



Department of Energy

Idaho Operations Office
1955 Fremont Avenue
Idaho Falls, ID 83415

October 3, 2017

Attn: Document Control Desk
Director, Division of Spent Fuel Storage and Transportation
Office of Nuclear Material Safety and Safeguards
U.S. Nuclear Regulatory Commission
Washington, DC 20555-0001

SUBJECT: Submittal of Responses to NRC Requests for Additional Information for the Environmental Review of the Three Mile Island Unit 2 Independent Spent Fuel Storage Installation License Renewal Application, Docket 72-0020 (EM-NRC-17-037)

- REFERENCES:
1. DOE-ID Letter EM-NRC-17-007 to NRC, "Submittal of Application for Renewal of TMI-2 ISFSI License SNM-2508," dated March 6, 2017 (OS-ESD-17-048)
 2. NRC Letter to Mr. John P. Zimmerman, Deputy Manager, Idaho Cleanup Project, "Request for Additional Information for the Environmental Review of the Application for Renewal of the Three Mile Island Unit 2 Independent Spent Fuel Storage Installation License No. SNM-2508 (CAC Nos. L25202 and L25203)," dated August 31, 2017

Dear Sir or Madam:

On March 6, 2017, The Department of Energy's Idaho Office (DOE-ID) submitted a license renewal application (LRA) requesting a 20-year renewal of Three Mile Island Unit 2 (TMI-2) Independent Spent Fuel Storage Installation (ISFSI) specific license SNM-2508 (ADAMS Accession Nos. ML17089A501 and ML17075A199 through ML17075A201). The Nuclear Regulatory Commission (NRC) acknowledged acceptance of the LRA on May 5, 2017 (ADAMS Accession No. ML17125A284).

On August 31, 2017 DOE-ID received from the NRC a Request for Additional Information (RAI) (ADAMS Accession No. ML 17244A054) pertaining to the environmental review associated with the TMI-2 ISFSI LRA. Attachment 1 contains the NRC RAIs and provides the DOE-ID responses.

NM5524
NM5526
NM55

Should you have questions or require additional information, please contact Steve Ahrendts at (208) 526-8888 or Scott Ferrara at (208) 526-5531.

Sincerely,



Scott Ferrara
License Manager Alternate and Facility Director

Attachment: 1. Responses to NRC Request for Additional Information on the TMI-2 ISFSI License Renewal Application Environmental Report Supplement

- Enclosures: 1. DOE Idaho Operations Office letter to Eastern Idaho Field Office, U.S. Fish and Wildlife Service, "Request for Informal Consultation on Extension of the U.S. Nuclear Regulatory Commission Operating License for the Three Mile Island Unit 2 Independent Spent Fuel Storage Installation Facility at U.S. Department of Energy's Idaho Site," dated April 24, 2017
2. U.S. Department of the Interior, Fish and Wildlife Service letter to DOE Idaho Operations Office, "Idaho National Laboratory Permit Renewal for Independent Spent Fuel Storage Installation (01EIFW00-2017-I-0916)," dated May 17, 2017

cc: Kristina Banovac, NRC (w/attach)
Bernard White, NRC (w/attach)
Meraj Rahimi, NRC (w/attach)
Nicholas DiNunzio, DOE HQ (w/attach)
Greg Sosson, DOE HQ (w/attach)

**Responses to NRC Request for Additional Information on the
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RAI ER-1

Provide a status update of the consultation with the U.S. Fish and Wildlife Service (FWS), the scope of such consultation, and the timeline for completing the consultation.

Section 10, "Environmental Approvals and Consultation," of the DOE-ID's Environmental Report Supplement (Supplemental ER) submitted as part of the license renewal application, states that after DOE-ID reviewed the list of threatened and endangered species at the site published by the FWS, DOE-ID determined that it was unlikely that the proposed action would impact any threatened or endangered species. In the Supplemental ER, DOE-ID, however, explains that consultation with the FWS is ongoing.

This information is necessary for compliance with Section 7 of the U.S. Endangered Species Act, and for the NRC staff to assess the impacts to threatened and endangered species in accordance with the National Environmental Policy Act (NEPA) and Title 10 of the *Code of Federal Regulations* (10 CFR) Section 51.30.

DOE-ID Response to RAI ER-1

DOE-ID consults with the United States FWS (USFWS) at least annually and otherwise as necessary, to discuss activities occurring at DOE's Idaho site, including those at the TMI-2 ISFSI. As long as the TMI-2 ISFSI stores material under the ISFSI license, this regular consultation will continue, to include the TMI-2 ISFSI as a subject of discussion. Thus, there is no timeline for completing the consultation as mentioned in the RAI.

In accordance with U.S. Wildlife and Fisheries regulation 50 CFR 402.13, "Informal Consultation," DOE-ID informed the Eastern Idaho Field Office for the USFWS of the submittal of the TMI-2 ISFSI license renewal application (LRA) by letter dated April 24, 2017. In that letter, DOE-ID provided maps showing the entire DOE Idaho site, including the TMI-2 ISFSI site, and referenced the NRC's Final Environmental Impact Statement (FEIS) for construction and operation of the TMI-2 ISFSI (NUREG-1626).

The April 24, 2017 DOE-ID letter to USFWS states the LRA covers only continued storage and maintenance of the existing TMI-2 ISFSI facility and the facility will not be expanded or store any additional nuclear material. The DOE-ID letter also cites relevant animal and plant species for the area based on the September 2016 Idaho Species Status list published by the USFWS, and identifies two species that may occur on DOE's Idaho site. The DOE-ID letter concludes that, given the passive nature and operation experience of dry fuel storage at the TMI-2 ISFSI, an additional 20 years of operation is not likely to adversely affect the listed species or their critical habitats. The April 24, 2017 DOE-ID letter to USFWS is provided as Enclosure 1 to this submittal.

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The USFWS responded to the DOE-ID by letter dated May 17, 2017. The USFWS letter incorporates by reference from the DOE-ID letter information pertaining to the licensing action and relevant animal and plant species. The USFWS letter states its concurrence with DOE-ID's determination that renewal of the TMI-2 ISFSI license may affect, but will not likely adversely affect the two cited species that may occur on DOE's Idaho site. The May 17, 2017 USFWS letter to DOE-ID is provided as Enclosure 2 to this submittal.

DOE-ID will continue to consult at least annually with the USFWS on matters of mutual interest and will respond to any requests received from USFWS on any relevant matter, including the TMI-2 ISFSI LRA.

