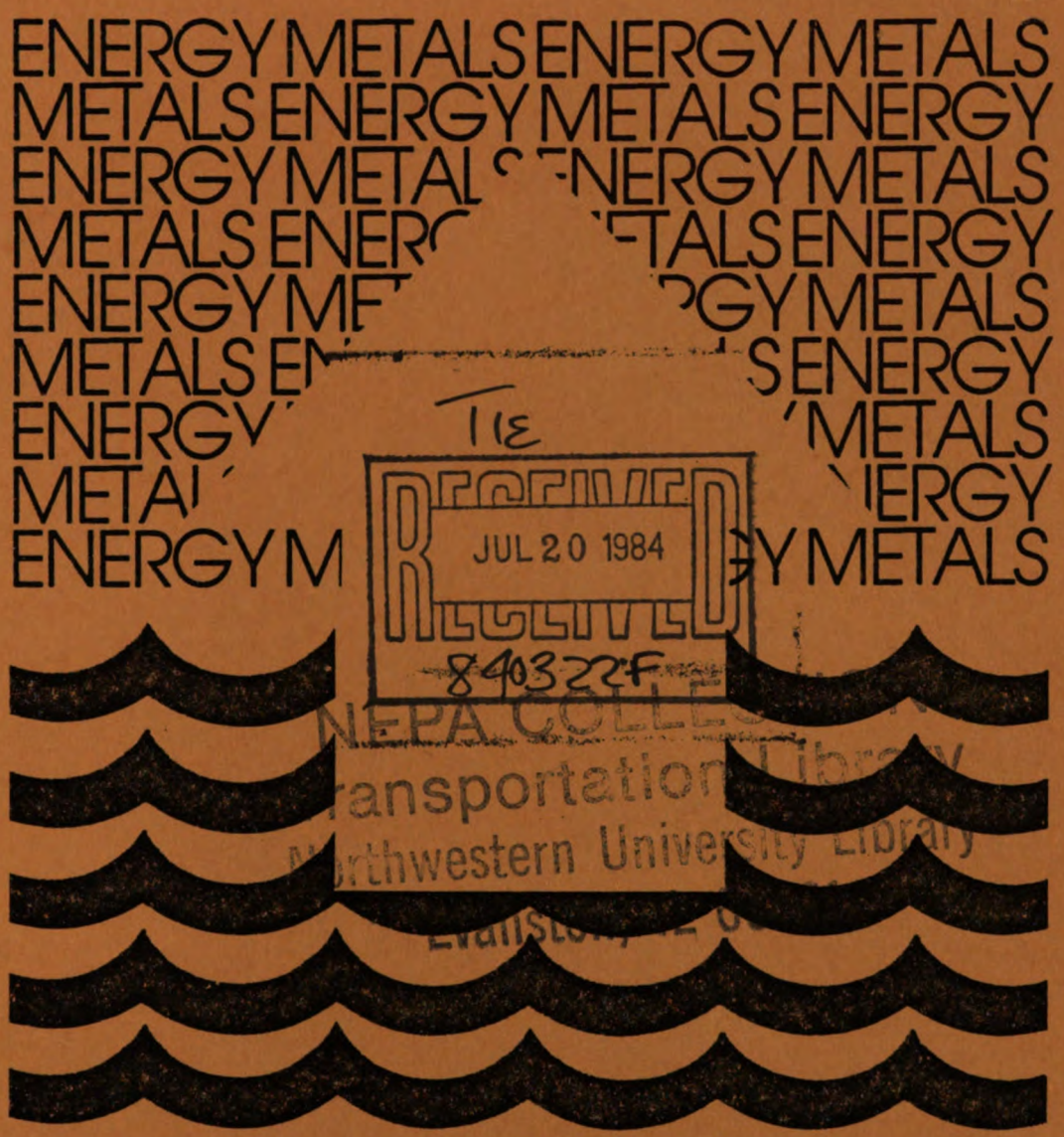
Ocean Management, Inc., exploration license : environmental impact statement

1984.



Deep Seabed Mining

Final Environmental Impact Statement on Issuing an Exploration License to Ocean Management, Inc.

U.S. DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
July 1984

Deep Seabed Mining

Final Environmental Impact Statement

Prepared by:
Office of Ocean and Coastal Resource Management
Ocean Minerals and Energy Division
2001 Wisconsin Avenue, N.W.
Washington, D.C. 20235

July 1984

U.S. DEPARTMENT OF COMMERCE
Malcolm Baldrige, Secretary

National Oceanic and Atmospheric Administration
John V. Byrne, Administrator

National Ocean Service
Paul M. Wolff, Assistant Administrator

DESIGNATION: Final Environmental Impact Statement (FEIS)

TITLE: Deep Seabed Mining Exploration License

ABSTRACT: This FEIS is prepared pursuant to the Deep Seabed Hard Mineral Resources Act (P.L. 96-283, "The Act") and the National Environmental Policy Act of 1969 (NEPA) to assess the impacts of issuing a deep seabed mining exploration license to Ocean Management, Inc. (OMI). Exploration by OMI will be authorized by license from the National Oceanic and Atmospheric Administration (NOAA) for ten years in the Pacific Ocean equatorial high seas, roughly between Central America and Hawaii. OMI proposes to use acoustic surveying methods, photography, satellite navigation, and to sample by means of free-fall grab samplers, dredge baskets, and box cores to delineate its exploration area. The worst case potential for impact involves loss of 54 kg of benthic biomass, from the seafloor three miles deep in the Pacific Ocean. OMI's exploration activities will provide better understanding of environmental impacts of deep seabed mining and ultimately reduce dependence on and impacts of land based mining, and will provide a reliable source for nationally strategic metals.

No onshore activities or equipment tests are authorized by issuance of the exploration license.

LEAD AGENCY: U.S. DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
National Ocean Service
Office of Ocean and Coastal Resource Management

CONTACT: James P. Lawless, Chief
Ocean Minerals and Energy Division
2001 Wisconsin Avenue, N.W., Room 105
Washington, D.C. 20235
(202) 653-7695

COMMENTS: The final of this environmental impact statement was filed with EPA on July 20, 1984.

ERRATA SHEET FOR OCEAN MANAGEMENT, INC.

1. p. iii - substitute new page.

2. p. xii, line 4 - delete "and protect".

3. p. xii, line 11 - delete "all"; delete line 12 and replace with "discharges from all vessels subject to the Deep Seabed Hard Mineral Resources Act engaged in exploration activities, except for discharges from at-sea mining system tests.

   The proposed general NPDES permit is not limited to those subject to exploration licenses, but applies to discharges from all vessels subject to DSHMRA engaged in exploration activities, except for discharges from initial mining tests."

4. p. 13, line 16 - insert "proposed" before "NPDES".

5. p. 25, line 16 - The trace metal data from the fish tissue analyses conducted by the Ocean Minerals Company are available from NOAA.

6. p. 26, line 17 - "dominate" should read "dominant".

7. p. 40, line 6 - insert "about" before "90".

8. p. 48, line 9 - insert after "applications.", "As proposed on August 29, 1983,".

9. p. 48, line 12 - insert at beginning of line "As proposed,".

10. p. 65, line 9 - "accompaning" should read "accompanying".

11. p. 67, line 5 - add after "ponds", "or to the ocean through ocean dumping or discharge through an ocean outfall."

12. p. 73, line 20 - "in press" should read "1984".

13. p. 74, line 12 - add "particle" before "volume".

14. p. 92 - "Ozturgut, E., J.W. Lavelle, 1983 ..." should read "Ozturgut, E., J.W. Lavelle, 1984. The Influence of the Pycnocline on the Oceanic Settling of Manganese Nodule Mining Waste. Marine Environmental Research 12, pp. 127-142."

15. p. 141, line 5 - "5 CFR" should read "15 CFR".

16. All references to the TCRs as Appendix 8 should be deleted. The revised TCRs will be available in late July as a separate document from NOAA's Ocean Minerals and Energy Division.

UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
Washington, D.C. 20230

OFFICE OF THE ADMINISTRATOR
July 20, 1984

Dear Reviewer:

In accordance with the provisions of Section 102(2)(C) of the National Environmental Policy Act of 1969 (NEPA), we are enclosing a set of comments, responses to comments, errata sheets, and new abstracts and covers for the draft environmental impact statements (DEIS) forwarded to you on May 18, 1984, in connection with the issuance of deep seabed mining exploration licenses to four international consortia: Kennecott Consortium; Ocean Mining Associates; Ocean Management, Inc.; and Ocean Minerals Company. These documents reflect comments received by the National Oceanic and Atmospheric Administration (NOAA) during the public comment period and at the public hearing on July 3, 1984. The enclosed package constitutes the final environmental impact statement (FEIS). NEPA regulations (40 CFR 1503.4) allow this abbreviated issuance of the FEIS if the changes in the DEIS in response to the comments are minor and require only a limited agency response.

Revised terms, conditions, and restrictions (TCRs) for the licenses are being prepared separately and will be mailed to you under separate cover within the next few days. NOAA has not made a final decision on the TCRs proposed in the license issuance proposal and found in Appendix 8 of the DEIS. The final evaluation and decision on TCRs will consider comments and recommendations made during public review of the EIS and the license issuance proposal. If NOAA issues the proposed licenses, the TCRs adopted will be issued as part of these licenses. A final decision is anticipated near the end of August. Federal Register notice of license issuance will be provided in accordance with 15 CFR 970.509.

Please submit any written comments to the official listed below by August 27, 1984. Also, please send a copy of your comments to me at Room H6111, PP2, NOAA Office of Policy and Planning, U.S. Department of Commerce, 14th and Constitution Ave. NW, Washington, DC 20230.

Information on this action may be obtained from:

Mr. John Padan
Ocean Minerals and Energy Div., National Ocean Service
National Oceanic and Atmospheric Administration
2001 Wisconsin Avenue, NW, Room 105
Washington, DC 20235

Telephone: 202/653-2034

Sincerely,

Joyce M. Wood

Joyce M. Wood
Chief, Ecology and Conservation Division

COMMENT LETTERS RECEIVED ON THE

DRAFT ENVIRONMENTAL IMPACT STATEMENTS

Attached are the full texts of the 14 letters received on the Draft Environmental Impact Statements (DEISs). Each commenter is listed below. Major points regarding the DEISs are underscored and numbered, the numbering system beginning anew with each commenter. NOAA's response appears on the right side of each page.

Comment	Comment and Affiliation	Page
	A. Federal Agencies	
1	Department of the Interior	2
2	Department of State	4
3 - 6	Environmental Protection Agency	6
	B. State Agencies	
7	Hawaii -- Office of the Governor	14
	C. Environmental Groups	
8	The Oceanic Society	15
9	Environmental Policy Institute	28
10	Natural Resources Defense Council	34
	D. Industry	
11	Kennecott Consortium	36
12	Ocean Minerals Company	38
	E. Individuals	
13	Benjamin V. Andrews	48
	F. Foreign Governments	
14	Belgian Embassy	49

United States Department of the Interior

OFFICE OF THE SECRETARY
WASHINGTON, D.C. 20240

In Reply Refer To:
ER-84/709

JUL 13 1984

Mr. James P. Lawless
Chief, Ocean Minerals and Energy Division
Office of Ocean and Coastal Resource Management
National Ocean Service/NOAA
2001 Wisconsin Avenue, N.W.
Washington, D.C. 20235

Dear Mr. Lawless:

We have reviewed the draft environmental impact statement (DEIS) for Deep Seabed Mining - Ocean Minerals Company, Northeast Equatorial Pacific Ocean, and have no serious objections with NOAA's license activity. The exploration activities proposed in the area under consideration would not adversely impact any resources of concern to the Department of Interior (DOI). The responsibilities of the DOI concerning the protection of endangered and threatened species have been met through the Section 7 consultation process.

The Minerals Management Service (MMS) and the Fish and Wildlife Service (FWS) should be included under the DOI in the list of Federal Agencies (Appendix 6) because of programs or activities within their statutory responsibilities that may be affected by license activities under the Deep Seabed Hard Minerals Resources Act.

It is unclear whether the conclusion reached on page 35 that the proposed exploration activities have no potential for significant environmental impact takes into account the mitigating effects of the regulations, the proposed monitoring program, the NPDES permitting activities, and the environmental requirements of the TCR's. On page 44, it is stated that a "no jeopardy" biological opinion was based on the fact that the mitigating effects of the regulations contain sufficient provisions to protect such critical species.

