APPENDIX E

COORDINATION LETTERS

United States Department of the Interior

FISH AND WILDLIFE SERVICE
446 Neal Street
Cookeville, TN 38501

September 14, 1999

Mr. Paul E. Bayer
U.S. Department of Energy
Environmental Sciences Division
Germantown, Maryland 20874-1290

Dear Mr. Bayer:

Thank you for your letter and enclosures of August 11, 1999, regarding the preparation of an Environmental Assessment (EA) for the implementation of the Natural and Accelerated Bioremediation Research (NABIR) Program and selection of Field Research Centers (FRC) at the Oak Ridge National Laboratory in Roane County, Tennessee. U.S. Fish and Wildlife Service (Service) personnel have reviewed the information submitted and offer the following comments for consideration.

Information available to the Service indicates that wetlands exist in the vicinity of the proposed project. Enclosed are copies of portions of the National Wetlands Inventory's Bethel Valley quadrangle (Attachments 1 and 2) with the referenced wetlands highlighted. This information is provided for your convenience. Our wetlands determination has been made in the absence of a field inspection and does not constitute a wetlands delineation for the purposes of Section 404 of the Clean Water Act. The Corps of Engineers should be contacted regarding the presence of regulatory wetlands and the requirements of wetlands protection statutes.

According to our records, the following federally listed endangered species may occur near the proposed FRC:

Gray bat	(*Myotis grisescens*)
Indiana bat	(*Myotis sodalis*)

Qualified biologists should assess potential impacts and determine if the proposed project may affect the species. We recommend that you submit a copy of your assessment and finding to this office for review and concurrence. A finding of "may affect" could require the initiation of formal consultation procedures.

These constitute the comments of the U.S. Department of the Interior in accordance with provisions of the Endangered Species Act (87 Stat. 884, as amended: 16 U.S.C. 1531 et seq.). We appreciate the opportunity to comment. Should you have any questions or need further assistance, please contact Steve Alexander of my staff at 931/528-6481, ext. 210.