RAI ER-2

Provide a status update of the consultation with the State of Idaho State Historic Preservation Office (SHPO) and the Shoshone-Bannock Tribes, the scope of such consultation, and the timeline for completing the consultation.

Supplemental ER Section 10, "Environmental Approvals and Consultation," states that DOE-ID continues to consult with the State of Idaho SHPO and Shoshone-Bannock Tribes.

This information is necessary for compliance with Section 106 of the National Historic Preservation Act and for the NRC staff to assess the impacts to historic and cultural resources in accordance with the NEPA and 10 CFR 51.30.

DOE-ID Response to RAI ER-2

DOE-ID consults with the SHPO and Shoshone-Bannock Tribes regularly to discuss a variety of matters pertaining to DOE's Idaho site, including activities at the TMI-2 ISFSI. As long as the TMI-2 ISFSI stores material under the ISFSI license, this regular consultation with both organizations will continue to include the TMI-2 ISFSI as a subject of discussion. Thus, there is no timeline for completing these consultations as mentioned in the RAI. DOE-ID will continue to consult regularly with the SHPO and Shoshone Bannock Tribes on matters of mutual interest and will respond to any requests received from SHPO or Shoshone Bannock Tribes on any relevant matter, including the TMI-2 ISFSI LRA. Consultation with each of the organizations is discussed separately below.

Consultation with the Idaho State Historic Preservation Office

In accordance with Section 106 of the National Historic Preservation Act, the NRC informed the Idaho SHPO director by letter dated July 6, 2017 of its proposed renewal of the TMI-2 ISFSI license and requested any information regarding historic and cultural resources of traditional and

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religious significance that may be affected by the LRA. The Idaho SHPO responded to the NRC by letter dated July 27, 2017 confirming that renewal of the TMI-2 ISFSI license would result in no historic properties affected.

DOE-ID and the Idaho SHPO meet on an annual basis to discuss cultural and historic resource management activities conducted on DOE's Idaho site. Additionally, DOE-ID periodically holds discussions with the Idaho SHPO during the year to consult on planning for projects at DOE's Idaho site. During one such recent discussion in an August 17, 2017 conference call, in which the Idaho SHPO director participated, the above-referenced NRC letter regarding Section 106 consultation for the proposed TMI-2 ISFSI license renewal was discussed. The Idaho SHPO director stated that no further Section 106 consultation was needed because this is a license renewal to continue operating the facility. The Idaho SHPO confirmed DOE-ID's conclusion that, since continued operation of the facility as proposed in the license renewal application does not involve new construction or ground disturbing activities, historic or cultural resources of traditional and religious significance will not be affected.

Consultation with the Shoshone-Bannock Tribes

DOE-ID maintains an ongoing government-to-government relationship with the Shoshone-Bannock Tribes through frequent meetings with the Tribes via the Fort Hall Business Council (FHBC). The FHBC is the elected governing body for the Shoshone-Bannock Tribes. DOE-ID's American Indian Program Manager meets, on average, twice per month with the FHBC and other business office/Tribal employees (e.g., cultural resource experts, environmental managers (RCRA and CERCLA), fisheries and wildlife biologists, etc.), and more frequently with the Tribal/DOE-ID program office. These meetings provide the Tribes with briefings on site activities, including the TMI-2 ISFSI, completion of projects, as well as progress and status of activities affecting their ancestral/indigenous lands.

During these briefings involving the Tribes, matters of pertinence and mutual interest are discussed. Consultations, on the other hand, occur as necessary to resolve specific differences of opinion and to address the Tribes' concerns about proposed DOE-ID actions. As such, consultations occur less frequently than briefings. As part of the TMI-2 ISFSI LRA preparation process, a communications plan was prepared. Part of that plan included DOE-ID notifying the Shoshone-Bannock Tribes prior to the LRA submittal of its intention to submit the LRA. That notification took place during the week of February 27, 2017, shortly before the March 16, 2017 submittal of the LRA. DOE-ID offered to provide follow-up briefings on the TMI-2 ISFSI LRA to the Shoshone-Bannock Tribes during the notification process.

Lastly, DOE-ID conducts ongoing discussions and briefings with the local Citizens Advisory Board (CAB). CAB meetings are held quarterly and are open to the public. Each meeting includes a period of public comment. A member of the Shoshone-Bannock Tribes has a seat on the CAB and participates in CAB business and briefings. The TMI-2 ISFSI LRA was discussed

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at the June 2017 CAB meeting. The Shoshone-Bannock Tribal representative to the CAB expressed no objection to DOE's intent to renew the TMI-2 ISFSI license for an additional 20 years of operation.

RAI ER-3

Provide a status update of the consultation with the State of Idaho regarding the Idaho Settlement Agreement, the scope of such consultation, and the timeline for completing the consultation.

Supplemental ER Section 10, "Environmental Approvals and Consultation," states that DOE-ID continues to consult with the State of Idaho regarding the Idaho Settlement Agreement.

This information is necessary to understand and assess the environmental impacts of the activities that will be carried out throughout the proposed license renewal period in accordance with NEPA and 10 CFR 51.30.

DOE-ID Response to RAI ER-3

DOE-ID communicates regularly with the State of Idaho on matters associated with the Settlement Agreement and will continue to do so throughout the term of the Agreement. Thus, there is no specific timeline for completing the consultation. In-person meetings and phone calls between State and DOE-ID management officials occur periodically during the year, including meetings with the Governor's Office, the Attorney General, and the Idaho Department of Environmental Quality. Annual progress reports are provided by DOE-ID to the State of Idaho on Idaho Settlement Agreement milestones. The last progress letter pertaining to the Settlement Agreement was submitted to the State on February 22, 2017. There was no status change with respect to the TMI-2 ISFSI discussed in the last progress letter.

DOE-ID provides updates on the Spent Nuclear Fuel Program progress toward meeting the Settlement Agreement milestones at most Citizens Advisory Board (CAB) meetings that the State of Idaho liaison attends. CAB meetings are open to the public. DOE-ID's Spent Nuclear Fuel Program progress toward meeting the Settlement Agreement milestones, as well as the TMI-2 ISFSI LRA, were discussed at the regular February 2017 and June 2017 CAB meetings and will be discussed at future CAB meetings.