The analysis of the environmental consequences from the exploration activities is incomplete. Major environmental resources and issues identified in the PEIS and in the "Affected Environment" section of this EIS should be analyzed for possible environmental impact. Although commercial fisheries, larval fish distributions, and zooplankton and phytoplankton communities are described in some detail in the description of the affected environment and in Appendix 2, "Marine Research Efforts", no attempt is made to assess the affects of the proposed action on these organisms. This is inconsistent and leads to some confusion. Also missing is an assessment of the environmental impact of the proposed licensed exploration activities on water quality parameters, in particular, nutrient and trace metal distributions. Since an NPDES permit is required, and since the potential impact on water quality is one of the prerequisites for requiring such a permit,

1. Appendix 6 lists those Federal agencies to whom copies of applications were sent and those that have submitted comments on them. NOAA provided a copy of the license applications and modifications to the official designated by the Secretary of the Interior. The Office of the Secretary and the National Park Service were the only components to provide comments and recommendations.

2. This conclusion of no significant adverse impact from the proposed activities is based upon the analysis in the DEISs (pp. 42-43) and the knowledge of the similar types of activities carried out during oceanographic research. Although the purpose is different, the research tools, as listed in the regulations (Section 970.701(a)), are the same. There is no evidence that such work by oceanographic vessels in the past has caused a significant adverse impact and the analyses in the DEISs clearly show that effects from a basket sampler, the predominant tool proposed that would affect the seafloor, is insignificant. Also see Oceanic Society comment # 5.

3. These DEISs focus on only those activities proposed in the applications and associated exploration plans. None of the applications or proposed licenses include mining systems tests or other more substantial activities of the future which are addressed in the PEIS. The environmental consequence analysis in the DEISs is a "worst case" analysis based on the sampling activity, which is judged to have the potential for the most impact, i.e., seafloor disturbance. There will be no surface discharge associated with any sampling method and thus no effect on any water column organisms. Exploration sampling activities have less of a potential for causing adverse effects than test mining.

such an assessment should be included. Finally, it is unclear how cultural resources will be protected.

We appreciate the opportunity to comment on this document.

Sincerely,

Bruce Blanchard, Director
Environmental Project Review

4. NOAA's TCRs will not require protection. The "to protect" is inadvertent and is to be deleted by means of the errata sheet.

United States Department of State

Washington, D.C. 20520

Department of State

July 13, 1984

Mr. James P. Lawless
Chief, Ocean Minerals and Energy Division
2001 Wisconsin Avenue, N.W.
Room 105, Code N/ORMI
Washington, D.C. 20235

Dear Mr. Lawless:

Thank you for your letter of 18 May 1984 enclosing four Draft Environmental Impact Statements (DEIS) covering four separate applications for deep seabed mining exploration permits. We have circulated the DEIS's within the Department of State for review and submit the following comments.

The Department of State concludes that the exploration proposed in the applications will not unreasonably interfere with the exercise of the freedoms of the high seas by other nations, as recognized under general principles of international law. During the fifteen years of exploration activities that have taken place, the U.S. has never been advised that any of these activities constituted interference with any other uses of the high seas. The Department of State is not aware of any conflicts, including interference with navigation, fishing, submarine pipeline and cable laying, and scientific research.

The Department also concludes that the proposed deep seabed mineral exploration will not conflict with any international obligation of the U.S. established by any treaty, international convention or other international agreement in force with respect to the United States.

Additionally, the Department of State anticipates that the deep seabed mineral exploration proposed in the four pending applications is not likely to create a situation which may reasonably be expected to lead to a breach of international peace and security involving armed conflict.

Finally, the Department wishes to note that these DEISs are being prepared under the specific language of Section 109 of the Deep Seabed Hard Mineral Resources Act of 1980 with reference to Section 102 of the National Environmental Policy Act of 1968, and thus there is no effect on the Department's policies with regard to Executive Order 12114 of January 4, 1979 ("Environmental Effects Abroad of Major Federal Actions").

Sincerely,

James L. Malone
Special Representative of the President
for the Law of the Sea

Mr. James P. Lawless
Chief, Ocean Minerals and Energy Division
National Oceanic and Atmospheric Administration
2001 Wisconsin Avenue, N.W., Room 105
Washington, D.C. 20235

Dear Mr. Lawless:

The Environmental Protection Agency (EPA), in accordance with its responsibilities under the National Environmental Policy Act (NEPA) and Section 309 of the Clean Air Act, has reviewed the draft environmental impact statement (DEIS) on issuing a deep seabed mining exploration license to Ocean Minerals Company (OMCO). The DEIS was prepared by the National Oceanic and Atmospheric Administration (NOAA) pursuant to its responsibilities under NEPA, as well as its specific requirements under P.L. 96-283, the Deep Seabed Hard Minerals Resources Act (DSHMRA). The exploration license is one of four such licenses NOAA proposes to issue.

Activities under the exploration license will take place in the Northeast Equatorial Pacific Ocean between Hawaii and Central America. The applicant intends to define an area for commercial recovery of manganese nodules from within this larger area of main commercial interest. OMCO proposes to use acoustic data, photography, satellite navigation and various bottom sampling techniques to define its exploration area.

EPA has no objections to the proposed issuance of an exploratory license to OMCO. We have categorized this EIS as "LO" (Lack of Objections). Based on our review, the exploration proposed in the application cannot reasonably be expected to result in a significant adverse effect on the environment. The enclosed detailed comments provide some suggested minor revisions to the EIS.

If you have any questions about our comments, please contact Armand Lepage of my staff at 382-5049.

Sincerely,

Allan Hirsch
Director
Office of Federal Activities

Enclosure

Detailed Comments on NOAA DEIS on Issuing Deep Seabed Mining Exploration License

1. We suggest the paragraph on p. xii regarding EPA development of a general National Pollutant Discharge Elimination System (NPDES) permit be changed to the following:

> The Environmental Protection Agency (EPA) is developing a general National Pollutant Discharge Elimination System (NPDES) permit for discharges from all vessels subject to the Deep Seabed Hard Mineral Resources Act engaged in exploration activities, except for discharges from at-sea mining system tests.
>
> The proposed general NPDES permit is not limited to those subject to exploration licenses, but applies to discharges from all vessels subject to the DSHMRA engaged in exploration activities, except for discharges from initial mining tests.

2. The first paragraph on p. 48 of the DEIS should be revised so that the third and fourth sentences read:

> As proposed on August 29, 1983, the permit will cover ... years. As proposed, discharges ... monthly.

The revised wording recognizes that changes in response to comments may be made before EPA issues the final general permit.

3. NOAA states in the DEIS, and specifically in paragraph (2) of the proposed license (Appendix 8), the need for applicants to supply detailed test plans and baseline data prior to the at-sea testing of mining systems. These same materials would also be used in developing appropriate NPDES permit mining system tests. In that regard, some of the reports discussed in Appendix 2 (Marine Research Effort--Recent Findings) will be useful to EPA in developing appropriate NPDES permit limitations for surface and benthic discharges from the at-sea mining system tests.

4. EPA understands that NOAA cannot now provide exact coordinates of the exploratory areas. Exact coordinates and site-specific data should, however, be included in any supplemental EIS covering at sea mining system testing.

5. On p. 84 of the DEIS, there is a statement regarding 13 elements being priority pollutants under the Toxic Substances Control Act. These same 13 elements are also toxic pollutants under the Clean Water Act.

Environmental Protection Agency

1. Adopted. Appropriate changes are made on the errata sheet.

2. Adopted. Appropriate changes are made on the errata sheet.

3. Agreed. All research reports will be available from NOAA.

4. NOAA expects the location of any at-sea test to be public information; however, the coordinates of the U.S. license areas will remain confidential until their release is appropriate under relevant laws on confidentiality. This determination will be made by the Commerce Department in consultation with the State Department. Also see The Oceanic Society comment # 6.

5. Agreed.

JUL 12 '83

Mr. James P. Lawless
Chief, Ocean Minerals & Energy Division
National Oceanic and Atmospheric Administration
2001 Wisconsin Avenue, N.W., Room 105
Washington, D.C. 20235

Dear Mr. Lawless:

The Environmental Protection Agency (EPA), in accordance with its responsibilities under the National Environmental Policy Act (NEPA) and Section 309 of the Clean Air Act, has reviewed the draft environmental impact statement (DEIS) on issuing a deep seabed mining exploration license to Ocean Mining Associates (OMA). The DEIS was prepared by the National Oceanic and Atmospheric Administration (NOAA) pursuant to its responsibilities under NEPA, as well as its specific requirements under P.L. 96-283, the Deep Seabed Hard Minerals Resources Act (DSHMRA). The exploration license is one of four such licenses NOAA proposes to issue.

Activities under the exploration license will take place in the Northeast Equatorial Pacific Ocean between Hawaii and Central America. The applicant intends to define an area for commercial recovery of manganese nodules from within this larger area of main commercial interest. OMA proposes to use acoustic data, photography, satellite navigation and various bottom sampling techniques to define its exploration area.

EPA has no objections to the proposed issuance of an exploratory license to OMA. We have categorized this EIS as "LO" (Lack of Objections). Based on our review, the exploration proposed in the application cannot reasonably be expected to result in a significant adverse effect on the environment. The enclosed detailed comments provide some suggested minor revisions to the EIS.

If you have any questions about our comments, please contact Armand Lepage of my staff at 382-5049.

Sincerely,

Allan Hirsch

Allan Hirsch
Director
Office of Federal Activities

Enclosure

Detailed Comments NOAA DEIS on Issuing Deep Seabed Mining Exploration License

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   The Environmental Protection Agency (EPA) is developing a general National Pollutant Discharge Elimination System (NPDES) permit for discharges from all vessels subject to the Deep Seabed Hard Mineral Resources Act engaged in exploration activities, except for discharges from at-sea mining system tests.

   The proposed general NPDES permit is not limited to those subject to exploration licenses, but applies to discharges from all vessels subject to the DSHMRA engaged in exploration activities, except for discharges from initial mining tests.

2. The paragraph on Page 48 of the DEIS should be revised so that the third and fourth sentences read:

   As proposed on August 29, 1983, the permit will cover ... years. As proposed, discharges ... monthly.

   The revised wording recognizes that changes in response to comments may be made before EPA issues the final general permit.

3. NOAA states in the DEIS, and specifically in paragraph (2) of the proposed license (Appendix 8), the need for applicants to supply detailed test plans and baseline data prior to the at-sea testing of mining systems. These same materials would also be used in developing appropriate NPDES permit mining system tests. In that regard, some of the reports discussed in Appendix 2 (Marine Research Effort--Recent Findings) will be useful to EPA in developing appropriate NPDES permit limitations for surface and benthic discharges from the at-sea mining system tests.

4. EPA encourages NOAA to provide additional site-specific data, including exact coordinates of the exploratory areas, when confidentiality requirements allow. Such site-specific data should be included in any supplemental EIS covering at sea mining system testing.

5. On Page 84 of the DEIS, there is a statement regarding 13 elements being priority pollutants under the Toxic Substances Control Act. These same 13 elements are also toxic pollutants under the Clean Water Act.

1. See response for Ocean Minerals Company.

2. See response for Ocean Minerals Company.

3. See response for Ocean Minerals Company.

4. See response for Ocean Minerals Company.

5. See response for Ocean Minerals Company.

JUL 12 1984

Mr. James P. Lawless
Chief, Ocean Minerals and Energy Division
National Oceanic and Atmospheric Administration
2001 Wisconsin Avenue, N.W., Room 105
Washington, D.C. 20235

Dear Mr. Lawless:

The Environmental Protection Agency (EPA), in accordance with its responsibilities under the National Environmental Policy Act (NEPA) and Section 309 of the Clean Air Act, has reviewed the draft environmental impact statement (DEIS) on issuing a deep seabed mining exploration license to Kennecott Consortium (KCON). The DEIS was prepared by the National Oceanic and Atmospheric Administration (NOAA) pursuant to its responsibilities under NEPA, as well as its specific requirements under P.L. 96-283, the Deep Seabed Hard Minerals Resources Act (DSHMRA). The exploration license is one of four such licenses NOAA proposes to issue.

Activities under the exploration license will take place in the Northeast Equatorial Pacific Ocean between Hawaii and Central America. The applicant intends to define an area for commercial recovery of manganese nodules from within this larger area of main commercial interest. KCON proposes to use acoustic data, photography, and satellite navigation to define its exploration area.

