Comments on Behalf of the Natural Resources Defense Council on the U.S. Environmental Protection Agency's Proposed Determination to Restrict the Use of an Area as a Disposal Site; Pebble Deposit Area, Southwest Alaska

September 18, 2014

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I. INTRODUCTION

On behalf of its 1.4 million members and activists, the Natural Resources Defense Council ("NRDC") submits these comments to the U.S. Environmental Protection Agency ("EPA") concerning the agency's July 21, 2014 Proposed Determination to Restrict the Use of an Area as a Disposal Site; Pebble Deposit Area, Southwest Alaska ("Proposed Determination"). We commend the agency for acting on the compelling evidence that large-scale mining would cause unacceptable adverse effects in Bristol Bay—the required statutory trigger to prohibit, deny, or restrict a disposal area for the discharge of dredged or fill material. We urge the Administrator to issue a Final Determination, and unburden once and for all the Bristol Bay residents, subsistence families, commercial fishermen, and hundreds of thousands of individuals who seek EPA protection of the area's pristine environment from the threat of devastation.

EPA's Proposed Determination is the result of a comprehensive multi-year, multi-staged process that incorporates public input and scientific review well beyond what is required. It is a reasoned proposal that is responsive to science, justified by law, and permissible under EPA's Congressionally-instilled authority to act. Never before has EPA gone to such lengths to ensure that all voices have been heard, and all thresholds have been met before proceeding with 404(c) action. This is the gold standard of 404(c), and leaves no room for doubt that large-scale mining is wholly inconsistent with a sustainable Bristol Bay—a fact further evidenced just last month by *two* catastrophic mining disasters in British Columbia and Mexico.

II. BACKGROUND

The cool, shallow waters of Bristol Bay in southwestern Alaska are surrounded by tundra, crisscrossed by rivers, and dotted with lakes large and small. These resources comprise a highly functioning, healthy, diverse, and naturally and economically sustainable ecosystem that, without exaggeration, is unsurpassed anywhere in the world. The Bristol Bay watershed provides ideal conditions for the world's largest sockeye salmon run and Alaska's largest Chinook salmon run. There are no hatchery fish in this watershed; the salmon are entirely wild and anadromous. As they have for centuries, the salmon that hatch in the Bristol Bay headwaters return there to spawn and die. Bristol Bay is one of the last places on Earth with such bountiful and sustainable harvests of wild salmon.

Salmon as a resource base is the linchpin of the region's greater ecosystem—which houses more than 20 fish species, 190 bird species, and more than 40 terrestrial mammal species. The salmon runs support fish-related economic activity valued at \$1.5 billion annually, indigenous peoples' subsistence way of life, and a vast array of wildlife including

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¹ U.S. EPA. An Assessment of Potential Mining Impacts on Salmon Ecosystems of Bristol Bay, Alaska (Final Report). U.S. Environmental Protection Agency, Washington, DC, EPA 910-R-14-001A-C, ES, ES-7 (2014) ("Final Assessment (2014)").

brown bears, eagles, seals, whales, moose, and caribou—virtually the entire web of life associated with the region's ecosystem.² Salmon hugely affect ecosystem productivity and regional biodiversity through their role transporting nutrients.³ The exceptional quality of the Bristol Bay watershed fish populations is largely a result of its high-quality, diverse aquatic habitats, the hydrologic and biochemical connectivity between surface and subsurface waters, and the relatively little human development.⁴

This abundance of fish and wildlife supports a robust and sustainable economy, including commercial, sport, and subsistence fishing; sport and subsistence hunting; and recreation and tourism—resulting in over 14,000 full and part-time jobs. The Bristol Bay commercial salmon fishery has an estimated value of \$300 million. Twenty-five federally recognized tribal governments also reside in the Bristol Bay watershed, and Alaska Natives have maintained a salmon-based subsistence culture for over 4,000 years.

The Pebble Limited Partnership ("PLP") hopes to build an enormous gold, copper, and molybdenum mine – for an ore deposit larger than 90% of the known deposits of this type in the world⁸ – at the very headwaters of Bristol Bay. It has documented its plans in (1) Northern Dynasty Minerals' ("NDM")⁹ "Preliminary Assessment of the Pebble Project, Southwest Alaska" ("Wardrop Report"), ¹⁰ a 2011 document filed with the U.S. Securities and Exchange Commission, and (2) NDM's 2006 permit applications filed with the State of Alaska. ¹¹ Due to the nature of the mineral deposit, and based on the information provided in the Wardrop Report, EPA has reasonably deduced that mining the Pebble deposit would involve excavation of the largest open pit ever constructed in North America, with colossal amounts of waste stored on-site and covering an area larger than Manhattan. ¹²

² *Id.* at ES-8.

³ *Id.* at ES-25.

⁴ *Id.* at ES-8.

⁵ *Id.* at ES-6.

⁶ EPA Region 10, *Notice of Availability and Public Hearing for Proposed Determination Pursuant to Section 404(c) of the Clean Water Act, Pebble Deposit Area, Southwest Alaska*, 79 FED. REG. 42314, 42315 (July 21, 2014) (hereinafter "Notice of Availability and Public Hearing").

⁷ Final Assessment (2014), *supra* note 1 at ES-1.

⁸ Notice of Availability and Public Hearing, *supra* note 6 at 42315.

⁹ Northern Dynasty Minerals is 100% owner of the Pebble Limited Partnership.

¹⁰ Ghaffari, H., R. S. Morrison, M. A., deRuijeter, A. Živković, T. Hantelmann, D. Ramsey, and S. Cowie. 2011. *Preliminary Assessment of the Pebble Project, Southwest Alaska*. (February 15, 2011) Document 1056140100-REP-R0001-00. Prepared for Northern Dynasty Minerals Ltd., by WARDROP (a Tetra Tech Company), Vancouver, BC (hereinafter "Wardrop Report").

¹¹ Application for Groundwater Right: South Fork Koktuli River (LAS 25873), Application for Groundwater Right: Unnamed Tributary (NK1.190) North Fork Koktuli River (LAS 25872); Application for Groundwater Right Upper Talarik Creek (LAS 25875). Alaska Department of Natural Resources, Division of Mining Land and Water, Pebble Project – Water Right Applications, accessed at http://dnr.alaska.gov/mlw/mining/largemine/pebble/water-right-apps/ (last visited August 30, 2014).

¹² Notice of Availability and Public Hearing, *supra* note 6 at 42316.

