Draft Regulatory Analysis

Proposed Rulemaking: Advance Notification to Native American Tribes of Transportation of Certain Types of Nuclear Waste (10 CFR Parts 71 and 73)

U.S. Nuclear Regulatory Commission
Office of Federal and State Materials and Environmental Management Programs

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1. Introduction

The U.S. Nuclear Regulatory Commission (NRC) regulations currently require NRC licensees who ship irradiated reactor fuel and certain nuclear wastes listed in § 71.97 to provide advance notification of such shipments to governors of States or their designees. This rulemaking would amend these regulations to extend the provision for advance notification to Tribal governments. This action would further Federal efforts to consult and coordinate with Tribal governments with regard to Federal affairs that are of concern to them, in recognition of the right of Native American Tribes to self-government, thereby supporting Tribal sovereignty and self-determination.

This regulatory analysis evaluates the consequences associated with the "Advance Notification to Native American Tribes of Transportation of Certain Types of Nuclear Waste" proposed rule. This document presents background material, rulemaking objectives, alternatives, input assumptions, and analysis of the consequences of the rule language and alternative approaches to accomplish the regulatory objectives.

The remainder of this introduction is divided into two sections. Section 1.1 states the problem and the objective of the rulemaking. Section 1.2 provides background information.

1.1 Statement of the Problem and Objective of the Rulemaking

The NRC has determined that there is a need to modify existing regulations in Title 10 of the *Code of Federal Regulations* (10 CFR) Parts 71 and 73 which currently require a licensee to inform a State governor, or the governor's designee, of certain shipments of irradiated reactor fuel and certain nuclear wastes listed in § 71.97 passing within or across the boundary of the State. The NRC promulgated these regulations in 1982 to comply with the NRC Authorization Act for Fiscal Year 1980.

The objective of the current rulemaking is to amend NRC regulations to extend the advance notification to include Federally recognized Tribal governments regarding shipments of irradiated reactor fuel and certain nuclear waste listed in § 71.97 passing within or across their reservations.

The primary purpose of the rule contemplated by the Commission would be to inform Native American Tribes of shipments passing within or across the boundary of Tribal reservations as recognition of Tribal sovereignty as well as the need for Tribes to be aware of activities that occur on Tribal reservations. Although emergency preparedness would not be the main reason for developing such a rule, Tribes that do have emergency preparedness capabilities would benefit from advance notification.

1.2 Background

Irradiated reactor fuel comes from commercial nuclear power plants and domestic research and test reactors. After the fresh fuel has been used in a reactor, highly radioactive irradiated reactor fuel assemblies remain. The assemblies must be removed from the reactor for storage to make room for new assemblies and to allow the fuel to cool. Currently, most irradiated fuel

assemblies are stored in pools of water, above ground vaults, or concrete casks. Irradiated reactor fuel may be shipped to temporary storage sites when space at reactor sites is limited. Irradiated reactor fuel is also shipped for various research studies. The NRC regulates irradiated reactor fuel shipments in terms of both public health and safety and common defense and security.

Current NRC regulations in 10 CFR require licensees to inform State governors, or the governor's designee, of certain shipments of irradiated reactor fuel and certain nuclear wastes listed in § 71.97 passing within or across the boundary of States. Section 73.37 requires advance notifications for shipments of irradiated reactor fuel in excess of 100 grams in net weight, exclusive of cladding or other structural or packaging material, which has a total external radiation dose rate in excess of 100 rems per hour at a distance of 3 feet from any accessible surface without intervening shielding. Section 71.97 requires advance notice for shipments of irradiated reactor fuel in quantities less than that subject to § 73.37 and certain licensed material that is required to be transported in Type B packaging and is being transported to a disposal facility or a collection point for transport to a disposal facility. The advance notification provisions also apply if the quantity of licensed material in a single package exceeds the least of the following: (1) 3000 times the A_1 value of the radionuclides as specified in Appendix A, Table A-1 of 10 CFR Part 71, for special form radioactive material; (2) 3000 times the A_2 value of the radionuclides as specified in Appendix A, Table A-1 of 10 CFR Part 71, for normal form radioactive material; or (3) 1000 Terabequerel (TBq) (27,000 curies). Schedule information provided for shipments in excess of 100 grams of irradiated reactor fuel is considered to be Safeguards Information (SGI) under NRC regulations and must be protected under the requirements in §§ 73.21 and 73.22.