In addition, as part of the DOE-ID communication plan for the TMI-2 ISFSI LRA submittal, the Idaho Offices of the Governor, Attorney General, and Department of Environmental Quality were notified of DOE-ID's intention to submit the TMI-2 ISFSI LRA. That notification took place during the week of February 27, 2017, shortly before the March 16, 2017 submittal of the LRA. Through these notifications, DOE-ID re-affirmed its commitment to meeting its obligations in the Settlement Agreement. DOE-ID also discussed the reasons for requesting renewal of the TMI-2 ISFSI license and outlined the NRC's process for review of the LRA.

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DOE-ID offered to provide follow-up briefings on the TMI-2 ISFSI LRA to the State of Idaho during the notification process.

RAI ER-4

Provide appropriate information and references beyond the information considered as part of the issuance of the NRC's TMI-2 ISFSI license regarding the operational activities (e.g., repackaging of the TMI-2 spent fuel core debris (fuel debris), transportation activities, potential land disturbance, workforce changes, etc.) that would be carried out by DOE-ID to remove the fuel debris from the Idaho National Laboratory. If documents previously considered as part of the issuance of the license are still valid and applicable, reaffirm their validity and applicability. Discuss the potential environmental impacts from these activities (e.g., impacts to socioeconomics, noise, air quality, transportation, occupational and public health and safety, waste management, water quality, etc.) and potential mitigation measures for reducing, minimizing or avoiding the environmental impacts of the fuel debris removal activities.

DOE-ID is requesting a 20-year renewal of the TMI-2 ISFSI license, until March 19, 2039. The State of Idaho, along with DOE-ID and the Department of the Navy, are parties to an October 1995 settlement agreement stating that all of the fuel debris would be removed from the State of Idaho by January 1, 2035. This date falls within the 20-year license renewal period requested by DOE-ID. The environmental review that the NRC is conducting will address environmental impacts during the period of the proposed action, which encompasses the date by which fuel debris is to be removed from Idaho per the October 1995 settlement agreement.

This information is necessary for the NRC staff to assess the environmental impacts of the proposed action, as required by NEPA and 10 CFR 51.30.

DOE-ID Response to RAI ER-4

No repackaging of the TMI-2 fuel debris is planned or expected prior to removal of the fuel debris from the TMI-2 ISFSI. Each Dry Shielded Canister (DSC) currently storing the smaller canisters housing the TMI-2 fuel debris is designed to be transferred directly from its Horizontal Storage Module (HSM) at the ISFSI into an NRC-certified transportation package for shipment. The loaded transportation package will then be moved on a trailer from the ISFSI to an appropriate site location for pre-shipment preparation as described in its 10 CFR 71 Certificate of Compliance (CoC) and associated Safety Analysis Report (SAR). Upon completion of preparation activities, the transportation package will be moved to an appropriately-designed conveyance (e.g. truck or rail car) for offsite transportation.

The descriptions of the tasks and activities required to remove the DSCs containing fuel debris from DOE's Idaho site that are discussed in the conceptual decommissioning plan submitted with the original license application and in the TMI-2 ISFSI UFSAR remain valid and

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applicable. This conceptual decommissioning plan includes discussion of the minimal expected environmental impacts created by these operations and the mitigative actions necessary to address any environmental impacts that may occur.

As required by 10 CFR 72.54(d), upon cessation of operations at the TMI-2 ISFSI, DOE-ID will notify the NRC within 60 days and submit an updated final decommissioning plan to the NRC for approval within one year after that notification. This commitment is reiterated in Sections 4.1.3 and 5.3 of the FEIS supporting the TMI-2 ISFSI license (NUREG-1626). The updated decommissioning plan will address the applicable standards for decontamination and decommissioning at that time. As discussed in ISFSI FSAR Section 9.6.1, DOE-ID will employ the available technologies of the day to cost-effectively and safely decommission the ISFSI.

RAI ER-5

Provide information on any reasonably foreseeable decommissioning activities that would take place from the time the TMI-2 spent fuel core debris is removed from the TMI-2 ISFSI site and before the end of the requested license renewal period, including when the decommissioning activities and dismantlement of the ISFSI structures would occur and the anticipated environmental impacts of decommissioning.

In accordance with the settlement agreement between DOE-ID, the State of Idaho, and the Department of the Navy, TMI-2 spent fuel core debris would be removed from the State of Idaho by January 1, 2035.

Section 72.54(d) of 10 CFR requires, in part, that within 60 days of the occurrence of any of the following, each licensee notify the NRC in writing, and submit within 12 months of this notification, a final decommissioning plan and begin decommissioning upon approval of the plan if:

- (1) The licensee has decided to permanently cease principal activities, as defined in this part, at the entire site or any separate building or outdoor area that contains residual radioactivity such that the building or outdoor area is unsuitable for release in accordance with NRC requirements; or
- (2) No principal activities under the license have been conducted for a period of 24 months; or
- (3) No principal activities have been conducted for a period of 24 months in any separate building or outdoor area that contains residual radioactivity such that the building or outdoor area is unsuitable for release in accordance with NRC requirements.

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In addition, Section 5.7 of the Supplement ER states that "Decommissioning and dismantlement of the ISFSI will be performed in a manner consistent with the *Conceptual Plan for Decommissioning TMI-2 Independent Spent Fuel Storage Installation* and site procedures that will be in place at that time." Rev. 0 of the *Conceptual Plan for Decommissioning TMI-2 Independent Spent Fuel Storage Installation* was submitted with the original license application for the TMI-2 ISFSI in October 1996.

This information is necessary for the NRC staff to assess the environmental impacts of the proposed action, including cumulative impacts, as required by NEPA and 10 CFR 51.30.

DOE-ID Response to RAI ER-5

DOE-ID remains committed to the 1995 Settlement Agreement with the State of Idaho to remove all spent fuel from the State of Idaho by 2035. Federal energy policies and DOE-ID's implementation of those future policies will determine the timelines for cessation of principal activities at the TMI-2 ISFSI facility, removal of the material from the site, and subsequent decommissioning of the ISFSI. As required by Section 72.54(d) of 10 CFR, DOE will notify the NRC of the cessation of principal activities within 60 days of occurrence. Within one year thereafter, DOE-ID will submit for NRC approval a revision to the conceptual decommissioning plan included with the original TMI-2 ISFSI license application as a final decommissioning plan. The revised final decommissioning plan will incorporate adjusted cost estimates for decommissioning and include consideration of contemporaneous available technologies to ensure, timely, safe, and cost-effective decommissioning of the facility that does not involve significant environmental effects.