In May 2010, six federally-recognized tribes from the Bristol Bay region sent a letter to EPA requesting that it proactively initiate section 404(c) action to prohibit, deny, restrict, or withdraw specification of the Pebble Mine site in Bristol Bay as a disposal area for the discharge of dredged or fill material. 13 These requests came after years of PLP pronouncements that permit applications were forthcoming. Alaska Senator Lisa Murkowski highlighted the mining interests' "collective responsib[ility]" for years of uncertainty and delays in a July 1, 2013 letter, emphasizing that "[a]t least as far back as . . . 2004, Northern Dynasty Minerals asserted that the submission of permit applications was imminent."¹⁴ Walking through the repeated assurances – in 2004, 2005, 2008, 2009, 2010, 2011, and 2013 – of forthcoming and "on schedule" proposals, Murkowski denounced PLP for "creat[ing] uncertainty among the people I represent," and "creat[ing] a vacuum that EPA has now filled."15

Since the initial 2010 request for 404(c) action, EPA has received over 850,000 requests from citizens, tribes, Alaska Native corporations, commercial and sport fishers, jewelry companies, seafood processors, restaurant owners, chefs, conservation organizations, members of the faith community, sport recreation business owners, elected officials and others asking EPA to take action to protect Bristol Bay. 16

III. EPA HAS LEGAL AUTHORITY TO ISSUE A 404(c) DETERMINATION

Congress granted EPA clear authority through the Clean Water Act ("CWA") to initiate Section 404(c) proceedings "whenever" unavoidable adverse effects are likely to occur – whether before, during, or after a mining application has been submitted to the Army Corps of Engineers ("Corps") – and the D.C. Circuit has explicitly upheld this conclusion in its recent *Mingo Logan* decision.¹⁷

EPA's Administrator has the Congressional mandate to:

prohibit the specification (including the withdrawal of specification) of any defined area as a disposal site, and he is authorized to deny or restrict the use of any defined area for

¹³ A Joint Letter from Six Fed.-Recognized Tribes in the Kvichak & Nushagak River Drainages of Sw. Alaska, to Lisa P. Jackson, Adm'r, EPA (May 2, 2010), available at http://ourbristolbay.com/ pdf/tribes-letter-to-epa-on-404-c.pdf. Ultimately, EPA received petitions from nine federally recognized tribes, the Bristol Bay Native Corporation, commercial fishermen, sportsmen, conservationists, and others to initiate action under section 404(c).

¹⁴ Letter from Lisa Murkoski, U.S. Sen., to John Shively, Chief Exec. Officer, PLP, Mark Cutifani, Chief Exec. Officer, AngloAmerican, and Ron Thiessen, Chief Exec. Officer, N. Dynasty Minerals (July 1, 2013), Exhibit A.

¹⁶ EPA Region 10, Proposed Determination of the U.S. Environmental Protection Agency Pursuant to Section 404(c) of the Clean Water Act Pebble Deposit Area, Southwest Alaska, 2-5 (July 2014) (hereinafter "Proposed Determination").

¹⁷ Mingo Logan Coal Co. v. U.S. Envtl. Prot. Agency (Mingo Logan I), 714 F.3d 608, 613 (D.C. Cir. 2013), cert. denied, 134 S. Ct. 1540 (2014).

specification (including the withdrawal of specification) as a disposal site, *whenever he determines*, after notice and opportunity for public hearings, that the discharge of such materials into such area will have an unacceptable adverse effect on municipal water supplies, shellfish beds and fishery areas (including spawning and breeding areas), wildlife, or recreational areas.¹⁸

While the first two clauses of this provision prescribe the range of actions available to the Administrator in exercising authority under this subsection – "prohibit," "withdraw," "deny," or "restrict" – it is the third clause that explicitly addresses EPA's authority here. This clause, modifying both the first and second, authorizes EPA to act pursuant to Section 404(c) "whenever" it makes a determination of unacceptable adverse effects. With this unambiguous term, the statute could not be clearer, as the D.C. Circuit confirmed. Addressing the equivalent question of statutory interpretation now before this Court – that is, the meaning of the term "whenever" – the D.C. Circuit last year reversed a district court ruling that EPA lacked statutory authority to withdraw a disposal site specification four years after it was granted. The court flatly rejected the plaintiff mining company's argument that EPA's authority under Section 404(c) is in any way temporally restricted. Because "the language unambiguously expresses the intent of Congress," the court of appeals held that the term "whenever," as used in Section 404(c), "unambiguously" means whenever:

Using the expansive conjunction "whenever," the Congress made plain its intent to grant the Administrator authority to prohibit/deny/restrict/withdraw a specification at *any* time.²³

The U.S. Supreme Court denied certiorari, allowing the D.C. Circuit decision to stand.²⁴

¹⁸ CWA § 404(c), 33 U.S.C. § 1344(c) (emphasis added) (spacing added).

²⁴ Mingo Logan Coal Co. v. Envtl. Prot. Agency, 134 S. Ct. 1540 (2014).

¹⁹ *Id*.

²⁰ *Mingo Logan I*, 714 F.3d at 616.

²¹ *Id.* at 613.

²² *Id.* at 612. An agency's construction of a statute that it administers will stand if <u>first</u>, Congress has directly spoken to the precise question at issue and, if so, the agency's action gives effect to Congress' unambiguously expressed intent; or, <u>second</u>, if the statute is "silent or ambiguous," any agency interpretation that is "based on a permissible construction" of the statute is entitled to deference. *Chevron*, *U.S.A.*, *Inc. v. Natural Resources Defense Council, Inc.* 467 U.S. 837, 842-843 (U.S.1984). A court is bound to defer to *any* "permissible construction of the statute" by the agency, even if that is not "the reading the court would have reached if the question initially had arisen in a judicial proceeding." *Id.* Further, the U.S. Supreme Court has specifically held that agencies are entitled to – and have consistently been afforded – *Chevron* deference regarding agency determination of its own jurisdiction. *City of Arlington, Tex. v. Fed. Commc'ns Comm'n*, 133 S. Ct. 1863, 1871-2 (2013).

²³ *Id.* at 612-13. The court also cited the dictionary definition of "whenever" as "[a]t whatever time, no matter when." *Id.* at 613 (quoting 20 OXFORD ENGLISH DICTIONARY 210 (2d ed. 1989)).