The NRC developed these advance notification regulations in 1982 to comply with the NRC Authorization Act for Fiscal Year 1980, which was enacted to deal with concerns expressed by States about their abilities to fulfill their responsibilities to protect public health and safety while waste shipments pass through their jurisdictions. Neither the Atomic Energy Act of 1954, as amended (AEA) nor the notification regulations required licensees to notify Native American Tribes of this type of shipment passing within or across their Tribal reservations.

In 1994, President Clinton issued a memorandum entitled "Government-to-Government Relations with Native American Tribal Governments" (59 FR 22951; May 4, 1994). Although this memorandum did not impose any new obligations on NRC as an independent regulatory agency, it does encourage Federal agencies to consult with Tribal governments before engaging in activities that may affect Tribes, and to remove any procedural impediments to agencies being able to work directly with Tribal governments. This direction from the President was also reiterated in Executive Order (EO) 13084 (63 FR 27655; May 19, 1998), "Consultation and Coordination with Indian Tribal Governments," issued on May 14, 1998.

On December 21, 1999, the NRC published an Advance Notice of Proposed Rulemaking (ANPR) to solicit stakeholder input on a possible rulemaking that would consider requiring advance notification to Native American Tribes of transportation of certain types of nuclear waste (64 FR 71331, December 21, 1999). Information was sought on minimizing the burden to licensees, identifying location of Tribal reservations in relationship to shipment routes, and the sharing and protecting of SGI. Forty-four comment letters were received from a variety of stakeholders including Tribal governments, Tribal associations, private citizens, a State, a

Federal agency, a licensee, and an industry association. Virtually all the comments favored providing advance notification to Tribal governments with some disagreement on the details on the implementation. Most comments were in favor of treating Tribal and State governments on the same basis. Commenters encouraged the NRC to make it possible to use more up-to-date means of communication of advance notifications, e.g., via the internet. Tribal representatives and others encouraged the NRC to communicate directly with Tribal governments during the rulemaking process, as well as when implementing procedures for advance notification. The comments received in response to the ANPR were taken into account during the development of this proposed rule.

On November 6, 2000, President Clinton issued Executive Order (EO) 13175, "Consultation and Coordination with Indian Tribal Governments." EO 13175 emphasized the importance of respecting the sovereignty of Tribal governments and working with them on a government-to-government basis. On November 5, 2009, President Obama expressed his commitment to EO 13175 at the White House Tribal Nations Conference and Interactive Discussion with Tribal Leaders. During the conference, the President signed an Executive Memorandum on Tribal consultation for the heads of Executive Departments and Agencies directing Cabinet agencies to take steps to develop regular and meaningful consultation with Tribal governments. The Memorandum underscored a commitment to regular and meaningful collaboration and consultation with tribal officials, and sought complete and consistent implementation of EO 13175. The NRC has adopted agency practices that ensure consultation and cooperation with Indian Tribal governments and are fully consistent with both President Clinton's April 29, 1994, guidance and EO 13175. The NRC practice is to conduct its activities in a manner that respects the rights of sovereign Tribal governments, and involves consultation and cooperation with Federally recognized Tribes on a government-to-government basis.

2. Identification and Preliminary Analysis of Alternative Approaches

The following discussion describes the two regulatory options being considered, with additional analysis presented in Section 3 of this analysis.

2.1 Option 1: No Action

Under Option 1, the No-action alternative, NRC would not amend the current regulations regarding advance notification of shipments of irradiated reactor fuel and certain nuclear wastes. The baseline of the analysis is Option 1, the No-action alternative, for which there are no costs nor benefits.

2.2 Option 2: Amend Regulations to Provide for Advance Notification of Tribal Governments

Under this option, NRC would conduct a rulemaking to amend several sections of 10 CFR Part 71 and Part 73 to enable advance notification of participating Tribal governments of shipments of irradiated reactor fuel and certain nuclear wastes in §71.97 passing through Tribal reservations. These changes are to: (1) amend 10 CFR 71.4 and 73.2 to add definitions of "Indian tribe" and "Tribal official"; (2) amend 10 CFR 71.97, and 73.37, to extend the advance notification that now applies to States to also apply to participating Federally recognized Tribal governments; (3) amend 10 CFR 73.21 to state that information protection procedures

employed by Tribal law enforcement agencies are presumed to meet the general performance requirements for protection of SGI; and (4) amend 10 CFR 73.59 to extend to Tribal officials, his or her designee, and Tribal law enforcement personnel relief from fingerprinting requirements that are required for access to advance notifications that contain SGI.

The NRC has estimated the benefits and costs of this option, as described in Sections 3 and 4 of this regulatory analysis, and has pursued Option 2 for the reasons discussed in Section 5.

