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UNITED STATES DISTRICT COURT FOR THE
WESTERN DISTRICT OF WASHINGTON

)	
HALCYN OLENEC, JOHN B. JONES III,)	Case No. 2:10-cv-1644
JULIE JONES, THOMAS STARK, TERI)	
STARK, LARRY WHITE, BANDON)	
WOODLANDS COMMUNITY)	COMPLAINT FOR DECLARATORY AND
ASSOCIATION, and OREGON COAST)	INJUNCTIVE RELIEF
ALLIANCE,)	
)	(Administrative Procedure Act, 5 U.S.C. §§
Plaintiffs,)	701 <i>et seq.</i> , Endangered Species Act, 16
)	U.S.C. §§ 1531 <i>et seq.</i> , Clean Water Act, 33
v.)	U.S.C. §§ 1251 <i>et seq.</i> , and National
)	Environmental Policy Act, 43 U.S.C. §§ 4321
NATIONAL MARINE FISHERIES)	<i>et seq.</i>)
SERVICE, an agency of the National Oceanic)	
and Atmospheric Administration; BARRY A.)	
THOM, in his official capacity as Acting)	
Regional Administrator; UNITED STATES)	
ARMY CORPS OF ENGINEERS, an agency)	
of the Department of the Army; and ROBERT)	
L. VAN ANTWERP, JR., Lieutenant General,)	
in his official capacity as the Chief of)	
Engineers and Commanding General for the)	
Corps,)	
)	
Defendants.)	

I. PRELIMINARY STATEMENT

1. This action challenges the failure of Defendants National Marine Fisheries Service and Barry A. Thom, Acting Regional Administrator (collectively “NMFS”), and U.S. Army Corps of Engineers and Lieutenant General Robert L. Van Antwerp, Jr., Chief of Engineers and Commanding General for the Corps (collectively the “Corps”) to comply with their obligations under the Administrative Procedure Act, 5 U.S.C. §§ 701 *et seq.*, the

1 Endangered Species Act, 16 U.S.C. §§ 1531 *et seq.*, the Clean Water Act, 33 U.S.C. §§ 1251 *et*
2 *seq.*, and the National Environmental Policy Act, 42 U.S.C. §§ 4321 *et seq.* to protect threatened
3 species, aquatic resources, and the human environment from adverse impacts from a proposed
4 chromite surface mine and related activities near Coos Bay, Oregon.

5 2. The mining operations are proposed to be carried out by Oregon Resources
6 Corporation (“ORC”), which is wholly owned by Industrial Minerals Corporation, an Australian
7 company, and entail the removal of vegetation, filling of wetlands, rerouting of waterways, open
8 pit run removal of material via heavy equipment, transport for processing, dewatering of mine
9 pits, and replacement of mine tailings at four sites within the watersheds of two fish-bearing
10 streams. To conduct the proposed mining activities, ORC applied to the Corps for a permit to fill
11 wetlands pursuant to section 404 of the Clean Water Act (“Section 404 Permit”). To grant the
12 permit, the Corps was required to consult with NMFS pursuant to section 7 of the Endangered
13 Species Act.

14 3. The National Marine Fisheries Service violated its duties under Section 7(a)(2) of
15 the Endangered Species Act (“ESA”), 16 U.S.C. § 1536(a)(2). Specifically, NMFS issued a
16 letter of concurrence to the Army Corps of Engineers (“concurrence letter”) concluding that 160
17 acres of specific mining operations for chromite and other minerals approved by the Corps are
18 not likely to adversely affect the Oregon Coast coho salmon (*Oncorhynchus kisutch*). By
19 concurring, NMFS acted arbitrarily and capriciously and contrary to law by failing to consider
20 relevant factors and failing to rely on the best available science.

21 4. In issuing a permit for surface mining activities to impact 7.7 acres of wetlands
22 and 0.6 acres of tributary streams, the Corps violated its mandatory duties under the Clean Water
23 Act (“CWA”), 33 U.S.C. §§ 1251, *et seq.*, and the National Environmental Policy Act
24 (“NEPA”), 42 U.S.C. §§ 4321, *et seq.*, in a variety of ways. The Corps’ action was arbitrary and

1 capricious and contrary to law.

2 5. Plaintiffs are individuals and organizations comprised of members who live, visit,
3 and recreate in the area where the proposed chromite mining operations will occur. Of particular
4 concern to the Plaintiffs is the presence of hexavalent chromium in the ground water at the mine
5 sites and the risk that hexavalent chromium and sedimentation generated during the mining
6 process will injure fish and wildlife, pollute the watershed and threaten their health and well-
7 being. Hexavalent chromium is toxic and carcinogenic and is extremely dangerous in very small
8 amounts. Samples of groundwater at the proposed mine sites show hexavalent chromium is
9 currently present.

10 6. Plaintiffs seek a declaration that the concurrence letter and Section 404 Permit
11 and are arbitrary, capricious, and contrary to law in violation of the Administrative Procedure
12 Act (“APA”), 5 U.S.C. § 706(2)(A). As a result, plaintiffs respectfully request that this court set
13 aside and remand the Section 404 Permit and concurrence letter pursuant to the APA.

14 7. Plaintiffs also seek an award of costs and attorneys’ fees pursuant to the Equal
15 Access to Justice Act, 28 U.S.C. § 2412.

16 **II. JURISDICTION and VENUE**

17 8. This action is brought pursuant to the Administrative Procedure Act, 5 U.S.C. §§
18 701–706. This court has jurisdiction pursuant to 28 U.S.C. § 1331. There is a present, actual
19 and justiciable controversy between the parties. The requested relief is proper under 28 U.S.C. §
20 2201 (declaratory relief) and § 2202 (injunctive relief) and 5 U.S.C. §§ 701–706. The federal
21 government has waived sovereign immunity in this action pursuant to 5 U.S.C. § 702.

22 9. Venue is proper under 28 U.S.C. § 1391(e) because defendant NMFS has its
23 Northwest regional office, which developed and issued the challenged concurrence letter, in this
24 district. In addition, no real property is involved in this matter and Plaintiff Halcyn Olenec

1 resides within this district.

2 **III. PARTIES**

3 10. Plaintiff HALCYN OLENEC currently resides on Mercer Island in King County,
4 Washington. After graduating college, Ms. Olenec lived at her family home with her parents,
5 Jack and Julie Jones, at 89056 Whiskey Run Lane, Bandon, Oregon. During the ten months that
6 Ms. Olenec was a full-time resident in Bandon, she regularly walked on the beach, collected
7 shells and rocks, collected seasonal berries, rode her bike in the area, and hiked in the forest.
8 Since moving to King County, Ms. Olenec continues to regularly visit her parents at the family
9 home. When she visits, she recreates in the area, hiking in the forest and enjoying the quiet and
10 solace of the area. Ms. Olenec will return to the family home for the upcoming holidays in late
11 November and late December to early January. On future visits, she plans to hike, ride her bike,
12 walk on the beach, and enjoy the quiet and solace of the family home's location. Ms. Olenec is a
13 member of Plaintiff organizations Bandon Woodlands Community Association ("BWCA") and
14 Oregon Coast Alliance ("ORCA").

15 11. Ms. Olenec is concerned that the proposed mining activities will injure her ability
16 to enjoy or engage in the same activities she is accustomed to enjoy during her time at the family
17 home. In particular she is concerned about traffic from mining trucks, increased noise, pollution
18 and debris, and limited access to the forests and beaches she enjoys. Ms. Olenec visits the family
19 home in Bandon frequently in order to spend time outdoors, closer to nature, where she finds
20 peace and solace. The proposed mining would directly disrupt her opportunity to continue this
21 practice. Ms. Olenec believes that further research and studies should be conducted in order to
22 fully understand the long-term effects of hexavalent chromium. She believes that further testing
23 and scientific study would better protect groundwater and water quality.

24 12. The aesthetic, recreational, educational, and health and safety interests of Halcyn

1 Olenec will be impaired if the chromite mining operations permitted by NMFS's concurrence
2 letter and the Section 404 Permit are allowed to proceed.