Furthermore, contrary to the State of Alaska's contentions that the EPA Watershed Assessment is a "new evaluation or permitting process" that "expand[s] [EPA's] otherwise limited role under Section 404,"²⁵ EPA was well within its authority to create a scientific record upon which to base 404(c) action. There is no statutory requirement that, in making its "unacceptable adverse effects" determination under 404(c), EPA must glean this information either from a permit application or from a proposed permit generated by the Corps. ²⁶ In circumstances that, according to the State of Alaska, are "similar to those here" the D.C. Court of Appeals recently upheld an Enhanced Coordination Process ("ECP") and related EPA Final Guidance that EPA and the Corps had adopted to facilitate their consideration of certain Clean Water Act permits. ²⁸ The ECP program allowed EPA to prescreen the Corps' 404 permit applications for potential unacceptable adverse effects. Responding to challenge by coal-mining companies and several states, the court held that EPA had acted within its statutory authority when it reviewed the applications before the Corps established its own record on the matter, noting that EPA and the Corps "have complementary roles in the Section 404 process." ²⁹

Finally, EPA's Clean Water Act implementing regulations specifically allow prospective 404(c) action during the pre-permitting timeframe, ³⁰ and EPA has for 35 years consistently interpreted 404(c) as authorizing it to act, as here, when no permit application has yet been filed. EPA's interpretation of the CWA provision, ³¹ as enacted in its 1979 Guidelines, states that EPA "may . . . prohibit the specification of a site under section 404(c) with regard to any existing or potential disposal site before a permit application has been submitted to or approved by the Corps." The pending Bristol Bay proceeding represents

²⁵ State of Alaska Brief in Support of Preliminary Injunction, *Pebble Limited Partnership*, et al. v. *EPA*, et al., Case No. 3:14-cv-00097-HRH, at 17 (Jul. 3, 2014).

²⁶ 33 U.S.C. § 1344(c) (2006). *See also United States v. Eurodif S.A.*, 555 U.S. 305, 316 n.6 (2009) (citing 5 U.S.C. § 706(2)(E))(the specific factual findings on which an agency relies in applying its interpretation are conclusive unless unsupported by substantial evidence).

²⁷ State of Alaska Brief in Support of Preliminary Injunction, *supra* note 25, at 16-17.

²⁸ National Mining Association v. Jackson, 768 F. Supp. 2d 34 (D.D.C. 2011), rev'd sub nom., Nat'l Mining Ass'n v. McCarthy, No. 12-5310, 2014 WL 3377245, at *1 (D.C. Cir. July 11, 2014).

²⁹ McCarthy, 2014 WL 3377245, at *1–2. The court further noted that "nothing in the [ECP] has changed the statutory criteria on which the Section 404 permitting decisions are based." *Id.* at *4.

³⁰ Denial or Restriction of Disposal Sites; Section 404(c) Procedures, 44 FED. REG. 58,076, 58,078 (Oct. 9, 1979) (to be codified at 40 C.F.R. pt. 231). *See also* note 22, describing how EPA's implementing regulations are entitled to deference.

³¹ Congress entrusted EPA to implement the CWA, 33 U.S.C. § 1251(d) (EPA Administrator "shall administer" the CWA "[e]xcept as otherwise expressly provided"), and EPA is authorized to "prescribe such regulations as are necessary to carry out its functions." 33 U.S.C. §1361(a).

³² 40 C.F.R. § 231.1(a). It is well established that when Congress revisits a statute with a

longstanding administrative interpretation, the "congressional failure to revise or repeal the agency's interpretation is persuasive evidence that the interpretation is the one intended by Congress." *Nat'l Labor Relations Bd. v. Bell Aerospace Co.*, 416 U.S. 267, 275 (1974); *accord Schor v. Commodity Futures Trading Comm'n*, 478 U.S. 833, 846 (1986); *Fed. Deposit Ins. Corp. v. Philadelphia Gear Corp.*, 476 U.S. 426, 437 (1986). The CWA was enacted in 1977, and EPA issued its 404(c) Guidelines in 1979. Over seven years later, Congress enacted major amendments to the CWA in the form of the Water Quality Act of 1987, and Section 404(c) remained unchanged. Pub. L. No. 100-4, 101 Stat. 7 (1987).

EPA's third application of this prospective 404(c) authority. In 1985, EPA restricted future disposal applications, including proposals by the Corps itself, in an area near land under consideration (and subject to litigation) for 404 permitting, but where "no pending permit application [was] currently being considered for the area in question by either EPA or the ... Corps." In 1988, EPA prospectively applied its 404(c) authority to a wetland property for which no 404 permit application had been filed. Relying on information from the record developed in two other wetland permit applications, EPA determined that rock plowing would result in "similar" unacceptable adverse environmental effects. The Pebble Mine is thus EPA's third practical confirmation of the scope of its authority under 404(c).

EPA's statutory authority to act is clear, and mining company claims to the contrary³⁵ are a mere smokescreen. Section 404(c) action is appropriate and permissible now.

IV. EPA'S MULTI-STAGED AND INCLUSIVE PROCESS IS THE GOLD STANDARD OF 404(c)

Consistently throughout this process, EPA has elicited extensive input, provided open access and communication, and sought independent review. The result is a Proposed Determination founded on comprehensive scientific study and rigorous analysis, and which incorporates input from two rounds of public comment and peer review. EPA has more than sufficiently established that mining in Bristol Bay would result in "unacceptable adverse effects" to fishery areas (including spawning and breeding areas), recreational areas, and wildlife, satisfying the statutory trigger to invoke section 404(c).

a. EPA's Watershed Assessment is the Result of Extensive Public and Stakeholder Participation and Peer Review

In order to issue a Final 404(c) Determination, EPA has a duty only to provide "notice and opportunity for public hearings," to "consult with the [Corps] Secretary," and to "set forth in writing and make public his findings and his reasons for making any determination under this subsection." EPA did all of this—and much more—in response to

³³ EPA Region 6, EPA Recommended Determination to Prohibit, Deny, or Restrict the Specification, or the Use for Specification, of an Area as a Disposal Site, (July 1986) (noting specifically that "[t]his action, therefore, is not an EPA 'veto' of a Corps permit decision. Instead, the Regional Administrator is recommending a restriction on the use of the site…") *available at* http://water.epa.gov/lawsregs/guidance/wetlands/upload/BayouAuxCarpes404c1985RecDeterm.pdf at 1; *see also* Final Determination, Bayou Aux Carpes, 50 FED. REG. 47267 (Nov. 15, 1985).
³⁴ Final Determination, Three Wetland Properties Owned by Henry Rem Estate, *et. al.*, 53 FED. REG 30093 (Aug. 10, 1988).

³⁵ See, e.g., News Release, Northern Dynasty Minerals Ltd., Northern Dynasty responds to EPA proposal for Alaska's Pebble Project, (July 18, 2014), *available at* http://www.northerndynastyminerals.com/ndm/NewsReleases.asp?ReportID=665299 (last visited Sept. 6, 2014).