The existing conceptual decommissioning plan for the TMI-2 ISFSI discusses a decontamination alternative for decommissioning (prompt removal/dismantling), due to the low levels of contamination and the relatively small physical facility size associated with this ISFSI. It contemplates two potential scenarios for decommissioning and provides a timeline for each, including preparations, engineering and planning, site preparation, operations, and site restoration. The final decommissioning plan submitted following cessation of operations at the TMI-2 ISFSI will augment this plan to account for the regulatory environment and technologies available at that time.

As mentioned in the response to RAI ER-1, NUREG-1626 is the sole FEIS governing the environmental impacts of operating and decommissioning the TMI-2 ISFSI and remains valid. While not applicable specifically to the TMI-2 ISFSI, additional information pertaining to the environmental impacts of removing spent fuel from DOE's Idaho site pursuant to the Settlement Agreement may be found in NUREG-1773, "Environmental Impact Statement for the proposed Idaho Spent Fuel Facility at the Idaho National Engineering and Environmental Laboratory in Butte County, Idaho," published in 2004 (NRC Docket 72-025). That FEIS applies to the 10 CFR 72 specific license granted for the Idaho Spent Fuel Facility (ISFF) and considered the

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proposed action of “the construction, operation, and decommissioning of an ISFSI.”
Decontamination and decommissioning of the facility are addressed in Sections 4.16 and 7.1.3
and associated reference materials, and are referred to throughout that FEIS.

RAI ER-6

Provide the disposal location for solid radioactive waste.

Supplemental ER Section 3.5.4, “Solid Radwaste Systems,” states that the solid radioactive
waste is taken to the Solid Waste Processing Area where it is prepared for shipment and disposal.
The disposal location is not identified.

This information is needed to assess the environmental impacts of the proposed action, as
required by 10 CFR 51.30.

DOE-ID Response to RAI ER-6

Very little solid radwaste is generated by activities associated with operation and maintenance of
the TMI-2 ISFSI. Waste that is generated is transferred to the larger DOE-ID radwaste stream
for further processing with other low-level radwaste generated at DOE’s Idaho site. This waste
transfer occurs at the Idaho Nuclear Technology and Engineering Center (INTEC) low-level
waste pad, southwest of the TMI-2 ISFSI. Specifically, the INTEC low-level waste pad is
identified as CPP 1790 as shown at the bottom of LRA Figure 3-1 near the southern end of the
INTEC west fence.

RAI ER-7

Provide a table of rainfall data for the region, similar to data in Table 2-4 “Temperature and
Snowfall Reports.”

Supplemental ER Section 2.3, “Climatology and Meteorology,” summarizes precipitation
measurements for the region, but there is no corresponding table with rainfall data.

This information is needed to describe the affected environment, as required by 10 CFR
51.45(b).

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DOE-ID Response to RAI ER-7

Monthly, annual, and maximum rainfall data for DOE's Idaho site are provided in Tables ER-7-1 and ER-7-2 below.

Table ER-7-1: Monthly and Annual Precipitation at DOE's Idaho Site (Water Equivalent)^{a,b}			
Month	Average (in.)	Highest (in.)	Lowest (in.)
January	0.66	2.56	0.00 ^c
February	0.56	2.40	0.00
March	0.60	2.03	0.00
April	0.77	2.50	0.00
May	1.18	4.42	0.02
June	1.09	4.64	0.00
July	0.47	2.29	0.00
August	0.53	4.05	0.00
September	0.63	3.52	0.00
October	0.60	2.60	0.00
November	0.59	1.74	0.00
December	0.74	3.43	0.00
ANNUAL	8.40	14.40	3.04

a. Data period of record spans March 1950 through December 2016 as shown on <http://niwc.noaa.inel.gov/climate.htm> (Table 24).

b. Data were collected at the Central Facilities Area at DOE's Idaho Site.

c. Trace amounts are not considered as precipitation.

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**Table ER-7-2: Greatest Precipitation Amounts at DOE's Idaho Site
During a 24-Hour Period^{a,b}**

Month	Inches
January	1.02
February	0.49
March	0.64
April	0.97
May	0.77
June	1.79
July	0.60
August	0.94
September	1.11
October	1.30
November	0.58
December	0.67
ANNUAL	1.79

a. Data period of record spans 1950 through 2016 as shown on <http://niwc.noaa.inel.gov/climate.htm> (Table 28).

b. Data were collected at the Central Facilities Area at DOE's Idaho Site.

RAI ER-8

Provide the location where wind data in Table 2-5, "Wind Speed Means and Extremes for 10 Meter Tower Level at GRI," was recorded, and define "GRI."

Supplemental ER Section 2.3, "Climatology and Meteorology," discusses wind speeds at GRI. This location is not defined.