3 13. Plaintiffs JOHN B. JONES III and JULIE JONES reside at 89056 Whiskey Run
4 Lane, Bandon, Oregon. Mr. Jones has owned the property for 24 years and the home has been
5 his primary residence for 20 years. The Jones' home is approximately 1.5 miles from the West
6 Section 10 mine site. The Joneses are members of BWCA and ORCA. The Joneses regularly
7 recreate in the area around their home from Cape Arago to the mouth of the Coquille River and
8 east to West Beaver Hill Road. Their activities include mushroom hunting, grouse and quail
9 hunting, picking blackberries and huckleberries, fishing sea-run cutthroat trout and steelhead
10 trout, and hiking. Mr. Jones is a commercial and sport fisherman who considers survival of coho
11 salmon and other indigenous fish species very important to both his livelihood and recreational
12 lifestyle. The Joneses enjoy the quiet of the area around their home, where they can hear the
13 ocean surf one mile away.

14 14. The Joneses are concerned that mining activities that will permanently destroy
15 wetlands and potentially contaminate groundwater and surface water will adversely affect the
16 fish and wildlife in the area and the habitat they rely on in the creeks from head waters to the
17 beaches. The effects of the mining operations will force the Joneses to find other places to
18 recreate, further from their home, and will destroy the tranquility they currently enjoy at their
19 home. The Joneses are also concerned that noise from 24-hour mining operations every day for
20 340 days per year will destroy the calm and tranquility they currently enjoy at their home. The
21 Joneses believe that further monitoring and testing are needed in order to establish a baseline for
22 evaluating water quality and impacts to fish in order to adequately protect the habitat, fish, and
23 wildlife around their home.

24 15. The aesthetic, recreational, educational, and health and safety interests of John

1 Jones and Julie Jones will be impaired if the chromite mining operations permitted by NMFS's
2 concurrence letter and the Section 404 Permit are allowed to proceed.

3 16. Plaintiffs THOMAS STARK and TERI STARK live at 59613 W Beaver Hill
4 Road, Bandon, Oregon 97411. The Starks have lived in this home, as their primary residence,
5 since November 1991. The Starks' residence is located less than 0.4 mile from the South Seven
6 Devils mine site, and just over 0.5 miles from the West Section 10 mine site. The access road to
7 these two mine sites is located 413 feet from the Stark's home. The house is set back from West
8 Beaver Hill Road by 215 feet. West Beaver Hill Road is the designated haul route for all of
9 ORC's mine sites. Due to their immediate proximity to the mining operations, the Starks will be
10 directly and grossly affected by mining activities. The Starks are members of Plaintiff
11 organizations BWCA and ORCA. They regularly take walks in the area, gather seasonal berries,
12 and enjoy bird watching and flora and fauna identification. While enjoying the area in recent
13 years, the Starks have observed bald eagles, red tailed hawks, and pileated woodpeckers, and
14 have identified the nighttime calls of saw-whet owls, pygmy owls, and great horned owls. The
15 Starks also enjoy hiking into the wetlands areas to be mined, where they have observed tree
16 frogs, red-legged frogs, newts and Pacific Giant salamanders and intend to continue these
17 activities in the future during the early spring and summer. The Starks rely on a shallow well (a
18 developed spring) for drinking water and domestic water needs. After mining operations begin,
19 the Starks will periodically test their water for contaminants, an increased financial burden, and
20 will carefully monitor the level of water in their well. If their well becomes contaminated, the
21 Starks will be forced to purchase drinking water for themselves and their animals.

22 17. Mr. and Mrs. Stark are concerned that the mine access road and West Beaver Hill
23 Road, portions of which are higher in elevation than their property, will become subject to
24 erosion and surface runoff during the wet seasons. The Starks are concerned that this sediment,

1 carried from the access road to West Beaver Hill Road by transport trucks, could enter their
2 property and the wetland adjacent to the north of their property. The Starks are concerned that
3 this surface runoff has the potential to contaminate their well water. The Starks are also
4 concerned that the mining vehicle traffic and mud from the access road will cause a serious
5 traffic hazard on the road in front of their home. Mining activities will displace wildlife through
6 noise and light pollution, air pollution and water contamination, in addition to direct habitat loss.
7 The Starks are concerned that upland application of contaminated water collected from the mine
8 pits will increase landslide hazards through over-saturation of soils. The Starks believe that
9 further study of the effects of the mining is necessary to better understand the impacts to fish
10 habitat, groundwater and water quality.

11 18. The aesthetic, recreational, educational, and health and safety interests of Thomas
12 and Teri Stark will be impaired if the chromite mining operations permitted by NMFS's
13 concurrence letter and the Section 404 Permit are allowed to proceed.

14 19. Plaintiff LARRY WHITE lives at 89000 Hemlock Lane, Bandon, Oregon, within
15 one mile of the West Section 10 mine site. He has owned the property for 33 years and it has
16 been his primary residence for 14 years. Mr. White is a member of Plaintiffs BWCA and
17 ORCA. Mr. White often hikes around the area of Hemlock Lane, including around the West
18 Section 10 and Shepard mine sites and intends to do so in the spring and summer. Mr. White
19 practices nature photography as a hobby, and often finds inspiration for his photographs in this
20 area. Mr. White is also a bird-watcher, and enjoys identifying different bird species he finds on
21 his walks in the area of the proposed mine sites. Mr. White enjoys the natural beauty of the area,
22 the solitude, the sound of the wind and the ocean, and the presence of wildlife. Mr. White has a
23 spring on his property and obtains his drinking water from a hand-dug well approximately 100
24 feet from the spring.

1 20. Mr. White is concerned that the noise, dust, and loss of habitat as a result of the
2 chromite mining will impair his continued enjoyment of hiking, photography, and bird-watching
3 in the area around his home. He is also concerned that mine activities within an aquifer below or
4 near to his property could drain his well and spring leaving his home and the wildlife at his
5 property dry. Mr. White is very concerned that hexavalent chromium was found at some of the
6 test wells, and that mining activities will mix the elements manganese and chromium, both
7 present at the site, and potentially create increased levels of hexavalent chromium in the
8 groundwater near his home. Mr. White is concerned that the proposed dewatering process will
9 then spread this contaminated water everywhere that the mine pit water is applied and infiltrate
10 in other areas than just the mine pits where it is formed. Particularly during winter, when heavy
11 rains saturate the soils in this area, Mr. White believes that dewatering discharges will run over
12 the ground surface spreading contaminated water further to wells, streams and to the ocean.
13 Once mining begins, Mr. White will only feel safe using his water supply with frequent testing
14 for contamination, and is concerned with the additional costs this testing will require. Mr. White
15 is also concerned that dewatering discharges will cause erosion and damage to the ecosystem by
16 contamination. Mr. White is concerned that the agencies responsible for analyzing the impacts
17 from the proposed mine site have not adequately considered the risks to human health, water
18 quality, and wildlife habitat from the proposed chromite mining operations.

19 21. Larry White's aesthetic, recreational, educational, and health and safety interests
20 will be impaired if the chromite mining operations permitted by NMFS's concurrence letter and
21 the Section 404 Permit are allowed to proceed.

22 22. Plaintiff BANDON WOODLANDS COMMUNITY ASSOCIATION ("BWCA")
23 is an unincorporated community association of property owners in an area west of Highway 101
24 north of Bandon, Oregon, where chromite mining operations will occur. BWCA strives to assure

1 their community's safety and quality of life, and to encourage responsible development in the
2 unique coastal woodlands environment where they live. BWCA has engaged in efforts to protect
3 the community from unsustainable development and has worked extensively to educate the
4 public and public agencies about the impacts of the proposed mining on their safety, property
5 values, and aesthetic and recreational enjoyment of the community.

6 23. BWCA has over 130 members who live or own homes and/or developable home
7 sites and land in the vicinity of the proposed mine sites. Some of BWCA's members live within
8 500 feet of the entrance to mine sites. Many of BWCA's members' residences are served by
9 domestic wells, which draw groundwater from watersheds that would be impacted by the
10 proposed mining. In some cases these wells are as shallow as 6 feet. In addition to owning
11 property and residing in the area where mining will occur, BWCA members use the area for
12 aesthetic enjoyment, observation, fishing, hiking, horseback riding, mushroom hunting, berry
13 picking, and other recreational, scientific, and educational activities and intend to do so on a
14 regular basis next spring and summer and regularly thereafter indefinitely into the future.

15 24. The aesthetic, recreational, educational, and health and safety interests of BWCA
16 and its members will be impaired if the chromite mining operations permitted by NMFS's
17 concurrence letter and the Corps' Section 404 Permit are allowed to proceed.