³⁶ 33 U.S.C. § 1344(c) (2006).

the Tribes' petition for 404(c) review:

- EPA held meetings and telephone calls in 2010 with stakeholders who both supported and opposed the Pebble Mine, and engaged in tribal consultation and public meetings.³⁷ The EPA Administrator and Regional Administrator visited Alaska, met with PLP, and hosted listening sessions with tribal leaders and local and regional entities.³⁸
- EPA decided to conduct an ecological risk assessment before considering any additional steps.³⁹
- In February 2011, EPA invited all 31 federally recognized tribal governments of the Bristol Bay region – 20 of which elected to participate – to enter "formal consultation" on the Watershed Assessment.⁴⁰
- In May 2012, EPA released a Draft Assessment of Potential Mining Impacts on Salmon Ecosystems of Bristol Bay, Alaska.⁴¹
- EPA held eight noticed public hearings and a public comment period, during which it received over 233,000 public comment letters. 42 Of these, over 90% expressed support for the Draft Assessment and/or EPA action.
- The agency submitted the Draft Assessment to peer-review by twelve independent scientific experts, assembled through an independent contractor. Peer reviewers included specialists in the fields of mine engineering, salmon fisheries biology, aquatic ecology, aquatic toxicology, hydrology, wildlife ecology and Alaska Native cultures.⁴³
- Public involvement in the peer review process was extensive. The public was invited to nominate peer reviewers, the peer review panel charge questions were subject to public comment and revised accordingly, and the first two days of the peer review meeting were open to public participation.⁴⁴
- EPA incorporated the public and peer input into a revised Draft Assessment,

³⁷ Proposed Determination, *supra* note 16, at 2-5.

³⁸ *Id*.

³⁹ *Id.* at ES-3.

⁴⁰ *Id.* at 2-8, 2-9.

⁴¹ An Assessment of Potential Mining Impacts on Salmon Ecosystems of Bristol Bay, Alaska, U.S. Environmental Protection Agency, Washington, DC, EPA-HQ-ORD-2012-0276 (2012).

⁴² Proposed Determination, *supra* note 16, at 2-9.

⁴³ News Release, U.S. Envtl. Prot. Agency, EPA releases Bristol Bay Assessment describing potential impacts to salmon and water from copper, gold mining (Jan. 15, 2014), *available at* http://yosemite.epa.gov/opa/admpress.nsf/names/r10_2014-1-15_final_bristol_bay_assessment (last visited Aug. 31, 2014).

⁴⁴ Proposed Determination, *supra* note 16, at 2-9.

released in April 2013.⁴⁵ This second Draft was *also* subject to public comment and a follow-on peer review to evaluate whether it was responsive to the 2012 peer review comments.⁴⁶ This time EPA received over 890,000 public comments, with over 650,000 of them supporting EPA protection of Bristol Bay.⁴⁷

- Incorporating the peer review and public comments to the Second Draft Assessment, ⁴⁸ EPA issued its final Watershed Assessment in January 2014, determining that large-scale mining would result in unacceptable adverse effects to streams, wetlands, lakes, and ponds, and unacceptable alterations of streamflow. ⁴⁹

In taking these comprehensive steps, EPA has far surpassed both its 404(c) requirements, and the EPA peer review guideline requirements (which for example contain no obligation – or mention – of a second review or comment period⁵⁰). This unprecedented level of public and peer engagement and input combined to ensure a thorough and reliable analysis of potential environmental impacts from large-scale mining in Bristol Bay.

b. EPA's Finding of Unacceptable Adverse Effects is Based on Sound Science

EPA's final Watershed Assessment thoroughly documents that large-scale mining in Bristol Bay would irrevocably devastate one of the most highly-functioning and productive salmon ecosystems remaining anywhere in the world, as well as the sustainable communities, wildlife, and local economy that it supports. Although NDM/PLP's preliminary plans could change, as EPA has correctly explained, "any mining of this deposit would, by necessity, require similar mine components, support facilities, and operational features." ⁵¹

EPA's Watershed Assessment analyzed the environmental impacts that mines of three sizes – 6.5 billion tons of ore, 2 billion tons, and 0.25 billion tons – would have in Bristol Bay. EPA reviewed the 6.5 and 2 billion ton mine sizes because public statements by the Pebble mining interests indicate that they are actively considering mines of at least this size. EPA also considered a smaller 0.25 mine size – the worldwide median size of porphyry copper deposits 53 – specifically in response to the draft Watershed Assessment

visited Aug. 31, 2014.)

⁴⁵ An Assessment of Potential Mining Impacts on Salmon Ecosystems of Bristol Bay, Alaska, (Second External Review Draft), U.S. Environmental Protection Agency, Washington, DC, EPA-HQ-ORD-2013-0189 (2013).

⁴⁶ Proposed Determination, *supra* note 16, at 2-10.

⁴⁷ *Id.* at 2-9. *See also* News Release, Commercial Fishermen for Bristol Bay, Staggering National Support to Save Bristol Bay (Sept. 16, 2013), *available at* http://fishermenforbristolbay.org/2013/09/staggering-national-support-to-save-bristol-bay/ (last

⁴⁸ Proposed Determination, *supra* note 16, at 2-10.

⁴⁹ Final Assessment (2014), *supra* note 1.

⁵⁰ EPA, PEER REVIEW HANDBOOK EPA/100/B-06/002, at 59 (3rd ed. 2006), available at http://www.epa.gov/peerreview/pdfs/peer_review_handbook_2012.pdf.

⁵¹ Notice of Availability and Public Hearing, *supra* note 6, at 42315.

⁵² Wardrop Report, *supra* note 10, at 4-5.