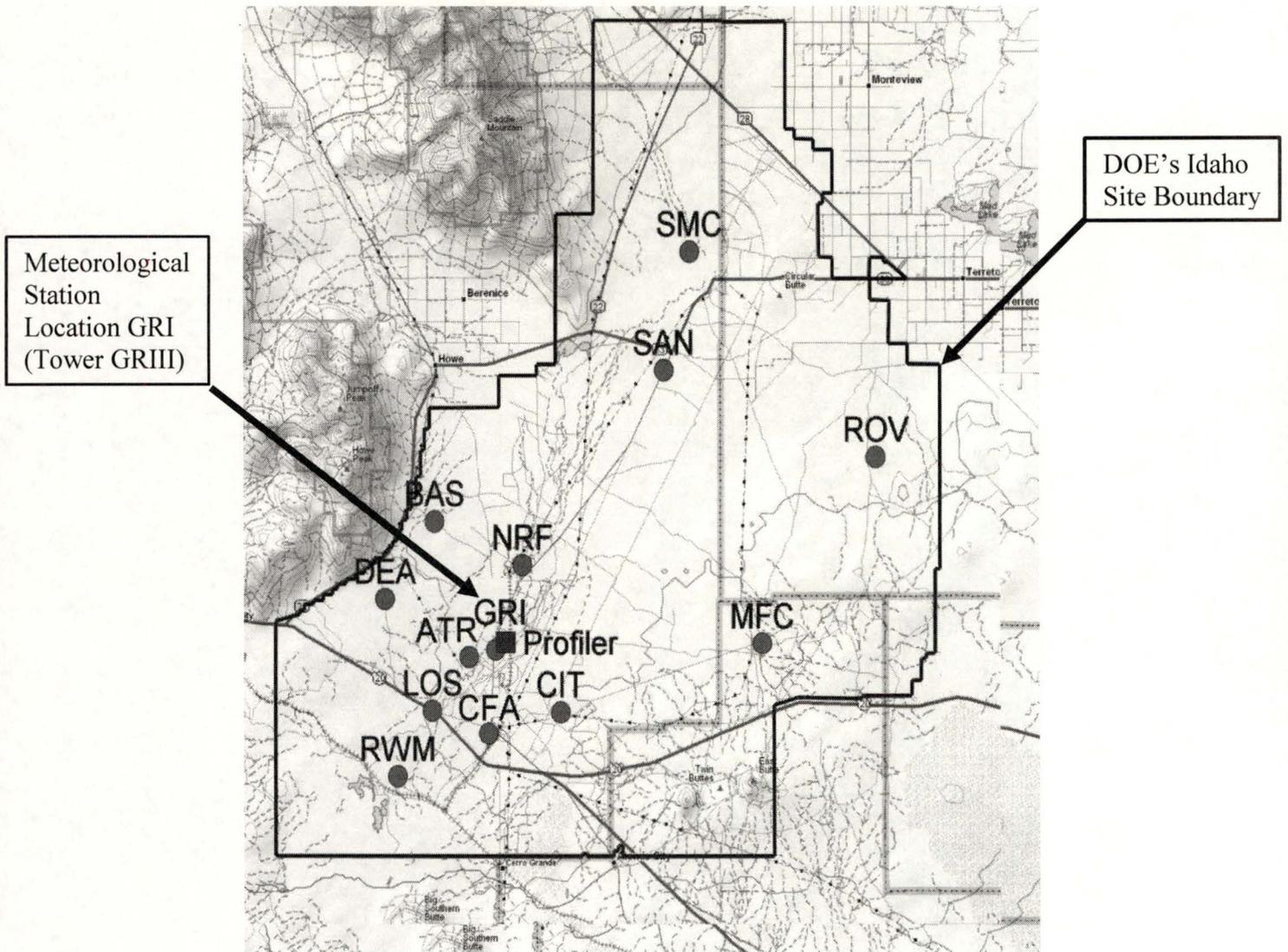
This information is needed to describe the affected environment, as required by 10 CFR 51.45(b).

DOE-ID Response to RAI ER-8

Grid III is a meteorological monitoring tower (GRI). The meteorological stations on DOE's Idaho site are shown on Figure ER-7-1 below. Meteorological Station Location GRI, used for the TMI-2 ISFSI data, is the location of the Grid III meteorological tower. GRI is located approximately one mile (1.6 km) north of INTEC. The TMI-2 ISFSI is located approximately one-half mile (0.8 km) from the northern INTEC boundary, in the southern center of the INTEC site (see LRA Figure 3-1)

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**Figure ER-7-1
Meteorological Station Locations on DOE's Idaho Site**



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RAI ER-9

Provide the source of tornado frequency data cited in the Supplemental ER and provide the actual data, if available.

Supplemental ER Section 2.3, "Climatology and Meteorology," briefly discusses severe weather and tornadoes in the region and points to Table 2-5 for data. Table 2-5, "Wind Speed Means and Extremes for 10 Meter Tower Level at GRI," does not appear to have severe weather data.

This information is needed to describe the affected environment, as required by 10 CFR 51.45(b).

DOE-ID Response to RAI ER-9

Section 2.3 of the original ER and the ER Supplement submitted with the LRA refers to Table 2-5 in the discussion of tornadoes. Table 2-5 of the ER Supplement reports "wind extremes," which would capture tornado wind if a tornado occurred near the measuring station. Note that the information pertaining to tornadoes was not modified in the ER Supplement submitted with the LRA.

Weather conditions are monitored on DOE's Idaho site with a network of meteorological towers. The tower nearest to the TMI ISFSI is the Grid III tower at location GRI (see response to RAI ER-8 for additional details). Winds measured at GRI are representative of wind flow patterns over the southwest portion of DOE's Idaho site. As shown in Table 2-5 of the ER Supplement, the highest measured hourly mean wind speed measured at GRI between January 1994 and December 2014 is 46.2 MPH (20.7 m/s) from the west-southwest for the month of January. The highest measured peak gust is 81.6 MPH (36.5 m/s) from the southwest in the month of July.

Section 3.4.3 of the FEIS for the TMI-2 ISFSI license (NUREG-1626) addresses tornado likelihood by referring to Section 4.7.1 [sic] of DOE/EIS-0203-F, "Department of Energy Programmatic Spent Nuclear Fuel Management and Idaho National Engineering Laboratory Environmental Restoration and Waste Management Programs Final Environmental Impact Statement," published in 1995. The likelihood of a tornado at DOE's Idaho site (called the Idaho National Engineering Laboratory at the time) is taken from a 1989 NOAA report, which is discussed in Section 4.2 of DOE/EIS-0203-F (and quoted in NUREG-1626). It states:

"Other than thunderstorms and lightning, severe weather is uncommon. Five funnel clouds (tornadoes not touching the ground) and no tornadoes have been reported onsite from 1950 to 1988."

In preparing the response to this RAI, an updated NOAA report for DOE's Idaho site published in 2007 was reviewed. As a result of that review, DOE-ID has concluded that only the unofficial

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observations of funnel clouds and tornadoes from the narrative in the 1989 NOAA report were included in the TMI-2 ISFSI ER (and maintained in the ER Supplement). The official numbers were included in a figure located elsewhere in the 1989 NOAA report and not addressed in the ER. It is unclear why the unofficial numbers were used in the original ER and subsequently carried forward to the LRA ER supplement.

The unofficial observations from the 1989 narrative yielded the five funnel clouds and no tornadoes cited above and in the ER. The official NOAA reporting from 1989 (and 2007) indicates that six funnel clouds and six tornadoes were recorded for DOE's Idaho site from 1950 to 2006. The six tornadoes were classified using the Fujita Scale (F-Scale) system that rates the degree of damage to the strength of the winds. Five tornadoes were classified as F0 (little damage) and one was classified as F1 (moderate damage). The tornadoes were generally sighted near the site's perimeter, well away from the TMI-2 ISFSI.