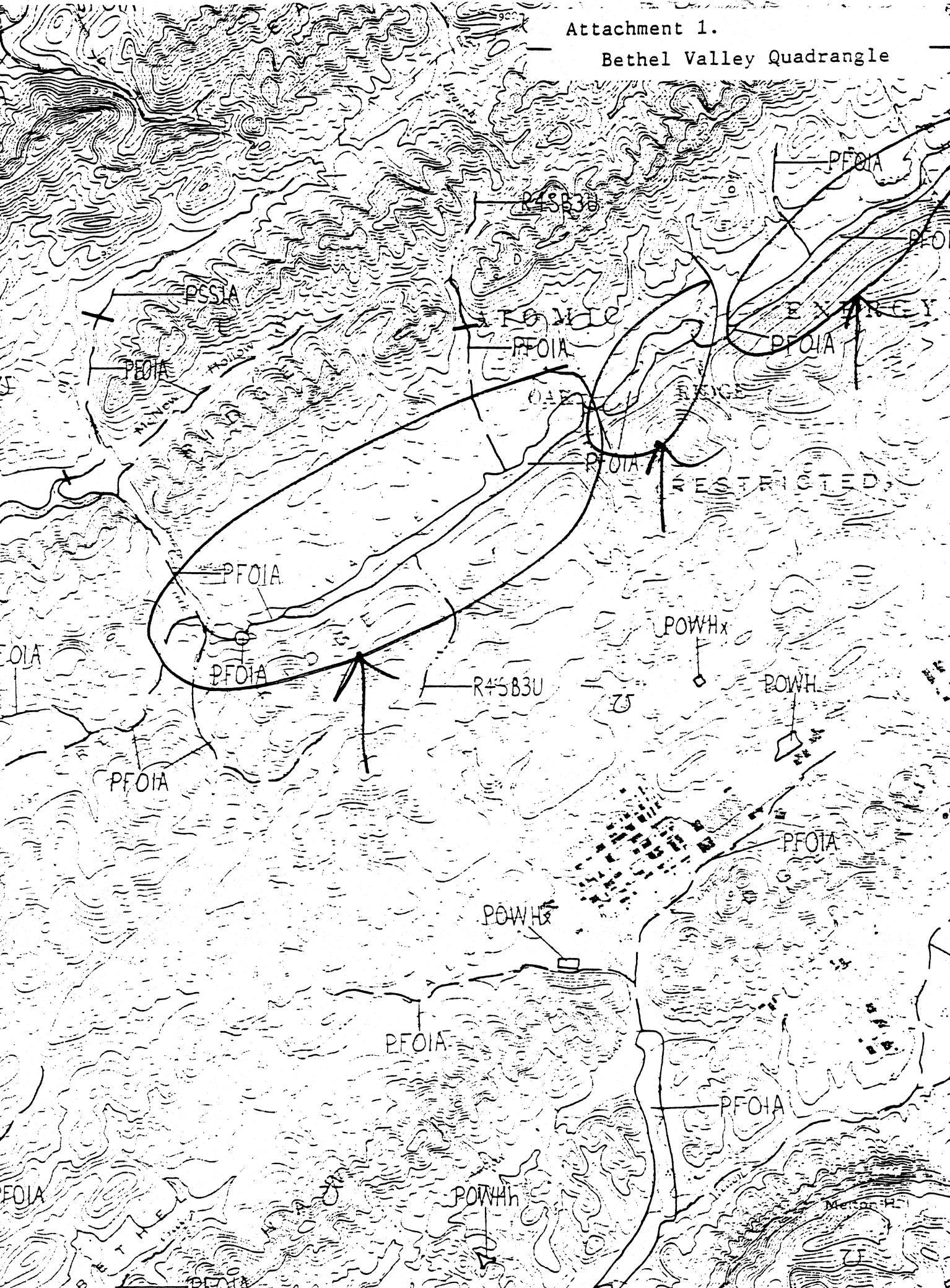
Sincerely,

Lee A. Barclay, Ph.D.
Field Supervisor

Enclosure

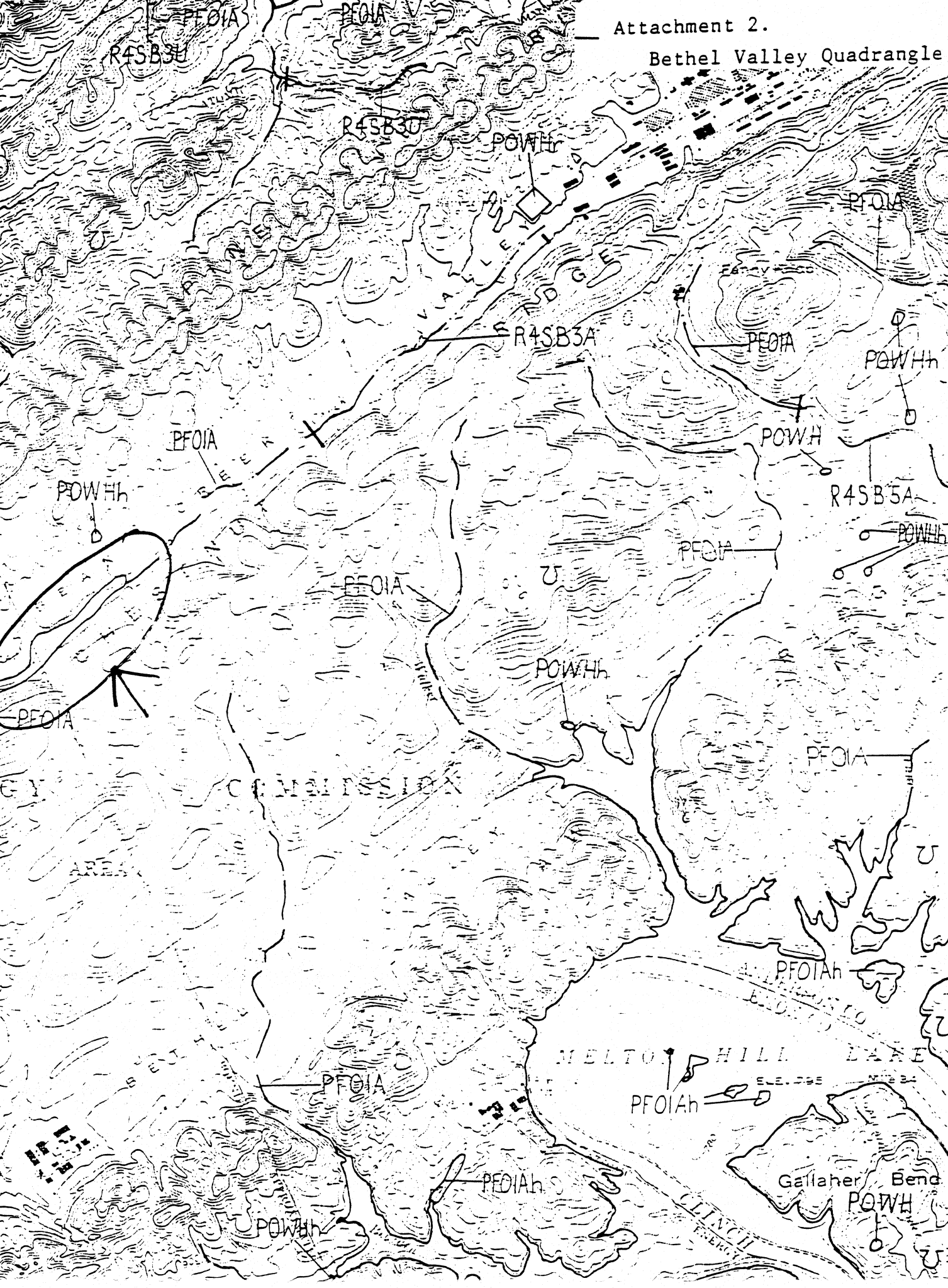
Attachment 1.