⁵³ Proposed Determination, *supra* note 16, at 6-20.

peer review recommendation to "[c]onsider adopting a broader range of mine scenarios, especially smaller size mines." 54

Even under the smallest contemplated mine size, the nature and magnitude of environmental losses from mining would be unprecedented for the Clean Water Act Section 404 permitting program in all of Alaska—and perhaps the nation.⁵⁵ Habitat losses associated with a 0.25 billion ton mine would include:

<u>Loss of streams</u>: nearly 24 miles of streams (representing approximately **5 miles** of streams with documented anadromous fish occurrence and **19 miles** of tributaries of those stream);

<u>Loss of wetlands</u>, <u>lakes</u>, <u>and ponds</u>: total habitat losses of more than 1,200 acres of wetlands, lakes, and ponds, of which approximately **1,100 acres** are contiguous with either streams with documented anadromous fish occurrence or tributaries of those streams;

<u>Streamflow alterations</u>: streamflow alterations in excess of 20% (which result in major changes in ecosystem structure and function and significant reductions in the extent and quality of fish habitat downstream of the mine) in more than 9 miles of streams with documented anadromous fish occurrence.⁵⁶

Even more devastating are the impacts associated with the more likely 6.5 billion ton mine size, which would include the loss of over 22 miles of streams with documented anadromous fish occurrence (and 72 miles of tributaries of those streams), total habitat losses of more than 4,100 acres of wetlands, lakes, and ponds contiguous with streams housing anadromous fish or their tributaries, and streamflow alterations in excess of 20% in more than 33 miles of streams with documented anadromous fish.⁵⁷ And in fact, the Pebble deposit contains almost twice that much identified ore (12 billion tons), which fully extracted would magnify impacts significantly.⁵⁸

EPA's findings are substantiated by in-depth scientific review and analysis. EPA followed its guidelines for ecological risk assessments in creating the Watershed Assessment, which require data of "sufficient quantity and quality, from a variety of

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⁵⁴ David A. Atkins *et al.*, *An Assessment of Potential Mining Impacts on Salmon Ecosystems of Bristol Bay, Alaska*, iii (Sept. 17, 2012), *available at* http://www2.epa.gov/bristolbay/peer-review-bristol-bay-assessment (last visited Sept. 16, 2014).

⁵⁵ News Release, U.S. EPA, EPA releases proposal to protect Bristol Bay, Alaska fisheries from potential impacts posed by Pebble Mine (July 18, 2014), *available at* http://yosemite.epa.gov/opa/admpress.nsf/d96f984dfb3ff7718525735900400c29/b52a95f5b3adefc18 5257d1900056758!OpenDocument (last visited Aug. 31, 2014).

⁵⁶ Proposed Determination, *supra* note 16, at ES-4. Losses of streams, wetlands, lakes, and ponds and alterations of streamflow each provide a basis to issue the Section 404(c) proposed determination. *Id.* at ES-5.

⁵⁷ *Id.* at ES-4.

⁵⁸ *Id.* at 6-4.

sources."⁵⁹ EPA prioritized peer-reviewed, publicly accessible sources to ensure that incorporated information and data were of sufficient quality. The agency also reviewed information and data from other credible, non-peer-reviewed sources, including reports from NDM/PLP, the State of Alaska, the U.S. government and other governments; datasets from the State of Alaska, the U.S. government, and other sources; mine industry publications; reports from non-governmental organizations; and personal communications with qualified experts.⁶⁰ In addition, the peer review process described above was charged with evaluating the quality of the science upon which the Watershed Assessment was based.⁶¹

EPA also thoroughly evaluated PLP's competing claims that large-scale mining in Bristol Bay *can* be accomplished without unacceptable adverse effects, and has repeatedly given PLP the opportunity to present compelling scientific evidence to support its position. Yet PLP has time and again failed to refute EPA's findings. In the most recent example, after EPA initiated the 404(c) process earlier this year, it invited PLP to "submit information, for the record, to demonstrate either than no unacceptable adverse effects on aquatic resources would result from ... mining the Pebble deposit or that actions could be taken to prevent such ... effects." EPA also met with PLP executives in March 2014. In both instances PLP—as it has for years—offered faulty or incomplete scientific grounds for proceeding with a large-scale mining permit, such as:

- PLP "continued to assert" that the streams and habitats most likely to be affected by the mine's footprint support low densities of fish or have low habitat value, despite the fact that EPA previously highlighted concerns regarding PLP's methods of analyzing data and reaching these conclusions. These concerns include the likelihood that current databases provide incomplete information about fish distribution and abundance—a fact that this is well known and documented within the ecological and fisheries literature. 63
- PLP disregards that some habitats are seasonally important.⁶⁴
- PLP ignores the fact that sites with low apparent abundance of salmon may provide habitat to other species critical to ecosystem function, and may provide important downstream services.⁶⁵
- PLP employs a flawed stream and wetland loss analysis that underestimates cumulative effects and the importance of genetic diversity, and has previously been rejected by the Army Corps of Engineers. 66

⁶¹ *Id.* at 2-10.

⁵⁹ *Id.* at 2-7.

⁶⁰ *Id*.

⁶² *Id.* at 2-11.

⁶³ *Id.* at, 2-11, 2-12.

⁶⁴ *Id.* at 2-12.

⁶⁵ *Id*.

⁶⁶ *Id*.

- In claiming that EPA underestimated the surplus water volumes available for treatment, release, and mitigation, PLP fails to provide "any supporting information to substantiate this claim." ⁶⁷
- PLP miscalculates streamflow changes, showing them at the scale of the entire river or Bristol Bay, rather than at the scale of the relevant stream. ⁶⁸
- PLP points to compensatory mitigation measures that are irrelevant (the waters of Bristol Bay among the most productive in the world are not a candidate for restoration/enhancement) or unproven (never measured for effectiveness, failed to meet their restoration objectives, or resulted in adverse consequences). 69

Both EPA's process for gathering pertinent and reliable data and the resulting scientific record underlying its conclusions support the agency's "unacceptable adverse effects" determination. The science is clear; large-scale mining and a sustainable fishery simply cannot harmoniously coexist in Bristol Bay.

c. The Proposed Determination is the Result of Careful Analysis and Invites Further Public Input

Throughout the Assessment process, PLP has railed against the notion of an EPA-imposed "veto" of the Pebble Mine. Yet in its Proposed Determination, EPA has recommended no such veto and does not target any specific mine claim holder. The agency instead lays out an environmental framework of impact limits, below which mining interests would be able to seek CWA 404 permits. The limits would allow any developer wishing to mine the Pebble deposit to proceed to the Corps permitting process if it can meet the restriction thresholds. EPA's position is clear in this matter, and PLP agreed in its July 18, 2014 press release: "we note the agency is seemingly moving away from pre-emptively vetoing the Pebble Project in favor of imposing specific conditions on future development."

Furthermore, the proposed impact limits are a reasoned response to EPA's Watershed Assessment analysis. Through its scientific Assessment, EPA determined that the Pebble 0.25 mine – though dwarfed by the impacts of the more likely mine sizes – would have unacceptable adverse effects on streams, wetlands, lakes, and ponds, and unacceptable alterations of streamflow in Bristol Bay.⁷² Because EPA has not assessed the impacts of a mine smaller than 0.25, the agency quite logically proposes to restrict only the discharge of

⁶⁹ *Id.* at 2-13, 2-14.

