

AUDIT REPORT

Audit of NRC's Implementation of Its
National Environmental Policy Act Responsibilities

OIG-14-A-09 December 24, 2013



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**UNITED STATES
NUCLEAR REGULATORY COMMISSION**
WASHINGTON, D.C. 20555-0001

**OFFICE OF THE
INSPECTOR GENERAL**

December 24, 2013

MEMORANDUM TO: Mark A. Satorius
Executive Director for Operations

FROM: Stephen D. Dingbaum */RA/*
Assistant Inspector General for Audits

SUBJECT: AUDIT OF NRC'S IMPLEMENTATION OF ITS NATIONAL
ENVIRONMENTAL POLICY ACT RESPONSIBILITIES
(OIG-14-A-09)

Attached is the Office of the Inspector General's (OIG) audit report titled, *Audit of NRC's Implementation of Its National Environmental Policy Act Responsibilities*.

The report presents the results of the subject audit. Please provide information on actions taken or planned on the recommendation within 30 days of the date of this memorandum. Actions taken or planned are subject to OIG followup as stated in Management Directive 6.1.

We appreciate the cooperation extended to us by members of your staff during the audit. If you have any questions or comments about our report, please contact me at 415-5915 or Sherri Miotla, Team Leader, Nuclear Materials & Waste Safety Team, at 415-5914.

Attachment: As stated

cc: R. Mitchell, OEDO
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EXECUTIVE SUMMARY

BACKGROUND

The National Environmental Policy Act

The National Environmental Policy Act of 1969, as amended (NEPA), established a national policy to encourage productive and enjoyable harmony between man and his environment, promote efforts that will prevent or eliminate damage to the environment and biosphere and stimulate the health and welfare of man, and enrich the understanding of ecological systems and natural resources. NEPA requires Federal agencies, as part of their decisionmaking process, to consider the environmental impacts of actions under their jurisdiction. NEPA is a procedural statute, imposing no substantive requirements on agencies beyond conducting the environmental review.

The Nuclear Regulatory Commission's (NRC) regulations require preparation of an environmental impact statement for a license to possess and use source material¹ for uranium milling or production of uranium hexafluoride. An environmental impact statement is also required to license a uranium enrichment facility.

The Atomic Energy Act and NRC Regulation

The Atomic Energy Act is the fundamental U.S. law on the civilian use of nuclear materials. The act empowers NRC to regulate uses of nuclear materials in order to protect health and safety and minimize danger to life or property. NRC regulates uses of nuclear materials through a combination of regulatory requirements, including licensing, inspection, and enforcement.

¹ Source material means (1) Uranium or thorium, or any combination thereof, in any physical or chemical form or (2) ores which contain by weight one-twentieth of one percent (0.05%) or more of (i) Uranium, (ii) thorium, or (iii) any combination thereof. Source material does not include special nuclear material.

NRC's NEPA and Licensing Process

NRC's NEPA review process begins when the agency receives an application for a proposed licensing action. Once NRC considers the application complete and accepts it for review, an environmental review to comply with NEPA begins.

The environmental review parallels the separate agency review for compliance with its technical or safety regulations. The safety review concludes with the issuance of a safety evaluation report. The safety evaluation report documents the NRC staff's review and safety evaluation of an application for an NRC license.

Principles of Good Regulation

In pursuing its mission, NRC strives to adhere to its Principles of Good Regulation – independence, openness, efficiency, clarity, and reliability. More specifically, NRC's principles state that regulations should be coherent, logical, and practical. Furthermore, there should be a clear nexus between regulations and agency goals and objectives. Agency positions should be readily understood and easily applied.

OBJECTIVE

The audit objective was to determine whether NRC implements its environmental review and consultation responsibilities as prescribed by NEPA. Appendix A contains information on the audit scope and methodology.