Using the 2007 official NOAA data for funnels clouds and tornadoes at DOE's Idaho site, it remains valid to conclude that such events are rare and, when tornadoes do occur, they are very low severity.



Department of Energy

Idaho Operations Office
1955 Fremont Avenue
Idaho Falls, ID 83415

April 24, 2017

Ms. Sandi Fisher, Field Office Lead
Eastern Idaho Field Office
U.S. Fish and Wildlife Service
4425 Burley Dr., Suite A
Chubbuck, ID 83202

SUBJECT: Request for Informal Consultation on Extension of the U.S. Nuclear Regulatory Commission Operating License for the Three Mile Island Unit 2 Independent Spent Fuels Storage Installation Facility at U.S. Department of Energy's Idaho Site (OS-ESD-17-048)

Dear Ms. Fisher:

The U.S. Department of Energy (DOE), as licensee of the Three Mile Island Unit 2 (TMI-2) Independent Spent Fuels Storage Installation (ISFSI), has applied to the U.S. Nuclear Regulatory Commission (NRC) for a 20-year license extension in accordance with 10 CFR Part 72. The current 20-year license (SNM-2508, Docket 72-20) expires on March 19, 2019. The purpose of this letter is to begin, in accordance with 50 CFR 402.13, informal consultation with the U.S. Fish and Wildlife Service (USFWS) to determine whether continued operation of the TMI-2 ISFSI is likely to adversely affect listed species or critical habitats.

Independent spent fuel storage installations for storing commercial spent nuclear fuel are licensed by the NRC in accordance with the Atomic Energy Act of 1954 (42 United States Code [USC] 2011, et seq.) and NRC implementing regulations (10 Code of Federal Regulations [CFR] Part 72). The TMI-2 ISFSI is located on the DOE's Idaho Site, also referred to as the Idaho National Laboratory Site or INL, within the Idaho Nuclear Technology and Engineering Center. The TMI-2 ISFSI has safely stored reactor core debris and partially intact fuel assemblies removed from the damaged TMI-2 commercial power reactor for the past 18 years. A map showing the location of the TMI-2 ISFSI is enclosed.

The Final Environmental Impact Statement for construction and operation of the TMI-2 ISFSI (NUREG-1626) was issued and published in the Federal Register (63 FR 13077) on March 17, 1998, in accordance with 10 CFR Part 51. In 1998, the NRC concluded that the facility could be constructed and operated with small and acceptable effects on the public and the existing environment at the site. Construction was completed in 1999 and fuel loading operations were completed in 2001. The license renewal application covers continued storage and maintenance of the existing TMI-2 ISFSI; no facility expansion or storage of additional nuclear material is being requested.

The September 2016 Idaho Species Status list published by the USFWS includes seven species that are identified as having proposed, candidate, or threatened status that may occur in the five counties that encompass the site:

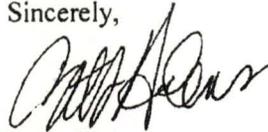
Common Name	Scientific Name	Status	Counties	Idaho Site Occurrences
Whitebark pine	<i>Pinus albicaulis</i>	Candidate	Bonneville, Butte, Clark	No documented occurrences
North American wolverine	<i>Gulo gulo luscus</i>	Proposed Threatened	Bingham, Bonneville, Butte, Clark, Jefferson	No documented occurrences; may pass through
Grizzly bear	<i>Ursus arctos horribilis</i>	Threatened	Bonneville, Clark	No documented occurrences
Ute ladies'-tresses	<i>Spiranthes diluvialis</i>	Threatened	Bingham, Bonneville, Jefferson	No documented occurrences
Yellow-billed Cuckoo	<i>Coccyzus americanus</i>	Threatened	Bingham, Bonneville, Clark, Jefferson	One documented occurrence near site boundary
Bull Trout	<i>Salvelinus confluentus</i>	Threatened/Designated Critical Habitat	Butte, Clark, Jefferson	No documented occurrences; no critical habitat
Canada Lynx	<i>Lynx canadensis</i>	Threatened/Designated Critical Habitat	Bonneville, Butte, Clark	No documented occurrences; no critical habitat

Two of these species may occur on the Idaho Site. The North American wolverine (*Gulo gulo luscus*) has not been documented at the Idaho Site, but may pass through it. The Yellow-billed Cuckoo (*Coccyzus americanus*) is known to breed in river valleys in southern Idaho (Federal Register, Vol. 79 No. 192, October 3, 2014), but has only been observed once near the Idaho Site at Atomic City. The Idaho Site has no designated critical habitat. Although the Greater sage-grouse (*Centrocercus Urophasianus*) is no longer a candidate species, DOE continues to operate under the voluntary Candidate Conservation Agreement with USFWS to protect this species and its habitat.

Several other animal species that were delisted but continue to be monitored are present on the Idaho Site. The bald eagle (*Haliaeetus leucocephalus*) was delisted in 2007, but is still protected under the Bald and Golden Eagle Protection Act. This species often winters in the Little Lost River Valley just north of the Site and several have been known to winter on the Site. The American peregrine falcon (*Falco peregrinus*), delisted in 2009, has been observed infrequently on the northern portion of the Site. DOE has a Migratory Bird Treaty Act Special Purpose permit issued by the USFWS (#MB-04294B-1), which requires immediate reporting of dead or injured bald and golden eagles and prior authorization to relocate raptor nests.

Given the passive nature and operation experience of dry fuel storage at the TMI-2 ISFSI, DOE has determined that a 20-year extension to the operating license for the TMI-2 ISFSI is not likely to adversely affect the listed species or their critical habitats. Written concurrence of this determination from the USFWS is hereby requested to support the license renewal application for the TMI-2 ISFSI. Please contact me at (208) 526-9855 should you have any questions in this regard.