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⁶⁷ *Id.* at 2-12, 2-13.

⁶⁸ *Id.* at 2-13.

⁷⁰ Notice of Availability and Public Hearing, *supra* note 6, at 42317.

⁷¹ News Release, Northern Dynasty Ltd., Northern Dynasty responds to EPA proposal for Alaska's Pebble Project, (July 18, 2014) *available at*

http://www.northerndynastyminerals.com/ndm/NewsReleases.asp?ReportID=665299 (last visited Sept. 6, 2014).

⁷² Proposed Determination, *supra* note 16, at ES-5.

dredged or fill material from mining that would result in losses equal or greater than those of a 0.25 mine. This conclusion is currently, once again, the subject of public comment and public hearings, 73 which EPA will review and, if appropriate, incorporate into a Recommended Determination.

Finally, contrary to off-the-mark assertions by PLP that "the precedent established by EPA taking pre-emptive action at Pebble would be devastating for the future of investment in the State of Alaska and throughout the United States" (closely echoed by Senator Murkowski's statement that "[t]his is a blueprint that will be used across the county to stop economic development", the scope of the Proposed Determination is "geographically narrow and does not affect other deposits or mine claim holders outside of those affiliated with the Pebble deposit." And, as EPA has specifically noted, the agency uses its 404(c) authority "judiciously and sparingly, having completed only 13 Section 404(c) actions in the 42-year history of the CWA."

d. Recent Mining Disasters Underscore the Conservative Nature of EPA's Proposed Determination—and the Need for a Final Determination

A final and critical element of the Proposed Determination – which further underscores the measured focus of EPA's analysis – is that it *significantly underestimates* potential harm. Not only does the Proposed Determination exclude consideration of footprint impacts associated with necessary components of a mine (e.g., a major transportation corridor, pipelines, a power-generating station, wastewater treatment plants, housing and support services for workers, administrative offices, and other infrastructure), it intentionally omits impacts from accidents and failures, such as a tailings dam failure.⁷⁸

NDM/PLP have long advocated for ignoring the risks of a tailings dam failure, claiming that constructing a "modern mine" would preclude this possibility:

EPA's statistics overstate the chances of a tailings dam failure today. [The] statistics referenced in the [draft Watershed Assessment] do not support the premise that tailings dam failure is a reasonable hypothesis for a modern mine operation in the Bristol Bay watershed.⁷⁹

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⁷³ Notice of Availability and Public Hearing, *supra* note 6, at 42314.

⁷⁴ News Release, Northern Dynasty Ltd., Northern Dynasty responds to EPA proposal for Alaska's Pebble Project, (July 18, 2014) *available at*

http://www.northerndynastyminerals.com/ndm/NewsReleases.asp?Report%20ID=665299 (last visited Sept. 6, 2014).

⁷⁵ Press Release, Murkowski Comments on EPA Restrictions on Bristol Bay Watershed (July 21, 2014), available at http://www.murkowski.senate.gov/public/index.cfm/pressreleases?ID=2a661f92-c255-426f-a722-cc6adc94a9ec (last visited Sept. 6, 2014).

⁷⁶ Notice of Availability and Public Hearing, *supra* note 6, at 42315.

⁷⁷ Proposed Determination, *supra* note 16, at ES-4.

⁷⁸ *Id.* at ES-5, 6.

⁷⁹ Thomas C. Collier Jr. on behalf of Northern Dynasty Minerals Ltd., Comments on "An Assessment of Potential Mining Impacts on Salmon Ecosystems of Bristol Bay, Alaska-Draft"; EPA-HQ-ORD-2012-0276 (July 23, 2012) *available at*

EPA relies on tailings facilities built in the late 1800s while ignoring modern engineering that would have prevented historical dam failures. 80

Tailings dams can be built to stand indefinitely provided the right procedures, protocols, checks, and monitoring are in place throughout all phases of a dam life.⁸¹

Though the Proposed Determination does not incorporate the risks of catastrophic failure, EPA cautioned that: "[t]here is ... real uncertainty as to whether severe accidents or failures ... could be adequately prevented over a management horizon of centuries, or even in perpetuity, particularly in such a geographically remote area subject to climate extremes." Nor is there reason to believe – as was starkly revealed just last month – that catastrophe can be prevented for even a matter of decades.

In the early morning of August 4, 2014, only days after EPA issued the cautionary statement above, a major breach occurred at the modern Mount Polley mine. An earthen dam built only 17 years ago to hold millions of tons of mining waste contaminated with mercury, lead, copper, and other heavy metals failed, and unleashed a torrent of 10.6 billion liters of water, 7.3 million cubic meters of tailings, and 6.5 million cubic meters of interstitial water and material to fill nearly 9,800 Olympic-sized swimming pools – to contaminate the lakes, creeks and rivers of the Fraser River watershed.

Hailed as an example "with [a] proven track record[], of sustainable low impact operations adjacent to important fish habitat," Mount Polley is one of the very mines that NDM and PLP pointed to as a primary example of healthy "co-existence" between mining and fishing, so "evidence ... that the risks to overall fisheries from the mine are extremely low," as an "important comparative[] [to the Pebble Mine] because of [its] large size and relative proximity to salmon habitat," and "no more likely to fail than modern high rises, hydroelectric dams, or highway bridges."

http://www.northerndynastyminerals.com/i/pdf/ndm/Steptoe_NDM-Submission.pdf at 34-36 (hereinafter "NDM 2012 Comments").

 $^{^{80}}$ *Id.* at 36.

⁸¹ *Id.* at 42.

⁸² Proposed Determination, *supra* note 16, at ES-5, 6.

⁸³ Imperial Metals, Mount Polley Mine Tailings Breach, *available at* http://www.imperialmetals.com/s/Mt_Polley_Update.asp?ReportID=671041 (last visited Sept. 6, 2014).

⁸⁴ NDM 2012 Comments, *supra* note 79, at 12.

⁸⁵ While the link to this document still appears on the Pebble Partnership website, the document itself was removed after the Mount Polley disaster. The Pebble Partnership, Co-Existence Mining and Fishing, Fraser River Record Run, *previously available at*:

http://corporate.pebblepartnership.com/news-article.php?s=co-existence-mining-and-fishing-fraser-river-record-run#sthash.luyLWrY0.dpuf.

⁸⁶ NDM 2012 Comments, *supra* note 79, at 12.

⁸⁷ *Id.* at 11.

⁸⁸ *Id.* at 46-47.