Bethel Valley Quadrangle



Attachment 2.

Bethel Valley Quadrangle



Department of Energy
Germantown, MD 20874-1290

AUG 11 1999

Mr. Reginald G. Reeves
Director
Division of Natural Heritage
Tennessee Department of Environment and Conservation
401 Church Street
Nashville, TN 37243-0443

Dear Mr. Reeves:

Reference: Information Act Request

The U.S. Department of Energy (DOE) proposes to implement the Natural and Accelerated Bioremediation Research (NABIR) Program and selection of Field Research Centers (FRC) and is currently preparing an environmental assessment (EA), pursuant to the National Environmental Policy Act (NEPA) on this Federal Action. The proposed FRC would consist of already existing laboratories, offices, and support facilities as well as appropriate experimental areas to allow ongoing programs of bioremediation research. The proposed site for NABIR is the DOE-owned Oak Ridge National Laboratory (ORNL) in Oak Ridge, Tennessee. The proposed location of the field site at ORNL is in Bear Creek Valley. The plots of land are adjacent to Bear Creek, outside the floodplain (see enclosed figures).

In an attempt to clean up legacy waste generated by DOE's weapons production and research activities, fundamental research is needed in the biological, chemical, and physical sciences that will contribute to new cost-effective solutions. One possible low cost approach for remediating the subsurface contamination of DOE sites is bioremediation. Bioremediation is the use of microorganisms to reduce or eliminate environmental hazards resulting from accumulation of toxic chemicals and other hazardous wastes. The NABIR program is a ten-year research program designed to better understand the biotic and abiotic processes in the subsurface, to control and accelerate the biotic processes, and to provide fully functional field sites. Field research would focus on the subsurface environment below the zone of root influence and would be expected to include investigation of both the saturated and unsaturated zones.

In order to properly assess these properties, I am requesting a review of the historic, cultural or archaeological significance of the referenced properties. Your input will be used in the preparation of the environmental assessment. A reply by September 10, 1999, would be appreciated.

Printed with soy ink on recycled paper

If the property information provided is not sufficient to conduct an accurate file search, or if you have any questions, please contact me at 301-903-5324. Thank you for your assistance.

Sincerely,

Paul E. Bayer

Paul E. Bayer
NEPA Document Manager
Environmental Sciences Division

Enclosures:
As stated

cc: C. Hickey

TENNESSEE HISTORICAL COMMISSION
DEPARTMENT OF ENVIRONMENT AND CONSERVATION
2941 LEBANON ROAD
NASHVILLE, TN 37243-0442
(615) 532-1550

September 3. 1999

Mr. Paul E. Bayer
Environmental Sciences Division
Dept. of Energy
Germantown. Maryland 20874-1290

RE: DOE. ORNL/NABIR PROGRAM. OAK RIDGE. ANDERSON COUNTY

Dear Mr. Bayer:

Pursuant to your request. this office has reviewed documentation concerning the above-referenced undertaking received Monday. August 16. 1999. This is a requirement of Section 106 of the National Historic Preservation Act for compliance by the participating federal agency or applicant for federal assistance. Procedures for implementing Section 106 of the Act are codified at 36 CFR 800 (64 FR 27044. May 18. 1999).

