reports. As specified in the PA, there will be two Project Stage Completion Reports, one following the end of construction and the other following the end of operations. In short, these reports will summarize the status of the Project through each phase that builds upon the contents of the Annual PA Reports and other reports prepared for the Project. The USACE will finalize these reports after consultation with Signatories, Invited Signatories, and Consulting Parties in accordance with *Stipulation III: Consultation* of the PA.

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9. APPENDICES

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APPENDIX A: MONITORING PLAN

Monitoring Plan for Activities Associated with the Pebble Project

Prepared for

Pebble Limited Partnership

and

US Army Corps of Engineers

Prepared by

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Version 1.2

June 8, 2020

Monitoring Plan for Activities Associated with the Pebble Project

Purpose

Stephen R. Braund & Associates (SRB&A) has prepared this Monitoring Plan (Plan) for use during monitoring activities that the USACE may require for the Pebble Limited Partnership's (PLP) Pebble Project (Project). Conditions or criteria necessary to indicate where the USACE may require monitoring have been identified in the cultural resource management plan (CRMP) for this Project. Specifically, the purpose of this Plan is to provide clear and concise guidance regarding monitoring procedures and protocols for both monitoring and Project personnel that will be implemented should the USACE require a monitoring activity. This Plan has been prepared by SRB&A based on guidance provided in the Alaska Department of Natural Resources (ADNR), Office of History and Archaeology (OHA) Monitoring Guidelines bulletin (ADNR OHA 2018) and through Project specific consultation with the State Historic Preservation Officer (SHPO), PLP, and the United States Army Corps of Engineers (USACE) along with other Signatory and Consulting Parties to the Project's Programmatic Agreement (PA), executed in 2020.

Outline of Plan

The goal of the Plan is to outline the following aspects of Cultural Resources Monitoring for PLP's Project:

1. Professional Standards
2. Permitting, Access, and Permissions
3. Construction Monitoring Procedures
 - a. Pre-Construction Cultural Resources Briefing and Site Assessment
 - b. Daily Monitoring Responsibilities
 - c. Identification, Notification, Evaluation, and Recordation of Discoveries
 - d. Human Remains
4. Curation of Artifacts
5. Reporting

Professional Standards

Any monitoring event associated with the Project will require an archaeologist. All monitoring efforts must meet the OHA Historic Preservation Series 15 *Monitoring Guidelines* and should be consistent with industry standard practices. Monitoring archaeologists must meet the requirements in *Section 1.5: Roles, Responsibilities and Applicable Standards* of the CRMP for supervisory monitoring archaeologist and monitoring Archaeologist (hereafter Monitors). Tribal Advisors that are appointed or recommended by a Tribe to monitor historic properties that are of traditional cultural, spiritual, or religious significance to a Tribe(s) do not need to meet these requirements (but will work under the supervision of the supervisory monitoring archaeologist). Monitoring must be completed by, or under the direct supervision, of the supervisory monitoring archaeologist. Monitors have the sole authority to issue Stop Work Orders during

monitored activities. Tribal Advisors monitoring Project construction activities under the supervision of a monitor shall immediately notify the monitor if they observe a situation requiring a Stop Work Order.

Permitting, Access, and Permissions

Prior to any monitoring activities, the Cultural Resource Specialist (CRS) will ensure that the necessary cultural resource investigation and access permits have been acquired for monitoring activities. These may include an OHA Field Archaeology Permit, Archaeological Resources Protection Act (ARPA) Permit, a University of Alaska Museum Curation Agreement for artifacts discovered on State of Alaska lands, and Private Landowner Artifact Curation Agreements and Access Permissions with all private landowners. If interviews with knowledgeable tribal members or elders occur to inform monitoring, approvals from village councils or tribal governments may be required.

Monitoring Procedures

This portion of the Plan describes the protocols and procedures to be implemented by the monitors overseeing the relevant monitoring activities within the Project area.

Pre-Monitoring Cultural Resources Briefing and Site Assessment

Monitors (and Tribal Advisors, if engaged) must have attended the Contractor Cultural Resource Awareness Training (see *Section 6: PLP Employee and Contractor Cultural Resources Awareness Training* of CRMP) and attend all Project safety briefings for the work they will be monitoring. The supervisory monitoring archaeologist will conduct a cultural resources briefing for contractors and subcontractors prior to the start of any ground disturbing activities (Attachment A) and will present the boundaries of the area to be monitored, summarize monitoring procedures, and explain Start/Stop Work authorities to those attending. This briefing will be repeated as necessary throughout the duration of the Project (i.e., crew change outs, change of scope). The supervisory monitoring archaeologist will inform the construction team (and any other contractors associated with the ground disturbing activities) of the role of the monitors and Tribal Advisors and briefly summarize the procedures that will be implemented if archaeological or historic resources are encountered. The monitors will coordinate with the equipment operators to establish safety procedures and hand signals that are appropriate to the specific work activity/contractor group that will be used to halt work activities in the event of an inadvertent discovery and will also identify and establish work/contractor specific safety procedures for working around heavy equipment. These procedures will be informed by the types of machinery/equipment being used, the environmental and climatic conditions of the monitoring area, and the scope of the planned construction activities.

Daily Monitoring Responsibilities

Prior to the commencement of each workday, the supervisory monitoring archaeologist will confer with the on-site supervisor to discuss the activities planned for the day. PLP shall designate the on-site supervisor at each location of monitoring associated with the Project. This individual should be intimately familiar with the Project, have access to schedules, contact information, Project designs, and be the point of contact for PLP's Environmental Supervisor. The on-site supervisor shall work in close concert with the monitor(s) to ensure that all areas identified for monitoring activities will have a monitor present prior to

any ground-disturbance to help prevent adverse effects to potential historic properties from the Project activity. Tribal Advisors, if present, will observe activities jointly with the monitor, and will advise the monitor if they identify potential cultural materials during construction activities. The monitor, upon notification from the Tribal Advisor, will halt construction activities and assess discoveries reported by the Tribal Advisor, and if necessary, follow the protocols outlined below regarding inadvertent discoveries.

At least one supervisory monitoring archaeologist must be present for each monitoring event. Additional monitors working under the supervisory monitoring archaeologist may observe ground disturbing construction activities out of visual range of the supervisory monitoring archaeologist only if they are able to communicate with the supervisory monitor archaeologist via cell phone, radios, or another immediate communicative method. The monitors will be on-site to observe construction activities, and will document daily observations on standardized forms including the “archaeological and historic resources briefing acknowledgement form”, the “daily monitoring log”, and the “archaeological and historic resources discovery form” (Attachments A, B, and C).

Monitors must remain at the monitoring location unless the supervisory monitoring archaeologist determines after field observations (and if necessary, in consultation with the USACE and SHPO), that monitoring is no longer necessary in that location. Following completion of the ground-disturbing activities, the monitor will conduct a final site check for the presence of cultural remains.

For monitoring activities, the monitor will have maps and GPS units with sub-meter accuracy, loaded with the historic property boundaries or resource locations, to ensure ground disturbing activities do not disturb areas within the boundaries.

Identification, Notification, Evaluation, and Recordation of Discoveries

In the event that a monitor or tribal advisor identifies cultural material during construction activities associated with the Project, the monitor shall halt work in the vicinity of the find in order to confirm and assess the nature of the discovery. If the materials identified appear to be modern (i.e., approximately younger than 50 years), the monitor will photograph and record the nature of the material on the Daily Monitoring Log. After adequately recording the information and confirming the modern assessment with the supervisory monitoring archaeologist, Project activities may resume. If the materials encountered are non-modern (i.e., appear older than 50 years) or contain possible human remains, then the monitor will follow the protocols outlined in the CRMP and Appendix B of the CRMP for field procedures to follow for inadvertent discoveries of cultural resources and/or human remains.

Human Remains

In the event that human remains are encountered, or if there is any reason to suspect that human remains may have been encountered at any time during ground disturbing activities associated with the Project, the monitor shall immediately call a stop to ground disturbing activities and ensure that the remains are treated with dignity and respect before reporting the discovery in accordance with the procedures outlined in the CRMP and Appendix B of the CRMP for reporting inadvertent discoveries of human remains in the Pebble Project area.

Artifact Curation

The monitor will follow the guidelines set forth in the CRMP and Appendix C of the CRMP relating to the curation of artifacts recovered from state and private lands. As noted above, the monitor will ensure that executed curation agreements from UAMN or private landowners are acquired prior to monitoring activities.

Reporting

Should archaeological or historic resources be discovered or experience unanticipated effects, the monitor will follow the reporting guidelines as stipulated in the CRMP in *Section 5: Inadvertent Discoveries and Unanticipated Effects*. The CRS will describe the results of the monitoring activities for the Project (regardless of whether or not cultural resources are discovered) in a Technical Report. Based on OHA reporting guidelines for monitoring activities, this reporting will summarize all monitoring activities that occurred, including the overall monitoring effort and locations, inadvertent discoveries and effects, avoidance or minimization efforts, monitors and Tribal Advisors that were involved, and other relevant field observations.

References

ADNR OHA, (Alaska Department of Natural Resources Office of History and Archaeology). 2018. Monitoring Guidelines. Number of 15s vols. Vol. 15. Available online at <http://dnr.alaska.gov/parks/oha/hpseries/hp15.pdf>.

Attachment A: Archaeological and Historic Resources Briefing Form for Monitoring Activities

Archaeological and Historic Resources Monitoring Briefing Acknowledgement Form

I acknowledge that I have been briefed by the Monitoring Archaeologist on the types of archaeological or historic resources that may be encountered during the course of project activities. I understand that the Monitoring Archaeologist is authorized to halt ground-disturbing activity, and that any object suspected of being an archaeological or historic resources or skeletal material must be left in place and the discovery reported immediately to the Monitoring Archaeologist and On-Site Supervisor.

DATE: _____

NAME (print)	SIGNATURE (legible)	COMPANY

Attachment B: Daily Monitoring Log

Daily Monitoring Log

Date:	Project Site Monitored:
Monitor's Name:	
Approximate Field Map Coordinates:	
Arrival Time:	Departure Time:
Weather:	Condition of Project Site:
Project Activities Being Conducted:	
Soil Type:	Excavation Depth:
Archaeological or Historic Resources Inadvertently Discovered or Impacted during Project Activities (Y/N)?	
GPS Points Taken (Y/N)?	
Photographs Taken (Y/N)?	

Observations and Findings:

GPS Points:

Photograph Numbers:

Signature: _____

Attachment C: Archaeological and Historic Resources Discovery/Impact Form

Archaeological and Historic Resources Discovery/Impact Form

Date and Time of Discovery/Impact:	Project Site:
Name of Discoverer:	
Activity Occurring at Time of Discovery/Impact:	
Was Work Halted (Y/N)?	
Date and Time Work Halted:	Date and Time Work Resumed:
Was Buffer Zone Established (Y/N)?	Size of Buffer Zone:
Name of Person(s) Documenting Discovery/Impact:	
GPS Points Taken (Y/N)?	
GPS Coordinates:	
Photographs Taken (Y/N)?	
Photograph Numbers:	
Is the Discovery Human Remains or Associated Funerary Objects (Y/N)?	
Is the Resource an Isolate?	
Who was Notified of the Discovery/Impact?	