EPA has no objections to the proposed issuance of an exploratory license to KCON. We have categorized this EIS as "LO" (Lack of Objections). Based on our review, the exploration proposed in the application cannot reasonably be expected to result in a significant adverse effect on the environment. The enclosed detailed comments provide some suggested minor revisions to the EIS.

If you have any questions about our comments, please contact Armand Lepage of my staff at 382-5049.

Sincerely,

Allan Hirsch
Director
Office of Federal Activities

Enclosure

10

Detailed Comments NOAA DEIS on Issuing Deep Seabed Mining Exploration License

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   The proposed general NPDES permit is not limited to those subject to exploration licenses, but applies to discharges from all vessels subject to the DSHMRA engaged in exploration activities, except for discharges from initial mining tests.

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   The revised wording recognizes that changes in response to comments may be made before EPA issues the final general permit.

3. NOAA states in the DEIS, and specifically in paragraph (2) of the proposed license (Appendix 8), the need for applicants to supply detailed test plans and baseline data prior to the at-sea testing of mining systems. These same materials would also be used in developing appropriate NPDES permit mining system tests. In that regard, some of the reports discussed in Appendix 2 (Marine Research Effort--Recent Findings) will be useful to EPA in developing appropriate NPDES permit limitations for surface and benthic discharges from the at-sea mining system tests.

4. EPA encourages NOAA to provide additional site-specific data, including exact coordinates of the exploratory areas, when confidentiality requirements allow. Such site-specific data should be included in any supplemental EIS covering at sea mining system testing.

5. On Page 84 of the DEIS, there is a statement regarding 13 elements being priority pollutants under the Toxic Substances Control Act. These same 13 elements are also toxic pollutants under the Clean Water Act.

1. See response for Ocean Minerals Company.

2. See response for Ocean Minerals Company.

3. See response for Ocean Minerals Company.

4. See response for Ocean Minerals Company.

5. See response for Ocean Minerals Company.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

OFFICE OF
EXTERNAL AFFAIRS

Environmental Protection Agency

12

Mr. James P. Lawless
Chief, Ocean Minerals & Energy Division
National Oceanic and Atmospheric Administration
2001 Wisconsin Avenue, N.W., Rm. 105
Washington, D.C. 20235

Dear Mr. Lawless:

The Environmental Protection Agency (EPA), in accordance with its responsibilities under the National Environmental Policy Act (NEPA) and Section 309 of the Clean Air Act, has reviewed the draft environmental impact statement (DEIS) on issuing a deep seabed mining exploration license to Ocean Management, Inc. (OMI). The DEIS was prepared by the National Oceanic and Atmospheric Administration (NOAA) pursuant to its responsibilities under NEPA, as well as its specific requirements under P.L. 96-283, the Deep Seabed Hard Minerals Resources Act (DSHMRA). The exploration license is one of four such licenses NOAA proposes to issue.

Activities under the exploration license will take place in the Northeast Equatorial Pacific Ocean between Hawaii and Central America. The applicant intends to define an area for commercial recovery of manganese nodules from within this larger area of main commercial interest. OMI proposes to use acoustic data, photography, satellite navigation and various bottom sampling techniques to define its exploration area.

EPA has no objections to the proposed issuance of an exploratory license to OMI. Based on our review, exploration proposed in the application cannot reasonably be expected to result in a significant adverse effect on the environment. We have categorized this EIS as "LO" (Lack of Objections). The enclosed detailed comments provide some suggested minor revisions to the EIS.

If you have any questions about our comments, please contact Armand Lepage of my staff at 382-5049.

Sincerely,

Allan Hirsch
Director
Office of Federal Activities

Enclosure

Environmental Protection Agency

Detailed Comments NOAA DEIS on Issuing Deep Seabed Mining Exploration License

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4. EPA encourages NOAA to provide additional site-specific data, including exact coordinates of the exploratory areas, when confidentiality requirements allow. Such site-specific data should be included in any supplemental EIS covering at sea mining system testing.

5. On Page 84 of the DEIS, there is a statement regarding 13 elements being priority pollutants under the Toxic Substances Control Act. These same 13 elements are also toxic pollutants under the Clean Water Act.

1. See response for Ocean Minerals Company.

2. See response for Ocean Minerals Company.

3. See response for Ocean Minerals Company.

4. See response for Ocean Minerals Company.

5. See response for Ocean Minerals Company.

EXECUTIVE CHAMBERS

HONOLULU

GEORGE R. ARIYOSHI
GOVERNOR

June 12, 1984

Mr. James P. Lawless
Chief, Ocean Minerals and Energy Division
Office of Ocean and Coastal Resource Management
National Ocean Service/NOAA
2001 Wisconsin Avenue, N.W.
Washington, D. C. 20235

Dear Mr. Lawless:

Thank you for inviting me to comment on the draft environmental impact statement covering the exploration of two areas of the Clarion-Clipperton seabed by the Kennecott consortium.

Under the license, the consortium is required to report any endangered species observed. It may be desirable that similar measures be employed to protect newly discovered species. Exploration offers a unique opportunity for these discoveries. 1

Exploration also offers an opportunity to test the feasibility of dumping tailings at sea instead of on land. Such a test would augment the camera scan presently contemplated. 2

Another at sea test could be the discharge of the sedimentary residue through a pipe extending below the thermocline with a view toward reducing the impact of the plume on the epipelagic zone, and on the neuston layer in particular. 3

We are very interested in your progress and would appreciate receiving the final environmental impact statement and any supplements you may be able to provide.

With warm personal regards, I remain,

Yours very truly,

George R. Ariyoshi

1. NOAA feels that such measures are premature, since a new species is not necessarily an endangered species requiring protection. New species can result from a reclassification of an existing taxonomic group or from the collection of an undescribed animal. Because the DOMES area has not been sampled extensively, NOAA expects that new species will be collected in the future as more intensive studies are conducted by NOAA and the licensees; however, such collection does not imply that these species are rare and should be protected. Thus, NOAA feels that it is inappropriate to take protective measures of newly discovered species.

2. Ocean disposal of tailings could occur in conjunction with onshore processing of nodules collected during integrated mining tests. NOAA would prepare a supplemental EIS should the processing tests and ocean disposal be proposed by industry.

3. We agree; however, no testing of integrated systems presently is proposed under pending licenses. However, in the context of future operations, subsurface discharge of the mining waste was the topic of a meeting of scientists held by NOAA in August 1983 to consider the potential for harmful effects from this method. The scientists concluded that discharge below 1000 meters depth is environmentally preferred over surface discharge. However, because of the difficulty of monitoring a subsurface plume and the lack of evidence of a significant adverse effect from surface discharge, NOAA will, at present, allow either type of discharge. If subsurface discharge were conducted under a license, it would be the subject of monitoring.

THE OCEANIC SOCIETY

EDUCATION • RESEARCH • CONSERVATION

EXECUTIVE OFFICES
Magee Avenue
Stamford, Ct. 06902
(203) 327-9786

July 13, 1984

Mr. James Lawless, Chief
Ocean Minerals and Energy Division
Office of Ocean and Coastal Resources
Management
National Ocean Service
National Oceanic and Atmospheric
Administration
Page I Building, Room 410
2001 Wisconsin Avenue, N.W.
Washington, D.C. 20235

Re: Comments on NOAA's Manganese Nodule Deep Seabed Mining Exploration License DEISs, 49 Fed. Reg. 20359 (May 14, 1984)

Dear Jim:

The following comments respond to NOAA's Draft Environmental Impact Statements (DEISs) assessing the environmental effects of issuing manganese nodule deep seabed mining (DSM) exploration licenses to Kennecott Consortium (KCON), Ocean Management, Inc. (OMI), Ocean Minerals Co. (OMCO), and Ocean Mining Associates (OMA), and to the companion Terms, Conditions and Restrictions (TCRs). We are submitting these comments on behalf of the twenty-six (26) undersigned environmental and other citizens organizations. These groups join with us in voicing several concerns about the effects of deep seabed mining on our vital ocean resources in the context of the DEISs and the proposed TCRs.

In the past we have stressed the importance of continued research because insufficient knowledge exists at the present time to assess the environmental impacts of the proposed activities. As a central thesis to these entire comments, we reiterate the need for continued environmentally focused research so that decisions impacting marine and costal areas will be made on the basis of sound information, data and analyses.

Before addressing specific concerns, we want to note that our comments should not be viewed as an endorsement of the evolving domestic deep seabed mining regime under the Deep Seabed Hard Mineral Resources Act. In our view, any mining of manganese

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15

nodules or other hard rock minerals in areas such as the Clarion-Clipperton zone should be governed internationally. For this reason, among others far more important to U.S. interests than deep seabed mining, we support and encourage the expeditious entry into force of the Law of the Sea Convention. That Convention will provide the international legal order and dispute settlement machinery within which to develop environmental laws, dispute settlement mechanisms, and other measures crucial to the protection and preservation of the marine environment.

The following comments separately address the four DEISs and their companion TCRs, in compliance with NOAA's request.

EXPLORATION LICENSE
DRAFT ENVIRONMENTAL IMPACT STATEMENTS

Drafters of the Deep Seabed Mining Hard Mineral Resources Act ("the Act"), 30 U.S.C. §1401 et seq., recognized the difficulty of assessing the environmental impacts of deep seabed mining given our limited knowledge of the deep sea. They expressed their concern by making it clear in the Act that issuance of licenses for exploration activities constitutes a "major Federal action significantly affecting the quality of the human environment for purposes of Section 102 of the National Environmental Policy Act of 1969." (30 U.S.C. §1419(d)) NOAA must publish an EIS with each license it grants, taking into account any newly published studies on the effects of ocean mining, and modifying the Terms, Conditions and Restrictions (TCRs) under which each company must operate wherever necessary.

I. Proposed License Phase Activities

The four DEISs that NOAA has issued are largely identical, differing principally in those sections that address exploration activities. KCON plans no sampling of nodules during the license phase. It will only engage in depth sounding and photographs. The other three companies will take samples of nodules from the ocean floor.

NOAA acknowledges that sampling, particularly the grab basket sampling contemplated by all three companies, carries with it the greatest environmental risk of any license phase activity presently contemplated. (DEISs, p. 41) NOAA goes on to state that sampling will probably not adversely effect the environment because the companies will not want to retrieve substantial samples due to the number of nodules each has in storage from earlier activities. (Id.) We urge NOAA to limit the quantities of nodules (or samples) each company may recover during the license phase, to insure protection of the deep sea while research goes forward. Since the licenses will be granted for a ten-year period, this initial limitation could be reviewed as additional information is forthcoming.

1. We concur that the actual exploration activities should not be allowed to differ substantially from those characterized in the DEISs without an early warning and decision by NOAA whether further environmental impact analysis is appropriate. The revised TCRs will provide a notice mechanism to trigger an environmental review as the nature of exploration activities evolve. See also comment # 9, and Ocean Minerals Company comments # 2 and # 7.

Our remaining comments apply to all four of NOAA's DEISs.

II. NEPA/CEQ Requirements

The Council on Environmental Quality (CEQ) regulations, 40 C.F.R. §1500.1 et seq., serve as the principal guidelines for NOAA's compliance with NEPA. Section 1502 of the CEQ regulations lists the detailed procedures NOAA must follow in preparing an EIS. In general, NOAA's DEISs comply with the format set out in that section. However, we strongly recommend that NOAA revise those sections of its DEISs pertaining to the "scope" of its analysis, the "alternatives", the "worst case" analysis and "cumulative impacts", consistent with the following comments.

A. Scope

NOAA officials state that each of the four "site specific" EISs "'tiers' off the broader PEIS by summarizing the PEIS analysis and incorporating the major discussions by reference, then covering issues specific to the license application." (DEISs, p. 4) While this approach is consistent with the requirements of Section 1502.20 of the CEQ regulations, we believe the DEISs should note those issues where further information may merit revised analyses under the broader Programmatic Environmental Impact Statement (PEIS) issued in 1981.