18 25. Plaintiff OREGON COAST ALLIANCE ("ORCA") is a non-profit organization
19 of coastal residents, who live, work, and recreate on or near the Oregon coast. ORCA's mission
20 is to preserve and protect the Oregon coast by working with coastal residents for sustainable
21 communities, protection and restoration of coastal natural resources.

22 26. Many of ORCA's members visit, recreate near, and live in the vicinity of the
23 proposed chromite mining operations which are the subject of the ESA consultation at issue here
24 and intend to do so on a continual and regular basis indefinitely into the future. The aesthetic,

1 recreational, scientific, and educational interests of ORCA and its members will be impaired if
2 the chromite mining operations that are the subject of the challenged concurrence letter and
3 Section 404 Permit and proceed without a legally sufficient analysis of the project's impacts on
4 salmon, and if NMFS and the Corps continue to review chromite mining proposals without
5 evaluating their full aquatic impacts and without ensuring that the mining will not jeopardize
6 salmon and steelhead survival and recovery.

7 27. Plaintiffs Halcyn Olenec, John B. Jones, Julie Jones, Thomas Stark, Teri Stark,
8 Larry White, BWCA, and ORCA are hereinafter collectively referred to as "Plaintiffs."

9 28. Plaintiff's injuries are directly traceable to NMFS and the Corps' violations of law
10 and the legal consequences flowing from those violations. NMFS is the agency charged with
11 providing analysis and consultation to action agencies to ensure the continued survival and
12 recovery of species listed under the ESA. If NMFS fails to properly evaluate impacts of a
13 proposed action on listed species and provide information and opinion to the action agency, this
14 failure inhibits protection of listed species and their habitats. The Corps is charged with
15 implementing section 404 of the Clean Water Act. If the Corps fails to properly implement the
16 requirements of the Clean Water Act, its regulations and guidelines in approving section 404
17 permits, its failure to properly apply the law inhibits the protection of special aquatic sites and
18 results in legally insufficient permits issued for projects that may have significant impacts on
19 aquatic resources and the human environment. Accordingly, NMFS' and the Corps' unlawful
20 actions are degrading and harming the clean water, fish species, and habitats enjoyed by the
21 Plaintiffs.

22 29. Plaintiff's injuries can be redressed by the declaratory and injunctive relief sought
23 herein. An order compelling NMFS and the Corps to properly review the proposed action under
24 the provisions of the CWA, NEPA and the ESA will be more protective of water quality, human

1 health and safety, listed species and their habitats.

2 30. Defendant National Marine Fisheries Service is an agency of the United States
3 Department of Commerce responsible for administering the provisions of the Endangered
4 Species Act with regard to threatened and endangered marine species, including salmon and
5 steelhead. It issued the concurrence letter that is challenged in this case.

6 31. Defendant Barry A. Thom is the Acting Regional Administrator of NMFS
7 Northwest Region and is the official responsible for the action taken by NMFS and is sued in his
8 official capacity.

9 32. Defendants National Marine Fisheries Service and Barry A. Thom are hereinafter
10 collectively referred to as “NMFS.”

11 33. Defendant United States Army Corps of Engineers is an agency of the federal
12 government that has the duty of evaluating applications for Department of the Army permits
13 under section 404 of the Clean Water Act, ensuring that the requirements of section 404 and the
14 section 404(b)(1) Guidelines are fulfilled, and ensuring that the requirements of the National
15 Environmental Policy Act are fulfilled in connection with all evaluation and decision-making
16 concerning such permits.

17 34. Defendant Lieutenant General Robert L. Van Antwerp, Jr., is the Chief of
18 Engineers and Commanding General for the Corps and is the official responsible for actions
19 taken by the Corps and is sued in his official capacity.

20 35. Defendants United State Army Corps of Engineers and Lieutenant General Robert
21 L. Van Antwerp, Jr. are hereinafter collectively referred to as the “Corps.”

22 **IV. FACTUAL BACKGROUND**

23 **A. Geology and Hydrology of the Project Area**

24 36. ORC proposes to extract chromite and other minerals from marine terraces south

1 of Coos Bay, Oregon. The marine terraces were formed by wave erosion and deposition at the
2 ocean shore. Over time, movement of the earth's plates resulted in land uplift pushing the
3 deposits up and away from the shoreline. Today, these marine terraces are located in the hills
4 approximately one to two miles from the shore.

5 37. Within the marine terraces, topsoil and lower soil layers sit atop a clay layer. This
6 layer slows groundwater movement downward, trapping groundwater at a shallow level. These
7 shallow groundwater conditions are reflected in the many wetlands and seeps found in the area.
8 Below the shallow layer lie the mineral sands that ORC proposes to extract. The mineral sands
9 in turn sit atop the Elkton unit geologic formation. The Elkton formation allows a small portion
10 of the groundwater to migrate below the terrace sand deposits, but generally has low
11 permeability and retains groundwater within the sands deposits of the terraces. The groundwater
12 perched within the sand deposits provides base flow for the streams in the area.

13 38. The project area contains wetlands and waterways including tributaries to
14 Thremile and Fivemile Creeks. These creeks and tributaries are within the habitat range of the
15 Oregon Coast Evolutionarily Significant Unit ("ESU") for coho salmon, which are listed as
16 "threatened" under the ESA, and are essential fish habitat under the Magnuson-Stevens Act.
17 Thremile and Fivemile Creeks flow year-round. The creeks drain directly to the Pacific Ocean,
18 about one to two miles to the west of the mine sites. There are no barriers to fish passage
19 downstream of the mine sites. NMFS assumes that Oregon Coast coho occupy the watersheds.

20 39. Chromite mining occurred at and around the action area during the 1940's.
21 Logging activities also occur within the impact area of the mining. These actions have degraded
22 aquatic habitat and contributed to the decline of salmonids that are now listed under the ESA.

23 **B. Proposed Operations**

24 40. ORC's mining operations will remove chromite sands and other minerals from

1 upland marine terraces in the area of Seven Devils near Bandon and Charleston in Coos County,
2 Oregon. First, the areas will be logged to prepare for mining. Once the big trees are gone ORC
3 will scrape remaining vegetation and dig up to 70 feet of soil into piles at the perimeter of the
4 mine sites. In blocks of ten acres each, the chromite and mineral sands will be removed by
5 heavy machinery to approximate excavation depths of 20 to 70 feet. The sands will be loaded
6 onto trucks, transported up to five miles along winding and narrow county roads before joining
7 Hwy 101 to reach the processing plant in Coos Bay. After the desired minerals are separated
8 from the sands, the remaining materials, or tailings, will be trucked back to the mine sites and
9 used to refill the mine pits. ORC estimates that approximately 75 percent of the removed
10 material will be returned to the mine pits. Each pit will be used to collect storm water runoff
11 from the mine area. Mining operations will proceed for 24 hours per day, seven days per week,
12 and 340 days per year.

13 41. Mining will occur at four mine sites including a total area of about 160 acres. The
14 four mine sites that are the subject of the concurrence letter and Section 404 Permit are named
15 West Bohemia, North Seven Devils, South Seven Devils, and West Section 10. The duration of
16 mining operations and associated disturbances for each mine site ranges from four months to
17 almost four years, with a total of six to eight years anticipated for construction through
18 reclamation.

19 42. In order to access minerals at the North Seven Devils site, ORC will construct
20 three temporary stream crossings. The stream crossings will be in place from five to 15 months.

21 43. At the North Seven Devils and South Seven Devils sites, waterways cross the
22 mining area. The waterways will be diverted around the mine site for the duration of mining
23 operations. ORC proposes to reconstruct the streams during its reclamation processes.

24 44. Mining using an open pit method in an area with shallow (perched) aquifers

1 means that groundwater will drain into the mine pits. ORC modeled the rate of drainage and
2 estimates that the pits from the mine sites could initially generate near 500m³ (132,000 gallons)
3 of water. ORC will collect this groundwater and any stormwater in the mine pits, and then pump
4 and apply the water (along with any pollutants) to upland areas where it will once again be
5 absorbed into the groundwater system. Specifically, ORC proposes to use the West Bohemia site
6 after it has been mined to recycle and infiltrate water from other mining sites. This site is
7 roughly 117 acres and will be the primary location for infiltration during mining of the North
8 Seven Devils site. West Bohemia drains to the north-northwest into Fivemile Creek. North
9 Seven Devils drains to the south into Threemile Creek.