Detailed Description of Discovery/Impact:

**APPENDIX B: INADVERTENT DISCOVERY AND HUMAN REMAINS FIELD
PROCEDURES AND CONTACT SHEET**

INADVERTENT DISCOVERY AND HUMAN REMAINS FIELD PROCEDURES

If PLP Employees, Contractors, or Visitors Encounter Archaeological or Historic Artifacts, Sites, or Human Remains in the Pebble Project

IMMEDIATELY STOP WORK and secure the discovery from disturbance, then contact PLP's Environmental Supervisor at (907) XXX-XXXX and be prepared to report a brief description of the discovery, its condition, and location

PLP's Environmental Supervisor will report the discovery to the appropriate officials depending on whether human remains are encountered

If Human Remains

Contact Authorities

Alaska State Troopers
Missing Persons Clearinghouse
And
Alaska State Medical Examiner's Office
Reporting Hotline

then contact Landowner

No Human Remains

Contact Landowner

State of Alaska (SHPO/OHA), Iliamna
Natives Ltd, Pedro Bay Corporation,
Salamatof Native Association, Seldovia
Native Association, or Tyonek Native
Corporation
(see Contact Info Below)

AND

Contact Agencies

USACE Project Manager
BSEE (if w/in BSEE ROW)
and
Alaska Office of History and Archaeology
State Historic Preservation Officer

**Contact Cultural Resources
Specialist**

Stephen R. Braund & Associates

CONTACT INFO AND DETAILED STEPS PROVIDED ON REVERSE SIDE

For PLP Field Personnel and On-Site Supervisors

IF YOU ENCOUNTER ARCHAEOLOGICAL OR HISTORIC RESOURCES (INCLUDING HUMAN REMAINS) WHILE IN THE FIELD, IMMEDIATELY STOP WORK AND FOLLOW THESE STEPS:

- Stop all work in the area of the discovery, and take the necessary measures to secure a 100-foot radius work stoppage area around the discovery with high visibility flagging or staking
- Immediately notify PLP's Environmental Supervisor at (907) XXX-XXXX and report as much of the following information of the discovery as possible, including:
 - Description and photographs of the discovery (is it an artifact/site/structure/burial etc.)
 - The location of the discovery (GPS coordinates and general location in the Project area)
 - A general assessment of the condition of the discovery (is it damaged, is it preserved, are there any immediate threats to the preservation of the discovery including erosion or human activities)
- Keep location information confidential, do not share with other PLP contractors that are not directly working at the site, and do not resume work in the area until directed by a PLP supervisor.

For PLP Environmental Supervisor

UPON NOTIFICATION THAT ARCHAEOLOGICAL OR HISTORIC RESOURCES (INCLUDING HUMAN REMAINS) HAVE BEEN ENCOUNTERED, IMMEDIATELY FOLLOW THESE STEPS AND LOG CONTACT ATTEMPTS TO THE INADVERTENT DISCOVERY NOTIFICATION FORM:

- If the resources encountered include human remains, you are legally obligated to immediately contact the Alaska State Troopers Missing Persons Clearinghouse at (907) 269-5038 and the Alaska State Medical Examiner's Office Reporting Hotline (907) 334-2200 and provide them with any information they request.
 - They may send an officer of the peace to examine the remains.
- If no human remains are present, contact the USACE, SHPO, and the landowner on which the discovery occurred:
 - For USACE Project Manager, call Katie McCafferty, Project Manager at (907) 753-2692
 - If within BSEE Right-of-Way, call BSEE Office of the Regional Director at (907) 334-5300
 - For the Alaska State Historic Preservation Officer (SHPO-Judith Bittner) or Richard VanderHoek at the Office of History and Archaeology (OHA) in Anchorage, call (907) 269-8700
 - Note: this will also serve as the contact for discoveries on State land.
 - For Iliamna Natives Limited (INL) land, call (907) 571-1597
 - For Pedro Bay Corporation land, call (907) XXX-XXXX
 - For Salamatof Native Association, Inc. land, call (907) XXX-XXXX
 - For Seldovia Native Association, Inc. land, call (907) XXX-XXXX
 - For Tyonek Native Corporation land, call (907) XXX-XXXX
- Notify Cultural Resource Specialist, Stephen R. Braund & Associates, at (907) 276-8222.
- Provide each contact the following information:
 - A brief description of the project-related activity that encountered the discovery
 - A description of the resources encountered, their current condition, and the protective measures used to safely secure the resource from any anticipated disturbances
- Follow the steps outlined in Section 5 of the Cultural Resources Management Plan for additional steps regarding inadvertent discoveries

FLOW CHART PROVIDED ON REVERSE SIDE

Inadvertent Discovery Notification Form Contact List

Date/Time of Discovery: _____ PLP Environmental Supervisor: _____

Contact Name & Affiliation	Phone #	Email	Date	Time
U.S. Army Corps of Engineers, Alaska District, Regulatory Division				
Katie McCafferty, Project Manager	907-753-2692	Katherine.a.mccafferty2@usace.army.mil		
USACE Regulatory Division	907-753-2712	regpagemaster@usace.army.mil		
BSEE				
Office of the Regional Director AKOCS	907-334-5300	mark.fesmire@bsee.gov		
Jeffery Missal, AK Regional Environmental Officer	907-334-5313	jeffrey.missal@bsee.gov		
Alaska Office of History and Archaeology/SHPO				
Judith Bittner, Chief/State Historic Preservation Officer (SHPO)	907-269-8700	oha.revcomp@alaska.gov		
Richard VanderHoek, State Archaeologist/Deputy SHPO	907-269-8700	oha.permits@alaska.gov		
Pebble Limited Partnership				
James Fuego, Vice-President Permitting	907-339-2612	jamesfuego@pebblepartnership.com		
Tim Havey, Director Environment and Permitting	907.339-2626	timhavey@pebblepartnership.com		
Cultural Resource Specialist				
Stephen R. Braund	907-276-8222	srb@srbak.com		
Jake Anders, Lead Archaeologist	907-786-8416	jake.anders@srbak.com		
Iliamna Natives Limited				
Steve Reimers, General Manager	907-571-1597	steve.reimers@iliamnacorp.com		
Sue Anelon, President		trefsue@arctic.net		
Pedro Bay Corporation				
Matt McDaniel, CEO	907-277-1500	Matt@pedrobaycorp.com		
Salamatof Native Association, Inc.				
Chris Monfor, President/CEO	907-283-7864	cmonfor@salamatof.com		
Seldovia Native Association, Inc.				
Don Kashevaroff	907-868-8006	info@snai.com		
Tyonek Native Corporation				
Connie J. Downing, CAO	907-272-0707			
HUMAN REMAINS CONTACTS				
Alaska State Troopers, Missing Persons Clearinghouse				
Malia Miller	907-269-5038	malia.miller@alaska.gov		
Lt. Paul Fussey	907-269-5682	paul.fussey@alaska.gov		
Alaska State Medical Examiner's Office				
Stephen Hoage, Operations Administration	907-334-2202	stephen.hoage@alaska.gov		
Dr. Cristin Rolf, Chief Medical Examiner	907-334-2200	cristin.rolf@alaska.gov		

APPENDIX C: ARTIFACT CURATION GUIDELINES, FORMS, AND AGREEMENTS

APPENDIX D: GLOSSARY

ACHP (Advisory Council on Historic Preservation) – The ACHP is an independent federal agency that promotes the preservation, enhancement, and productive use of our nation’s historic resources, and advises the President and Congress on national historic preservation policy. The National Historic Preservation Act (NHPA) gives the ACHP the legal responsibility to assist federal agencies in their efforts and to ensure they consider preservation during project planning.

Adverse Effect – An adverse effect is found when an Undertaking may alter, directly or indirectly, any of the characteristics of a historic property that qualify the property for inclusion in the National Register of Historic Places (NRHP) in a manner that would diminish the integrity of the property’s location, design, setting, materials, workmanship, feeling, or association. Adverse effects may include reasonably foreseeable effects caused by the Undertaking that may occur later in time, be farther removed in distance, or be cumulative. The term is consistent with the definition found at 36 Code of Federal Regulations (CFR) 800.5(a)(1).

APE (Area of Potential Effects) – The APE geographic area or areas within which an Undertaking may directly or indirectly cause alterations in the character or use of historic properties, if any such properties exist. The APE is influenced by the scale and nature of an Undertaking and may be different for different kinds of effects caused by the Undertaking.

Consultation – The process of seeking, discussing, and considering the views of other participants, and, where feasible, seeking agreement with them regarding matters arising in the Section 106 process.

Cultural Resource/Cultural Property – A definite location of human activity, occupation, or use identifiable through field inventory (survey), historical documentation, or oral evidence. The term includes archaeological, historic, or architectural sites, structures, or places with important public and scientific uses, and may include definite locations (sites or places) of traditional cultural or religious importance to specified social and/or cultural groups (e.g., “traditional cultural property”). Cultural resources are concrete, material places and things that may be but are not necessarily eligible for the NRHP (BLM Manual 8100).

Cumulative Effects – Cumulative effects result from incremental actions, that when added to other past, present, and reasonably foreseeable future actions, may adversely affect a historic property.

Curation – Refers to the process of selecting and caring for archaeological or cultural materials to be provided to a museum or landowner for future research, exhibit, or instruction. Curation procedures will follow University of Alaska Museum of the North’s Curation Guidelines.

Direct Effects – Direct effects include physical destruction or damage, alteration that is not consistent with 36 CFR 68, removal of a property from a historic location, change in the character of use or physical features that contribute to the historic significance, deterioration through neglect, or introduction of visual, atmospheric, or audible elements that diminish the integrity of a property’s significant historic features. The term is consistent with the definition found at 36 CFR 800.5(a)(2).

DOE (Determination of Eligibility) – A DOE is an evaluation of whether a property is eligible for listing in the NRHP, following guidance provided in the National Park Service Bulletin 15 How to Apply the National Register Criteria for Evaluation.

Historic Property – Any prehistoric or historic district, site, building, structure, or object included in, or eligible for inclusion in, the NRHP maintained by the Secretary of the Interior. This term includes artifacts, records, and remains that are related to and located within such properties. The term includes properties of traditional religious, spiritual, or cultural importance to a Tribe and that meet the NRHP criteria.

Inadvertent Discovery – An unanticipated finding of cultural material (including human remains) as a result of Project activities.

Indirect Effects - Indirect effects to historic properties are those caused by an Undertaking that are later in time or farther removed in distance but are still reasonably foreseeable.

Integrity – The ability of a historic property to convey its significance or meaning and importance. It consists of seven aspects (location, setting, design, materials, workmanship, feeling, and association) that are evaluated for the Property during the DOE process. A property must retain some, but not all, aspects of integrity to be eligible for the NRHP.