NOAA has discussed the need for supplemental PEISs in certain areas, for instance with respect to mining systems tests and on-shore processing. However, NOAA has not made reference to several developments since 1981 that might merit the publication of a supplemental PEIS. Examples of such developments are: the continuing depressed state of the metals market; the availability of land-based supplies and the growing interest in substitution and recycling; shifting interest by industry towards nearer shore deposits of polymetallic sulfides and cobalt crusts; and the United States' decision to move forward with a domestic manganese nodule mining regime that is not an interim approach to subsequent participation with other nations under the Law of the Sea Convention. With respect to the last development, the current unsettled nature of international law in relation to deep seabed mining and the related effects on security of mine site tenure that have resulted from the United States' decision not to sign the Convention have had a significant adverse effect on the viability of manganese nodule mining.

These considerations are beyond the scope of issues specific to the license applications under a tiered EIS approach. However, we believe NOAA must note the changed character of PEIS issues whenever it makes reference to its broader PEIS analysis. Some of our concerns in this regard are further noted in the remaining subsections of this portion of our comments.

2. These issues are critical to the future of deep seabed mining, but have little (if anything) to do with the environmental impacts of proposed exploration activities, or even with the impacts of first generation mining through 2010 as described in the PEIS. These developments are generally addressed in NOAA's biennial Report to Congress. However, if economic and political developments have some implications that affect NOAA's PEIS, especially in the direction of indicating more significant environmental impacts, NOAA will consider undertaking an appropriate supplement to the PEIS. NOAA has already implemented suggestions by the Center for Law and Social Policy, in their comments on the PEIS, to include research and SRA developments since 1981 in the site-specific DEISs. None of these developments, however, alter the conclusions expressed in either the PEIS or the site-specific DEISs.

B. Significant Environmental Effects

The DEISs state that license phase exploration activities have no potential for causing significant environmental impact, with that finding based in substantial part on the earlier PEIS. However, NOAA does not mention the preliminary nature of this PEIS determination, nor does NOAA mention the need for continued research and monitoring to verify the accuracy of its initial findings. The Deep Ocean Mining Environmental Studies (DOMES), on which NOAA relied substantially for its PEIS, was very limited in scope and duration. NOAA itself noted in its PEIS that "because the DOMES test were pilot scale and brief, it is essential that important findings be validated, as discussed in NOAA's 5 year research plan, during the mining systems endurance tests industry will conduct prior to embarking on commercial mining." (DEISs, p. 79) NOAA should make reference to the preliminary nature of its conclusions that exploration activities will have no adverse impact on the deep sea in each of its license-specific EISs. NOAA should also reiterate the need for further research on the environmental impacts of deep seabed mining, as mentioned in our introductory comments.

3

C. Alternatives

CEQ regulations refer to the alternatives section as "the heart of the EIS." (40 C.F.R. §1502.14) They go on to state that this section "should present the environmental impacts of the proposal and the alternatives in comparative form, thus sharply defining the issues and providing a clear basis for choice among options by the decision maker and the public." (Id). While we are not suggesting that the tiered DEISs need to restate in detail the broader PEIS analysis, as mentioned in subsection A, above, the license-specific EISs should note the fact that new information and changing conditions have affected the validity of the earlier PEIS analysis with respect to alternatives. Such mention could be made in those DEIS sections where NOAA briefly mentions delaying or denying licenses as an unacceptable option.

4

In addition, Section 1502.14(f) of the CEQ regulations requires that NOAA's discussion of alternatives "include appropriate mitigation measures not already included in th proposed action or alternatives." (40 C.F.R. §1502.14(f)) However, NOAA makes no mention of provisions for mitigating adverse environmental effects in this section. NOAA simply concludes that "there is not expected to be any adverse environmental effects" during the license phase. (DEISs, p. 13) Even though NOAA doubts the likelihood of adverse environmental effects from license activities, it should emphasize the duty of each company to mitigate any adverse effects that might develop. According to CEQ regulations, each company remains under a duty to mitigate throughout the license

The Oceanic Society

3. NOAA agrees that its conclusions regarding the environmental effects from test mining and commercial-scale mining are preliminary and require more research and monitoring in order to increase its confidence in these predictions, as stated in its PEIS (p. 112). NOAA does feel certain that the effects of test mining activities, although locally adverse, will be insignificant as discussed in the PEIS and the Alternatives section of the DEISs. However, the Alternatives section of the DEISs also states that the TCRs will require a licensee to monitor the environmental effects of its test mining activities in order to assess the validity of the conclusions in the DEISs relating to impacts. This monitoring will also yield information concerning potential adverse effects from commercial-scale mining. With respect to those activities actually proposed to be conducted under any of these pending licenses, as stated in the Alternatives section of the DEISs, NOAA has concluded that there will be no significant adverse environmental effects; these activities, as defined in the regulations (15 CFR 970.701), are routine oceanographic activities. As evidenced by NOAA's research program, there is a need for further research on the potential impacts from seabed mining (PEIS, pp. 102 and 112).

4. NOAA is not aware of anything substantially affecting the PEIS analysis of alternatives that would alter the conclusions regarding environmental impacts from these alternatives.

5. As stated in the Alternatives section of the DEISs, NOAA does not feel that there is a requirement to mitigate if no significant adverse impacts are expected to occur. The proposed TCRs, as noted in the Alternatives section, impose upon the licensee a continuing duty to conduct activities to assure protection of the environment, and in the event of an unanticipated adverse effect, NOAA would certainly take action to evaluate and minimize such effects if they were potentially significant.

18

phase, whether or not this duty requires affirmative action. (Id.)

D. Worst Case Analysis

Although NOAA plans to grant site-specific licenses, it has chosen not to reveal the exact coordinates of the four sites to avoid problems that might arise in foreign affairs and in the commercial market. Instead, NOAA has employed a "worst case" approach -- based on Section 1502.22(b)(2) of the CEQ regulations -- to assess the environmental impacts of exploration in the general area in which all four companies will be operating. (DEISs, p. 7)

We strongly encourage NOAA in its stated intention to reveal site coordinates to the public as soon as possible. The combined license area is smaller than the area studied in the DOMES project, but still quite large. The DOMES report noted that environments vary within the proposed mining area. Thus, site selection may prove critical in protecting the ocean to the maximum degree possible. Site coordinate designations are needed to properly assess the effects of exploration activities on specific sites. We recommend that NOAA acknowledge the need for supplemental DEISs once site-specific coordinates are made public, and that the licenses generally place industry on notice as to the considerations that would trigger the publication of the site-specific coordinates at the earliest possible time.

6

E. Cumulative Impacts

CEQ regulations stress the importance of avoiding cumulative adverse environmental impacts by explicitly requiring that DEISs consider all other "past, present and reasonably forseeable future actions...", whether by the agency preparing the DEIS or others. (40 C.F.R. §1508.7) Even if NOAA concludes that no significant actions will likely occur during the exploration phase of deep seabed mining, non-U.S. regulated companies may decide to engage in as yet uncontemplated activities at some point during the 10-year license phase. For example, Preparatory Commission participants are expected to issue pioneer investor certificates of registration under the LOS Convention within the next 12 months. Those certificates will allow the investors to engage in pioneer activities, as defined in Annex I (Resolution II(1)(b)) of the Convention. In addition, mining nations other than the U.S. may decide to grant exploration licenses as part of the ongoing process to establish the Reciprocating States Regime. While the license-specific EISs need not focus in detail on those other considerations, this NEPA issue should be noted with appropriate reference to the affects of changing circumstances on NOAA's earlier PEIS.

6. The coordinates of the U.S. license areas will remain confidential until the commercial and foreign affairs justifications for their confidentiality no longer exist, or until the licensee authorizes their disclosure. The justification for this determination will be made by the Department of Commerce, in consultation with the Department of State, as appropriate. NOAA agrees that the coordinates should be made public as soon as possible. NOAA does not believe that knowledge of the coordinates would affect the DEISs analysis or that a supplemental EIS would necessarily be appropriate upon disclosure of the coordinates because virtually all of NOAA's site specific environmental information is now contained in the DEISs. Chapter III in the DEISs reveals how the proposed sites' characteristics fall within the range of characteristics identified in the PEIS. Accordingly, there is no reason to believe that any of the proposed sites is "special" in any environmental sense. Also see Environmental Policy Institute comment # 3, and EPA comment # 4.

If testing is proposed, NOAA expects that the test location would be public information. As stated in the DEISs introduction and the section on monitoring, a licensee will have to submit site-specific environmental information and a monitoring strategy for NOAA approval, as well as detailed test plans; also, a supplemental EIS will be prepared. NOAA believes that this procedure will adequately protect the environment.

7. Should deep seabed mining develop at a rate substantially more rapid than that projected in the PEIS (Appendix 5, especially page 278), NOAA will consider the need for a supplement to the PEIS (see also comment # 2).

III. DSMHRA -- "THE ACT"

A. Exploration Plan

NOAA states at the outset of each DEIS that its statement does not assess the environmental impacts associated with at-sea mining systems tests. (DEISs, p. 3) NOAA makes clear that before a company may engage in at-sea testing, it must first obtain NOAA's approval of a revised exploration plan. This complies with Section 103 of the Deep Seabed Hard Mineral Resources Act. (30 U.S.C. §1413) NOAA must then issue a supplemental DEIS and appropriately modify the terms, conditions and restrictions of the company's license. (Id.) We strongly support this approach. In addition, we have two recommendations to make with regard to at-sea mining systems tests.

The first recommendation concerns NOAA's statement that they will not require companies to submit mining pattern information during test mining. (DEISs, p. 68) We urge NOAA to take steps to insure that several companies do not engage in test mining near the same area simultaneously. Although the adverse environmental impact of one company's test mining may prove relatively slight, the cumulative effect of several companies test mining near the same area could produce a significant environmental impact. Accordingly, mining pattern information should be required. 8

Our second recommendation concerns the definition of at-sea mining tests. In the July 3, 1984 public hearing sponsored by NOAA in relation to the DEISs and TCRs, at least one of the industry representatives indicated that the definition of mining systems tests should be very narrowly defined to refer only to a fully integrated mining system. We strongly object to such a crabbed interpretation of the Act. It is our view that any form of mining systems test, whether pilot, sub-system, or full-scale, should be subject to the additional analyses and requirements that NOAA has put forward on this matter. 9

B. Stable Reference Areas (SRAs)

Section 109(f) of the Act requires that the Secretary of State and the Administrator of NOAA, in cooperation with other nations, establish SRAs where no mining of the deep seabed will occur. (30 U.S.C. §1419(f)) As stated in that provision of the Act, SRAs are to be used as "a reference zone or zones for purposes of resource evaluation and environmenal assessment of deep seabed mining," and they must include "the designation of appropriate zones to insure a representative and stable biota of the deep seabed." (30 U.S.C. §1419(f)(4))

The concept of SRAs is critical for the evaluation of broad benthic impacts from mining activities. In 1982-83, the National Research Council's Board on Ocean Science and Policy (BOSP)

8. NOAA does not feel that such a requirement is appropriate at this time because of the lack of research information on the desirability of prohibiting adjacent tracks and the extremely low probability that this problem will even arise, given that it is doubtful if more than two of the currently proposed U.S. licensees will conduct further testing during the license period. Although NOAA's PEIS (p. 103) assumes that starvation due to the benthic plume is the major potential problem, this was for the purposes of a worst case scenario and so assumed that there was total destruction of the benthos in the collector path and in all areas affected by the benthic plume from five ships (i.e., 750 km^2). Whether these plume effects in fact would result in mortality or would cause sublethal effects, however, is unknown. If the effects are sublethal, it would seem wise to keep the tracks dispersed; if the effects are lethal, it would seem prudent to "concentrate" these effects by encouraging adjacent tracts and so minimize the area affected. NOAA is funding research to try to identify the type of effects that would result from small amounts of deposited sediments.

NOAA is not presently proposing to impose specific mining patterns; however, NOAA's license regulations [15 CFR 970.603(b)] point out that collector track (i.e., mining pattern) data will be required.

9. We agree with the need to define "a test" and to examine activities not covered in the DEISs that fall short of a fully integrated mining systems test. This subject will be addressed in the revised TCRs.

undertook a focused study of the SRA concept at the request of NOAA. The findings and recommendations of that study, which are contained in its report, Deep Seabed Stable Reference Areas, National Academy Press (1984), provide valuable guidance in the development of the SRA concept. As noted in that report (p. 2):

> The concept of [SRAs]...is scientifically valid if two types of SRAs are designated: one type, the preservational reference area (PRA), must be located to ensure that the biota is not affected by mining activities or other anthropogenic activities; the other type, the impact reference area (IRA), must be located close enough to mining to minimize inherent environmental differences so that statistically valid assessments of the impacts of mining can be made.