10 45. ORC has indicated its intent to mine other areas within the Southwest Oregon
11 coastal region “from Cape Arago to Port Orford” and within the action area of the project.
12 Together with the four approved sites, ORC originally also proposed to mine at another mine site
13 called Section 33. Section 33 was included in the application but ultimately was dropped from
14 the permit. Section 33 is located within the Fivemile Creek drainage basin. Other mine sites that
15 ORC has identified as having potential for production include Westbrook, Shepard, and six other
16 deposits (South Slough, Pioneer-Eagle, Section 36, Section 9, Butler, and Rose). Of these,
17 Westbrook, Section 33, Shepard, and Rose are within the “Coos Bay Project Area” identified by
18 ORC. These sites all lie within the drainages of Threemile, Fivemile, and Twomile Creeks.
19 ORC states that in the future, additional mineral reserves may be identified or existing proved
20 reserves may become economically feasible.

21 **C. Hexavalent Chromium and Groundwater**

22 46. Hexavalent chromium (Cr(VI)) is a toxic and carcinogenic form of the element
23 chromium. The more common variety of chromium compounds is trivalent chromium, which is
24 not as volatile or harmful as hexavalent chromium. Trivalent chromium is also not as soluble as

1 hexavalent chromium.

2 47. According to groundwater sampling at the mine sites, hexavalent chromium is
3 present in concentrations as high as 7.8 parts per billion (7.8 µg/L).

4 48. Oregon DEQ publishes ecological screening values for certain chemicals. For
5 aquatic organisms, the screening level for hexavalent chromium is 11 parts per billion (11
6 micrograms per liter (µg/L)). Under the Safe Drinking Water Act, the Environmental Protection
7 Agency (“EPA”) determines the level of contaminants in drinking water at which no adverse
8 health effects are likely to occur. EPA has determined that hexavalent chromium makes drinking
9 water unsafe when concentrations exceed only 100 parts per billion (100 µg/L).

10 49. Hexavalent chromium is formed through a chemical reaction where trivalent
11 chromium is oxidized and dissolved through natural processes in the presence of certain minerals
12 and soil conditions. Natural formation of hexavalent chromium occurs in soils with high
13 manganese and chromium content. In an opposite chemical reaction, hexavalent chromium may
14 reduce to the trivalent form in the presence of organic material or sulfides.

15 50. The mineral deposits at the four mine sites for this project contain substantial
16 amounts of both chromium and manganese. Mining activities may increase reactivity of the soils
17 with groundwater because mining disturbs soil structure, exposing more surface area to
18 groundwater. The mining activities proposed will result in the mixing of sediments and changes
19 in hydrology (*i.e.*, the operation of heavy equipment and removal of soil layers will disturb soils
20 and result in groundwater movement), which could enhance oxidation and mobilization of
21 hexavalent chromium.

22 51. It is possible for hexavalent chromium to naturally attenuate in soils if conditions
23 allow. Whether site conditions will allow for natural reduction at a rate that is environmentally
24 significant depends on a multitude of factors. There is no single test that can determine whether

1 natural attenuation will occur at a particular site. In determining the potential for the natural
2 attenuation of hexavalent chromium, it must be demonstrated that 1) there are natural reductants
3 present within the aquifer, 2) the amount of hexavalent chromium and other reactive constituents
4 does not exceed the capacity of the aquifer to reduce them, 3) the rate of hexavalent chromium
5 reduction is greater than the rate of transport of the aqueous hexavalent chromium from the site,
6 4) the trivalent chromium remains immobile, and 5) there is no net oxidation of trivalent
7 chromium to hexavalent chromium.

8 52. The Biological Assessment (“BA”) prepared by ORC’s consultant acknowledges
9 that groundwater testing results showed hexavalent chromium is present at the mining sites. The
10 highest sample returned hexavalent chromium in concentrations of 7.8 parts per billion (7.8
11 µg/L). For aquatic organisms, the screening level for hexavalent chromium is 11 parts per billion
12 (11 µg/L). The BA compared testing results to Environmental Protection Agency drinking water
13 standards for hexavalent chromium, which are higher than standards for chronic and acute
14 toxicity for fish. Despite site specific sampling showing presence of hexavalent chromium in the
15 groundwater, the BA concludes that the conditions at the site are not favorable to the formation
16 of hexavalent chromium. The BA also acknowledges that it is possible that mechanical
17 disturbance of area soils from mining actions could increase the rate at which hexavalent
18 chromium forms, but concludes that those activities would be more likely to reduce the rate of
19 hexavalent chromium formation.

20 53. A report prepared by Dr. Daniel J. Bain, Associate Professor at the Department of
21 Geology and Planetary Sciences at the University of Pittsburgh (“Bain Report”) identifies the
22 potential for hexavalent chromium to occur naturally in the mine site conditions and the potential
23 for hexavalent chromium to be formed by oxidation as a result of soil disturbances associated
24 with mining activities. The Bain Report concludes that there is great uncertainty as to whether

1 ORC's mining operations will adversely affect groundwater or surface water quality. Dr. Bain
2 also submitted comments to the Corps in response to ORC's groundwater study, which raised
3 concerns over the sampling method used and the fact that hexavalent chromium was found to be
4 present in the mine areas.

5 54. NMFS and the Corps did not conduct an analysis of hexavalent chromium.
6 Instead, these agencies requested technical support from Oregon Department of Environmental
7 Quality ("DEQ") in evaluating the potential for mining activities to cause hexavalent chromium
8 to migrate to surface water resources in concentrations that could potentially affect aquatic
9 organisms. DEQ's report acknowledges that it is extremely difficult to predict the likely
10 chromium species in a system without sufficient site-specific data. DEQ's assessment concludes
11 that it is possible that hexavalent chromium could be generated in a post-mining environment but
12 appears unlikely to be significant given the aquifer's apparent potential to reduce hexavalent
13 chromium to the less harmful and less volatile trivalent chromium. This conclusion is based in
14 part on an assumption of the presence of organic matter to reduce hexavalent chromium. No
15 studies were conducted demonstrating the presence of organic material in the sands at these mine
16 sites. DEQ qualified its conclusions, stating that they should be confirmed with easy and cost-
17 effective field studies to help quantify the attenuation capacity at each particular site. NFMS
18 and the Corps did not request that these field studies be performed.

19 **V. LEGAL BACKGROUND**

20 **A. Administrative Procedure Act**

21 55. The Administrative Procedure Act ("APA") allows for review of agency action.
22 "A person suffering legal wrong because of agency action, or adversely affected or aggrieved by
23 agency action within the meaning of a relevant statute, is entitled to judicial review thereof." 5
24 U.S.C. § 702.

1 56. The APA requires that a court set aside and hold unlawful agency action found to
2 be “arbitrary, capricious, an abuse of discretion, or otherwise not in accordance with law,” and
3 “without observance of procedure required by law.” 5 U.S.C. § 706(2).

4 **B. Endangered Species Act and implementing regulations**

5 57. The Endangered Species Act (“ESA”), 16 U.S.C. § 1531 *et seq.*, was enacted “to
6 provide a means whereby the ecosystems upon which endangered species and threatened species
7 depend may be conserved.” 16 U.S.C. § 1531(b). The ESA protects animal species that are
8 listed as “endangered” or “threatened.” 16 U.S.C. § 1533. Oregon Coast coho (*Oncorhynchus*
9 *kisutch*) is listed as a threatened species. 73 Fed. Reg. 7816 (Feb. 11, 2008). The Oregon Coast
10 Steelhead ESU is a species of concern under the ESA and is not listed as threatened or
11 endangered at this time.

12 58. Section 7 of the ESA prohibits agency actions that may jeopardize the survival
13 and recovery of a listed species or adversely modify its critical habitat:

14 “[e]ach federal agency shall, in consultation with and with the assistance of the
15 Secretary, insure that any action authorized, funded, or carried out by such agency
16 ... is not likely to jeopardize the continued existence of any endangered species or
17 threatened species or result in the destruction or adverse modification of habitat of
18 such species which is determined by the Secretary . . . to be critical”

19 16 U.S.C. § 1536(a)(2).

20 59. Section 9 of the Act makes it unlawful for any person to “take” an endangered
21 species, without permission from NMFS, 16 U.S.C. § 1538(a)(1), and NMFS’s implementing
22 regulations have extended that prohibition to “threatened” species as well. *See* 50 C.F.R. §
23 222.301(b). The definition of “take” includes not only to kill an individual of the species, but
24 also to “harm” or “harass” it. 16 U.S.C. § 1532(19). NMFS’s own regulations also define
“harm” to include “significant habitat modification or degradation which actually kills or injures

1 fish or wildlife by significantly impairing essential behavioral patterns, including breeding,
2 spawning, rearing, migrating, feeding or sheltering.” 50 C.F.R. § 222.102.