Worse, the company that designed and oversaw construction of the tailings facility for the Mount Polley Mine, Knight Piesold, is the same company NDM hired to design the tailings facility for the Pebble Project⁸⁹—and the same company that claimed, in response to EPA's draft Watershed Assessment, that "...modern dam design technologies are based on proven scientific/engineering principles and *there is no basis for asserting that they will not stand the test of time*." Notably, whereas about 20,000 tons per day were being mined at the Mount Polley mine, 1 NDM has anticipated upwards of fifty times that at Pebble, 2 with a tailings storage facility nearly *one hundred* times the size.

The Mount Polley spill is an extraordinary disaster. But unprecedented, or the last of its kind, it is not. On August 6, 2014, a mere two days after the Mount Polley Mine breach and 1200 miles south, the Buena Vista copper mine in Sonora, Mexico also failed, releasing ten million gallons of mining acid, turning the Bacanuchi and Sonora rivers orange with poisonous chemicals, shutting down drinking water supplies, closing schools, and affecting an estimated 800,000 people. Selection disaster provoked by the mining industry in the modern history of Mexico, Selection the spill was apparently caused by *recently constructed* holding tanks.

The lesson is clear. We cannot realistically credit any mining company's promises that catastrophic failure from large-scale mining – modern or not – is out of the question, no matter the precautions taken or the technology used. Indeed, given the irreplaceable wild salmon fisheries resources in this region and the critical importance of those resources to the communities and wildlife that they sustain, we question whether *any* significant mining development – even below the level that EPA's determination, if adopted, would preclude – can be permitted without unacceptable adverse environmental effects prohibited by law.

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⁸⁹ News Statement, Knight Piesold Consulting, Statement by Knight Piesold Ltd. Regarding the Mount Polley Mining Incident, (Aug. 8, 2014), *available at*

http://www.knightpiesold.com/en/index.cfm/news/statement-by-knight-piesold-ltd-regarding-the-mount-polley-mining-incident/ (Last visited Sept. 16, 2014).

⁹⁰ Memorandum from Knight Piesold Consulting, Review of the Bristol Bay Assessment; EPA-HQ-ORD-2013-0189 (June 28, 2013) at 1-2, available at

 $http://corporate.pebble partnership.com/files/documents/PLP-Knight_Piesold_Ltd.pdf \ (emphasis added).$

⁹¹ NDM 2012 Comments, *supra* note 79, at 12.

⁹² Wardrop Report, *supra* note 10, at 37.

⁹³ Final Assessment (2014), *supra* note 1 at Table 6-2; Mount Polley Mine, 43-101 Technical Report 2004 Feasibility Study, Greg Gillstrom, P. Eng Geological Enginner, Vancouver, B.C., Canada (Aug. 1, 2004) at 105.

⁹⁴ Meg Wagner, Mexico Closes 88 Schools in Sonora After 10 million Gallons of Acid Spills From Copper Mine Into Rivers, New York Daily News, (Aug. 19, 2014), *available at* http://www.nydailynews.com/news/world/mexico-closes-80-schools-copper-pollutes-2-rivers-article-1.1908978#ixzz3DPCdn4jC (last visited Sept. 15, 2014).

⁹⁵ Dolia Estevez, No Apology from Mining Tycoon German Larrea for Worst Ecological Disaster in Mexico's History, Forbes, (Sept. 2, 2014), *available at*

http://www.forbes.com/sites/doliaestevez/2014/09/02/no-apology-from-mining-tycoon-german-larrea-for-worst-ecological-disaster-in-mexicos-history/ (last visited Sept. 16, 2014).

V. CONCLUSION

NRDC applauds EPA for the quality of its scientific review and analysis contained in the Final Watershed Assessment and for its extensive consideration of peer, stakeholder, and public input prior to concluding that large-scale mining in Bristol Bay would subject the region's water quality and wild salmon fisheries to unavoidable and devastating risks.

The long-term nature of any mining project, the significant likelihood of operational failures during the life of the mine (see, e.g., recent failures at Mt. Polley and Buena Vista mines), and the inevitable harm that large-scale mining would inflict on the region – all of these factors dictate a conclusion of unacceptable adverse effects on the protected resources of Bristol Bay and the communities and wildlife that depend on them. The Proposed Determination clearly and appropriately assesses these risks.

The agency now has a full factual record upon which to base a Final 404(c) Determination, as well as the legal authority – and indeed the responsibility to the communities, salmon, and wildlife that depend on a healthy and sustainable Bristol Bay – to safeguard this globally-unsurpassed environmental resource. We therefore respectfully request that EPA expeditiously incorporate public comments into a Recommended Determination, and that EPA Administrator McCarthy issue a Final Determination to protect Bristol Bay.