Inventory – The term “inventory” is used in this document to refer to all efforts to compile information on historic properties, including consultation, archival research, and fieldwork. The term is similar to survey, but “survey” is used throughout this document to refer to inventory efforts that are field based only.

Materials – The term “materials” refers to any objects, artifacts, specimens, records, or remains associated with historic properties, consistent with the definition found at 36 CFR 79.4(a)(1). This includes all documentation generated during the implementation of this PA, with the exception of information that is subject to confidentiality clauses of NHPA, Archaeological Resources Protection Act, and/or Alaska State law.

NRHP (National Register of Historic Places) – The NRHP is the official list of the Nation’s historic places worthy of preservation. Authorized by the National Historic Preservation Act of 1966, the NRHP is part of a national program to coordinate and support public and private efforts to identify, evaluate, and protect America’s historic and archeological resources.

PA (Programmatic Agreement) – A document that records the terms and conditions agreed upon to resolve the potential adverse effects of a Federal agency program, complex Undertaking or other situations in accordance with 36 CFR 800.14(b).

Project – All aspects, including those not currently defined but may be defined in the future for the Pebble Limited Partnership Undertaking.

Provenance – The chronology of something’s existence including origin, ownership, custody, and location.

Section 106 – Section 106 of the NHPA of 1966 requires federal agencies to consider the effects of projects they carry out, assist, fund, permit, license, or approve throughout the country (known as “Undertakings”) on historic properties. The Section 106 process requires federal agencies to identify historic properties,

assess effects on those properties, and consider alternatives to resolve those effects. Section 106 gives the ACHP, interested parties, and the public the chance to weigh in on these matters before a final decision is made. The ACHP has issued regulations, 36 CFR 800, which guide how agencies should fulfill this responsibility.

SHPO (State Historic Preservation Officer) – Every state and U.S. Territory has a SHPO who, with the support of qualified staff, is charged with: conducting a comprehensive survey of historic properties; maintaining an inventory of historic properties; identifying and nominating eligible properties for the NRHP; advising and assisting Federal, State and local governments in matters of historic preservation; preparing and implementing a statewide historic preservation plan; providing public information, education, training, and technical assistance; and providing consultation for Federal Undertakings under the Section 106 provision of the National Historic Preservation Act.

Stages/Project Stages - Specific construction steps or activities that would occur within each Project Phase or Component (e.g., survey, geotechnical drilling, etc.).

Survey – The term “survey” is used throughout this document to refer to inventory efforts that are field-based only. The term is similar to inventory, but “inventory” is used in this document to refer to all efforts to compile information on historic properties, including consultation, archival research, and fieldwork.

Unanticipated Effects – Unforeseen or unexpected impacts to historic properties that result from an action by the Project.

Undertaking – A project, activity, or program funded in whole or in part under the direct or indirect jurisdiction of a federal agency, including those carried out by or on behalf of a federal agency, those carried out with federal financial assistance, and those requiring a federal permit, license, or approval as defined at 36 CFR 800.16(y).

APPENDIX E: CULTURAL RESOURCE TABLES

Table E-1: Descriptions of AHRs Sites within the Pebble Project APE

AHRS Number	AHRS Site Name	Description ¹	Source
ILI-00001	PEDRO BAY SITE	Site consisting of the surface indications of five semi-subterranean house structures and four subterranean fish storage pits on 25' high ridge projecting some 250 yards north from the base of Pedro Mountain. Four of the houses have two unequally sized rooms connected by short tunnels, all five have entry passages. Townsend excavated here between 1960 and 1967, producing indications of at least two components. The upper component (AD 1750-1800) relates to the, apparently Tanaina, surface features and the lower component (BC 2358 & BC 2370) materials resemble Ocean Bay I and Ocean Bay II artifacts. A third component may also be present.	(Townsend and Townsend 1961, Townsend 1965, Reger and Townsend 1981, Mack 2014, Dumond 1984, Townsend 1969, 1968, 1970, Bradley 1968)
ILI-00005	DUTTON	Mining camp named for G.W. Dutton who was its first postmaster in 1905. The post office was discontinued in 1909. A 1 1/2-story, gable roofed, wood frame structure (possibly the post office/residence) was still standing in August 1988. Some structural damage had occurred to one wall, but the wood throughout the rest of the structure appeared to be with little or no rot.	(Reger 1980, Sacaloff and Sacaloff 1988, Mack 2015)
ILI-00006	CHEKOK	Eskimo village, now abandoned, listed in the 1880 census as "Chikak," with a population of 51. Townsend saw three house pits, two of which were surface and one which was semi-subterranean, in 1960.	(Townsend 1969, Orth 1971)
ILI-00021	LONESOME BAY VILLAGE	Former Native village in an estimated 5 acre clearing.	(ADNR OHA 1973)
ILI-00022	ST NICHOLAS CHAPEL, PEDRO BAY	This 1890 chapel is one of the few to retain its excellent original lines with no obvious alterations. Of hewn-log construction, the main portion forms a 15' square with an adjunct that forms the altar end being in the form of a truncated (five-sided) octagon. There is a gable roof over the square portion and a modified hip roof over the octagonal space. There is a shed vestibule. The roof is shingled and has two crosses. [NATREG] St Nicholas Chapel in the village of Pedro Bay at the eastern end of Lake Iliamna on the Alaska Peninsula was built in 1890. The rectangular building consists of a 15' square nave with a gable roof and a five-sided octagonal altar area with a hip roof. There is a small shed roof vestibule at the W of the structure. The log structure is covered with tar paper on the S side. The shingled roof houses two unadorned crosses, the larger one at the center of the roof and the lesser one at the W end of the ridge line.	(Kreta 1979b, a, Unknown 1979, Hoff 2007)
ILI-00026	ILI-00026	Two slightly semi-subterranean houses in the trees. Although not tested, the houses are believed to be slightly later than those at ILI-001 and ILI-003.	(Hoff 2007)
ILI-00027	WHITE ROCK SITE	Three large, single room, slightly semi-subterranean house on a ridge above a dry marsh. One house was partially excavated by Townsend in 1969. The site apparently equates in time with ILI-003. Yarborough noted that the site consists of two house pits and six cache pits on a south sloping ridge between two small streams. Both of the house pits have only a single room and only the smaller has an obvious entry way. The larger depression, the southern third of which	(Townsend 1969, Hoff 2007, Yarborough 1985a, b)

Table E-1: Descriptions of AHRs Sites within the Pebble Project APE

AHRs Number	AHRs Site Name	Description ¹	Source
		Townsend excavated, measures 7.4m x 6.5m x .6-.7m deep (two possible entryways were later noted in its west wall). The other, smaller and shallower, depression measures 4.3m x 3.5m, with a 1.1m wide entry. Five of the six cache pits are rectangular to almost square, while the sixth is nearly round. They range in size from 1.35m x .9m to 3.2m x 3m and are .45-1m deep. The largest may be the feature that Townsend counted as a house pit.	
ILI-00032	KNUTSON BAY	Townsend reported that four to five houses were located at the head of Knutson Bay, within a quarter of a mile of each other. Three of them are on the trail behind the house of Mr. Fred Blayden. Three of the houses in the area were single room surface dwellings, measuring 20' x 20'. The other two are double room, semi-subterranean structures; the larger room measures 20' x 20', the smaller room measures 10' x 10'.	(Townsend 1968)
ILI-00043	ILIAMNA MISSION, ILIAMNA VILLAGE	Abandoned site of a Russian Orthodox church identified on USS No. 893 (1908). Villagers moved to Pedro Bay 1940-1941.	(ADNR OHA 1979)
ILI-00047	ILI-00047	Yarborough located six cache pits on the west shore of a salmon spawning pond, just south of the road right-of-way. The pits are oval to rectangular in shape, and measure from .9m x .8m x .5m deep to 2.1m x 1.8m x 1m deep.	(Hoff 2007)
ILI-00048	ILI-00048	Yarborough located a total of three house pits and five cache pits within the originally proposed road right-of-way, 320' southwest of runway station 11+13. The houses measured 3.9m x 3.7m x .5-1.1m deep, 3.2m x 2m x .4m deep, and 2.9m x 2.6m x .4-.6m deep. The cache pits measured from 2.4m x 2m x .55-.6m deep to .83m x .55m x .55-.8m deep.	(Hoff 2007, Yarborough 1985a, b)
ILI-00049	ILI-00049	[AHRs] Yarborough located four large multi-room house pits and five cache pits surrounded by a fairly thick growth of black spruce and alders. House 1 has a 7m x 5m main room, a 3.5m x 3m room off its east wall, and an entry way in its west wall. House 2 has a 9m x 7m main room, a 3m x 2m room to the east, and a 4m x 3m room at its northwest corner. House 3 has a 7m x 6m main room, a 3m x 4m room off its southwest wall, and an entry way in its northwest wall. House 4 has a 7m x 6m main room, a 3.5m x 3m room off its west wall, and an entry way in the east wall. Two small round cache pits are adjacent to House 2; three larger rectangular cache pits were noted adjacent to House 3, adjacent to House 2, and between House 1 and House 2. A test in the center of House 1 revealed an approx. 20cm thick layer of charcoal and fire cracked rock, with some animal bone, under 9cm of humus and 4cm of ash. [DOE] Site ILI-049 consists of four large, multi-roomed house pits and several smaller cache pits.	(Hoff 2007)
ILI-00050	ILI-00050	Yarborough located a single house pit and two possible cache pits within the right-of-way of the proposed runway. The house measured about 4m x 4m x 1m deep. The features is within what appeared to be an old stream channel. Although two tests failed to yield cultural material, Yarborough was confident that this was a house pit, as the walls are almost vertical and the depression is deeper than the rest of the channel.	
ILI-00052	AC POINT	[No Description in AHRs]	(ADNR OHA 1985)