3. Estimation and Evaluation of Values and Impacts

This section describes the analysis conducted to identify and evaluate the benefits (values) and costs (impacts) of the two regulatory options. Section 3.1 identifies the attributes expected to be affected by the proposed rulemaking. Section 3.2 describes how the values and impacts have been analyzed. Finally, Section 3.3 presents the detailed results of the projected values and impacts.

3.1 Identification of Affected Attributes

This section identifies the factors within the public and private sectors, that the rule is expected to affect, using the list of potential attributes provided in Chapter 5 of NUREG/BR-0184, "Regulatory Analysis Technical Evaluation Handbook," dated January 1997, and in Chapter 4 of NUREG/BR-0058, Rev. 5, "Regulatory Analysis Guidelines of the U.S. Nuclear Regulatory Commission," dated September 2004. The evaluation considered each attribute listed in Chapter 5. The basis for selecting those attributes is presented below.

Affected attributes include the following:

- *Industry Implementation* -- The proposed action would require licensees to read the amended regulations.

- *Industry Operation* -- Licensees would be required to identify affected Federally recognized Tribal reservations prior to shipment. Licensees would be required to produce additional notifications of shipments for Federally recognized Tribal governments and would incur any costs associated with these notifications.

- *NRC Implementation* -- NRC will need to revise existing regulatory guidance as well as develop a contact list of Federally recognized Tribal governments that choose to receive the advance notifications. Training for SGI may be provided to Tribes who choose to receive notifications.

- *NRC Operation* -- NRC would need to update the participating Federally recognized Tribal government contact list on an annual basis as well as publicize the updated contact list.

- *Other Government* -- The proposed action would affect Federally recognized Tribal governments choosing to receive advance notification of irradiated reactor fuel and other certain nuclear waste shipments crossing their reservations. Tribes would need to protect

SGI contained in the advance notifications and provide NRC with contact information. The proposed rule recognizes Tribal governments' interest in being informed of activities occurring on Tribal reservations. Agreement State governments will incur a one-time cost for adopting this final rule into their State regulations governing the use of radioactive material. The Bureau of Indian Affairs (BIA), Department of Energy (DOE), Department of Transportation (DOT) and the United States Geologic Survey may serve as resources depending upon how the rule is implemented. However, these effects would be marginal incremental efforts for services already currently provided and are not deemed significant.

- *Safeguards and Security Considerations* -- The proposed rule would modify the types of entities (i.e., by adding Tribal officials or those designated by them to receive such information) afforded SGI access privileges. The rule could increase the potential for perception by the public of unauthorized disclosure of SGI due to wider dissemination of information.

Attributes that are *not* expected to be affected by the rulemaking options include the following:

- Occupational Health (Routine);
- Occupational Health (Accident);
- Public Health (Routine);
- Public Health (Accident);
- Off-site Property;
- On-site Property;
- Environmental Considerations;
- General Public;
- Improvements in Knowledge; and Anti-trust Considerations;
- Regulatory Efficiency.

3.2 Analytical Methodology

This section describes the methodology used to analyze the consequences associated with the proposed rule. The values (benefits) include any desirable changes in the affected attributes. The impacts (costs) include any undesirable changes in affected attributes.

The NRC collected input assumptions using data and information from the following sources: NRC workgroups and staff experience; NRC databases; and reports and documents.

As described in Section 3.1, the attributes expected to be affected include the following:

- Industry Implementation;
- Industry Operation;
- NRC Implementation;
- NRC Operation;
- Other Government;
- Safeguards and Security Considerations.

This analysis relies on a qualitative evaluation for several of the affected attributes (other government and safeguards and security considerations) due to the difficulty in quantifying the impact of the current rulemaking. One attribute (other government) is analyzed both qualitatively and quantitatively.

The remaining attributes (industry implementation, industry operation, NRC implementation, and NRC operation) are evaluated quantitatively. Quantitative analysis requires a baseline characterization of the universe, including factors such as the number and location of Federally recognized Tribes affected by the number of shipments of irradiated reactor fuel and other nuclear wastes listed in § 71.97, and the travel routes of each shipment. The analysis proceeds quantitatively for these attributes and makes numerous assumptions as discussed in Sections 3.2.1 and 3.2.2.

In accordance with Office of Management and Budget guidance and NUREG/BR-0058, Rev. 4, the results of the analysis are presented using both 3 percent and 7 percent real discount rates. The NRC seeks public comments on the accuracy of these regulatory analysis assumptions and on the validity of the proposed rules value and impact estimation methods.