After considering the documentation submitted. it is our opinion that THERE ARE NO NATIONAL REGISTER OF HISTORIC PLACES LISTED OR ELIGIBLE PROPERTIES AFFECTED BY THIS UNDERTAKING. This determination is made either because of the location. scope and/or nature of the undertaking. and/or because of the size of the area of potential effect; or because no listed or eligible properties exist in the area of potential effect: or because the undertaking will not alter any characteristics of an identified eligible or listed property that qualify the property for listing in the National Register or alter such property's location. setting or use. Therefore. this office has no objections to your proceeding with the project.

If you are applying for federal funds. license or permit. you should submit this letter as evidence of consultation under Section 106 to the appropriate federal agency. which. in turn. should contact this office as required by 36 CFR 800. If you represent a federal agency. you should submit a formal determination of eligibility and effect to this office for comment. You may direct questions or comments to Joe Garrison (615)532-1559. This office appreciates your cooperation.

Sincerely.

Herbert L. Harper

Herbert L. Harper
Executive Director and
Deputy State Historic
Preservation Officer

HLH/jyg

United States Department of the Interior

FISH AND WILDLIFE SERVICE
517 South Buchanan
Moses Lake, Washington 98837
Phone: 509-765-6125 FAX: 509-765-9043

May 11, 1999

Department of Energy
Attn: James E. Rasmussen
Environmental Assurance, Permits and Policy
P.O. Box 550
Richland, WA 99352

Re: Species List Request, Bio-Remediation Research Program
FWS Reference 1-9-99-SP-269

Dear Mr. Rasmussen:

Thank you for your species list request of April 5, 1999. Enclosed is a list of threatened and endangered species, candidate species and species of concern (Enclosure A), that may be present in the action area of the proposed Natural and Accelerated Bio-remediation Research Program.

This list fulfills the requirements of the U. S. Fish and Wildlife Service (Service) under Section 7(c) of the Endangered Species Act of 1973, as amended (Act). We are enclosing a copy of the requirements for federal agency compliance under the Act (Enclosure B). Also enclosed is a information packet (Enclosure C) on the Ute ladies'-tresses, a federally threatened species found recently in Washington State.

Should the Biological Assessment (BA) for the proposed project determine that a listed species is likely to be affected (adversely or beneficially) by the project, the federal agency should request Section 7 consultation through this office. If the BA determines that the proposed action is "not likely to adversely affect" a listed species, the federal agency should request Service concurrence with that determination through the informal consultation process. If the BA determines the project to have "no effect," we would appreciate receiving a copy for our information.

Candidate species and species of concern are included simply as advance notice to federal agencies of species which may be proposed and listed in the future. Protection provided to these species now may preclude possible listing in the future. If early evaluation of your project indicates that it is likely to adversely impact a candidate species, or species of concern, the federal agency may wish to request technical assistance from this office.

RECEIVED

MAY 1 3 1999
DOE RL/CCC

There are other species, including anadromous fishes that have been federally listed by the National Marine Fisheries Service (NMFS). Some of these species may occur in the vicinity of your project. Please contact NMFS in Lacy, WA at (360) 753-5828, or in Portland, OR at (503) 231-2319, to request a species list.

Thank you for your efforts to protect our nation's species and their habitats. If you have additional questions regarding your responsibilities under the Act, please contact Richard Smith of this office at (509) 765-6125.

Sincerely,

Mark G. Miller

Mark G. Miller
Project Leader

ENCLOSURES

Enclosure A **May 11, 1999**

LISTED AND PROPOSED ENDANGERED AND THREATENED SPECIES AND SPECIES OF CONCERN WHICH MAY OCCUR IN THE BENTON COUNTY, WASHINGTON PORTION OF THE HANFORD SITE

FWS Reference: 1-9 -99-SP-269

LISTED

Endangered

Peregrine falcon *(Falco peregrinus)*

Threatened

Bald eagle *(Haliaeetus leucocephalus)*
Bull trout *(Salvelinus confluentus)*
Spiranthes diluvialis (Ute ladies' tresses)