3 60. Section 7 of the ESA establishes an interagency consultation process to assist
4 federal agencies in complying with their duty to avoid jeopardy to listed species or destruction or
5 adverse modification of critical habitat. The permitting of activities impacting jurisdictional
6 wetlands under section 404 of the CWA, as well as other new and ongoing projects that may
7 affect listed salmon, are agency actions subject to this consultation obligation. To carry out these
8 obligations, the Corps must consult with the fish and wildlife agencies concerning the effects of
9 agency actions on listed species. For salmonids, NMFS is the responsible agency.

10 61. Where NMFS determines that listed species may be present, the action agency
11 shall conduct a biological assessment (“BA”) for the purpose of identifying any endangered
12 species or threatened species that is likely to be affected by the action. 16 U.S.C. § 1536(c); 50
13 C.F.R. § 402.12(a). For those actions that may adversely affect a species, NMFS must review all
14 information provided by the action agency, as well as any other relevant information, to
15 determine whether the proposed action is likely to jeopardize a listed species or destroy or
16 adversely modify its designated critical habitat. 50 C.F.R. § 402.14(h)(3). This determination is
17 set forth in a biological opinion from NMFS. *Id.*; 16 U.S.C. § 1536(b)(3)(A).

18 62. The agencies must assess direct and indirect impacts against the backdrop of the
19 environmental baseline and any changes expected from future private and state activities. 50
20 C.F.R. § 402.02 (definitions of “effects of the action” and “cumulative effects”). The impacts
21 include those effects that will manifest themselves immediately, those that will occur later in
22 time, and those that will become notably harmful only when added to the baseline or combined
23 with the impacts of other similar activities. *See id.* § 402.02 (definition of “effects of the
24 action”). NMFS defines “action area” as “all areas to be affected directly or indirectly by the

1 Federal action and not merely the immediate area involved in the action.” 50 C.F.R. § 402.02.

2 63. In carrying out the requirements of section 7, each agency shall use the best
3 scientific and commercial data available. 16 U.S.C. § 1536(a)(2).

4 64. The Corps, as the action agency, must make a preliminary determination of
5 whether actions that may affect the listed species are likely or not likely to adversely affect the
6 species. 50 C.F.R. § 402.14(a)-(b). If NMFS concurs in writing with the action agency’s
7 determination that an action is not likely to adversely affect (“NLAA”) the listed species, the
8 consultation process is concluded at that point and NMFS need not prepare a biological opinion.
9 50 C.F.R. §§ 402.13, 402.14(b)(1).

10 65. The requirements for a “not likely to adversely affect” finding are stringent. As
11 explained in the NMFS’s Handbook for Procedures for Conducting Consultation Under Section
12 7, if NMFS is going to provide the action agency with a written concurrence that the proposed
13 action “is not likely to adversely affect” listed species—and thereby excuse the action agency
14 from engaging in formal consultation—NMFS’s decision must be “based on review of all
15 potential effects, direct and indirect” which is “documented in the concurrence letter.”
16 Consultation Handbook at 3-12. If the “nature of the effects cannot be determined, benefit of the
17 doubt” must be given to the species, and the Director cannot concur with the not likely to
18 adversely affect determination and formal consultation must be initiated. *Id.* NMFS must
19 conclude that a project is likely to adversely affect “if *any* adverse effect to listed species *may*
20 occur as a direct or indirect result of the proposed action or its interrelated or interdependent
21 actions,” unless the effect is discountable or insignificant. *Id.* at 3-13 (emphasis added).

22 66. At the culmination of the consultation process, NMFS may issue an incidental
23 take statement that specifies terms and conditions necessary to minimize the impact of the take
24 of listed species. 16 U.S.C. § 1536(b)(4). An incidental take statement exempts any take that is

1 in compliance with its terms and conditions from the take prohibition. 16 U.S.C. § 1536(o)(2).

2 **C. Clean Water Act**

3 67. Congress passed the Clean Water Act “to restore and maintain the chemical,
4 physical, and biological integrity of the Nation’s waters.” 33 U.S.C. § 1251(a). To achieve this
5 objective, Section 301 of the CWA, 33 U.S.C. § 1311(a), prohibits “the discharge of any
6 pollutant” into waters of the United States except in accordance with water quality standards
7 promulgated and permits issued under other sections of the CWA. “Pollutant[s]” include
8 dredged spoil, rock, and sand, among other materials. 33 U.S.C. § 1362(6).

9 68. The term “waters of the United States” includes wetlands. 40 C.F.R. § 232.2.

10 69. Section 404 of the CWA, 33 U.S.C. § 1344, authorizes the Secretary of the Army
11 to issue permits for the discharge of dredged or fill material into “navigable waters,” including
12 wetlands, when certain conditions are met. The section 404 permitting program is administered
13 by the Corps. Unless exempted by section 404(f)(1) under circumstances not relevant to this
14 action, all discharges of dredged or fill material into waters of the United States, including
15 wetlands, must be authorized under a section 404 permit issued by the Corps.

16 70. In reviewing a section 404 application, the Corps must follow rules developed by
17 EPA under section 404(b) of the CWA, 33 U.S.C. § 1344(b), which are known as the “404(b)(1)
18 Guidelines.” 33 C.F.R. § 320.4(a). The 404(b)(1) Guidelines are codified at 40 C.F.R. Part 230.
19 The Corps is prohibited from issuing any permit if:

- 20 (i) There is a practicable alternative to the proposed discharge that would have less
21 adverse effect on the aquatic ecosystem, so long as such alternative does not have
22 other significant adverse environmental consequences; or
23 (ii) The proposed discharge will result in significant degradation of the aquatic
24 ecosystem ... ; or
(iii) The proposed discharge does not include all appropriate and practicable measures
to minimize potential harm to the aquatic ecosystem; or
(iv) There does not exist sufficient information to make a reasonable judgment as to
whether the proposed discharge will comply with these Guidelines.

1 40 C.F.R. § 230.12(a)(3).

2 71. Where a discharge is proposed for a wetland or other special aquatic site, all
3 practicable alternatives to the proposed discharge that do not involve a discharge to a wetland
4 “are presumed to have less adverse impact on the aquatic ecosystem, unless clearly demonstrated
5 otherwise.” 40 C.F.R. § 230.10(a)(3).

6 72. In addition, if “the activity associated with a discharge which is proposed for a
7 [wetland] does not require access or proximity to or siting within [the wetland] to fulfill its basic
8 purpose (i.e., is not ‘water-dependent’), practicable alternatives that do not involve [wetlands]
9 are presumed to be available, unless clearly demonstrated otherwise.” 40 C.F.R. § 230.10(a)(3).

10 73. An alternative to discharge to a wetland “is practicable if it is available and
11 capable of being done after taking into consideration cost, existing technology, and logistics in
12 light of overall project purposes.” 40 C.F.R. § 230.10(a)(2).

13 74. The preamble to the 404(b)(1) Guidelines confirms the plain meaning of the term
14 “cost.” The notice explains that the word “cost” was used instead of the word “economic”
15 because “[t]he term economic might be construed to include consideration of the applicant’s
16 financial standing, or investment, or market share, a cumbersome inquiry which is not
17 necessarily material to the objectives of the Guidelines.” 45 Fed. Reg. 85339 (Dec. 24, 1980).

18 75. On August 23, 1993, the Corps issued a Memorandum to the Field on the
19 Appropriate Level of Analysis Required for Evaluating Compliance with the Section 404(b)(1)
20 Guidelines Alternatives Requirements. This memorandum provides that in reviewing economic
21 factors of the project and alternatives, “it is not a particular applicant’s financial standing that is
22 the primary consideration for determining practicability, but rather characteristics of the project
23 and what constitutes a reasonable *expense* for these projects that are most relevant to
24 practicability determinations.” Memorandum to the Field (Aug. 23, 1993) (emphasis added).