RESULTS IN BRIEF

NRC conducts environmental reviews and prepares environmental impact statements for certain licensing actions, as required by NEPA. However, for two types of licensing actions, fuel cycle facilities and uranium recovery facilities, the licensing process lacks clarity regarding the purpose of the NEPA review. Further, the agency faces challenges to complete legislatively required consultations regarding historic and cultural resources. These challenges are discussed in Appendix B.

RECOMMENDATION

This report makes one recommendation to clarify the licensing process regarding the purpose of the NEPA review.

AGENCY COMMENTS

An exit conference was held with the agency on November 21, 2013. Prior to this meeting, after reviewing a discussion draft, agency management provided supplemental information that has been incorporated into this report, as appropriate. As a result, agency management stated their general agreement with the finding and recommendation in this report and opted not to provide formal comments for inclusion in this report.

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I. BACKGROUND

The National Environmental Policy Act

The National Environmental Policy Act of 1969, as amended (NEPA), established a national policy to encourage productive and enjoyable harmony between man and his environment, promote efforts that will prevent or eliminate damage to the environment and biosphere and stimulate the health and welfare of man, and enrich the understanding of ecological systems and natural resources. NEPA requires Federal agencies, as part of their decisionmaking process, to consider the environmental impacts of actions under their jurisdiction. NEPA is a procedural statute, imposing no substantive requirements on agencies beyond conducting the environmental review.

NEPA requires that a detailed statement of the environmental impact of an agency's proposed action and reasonable alternatives be prepared for "major Federal actions significantly affecting the quality of the human environment." This detailed statement is called an environmental impact statement.

The Nuclear Regulatory Commission's (NRC) regulations require preparation of an environmental impact statement for a license to possess and use source material² for uranium milling or production of uranium hexafluoride. An environmental impact statement is also required to license a uranium enrichment facility.

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NRC's NEPA and Licensing Process

NRC's NEPA review process begins when the agency receives an application for a proposed licensing action. Once NRC considers the application complete and accepts it for review, an environmental review to comply with NEPA begins. For licensing actions requiring an environmental impact statement, a typical NRC environmental review includes analyses of impacts to specific resource areas, including air, water, animal life, natural resources, and property of historic, archeological or architectural significance. In its NEPA review, NRC also evaluates cumulative, economic, social, cultural, and environmental justice impacts.

The environmental review parallels the separate agency review for compliance with its technical or safety regulations. The safety review concludes with the issuance of a safety evaluation report. The safety evaluation report documents the NRC staff's review and safety evaluation of an application for an NRC license.

Principles of Good Regulation

In pursuing its mission, NRC strives to adhere to its Principles of Good Regulation – independence, openness, efficiency, clarity, and reliability. More specifically, NRC's principles state that regulations should be coherent, logical, and practical. Furthermore, there should be a clear nexus between regulations and agency goals and objectives. Agency positions should be readily understood and easily applied.

II. OBJECTIVE

The audit objective was to determine whether NRC implements its environmental review and consultation responsibilities as prescribed by NEPA. Appendix A contains information on the audit scope and methodology.

III. FINDING

NRC conducts environmental reviews and prepares environmental impact statements for certain licensing actions, as required by NEPA. However, for two types of licensing actions, fuel cycle facilities and uranium recovery facilities, the licensing process lacks clarity regarding the purpose of the NEPA review. Further, the agency faces challenges to complete legislatively required consultations regarding historic and cultural resources. These challenges are discussed in Appendix B.³

NRC Imposes License Conditions Outside the Atomic Energy Act

NRC imposes license conditions for fuel cycle and uranium recovery facilities that do not meet the intent of the Atomic Energy Act. NRC should impose only license conditions that are appropriate and necessary to meet the intent of the act. Some license conditions are imposed because NRC does not have adequate guidance for staff preparing licenses. When NRC ties these license conditions to the license, licenses contain conditions for which NRC cannot hold licensees accountable.