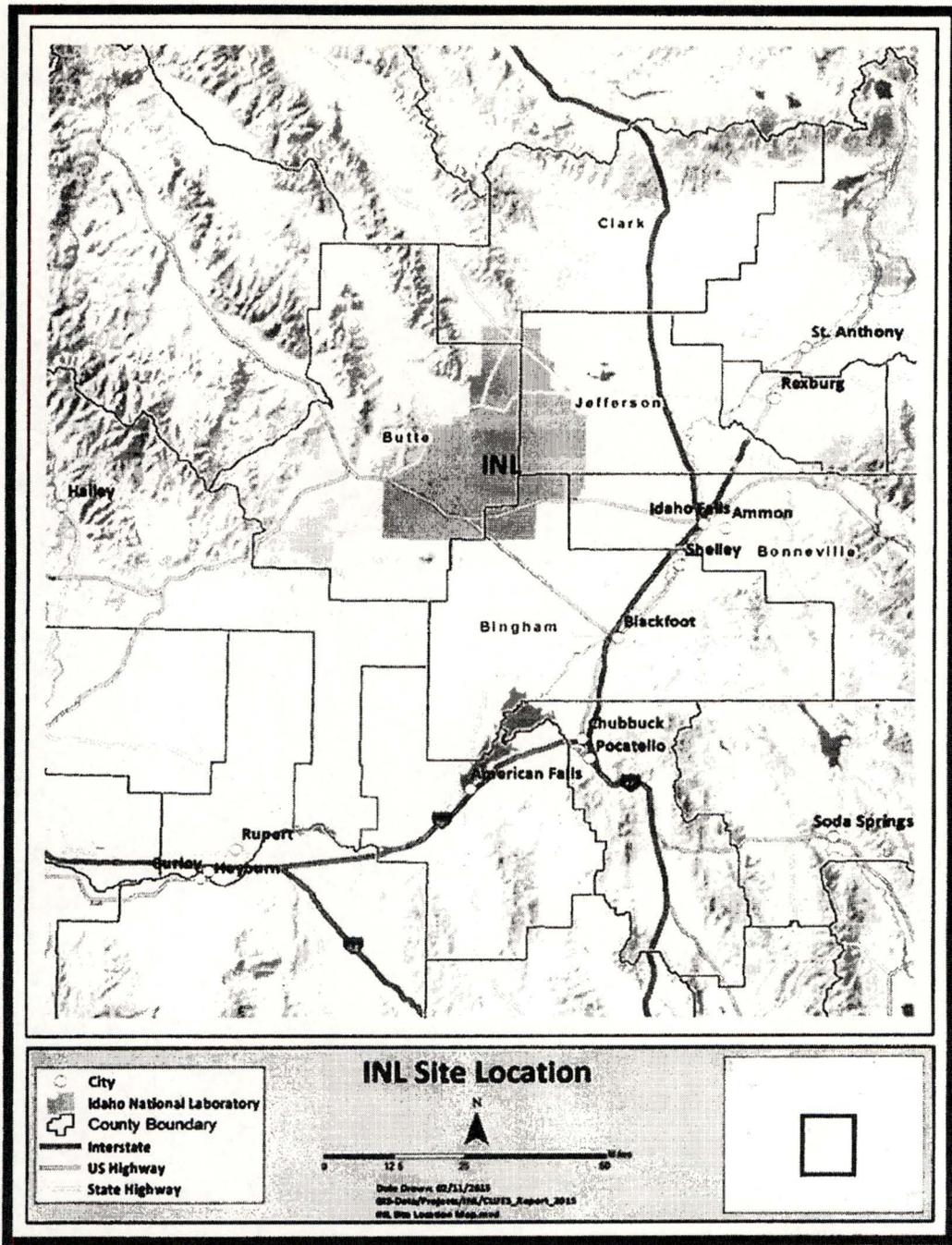
Sincerely,



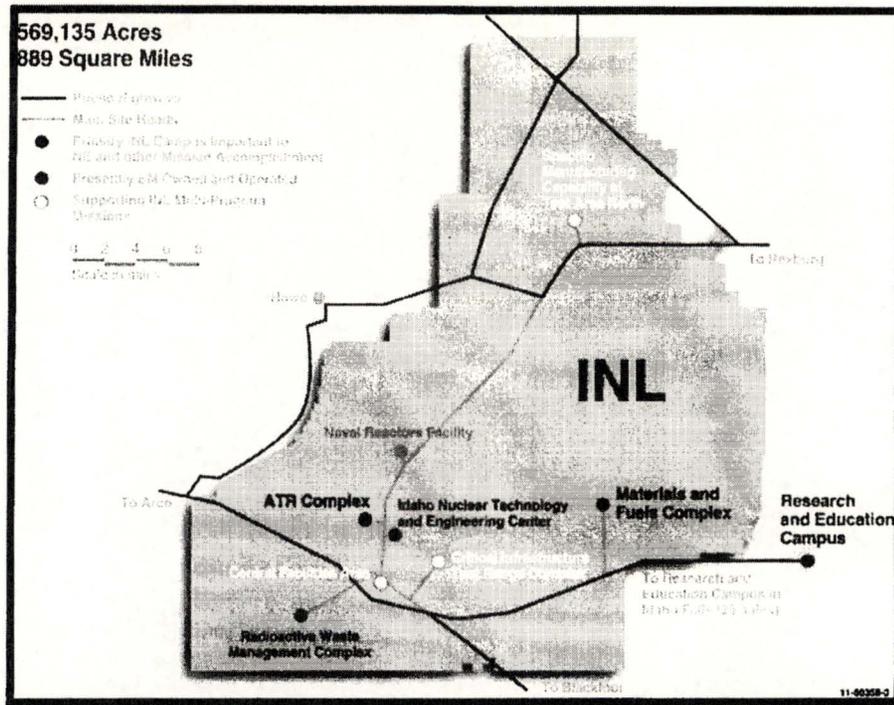
Betsy Holmes
Environmental Resources Team