PROPOSED

None

CANDIDATE

None

SPECIES OF CONCERN

Animals
Black tern *(Chlidonias niger)*
California floater (mussel) *(Anodonta californiensis* (Lea, 1852*))*
Columbia pebblesnail *(Fluminicola (=Lithoglyphus) columbianus* (Hemphill in Pilsbry, 1899*))*
[great Columbia River spire snail]
Ferruginous hawk *(Buteo regalis)*
Fringed myotis (bat) *(Myotis thysanodes)*
Loggerhead shrike *(Lanius ludovicianus)*
Long-eared myotis (bat) *(Myotis evotis)*
Long-legged myotis (bat) *(Myotis volans)*
Lynn's clubtail (dragonfly) *(Gomphus lynnae)*
Margined sculpin *(Cottus marginatus)*
Northern sagebrush lizard *(Sceloporus graciosus graciosus)*
Olive-sided flycatcher *(Contopus borealis)*

1-9 -99-SP-59 **December 21, 1998**
Pacific lamprey *(Lampetra tridentata)*
Pale Townsend's (= western) big-eared bat *(Corynorhinus (=Plecotus) townsendii pallescens)*
River lamprey *(Lampetra ayresi)*
Small-footed myotis (bat) *(Myotis ciliolabrum)*
Western burrowing owl *(Athene cunicularia hypugea)*
Yuma myotis (bat) *(Myotis yumanensis)*

Plants
Astragalus columbianus (Columbia milk-vetch)
Eriogonum codium (Umtanum wild buckwheat)
Rorippa columbiae (Columbia yellow-cress)

Enclosure B

FEDERAL AGENCIES' RESPONSIBILITIES UNDER SECTIONS 7(a) AND 7(c) OF THE ENDANGERED SPECIES ACT OF 1973, AS AMENDED

SECTION 7(a) - Consultation/Conference

Requires:

1. Federal agencies to utilize their authorities to carry out programs to conserve endangered and threatened species;

2. Consultation with FWS when a federal action may affect a listed endangered or threatened species to ensure that any action authorized, funded, or carried out by a federal agency is not likely to jeopardize the continued existence of listed species or result in the destruction or adverse modification of critical habitat. The process is initiated by the federal agency after it has determined if its action may affect (adversely or beneficially) a listed species; and

3. Conference with FWS when a federal action is likely to jeopardize the continued existence of a proposed species or result in destruction or an adverse modification of proposed critical habitat.

SECTION 7(c) - Biological Assessment for Construction Projects *

Requires federal agencies or their designees to prepare a Biological Assessment (BA) for construction projects only. The purpose of the BA is to identify any proposed and/or listed species which is/are likely to be affected by a construction project. The process is initiated by a federal agency in requesting a list of proposed and listed threatened and endangered species (list attached). The BA should be completed within 180 days after its initiation (or within such a time period as is mutually agreeable). If the BA is not initiated within 90 days of receipt of the species list, please verify the accuracy of the list with our Service. No irreversible commitment of resources is to be made during the BA process which would result in violation of the requirements under Section 7(a) of the Act. Planning, design, and administrative actions may be taken; however, no construction may begin.

To complete the BA, your agency or its designee should: (1) conduct an onsite inspection of the area to be affected by the proposal, which may include a detailed survey of the area to determine if the species is present and whether suitable habitat exists for either expanding the existing population or potential reintroduction of the species; (2) review literature and scientific data to determine species distribution, habitat needs, and other biological requirements; (3) interview experts including those within the FWS, National Marine Fisheries Service, state conservation department, universities, and others who may have data not yet published in scientific literature; (4) review and analyze the effects of the proposal on the species in terms of individuals and populations, including consideration of cumulative effects of the proposal on the species and its habitat; (5) analyze alternative actions that may provide conservation measures; and (6) prepare a report documenting the results, including a discussion of study methods used, any problems encountered, and other relevant information. Upon completion, the report should be forwarded to our Moses Lake Office, 517 S.Buchanan, Moses Lake, WA 98837.

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* "Construction project" means any major federal action which significantly affects the quality of the human environment (requiring an EIS), designed primarily to result in the building or erection of human-made structures such as dams, buildings, roads, pipelines, channels, and the like. Biological evaluations are recommended for other federal actions such as permits, grants, licenses, federal authorizations or approval which may result in construction.

United States Department of the Interior

FISH AND WILDLIFE SERVICE

Upper Columbia River Basin Field Office
11103 E. Montgomery Drive, Suite #2
Spokane, WA 99206

RECEIVED
JUN 22 1998
U.S. FISH & WILDLIFE SERVICE
MOSES LAKE OFFICE

June 17, 1998

Subject: Ute ladies'-tresses, *Spiranthes diluvialis*

Dear Interested Party:

Ute ladies'-tresses, *Spiranthes diluvialis*, an orchid that is federally listed as threatened, was discovered in Washington for the first time in 1997. It was also found in the Snake River basin in southeastern Idaho in 1996. Before these discoveries, this plant was known only from a few locations in Montana, Colorado, Wyoming and Nebraska.