Table E-1: Descriptions of AHRS Sites within the Pebble Project APE

AHRS Number	AHRS Site Name	Description ¹	Source
ILI-00057	HANAK SITE	BIA investigators noted one or two house pits and several small cache pits on the northwestern shore of this large lake. Three 50cm x 50cm subsurface tests, excavated to a depth of 5-60cm, revealed only a possible organic staining about 15cm below the surface. The site apparently postdates the 1912 Katmai Ash.	(BIA 1988b)
ILI-00131	Iliamna River Bridge	Built around 1934, this bridge originally spanned Eagle River, north of Anchorage. It was relocated in 1946 to its present location on the Williamsport to Pile Bay Road. The bridge is a Stratton standard riveted steel through truss, with timber decking plank. The bridge measures 180' long by 12' wide. It is enclosed by steel girders with an opening 11'8" high by 12' wide. Most recent bridge repairs were done in 1997. A temporary bridge was built alongside the original in 2003.	(ADOT&PF 2003b, a)
ILI-00132	WILLIAMSPORT TO PILE BAY ROAD	[AHRS] The Williamsport to Pile Bay Road is a 1 lane, 15.5mi. seasonal road that provided the shortest surface route for six communities around Iliamna Lake. The road follows a traditional Dena'ina Athabascan trail portage over the Chigmit Mountains and was originally built in the 1930's by the Alaska Road Commission. By 1932, the road supported small truck traffic. With the installment of the Iliamna River Bridge in 1946, the portage terminus changed from the Iliamna River at Foss's Landing to Pile Bay at Lake Iliamna. Lyle and Carl Williams subsequently began a truck freighting business, with Lyle at Pile Bay and Carl at Williamsport. The road expansion combined with the Williams' freighting operations provided an opportunity that allowed boats direct overland access to Lake Iliamna and Bristol Bay. Carl took the first Bristol Bay fishing boat over the Portage around 1938. [DOE] The road follows a traditional Dena'ina Athabascan trail portage over the Chigmit Mountains. Near the summit the dirt road is less than 11' wide with a 750' drop. Improvements began in 1917 to the trail. In 1937 the W terminus of the road was rerouted to Pile Bay. The road is now one lane, 15.5 miles long, used seasonally.	(DePew, McLain, and Schneider 2006, Lane 2007, ADOT&PF 2007, Tompkins 2009, ADOT&PF 2003a)
ILI-00135	ILI-00135	[AHRS] The site consists of a single large cache pit on a prominent bluff immediately E of a stream. The stream supports a large spawning population of sockeyes. The cache pit is roughly square, 3.5m x 3.5m and 1.25m in depth. Tests conducted inside and adjacent to the pit were all negative. The pit contained approx 5cm of Katmai Ash, so its excavation predates 1912. The ash appears to have been compressed so it is possible that the pit was also in use after 1912. [DOE] Site is a large square depression. It has a depth of approx 1.25m and a width of 3.5m. Single test inside pit revealed approx 5cm of Katmai ash beginning at a depth of 10cm below ground surface and excavated to a depth of 50cm with no cultural material recovered.	(Hedman 2003)
ILI-00185	ILI-00185	Site consists of a hearth and lithics in a widened niche formed in the crack of a massive colluvially deposited stone mass as the base of the Back Range. A 2" thick charcoal stained layer was located 21" below surface. The surrounding matrix was cube shaped decomposed bedrock and silt. A granite adze or wedge (from locally available granite) and a burin (from non-local bedrock) were located in the test unit. The charcoal was dated to BP 1560+/-80 (Beta 208530).	(SRB&A 2006)

Table E-1: Descriptions of AHRS Sites within the Pebble Project APE

AHRS Number	AHRS Site Name	Description ¹	Source
ILI-00186	ILI-00186	Site consists of a lens hearth surrounded by stones. The center of the hearth was a light gray ash with a lens of black charcoal and stained soil above and below the ash. The fire pit was level with the surrounding ground indicating the hearth was dug into the ground. A charcoal sample was AMS dated to BP 430+/-40 (Beta 208531). Site may have other buried cultural materials, as it is above an easily accessible shingle beach near a well known halibut fishing "hole".	(SRB&A 2006)
ILI-00196	ILI-00196	Site consists of an isolated artifact located on an alluvial fan next to a stream bed. It appears to be a biface reduction flake made of gray chert. Intensive testing of the surrounding area failed to locate further cultural material. No gray chert source material was located nearby.	(SRB&A 2006)
ILI-00212	ROCK STACK AND CIRCLE SITE	A one meter diameter circle of cobbles with a very large cobble in the center. The rocks appear to be larger and rounder than the rocks in the surrounding area, which are fractured and heavily covered with black lichen. Nearby (50m) is a collapsed stack of similar stones	(SRB&A 2009)
ILI-00214	WIGGLY LAKE CAMP 2	This site consists of two rock features, a deposit of rifle cartridges of two different calibers, and some antler and bone pieces. The fire ring is on a gravel outwash terrace above Wiggly Lake with a relatively steep slope to the water providing a good overview to the southwest. The fire ring is a circle nearly a meter in diameter with a line of rocks bisecting the circle down the center. Some burned material was visible beneath the rocks. Nearby to the southeast was an area with numerous cartridges including .223, .338 and 7mm magnum rounds and a tent ring about 12 feet in diameter consisting of 5-8 cobbles resting on the surface of the tundra. Possible stakes made from antler and bone fragments are also nearby.	(SRB&A 2009)
ILI-00215	WIGGLY LAKE CAMP 3	The site consists of a ring of cobbles approx 12' in diameter on the surface of the tundra.	(SRB&A 2009)
ILI-00216	WIGGLY LAKE CAMP 4	This site consists of a 20' diameter ring of large cobbles on a flat stretch of tundra. Nearby were [sic.] several sets of caribou antlers. Associated surface finds included some food wrappers, water and oil bottles, and stakes made from antler and bone	(SRB&A 2009)
ILI-00217	WIGGLY LAKE CAMP 5	This site is a relatively large camp on an esker that includes a tent ring approximately 20 feet in diameter consisting of large cobbles. A plastic water container with bear bite marks, a kerosene can, a firewood stockpile and a stacked pile of caribou antlers were found below the esker on a flat area of tussock tundra. Nearby on the tussock flats a horseshoe pitch with horseshoes and rebar pins were found. A few fire pits were on the flats toward the lake in tussock tundra.	(SRB&A 2009)
ILI-00218	ISOLATED LITHIC FIND	This site consisted of one possible microblade or blade core. The core was found on the surface of the tundra. No other lithics were found on the surface or in test pits excavated nearby.	(SRB&A 2009)
ILI-00226	ILI-00226	Site consists of lithic debitage recovered from a subsurface context. This site is at the S-most point of the dissected triangular plateau that includes the sites ILI-221 and ILI-227. Two shovel tests yielded 13 flakes, cultural material was 0-20cm bs. The site is not delineated.	(SRB&A 2010)
ILI-00241	ILI-00241	Site is a prominent knoll with bedrock outcroppings of flysch material, with veins of quartz and chalcedony interbedded with the host material. This site is smaller than the similar site ILI-240, with two outcrop mounds surrounded by an area of bare bedrock in the form of fractured slate	(SRB&A 2010)

Table E-1: Descriptions of AHRs Sites within the Pebble Project APE

AHRS Number	AHRS Site Name	Description ¹	Source
		material. The knoll is surrounded by a, litter of quarts fragments including clear, milky and fractured pieces. This distribution of material may indicate that the site had been used by prehistoric tool makers, with the fragments examined and the unusable ones discarded.	
ILI-00244	ARC CAMP ADJACENT TO WILLIAMSPORT-PILE BAY ROAD	AHRS card lacks site description	(Cassell 2010)
ILI-00247	WILLIAMSPORT HISTORICAL OCCUPATION/LAND USE AREA	Cultural remains located at Williamsport on the Williams family property include the former cement foundation of Carl Williams' home. A modern cabin has been built on the 1940s cement foundation, although three sides of the foundation are still visible. The original foundation is estimated to have been about 20 ft X 20 ft. Also present are the remains of the log cabin lived in by Ed McCammet and later by the Williams family. It is possible that this log cabin was once the ARC cabin at Williamsport, given that Ed McCammet was reported to have lived in the ARC cabin. The cabin has collapsed and the remaining timbers are largely embedded in river sediments and gravels and in poor condition. A gravesite is also present. The property currently contains gravel roadpads, numerous storage and staging areas, and a standing building.	(Cassell 2010)
ILI-00251	ILI-00251	Site consists of two flakes of green silicified mudstone on an eroded blowout surface. One flake is blade-like. The location is an excellent hunting area as game trails run in the bottom of the canyon. The canyon below the site is the choke point for entry to the G Valley, which cuts through the mountain roughly NNE to SSW with a pass leading to the South Fork Kuktuli from the North Fork Kuktuli and broad areas of relatively shallow sloped well vegetated land in the valley. In 2013, archaeologists from Stephen R. Braund & Associates (SRB&A) returned to the site and conducted subsurface testing to identify additional cultural material and define the boundaries of the site. SRB&A excavated 17 shovel tests at regular intervals across the landform away from the terrace edge. None of the subsurface tests were positive.	(SRB&A 2011a, 2014)
ILI-00254	ILI-00254	ILI-00254 is a modern to historic winter fur trapping camp located in a cottonwood patch on the south side of Groundhog Mountain along a tributary of Upper Talarik Creek. The creek drains a lake higher up on the mountain which is located in a steep walled canyon. The site consists of two square flat areas that were leveled out to approximately the size of a 10x10 foot wall tent, with the downhill area cut into the root bed of a large cottonwood tree. The uphill area was leveled with less cutting into the soil. Near these tent footprints, cottonwood tree limbs were removed with an axe in the past while one tree in the patch had an axe cut blaze on it to indicate where the camp was. On the surface was a well rusted steel round gasoline can with a Chevron logo still visible where it lay. Local person indicated that the site probably belonged to either Butchy Hobson or one of the Kuktelash family from Nondalton and was a winter fur hunting camp at least 30 years in age.	(SRB&A 2011a)

Table E-1: Descriptions of AHRS Sites within the Pebble Project APE

AHRS Number	AHRS Site Name	Description¹	Source
ILI-00260	ILI-00260	Site is on top of a moraine at the outlet of Frying Pan Lake and consists of 54 pieces of lithic debitage and a carbon sample from between 0 and 5cm below surface in one subsurface test. Three other subsurface tests on the landform did not reveal additional cultural materials. The moraine is oriented E to W and is bounded by a draw on its N side, a creek valley on its S and the lake outlet which flows perpendicular to the moraine at its E end. The moraine slopes uphill to the W, culminating in a knoll before merging with the lower slope of Kaskanak Mountain. The position of the moraine and knoll with its view of Frying Pan Lake and the lake valley suggest the site was used as a hunting lookout. In 2013, archaeologists from Stephen R. Braund & Associates (SRB&A) returned to ILI-00260 to conduct subsurface testing to better define the site boundaries. SRB&A excavated 12 shovel tests, none of which were positive for cultural material.	(SRB&A 2012b, 2014)
ILI-00261	ILI-00261	Site is on a glacial ridge. The ground surface is up to 50 percent exposed till and gravel. The cultural materials at the site consists of one piece of lithic debitage observed on the surface among the gravel. Two subsurface tests conducted on the ridge did not result in the identification of a subsurface component at the site.	(SRB&A 2012b)
ILI-00269	PGCO4 2012-3	On the slope of a small ridge, this feature consists of a collection of cobbles. These cobbles are stacked in a semi-circular pattern with the opening facing down-slope to the N. The view shed is comprised of the valley with one of the Talarik's tributaries. The stones appear to have been settled for at least 20 years.	(SRB&A 2013)
ILI-00293	ILI-00293	"Fire ring" exposed by private landowner during original clearing for garden, reported to have been under "several feet of soil". Current landowner reported that the area was protected and now supports a re-vegetated stand of spruce trees on the S side of the existing garden area (which at the time of reporting had been present for 20+ years). Additional clearing in the area did not expose further material. [Reported in 2015 through NRCS consultation for a high tunnel that would cover the garden area].	(ADNR OHA 2016a)
ILI-00296	Knutson Creek Cache Pits	The site consists of six cultural depressions, which are likely cache pits, arrayed across a broad terrace approximately 15A above the creek level. These features are arranged in a semi-circle, extending from the terrace edge above Knutson Creek to the base of the slope to the east. This well drained terrace is about 20 to 25 feet above the creek and is covered with spruce and birch forest. The features are small, averaging 1.0 by 1.2 m in size and 30 cm deep. Four sub-surface tests were excavated at this site, with three in the depressions and one in an adjacent area for comparison of deposits. No artifacts were found within these tests, although Features 2 and 3 did contain disturbed sediments and charcoal. Charcoal samples were collected for possible analysis	(ADNR OHA 2019)
ILI-00302	East Newhalen Site	The East Newhalen Site is a multicomponent subsurface and surface site discovered in August 2019. The site contains two stratigraphically distinct subsurface prehistoric components and one historic surface component that occupy a terrace on the east/southeast side of the Newhalen River. Cultural materials at the site consist of lithic debitage and tool fragments, undecorated	(SRB&A 2020)