3.2.1 Model Design

This section describes the cost model and the data sources used to calculate the values and impacts for the affected attributes of the proposed rule. The analysis is driven, in part, by the number of shipments requiring notifications and the number of Federally recognized Tribes to be notified. Shipment data was taken from NUREG-0725 Revision 15.

In January of 2010, DOE established a Blue Ribbon Commission on America's Nuclear Future to review policies for managing the back end of the nuclear fuel cycle. This coincided with DOE's notification to the NRC of its intent to withdraw its Yucca Mountain High Level Waste (HLW) Repository license application. This regulatory analysis cost model assumes shipping routes and actual shipments for a 10-year period. The shipments made during this timeframe will largely be for research purposes. The potential for and impact of policy changes to the back end of the nuclear cycle makes it prudent to keep this cost model at the 10-year period.

3.2.2 Data and Assumptions

3.2.2.1 Data/Affected Entities

Licensees

- Operating commercial power reactors: 104 commercial power reactors (65 sites) are currently generating irradiated reactor fuel. The analysis assumes that no new reactors will ship irradiated fuel within the 10 year time period.

- There are 15 decommissioned non-operating commercial power reactors.

- Operating Research and Test Reactors (RTRs): There are 32 RTRs which will be included in the analysis. The 10 Decommissioning Research and Test Reactors are not included in this analysis.

- On-Site Independent Spent Fuel Storage Installations (ISFSIs): Shipments from reactors to dedicated ISFSIs maintained by reactor licensees themselves (e.g., Calvert Cliffs maintains an on-site ISFSI) are assumed not to traverse Tribal reservations and are not included in the analysis.

- Off-Site Independent Spent Fuel Storage Installations: The General Electric ISFSI in Morris, IL is included in the analysis. Shipments to and from yet-to-be-licensed commercial ISFSIs will not be considered in the analysis.

- Costs associated with shipping irradiated reactor fuel and other wastes shipped under Section 71.97 are incurred by licensees. If shippers (e.g., trucking companies) conduct any of the activities required by the rule, the analysis assumes that the costs of these activities will be passed onto the licensee. Thus, shippers are not affected by the rule.

Agreement States

- The 38 Agreement State governments will incur a one-time cost for adopting this proposed rule into their State regulations governing the use of radioactive material.

Federally Recognized Tribal Governments

- The analysis assumes that of the 564 Federally recognized Native American Tribes, only 168 will be affected by the proposed rule, calculated as follows:

    - 228 Tribes located in Alaska will not be affected by the proposed rule because shipments will not pass through Alaska.

    - Of the remaining 336 Tribes it is assumed half, or 168 will elect to receive advanced notifications of shipments of irradiated reactor fuel and other nuclear wastes listed in § 71.97 passing through Tribal reservations.

    - Only those participating Tribes whose reservations are crossed will be notified of shipments. Tribes notified will depend on the particular route of individual shipments. The NRC estimates 300 notifications will be issued to a total of 50 Tribes on an annual basis. Note that an individual Tribe will likely receive more than one notification.

3.2.2.2 Assumptions/shipping routes

- For the analysis, the NRC assumed an average of 20 shipments annually over the next 10 years would be affected by the regulation under both the No-Action Alternative and the Rulemaking Alternative. Table 1 shows the history of shipments from 1979-2007; the last

10 years showed an average of 17 shipments per year. The NRC assumes 20 shipments per year for the next 10 years.

- The 20 shipments would break down to 16 shipments via highway and 4 via railways. The NRC does not anticipate any shipments via waterways.

- The NRC estimates that the shipments would pass through or cross an average of 5 states per shipment.

- The NRC estimates that 3 Tribes per State (15 per shipment) would be notified.

- The NRC anticipates 5 shipments annually would incur some issue(s) which would require revisions to the schedule.

- In addition, the NRC anticipates that one shipment would be canceled over a 3-year period.

- The analysis does not include shipments of irradiated fuel other than commercial irradiated reactor fuel. These shipment figures assume that all currently operating commercial power reactors renew their operating licenses for an additional 10 years. It includes only shipments of academic, industrial, and utility irradiated reactor fuel and other wastes shipped under Section 71.97 subject to NRC regulation. The NRC does not regulate DOE or Department of Defense shipments; therefore, this analysis does not include those shipments.

3.2.2.3 Shipment Routes

- To simplify the analysis, the NRC assumed that all shipments will comply with NRC approved shipping routes. See Table 2 for list of NRC approved routes used from 1998 to 2007.