1 76. Pursuant to the Corps’ regulations governing the issuance of section 404 permits,
2 “[n]o permit will be granted . . . unless the district engineer concludes, on the basis of the
3 analysis required in paragraph (a) of this section, that the benefits of the proposed alteration
4 outweigh the damage to the wetlands resource.” 33 C.F.R. § 320.4(b)(4). Paragraph (a) of §
5 320.4 includes factors to be considered, including, without limitation, “conservation, economics,
6 aesthetics, general environmental concerns, wetlands, historic properties, fish and wildlife
7 values, flood hazards, floodplain values, land use, navigation, shore erosion and accretion,
8 recreation, water supply and conservation, water quality, energy needs, safety, food and fiber
9 production, mineral needs, consideration of property ownership and, in general, the needs and
10 welfare of the people.” *Id.*

11 **D. National Environmental Policy Act**

12 77. Under the National Environmental Policy Act (“NEPA”), a federal agency must
13 prepare or adopt an environmental impact statement (“EIS”) for any major Federal action that
14 will significantly affect the quality of the human environment. 42 U.S.C. § 4332(2)(C).

15 78. The EIS requirement serves two functions. First, it ensures that an agency takes a
16 hard look at a proposed project’s environmental effects before deciding whether to recommend
17 it. Second, the EIS ensures that relevant information about a proposed project is made available
18 to members of the public so that they may play a role in both the decision-making process and
19 the implementation of the decision.

20 79. To implement the requirements of NEPA, the Council on Environmental Quality
21 (“CEQ”) promulgated regulations applicable to all federal agencies. 40 C.F.R. §§ 1500–1508.
22 In addition, the Corps has promulgated regulations and adopted procedures for complying with
23 NEPA in the processing of Department of the Army permits, 33 C.F.R. § 325 Appendix B, to
24 supplement the CEQ’s NEPA regulations.

1 80. Regulations implemented under NEPA allow the preparation of an Environmental
2 Assessment (“EA”) where a federal action may not have significant impacts or is otherwise not
3 required to have an EIS. 40 C.F.R. §§ 1501.3, 1508.9.

4 81. In determining whether to prepare an EIS for a proposed action, the Corps must
5 consider context and intensity, factors which include the unique characteristics of the geographic
6 area such as proximity to historic or cultural resources, park lands, prime farmlands, wetlands,
7 wild and scenic rivers, or ecologically critical areas; the degree to which the effects on the
8 quality of the human environment are likely to be highly controversial; the degree to which the
9 possible effects on the human environment are highly uncertain or involve unique or unknown
10 risks; the degree to which the action may establish a precedent for future actions with significant
11 effects or represents a decision in principle about a future consideration; whether the action is
12 related to other actions with individually insignificant but cumulatively significant impacts; and
13 the degree to which the action may adversely affect an endangered or threatened species or its
14 critical habitat. 40 C.F.R. § 1508.27(b).

15 82. NEPA requires an agency to include in an EIS or EA a discussion of alternatives
16 to the proposed action. 42 U.S.C. § 4332(2)(C)(iii); 40 C.F.R. § 1508.9. The agency is required
17 to rigorously explore and objectively evaluate all reasonable alternatives. 40 C.F.R. §
18 1502.14(a). This requirement specifically includes a mandate that an EIS or EA for a section
19 404 permit include discussions of reasonable alternatives. 33 C.F.R. § 325, App. B (7)(a),
20 (9)(b)(5).

21 83. Where information for an EA is prepared by the applicant, the Corps “shall make
22 its own evaluation of the environmental issues and take responsibility for the scope and content”
23 of the EA. 40 C.F.R. § 1506.5(b).

1 **VI. PROCEDURAL BACKGROUND**

2 84. On May 5, 2008, Oregon Resources Corporation (“ORC”) submitted an
3 application to the Corps for a permit to discharge dredge or fill material to waters and wetlands
4 of the United States under section 404 of the Clean Water Act. The application sought permit
5 coverage for proposed chromite and other mineral mining operations in the watersheds of
6 Threemile and Fivemile Creeks that would permanently impact wetlands and waters of the
7 United States.

8 85. The Corps issued a public notice of the permit application on June 9, 2008.

9 **A. Consultation and Concurrence under the ESA**

10 86. In response to the Corps’ public notice, NMFS sent a general correspondence
11 letter on July 8, 2008, to the Corps, which identified general concerns regarding the effects of
12 issuing a permit to ORC to mine heavy minerals from beach sands.

13 87. Upon reviewing ORC’s application, the Corps made an initial determination that
14 the proposed mining operations may affect, but are not likely to adversely affect listed species
15 under the ESA.

16 88. On July 21, 2008, the Corps requested informal consultation with NMFS under
17 the ESA regarding the effects of authorizing a permit to ORC to mine heavy minerals from beach
18 sand deposits and associated activities under the Corps authority found in section 404 of the
19 CWA.

20 89. NMFS sent a letter dated February 6, 2009, stating that consultation would not
21 proceed until NMFS received a Biological Assessment (“BA”) for the proposed action.

22 90. NMFS received a BA prepared by URS Corporation on March 13, 2009. On
23 April 20, 2009, NMFS received a technical memorandum regarding hexavalent chromium, also
24 prepared by URS on behalf of ORC.

1 91. On June 29, 2009, NMFS sent a letter to the Corps containing a statement of non-
2 concurrence with the Corps' NLAA determination for Oregon Coast coho salmon and designated
3 critical habitats. In this letter NMFS stated that it had received enough information to determine
4 that the project is likely to adversely affect coho salmon and designated critical habitat and
5 therefore would proceed with formal consultation. NMFS identified concerns over construction
6 of temporary roads crossing headwater streams at the North Seven Devils mine site. NMFS
7 requested additional information necessary for consultation related to culvert design, fish
8 passage, culvert installation, groundwater and surface water monitoring, and several other issues.

9 92. NMFS received supplemental information for the BA on October 19, 2009
10 responding to NMFS's June 29 request for information. ORC explained that it would utilize
11 open-bottom arched culverts for stream crossings, construct culverts during periods when
12 streams are seasonally dry, and relocate one stream crossing to a location higher up the stream
13 channel. ORC also explained its groundwater monitoring plan, its erosion control check dam
14 proposal, its evaluation of stream shading, and its analysis of metals toxicity in groundwater.
15 ORC provided information related to the processing site including pile driving hydroacoustics,
16 stormwater treatment, waterway transport impacts, and other requested information.

17 93. During review, a NMFS representative determined that mitigation techniques will
18 not prevent take of listed fish and that there will be severe sediment loading of downstream
19 channels due to the mining activities at the North Seven Devils site.

20 94. A site visit was held at the mining sites on December 14, 2009, attended by the
21 representatives from ORC, their consultant and legal staff, NMFS, and the Oregon Department
22 of Fish and Wildlife ("ODFW"). Following the site visit, the NMFS representative, a hydraulic
23 engineer from the hydropower division, determined that fish passage was not needed due to
24 absence of habitat and use by coho.

1 95. Following the site visit and several letters from ORC's legal counsel, NMFS
2 concluded that the action, as proposed, may affect but is not likely to adversely affect Oregon
3 coast coho salmon and their designated critical habitat, allowing the Corps to forego formal
4 consultation. NMFS issued its concurrence letter on February 12, 2010.

5 **B. Permit Review and Approval under the CWA and NEPA**

6 96. The Corps received comments from members of the public and state and federal
7 agencies in response to its public notice, including comments from Plaintiffs BWCA and John
8 Jones and Julie Jones. These comments raised concerns over the potential for hexavalent
9 chromium formation and contamination of streams and groundwater in an area where residents
10 rely on domestic wells to supply water to their homes.

11 97. Plaintiffs BWCA submitted reports prepared by experts regarding the potential for
12 hexavalent chromium to form in the mining process and outlining the health threats posed by
13 hexavalent chromium to people and fish, as well as hydrogeologic effects from mining.

14 98. The Corps also reviewed the report prepared by Bill Mason of Oregon DEQ,
15 which concluded:

16 "it is possible that hexavalent chromium could be generated in a post-mining
17 environment, but it appears unlikely to be significant given the aquifer's apparent
18 potential to reduce [hexavalent chromium] to [trivalent chromium] (i.e., presence
19 of natural reductants such as iron, manganese, and organic matter). This
20 conclusion, however, should be confirmed with easy and cost-effective field
21 studies that can help quantify the attenuation capacity at a particular site."

22 99. The Corps initiated NEPA review in the form of an Environmental Assessment.
23 The Corps did not prepare an Environmental Impact Statement.