As described in detail in the BOSP report, including the appendices which summarize the results of the four workshops that were held as part of the study, the establishment of PRAs and IRAs is a sound and achievable means of fulfilling the requirements of Section 109(f) of the Act. The DEISs discuss the
10 SRA concept too summarily, and the draft TCRs are deficient in their reference to and incorporation of this important resource evaluation and environmental assessment mechanism. At present, the draft TCRs only allude to SRAs (Section 2(g), p. 136) by stating that each company's proposed monitoring plan shall involve "nearby control areas." We strongly encourage NOAA to spell out the SRA concept in a specific subsection of the TCRs. the need for more detailed elaboration of the SRA concept is reinforced by the BOSP report, which states in part (p. 7):

> No policy was stated in the license regulations on the implementation of the stable reference area section of the law since it was felt to be premature; however, acknowledgement of this concept and NOAA's intent to implement it will be made in the individual license terms, conditions and restrictions (TCR).

In particular, the designation of provisional PRAs should be addressed in the TCRs. The establishment of provisional PRA zones can be structured in a manner that incorporates the "characteristic environment" categories described in the BOSP report (p. 2 and p. 11, inter alia). As noted in that report, nine characteristic environment units have been identified, and "each unit should contain at least one provisional PRA, which should be identified as soon as possible to embed the concept into the regulatory process and the reciprocating states framework and focus future fieldwork". (p. 11)

10. NOAA feels, as stated in the DEISs and the PEIS, that developing the scientific criteria for designation of stable reference areas is preferable to random designation. NOAA's request to the National Research Council's Board of Ocean Science and Policy (BOSP) to undertake this report (summarized in Appendix 2 of the DEISs) was the initial effort to improve the definition of the criteria, and thus the information required, to designate these areas with any assurance that they would meet the intent of the Act. Because that section of the DEISs was only summarizing the PEIS alternatives, any more discussion of the progress in thinking on this concept was inappropriate, not underestimating the value of the BOSP report. In fact, NOAA has already initiated research implementing some of the BOSP's recommendations. (See Appendix 2 of DEISs).

TERMS, CONDITIONS AND RESTRICTIONS

Section 109(b) of the Act requires that NOAA issue each license, subject to "such terms, conditions and restrictions, established by the Administrator, which prescribe the actions the licensee or permitee shall take in the conduct of exploration and recovery activities to assure protection of the environment." (30 U.S.C. §1419(b)) NOAA lists these TCRs in Appendix 8 of each DEIS.

At NOAA's July 3, 1984 public hearing, the spokespeople for industry urged NOAA to incorporate as much flexibility as possible into the TCRs. They emphasized the importance of flexibility in view of the fact that deep seabed mining is a long-range project, still in the initial stages. We believe that the TCRs as written grant industry considerable flexibility. Each company will receive an exploration license for ten years, a substantial period of time during which the companies will carry out exploration plans designed by their own scientists. Since NOAA has granted industry this much leeway under the license, it should not relax the requirements imposed on industry by the TCRs. NOAA should require industry to comply with the set of standards contained in the TCRs, including the proposed changes we have recommended in relation to monitoring and other matters.

The following comments address the specific TCR provisions:

(1) Diligence

NOAA requires each company to submit an annual report demonstrating the company's conformance to the schedule of activities and expenditures set out in its exploration plan. (Section 1, p. 133-34) We commend NOAA's statement on the purpose of this diligence report, "to focus on exhibiting to NOAA the evolving ability of [each company] to apply for a permit for commercial recovery by the end of the ten year license period." (Id.)

Several industry spokespeople at the July 3 hearing asked NOAA to extend the 90-day deadline for this diligence report. OMI quoted C.F.R language to support its contention that the license regulations require NOAA to use flexibility in this area. (15 C.F.R 970.602(c)) The regulation referred to by OMI recognizes that industry may not always precisely follow its exploration plan, given its long-range planning, and industry admonishes NOAA to keep this in mind when reviewing the diligence reports. However, the regulation does not require NOAA to use flexibility in setting a date for submission of the diligence reports. Ninety days after the anniversary date of the license provides adequate time for industry to compile its data for the year and send it to NOAA. Moreover, we urge NOAA to require these reports on a monthly or quarterly basis as NOAA itself recommended in its "Discussion Paper on the Implementation of Public Law No. 96-283, the DSHMRA". (p. 22)

NOAA is not responding to comments on the Terms, Conditions and Restrictions in this document.

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(2) Environmental Protection and Monitoring

NOAA's DEISs do not require companies to conduct environmental monitoring unless they engage in at-sea mining tests. We strongly urge NOAA to alter this section of the TCRs and mandate environmental monitoring throughout the license phase. The Act requires monitoring for all license phase activities. Section 114 of the Act provides that (30 U.S.C. §1424):

> Each license and permit issued under this title shall require the licensee or permittee...to monitor the environmental effects of the exploration and commercial recovery activities in accordance with guidelines issued by the Administrator. (emphasis added)

In addition, Section 103 of the Act requires that each exploration plan include "measures to protect the environment and to monitor systems for commercial recovery." (30 U.S.C. §1413(a)(2)(B)) If NOAA fails to mandate environmental monitoring during the license phase it will violate both provisions of the Act. Failure to require monitoring will also contravene one of the basic purposes of the Act, stated in Section 2, which is (30 U.S.C. §1401(b)(4)):

> "to accelerate the program of environmental assessment of exploration for and commercial recovery of hard mineral resources of the deep seabed and assure that such exploration and recovery activities are conducted in a manner which will encourage the conservation of such resources, protect the quality of the environment, and promote the safety of life and property at sea."

Environmental monitoring is essential to properly assess the impacts of deep seabed mining on the ocean. Even though NOAA's research to date reveals no significant adverse impacts associated with license activities, these findings are preliminary and the Act clearly requires monitoring as an ongoing activity. Furthermore, if NOAA requires monitoring at the start of the license-phase activities, it will provide evolving information on deep ocean processes and the benthic community, and thereby enhance the prospects of effective monitoring during commercial recovery phases when monitoring becomes even more crucial. Moreover, if NOAA adopts this approach, it will more easily assure compliance with the requirement that companies report observations of endangered species.

In the DEISs' section on monitoring (DEISs, p. 48), NOAA states that each licensee must obtain a National Pollution Discharge Elimination System (NPDES) permit in compliance with the Clean Water Act (33 U.S.C. §1342), and that discharges will be monitored monthly under this permit. This regulatory provision alone fails to satisfy the monitoring requirement of Section 114 of the Act. First, companies must only monitor

discharges under the NPDES permit. They need not monitor other activities which might harm the environment. Second, the permits are general and apply to all companies operating under a deep seabed mining license. They are not specially tailored to the activities of each company.

As mentioned earlier, NOAA requires companies to obtain approval for a revised exploration plan before conducting at-sea mining systems tests, and NOAA will publish a supplemental DEIS should industry take this next step. Section 2(f)(ii) of the draft TCRs states that companies are "strongly encouraged to consult with NOAA...concerning the adequacy of proposed sampling strategy prior to initiation of baseline data collection." (DEISs, p. 135) NOAA should mandate such consultations.

In relation to Section 2(f)(ii), at the July 3 hearing one industry spokesperson requested that NOAA include a narrow definition of "at-sea mining" in that section to avoid restrictions on small-scale systems or sub-systems testing. We urge NOAA not to adopt this suggestion. All at-sea mining tests must be subject to environmental monitoring, in keeping with the provisions of the Act quoted above.

NOAA mentions the possiblity of ocean dumping as a means of waste disposal (DEISs, p. 65), should industry initiate testing at sea. Due to NOAA's acknowledged lack of information on the adverse environmental consequences of ocean dumping, NOAA should include a statement in its TCRs that it will publish a supplemental DEIS if industry proposes ocean dumping during the license phase.

We also request mandatory publication of a supplemental PEIS prior to initiation of onshore processing, and the establishment of deadlines for advance notification of onshore processing. On page 65 of each DEIS, NOAA states that it will publish a supplemental PEIS should companies initiate offshore processing. NOAA should reiterate this statement in Section 2 of the TCRs.

(3) Federal Observers

We concur with the approach stated in Section 6 of the TCRs (DEISs, p. 138), ensuring compliance with Section 114 of the Act, by providing for the placement of Federal observers on board vessels during the license phase to monitor the environmental impacts of exploration activities. In particular, we support the provision that each company notify NOAA of cruise departures at least 60 days prior to vessel departure.

We believe that observers should have the authority to make minor changes in sampling protocols or strategies, as proposed in that section of the TCRs. If NOAA were to adopt industry's request that changes only be made by "consensus," we strongly recommend that industry be required to submit a written statement

of reasons to NOAA, at an early date, in those situations where the observer's request for changes is not accepted. Such written statements also should be made a matter of public record.

(4) Records

As a minimal requirement, we support Section 7 of the TCRs (DEISs, p. 138), providing that each company keep and maintain records for not less than three years. This will facilitate industry compliance with environmental monitoring requirements. However, we suggest that NOAA require licensees to keep and maintain their records for the entire 10-year duration of the license.

(5) Emergency Orders

We support NOAA's authority, under Section 11 of the TCRs (DEISs, p. 140), to order immediate suspension or modification of industry licenses should an international or environmental emergency arise. This provision makes good sense given NOAA's lack of information on the environmental impact of deep seabed mining, the possibility of international disputes related to the current Administration's refusal to sign the LOS Convention, and the need to allow mid-course corrections and/or abatement approaches. We do not agree with the suggestion of one of the industry representatives that supervision orders be subject to Presidential approval. This responsibility appropriately rests with NOAA.

(6) Stable Reference Areas

We urge NOAA to address the concept of SRAs in the TCRs, as discussed in greater detail under section III(B) of our comments in relation to the DEISs.

(7) Security of Tenure

Finally, at the July 3 hearing industry spokespeople requested that NOAA include an affirmative statement in the TCRs declaring the rights of the four companies as against all others to explore the deep sea for mining purposes. NOAA has no power to grant industry such exclusive rights. Although American companies may not engage in exploration activities without obtaining a license from NOAA, other nations are moving forward with the development of an international regime under the framework of the Law of the Sea Convention. The TCRs state at the outset that the licenses NOAA issues will allow the four companies to carry out their exploration plans. That is the extent of what industry will receive under the licenses and the limit to what NOAA may grant in the way of secured tenure.

Conclusion

In closing, NOAA's license-specific EISs and the TCRs need further revisions before any exploration licenses are approved. As the development of deep seabed mining moves forward, considerable and continuing attention must be given to the regulatory framework necessary to deal with the potential adverse impacts of mining on the marine environment. Given what little is known technically of both the short- and long-term impacts of deep seabed mining, considerble caution must be exercised. To date, attention has been focused primarily on develping the technology to retrieve nodules from the ocean floor and to process them in a commercially viable way. A comprehensive environmental framework, including enforcement mechanisms, must be an integral feature of further development as we improve our understanding of the deep ocean.

We look forward to working with NOAA in the future to ensure the protection, conservation and wise use of our ocean resources.

Respectfully submitted,

Clifton Curtis
Dr. Michael Herz
Christopher Roosevelt
Sarah Matthews*/

On behalf of the Oceanic Society and the following organizations:

Organization	Location
Aloha Aina	Hilo, Hawaii
American Cetacean Society	San Pedro, California
Center for Environmental Education	Washington, D.C.
Coast Alliance	Washington, D.C.
Environmental Defense Fund	Washington, D.C.
Environmental Policy Institute	Washington, D.C.
Friends of the Coast	Bodega Bay, California
Friends of the Earth	San Francisco, California
Friends of the Sea Otter	Monterey, California
Greenpeace, Hawaii	Honolulu, Hawaii
Greenpeace, U.S.A.	Washington, D.C.

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Organization	Location
League for Coastal Protection	San Francisco, California
National Audubon Society	Washington, D.C.
Natural Resources Defense Council	New York City, New York
Oregon Shores Conservation Council	Salem, Oregon
Pacific Coast Federation of Fisherman's Associations	Sausalito, California
Pacific Concerns Resource Center	Honolulu, Hawaii
Pacific Seabird Group	Kaneohe, Hawaii
Puna Geothermal Committee	Hilo, Hawaii
Sierra Club	San Francisco, California
Southwest Research and Information Center	Albuquerque, New Mexico
United Methodist Church Joint Law of the Sea Project	Washington, D.C.
United States Committee on Oceans	Washington, D.C.
Volcano Community Association	Hilo, Hawaii
The Whale Center	Oakland, California

ENVIRONMENTAL POLICY INSTITUTE

Received July 13, 1984

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Re: Comments on Draft Environmental Impact Statements on issuing Exploration Licenses for Deep Seabed Mining.