Table E-1: Descriptions of AHRS Sites within the Pebble Project APE

AHRS Number	AHRS Site Name	Description ¹	Source
		fragments of sand-tempered ceramics, fire cracked rock, a possible subsurface hearth, as well as multiple charcoal and ash features that may or may not be cultural. Lithic artifacts include over 100 waste flakes, blade-like flake fragments, and possible formal bifacial tool fragments. A single unmodified historic 'Blazo' fuel can was also identified on the site's surface. The site terrace stands out as one of the few level areas along this section of the river which is otherwise flanked by a steep hill. Although level relative to the adjoining slope, the surface of the site terrace is covered in large natural hummocks and deep, narrow swales that may be obscuring cultural features such as cache pits. A well-worn trail follows the edge of the terrace and may be associated with a historic trail identified during interviews with knowledgeable residents. The site is also within one mile of dozens of other interview-identified historic trails, camps, meeting spots, and subsistence use areas that may be associated with the site.	
ILI-00303	West Newhalen Site	The West Newhalen Site is a multicomponent surface and subsurface site consisting of historic hunting and camp materials found just below the existing ground cover vegetation and leaf litter, as well as buried lithic debitage (two waste flakes) recovered from one subsurface test at the site. There are also numerous saw-cut tree stumps located in the vicinity of the artifact concentration. The site is situated on a small (~6m x 6m) bench approximately 2m above the highwater level at the base of a steep bluff on the west bank of the Newhalen River. Historic artifacts identified at the site include a complete, but degraded bolt-action rifle, a single nail, two food cans (one with a leadsolder seal), a small tin, a large modified fuel can, a glass insulated metal thermos, a single spent brass casing, a brass packing slide, and a few small fragments of clear glass. Vegetation at the site consists of mixed birch-spruce forest with an open grass-fern-sphagnum understory	(SRB&A 2020)
ILI-00304	West Newhalen Site 2	Subsurface archaeological site with two potential components and surface features that may be cultural in origin. Two positive test pits revealed lithic debitage and formal tools, including a small bifacial implement similar to those of the Brooks Gravels Phase of the Naknek River.	(SRB&A 2020)
ILI-00305	West Newhalen Site 3	Subsurface archaeological site consisting of a single large flake recovered from a shovel test. Subsequent testing around the initial positive test did not yield additional cultural material.	(SRB&A 2020)
ILI-00306	East Newhalen Site 2	Subsurface archaeological sites with variety of lithic material types, fire-cracked rock, and possible hearth feature(s).	(SRB&A 2020)
SEL-00164	Clabo Midden Site	This site consists of blue mussel shell midden with charcoal, some bone, and massive stone mauls. The midden is in the Clabo garden. No surface features were seen and no testing was done. The site area would have been covered with Sitka Spruce before clearing.	(ASRC 2016)
SEL-00368	Whiskey Gulch Site 1	During a survey of a high probability zone near Whiskey Gulch a total of five shovel tests were carried out in a localized undisturbed area within a gently-sloping landform on a coastal bluff.	(Guilfoyle and Stern 2013)

Table E-1: Descriptions of AHRs Sites within the Pebble Project APE

AHRs Number	AHRs Site Name	Description ¹	Source
		One shovel test was positive revealing possible flaked stone artifacts at a depth of approx. 63cm BS. This included a bipolar flake (with a crushed distal platform) and a possible core fragment.	
SEL-00379	Sterling Highway	The Sterling Highway is approximately 138 miles long and runs from the Seward Highway to the end of the Homer Spit. The highway is owned by the Alaska DOT&PF and is located within the Kenai Peninsula Borough. From the eastern terminus at Mile 36.495 on the Seward Highway, the Sterling Highway runs west through a portion of the Chugach National Forest and continues through the community of Sterling and the city of Soldotna, where it provides access to the Kenai Spur Highway leading to Kenai and Nikiski. The Sterling Highway then runs south, approximately parallel to the western coastline of the peninsula and the Cook Inlet, providing access to Kasilof and passing through the communities of Ninilchik and Anchor Point before terminating in Homer at the ferry terminal located at the end of a 5-mile sand spit. Construction began in 1947 and the highway was formally opened to the public in 1950. (A portion of the Sterling Highway designated as Interstate Highway System is under the Interstate Exemption [2005] and is exempt from Section 106 Review.)	(Hunt 2014, ASRC 2016, NLUR and Hunt 2017)
¹ Description taken verbatim from AHRs Cards			

Stephen R. Braund & Associates, 2020.

Table E-2: NRHP Eligibility Status and Cultural Resource Type of AHRs Sites within the Pebble Project APE

AHRs Number	NRHP Eligibility	Cultural Resource Type	Within Construction Footprint?
ILI-00001	NDE	Archaeological Site	
ILI-00005	NDE	Other Historic Structures	
ILI-00006	NDE	Village; Archaeological Site	
ILI-00021	NDE	Village	
ILI-00022	NHR	Other Historic Structures	
ILI-00026	NDE	Archaeological Site	
ILI-00027	NDE	Archaeological Site	
ILI-00032	NDE	Archaeological Site	
ILI-00043	NDE	Other Historic Structures	
ILI-00047	NDE	Archaeological Site	

Table E-2: NRHP Eligibility Status and Cultural Resource Type of AHS Sites within the Pebble Project APE

AHS Number	NRHP Eligibility	Cultural Resource Type	Within Construction Footprint?
ILI-00048	NDE	Archaeological Site	
ILI-00049	DOE-S	Archaeological Site	
ILI-00050	NDE	Archaeological Site	
ILI-00052	NDE	Place Name	
ILI-00057	NDE	Archaeological Site	
ILI-00131	DOE-S	Other Historic Structures	
ILI-00132	DOE-S	Trail/Route	X
ILI-00135	DREJ-S	Archaeological Site	
ILI-00185	NDE	Archaeological Site	
ILI-00186	NDE	Archaeological Site	
ILI-00196	NDE	Archaeological Site	
ILI-00212	NDE ³	Archaeological Site	
ILI-00214	NDE	Camp	
ILI-00215	NDE	Camp	
ILI-00216	NDE	Camp	
ILI-00217	NDE	Camp	
ILI-00218	NDE ³	Archaeological Site	X
ILI-00226	NDE ⁴	Archaeological Site	
ILI-00241	NDE	Material Source	
ILI-00244	NDE ³	Camp	
ILI-00247	NDE ³	Cabin; Grave/Burial	
ILI-00251	DREJ-S	Archaeological Site	X
ILI-00254	NDE	Camp	
ILI-00260	NDE ⁴	Archaeological Site	
ILI-00261	NDE ³	Archaeological Site	
ILI-00269	NDE ³	Camp	
ILI-00293	NDE	Archaeological Site	

Table E-2: NRHP Eligibility Status and Cultural Resource Type of AHRs Sites within the Pebble Project APE

AHRs Number	NRHP Eligibility	Cultural Resource Type	Within Construction Footprint?
ILI-00296	NDE	Archaeological Site	
ILI-00302	NDE	Archaeological Site, Camp	
ILI-00303	NDE	Archaeological Site, Camp	
ILI-00304	NDE	Archaeological Site	
ILI-00305	NDE ³	Archaeological Site	X
ILI-00306	NDE ⁴	Archaeological Site	X
SEL-00164	NDE	Archaeological Site	
SEL-00368	NDE	Archaeological Site	
SEL-00379	DREJ-S	Trail/Route	
¹ Descriptions verbatim from AHRs ² NRHP Eligibility status based on AHRs database as of 6/1/20. ³ Recommended Not Eligible by SRB&A (SRB&A 2020 and 2019b) ⁴ Recommended Eligible by SRB&A (SRB&A 2020 and 2019b)			
NRHP Eligibility Codes: NDE – No Determination of Eligibility; DREJ-S - Determined not eligible by agency and SHPO concurs; DOE-S - Determined Eligible through SHPO; NHR - Listed on NRHP			

Stephen R. Braund & Associates, 2020

Table E-3: Descriptions of IICRs within Pebble Project APE

IICR Number	Community	Cultural Resource Type	Feature Type Description	Within Construction Footprint?
IICR-0002	Iliamna	Trail/Route	Horse/dog team trail from Iliamna to Williamsport	X
IICR-0003	Iliamna	Trail/Route	Trail from Iliamna to the Landing on the Newhalen River	X
IICR-0004	Iliamna	Trapline	Iliamna trapline south of Roadhouse Mountain	X
IICR-0005	Iliamna	Cabin	Cabin on Newhalen River near Horseshoe Lake	
IICR-0007	Iliamna	Cabin; Grave/Burial	Cabin and graves near base of Roadhouse Mountain	
IICR-0011	Iliamna	Village	Old village and cabins at "Goose Bay" near Hedlunds	