³ During the audit, OIG identified that the agency was not in compliance with its regulations relative to the preparation of environmental impact statements. OIG reported this non-compliance in *Audit of NRC's Compliance With 10 CFR Part 51 Relative to Environmental Impact Statements* [OIG-13-A-20], issued August 20, 2013.

License Conditions and the Atomic Energy Act

NRC regulations state the agency can impose license conditions that are appropriate and necessary to meet the intent of the Atomic Energy Act and NRC safety regulations. When NRC determines a license application meets the requirements of the Atomic Energy Act and NRC regulations, NRC will issue a license. License conditions should be appropriate and necessary to meet the intent of the Atomic Energy Act and NRC regulations.

NEPA requires NRC to conduct an environmental review. NEPA does not expand NRC's authority to issue a permit or license for activities that are not reasonably related to radiological health and safety or protection of the common defense and security. Although NEPA requires NRC to consider environmental effects, it does not expand the agency's authority under the Atomic Energy Act. NRC is required to issue a license if an applicant meets the Atomic Energy Act and NRC's regulatory requirements.

NRC Imposes License Conditions That Do Not Meet the Intent of the Atomic Energy Act

For fuel cycle and uranium recovery facilities, NRC is imposing license conditions outside of the Atomic Energy Act and NRC's safety regulations. These conditions originate from the applicant's environmental report. NRC uses the environmental report to aid in the development of the environmental impact statement.

An applicant for a fuel cycle or uranium recovery facility license must submit an environmental report as part of its license application. The applicant's environmental report must discuss the environmental impacts of the proposed action, any adverse environmental effects that cannot be avoided, and alternatives to the proposed action. The environmental report must also contain a description of the proposed site, proposed environmental mitigation measures, and environmental monitoring programs.

Environmental reports for fuel cycle and uranium recovery facilities include mitigation measures such as:

- Measures that will be in place to minimize impacts on water resources during construction and operation.
- Use of native plant species to revegetate disturbed areas to enhance wildlife habitat.
- Minimizing fugitive dust production, noise, and wildlife mortality.
- Measures that will be in place to minimize the impact to visual and scenic resources.
- Reducing traffic volumes.

NRC imposed these or similar license conditions for 12 facilities⁴ by making the entire environmental report a license tie down.⁵ A tie down is a licensee commitment to NRC that becomes part of the license. When the environmental report is a license tie down, all statements in it become part of the license.

The license conditions that result from tie down of the environmental report in its entirety are distinct from conditions enumerated in a license related to statutory requirements other than the Atomic Energy Act. For example, consultations required by the National Historic Preservation Act may result in NRC imposing a license condition related to historic and cultural resources.⁶ Other examples include license conditions related to

⁴ This includes six fuel cycle facilities that received licenses from March 2005 through March 2013 and six uranium recovery facilities operating in 2013.

⁵ Environmental reports can contain conditions related to radiological health and safety, for example, proposed monitoring programs for radiological effluents during facility operations.

⁶ A cultural resources license condition might state, "Before engaging in any developmental activity not previously assessed by the NRC, the licensee shall administer a cultural resource inventory if such survey has not been previously conducted and submitted to the NRC. All disturbances associated with the proposed development will be completed in compliance with the National Historic Preservation Act (as amended) and its implementing regulations (36 CFR 800), and the Archaeological Resources Protection Act (as amended) and its implementing regulations (43 CFR 7)."

non-radiological chemical constituents of groundwater authorized under the Uranium Mill Tailings Radiation Control Act or related to surveys of endangered or threatened species under the Endangered Species Act. While these non-radiological license conditions are tied to statutes other than the Atomic Energy Act, conditions arising from the environmental report, such as revegetation or traffic control measures, are not.