Dear Mr. Lawless:

The following comments on the Draft Environmental Impact Statements for proposed Deep Sea Mining Exploration Licenses for four mining consortia are submitted on behalf of the Environmental Policy Institute and are endorsed and supported by the Oceanic Society. These comments supplement the comments previously provided at a public hearing on July 3, 1984 in Washington, D.C. and at a meeting with on July 5, 1984 with Mr. Padan, Mr. Lawless, and Mr. Auerbach, all representing NOAA. In addition we have read and endorsed the comments of the Oceanic Society on these DEISs.

The commenters note that except for the descriptions of the proposed activities to be conducted in the general area, the description of the environment and potential impacts are identical. The single exception is the Kennecott Consortium which does not plan to take actual manganese nodule samples. With that exception the following comments apply equally to all four DEISs.

It is the commenters opinion that the commercial viability of manganese module mining is still an open question. Nearshore crust formations, enhanced recovery techniques, and new land-based sources might become economically feasable sources of metallic ores before the development of deep seabed mining for nodules does. Recognizing the need to keep future options open

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and the time consuming effort to develop the technology, the commenters support cautious progress toward the development of a deep seabed mining industry, consistent with the requirements of the Deep Seabed Hard Minerals Resources Act (P.L. 96-283). The commenters believe, however, that the Draft Environmental Impact Statement on the aplications for exploration licenses submitted by the four consortia is insufficient in a number of key respects as described in detail below. Additionally, we address certain deficiencies in the terms, conditions and restrictions (TCRs) of the proposed licenses.

1. Scope: Connected Actions. The DEISs fail to analyze adequately the environmental impacts of actions that are connected to and likely to result from the issuance of the exploration license. For example, the DEISs fail to describe any impacts associated with the "at sea mining system tests", indicating rather that those impacts will be addressed "in a subsequent site specific EIS with additional environmental data gathered by industry during these initial exploration license activities". OMI DEIS p. 11, 40. Further, the DIESs contain no adequate discussion of the potential for impacts relating to full scale mining operations other than a very brief summary of issues raised in the Programatic EIS for Deep Seabed Minig (PEIS) contained in appendix 1. The commenters believe that NOAA's failure to analyze the impacts of these at-sea mining system tests, as well as their failure to discuss adequately the actual anticipated impacts from mining and processing itself violates the National Environmental Policy Act as implemented by the Council on Environmental Quality regulations. Those regulations define the "scope" of an EIS to include "connected", "cumulative" and "similar actions. In particular, "connected" actions are described as encompassing any "interdependent parts of a larger action" and as actions that "cannot . . . proceeed unless other actions are taken previously . . ." 40 CFR 1508.25.

That the at-sea mining tests fall into the category of connected actions is quite clear from the above definition. If there were any doubt that commercial recovery and processing qualified as connected actions, it is erased by the fact that NOAA's own Deep Seabed Mining regulations makes it specific that "A valid exisiting license will entitle the holder . . . to a permit for commercial recovery from an area selected within the same area of the sea floor." 15 CFR 970.102 (c).

It may be that the information needed to conduct the analysis of these actions is not yet available and cannot reasonabley be obtained prior to the agency's decision on the

1. NUAA disagrees that the environmental impacts from at sea testing and commercial-scale mining have not been satisfactorily analyzed. Through tiering off the PEIS, as allowed by CEQ regulations, the DEISs incorporate the analyses developed in this earlier document. The PEIS addressed all aspects of commercial-scale mining, based on available information, including worst-case scenarios for test mining and commercial-scale recovery (pp. 99-111). NOAA clearly recognizes the need for more information on the potential impacts from this new industry and is actively supporting research to develop the data base needed to improve impact predictions. One of the consequences of this research is the diminution of the concern over pycnocline accumulation of fine particles from the surface plume and the concern over significant adverse effects on the tuna and billfish larvae. (Appendix 2 of the DEISs explains this research in more detail.)

It should be noted that this licensing proposal does not include authorizing the licensee to engage in either mining systems tests or commercial recovery without additional NOAA approvals and procedures pursuant to NEPA. Although the Act [at Section 102(b)(3)] states that a licensee is entitled to a permit for commercial recovery, that entitlement is conditioned on the holder being otherwise eligible under the Act and regulations. This eligibility includes the finding pursuant to Section 105(a)(4) of the Act relating to significant adverse effect on the quality of the environment, and preparation of an EIS.

license application. The CEQ regulations, however, recognize this possibility and require in such instances that the agency conduct a "worst case analysis" and include "an indication of the probability or improbability of its occurence". 40 CFR 1502.22. The only attempt at a worst case analysis is done for the collecting of nodules by the basket samplers during the exploration stage. Large scale sampling (10,000 to 20,000 tonnes) needed for pilot processing operations is promised to be addressed in a future supplement to the site specific EIS. A worst case analysis for at-sea testing of mining systems and commercial mining/processing are not dealt with at all in the DEIS. Yet in appendix 1, the PEIS summary identifies at least one significant potential impact from pilot or full scale mining, that of the surface plume on the mortality of eggs and larvae of commercially important fish, and ignorance of the impacts from the accumulation of fines on the pycnocline. Further, the DEIS admits that "determinations of environmental significance in the PEIS were based on brief periods of pilot-scale mining and on the results of laboratory research and modelling. OMI DEIS P. 65. While there is a promise to develop further data when at-sea demonstration mining is conducted and to develop supplemental EISs when appropriate, this "modular EIS" approach does not excuse the agency from complying with the "full disclosure" policy of NEPA and doing a worst case analysis for all connective and related activities. See Save Our Ecosystem v. Clark, 14 ELR 20241 (9th Cir. 1984); Southern Oregon Citizens Against Toxic Spraying v. Clark, 720 F.2d 1475 (9th Cir. 1983); Sierra Club v. Siegler, 695 F.2d 957 (5th Cir. 1983).

One of the chief purposes behind the CEQ regulations was to assure that agencies "integrate the NEPA process with other planning at the earliest possible time to insure that planning and decisions reflect environmental values, to avoid delays later in the process, and to head off potential conflicts." 40 CFR 1501.2. The commetners believe that NOAA has failed to achieve this objective in these DEISs.

2. Scope: Cumulative Impacts. As described above, the CEQ regulations require the EIS to address the cumulative impacts on the environment, which when viewed with other proposed actions could have cumulatively significant impacts. In the analysis of environmental consequences of the proposed action NOAA states that the area potentially affected by exploration activities with the 4.6 million sq km Clarion-Clipperton zone is 1.0 million sq km. NOAA provides no analysis whatsoever of the consequences of the effect of other activities by other parties either within or adjacent to the area covered by the DEISs. Rather the analysis

2. The PEIS and the DEISs together present worst case scenarios on the potential impacts from exploration activities, including testing, and commercial-scale development. All documents address the cumulative impacts from more than one licensee or permittee. The DEISs describe the worst case impact on the part of one U.S. licensee and then points out that that same effect could be created, simultaneously and elsewhere in the affected environment, by two of the other three U.S. licensees (one consortium does not propose to engage in the activity in question). Further, the DEISs indicate that the French and Japanese consortia (France and Japan are signatories of the LUS Treaty), having been engaged in conflict resolution with the U.S. applicants, obviously have sites in or near the affected environment. Should both elect to sample, in this fashion, then five such impacts would occur. India is known to be conducting its exploration activities in the Indian Ocean. We are not aware of anyone else in the world interested in mining in this affected environment. The USSR has a reported interest in deep seabed mining but NOAA does not know if their area(s) of interest lie anywhere near the affected environment, nor whether the USSR plans to conduct any exploration activities within the next ten years.

provided assesses the impacts only of the immediate area which are to be sampled (i.e. the area of the bottom actually contacted by the sampling gear). The commenters believe that the DEISs are deficient in failing to afford a worst case analysis of the cumulative impacts of all proposed activities within the affected area.

3. Description of the "Affected Environment". The public has been placed at a distinct disadvantage because of the agency's failure to state the specific location of the proposed exploration activities. NOAA claims that it has determined not to disclose the location of these activities in order to "avoid the adverse foreign affairs and commercial consequences NOAA believes would result from premature disclosure of the U.S. site coordinates. OMI DIES p. 6. As a result, with the exception of a very generalized topographic description of the seafloor of the four claim areas, the description of the "affected environment" is identical for each of the four DEISs on pending license applications. The majority of the data on surface conditions and some water column temperature and biota characterization come from the work of one company, OMCO. The collection points for this data are claimed to correspond roughly with three data points shown on a map of the area (OMI DEIS p. 18). Yet there is no clarification whether these data points lie within the claim area of OMCO or encompass other claims, or if some of the claim areas are not covered at all by these data points. Thus there is no way the public can evaluate whether even this admittedly skimpy data base covers all the claim areas.

Assuming for the moment that the nondisclosure of the location of the proposed exploration activites can be justified, NOAA has not explained why it nonetheless believes that the description of the affected environment in the DEISs cannot describe the environment at the individual license areas. The commenters believe that NOAA could reasonablev describe the distinct environment of the application areas individually without disclosing information that would allow competitors to ascertain the site's location. Thus, even assuming that NOAA is justified in withholding the exact location of the proposed exploration activities, there has been no justification for NOAA's failure to describe the "affected environment".

4. Endangered species. NOAA states that the biological opinions provided by the Fish and Wildlife Service and National Marine Fisheries Service conclude that the proposed deep seabed regulations are not likely to jeopardize the continued existence of any threatened or endangered species. No subsequent

3. NOAA's description of the affected environment was developed one-parameter-at-a-time in precisely the same fashion as the PEIS (pages 17-56). As the PEIS points out (page 17), the DOMES sites were chosen as representative of the range of environmental parameters likely to be encountered at mine sites. The one-parameter-at-a-time DEIS discussion reveals to the reader that the applicant's data do indeed fall within the range denoted in the PEIS. Therefore, there is no evidence that the proposed sites are unusual in any way. Consequently, NOAA feels that its description of the affected environment is sufficient for meeting CEQ requirements. (Also, see response to The Oceanic Society, comment # 6).

4. Subsequent to the issuance of the regulations, NOAA discussed these specific license applications with both the National Marine Fisheries Service

consultation, however, was made with the FWS or NMFS on the specific applications at issue in these DEISs despite a specific requirement for such consultation in the rules in NOAA's own regulations (15 CFR 970.502). NOAA claims that no consultation was necessasry because no "may affect" situation exists for the listed species or their habitats. The conclusion that no "may affect" situation exists appears to be based on the same faulty logic as regards NOAA's identification of the "scope" of the proposed action as was demonstrated in the above analysis regarding the proper scopoe of the EIS. Thus, the commenters believe that NOAA's failure to consult with FWS and NMFS violates NEPA as well as NOAA's own regulations.

Moreover, it is not clear that FWS and NMFS have been apprised of the location of the proposed activities so that they might ascertain whether any endangered or threatened splecies might exist in the license area. Surely, the information on the location of these activities can be shared with these agencies as necessary to assure compliance with the ESA. No evidence appears to suggest that such information was provided to interested agencies. Accordingly, the analysis contained in the DEISs of the potential impact on endangered and threatened species is not adequate.

5. Federal observers' powers to enforce Federal Laws. Under the proposed terms, conditions, or restrictions on the exploration licenses, Federal officers or employees shall be designated as observers aboard vessels of the licensee. OMI DIES p. 138. The commenters strongly urge that as part of their duties, the onboard observers be empowered to cite violations of other Federal statutes which might not normally fall under the juridiction of NOAA. For instance, violations of the Endangered Species Act under normal operations of a licensee would take place at sea, thousands of miles from the nearest officer of the U.S. Fish and Wildlife Service. NOAA could easily empower its on board observers to cite violations of such laws as the ESA, the Marine Mammals Protection Act, the National Historic Preservation Act, and other applicable environmental statutes, using its existing regulations. Under 15 CFR 970.524 other Federal agencies may suggest TCRs which would "assure compliance with any law or regulation within that agency's area of responsibility" and the Administrator has the authority to add them to a license. Further, observers report on "compliance with the Act, regualtions and orders issued under the Act, and the license terms, conditions and restrictions . . .". 15 CFR 970.1105 (a) (2). Thus, by incoporating compliance with laws under other agencies' jurisdiction in the TCRs, the observers

and the Fish and Wildlife Service in relation to the Endangered Species Act. The National Marine Fisheries Service, after reviewing the applications, concluded that the exploration licenses should be issued providing that all environmental safeguards stipulated in the applications are adhered to. The U.S. Fish and Wildlife Service stated that since there was no anticipated effects on endangered species in the area proposed for exploration, no further action was required for the issuance of the licenses.