Enclosures

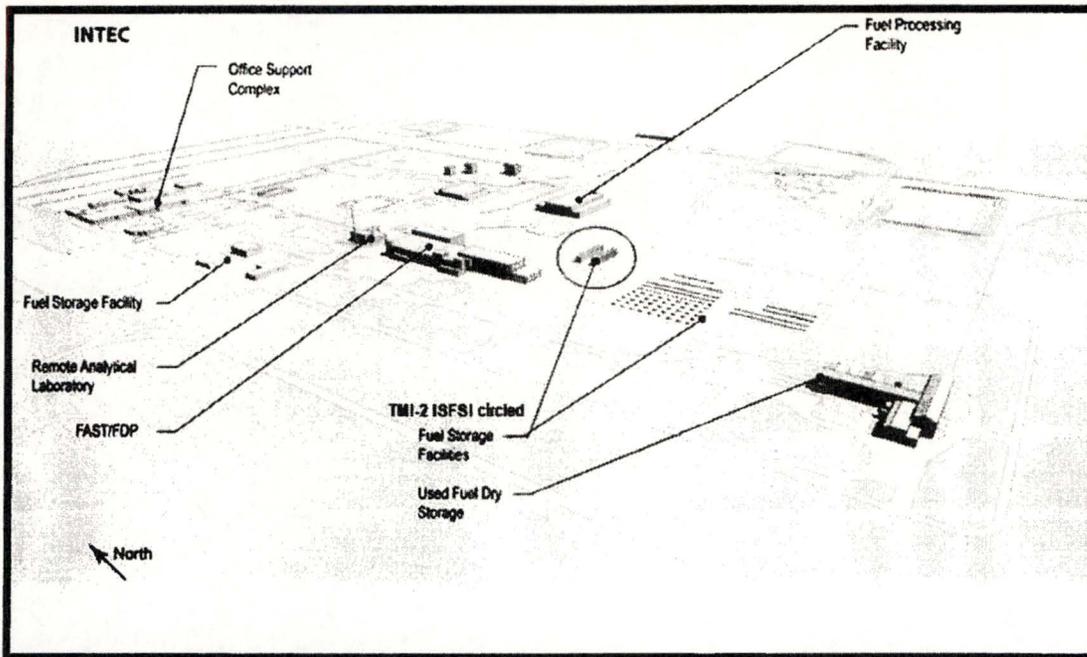
cc: Jeff Long
David Bland



DOE'S IDAHO SITE PRIMARY FACILITY AREAS



TMI-2 ISFSI WITHIN INTEC





United States Department of the Interior
FISH AND WILDLIFE SERVICE

Eastern Idaho Field Office
4425 Burley Dr., Suite A
Chubbuck, Idaho 83202
Telephone (208) 237-6975
<http://IdahoES.fws.gov>



MAY 17 2017

Besty Holmes, Environmental Resources Team
Department of Energy
Idaho Operations Office
1955 Fremont Avenue
Idaho Falls, Idaho 83415

Subject: Idaho National Laboratory Permit Renewal for Independent Spent Fuels Storage
Installation (01EIFW00-2017-I- 0916)

Dear Ms. Holmes:

This letter responds to the Department of Energy (DOE) request for the U.S. Fish and Wildlife Service's (Service) concurrence on effects of the subject project to species and habitats listed under the Endangered Species Act of 1973, as amended (16 U.S.C. 1531 et seq.; [Act]). The DOE proposes to renew the license for 20 years for the continued storage of Three Mile Island Unit 2 (TMI-2) reactor core debris and partially intact fuel assemblies. The DOE's request (Letter) dated April 24, 2017, was received by the Service on April 26, 2017. Information contained in the Letter is incorporated here by reference.

In the Letter, the DOE identified two species that may occur on the site: the Yellow-billed Cuckoo (*Coccyzus americanus*), a species listed as threatened under the Act, and the North American wolverine (*Gulo gulo luscus*), a species proposed for listing under the Act. The DOE determined the project may affect, but is not likely to adversely affect Yellow-billed Cuckoo or North American wolverine. The Service concurs with the DOE's determination for Yellow-billed Cuckoo and presents our rationale below. Furthermore, the Act does not require consultation on proposed species, such as wolverine. If in the future the wolverine is listed as threatened or endangered and there have been no significant changes that could warrant reanalysis of effects to the species, this letter shall also serve as our conference report that the proposed action is not likely to adversely affect this species. However, if the status of the species changes prior to completion of this project, the DOE should contact the Service in writing to affirm the validity of the informal conference report and request it be converted to an informal consultation to ensure continued coverage under the Act.

Proposed Action

The DOE proposes to extend the current 20-year license for the storage and containment of TMI-2 reactor core debris and partially intact fuel assemblies for another 20 years. DOE has safely stored these materials at the Independent Spent Fuels Storage Installation (ISFSI), located on the DOE's Idaho National Laboratory Site (INL), for the past 18 years. No facility expansion or

storage of additional nuclear material is proposed. The proposed action is fully described in the Letter, and includes the licensing renewal and the continued storage and maintenance of the existing TMI-2 facility (Letter).

Species and Habitat Presence in the Project Area

The Yellow-billed Cuckoo has been observed near the INL; however, Yellow-billed Cuckoos require large expanses of riparian habitat for breeding and nesting that is not found within INL's borders. The Yellow-billed Cuckoo observed near INL was probably utilizing the area as stop-over habitat during an exploratory trek or migration.

The North American wolverine has not been documented at the INL, but may be found in the area. Wolverine prefer high-elevation alpine areas in Idaho and the INL does not provide that type of habitat. Should a wolverine be found at INL, it would likely be an individual migrating through the action area to find suitable habitat elsewhere.

Potential Impacts and Effects from the Proposed Action

The primary effect to Yellow-billed Cuckoo or North American wolverine, should one be present in the action area, would be exposure to TMI-2 nuclear material. However, TMI-2 material has been stored at the INL ISFSI without incident for 18 years. Renewing the 20-year license for the continued storage of TMI-2 material is a passive action and is highly unlikely to result in the exposure of nuclear material; therefore, the effect is considered discountable.

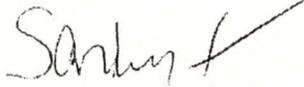
Concurrence

Based on the Service's review of the Letter, we concur with the DOE's determination that the project outlined in the Letter, may affect, but is not likely to adversely affect Yellow-billed Cuckoo or North American wolverine. This concurrence is based on the condition of habitat within the INL, the lack of observations of Yellow-billed Cuckoo or North American wolverine within the INL, and the extremely low likelihood that the extension of the license to maintain the current ISFSI would lead to exposure to TMI-2 nuclear material, making impacts to Yellow-billed Cuckoo or North American wolverine discountable.

This concludes informal consultation. Further consultation pursuant to section 7(a)(2) of the Act is not required. Reinitiation of consultation on this action may be necessary if new information reveals effects of the action that may affect the listed species or designated critical habitat in a manner or to an extent not considered in the Letter, the action is subsequently modified in a manner that causes an effect to the listed species that was not considered in the analysis, or a new species is listed or critical habitat is designated that may be affected by the proposed action.

Thank you for your continued interest in the conservation of threatened and endangered species. If you have any questions regarding this consultation, please contact Lisa Dlugolecki of this office at (208) 237-6975 extension 114.

Sincerely,



GS Gregory M. Hughes
State Supervisor

cc: FWS, Boise (Holder)