NRC Does Not Have Adequate Guidance

NRC is imposing license conditions outside of the Atomic Energy Act and other statutory requirements because the agency does not have adequate guidance for staff preparing licenses for fuel cycle and uranium recovery facilities. For fuel cycle facilities, staff use a licensing review handbook to prepare a license. For uranium recovery facilities, staff use a guidance document⁷ and an operations manual. These documents provide very little direction on how to write the license and no direction on what documents to include as license tie downs. The licensing review handbook merely suggests staff look at examples of previously completed licenses. If the previously completed license was written with the environmental report as a tie down, then it is likely that the new license will also include the report as a tie down.

Licenses Contain Conditions for Which NRC Cannot Hold Licensees Accountable

When NRC makes the environmental report a license tie down, licenses then contain conditions for which NRC cannot hold licensees accountable. In addition, these license conditions are not inspected or enforced by NRC.

Further, the license is misleading. The environmental report is not a basis for issuing a license. Rather, it is to aid the agency in compliance with NEPA. However, making the entire environmental report a license tie down gives the appearance that the environmental report and safety evaluation report have the same weight in the agency's decision to issue a

⁷ The guidance document that staff use is NUREG-1569, Standard Review Plan for In Situ Leach Uranium Extraction License Applications.

license. It also appears that the applicant's environmental report was a basis for issuing the license. This is inconsistent with NRC's stated regulatory principles—agency positions should be readily understood and easily applied.

OIG recommends that the Executive Director for Operations:

1. Develop and implement detailed guidance for fuel cycle and uranium recovery staff regarding inclusion of license conditions and tie downs in licenses.

IV. AGENCY COMMENTS

An exit conference was held with the agency on November 21, 2013. Prior to this meeting, after reviewing a discussion draft, agency management provided supplemental information that has been incorporated into this report, as appropriate. As a result, agency management stated their general agreement with the finding and recommendation in this report and opted not to provide formal comments for inclusion in this report.

OBJECTIVE, SCOPE, AND METHODOLOGY

OBJECTIVE

The audit objective was to determine whether NRC implements its environmental review and consultation responsibilities as prescribed by NEPA.

SCOPE

This audit focused on how NRC implements its environmental review and consultation responsibilities under NEPA. Specifically, the audit team focused on NRC licensing actions that require preparation of an environmental impact statement. Additionally, the team reviewed how the agency meets its consultation requirements under the National Historic Preservation Act. We conducted this performance audit at NRC headquarters (Rockville, Maryland) from July 2012 through September 2013. Internal controls related to the audit objective were reviewed and analyzed. Throughout the audit, auditors were aware of the possibility or existence of fraud, waste, or misuse in the program.

METHODOLOGY

Document Reviews

The OIG audit team reviewed relevant criteria, including, among others, the Atomic Energy Act of 1954, as amended; the National Environmental Policy Act of 1969, as amended; the National Historic Preservation Act of 1966, as amended; the Uranium Mill Tailings Radiation Control Act of 1978, as amended; the Endangered Species Act of 1973, as amended; 10 CFR Part 51, "Environmental Protection Regulations for Domestic Licensing and Related Regulatory Functions"; 10 CFR Part 40, "Domestic Licensing of Source Material"; and 10 CFR Part 70, "Domestic Licensing of Special Nuclear Material."

The OIG team reviewed guidance and documents pertaining to NRC's implementation of NEPA and the National Historic Preservation Act. Key documents reviewed included:

- NUREG-1748, Environmental Review Guidance for Licensing Actions Associated with NMSS Programs.
- NUREG-1569, Standard Review Plan for In Situ Leach Uranium Extraction License Applications.
- NUREG-1556, Volume 20, Consolidated Guidance about Materials Licenses: Guidance about Administrative Licensing Procedures.
- Office-level guidance.
- SECY papers.
- Licenses for fuel cycle and uranium recovery facilities.
- Environmental Reports.
- NEPA – National Historic Preservation Act Section 106 Handbook.
- NRC Tribal Protocol Manual.
- National Historic Preservation Act Section 106 Flowchart.