- The analysis estimates the number of Tribes to be notified in a given State to average three Federally recognized tribes that are participating in the notification program.

3.2.2.4 Other

- Assumed labor rate for NRC staff is $119 per hour.

- Assumed $100 hourly labor rate for licensee personnel and $36.54 for Agreement State personnel.

- We estimate the salary for Tribal personnel compiling the information to be $33.83 per hour. This estimate is based on the Bureau of Labor Statistics' Employer Costs for Employee Compensation – September 2008, for the category of Management, Professional, and Related staff. Including a multiplier of 1.4 for benefits results in a total salary of $47.36 per hour.

- The analysis assumes the rule will become effective in January 2013.

3.3 Detailed Results

This section presents a detailed estimate of the values and impacts for the proposed rulemaking (Option 2). Some values and impacts are addressed qualitatively for reasons discussed in Section 3.2. These results are summarized in Exhibits 3-1 and 3-2.

Option 1: No-action

By definition, this option does not result in any values or impacts.

Option 2: Amend Regulations to Provide for Advance Notification of Tribal Governments

Agreement States Implementation

Impact: Agreement State governments will incur a one-time cost for adopting this final rule into their State regulations governing the use of radioactive material.

- On average each State will expend 208 hours (0.1 FTE) to amend their State regulations.

Industry Implementation

Impact: Read the amended regulations.

- One time incremental effort of 1.5 hours per licensee.

Industry Operation

Impact: Identify Tribal government reservations crossed by shipments (truck and rail), and obtain Tribal government contact information.

- Effort of 2.5 hours per licensee for each shipment.

Impact: Send notification to Tribal government(s) by mail, messenger/courier.

- ($10.00 delivery charge + 0.5 hour of labor) x the total number of shipments per year per licensee x total number of Tribes requiring notification.

Impact: Notify Tribal government(s) by telephone if shipment schedule changes.

- (Phone call + 5 minutes of labor) x 25 percent of all shipments per licensee per year.

Impact: Notify Tribal government(s) by telephone if shipment is cancelled.

- (Phone call + 5 minutes of labor) x 1 shipment in a 3 year period.

Impact: Recordkeeping:

- 1 hour per shipment of administrative labor (e.g., marking records as Safeguards Information, and filing). No incremental capital cost will be incurred to store the records (i.e., licensees already own secure filing cabinets).

NRC Implementation

Impact: Develop rule guidance:

- One time incremental effort of 80 hours to develop new guidance or revise existing guidance.

Impact: Develop initial Federally recognized Tribal government contact information listing for those Tribes that choose to participate:

- One time incremental effort of 240 hours of labor.

Impact: Publicize initial contact information for Federally recognized Tribal governments (e.g., web page, FRN):

- One time incremental effort of 80 hours.

Impact: Develop and distribute SGI training package for the participating Federally recognized Tribal governments.

- One time incremental effort of 80 hours.

Impact: Distribute information package for the Federally recognized Tribal governments.

- One time incremental effort of 40 hours.

NRC Operation

Impact: Update Federally recognized Tribal government contact list information of participating Tribes

- Annual incremental effort of 120 hours per year to collect, review, and update contact information for the Federally recognized Tribes electing to receive advance notifications.

Impact: Publicize updated contact information of participating Federally recognized Tribal governments (e.g., web page, FRN):

- Annual incremental effort of 80 hours.

Other Government

Value: Tribes will be given the option to be informed of nuclear waste shipments passing through their reservations. The proposed rule recognizes Tribal governments' interest in being informed of activities occurring on Tribal reservations.

Impact: The BIA, DOE, and DOT may be marginally affected by the proposed rule to provide information to assist in the identification of the location(s) of Federally recognized Tribal reservations. The incremental burden on these entities is estimated to be negligible or zero.

Tribal Government Implementation:

Impact: Read regulations and familiarize with the requirements:

- One-time burden of 1.5 hours per Tribe x all Federally recognized Native American Tribes in the United States.

Impact: Determine if Tribe wants to receive notification and Identify individuals to receive notifications:

- One-time burden of 4 hours per Tribe x the number of Tribes electing to receive notifications.

Impact: SGI Training for the 168 Tribes who determine they want to receive notification.

- One-time burden of 4 hours per participating Tribe (2 hour training for 2 individuals to receive training).

Impact: Notify NRC of contact person for notification:

- One-time burden of 0.5 hours per participating Tribe.

Impact: Purchase shredder to destroy SGI:

- 168 Tribal governments are estimated to purchase a shredder at a one-time cost of $250.