Table E-3: Descriptions of IICRs within Pebble Project APE

IICR Number	Community	Cultural Resource Type	Feature Type Description	Within Construction Footprint?
IICR-0012	Iliamna	Historic Objects	Cairn located along travel route between Williamsport and Iliamna	
IICR-0013	Iliamna	Archaeological Site; Grave/Burial; Village	Village and burials inland on Young's Creek (near Chekok bay)	
IICR-0014	Iliamna	Harvest Location/Traditional Use Area	Traditional hunting and trapping area near Groundhog Mountain	X
IICR-0015	Iliamna	Harvest Location/Traditional Use Area	Traditional caribou hunting area near Frying Pan Lake	X
IICR-0018	Iliamna	Archaeological Site; Grave/Burial; Village	Old village and burials inland along Canyon Creek	
IICR-0020	Iliamna; Newhalen	Cabin; Other Historic Structures	Cabin/reindeer station in Eagle Bay associated with Ignatia Delkittie	
IICR-0071	Kokhanok	Trail/Route	Old dog team trail between Iliamna and Sixmile Lake	X
IICR-0094	Kokhanok	Trail/Route	Community Routes: Kokhanok Traditional Travel Routes	X
IICR-0115	Newhalen	Camp	Camp along Newhalen River at the mouth of Alexcy Creek for spawnout salmon	
IICR-0120	Newhalen	Trail/Route	Winter trail from Newhalen to Lake Clark	X
IICR-0121	Newhalen	Trail/Route	Riverside trail along the west side of the Newhalen River	
IICR-0122	Newhalen	Trail/Route	Trail from Stonehouse Lake to Sixmile Lake via east side Roadhouse Mountain	X
IICR-0129	Newhalen	Grave/Burial	Burials north of Iliamna on the east side of the Newhalen River	X
IICR-0130	Newhalen	Trail/Route	Trail from Kijik to Old Iliamna	X
IICR-0131	Newhalen	Trail/Route	Community Routes: Newhalen Traditional Travel Routes	
IICR-0135	Iliamna; Newhalen; Pedro Bay	Archaeological Site; Cabin; Harvest Location/Traditional Use Area	Traditional use area for spawned out salmon near head of Knutson Bay associated with cabins and archaeological sites	
IICR-0136	Iliamna; Newhalen; Nondalton	Battleground; Grave/Burial; Place to Avoid/Spooky Place; Places with Legends or Beings; Spiritually Important Place	Roadhouse Mountain also known as "Shaman's Mountain" or "Giant Mountain." Includes sacred areas, spooky places to avoid, hairy man sightings, burials, battleground, and stone structures/shelters near summit.	X
IICR-0138	Nondalton	Trapline	Trapping area on Boys' Mountain	
IICR-0139	Nondalton	Trail/Route	Trail from Nondalton to Upper Talarik Creek	X

Table E-3: Descriptions of IICRs within Pebble Project APE

IICR Number	Community	Cultural Resource Type	Feature Type Description	Within Construction Footprint?
IICR-0140	Nondalton	Historic Objects; Place to Avoid/Spooky Place	Wien air plane crash site up Knutson Creek	
IICR-0141	Nondalton	Camp	Camps on the south side of Frying Pan Lake	
IICR-0142	Nondalton	Camp	Camp at outlet of Frying Pan Lake	
IICR-0143	Nondalton	Trail/Route	Horse trail from Sixmile Lake to Eagle Bay via east side of Roadhouse Mountain	X
IICR-0144	Nondalton	Trail/Route	Trail by dog team from Old Iliamna to Seversons along the beach	X
IICR-0145	Nondalton	Camp	Fish camp located on west side of the Newhalen River	
IICR-0148	Newhalen; Nondalton	Village	Modern village of Pedro Bay	
IICR-0149	Nondalton	Camp	Fish camp located along east side of the Newhalen River	
IICR-0150	Nondalton	Camp	Cottonwood patch used for camping north of Kaskanak Mountain	
IICR-0151	Nondalton	Trail/Route	Trail from Tanalian to Hedlunds via Tazimina Lakes	X
IICR-0152	Nondalton	Camp	Sandy beach camp on the north end of Frying Pan Lake	
IICR-0153	Nondalton	Camp	Wooded outlet stream camp on the south end of Frying Pan Lake	
IICR-0154	Nondalton	Camp	Camp and burials located at Portage Landing on west side of Newhalen River	
IICR-0155	Nondalton	Battleground	Battle site north of Petroff Falls west of the Newhalen River	X
IICR-0156	Nondalton	Trail/Route	Trail from Nondalton along west side of Newhalen River to bird camp and caribou hunting area	X
IICR-0157	Nondalton	Other Historic Structures	Reindeer corral on the west side of Newhalen River south of Sixmile Lake	
IICR-0158	Nondalton	Camp	Cottonwood patch used for camping west of Groundhog Mountain	
IICR-0159	Nondalton	Trail/Route	Nondalton water routes across Iliamna Lake	
IICR-0160	Newhalen; Nondalton; Pedro Bay	Trail/Route	Williamsport to Pile Bay road	X
IICR-0161	Nondalton	Village	Hedlunds site near Chekok Point	
IICR-0162	Nondalton	Portage	Portage over Knutson Creek	
IICR-0163	Nondalton	Camp	Vern Jensen's allotment and camping area	

Table E-3: Descriptions of IICRs within Pebble Project APE

IICR Number	Community	Cultural Resource Type	Feature Type Description	Within Construction Footprint?
IICR-0164	Nondalton	Village	Old village near head of Lonesome Bay	X
IICR-0166	Nondalton	Grave/Burial	Burial located near Portage Landing on the east side of the Newhalen River	
IICR-0167	Nondalton	Trail/Route	Trail by dog team from Sixmile Lake to Chekok Bay/Hedlunds	X
IICR-0168	Nondalton	Trail/Route	Foot trail from Pickerel Lakes to Chekok Bay	X
IICR-0169	Nondalton	Trail/Route	Trail from Pedro Bay to Cook Inlet called "Giant's Trail"	
IICR-0170	Nondalton	Trail/Route	Community Routes: Nondalton Traditional Travel Routes	X
IICR-0171	Nondalton	Trail/Route	Road/Trail/Route between Nondalton and Iliamna	X
IICR-0172	Nondalton	Trapline	Trapline extending from Sixmile Lake and south of Groundhog Mountain	
IICR-0173	Nondalton	Camp; Harvest Location/Traditional Use Area	Camp and traditional caribou hunting area at Frying Pan Lake	X
IICR-0174	Nondalton	Camp	Hunting camp south of Groundhog Mountain	X
IICR-0175 ¹	Nondalton	Camp	Fish Camp on east side of Newhalen River near mouth of Alexcy Creek	
IICR-0177	Nondalton	Camp	Cottonwood Camp south of Groundhog Mountain	
IICR-0178	Nondalton	Camp	Camp and traditional meeting area in cottonwood patch near Black Mountain west of Groundhog Mountain	
IICR-0179	Nondalton	Harvest Location/Traditional Use Area	Sacred fishing grounds from Nondalton to the landing on the Newhalen River	X
IICR-0180	Nondalton	Harvest Location/Traditional Use Area	Traditional fishing area for steelhead trout at Frying Pan Lake	
IICR-0181	Nondalton	Harvest Location/Traditional Use Area	Clam harvesting area in Cottonwood Bay (Cook Inlet)	X
IICR-0182 ¹	Nondalton	Spiritually Important Place	Groundhog Mountain - important landscape feature for maintaining cultural identity and for subsistence practices	
IICR-0183	Nondalton	Harvest Location/Traditional Use Area	Traditional fishing, trapping, caribou, and moose hunting area near Sharp Mountain, headwaters of Koktuli river, and Groundhog Mountain.	X
IICR-0184	Nondalton	Camp; Harvest Location/Traditional Use Area	Traditional use area south of Nondalton with camps for fishing and hunting; referred to as Steam Bath Creek	
IICR-0186	Pedro Bay	Camp	Old camp along Pile River	
IICR-0187	Pedro Bay	Camp	Old family camp located in Iliamna Bay	

Table E-3: Descriptions of IICRs within Pebble Project APE

IICR Number	Community	Cultural Resource Type	Feature Type Description	Within Construction Footprint?
IICR-0188	Pedro Bay	Grave/Burial	Burials at Lonesome Bay	X
IICR-0189	Pedro Bay	Trail/Route	Trail to Knutson Bay - Knutson Trail (newer trail)	
IICR-0190	Pedro Bay	Trail/Route	Trail to Knutson Bay - Old Knutson Trail	
IICR-0191	Pedro Bay	Trail/Route	Trail from Pedro Bay to Pile Bay (RS2477 trail/USGS 250k Trail) - Old Horse Trail	X
IICR-0192	Pedro Bay	Trapline	Trapline along Iliamna River	X
IICR-0193	Pedro Bay	Trapline	Trapline and traditional hunting area along Pile River	X
IICR-0194	Pedro Bay	Trail/Route	Trail to Old Iliamna	X
IICR-0195	Pedro Bay	Archaeological Site	House pits in Knutson Bay	X
IICR-0196	Pedro Bay	Archaeological Site	House pits in Knutson Bay	
IICR-0197	Pedro Bay	Archaeological Site	Hearth site at Rabbit Point southeast of Pedro Bay	
IICR-0198	Pedro Bay	Harvest Location/Traditional Use Area	Traditional ice fishing area at Dumbbell Lakes	
IICR-0199	Pedro Bay	Camp	Camp and stopping area called Chayi [Tea] Place	X
IICR-0200	Pedro Bay	Harvest Location/Traditional Use Area	Traditional use area for spawned out salmon at mouth of Knutson Creek	
IICR-0203	Pedro Bay	Grave/Burial	Burials near Pedro Bay	
IICR-0204	Pedro Bay	Grave/Burial	Burials near Pedro Bay	
IICR-0205	Pedro Bay	Grave/Burial	Burials at Pedro Bay Village cemetery	
IICR-0206	Pedro Bay	Grave/Burial	Burials at Rabbit Point cemetery south of Pedro Bay	
IICR-0207	Pedro Bay	Place Name	Lonesome Bay Mountain - landscape feature located north of Pedro Bay	
IICR-0208	Pedro Bay	Place Name	Lincoln's Profile - Landscape feature/rock outcropping which resembles a profile of Abraham Lincoln's face	
IICR-0209	Pedro Bay	Other Historic Structures	Russian Orthodox church south of Pedro Bay - moved from Old Iliamna	
IICR-0210	Pedro Bay	Place Name	Big Hill - landscape feature on northeast end of Iliamna Lake	
IICR-0211	Pedro Bay	Archaeological Site	House pits near Pedro Bay airport	

Table E-3: Descriptions of IICRs within Pebble Project APE

IICR Number	Community	Cultural Resource Type	Feature Type Description	Within Construction Footprint?
IICR-0212	Pedro Bay	Battleground; Other Historic Structures	Battleground and Russian fort near Pedro Bay	
IICR-0213	Pedro Bay	Archaeological Site; Village	Old village and housepits in Knutson Bay	
IICR-0214	Pedro Bay	Camp	Camp near Dumbbell Lake - referred to as "Chayi Camp"	
IICR-0215	Pedro Bay	Cabin; Grave/Burial; Village	Old Village, cabins, and burials in Lonesome Bay	
IICR-0216	Pedro Bay	Camp; Harvest Location/Traditional Use Area	Traditional camp and fishing area inland from Pedro Bay; referred to as "Joe Luck's Fish Pond"	
IICR-0217	Pedro Bay	Archaeological Site; Harvest Location/Traditional Use Area	Traditional fishing area and cache pits along Old Knutson Trail	
IICR-0218	Pedro Bay	Archaeological Site	House pits inland from Pedro Bay	X
IICR-0219	Port Alsworth	Trail/Route	Portage Trail from Sixmile Lake to Iliamna	X
IICR-0220	Port Alsworth	Trail/Route	Airplane Route from Port Alsworth to Nondalton and Iliamna	X
IICR-0221	Port Alsworth	Trail/Route	Airplane Route from Port Alsworth to Pedro Bay via pass	X
IICR-0240	Nondalton	Harvest Location/Traditional Use Area, Spiritually Important Place, Trail/Route	Sacred area, trail, and traditional use area west of Newhalen River	
IICR-0242	Nondalton	Spiritually Important Place	Place where legendary hero/shaman lived on Newhalen River	
IICR-0244	Nondalton	Camp	Fish camp on Newhalen River called "Old Man Fedia's" camp	
IICR-0247	Pedro Bay	Cabin	Trading Post/Store at AC Point in Iliamna Bay/Cook Inlet	
IICR-0248	Pedro Bay	Village	Old village west of Pedro Bay	
IICR-0249	Pedro Bay	Archaeological Site	House pits west of Pedro Bay	

¹Identified as potential TCP during 2013 cultural resource interviews.