Interviews

At NRC headquarters in Rockville, Maryland, auditors interviewed staff and management from the Office of Federal and State Materials and Environmental Management Programs, the Office of Nuclear Reactor Regulation, the Office of New Reactors, the Office of Nuclear Material Safety and Safeguards, the Office of the General Counsel, and the Atomic Safety Licensing Board Panel, to gain an understanding of their roles and responsibilities related to the environmental review. Auditors also interviewed a representative from the Council on Environmental Quality.

Auditors received training in the implementation of the National Environmental Policy Act.

We conducted this performance audit in accordance with generally accepted Government auditing standards. Those standards require that we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions based on our audit objective. We believe that the evidence obtained provides a reasonable basis for our finding and conclusions based on our audit objective.

The audit work was conducted by Sherri Miotla, Team Leader; Levar Cole, Audit Manager; Kristen Lipuma, Senior Analyst; Kevin Nietmann, Senior Technical Advisor; and Amy Hardin, Auditor.

THE NATIONAL HISTORIC PRESERVATION ACT AND SECTION 106 CONSULTATION

The audit objective was to determine whether NRC implements its environmental review and consultation responsibilities as prescribed by NEPA. The purpose of Appendix B is to address NRC's consultation responsibilities.

NRC faces a growing challenge in consultation related to historic and cultural resources. The National Historic Preservation Act of 1966 requires Federal agencies to engage in consultation to assess and mitigate the impacts of Federal undertakings on historic resources. This consultation process, referred to as a Section 106 consultation or a Section 106 review, now also includes cultural as well as historical resources. In completing its consultation responsibilities, NRC must make "a good faith and reasonable effort" to identify tribes with ancestral connections to the affected area and provide those tribes "reasonable" opportunity to identify resources and participate in the resolution of an undertaking's effects.

Governmentwide NEPA-implementing regulations require, to the fullest extent possible, all agencies to integrate the environmental impact review and Section 106 review. NRC adopted this approach in its regulations. Because NRC integrates the environmental and Section 106 reviews, the environmental review is not complete until the Section 106 review is complete. As a result, a license, license amendment, or construction permit cannot be issued until the environmental review and Section 106 review are complete.

Challenges

NRC strives to complete consultations as required under Section 106 of the National Historic Preservation Act. However, NRC faces numerous challenges in completing consultations under the National Historic Preservation Act. Some challenges specific to NRC are:

- The obligation to conduct a Section 106 consultation lies with NRC, yet the review of historic and cultural resources is dependent on an applicant's ability to gather information and willingness to provide resources to support consultation activities.
- The greatest impacts on historic and cultural resources may result from site-preparation activities outside NRC's regulatory jurisdiction.

Additional challenges shared by other agencies include:

- The concept of "reasonable" remains open-ended.
- Cultural differences between Federal agencies and tribes about the meaning of "consultation" and consultation process.
- Identifying the correct decisionmaking authority within a tribe.
- Tribes may lack resources for travel to meetings and site visits.

Accomplishments

NRC has made many efforts to address the challenges it faces in completing Section 106 consultations. Examples of NRC's efforts include:

- Conducting lessons learned reviews.
- Conferring with the Advisory Council on Historic Preservation.⁸
- Developing draft guidance.
- Seeking public comment on a draft Tribal Protocol Manual and input on a possible policy for tribal consultations.

⁸ The National Historic Preservation Act established the Advisory Council on Historic Preservation to oversee, through regulations, guidance, and review, the process of Federal agency consultation.

The Solution Lies Outside NRC

NRC's ability to overcome these challenges is difficult because the requirements and definitions for the extent and content of consultations have been established outside NRC.

Additionally, the context of Section 106 consultations continues to evolve. For example, a June 2013 Executive Order established a White House Council on Native American Affairs, whose mission includes developing a more effective and efficient process for agencies to fulfill tribal consultation as set forth in Executive Order 13175. It is not clear whether the Council will provide a context for addressing issues faced by many Federal agencies or how future developments will further impact NRC's consultations.