Impact: Purchase security storage container for SGI:

- 168 Tribal governments are estimated to purchase a secure filing cabinet at a one-time cost of $500.

Impact: Develop information safeguards procedures for shipment schedule information in accordance with 10 CFR 73.21:

- One-time burden of 3 hours per Tribe x 168 Tribes.

Tribal Government Operations:

Value: Tribes will be given the option to be informed of commercial nuclear waste shipments passing through their reservations. The proposed rule recognizes Tribal governments' interest in being informed of activities occurring on Tribal reservations.

Impact: Provide contact information to NRC:

- Annual burden of 0.5 hour per participating Tribe to fill-out updated contact information paperwork and send to NRC.

Impact: Process written notifications:

- The burden is 15 minutes per Tribe processing the shipment information.

Impact: Process revision notifications:

- The burden 5 minutes per phone call, 5 shipments annually will require notification of the Tribes of the new shipment information.

Impact: Process cancel notifications:

- The burden is 5 minutes per cancel notification; one shipment in a 3-year period will be canceled.

Safeguards and Security Considerations

Impact: Increased potential for public perceptions of unauthorized disclosure of SGI due to wider dissemination of information.

Exhibit 3-1
Quantitative Results in Dollars (Total Present Value through 2022)
Value (+) or Impact (-)

	One-time Implementation Costs	Annual Operating Costs
Industry Costs	(17,100)	(22,880)
Agreement States	(288,812)	0
Tribal Governments Costs	(332,584)	(7,846)
Sub-total	(638,496)	(30,726)
NRC Costs	(68,530)	(23,800)
Total	(707,026)	(54,526)

Total Annual Costs 2012-2021 at 3% discount	(465,118)
Total Annual Costs 2012-2021 at 7% discount	(382,968)
Total Combined Implementation and Annual Costs 2012-2021at 3% discount rate	(1,172,144)
Total Combined Implementation and Annual Costs 2012-2021 at 7% discount rate	(1,089,994)

4. Presentation of Results

4.1 Values and Impacts

This section summarizes the values (benefits) and impacts (costs) estimated for the regulatory options. (A more detailed analysis is presented in Section 3.3.) To the extent that the affected attributes could be analyzed quantitatively, the net effect of each option has been calculated and is presented below. However, some values and impacts could be evaluated only on a qualitative basis.

The results of the value-impact analysis are summarized in Exhibit 4-1. Relative to the No-action alternative (Option 1), rulemaking (Option 2) would result in a net quantitative impact estimated of $1,172,144 over a 10-year period at a 3 percent discount rate and $1,089,994 over a 10-year period at a 7 percent discount rate.

The costs breakdown (10-year period at a 3 percent discount rate) associated with Option 2 is industry ($212,271), Agreement States ($288,812), NRC ($271,549) and Tribes ($399,714). Each of the 564 Tribes may incur a one time cost of $259 to read the regulations and decide if they want to receive notification. If a Tribe does decide to receive notification they will incur an additional one time cost of $1,103. For those Tribes who chose to receive notification they will incur on average annual cost of $43. The analysis estimates that Option 2 would result in qualitative benefits in the following attributes: other government.

Exhibit 4-1
Summary of Values and Impacts

Regulatory Option	Net Value (+) or Impact (-) (Total Present Value)	Qualitative Values/Impacts
Option 1: No Action	$0	N.A.
Option 2: Proposed Action	Agreement States -$288,812 Industry: -$212,271 Tribal Governments: -$399,512 NRC: - $271,549	***Values:*** *Other Government* - Tribes will be given the option to be informed of commercial nuclear waste shipments passing through their reservations. The proposed rule recognizes Tribal governments' interest in being informed of activities occurring on Tribal reservations. ***Impacts:*** *Safeguards and Security Considerations* - Increased potential for public perception of unauthorized disclosure of SGI, due to wider dissemination of information.

4.2 Backfit Analysis

The NRC has determined that the backfit rule does not apply to this proposed rule because this amendment does not add or modify any regulations to impose backfits as defined in 10 CFR 50.109 or 10 CFR 72.62. Therefore, a backfit analysis is not required.

5. Decision Rationale

NRC's current regulations require a licensee to inform a State governor, or the governor's designee, of certain shipments of irradiated reactor fuel and certain nuclear wastes listed in 10 CFR 71.97 passing through the boundary of the State. Current regulations, however, do not require that licensees provide such advance notifications to Federally recognized Native American Tribes.