Since Ute ladies'-tresses is now known to be present in northern Washington, southern Idaho, and nearby parts of Montana, the US Fish and Wildlife Service (Service) has determined that, in the absence of adequate surveys, this species may be expected to occur in suitable habitat throughout Idaho and Washington. For this reason, we are placing Ute ladies'-tresses on all species lists for activities occurring in potentially suitable habitat. Also, for projects in suitable habitat, Federal agencies now have the responsibility to consider the species in their planning, and, under section 7 of the Endangered Species Act, the agencies must consult with the Service on projects that may affect this species.

Because the species was not expected in the Upper Columbia Ecoregion, it has not been surveyed for. Therefore, until adequate surveys have been done, Ute ladies'-tresses must be considered to be potentially present in any suitable habitat. We recommend that land managers institute surveys by knowledgeable botanists. Surveys should be conducted during the peak of the blooming period, August and September, since the species is difficult to find and identify at other times.

The enclosed package includes the information we have gathered about this species, its habitat and its requirements. We have included some photos of typical habitat in southern Idaho and one of the flowering head. We hope this information will help you determine whether Ute ladies'-tresses is present in your area of concern, and if so, develop appropriate measures for its protection.

If you have any questions about this information, please contact Linda Hallock, at 509-921-0160, or Suzanne Audet, at 509-891-6839, both of this office.

Sincerely,

Philip Laumeyer
Field Supervisor

Enclosures

March 12, 1999

Mr. Tyler Gilmore
Pacific Northwest National Laboratory
P. O. Box 999, MSIN K6-81
Richland, WA 99352

Dear Mr. Gilmore:

BIOLOGICAL REVIEW FOR THE NATURAL AND ACCELERATED BIOREMEDIATION RESEARCH (NABIR) PROGRAM, FIELD RESEARCH CENTER, ENVIRONMENTAL ASSESSMENT, 100 H Area, ECR #99-100-005.

Project Description:

- PNNL and DOE/RL are proposing the general 100-H area as a field research center (FRC) under the NABIR program. If the site is selected a variety of activities may occur within the area, such as well drilling, excavations, surface clearing, and alteration the saturated and/or unsaturated soil zones.

Survey Objectives:

- To determine the occurrence in the project area of plant and animal species protected under the Endangered Species Act (ESA), candidates for such protection, and species listed as threatened, endangered, candidate, sensitive, or monitor by the state of Washington, and species protected under the Migratory Bird Treaty Act,

- To evaluate and quantify the potential impacts of disturbance on priority habitats and protected plant and animal species identified in the survey.

Survey Methods:

- Pedestrian and ocular reconnaissance of the proposed FRC site, and a control site near the southeast corner of 100-H Area were performed by C. A. Duberstein, J. L. Downs, B. L. Tiller, and M. R. Sackschewsky on 23 April 1998. An additional control site, which is proposed to be to the south or the southwest of the original 100-H perimeter has not been recently surveyed. However, information on the habitat of the region was obtained from the habitat classification database of the Ecosystems Monitoring Project (Neitzel et al. 1998). The Braun-Blanquet cover-abundance scale (Bonham 1989) was used to determine percent cover of dominant vegetation,

  Priority habitats and species of concern are documented as such in the following: Washington Department of Fish and Wildlife (1994, 1996), Washington State Department of Natural Resources (1997), and for migratory birds, U.S. Fish and Wildlife Service (1985). Lists of animal and plant species considered Endangered, Threatened,

Proposed, or Candidate by the USFWS are maintained at 50 CFR 17.11 and 50 CFR 17.12.

Survey Results:

- The northern portion of the proposed FRC site is characterized as a Rabbitbrush (*Crysothamnus nauseosus*) / cheatgrass (*Bromus tectorum*) community, with a significant amount of bulbous bluegrass (*Poa bulbosa*). Other portions of the proposed FRC site are primarily characterized as cheatgrass communities. The entire proposed FRC site has been previously disturbed. The proposed control site in the southeast corner of 100H area is characterized as a cheatgrass community. Neither of these habitats are considered to be priority habitats.

- Migratory bird species observed within the proposed project areas include white-crown and grasshopper sparrows, house finch, killdeer, horned lark, cliff and bank swallows, western meadowlarks, and Canadian geese.