5. The Deep Seabed Hard Mineral Resources Act, under which deep seabed mining is regulated, does not give Federal observers the authority to enforce, only to report. Should they observe actions that are contrary to existing law, they have the authority to report such actions to the proper agencies where legal action may be taken. As required by NOAA regulations and noted in Appendix 6 of the DEISs, NOAA has consulted with the listed agencies, whose responsibilities may be affected by seabed mining activities. None of these agencies has recommended either denial of licenses or imposition of terms, conditions and restrictions beyond those listed in Appendix 8 of the DEISs.

could effectively enforce them by reporting any violations to Administrator. Moreover, precedent for this type of approach to enforcement of a variety of environmental laws by one agency is contained in the regulations promulgated under the Surface Mine Control and Reclamation Act (see 30 CFR 773.15 (2) (b)).

The commenters feel that by incorporating such TCRs as would give the observers power to enforce important environmental laws, it would increase the public confidence in NOAA to effectively monitor and control the activities of the licensees.

Very Truly Yours

Andrew Palmer, Director
Oceans, Coasts and Public Lands Project

Natural Resources Defense Council, Inc.

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July 9, 1984

Mr. James Lawless, Chief
Ocean Minerals and Energy Division
Office of Ocean and Coastal Resources Management
National Oceanic and Atmospheric Administration
National Ocean Science
2001 Wisconsin Avenue, N.W.
Page I Building, Room 410
Washington, D.C. 20235

Re: Comments on NOAA's Manganese Nodule Deep Seabed Mining Exploration License DEISs, 49 Fed. Reg. 20359 (May 14, 1984).

Dear Mr. Lawless,

The following comments respond to NOAA's Draft Environmental Impact Statements (DEISs) on the effects of licensing deep seabed mining exploration in the vicinity of the Clarion-Clipperton Fracture Zone. The Natural Resources Defense Council, Inc. (NRDC) fully endorses the more detailed comments submitted by the Oceanic Society in response to the DEISs. We wish to emphasize three major points developed further in those comments.

First, the DEISs' discussion of alternatives is completely inadequate under NEPA and the CEQ regulations. NOAA mechanically rejects the standard alternatives of delay and no action without any attempt to grapple with relevant questions about the wisdom of the proposed action. Such issues as economic feasibility, alternative sources, substitution, and recycling must be fully addressed in a meaningful discussion of alternatives.

Second, the DEISs fail to provied a complete discussion of cumulative impacts, as required by NEPA and the CEQ regulations. For example, NOAA must take into account the

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1. The site-specific DEISs only consider the alternatives to the proposed action of issuing exploration licenses. We note that Section 102(a) of the Act requires the Administration to issue a license if the requirements of the Act are met. With respect to the broader program, alternatives to marine and onshore issues associated with license and permit activities are discussed in the PEIS (pages 129-147 and 172-182). A delay or prohibition of a deep seabed mining program is discussed in the above referenced pages.

2. The cumulative impacts of exploration activities by other mining nations is discussed in the response to comment number # 2 by the Environmental Policy Institute.

possibility of exploration activities by other mining nations in its assessment of impacts. NRDC also urges NOAA to take steps to insure that several companies do not conduct test mining activities simultaneously in the same area. If not, NOAA must at least discuss the cumulative impacts of such activities, which may well be significant.

Third, we strongly encourage NOAA to require companies to conduct environmental monitoring for all license phase activities, as required by DSHMRA, 30 U.S.C. § 1424. Because so little is known about the ultimate environmental impacts of deep seabed mining and associated activities, every possible opportunity to gather more information should be exploited.

In short, given the present uncertainties regarding deep seabed mining activities and their effects, NRDC urges NOAA to proceed with caution and to be particularly scrupulous in complying with all applicable provisions of NEPA and DSHMRA.

Thank you for this opportunity to comment.

Very truly yours,

Nancy S. Marks

Nancy S. Marks
Staff Attorney

cc: Sarah Matthews, Oceanic Society

3. Each mining company must conduct test mining within the limits of its license area. Several mining companies therefore cannot simultaneously conduct test mining activities in the same area since each consortium will be awarded a separate license area. (See response to comment # 8 of the Oceanic Society.)

4. We strongly concur that all opportunities should be taken to monitor environmental effects from exploration activities; however, it would be futile to require the monitoring of activities proposed to be carried out under a license for the delineation of the ore body, since such effects would most likely be indistinguishable from the natural variation in the environment. Consequently, NOAA, exercising the discretion provided in the Act (Sec. 114(c)), absolutely requires monitoring of an at-sea test of a fully integrated mining system. During tests of this type, effects, although local in extent, will be detectable and can be attributed to the effect of such tests. Monitoring of tests using less than fully integrated mining systems will be addressed in the revised TCRs.

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Earl C. Tingey
Assistant Chief Counsel

Kennecott

July 3, 1984

United States Department of Commerce
National Oceanic and Atmospheric
Administration
National Ocean Service
Washington, D. C. 20235

Attention: James C. P. Lawless
Chief
Ocean Minerals and Energy Division

Dear Mr. Lawless:

Subject: NOTICE OF PROPOSAL TO ISSUE EXPLORATION LICENSES SUBJECT TO ENVIRONMENTAL IMPACT STATEMENTS (EIS), FEDERAL REGISTER, VOLUME 49, NUMBER 103, MAY 25, 1984, PAGE 22133.

Pursuant to the above referenced Federal Register Notice, the Kennecott Consortium (KCON) is pleased to comment on the draft mining exploration licenses, subject to the EIS's, NOAA proposes to issue to a Licensee with respect to the two applications KCON has filed with NOAA. The text of the EIS is set forth in the "Deep Seabed Mining Draft Environmental Impact Statement on Issuing Exploration Licenses to Kennecott Consortium-U.S. Department of Commerce, National Oceanic and Atmospheric Administration, May 1984."

KCON's comments on the proposed EIS are as follows:

1. In general, KCON suggests a flexible approach by NOAA with respect to the determinations and requirements to be imposed on the Licensee. The comments set forth in Kennecott's letter of even date addressed to NOAA with respect to the TCR's, are incorporated herewith, to the extent such comments are applicable.

2. On page 68, third full paragraph, reference is made to the "mining pattern" to be followed by the Licensee. At this point in time, any proposed plan involving a mining pattern is initiatory and a final determination would require far greater additional facts than are now available or might be available at the time a mining plan is filed. KCON supports the concept of conservation of the resources but feels that the ultimate determination of the mining pattern is involved in mining efficiencies, which mining efficiencies the Licensee will be inclined to pursue due to economic considerations.

In the same pagagraph, continued on page 69, the EIS seems to require certain obligations with respect to the exploration of manganese or of the retention of manganese tailings. Once again, KCON recommends that such determinations be made at a later time when all conditions affecting the project, including specifically, economic considerations and market conditions are known.

On page 69, second full paragraph, certain conditions are set forth with respect to NOAA's involvement in managing onshore activities. KCON has previously addressed this matter in the earlier referenced letter dealing with the TCR's.

Sincerely,

Earl C. Tingey

Earl C. Tingey

ECT:jcm

Kennecott

1. This is simply a brief summary of a commercial mining issue discussed in more depth in the PEIS on page 136.

2. This subject also is a commercial mining issue and is discussed on pages 137-139 in the PEIS.

37

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July 13, 1984

James P. Lawless, Chief
Ocean Minerals and Energy Division
National Oceanic and Atmospheric
Administration
2001 Wisconsin Avenue, N.W.
Washington, D.C. 20235

Dear Mr. Lawless:

Re: Comments of Ocean Minerals Company on Proposed Exploration License and Draft Environmental Impact Statement

Please find enclosed five copies of each of the following documents: (1) Written Comments of Ocean Minerals Company on Proposal to Issue an Exploration License Subject to Terms, Conditions, and Restrictions and (2) Written Comments of Ocean Minerals Company on Draft Environmental Impact Statement on Issuing an Exploration License to OMCO. While OMCO is submitting its comments on the proposed license and on the DEIS separately, we would suggest that the two documents be read together since the issues discussed in each necessarily overlap and converge to some extent.

Please do not hesitate to contact me if you have any questions or if you require additional copies.

Very truly yours,

J. Gordon Arbuckle
Counsel for Ocean Minerals
Company

JGA:krh
Enclosure

BEFORE THE
UNITED STATES DEPARTMENT OF COMMERCE
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION

APPLICATION OF OCEAN MINERALS COMPANY FOR A DEEP SEABED MINING EXPLORATION LICENSE PURSUANT TO PUBLIC LAW 96-283	Docket No. 101

WRITTEN COMMENTS OF OCEAN MINERALS COMPANY ON DRAFT ENVIRONMENTAL IMPACT STATEMENT ON ISSUING AN EXPLORATION LICENSE TO OMCO

Ocean Minerals Company (OMCO) hereby submits the following comments on the Draft Environmental Impact Statement (DEIS) prepared by the National Oceanic and Atmospheric Administration (NOAA) in support of NOAA's proposal to issue a deep seabed mining exploration license to OMCO subject to certain terms, conditions and restrictions. These comments supplement, and should be read in conjunction with, the more general oral comments presented by OMCO at the public hearing held by NOAA on July 3, 1984. The purpose of these comments is to note a number of issues, primarily of a technical nature, which should be addressed before the DEIS is made final. With respect to many of the issues, the comments include suggested language which could be incorporated in the final EIS in order to achieve the necessary clarification. OMCO recognizes however, that other approaches to clarify these issues may be equally appropriate.

Page xi, lines 4-17: This discussion may be subject to misinterpretation in a number of respects. First, the list of exploration tools which OMCO proposes to use should not be regarded as exhaustive. Second, as discussed in a later part of these comments, the amount of benthic biomass which would be lost under the worst case dredge basket sampling scenario necessarily involves some uncertainity, though it can confidently be said that the estimated loss is of the correct order of magnitude. Third, it should be made clear that sampling activities by other consortia would be limited to each consortium's license area, and thus presumably would have no substantial impact in OMCO's license area. Finally, NOAA should clarify its conclusion that the activities of OMCO and the other U.S. applicants which would be authorized under the proposed licenses, whether viewed singly or cumulatively, have no potential for significant impacts. Accordingly, this discussion should be revised to read as follows:

> Specifically, OMCO proposes to use acoustic data, photography, satellite navigation, physical sampling techniques (including grab samplers, dredge baskets, box corers, gravity corers, freefall corers, or other methods) and other state of the art exploration tools to delineate its exploration area. The worst case potential for impact involves sampling with dredge baskets and the resultant loss of approximately 54 kg of benthic biomass, at most about one millionth of that in OMCO's license area. Similar sampling impacts in other portions of the affected environment could also be caused by the other two U.S. applicants contemplating this type of sampling and by the French and Japanese consortia should they sample in this manner, although each consortium's

1. Agreed. This notion is pointed out on pages 35 and 36 of the DEIS.

2. The benthic loss should be approximately that quantified in the DEIS as sampling of "about 100 hauls" over the term of the license. Sampling clearly in excess of this amount will not be permitted without prior notification. This will be reflected in the revised TCRs.

3. Agreed; NOAA recognizes that most sampling conducted by a licensee will be within the licensee's area; however, prospecting in the deep seabed is not prohibited by the Act and could take place in any licensee's area.

4. Agreed. The concept of cumulative effects is detailed on page 43 of the DEIS and identified, on page xi, as having no potential for significant environmental impact.

sampling activities would be limited to its own license area. Japan has announced its intention to test a hydraulic mining system around 1990. Although these activities, separately or cumulatively, appear to have no potential for significant environmental impact and would not normally require preparation of an EIS under NEPA, Section 109(d) of the Act nonetheless requires that NOAA prepare this EIS to assess the impacts of issuing any license.