24 100. The Corps recognized ORC's plans to mine for chromite and mineral sands in
other locations in Coos and Curry Counties and in the vicinity of the chromite mine sites
proposed for this permit. Specifically, the Corps acknowledged ORC's intent to mine chromite

1 and mineral sands “from Cape Arago to Port Orford” paralleling the Southwestern Oregon
2 Pacific Coast.

3 101. The Corps requested that ORC clearly identify its target market for their primary
4 product, chromite, and explain specifically how this product will substitute existing supplies.
5 ORC failed to provide the requested information.

6 102. In its review under the CWA, the Corps properly determined that the project’s
7 purpose, surface mining, is not water-dependent.

8 103. ORC’s August 2009 revised alternatives analysis considered four general
9 alternatives: hard rock mining, offshore deposits, beach deposits, and marine terrace deposits.
10 The Corps considered alternatives including no action, smaller scale projects, larger project
11 designs, recycling foundry sands rather than mining new sources, other available and unavailable
12 sites including mine sites identified as within ORC’s explorations area and other locations
13 internationally including Australia, the home country of ORC’s parent corporation.

14 104. On February 2, 2010, ORC submitted a letter stating that only the proposed four
15 mine sites “have sufficient quantities of proven reserves to amortize, by June 30, 2013, the high
16 capital investment in the processing facility. In the future, additional proved reserves may be
17 identified, or the three other proved reserves (Section 33, Shepard, and Westbrook, the ‘Deferred
18 Sites’) that are currently not economically or logistically feasible to mine may become feasible.”
19 The letter asserts that this financing scheme is the “only financing available to ORC” and
20 “[t]here is no assurance that any alternative financing can be found.”

21 105. Ultimately, the Corps determined that mining the Shepard, Section 33 and
22 Westbrook sites may be practicable, but rejected these alternatives on the basis that “ORC has
23 asserted the four sites they propose to mine will erase their investment debt and provide the
24 company with a profit.”

1 bearing streams.

2 112. The project proposes to remove water from within the Threemile Creek drainage
3 and apply that water for infiltration in upland areas that drain to Fivemile Creek, which will
4 result in net loss of flows to Threemile Creek. For water returned to the same watershed from
5 which it was drawn, there will be a time delay while groundwater is collected, pumped, and
6 applied on upland areas.

7 113. NMFS failed to consider these impacts to surface water flows and associated
8 effects on listed species. Given the likelihood of significant impacts on stream flows in
9 Threemile and Fivemile Creeks as a result of mine pit dewatering, NMFS's determination that
10 ORC's operations are not likely to adversely affect listed species occurring with these habitats
11 was arbitrary and capricious.

12 114. NMFS failed to rely on best available science in determining that dewatering
13 would not likely adversely affect fish habitat by failing to analyze both location and timing of
14 withdrawals and return flows. 16 U.S.C. § 1536(a)(2).

15 115. NMFS's concurrence letter acknowledges that there is a potential for hexavalent
16 chromium to be generated in a post-mining environment, but concludes that site conditions do
17 not favor formation of hexavalent chromium and that the magnitude of the adverse effects from
18 groundwater or surface water contamination will not rise to a level that will cause mortality.

19 116. NMFS did not conduct an analysis of the presence, effect or formation of
20 hexavalent chromium at the mine sites.

21 117. The DEQ memorandum upon which NMFS relied determined that formation of
22 hexavalent chromium is possible in the post-mining environment, but relies on the potential for
23 hexavalent chromium to reduce to the trivalent form in concluding that "it is unlikely to be
24 significant." This analysis fails to consider the possibility for formation of hexavalent chromium

1 during mining operations, the variables for natural reduction of hexavalent chromium or the time
2 needed for hexavalent chromium to reduce to the less toxic form.

3 118. NMFS's concurrence failed to consider the time required for hexavalent
4 chromium to attenuate, relied on the ability of organic matter to break down hexavalent
5 chromium without evidence that organic matter is present within the mineral sands, and ignored
6 best available science for the rate of reduction for hexavalent chromium.

7 119. NMFS failed to conduct or require the easy and cost-effective field studies
8 recommended by the DEQ report in order to quantify the attenuation capacity of the particular
9 mine sites.

10 120. Given evidence that hexavalent chromium is already present in groundwater at the
11 mine sites at levels nearing Oregon's chronic toxicity concentration for fish, NMFS's reliance on
12 the apparent potential for the natural site conditions to reduce hexavalent chromium to the
13 trivalent form was arbitrary and capricious.

14 121. For both of these reasons, and others, NMFS's determination that mining
15 operations are not likely to adversely affect listed species is arbitrary, capricious, and not in
16 accordance with the law, and therefore actionable pursuant to the APA. 5 U.S.C. § 706(2)(A).

17 **Claim Two:**
18 **Endangered Species Act Violation Challenged pursuant to the APA (5 U.S.C. § 702)**

19 **National Marine Fisheries Service: Not Likely to Adversely Affect Concurrence**

20 122. Plaintiffs incorporate by reference paragraphs 1–108, 115–119.

21 123. In carrying out its ESA section 7 consultation obligations, NMFS must assess the
22 mining's direct and indirect impacts against the backdrop of the environmental baseline and any
23 changes expected from future private and state activities. 50 C.F.R. § 402.02 (definition of
24 "effects of the action" and "cumulative effects"). The impacts include those effects that will

1 manifest themselves immediately, those that will occur later in time, and those that will become
2 notably harmful only when added to the baseline or combined with the impacts of other similar
3 activities. *See id.* § 402.02 (definition of “effects of the action”). The environmental baseline
4 “includes the past and present impacts of all Federal, State, or private actions and other human
5 activities in the action area . . . and the impact of State or private actions which are
6 contemporaneous with the consultation in process.” 50 C.F.R. § 402.02. *See also* Final ESA
7 Section 7 Consultation Handbook, March 1998 at 4-22.

8 124. NMFS failed to establish a baseline level of essential habitat variables such as
9 turbidity, sedimentation and metals contamination in the subject area or consider the historic
10 mining at the project site as part of the environmental baseline. NMFS recognized that the North
11 Seven Devils site will require construction of two additional culverts and repair of one existing
12 culvert within the 5th field watershed, but failed to consider the existence of other culverts within
13 the watershed.

14 125. Without establishing an environmental baseline, NMFS’s concurrence is not in
15 accordance with provisions of the ESA requiring the agency to analyze the effects of the action
16 against the environmental baseline and to use best available science in carrying out consultation
17 obligations.

18 126. NMFS’s concurrence letter fails to consider the cumulative effects and indirect
19 impacts of ORC’s future mining in conjunction with this project and against the current
20 environmental baseline.

21 127. NMFS’s failure to evaluate the cumulative effects of ORC’s mining operations
22 against the current environmental baseline as effected by historical mining operations and
23 changes that can be expected from future mining operations is arbitrary, capricious, and not in
24 accordance with the law, and therefore actionable pursuant to 5 U.S.C. § 706(2)(A).

**Claim Three:
Endangered Species Act Violation**

National Marine Fisheries Service: Not Likely to Adversely Affect Concurrence

128. Plaintiffs hereby incorporate preceding paragraphs 1–108 & 123.

129. Increased levels of sediment in streams adversely affects fish survival by disrupting feeding, growth, and behavior, covering fish eggs and decreasing food habitat. High sediment levels can cause fish mortality and affect survival rates for juvenile fish.

130. In order to reach the conclusion that the project is not likely to adversely affect listed species, NMFS relied on use of approved Best Management Practices (“BMPs”) for construction and removal of the temporary stream crossings and required crossings to span the 100 year flood plain in order to reduce the likelihood of catastrophic failure of culverts.

131. The BMPs identified for culvert construction and removal are based on conditions of all stream channels being dry. In a memorandum dated January 19, 2010, NMFS explained its reasoning based on undocumented observations by unnamed individuals that all stream channels during the summer are dry. Based on this information, NMFS concluded that dry stream channel construction timing should mitigate sediment discharge into downstream channels. NMFS therefore concluded that sedimentation impacts would be negligible or absent.

132. The streams receive base flow from groundwater in the form of seeps and springs. As a result, the streams are not dependant on precipitation to maintain flows. Neighbors in the area have observed running water in streams at the North Seven Devils site in late summer. ODFW’s public comments regarding the mining proposal reference the two permanently flowing streams at the North Seven Devils site.