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Table E-4: Descriptions of Place Names within Pebble Project APE

Place Name Number	Native Place Name ²	Place Description	English Translation	Source	Within Construction Footprint?
PLA-001	<i>Vak'ent'esi Vena</i>	Frying Pan Lake	"frying pan lake"	(Evanoff 2010)	
PLA-002	<i>Vak'ent'esi Vena Q'estsiq'</i>	Outlet of Frying Pan Lake	"outlet of the lake"	(Evanoff 2010)	
PLA-003	<i>Nughil Vetnu</i>	Newhalen River	"flows downstream"	(Evanoff 2010)	X ¹
PLA-004	<i>Tuni Vetnu Tl'ughu</i>	Head of Upper Talarik Creek	"rainbow trout stream"	(Evanoff 2010)	
PLA-005	<i>Eseni Dghil'u Hdakaq'</i>	Mouth of Upper Talarik Creek	"mouth of stream"	(Evanoff 2010)	X ¹
PLA-006	<i>Yutsi Qilant</i>	Knutson Bay	"lower place"	(Kari, Kari, and Balluta 1986)	
PLA-007	<i>Tsayehtnu</i>	Pile River	"cliff river"	(Kari et al. 1986)	X ¹
PLA-008	<i>Nilavena Hkaytaghi'u</i>	Iliamna Bay	"islands lake bay"	(Kari et al. 1986)	X ¹
PLA-009	<i>Vighutiztin Q'atl'a</i>	Lonesome Bay	"trail goes along it bay"	(Kari et al. 1986)	
PLA-010	<i>Qanintin</i>	Pedro Bay Mountain	"ridge against a place"	(Kari et al. 1986)	X
PLA-011	<i>Hkayitaggi'u</i>	Cottonwood Bay	"bay"	(Kari et al. 1986)	X ¹
PLA-012	<i>Nitkintl'udalyuyi Vena</i>	Dumbbell Lake	"ends-joined-together lakes"	(Kari and Kari 1982)	X ¹
PLA-013	<i>Qeghqidun</i>	Big Chutes	"tunnel goes through"	(Kari and Kari 1982)	
PLA-014	<i>Ch'q'ayna Qudghijaq'</i>	Mountain up Iliamna River	"children ran up"	(Kari and Kari 1982)	
PLA-015	<i>Ch'ak'elyashtnu</i>	Chinkelyes River	"things-are-carried-out river"	(Kari and Kari 1982)	X
PLA-016	<i>Duntsih</i>	Iliamna Lake lowlands (II); lowlands south of Lake Clark (I)	"toward the water"	(Kari and Kari 1982)	
PLA-017	<i>K'emeq' Ka'ahtnu</i>	Eagle Bay Creek	"big-spawning-pond creek"	(Kari and Kari 1982)	X ¹
PLA-018	<i>Ggis Nuqelahitnu</i>	Bear Creek	"celery-is-customarily-there creek"	(Kari and Kari 1982)	
PLA-021	<i>Utcha Dghil'u</i>	Roadhouse Mountain	"Alutiiq mountain"	(Kari and Kari 1982)	
PLA-022	<i>Chixtnu</i>	Canyon Creek	"ochre creek"	(Kari and Kari 1982)	X ¹
PLA-023	<i>Hunqet'unhtnu</i>	Chekok Creek	"he-takes-his-time creek"	(Kari and Kari 1982)	X ¹
PLA-024	<i>Yutsi Dghil'u, Yutsi Qilant</i>	Knutson Mountain, Knudsen Mountain	"by-water mountain"	(Kari and Kari 1982)	
PLA-025	<i>Yutsi Qilantnu</i>	Knutson River	"place-by-the-water creek"	(Kari and Kari 1982)	X ¹
PLA-026	<i>Gulul Vena</i>	Long Lake	"Gulul (personal name) lake"	(Kari and Kari 1982)	X ¹
PLA-028	<i>Qiyhi Qelahi, Qiyhi Dghil'u</i>	Groundhog Mountain	"marmot mountain"	(Kari et al. 1986)	

Table E-4: Descriptions of Place Names within Pebble Project APE

Place Name Number	Native Place Name ²	Place Description	English Translation	Source	Within Construction Footprint?
PLA-029	<i>Taq' Nust'in (Dghil'u)</i>	Mountain west of Newhalen River	"extends in lowlands (mountain)"	(Evanoff 2010)	
PLA-030	<i>Dzeł Ggezh</i>	Pass on Iliamna Bay Portage	"mountain gap"	(Kari et al. 1986)	
PLA-031	<i>Esdghuk'a T'el'ih</i>	Diamond Point in Iliamna Bay	"where cockles are gathered"	(Kari and Kari 1982)	X
PLA-032	<i>Ch'ak'dalitnu, Nuch'ak'dalitnu</i>	Old Iliamna Village and Iliamna River	"flows-out-river"	(Kari and Kari 1982)	
PLA-033	<i>Tunaghelggye</i>	Stream into Chinkelyes River	"white water"	(Evanoff 2010)	
PLA-034	<i>Ch'ank'elyash Vena</i>	Lower Summit Lake	"things are carried out lake"	(Evanoff 2010)	
PLA-035	<i>Unqeghnit Ch'ank'elyash Vena</i>	Upper Summit Lake	"upstream things are carried out lake"	(Evanoff 2010)	
PLA-036	<i>Ch'ank'elyashtnu Tustes</i>	Pass at Chinkelyes Creek along Iliamna Portage	"things are carried out river pass"	(Evanoff 2010)	X ¹
PLA-037	<i>Qahetldildeł Tustes</i>	Pass at Iniskin Bay Portage	"where sleds are driven down pass"	(Evanoff 2010)	X ¹
PLA-038	<i>Qahetldildet</i>	Williams Creek	"where sleds are driven down"	(Evanoff 2010)	X ¹
PLA-039	<i>Hał Q'a</i>	Trail Head on Iliamna Bay	"pack place"	(Evanoff 2010)	
PLA-040	<i>Nik'unadghezhi Kiyiq'</i>	Diamond Point	"rough one that goes out point"	(Evanoff 2010)	
PLA-041	<i>Qaqelchixt</i>	Arc Mountain	"built against place"	(Evanoff 2010)	
PLA-042	<i>Qaqelchixtnu</i>	Stream off mountain northwest of South Head into Cottonwood Bay	"built against place stream"	(Evanoff 2010)	
PLA-043	<i>Vanilnagh</i>	Fishing area on Iliamna River north of bridge	"hooked in it"	(Evanoff 2010)	
PLA-044	<i>Chu Vena</i>	Zip Lake	"beaver lake"	(Evanoff 2010)	
PLA-046	<i>Chu Vena Q'estsiq'</i>	Outlet of Zip Lake	"beaver lake outlet"	(Evanoff 2010)	
PLA-047	<i>Venkda</i>	Small lake south of bridge on Iliamna River	"poor lake"	(Evanoff 2010)	
PLA-048	<i>Tus Nuch'k'elyasht</i>	Iliamna Portage to Cook Inlet	"pass where we carry things back"	(Evanoff 2010)	X ¹
PLA-049	<i>łach Nelttutl'</i>	Bank across Iliamna River from Old Iliamna	"soil breaks off"	(Evanoff 2010)	
PLA-050	<i>łiq'a T'el'ih</i>	Stream into Iliamna River from the South near Old Iliamna	"fish are gathered river, salmon are gathered stream"	(Evanoff 2010)	
PLA-051	<i>Nik'unadghezhi</i>	Mountain peak north of Diamond Point	"rough one that goes out"	(Evanoff 2010)	

Table E-4: Descriptions of Place Names within Pebble Project APE

Place Name Number	Native Place Name ²	Place Description	English Translation	Source	Within Construction Footprint?
PLA-052	<i>Vighuk'di'ushi</i>	Mountain in Chigmit Mountains	"object that is carried along it"	(Evanoff 2010)	
¹ GIS location not within construction footprint but geographic feature represented by place name location extends into construction footprint.					
² All place names are from the Dena'ina language					

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APPENDIX F: CULTURAL RESOURCE MAPBOOK

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ATTACHMENT D**LIST OF FEDERAL AGENCIES, INDIAN TRIBES, AND OTHER CONSULTING PARTIES**

Table 1. List of Federal Agencies, Indian Tribes and Other Consulting Parties

Type	Organization
Federal	Advisory Council on Historic Preservation
Federal	Bureau of Safety and Environmental Enforcement
Federal	US Coast Guard
Federal	US Department of Interior National Park Service; Lake Clark National Park
State	Alaska Department of Natural Resources Office of Permits and Project Management
State	Alaska Department of Natural Resources Division of Mines, Land, and Water
State	Alaska Office of History and Archaeology
Borough	Lake and Peninsula Borough
Indian Tribe	Aleknagik Traditional Council
Indian Tribe	Chignik Lake Traditional Council
Indian Tribe	Clarks Point Village Council
Indian Tribe	Curyung Tribal Council
Indian Tribe	Egegik Village Council
Indian Tribe	Ekuk Village Council
Indian Tribe	Ekwok Village Council
Indian Tribe	Igiugig Village Council
Indian Tribe	Iliamna Village Council
Indian Tribe	Kokhanok Village Council
Indian Tribe	Naknek Native Village Council
Indian Tribe	New Koliganek Village Council
Indian Tribe	New Stuyahok Traditional Council
Indian Tribe	Newhalen Tribal Council
Indian Tribe	Nondalton Tribal Council
Indian Tribe	Pedro Bay Village Council
Indian Tribe	Pilot Point Tribal Council
Indian Tribe	Portage Creek Village Council