Considerations and Recommendations:

- No plant or animal species protected under the ESA, candidates for such protection, or species listed by the Washington state government as threatened or endangered were observed within the proposed site boundaries.

- However, the Columbia River Steelhead (Federal endangered) and Columbia River Spring Chinook Salmon (Federal Proposed Threatened) are known to occur in the Columbia River immediately adjacent to the proposed project sites. The proposed work involves altering the groundwater which flows to the Columbia River and surface work that could result in erosion to the river as well as ground vibrations within the river. These species could be impacted by the proposed activities. A consultation with the National Marine Fisheries Service under Section 7 of the Endangered Species Act will be required for this portion of the proposed work. This consultation will be completed prior to initiation of the proposed work.

- Bald eagles (Federal threatened) use the river area adjacent to the proposed sites during the winter. Bald eagle roost trees are located to the north and the south of 100H area. The Hanford Site Bald Eagle Site Management Plan (DOE 1994) restricts routine work within 800 meters of the roost sites to between the hours of 10 am and 2 pm. Non-routine activities, such as excavations and well drilling, require case-by case evaluations, and may not be allowed between 15 November and 15 March. However, the proposed FRC and Control sites are located just beyond the 800 m radius from the night roost locations.

- Habitat removal that would occur between 15 April and 31 July could affect nesting migratory birds, and will require specific assessments prior to startup.

- Otherwise, no adverse impacts to species, habitats, or other biological resources are expected to result from the proposed actions at the proposed FRC site or the control site in the southeast corner of 100H area.
- The additional control site that is proposed to be located south or southwest of the 100 H Area will require site specific evaluations prior to initiation of any disturbance activities. However, no federal or state listed threatened or endangered species are known to inhabit the area containing the proposed control sites, and there is no reason to anticipate any such species in the area.
- This Ecological Compliance Review is based on data collected during the spring of 1998 and previous years. The sites will be re-surveyed during the spring of 1999 as part of the routine baseline ecological compliance effort. If the 1999 surveys detect the presence of additional species of concern the project contacts will be notified.

Sincerely,

CA Brandt, Ph.D.
Project Manager
Ecological Compliance Assessment

CAB:mrs

REFERENCES

Bonham, Charles D. 1989. Measurements for Terrestrial Vegetation, John Wiley & Sons, Inc. pp. 127-128.

Neitzel, D. A., et al. (1998) Hanford Site National Environmental Policy Act (NEPA) Characterization. PNNL-6415 Rev. 10. Pacific Northwest National Laboratory, Richland, WA.

U. S. Department of Energy (1994) Bald Eagle Site Management Plan for the Hanford Site, South-Central Washington. DOE/RL-94-150.

U. S. Fish and Wildlife Service. 1985. Revised List of Migratory Birds; Final Rule. 50 FR 13708 (April 5, 1985).

Washington Department of Fish and Wildlife. 1994. Species of Special Concern in Washington. (April 1994).

Washington Department of Fish and Wildlife. 1996. Priority Habitats and Species List. (January 1996).

Washington Department of Natural Resources. 1997. Endangered, Threatened & Sensitive Vascular Plants of Washington (August 1997).

Department of Energy
Richland Operations Office
P.O. Box 550
Richland, Washington 99352

APR 01 1999

99-EAP-234

Mr. Kurt R. Campbell
Supervisor, Moses Lake Field Office
U.S. Fish and Wildlife Service
517 South Buchanan
P.O. Box 1157
Moses Lake, Washington 98837

Dear Mr. Campbell:

PROPOSED NATURAL AND ACCELERATED BIO-REMEDIATION RESEARCH PROGRAM - FIELD RESEARCH CENTER ENVIRONMENTAL ASSESSMENT

The U.S. Department of Energy, Richland Operations Office (RL), is preparing an Environmental Assessment (EA), for a proposed Field Research Center under the Natural and Accelerated Bioremediation Research (NABIR) Program, to be located within the 100-H Area of the Hanford Site near Richland, Washington. In compliance with the Endangered Species Act (ESA), the EA will contain an analysis of the proposed action as it relates to species that are either listed or proposed as threatened or endangered under the ESA.

In support of the preparation of this EA, RL requests U.S. Fish and Wildlife Service provide a current list of species that may be affected by the proposed action. Activities covered by this EA will occur in Benton County, Washington, in the following areas:

Township	Range	Section
14N	26E	12, 13, 24
14N	27E	7, 18, 19

If you have any questions, please contact Dana C. Ward of my staff, on (509) 372-1261.