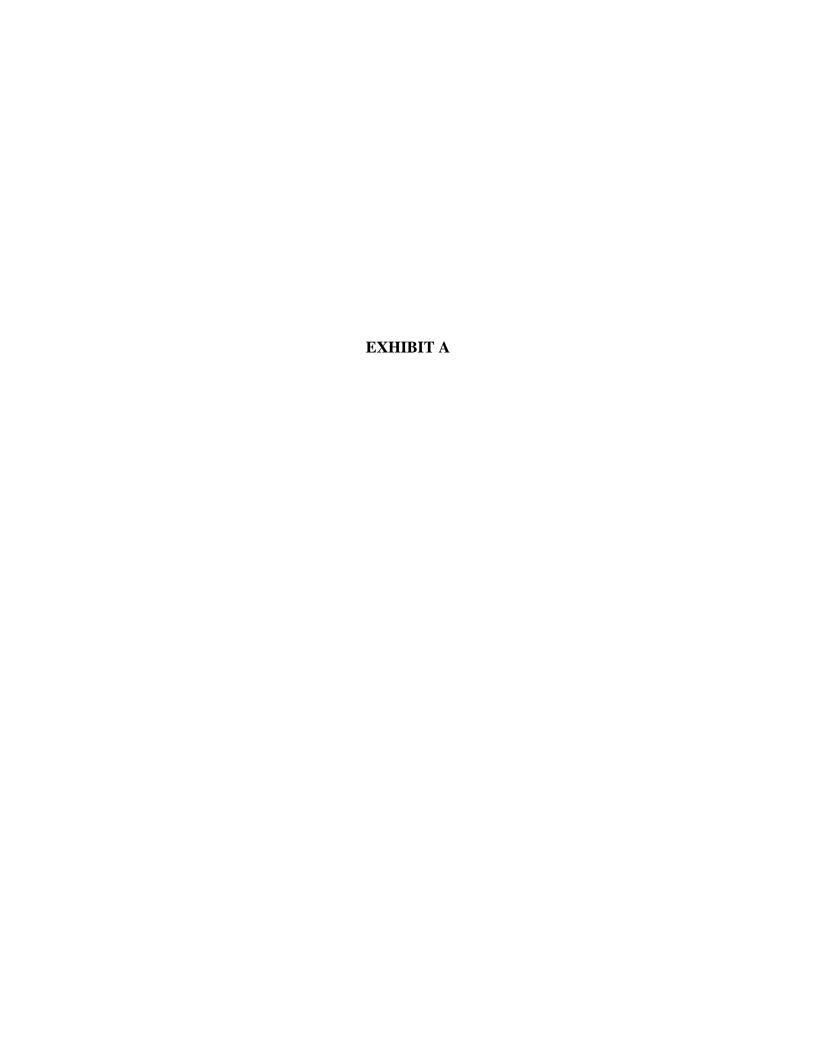
Respectfully submitted,

Joel R. Reynolds Danielle A. Lackey

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Messrs. Shively, Cutifani and Thiessen:

I write today with regard to the Pebble Limited Partnership (PLP)'s timeline for releasing a project description and submitting permit applications for development of the Pebble deposit in the Bristol Bay region of Alaska. As you know, in anticipation of PLP taking these actions, I have been and remain neutral on potential development in this area.

To that end, I have encouraged all stakeholders to withhold judgment until a project description is released, permit applications filed, and all relevant analyses completed. Because of that position, I have opposed the prospect of a preemptive veto of development in Alaska by the Environmental Protection Agency (EPA) under Section 404(c) of the Clean Water Act. Such an action would be based purely upon speculation and conjecture. It would deprive relevant government agencies and all stakeholders of the specifics needed to make informed decisions. But failure to describe the project and submit permit applications has the same effect.

For nearly a decade, Alaskans have been told that these actions are imminent. This has generated a broad range of responses from people throughout the state. Yet today, after years of waiting, it is anxiety, frustration, and confusion that have become the norm in many communities – rather than optimism about the new economic opportunities that responsible development of the Pebble deposit might be able to deliver.

As you know, I have been highly critical of EPA and protective of the due process that any entity considering investment in Alaska should be provided. But your own actions have created uncertainty among the people I represent, and the time has come to tell Alaskans whether and how you plan to proceed. I have addressed this correspondence to all of you, as a group, because your organizations are collectively responsible for these issues. You are also the only ones in a position to remedy them.

At least as far back as November 3, 2004, Northern Dynasty Minerals asserted that the submission of permit applications was imminent, stating that the company expected "completion in 2005 of ... permit

applications."1 On August 12, 2005, another statement was issued, claiming that "a full permitting process for a port, access road and open pit mine [were] all slated to begin in 2006."2

On October 27, 2008, Alaskans were assured that those seeking to develop the Pebble deposit were "on schedule to finalize a proposed development plan in 2009 and, following input from project stakeholders, apply for permits in early 2010."3 Six months later, on March 18, 2009, this timeline was reaffirmed, with an announcement that PLP was in the midst of "preparation to initiate state and federal permitting under the National Environmental Policy Act (NEPA) in 2010."4

On February 1, 2010, Alaskans were told that PLP was "preparing to initiate project permitting under the National Environmental Policy Act (NEPA) in 2011."5 Yet on May 2, 2011, came the announcement that PLP intended "to enter the permitting phase towards the end of 2012." On October 18, 2011, came another revision, as Alaskans were told by a PLP representative that "We have never even said that we're going to [seek a] permit. We may not."7

Most recently, on June 13, 2013, a PLP representative said that you "hope to have a project to take into permitting this year."8 And in what seems representative of the confusing message being communicated to Alaskans, at the time of this letter, a PLP company website still asserts that you are planning on "initiating permitting by late 2012."9

By failing to take the next step - by failing to decide whether to formally describe the project and seek permits for it - PLP has created a vacuum that EPA has now filled with not one, not two, but three hypothetical mine scenarios contained in its so-called Watershed Assessment.

So I have a simple request: please establish a timeline and adhere to it. Clarity and certainty over how you intend to proceed is in the best interest of all who are involved with - and all who could be affected by - development of the Pebble deposit.

Sincerely.

United States Senator

^{1 &}quot;Northern Dynasty Secures Listing With Symbol 'NAK' on the American Stock Exchange," Northern Dynasty Minerals Ltd. press

release, November 3, 2004, on the Northern Dynasty Minerals Ltd. website, http://bit.ly/1cmyd03, accessed June 26, 2013.

2 "Northern Dynasty Welcomes New Director to Board," Northern Dynasty Minerals Ltd. press release, August 12, 2005, on the Northern Dynasty Minerals Ltd. website, http://bit.ly/138vpW1, accessed June 26, 2013.

³ "Successful 2008 Study Program Continues At Alaska's Pebble Project," Northern Dynasty Minerals Ltd. press release, October 27, 2008, on the Northern Dynasty Minerals Ltd. website, http://bit.ly/10Vbp7S, accessed June 26, 2013.

4 "Pebble 2009 Work Plan to Focus on Finalizing Prefeasibility Study," Pebble Limited Partnership press release, March 18, 2009, on the

Pebble Limited Partnership website, http://bit.ly/120vTWM, accessed June 26, 2013.

⁵ "Updated Mineral Resource Estimate Confirms the Pebble Project as North America's Most Important New Copper-Gold-Molybdenum Development Opportunity," Northern Dynasty Minerals Ltd. press release, February 1, 2010, on the Northern Dynasty Minerals Ltd. website, http://bit.ly/14a3MbK, accessed June 26, 2013.

^{6 &}quot;\$91 million work program underway to prepare Pebble Project for permitting in 2012," Northern Dynasty Minerals Ltd. press release, May 2, 2011, on the Northern Dynasty Minerals Ltd. website, http://bit.ly/15FP3Du, accessed June 26, 2013.

⁷ Lempinen, Edward W., "Proposed Pebble Mine Has Alaskan Community Focused on Critical Science and Policy Issues," AAAS news release, October 18, 2011, on the AAAS website, http://bit.ly/nhZqnW, accessed June 26, 2013.

⁸ Shively, John. Interview by Monica Trauzzi, OnPoint, E&ETV, "Bristol Bay: Pebble mine's Shively discusses future of project, EPA's watershed assessment," June 13, 2013, online, http://bit.ly/16zAHXq, accessed June 26, 2013.

AngloAmerican, "Case studies: Pebble partnership," http://bit.ly/19tRNeA, accessed June 26, 2013.