Page xii, Lines 7-9: For the reasons discussed in detail in another part of these comments, this paragraph should be revised to read as follows:

5 The Environmental Protection Agency (EPA) is considering issuing a general National Pollutant Discharge Elimination System (NPDES) permit for all vessels operating under NOAA exploration licenses. Whether such permit will be issued or what terms and conditions, if any, it may contain, is presently unknown. NOAA does not expect that discharges resulting from normal vessel operations would have a significant adverse environmental imput. Therefore, in concluding that the exploration activities which OMCO has proposed will have no significant environmental impact, NOAA is

6 not relying upon the issuance of an NDPES permit or on any assumptions about the terms and conditions of such permit, if any.

Page 13, Lines 10-13: This sentence could be read as implying that some proposed exploration activities other than mining system tests may have significant environmental impact. The sentence would be clearer if rephrased as follows:

Because the exploration activities proposed by OMCO have no potential for significant impact and no monitoring is required,

7 environmental monitoring is a license phase issue only in relation to mining system tests, if any.

Ocean Minerals Company

5. Agreed. See EPA comment #1.

6. Agreed. NOAA concurs with this interpretation of the issuance of the NPDES permit.

7. Not necessarily. At-sea testing of components and mining sub-systems probably will create environmental effects so small scale that they will be masked by natural variations in the environment and impossible to monitor. Nevertheless, they differ sufficiently from the activities characterized in the DEISs that NOAA is revising the TCRs to require them to be proposed to NOAA as a "Notice of Change." NOAA would then prepare an environmental assessment or, if appropriate, a supplement to the site-specific DEIS, and determine at that time if monitoring is required. The revised TCRs will elaborate on this point.

Page 13, Line 16: For reasons discussed below, the phrase ", if any," should be inserted after the reference to "the NPDES general permit."

Page 26, Line 17: The word "dominate" should be replaced with "dominant."

Page 33, Lines 11-13: This discussion of preenactment explorers' rights may be confusing to the uninitiated reader. This sentence could be clarified as follows:

> Exploration--which includes development (Section 4(5))--is prohibited except under a NOAA license (Section 101(a)), except that preenactment explorers (such as OMCO) who have applied for a license may continue exploration pending the final issuance or denial of the license.

Page 35, Line 3: The legal basis for the normal EIS requirement should be clarified by adding the phrase "under NEPA" after the word "EIS."

Page 35, Line 8: Phase II covers years 6 through 10, not 5 through 10.

Page 42, Line 11: Exploration activities conducted in accordance with OMCO's exploration plan may result in the collection of a somewhat larger (or smaller) quantity of nodules than the 90 tons mentioned in this sentence. Nevertheless, this figure is a sound approximation of the quantity likely to be collected. Certainly, the quantity actually collected will be of the same order of magnitude as the estimated quantity. Thus, total mortality of benthic organisms would remain insignificant as compared with the total volume of biomass in OMCO's license area even under the worst case impact situation. The sentence

8. Agreed, the wording has been changed to reflect that an NPDES permit has only been proposed. (See also EPA's comments # 1 and # 2.)

9. Agreed; modification indicated in errata sheet.

10. Agreed; NOAA concurs with this interpretation of a pre-enactment explorer.

11. Agreed; NOAA concurs with this interpretation.

12. Agreed; modification included in errata sheet.

13. Agreed; modification included in errata sheet.

should be clarified by inserting the word "about" before the figure "90."

Page 43, Lines 10-14,23: The fact that environmental effects of exploration activities by other consortia will be felt almost exclusively in their respective license areas, as well as the fact that the cumulative effects of these activities are not significant, should be clarified. Accordingly, the first two sentences of this paragraph should be revised to read as follows:

> In considering the worst case environmental impact, one must recognize that the impact discussed above might also be caused at different locations within the affected environment by the other two U.S. applicants contemplating sampling of that type (the third U.S. applicant does not intend to sample). In addition, both the French and the Japanese consortia might sample in similar fashion in their respective areas.

Page 43, lines 24-26:

The difference between at-sea mining system tests and at-sea component tests should be noted, as should the distinction between demonstration-scale tests and smaller-scale tests.

This sentence should be revised to to read as follows:

> Should OMCO decide to conduct at-sea tests of demonstration- or larger-scale integrated mining systems under this license, NOAA will prepare a supplement to this site-specific EIS.

The following new sentence should also be added at the end of this paragraph:

> In any case, NOAA anticipates no significant adverse impact from any of these exploration activities (excluding at-sea mining tests), whether individually or cumulatively.

14. Agreed. See #4 above.

15. Component tests are discussed in comment #7. With respect to scale, NOAA's final regulations for exploration licenses (15 CFR 970.204(a)) point out that any scale at-sea test of a fully integrated mining system is prohibited until NOAA has prepared a supplement to the site-specific EIS.

Page 49, Lines 5-9: As currently phrased, this sentence suggests that there may be exploration activities in addition to mining tests which could have significant environmental impacts. It also assumes that NPDES monitoring requirements will be imposed by EPA. The sentence should be revised to read as follows:

> Because none of the proposed exploration activities, except at-sea mining tests, are considered by NOAA to have any potential for significant environmental impact, no monitoring of exploration activities (other than such NPDES monitoring requirements as EPA may impose) will be required unless a consortium desires to test mine under a license.

16

16. See comment #7.

Page 50, Lines 1-15: The conclusion that each licensee must obtain an NPDES permit is premature. Although EPA issued a draft General Permit for exploration licensees in late 1983, that general permit has not been finally adopted. As OMCO pointed out in testimony to EPA on the draft permit, the monitoring requirements proposed by EPA are burdensome and unnecessary. In addition, there is serious reason to doubt that EPA has the authority under its NPDES regulations to require a permit for discharges arising from the normal operation of vessels.

17

17. Agreed; see EPA's comment # 1.

The monitoring requirements proposed by EPA serve no purpose. For example, OMCO would be required, on a weekly basis, to sample the water which flows out of every scupper on the ship before it reaches the ocean. On most research vessels there are 12 or more scuppers which are designed to get rid of the seawater which commonly flows over the deck from waves which break over

the gunwales. In our experience, hundreds or even thousands of gallons of seawater are taken on deck in this manner and then discharged, frequently in a matter of seconds. It would be time-consuming and possibly dangerous to sample the scupper overflow every week. Such sampling also would be meaningless in view of the large volumes of seawater which are taken on deck and rapidly discharged at irregular intervals throughout the vessel's voyage.

The proposed permit also would require monitoring and reporting of other discharges, including water distillation discharge, boiler blowdown and cooling water. All of the discharges listed in the draft permit are those of a normal seagoing vessel, and all are currently controlled by existing Coast Guard and other regulations. Since these discharges would not be different during exploration operations than during other marine research activities, and are in any event regulated by the Coast Guard, it is impossible to see what environmental benefit could be anticipated from such requirements.

Finally, it is OMCO's position that EPA is without legal authority to require an NPDES permit for normal exploration vessel operations. As explained in a legal opinion provided to OMCO on September 30, 1983 and subsequently submitted to EPA, EPA's NDPES regulations expressly provide that any discharge incidental to the normal operation of a vessel does not require an NPDES permit. 40 C.F.R. § 122.3(a). Such permits are required only for vessels which are used as mining facilities or which are secured to the ocean floor for the purpose of mineral

exploration or development. Id. Thus, EPA's own regulations clearly exclude discharges from licensed exploration vessels, as from any other oceanographic or research vessel.

As discussed in detail in the legal opinion, section 109(e) of the Deep Seabed Hard Mineral Resources Act does not supply EPA the authority which it lacks under its own regulations. Indeed, the legislative history of 109(e) clearly shows that Congress did not intend to alter the scope of the NPDES requirement under the preexisting EPA regulations.

In short, we urge NOAA not to prejudge this issue, which has yet to be resolved. To include in the EIS an unqualified assertion that an NPDES permit will be required for exploration activities, or that such permit will apply to specific discharges, would be ill-advised and could subject the EIS to future attack in the event that the General Permit were not issued or contained different monitoring requirements. Accordingly, we urge the deletion of Item VI.A.

18 Page 71, Line 9: Substitute "accompanying" for "accompaning."

19 Page 73, Lines 4-5: There is no factual basis for the categorical statement that "disposal [of processing wastes] will be on land in landfills or tailings ponds." The DEIS itself notes, at page 71, that: "Industry may consider ocean dumping or discharge through an ocean outfall." Tetra Tech, in a study referred to at DEIS 85-86, has recommended that ocean disposal be considered as an acceptable option. A joint study conducted by

18. Agreed; change included in errata sheet.

19. Agreed; change included in errata sheet.

NOAA and the State of Hawaii, referred to at DEIS 93, has found that for Hawaii processing locations ocean disposal would be the preferred method of waste disposal because the amount of precipitation would make onshore containment technically difficult. Accordingly, OMCO recommends that the sentence in question be revised to read as follows:

> Disposal may be on land in landfills or tailings ponds, or to the ocean through ocean dumping or discharge through an ocean outfall.

OMCO appreciates the opportunity to comment on the DEIS for its proposed exploration license. Any questions about these comments or requests for further information may be directed to the undersigned.

J. Gordon Arbuckle
Counsel for Ocean Minerals Company

July 13, 1983

BENJAMIN V. ANDREWS
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June 12, 1984

Mr. James P. Lawless, Chief
Ocean Minerals & Energy Division
Office of Ocean and Coastal Resource Management
National Ocean Service/NOAA
2001 Wisconsin Avenue
Washington, DC 20231

Dear Mr. Lawless,

At the request of the NOAA letter of May 18, 1984, I have reviewed the four draft environmental impact statements of consortia requesting a license to explore for manganese nodules.

As an independent engineer, the NOAA TCR appear to be not unduly restrictive, and if practically operated should be acceptable to the applicants. The draft EIS reflects the latest research results and the minimal -- perhaps imperceptible -- level of environmental impact from nodule exploration and testing.

However, the documents refer to the proposed issuance of the permit by the EPA for discharges from the research vessels engaged in exploration, which will require monthly monitoring of deck drainage, wastes and overboard discharges. This EPA permitting, if legal and the intent of Congress, requires extraordinary expenditures for no conceivable gain in environmental benefits, and in addition to being costly, may produce undesired feedback. The NOAA document fails to address the EPA permit advantages and detriments, environmentally or economically. Since the EPA is apparently intending to proceed with their foolish and bureaucratic permit, without benefit of their own draft ELS, and contrary to the Coast Guard official opinion, NOAA should address this issue squarely. If the permit is required for university and commercial research vessels looking at nodule site environments, then NOAA, USCG and foreign research vessels are next in line to be monitored in the same way for the same reasons. Although this is an election year, I urge NOAA to extend their deregulation to the truly trivial pollution from decks and operations of a few small research ships on the high seas, and address more significant problems.

Sincerely,

Benjamin V. Andrews, P.E.

cc: EPA, San Francisco
OMB, Washington, DC
Congressman Tom Lantos
Congressman Ed Zschau

1. Section 109(e) of the Deep Seabed Hard Mineral Resources Act provides that any discharge of a pollutant from a vessel or other floating craft subject to this Act is subject to the NPDES provisions of the Clean Water Act. NOAA has no authority to determine whether or not EPA will issue a permit, or the scope of any permit. Although a question has been raised as to whether Congress intended for this provision to apply to the incidental discharges from survey vessels, the issuance of the permit could prevent legal action and associated delay in the future. NOAA is not relying on this requirement to monitor environmental effects from licensed activities since no proposed activities have any potential for significant adverse environmental effects.

BELGIAN EMBASSY
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No. 370

July 12, 1984

Mr. James P. Lawless
Chief, Ocean Minerals and Energy Division
Office of Ocean and Coastal Resource Management
National Ocean Service / NOAA
2001 Wisconsin Avenue NW
Washington, D.C. 20235

Dear Mr. Lawless,

Referring to your letter dated May 18, 1984, the four draft environmental impact statements about the exploration activities proposed by the consortia have been forwarded for review to the proper agency in Belgium.

The position of the Belgian government is that these exploration activities are not likely to have damaging effects on the environment.

The Belgian government has no additional comment or question about these drafts.

Sincerely yours,

Luc Arnould,
scientific counselor.

cc. Joyce M. T. Wood