133. NMFS did not verify that streams are dry during any portion of the year. Given that the success of the BMPs to reduce or eliminate adverse impacts to listed species requires dry

1 stream channel conditions, NMFS' reliance upon dry site conditions to conclude that the mining
2 would not adversely affect listed species was arbitrary and capricious and therefore actionable
3 pursuant to 5 U.S.C. § 706(2)(A).

4 **Claim Four:**
5 **Clean Water Act Violation**

6 **Army Corps of Engineers: Practicable Alternatives Analysis**

7 134. Plaintiffs hereby incorporate preceding paragraphs 1–108.

8 135. Where a project is not water-dependent, the Corps must presume that upland sites
9 or sites with less impact on the aquatic ecosystem are available. When this presumption applies,
10 the permit applicant must rebut the presumption by clearly demonstrating that a practicable
11 alternative is not available. 40 C.F.R. § 230.10(a)(3).

12 136. An alternative is “practicable” where it is “available and capable of being done
13 after taking into consideration cost, existing technology, and logistics in light of the overall
14 project purpose.” 40 C.F.R. § 230.10(a)(2); 230.3(q).

15 137. The Corps may rely on information submitted by the applicant but must
16 independently verify such information. 40 C.F.R. § 1506.5(a).

17 138. The burden of proof to demonstrate compliance with the 404(b)(1) Guidelines
18 rests with the applicant. The Guidelines require that no permit be issued where insufficient
19 information is provided to determine compliance. 40 C.F.R. § 230.12(a)(3)(iv).

20 139. Here, the Corps properly determined that ORC's project, surface mining, is not
21 water-dependent. Therefore the presumption of available upland sites applies.

22 140. The Corps determined that alternative mine sites may be practicable, but rejected
23 these alternatives on the basis of assertions by ORC regarding its financing and the time by
24 which ORC must amortize its debt to investors.

1 141. The Corps failed to require the applicant to provide detailed, clear and convincing
2 information proving that an alternative with a less adverse impact was impracticable.

3 142. The Corps erroneously relied on the applicant's assertions of debt amortization,
4 rather than cost to the applicant, to eliminate otherwise practicable alternatives from its analysis.
5 By relying on this factor, on which Congress did not intend for the Corps to rely, the Corps acted
6 arbitrarily and capriciously.

7 143. The Corps failed to independently verify information regarding the cost of
8 alternatives or the availability of financing.

9 144. For these reasons, and others, the Corps unlawfully granted the Section 404
10 Permit, in violation of the APA 5 U.S.C. § 706(2)(A).

11 **Claim Five:**
12 **National Environmental Policy Act Violation**

13 **Army Corps of Engineers: Environmental Assessment and**
14 **Finding of No Significant Impact**

15 145. Plaintiffs incorporate preceding paragraphs 1–108.

16 146. The Corps' Section 404 Permit is a major federal action requiring review and
17 compliance with NEPA.

18 147. The Corps must prepare an EIS where a project may have significant effects on
19 the human environment. Significance is determined by examining context and integrity. 40
20 C.F.R. § 1508.27.

21 148. Here, the Corps' failure to consider significance criteria was arbitrary and
22 capricious because the proposed mining presents highly uncertain effects and unique or unknown
23 risks. 40 C.F.R. § 1508.27(b)(5). The formation of hexavalent chromium is known to create a
24 risk to human health and safety, and the Corps did not have sufficient information about the
project site and its capacity for attenuation of hexavalent chromium to conclude that mining

1 effects on the human environment would not be significant.

2 149. The Corps' failure to consider significance criteria was arbitrary and capricious
3 because the effects of the proposed mining are highly controversial. 40 C.F.R. § 1508.27(b)(4).
4 Even the Oregon DEQ report, relied upon by the Corps, does not reach a firm conclusion
5 regarding the effects of mining and the risk of hexavalent chromium. Plaintiffs submitted reports
6 outlining the potential for hexavalent chromium to be formed in the mining environment.

7 150. Both the controversial and uncertain nature of the effects of the action are
8 particularly important given the risk to public health and safety posed by hexavalent chromium
9 formation in an area surrounded by residential wells. Because the proposed action may affect
10 public health and safety, the Corps' failure to consider significance criteria was arbitrary and
11 capricious. 40 C.F.R. § 1508.27(b)(2).

12 151. The Corps' failure to consider significance criteria was arbitrary and capricious
13 because the project is proposed in a geographic area with unique characteristics. 40 C.F.R.
14 §1508.27(b)(3). ORC proposes to mine within and on top of unique and high-functioning
15 wetlands in an isolated area. Impacts to wetlands, as well as noise and light pollution from
16 mining activities will likely be significant in this geographically unique area.

17 152. ORC has stated its intent to mine for chromite and mineral sands "from Cape
18 Arago to Port Orford" paralleling the southwest Oregon coast. Future mining proposals in this
19 area are reasonably foreseeable. As a result, this permit, as the first such permit to allow
20 chromite mining to impact waters and wetlands, is likely to establish a precedent for future
21 actions with significant effects, and the Corps should have prepared an EIS. 40 C.F.R.
22 1508.27(b)(6).

23 153. ORC's proposed mining of these four sites is related to its proposed future mining
24 operations paralleling the southwest Oregon coast from Cape Arago to Port Orford. Given that

1 ORC is investing in the construction of a processing plant in Coos Bay in conjunction with the
2 current mining plan, future mining operations will likely utilize the same processing plant. It is
3 reasonable to anticipate a cumulatively significant impact on the environment from the
4 foreseeable future actions related to this project. Because this permit is related to other actions
5 with cumulatively significant impacts, the Corps should have prepared an EIS. 40 C.F.R. §
6 1508.27(b)(7).

7 154. As set forth in claims one through three above, the mining operations allowed by
8 the Corps' permit may adversely affect an endangered or threatened species under the
9 Endangered Species Act. As a result, the Corps' failure to consider significance criteria was
10 arbitrary and capricious. 40 C.F.R. § 1508.27(b)(9).

11 155. Because several of the intensity factors to be considered in determining the
12 significance of an action are present with this Section 404 Permit and the mining it allows, the
13 Corps' failure to consider significance criteria in deciding whether to prepare an EIS was
14 arbitrary and capricious, and not in accordance with law.

15 156. In reviewing an action's environmental effects, NEPA requires that the Corps
16 consider the cumulative effects of the action when added to other past, present, and reasonably
17 foreseeable future actions. 40 C.F.R. § 1508.7.

18 157. ORC has stated its intent to mine for chromite and mineral sands "from Cape
19 Arago to Port Orford" paralleling the southwest Oregon coast. The Corps acknowledged 12
20 mine sites located within the company's "advanced exploration area" containing measured
21 resources or proved reserves (7 sites) and indicated mineral resources (5 sites). Of these sites,
22 ORC has secured a financial interest in the Westbrook deposit and is negotiating minerals mining
23 leaseholds on land owned by Coos County. Future mining proposals in this area are reasonably
24 foreseeable.

1 adversely affect” listed species on an inadequate analysis and biological assessment, which is
2 arbitrary, capricious, an abuse of discretion and contrary to law;

3 (2) Adjudge and declare that the Corps violated the Clean Water Act and its
4 implementing regulations by issuing a Section 404 Permit without proper consideration of
5 practicable alternatives and public benefit review, which is arbitrary, capricious, an abuse of
6 discretion, and contrary to law;

7 (3) Adjudge and declare that the Corps has violated NEPA and its implementing
8 regulations by failing consider significance factors requiring preparation of an environmental
9 impact statement that adequately and objectively evaluates the impacts caused by the chromite
10 mining, identified necessary mitigation measures, and analyzes appropriate alternatives, which is
11 arbitrary, capricious, an abuse of discretion, and contrary to law;

12 (4) Enjoin NMFS to initiate formal consultation with the Corps as required under the
13 ESA and its implementing regulations;

14 (5) Enjoin the Corps to rescind the Section 404 Permit while formal consultation
15 between NMFS and the Corps is ongoing and while NEPA review is ongoing;

16 (6) Enjoin the Corps to prepare an environmental impact statement that adequately
17 considers significance factors determining whether an environmental impact statement is
18 necessary and to adequately and objectively evaluate the impacts caused by the chromite mining;

19 (7) Award Plaintiffs their costs, expenses, and reasonable attorneys’ fees associated with
20 this litigation pursuant to the Equal Access to Justice Act, 28 U.S.C. § 2412; and

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1 (8) Awarding Plaintiffs any other relief that the Court may deem just and proper.

2 DATE: October 12, 2010

Respectfully submitted,

3 /s _____

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