Sincerely,

Paul F.X. Denugin, for
James E. Rasmussen, Director
Environmental Assurance, Permits
and Policy Division

EAP:DCW

cc: Mike Sackschewsky, PNNL

Department of Energy
Richland Operations Office
P.O. Box 550
Richland, Washington 99352

APR 01 1999

99-EAP-233

Mr. Dennis Carlson
National Oceanic and Atmospheric Administration
National Marine Fisheries Service
510 Desmond Drive SE
Suite 103
Lacey, Washington 98503

Dear Mr. Carlson:

PROPOSED NATURAL AND ACCELERATED BIO-REMEDIATION RESEARCH PROGRAM - FIELD RESEARCH CENTER ENVIRONMENTAL ASSESSMENT

The U.S. Department of Energy, Richland Operations Office (RL), is preparing an Environmental Assessment (EA), for a proposed Field Research Center under the Natural and Accelerated Bioremediation Research (NABIR) Program, to be located within the 100-H Area of the Hanford Site near Richland, Washington. In compliance with the Endangered Species Act (ESA), the EA will contain an analysis of the proposed action as it relates to species that are either listed or proposed as threatened or endangered under the ESA.

In support of the preparation of this EA, RL requests the National Marine Fisheries Service provide a current list of species that may be affected by the proposed action. Activities covered by the EA may impact areas near the Columbia River between River Mile 370 and River Mile 374. If you have any questions, please contact Dana C. Ward of my staff, on (509) 372-1261.

Sincerely,

Paul F. X. Dunigan Jr.
for James E. Rasmussen, Director
Environmental Assurance, Permits,
and Policy Division

EAP:DCW

cc: Mike Sackschewsky, PNNL

The National Marine Fisheries Service had no comment or response to requested information.

Battelle
Pacific Northwest Laboratories

Project Number _____

Internal Distribution

file/LB

Date March 12, 1999

To Mr. Tyler J. Gilmore, Applied Geology and Geochemistry

From Ms. Natalie A. Cadoret, Cultural Resources Project. Concurrence: _____

Subject Cultural Resources Review for the Natural and Accelerated Bioremediation Research (NABIR) Program. HCRC #99-100-005.

In response to your request received March 4, 1999, staff of the Hanford Cultural Resources Laboratory (HCRL) conducted a cultural resources review of the subject project located in the 100 and 600 Areas of the Hanford Site. According to the information that you supplied, a proposal to DOE for hosting a Field Research Center (FRC) at Hanford for the Natural and Accelerated Bioremediation Research (NABIR) program is being prepared. The proposed location is in the 100-H Area and vicinity. A FRC Test Site and 2 control sites, one to the southwest (SWCS) and the other to the southeast (SECS) of the FRC Test Site have been identified. Cultural information on these sites is needed to support an Environmental Assessment effort at DOE Headquarters.

Our records review indicates that approximately half of the FRC Test Site has been intensively surveyed for cultural resources (HCRC #91-100-CERCLA). No archaeological sites or isolated artifacts were identified in the survey area. The FRC Test Site is primarily within areas where the ground surface has been disturbed by prior Hanford Site construction activities. All but a very small part of the remainder of the FRC Test Site not intensively surveyed is identified as original ground surface (Action Plan for Managing Hanford Cultural Resources, 100-H Reactor Area (1995 draft, BHI-00709)). Part of the FRC Test Site area is within 400 m of the Columbia River, which is considered culturally sensitive. Generally, monitoring of excavations by a cultural resource specialist is required within this sensitive zone. There are no known historic properties within the FRC Test Site.

The SWCS and the SECS have also been previously surveyed for cultural resources. No archaeological sites or isolated artifacts were located within the control sites. Review of 1941 aerial photographs indicates that the SWCS was undeveloped range land, while the SECS was a combination of undeveloped and agricultural land. There are no known historic properties within the SWCS or the SECS.

If the 100H Area is selected for the NABIR FRC Project, cultural resource reviews will be necessary for individual tests associated with the project.

A copy of this memo will be sent to D. W. Lloyd, DOE, Richland Operations Office, as official documentation. If you have any questions, please call me at 376-8107. Please use the HCRC# above for any future correspondence concerning this project.

cc: D. W. Lloyd, RL (2)