Type	Organization
Indian Tribe	Port Heiden Village Council
Indian Tribe	Port Graham Tribal Council
Indian Tribe	Port Heiden Village Council
Indian Tribe	Seldovia Village Tribal Council
Indian Tribe	Traditional Council of Togiak
Indian Tribe	Twin Hills Village Council
ANCSA Regional Corporation	Bristol Bay Native Corporation
ANCSA Regional Corporation	Cook Inlet Region, Inc.
ANCSA Village Corporation	Akhiok-Kaguyak, Incorporated
ANCSA Village Corporation	Alaska Peninsula Corporation
ANCSA Village Corporation	Choggiung Limited
ANCSA Village Corporation	Igiugig Development Corporation
ANCSA Village Corporation	Iliamna Natives Limited
ANCSA Village Corporation	Kijik Corporation
ANCSA Village Corporation	Ninilchik Natives Association
City	City of Newhalen
Applicant	Pebble Limited Partnership
Organization	Bristol Bay Native Association
Organization	United Tribes of Bristol Bay

Table 2. List of Entities Invited to Participate in Section 106 Consultation

Type	Organization
Federal	National Park Service Alaska Regional Office
Federal	Pipeline and Hazardous Materials Safety Administration
Federal	United States Coast Guard
Federal	Advisory Council on Historic Preservation
Federal	Bureau of Indian Affairs, Alaska Region Regional Office
Federal	Bureau of Ocean Energy Management, Alaska Regional Office
Federal	Bureau of Safety and Environmental Enforcement
State	Alaska Department of Fish and Game

Type	Organization
State	Alaska Department of Natural Resources
State	Alaska Office of History and Archaeology
Indian Tribe	Aleknagik Traditional Council
Indian Tribe	Chignik Bay Tribal Council
Indian Tribe	Chignik Lagoon Village Council
Indian Tribe	Chignik Lake Traditional Council
Indian Tribe	Clarks Point Village Council
Indian Tribe	Curyung Tribal Council
Indian Tribe	Egegik Village Council
Indian Tribe	Ekuk Village Council
Indian Tribe	Ekwok Village Council
Indian Tribe	Igiugig Village Council
Indian Tribe	Iliamna Village Council
Indian Tribe	Ivanof Bay Tribal Council
Indian Tribe	King Salmon Tribal Council
Indian Tribe	Kokhanok Village Council
Indian Tribe	Levelock Village Council
Indian Tribe	Manokotak Village Council
Indian Tribe	Naknek Native Village Council
Indian Tribe	Nanwalek IRA Council
Indian Tribe	Native Indian Tribe of Kanatak
Indian Tribe	Native Village of Perryville
Indian Tribe	New Koliganek Village Council
Indian Tribe	New Stuyahok Traditional Council
Indian Tribe	Newhalen Tribal Council
Indian Tribe	Ninilchik Traditional Council
Indian Tribe	Nondalton Tribal Council
Indian Tribe	Pedro Bay Village Council
Indian Tribe	Pilot Point Tribal Council
Indian Tribe	Port Graham Tribal Council
Indian Tribe	Port Heiden Village Council
Indian Tribe	Portage Creek Village Council

Type	Organization
Indian Tribe	Seldovia Village Tribal Council
Indian Tribe	South Naknek Village Council
Indian Tribe	Traditional Council of Togiak
Indian Tribe	Twin Hills Village Council
Indian Tribe	Ugashik Traditional Council
Indian Tribe	Native Village of Tyonek
Indian Tribe	Village of Salamatof
Indian Tribe	Kenaitze Indian Tribe
ANCSA Regional Corporation	Bristol Bay Native Corporation
ANCSA Regional Corporation	Chugach Alaska Corporation
ANCSA Regional Corporation	Cook Inlet Region, Inc.
ANCSA Village Corporation	Akhiok-Kaguyak, Incorporated
ANCSA Village Corporation	Alaska Peninsula Corporation
ANCSA Village Corporation	Aleknagik Natives Limited
ANCSA Village Corporation	Bay View Incorporated
ANCSA Village Corporation	Becharof Corporation
ANCSA Village Corporation	Chignik Lagoon Native Corporation
ANCSA Village Corporation	Chignik River, Limited
ANCSA Village Corporation	Choggiung Limited
ANCSA Village Corporation	Ekwok Natives Limited
ANCSA Village Corporation	Far West, Incorporated
ANCSA Village Corporation	Igiugig Native Corporation
ANCSA Village Corporation	Iliamna Natives Limited
ANCSA Village Corporation	Kijik Corporation
ANCSA Village Corporation	Koliganek Natives Limited
ANCSA Village Corporation	Levelock Natives Limited
ANCSA Village Corporation	Manokotak Natives Limited
ANCSA Village Corporation	Oceanside Native Corporation
ANCSA Village Corporation	Paug-Vik Incorporated
ANCSA Village Corporation	Pedro Bay Corporation
ANCSA Village Corporation	Pilot Point Native Corporation
ANCSA Village Corporation	Saguyak, Incorporated

Type	Organization
ANCSA Village Corporation	Stuyahok Limited
ANCSA Village Corporation	Tanalian Incorporated
ANCSA Village Corporation	Togiak Natives Limited
ANCSA Village Corporation	Twin Hills Native Corporation
ANCSA Village Corporation	Ninilchik Natives Association, Inc
ANCSA Village Corporation	The English Bay Corporation
ANCSA Village Corporation	The Port Graham Corporation
ANCSA Village Corporation	Tyonek Native Corporation
ANCSA Village Corporation	Salamatof Native Association, Inc
ANCSA Village Corporation	Kenai Natives Association, Inc
Borough	Kenai Peninsula Borough
Borough	Lake and Peninsula Borough
City	City of Aleknagik
City	City of Chignik
City	City of Clarks Point
City	City of Egegik
City	City of Ekwok
City	City of Manokotak
City	City of New Stuyahok
City	City of Newhalen
City	City of Nondalton
City	City of Pilot Point
City	City of Port Heiden
City	City of Togiak
City	City of Dillingham
City	City of Homer
City	City of Kenai
City	City of Soldotna
Organization	Alaska Association of Historic Preservation
Organization	Alaska Historical Society
Organization	Alutiiq Museum
Organization	Bristol Bay Native Association

Type	Organization
Organization	Center for Alaskan Coastal Studies
Organization	Cooper Landing Historical Society
Organization	Kasilof Regional Historical Association
Organization	Kenai Historical Society
Applicant	Pebble Limited Partnership
Organization	Pratt Museum
Organization	Soldotna Historical Society
Organization	United Tribes of Bristol Bay

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1 **ATTACHMENT E**
2 **TREATMENT PLANS**

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4 [Note: Treatment Plans will be inserted when developed.]
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1 **ATTACHMENT F**
2 **AMENDMENT LOG**

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Execution Date	Amendment Title	Description

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ATTACHMENT G

DEFINITIONS/GLOSSARY OF TERMS

Concurring Parties: In accordance with 36 C.F.R. § 800.6(c)(3), a Concurring Party is a consulting party invited to concur on the PA document but who does not have the authority to execute, amend, or terminate the PA. Like an Invited Signatory's signature, a Concurring Party signature is not required to execute the PA; a concurring signature is essentially an endorsement of the PA. Signing this PA as a Concurring Party does not imply endorsement or approval of the Project itself, or limit or restrict in any way the Concurring Party's right to object to, petition against; litigate against or in any other way express or advance critical or negative comments toward, the Project or its proponent.

Construction Footprint: The USACE permit area as described in Attachment B.

Consulting Parties: Consulting Parties include Signatories, Invited Signatories, Indian Tribes (which include native village, regional corporation, or village corporation, as those terms are defined in Section 3 of the Alaska Native Claims Settlement Act (43 U.S.C. § 1602)), representatives of local governments, land owners, and individuals or organizations with a demonstrated interest in the undertaking. These entities have either requested consultative roles in the development of this PA, or will be included in consultation outlined in the PA.

Effective Date: The date the Programmatic Agreement is active. The date the agreement is signed by the last Signatory.

Federal Agencies: USACE, BSEE, and USCG and any federal agency that may become party to this PA under Stipulation XVII.

Indian Tribes/Tribes: Indian Tribe as defined in 36 C.F.R § 800.16(m) means an Indian Tribe, band, nation, or other organized group or community, including a native village, regional corporation, or village corporation, as those terms are defined in Section 3 of the Alaska Native Claims Settlement Act (43 U.S.C. § 1602), which is recognized as eligible for the special programs and services provided by the United States to Indians because of their status as Indians.

Invited Signatory/Invited Signatories: In accordance with 36 C.F.R. § 800.6(c)(2), an Invited Signatory, upon signing, has the authority to amend or terminate the PA. This PA places significant responsibilities on the Permittee, and the USACE has invited the Permittee to sign this PA as an Invited Signatory. The refusal of any Invited Signatory to sign the PA does not invalidate the PA.

Permittee: Pebble Limited Partnership (PLP) or transferee entity or assignee holding the permit POA-2017-271.

Project Components: The discrete project elements, as described in Attachment A (Project Description), that include the Mine Site, Transportation Corridor, Port, and Natural Gas Pipeline.

Project Stage: The discrete stages of the project including construction and operations. Construction includes preconstruction activities.

Signatory/Signatories: In accordance with 36 C.F.R. § 800.6(c)(1), a signatory, collectively referred to as Signatories in this PA, has/have the sole authority to execute the PA. Along with

1 Invited Signatories, Signatories have the authority to amend or terminate the PA. The USACE,
2 SHPO, and ACHP are the Signatories of this PA.
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Signatory Signature Page

**Programmatic Agreement Pursuant to Section 106 of the National Historic
Preservation Act**

**Regarding the
Pebble Project**

U.S. Army Corps of Engineers

By: _____ Date: _____

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Signatory Signature Page

**Programmatic Agreement Pursuant to Section 106 of the National Historic
Preservation Act**

**Regarding the
Pebble Project**

Alaska State Historic Preservation Officer

By: _____ Date: _____

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Signatory Signature Page

**Programmatic Agreement Pursuant to Section 106 of the National Historic
Preservation Act**

**Regarding the
Pebble Project**

Advisory Council on Historic Preservation

By: _____ Date: _____

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Invited Signatory Signature Page

**Programmatic Agreement Pursuant to Section 106 of the National Historic
Preservation Act**

**Regarding the
Pebble Project**

U.S. Bureau of Safety and Environmental Enforcement

By: _____ Date: _____

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Invited Signatory Signature Page

**Programmatic Agreement Pursuant to Section 106 of the National Historic
Preservation Act**

**Regarding the
Pebble Project**

United States Coast Guard

By: _____ Date: _____

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Invited Signatory Signature Page

**Programmatic Agreement Pursuant to Section 106 of the National Historic
Preservation Act
Regarding the
Pebble Project**

Pebble Limited Partnership

By: _____ Date: _____

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Concurring Party Signature Page

**Programmatic Agreement Pursuant to Section 106 of the National Historic
Preservation Act**

**Regarding the
Pebble Project**

[INSERT NAME OF EACH CONSULTING PARTY THAT IS NOT A SIGNATORY OR
INVITED SIGNATORY, ONE PER PAGE]

By: _____ Date: _____

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