The proposed rule would revise sections of 10 CFR Part 71 and 73 to (1) require advance notification of participating Tribal governments of shipments of irradiated reactor fuel and certain nuclear wastes listed in 10 CFR 71.97 passing through Tribal reservations and (2) extend to Tribal officials, his or her designee, and Tribal law enforcement personnel relief

from fingerprinting requirements required for access to the SGI contained in the advance notifications.

The proposed rule would result in a net quantitative estimated cost of $1,172,144. The rule also might pose a risk to public perceptions regarding safeguards and safety considerations due to wider dissemination of SGI on shipments. However, the rule would result in several benefits. Tribes will be given the option to be informed of commercial nuclear waste shipments passing through their reservations. The proposed rule recognizes Tribal governments' interest in being informed of activities occurring on Tribal reservations.

For the reasons discussed above, the proposed option is superior to the No-action alternative.

6. Implementation

The staff is recommending that the final rule be effective 1 year after publication in the *Federal Register*. This would provide time for NRC staff to develop and publish the Federally recognized Tribal contact list and to provide training on the protection of SGI. It would also provide time for licensees to put the necessary programs in place, develop procedures, and conduct training on the new requirements.

In order to receive the advance notifications, Tribes would need to declare that they would like to receive the information and certify that the Tribe would appropriately protect any SGI. The NRC staff believes that in view of the information protection requirements, a Tribe should be given the option to receive advance notifications.

7. References

1. Nuclear Regulatory Commission, "Regulatory Analysis Technical Evaluation Handbook, Final Report," NUREG/BR-0184, January 1997.

2. NUREG/CR-0725, Rev. 15, Public Information Circular For Shipments of Irradiated Reactor Fuel.

3. NUREG/BR-0058, Rev. 5, "Regulatory Analysis Guidelines of the U.S. Nuclear Regulatory Commission," September 2004.

4. Department of Interior, Bureau of Indian Affairs, Office of Indian Services. "Tribal Leadership Directory," Winter 2009.

Table 1 - Domestic Shipments from 1970-2007

Year	Highway	Railway
1979	2	11
1980	73	5
1981	30	2
1982	80	0
1983	92	0
1984	209	3
1985	114	18
1986	88	15
1987	85	15
1988	10	7
1989	11	6
1990	0	8
1991	4	10
1992	20	6
1993	14	12
1994	6	9
1995	7	9
1996	3	8
1997	7	4
1998	11	11
1999	8	9
2000	10	4
2001	9	6
2002	6	16
2003	15	14
2004	7	14
2005	6	7
2006	5	7
2007	6	7

Table 2 - NRC Approved Routes used from 1998 to 2007

Origin State	Shipment	NRC Route Number	States on route	Status of Route	Transport Mode	Shipment Years
Alabama	Browns Ferry Nuclear Station to GE Vallecitos Nuclear Center	209	AL, MS, LA, TX, NM, AZ, CA		Highway	2003
California	GE Vallecitos Nuclear Center to Argonne National Lab	190	CA, NV, UT, WY, NE, IA, IL	Expired Route	Highway	2000, 2001
	General Atomic to Bechtel BWXT,INEEL	207	CA, NV, AZ, UT, ID	Expired Route	Highway	2003
Florida	University of Florida to Savannah River Site	222	FL, GA, SC		Highway	2006, 2007
Illinois	La Salle County Station to Newport News	208	IL, IN, KY, WV, VA	Expired Route	Highway	2003
	University of Illinois to INEEL	214	IL, IA, NE, WY, UT, ID	Expired Route	Highway	2004
	University of Illinois to University of Texas, Austin	213	IL, MO, AR, TX	Expired Route	Highway	2004
Indiana	Purdue University Training Reactor to Savannah River Site	225	IN, KY, TN, NC, SC		Highway	2007
Iowa	Duane Arnold Energy Center to GE Vallecitos Nuclear Center	163	IA, NE, WY, UT, NV, CA	Expired Route	Highway	1998, 2008
Maryland	Dundalk Marine Terminal to GE Vallecitos Nuclear Center	180	GA, AL, MS, LA, TX, NM, AZ, CA	Expired Route	Highway	2000
	National Institute of Standards and Technology to Savannah River Site	187	MD, WV, VA, NC, SC	Expired Route	Highway	1999, 2003

Origin State	Shipment	NRC Route Number	States on route	Status of Route	Transport Mode	Shipment Years
Massachusetts	Massachusetts Institute of Technology to Savannah River Site	166	MA, CT, NY, PA, MD, WV, VA, NC, SC	Expired Route	Highway	1998 thru 2002
	University of Massachusetts, Lowell to Savannah River Site	215	MA, CT, NY, PA, MD, WV, VA, NC, SC	Expired Route	Highway	2004
	Massachusetts Institute of Technology to Savannah River Site	217	MA, CT, NY, PA, MD, WV, VA, NC, SC		Highway	2005 thru 2007
Michigan	University of Michigan to Savannah River Site	196	MI, OH, KY, TN, GA, SC	Expired Route	Highway	1999, 2000, 2003
Missouri	University of Missouri, Columbia to Savannah River Site	182	MO, IL, KY, TN, GA, SC	Expired Route	Highway	1998 thru 2004
	University of Missouri, Columbia to Savannah River Site	182B	MO, IL, KY, TN, GA, SC		Highway	2005 thru 2007
Nebraska	Veteran Administration to US Geological Survey, Denver Federal Center	206	NE, WY, CO	Expired Route	Highway	2002
New York	Cornell University to Bechtel BWXT, INEEL	212	NY, PA, OH, IN, IL, IA, NE, WY, UT, ID	Expired Route	Highway	2003
	McMaster University to Savannah River Site	198	NY, PA, WV, VA, NC, SC	Expired Route	Highway	2000
	University of Toronto to Savannah River Site	198	NY, PA, WV, VA, NC, SC	Expired Route	Highway	2000

Origin State	Shipment	NRC Route Number	States on route	Status of Route	Transport Mode	Shipment Years
New York (Continued)	University of NY, Buffalo, NY to Idaho National Laboratory, Scoville, ID	216	NY, PA, OH, IN, IL, IA, NE, WY, UT, ID	Expired Route	Highway	2005
North Carolina	Brunswick Nuclear Plant to Harris Nuclear Plant	130	NC		Railway	1998,1999, 2001 thru 2007
Ohio	Battelle, West Jefferson Site to Savannah River Site	211	OH, WV, VA, NC, SC	Expired Route	Highway	2003
Pennsylvania	Limerick Generating Station to GE Vallecitos Nuclear Center	197	PA, MD, WV, OH, IN, IL, IA, NE, WY, UT, NV, CA	Expired Route	Highway	19,992,003
South Carolina	H.B. Robinson Steam Electric Plant to Harris Nuclear Plant	135	SC, NC		Railway	2000,2002 thru 2004
	H.B. Robinson Steam Electric Plant to GE Vallecitos Nuclear Center	200	SC, GA, AL, MS, LA, TX, NM, AZ, CA	Expired Route	Highway	2001
	Charleston to Savannah River Site	185	SC	Expired Route	Railway	1999,2001, 2002,2004 thru 2007
	Charleston to Savannah River Site	192	SC		Highway	2000 2001 2004 2007
	Charleston to Savannah River Site	201A	SC, GA	Expired Route	Railway	1998 thru 2003
	Charleston to Savannah River Site	210	SC	Expired Route	Highway	2003, 2005
	Charleston to INEEL	192 & 195	SC, GA, TN, KY, IL, IA, NE, WY, UT, ID		Highway	1999

Origin State	Shipment	NRC Route Number	States on route	Status of Route	Transport Mode	Shipment Years
South Carolina (Continued)	Savannah River to INEEL	195	SC, GA, TN, KY, IL, IA, NE, WY, UT, ID		Highway	2000,2001 2003
	Savannah River to INEEL	202	SC, GA, TN, KY, IL, MO, IA, NE, WY, UT, ID		Highway	2004, 2006
	Oconee Nuclear Site to AECL Chalk River	203	SC, NC, VA, WV, PA, NY	Expired Route	Highway	2001, 2002
Texas	Texas A&M University to INEEL	221	TX, OK, KS, CO, WY, UT, ID		Highway	2006, 2007
Virginia	North Anna Power Station to Studsvik Nuclear	204A	VA	Expired Route	Highway	2002

Table 3 - Number of Federally recognized Tribal Governments by State

* Tabulated from the “Tribal Leadership Directory”, Department of Interior, Bureau of Indian Affairs, Office of Indian Services, Winter 2009.

Number of Tribes by State
AK - 227
AL - 1
AZ - 20
CA- 104
CO - 2
CT - 2
FL - 2
IA - 1
ID - 4
KS - 4
LA - 4
MA - 2
ME - 4
MI - 12
MN - 6
MO -1
MS -1
MT - 7
NC - 1
ND - 4
NE - 4
NM - 21
NV - 17
NY - 7
OK - 37
OR - 9
RI - 1
SC - 1
SD -8
TX- 3
UT - 5
WA - 29
WI - 11
WY- 2